284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

DATA PACKAGE

METALS

PROJECT NAME : NYCDDC SANTWOBR BROOKLYN BRIDGE BBMCR

RU2 ENGINEERING, LLC

2 Melinda Drive

Monroe Township, NJ - 08831

Phone No: 732-261-2236

ORDER ID : Q1235

ATTENTION : Rutu Manani

Laboratory Certification ID # 20012

Table Of Contents for Q1235

1) TCLP METALS DATA 2

2) Signature Page 4

3) Case Narrative 5

4) Qualifier Page 6

5) Conformance/Non Conformance 7

6) QA Checklist 8

7) Chronicle 9

8) Hit Summary 10

9) Sample Data 11

- 9.1) JPP-51.2-012925 12
- 9.2) JPP-16.1-012925 13

10) METALS CALIBRATION DATA 14

- 10.1) Initial and Continuing Calibration Verification 15
- 10.2) CRDL Standard For AA & ICP 21
- 10.3) Initial and Continuing Calibration Blank Summary 22
- 10.4) Preparation Blank Summary 27
- 10.5) Interference Check Sample 29

11) METALS QC DATA 30

- 11.1) Matrix Spike Summary 31
- 11.2) Post Digest Spike Summary 33
- 11.3) Duplicate Sample Summary 34
- 11.4) Laboratory Control Sample Summary 36
- 11.5) ICP Serial Dilutions 38

12) METALS PREPARATION & INSTRUMENT DATA 39

- 12.1) ICP Interelement Correction Factors 40

13) PREPARATION & ANALYTICAL SUMMARY 45

- 13.1) Sample Preparation Summary 46
- 13.2) Analysis Run Log 48

14) METALS RAW DATA 50

- 14.1) METALS RAW DATA - ANALYTICAL 51
- 14.2) LB134659 51
- 14.3) LB134537 273
- 14.4) METALS RAW DATA - PREP 275
  - 14.4.1) PB166425 275
  - 14.4.2) PB166487 278

15) Analytical Runlogs 281
16) Extraction Logs 290
16.1) PB166356.pdf 290
17) Standard Prep Logs 294
18) Shipping Document 448
18.1) Chain Of Custody 449
18.2) Lab Certificate 450
18.3) Internal COC 451

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Cover Page

Order ID : Q1235

Project ID : NYCDDC SANTWOBR Brooklyn Bridge BBMCR

Client : RU2 Engineering, LLC

Lab Sample Number	Client Sample Number
Q1235-01	JPP-51.2-012925
Q1235-02	JPP-51.2-012925
Q1235-03	JPP-51.2-012925
Q1235-04	JPP-51.2-012925
Q1235-05	JPP-16.1-012925
Q1235-06	JPP-16.1-012925
Q1235-07	JPP-16.1-012925
Q1235-08	JPP-16.1-012925

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

Signature : APPROVED
By Nimisha Pandya, QA/QC Supervisor at 3:02 pm, Feb 13, 2025

Date: 2/13/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

CASE NARRATIVE

RU2 Engineering, LLC
Project Name: NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Project # N/A
Chemtech Project # Q1235
Test Name: TCLP Mercury,TCLP ICP Metals

A. Number of Samples and Date of Receipt:
8 Solid samples were received on 01/30/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Diesel Range Organics, Gasoline Range Organics, Ignitability, Mercury, Metals ICP-TAL, METALS-TAL, Paint Filter, PCB, Pesticide-TCL, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOC-TCL BNA -20, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TCLP-FULL and VOCMS Group1. This data package contains results for TCLP Mercury,TCLP ICP Metals.

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

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

E. Additional Comments:

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

Signature_____ **APPROVED**
By Nimisha Pandya, QA/QC Supervisor at 3:03 pm, Feb 13, 2025

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

DATA REPORTING QUALIFIERS- INORGANIC

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

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

ALLIANCE 284 Sheffield Street, Mountainside New Jersey 07092

NEW JERSEY LAB ID#: 20012: NEW YORK LAB ID#: 11376

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: Q1235 MATRIX: TCLP

METHOD: 6010D,7470A,1311

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

ADDITIONAL COMMENTS:

QA REVIEW

REVIEWED
By Sohil Jodhani, QA/QC Director at 11:20 am, Feb 13, 2025

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1235

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

QA Review Signature: SOHIL JODHANI **Date:** 02/13/2025

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

LAB CHRONICLE

OrderID:	Q1235	**OrderDate:**	1/30/2025 12:15:00 PM
Client:	RU2 Engineering, LLC	**Project:**	NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Contact:	Rutu Manani	**Location:**	E11,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1235-03	**JPP-51.2-012925**	**SOIL**			**01/29/25**			**01/30/25**
			Mercury	7471B		01/30/25	01/31/25	
			Metals ICP-TAL	6010D		01/30/25	01/31/25	
Q1235-04	**JPP-51.2-012925**	**TCLP**			**01/29/25**			**01/30/25**
			TCLP ICP Metals	6010D		01/31/25	02/10/25	
			TCLP Mercury	7470A		02/03/25	02/03/25	
Q1235-07	**JPP-16.1-012925**	**SOIL**			**01/29/25**			**01/30/25**
			Mercury	7471B		01/30/25	01/31/25	
			Metals ICP-TAL	6010D		01/30/25	01/31/25	
Q1235-08	**JPP-16.1-012925**	**TCLP**			**01/29/25**			**01/30/25**
			TCLP ICP Metals	6010D		01/31/25	02/10/25	
			TCLP Mercury	7470A		02/03/25	02/03/25	

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Hit Summary Sheet
SW-846

SDG No.: Q1235 **Order ID:** Q1235

Client: RU2 Engineering, LLC **Project ID:** NYCDDC SANTWOBR Brooklyn Bridge

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : JPP-51.2-012925								
Q1235-04	JPP-51.2-012925	TCLP	Barium	171	J	62.8	500	ug/L
Q1235-04	JPP-51.2-012925	TCLP	Chromium	63.1		6.60	50.0	ug/L
Client ID : JPP-16.1-012925								
Q1235-08	JPP-16.1-012925	TCLP	Barium	333	J	62.8	500	ug/L
Q1235-08	JPP-16.1-012925	TCLP	Chromium	9.60	J	6.60	50.0	ug/L

SAMPLE DATA

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-51.2-012925	SDG No.:	Q1235
Lab Sample ID:	Q1235-04	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	100	U	1	34.8	100	ug/L	01/31/25 12:30	02/10/25 16:35	SW6010	SW3050
7440-39-3	Barium	171	J	1	62.8	500	ug/L	01/31/25 12:30	02/10/25 16:35	SW6010	SW3050
7440-43-9	Cadmium	30.0	U	1	0.94	30.0	ug/L	01/31/25 12:30	02/10/25 16:35	SW6010	SW3050
7440-47-3	Chromium	63.1		1	6.60	50.0	ug/L	01/31/25 12:30	02/10/25 16:35	SW6010	SW3050
7439-92-1	Lead	60.0	U	1	35.1	60.0	ug/L	01/31/25 12:30	02/10/25 16:35	SW6010	SW3050
7439-97-6	Mercury	2.00	U	1	0.81	2.00	ug/L	02/03/25 09:25	02/03/25 17:05	SW7470A	
7782-49-2	Selenium	100	U	1	58.8	100	ug/L	01/31/25 12:30	02/10/25 16:35	SW6010	SW3050
7440-22-4	Silver	50.0	U	1	5.80	50.0	ug/L	01/31/25 12:30	02/10/25 16:35	SW6010	SW3050

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

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

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Report of Analysis

Client:	RU2 Engineering, LLC	Date Collected:	01/29/25
Project:	NYCDDC SANTWOBR Brooklyn Bridge BBMCR	Date Received:	01/30/25
Client Sample ID:	JPP-16.1-012925	SDG No.:	Q1235
Lab Sample ID:	Q1235-08	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	100	U	1	34.8	100	ug/L	01/31/25 12:30	02/10/25 16:39	SW6010	SW3050
7440-39-3	Barium	333	J	1	62.8	500	ug/L	01/31/25 12:30	02/10/25 16:39	SW6010	SW3050
7440-43-9	Cadmium	30.0	U	1	0.94	30.0	ug/L	01/31/25 12:30	02/10/25 16:39	SW6010	SW3050
7440-47-3	Chromium	9.60	J	1	6.60	50.0	ug/L	01/31/25 12:30	02/10/25 16:39	SW6010	SW3050
7439-92-1	Lead	60.0	U	1	35.1	60.0	ug/L	01/31/25 12:30	02/10/25 16:39	SW6010	SW3050
7439-97-6	Mercury	2.00	U	1	0.81	2.00	ug/L	02/03/25 09:25	02/03/25 17:07	SW7470A	
7782-49-2	Selenium	100	U	1	58.8	100	ug/L	01/31/25 12:30	02/10/25 16:39	SW6010	SW3050
7440-22-4	Silver	50.0	U	1	5.80	50.0	ug/L	01/31/25 12:30	02/10/25 16:39	SW6010	SW3050

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

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

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

METAL CALIBRATION DATA

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

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
ICV81	Mercury	3.69	4.0	92	90 - 110	CV	02/03/2025	15:59	LB134537

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

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
CCV10	Mercury	5.01	5.0	100	90 - 110	CV	02/03/2025	16:03	LB134537
CCV11	Mercury	5.14	5.0	103	90 - 110	CV	02/03/2025	16:33	LB134537
CCV12	Mercury	4.98	5.0	100	90 - 110	CV	02/03/2025	17:01	LB134537
CCV13	Mercury	4.99	5.0	100	90 - 110	CV	02/03/2025	17:23	LB134537

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV01	Arsenic	1030	1000	104	90 - 110	P	02/10/2025	14:06	LB134659
	Barium	502	520	97	90 - 110	P	02/10/2025	14:06	LB134659
	Cadmium	514	510	101	90 - 110	P	02/10/2025	14:06	LB134659
	Chromium	541	520	104	90 - 110	P	02/10/2025	14:06	LB134659
	Lead	1010	1000	101	90 - 110	P	02/10/2025	14:06	LB134659
	Selenium	1080	1000	108	90 - 110	P	02/10/2025	14:06	LB134659
	Silver	256	250	102	90 - 110	P	02/10/2025	14:06	LB134659

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
LLICV01	Arsenic	21.0	20.0	105	80 - 120	P	02/10/2025	14:20	LB134659
	Barium	84.5	100	84	80 - 120	P	02/10/2025	14:20	LB134659
	Cadmium	5.70	6.0	95	80 - 120	P	02/10/2025	14:20	LB134659
	Chromium	9.89	10.0	99	80 - 120	P	02/10/2025	14:20	LB134659
	Lead	11.5	12.0	95	80 - 120	P	02/10/2025	14:20	LB134659
	Selenium	20.3	20.0	101	80 - 120	P	02/10/2025	14:20	LB134659
	Silver	10.3	10.0	103	80 - 120	P	02/10/2025	14:20	LB134659

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV01	Arsenic	5020	5000	100	90 - 110	P	02/10/2025	14:59	LB134659
	Barium	9910	10000	99	90 - 110	P	02/10/2025	14:59	LB134659
	Cadmium	2640	2500	106	90 - 110	P	02/10/2025	14:59	LB134659
	Chromium	998	1000	100	90 - 110	P	02/10/2025	14:59	LB134659
	Lead	4860	5000	97	90 - 110	P	02/10/2025	14:59	LB134659
	Selenium	5080	5000	102	90 - 110	P	02/10/2025	14:59	LB134659
	Silver	1240	1250	99	90 - 110	P	02/10/2025	14:59	LB134659
CCV02	Arsenic	4720	5000	94	90 - 110	P	02/10/2025	16:05	LB134659
	Barium	10500	10000	105	90 - 110	P	02/10/2025	16:05	LB134659
	Cadmium	2720	2500	109	90 - 110	P	02/10/2025	16:05	LB134659
	Chromium	929	1000	93	90 - 110	P	02/10/2025	16:05	LB134659
	Lead	4520	5000	90	90 - 110	P	02/10/2025	16:05	LB134659
	Selenium	4790	5000	96	90 - 110	P	02/10/2025	16:05	LB134659
	Silver	1150	1250	92	90 - 110	P	02/10/2025	16:05	LB134659
CCV03	Arsenic	5040	5000	101	90 - 110	P	02/10/2025	16:57	LB134659
	Barium	9210	10000	92	90 - 110	P	02/10/2025	16:57	LB134659
	Cadmium	2370	2500	95	90 - 110	P	02/10/2025	16:57	LB134659
	Chromium	991	1000	99	90 - 110	P	02/10/2025	16:57	LB134659
	Lead	4770	5000	95	90 - 110	P	02/10/2025	16:57	LB134659
	Selenium	5140	5000	103	90 - 110	P	02/10/2025	16:57	LB134659
	Silver	1220	1250	98	90 - 110	P	02/10/2025	16:57	LB134659
CCV04	Arsenic	4910	5000	98	90 - 110	P	02/10/2025	17:53	LB134659
	Barium	9210	10000	92	90 - 110	P	02/10/2025	17:53	LB134659
	Cadmium	2320	2500	93	90 - 110	P	02/10/2025	17:53	LB134659
	Chromium	972	1000	97	90 - 110	P	02/10/2025	17:53	LB134659
	Lead	4680	5000	94	90 - 110	P	02/10/2025	17:53	LB134659
	Selenium	5010	5000	100	90 - 110	P	02/10/2025	17:53	LB134659
	Silver	1210	1250	97	90 - 110	P	02/10/2025	17:53	LB134659
CCV05	Arsenic	5050	5000	101	90 - 110	P	02/10/2025	18:48	LB134659
	Barium	9470	10000	95	90 - 110	P	02/10/2025	18:48	LB134659
	Cadmium	2360	2500	94	90 - 110	P	02/10/2025	18:48	LB134659
	Chromium	969	1000	97	90 - 110	P	02/10/2025	18:48	LB134659
	Lead	4760	5000	95	90 - 110	P	02/10/2025	18:48	LB134659
	Selenium	5190	5000	104	90 - 110	P	02/10/2025	18:48	LB134659

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Initial Calibration Source: EPA

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV05	Silver	1200	1250	96	90 - 110	P	02/10/2025	18:48	LB134659
CCV06	Arsenic	4890	5000	98	90 - 110	P	02/10/2025	19:40	LB134659
	Barium	9330	10000	93	90 - 110	P	02/10/2025	19:40	LB134659
	Cadmium	2290	2500	92	90 - 110	P	02/10/2025	19:40	LB134659
	Chromium	970	1000	97	90 - 110	P	02/10/2025	19:40	LB134659
	Lead	4630	5000	93	90 - 110	P	02/10/2025	19:40	LB134659
	Selenium	5000	5000	100	90 - 110	P	02/10/2025	19:40	LB134659
	Silver	1200	1250	96	90 - 110	P	02/10/2025	19:40	LB134659
CCV07	Arsenic	4890	5000	98	90 - 110	P	02/10/2025	20:36	LB134659
	Barium	9290	10000	93	90 - 110	P	02/10/2025	20:36	LB134659
	Cadmium	2290	2500	92	90 - 110	P	02/10/2025	20:36	LB134659
	Chromium	968	1000	97	90 - 110	P	02/10/2025	20:36	LB134659
	Lead	4650	5000	93	90 - 110	P	02/10/2025	20:36	LB134659
	Selenium	5010	5000	100	90 - 110	P	02/10/2025	20:36	LB134659
	Silver	1200	1250	96	90 - 110	P	02/10/2025	20:36	LB134659
CCV08	Arsenic	4920	5000	98	90 - 110	P	02/10/2025	21:02	LB134659
	Barium	9300	10000	93	90 - 110	P	02/10/2025	21:02	LB134659
	Cadmium	2320	2500	93	90 - 110	P	02/10/2025	21:02	LB134659
	Chromium	983	1000	98	90 - 110	P	02/10/2025	21:02	LB134659
	Lead	4700	5000	94	90 - 110	P	02/10/2025	21:02	LB134659
	Selenium	5010	5000	100	90 - 110	P	02/10/2025	21:02	LB134659
	Silver	1220	1250	97	90 - 110	P	02/10/2025	21:02	LB134659

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

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	0.26	0.2	130	40 - 160	CV	02/03/2025	16:08	LB134537
CRI01	Arsenic	21.7	20.0	108	40 - 160	P	02/10/2025	14:31	LB134659
	Barium	88.7	100	89	40 - 160	P	02/10/2025	14:31	LB134659
	Cadmium	5.75	6.0	96	40 - 160	P	02/10/2025	14:31	LB134659
	Chromium	10.1	10.0	101	40 - 160	P	02/10/2025	14:31	LB134659
	Lead	11.5	12.0	96	40 - 160	P	02/10/2025	14:31	LB134659
	Selenium	19.7	20.0	99	40 - 160	P	02/10/2025	14:31	LB134659
	Silver	10.6	10.0	106	40 - 160	P	02/10/2025	14:31	LB134659

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB81	Mercury	0.20	+/-0.20	U	0.20	CV	02/03/2025	16:01	LB134537

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB10	Mercury	0.20	+/-0.20	U	0.20	CV	02/03/2025	16:06	LB134537
CCB11	Mercury	0.20	+/-0.20	U	0.20	CV	02/03/2025	16:36	LB134537
CCB12	Mercury	0.20	+/-0.20	U	0.20	CV	02/03/2025	17:03	LB134537
CCB13	Mercury	0.20	+/-0.20	U	0.20	CV	02/03/2025	17:26	LB134537

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	20.0	+/-20.0	U	20.0	P	02/10/2025	14:26	LB134659
	Barium	100	+/-100	U	100	P	02/10/2025	14:26	LB134659
	Cadmium	6.00	+/-6.00	U	6.00	P	02/10/2025	14:26	LB134659
	Chromium	10.0	+/-10.0	U	10.0	P	02/10/2025	14:26	LB134659
	Lead	12.0	+/-12.0	U	12.0	P	02/10/2025	14:26	LB134659
	Selenium	20.0	+/-20.0	U	20.0	P	02/10/2025	14:26	LB134659
	Silver	10.0	+/-10.0	U	10.0	P	02/10/2025	14:26	LB134659

Alliance TECHNICAL GROUP
284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	20.0	+/-20.0	U	20.0	P	02/10/2025	15:03	LB134659
	Barium	100	+/-100	U	100	P	02/10/2025	15:03	LB134659
	Cadmium	6.00	+/-6.00	U	6.00	P	02/10/2025	15:03	LB134659
	Chromium	10.0	+/-10.0	U	10.0	P	02/10/2025	15:03	LB134659
	Lead	12.0	+/-12.0	U	12.0	P	02/10/2025	15:03	LB134659
	Selenium	20.0	+/-20.0	U	20.0	P	02/10/2025	15:03	LB134659
	Silver	10.0	+/-10.0	U	10.0	P	02/10/2025	15:03	LB134659
CCB02	Arsenic	20.0	+/-20.0	U	20.0	P	02/10/2025	16:08	LB134659
	Barium	100	+/-100	U	100	P	02/10/2025	16:08	LB134659
	Cadmium	6.00	+/-6.00	U	6.00	P	02/10/2025	16:08	LB134659
	Chromium	10.0	+/-10.0	U	10.0	P	02/10/2025	16:08	LB134659
	Lead	12.0	+/-12.0	U	12.0	P	02/10/2025	16:08	LB134659
	Selenium	20.0	+/-20.0	U	20.0	P	02/10/2025	16:08	LB134659
	Silver	10.0	+/-10.0	U	10.0	P	02/10/2025	16:08	LB134659
CCB03	Arsenic	20.0	+/-20.0	U	20.0	P	02/10/2025	17:06	LB134659
	Barium	100	+/-100	U	100	P	02/10/2025	17:06	LB134659
	Cadmium	6.00	+/-6.00	U	6.00	P	02/10/2025	17:06	LB134659
	Chromium	10.0	+/-10.0	U	10.0	P	02/10/2025	17:06	LB134659
	Lead	12.0	+/-12.0	U	12.0	P	02/10/2025	17:06	LB134659
	Selenium	20.0	+/-20.0	U	20.0	P	02/10/2025	17:06	LB134659
	Silver	10.0	+/-10.0	U	10.0	P	02/10/2025	17:06	LB134659
CCB04	Arsenic	20.0	+/-20.0	U	20.0	P	02/10/2025	18:00	LB134659
	Barium	100	+/-100	U	100	P	02/10/2025	18:00	LB134659
	Cadmium	6.00	+/-6.00	U	6.00	P	02/10/2025	18:00	LB134659
	Chromium	10.0	+/-10.0	U	10.0	P	02/10/2025	18:00	LB134659
	Lead	12.0	+/-12.0	U	12.0	P	02/10/2025	18:00	LB134659
	Selenium	20.0	+/-20.0	U	20.0	P	02/10/2025	18:00	LB134659
	Silver	10.0	+/-10.0	U	10.0	P	02/10/2025	18:00	LB134659
CCB05	Arsenic	20.0	+/-20.0	U	20.0	P	02/10/2025	18:52	LB134659
	Barium	100	+/-100	U	100	P	02/10/2025	18:52	LB134659
	Cadmium	6.00	+/-6.00	U	6.00	P	02/10/2025	18:52	LB134659
	Chromium	10.0	+/-10.0	U	10.0	P	02/10/2025	18:52	LB134659
	Lead	12.0	+/-12.0	U	12.0	P	02/10/2025	18:52	LB134659
	Selenium	20.0	+/-20.0	U	20.0	P	02/10/2025	18:52	LB134659
	Silver	10.0	+/-10.0	U	10.0	P	02/10/2025	18:52	LB134659
CCB06	Arsenic	20.0	+/-20.0	U	20.0	P	02/10/2025	19:45	LB134659
	Barium	100	+/-100	U	100	P	02/10/2025	19:45	LB134659
	Cadmium	6.00	+/-6.00	U	6.00	P	02/10/2025	19:45	LB134659
	Chromium	10.0	+/-10.0	U	10.0	P	02/10/2025	19:45	LB134659

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Lead	12.0	+/-12.0	U	12.0	P	02/10/2025	19:45	LB134659
	Selenium	20.0	+/-20.0	U	20.0	P	02/10/2025	19:45	LB134659
	Silver	10.0	+/-10.0	U	10.0	P	02/10/2025	19:45	LB134659
CCB07	Arsenic	20.0	+/-20.0	U	20.0	P	02/10/2025	20:41	LB134659
	Barium	100	+/-100	U	100	P	02/10/2025	20:41	LB134659
	Cadmium	6.00	+/-6.00	U	6.00	P	02/10/2025	20:41	LB134659
	Chromium	10.0	+/-10.0	U	10.0	P	02/10/2025	20:41	LB134659
	Lead	12.0	+/-12.0	U	12.0	P	02/10/2025	20:41	LB134659
	Selenium	20.0	+/-20.0	U	20.0	P	02/10/2025	20:41	LB134659
	Silver	10.0	+/-10.0	U	10.0	P	02/10/2025	20:41	LB134659
CCB08	Arsenic	20.0	+/-20.0	U	20.0	P	02/10/2025	21:06	LB134659
	Barium	100	+/-100	U	100	P	02/10/2025	21:06	LB134659
	Cadmium	6.00	+/-6.00	U	6.00	P	02/10/2025	21:06	LB134659
	Chromium	10.0	+/-10.0	U	10.0	P	02/10/2025	21:06	LB134659
	Lead	12.0	+/-12.0	U	12.0	P	02/10/2025	21:06	LB134659
	Selenium	20.0	+/-20.0	U	20.0	P	02/10/2025	21:06	LB134659
	Silver	10.0	+/-10.0	U	10.0	P	02/10/2025	21:06	LB134659

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166356TB		**WATER**		**Batch Number:**	**PB166487**		**Prep Date:**	**02/03/2025**	
	Mercury	2.00	<2.00	U	2.00	CV	02/03/2025	17:16	LB134537

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166487BL		**WATER**		**Batch Number:**	**PB166487**		**Prep Date:**	**02/03/2025**	
	Mercury	0.20	<0.20	U	0.20	CV	02/03/2025	16:15	LB134537

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB166356TB		**WATER**		**Batch Number:**	**PB166425**		**Prep Date:**	**01/31/2025**	
	Arsenic	100	<100	U	100	P	02/10/2025	15:07	LB134659
	Barium	500	<500	U	500	P	02/10/2025	15:07	LB134659
	Cadmium	30.0	<30.0	U	30.0	P	02/10/2025	15:07	LB134659
	Chromium	50.0	<50.0	U	50.0	P	02/10/2025	15:07	LB134659
	Lead	60.0	<60.0	U	60.0	P	02/10/2025	15:07	LB134659
	Selenium	100	<100	U	100	P	02/10/2025	15:07	LB134659
	Silver	50.0	<50.0	U	50.0	P	02/10/2025	15:07	LB134659
Sample ID	**Analyte**	**Result (ug/L)**	**Acceptance Limit**	**Conc Qual**	**CRQL ug/L**	**M**	**Analysis Date**	**Analysis Time**	**Run**
PB166425BL		**WATER**		**Batch Number:**	**PB166425**		**Prep Date:**	**01/31/2025**	
	Arsenic	100	<100	U	100	P	02/10/2025	15:12	LB134659
	Barium	500	<500	U	500	P	02/10/2025	15:12	LB134659
	Cadmium	30.0	<30.0	U	30.0	P	02/10/2025	15:12	LB134659
	Chromium	10.5	<50.0	J	50.0	P	02/10/2025	15:12	LB134659
	Lead	60.0	<60.0	U	60.0	P	02/10/2025	15:12	LB134659
	Selenium	100	<100	U	100	P	02/10/2025	15:12	LB134659
	Silver	50.0	<50.0	U	50.0	P	02/10/2025	15:12	LB134659

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

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

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Low Limit (ug/L)	High Limit (ug/L)	Analysis Date	Analysis Time	Run Number
ICSA01	Arsenic	1.27			-20	20	02/10/2025	14:35	LB134659
	Barium	1.84	6.0	31	-94	106	02/10/2025	14:35	LB134659
	Cadmium	3.51	1.0	351	-5	7	02/10/2025	14:35	LB134659
	Chromium	56.7	52.0	109	42	62	02/10/2025	14:35	LB134659
	Lead	8.37			-12	12	02/10/2025	14:35	LB134659
	Selenium	-6.12			-20	20	02/10/2025	14:35	LB134659
	Silver	2.79			-10	10	02/10/2025	14:35	LB134659
ICSAB01	Arsenic	106	104	102	88.4	120	02/10/2025	14:41	LB134659
	Barium	442	537	82	437	637	02/10/2025	14:41	LB134659
	Cadmium	963	972	99	826	1120	02/10/2025	14:41	LB134659
	Chromium	556	542	103	460	624	02/10/2025	14:41	LB134659
	Lead	55.7	49.0	114	37	61	02/10/2025	14:41	LB134659
	Selenium	44.9	46.0	98	26	66	02/10/2025	14:41	LB134659
	Silver	216	201	108	170	232	02/10/2025	14:41	LB134659

METAL QC DATA

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

metals
- 5a -
MATRIX SPIKE SUMMARY

client: RU2 Engineering, LLC **level:** low **sdg no.:** Q1235

contract: RUTW01 **lab code:** CHEM **case no.:** Q1235 **sas no.:** Q1235

matrix: Water **sample id:** Q1235-08 **client id:** JPP-16.1-012925MS

Percent Solids for Sample: NA **Spiked ID:** Q1235-08MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	3990		100	U	4000	100		P
Barium	ug/L	75 - 125	1220		333	J	1000	88		P
Cadmium	ug/L	75 - 125	916		30.0	U	1000	92		P
Chromium	ug/L	75 - 125	1920		9.60	J	2000	95		P
Lead	ug/L	75 - 125	4380		60.0	U	5000	88		P
Mercury	ug/L	75 - 125	44.2		2.00	U	40.0	110		CV
Selenium	ug/L	75 - 125	9960		100	U	10000	100		P
Silver	ug/L	75 - 125	363		50.0	U	380	96		P

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: RU2 Engineering, LLC **level:** low **sdg no.:** Q1235

contract: RUTW01 **lab code:** CHEM **case no.:** Q1235 **sas no.:** Q1235

matrix: Water **sample id:** Q1235-08 **client id:** JPP-16.1-012925MSD

Percent Solids for Sample: NA **Spiked ID:** Q1235-08MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	3880		100	U	4000	97		P
Barium	ug/L	75 - 125	1260		333	J	1000	93		P
Cadmium	ug/L	75 - 125	904		30.0	U	1000	90		P
Chromium	ug/L	75 - 125	1920		9.60	J	2000	96		P
Lead	ug/L	75 - 125	4340		60.0	U	5000	87		P
Mercury	ug/L	75 - 125	41.2		2.00	U	40.0	103		CV
Selenium	ug/L	75 - 125	9640		100	U	10000	96		P
Silver	ug/L	75 - 125	360		50.0	U	380	95		P

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals
- 5b -

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

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

Sample ID: **Spiked ID:**

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: RU2 Engineering, LLC **Level:** LOW **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Matrix: Water **Sample ID:** Q1235-08 **Client ID:** JPP-16.1-012925DUP

Percent Solids for Sample: NA **Duplicate ID** Q1235-08DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	100	U	100	U			P
Barium	ug/L	20	333	J	330	J	1		P
Cadmium	ug/L	20	30.0	U	30.0	U			P
Chromium	ug/L	20	9.60	J	11.0	J	13		P
Lead	ug/L	20	60.0	U	60.0	U			P
Mercury	ug/L	20	2.00	U	2.00	U			CV
Selenium	ug/L	20	100	U	100	U			P
Silver	ug/L	20	50.0	U	50.0	U			P

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: RU2 Engineering, LLC **Level:** LOW **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Matrix: Water **Sample ID:** Q1235-08MS **Client ID:** JPP-16.1-012925MSD

Percent Solids for Sample: NA **Duplicate ID** Q1235-08MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	3990		3880		3		P
Barium	ug/L	20	1220		1260		3		P
Cadmium	ug/L	20	916		904		1		P
Chromium	ug/L	20	1920		1920		0		P
Lead	ug/L	20	4380		4340		1		P
Mercury	ug/L	20	44.2		41.2		7		CV
Selenium	ug/L	20	9960		9640		3		P
Silver	ug/L	20	363		360		1		P

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

LABORATORY CONTROL SAMPLE SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166425BS							
Arsenic	ug/L	4000	3710		93	80 - 120	P
Barium	ug/L	1000	885		88	80 - 120	P
Cadmium	ug/L	1000	964		96	80 - 120	P
Chromium	ug/L	2000	2000		100	80 - 120	P
Lead	ug/L	5000	4420		88	80 - 120	P
Selenium	ug/L	10000	9040		90	80 - 120	P
Silver	ug/L	380	350		92	80 - 120	P

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

LABORATORY CONTROL SAMPLE SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB166487BS							
Mercury	ug/L	4.0	4.10		102	80 - 120	CV

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

JPP-16.1-012925L

Lab Name: Chemtech Consulting Group **Contract:** RUTW01

Lab Code: CHEM **Lb No.:** lb134659 **Lab Sample ID :** Q1235-08L **SDG No.:** Q1235

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	100	U	500	U			P
Barium	333	J	2500	U	100.0		P
Cadmium	30.0	U	150	U			P
Chromium	9.60	J	62.4	J	550		P
Lead	60.0	U	300	U			P
Mercury	2.00	U	10.0	U			CV
Selenium	100	U	500	U			P
Silver	50.0	U	250	U			P

METAL PREPARATION & INSTRUMENT DATA

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Al	Ca	Fe	Mg	Ag
Arsenic	193.759	0.0000000	0.0000000	-0.0000440	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	-0.0001440	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: As	Ba	Be	Cd	Co
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	-0.0003570
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Cr	Cu	K	Mn	Mo
Arsenic	193.759	-0.0029000	0.0000000	0.0000000	0.0000000	0.0004900
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0007460	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Case No.:** Q1235 **SAS No.:** Q1235

Instrument ID: **Date:**

Interelement Correction Factors (apparent ppb analyte/ppm interferent)

Analyte	Wave-Length (nm)	ICP Interelement Correction Factors For: Sn	Ti	Tl	V	Zn
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Method:**

Case No.: Q1235 **SAS No.:** Q1235

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166425**						
PB166356TB	PB166356TB	MB	WATER	01/31/2025	5.0	25.0	
PB166425BL	PB166425BL	MB	WATER	01/31/2025	5.0	25.0	
PB166425BS	PB166425BS	LCS	WATER	01/31/2025	5.0	25.0	
Q1235-04	JPP-51.2-012925	SAM	WATER	01/31/2025	5.0	25.0	
Q1235-08	JPP-16.1-012925	SAM	WATER	01/31/2025	5.0	25.0	
Q1235-08DUP	JPP-16.1-012925DUP	DUP	WATER	01/31/2025	5.0	25.0	
Q1235-08MS	JPP-16.1-012925MS	MS	WATER	01/31/2025	5.0	25.0	
Q1235-08MSD	JPP-16.1-012925MSD	MSD	WATER	01/31/2025	5.0	25.0	

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: RU2 Engineering, LLC **SDG No.:** Q1235

Contract: RUTW01 **Lab Code:** CHEM **Method:**

Case No.: Q1235 **SAS No.:** Q1235

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB166487**						
PB166356TB	PB166356TB	MB	WATER	02/03/2025	3.0	30.0	
PB166487BL	PB166487BL	MB	WATER	02/03/2025	30.0	30.0	
PB166487BS	PB166487BS	LCS	WATER	02/03/2025	30.0	30.0	
Q1235-04	JPP-51.2-012925	SAM	WATER	02/03/2025	3.0	30.0	
Q1235-08	JPP-16.1-012925	SAM	WATER	02/03/2025	3.0	30.0	
Q1235-08DUP	JPP-16.1-012925DUP	DUP	WATER	02/03/2025	3.0	30.0	
Q1235-08MS	JPP-16.1-012925MS	MS	WATER	02/03/2025	3.0	30.0	
Q1235-08MSD	JPP-16.1-012925MSD	MSD	WATER	02/03/2025	3.0	30.0	

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

metals
- 14 -
ANALYSIS RUN LOG

Client: RU2 Engineering, LLC **Contract:** RUTW01

Lab code: CHEM **Case no.:** Q1235 **Sas no.:** Q1235 **Sdg no.:** Q1235

Instrument id number: **Method:** **Run number:** LB134537

Start date: 02/03/2025 **End date:** 02/03/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1535	HG
S0.2	S0.2	1	1537	HG
S2.5	S2.5	1	1541	HG
S5	S5	1	1543	HG
S7.5	S7.5	1	1546	HG
S10	S10	1	1554	HG
ICV81	ICV81	1	1559	HG
ICB81	ICB81	1	1601	HG
CCV10	CCV10	1	1603	HG
CCB10	CCB10	1	1606	HG
CRA	CRA	1	1608	HG
PB166487BL	PB166487BL	1	1615	HG
PB166487BS	PB166487BS	1	1620	HG
CCV11	CCV11	1	1633	HG
CCB11	CCB11	1	1636	HG
CCV12	CCV12	1	1701	HG
CCB12	CCB12	1	1703	HG
Q1235-04	JPP-51.2-012925	1	1705	HG
Q1235-08	JPP-16.1-012925	1	1707	HG
Q1235-08DUP	JPP-16.1-012925DUP	1	1710	HG
Q1235-08MS	JPP-16.1-012925MS	1	1712	HG
Q1235-08MSD	JPP-16.1-012925MSD	1	1714	HG
PB166356TB	PB166356TB	1	1716	HG
Q1235-08L	JPP-16.1-012925L	5	1719	HG
CCV13	CCV13	1	1723	HG
CCB13	CCB13	1	1726	HG

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

metals
- 14 -
ANALYSIS RUN LOG

Client: RU2 Engineering, LLC **Contract:** RUTW01

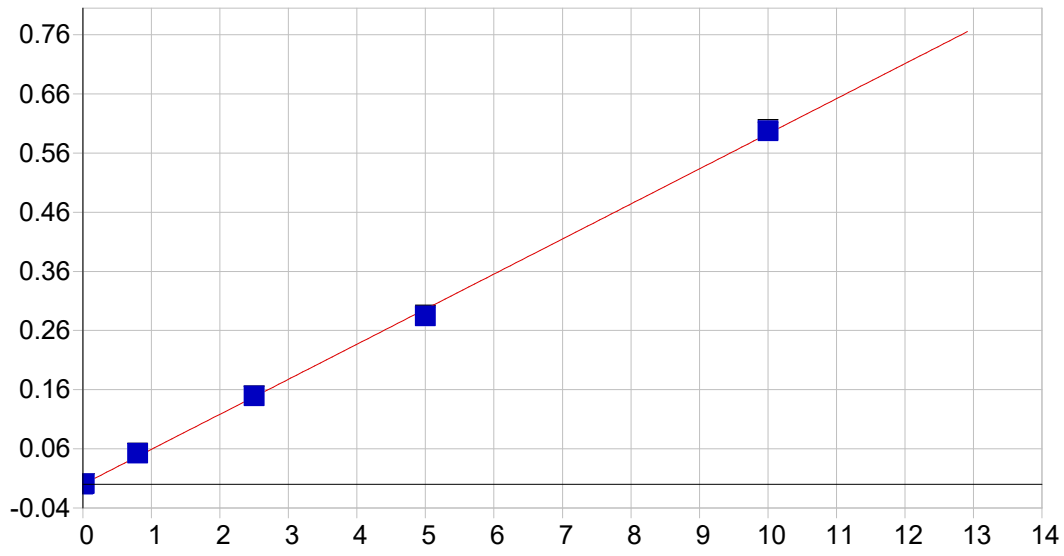
Lab code: CHEM **Case no.:** Q1235 **Sas no.:** Q1235 **Sdg no.:** Q1235

Instrument id number: **Method:** **Run number:** LB134659

Start date: 02/10/2025 **End date:** 02/10/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1328	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1332	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1336	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1340	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1344	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1349	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1406	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1420	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1426	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1431	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1435	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1441	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1459	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1503	Ag,As,Ba,Cd,Cr,Pb,Se
PB166356TB	PB166356TB	1	1507	Ag,As,Ba,Cd,Cr,Pb,Se
PB166425BL	PB166425BL	1	1512	Ag,As,Ba,Cd,Cr,Pb,Se
PB166425BS	PB166425BS	1	1516	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1605	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1608	Ag,As,Ba,Cd,Cr,Pb,Se
Q1235-04	JPP-51.2-012925	1	1635	Ag,As,Ba,Cd,Cr,Pb,Se
Q1235-08	JPP-16.1-012925	1	1639	Ag,As,Ba,Cd,Cr,Pb,Se
Q1235-08DUP	JPP-16.1-012925DUP	1	1644	Ag,As,Ba,Cd,Cr,Pb,Se
Q1235-08L	JPP-16.1-012925L	5	1648	Ag,As,Ba,Cd,Cr,Pb,Se
Q1235-08MS	JPP-16.1-012925MS	1	1652	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1657	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1706	Ag,As,Ba,Cd,Cr,Pb,Se
Q1235-08MSD	JPP-16.1-012925MSD	1	1711	Ag,As,Ba,Cd,Cr,Pb,Se
CCV04	CCV04	1	1753	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1800	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	1848	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	1852	Ag,As,Ba,Cd,Cr,Pb,Se
CCV06	CCV06	1	1940	Ag,As,Ba,Cd,Cr,Pb,Se
CCB06	CCB06	1	1945	Ag,As,Ba,Cd,Cr,Pb,Se
CCV07	CCV07	1	2036	Ag,As,Ba,Cd,Cr,Pb,Se
CCB07	CCB07	1	2041	Ag,As,Ba,Cd,Cr,Pb,Se
CCV08	CCV08	1	2102	Ag,As,Ba,Cd,Cr,Pb,Se
CCB08	CCB08	1	2106	Ag,As,Ba,Cd,Cr,Pb,Se

METAL
RAW DATA

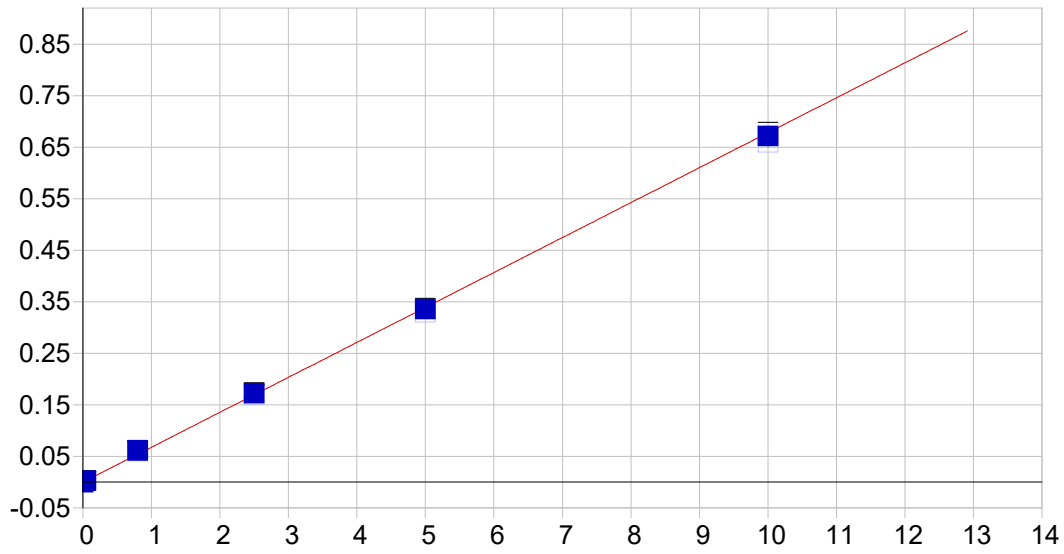


As 189.042 {479}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000199	Re-Slope:	1.000000
A1 (Gain):	0.059280	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999498	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.002221		
Predicted MQL:	0.007403		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00020	.000	1
S1	.02000	.02194	.002	9.68	.00110	.000	1
S3	2.5000	2.5241	.024	.966	.14927	.000	1
S4	5.0000	4.8025	-.198	-3.95	.28417	.002	1
S5	10.000	10.085	.085	.846	.59697	.002	1
S2	.80000	.88686	.087	10.9	.05232	.000	1

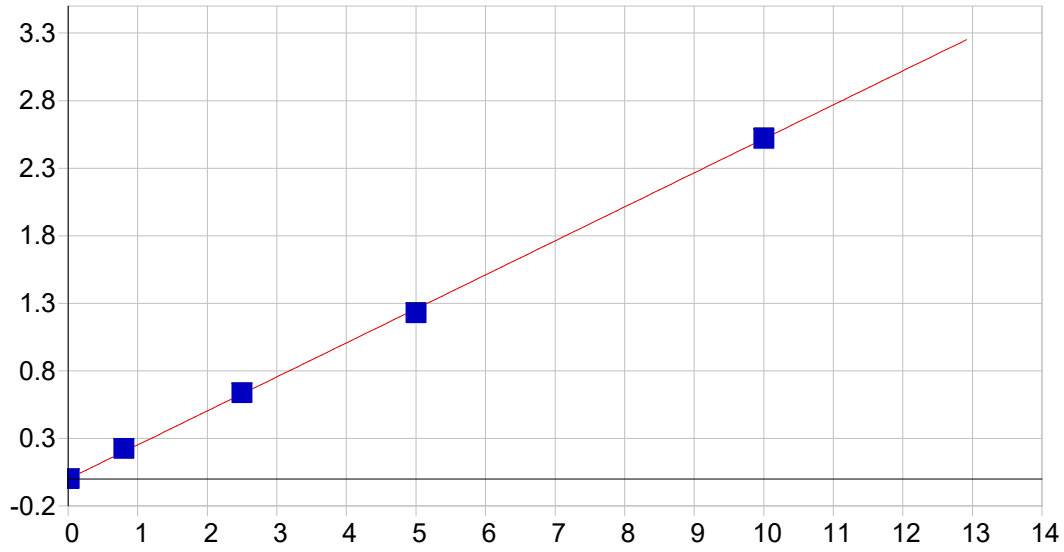


Tl 190.856 {477}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000099	Re-Slope:	1.000000
A1 (Gain):	0.067820	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999563	Status:	OK.
Std Error of Est:	0.000065		
Predicted MDL:	0.001968		
Predicted MQL:	0.006561		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00010	.000	1
S1	.04000	.03841	-.002	-3.97	.00233	.000	1
S3	2.5000	2.5423	.042	1.69	.16920	.001	1
S4	5.0000	4.9496	-.050	-1.01	.32934	.002	1
S5	10.000	9.9065	-.094	-.935	.65927	.007	1
S2	.80000	.90306	.103	12.9	.06015	.001	1

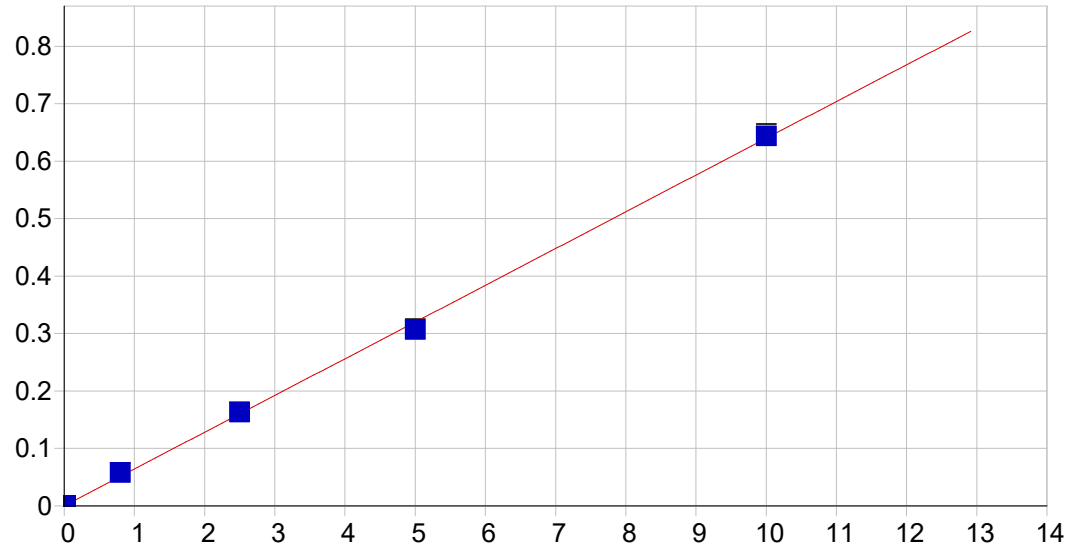


Pb 220.353 {453}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000279	Re-Slope:	1.000000
A1 (Gain):	0.251726	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999621	Status:	OK.
Std Error of Est:	0.000126		
Predicted MDL:	0.001148		
Predicted MQL:	0.003827		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00028	.000	1
S1	.01200	.01088	-.001	-9.34	.00240	.000	1
S3	2.5000	2.5285	.028	1.14	.63551	.001	1
S4	5.0000	4.8766	-.123	-2.47	1.2259	.003	1
S5	10.000	10.005	.005	.050	2.5155	.006	1
S2	.80000	.89113	.091	11.4	.22382	.001	1

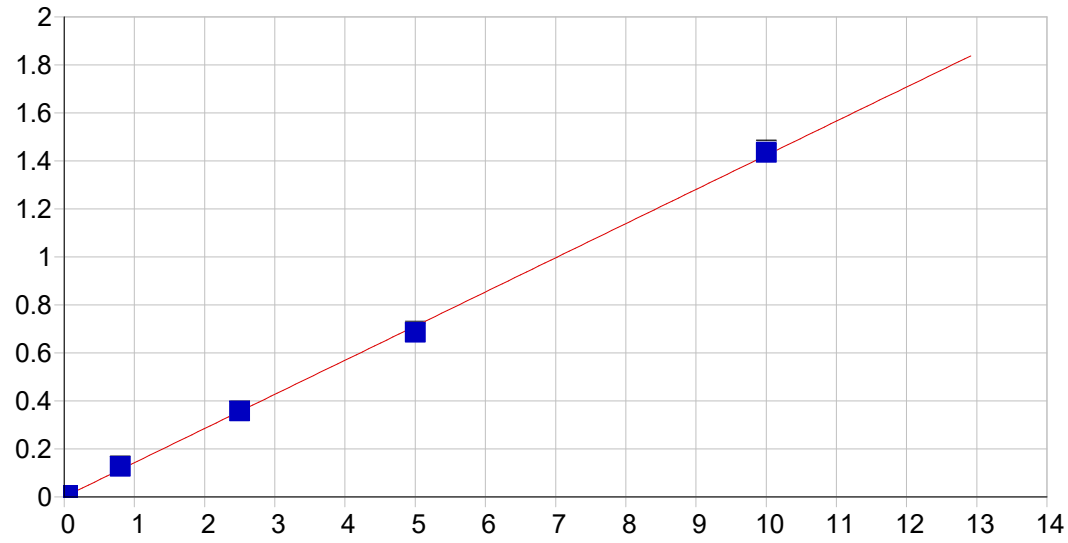


Se 196.090 {472}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000290	Re-Slope:	1.000000
A1 (Gain):	0.063951	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999401	Status:	OK.
Std Error of Est:	0.000052		
Predicted MDL:	0.002550		
Predicted MQL:	0.008499		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00029	.000	1
S1	.02000	.01960	-.000	-2.00	.00154	.000	1
S3	2.5000	2.5437	.044	1.75	.16290	.000	1
S4	5.0000	4.7917	-.208	-4.17	.30661	.001	1
S5	10.000	10.067	.067	.668	.64384	.004	1
S2	.80000	.89825	.098	12.3	.05772	.000	1

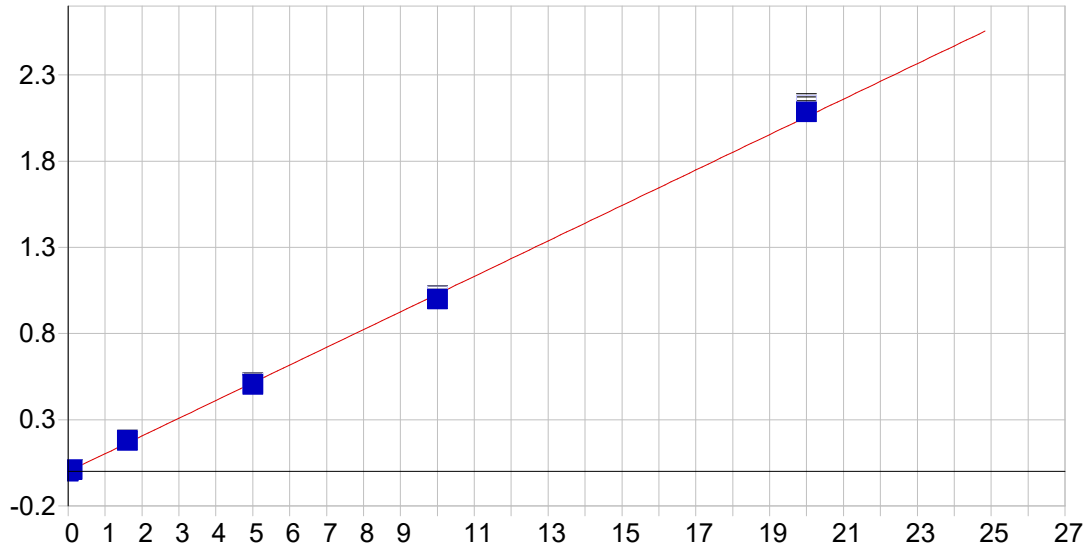


Sb 206.833 {463}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000272	Re-Slope:	1.000000
A1 (Gain):	0.142298	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999502	Status:	OK.
Std Error of Est:	0.000167		
Predicted MDL:	0.001437		
Predicted MQL:	0.004789		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00027	.000	1
S1	.05000	.04992	-.000	-.153	.00739	.000	1
S3	2.5000	2.5136	.014	.543	.35891	.000	1
S4	5.0000	4.8134	-.187	-3.73	.68715	.003	1
S5	10.000	10.081	.081	.806	1.4386	.007	1
S2	.80000	.89248	.092	11.6	.12758	.000	1

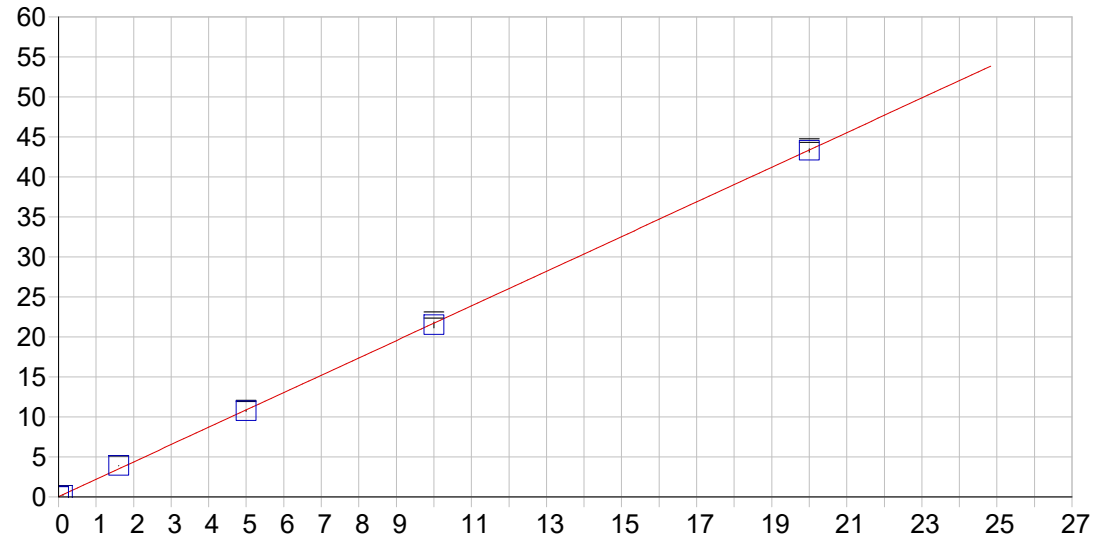


Al 396.152 { 85}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000139	Re-Slope:	1.000000
A1 (Gain):	0.102860	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999656	Status:	OK.
Std Error of Est:	0.000204		
Predicted MDL:	0.005486		
Predicted MQL:	0.018288		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00014	.000	1
S1	.10000	.09715	-.003	-2.85	.01093	.000	1
S3	5.0000	4.8932	-.107	-2.14	.51344	.002	1
S4	10.000	9.7061	-.294	-2.94	1.0185	.001	1
S5	20.000	20.267	.267	1.33	2.1247	.009	1
S2	1.6000	1.7370	.137	8.56	.18200	.001	1

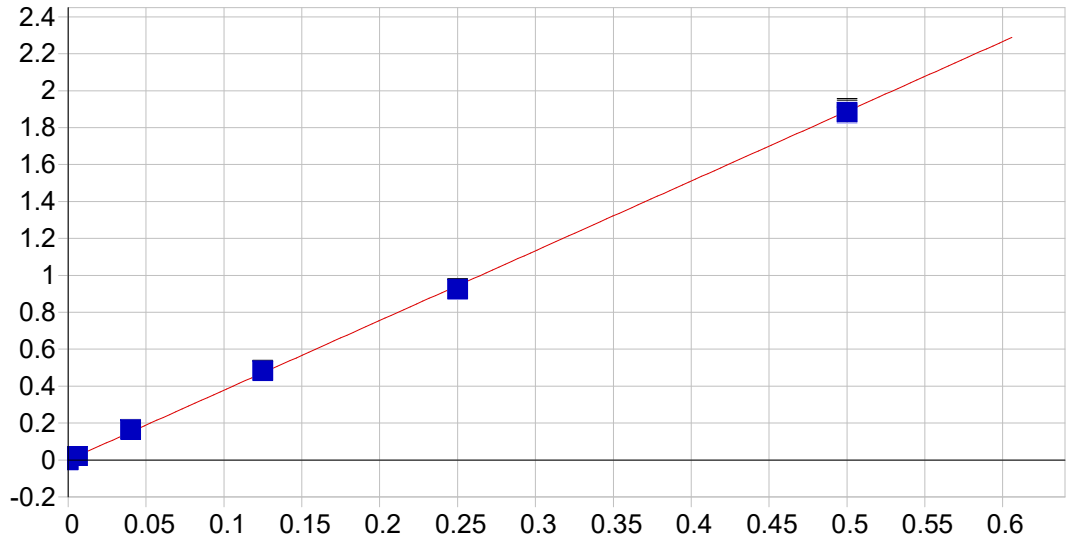


Ba 493.409 { 68}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.042419	Re-Slope:	1.000000
A1 (Gain):	2.166345	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999670	Status:	OK.
Std Error of Est:	0.004129		
Predicted MDL:	0.000734		
Predicted MQL:	0.002445		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.04241	.001	1
S1	.10000	.09396	-.006	-6.04	.24597	.002	1
S3	5.0000	4.9439	-.056	-1.12	10.753	.082	1
S4	10.000	9.9052	-.095	-.948	21.500	.362	1
S5	20.000	19.968	-.032	-.160	43.300	.212	1
S2	1.6000	1.7889	.189	11.8	3.9178	.022	1

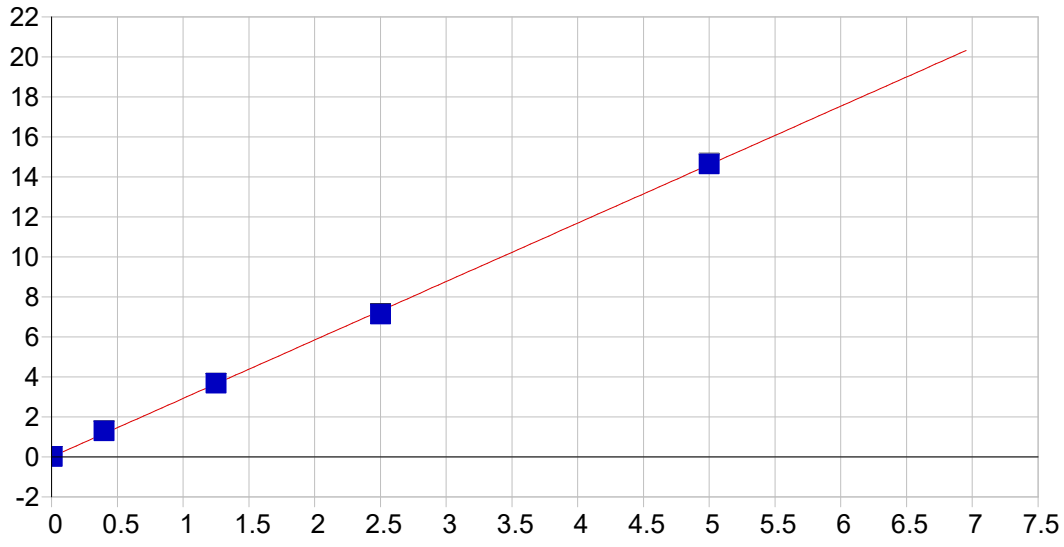


Be 234.861 {144}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000092	Re-Slope:	1.000000
A1 (Gain):	3.776722	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999724	Status:	OK.
Std Error of Est:	0.000254		
Predicted MDL:	0.000055		
Predicted MQL:	0.000182		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00009	.000	1
S1	.00600	.00579	-.000	-3.50	.02179	.000	1
S3	.12500	.12793	.003	2.34	.48113	.002	1
S4	.25000	.24495	-.005	-2.02	.92098	.002	1
S5	.50000	.49873	-.001	-.254	1.8752	.020	1
S2	.04000	.04359	.004	8.99	.16406	.001	1

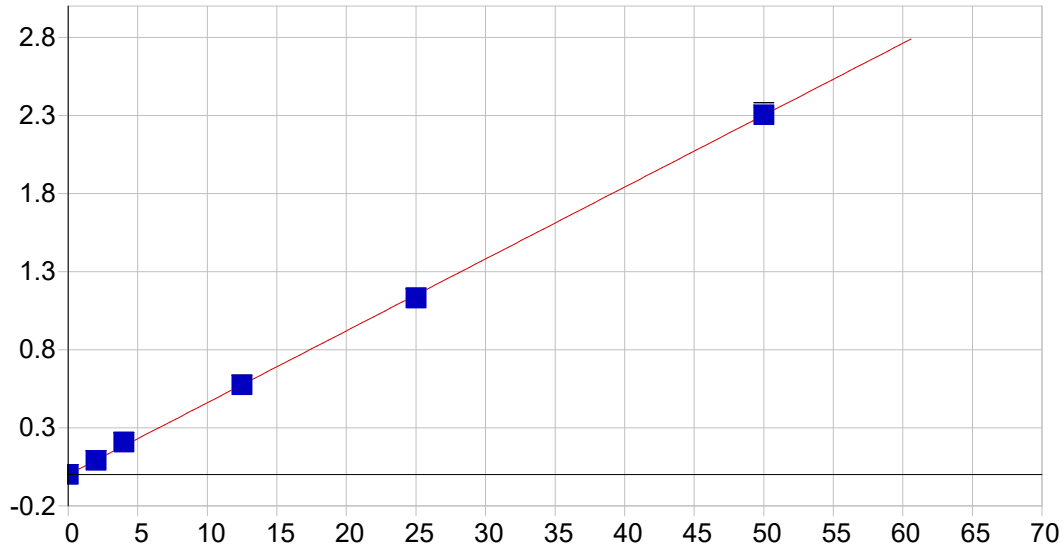


Cd 226.502 {449}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000124	Re-Slope:	1.000000
A1 (Gain):	2.922634	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999684	Status:	OK.
Std Error of Est:	0.000667		
Predicted MDL:	0.000081		
Predicted MQL:	0.000270		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00012	.000	1
S1	.00600	.00585	-.000	-2.51	.01730	.000	1
S3	1.2500	1.2567	.007	.536	3.6758	.006	1
S4	2.5000	2.4420	-.058	-2.32	7.1429	.017	1
S5	5.0000	5.0095	.009	.190	14.652	.039	1
S2	.40000	.44194	.042	10.5	1.2927	.002	1

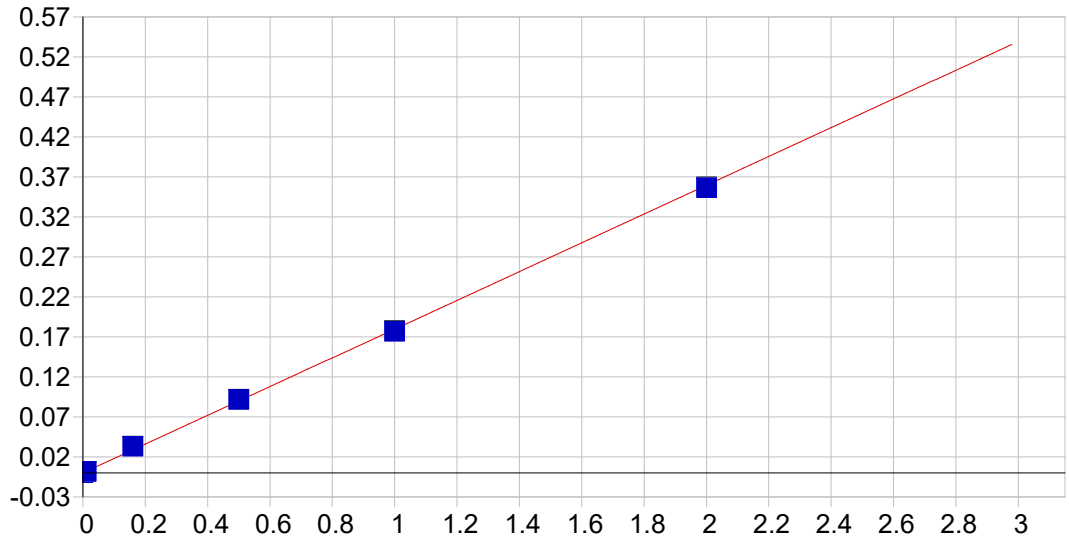


Ca 373.690 { 90}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000259	Re-Slope:	1.000000
A1 (Gain):	0.046024	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999634	Status:	OK.
Std Error of Est:	0.000659		
Predicted MDL:	0.009560		
Predicted MQL:	0.031866		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00016	-.000	.000	.00025	.000	1
S2	4.0000	4.4876	.488	12.2	.20680	.001	1
S3	12.500	12.456	-.044	-.355	.57352	.001	1
S4	25.000	24.556	-.444	-1.77	1.1304	.002	1
S5	50.000	50.044	.044	.088	2.3035	.014	1
S1	2.0000	1.9566	-.043	-2.17	.09031	.001	1

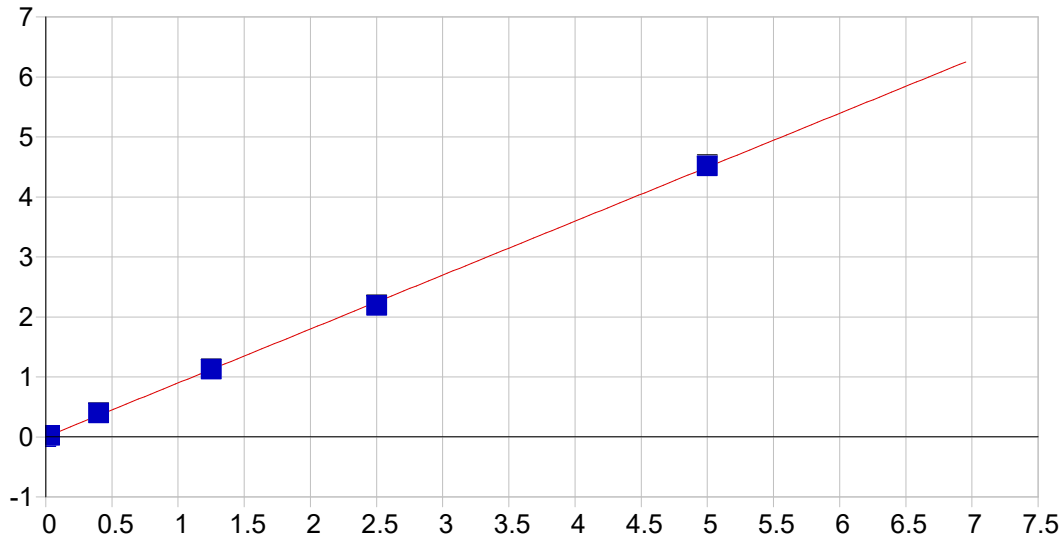


Cr 267.716 {126}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000035	Re-Slope:	1.000000
A1 (Gain):	0.179793	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999431	Status:	OK.
Std Error of Est:	0.000045		
Predicted MDL:	0.000386		
Predicted MQL:	0.001285		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00004	.000	1
S1	.01000	.00979	-.000	-2.09	.00173	.000	1
S3	.50000	.51048	.010	2.10	.09177	.000	1
S4	1.0000	.98444	-.016	-1.56	.17701	.001	1
S5	2.0000	1.9815	-.019	-.926	.35633	.001	1
S2	.16000	.18381	.024	14.9	.03302	.000	1

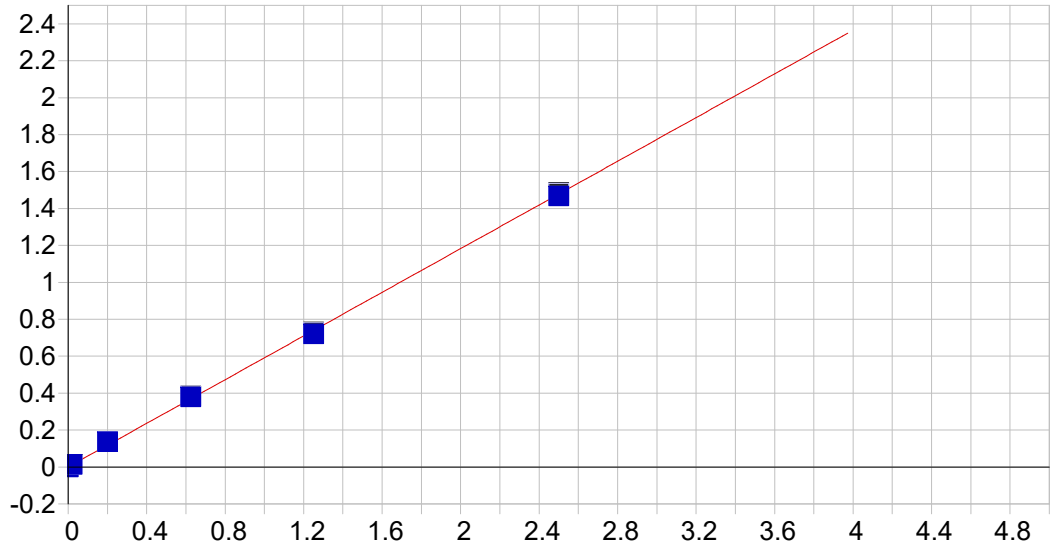


Co 228.616 {448}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000110	Re-Slope:	1.000000
A1 (Gain):	0.898897	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999648	Status:	OK.
Std Error of Est:	0.000485		
Predicted MDL:	0.000217		
Predicted MQL:	0.000723		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00011	.000	1
S1	.03000	.02922	-.001	-2.61	.02626	.000	1
S3	1.2500	1.2532	.003	.254	1.1285	.001	1
S4	2.5000	2.4342	-.066	-2.63	2.1920	.007	1
S5	5.0000	5.0203	.020	.406	4.5205	.014	1
S2	.40000	.44307	.043	10.8	.39899	.000	1

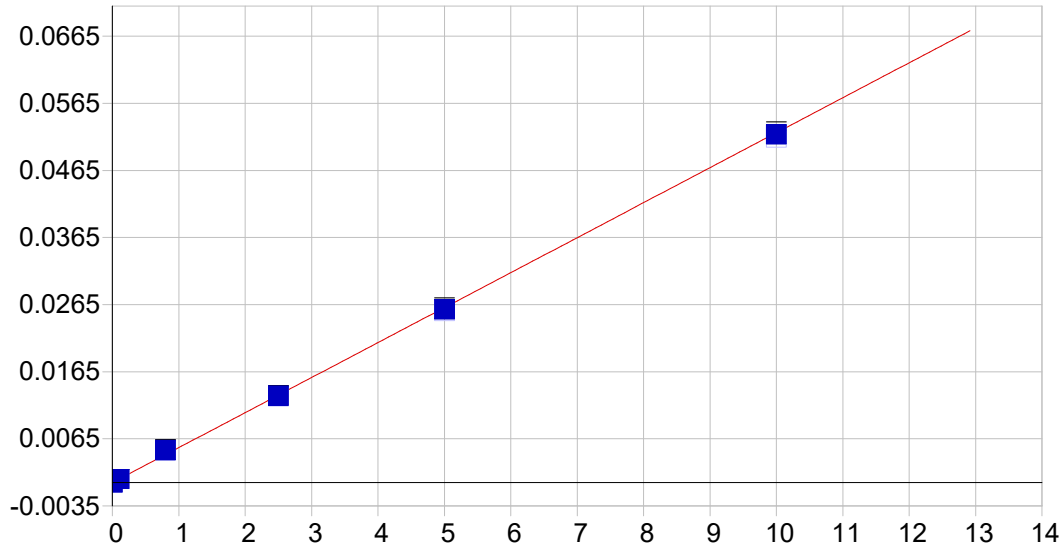


Cu 224.700 {450}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000348	Re-Slope:	1.000000
A1 (Gain):	0.591426	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999335	Status:	OK.
Std Error of Est:	0.000256		
Predicted MDL:	0.000444		
Predicted MQL:	0.001480		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00035	.000	1
S1	.02000	.02178	.002	8.92	.01269	.000	1
S3	.62500	.64250	.018	2.80	.38332	.001	1
S4	1.2500	1.2178	-.032	-2.58	.72722	.004	1
S5	2.5000	2.4825	-.018	-.701	1.4825	.004	1
S2	.20000	.23046	.030	15.2	.13713	.001	1

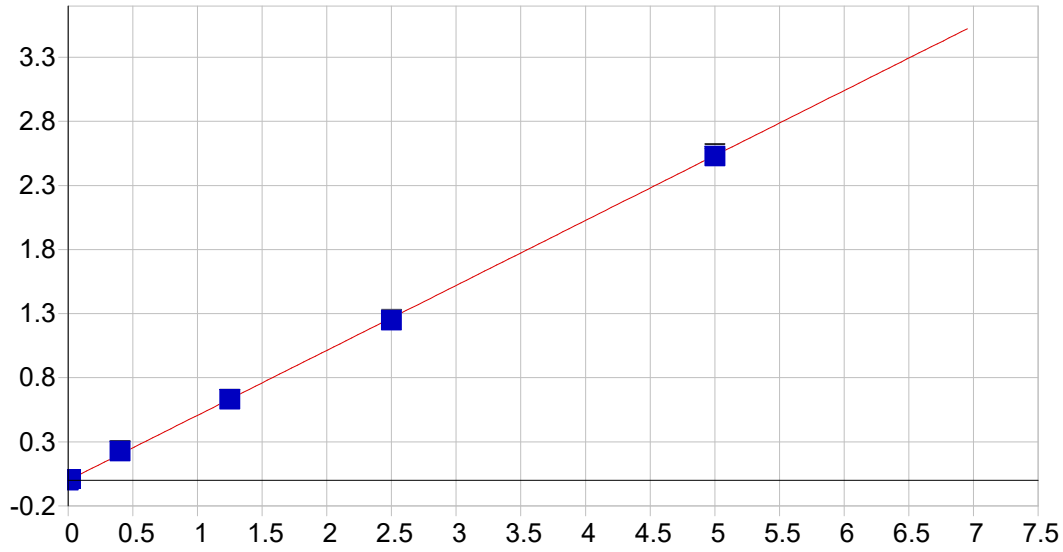


Fe 240.488 {140}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000025	Re-Slope:	1.000000
A1 (Gain):	0.005215	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999422	Status:	OK.
Std Error of Est:	0.000009		
Predicted MDL:	0.004586		
Predicted MQL:	0.015288		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00002	.000	1
S1	.10000	.09900	-.001	-.997	.00048	.000	1
S3	2.5000	2.4794	-.021	-.824	.01279	.000	1
S4	5.0000	4.9471	-.053	-1.06	.02555	.000	1
S5	10.000	9.9483	-.052	-.517	.05141	.000	1
S2	.80000	.92622	.126	15.8	.00477	.000	1

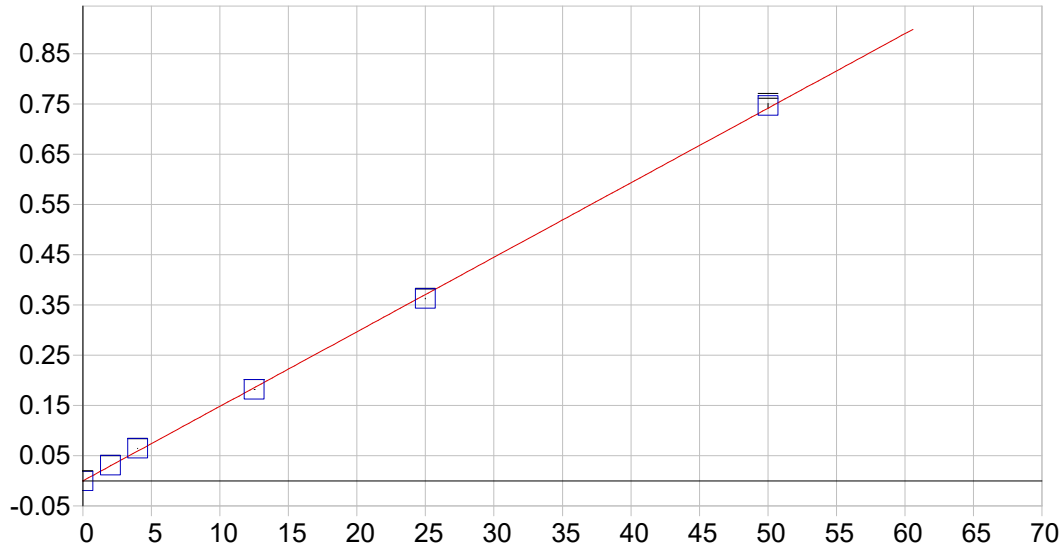


Mn 257.610 {131}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000031	Re-Slope:	1.000000
A1 (Gain):	0.506756	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999637	Status:	OK.
Std Error of Est:	0.000227		
Predicted MDL:	0.000349		
Predicted MQL:	0.001165		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00003	.000	1
S1	.02000	.01990	-.000	-.521	.01012	.000	1
S3	1.2500	1.2447	-.005	-.424	.63092	.001	1
S4	2.5000	2.4654	-.035	-1.39	1.2496	.006	1
S5	5.0000	4.9904	-.010	-.191	2.5295	.018	1
S2	.40000	.44959	.050	12.4	.22790	.001	1

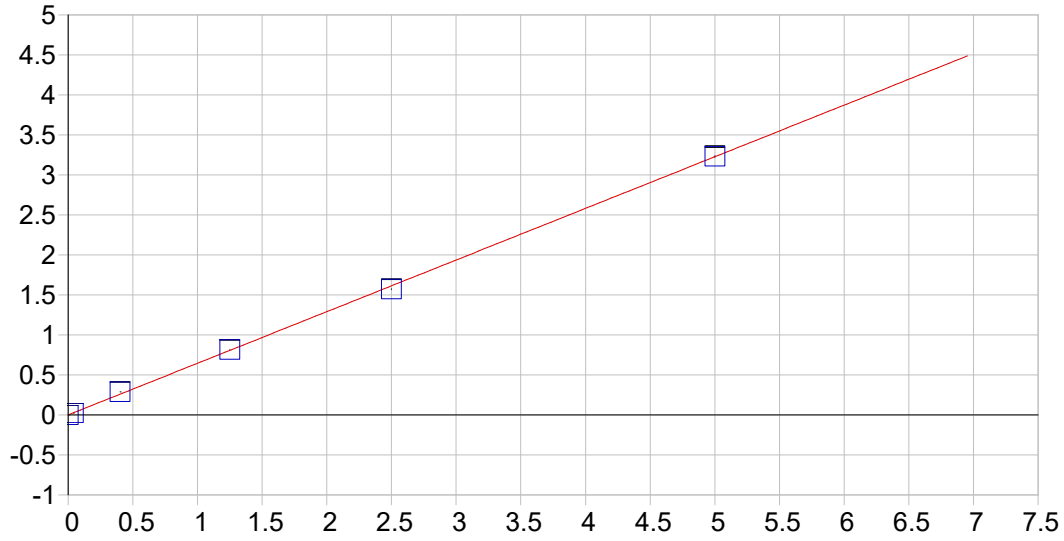


Mg 279.079 {121}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000144	Re-Slope:	1.000000
A1 (Gain):	0.014836	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999712	Status:	OK.
Std Error of Est:	0.000188		
Predicted MDL:	0.013428		
Predicted MQL:	0.044758		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00019	-.000	.000	-.00015	.000	1
S2	4.0000	4.3609	.361	9.02	.06455	.000	1
S3	12.500	12.271	-.229	-1.83	.18190	.000	1
S4	25.000	24.456	-.544	-2.17	.36268	.000	1
S5	50.000	50.335	.335	.669	.74660	.005	1
S1	2.0000	2.0776	.078	3.88	.03068	.000	1

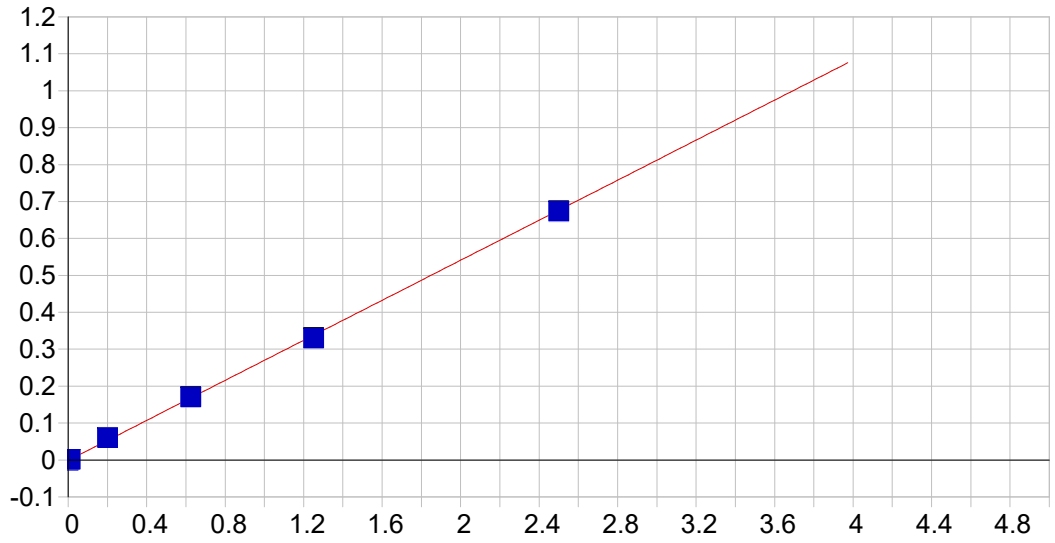


Ni 231.604 {446}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000044	Re-Slope:	1.000000
A1 (Gain):	0.645359	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999597	Status:	OK.
Std Error of Est:	0.000430		
Predicted MDL:	0.000337		
Predicted MQL:	0.001124		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00004	.000	1
S1	.04000	.03932	-.001	-1.70	.02542	.000	1
S3	1.2500	1.2627	.013	1.01	.81492	.001	1
S4	2.5000	2.4357	-.064	-2.57	1.5720	.004	1
S5	5.0000	5.0049	.005	.098	3.2300	.009	1
S2	.40000	.44737	.047	11.8	.28876	.001	1

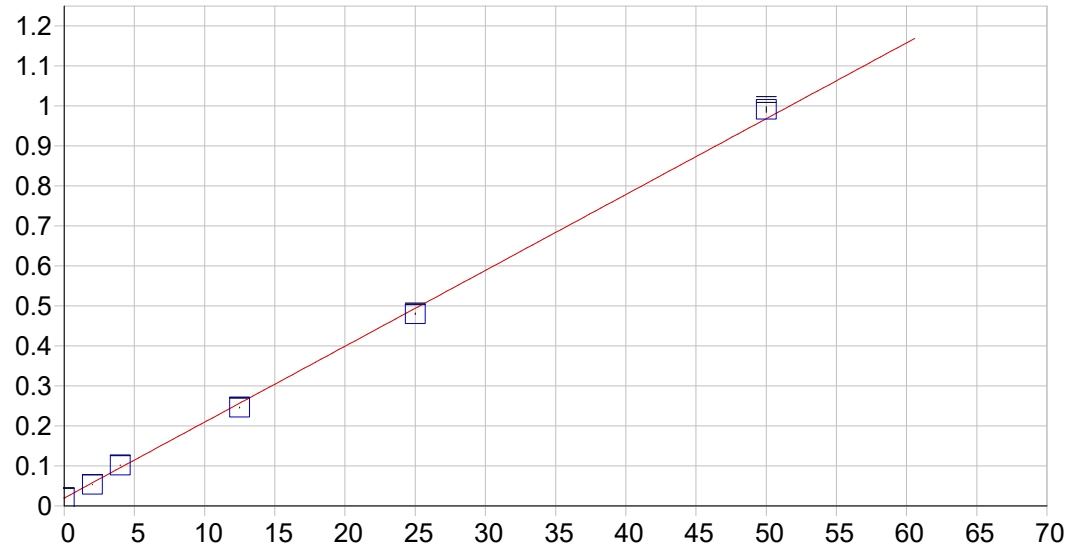


Ag 328.068 {103}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001151	Re-Slope:	1.000000
A1 (Gain):	0.271052	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999486	Status:	OK.
Std Error of Est:	0.000072		
Predicted MDL:	0.000357		
Predicted MQL:	0.001190		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00115	.000	1
S1	.01000	.01027	.000	2.66	.00161	.000	1
S3	.62500	.63327	.008	1.32	.16983	.000	1
S4	1.2500	1.2228	-.027	-2.18	.32894	.001	1
S5	2.5000	2.4907	-.009	-.374	.67125	.001	1
S2	.20000	.22805	.028	14.0	.06045	.000	1

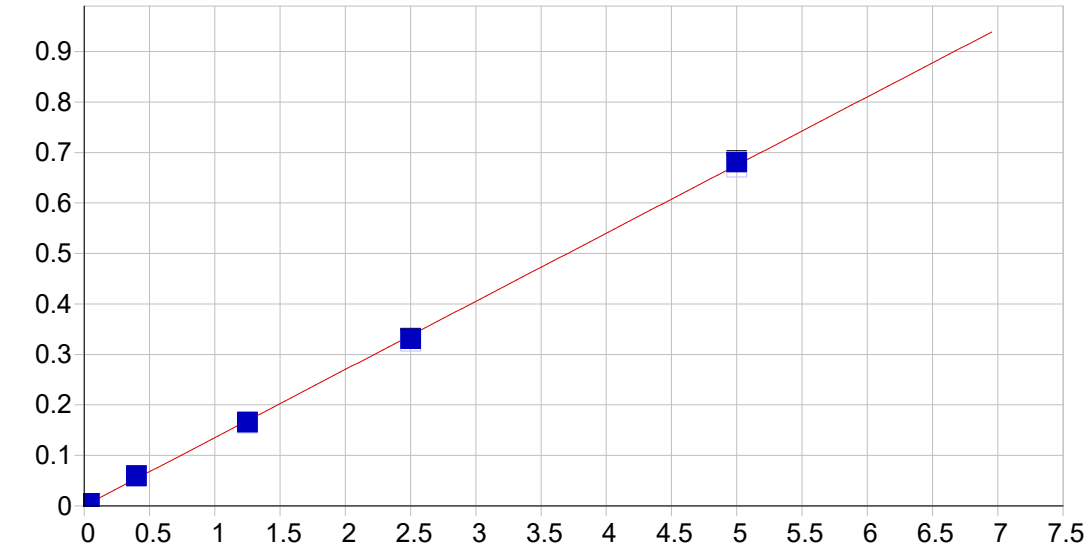


Na 589.592 { 57}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.019858	Re-Slope:	1.000000
A1 (Gain):	0.018969	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999323	Status:	OK.
Std Error of Est:	0.000369		
Predicted MDL:	0.008228		
Predicted MQL:	0.027428		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00018	.000	.000	.01986	.001	1
S2	4.0000	4.3013	.301	7.53	.10145	.001	1
S3	12.500	11.932	-.568	-4.54	.24620	.001	1
S4	25.000	24.276	-.724	-2.90	.48034	.002	1
S5	50.000	51.224	1.22	2.45	.99151	.007	1
S1	2.0000	1.7665	-.233	-11.7	.05337	.000	1

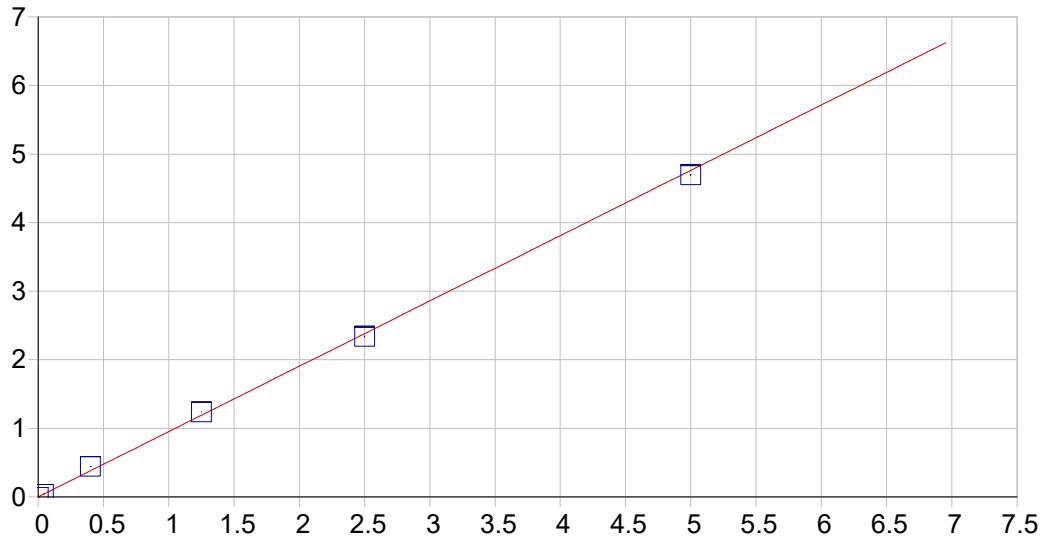


V 292.402 {115}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000136	Re-Slope:	1.000000
A1 (Gain):	0.134994	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999685	Status:	OK.
Std Error of Est:	0.000078		
Predicted MDL:	0.001618		
Predicted MQL:	0.005392		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00014	.000	1
S1	.04000	.03678	-.003	-8.05	.00490	.000	1
S3	1.2500	1.2264	-.024	-1.88	.16324	.000	1
S4	2.5000	2.4496	-.050	-2.02	.32590	.001	1
S5	5.0000	5.0392	.039	.784	.67056	.004	1
S2	.40000	.43791	.038	9.48	.05846	.000	1

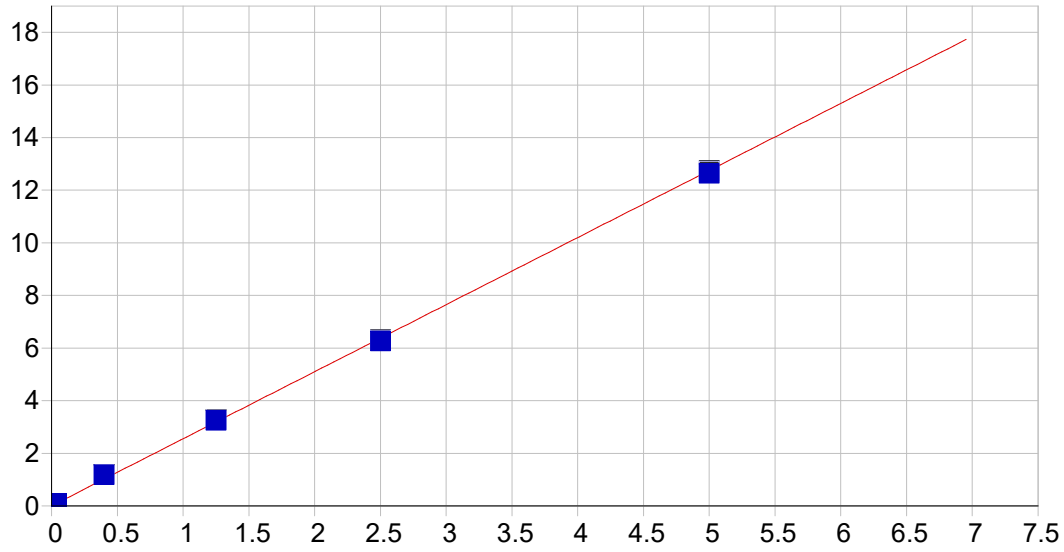


Zn 206.200 {464}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000324	Re-Slope:	1.000000
A1 (Gain):	0.952430	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999175	Status:	OK.
Std Error of Est:	0.000909		
Predicted MDL:	0.000182		
Predicted MQL:	0.000608		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00031	.000	1
S1	.04000	.04265	.003	6.62	.04094	.000	1
S3	1.2500	1.2998	.050	3.98	1.2383	.003	1
S4	2.5000	2.4540	-.046	-1.84	2.3376	.010	1
S5	5.0000	4.9269	-.073	-1.46	4.6929	.009	1
S2	.40000	.46666	.067	16.7	.44478	.001	1

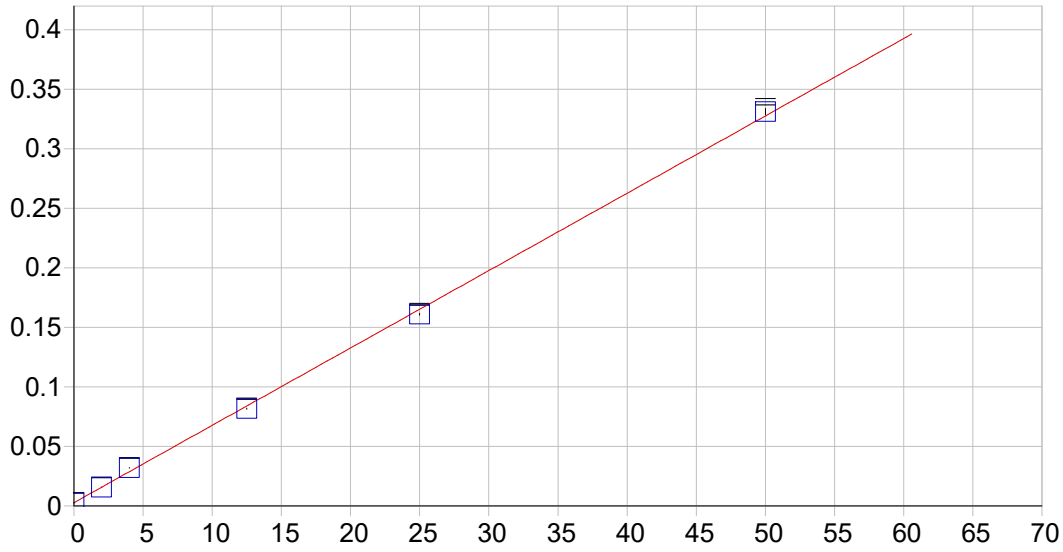


Zn 213.856 {158}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001423	Re-Slope:	1.000000
A1 (Gain):	2.549838	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999355	Status:	OK.
Std Error of Est:	0.002165		
Predicted MDL:	0.000271		
Predicted MQL:	0.000902		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00140	.000	1
S1	.04000	.04240	.002	6.01	.11026	.002	1
S3	1.2500	1.2750	.025	2.00	3.2747	.009	1
S4	2.5000	2.4546	-.045	-1.81	6.3047	.003	1
S5	5.0000	4.9542	-.046	-.916	12.723	.025	1
S2	.40000	.46369	.064	15.9	1.1909	.002	1

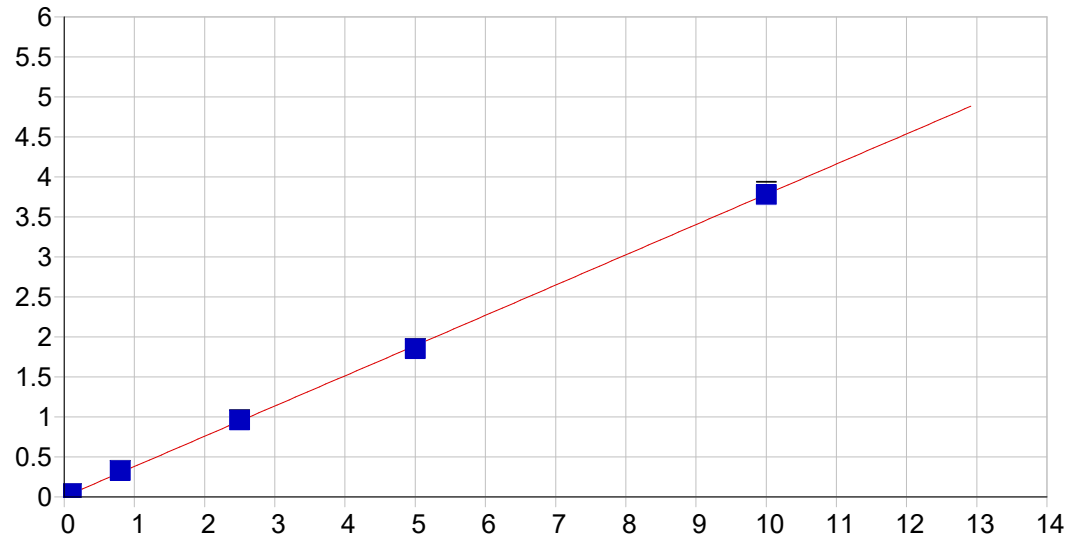


K 766.490 { 44}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002736	Re-Slope:	1.000000
A1 (Gain):	0.006499	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999467	Status:	OK.
Std Error of Est:	0.000112		
Predicted MDL:	0.030539		
Predicted MQL:	0.101797		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00013	-.000	.000	.00274	.000	1
S2	4.0000	4.5129	.513	12.8	.03207	.000	1
S3	12.500	12.144	-.356	-2.85	.08167	.000	1
S4	25.000	24.342	-.658	-2.63	.16094	.001	1
S5	50.000	50.536	.536	1.07	.33119	.003	1
S1	2.0000	1.9648	-.035	-1.76	.01551	.000	1

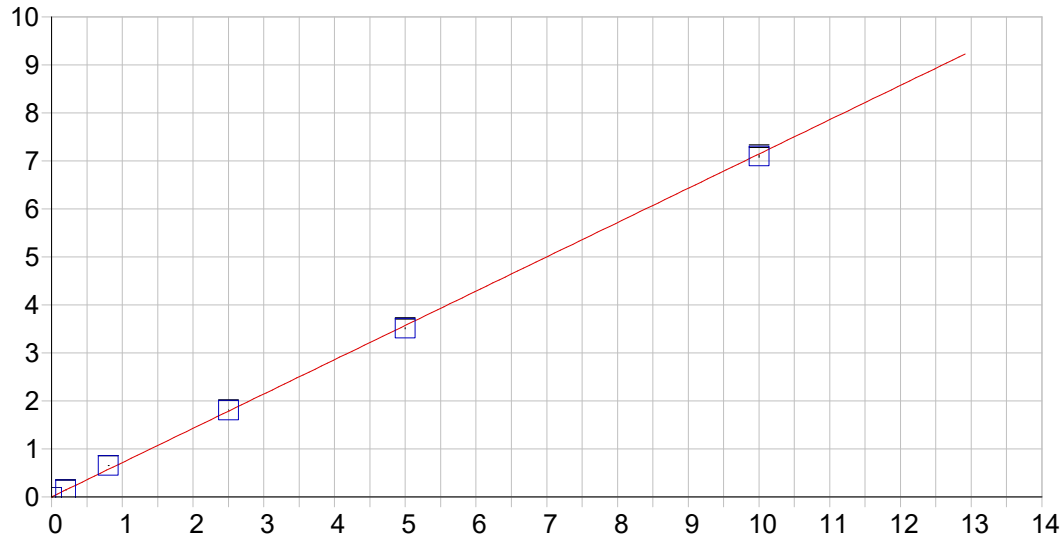


B 249.678 {135}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001701	Re-Slope:	1.000000
A1 (Gain):	0.377998	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999786	Status:	OK.
Std Error of Est:	0.000410		
Predicted MDL:	0.000682		
Predicted MQL:	0.002275		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00170	.000	1
S1	.10000	.10188	.002	1.88	.04005	.000	1
S3	2.5000	2.5350	.035	1.40	.95806	.004	1
S4	5.0000	4.8994	-.101	-2.01	1.8500	.004	1
S5	10.000	9.9986	-.001	-.014	3.7738	.039	1
S2	.80000	.86514	.065	8.14	.32813	.002	1

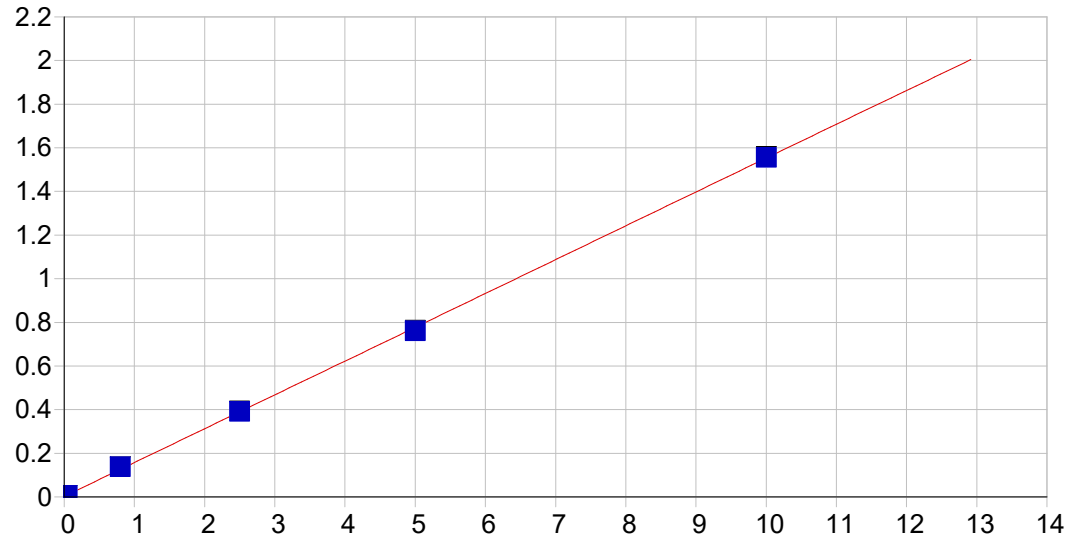


Mo 202.030 {467}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000182	Re-Slope:	1.000000
A1 (Gain):	0.714407	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999521	Status:	OK.
Std Error of Est:	0.001647		
Predicted MDL:	0.000256		
Predicted MQL:	0.000853		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00003	-.000	.000	.00016	.000	1
S1	.20000	.20124	.001	.618	.14395	.000	1
S3	2.5000	2.5308	.031	1.23	1.8082	.002	1
S4	5.0000	4.9169	-.083	-1.66	3.5128	.016	1
S5	10.000	9.9394	-.061	-.606	7.1009	.026	1
S2	.80000	.91172	.112	14.0	.65152	.001	1

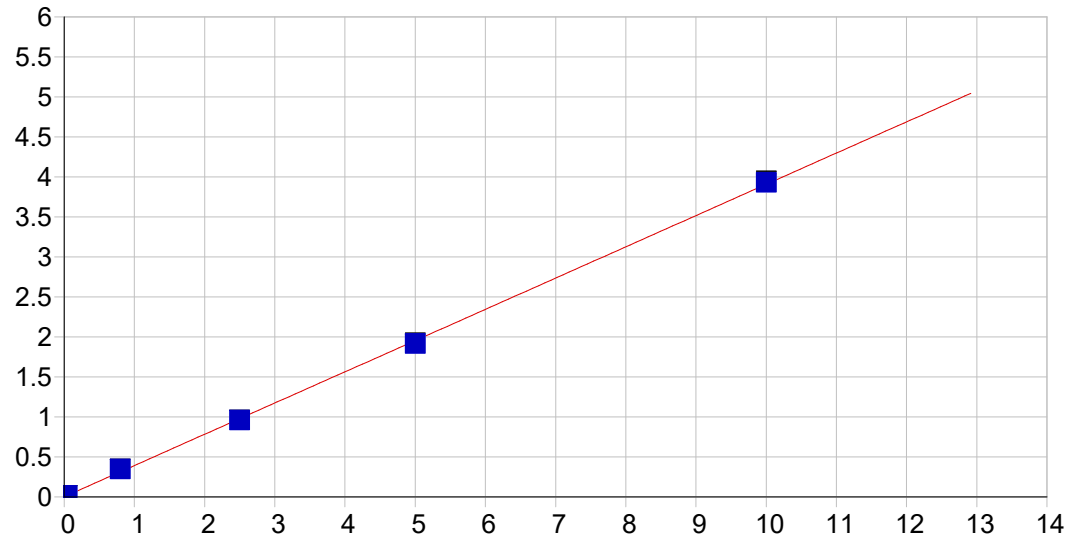


Sn 189.989 {478}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002300	Re-Slope:	1.000000
A1 (Gain):	0.155034	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999758	Status:	OK.
Std Error of Est:	0.000113		
Predicted MDL:	0.000702		
Predicted MQL:	0.002339		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00230	.000	1
S1	.04000	.03827	-.002	-4.32	.00823	.000	1
S3	2.5000	2.5156	.016	.623	.39190	.000	1
S4	5.0000	4.8952	-.105	-2.10	.76042	.002	1
S5	10.000	10.019	.019	.191	1.5540	.005	1
S2	.80000	.87190	.072	8.99	.13735	.000	1

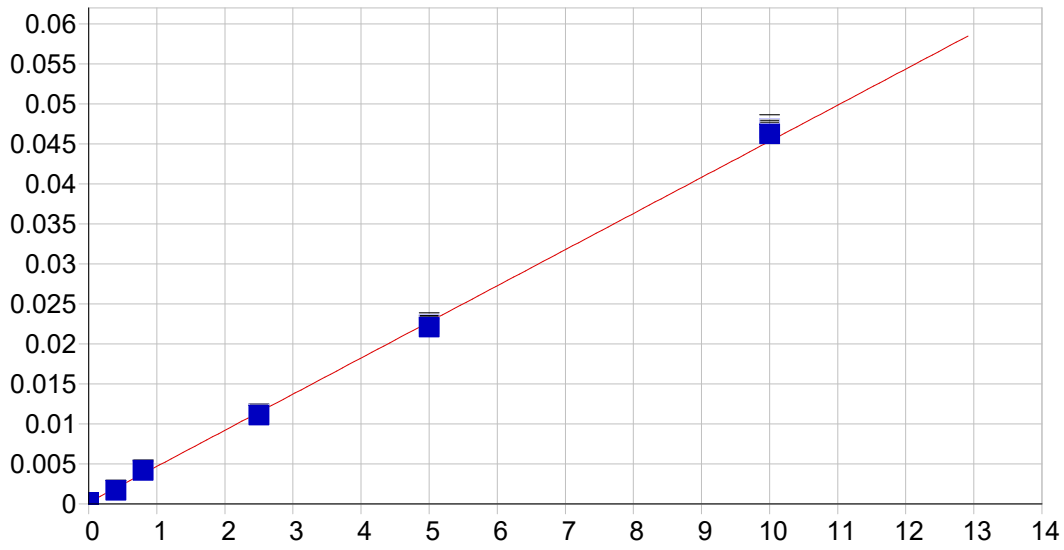


Ti 336.121 {100}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001698	Re-Slope:	1.000000
A1 (Gain):	0.390520	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999677	Status:	OK.
Std Error of Est:	0.000329		
Predicted MDL:	0.000750		
Predicted MQL:	0.002499		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00170	.000	1
S1	.04000	.03846	-.002	-3.84	.01671	.000	1
S3	2.5000	2.4500	-.050	-2.00	.95810	.002	1
S4	5.0000	4.9062	-.094	-1.88	1.9170	.005	1
S5	10.000	10.062	.062	.623	3.9298	.017	1
S2	.80000	.88309	.083	10.4	.34645	.001	1

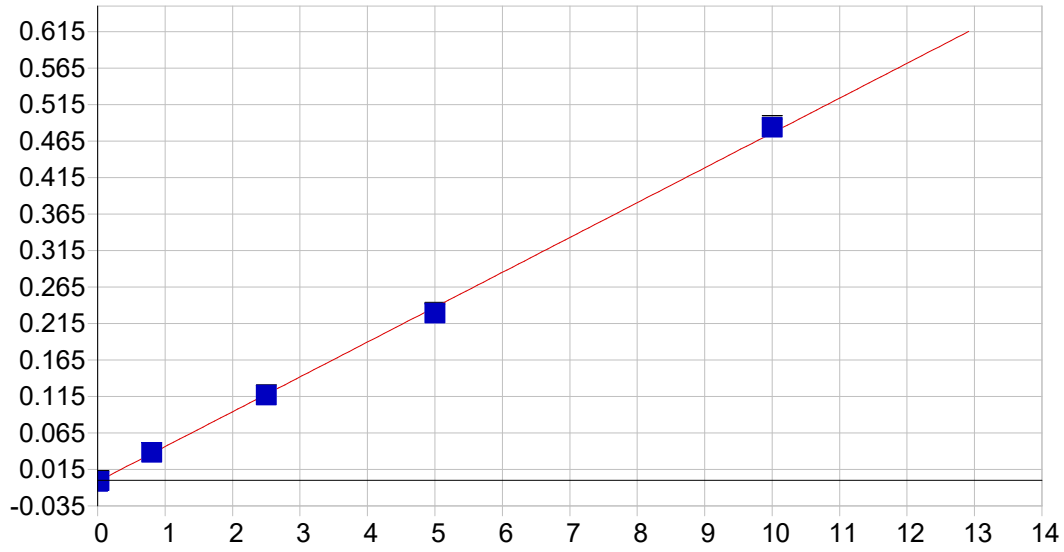


Si 288.158 {117}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000170	Re-Slope:	1.000000
A1 (Gain):	0.004516	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999224	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.008820		
Predicted MQL:	0.029400		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00004	.000	.000	.00017	.000	1
S1	.40000	.33856	-.061	-15.4	.00170	.000	1
S3	2.5000	2.4136	-.086	-3.46	.01124	.000	1
S4	5.0000	4.8556	-.144	-2.89	.02244	.000	1
S5	10.000	10.206	.206	2.06	.04694	.000	1
S2	.80000	.88505	.085	10.6	.00422	.000	1

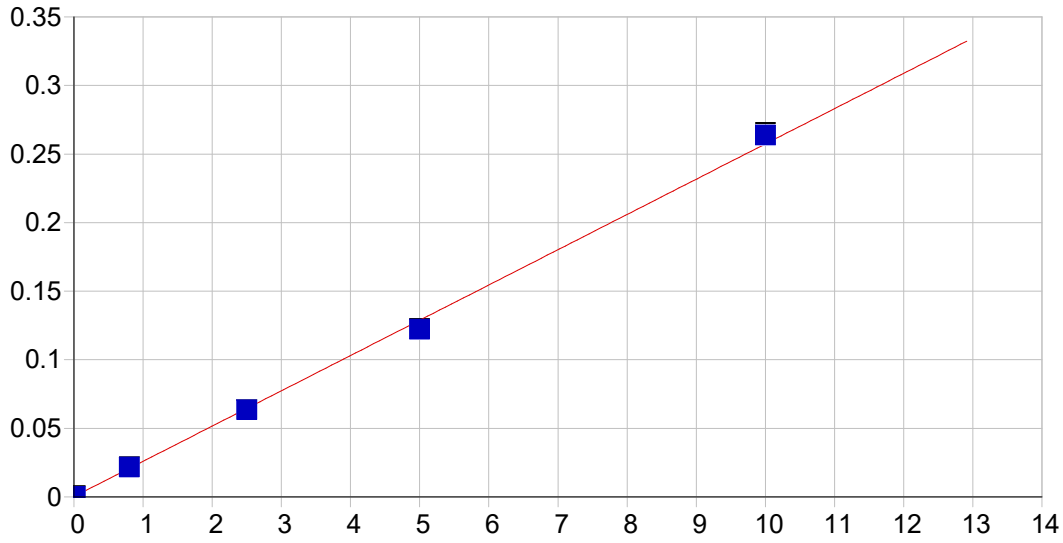


P 177.495 {490}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001508	Re-Slope:	1.000000
A1 (Gain):	0.047756	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999731	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	0.002124		
Predicted MQL:	0.007079		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00151	.000	1
S1	.02000	.01873	-.001	-6.35	-.00061	.000	1
S3	2.5000	2.4764	-.024	-.943	.11674	.001	1
S4	5.0000	4.8300	-.170	-3.40	.22912	.001	1
S5	10.000	10.166	.166	1.66	.48393	.002	1
S2	.80000	.82836	.028	3.55	.03805	.000	1

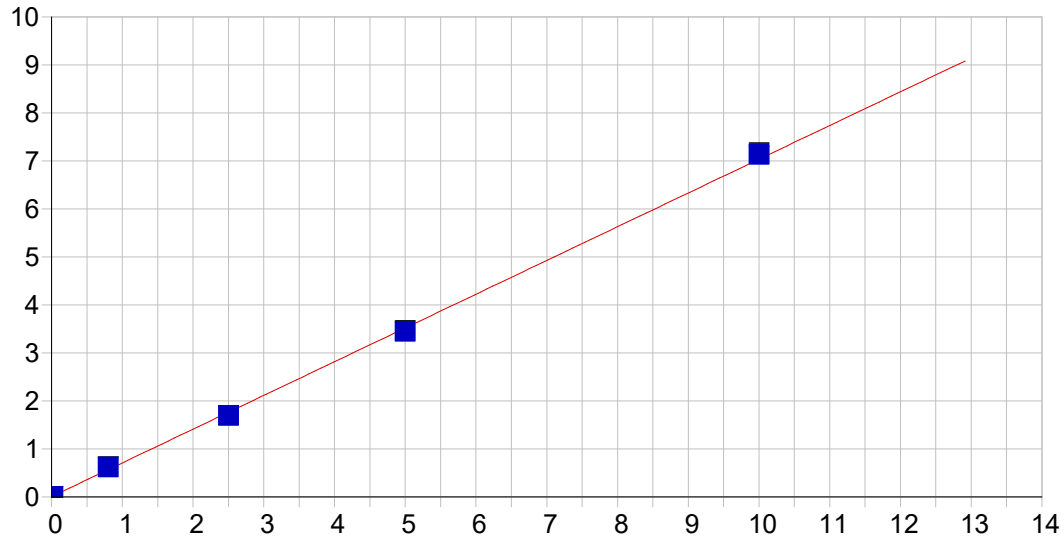


S 182.034 {485}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000225	Re-Slope:	1.000000
A1 (Gain):	0.025716	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999393	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.003599		
Predicted MQL:	0.011997		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00022	.000	1
S1	.02000	.02028	.000	1.42	.00072	.000	1
S3	2.5000	2.4637	-.036	-1.45	.06341	.000	1
S4	5.0000	4.7422	-.258	-5.16	.12184	.001	1
S5	10.000	10.256	.256	2.56	.26331	.002	1
S2	.80000	.83753	.038	4.69	.02171	.000	1

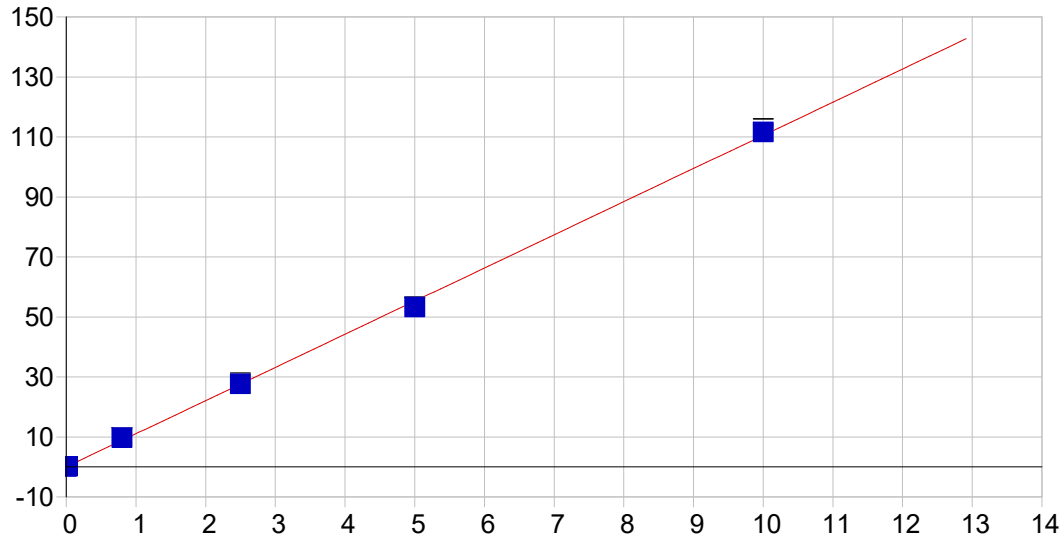


Li 670.784 { 50}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005643	Re-Slope:	1.000000
A1 (Gain):	0.702901	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999563	Status:	OK.
Std Error of Est:	0.000487		
Predicted MDL:	0.001208		
Predicted MQL:	0.004028		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00564	.001	1
S5	10.000	10.138	.138	1.38	7.1352	.033	1
S4	5.0000	4.8932	-.107	-2.14	3.4469	.014	1
S3	2.5000	2.3976	-.102	-4.10	1.6918	.004	1
S1	.02000	.01634	-.004	-18.3	.01735	.001	1
S2	.80000	.87475	.075	9.34	.62078	.003	1

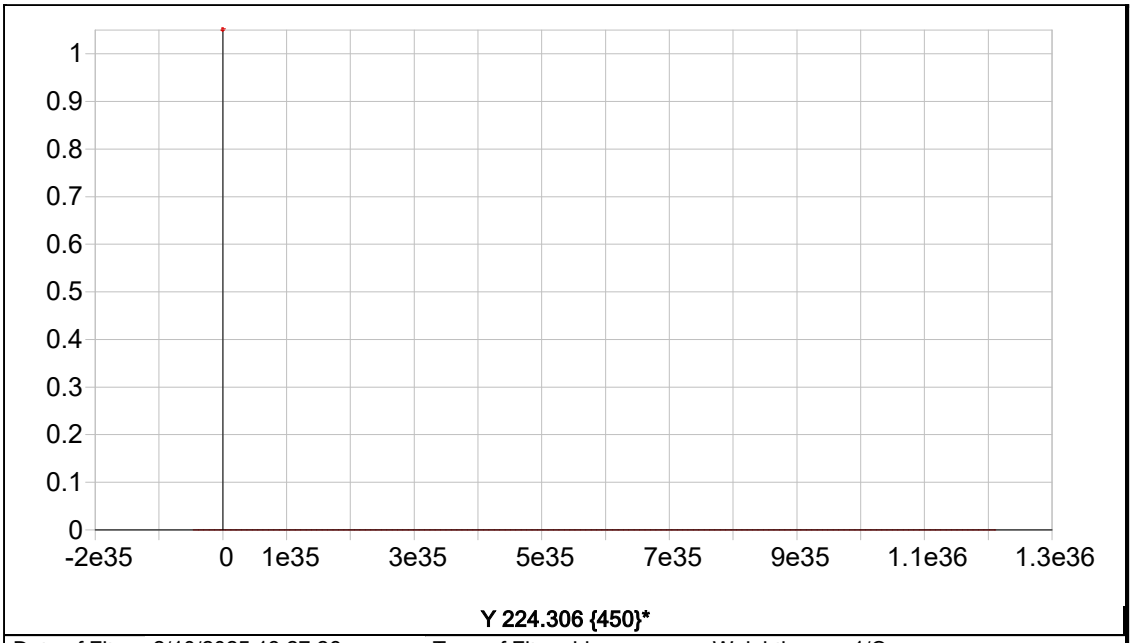


Sr 407.771 { 83}

Date of Fit:	2/10/2025 13:53:23	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000260	Re-Slope:	1.000000
A1 (Gain):	11.051246	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999574	Status:	OK.
Std Error of Est:	0.007570		
Predicted MDL:	0.000046		
Predicted MQL:	0.000155		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00025	.000	1
S1	.02000	.01918	-.001	-4.11	.21330	.000	1
S3	2.5000	2.5035	.003	.140	27.695	.272	1
S4	5.0000	4.8172	-.183	-3.66	53.292	.069	1
S5	10.000	10.100	.100	1.00	111.73	1.02	1
S2	.80000	.87963	.080	9.95	9.7301	.009	1

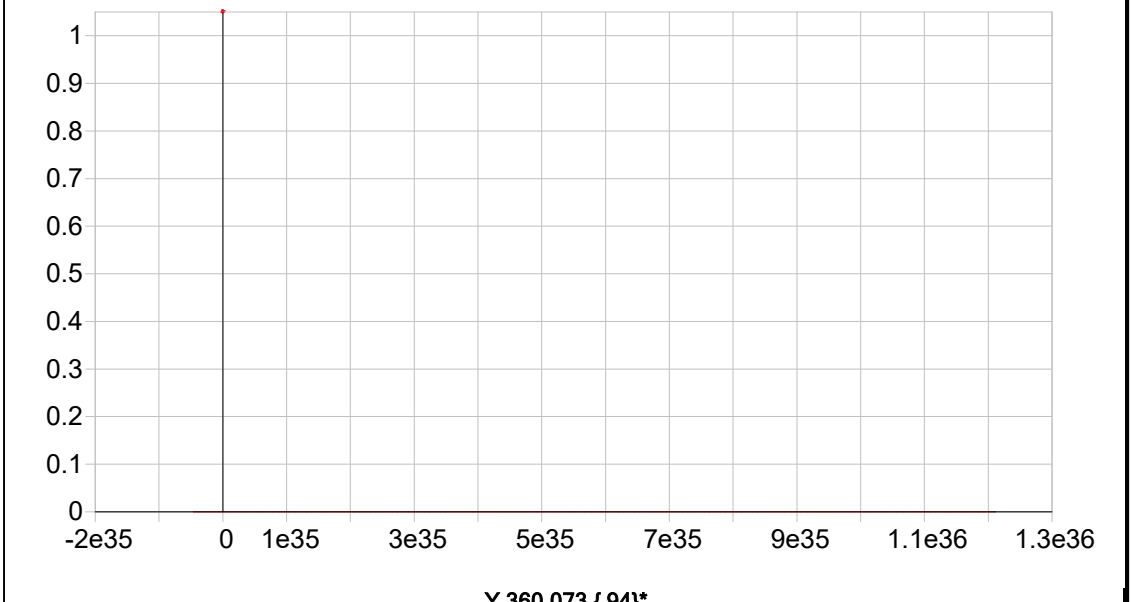


Y 224.306 {450}*

Date of Fit:	2/10/2025 13:27:26	Type of Fit:	Linear	Weighting:	1/Conc

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

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



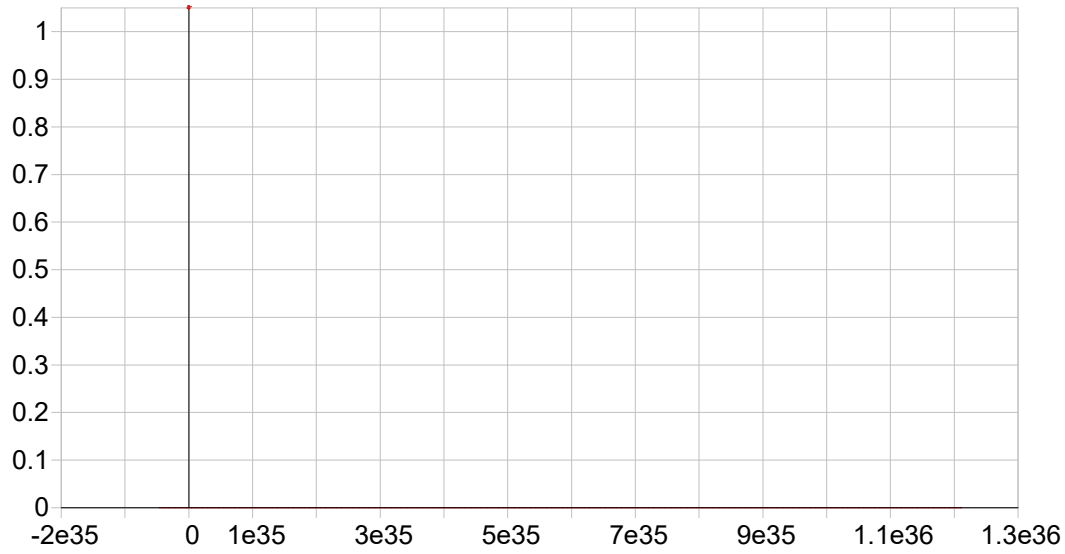
Y 360.073 { 94}*

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

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

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

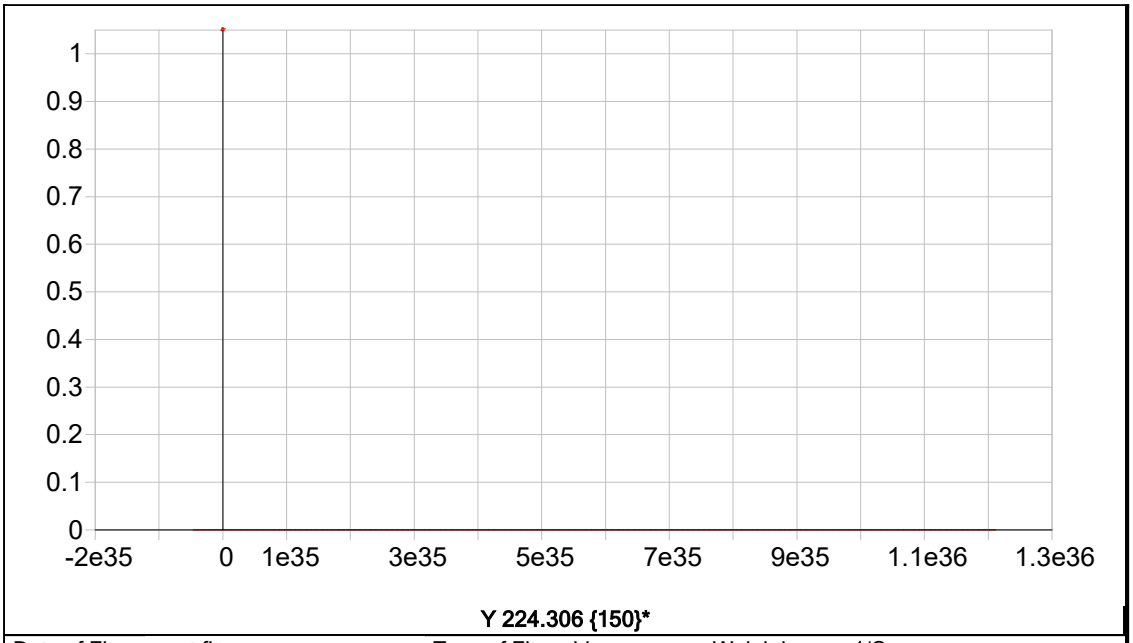
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

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

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

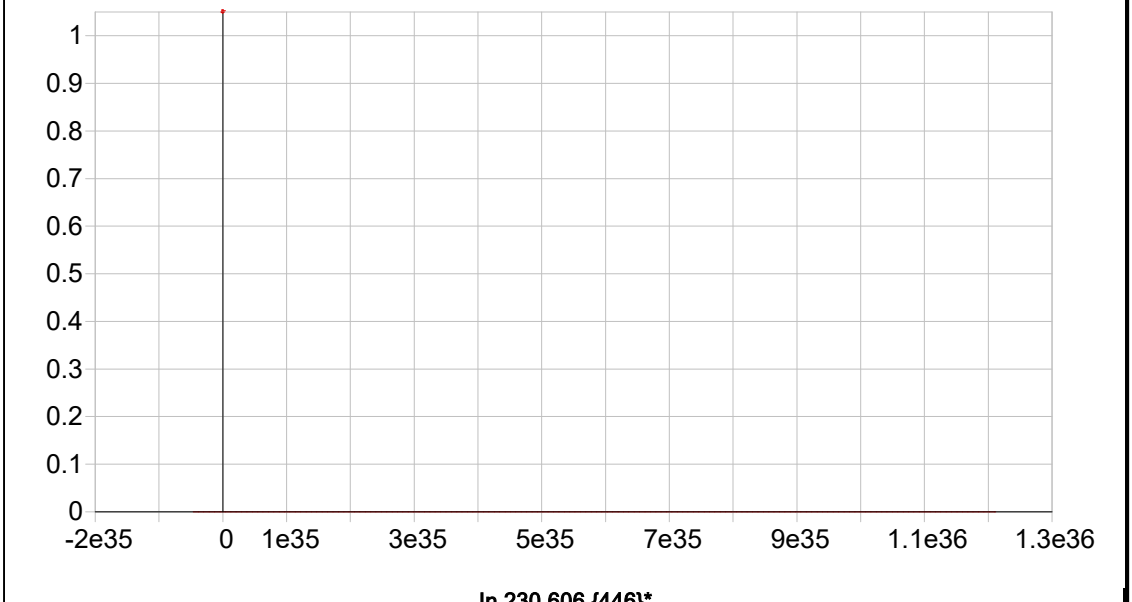


Y 224.306 {150}*

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

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

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



In 230.606 {446}*

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

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

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

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S0 Acquired: 2/10/2025 13:28:03 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	-.00020	-.00010	-.00028	.00029	.00027	.00014	.04241	.00009
Stddev	.00016	.00002	.00019	.00002	.00005	.00041	.00094	.00020
%RSD	79.791	23.669	66.385	7.2428	19.291	295.46	2.2065	220.27
#1	-.00014	-.00007	-.00011	.00029	.00021	.00057	.04215	.00008
#2	-.00038	-.00011	-.00025	.00027	.00030	-.00025	.04345	-.00011
#3	-.00008	-.00012	-.00048	.00031	.00030	.00010	.04164	.00029

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	.00012	.00025	-.00004	.00011	-.00035	-.00002	.00003	-.00015
Stddev	.00028	.00029	.00003	.00020	.00005	.00001	.00009	.00017
%RSD	227.45	115.66	75.614	185.57	14.592	46.603	283.96	113.80
#1	.00019	-.00002	-.00006	-.00011	-.00037	-.00001	.00010	-.00002
#2	.00036	.00022	-.00004	.00015	-.00029	-.00002	.00005	-.00034
#3	-.00018	.00056	-.00001	.00029	-.00039	-.00004	-.00006	-.00008

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	.00004	-.00115	.01986	.00014	.00140	.00274	.00170	.00016
Stddev	.00007	.00001	.00063	.00011	.00034	.00035	.00022	.00010
%RSD	165.23	1.1218	3.1839	82.808	24.559	12.682	13.017	63.560
#1	.00012	-.00117	.01932	.00023	.00102	.00239	.00195	.00025
#2	-.00002	-.00115	.01970	.00001	.00151	.00273	.00159	.00005
#3	.00003	-.00114	.02056	.00017	.00168	.00309	.00155	.00019

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	.00230	.00170	.00017	-.00151	.00022	.00564	.00025
Stddev	.00004	.00019	.00005	.00004	.00003	.00059	.00032
%RSD	1.9012	11.167	28.053	2.9744	11.625	10.422	126.74
#1	.00229	.00184	.00022	-.00146	.00019	.00511	-.00007
#2	.00235	.00148	.00013	-.00151	.00024	.00627	.00026
#3	.00226	.00177	.00016	-.00155	.00024	.00555	.00057

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S0 Acquired: 2/10/2025 13:28:03 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	3491.7	74496.	13873.	2498.7	4330.7
Stddev	8.8	140.	40.	10.3	10.7
%RSD	.25141	.18766	.28562	.41037	.24812
#1	3490.4	74643.	13828.	2488.9	4328.0
#2	3483.7	74366.	13885.	2497.9	4321.5
#3	3501.1	74477.	13905.	2509.3	4342.5

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S1 Acquired: 2/10/2025 13:32:26 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	.00110	.00233	.00240	.00154	.00739	.01093	.24597	.02179
Stddev	.00008	.00008	.00015	.00012	.00028	.00022	.00199	.00014
%RSD	6.9264	3.3514	6.2834	8.0535	3.8075	2.0440	.80779	.63681
#1	.00112	.00225	.00248	.00140	.00707	.01089	.24683	.02191
#2	.00116	.00240	.00249	.00163	.00751	.01073	.24370	.02182
#3	.00101	.00235	.00223	.00160	.00759	.01117	.24739	.02164

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	.01730	.09031	.00173	.02626	.01269	.00048	.01012	.03068
Stddev	.00018	.00053	.00004	.00014	.00020	.00001	.00013	.00028
%RSD	1.0538	.58729	2.1056	.52024	1.5880	2.7367	1.2361	.90294
#1	.01741	.08975	.00176	.02641	.01252	.00050	.01026	.03056
#2	.01709	.09081	.00172	.02616	.01291	.00047	.01008	.03099
#3	.01739	.09037	.00169	.02620	.01264	.00049	.01002	.03048

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	.02542	.00161	.05337	.00490	.11026	.01551	.04005	.14395
Stddev	.00007	.00003	.00027	.00009	.00169	.00026	.00022	.00042
%RSD	.27431	1.5814	.50561	1.7786	1.5296	1.6447	.55118	.29477
#1	.02548	.00158	.05315	.00481	.11136	.01521	.03980	.14374
#2	.02534	.00163	.05328	.00491	.10832	.01565	.04020	.14367
#3	.02544	.00162	.05367	.00498	.11110	.01566	.04015	.14443

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	.00823	.01671	.00170	-.00061	.00072	.01735	.21330
Stddev	.00003	.00023	.00002	.00005	.00007	.00065	.00028
%RSD	.32132	1.3750	1.2185	8.3603	10.072	3.7325	.13120
#1	.00822	.01644	.00172	-.00056	.00080	.01800	.21324
#2	.00821	.01686	.00171	-.00066	.00066	.01671	.21360
#3	.00826	.01682	.00168	-.00061	.00071	.01734	.21305

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S1 Acquired: 2/10/2025 13:32:26 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	3443.1	74542.	13922.	2466.3	4247.3
Stddev	5.5	208.	45.	4.8	7.0
%RSD	.16027	.27903	.32180	.19432	.16436
#1	3447.5	74497.	13968.	2463.7	4252.0
#2	3444.9	74359.	13879.	2471.8	4250.6
#3	3436.9	74768.	13919.	2463.3	4239.3

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S2 Acquired: 2/10/2025 13:36:45 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	.05232	.06015	.22382	.05772	.12758	.18200	3.9178	.16406
Stddev	.00009	.00062	.00052	.00027	.00020	.00086	.0216	.00111
%RSD	.16785	1.0246	.23054	.46010	.15683	.47507	.55058	.67358
#1	.05242	.06010	.22436	.05796	.12777	.18299	3.9414	.16410
#2	.05225	.05956	.22334	.05743	.12737	.18160	3.8992	.16515
#3	.05229	.06079	.22375	.05775	.12760	.18140	3.9129	.16294

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	1.2927	.20680	.03302	.39899	.13713	.00477	.22790	.06455
Stddev	.0025	.00066	.00010	.00037	.00068	.00007	.00125	.00023
%RSD	.19248	.31796	.29101	.09307	.49340	1.3901	.55042	.35392
#1	1.2931	.20683	.03297	.39932	.13766	.00483	.22932	.06482
#2	1.2900	.20744	.03296	.39859	.13636	.00470	.22693	.06442
#3	1.2949	.20612	.03313	.39906	.13736	.00479	.22745	.06442

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	.28876	.06045	.10145	.05846	1.1909	.03207	.32813	.65152
Stddev	.00078	.00015	.00066	.00016	.0024	.00026	.00182	.00107
%RSD	.26971	.25486	.65414	.27661	.20169	.81921	.55472	.16473
#1	.28828	.06056	.10148	.05857	1.1888	.03198	.32751	.65172
#2	.28834	.06027	.10077	.05828	1.1903	.03186	.33018	.65036
#3	.28966	.06051	.10209	.05854	1.1935	.03236	.32670	.65248

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	.13735	.34645	.00422	.03805	.02171	.62078	9.7301
Stddev	.00008	.00119	.00005	.00038	.00009	.00286	.0086
%RSD	.05576	.34247	1.2356	1.0034	.41074	.46018	.08804
#1	.13733	.34757	.00417	.03775	.02174	.62364	9.7324
#2	.13728	.34521	.00422	.03791	.02161	.61792	9.7207
#3	.13743	.34657	.00427	.03848	.02178	.62079	9.7373

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S2 Acquired: 2/10/2025 13:36:45 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	3434.3	73370.	14084.	2396.1	4215.1
Stddev	2.1	220.	52.	10.6	3.0
%RSD	.06033	.29925	.37211	.44361	.07207
#1	3432.2	73495.	14111.	2406.1	4215.1
#2	3436.3	73498.	14024.	2397.4	4218.1
#3	3434.5	73116.	14118.	2384.9	4212.0

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S3 Acquired: 2/10/2025 13:40:50 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	.14927	.16920	.63551	.16290	.35891	.51344	10.753	.48113
Stddev	.00015	.00131	.00129	.00019	.00037	.00228	.082	.00231
%RSD	.10155	.77206	.20296	.11765	.10342	.44401	.76505	.48006
#1	.14927	.16830	.63488	.16270	.35895	.51080	10.661	.47879
#2	.14912	.17070	.63466	.16293	.35853	.51478	10.775	.48341
#3	.14942	.16860	.63699	.16308	.35927	.51472	10.821	.48120

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	3.6758	.57352	.09177	1.1285	.38332	.01279	.63092	.18190
Stddev	.0056	.00137	.00004	.0012	.00067	.00005	.00099	.00027
%RSD	.15354	.23890	.04535	.10892	.17501	.41946	.15660	.14967
#1	3.6776	.57253	.09182	1.1287	.38371	.01285	.62984	.18206
#2	3.6695	.57508	.09174	1.1272	.38254	.01275	.63113	.18205
#3	3.6804	.57294	.09175	1.1296	.38369	.01278	.63179	.18158

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	.81492	.16983	.24620	.16324	3.2747	.08167	.95806	1.8082
Stddev	.00129	.00034	.00094	.00042	.0086	.00049	.00412	.0019
%RSD	.15837	.19772	.38051	.25914	.26324	.60406	.42967	.10377
#1	.81513	.17018	.24677	.16275	3.2800	.08161	.95481	1.8065
#2	.81354	.16978	.24512	.16350	3.2648	.08120	.96269	1.8078
#3	.81609	.16952	.24671	.16347	3.2795	.08218	.95668	1.8102

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	.39190	.95810	.01124	.11674	.06341	1.6918	27.695
Stddev	.00044	.00158	.00001	.00051	.00004	.0041	.272
%RSD	.11164	.16487	.08047	.43530	.06628	.24080	.98049
#1	.39140	.95645	.01125	.11633	.06343	1.6875	27.473
#2	.39216	.95826	.01124	.11731	.06337	1.6923	27.998
#3	.39215	.95959	.01123	.11658	.06344	1.6956	27.613

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S3 Acquired: 2/10/2025 13:40:50 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	3325.1	72094.	13335.	2383.8	3982.5
Stddev	8.3	87.	68.	4.2	9.6
%RSD	.24860	.12031	.51178	.17501	.24077
#1	3318.3	72052.	13392.	2381.9	3974.4
#2	3334.3	72035.	13260.	2388.6	3993.1
#3	3322.8	72193.	13354.	2381.0	3979.9

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S4 Acquired: 2/10/2025 13:44:59 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	.28417	.32934	1.2259	.30661	.68715	1.0185	21.500	.92098
Stddev	.00162	.00217	.0032	.00124	.00345	.0006	.362	.00235
%RSD	.57133	.65838	.26154	.40326	.50170	.05423	1.6836	.25477
#1	.28253	.32738	1.2224	.30600	.68378	1.0188	21.881	.92320
#2	.28420	.32897	1.2267	.30580	.68699	1.0188	21.460	.91852
#3	.28578	.33167	1.2286	.30803	.69067	1.0178	21.161	.92121

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7.1429	1.1304	.17701	2.1920	.72722	.02555	1.2496	.36268
Stddev	.0173	.0020	.00055	.0069	.00415	.00024	.0057	.00042
%RSD	.24181	.17637	.31139	.31435	.57085	.93462	.45501	.11676
#1	7.1254	1.1283	.17700	2.1854	.72302	.02528	1.2431	.36220
#2	7.1434	1.1323	.17647	2.1915	.72730	.02566	1.2531	.36300
#3	7.1600	1.1307	.17757	2.1992	.73132	.02572	1.2527	.36284

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	1.5720	.32894	.48034	.32590	6.3047	.16094	1.8500	3.5128
Stddev	.0043	.00093	.00211	.00107	.0025	.00081	.0038	.0159
%RSD	.27383	.28322	.43925	.32805	.04020	.50189	.20460	.45148
#1	1.5686	.32792	.47795	.32477	6.3058	.16002	1.8532	3.4978
#2	1.5705	.32974	.48114	.32602	6.3065	.16125	1.8510	3.5113
#3	1.5768	.32915	.48193	.32690	6.3018	.16154	1.8458	3.5294

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	.76042	1.9170	.02244	.22912	.12184	3.4469	53.292
Stddev	.00219	.0053	.00021	.00106	.00057	.0143	.069
%RSD	.28794	.27636	.94458	.46408	.46420	.41475	.12895
#1	.75797	1.9114	.02220	.22847	.12126	3.4307	53.359
#2	.76113	1.9220	.02251	.22853	.12186	3.4577	53.222
#3	.76217	1.9175	.02260	.23035	.12239	3.4522	53.295

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S4 Acquired: 2/10/2025 13:44:59 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	3387.8	72287.	13389.	2363.9	3998.6
Stddev	15.0	197.	28.	9.0	12.2
%RSD	.44410	.27197	.21045	.37883	.30503
#1	3403.4	72387.	13357.	2368.0	4010.8
#2	3386.8	72414.	13411.	2353.6	3998.4
#3	3373.4	72060.	13400.	2370.0	3986.4

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S5 Acquired: 2/10/2025 13:49:11 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	.59697	.65927	2.5155	.64384	1.4386	2.1247	43.300	1.8752
Stddev	.00238	.00739	.0063	.00357	.0069	.0088	.212	.0204
%RSD	.39878	1.1215	.25261	.55467	.48049	.41178	.48873	1.0895
#1	.59637	.66350	2.5119	.64475	1.4403	2.1347	43.522	1.8929
#2	.59495	.65073	2.5117	.63990	1.4310	2.1204	43.278	1.8799
#3	.59960	.66357	2.5228	.64686	1.4445	2.1189	43.101	1.8528

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	14.652	2.3035	.35633	4.5205	1.4825	.05141	2.5295	.74660
Stddev	.039	.0141	.00093	.0141	.0043	.00039	.0177	.00458
%RSD	.26561	.60979	.26201	.31138	.29109	.76717	.69818	.61359
#1	14.631	2.3195	.35721	4.5085	1.4839	.05142	2.5498	.75167
#2	14.629	2.2978	.35535	4.5169	1.4777	.05101	2.5207	.74536
#3	14.697	2.2932	.35641	4.5360	1.4860	.05180	2.5179	.74276

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	3.2300	.67125	.99151	.67056	12.723	.33119	3.7738	7.1009
Stddev	.0093	.00118	.00712	.00355	.025	.00268	.0385	.0256
%RSD	.28824	.17597	.71783	.52907	.19495	.80945	1.0208	.35998
#1	3.2240	.67219	.99041	.67435	12.751	.33043	3.8039	7.1108
#2	3.2253	.66993	.98500	.67000	12.703	.32897	3.7870	7.0719
#3	3.2407	.67165	.99911	.66732	12.714	.33417	3.7304	7.1201

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	1.5540	3.9298	.04694	.48393	.26331	7.1352	111.73
Stddev	.0047	.0167	.00045	.00226	.00174	.0331	1.02
%RSD	.30006	.42500	.95966	.46727	.66005	.46456	.91276
#1	1.5532	3.9491	.04671	.48352	.26304	7.1723	112.88
#2	1.5498	3.9202	.04665	.48190	.26172	7.1083	111.39
#3	1.5590	3.9201	.04746	.48637	.26517	7.1252	110.93

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: S5 Acquired: 2/10/2025 13:49:11 Type: Cal
Method: NON EPA-6010-200.7(v2672) 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	3185.7	69286.	12862.	2222.3	3698.1
Stddev	5.9	311.	153.	13.8	4.6
%RSD	.18464	.44872	1.1909	.62191	.12474
#1	3180.6	68943.	12709.	2208.1	3699.4
#2	3192.1	69549.	12862.	2235.7	3701.9
#3	3184.5	69366.	13016.	2223.0	3693.0

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICV01 Acquired: 2/10/2025 14:06:53 Type: Unk
Method: NON EPA-6010-200.7(v2673) 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	1.034937	1.054937	1.013386	1.081382	1.067592	2.548588
Stddev	.003094	.016878	.001816	.003531	.004158	.008049
%RSD	.2989120	1.599922	.1791995	.3265079	.3894399	.3158058
#1	1.032617	1.048995	1.011684	1.078107	1.065876	2.555148
#2	1.033746	1.041834	1.015298	1.080916	1.064567	2.551009
#3	1.038450	1.073983	1.013176	1.085123	1.072333	2.539607

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5020788	.5054688	.5142842	10.03645	.5405611	.5222057
Stddev	.0006890	.0010699	.0009867	.02089	.0007323	.0010999
%RSD	.1372264	.2116576	.1918621	.2081439	.1354717	.2106340
#1	.5019233	.5051817	.5148452	10.02151	.5400655	.5222189
#2	.5014808	.5066530	.5131448	10.06032	.5414023	.5210992
#3	.5028322	.5045718	.5148624	10.02751	.5402155	.5232990

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5408637	10.32990	.5114006	5.914630	.5256384	.2558783
Stddev	.0014903	.03568	.0007267	.017564	.0012588	.0007704
%RSD	.2755396	.3454414	.1420932	.2969622	.2394755	.3010803
#1	.5405497	10.29079	.5106836	5.901597	.5265433	.2567239
#2	.5395555	10.33821	.5113816	5.934604	.5242009	.2556947
#3	.5424860	10.36069	.5121366	5.907689	.5261709	.2552163

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.915448	.5031134	.9883586	10.06474	F .0045220	F -.000028
Stddev	.019923	.0005991	.0024300	.01776	.0004425	.000247
%RSD	.2009319	.1190793	.2458637	.1764112	9.784853	872.9687
#1	9.924672	.5024415	.9863708	10.05464	.0050174	.000252
#2	9.929088	.5033067	.9910676	10.05433	.0043825	-.000123
#3	9.892585	.5035920	.9876374	10.08524	.0041660	-.000215

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICV01 Acquired: 2/10/2025 14:06:53 Type: Unk
Method: NON EPA-6010-200.7(v2673) 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 -.002925	F .0014290	F -.025035	F -.000348	F .0017732	F -.002711
Stddev	.000401	.0011346	.002425	.001276	.0005167	.000588
%RSD	13.70514	79.39968	9.687668	366.8349	29.14108	21.67753
#1	-.002669	.0004177	-.022373	-.001599	.0017470	-.003246
#2	-.002719	.0012133	-.027120	.000952	.0023025	-.002806
#3	-.003387	.0026560	-.025613	-.000396	.0012701	-.002082

Elem	Sr4077
Units	ppm
Avg	F -.009176
Stddev	.000040
%RSD	.4308505
#1	-.009130
#2	-.009199
#3	-.009199

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3335.292	72532.86	14110.04	2330.035	4100.029
Stddev	4.075	233.86	47.96	15.528	8.351
%RSD	.1221764	.3224217	.3399251	.6664230	.2036810
#1	3336.478	72661.00	14134.31	2337.252	4094.169
#2	3338.643	72262.94	14054.79	2312.212	4109.591
#3	3330.756	72674.65	14141.02	2340.641	4096.326

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: LLICV01 Acquired: 2/10/2025 14:20:39 Type: Unk
Method: NON EPA-6010-200.7(v2674) 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	.0210442	.0392551	.0114507	.0202887	.0523101	.0976597
Stddev	.0012916	.0002816	.0015650	.0006597	.0000277	.0012075
%RSD	6.137580	.7173041	13.66757	3.251448	.0528982	1.236486
#1	.0202146	.0395116	.0098980	.0206668	.0523132	.0990508
#2	.0225324	.0393000	.0130278	.0206723	.0523361	.0968817
#3	.0203858	.0389538	.0114264	.0195270	.0522810	.0970465

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0845367	.0058611	.0056964	1.926949	.0098927	.0290355
Stddev	.0011765	.0000084	.0000204	.004970	.0002867	.0002276
%RSD	1.391747	.1438757	.3579487	.2579411	2.897986	.7839244
#1	.0857213	.0058691	.0056816	1.927445	.0100221	.0287735
#2	.0833684	.0058523	.0057196	1.931654	.0100919	.0291854
#3	.0845206	.0058620	.0056879	1.921750	.0095642	.0291475

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0220604	.0958581	.0190394	2.014674	.0389161	.0103343
Stddev	.0005353	.0039604	.0004388	.003453	.0000280	.0000778
%RSD	2.426295	4.131568	2.304553	.1713903	.0719330	.7527416
#1	.0217233	.0987103	.0194120	2.010687	.0388874	.0103325
#2	.0217803	.0913362	.0185558	2.016685	.0389433	.0102574
#3	.0226776	.0975277	.0191504	2.016649	.0389175	.0104129

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.953105	.0367903	.0428852	1.631520	.0988642	.2068165
Stddev	.016736	.0002591	.0003272	.024998	.0012134	.0002086
%RSD	.8569161	.7043821	.7629506	1.532191	1.227318	.1008774
#1	1.950466	.0370684	.0431000	1.658768	.1002644	.2065763
#2	1.971004	.0365557	.0425086	1.626147	.0981221	.2069202
#3	1.937844	.0367467	.0430468	1.609646	.0982060	.2069529

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: LLICV01 Acquired: 2/10/2025 14:20:39 Type: Unk
Method: NON EPA-6010-200.7(v2674) 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	.0378661	.0380938	.3356537	.0182415	.0201335	F .0125589
Stddev	.0007143	.0010355	.0032043	.0022459	.0026646	.0011404
%RSD	1.886414	2.718372	.9546526	12.31218	13.23480	9.080524
#1	.0380530	.0388666	.3322886	.0171221	.0170639	.0113568
#2	.0384684	.0384976	.3386684	.0167753	.0214852	.0136255
#3	.0370769	.0369172	.3360041	.0208271	.0218514	.0126943

Elem	Sr4077
Units	ppm
Avg	.0201757
Stddev	.0000654
%RSD	.3240583
#1	.0201055
#2	.0202348
#3	.0201869

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3335.093	72414.89	13672.14	2281.806	4215.322
Stddev	6.685	217.94	28.96	8.094	5.096
%RSD	.2004539	.3009612	.2118501	.3547326	.1208992
#1	3342.117	72363.50	13699.23	2272.678	4220.992
#2	3334.355	72227.24	13675.59	2284.631	4213.851
#3	3328.807	72653.93	13641.61	2288.110	4211.124

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICB01 Acquired: 2/10/2025 14:26:50 Type: Unk
Method: NON EPA-6010-200.7(v2675) 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	-.000176	-.002843	.0000970	-.001636	.0003098	-.000513	-.002902
Stddev	.003400	.000718	.0006328	.003759	.0005980	.006719	.000433
%RSD	1933.382	25.26395	652.0836	229.7740	193.0614	1308.565	14.91394
#1	-.004049	-.003663	.0007609	.000789	-.000170	.000266	-.002632
#2	.002313	-.002322	.0000296	.000269	.000120	-.007588	-.002672
#3	.001209	-.002545	-.000499	-.005965	.000980	.005781	-.003401

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000020	-.000022	-.008382	.0000671	-.000081	-.000099	-.000815
Stddev	.000030	.000019	.005141	.0001194	.000393	.000205	.001859
%RSD	151.8174	89.56400	61.33116	177.9801	487.8642	208.1679	227.9503
#1	-.000055	-.000044	-.003287	-.000042	.000232	-.000154	-.002879
#2	-.000002	-.000009	-.008292	.000195	-.000522	.000129	-.000296
#3	-.000003	-.000012	-.013567	.000048	.000048	-.000271	.000729

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000290	-.005980	-.000156	.0004000	-.620387	-.001486	.0002056
Stddev	.000080	.010697	.000166	.0001104	.017238	.001004	.0004170
%RSD	27.58064	178.8773	106.3647	27.60128	2.778621	67.58167	202.8557
#1	-.000237	-.006603	-.000215	.0005152	-.638899	-.002637	-.000026
#2	-.000251	.005015	-.000284	.0003896	-.617465	-.001028	-.000044
#3	-.000382	-.016351	.000031	.0002952	-.604797	-.000792	.000687

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.251298	-.001072	-.000161	-.000215	.0008320	-.008347	-.001583
Stddev	.039108	.000666	.000079	.000320	.0004053	.004758	.000452
%RSD	15.56258	62.14443	49.41729	148.6104	48.70914	57.01084	28.52937
#1	-.292610	-.001839	-.000199	-.000090	.0012122	-.013576	-.001077
#2	-.246435	-.000637	-.000069	.000023	.0008781	-.004272	-.001944
#3	-.214848	-.000741	-.000213	-.000579	.0004056	-.007192	-.001729

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICB01 Acquired: 2/10/2025 14:26:50 Type: Unk
Method: NON EPA-6010-200.7(v2675) 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	-.002064	-.005342	-.000048
Stddev	.001532	.000055	.000046
%RSD	74.22069	1.030683	96.31829
#1	-.003263	-.005305	.000004
#2	-.000338	-.005316	-.000063
#3	-.002592	-.005405	-.000085

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3371.329	72033.28	14110.90	2280.323	4307.950
Stddev	8.808	158.27	45.22	5.314	9.362
%RSD	.2612500	.2197182	.3204283	.2330313	.2173197
#1	3364.506	72215.49	14084.36	2284.931	4303.391
#2	3368.209	71929.99	14085.22	2274.510	4301.740
#3	3381.272	71954.36	14163.11	2281.528	4318.718

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CRI01 Acquired: 2/10/2025 14:31:10 Type: Unk
Method: NON EPA-6010-200.7(v2675) 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	.0216621	.0389101	.0114952	.0197163	.0522522	.0981061
Stddev	.0023022	.0003542	.0005874	.0013886	.0005397	.0017512
%RSD	10.62769	.9102547	5.110396	7.043130	1.032908	1.784996
#1	.0224009	.0389477	.0118877	.0184178	.0518292	.0982640
#2	.0235042	.0392440	.0117780	.0211803	.0520674	.0962813
#3	.0190813	.0385386	.0108198	.0195507	.0528601	.0997730

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0887392	.0057636	.0057526	1.936055	.0101241	.0292060
Stddev	.0005199	.0000705	.0000820	.008589	.0001559	.0003087
%RSD	.5858486	1.223058	1.424890	.4436370	1.540176	1.056928
#1	.0881931	.0057473	.0057878	1.929965	.0100911	.0293451
#2	.0892281	.0058408	.0056590	1.945880	.0102939	.0294207
#3	.0887964	.0057026	.0058112	1.932321	.0099873	.0288523

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0216358	.1003723	.0192258	2.053421	.0387584	.0106360
Stddev	.0002321	.0008599	.0001631	.021978	.0001594	.0001135
%RSD	1.072746	.8567126	.8484506	1.070288	.4113791	1.067078
#1	.0216373	.0998033	.0193504	2.030196	.0386664	.0107298
#2	.0218672	.1013615	.0190411	2.073892	.0386663	.0105098
#3	.0214030	.0999522	.0192857	2.056176	.0389425	.0106683

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.002904	.0369812	.0429204	1.735729	.0972537	.2058371
Stddev	.024722	.0007108	.0004656	.032689	.0009097	.0003256
%RSD	1.234306	1.921979	1.084699	1.883319	.9353957	.1581624
#1	1.998321	.0362576	.0434153	1.770648	.0971550	.2055706
#2	1.980795	.0376784	.0424911	1.705856	.0982088	.2057407
#3	2.029597	.0370074	.0428548	1.730683	.0963974	.2062000

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CRI01 Acquired: 2/10/2025 14:31:10 Type: Unk
Method: NON EPA-6010-200.7(v2675) 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	.0387072	.0383604	.3526946	.0165190	.0170995	F .0134324
Stddev	.0007260	.0002585	.0047148	.0018589	.0016260	.0002477
%RSD	1.875658	.6738113	1.336804	11.25317	9.508941	1.844146
#1	.0378753	.0386567	.3473875	.0184824	.0152417	.0135914
#2	.0390333	.0381813	.3542966	.0147861	.0177936	.0131470
#3	.0392130	.0382431	.3563996	.0162884	.0182632	.0135588

Elem	Sr4077
Units	ppm
Avg	.0196253
Stddev	.0000787
%RSD	.4011161
#1	.0195595
#2	.0197125
#3	.0196038

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3351.354	72450.02	13916.99	2310.193	4212.757
Stddev	4.978	246.13	99.51	5.767	6.396
%RSD	.1485480	.3397225	.7149900	.2496283	.1518338
#1	3356.692	72581.49	13949.79	2314.466	4219.362
#2	3350.533	72602.50	13805.23	2312.480	4212.315
#3	3346.837	72166.08	13995.96	2303.634	4206.593

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICSA01 Acquired: 2/10/2025 14:35:27 Type: Unk
Method: NON EPA-6010-200.7(v2675) 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	.0012660	.0057935	.0083698	-.006117	.0009317	242.7654	.0018394
Stddev	.0023772	.0025800	.0015257	.000137	.0016094	.1907	.0005656
%RSD	187.7645	44.53290	18.22825	2.240115	172.7303	.0785420	30.75115
#1	-.000908	.0042423	.0098782	-.006226	.0012391	242.9408	.0012059
#2	.003804	.0043663	.0068274	-.005963	.0023653	242.5624	.0022937
#3	.000902	.0087717	.0084037	-.006161	-.000809	242.7929	.0020185

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019428	.0035128	225.8624	.0567031	.0022950	.0064791	96.51969
Stddev	.0000270	.0002007	.7045	.0003806	.0000996	.0014955	.47172
%RSD	1.391150	5.713206	.3119133	.6712044	4.341381	23.08213	.4887301
#1	.0019124	.0033117	225.9097	.0569717	.0022652	.0049556	96.89828
#2	.0019641	.0037131	225.1355	.0568701	.0024062	.0079450	95.99124
#3	.0019518	.0035137	226.5421	.0562676	.0022137	.0065366	96.66954

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049429	244.0392	.0038811	.0027863	-.467793	.0037294	.0061460
Stddev	.0006572	.6002	.0003222	.0000557	.009661	.0003354	.0004156
%RSD	13.29502	.2459261	8.302118	1.999257	2.065240	8.994271	6.762339
#1	.0049052	243.9185	.0040416	.0028451	-.477970	.0036271	.0062779
#2	.0043054	243.5085	.0035102	.0027795	-.466661	.0034571	.0056805
#3	.0056181	244.6905	.0040915	.0027344	-.458748	.0041041	.0064798

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.133974	.0339144	.0000628	-.004798	-.001310	.0084309	.0008860
Stddev	.037223	.0005225	.0004591	.001122	.000368	.0070949	.0004037
%RSD	27.78331	1.540794	731.0881	23.38161	28.07789	84.15342	45.55953
#1	-.151736	.0342181	.0005857	-.005681	-.001577	.0002391	.0012613
#2	-.158989	.0333110	-.000123	-.005177	-.000890	.0126155	.0004590
#3	-.091198	.0342141	-.000274	-.003536	-.001461	.0124381	.0009378

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICSA01 Acquired: 2/10/2025 14:35:27 Type: Unk
Method: NON EPA-6010-200.7(v2675) 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	-.018411	-.002752	.0008177
Stddev	.001042	.001559	.0005138
%RSD	5.660229	56.63287	62.83074
#1	-.018290	-.000993	.0004634
#2	-.017435	-.003960	.0014069
#3	-.019508	-.003303	.0005828

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3011.031	65341.77	13492.03	2085.214	3504.093
Stddev	10.831	82.82	25.72	3.022	6.903
%RSD	.3597136	.1267505	.1906377	.1449138	.1969966
#1	3018.115	65252.05	13514.55	2084.316	3507.359
#2	3016.414	65415.29	13497.53	2088.583	3508.758
#3	2998.563	65357.97	13464.00	2082.743	3496.164

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICSAB01 Acquired: 2/10/2025 14:41:27 Type: Unk
Method: NON EPA-6010-200.7(v2676) 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	.1058253	.0882946	.0556834	.0448946	.6316984	245.2702
Stddev	.0006824	.0009856	.0006179	.0002641	.0034279	.1851
%RSD	.6448474	1.116300	1.109685	.5883601	.5426452	.0754670
#1	.1056441	.0887842	.0556032	.0446296	.6278307	245.0621
#2	.1052517	.0889396	.0563376	.0448963	.6329036	245.3318
#3	.1065800	.0871601	.0551096	.0451579	.6343609	245.4166

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4421759	.4733163	.9627944	224.5886	.5560325	.4921193
Stddev	.0011406	.0016737	.0007552	.3425	.0016826	.0007678
%RSD	.2579452	.3536025	.0784389	.1525062	.3026075	.1560229
#1	.4415124	.4750983	.9635209	224.9336	.5550354	.4930059
#2	.4415224	.4730730	.9620135	224.2486	.5550869	.4916681
#3	.4434929	.4717776	.9628487	224.5838	.5579752	.4916840

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4939359	95.75303	.4394443	243.3526	.9705777	.2155423
Stddev	.0007527	.31951	.0013208	.2947	.0011540	.0006380
%RSD	.1523884	.3336861	.3005707	.1210890	.1188941	.2960034
#1	.4940592	95.47689	.4390311	243.6567	.9709438	.2148060
#2	.4946194	95.67921	.4409223	243.0684	.9692851	.2158883
#3	.4931292	96.10299	.4383794	243.3327	.9715041	.2159326

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.483062	.4497660	1.042004	-.143341	F .0290229	F -.000024
Stddev	.012125	.0030909	.000901	.026329	.0010607	.000030
%RSD	2.510000	.6872209	.0864659	18.36783	3.654570	124.2708
#1	-.495490	.4476036	1.041958	-.154602	.0284635	-.000052
#2	-.482430	.4483883	1.042927	-.162167	.0283590	.000008
#3	-.471265	.4533062	1.041127	-.113255	.0302461	-.000028

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICSAB01 Acquired: 2/10/2025 14:41:27 Type: Unk
Method: NON EPA-6010-200.7(v2676) 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 -.005757	F -.001892	F -.011748	F .0031703	F -.016703	F -.002332
Stddev	.000366	.000378	.004809	.0009520	.002878	.000226
%RSD	6.355724	19.97622	40.93523	30.02972	17.23029	9.701556
#1	-.005369	-.002167	-.007802	.0023088	-.013586	-.002559
#2	-.006096	-.002048	-.010339	.0041925	-.017262	-.002106
#3	-.005805	-.001461	-.017105	.0030096	-.019260	-.002331

Elem	Sr4077
Units	ppm
Avg	F .0054004
Stddev	.0001649
%RSD	3.053467
#1	.0054484
#2	.0055360
#3	.0052168

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2951.592	64334.66	13438.14	2018.407	3469.951
Stddev	5.703	177.65	45.57	4.872	2.650
%RSD	.1932023	.2761396	.3391304	.2413984	.0763822
#1	2957.999	64385.90	13388.56	2016.725	3469.826
#2	2949.704	64481.07	13478.19	2023.898	3472.661
#3	2947.072	64137.02	13447.68	2014.599	3467.364

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICSADLX20 Acquired: 2/10/2025 14:45:31 Type: Unk
Method: NON EPA-6010-200.7(v2676) 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	.0018019	-.000768	.0007076	.0001161	-.000080	12.15621	-.004364
Stddev	.0010585	.000495	.0007127	.0018882	.001844	.00853	.000832
%RSD	58.74015	64.46356	100.7317	1625.866	2297.347	.0701916	19.07063
#1	.0026432	-.001067	.0000397	.0004209	-.000574	12.16517	-.003765
#2	.0006135	-.000196	.0014579	.0018334	.001960	12.14818	-.004014
#3	.0021491	-.001039	.0006251	-.001906	-.001627	12.15529	-.005315

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001608	.0001206	11.72130	.0028936	-.000147	.0003552	4.872601
Stddev	.0000283	.0000898	.02716	.0003022	.000204	.0003145	.008905
%RSD	17.61325	74.43833	.2316796	10.44444	138.5121	88.52261	.1827548
#1	.0001296	.0001142	11.74147	.0026605	-.000058	.0007159	4.863399
#2	.0001681	.0002133	11.69042	.0027852	-.000380	.0002108	4.873227
#3	.0001848	.0000342	11.73200	.0032350	-.000003	.0001389	4.881176

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000004	12.11183	-.000023	.0004419	-.602982	.0004279	.0005503
Stddev	.000353	.05988	.000121	.0002652	.015283	.0007064	.0002191
%RSD	10039.59	.4944009	518.3149	60.00685	2.534588	165.0872	39.80511
#1	-.000344	12.16998	-.000005	.0001782	-.616034	.0008711	.0004683
#2	-.000028	12.05036	.000088	.0004389	-.606742	-.000387	.0003841
#3	.000361	12.11515	-.000153	.0007085	-.586170	.000799	.0007985

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.218227	-.000500	-.000004	-.000977	.0009915	-.007747	-.000734
Stddev	.007025	.000086	.000137	.000421	.0004832	.003991	.001769
%RSD	3.219116	17.21674	3870.472	43.07425	48.73679	51.51668	241.0756
#1	-.225400	-.000424	-.000096	-.001425	.0015267	-.006769	.001135
#2	-.211360	-.000483	.000154	-.000590	.0005872	-.004335	-.002384
#3	-.217920	-.000594	-.000068	-.000915	.0008607	-.012135	-.000953

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICSADLX20 Acquired: 2/10/2025 14:45:31 Type: Unk
Method: NON EPA-6010-200.7(v2676) 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	.0008007	-.006200	.0001776
Stddev	.0029020	.000871	.0000262
%RSD	362.4383	14.05339	14.73162
#1	.0024816	-.005195	.0001903
#2	-.002550	-.006743	.0001950
#3	.002471	-.006661	.0001475

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3241.244	71269.69	14083.12	2237.554	4048.869
Stddev	10.859	43.90	75.61	4.850	13.485
%RSD	.3350264	.0616002	.5369002	.2167545	.3330556
#1	3249.126	71231.61	14015.04	2232.231	4060.746
#2	3228.858	71317.71	14164.50	2241.721	4034.210
#3	3245.749	71259.75	14069.82	2238.711	4051.650

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICSABDLX20 Acquired: 2/10/2025 14:49:48 Type: Unk
Method: NON EPA-6010-200.7(v2676) 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	.0062220	.0034253	.0033601	.0004639	.0317005	12.37487	.0184580
Stddev	.0011823	.0011924	.0012361	.0024897	.0008390	.02334	.0004928
%RSD	19.00177	34.80995	36.78558	536.7325	2.646638	.1885707	2.670100
#1	.0061864	.0047766	.0019364	.0022189	.0309948	12.36358	.0178957
#2	.0074217	.0029780	.0041583	-.002386	.0326282	12.40171	.0188150
#3	.0050579	.0025213	.0039858	.001558	.0314787	12.35933	.0186635

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0246627	.0492054	11.90626	.0289608	.0246183	.0263924	4.938011
Stddev	.0001952	.0001176	.05628	.0003231	.0001420	.0002527	.030440
%RSD	.7914630	.2389851	.4727191	1.115576	.5768191	.9573794	.6164412
#1	.0248872	.0490803	11.95026	.0286403	.0246729	.0262934	4.905896
#2	.0245683	.0492223	11.92567	.0289559	.0247250	.0262041	4.966440
#3	.0245327	.0493136	11.84284	.0292864	.0244572	.0266795	4.941698

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0234643	12.34736	.0495526	.0107425	-.606733	.0218394	.0530290
Stddev	.0001297	.06300	.0005369	.0002716	.012600	.0014442	.0003352
%RSD	.5525781	.5102407	1.083542	2.527912	2.076753	6.612835	.6320344
#1	.0236119	12.39272	.0501209	.0106952	-.620942	.0222929	.0526421
#2	.0233689	12.37393	.0490539	.0110346	-.602339	.0230024	.0532273
#3	.0234119	12.27542	.0494829	.0104977	-.596918	.0202229	.0532177

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.209170	-.000495	.0000129	-.001722	.0009618	-.009664	-.002444
Stddev	.017174	.000718	.0001649	.001008	.0001548	.006942	.000082
%RSD	8.210551	145.0872	1282.940	58.51437	16.09120	71.83365	3.345984
#1	-.228015	-.000974	.0000366	-.002831	.0009119	-.009033	-.002371
#2	-.194400	.000331	-.000163	-.000862	.0008381	-.003059	-.002532
#3	-.205096	-.000841	.000165	-.001473	.0011353	-.016901	-.002430

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: ICSABDLX20 Acquired: 2/10/2025 14:49:48 Type: Unk
Method: NON EPA-6010-200.7(v2676) 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	-.004180	-.005682	.0001820
Stddev	.003056	.000268	.0000186
%RSD	73.10223	4.712522	10.19528
#1	-.006835	-.005974	.0001833
#2	-.004866	-.005622	.0001628
#3	-.000840	-.005448	.0001998

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3261.798	70885.01	13979.62	2237.031	4066.125
Stddev	8.800	387.66	47.05	14.015	6.444
%RSD	.2697996	.5468843	.3365967	.6265206	.1584883
#1	3251.743	71331.27	13928.01	2250.941	4059.176
#2	3265.553	70692.16	13990.71	2222.913	4071.904
#3	3268.098	70631.59	14020.14	2237.239	4067.295

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV01 Acquired: 2/10/2025 14:59:19 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	5.023697	4.986210	4.863045	5.082227	5.116823	9.801344	9.911460
Stddev	.013972	.018394	.009020	.009442	.010828	.019150	.083505
%RSD	.2781135	.3688952	.1854882	.1857837	.2116110	.1953818	.8425062
#1	5.020532	4.973935	4.864733	5.081058	5.126891	9.783554	9.821075
#2	5.011580	4.977337	4.853300	5.073424	5.105369	9.821613	9.927567
#3	5.038980	5.007359	4.871102	5.092199	5.118209	9.798864	9.985738

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2676351	2.636471	23.84899	.9982699	2.431008	1.259217	4.930059
Stddev	.0012938	.006730	.12244	.0019879	.006518	.003100	.016029
%RSD	.4834085	.2552808	.5133951	.1991375	.2681384	.2461684	.3251257
#1	.2688743	2.639710	23.81436	.9983458	2.433672	1.260113	4.923447
#2	.2677381	2.628734	23.98501	.9962451	2.423579	1.255768	4.948336
#3	.2662929	2.640970	23.74759	1.000219	2.435772	1.261770	4.918394

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.335965	23.83161	2.434897	1.238190	25.60270	2.404849	2.510938
Stddev	.009753	.09314	.005279	.003053	.09296	.005619	.006136
%RSD	.4175057	.3908079	.2167892	.2465314	.3631008	.2336541	.2443795
#1	2.337156	23.76225	2.439487	1.239161	25.58344	2.407075	2.514588
#2	2.345068	23.93747	2.429129	1.234770	25.52087	2.409014	2.503854
#3	2.325671	23.79512	2.436075	1.240638	25.70378	2.398458	2.514372

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.01173	4.687219	5.058453	4.882956	4.780547	5.105836	4.871553
Stddev	.11897	.007175	.011079	.011273	.018818	.028084	.011134
%RSD	.4756391	.1530842	.2190182	.2308704	.3936344	.5500340	.2285535
#1	24.93540	4.695429	5.062923	4.883332	4.783044	5.096377	4.875554
#2	24.95098	4.684086	5.045837	4.871500	4.797992	5.083704	4.858971
#3	25.14880	4.682143	5.066598	4.894037	4.760605	5.137428	4.880133

Sample Name: CCV01 Acquired: 2/10/2025 14:59:19 Type: Unk
Method: NON EPA-6010-200.7(v2677) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.843677	4.810895	4.992996
Stddev	.018255	.010882	.025353
%RSD	.3768845	.2261959	.5077677
#1	4.853043	4.814630	4.964295
#2	4.822640	4.819418	5.002351
#3	4.855348	4.798637	5.012342

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3213.059	69622.83	13674.14	2180.958	3882.390
Stddev	9.328	108.44	50.09	6.670	11.254
%RSD	.2903211	.1557563	.3663426	.3058503	.2898633
#1	3209.540	69682.40	13657.73	2177.709	3877.606
#2	3223.634	69688.44	13634.30	2188.630	3895.245
#3	3206.002	69497.66	13730.38	2176.534	3874.318

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB01 Acquired: 2/10/2025 15:03:29 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	.0015470	-.001033	.0004755	-.001368	-.000194	-.002694	-.006562
Stddev	.0002666	.000872	.0007547	.001532	.001103	.005626	.000287
%RSD	17.23358	84.35136	158.7086	112.0051	570.1633	208.8641	4.367250
#1	.0015162	-.001835	.0009253	-.002779	-.001359	-.000554	-.006272
#2	.0012972	-.001158	-.000396	.000261	-.000055	-.009075	-.006845
#3	.0018277	-.000106	.000897	-.001585	.000834	.001549	-.006568

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000029	-.000164	-.001467	.0000721	-.000107	.0000141	.0017178
Stddev	.000014	.000037	.007525	.0002247	.000180	.0000528	.0024742
%RSD	48.78081	22.63425	512.8625	311.4586	167.8865	375.1218	144.0329
#1	-.000034	-.000204	.000169	.0000141	.000019	.0000750	.0045722
#2	-.000013	-.000130	-.009676	.0003201	-.000313	-.000014	.0001851
#3	-.000040	-.000159	.005105	-.000118	-.000027	-.000019	.0003961

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000351	.0065949	-.000035	.0002033	-.743073	-.000088	.0003131
Stddev	.000103	.0086644	.000061	.0001106	.004076	.000635	.0003633
%RSD	29.22038	131.3803	174.1016	54.41103	.5485970	722.3590	116.0535
#1	-.000245	.0165342	-.000072	.0003148	-.739978	.000009	.0005444
#2	-.000450	.0026145	.000035	.0000936	-.741549	-.000765	.0005005
#3	-.000359	.0006360	-.000069	.0002016	-.747692	.000493	-.000106

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.291490	.0119032	.0003105	-.000345	.0012613	-.007804	-.001227
Stddev	.022306	.0005271	.0001950	.000745	.0007598	.005804	.000806
%RSD	7.652476	4.427841	62.81130	215.9772	60.23688	74.37548	65.65881
#1	-.299499	.0124952	.0001709	.000323	.0018802	-.002028	-.001806
#2	-.308687	.0117296	.0005334	-.000210	.0004134	-.007747	-.001567
#3	-.266285	.0114849	.0002273	-.001147	.0014903	-.013636	-.000307

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB01 Acquired: 2/10/2025 15:03:29 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.002012	-.004987	.0000292
Stddev	.001010	.000292	.0000025
%RSD	50.22349	5.864516	8.450120
#1	-.002269	-.005289	.0000272
#2	-.000897	-.004966	.0000320
#3	-.002868	-.004705	.0000285

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3328.146	72535.06	14206.34	2261.794	4252.699
Stddev	7.738	206.51	68.86	10.641	13.758
%RSD	.2325112	.2847043	.4847098	.4704755	.3235050
#1	3332.954	72652.38	14197.43	2250.765	4260.551
#2	3332.265	72656.20	14142.38	2272.000	4260.734
#3	3319.219	72296.62	14279.23	2262.616	4236.814

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166356TB Acquired: 2/10/2025 15:07:50 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.004052	-.006557	.0000497	.0069935	.0016028	.0109665
Stddev	.000910	.000557	.0010468	.0010472	.0010419	.0014686
%RSD	22.45001	8.489819	2104.948	14.97459	65.00643	13.39191
#1	-.004496	-.007196	-.000740	.0059143	.0026509	.0116704
#2	-.003006	-.006299	.001237	.0070605	.0005673	.0119506
#3	-.004654	-.006176	-.000348	.0080055	.0015900	.0092784

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.010408	-.000236	-.000049	.0077056	.0012302	-.000598
Stddev	.000691	.000003	.000015	.0023644	.0003258	.000153
%RSD	6.642256	1.267060	30.04559	30.68372	26.48639	25.51495
#1	-.009621	-.000233	-.000066	.0078244	.0010004	-.000453
#2	-.010682	-.000238	-.000042	.0100083	.0016031	-.000758
#3	-.010919	-.000237	-.000039	.0052840	.0010872	-.000584

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012789	.0325737	.0026594	.0011599	.0010057	.0001800
Stddev	.0004283	.0006643	.0000451	.0056440	.0001293	.0002498
%RSD	33.49256	2.039412	1.696504	486.5924	12.85790	138.8068
#1	.0016857	.0332823	.0026156	.0072587	.0009843	.0004470
#2	.0008319	.0324737	.0027057	-.003879	.0011445	.0001409
#3	.0013189	.0319651	.0026568	.000100	.0008885	-.000048

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 304.5265	-.000601	.0023162	-.337524	.0016856	.0001941
Stddev	2.2722	.000279	.0001149	.011458	.0005534	.0002670
%RSD	.7461365	46.44360	4.962209	3.394839	32.82843	137.5745
#1	306.8151	-.000450	.0022736	-.344319	.0018720	.0004981
#2	302.2711	-.000429	.0022287	-.324295	.0021217	.0000865
#3	304.4932	-.000922	.0024464	-.343958	.0010631	-.000002

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166356TB Acquired: 2/10/2025 15:07:50 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.012529	.0012451	.0053460	.0041722	F .0240196	-.007376
Stddev	.000216	.0002917	.0012106	.0006420	.0013828	.000424
%RSD	1.727206	23.42685	22.64423	15.38822	5.757120	5.747927
#1	-.012713	.0015548	.0055261	.0048810	.0231754	-.006901
#2	-.012291	.0009756	.0064564	.0036296	.0232680	-.007513
#3	-.012585	.0012048	.0040555	.0040060	.0256155	-.007715

Elem	Sr4077
Units	ppm
Avg	-.000048
Stddev	.000014
%RSD	28.80963
#1	-.000044
#2	-.000064
#3	-.000037

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3091.672	68161.80	14420.18	2103.419	3772.036
Stddev	11.536	90.47	139.91	1.012	8.569
%RSD	.3731304	.1327332	.9702131	.0481316	.2271807
#1	3093.282	68178.99	14383.12	2104.064	3777.731
#2	3102.319	68063.97	14302.54	2103.942	3776.197
#3	3079.416	68242.45	14574.89	2102.252	3762.181

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166425BL Acquired: 2/10/2025 15:12:18 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.003139	-.008512	.0004224	.0018617	.0010206	.0101597	-.011527
Stddev	.000775	.001149	.0005316	.0015449	.0008227	.0054321	.000211
%RSD	24.69803	13.49364	125.8498	82.98343	80.60627	53.46681	1.833981
#1	-.004005	-.009641	-.000064	.0029801	.0010064	.0128181	-.011313
#2	-.002509	-.007345	.000341	.0000989	.0018504	.0137506	-.011735
#3	-.002903	-.008551	.000990	.0025061	.0002052	.0039104	-.011533

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000216	.0000280	.0163106	.0021068	-.000343	.0004841	.0379647
Stddev	.000026	.0000990	.0047195	.0002599	.000147	.0003638	.0027290
%RSD	11.90736	353.4943	28.93514	12.33475	42.85727	75.15282	7.188388
#1	-.000222	.0001331	.0117146	.0019435	-.000192	.0002799	.0391413
#2	-.000187	.0000144	.0160727	.0019704	-.000352	.0002682	.0399082
#3	-.000238	-.000063	.0211445	.0024065	-.000485	.0009041	.0348448

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016597	.0027634	.0001578	.0000396	-.941754	-.000363	.0018704
Stddev	.0003072	.0003332	.0000985	.0003092	.002763	.000616	.0000690
%RSD	18.51129	12.05760	62.41200	780.1471	.2933986	169.5728	3.689553
#1	.0013093	.0031034	.0000671	-.000011	-.944829	.000339	.0018667
#2	.0017867	.0024375	.0002626	-.000241	-.940951	-.000618	.0019411
#3	.0018831	.0027493	.0001437	.000371	-.939481	-.000810	.0018033

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.477502	.0001103	.0001245	-.012877	.0012171	.0074581	.0044294
Stddev	.018809	.0007980	.0000743	.000873	.0006621	.0029969	.0014816
%RSD	3.939120	723.6366	59.70101	6.776235	54.39893	40.18247	33.44944
#1	-.473956	-.000645	.0001594	-.012022	.0005626	.0101553	.0036088
#2	-.497832	.000945	.0000392	-.013766	.0012020	.0042320	.0061397
#3	-.460718	.000031	.0001750	-.012842	.0018865	.0079870	.0035396

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166425BL Acquired: 2/10/2025 15:12:18 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	.0085712	-.007118	-.000121
Stddev	.0031577	.000320	.000027
%RSD	36.84067	4.493580	22.27947
#1	.0112169	-.006753	-.000093
#2	.0094211	-.007350	-.000146
#3	.0050755	-.007251	-.000124

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3308.556	74259.26	14376.80	2278.624	4257.850
Stddev	7.919	194.11	46.84	5.989	16.831
%RSD	.2393376	.2613977	.3258361	.2628167	.3952864
#1	3302.465	74391.39	14326.86	2278.838	4255.088
#2	3317.507	74036.40	14419.77	2272.531	4275.891
#3	3305.695	74349.99	14383.78	2284.503	4242.572

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166425BS Acquired: 2/10/2025 15:16:38 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	.7429487	1.817103	.8833038	1.808990	.7840561	1.885388
Stddev	.0027070	.022222	.0022298	.008363	.0011095	.008672
%RSD	.3643551	1.222954	.2524379	.4622949	.1415077	.4599469
#1	.7439167	1.837019	.8857647	1.818002	.7851554	1.880970
#2	.7398908	1.793132	.8814177	1.807488	.7840763	1.879814
#3	.7450386	1.821156	.8827291	1.801479	.7829366	1.895379

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1769035	.1951163	.1927142	.9527804	.3996296	.1863679
Stddev	.0011975	.0010703	.0006959	.0024621	.0011331	.0010180
%RSD	.6768969	.5485660	.3610800	.2584120	.2835450	.5462455
#1	.1781545	.1948061	.1933448	.9539986	.3984761	.1875046
#2	.1757680	.1942354	.1928302	.9543959	.3996715	.1860591
#3	.1767880	.1963075	.1919677	.9499467	.4007411	.1855401

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2968738	2.857862	.1880713	1.812884	.4656817	.0699883
Stddev	.0008458	.014854	.0009779	.003222	.0013847	.0003405
%RSD	.2849109	.5197498	.5199633	.1777395	.2973592	.4864968
#1	.2978375	2.869709	.1878202	1.812373	.4672590	.0696107
#2	.2962544	2.862679	.1872435	1.809948	.4651204	.0700820
#3	.2965296	2.841198	.1891503	1.816331	.4646657	.0702721

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.431242	.2769556	.1942687	9.067523	F .2393750	.4178000
Stddev	.018775	.0018195	.0011241	.064986	.0018630	.0010809
%RSD	.7722342	.6569495	.5786272	.7166917	.7782903	.2587116
#1	2.451096	.2755018	.1946441	9.119370	.2398436	.4190420
#2	2.428855	.2789960	.1930050	9.088579	.2373224	.4172861
#3	2.413775	.2763689	.1951571	8.994619	.2409589	.4170719

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166425BS Acquired: 2/10/2025 15:16:38 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	.6331310	.1863728	.7656807	5.153157	F .0196682	.1835825
Stddev	.0026332	.0010163	.0036507	.017146	.0054205	.0001459
%RSD	.4158991	.5453231	.4767846	.3327202	27.55980	.0794710
#1	.6361480	.1853313	.7672171	5.171269	.0241417	.1834309
#2	.6312953	.1873620	.7683121	5.137177	.0212225	.1837219
#3	.6319497	.1864252	.7615130	5.151027	.0136403	.1835948

Elem	Sr4077
Units	ppm
Avg	.1922150
Stddev	.0005592
%RSD	.2909153
#1	.1921300
#2	.1917032
#3	.1928119

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3276.595	73185.53	14253.80	2270.371	4185.014
Stddev	9.170	216.83	34.67	11.509	15.977
%RSD	.2798707	.2962787	.2432199	.5069374	.3817576
#1	3266.079	73316.86	14279.83	2259.099	4166.588
#2	3280.774	72935.26	14267.11	2282.104	4193.436
#3	3282.931	73304.49	14214.44	2269.909	4195.017

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1215-04 Acquired: 2/10/2025 15:20:38 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.003621	-.008740	.0211500	.0050072	.0026617	.0540699	.0874420
Stddev	.001708	.003367	.0012501	.0009724	.0013764	.0011862	.0005410
%RSD	47.16760	38.51946	5.910711	19.41976	51.70926	2.193841	.6186789
#1	-.003923	-.009421	.0218142	.0041937	.0011130	.0527039	.0874167
#2	-.001782	-.011714	.0219278	.0060841	.0031273	.0548393	.0869141
#3	-.005158	-.005085	.0197079	.0047436	.0037449	.0546667	.0879952

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000155	-.000074	31.86767	.0010771	.0003855	.0211333	.0159157
Stddev	.000011	.000025	.04523	.0001517	.0000842	.0005741	.0039699
%RSD	7.236602	34.07641	.1419440	14.08086	21.83334	2.716651	24.94347
#1	-.000158	-.000098	31.82703	.0011144	.0003856	.0206948	.0174735
#2	-.000164	-.000047	31.85956	.0012067	.0003012	.0209219	.0188704
#3	-.000142	-.000078	31.91641	.0009103	.0004696	.0217831	.0114031

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0754869	4.511902	.0027194	.0002142	279.6237	-.000720	.0785513
Stddev	.0002460	.005046	.0001900	.0002356	2.7573	.001227	.0004891
%RSD	.3258565	.1118370	6.987702	110.0233	.9860928	170.3724	.6226385
#1	.0754490	4.512790	.0025006	.0000513	279.5015	-.002123	.0779866
#2	.0752621	4.516445	.0028151	.0004843	276.9294	-.000187	.0788364
#3	.0757496	4.506470	.0028426	.0001068	282.4401	.000150	.0788310

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.299644	.0265558	.0005587	-.014523	.0007074	1.750734	.0234285
Stddev	.021332	.0004775	.0001743	.000459	.0003735	.014496	.0023417
%RSD	1.641353	1.798226	31.19073	3.160282	52.79730	.8280204	9.995114
#1	1.276333	.0268677	.0006883	-.014432	.0002806	1.742209	.0260583
#2	1.304407	.0260061	.0006271	-.015021	.0009744	1.742520	.0226584
#3	1.318191	.0267937	.0003606	-.014117	.0008673	1.767472	.0215689

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1215-04 Acquired: 2/10/2025 15:20:38 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	1.701710	-.009261	.1443070
Stddev	.010345	.000917	.0001649
%RSD	.6079203	9.904367	.1142467
#1	1.702751	-.008202	.1442301
#2	1.690884	-.009778	.1444962
#3	1.711496	-.009803	.1441946

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3088.872	68708.46	13967.95	2135.156	3754.042
Stddev	19.744	137.35	31.41	4.376	23.071
%RSD	.6391824	.1999025	.2248910	.2049506	.6145639
#1	3096.367	68840.30	13936.10	2137.745	3762.795
#2	3103.770	68566.19	13968.85	2130.103	3771.455
#3	3066.478	68718.89	13998.91	2137.619	3727.875

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1215-08 Acquired: 2/10/2025 15:25:06 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.005540	-.011274	.0288104	.0036766	.0019855	.0508088	.0575612
Stddev	.000764	.001296	.0003297	.0014372	.0009890	.0057314	.0003189
%RSD	13.78273	11.49337	1.144454	39.09150	49.81161	11.28039	.5540076
#1	-.004762	-.009781	.0284744	.0025567	.0011221	.0569075	.0579294
#2	-.005568	-.011928	.0288234	.0052972	.0030646	.0499853	.0573814
#3	-.006288	-.012111	.0291335	.0031760	.0017699	.0455337	.0573728

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000155	.0002720	82.89355	.0008837	.0030207	.0144982	.0246941
Stddev	.000035	.0000833	.29916	.0001641	.0004516	.0005024	.0053080
%RSD	22.73391	30.62633	.3608928	18.57564	14.94840	3.465110	21.49518
#1	-.000125	.0003571	83.11940	.0009197	.0032638	.0146301	.0196043
#2	-.000194	.0001906	83.00698	.0010268	.0032986	.0139431	.0242815
#3	-.000147	.0002683	82.55427	.0007045	.0024997	.0149215	.0301963

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3119988	7.008993	.0085266	-.000088	276.4028	-.000635	.0910192
Stddev	.0007515	.031831	.0003077	.000245	1.0664	.000914	.0002679
%RSD	.2408592	.4541520	3.608657	278.0422	.3857985	144.0191	.2943371
#1	.3120036	7.043526	.0084087	-.000371	277.5468	-.000331	.0912595
#2	.3127479	7.002630	.0082953	.000069	275.4364	.000089	.0907303
#3	.3112450	6.980824	.0088758	.000037	276.2253	-.001663	.0910678

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.534413	.0292375	.0008855	-.014898	-.000296	3.858351	.0089460
Stddev	.028949	.0002394	.0001797	.000503	.000246	.013974	.0007254
%RSD	1.886647	.8189320	20.29469	3.375464	83.15779	.3621840	8.109235
#1	1.502983	.0294594	.0008250	-.015377	-.000069	3.843917	.0081959
#2	1.540272	.0289837	.0010876	-.014941	-.000557	3.871815	.0089981
#3	1.559985	.0292693	.0007438	-.014374	-.000261	3.859322	.0096440

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1215-08 Acquired: 2/10/2025 15:25:06 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	3.060693	-.017847	.3851175
Stddev	.011657	.000926	.0016875
%RSD	.3808641	5.186371	.4381786
#1	3.067088	-.018462	.3854138
#2	3.047238	-.018296	.3866373
#3	3.067754	-.016782	.3833015

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3000.368	67158.08	13966.33	2051.438	3643.139
Stddev	3.288	36.66	87.23	2.968	9.553
%RSD	.1096002	.0545929	.6245907	.1446857	.2622271
#1	3001.507	67153.09	13866.15	2048.738	3649.155
#2	3002.935	67196.98	14007.27	2054.616	3648.138
#3	2996.661	67124.17	14025.56	2050.960	3632.123

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-04 Acquired: 2/10/2025 15:29:31 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.004270	-.009369	.0016481	-.000445	.0015945	.0035880	.0750359
Stddev	.000822	.000663	.0002538	.001528	.0018256	.0043225	.0002170
%RSD	19.25210	7.076733	15.39907	343.7861	114.4928	120.4711	.2892491
#1	-.003337	-.009906	.0013583	-.000574	.0004794	.0085584	.0750396
#2	-.004890	-.009573	.0017553	-.001904	.0037012	.0014975	.0752511
#3	-.004581	-.008628	.0018307	.001145	.0006027	.0007081	.0748170

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000207	.0000488	130.8298	.0012443	.0002710	.0034804	.0168854
Stddev	.000031	.0000973	.3085	.0001241	.0000440	.0002545	.0024890
%RSD	14.80627	199.3829	.2358300	9.971907	16.23295	7.311207	14.74079
#1	-.000172	.0000065	130.4890	.0013378	.0003214	.0033865	.0197113
#2	-.000228	.0001601	131.0902	.0011036	.0002512	.0032862	.0150187
#3	-.000222	-.000020	130.9102	.0012917	.0002403	.0037684	.0159261

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2002034	8.974286	.0039311	.0002785	338.3560	.0018091	.0385795
Stddev	.0012815	.006985	.0001912	.0008748	3.5807	.0005249	.0001399
%RSD	.6401185	.0778316	4.864250	314.1318	1.058268	29.01308	.3625864
#1	.1987352	8.973809	.0040405	.0012885	334.5120	.0023767	.0384838
#2	.2010975	8.967552	.0040425	-.000237	341.5968	.0017095	.0385146
#3	.2007775	8.981497	.0037103	-.000216	338.9593	.0013412	.0387400

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.012238	.0662334	.0018879	-.015740	-.001715	4.371869	.0128091
Stddev	.015643	.0006984	.0002852	.000186	.000736	.022697	.0011816
%RSD	.5193012	1.054480	15.10717	1.184514	42.94036	.5191486	9.224849
#1	3.022645	.0667731	.0019652	-.015632	-.002563	4.398048	.0136908
#2	2.994249	.0654446	.0015720	-.015634	-.001347	4.357709	.0132700
#3	3.019820	.0664825	.0021264	-.015956	-.001235	4.359852	.0114665

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-04 Acquired: 2/10/2025 15:29:31 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	3.722261	-.023450	.4322163
Stddev	.175082	.002108	.0006268
%RSD	4.703639	8.987916	.1450186
#1	3.921927	-.021362	.4318210
#2	3.594975	-.023412	.4318890
#3	3.649880	-.025577	.4329390

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3496.315	64974.83	14016.65	1986.782	4243.113
Stddev	123.294	209.83	43.64	7.732	156.771
%RSD	3.526408	.3229475	.3113136	.3891675	3.694713
#1	3355.611	64799.91	14053.39	1988.494	4064.380
#2	3585.463	64917.10	13968.42	1978.338	4357.342
#3	3547.871	65207.49	14028.15	1993.515	4307.616

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-08 Acquired: 2/10/2025 15:33:54 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.003244	-.009206	.0059846	.0008229	.0016306	-.003683	.0786177
Stddev	.001915	.001183	.0004529	.0002560	.0009370	.001542	.0008148
%RSD	59.04913	12.84854	7.568314	31.10531	57.46268	41.85733	1.036365
#1	-.004454	-.010348	.0057252	.0007789	.0013745	-.001920	.0780489
#2	-.004241	-.009283	.0065076	.0005918	.0008483	-.004352	.0782531
#3	-.001035	-.007987	.0057210	.0010980	.0026691	-.004777	.0795511

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000151	.0003088	128.7884	.0010854	.0018625	.0065040	.0222961
Stddev	.000014	.0001217	.4432	.0001829	.0002356	.0002489	.0025629
%RSD	9.061019	39.41936	.3441300	16.85136	12.65117	3.826528	11.49475
#1	-.000160	.0004393	128.3426	.0008812	.0018869	.0063124	.0236742
#2	-.000158	.0001984	128.7938	.0012342	.0020849	.0064142	.0238752
#3	-.000136	.0002887	129.2289	.0011409	.0016156	.0067853	.0193390

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1904183	2.774508	.0023215	.0003355	319.8459	-.000639	.0483280
Stddev	.0003035	.009803	.0000894	.0001184	1.6593	.000463	.0001110
%RSD	.1594012	.3533089	3.850646	35.29456	.5187741	72.40981	.2295775
#1	.1902184	2.768552	.0023963	.0002023	317.9689	-.000138	.0483127
#2	.1902688	2.769151	.0023456	.0003755	321.1175	-.000729	.0484458
#3	.1907675	2.785822	.0022225	.0004288	320.4512	-.001050	.0482255

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.636158	.0200586	.0008307	-.015496	-.002562	1.542918	.0241735
Stddev	.022809	.0003918	.0003292	.000070	.000716	.007395	.0005296
%RSD	1.394081	1.953295	39.63226	.4528556	27.94587	.4792963	2.190694
#1	1.639194	.0201945	.0011580	-.015415	-.001789	1.544066	.0242921
#2	1.611982	.0196169	.0004995	-.015534	-.003203	1.549672	.0235947
#3	1.657297	.0203643	.0008347	-.015538	-.002694	1.535016	.0246337

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-08 Acquired: 2/10/2025 15:33:54 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	1.693695	-.026141	.4667859
Stddev	.012257	.000405	.0026913
%RSD	.7236790	1.550487	.5765524
#1	1.707399	-.026410	.4650922
#2	1.683780	-.026337	.4653764
#3	1.689906	-.025675	.4698892

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3602.297	79578.64	16917.52	2421.651	4326.211
Stddev	19.509	320.22	33.08	20.919	24.670
%RSD	.5415767	.4023910	.1955128	.8638198	.5702523
#1	3580.307	79320.61	16955.61	2397.773	4299.252
#2	3609.058	79478.29	16896.03	2430.431	4331.718
#3	3617.526	79937.01	16900.92	2436.749	4347.662

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-12 Acquired: 2/10/2025 15:38:19 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.003030	-.007974	.0015301	.0010047	.0013422	-.002865	.0880928
Stddev	.000846	.001849	.0005240	.0017865	.0006880	.004873	.0481089
%RSD	27.93260	23.19266	34.24949	177.8036	51.26053	170.0939	54.61163
#1	-.002057	-.007369	.0010531	-.000743	.0019962	.002271	.0582019
#2	-.003438	-.006503	.0014461	.000929	.0014057	-.003443	.0624873
#3	-.003596	-.010050	.0020911	.002828	.0006246	-.007422	.1435890

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000179	.0000207	146.5890	.0017458	-.000463	.0027843	.0055146
Stddev	.000037	.0000955	66.3595	.0005911	.000089	.0004466	.0014005
%RSD	20.57952	460.6157	45.26911	33.85861	19.16045	16.03966	25.39612
#1	-.000150	-.000066	105.3785	.0023694	-.000361	.0031544	.0045147
#2	-.000168	.000123	111.2491	.0011938	-.000520	.0022883	.0049139
#3	-.000221	.000004	223.1394	.0016741	-.000508	.0029103	.0071153

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1009475	16.90180	.0025499	.0000208	371.2219	.0014112	.0306394
Stddev	.0459636	7.72678	.0001944	.0003031	98.4863	.0012866	.0086642
%RSD	45.53219	45.71572	7.622899	1460.606	26.53030	91.17376	28.27782
#1	.0723965	12.05295	.0025310	-.000160	479.5037	.0016031	.0401084
#2	.0764765	12.84011	.0023657	.000371	347.1783	.0000394	.0287019
#3	.1539694	25.81233	.0027530	-.000148	286.9838	.0025911	.0231081

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.273428	.1115757	.0014067	-.015694	-.002297	4.654347	.0167659
Stddev	.638717	.0440132	.0002038	.001012	.001108	1.123429	.0020707
%RSD	28.09490	39.44694	14.49088	6.450031	48.23580	24.13720	12.35060
#1	2.994186	.0849290	.0014556	-.016774	-.001647	5.918565	.0168582
#2	2.048477	.0874207	.0011829	-.015541	-.001669	4.274046	.0146506
#3	1.777621	.1623774	.0015817	-.014767	-.003577	3.770430	.0187889

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-12 Acquired: 2/10/2025 15:38:19 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	5.226336	-.026617	.5259690
Stddev	.551233	.008710	.2345839
%RSD	10.54722	32.72174	44.60033
#1	5.055060	-.021155	.3819572
#2	4.781073	-.022036	.3992917
#3	5.842875	-.036662	.7966583

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3455.815	68409.06	15008.83	2095.714	4150.094
Stddev	294.963	16724.55	4989.99	522.020	361.333
%RSD	8.535265	24.44786	33.24702	24.90894	8.706631
#1	3551.108	51012.31	18379.32	1554.332	4261.194
#2	3691.352	69846.20	17370.78	2136.876	4442.831
#3	3124.986	84368.67	9276.38	2595.935	3746.256

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-16 Acquired: 2/10/2025 15:42:43 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.003219	-.006577	.0099801	.0025132	.0019751	.0177472	.0588712
Stddev	.000614	.001006	.0002478	.0025017	.0013013	.0019747	.0002883
%RSD	19.07755	15.29861	2.482555	99.54118	65.88765	11.12680	.4897539
#1	-.002514	-.007735	.0097512	-.000245	.0031914	.0167455	.0591977
#2	-.003507	-.006088	.0099460	.004636	.0021311	.0164742	.0586517
#3	-.003636	-.005909	.0102432	.003149	.0006028	.0200220	.0587643

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000127	.0000242	55.39620	.0013138	.0005795	.0061746	.0190545
Stddev	.000037	.0000746	.51164	.0001555	.0000930	.0005926	.0073829
%RSD	28.76656	308.6270	.9235953	11.83609	16.04514	9.596864	38.74648
#1	-.000085	-.000036	54.87897	.0013535	.0005497	.0059657	.0130049
#2	-.000149	.000001	55.40755	.0011423	.0005051	.0057146	.0272812
#3	-.000147	.000108	55.90206	.0014457	.0006837	.0068433	.0168774

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0985870	7.590133	.0037240	.0003012	259.0157	-.000606	.0503062
Stddev	.0005388	.135069	.0001630	.0002155	14.4105	.001282	.0001902
%RSD	.5465393	1.779528	4.378194	71.55187	5.563549	211.7602	.3780460
#1	.0979649	7.441348	.0039119	.0002300	274.9385	.000104	.0501820
#2	.0988903	7.624021	.0036203	.0001303	255.2390	.000165	.0505251
#3	.0989058	7.705031	.0036397	.0005433	246.8697	-.002086	.0502115

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.299582	.0430749	.0006525	-.014994	-.000424	2.410639	.0107659
Stddev	.061051	.0016780	.0000651	.000064	.000323	.047739	.0023857
%RSD	4.697717	3.895432	9.971486	.4298236	76.18026	1.980327	22.16008
#1	1.364180	.0412067	.0006817	-.014973	-.000758	2.464036	.0080112
#2	1.291727	.0435644	.0006977	-.015066	-.000113	2.395793	.0121226
#3	1.242839	.0444538	.0005779	-.014942	-.000401	2.372087	.0121638

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-16 Acquired: 2/10/2025 15:42:43 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	2.401817	-.012697	.4514971
Stddev	.043403	.000700	.0059605
%RSD	1.807089	5.509220	1.320168
#1	2.351936	-.012945	.4581044
#2	2.422548	-.011908	.4498624
#3	2.430968	-.013240	.4465245

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3720.311	84500.14	18107.75	2610.406	4510.534
Stddev	130.459	603.53	332.54	.813	105.469
%RSD	3.506664	.7142315	1.836424	.0311327	2.338281
#1	3854.658	83939.05	18488.58	2610.820	4628.920
#2	3712.152	84422.73	17959.82	2609.469	4476.082
#3	3594.123	85138.64	17874.84	2610.928	4426.598

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-20 Acquired: 2/10/2025 15:47:08 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	-.001917	-.008239	.0018737	.0004570	.0030464	-.005320	.0563685
Stddev	.001069	.001653	.0003943	.0010957	.0008132	.002010	.0008054
%RSD	55.75142	20.05964	21.04253	239.7328	26.69531	37.76957	1.428766
#1	-.002064	-.010131	.0022751	-.000191	.0023699	-.007576	.0572977
#2	-.000783	-.007073	.0018591	.001722	.0028206	-.003721	.0559375
#3	-.002906	-.007514	.0014869	-.000160	.0039486	-.004664	.0558704

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000161	.0000547	117.1685	.0015648	-.000453	.0025933	.0127288
Stddev	.000007	.0000538	.5650	.0002388	.000199	.0001165	.0032258
%RSD	4.297223	98.28586	.4821767	15.26220	43.94440	4.490553	25.34232
#1	-.000154	.0001157	117.3337	.0017987	-.000519	.0026626	.0120464
#2	-.000168	.0000340	117.6325	.0013213	-.000611	.0026585	.0098988
#3	-.000162	.0000143	116.5394	.0015745	-.000229	.0024589	.0162411

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0846500	9.275275	.0022652	.0001374	295.4908	.0013146	.0234516
Stddev	.0007020	.033570	.0002563	.0002636	3.1408	.0005328	.0005738
%RSD	.8292778	.3619252	11.31402	191.7614	1.062902	40.52775	2.446662
#1	.0848862	9.243576	.0019710	-.000165	294.9052	.0016458	.0229554
#2	.0852034	9.310445	.0024398	.000261	292.6841	.0007000	.0240799
#3	.0838604	9.271802	.0023849	.000317	298.8832	.0015979	.0233196

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.983951	.0586166	.0015755	-.013120	-.001775	4.206435	.0129520
Stddev	.022049	.0003049	.0001527	.000141	.000255	.026220	.0009930
%RSD	1.111353	.5201056	9.691368	1.077537	14.36748	.6233373	7.666492
#1	1.978978	.0585184	.0016806	-.013261	-.001696	4.199779	.0119941
#2	1.964814	.0589584	.0016456	-.012978	-.001569	4.184184	.0128851
#3	2.008061	.0583729	.0014004	-.013120	-.002060	4.235342	.0139767

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1216-20 Acquired: 2/10/2025 15:47:08 Type: Unk
Method: NON EPA-6010-200.7(v2677) 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	5.801570	-.021905	.3630908
Stddev	.016488	.000242	.0019201
%RSD	.2841922	1.103669	.5288107
#1	5.782610	-.021948	.3623863
#2	5.809565	-.022122	.3652636
#3	5.812536	-.021644	.3616225

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3585.618	80011.79	17409.65	2404.127	4373.158
Stddev	10.824	506.64	103.66	29.447	9.669
%RSD	.3018781	.6332127	.5954264	1.224869	.2211033
#1	3594.886	80397.82	17472.84	2434.056	4381.638
#2	3573.722	80199.47	17290.01	2403.139	4362.628
#3	3588.246	79438.09	17466.09	2375.186	4375.206

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV02 Acquired: 2/10/2025 16:05:04 Type: Unk
Method: NON EPA-6010-200.7(v2678) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.720958	4.622642	4.516328	4.790672	4.835595	9.125545
Stddev	.018090	.022899	.012520	.017558	.013524	.003803
%RSD	.3831882	.4953601	.2772166	.3665004	.2796785	.0416729
#1	4.719144	4.602879	4.516143	4.771729	4.826590	9.128858
#2	4.703844	4.647736	4.503901	4.793885	4.829047	9.126386
#3	4.739887	4.617310	4.528939	4.806400	4.851146	9.121392

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.53708	.2684761	2.717591	27.34173	.9290506	2.264769
Stddev	.09059	.0003475	.007941	.06811	.0051937	.005885
%RSD	.8596851	.1294470	.2922153	.2490914	.5590291	.2598490
#1	10.59311	.2688722	2.716762	27.36747	.9297938	2.264568
#2	10.43257	.2683334	2.710097	27.26451	.9235254	2.258987
#3	10.58557	.2682226	2.725915	27.39321	.9338327	2.270752

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.184159	4.500780	2.450943	26.25400	2.266662	1.154348
Stddev	.004020	.036646	.007695	.10191	.008365	.002949
%RSD	.3394751	.8142151	.3139777	.3881688	.3690316	.2554465
#1	1.182098	4.468804	2.455269	26.25573	2.265877	1.157110
#2	1.181587	4.492767	2.442058	26.15123	2.258717	1.151242
#3	1.188791	4.540770	2.455501	26.35502	2.275391	1.154692

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.78150	2.562470	2.347931	22.94363	F 4.333087	4.756446
Stddev	.08623	.008863	.006332	.15263	.005904	.011553
%RSD	.3626095	.3458614	.2696771	.6652408	.1362434	.2429010
#1	23.71290	2.554124	2.354591	22.90279	4.339854	4.746700
#2	23.75330	2.561514	2.347216	22.81558	4.328987	4.753430
#3	23.87831	2.571772	2.341988	23.11253	4.330420	4.769209

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV02 Acquired: 2/10/2025 16:05:04 Type: Unk
Method: NON EPA-6010-200.7(v2678) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.525970	F 4.405134	4.735993	4.553569	4.507024	F 4.437098
Stddev	.012175	.005614	.053404	.014473	.010129	.001298
%RSD	.2690005	.1274438	1.127615	.3178417	.2247487	.0292487
#1	4.527635	4.403632	4.691241	4.562795	4.497691	4.435631
#2	4.513048	4.400424	4.721627	4.561025	4.505585	4.438097
#3	4.537227	4.411347	4.795110	4.536888	4.517796	4.437565

Elem	Sr4077
Units	ppm
Avg	4.726054
Stddev	.041284
%RSD	.8735374
#1	4.773695
#2	4.703682
#3	4.700784

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3379.794	74172.15	14616.21	2294.839	4119.491
Stddev	6.122	330.66	66.43	16.377	9.013
%RSD	.1811492	.4457973	.4545285	.7136301	.2187972
#1	3380.348	74046.94	14543.33	2276.195	4115.959
#2	3385.621	74547.13	14673.38	2306.900	4129.735
#3	3373.414	73922.39	14631.93	2301.422	4112.778

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB02 Acquired: 2/10/2025 16:08:55 Type: Unk
Method: NON EPA-6010-200.7(v2679) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019630	-.001476	.0007089	-.000096	-.000153	.0025208	-.007054
Stddev	.0009635	.001464	.0006566	.000628	.000702	.0037203	.000770
%RSD	49.08241	99.20980	92.61489	655.0215	459.1855	147.5836	10.92219
#1	.0030008	-.001835	.0013192	-.000808	.000657	-.001052	-.006358
#2	.0017909	-.002726	.0000142	.000142	-.000516	.002241	-.007882
#3	.0010971	.000135	.0007934	.000379	-.000600	.006373	-.006924

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000005	-.000049	-.002216	.0003522	-.000114	-.000355	.0014855
Stddev	.000019	.000094	.002299	.0002537	.000189	.000302	.0020745
%RSD	369.4860	194.1473	103.7745	72.03639	166.5969	85.08516	139.6519
#1	-.000012	-.000110	-.003898	.0001799	-.000074	-.000321	-.000852
#2	-.000020	.000060	.000404	.0006434	.000053	-.000072	.003109
#3	.000016	-.000095	-.003154	.0002331	-.000320	-.000673	.002199

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000001	-.000090	-.000259	.0005164	-.716963	-.000781	.0002002
Stddev	.000087	.008393	.000140	.0002463	.007229	.000123	.0002911
%RSD	7679.441	9370.125	54.02466	47.68960	1.008246	15.75625	145.4002
#1	-.000048	-.007505	-.000359	.0005063	-.721329	-.000726	.0004995
#2	-.000055	-.001787	-.000099	.0007675	-.720942	-.000922	-.000082
#3	.000099	.009022	-.000319	.0002753	-.708619	-.000695	.000183

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.303136	.0099185	.0001162	-.003793	.0013637	-.011561	-.001603
Stddev	.013315	.0007391	.0001502	.000300	.0004845	.002535	.001356
%RSD	4.392428	7.451526	129.3284	7.913054	35.53280	21.92816	84.58098
#1	-.317817	.0106044	.0000717	-.003495	.0010484	-.010192	-.001590
#2	-.291841	.0100154	.0002836	-.003788	.0011209	-.014487	-.000254
#3	-.299750	.0091358	-.000007	-.004096	.0019216	-.010005	-.002966

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB02 Acquired: 2/10/2025 16:08:55 Type: Unk
Method: NON EPA-6010-200.7(v2679) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002742	-.003963	.0000627
Stddev	.001400	.000219	.0000210
%RSD	51.05384	5.532736	33.54038
#1	-.004347	-.003717	.0000392
#2	-.002104	-.004137	.0000797
#3	-.001775	-.004036	.0000693

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3390.635	75881.55	14900.01	2343.413	4353.618
Stddev	5.734	110.05	143.56	9.353	6.382
%RSD	.1691258	.1450257	.9635071	.3991251	.1465816
#1	3396.948	75990.75	14926.02	2351.918	4360.297
#2	3389.209	75883.21	15028.79	2344.924	4352.974
#3	3385.748	75770.68	14745.22	2333.396	4347.583

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1232-04 Acquired: 2/10/2025 16:13:14 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	-.004929	-.008936	.0166646	.0036215	.0015506	.0184569	.1114855
Stddev	.002419	.001875	.0011722	.0005642	.0018731	.0023079	.0003273
%RSD	49.06220	20.98817	7.034288	15.57925	120.8004	12.50411	.2935607
#1	-.002232	-.009542	.0154551	.0042580	-.000201	.0163540	.1112346
#2	-.005653	-.010432	.0167430	.0031830	.001327	.0209260	.1118557
#3	-.006904	-.006832	.0177956	.0034234	.003525	.0180909	.1113662

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000212	.0002147	46.23586	.0003607	-.000366	.0165020	.0237539
Stddev	.000036	.0001124	.06406	.0003788	.000097	.0004356	.0029068
%RSD	16.97854	52.37236	.1385557	105.0235	26.37537	2.639901	12.23702
#1	-.000248	.0000885	46.29244	.0005965	-.000383	.0160944	.0247395
#2	-.000212	.0002511	46.24884	.0005619	-.000262	.0169611	.0260397
#3	-.000176	.0003043	46.16630	-.000076	-.000454	.0164506	.0204824

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3053345	3.029453	.0021514	.0002087	275.0729	-.001370	.0666864
Stddev	.0006171	.006632	.0000789	.0000287	2.2241	.000592	.0003336
%RSD	.2021148	.2189063	3.666508	13.74891	.8085644	43.24744	.5002475
#1	.3060115	3.028671	.0022379	.0001823	277.4692	-.001952	.0667942
#2	.3051883	3.036441	.0020836	.0002392	273.0748	-.001390	.0663122
#3	.3048035	3.023247	.0021326	.0002045	274.6746	-.000768	.0669527

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9115413	.0116133	.0005664	-.013858	.0002331	.7305490	.0444874
Stddev	.0121437	.0003150	.0002991	.000696	.0002044	.0050702	.0016357
%RSD	1.332218	2.712640	52.80602	5.021516	87.70476	.6940227	3.676680
#1	.8980344	.0114617	.0004084	-.014079	.0003908	.7336182	.0457390
#2	.9215569	.0114026	.0003794	-.014417	.0000021	.7333320	.0426366
#3	.9150328	.0119754	.0009114	-.013079	.0003063	.7246968	.0450864

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1232-04 Acquired: 2/10/2025 16:13:14 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	1.946358	-.013232	.2502557
Stddev	.006610	.000782	.0004167
%RSD	.3395901	5.913019	.1664902
#1	1.938771	-.014134	.2498588
#2	1.950865	-.012834	.2506896
#3	1.949439	-.012729	.2502185

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3133.291	69653.32	14488.89	2115.449	3845.664
Stddev	6.948	1.21	23.43	2.502	5.460
%RSD	.2217466	.0017302	.1616976	.1182641	.1419740
#1	3139.702	69651.94	14467.18	2115.428	3851.968
#2	3134.263	69653.82	14485.76	2112.958	3842.595
#3	3125.908	69654.19	14513.72	2117.961	3842.429

Sample Name: Q1232-08 Acquired: 2/10/2025 16:17:41 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	-.004306	-.009242	.0008870	.0019859	.0009467	.0123066	.0674931
Stddev	.000655	.001981	.0013270	.0028256	.0018587	.0043687	.0006203
%RSD	15.21711	21.44053	149.6012	142.2787	196.3267	35.49885	.9191061
#1	-.005046	-.009610	-.000579	.0015558	-.000915	.0170886	.0668530
#2	-.003799	-.011014	.001234	.0050019	.002803	.0113069	.0680916
#3	-.004072	-.007102	.002006	-.000600	.000952	.0085244	.0675347

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000184	.0001616	94.38155	.0018177	.0015465	.0035221	.0164068
Stddev	.000026	.0000529	.11062	.0000622	.0001975	.0000742	.0014765
%RSD	14.05468	32.74918	.1172042	3.423299	12.77064	2.107601	8.999021
#1	-.000214	.0001084	94.25428	.0017701	.0017554	.0034827	.0172702
#2	-.000170	.0002142	94.45455	.0018881	.0015215	.0034758	.0147020
#3	-.000169	.0001624	94.43583	.0017950	.0013628	.0036077	.0172483

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2355001	2.442589	.0060723	.0001276	296.9389	-.000695	.0339230
Stddev	.0008586	.017227	.0004713	.0001703	.2373	.000899	.0002177
%RSD	.3645920	.7052717	7.762022	133.4633	.0799220	129.3082	.6418136
#1	.2347599	2.422735	.0061485	.0003218	296.8801	-.001683	.0339120
#2	.2364414	2.453575	.0065009	.0000573	297.2001	.000076	.0337110
#3	.2352989	2.451458	.0055675	.0000037	296.7365	-.000480	.0341460

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.527698	.0130250	.0012071	-.015866	-.000538	3.923809	.0067208
Stddev	.020887	.0003808	.0001790	.000275	.000634	.015290	.0023563
%RSD	1.367250	2.923892	14.83125	1.730279	117.8950	.3896605	35.05933
#1	1.503583	.0126015	.0012411	-.015581	.000009	3.934193	.0083967
#2	1.539368	.0131341	.0013666	-.015890	-.001234	3.930981	.0077392
#3	1.540141	.0133394	.0010135	-.016128	-.000389	3.906251	.0040267

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1232-08 Acquired: 2/10/2025 16:17:41 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	2.748789	-.019542	.2574268
Stddev	.002058	.001213	.0008668
%RSD	.0748638	6.204708	.3367337
#1	2.746539	-.020812	.2578924
#2	2.750577	-.019418	.2579613
#3	2.749250	-.018396	.2564266

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3112.956	69926.65	14807.76	2128.994	3780.852
Stddev	2.649	133.54	40.80	6.183	1.612
%RSD	.0851115	.1909651	.2755185	.2904169	.0426328
#1	3110.690	69929.90	14852.80	2126.598	3779.806
#2	3115.869	70058.53	14773.28	2136.016	3780.042
#3	3112.309	69791.52	14797.20	2124.367	3782.708

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1232-12 Acquired: 2/10/2025 16:22:07 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	-.002627	-.009463	.0011150	.0018567	.0058596	-.004862	.0515222
Stddev	.001404	.000824	.0010548	.0010398	.0003231	.004112	.0005482
%RSD	53.44582	8.709525	94.59569	56.00179	5.514534	84.56520	1.063972
#1	-.003803	-.009430	.0022685	.0014427	.0062131	-.000277	.0515877
#2	-.001073	-.010304	.0001997	.0030398	.0057861	-.008221	.0509442
#3	-.003006	-.008657	.0008769	.0010877	.0055795	-.006089	.0520347

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000189	-.000079	120.3885	.0016820	-.000071	.0073349	.0117444
Stddev	.000054	.000087	.0451	.0001344	.000132	.0002259	.0040532
%RSD	28.46555	109.6005	.0374787	7.992026	186.8718	3.079436	34.51211
#1	-.000231	.000016	120.3417	.0015786	-.000041	.0070934	.0081039
#2	-.000209	-.000154	120.4317	.0018340	.000044	.0075410	.0161119
#3	-.000128	-.000099	120.3921	.0016334	-.000215	.0073704	.0110172

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0545478	2.150888	.0018301	.0003613	292.5598	.0003780	.0044199
Stddev	.0005742	.008758	.0002955	.0001534	2.8074	.0006015	.0002495
%RSD	1.052733	.4071843	16.14667	42.45388	.9596022	159.1409	5.644733
#1	.0539485	2.147234	.0016007	.0002071	289.8584	.0001847	.0046000
#2	.0546018	2.144549	.0017261	.0005139	295.4624	-.000103	.0041351
#3	.0550931	2.160882	.0021635	.0003629	292.3586	.001052	.0045246

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.000351	.0155191	.0023317	-.016236	-.002428	3.531511	.0100200
Stddev	.065443	.0006214	.0002998	.000468	.000201	.032416	.0009828
%RSD	1.635920	4.004417	12.85723	2.879925	8.264409	.9179183	9.808720
#1	4.017659	.0161914	.0020138	-.015698	-.002562	3.514473	.0088924
#2	4.055400	.0149657	.0023719	-.016545	-.002525	3.568893	.0106954
#3	3.927994	.0154001	.0026093	-.016464	-.002197	3.511165	.0104720

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1232-12 Acquired: 2/10/2025 16:22:07 Type: Unk
Method: NON EPA-6010-200.7(v2679) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	8.133914	-.021690	.2962441
Stddev	.009853	.000150	.0007407
%RSD	.1211328	.6904345	.2500219
#1	8.143125	-.021527	.2970024
#2	8.135093	-.021720	.2955225
#3	8.123525	-.021822	.2962074

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3163.792	71003.82	14472.70	2152.037	3834.009
Stddev	10.140	326.41	59.74	9.651	9.281
%RSD	.3205158	.4597108	.4128017	.4484474	.2420812
#1	3155.073	71149.91	14454.37	2152.097	3831.058
#2	3161.384	70629.88	14539.46	2142.356	3826.562
#3	3174.920	71231.67	14424.27	2161.657	3844.407

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1232-16 Acquired: 2/10/2025 16:26:32 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	-.005151	-.007444	.0032989	.0011901	.0009252	.0016998	.0622008
Stddev	.004085	.001307	.0003107	.0013568	.0022810	.0032533	.0009502
%RSD	79.31549	17.55775	9.417927	114.0103	246.5271	191.3985	1.527599
#1	-.000710	-.008270	.0029723	-.000279	.0012949	-.000413	.0632705
#2	-.005993	-.005937	.0035907	.002395	-.001518	.005446	.0618772
#3	-.008749	-.008126	.0033337	.001454	.002999	.000066	.0614548

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000204	-.000054	120.1940	.0061367	-.000050	.0148278	.0343430
Stddev	.000035	.000031	.6348	.0001596	.000221	.0004177	.0022251
%RSD	17.10261	56.93446	.5281461	2.600090	446.3259	2.817379	6.479110
#1	-.000239	-.000074	120.8990	.0061767	.000084	.0153098	.0325860
#2	-.000169	-.000071	119.6676	.0059610	-.000305	.0146032	.0335981
#3	-.000205	-.000019	120.0156	.0062726	.000072	.0145704	.0368450

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1374946	1.690410	.0041360	.0001122	285.2868	.0003800	.0144825
Stddev	.0003353	.016726	.0001480	.0002409	1.2941	.0003791	.0001843
%RSD	.2438452	.9894637	3.578756	214.7047	.4536174	99.77284	1.272291
#1	.1378801	1.709387	.0043044	.0001122	286.3572	.0008014	.0142993
#2	.1373324	1.677811	.0040768	.0003531	285.6546	.0000665	.0144803
#3	.1372712	1.684033	.0040267	-.000129	283.8486	.0002722	.0146678

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.753017	.0113344	.0022572	-.016317	-.001642	4.404278	.0112903
Stddev	.019137	.0005091	.0001442	.000519	.000533	.024890	.0025072
%RSD	.6951204	4.491150	6.386472	3.181741	32.44538	.5651325	22.20632
#1	2.733207	.0109251	.0022925	-.016847	-.001811	4.383118	.0105705
#2	2.771401	.0119044	.0023804	-.015809	-.001046	4.398013	.0140787
#3	2.754443	.0111737	.0020987	-.016296	-.002070	4.431701	.0092219

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1232-16 Acquired: 2/10/2025 16:26:32 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	4.492668	-.021186	.3067232
Stddev	.005908	.000629	.0004555
%RSD	.1314977	2.967509	.1484907
#1	4.489087	-.020662	.3066490
#2	4.499487	-.021883	.3063095
#3	4.489430	-.021013	.3072112

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3104.632	69999.63	14690.30	2131.897	3777.653
Stddev	2.262	60.55	156.39	6.438	3.425
%RSD	.0728585	.0864944	1.064603	.3019786	.0906518
#1	3107.079	69981.86	14509.96	2136.048	3780.531
#2	3104.199	70067.07	14788.70	2135.161	3778.562
#3	3102.617	69949.96	14772.24	2124.480	3773.866

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1232-20 Acquired: 2/10/2025 16:30:56 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	-.003801	-.010541	.0025484	.0028552	.0022018	.0027951	.0633358
Stddev	.001821	.002199	.0013519	.0029284	.0012759	.0042012	.0007817
%RSD	47.90008	20.85730	53.04795	102.5610	57.94625	150.3039	1.234255
#1	-.003927	-.011212	.0032414	.0026501	.0025883	.0028193	.0641516
#2	-.005556	-.012326	.0034134	.0058808	.0007774	-.001418	.0625933
#3	-.001921	-.008085	.0009906	.0000348	.0032397	.006984	.0632626

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000185	.0000981	120.0026	.0023605	-.000223	.0067722	.0176817
Stddev	.000017	.0000665	.8627	.0002680	.000174	.0004246	.0015940
%RSD	9.228006	67.81789	.7189175	11.35503	77.88557	6.270215	9.015123
#1	-.000166	.0000433	120.2899	.0025811	-.000023	.0064057	.0159202
#2	-.000198	.0000789	119.0329	.0020622	-.000338	.0066734	.0180998
#3	-.000192	.0001721	120.6850	.0024382	-.000308	.0072375	.0190249

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1371521	2.072048	.0029239	.0003072	294.4196	.0016719	.0306143
Stddev	.0012582	.020355	.0001645	.0003409	4.6843	.0010136	.0001601
%RSD	.9173610	.9823850	5.626805	110.9795	1.591026	60.62439	.5229533
#1	.1380023	2.092195	.0030908	.0003932	289.0112	.0005018	.0306538
#2	.1357067	2.051490	.0027618	.0005969	297.1901	.0022363	.0304381
#3	.1377472	2.072458	.0029192	-.000068	297.0575	.0022775	.0307509

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.113332	.0146351	.0012096	-.014263	-.001418	3.967836	.0933727
Stddev	.026523	.0002785	.0001380	.000147	.000052	.014113	.0021388
%RSD	1.255044	1.902725	11.41131	1.031667	3.664353	.3556875	2.290566
#1	2.095383	.0147180	.0010527	-.014166	-.001442	3.960775	.0911733
#2	2.143798	.0148627	.0013121	-.014432	-.001455	3.958647	.0934996
#3	2.100816	.0143246	.0012641	-.014190	-.001359	3.984086	.0954452

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1232-20 Acquired: 2/10/2025 16:30:56 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	2.641290	-.023746	.4256799
Stddev	.015213	.001356	.0000887
%RSD	.5759554	5.712290	.0208453
#1	2.633320	-.023812	.4257040
#2	2.631720	-.022357	.4255816
#3	2.658832	-.025068	.4257541

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3033.168	68390.17	14842.14	2051.644	3701.874
Stddev	7.966	314.10	160.08	15.507	5.238
%RSD	.2626453	.4592802	1.078557	.7558098	.1415094
#1	3042.289	68191.42	14765.83	2037.178	3705.603
#2	3027.577	68752.29	15026.10	2068.015	3704.134
#3	3029.636	68226.79	14734.49	2049.738	3695.885

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-04 Acquired: 2/10/2025 16:35:21 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	-.002372	-.010998	-.000515	.0030046	.0014415	-.001415	.0341975
Stddev	.001797	.001565	.000522	.0018375	.0003829	.000920	.0001749
%RSD	75.75010	14.23275	101.4860	61.15477	26.56448	64.99902	.5115550
#1	-.000298	-.009586	-.000272	.0049276	.0011654	-.001992	.0340874
#2	-.003368	-.012682	-.001114	.0012667	.0018787	-.000354	.0343992
#3	-.003450	-.010728	-.000158	.0028196	.0012806	-.001899	.0341060

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000190	-.000130	102.3237	.0126229	-.000495	.0022838	.0082114
Stddev	.000013	.000067	.4338	.0002174	.000200	.0000785	.0008798
%RSD	6.646042	51.91087	.4239460	1.721842	40.37278	3.437005	10.71388
#1	-.000200	-.000069	101.8252	.0125645	-.000722	.0022037	.0072253
#2	-.000176	-.000202	102.5312	.0124407	-.000417	.0023606	.0089160
#3	-.000195	-.000118	102.6148	.0128635	-.000345	.0022871	.0084928

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0429798	1.957784	.0008772	.0000290	281.7653	.0021196	.0040442
Stddev	.0003393	.001240	.0002081	.0000976	3.1113	.0007210	.0003482
%RSD	.7894007	.0633132	23.72050	336.3553	1.104218	34.01388	8.610234
#1	.0425889	1.959200	.0011153	-.000058	284.8900	.0028724	.0041254
#2	.0431522	1.957253	.0007856	.000010	281.7382	.0020510	.0043446
#3	.0431983	1.956898	.0007306	.000135	278.6676	.0014354	.0036625

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.562021	.0112347	.0028755	-.014328	-.001580	3.561536	.0131100
Stddev	.024117	.0004686	.0001957	.000143	.000585	.024211	.0006391
%RSD	1.543941	4.171255	6.807278	.9962495	37.01839	.6798039	4.875193
#1	1.547408	.0109363	.0028922	-.014243	-.001426	3.560133	.0138441
#2	1.548797	.0109931	.0030623	-.014493	-.001088	3.586418	.0126768
#3	1.589857	.0117749	.0026719	-.014248	-.002227	3.538056	.0128092

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-04 Acquired: 2/10/2025 16:35:21 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	4.853283	-.020503	.3677227
Stddev	.007378	.000136	.0024871
%RSD	.1520117	.6647524	.6763490
#1	4.856925	-.020555	.3649598
#2	4.858131	-.020348	.3684258
#3	4.844792	-.020606	.3697826

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3033.843	68186.17	14763.81	2053.768	3715.911
Stddev	3.460	160.83	25.51	4.469	2.643
%RSD	.1140316	.2358707	.1727536	.2175783	.0711311
#1	3034.454	68087.12	14787.95	2048.815	3712.957
#2	3030.119	68099.65	14766.35	2054.994	3716.726
#3	3036.956	68371.74	14737.13	2057.497	3718.051

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08 Acquired: 2/10/2025 16:39:46 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	-.003751	-.008872	.0018869	.0013515	.0012010	.0055552	.0665141
Stddev	.000370	.001516	.0000958	.0009395	.0018862	.0083314	.0012030
%RSD	9.851237	17.08818	5.077201	69.51904	157.0526	149.9737	1.808627
#1	-.003962	-.008116	.0019581	.0002740	.0020786	.0026027	.0667042
#2	-.003966	-.010617	.0017780	.0019996	-.000964	.0149608	.0652275
#3	-.003324	-.007882	.0019245	.0017809	.002488	-.000898	.0676108

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000191	.0000915	123.5842	.0019191	.0004300	.0042552	.0234902
Stddev	.000043	.0000697	.4407	.0003312	.0000906	.0001892	.0038890
%RSD	22.72656	76.19591	.3566074	17.25929	21.05981	4.447535	16.55579
#1	-.000210	.0000183	123.6047	.0017769	.0003255	.0040610	.0203103
#2	-.000141	.0000991	123.1336	.0022977	.0004800	.0042654	.0223343
#3	-.000221	.0001570	124.0143	.0016827	.0004845	.0044391	.0278261

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1262733	3.761672	.0030739	.0002538	305.0878	-.000305	.0193765
Stddev	.0009380	.018157	.0001617	.0001663	1.7871	.000901	.0002556
%RSD	.7428467	.4826787	5.260600	65.50828	.5857649	295.2385	1.319013
#1	.1251911	3.758345	.0029104	.0004397	305.0591	-.000219	.0193728
#2	.1267760	3.745409	.0032338	.0002028	306.8891	-.001246	.0191227
#3	.1268528	3.781262	.0030776	.0001191	303.3152	.000550	.0196338

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.816035	.0292595	.0015986	-.016042	-.001814	3.907982	.0238373
Stddev	.033100	.0007734	.0001941	.001006	.001046	.013687	.0015573
%RSD	1.175404	2.643194	12.14454	6.271424	57.67617	.3502191	6.533000
#1	2.838782	.0290120	.0018193	-.016196	-.002082	3.917833	.0255610
#2	2.831262	.0286401	.0015220	-.016962	-.002700	3.892354	.0225318
#3	2.778062	.0301263	.0014544	-.014968	-.000660	3.913758	.0234192

Sample Name: Q1235-08 Acquired: 2/10/2025 16:39:46 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	3.362940	-.023757	.4524885
Stddev	.009415	.000274	.0015695
%RSD	.2799626	1.154099	.3468650
#1	3.356894	-.024064	.4518341
#2	3.358140	-.023537	.4513521
#3	3.373788	-.023670	.4542794

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3086.797	69111.85	14419.52	2086.476	3748.703
Stddev	7.903	147.71	48.71	9.579	7.119
%RSD	.2560327	.2137300	.3377739	.4591034	.1898989
#1	3077.695	68941.43	14409.07	2084.827	3740.489
#2	3090.779	69203.00	14472.61	2096.773	3752.538
#3	3091.918	69191.14	14376.89	2077.830	3753.083

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08DUP Acquired: 2/10/2025 16:44:10 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	-.002927	-.007608	.0013373	.0031285	.0022083	.0073910	.0659172
Stddev	.000845	.002160	.0001489	.0025183	.0008550	.0042246	.0002300
%RSD	28.88428	28.39465	11.13269	80.49544	38.71666	57.15828	.3488402
#1	-.002359	-.005243	.0015087	.0006848	.0025359	.0025453	.0660648
#2	-.003898	-.009478	.0012399	.0057152	.0012379	.0093274	.0656523
#3	-.002523	-.008104	.0012634	.0029853	.0028509	.0103002	.0660346

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000166	-.000036	123.0267	.0021920	.0002026	.0043756	.0237250
Stddev	.000056	.000126	.1876	.0002382	.0000297	.0006695	.0010608
%RSD	33.46675	354.2581	.1524867	10.86914	14.66075	15.29983	4.471414
#1	-.000106	-.000024	122.9877	.0019822	.0001762	.0039737	.0225515
#2	-.000177	.000084	122.8616	.0021428	.0001967	.0051484	.0240075
#3	-.000216	-.000167	123.2307	.0024510	.0002348	.0040046	.0246160

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1265577	3.748831	.0034685	-.000151	302.7107	.0004430	.0193266
Stddev	.0005992	.011356	.0001938	.000112	2.9259	.0008869	.0001602
%RSD	.4734687	.3029173	5.587353	73.86036	.9665654	200.2149	.8290938
#1	.1261223	3.755074	.0034373	-.000025	299.3341	.0011740	.0192112
#2	.1263097	3.735723	.0032922	-.000237	304.4999	-.000544	.0192590
#3	.1272411	3.755696	.0036760	-.000192	304.2979	.000698	.0195095

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.799154	.0300239	.0018008	-.015678	-.001665	3.849539	.0253764
Stddev	.035461	.0004126	.0001124	.000881	.000710	.023227	.0010335
%RSD	1.266853	1.374105	6.240953	5.616644	42.63305	.6033595	4.072742
#1	2.760361	.0304892	.0016711	-.016291	-.001243	3.828979	.0248822
#2	2.829900	.0298797	.0018664	-.014669	-.001268	3.874734	.0246828
#3	2.807200	.0297028	.0018651	-.016074	-.002485	3.844905	.0265642

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08DUP Acquired: 2/10/2025 16:44:10 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	3.461255	-.023505	.4502292
Stddev	.005912	.000774	.0003412
%RSD	.1708027	3.293156	.0757913
#1	3.455475	-.024372	.4504723
#2	3.461000	-.023260	.4498391
#3	3.467290	-.022883	.4503762

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3049.874	68360.65	14208.14	2111.242	3674.451
Stddev	7.003	35.35	67.09	1.830	5.325
%RSD	.2296277	.0517183	.4721862	.0867005	.1449177
#1	3057.789	68399.54	14149.22	2109.414	3679.024
#2	3047.353	68330.45	14281.16	2113.075	3675.724
#3	3044.481	68351.97	14194.03	2111.236	3668.605

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08LX5 Acquired: 2/10/2025 16:48:35 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	-.001977	-.003852	.0007557	.0007158	.0001246	.0031277	.0081037
Stddev	.002237	.000373	.0002659	.0003215	.0014548	.0042769	.0003736
%RSD	113.1826	9.671124	35.18922	44.91171	1167.213	136.7459	4.610657
#1	-.002824	-.003424	.0010481	.0010869	-.001530	.0053785	.0076817
#2	.000560	-.004101	.0006907	.0005392	.000703	.0058091	.0083926
#3	-.003667	-.004032	.0005283	.0005214	.001202	-.001805	.0082367

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000057	-.000093	25.36681	.0024963	-.000191	.0008335	.0158555
Stddev	.000007	.000042	.04599	.0004494	.000195	.0004345	.0037664
%RSD	12.72203	45.41670	.1812982	18.00275	102.0112	52.12386	23.75452
#1	-.000060	-.000045	25.32618	.0025725	-.000120	.0013161	.0115104
#2	-.000063	-.000125	25.35751	.0029027	-.000042	.0004735	.0181875
#3	-.000049	-.000110	25.41674	.0020136	-.000412	.0007109	.0178688

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0259856	.7902763	.0013226	.0003125	60.10885	-.000718	.0042534
Stddev	.0004398	.0058399	.0004359	.0001464	.46078	.000423	.0002634
%RSD	1.692537	.7389736	32.95429	46.83329	.7665754	58.92164	6.193814
#1	.0262769	.7968534	.0013670	.0004134	60.24846	-.000930	.0041638
#2	.0254797	.7882767	.0017346	.0003795	60.48369	-.000994	.0040465
#3	.0262002	.7856988	.0008663	.0001446	59.59441	-.000231	.0045500

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3457181	.0048987	.0001681	-.004343	.0006858	.7794176	.0035796
Stddev	.0045413	.0006592	.0001434	.000129	.0003551	.0024880	.0014818
%RSD	1.313591	13.45730	85.27812	2.963642	51.78322	.3192136	41.39653
#1	.3409878	.0042835	.0002920	-.004383	.0008207	.7793064	.0052902
#2	.3500432	.0055946	.0000110	-.004199	.0002830	.7819593	.0026875
#3	.3461233	.0048180	.0002014	-.004447	.0009537	.7769870	.0027612

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08LX5 Acquired: 2/10/2025 16:48:35 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	.7075502	-.006966	.0919452
Stddev	.0040527	.000350	.0000632
%RSD	.5727860	5.026549	.0687679
#1	.7029264	-.006984	.0920165
#2	.7104866	-.007307	.0919232
#3	.7092377	-.006608	.0918959

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3222.344	71097.58	14608.71	2210.592	3998.862
Stddev	14.816	57.11	96.84	6.973	18.481
%RSD	.4597952	.0803273	.6628762	.3154244	.4621480
#1	3219.575	71160.09	14656.48	2214.273	3995.936
#2	3238.350	71048.13	14672.38	2202.550	4018.631
#3	3209.108	71084.52	14497.27	2214.952	3982.018

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08MS Acquired: 2/10/2025 16:52:55 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	.7983857	1.742920	.8761686	1.991324	.8254828	1.850305	.2433240
Stddev	.0031218	.005835	.0053077	.007088	.0025661	.008539	.0003725
%RSD	.3910205	.3347654	.6057832	.3559633	.3108632	.4615029	.1530927
#1	.7982370	1.741855	.8741210	1.987160	.8269457	1.854785	.2434215
#2	.7953408	1.749214	.8721897	1.987304	.8225198	1.855673	.2436380
#3	.8015792	1.737691	.8821951	1.999509	.8269829	1.840458	.2429124

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1702093	.1831448	135.9976	.3839051	.1882957	.2911502	2.866187
Stddev	.0011922	.0004738	.5477	.0001623	.0006667	.0010785	.007881
%RSD	.7004233	.2586884	.4026995	.0422776	.3540703	.3704224	.2749748
#1	.1699421	.1827163	135.5800	.3838394	.1880437	.2919179	2.870808
#2	.1715125	.1830646	136.6177	.3837860	.1877917	.2899172	2.857087
#3	.1691735	.1836536	135.7951	.3840900	.1890516	.2916156	2.870667

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3331541	5.774669	.4691811	.0725665	339.0988	.2710175	.2220026
Stddev	.0007259	.030353	.0016082	.0002194	3.3158	.0022052	.0011608
%RSD	.2178992	.5256233	.3427606	.3023761	.9778331	.8136893	.5228792
#1	.3336094	5.744092	.4680855	.0725655	341.1959	.2692524	.2223579
#2	.3323169	5.804793	.4684304	.0723476	340.8245	.2703106	.2229442
#3	.3335359	5.775121	.4710273	.0727865	335.2761	.2734896	.2207057

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.58815	.2637157	.4170336	.6373994	.1764856	5.151345	5.890588
Stddev	.08868	.0028446	.0021207	.0031497	.0004095	.019025	.024521
%RSD	.6526412	1.078657	.5085315	.4941528	.2320545	.3693232	.4162676
#1	13.66300	.2630874	.4173224	.6370198	.1768982	5.151514	5.879327
#2	13.49020	.2668219	.4147833	.6344566	.1760791	5.132235	5.873720
#3	13.61124	.2612378	.4189952	.6407217	.1764795	5.170284	5.918716

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08MS Acquired: 2/10/2025 16:52:55 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	3.745289	.1633123	.7002189
Stddev	.006172	.0008291	.0011633
%RSD	.1647807	.5076521	.1661276
#1	3.743348	.1638677	.7002324
#2	3.740322	.1623594	.7013754
#3	3.752198	.1637099	.6990490

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2976.616	67386.83	14165.29	2035.337	3609.073
Stddev	11.257	244.25	130.94	13.561	11.266
%RSD	.3781656	.3624606	.9243740	.6662780	.3121596
#1	2974.951	67387.81	14233.50	2033.130	3612.945
#2	2988.613	67142.09	14014.32	2023.015	3617.892
#3	2966.285	67630.59	14248.04	2049.866	3596.381

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV03 Acquired: 2/10/2025 16:57:02 Type: Unk
Method: NON EPA-6010-200.7(v2679) 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	5.037343	4.882880	4.771068	5.138782	5.162961	9.716602	9.206893
Stddev	.018562	.027955	.020425	.025305	.026043	.015603	.164233
%RSD	.3684848	.5725122	.4281099	.4924413	.5044196	.1605827	1.783809
#1	5.035854	4.882279	4.789190	5.141072	5.171300	9.699259	9.372144
#2	5.019570	4.855230	4.748934	5.112409	5.133769	9.729501	9.204839
#3	5.056604	4.911131	4.775079	5.162864	5.183813	9.721046	9.043697

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2313998	2.369301	23.06786	.9906580	2.394197	1.254068	4.768636
Stddev	.0009727	.009589	.05455	.0017347	.008986	.005583	.009245
%RSD	.4203587	.4047012	.2364863	.1751015	.3753246	.4451945	.1938738
#1	.2302792	2.371319	23.00842	.9895444	2.397084	1.255068	4.779263
#2	.2318948	2.358864	23.11565	.9926566	2.384123	1.248052	4.764197
#3	.2320255	2.377720	23.07950	.9897728	2.401385	1.259083	4.762447

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.605944	23.04226	2.394172	1.224394	25.71056	2.332973	2.493842
Stddev	.004364	.05194	.008487	.001437	.10182	.007022	.001267
%RSD	.1674757	.2254075	.3544811	.1173663	.3960420	.3009891	.0508086
#1	2.601283	22.98268	2.397221	1.225987	25.82767	2.326570	2.494247
#2	2.606616	23.07800	2.384582	1.223998	25.64298	2.331867	2.494858
#3	2.609934	23.06609	2.400713	1.223196	25.66102	2.340483	2.492422

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.39356	4.558721	5.045201	4.784297	4.627865	5.044600	4.767458
Stddev	.09409	.026985	.024398	.024603	.004369	.026413	.014305
%RSD	.3857250	.5919522	.4835948	.5142395	.0944133	.5235891	.3000592
#1	24.49526	4.528994	5.045888	4.789276	4.623057	5.074037	4.765378
#2	24.30959	4.581675	5.020466	4.757585	4.628945	5.022973	4.754307
#3	24.37584	4.565493	5.069248	4.806029	4.631593	5.036789	4.782690

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV03 Acquired: 2/10/2025 16:57:02 Type: Unk
Method: NON EPA-6010-200.7(v2679) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.765440	4.649062	5.164476
Stddev	.029529	.005899	.047947
%RSD	.6196562	.1268757	.9283983
#1	4.764465	4.645449	5.111668
#2	4.736410	4.645867	5.176476
#3	4.795444	4.655868	5.205282

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3234.704	70289.26	14013.25	2155.025	3957.652
Stddev	11.051	131.57	48.65	3.274	12.106
%RSD	.3416498	.1871852	.3471414	.1519046	.3058850
#1	3233.005	70166.51	14066.49	2151.283	3952.303
#2	3246.506	70273.11	13971.12	2156.437	3971.511
#3	3224.600	70428.16	14002.14	2157.356	3949.143

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB03 Acquired: 2/10/2025 17:06:53 Type: Unk
Method: NON EPA-6010-200.7(v2680) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022823	-.001972	.0006716	.0001226	.0000230	.0027906	-.006713
Stddev	.0005932	.001542	.0010673	.0016104	.0014505	.0024041	.000789
%RSD	25.98925	78.22175	158.9171	1313.258	6303.181	86.15030	11.75141
#1	.0023101	-.001950	.0014099	.0011622	-.000139	.0001614	-.007455
#2	.0016758	-.000440	.0011569	-.001732	.001548	.0033336	-.005884
#3	.0028611	-.003524	-.000552	.000938	-.001340	.0048769	-.006801

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000047	-.000045	-.004257	.0002113	-.000042	-.000150	.0002043
Stddev	.000035	.000041	.002680	.0002043	.000292	.000375	.0009872
%RSD	75.89220	92.50827	62.95977	96.68210	688.6003	250.4715	483.3097
#1	-.000015	-.000079	-.007001	.0000494	-.000159	.000086	-.000879
#2	-.000085	-.000056	-.001647	.0001437	.000290	-.000582	.001053
#3	-.000040	.000001	-.004122	.0004408	-.000258	.000047	.000439

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000307	-.002660	-.000075	.0003999	-.685842	-.000440	-.000084
Stddev	.000255	.004949	.000264	.0001520	.015146	.000795	.000185
%RSD	82.94737	186.0426	351.0833	38.00756	2.208374	180.8764	219.8007
#1	-.000584	-.008299	-.000359	.0003836	-.701644	-.000248	-.000260
#2	-.000081	.000962	.000162	.0002568	-.684432	.000242	.000108
#3	-.000257	-.000643	-.000029	.0005595	-.671450	-.001313	-.000101

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.312628	.0011302	-.000180	-.003583	.0010604	-.014916	-.001894
Stddev	.022988	.0001809	.000224	.000917	.0009923	.004106	.000958
%RSD	7.353187	16.00189	124.7984	25.60026	93.57041	27.52753	50.57610
#1	-.336811	.0009303	-.000120	-.004243	.0022061	-.016066	-.002978
#2	-.310017	.0011776	.000009	-.003970	.0004756	-.018325	-.001164
#3	-.291058	.0012826	-.000427	-.002536	.0004996	-.010358	-.001539

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB03 Acquired: 2/10/2025 17:06:53 Type: Unk
Method: NON EPA-6010-200.7(v2680) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.004387	-.004199	-.000033
Stddev	.002272	.000937	.000027
%RSD	51.79274	22.30393	84.35752
#1	-.004946	-.003700	-.000064
#2	-.006328	-.003619	-.000019
#3	-.001888	-.005280	-.000015

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3372.665	74667.70	14537.64	2341.193	4299.968
Stddev	10.842	98.71	57.38	6.482	10.122
%RSD	.3214682	.1321934	.3946786	.2768776	.2353986
#1	3378.443	74781.04	14492.02	2333.726	4301.444
#2	3360.157	74621.50	14518.85	2344.468	4289.189
#3	3379.393	74600.58	14602.06	2345.384	4309.271

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08MSD Acquired: 2/10/2025 17:11:11 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.7762026	1.693815	.8670036	1.928921	.8051250	1.860383	.2519097
Stddev	.0025017	.004948	.0005942	.007048	.0036926	.005760	.0006870
%RSD	.3223046	.2921032	.0685332	.3653878	.4586387	.3095910	.2727134
#1	.7733448	1.692858	.8675018	1.920836	.8021706	1.857303	.2526103
#2	.7772658	1.699171	.8671631	1.933772	.8039398	1.856819	.2512372
#3	.7779970	1.689416	.8663460	1.932154	.8092647	1.867028	.2518814

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1680976	.1807216	137.4536	.3839566	.1853598	.2851276	2.900276
Stddev	.0014160	.0002980	.3955	.0014646	.0007323	.0007926	.030446
%RSD	.8423771	.1648717	.2877424	.3814464	.3950890	.2779673	1.049760
#1	.1674993	.1806922	137.3556	.3823627	.1851211	.2843767	2.902091
#2	.1670789	.1804395	137.1164	.3852431	.1847766	.2850499	2.929774
#3	.1697145	.1810332	137.8890	.3842640	.1861817	.2859561	2.868964

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3341943	5.855772	.4633013	.0720398	345.6556	.2755813	.2191611
Stddev	.0008420	.014633	.0008991	.0000929	2.2641	.0012761	.0010051
%RSD	.2519500	.2498972	.1940660	.1289926	.6550031	.4630460	.4586107
#1	.3336159	5.851099	.4627822	.0719630	343.8632	.2770496	.2180056
#2	.3338067	5.844046	.4627822	.0720131	344.9038	.2747405	.2196448
#3	.3351603	5.872172	.4643395	.0721431	348.2000	.2749538	.2198328

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.92965	.2609971	.4124650	.6286254	.1794043	5.203178	5.771702
Stddev	.15521	.0019558	.0011086	.0017511	.0007968	.027324	.010544
%RSD	1.114263	.7493633	.2687707	.2785547	.4441483	.5251315	.1826878
#1	13.98420	.2598343	.4114288	.6283298	.1794140	5.178452	5.760490
#2	14.05022	.2599019	.4123322	.6270409	.1801962	5.232513	5.773197
#3	13.75452	.2632552	.4136340	.6305054	.1786027	5.198569	5.781419

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08MSD Acquired: 2/10/2025 17:11:11 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	3.642120	.1688178	.6806947
Stddev	.003464	.0006161	.0010610
%RSD	.0951075	.3649454	.1558720
#1	3.640459	.1687799	.6794841
#2	3.639798	.1694520	.6814630
#3	3.646101	.1682216	.6811370

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3043.180	67723.88	14312.59	2060.169	3682.451
Stddev	3.802	32.74	124.92	9.355	8.595
%RSD	.1249425	.0483382	.8727780	.4540716	.2334145
#1	3044.552	67756.45	14334.30	2069.771	3684.342
#2	3046.105	67690.98	14425.22	2051.083	3689.943
#3	3038.882	67724.23	14178.24	2059.651	3673.068

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08A Acquired: 2/10/2025 17:15:18 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.7859163	1.717928	.8646818	1.948391	.8126490	1.846034	.2400310
Stddev	.0028995	.018978	.0034433	.010495	.0048805	.003362	.0005157
%RSD	.3689324	1.104690	.3982196	.5386594	.6005713	.1821271	.2148291
#1	.7892141	1.717321	.8640812	1.954922	.8175837	1.847784	.2394356
#2	.7847680	1.699260	.8615783	1.936285	.8078244	1.842158	.2403322
#3	.7837669	1.737201	.8683860	1.953965	.8125390	1.848161	.2403252

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1715627	.1808901	134.9385	.3852698	.1860566	.2849587	2.823473
Stddev	.0004656	.0003567	.2756	.0012590	.0004272	.0010538	.014801
%RSD	.2713648	.1971804	.2042718	.3267852	.2296168	.3697998	.5242173
#1	.1714651	.1805564	134.6469	.3844862	.1857964	.2854493	2.808852
#2	.1711537	.1808480	134.9741	.3846010	.1858238	.2837491	2.823118
#3	.1720693	.1812660	135.1947	.3867220	.1865497	.2856778	2.838448

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3314555	5.751186	.4632170	.0722670	333.8103	.2699266	.2208529
Stddev	.0015954	.007943	.0008419	.0002837	5.8210	.0010068	.0005215
%RSD	.4813317	.1381146	.1817454	.3925980	1.743805	.3729898	.2361187
#1	.3297046	5.747920	.4626832	.0722952	330.3301	.2707776	.2214470
#2	.3318350	5.760242	.4627804	.0719702	330.5705	.2701871	.2204709
#3	.3328269	5.745397	.4641875	.0725355	340.5304	.2688152	.2206409

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.31485	.2651341	.4145172	.6287403	.1751823	5.065840	5.765701
Stddev	.05646	.0006418	.0010792	.0019717	.0003677	.021893	.020135
%RSD	.4240559	.2420551	.2603613	.3135972	.2098946	.4321698	.3492286
#1	13.25282	.2643936	.4151299	.6264781	.1754357	5.057789	5.753923
#2	13.32848	.2654793	.4132710	.6296490	.1747605	5.049111	5.754230
#3	13.36324	.2655294	.4151506	.6300938	.1753507	5.090618	5.788951

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1235-08A Acquired: 2/10/2025 17:15:18 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	3.630053	.1616034	.7005891
Stddev	.010311	.0009532	.0007652
%RSD	.2840583	.5898251	.1092161
#1	3.634245	.1608987	.7014721
#2	3.618306	.1626880	.7001730
#3	3.637609	.1612235	.7001221

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3045.729	67380.89	14068.45	2037.595	3696.959
Stddev	8.078	295.19	31.16	5.277	5.276
%RSD	.2652366	.4380977	.2215001	.2589774	.1427132
#1	3037.274	67428.07	14089.91	2031.504	3694.914
#2	3053.369	67649.66	14082.75	2040.778	3702.952
#3	3046.545	67064.95	14032.71	2040.504	3693.012

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166613BL Acquired: 2/10/2025 17:19:24 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.0000312	-.002310	-.000147	-.000075	-.000213	.0079804	-.007353
Stddev	.0020311	.000623	.000780	.000649	.000422	.0037322	.000500
%RSD	6515.099	26.96343	531.3911	866.7758	197.5308	46.76750	6.796879
#1	-.001996	-.001775	-.001040	.000269	-.000016	.0116282	-.007028
#2	.002067	-.002993	.000400	-.000823	.000073	.0041691	-.007102
#3	.000023	-.002161	.000200	.000329	-.000698	.0081440	-.007928

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000056	-.000042	.0117449	.0002646	-.000059	.0001065	.0002259
Stddev	.0000201	.000013	.0088683	.0002885	.000106	.0003135	.0014963
%RSD	358.8554	30.72243	75.50725	109.0292	181.2468	294.4491	662.4203
#1	.0000222	-.000056	.0015392	.0004161	.000021	.0002165	-.000928
#2	-.000017	-.000031	.0161209	.0004459	-.000180	.0003501	.001917
#3	.000011	-.000040	.0175747	-.000068	-.000017	-.000247	-.000311

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000259	-.002333	-.000215	.0005480	-.642413	-.000581	.0002671
Stddev	.000120	.003354	.000136	.0001188	.013725	.001146	.0001674
%RSD	46.42384	143.7246	63.27167	21.68049	2.136442	197.0265	62.65201
#1	-.000310	.001430	-.000143	.0006686	-.656045	-.001845	.0004003
#2	-.000345	-.003423	-.000130	.0005442	-.642597	-.000290	.0000793
#3	-.000122	-.005006	-.000372	.0004311	-.628597	.000390	.0003218

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.313523	-.000931	.0000115	-.000701	.0012429	-.012003	-.002764
Stddev	.022567	.000336	.0000744	.000381	.0002319	.004537	.001774
%RSD	7.197945	36.15228	649.1055	54.36494	18.65905	37.80042	64.18139
#1	-.339581	-.001266	.0000833	-.000618	.0010038	-.017038	-.002439
#2	-.300628	-.000593	.0000164	-.000368	.0012580	-.008232	-.004678
#3	-.300361	-.000932	-.000065	-.001117	.0014669	-.010739	-.001175

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166613BL Acquired: 2/10/2025 17:19:24 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.0024988	-.004326	-.000066
Stddev	.0037871	.000731	.000006
%RSD	151.5563	16.89277	9.510063
#1	.0010128	-.004406	-.000072
#2	-.000320	-.003558	-.000059
#3	.006804	-.005013	-.000068

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3339.050	75116.84	14607.59	2329.940	4269.001
Stddev	7.347	643.14	23.36	11.607	7.098
%RSD	.2200399	.8561836	.1599463	.4981481	.1662648
#1	3331.039	75802.88	14619.36	2341.850	4264.567
#2	3345.473	74527.56	14580.69	2318.663	4277.188
#3	3340.639	75020.10	14622.74	2329.308	4265.249

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166613BS Acquired: 2/10/2025 17:23:44 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.7585699	1.882952	.9060068	1.936269	.7820482	1.855740
Stddev	.0047058	.024625	.0022770	.006589	.0013572	.011604
%RSD	.6203488	1.307781	.2513196	.3403011	.1735406	.6253043
#1	.7598547	1.892728	.9059368	1.940242	.7811771	1.849724
#2	.7624998	1.901188	.9083180	1.939904	.7836119	1.869116
#3	.7533551	1.854940	.9037656	1.928663	.7813556	1.848379

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1735312	.1811372	.1815972	.9425402	.3847993	.1858961
Stddev	.0002370	.0006511	.0000854	.0046237	.0011253	.0003240
%RSD	.1365960	.3594614	.0470052	.4905594	.2924286	.1742935
#1	.1733408	.1818287	.1815010	.9455219	.3845892	.1855541
#2	.1734560	.1805359	.1816639	.9372139	.3837940	.1859355
#3	.1737967	.1810470	.1816268	.9448848	.3860149	.1861985

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3000492	2.809604	.2063527	1.808056	.4680053	.0713460
Stddev	.0002679	.003145	.0002107	.001287	.0005758	.0002375
%RSD	.0892966	.1119544	.1021111	.0711822	.1230400	.3328298
#1	.2997780	2.806084	.2065787	1.808274	.4683901	.0715770
#2	.3003138	2.810591	.2063178	1.809219	.4682825	.0711025
#3	.3000559	2.812139	.2061617	1.806673	.4673433	.0713584

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.308282	.2725425	.1984225	9.181843	.2661228	.3930367
Stddev	.021940	.0013571	.0008317	.080791	.0016537	.0003943
%RSD	.9504706	.4979274	.4191532	.8798949	.6214081	.1003240
#1	2.282949	.2711097	.1990464	9.100107	.2680019	.3928101
#2	2.321076	.2738084	.1987428	9.183768	.2648890	.3934921
#3	2.320821	.2727095	.1974783	9.261654	.2654775	.3928081

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166613BS Acquired: 2/10/2025 17:23:44 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.6418958	.1826016	F .7476357	5.418485	F -.012974	.1876849
Stddev	.0016394	.0012030	.0105344	.011421	.002170	.0009451
%RSD	.2554030	.6588093	1.409034	.2107847	16.72823	.5035842
#1	.6425902	.1813609	.7366448	5.421419	-.014403	.1871716
#2	.6430738	.1826810	.7576450	5.428153	-.014041	.1871074
#3	.6400235	.1837630	.7486174	5.405883	-.010476	.1887756

Elem	Sr4077
Units	ppm
Avg	.1862743
Stddev	.0008294
%RSD	.4452483
#1	.1856976
#2	.1872248
#3	.1859005

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3385.686	74470.99	14510.81	2335.168	4278.963
Stddev	2.121	121.22	17.26	4.932	4.233
%RSD	.0626593	.1627701	.1189194	.2112025	.0989300
#1	3386.809	74610.43	14493.27	2340.243	4283.795
#2	3383.239	74390.76	14511.39	2330.393	4277.183
#3	3387.010	74411.78	14527.77	2334.869	4275.910

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-03 Acquired: 2/10/2025 17:27:43 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.0052539	-.007297	.0147814	-.007166	.0163218	1.001354
Stddev	.0017706	.001327	.0013169	.000619	.0011835	.001557
%RSD	33.70034	18.18368	8.909169	8.640415	7.251162	.1555341
#1	.0032128	-.008620	.0162937	-.006457	.0167142	1.002519
#2	.0063767	-.007306	.0138879	-.007446	.0172593	.999585
#3	.0061723	-.005966	.0141626	-.007597	.0149919	1.001958

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9195403	-.000007	.0004272	440.2113	.0268312	.0041424
Stddev	.0032597	.000022	.0000129	3.7758	.0002487	.0000803
%RSD	.3544876	315.4123	3.018119	.8577328	.9267112	1.938565
#1	.9207173	.000006	.0004296	439.9874	.0265771	.0042240
#2	.9158557	.000005	.0004133	436.5524	.0268426	.0040634
#3	.9220481	-.000032	.0004388	444.0941	.0270740	.0041397

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0207316	2.986297	1.755840	159.5911	.0737392	.0000354
Stddev	.0000956	.006328	.009373	.3990	.0004207	.0003044
%RSD	.4613330	.2118851	.5337980	.2499921	.5705303	860.3397
#1	.0208059	2.983404	1.757324	159.8155	.0734697	.0003861
#2	.0207652	2.981933	1.745813	159.1304	.0735238	-.000119
#3	.0206237	2.993554	1.764381	159.8273	.0742239	-.000161

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1641.719	.0038528	.9203687	96.36136	.8362794	.0156033
Stddev	20.899	.0004805	.0038003	.53431	.0014111	.0002041
%RSD	1.272983	12.47241	.4129129	.5544870	.1687337	1.308090
#1	1634.750	.0043331	.9159968	96.04496	.8353979	.0155797
#2	1625.195	.0033720	.9222277	96.06086	.8355333	.0154120
#3	1665.212	.0038533	.9228817	96.97826	.8379069	.0158182

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-03 Acquired: 2/10/2025 17:27:43 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	-.005508	.0074490	F 42.45947	F 24.17052	F 529.4950	-.018368
Stddev	.001275	.0003722	.22289	.07049	.3032	.000583
%RSD	23.15242	4.996656	.5249430	.2916179	.0572647	3.172167
#1	-.006887	.0078563	42.30045	24.20879	529.8388	-.017783
#2	-.004371	.0073640	42.36373	24.21359	529.2660	-.018373
#3	-.005265	.0071266	42.71424	24.08918	529.3800	-.018949

Elem	Sr4077
Units	ppm
Avg	2.940241
Stddev	.009573
%RSD	.3255981
#1	2.943028
#2	2.929584
#3	2.948112

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2710.259	61082.05	13700.65	1885.478	3063.321
Stddev	14.352	305.08	48.13	6.163	6.212
%RSD	.5295611	.4994625	.3512797	.3268744	.2027864
#1	2717.127	61251.52	13694.43	1889.121	3062.291
#2	2719.888	61264.78	13751.59	1888.950	3069.984
#3	2693.763	60729.86	13655.94	1878.362	3057.689

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05 Acquired: 2/10/2025 17:32:20 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.0001360	-.005280	.0012505	-.002468	.0007618	.0213818
Stddev	.0016525	.003281	.0007593	.000935	.0024264	.0067315
%RSD	1214.910	62.14847	60.72031	37.87967	318.5302	31.48251
#1	-.001566	-.007068	.0018494	-.001692	.0030067	.0260863
#2	.000240	-.007278	.0003965	-.003506	.0010911	.0136710
#3	.001734	-.001493	.0015055	-.002205	-.001813	.0243881

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1686560	-.000043	.0000408	147.6249	.0046918	.0006702
Stddev	.0013071	.000039	.0000661	1.3015	.0002144	.0001828
%RSD	.7750113	89.26713	161.9865	.8816087	4.569559	27.26966
#1	.1701556	-.000043	.0000130	148.8959	.0049358	.0004656
#2	.1680536	-.000005	.0001162	146.2950	.0046059	.0008173
#3	.1677587	-.000083	-.000007	147.6837	.0045337	.0007276

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0058486	.1669745	.2580633	53.78017	.0273756	.0005469
Stddev	.0002724	.0008020	.0018661	.43986	.0002256	.0002511
%RSD	4.657265	.4803236	.7231042	.8178764	.8240925	45.91265
#1	.0059297	.1661076	.2596944	54.24889	.0271384	.0005254
#2	.0055448	.1671257	.2560283	53.37641	.0274009	.0008081
#3	.0060711	.1676901	.2584671	53.71521	.0275874	.0003073

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	539.3026	.0007288	.2561133	30.53494	.3033334	.0062460
Stddev	4.1777	.0017675	.0032765	.22482	.0052236	.0002600
%RSD	.7746488	242.5116	1.279321	.7362701	1.722083	4.162277
#1	536.1541	.0027215	.2566559	30.42928	.3080861	.0061815
#2	537.7117	-.000649	.2525994	30.38242	.2977406	.0065321
#3	544.0421	.000114	.2590846	30.79312	.3041736	.0060243

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05 Acquired: 2/10/2025 17:32:20 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	-.016312	-.002084	F 12.32457	7.505814	F 126.2925	-.010651
Stddev	.000360	.000681	.06281	.044706	.3013	.000394
%RSD	2.209465	32.69589	.5096494	.5956200	.2385883	3.703169
#1	-.016181	-.001304	12.31827	7.463163	125.9501	-.011022
#2	-.016719	-.002566	12.26515	7.552325	126.4101	-.010237
#3	-.016035	-.002380	12.39030	7.501954	126.5173	-.010695

Elem	Sr4077
Units	ppm
Avg	1.005334
Stddev	.004090
%RSD	.4067905
#1	1.008749
#2	1.000802
#3	1.006452

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2964.486	67565.61	13878.18	2051.563	3495.053
Stddev	18.485	470.98	144.04	11.818	14.878
%RSD	.6235559	.6970716	1.037865	.5760620	.4256872
#1	2977.127	67477.47	13739.15	2045.122	3506.497
#2	2973.060	68074.43	14026.75	2065.202	3500.427
#3	2943.270	67144.92	13868.64	2044.365	3478.235

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05DUP Acquired: 2/10/2025 17:36:40 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.0016433	-.003545	.0016428	-.001376	.0005109	.0355850
Stddev	.0011200	.000497	.0010283	.001930	.0006038	.0063369
%RSD	68.15380	14.03392	62.59759	140.2512	118.1704	17.80768
#1	.0022215	-.003212	.0009644	.000399	.0001179	.0287921
#2	.0023561	-.003306	.0011379	-.001097	.0012061	.0366260
#3	.0003524	-.004117	.0028260	-.003430	.0002088	.0413370

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1742232	-.000076	.0000035	147.4215	.0048941	.0006536
Stddev	.0015928	.000042	.0000719	1.2133	.0000473	.0000835
%RSD	.9142461	54.93989	2085.932	.8230000	.9675542	12.77629
#1	.1738722	-.000090	-.000013	146.8150	.0049461	.0006235
#2	.1728351	-.000110	-.000059	146.6309	.0048825	.0005893
#3	.1759622	-.000029	.000082	148.8184	.0048536	.0007480

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063171	.1766504	.2548917	53.67564	.0273772	.0004869
Stddev	.0003013	.0022741	.0019032	.46583	.0005585	.0002424
%RSD	4.769692	1.287325	.7466759	.8678643	2.040008	49.78963
#1	.0066485	.1761380	.2537782	53.51685	.0268116	.0006023
#2	.0060597	.1746762	.2538075	53.30996	.0273917	.0006501
#3	.0062430	.1791369	.2570892	54.20010	.0279284	.0002083

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	592.7213	.0010141	.2620518	33.21185	.2913564	.0063375
Stddev	9.0382	.0011778	.0011732	.12231	.0032865	.0001412
%RSD	1.524860	116.1438	.4476894	.3682616	1.128000	2.228706
#1	585.4466	.0022466	.2628288	33.25056	.2885428	.0062641
#2	589.8782	-.000100	.2607023	33.07487	.2905579	.0062481
#3	602.8392	.000895	.2626244	33.31011	.2949686	.0065004

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05DUP Acquired: 2/10/2025 17:36:40 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	-.016424	-.001904	F 13.28465	7.379929	F 125.3453	-.011013
Stddev	.000517	.000303	.04780	.050103	.5485	.000792
%RSD	3.147165	15.90259	.3598510	.6789146	.4376178	7.188114
#1	-.016589	-.001561	13.29334	7.346964	125.0191	-.011141
#2	-.016838	-.002021	13.23309	7.355238	125.0381	-.010165
#3	-.015844	-.002132	13.32751	7.437586	125.9786	-.011733

Elem	Sr4077
Units	ppm
Avg	.9834634
Stddev	.0069186
%RSD	.7034954
#1	.9827360
#2	.9769372
#3	.9907170

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2961.133	65918.73	14580.11	2020.140	3499.687
Stddev	8.266	163.53	123.39	2.351	5.864
%RSD	.2791604	.2480757	.8462795	.1163740	.1675641
#1	2961.055	65966.96	14664.62	2022.561	3501.856
#2	2969.438	66052.73	14637.19	2019.992	3504.158
#3	2952.906	65736.52	14438.52	2017.866	3493.048

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05LX5 Acquired: 2/10/2025 17:41:00 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.0013307	-.001928	-.000260	.0005848	-.000726	.0080002
Stddev	.0007377	.001045	.000763	.0005791	.000870	.0027174
%RSD	55.43681	54.18785	293.7049	99.02781	119.7367	33.96634
#1	.0016324	-.002960	.000513	.0012245	-.001161	.0081642
#2	.0004900	-.000871	-.000279	.0004335	-.001293	.0106318
#3	.0018697	-.001954	-.001013	.0000964	.000275	.0052045

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0302917	.0000310	-.000040	30.90501	.0008772	.0000765
Stddev	.0011083	.0000139	.000007	.13887	.0004108	.0000593
%RSD	3.658848	44.90590	17.68121	.4493318	46.83515	77.55350
#1	.0290608	.0000440	-.000037	30.76996	.0010079	.0000667
#2	.0306037	.0000326	-.000036	30.89768	.0004169	.0000226
#3	.0312106	.0000163	-.000048	31.04740	.0012067	.0001400

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010195	.0372818	.0540395	11.14153	.0055598	.0003545
Stddev	.0003375	.0027226	.0005469	.05980	.0002466	.0001715
%RSD	33.10122	7.302706	1.012089	.5367438	4.435307	48.38681
#1	.0008647	.0391797	.0539441	11.08027	.0055415	.0002272
#2	.0007872	.0341624	.0535465	11.14457	.0053228	.0002867
#3	.0014066	.0385034	.0546278	11.19975	.0058150	.0005496

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	115.2296	-.000851	.0518048	6.087997	.0621872	.0013750
Stddev	.8150	.001121	.0002383	.057218	.0010539	.0001459
%RSD	.7072898	131.7447	.4600728	.9398464	1.694809	10.61230
#1	116.0309	-.000706	.0520799	6.104844	.0609947	.0013670
#2	114.4016	.000191	.0516597	6.024248	.0625733	.0015247
#3	115.2563	-.002037	.0516748	6.134901	.0629937	.0012332

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05LX5 Acquired: 2/10/2025 17:41:00 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	-.004585	.0005903	2.583318	1.432182	F 24.21828	-.004456
Stddev	.000673	.0000911	.016430	.008195	.11053	.000356
%RSD	14.67297	15.43799	.6359919	.5721824	.4564088	7.979618
#1	-.005350	.0004856	2.590897	1.431387	24.21191	-.004773
#2	-.004319	.0006336	2.564467	1.424414	24.11106	-.004523
#3	-.004086	.0006516	2.594590	1.440746	24.33186	-.004071

Elem	Sr4077
Units	ppm
Avg	.2012502
Stddev	.0008934
%RSD	.4439268
#1	.2006926
#2	.2007774
#3	.2022806

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3150.226	69863.73	14750.06	2155.549	3876.011
Stddev	22.734	97.45	73.75	6.993	28.588
%RSD	.7216740	.1394926	.4999767	.3244069	.7375525
#1	3145.981	69763.14	14834.78	2162.208	3878.428
#2	3174.784	69870.33	14700.29	2156.173	3903.314
#3	3129.914	69957.71	14715.10	2148.265	3846.292

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05MS Acquired: 2/10/2025 17:45:17 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.8122511	1.781908	.8932446	2.016828	.8274378	1.882503
Stddev	.0052348	.036671	.0033588	.010322	.0033833	.009835
%RSD	.6444797	2.057975	.3760224	.5118022	.4088853	.5224603
#1	.8067729	1.741130	.8899428	2.004909	.8246284	1.876876
#2	.8172026	1.812177	.8966577	2.022828	.8311935	1.893860
#3	.8127778	1.792418	.8931334	2.022747	.8264915	1.876774

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3481077	.1727560	.1826661	145.2147	.3753712	.1875997
Stddev	.0008792	.0005575	.0005099	.3378	.0033779	.0007333
%RSD	.2525697	.3227358	.2791255	.2326190	.8998871	.3908993
#1	.3480831	.1731151	.1820804	145.0076	.3726792	.1868850
#2	.3472410	.1721137	.1829072	145.0319	.3791616	.1883503
#3	.3489989	.1730391	.1830107	145.6045	.3742728	.1875637

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2895174	3.092675	.4385546	54.25898	.4914820	.0742691
Stddev	.0010245	.013958	.0016966	.09373	.0013051	.0005591
%RSD	.3538761	.4513337	.3868524	.1727418	.2655393	.7527729
#1	.2884176	3.077527	.4387360	54.19066	.4899751	.0744192
#2	.2896898	3.105017	.4367747	54.22045	.4922242	.0747378
#3	.2904448	3.095482	.4401532	54.36584	.4922467	.0736503

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	560.5006	.2682976	.4551354	42.37482	.5225522	.3996149
Stddev	1.3573	.0010464	.0030554	.33535	.0039258	.0025394
%RSD	.2421516	.3900231	.6713245	.7914009	.7512660	.6354547
#1	558.9362	.2693514	.4538011	42.14339	.5249692	.3968542
#2	561.2000	.2682826	.4586311	42.75941	.5180225	.4001394
#3	561.3654	.2672587	.4529742	42.22166	.5246648	.4018511

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05MS Acquired: 2/10/2025 17:45:17 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.6397618	.1743248	F 13.49303	F 13.23499	F 119.3549	.1815275
Stddev	.0025928	.0004829	.15146	.15263	.8843	.0010769
%RSD	.4052692	.2769826	1.122503	1.153265	.7409262	.5932191
#1	.6369670	.1747527	13.39111	13.07167	118.3568	.1810717
#2	.6402296	.1738013	13.66707	13.37402	120.0405	.1827573
#3	.6420888	.1744202	13.42091	13.25929	119.6675	.1807535

Elem	Sr4077
Units	ppm
Avg	1.106266
Stddev	.011409
%RSD	1.031328
#1	1.109910
#2	1.115407
#3	1.093479

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2996.414	66421.14	14320.86	2067.636	3512.903
Stddev	6.777	524.54	11.88	15.030	6.983
%RSD	.2261641	.7897125	.0829242	.7269083	.1987711
#1	3003.605	66695.24	14326.51	2072.675	3520.952
#2	2995.490	65816.34	14328.85	2050.734	3509.290
#3	2990.146	66751.83	14307.21	2079.498	3508.467

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05MSD Acquired: 2/10/2025 17:49:33 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.8073538	1.740913	.8884361	1.997551	.8226012	1.870555
Stddev	.0039101	.012587	.0014413	.002025	.0032178	.005309
%RSD	.4843161	.7229864	.1622273	.1013706	.3911710	.2838091
#1	.8028627	1.750633	.8869930	1.995843	.8191965	1.874554
#2	.8091968	1.745412	.8898756	1.997022	.8255920	1.864532
#3	.8100018	1.726696	.8884397	1.999788	.8230152	1.872580

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3510380	.1735461	.1819855	145.3531	.3742944	.1875322
Stddev	.0006718	.0009061	.0001776	.3148	.0008023	.0004706
%RSD	.1913788	.5220821	.0975779	.2165746	.2143572	.2509151
#1	.3513344	.1741418	.1817838	145.7164	.3751574	.1870315
#2	.3502690	.1739929	.1820542	145.1816	.3741548	.1875998
#3	.3515107	.1725034	.1821185	145.1614	.3735710	.1879653

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2879242	3.093617	.4401812	54.13722	.4896793	.0744819
Stddev	.0007818	.010119	.0008908	.14516	.0005552	.0002776
%RSD	.2715408	.3271070	.2023682	.2681309	.1133882	.3727091
#1	.2876631	3.088576	.4410641	54.28804	.4890998	.0746696
#2	.2873063	3.087007	.4392828	54.12515	.4902067	.0746130
#3	.2888031	3.105266	.4401967	53.99848	.4897313	.0741630

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	557.4478	.2684421	.4537133	42.21459	.5250944	.3989142
Stddev	6.1500	.0007694	.0006038	.25151	.0027324	.0011581
%RSD	1.103239	.2866316	.1330718	.5957807	.5203600	.2903111
#1	554.2900	.2692294	.4544082	42.14172	.5279965	.3978856
#2	553.5183	.2684051	.4533170	42.00757	.5247154	.3986885
#3	564.5352	.2676918	.4534146	42.49449	.5225713	.4001685

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05MSD Acquired: 2/10/2025 17:49:33 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	.6382215	.1769924	F 13.36110	F 13.14128	F 118.1961	.1844359
Stddev	.0000898	.0009484	.03870	.02772	.1233	.0006165
%RSD	.0140647	.5358371	.2896739	.2109082	.1043275	.3342491
#1	.6381355	.1767292	13.33453	13.11419	118.0835	.1845851
#2	.6383146	.1762034	13.34327	13.16958	118.1769	.1837585
#3	.6382143	.1780446	13.40551	13.14007	118.3279	.1849640

Elem	Sr4077
Units	ppm
Avg	1.085763
Stddev	.006665
%RSD	.6138900
#1	1.078109
#2	1.090286
#3	1.088895

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3004.478	66652.33	14254.17	2077.269	3522.503
Stddev	8.080	142.15	50.06	2.110	8.923
%RSD	.2689484	.2132772	.3511787	.1015740	.2533026
#1	3013.596	66639.47	14208.73	2078.102	3532.202
#2	3001.634	66800.48	14245.96	2074.869	3520.662
#3	2998.204	66517.04	14307.83	2078.835	3514.644

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV04 Acquired: 2/10/2025 17:53:48 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	4.912485	4.841242	4.676428	5.012077	5.042684	9.535938	9.210621
Stddev	.024778	.024592	.013233	.028529	.026217	.031373	.147731
%RSD	.5043905	.5079717	.2829733	.5691974	.5199018	.3289983	1.603924
#1	4.893779	4.830724	4.663505	4.997525	5.026463	9.571949	9.179717
#2	4.903089	4.823659	4.675829	4.993759	5.028659	9.514517	9.371360
#3	4.940587	4.869345	4.689951	5.044947	5.072931	9.521347	9.080787

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2284312	2.320470	22.67183	.9715419	2.346597	1.228015	4.733845
Stddev	.0024656	.006928	.11567	.0114303	.005098	.004752	.033952
%RSD	1.079354	.2985806	.5102025	1.176510	.2172628	.3869730	.7172103
#1	.2312448	2.313908	22.79413	.9847388	2.342705	1.225971	4.769834
#2	.2274013	2.319787	22.56417	.9651256	2.344718	1.224627	4.702385
#3	.2266476	2.327714	22.65719	.9647614	2.352368	1.233447	4.729317

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.574069	22.52960	2.346544	1.212973	25.25831	2.296454	2.464253
Stddev	.016370	.09102	.006749	.013877	.17460	.007544	.027622
%RSD	.6359408	.4040002	.2876156	1.144028	.6912409	.3284925	1.120905
#1	2.587416	22.63042	2.340746	1.228736	25.44966	2.303942	2.495858
#2	2.555804	22.50492	2.344934	1.207581	25.10765	2.296563	2.452164
#3	2.578985	22.45347	2.353953	1.202601	25.21763	2.288856	2.444737

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.20952	4.532467	4.958948	4.694303	4.578924	4.965801	4.722776
Stddev	.14364	.045896	.017134	.014770	.015331	.045982	.008681
%RSD	.5933304	1.012604	.3455100	.3146275	.3348190	.9259800	.1838061
#1	24.35495	4.581573	4.948735	4.682623	4.595418	5.014619	4.717939
#2	24.06773	4.525175	4.949381	4.689380	4.565110	4.923309	4.717592
#3	24.20588	4.490654	4.978729	4.710905	4.576244	4.959474	4.732798

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV04 Acquired: 2/10/2025 17:53:48 Type: Unk
Method: NON EPA-6010-200.7(v2680) 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	4.678100	4.626945	5.040663
Stddev	.009484	.018824	.015346
%RSD	.2027372	.4068348	.3044415
#1	4.676716	4.646559	5.023329
#2	4.669383	4.609026	5.046149
#3	4.688200	4.625250	5.052513

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3273.186	70644.46	14057.27	2193.822	3998.477
Stddev	8.006	716.31	131.28	22.819	7.893
%RSD	.2445949	1.013969	.9338864	1.040130	.1973893
#1	3278.889	69822.05	13919.39	2169.001	4007.263
#2	3276.635	70979.23	14071.65	2198.577	3996.182
#3	3264.033	71132.09	14180.77	2213.889	3991.987

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB04 Acquired: 2/10/2025 18:00:29 Type: Unk
Method: NON EPA-6010-200.7(v2681) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006059	-.001351	-.000214	-.000649	.0003844	-.000699	-.009287
Stddev	.0016978	.000930	.000601	.000932	.0005956	.000792	.000080
%RSD	280.2406	68.85050	280.7844	143.6215	154.9382	113.3622	.8604711
#1	.0021533	-.001196	-.000068	-.000179	-.000252	-.001577	-.009202
#2	.0008745	-.000508	-.000875	-.001723	.000929	-.000480	-.009300
#3	-.001210	-.002349	.000301	-.000045	.000476	-.000039	-.009360

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000010	-.000092	.0023193	.0000099	-.000047	.0001479	.0027072
Stddev	.000032	.000038	.0057366	.0002346	.000165	.0004224	.0016652
%RSD	319.0603	41.61856	247.3386	2376.303	349.4462	285.6348	61.51192
#1	.000008	-.000136	.0080210	.0002246	-.000215	.0003889	.0015494
#2	.000009	-.000075	.0023885	.0000455	-.000042	-.000340	.0046156
#3	-.000048	-.000065	-.003452	-.000241	.000115	.000395	.0019566

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000250	.0040177	-.000476	.0003924	-.624916	-.001895	.0001192
Stddev	.000030	.0098544	.000131	.0002479	.019655	.000771	.0002016
%RSD	12.06263	245.2749	27.42492	63.19255	3.145238	40.69771	169.1811
#1	-.000232	.0007083	-.000612	.0004669	-.646956	-.002725	.0000119
#2	-.000285	-.003756	-.000466	.0005945	-.618584	-.001760	-.000006
#3	-.000233	.015101	-.000351	.0001157	-.609207	-.001200	.000352

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.277374	.0017369	-.000009	-.003626	.0006832	-.013805	-.001497
Stddev	.022239	.0002459	.000216	.000161	.0004022	.008104	.001460
%RSD	8.017523	14.15542	2461.151	4.441245	58.86093	58.70599	97.52899
#1	-.303035	.0017616	.000240	-.003446	.0002376	-.004638	-.003174
#2	-.265392	.0019695	-.000118	-.003756	.0010190	-.020020	-.000814
#3	-.263697	.0014797	-.000149	-.003676	.0007932	-.016758	-.000504

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB04 Acquired: 2/10/2025 18:00:29 Type: Unk
Method: NON EPA-6010-200.7(v2681) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0034658	-.003487	-.000008
Stddev	.0037137	.000890	.000039
%RSD	107.1544	25.52627	512.1155
#1	-.000718	-.002558	.000026
#2	.006373	-.003571	-.000051
#3	.004742	-.004332	.000002

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3323.015	73786.96	14939.46	2270.993	4285.986
Stddev	19.649	63.51	26.26	8.066	23.198
%RSD	.5912974	.0860785	.1757911	.3551686	.5412619
#1	3324.884	73749.11	14965.36	2269.714	4279.314
#2	3341.662	73751.48	14940.17	2263.643	4311.789
#3	3302.498	73860.29	14912.85	2279.622	4266.854

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05A Acquired: 2/10/2025 18:04:49 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.8299786	1.745505	.8943800	2.065907	.8460505	1.876889
Stddev	.0075398	.025549	.0008835	.011903	.0021031	.004534
%RSD	.9084341	1.463700	.0987878	.5761667	.2485827	.2415502
#1	.8222749	1.761180	.8935841	2.066738	.8451452	1.875088
#2	.8303180	1.716023	.8953307	2.053610	.8484547	1.873532
#3	.8373430	1.759311	.8942252	2.077373	.8445515	1.882046

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3405295	.1720520	.1825808	143.9091	.3733766	.1884195
Stddev	.0004129	.0005426	.0001668	.5374	.0019205	.0001887
%RSD	.1212532	.3153938	.0913461	.3734543	.5143507	.1001218
#1	.3404049	.1717759	.1826627	143.5930	.3755942	.1884837
#2	.3401933	.1717028	.1826907	143.6047	.3722690	.1885676
#3	.3409904	.1726771	.1823888	144.5297	.3722667	.1882071

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2928923	3.057399	.4376539	53.78627	.4928732	.0748502
Stddev	.0009938	.006032	.0014459	.04119	.0003896	.0003551
%RSD	.3393159	.1972945	.3303712	.0765855	.0790468	.4744059
#1	.2918750	3.050465	.4360233	53.82572	.4933137	.0751998
#2	.2929410	3.060290	.4381586	53.74353	.4925739	.0748610
#3	.2938609	3.061441	.4387798	53.78955	.4927319	.0744899

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	563.7362	.2656996	.4551670	42.03197	.5225326	.4031286
Stddev	4.2304	.0004392	.0015147	.09369	.0017227	.0011265
%RSD	.7504195	.1652827	.3327792	.2229070	.3296802	.2794444
#1	568.2948	.2652518	.4539226	42.12863	.5220369	.4028916
#2	559.9369	.2657174	.4547247	41.94156	.5211121	.4021394
#3	562.9768	.2661296	.4568536	42.02573	.5244488	.4043547

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1325-05A Acquired: 2/10/2025 18:04:49 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.6371844	.1738666	F 13.43507	F 12.95942	F 119.3988	.1808754
Stddev	.0021170	.0015734	.05397	.01074	.4299	.0011766
%RSD	.3322448	.9049151	.4017291	.0828721	.3600366	.6505261
#1	.6385827	.1731418	13.49405	12.95780	119.5837	.1803707
#2	.6347488	.1727863	13.42300	12.94959	118.9074	.1800353
#3	.6382216	.1756717	13.38815	12.97088	119.7053	.1822202

Elem	Sr4077
Units	ppm
Avg	1.128154
Stddev	.002823
%RSD	.2502063
#1	1.129136
#2	1.130354
#3	1.124971

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2936.017	66213.87	14308.86	2028.784	3478.396
Stddev	8.579	147.08	46.02	6.071	6.443
%RSD	.2921836	.2221346	.3215900	.2992241	.1852303
#1	2945.764	66047.50	14335.20	2031.132	3485.835
#2	2932.672	66267.48	14335.67	2033.330	3474.619
#3	2929.615	66326.63	14255.73	2021.890	3474.733

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166591TB Acquired: 2/10/2025 18:09:04 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.004008	-.008833	-.000030	.0044208	.0007071	.0065295
Stddev	.000942	.001152	.000199	.0012207	.0009208	.0036922
%RSD	23.49451	13.04654	666.2043	27.61288	130.2249	56.54660
#1	-.003989	-.010163	.000063	.0057870	.0005283	.0101681
#2	-.003076	-.008224	-.000259	.0040379	.0017041	.0066346
#3	-.004959	-.008114	.000106	.0034374	-.000111	.0027859

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.010855	-.000234	-.000143	.0033083	.0020035	-.000350
Stddev	.001374	.000027	.000059	.0057580	.0003481	.000045
%RSD	12.65835	11.40087	41.45111	174.0454	17.37675	12.72127
#1	-.012204	-.000213	-.000131	.0052348	.0016026	-.000386
#2	-.010903	-.000264	-.000090	.0078562	.0022296	-.000300
#3	-.009457	-.000224	-.000206	-.003166	.0021782	-.000364

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001366	.0118590	.0081074	.0045174	.0019523	.0004133
Stddev	.0004666	.0037230	.0002598	.0104109	.0000848	.0001124
%RSD	341.7292	31.39384	3.204686	230.4618	4.344686	27.19412
#1	-.000177	.0119351	.0078323	.0148954	.0019891	.0005285
#2	-.000087	.0155434	.0083485	.0045828	.0018553	.0003039
#3	.000673	.0080985	.0081416	-.005926	.0020124	.0004076

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 354.9226	-.000656	.0034228	-.388096	-.000208	.0002509
Stddev	2.2496	.001162	.0001757	.027169	.000052	.0000672
%RSD	.6338231	177.1190	5.134676	7.000680	25.14217	26.79717
#1	356.1368	-.000173	.0032277	-.370662	-.000151	.0003002
#2	356.3042	-.001981	.0034717	-.374225	-.000253	.0001743
#3	352.3268	.000186	.0035688	-.419401	-.000221	.0002782

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166591TB Acquired: 2/10/2025 18:09:04 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.013096	.0015851	-.002103	.0049434	F .0287381	-.007152
Stddev	.000188	.0004785	.005721	.0009505	.0030083	.001180
%RSD	1.437159	30.18585	272.0800	19.22719	10.46803	16.49322
#1	-.012983	.0018388	.001830	.0038654	.0272579	-.006674
#2	-.012992	.0010332	-.008666	.0053038	.0321997	-.006286
#3	-.013314	.0018832	.000528	.0056609	.0267567	-.008495

Elem	Sr4077
Units	ppm
Avg	-.000090
Stddev	.000044
%RSD	49.42853
#1	-.000133
#2	-.000044
#3	-.000093

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3129.344	69316.86	14651.03	2113.560	3837.965
Stddev	7.042	475.21	41.44	26.220	6.129
%RSD	.2250411	.6855672	.2828232	1.240554	.1596895
#1	3122.999	68769.96	14661.73	2084.104	3830.948
#2	3128.112	69551.61	14686.06	2122.229	3842.274
#3	3136.921	69629.02	14605.29	2134.347	3840.671

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166593BL Acquired: 2/10/2025 18:13:32 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.0019952	-.001579	.0004306	-.000833	.0000930	.0009258
Stddev	.0008528	.000692	.0003094	.001966	.0010429	.0013253
%RSD	42.74185	43.80711	71.86035	235.9814	1121.416	143.1588
#1	.0018407	-.000944	.0004290	-.001497	.0005533	-.000301
#2	.0029147	-.001478	.0001220	-.002382	.0008266	.002332
#3	.0012302	-.002316	.0007408	.001379	-.001101	.000746

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007008	-.000030	-.000072	-.007465	-.000025	-.000022
Stddev	.000805	.000055	.000010	.004591	.000080	.000083
%RSD	11.49428	183.9617	13.74518	61.49548	324.8622	376.5033
#1	-.007743	-.000093	-.000062	-.009364	-.000115	.000012
#2	-.006147	.000008	-.000073	-.010802	.000004	.000038
#3	-.007134	-.000004	-.000082	-.002230	.000037	-.000116

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000028	-.001347	.0002611	.0037821	-.000169	.0005422
Stddev	.000450	.004028	.0002242	.0090586	.000166	.0001208
%RSD	1628.660	299.1388	85.85862	239.5156	98.63082	22.28301
#1	.000490	.001180	.0001906	-.005847	-.000341	.0006155
#2	-.000327	.000772	.0000807	.012135	-.000156	.0004028
#3	-.000246	-.005992	.0005121	.005058	-.000009	.0006084

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.547024	-.001257	.0000828	-.293455	.0000615	-.000124
Stddev	.011275	.001084	.0002409	.010944	.0005149	.000163
%RSD	2.061238	86.25258	290.9886	3.729275	836.6782	131.1488
#1	-.559970	-.001846	-.000026	-.287033	.0003311	-.000039
#2	-.539354	-.001919	-.000084	-.306091	-.000532	-.000022
#3	-.541748	-.000006	.000359	-.287241	.000386	-.000312

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166593BL Acquired: 2/10/2025 18:13:32 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.000812	.0009391	-.007482	-.001128	F .0191777	-.003198
Stddev	.000856	.0003812	.002509	.000910	.0001350	.001610
%RSD	105.3408	40.58492	33.53834	80.61985	.7038707	50.33516
#1	-.001668	.0012893	-.005245	-.001991	.0191660	-.005057
#2	-.000812	.0009949	-.010195	-.000178	.0193182	-.002311
#3	.000043	.0005332	-.007006	-.001216	.0190490	-.002227

Elem	Sr4077
Units	ppm
Avg	-.000048
Stddev	.000016
%RSD	34.20500
#1	-.000061
#2	-.000054
#3	-.000029

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3373.585	75261.31	14723.11	2364.237	4292.128
Stddev	2.214	245.55	130.87	8.134	3.812
%RSD	.0656212	.3262568	.8888804	.3440448	.0888207
#1	3371.538	75501.24	14828.61	2367.702	4289.948
#2	3375.934	75010.51	14576.66	2370.064	4296.530
#3	3373.283	75272.18	14764.07	2354.944	4289.906

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166593BS Acquired: 2/10/2025 18:17:52 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.7778330	1.904760	.9133195	2.005182	.8070399	1.868017
Stddev	.0023748	.013978	.0011584	.010535	.0010759	.009158
%RSD	.3053144	.7338571	.1268346	.5253977	.1333188	.4902502
#1	.7766594	1.898934	.9146473	1.996013	.8057979	1.872113
#2	.7805661	1.920709	.9127954	2.002843	.8076876	1.857526
#3	.7762734	1.894638	.9125157	2.016690	.8076343	1.874411

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1711721	.1819022	.1834848	.9533169	.3877554	.1879703
Stddev	.0006133	.0011710	.0003692	.0028524	.0013201	.0006414
%RSD	.3583063	.6437653	.2012179	.2992078	.3404394	.3412164
#1	.1706694	.1819262	.1835801	.9549474	.3868112	.1883123
#2	.1718554	.1807194	.1830772	.9549800	.3871912	.1872303
#3	.1709914	.1830611	.1837969	.9500232	.3892638	.1883681

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3060108	2.837083	.2105430	1.801549	.4745888	.0723167
Stddev	.0007219	.003590	.0000634	.006867	.0012740	.0002843
%RSD	.2359212	.1265430	.0301023	.3811811	.2684337	.3931885
#1	.3054033	2.840923	.2106153	1.797013	.4745546	.0726451
#2	.3058200	2.836515	.2105164	1.809449	.4733322	.0721565
#3	.3068089	2.833810	.2104972	1.798184	.4758794	.0721487

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.372389	.2695548	.2096155	9.186698	.2671834	.3997265
Stddev	.014540	.0017468	.0014622	.036327	.0019479	.0002151
%RSD	.6129008	.6480465	.6975818	.3954256	.7290307	.0538094
#1	2.373974	.2675567	.2112631	9.181413	.2673700	.3997749
#2	2.386072	.2703142	.2084720	9.225378	.2651489	.3999133
#3	2.357121	.2707933	.2091114	9.153304	.2690312	.3994914

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166593BS Acquired: 2/10/2025 18:17:52 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.6480582	.1822818	.7525489	5.530761	F -.006195	.1863592
Stddev	.0014412	.0001728	.0102564	.009145	.001955	.0011986
%RSD	.2223894	.0948022	1.362893	.1653398	31.56280	.6431652
#1	.6489658	.1824608	.7407437	5.520275	-.004167	.1850942
#2	.6463964	.1822686	.7576319	5.537080	-.008068	.1874780
#3	.6488124	.1821159	.7592712	5.534927	-.006350	.1865055

Elem	Sr4077
Units	ppm
Avg	.1923785
Stddev	.0008236
%RSD	.4281159
#1	.1920715
#2	.1917525
#3	.1933115

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3332.558	74099.19	14537.98	2315.852	4220.767
Stddev	1.518	203.39	101.40	3.121	5.406
%RSD	.0455627	.2744769	.6974602	.1347667	.1280824
#1	3331.325	74311.27	14612.81	2317.197	4214.898
#2	3334.254	74080.53	14578.55	2318.074	4225.543
#3	3332.095	73905.78	14422.58	2312.284	4221.861

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1299-04 Acquired: 2/10/2025 18:21:54 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.005527	-.012149	.0049973	.0037909	.0007880	.1009613	.1617440
Stddev	.003100	.001858	.0013571	.0013685	.0014802	.0045619	.0016824
%RSD	56.09380	15.29357	27.15780	36.09900	187.8379	4.518468	1.040177
#1	-.007779	-.010342	.0040982	.0045414	-.000809	.0986149	.1604487
#2	-.001991	-.012049	.0065584	.0046198	.002115	.0980501	.1611378
#3	-.006812	-.014054	.0043352	.0022113	.001058	.1062188	.1636456

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000002	.0001947	50.81217	.0026818	-.000463	.0076410	.0160599
Stddev	.000029	.0000442	.25637	.0002677	.000049	.0003232	.0014195
%RSD	1594.984	22.67874	.5045467	9.983134	10.60640	4.230369	8.838703
#1	.000020	.0001634	50.58438	.0029666	-.000503	.0073055	.0144251
#2	-.000035	.0002453	50.76234	.0024352	-.000479	.0076672	.0167749
#3	.000009	.0001756	51.08980	.0026435	-.000408	.0079504	.0169798

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4014287	2.221683	.0036541	.0003724	334.1656	-.001082	.0736675
Stddev	.0016662	.000861	.0003173	.0002955	2.8030	.000172	.0013084
%RSD	.4150629	.0387459	8.684307	79.34316	.8388193	15.86374	1.776062
#1	.4002472	2.220755	.0036399	.0006624	334.3645	-.000936	.0726317
#2	.4007044	2.222456	.0039783	.0003831	331.2683	-.001038	.0732329
#3	.4033344	2.221837	.0033441	.0000718	336.8638	-.001271	.0751379

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9847185	.0158540	.0008732	-.015085	-.000456	3.139290	.0174561
Stddev	.0164303	.0002388	.0001697	.000370	.000445	.028414	.0019723
%RSD	1.668523	1.506156	19.43314	2.454604	97.47711	.9051138	11.29872
#1	.9776416	.0159327	.0006801	-.015294	-.000694	3.134882	.0152353
#2	.9730127	.0155858	.0009406	-.015303	-.000732	3.113338	.0190036
#3	1.003501	.0160435	.0009988	-.014657	.000057	3.169651	.0181293

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1299-04 Acquired: 2/10/2025 18:21:54 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	1.113207	-.010781	.2894042
Stddev	.002712	.000750	.0026612
%RSD	.2436098	6.952761	.9195523
#1	1.116046	-.009966	.2876376
#2	1.112931	-.010936	.2881100
#3	1.110644	-.011441	.2924650

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3087.740	68567.92	14716.55	2088.550	3781.175
Stddev	9.963	250.57	38.69	14.569	6.797
%RSD	.3226749	.3654322	.2628732	.6975840	.1797638
#1	3098.072	68556.78	14759.99	2087.947	3787.355
#2	3086.956	68823.88	14703.85	2103.412	3773.895
#3	3078.191	68323.11	14685.81	2074.292	3782.276

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1299-08 Acquired: 2/10/2025 18:26:19 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.004033	-.009252	.0154189	.0024751	.0005171	.0501656	.2606811
Stddev	.000278	.002204	.0015733	.0014172	.0006110	.0022275	.0004198
%RSD	6.904905	23.81892	10.20376	57.25715	118.1520	4.440290	.1610586
#1	-.003846	-.009859	.0171366	.0020655	.0007844	.0523965	.2603851
#2	-.003901	-.011088	.0140477	.0040520	.0009488	.0501590	.2604966
#3	-.004353	-.006808	.0150724	.0013079	-.000182	.0479415	.2611616

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000541	.0001927	15.35601	.0015208	.0081363	.0167667	.3473367
Stddev	.0000469	.0000698	.08977	.0001046	.0000676	.0002562	.0025013
%RSD	86.66181	36.22196	.5846173	6.880713	.8304359	1.528123	.7201320
#1	.0000470	.0002716	15.27778	.0014000	.0080867	.0169458	.3499533
#2	.0001042	.0001675	15.33623	.0015853	.0081089	.0164732	.3470871
#3	.0000112	.0001390	15.45403	.0015769	.0082133	.0168810	.3449695

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.163258	2.303348	.0044784	.0003280	311.4951	-.002010	.0730368
Stddev	.010078	.011797	.0002171	.0002349	2.5032	.001196	.0007717
%RSD	.4658526	.5121745	4.847540	71.60950	.8036211	59.52661	1.056529
#1	2.159091	2.290661	.0047196	.0000619	309.4411	-.000868	.0729239
#2	2.155932	2.313988	.0042988	.0004155	310.7607	-.001908	.0723278
#3	2.174751	2.305394	.0044167	.0005066	314.2833	-.003254	.0738587

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6038596	.0183769	.0005104	-.013466	.0005782	.5569515	.0090049
Stddev	.0416562	.0002684	.0000785	.000528	.0006001	.0082080	.0018248
%RSD	6.898318	1.460600	15.37252	3.919039	103.7889	1.473740	20.26488
#1	.5702335	.0180907	.0004210	-.012906	.0012018	.5625602	.0079659
#2	.6504586	.0184168	.0005424	-.013538	.0000047	.5607636	.0079368
#3	.5908868	.0186231	.0005679	-.013954	.0005280	.5475306	.0111119

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1299-08 Acquired: 2/10/2025 18:26:19 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.2795184	-.008516	.0722394
Stddev	.0028317	.000434	.0001355
%RSD	1.013055	5.097369	.1875446
#1	.2777832	-.008448	.0721034
#2	.2827860	-.008120	.0723743
#3	.2779859	-.008980	.0722405

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3129.705	69917.71	14823.00	2144.639	3832.455
Stddev	7.589	161.59	116.10	3.395	4.083
%RSD	.2424676	.2311212	.7832594	.1582991	.1065470
#1	3133.705	69935.08	14925.64	2147.617	3836.619
#2	3120.953	69748.13	14846.38	2140.942	3832.290
#3	3134.456	70069.92	14696.99	2145.357	3828.457

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-04 Acquired: 2/10/2025 18:30:46 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.003927	-.010690	.0098120	.0046606	.0008232	.0512776	.3047402
Stddev	.001006	.002524	.0007041	.0026076	.0007489	.0042368	.0015854
%RSD	25.62185	23.60797	7.175521	55.94930	90.97996	8.262422	.5202459
#1	-.003806	-.012626	.0106186	.0076570	.0009945	.0489438	.3063538
#2	-.002987	-.007836	.0094969	.0029068	.0000034	.0487210	.3031846
#3	-.004989	-.011609	.0093205	.0034180	.0014715	.0561681	.3046822

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000034	-.000035	11.50520	.0003313	-.000206	.0157811	.0176450
Stddev	.000024	.000034	.01363	.0002924	.000115	.0001522	.0022684
%RSD	69.61342	96.47114	.1184990	88.25852	55.81899	.9647778	12.85600
#1	-.000050	-.000051	11.49456	.0000050	-.000278	.0159200	.0199531
#2	-.000007	.000004	11.50047	.0004194	-.000074	.0158050	.0154184
#3	-.000045	-.000059	11.52057	.0005695	-.000267	.0156184	.0175636

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4339220	1.063956	.0009253	.0003146	293.4849	-.000998	.1330135
Stddev	.0010030	.017856	.0004052	.0002505	.8638	.000945	.0004300
%RSD	.2311560	1.678285	43.79204	79.64390	.2943106	94.69695	.3232703
#1	.4350657	1.045606	.0012737	.0005684	292.6846	-.001818	.1325193
#2	.4331920	1.064989	.0004806	.0000674	293.3695	.000036	.1333019
#3	.4335082	1.081274	.0010216	.0003080	294.4005	-.001211	.1332194

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0774193	.0597324	.0003160	-.013721	.0011166	.4027122	.0141750
Stddev	.0293118	.0003010	.0000803	.000481	.0006572	.0016718	.0015022
%RSD	37.86106	.5038831	25.42727	3.504963	58.85649	.4151478	10.59775
#1	.1085893	.0597503	.0003692	-.014263	.0013112	.4039110	.0148153
#2	.0504104	.0594229	.0002235	-.013555	.0016545	.4008024	.0124587
#3	.0732584	.0600241	.0003551	-.013345	.0003841	.4034233	.0152510

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-04 Acquired: 2/10/2025 18:30:46 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.5931078	-.009477	.0602394
Stddev	.0033182	.000352	.0001965
%RSD	.5594607	3.718295	.3261382
#1	.5924224	-.009719	.0604655
#2	.5901858	-.009073	.0601101
#3	.5967152	-.009639	.0601427

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3121.803	69888.37	14683.11	2144.178	3835.327
Stddev	1.568	65.97	26.03	2.256	3.868
%RSD	.0502355	.0943883	.1772707	.1051962	.1008492
#1	3120.176	69964.50	14669.43	2143.875	3838.417
#2	3123.305	69848.09	14713.13	2142.089	3830.989
#3	3121.928	69852.51	14666.78	2146.569	3836.574

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-08 Acquired: 2/10/2025 18:35:12 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.002042	-.009375	.0037879	.0040874	.0001475	.1233402	.3391896
Stddev	.000836	.001308	.0012925	.0028654	.0011564	.0021333	.0014465
%RSD	40.95146	13.94773	34.12191	70.10449	784.2565	1.729642	.4264540
#1	-.002969	-.008314	.0043883	.0041226	.0014012	.1223409	.3400717
#2	-.001814	-.008975	.0046709	.0069350	-.000082	.1257898	.3399769
#3	-.001344	-.010836	.0023044	.0012045	-.000877	.1218899	.3375202

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003774	-.000036	14.55467	.0092535	.0134852	.0091336	3.981744
Stddev	.0000290	.000065	.05978	.0004294	.0003044	.0001179	.007130
%RSD	7.675838	178.4291	.4107062	4.640158	2.257369	1.291043	.1790594
#1	.0003741	-.000110	14.58085	.0093483	.0131595	.0091338	3.974224
#2	.0004079	-.000006	14.59689	.0096276	.0135335	.0090156	3.988406
#3	.0003502	.000008	14.48627	.0087846	.0137626	.0092514	3.982601

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.890549	3.291686	.0129368	.0004257	321.3796	-.001388	.0936122
Stddev	.009750	.033140	.0000827	.0002124	3.4440	.000909	.0004311
%RSD	.3373190	1.006768	.6390295	49.89036	1.071636	65.48008	.4605404
#1	2.896973	3.315385	.0128431	.0004502	325.1583	-.001864	.0938672
#2	2.895346	3.305856	.0129996	.0006249	318.4167	-.001961	.0938549
#3	2.879330	3.253817	.0129677	.0002022	320.5637	-.000340	.0931144

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.120613	.0382469	.0003847	-.014487	.0007600	.8076960	.0105640
Stddev	.013490	.0008888	.0002931	.000281	.0005556	.0116303	.0014655
%RSD	11.18413	2.323948	76.17860	1.942955	73.10242	1.439941	13.87274
#1	-.127626	.0376657	.0003627	-.014812	.0008439	.7959390	.0091057
#2	-.105062	.0392701	.0006882	-.014321	.0001672	.8079537	.0120366
#3	-.129152	.0378049	.0001033	-.014329	.0012688	.8191954	.0105495

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-08 Acquired: 2/10/2025 18:35:12 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.3963541	-.005789	.1029117
Stddev	.0052642	.000374	.0001860
%RSD	1.328160	6.460738	.1807293
#1	.3930233	-.005524	.1030392
#2	.3936160	-.006217	.1029977
#3	.4024231	-.005625	.1026983

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3146.953	69812.29	14681.16	2130.447	3865.344
Stddev	5.324	71.16	111.64	7.147	6.110
%RSD	.1691675	.1019372	.7604078	.3354779	.1580624
#1	3146.868	69835.45	14579.39	2130.492	3864.734
#2	3152.319	69868.99	14663.51	2137.572	3871.735
#3	3141.673	69732.43	14800.56	2123.277	3859.562

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-12 Acquired: 2/10/2025 18:39:38 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.002318	-.006833	.0046184	.0008741	.0003725	.1858521	.2671174
Stddev	.001608	.001583	.0003323	.0007733	.0015795	.0037227	.0013529
%RSD	69.37572	23.17087	7.194423	88.47097	424.0640	2.003022	.5064763
#1	-.002470	-.008565	.0045427	.0001226	.0000690	.1870092	.2656328
#2	-.003844	-.006474	.0049821	.0016675	-.001033	.1888587	.2674389
#3	-.000639	-.005460	.0043306	.0008320	.002082	.1816882	.2682806

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003237	-.000286	11.28122	.0032953	.0011383	.0095338	31.35238
Stddev	.0000374	.000114	.06698	.0002315	.0001897	.0001595	.12067
%RSD	11.56438	40.01471	.5937082	7.026185	16.66638	1.672592	.3848774
#1	.0002836	-.000397	11.20824	.0030490	.0009840	.0094880	31.48431
#2	.0003578	-.000292	11.29555	.0033282	.0010808	.0094022	31.24759
#3	.0003299	-.000168	11.33988	.0035086	.0013501	.0097111	31.32525

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6349358	2.262130	.0034870	.0015233	338.4903	.0029301	.0974189
Stddev	.0028726	.014353	.0001600	.0001981	2.7787	.0000907	.0005626
%RSD	.4524179	.6344751	4.587879	13.00633	.8208960	3.095901	.5774940
#1	.6319413	2.246108	.0035941	.0015691	341.2289	.0029481	.0973990
#2	.6351978	2.266470	.0033031	.0013063	338.5687	.0028318	.0979911
#3	.6376684	2.273811	.0035638	.0016946	335.6732	.0030105	.0968665

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3089468	.0514171	.0001402	-.013710	.0010936	.7384572	.0112645
Stddev	.0153633	.0006390	.0002271	.000203	.0005619	.0037184	.0012688
%RSD	4.972809	1.242728	161.9773	1.482254	51.37815	.5035340	11.26399
#1	.3168026	.0513725	.0004009	-.013761	.0005226	.7421141	.0106195
#2	.2912440	.0508015	-.000014	-.013486	.0016458	.7346803	.0127262
#3	.3187937	.0520772	.000034	-.013882	.0011124	.7385773	.0104477

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-12 Acquired: 2/10/2025 18:39:38 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.5536463	.0034983	.0253195
Stddev	.0052162	.0005464	.0002100
%RSD	.9421585	15.61932	.8292164
#1	.5476658	.0031413	.0251205
#2	.5560165	.0041274	.0252990
#3	.5572565	.0032263	.0255389

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3166.959	70185.22	14585.50	2160.494	3877.774
Stddev	1.791	307.74	91.76	21.712	2.484
%RSD	.0565503	.4384716	.6291119	1.004975	.0640463
#1	3166.353	69830.63	14690.74	2137.417	3876.677
#2	3165.550	70382.65	14543.49	2163.545	3880.617
#3	3168.975	70342.38	14522.27	2180.519	3876.027

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-16 Acquired: 2/10/2025 18:44:04 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.003192	-.008725	.0006326	.0016745	.0008222	.0001557	.4554998
Stddev	.000579	.001019	.0007718	.0015151	.0004893	.0042945	.0008280
%RSD	18.15024	11.68101	122.0048	90.47524	59.50894	2757.520	.1817727
#1	-.002528	-.008223	.0004925	.0020606	.0002590	.0044888	.4553497
#2	-.003460	-.009898	-.000060	.0029592	.0011421	.0000776	.4563925
#3	-.003590	-.008055	.001465	.0000038	.0010655	-.004099	.4547571

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000137	-.000024	113.3738	.0109514	-.000604	.0062038	.0472076
Stddev	.000010	.000028	.3142	.0003176	.000125	.0005350	.0010411
%RSD	7.351365	116.9758	.2771107	2.899668	20.60516	8.624308	2.205352
#1	-.000143	-.000040	113.2426	.0106645	-.000648	.0060676	.0483068
#2	-.000143	.000008	113.7324	.0112926	-.000464	.0057501	.0462365
#3	-.000125	-.000040	113.1466	.0108972	-.000701	.0067938	.0470794

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0098262	4.939983	.0042906	.0003873	322.9027	-.000722	.0548365
Stddev	.0001983	.024491	.0001673	.0002892	.6028	.000668	.0002476
%RSD	2.018421	.4957631	3.900030	74.65896	.1866770	92.56696	.4514500
#1	.0095996	4.926659	.0043511	.0004607	323.1819	-.000216	.0546217
#2	.0099684	4.968247	.0041014	.0006328	323.3152	-.001479	.0551073
#3	.0099107	4.925043	.0044192	.0000685	322.2109	-.000470	.0547807

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.065375	.0170325	.0007774	-.015989	-.002045	.7436450	.0214275
Stddev	.034235	.0001896	.0001474	.000364	.000363	.0092395	.0015064
%RSD	52.36630	1.113135	18.95631	2.278097	17.77586	1.242468	7.030324
#1	-.100045	.0172169	.0006402	-.015733	-.001819	.7332982	.0201062
#2	-.064488	.0170425	.0007589	-.016406	-.002464	.7465653	.0230679
#3	-.031593	.0168381	.0009332	-.015828	-.001850	.7510716	.0211084

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-16 Acquired: 2/10/2025 18:44:04 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.4545692	-.019742	.2693657
Stddev	.0013848	.000998	.0008656
%RSD	.3046368	5.054752	.3213444
#1	.4559810	-.018886	.2701060
#2	.4532132	-.020838	.2684140
#3	.4545133	-.019501	.2695772

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3141.051	70665.75	14648.23	2173.804	3786.730
Stddev	5.626	182.86	83.40	7.646	1.392
%RSD	.1791064	.2587650	.5693518	.3517261	.0367660
#1	3147.537	70670.73	14609.60	2165.085	3785.456
#2	3137.497	70480.45	14591.15	2179.365	3788.216
#3	3138.118	70846.06	14743.94	2176.963	3786.517

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV05 Acquired: 2/10/2025 18:48:31 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	5.050520	4.873841	4.761601	5.194851	5.167413	9.722810	9.467358
Stddev	.025251	.084339	.016240	.031857	.025130	.041968	.100408
%RSD	.4999674	1.730444	.3410679	.6132420	.4863094	.4316479	1.060567
#1	5.038363	4.802121	4.761561	5.182263	5.157484	9.744555	9.562534
#2	5.033648	4.852647	4.745380	5.171212	5.148764	9.749444	9.362430
#3	5.079550	4.966756	4.777861	5.231079	5.195990	9.674432	9.477110

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2286692	2.355513	23.36666	.9690477	2.392724	1.258843	4.762012
Stddev	.0002632	.006329	.13561	.0029923	.008341	.004719	.046432
%RSD	.1150877	.2687070	.5803358	.3087824	.3485915	.3748352	.9750531
#1	.2289691	2.354322	23.51500	.9671607	2.391140	1.258484	4.786585
#2	.2285615	2.349865	23.33590	.9724978	2.385289	1.254313	4.790994
#3	.2284769	2.362354	23.24907	.9674846	2.401743	1.263730	4.708457

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.677159	23.22484	2.392647	1.199783	25.57599	2.356690	2.448765
Stddev	.014156	.11373	.009176	.002898	.11627	.011588	.005680
%RSD	.5287627	.4897103	.3835020	.2415565	.4546236	.4917265	.2319719
#1	2.692402	23.30886	2.390520	1.198032	25.56668	2.366442	2.442508
#2	2.674647	23.27026	2.384721	1.203128	25.69665	2.359748	2.453597
#3	2.664427	23.09542	2.402699	1.198188	25.46466	2.343879	2.450191

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.39305	4.521339	4.998228	4.759323	4.706321	4.966669	4.920587
Stddev	.10481	.008209	.020967	.023221	.022911	.020300	.052229
%RSD	.4296742	.1815674	.4194906	.4878982	.4868030	.4087339	1.061432
#1	24.35533	4.530376	4.988863	4.751855	4.728253	4.943604	4.894135
#2	24.51150	4.519300	4.983576	4.740756	4.708168	4.974581	4.886877
#3	24.31232	4.514343	5.022246	4.785359	4.682543	4.981822	4.980750

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV05 Acquired: 2/10/2025 18:48:31 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	4.859571	4.780019	5.049724
Stddev	.028005	.024493	.060406
%RSD	.5762934	.5124104	1.196221
#1	4.837552	4.805307	5.026325
#2	4.850070	4.778345	5.118329
#3	4.891091	4.756406	5.004517

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3239.347	73257.73	14301.23	2246.570	3959.966
Stddev	8.102	231.81	18.15	1.948	10.248
%RSD	.2501141	.3164317	.1269026	.0867123	.2588000
#1	3237.981	73450.06	14282.47	2248.053	3958.566
#2	3248.046	73000.34	14302.53	2244.364	3970.842
#3	3232.015	73322.79	14318.70	2247.294	3950.490

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB05 Acquired: 2/10/2025 18:52:43 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.000221	-.001860	-.000051	.0004017	.0000513	.0022974	-.008152
Stddev	.004377	.001009	.000629	.0005024	.0013838	.0003393	.001144
%RSD	1984.752	54.26843	1232.980	125.0686	2695.519	14.76795	14.03615
#1	.004823	-.001304	.000463	-.000036	-.001014	.0026797	-.007974
#2	-.002457	-.001251	.000136	.000290	.001615	.0020321	-.009375
#3	-.003028	-.003025	-.000752	.000950	-.000447	.0021804	-.007107

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000025	-.000060	-.001038	.0002184	-.000186	.0002332	-.000667
Stddev	.000042	.000053	.003839	.0002163	.000090	.0000889	.002137
%RSD	163.3418	87.89951	370.0528	99.03447	48.24016	38.11657	320.2340
#1	-.000030	-.000107	-.004227	.0003576	-.000241	.0002313	-.000581
#2	.000018	-.000069	.003224	-.000031	-.000234	.0001453	-.002847
#3	-.000064	-.000003	-.002109	.000329	-.000082	.0003230	.001425

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000263	-.005011	-.000125	.0006104	-.580515	-.001134	.0001039
Stddev	.000170	.003976	.000107	.0001329	.017552	.000400	.0002843
%RSD	64.66956	79.34100	85.60494	21.76431	3.023493	35.30338	273.5777
#1	-.000161	-.006548	-.000015	.0004641	-.600694	-.001259	.0002639
#2	-.000459	-.000496	-.000130	.0007234	-.568791	-.000686	-.000224
#3	-.000169	-.007988	-.000229	.0006438	-.572060	-.001456	.000272

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.231321	.0032889	.0000064	-.003737	.0013638	-.009005	-.001947
Stddev	.017464	.0002558	.0001071	.000591	.0002246	.002808	.002302
%RSD	7.549525	7.778058	1683.425	15.81775	16.46679	31.18533	118.2300
#1	-.248735	.0035553	.0001172	-.003950	.0016184	-.007440	-.001120
#2	-.231419	.0032662	-.000002	-.003069	.0012789	-.007327	-.000173
#3	-.213808	.0030452	-.000096	-.004192	.0011940	-.012247	-.004547

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB05 Acquired: 2/10/2025 18:52:43 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.0015174	-.002989	.0000130
Stddev	.0026546	.000335	.0000324
%RSD	174.9484	11.20648	250.2321
#1	.0009797	-.002704	.0000384
#2	-.000827	-.003358	.0000240
#3	.004400	-.002905	-.000024

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3353.540	73898.86	14788.15	2281.338	4335.031
Stddev	11.595	1333.98	70.64	34.220	8.512
%RSD	.3457593	1.805140	.4776937	1.500018	.1963463
#1	3365.569	74771.42	14781.22	2303.424	4342.610
#2	3352.619	72363.28	14862.00	2241.919	4336.660
#3	3342.434	74561.90	14721.23	2298.671	4325.822

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-20 Acquired: 2/10/2025 18:57:03 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.003535	-.009521	.0018394	.0051670	.0002733	.0499817	.2321271
Stddev	.001357	.000287	.0009212	.0027158	.0012445	.0032724	.0010910
%RSD	38.37825	3.009958	50.07946	52.56078	455.3830	6.547218	.4700032
#1	-.003354	-.009796	.0007887	.0082164	.0016634	.0524118	.2333633
#2	-.002278	-.009541	.0022210	.0042762	-.000737	.0462607	.2312988
#3	-.004973	-.009224	.0025083	.0030085	-.000106	.0512725	.2317193

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000135	.0000286	5.266901	.0015046	.0035739	.0114340	.0171004
Stddev	.000041	.0000403	.025229	.0003366	.0001348	.0001953	.0014211
%RSD	30.60791	140.6978	.4790159	22.36975	3.770892	1.707935	8.310389
#1	-.000179	.0000706	5.294900	.0012218	.0036166	.0116101	.0159809
#2	-.000129	-.000010	5.245933	.0014151	.0036822	.0112240	.0166212
#3	-.000097	.000025	5.259871	.0018768	.0034230	.0114681	.0186992

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1618828	.3639422	.0013443	.0004817	316.5299	-.000241	.0653166
Stddev	.0014147	.0085356	.0001617	.0000738	2.0185	.000535	.0003025
%RSD	.8739150	2.345308	12.02759	15.32027	.6377076	222.1071	.4630856
#1	.1634334	.3545195	.0015187	.0004971	318.1263	.000051	.0655157
#2	.1615524	.3661506	.0011993	.0004014	314.2609	-.000859	.0649686
#3	.1606624	.3711566	.0013148	.0005465	317.2024	.000084	.0654656

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5792012	.0288270	.0004736	-.013380	.0008765	.3958409	.0144701
Stddev	.0271927	.0001944	.0001419	.000470	.0004796	.0020400	.0035591
%RSD	4.694869	.6743527	29.96370	3.512018	54.71000	.5153694	24.59637
#1	.5923373	.0288844	.0006372	-.013876	.0004978	.3941040	.0115987
#2	.5973319	.0286103	.0003984	-.012941	.0014157	.3953313	.0133596
#3	.5479344	.0289862	.0003850	-.013324	.0007161	.3980875	.0184521

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-20 Acquired: 2/10/2025 18:57:03 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.3393255	-.007643	.0417058
Stddev	.0012893	.000508	.0000404
%RSD	.3799497	6.641567	.0967868
#1	.3390688	-.007665	.0417518
#2	.3381839	-.007124	.0416761
#3	.3407238	-.008138	.0416895

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3120.496	71375.86	15060.92	2153.133	3861.727
Stddev	19.825	322.08	71.97	11.442	22.969
%RSD	.6353252	.4512474	.4778466	.5313953	.5947770
#1	3137.692	71406.23	14982.55	2144.273	3877.970
#2	3124.984	71039.67	15124.05	2149.076	3871.764
#3	3098.811	71681.68	15076.16	2166.050	3835.449

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24 Acquired: 2/10/2025 19:01:30 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.004708	-.010403	.0036546	.0048543	.0018032	.0360052	.2628680
Stddev	.000622	.002341	.0012423	.0029077	.0006527	.0034314	.0000938
%RSD	13.20371	22.50165	33.99134	59.89995	36.19478	9.530342	.0356733
#1	-.004261	-.012381	.0031028	.0066086	.0010547	.0355323	.2627672
#2	-.004445	-.011011	.0027838	.0014979	.0021011	.0396485	.2629527
#3	-.005418	-.007819	.0050772	.0064563	.0022537	.0328347	.2628841

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000049	-.000034	9.618498	.0002259	-.000393	.0120031	.0113876
Stddev	.000043	.000018	.038746	.0002871	.000046	.0002678	.0037527
%RSD	86.91373	52.00611	.4028257	127.0710	11.71868	2.230986	32.95402
#1	-.000072	-.000055	9.598013	.0000673	-.000410	.0117785	.0136613
#2	.000000	-.000024	9.594295	.0005573	-.000428	.0122995	.0070561
#3	-.000076	-.000024	9.663187	.0000531	-.000341	.0119314	.0134452

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0397621	.6864020	.0002952	.0004316	320.8581	-.001289	.1012246
Stddev	.0004487	.0081235	.0001521	.0001479	2.6878	.001449	.0005950
%RSD	1.128367	1.183483	51.52650	34.26552	.8376762	112.4122	.5877612
#1	.0394316	.6785718	.0004044	.0004084	322.8771	.000233	.1016243
#2	.0402728	.6858443	.0003597	.0002968	317.8074	-.001449	.1005408
#3	.0395817	.6947899	.0001215	.0005898	321.8899	-.002652	.1015086

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123500	.0458957	.0003064	-.013490	.0005108	.7390069	.0545538
Stddev	.0132169	.0009301	.0002616	.000910	.0005029	.0090641	.0023560
%RSD	107.0193	2.026463	85.37771	6.742783	98.44853	1.226525	4.318606
#1	.0177309	.0449357	.0006015	-.014538	.0002268	.7296620	.0526426
#2	.0220277	.0467926	.0001031	-.013026	.0002142	.7395975	.0571860
#3	-.002709	.0459588	.0002146	-.012906	.0010914	.7477613	.0538329

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24 Acquired: 2/10/2025 19:01:30 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.3523958	-.008025	.0988650
Stddev	.0027935	.000469	.0001930
%RSD	.7927073	5.838243	.1952332
#1	.3503268	-.007998	.0986423
#2	.3555734	-.008507	.0989695
#3	.3512873	-.007571	.0989832

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3112.994	72171.45	15033.18	2144.758	3854.685
Stddev	7.228	147.91	31.60	4.271	5.565
%RSD	.2321750	.2049417	.2101953	.1991284	.1443667
#1	3113.896	72116.92	15025.66	2140.124	3857.660
#2	3119.728	72338.89	15067.87	2148.536	3858.131
#3	3105.358	72058.55	15006.03	2145.613	3848.265

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24DUP Acquired: 2/10/2025 19:05:58 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.004033	-.009687	.0030899	.0021226	-.000012	.0311502	.2616575
Stddev	.000671	.001560	.0002828	.0022176	.000966	.0023389	.0011495
%RSD	16.62715	16.10884	9.153403	104.4743	7910.382	7.508393	.4393112
#1	-.004401	-.009757	.0029259	.0015334	.000811	.0286716	.2623082
#2	-.004439	-.011211	.0034165	.0045754	-.001075	.0333184	.2623340
#3	-.003259	-.008092	.0029273	.0002592	.000228	.0314605	.2603303

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000128	-.000078	9.601996	.0004495	-.000483	.0119827	.0118912
Stddev	.000046	.000076	.030165	.0001090	.000165	.0002579	.0035043
%RSD	35.51450	97.42196	.3141576	24.25542	34.15358	2.152398	29.46967
#1	-.000082	-.000045	9.617958	.0005730	-.000461	.0121464	.0159063
#2	-.000173	-.000166	9.620827	.0004093	-.000330	.0121164	.0094485
#3	-.000129	-.000024	9.567203	.0003663	-.000658	.0116854	.0103187

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0397567	.6847237	.0004099	.0004278	326.1640	-.001026	.1030608
Stddev	.0003349	.0040037	.0002760	.0001340	1.3084	.001000	.0002090
%RSD	.8423213	.5847167	67.31577	31.31602	.4011409	97.52696	.2028131
#1	.0399585	.6825539	.0007269	.0003812	325.4354	-.001609	.1029043
#2	.0399415	.6822733	.0002799	.0005788	325.3820	.000129	.1032982
#3	.0393702	.6893439	.0002230	.0003234	327.6744	-.001598	.1029800

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.022854	.0460144	.0003314	-.013369	.0011939	.7496042	.0537568
Stddev	.017324	.0005769	.0002420	.000034	.0001815	.0040992	.0006667
%RSD	75.80323	1.253665	73.01386	.2515429	15.20131	.5468487	1.240263
#1	-.003867	.0454111	.0000577	-.013330	.0012442	.7457072	.0534979
#2	-.026893	.0465606	.0005169	-.013391	.0009926	.7538794	.0545142
#3	-.037803	.0460715	.0004196	-.013386	.0013449	.7492262	.0532584

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24DUP Acquired: 2/10/2025 19:05:58 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.3526369	-.008332	.0991866
Stddev	.0038745	.000684	.0002340
%RSD	1.098717	8.209103	.2358798
#1	.3554906	-.008193	.0993716
#2	.3541940	-.007728	.0992647
#3	.3482261	-.009075	.0989236

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3107.718	70149.96	14952.40	2126.330	3846.812
Stddev	8.144	302.36	49.27	5.059	6.689
%RSD	.2620668	.4310128	.3295048	.2379370	.1738952
#1	3105.329	70154.57	14896.42	2122.614	3847.260
#2	3116.789	70449.99	14971.60	2132.092	3853.267
#3	3101.035	69845.33	14989.18	2124.285	3839.910

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24LX5 Acquired: 2/10/2025 19:10:26 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	-.002351	-.002463	.0011842	.0026082	.0007762	.0058341	.0474150
Stddev	.001235	.001526	.0002030	.0011251	.0006484	.0010674	.0006762
%RSD	52.51661	61.93797	17.14146	43.13704	83.54174	18.29637	1.426228
#1	-.003363	-.001433	.0009926	.0035632	.0015036	.0054327	.0481384
#2	-.002716	-.001741	.0013969	.0013679	.0005659	.0050256	.0467987
#3	-.000975	-.004216	.0011631	.0028935	.0002590	.0070440	.0473080

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000064	-.000085	2.005068	-.000185	-.000102	.0022965	.0037866
Stddev	.000033	.000058	.019438	.000110	.000163	.0002878	.0011143
%RSD	51.88370	68.03759	.9694498	59.35764	159.9860	12.53034	29.42600
#1	-.000100	-.000123	2.027278	-.000058	-.000285	.0019915	.0039834
#2	-.000056	-.000018	1.996777	-.000250	-.000049	.0025631	.0025871
#3	-.000035	-.000112	1.991151	-.000247	.000028	.0023350	.0047894

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0082090	.1497930	-.000100	.0005225	63.32095	-.000885	.0211710
Stddev	.0002590	.0107432	.000122	.0001242	.53205	.000871	.0003462
%RSD	3.154908	7.172031	121.5559	23.77722	.8402444	98.37870	1.635496
#1	.0080135	.1377310	-.000012	.0006264	62.79471	-.000614	.0214539
#2	.0081108	.1583337	-.000050	.0003849	63.85863	-.000182	.0207849
#3	.0085027	.1533142	-.000239	.0005562	63.30953	-.001859	.0212742

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.264000	.0097813	.0000989	-.003893	.0009335	.1420138	.0096562
Stddev	.039809	.0004105	.0002007	.000557	.0003319	.0084932	.0007891
%RSD	15.07911	4.197307	202.8635	14.31307	35.55430	5.980539	8.172227
#1	-.308085	.0101356	.0001491	-.004417	.0007826	.1330321	.0090383
#2	-.253232	.0098768	.0002698	-.003955	.0007038	.1430943	.0093851
#3	-.230683	.0093314	-.000122	-.003308	.0013140	.1499151	.0105451

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24LX5 Acquired: 2/10/2025 19:10:26 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.0823776	-.004643	.0204198
Stddev	.0053229	.000793	.0000253
%RSD	6.461553	17.07800	.1238312
#1	.0765160	-.004451	.0204441
#2	.0837072	-.003964	.0204217
#3	.0869097	-.005514	.0203937

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3278.325	73203.11	14807.35	2243.431	4109.372
Stddev	6.432	120.75	125.26	6.909	7.418
%RSD	.1961837	.1649582	.8459440	.3079731	.1805073
#1	3282.162	73155.85	14663.07	2247.780	4111.288
#2	3281.913	73113.14	14888.31	2247.049	4115.643
#3	3270.900	73340.35	14870.68	2235.464	4101.184

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24MS Acquired: 2/10/2025 19:14:45 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.7760922	1.715368	.8613636	1.958834	.8003742	1.876398	.4590577
Stddev	.0018773	.008760	.0018302	.002504	.0041256	.002562	.0008634
%RSD	.2418906	.5106603	.2124819	.1278525	.5154634	.1365499	.1880841
#1	.7752561	1.710105	.8593631	1.959929	.8022862	1.879137	.4594093
#2	.7747782	1.710520	.8617737	1.955969	.7956394	1.874059	.4580740
#3	.7782423	1.725481	.8629540	1.960605	.8031969	1.875999	.4596899

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1647105	.1790801	11.23694	.3896405	.1857136	.2949029	2.902838
Stddev	.0006615	.0002251	.02324	.0002641	.0001851	.0000592	.018163
%RSD	.4016336	.1256904	.2068254	.0677764	.0996842	.0200566	.6256826
#1	.1646778	.1790297	11.26373	.3898454	.1859146	.2949701	2.905457
#2	.1653877	.1788845	11.22230	.3897335	.1855501	.2948588	2.883508
#3	.1640659	.1793261	11.22477	.3893424	.1856760	.2948798	2.919549

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2455342	2.429193	.4643654	.0705413	351.8387	.2706942	.3086489
Stddev	.0003101	.010442	.0007121	.0001773	4.0714	.0001104	.0018397
%RSD	.1263161	.4298550	.1533471	.2513880	1.157177	.0407692	.5960631
#1	.2454302	2.417790	.4638355	.0705707	356.2344	.2708039	.3105631
#2	.2458830	2.431501	.4640858	.0707021	351.0847	.2705832	.3084895
#3	.2452894	2.438287	.4651748	.0703511	348.1970	.2706955	.3068940

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.31422	.2737081	.4110744	.6184645	.1805143	1.595117	5.583446
Stddev	.01236	.0024344	.0006730	.0013966	.0006501	.010596	.013670
%RSD	.1197881	.8894327	.1637081	.2258100	.3601295	.6643051	.2448341
#1	10.32594	.2755982	.4118460	.6195052	.1811733	1.585538	5.577359
#2	10.30131	.2745649	.4106089	.6168774	.1798735	1.593314	5.573878
#3	10.31539	.2709610	.4107682	.6190110	.1804962	1.606499	5.599103

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24MS Acquired: 2/10/2025 19:14:45 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.3443279	.1799712	.3004295
Stddev	.0028430	.0009072	.0003471
%RSD	.8256633	.5040731	.1155426
#1	.3473672	.1809540	.3001820
#2	.3417338	.1797937	.3008263
#3	.3438827	.1791659	.3002803

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3124.316	69850.55	14666.66	2120.683	3853.330
Stddev	6.976	59.92	65.77	10.085	3.035
%RSD	.2232804	.0857789	.4484074	.4755407	.0787755
#1	3117.013	69805.76	14642.58	2109.060	3849.825
#2	3125.026	69918.61	14616.33	2127.108	3855.121
#3	3130.910	69827.28	14741.07	2125.881	3855.043

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24MSD Acquired: 2/10/2025 19:18:55 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.7556375	1.701304	.8527931	1.884196	.7748247	1.864557	.4551324
Stddev	.0028577	.016710	.0029876	.003256	.0003659	.006957	.0024235
%RSD	.3781772	.9821778	.3503268	.1727947	.0472222	.3731439	.5324840
#1	.7569674	1.684447	.8506726	1.883216	.7745957	1.856680	.4532382
#2	.7523573	1.701603	.8514969	1.881543	.7746317	1.867128	.4542957
#3	.7575878	1.717863	.8562099	1.887830	.7752467	1.869863	.4578634

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1686327	.1773778	11.22459	.3894378	.1837894	.2890034	2.885804
Stddev	.0004206	.0000177	.03319	.0011465	.0006481	.0004461	.023701
%RSD	.2494167	.0099797	.2956617	.2944010	.3526287	.1543643	.8213052
#1	.1690138	.1773942	11.22485	.3902680	.1832946	.2888449	2.895601
#2	.1681814	.1773590	11.19127	.3899158	.1835507	.2886582	2.858775
#3	.1687028	.1773801	11.25764	.3881296	.1845230	.2895071	2.903036

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2455950	2.443573	.4590240	.0706656	344.9789	.2708978	.3073273
Stddev	.0011449	.005289	.0008680	.0000863	1.8620	.0018334	.0007253
%RSD	.4661724	.2164283	.1890896	.1221856	.5397344	.6767715	.2360043
#1	.2446966	2.444653	.4583241	.0706513	345.3456	.2714599	.3081607
#2	.2452042	2.437828	.4587526	.0707583	342.9609	.2688491	.3069829
#3	.2468841	2.448238	.4599952	.0705874	346.6303	.2723842	.3068384

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.07331	.2795382	.4064770	.6128130	.1794015	1.579942	5.532264
Stddev	.04149	.0005200	.0006660	.0031307	.0013890	.003853	.024315
%RSD	.4118545	.1860359	.1638460	.5108669	.7742184	.2438576	.4395041
#1	10.09515	.2800526	.4070216	.6145132	.1782158	1.578843	5.510836
#2	10.02547	.2795494	.4057345	.6092001	.1790589	1.584225	5.527266
#3	10.09932	.2790127	.4066749	.6147257	.1809297	1.576758	5.558689

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24MSD Acquired: 2/10/2025 19:18:55 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.3340563	.1759563	.2973152
Stddev	.0012499	.0009099	.0001614
%RSD	.3741684	.5171272	.0542979
#1	.3327192	.1749379	.2971336
#2	.3342542	.1766893	.2974425
#3	.3351955	.1762416	.2973696

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3209.169	69747.52	14468.31	2145.912	3942.382
Stddev	4.046	246.81	36.39	13.201	3.729
%RSD	.1260815	.3538559	.2514887	.6151811	.0945953
#1	3205.105	69518.98	14436.77	2133.129	3945.323
#2	3213.197	70009.24	14508.12	2159.495	3943.635
#3	3209.207	69714.35	14460.03	2145.111	3938.187

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24A Acquired: 2/10/2025 19:23:04 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.7690718	1.701354	.8617718	1.931822	.7890913	1.865711	.4702545
Stddev	.0021349	.010645	.0024305	.006623	.0011348	.004340	.0011345
%RSD	.2775884	.6256568	.2820402	.3428173	.1438112	.2326007	.2412425
#1	.7706677	1.712808	.8597525	1.934089	.7890647	1.862702	.4712954
#2	.7666468	1.691765	.8610935	1.924364	.7879700	1.863745	.4704227
#3	.7699009	1.699489	.8644694	1.937014	.7902391	1.870686	.4690453

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1683695	.1788110	11.35670	.3856835	.1851821	.2939422	2.935960
Stddev	.0009774	.0004275	.01171	.0001751	.0004896	.0007019	.018318
%RSD	.5805195	.2390775	.1030924	.0453931	.2644089	.2387755	.6239254
#1	.1687089	.1784042	11.34895	.3854865	.1846303	.2931538	2.941099
#2	.1672676	.1787721	11.37017	.3858214	.1853510	.2941738	2.951159
#3	.1691319	.1792565	11.35097	.3857426	.1855649	.2944991	2.915621

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2500390	2.456888	.4643073	.0704344	340.1414	.2729449	.3054998
Stddev	.0004055	.019532	.0011320	.0002898	3.1445	.0020797	.0006772
%RSD	.1621831	.7949922	.2437927	.4114877	.9244548	.7619505	.2216741
#1	.2495724	2.468848	.4633989	.0701818	338.2565	.2749250	.3054789
#2	.2502381	2.467468	.4639476	.0703704	343.7714	.2731315	.3048333
#3	.2503065	2.434348	.4655754	.0707508	338.3962	.2707782	.3061873

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.20273	.2796557	.4052017	.6203233	.1830677	1.578472	5.743158
Stddev	.08231	.0027986	.0008891	.0019379	.0003884	.011999	.019261
%RSD	.8067830	1.000727	.2194295	.3123970	.2121465	.7601729	.3353657
#1	10.24136	.2787824	.4044949	.6187632	.1835145	1.588168	5.748108
#2	10.25864	.2773980	.4049101	.6197142	.1828780	1.582195	5.721905
#3	10.10821	.2827869	.4062000	.6224926	.1828107	1.565053	5.759460

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1309-24A Acquired: 2/10/2025 19:23:04 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.3487300	.1839376	.2897505
Stddev	.0012714	.0005770	.0003648
%RSD	.3645792	.3136891	.1258938
#1	.3481352	.1845640	.2900347
#2	.3478650	.1834279	.2898776
#3	.3501898	.1838207	.2893391

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3143.795	70649.98	14543.39	2205.474	3842.491
Stddev	4.100	174.97	80.29	10.187	6.732
%RSD	.1304277	.2476513	.5520763	.4618939	.1752070
#1	3148.335	70800.13	14537.81	2216.982	3849.908
#2	3140.361	70457.84	14626.33	2197.608	3836.768
#3	3142.687	70691.99	14466.04	2201.833	3840.796

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-03 Acquired: 2/10/2025 19:27:14 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.9302740	.0155425	27.68141	-.051427	.0638539	95.72114
Stddev	.0007082	.0049166	.13154	.000541	.0017609	.08372
%RSD	.0761297	31.63335	.4751759	1.051390	2.757620	.0874639
#1	.9309472	.0178594	27.56075	-.050988	.0641805	95.65347
#2	.9295353	.0098955	27.66186	-.051261	.0619527	95.81476
#3	.9303394	.0188726	27.82163	-.052031	.0654287	95.69518

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.94005	.0108320	.0760018	421.7145	.3889199	.1564210
Stddev	.19730	.0000621	.0012471	3.0108	.0017794	.0004034
%RSD	1.803424	.5735951	1.640887	.7139336	.4575186	.2579135
#1	11.15066	.0109027	.0755788	425.0936	.3892640	.1560721
#2	10.75952	.0108070	.0750211	420.7324	.3905020	.1563281
#3	10.90999	.0107863	.0774053	419.3174	.3869936	.1568628

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.703105	523.3371	6.593150	65.69979	.6363071	.0549169
Stddev	.025677	2.9374	.012400	.04258	.0031943	.0006728
%RSD	.4502365	.5612837	.1880780	.0648118	.5020122	1.225189
#1	5.679634	522.7348	6.582717	65.73435	.6339591	.0546680
#2	5.699152	526.5290	6.589874	65.71280	.6350176	.0556787
#3	5.730530	520.7475	6.606859	65.65222	.6399446	.0544039

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.14200	.4130454	19.78989	18.92023	.2007924	.0158330
Stddev	.02362	.0008462	.13486	.03647	.0034467	.0006577
%RSD	.2329060	.2048605	.6814461	.1927504	1.716528	4.154237
#1	10.12804	.4134535	19.90715	18.91760	.2023622	.0150775
#2	10.12869	.4136102	19.64252	18.88515	.2031746	.0161431
#3	10.16927	.4120726	19.82000	18.95794	.1968402	.0162783

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-03 Acquired: 2/10/2025 19:27:14 Type: Unk
Method: NON EPA-6010-200.7(v2681) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.237869	4.999938	F 25.00580	F 20.13657	F 23.51991	.2548989
Stddev	.009071	.005937	.16795	.09742	.12361	.0021279
%RSD	.4053300	.1187390	.6716353	.4838142	.5255716	.8348000
#1	2.229398	4.995195	24.91955	20.04894	23.40733	.2532808
#2	2.236769	5.006596	24.89851	20.11930	23.50021	.2573092
#3	2.247439	4.998023	25.19935	20.24147	23.65219	.2541066

Elem	Sr4077
Units	ppm
Avg	1.038089
Stddev	.016452
%RSD	1.584861
#1	1.042160
#2	1.019983
#3	1.052123

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3339.539	77369.67	16387.91	2291.089	3547.709
Stddev	15.162	122.77	34.97	21.173	22.835
%RSD	.4540003	.1586831	.2133759	.9241442	.6436591
#1	3353.272	77227.96	16380.82	2267.318	3566.390
#2	3342.077	77437.09	16357.02	2307.924	3554.483
#3	3323.269	77443.95	16425.87	2298.024	3522.253

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-07 Acquired: 2/10/2025 19:31:51 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.0503245	-.012200	.7953554	-.019169	.0003086	134.8835
Stddev	.0035048	.003943	.0073205	.000129	.0008547	.2682
%RSD	6.964298	32.31818	.9204116	.6704449	276.9961	.1988585
#1	.0500308	-.008167	.7869317	-.019140	-.000671	135.1602
#2	.0469759	-.016045	.8001767	-.019057	.000905	134.8658
#3	.0539669	-.012387	.7989578	-.019309	.000691	134.6246

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5367793	.0046416	.0059644	353.3548	.2779407	.0576640
Stddev	.0030454	.0000603	.0005541	1.1277	.0019223	.0007678
%RSD	.5673443	1.298500	9.289963	.3191379	.6916259	1.331534
#1	.5393299	.0046703	.0053714	354.6433	.2791122	.0567803
#2	.5376004	.0046821	.0064689	352.5479	.2757222	.0580438
#3	.5334075	.0045723	.0060529	352.8732	.2789878	.0581679

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4745125	167.6286	2.001636	89.45209	.3035465	.0082468
Stddev	.0045981	1.2293	.001356	.14722	.0022282	.0001340
%RSD	.9690161	.7333193	.0677313	.1645745	.7340411	1.624434
#1	.4693796	168.8777	2.001481	89.33315	.3009889	.0083988
#2	.4759031	166.4203	2.000365	89.40639	.3045825	.0081459
#3	.4782548	167.5879	2.003063	89.61674	.3050680	.0081956

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.391481	.3287073	1.490918	17.26079	.0881741	.0098320
Stddev	.105302	.0010771	.009621	.13862	.0024496	.0003896
%RSD	1.121252	.3276795	.6452857	.8030693	2.778091	3.962055
#1	9.507341	.3274636	1.489911	17.40979	.0908507	.0094690
#2	9.301599	.3293219	1.481841	17.13566	.0860438	.0097833
#3	9.365503	.3293364	1.501003	17.23693	.0876279	.0102435

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-07 Acquired: 2/10/2025 19:31:51 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.0219040	2.966963	F 31.72729	3.728566	9.554814	.0826001
Stddev	.0012555	.008620	.22482	.040734	.076931	.0009444
%RSD	5.731731	.2905293	.7085965	1.092479	.8051550	1.143295
#1	.0209848	2.972168	31.94747	3.685126	9.471974	.0836886
#2	.0213929	2.971709	31.49810	3.734668	9.568456	.0821131
#3	.0233345	2.957014	31.73630	3.765905	9.624011	.0819987

Elem	Sr4077
Units	ppm
Avg	.8836713
Stddev	.0039948
%RSD	.4520704
#1	.8797620
#2	.8835056
#3	.8877464

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3280.731	73220.16	15980.21	2227.633	3652.970
Stddev	15.830	422.73	80.04	11.441	25.639
%RSD	.4825007	.5773368	.5008666	.5135902	.7018563
#1	3298.606	72973.16	16068.76	2228.265	3682.137
#2	3275.099	73708.27	15958.86	2238.745	3642.778
#3	3268.487	72979.05	15913.01	2215.889	3633.994

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-11 Acquired: 2/10/2025 19:36:12 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.0727898	-.009002	2.446203	-.025696	.0081668	90.86988
Stddev	.0026371	.001359	.015549	.005008	.0018058	.39085
%RSD	3.622856	15.10062	.6356517	19.49012	22.11181	.4301191
#1	.0753358	-.007940	2.439990	-.023981	.0062739	91.16155
#2	.0729634	-.010534	2.434721	-.021770	.0083558	90.42579
#3	.0700703	-.008531	2.463898	-.031336	.0098707	91.02230

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.047399	.0092924	.0118201	464.0278	.3376994	.1340821
Stddev	.003508	.0001358	.0005462	1.3369	.0008903	.0009521
%RSD	.3349115	1.461083	4.621027	.2881062	.2636387	.7100964
#1	1.047104	.0092395	.0115896	465.0067	.3375564	.1333328
#2	1.044048	.0091911	.0114268	462.5046	.3386525	.1337600
#3	1.051045	.0094467	.0124437	464.5721	.3368892	.1351534

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.272692	226.6908	4.694064	74.11038	.4615987	.0210334
Stddev	.007626	1.1035	.008690	.32305	.0019825	.0003656
%RSD	.5991698	.4867801	.1851183	.4359029	.4294801	1.738064
#1	1.269099	227.4419	4.697537	74.40077	.4607376	.0213247
#2	1.267527	227.2066	4.684176	73.76241	.4601924	.0206232
#3	1.281451	225.4239	4.700481	74.16797	.4638661	.0211524

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.63557	.3211161	4.900993	27.00670	.2012042	.0277610
Stddev	.06291	.0007041	.020642	.15557	.0030171	.0001233
%RSD	.4978634	.2192799	.4211742	.5760296	1.499515	.4442447
#1	12.70663	.3213130	4.904414	27.14848	.2024324	.0277587
#2	12.61306	.3203344	4.919711	27.03134	.2034135	.0276388
#3	12.58701	.3217008	4.878855	26.84029	.1977667	.0278854

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-11 Acquired: 2/10/2025 19:36:12 Type: Unk
Method: NON EPA-6010-200.7(v2681) 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	.3698593	4.682848	F 36.54050	F 13.26544	F 25.11236	.1589971
Stddev	.0025628	.011785	.16655	.08047	.18852	.0007434
%RSD	.6929169	.2516699	.4557948	.6065999	.7507166	.4675782
#1	.3672501	4.691678	36.70210	13.24725	25.02133	.1582322
#2	.3699548	4.669465	36.55000	13.19562	24.98663	.1590423
#3	.3723731	4.687401	36.36940	13.35345	25.32912	.1597170

Elem	Sr4077
Units	ppm
Avg	1.478054
Stddev	.013728
%RSD	.9287847
#1	1.473345
#2	1.493517
#3	1.467301

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3362.943	74337.12	16077.58	2241.483	3639.432
Stddev	11.518	363.35	63.00	8.043	14.979
%RSD	.3424964	.4887816	.3918202	.3588318	.4115724
#1	3366.315	73942.67	16035.52	2233.327	3645.075
#2	3372.399	74410.54	16150.01	2241.712	3650.769
#3	3350.116	74658.15	16047.21	2249.409	3622.451

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV06 Acquired: 2/10/2025 19:40:32 Type: Unk
Method: NON EPA-6010-200.7(v2681) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.894113	4.675354	4.634535	4.995015	5.049829	9.651020
Stddev	.009817	.035974	.005952	.003335	.000696	.030881
%RSD	.2005904	.7694288	.1284347	.0667719	.0137759	.3199814
#1	4.891741	4.696116	4.634574	4.998037	5.050630	9.656506
#2	4.885699	4.633815	4.628564	4.995572	5.049483	9.617763
#3	4.904899	4.696131	4.640468	4.991437	5.049374	9.678791

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.328796	.2273855	2.290806	23.15045	.9698142	2.336135
Stddev	.063824	.0017870	.004291	.09341	.0036375	.004014
%RSD	.6841578	.7858769	.1873058	.4035000	.3750741	.1718429
#1	9.322847	.2289436	2.292949	23.18292	.9727991	2.336994
#2	9.268155	.2254349	2.285866	23.04514	.9657626	2.331761
#3	9.395386	.2277781	2.293603	23.22330	.9708808	2.339651

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.224642	4.762833	2.643752	23.05219	2.330841	1.202605
Stddev	.001520	.026656	.018032	.13598	.003545	.003610
%RSD	.1241040	.5596718	.6820553	.5898962	.1520961	.3001867
#1	1.223336	4.787379	2.657320	23.10389	2.332402	1.202288
#2	1.224279	4.734476	2.623290	22.89793	2.326783	1.199164
#3	1.226310	4.766644	2.650646	23.15473	2.333338	1.206363

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.65554	2.325579	2.422185	24.52420	F 4.472053	4.940340
Stddev	.05344	.007885	.010817	.08014	.030067	.002219
%RSD	.2083139	.3390532	.4465850	.3267991	.6723412	.0449139
#1	25.59635	2.328658	2.430301	24.52302	4.499314	4.942152
#2	25.67001	2.316619	2.409904	24.44466	4.439803	4.937865
#3	25.70025	2.331459	2.426349	24.60494	4.477042	4.941002

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV06 Acquired: 2/10/2025 19:40:32 Type: Unk
Method: NON EPA-6010-200.7(v2681) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.621363	4.640036	5.164264	4.583198	4.585281	4.701793
Stddev	.010420	.021333	.037005	.011423	.016352	.019612
%RSD	.2254737	.4597541	.7165516	.2492326	.3566187	.4171110
#1	4.631728	4.655518	5.124830	4.588213	4.595108	4.719734
#2	4.610889	4.615703	5.169733	4.570126	4.566405	4.680855
#3	4.621473	4.648888	5.198230	4.591255	4.594331	4.704789

Elem	Sr4077
Units	ppm
Avg	4.999357
Stddev	.047184
%RSD	.9437938
#1	5.040307
#2	4.947759
#3	5.010004

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3298.365	71197.91	14208.25	2188.821	4070.376
Stddev	3.244	152.11	98.18	4.216	2.219
%RSD	.0983655	.2136439	.6909887	.1926062	.0545251
#1	3297.474	71110.40	14120.13	2184.028	4068.010
#2	3295.659	71373.55	14314.07	2191.952	4072.411
#3	3301.962	71109.78	14190.53	2190.485	4070.708

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB06 Acquired: 2/10/2025 19:45:19 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.0017474	-.002308	.0004433	-.000488	-.000782	-.000590	-.007242
Stddev	.0016143	.000401	.0007247	.001152	.000805	.005380	.000471
%RSD	92.37993	17.37530	163.4737	236.2171	103.0530	912.3415	6.510261
#1	.0030423	-.002057	-.000076	.000149	-.001541	-.006800	-.007442
#2	-.000061	-.002097	.001271	-.001818	-.000868	.002646	-.006703
#3	.002261	-.002771	.000135	.000205	.000063	.002384	-.007580

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000364	.0000372	.0030123	.0000167	-.000067	-.000141	-.000743
Stddev	.0000273	.0000276	.0117254	.0001041	.000244	.000246	.001392
%RSD	74.92459	74.10425	389.2541	624.5912	363.7785	174.5461	187.3296
#1	.0000651	.0000084	.0160000	.0001369	.000031	-.000417	-.001048
#2	.0000332	.0000399	-.000169	-.000041	-.000344	-.000060	.000776
#3	.0000108	.0000633	-.006794	-.000045	.000112	.000054	-.001957

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000120	-.008556	-.000073	.0008866	-.595362	-.000633	.0001892
Stddev	.0000416	.002830	.000249	.0001040	.013557	.000395	.0002536
%RSD	345.1274	33.07735	341.2776	11.72576	2.277087	62.34055	134.0242
#1	.0000305	-.005343	.000206	.0008175	-.610955	-.000406	.0002615
#2	-.000036	-.009646	-.000273	.0010062	-.588767	-.000405	-.000093
#3	.000041	-.010680	-.000151	.0008362	-.586365	-.001089	.000399

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.096194	.0033377	.0001911	-.003629	.0010138	-.000093	-.001863
Stddev	.031144	.0004051	.0000790	.000340	.0001683	.003770	.002018
%RSD	32.37641	12.13653	41.35259	9.359574	16.60273	4036.975	108.2709
#1	-.131386	.0031804	.0002524	-.003276	.0010106	-.000803	.000257
#2	-.072184	.0037978	.0002191	-.003658	.0011838	.003981	-.003759
#3	-.085013	.0030348	.0001019	-.003953	.0008472	-.003458	-.002089

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB06 Acquired: 2/10/2025 19:45:19 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.0003067	-.004115	.0000319
Stddev	.0015927	.000391	.0000265
%RSD	519.3149	9.491441	82.93684
#1	-.000232	-.004441	.0000128
#2	.002099	-.004221	.0000208
#3	-.000947	-.003682	.0000621

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3368.517	74749.42	14843.88	2302.826	4376.465
Stddev	3.235	93.44	55.94	13.589	5.141
%RSD	.0960326	.1250106	.3768734	.5901143	.1174677
#1	3370.540	74757.40	14833.64	2307.972	4382.215
#2	3370.224	74838.62	14904.24	2313.091	4374.870
#3	3364.786	74652.24	14793.77	2287.415	4372.311

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-15 Acquired: 2/10/2025 19:49:37 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.1056907	-.006200	7.523597	-.023327	.0415796	89.63841
Stddev	.0015152	.001920	.037565	.001446	.0010642	.44839
%RSD	1.433597	30.97093	.4993010	6.196919	2.559473	.5002179
#1	.1040547	-.006429	7.508182	-.023041	.0426396	89.30320
#2	.1059716	-.004176	7.566418	-.022047	.0405112	89.46428
#3	.1070458	-.007996	7.496191	-.024895	.0415881	90.14774

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.933393	.0075406	.0118326	365.4137	.2458777	.1212322
Stddev	.013836	.0000600	.0003087	3.3275	.0005695	.0005533
%RSD	.7156307	.7958162	2.608731	.9106253	.2316310	.4563713
#1	1.924924	.0074723	.0116802	365.6759	.2462579	.1210196
#2	1.925896	.0075851	.0121878	361.9628	.2461523	.1218602
#3	1.949360	.0075642	.0116297	368.6023	.2452229	.1208167

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.575438	252.1156	4.066028	104.0825	.4798592	.0149097
Stddev	.009090	1.6779	.016263	.2532	.0022445	.0003511
%RSD	.5770025	.6655384	.3999611	.2432727	.4677399	2.354597
#1	1.577224	251.6870	4.054213	103.8944	.4797043	.0150154
#2	1.583503	250.6935	4.059295	103.9828	.4821771	.0145180
#3	1.565587	253.9662	4.084575	104.3704	.4776961	.0151959

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.88505	.2931198	1.768785	29.31235	.1325011	.0146170
Stddev	.15935	.0017668	.003448	.23375	.0025772	.0003636
%RSD	.7629665	.6027658	.1949422	.7974303	1.945061	2.487612
#1	20.81030	.2922790	1.766554	29.22440	.1323291	.0146553
#2	20.77683	.2919303	1.767046	29.13534	.1300142	.0142358
#3	21.06803	.2951500	1.772757	29.57731	.1351600	.0149600

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-15 Acquired: 2/10/2025 19:49:37 Type: Unk
Method: NON EPA-6010-200.7(v2682) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.102094	4.966240	F 22.26691	F 10.71784	9.223087	.1898425
Stddev	.003949	.023936	.15482	.01421	.016813	.0007037
%RSD	.3583125	.4819678	.6952744	.1325505	.1822976	.3706838
#1	1.103712	4.950690	22.22120	10.70802	9.226454	.1890300
#2	1.104977	4.954228	22.14010	10.73413	9.237962	.1902368
#3	1.097593	4.993803	22.43944	10.71139	9.204845	.1902606

Elem	Sr4077
Units	ppm
Avg	1.278694
Stddev	.029680
%RSD	2.321086
#1	1.244538
#2	1.298197
#3	1.293348

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3370.766	77042.20	16719.01	2320.633	3562.034
Stddev	13.266	167.00	36.73	14.805	14.458
%RSD	.3935517	.2167603	.2196713	.6379698	.4059038
#1	3368.592	77106.03	16760.19	2333.056	3564.959
#2	3358.721	77167.87	16689.66	2324.592	3546.337
#3	3384.984	76852.70	16707.17	2304.251	3574.807

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19 Acquired: 2/10/2025 19:53:57 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.1584298	-.010327	6.173543	-.029098	.0142083	127.9450
Stddev	.0021955	.001037	.020759	.004716	.0007242	.2802
%RSD	1.385766	10.04082	.3362586	16.20827	5.096780	.2190288
#1	.1581494	-.009498	6.186213	-.027944	.0134312	128.0931
#2	.1607521	-.009994	6.184831	-.034284	.0143296	128.1201
#3	.1563881	-.011490	6.149586	-.025066	.0148642	127.6218

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.557991	.0094936	.0220347	502.7165	.3251096	.1547501
Stddev	.011955	.0000676	.0002051	4.6065	.0009001	.0002907
%RSD	.4673503	.7121796	.9307316	.9163312	.2768717	.1878396
#1	2.571319	.0095713	.0221065	506.2192	.3261488	.1550517
#2	2.554442	.0094611	.0221942	504.4320	.3246085	.1547267
#3	2.548213	.0094483	.0218034	497.4984	.3245715	.1544718

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.797744	341.9135	4.782127	86.09704	.4220884	.0170153
Stddev	.003593	.5044	.013489	.25761	.0014336	.0003004
%RSD	.1998743	.1475282	.2820672	.2992116	.3396544	1.765484
#1	1.800616	342.3136	4.793513	85.89555	.4221452	.0169929
#2	1.798901	342.0800	4.785638	86.38730	.4234928	.0173263
#3	1.793715	341.3468	4.767229	86.00827	.4206272	.0167267

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	49.30590	.4841595	3.999199	25.08319	.2339442	.0172053
Stddev	.10211	.0020649	.000996	.08936	.0012641	.0002158
%RSD	.2070894	.4264958	.0248943	.3562611	.5403591	1.254402
#1	49.41832	.4829741	3.998306	25.17266	.2334328	.0174431
#2	49.21891	.4865439	4.000272	25.08299	.2353839	.0171507
#3	49.28047	.4829607	3.999017	24.99394	.2330159	.0170220

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19 Acquired: 2/10/2025 19:53:57 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.2827143	6.397806	F 24.07801	F 13.02222	F 20.86409	.2179148
Stddev	.0019943	.021550	.07265	.02508	.02532	.0008918
%RSD	.7053962	.3368409	.3017327	.1925690	.1213554	.4092330
#1	.2826867	6.416450	24.04050	13.05096	20.89141	.2186027
#2	.2847223	6.402757	24.16175	13.00481	20.85942	.2169072
#3	.2807340	6.374211	24.03177	13.01088	20.84142	.2182343

Elem	Sr4077
Units	ppm
Avg	1.612345
Stddev	.024457
%RSD	1.516848
#1	1.625517
#2	1.584126
#3	1.627393

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3320.980	75634.98	16595.73	2302.621	3454.936
Stddev	7.047	69.27	13.05	5.950	11.747
%RSD	.2121878	.0915882	.0786061	.2584183	.3400093
#1	3316.967	75646.69	16580.80	2309.465	3450.422
#2	3316.857	75697.66	16601.47	2298.668	3446.116
#3	3329.117	75560.60	16604.93	2299.731	3468.271

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19DUP Acquired: 2/10/2025 19:58:18 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.1513137	-.012486	6.125841	-.032657	.0146194	123.8968
Stddev	.0040777	.001430	.010559	.001686	.0017276	2.2979
%RSD	2.694888	11.44946	.1723679	5.162803	11.81693	1.854698
#1	.1553715	-.010877	6.130229	-.033469	.0142240	125.2518
#2	.1513533	-.012972	6.113796	-.033783	.0165104	125.1950
#3	.1472163	-.013610	6.133499	-.030718	.0131238	121.2436

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.406265	.0098955	.0241600	492.2620	.3250653	.1543383
Stddev	.034096	.0001134	.0001522	6.9559	.0006143	.0005956
%RSD	1.416955	1.145934	.6299538	1.413054	.1889760	.3859363
#1	2.422476	.0100009	.0243341	493.4491	.3247055	.1545363
#2	2.429231	.0099101	.0240934	498.5480	.3247159	.1536689
#3	2.367089	.0097755	.0240524	484.7889	.3257747	.1548098

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.784931	320.8968	4.621663	83.54678	.4192512	.0132010
Stddev	.003370	1.4289	.068577	1.52135	.0004821	.0004437
%RSD	.1888248	.4452715	1.483817	1.820952	.1149946	3.361282
#1	1.786670	319.3850	4.648300	84.05024	.4191265	.0127648
#2	1.781046	321.0805	4.672926	84.75257	.4188436	.0131863
#3	1.787077	322.2249	4.543764	81.83752	.4197834	.0136519

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	45.36366	.4677001	4.008663	22.93635	.2052892	.0173160
Stddev	.13990	.0097961	.005685	.11573	.0048529	.0001482
%RSD	.3083932	2.094526	.1418297	.5045671	2.363939	.8556813
#1	45.40629	.4713491	4.014218	22.87520	.2001690	.0171766
#2	45.20741	.4751479	4.002855	22.86402	.2058775	.0172998
#3	45.47729	.4566032	4.008915	23.06982	.2098212	.0174716

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19DUP Acquired: 2/10/2025 19:58:18 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.2816200	6.108653	F 22.39117	F 13.00594	F 20.42744	.2012170
Stddev	.0007510	.099249	.02780	.03144	.07556	.0012312
%RSD	.2666619	1.624732	.1241477	.2417279	.3699179	.6118599
#1	.2807632	6.152866	22.35934	13.01820	20.46869	.2021162
#2	.2821644	6.178112	22.40347	12.97021	20.34023	.2017211
#3	.2819323	5.994981	22.41069	13.02939	20.47341	.1998138

Elem	Sr4077
Units	ppm
Avg	1.655590
Stddev	.041704
%RSD	2.519009
#1	1.671826
#2	1.686734
#3	1.608209

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3403.766	75605.75	15950.44	2322.463	3517.943
Stddev	8.702	143.84	290.41	6.481	5.890
%RSD	.2556727	.1902513	1.820692	.2790576	.1674252
#1	3404.654	75766.29	15829.68	2326.680	3520.066
#2	3411.990	75488.58	15739.89	2315.000	3522.477
#3	3394.653	75562.40	16281.74	2325.708	3511.286

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19LX5 Acquired: 2/10/2025 20:02:37 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.0320325	-.003086	1.312171	-.006137	.0007174	27.58658	.5286572
Stddev	.0017602	.001613	.018399	.003265	.0004697	.04266	.0009526
%RSD	5.495032	52.27626	1.402165	53.19907	65.47322	.1546559	.1801923
#1	.0318366	-.001769	1.324014	-.002449	.0012226	27.54291	.5288952
#2	.0303785	-.004885	1.290975	-.007307	.0006355	27.62817	.5276082
#3	.0338825	-.002603	1.321525	-.008656	.0002940	27.58865	.5294682

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023454	.0026058	114.6200	.0750206	.0314226	.4304847	72.12205
Stddev	.0000024	.0001783	.1790	.0002695	.0002599	.0051343	.21696
%RSD	.1037349	6.840520	.1562048	.3591668	.8271847	1.192673	.3008295
#1	.0023436	.0025352	114.4870	.0747136	.0312033	.4325099	71.99950
#2	.0023445	.0024736	114.8236	.0751297	.0313547	.4246467	71.99410
#3	.0023482	.0028085	114.5495	.0752183	.0317097	.4342975	72.37256

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.095379	19.47468	.0868025	.0031165	8.702239	.1078688	.9074418
Stddev	.001280	.05584	.0011921	.0003248	.045777	.0013925	.0017632
%RSD	.1168130	.2867109	1.373378	10.42119	.5260427	1.290927	.1943046
#1	1.094199	19.41077	.0876921	.0029708	8.681067	.1068847	.9054059
#2	1.095200	19.51400	.0854480	.0028900	8.670879	.1094621	.9084764
#3	1.096739	19.49926	.0872675	.0034886	8.754770	.1072596	.9084431

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.559675	.0464761	.0039873	.0534650	1.415880	4.681318	2.634724
Stddev	.028519	.0009319	.0001578	.0010863	.001598	.017493	.033364
%RSD	.6254547	2.005097	3.957853	2.031778	.1128304	.3736679	1.266329
#1	4.531682	.0468451	.0041690	.0545676	1.416987	4.686095	2.661410
#2	4.558651	.0454162	.0038841	.0523958	1.416603	4.661934	2.597317
#3	4.588692	.0471671	.0039089	.0534316	1.414048	4.695927	2.645445

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19LX5 Acquired: 2/10/2025 20:02:37 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	4.034368	.0411960	.3770904
Stddev	.043145	.0013959	.0001186
%RSD	1.069435	3.388352	.0314487
#1	4.062423	.0401497	.3769899
#2	3.984687	.0406573	.3770601
#3	4.055994	.0427809	.3772212

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3296.903	73729.34	14463.58	2301.042	3924.811
Stddev	26.993	262.46	42.53	12.933	35.666
%RSD	.8187526	.3559774	.2940565	.5620436	.9087295
#1	3290.829	73942.69	14504.90	2312.743	3904.899
#2	3326.417	73809.08	14419.94	2303.228	3965.987
#3	3273.465	73436.26	14465.90	2287.156	3903.547

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19MS Acquired: 2/10/2025 20:06:45 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.8523757	1.626848	6.113818	1.664513	.2718191	129.0132
Stddev	.0026000	.007214	.010862	.008507	.0012568	.3758
%RSD	.3050341	.4434317	.1776608	.5110982	.4623788	.2912957
#1	.8553580	1.619034	6.118190	1.655623	.2710225	129.1751
#2	.8511841	1.633254	6.101452	1.672577	.2711669	129.2810
#3	.8505852	1.628256	6.121812	1.665338	.2732680	128.5836

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.558886	.1627108	.1987952	499.7003	.6270524	.3342031
Stddev	.015696	.0013369	.0010694	9.5624	.0025207	.0010790
%RSD	.6133938	.8216346	.5379374	1.913637	.4019952	.3228644
#1	2.568368	.1633761	.1998505	502.7784	.6265556	.3344238
#2	2.567522	.1635844	.1977122	507.3446	.6297845	.3330308
#3	2.540769	.1611718	.1988229	488.9778	.6248171	.3351547

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.803682	393.9454	4.329760	92.91529	.8793303	.0843421
Stddev	.009309	4.6728	.028780	.51797	.0015700	.0007476
%RSD	.5161212	1.186154	.6647086	.5574689	.1785412	.8864364
#1	1.811956	388.6895	4.349491	93.24549	.8806364	.0835093
#2	1.793602	395.5166	4.343054	93.18207	.8775885	.0845617
#3	1.805486	397.6301	4.296736	92.31830	.8797660	.0849554

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.07184	.6875402	3.745885	35.92629	.4375529	.3495467
Stddev	.10985	.0044564	.017069	.06907	.0045387	.0013452
%RSD	.2193849	.6481605	.4556752	.1922542	1.037288	.3848508
#1	49.97898	.6909745	3.761578	35.86012	.4323488	.3506390
#2	50.04343	.6891417	3.748367	35.92083	.4396184	.3480441
#3	50.19310	.6825044	3.727711	35.99793	.4406914	.3499570

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19MS Acquired: 2/10/2025 20:06:45 Type: Unk
Method: NON EPA-6010-200.7(v2682) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.079743	6.787910	F 24.74274	F 18.13191	F 19.34303	.4300132
Stddev	.003435	.037933	.02076	.01547	.06270	.0023757
%RSD	.3181233	.5588384	.0838969	.0853228	.3241522	.5524790
#1	1.081577	6.816459	24.76441	18.14312	19.39013	.4272737
#2	1.075781	6.802405	24.72303	18.11426	19.27186	.4312591
#3	1.081872	6.744867	24.74079	18.13836	19.36709	.4315068

Elem	Sr4077
Units	ppm
Avg	1.707869
Stddev	.010027
%RSD	.5871115
#1	1.718251
#2	1.707116
#3	1.698240

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3275.708	73671.17	15878.36	2245.170	3476.552
Stddev	10.537	65.45	94.90	11.406	8.374
%RSD	.3216619	.0888450	.5976403	.5080453	.2408774
#1	3275.592	73716.43	15825.31	2232.309	3474.434
#2	3286.302	73596.12	15821.86	2249.140	3485.782
#3	3265.229	73700.97	15987.92	2254.061	3469.440

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19MSD Acquired: 2/10/2025 20:11:05 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.8517579	1.633493	6.080207	1.667537	.2689831	126.7022
Stddev	.0086196	.020782	.046842	.006625	.0013843	.0953
%RSD	1.011973	1.272248	.7703976	.3972884	.5146474	.0752359
#1	.8525838	1.648461	6.105483	1.671363	.2698784	126.7537
#2	.8599348	1.642252	6.108980	1.671360	.2696822	126.7606
#3	.8427551	1.609765	6.026156	1.659887	.2673886	126.5922

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.447570	.1615683	.1987616	484.1919	.6274817	.3329738
Stddev	.004236	.0005021	.0017846	2.5868	.0023999	.0028144
%RSD	.1730741	.3107810	.8978519	.5342577	.3824698	.8452389
#1	2.444232	.1613569	.1993895	484.4178	.6301826	.3343676
#2	2.446143	.1612063	.2001473	481.4995	.6266687	.3348193
#3	2.452335	.1621415	.1967479	486.6583	.6255940	.3297345

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.802689	385.7960	4.171092	90.38237	.8754621	.0830193
Stddev	.012886	.5264	.008070	.18380	.0065953	.0005284
%RSD	.7148149	.1364516	.1934792	.2033633	.7533532	.6365078
#1	1.803167	386.2466	4.179093	90.59410	.8785627	.0834098
#2	1.815329	385.9240	4.162954	90.26379	.8799358	.0832300
#3	1.789570	385.2174	4.171228	90.28921	.8678879	.0824180

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	48.85679	.6667208	3.749649	34.58452	.4262015	.3491996
Stddev	.10533	.0017078	.009463	.04088	.0005749	.0023544
%RSD	.2155791	.2561561	.2523673	.1181922	.1348951	.6742212
#1	48.80900	.6686853	3.748225	34.59126	.4266405	.3499370
#2	48.97754	.6658875	3.740978	34.62162	.4255507	.3510970
#3	48.78383	.6655896	3.759743	34.54070	.4264133	.3465648

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19MSD Acquired: 2/10/2025 20:11:05 Type: Unk
Method: NON EPA-6010-200.7(v2682) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.073838	6.562066	F 24.65755	F 18.04829	F 19.31245	.4137300
Stddev	.010543	.003192	.04586	.16547	.20037	.0003253
%RSD	.9818194	.0486450	.1859985	.9168321	1.037531	.0786246
#1	1.077256	6.565584	24.68520	18.12556	19.42513	.4139151
#2	1.082249	6.559354	24.68284	18.16098	19.43112	.4139205
#3	1.062010	6.561260	24.60461	17.85831	19.08111	.4133544

Elem	Sr4077
Units	ppm
Avg	1.726773
Stddev	.013884
%RSD	.8040472
#1	1.731863
#2	1.711063
#3	1.737394

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3275.983	73514.10	15898.32	2215.141	3486.847
Stddev	16.841	192.66	32.58	1.463	21.644
%RSD	.5140707	.2620772	.2049560	.0660510	.6207355
#1	3273.126	73343.54	15861.68	2216.750	3477.769
#2	3260.753	73475.67	15924.03	2214.783	3471.220
#3	3294.070	73723.08	15909.26	2213.890	3511.552

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1241-19A Acquired: 2/10/2025 20:15:18 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.8632994	1.626667	6.163397	1.683258	.2757093	128.2382
Stddev	.0054855	.011964	.021977	.004268	.0010978	.2390
%RSD	.6354135	.7354926	.3565728	.2535779	.3981617	.1863849
#1	.8582422	1.617265	6.144645	1.679287	.2753433	128.5102
#2	.8625249	1.622601	6.157966	1.682715	.2748413	128.1432
#3	.8691309	1.640134	6.187581	1.687772	.2769433	128.0614

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.523471	.1616767	.2004943	499.3780	.6304712	.3375928
Stddev	.008040	.0002312	.0010921	9.5242	.0003148	.0011949
%RSD	.3185912	.1429811	.5446874	1.907204	.0499350	.3539390
#1	2.531054	.1617698	.1994125	509.9702	.6304617	.3367777
#2	2.515042	.1614135	.2004741	491.5200	.6307906	.3370363
#3	2.524317	.1618468	.2015964	496.6437	.6301611	.3389644

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.816144	397.1637	4.274141	91.97707	.8860172	.0848390
Stddev	.006397	.6016	.014156	.11367	.0024792	.0001264
%RSD	.3522267	.1514728	.3311983	.1235799	.2798128	.1489613
#1	1.809637	397.5914	4.288252	92.10821	.8836834	.0849077
#2	1.816371	396.4758	4.259941	91.90676	.8857483	.0846931
#3	1.822425	397.4239	4.274231	91.91625	.8886198	.0849161

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	50.05761	.6815037	3.762157	35.66377	.4405917	.3528759
Stddev	.00696	.0037464	.013782	.06843	.0009652	.0017616
%RSD	.0138990	.5497287	.3663224	.1918702	.2190745	.4992086
#1	50.05712	.6797336	3.773367	35.73646	.4405374	.3517356
#2	50.06479	.6858072	3.766334	35.60060	.4415829	.3519872
#3	50.05090	.6789703	3.746770	35.65426	.4396547	.3549048

Sample Name: Q1241-19A Acquired: 2/10/2025 20:15:18 Type: Unk
Method: NON EPA-6010-200.7(v2682) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.087824	6.711928	F 25.40379	F 18.17463	F 19.46399	.4248618
Stddev	.003729	.017805	.04338	.11378	.08393	.0006724
%RSD	.3428299	.2652786	.1707775	.6260605	.4312270	.1582537
#1	1.087517	6.731435	25.44814	18.06338	19.37209	.4241038
#2	1.084258	6.696550	25.36144	18.16973	19.48325	.4250956
#3	1.091698	6.707798	25.40177	18.29079	19.53661	.4253861

Elem	Sr4077
Units	ppm
Avg	1.696424
Stddev	.022097
%RSD	1.302556
#1	1.717709
#2	1.673596
#3	1.697967

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3256.971	73296.94	15947.36	2216.977	3454.607
Stddev	7.616	52.87	13.43	13.356	8.558
%RSD	.2338481	.0721293	.0842369	.6024289	.2477282
#1	3259.953	73357.79	15933.17	2205.152	3460.466
#2	3262.645	73262.24	15959.88	2214.316	3458.570
#3	3248.315	73270.81	15949.03	2231.463	3444.786

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1242-03 Acquired: 2/10/2025 20:19:32 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.0760459	-.016845	2.474081	-.029141	.0098323	100.2269
Stddev	.0008821	.000503	.002175	.002432	.0013173	1.6371
%RSD	1.159992	2.988613	.0879309	8.346662	13.39767	1.633435
#1	.0769646	-.016773	2.471899	-.026866	.0102238	99.2417
#2	.0752056	-.016381	2.474094	-.031705	.0109093	99.3222
#3	.0759675	-.017381	2.476250	-.028853	.0083636	102.1167

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.516185	.0065718	.0150094	606.9444	.3578320	.0956172
Stddev	.027436	.0001773	.0003372	9.2753	.0024832	.0003542
%RSD	1.809537	2.698407	2.246296	1.528198	.6939460	.3703914
#1	1.498525	.0064549	.0153966	601.1205	.3550822	.0956308
#2	1.502238	.0064847	.0148510	602.0721	.3585033	.0959644
#3	1.547793	.0067759	.0147806	617.6405	.3599105	.0952565

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6991720	223.3926	3.177246	89.36112	.4032906	.0157762
Stddev	.0018281	1.5360	.049313	1.33607	.0008188	.0006019
%RSD	.2614708	.6875978	1.552056	1.495138	.2030367	3.815439
#1	.7003154	221.8861	3.149690	88.63836	.4024975	.0152443
#2	.7001370	223.3350	3.147870	88.54212	.4032413	.0156547
#3	.6970636	224.9566	3.234178	90.90288	.4041329	.0164297

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	33.94172	.3317961	1.417092	28.88621	.1493148	.0164635
Stddev	.28031	.0068376	.006736	.22382	.0011387	.0003007
%RSD	.8258510	2.060782	.4753243	.7748243	.7625902	1.826527
#1	33.64295	.3287550	1.409735	28.65721	.1480360	.0161182
#2	33.98329	.3270066	1.422956	28.89695	.1502188	.0166678
#3	34.19892	.3396267	1.418585	29.10446	.1496896	.0166045

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1242-03 Acquired: 2/10/2025 20:19:32 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.1183851	6.148949	F 25.78774	7.653566	F 33.38958	.1629445
Stddev	.0005983	.101918	.21454	.032230	.08818	.0018731
%RSD	.5054007	1.657487	.8319454	.4211136	.2640814	1.149541
#1	.1181061	6.085726	25.58004	7.626989	33.35656	.1611126
#2	.1190720	6.094598	25.77465	7.644291	33.32268	.1628647
#3	.1179773	6.266522	26.00852	7.689416	33.48950	.1648563

Elem	Sr4077
Units	ppm
Avg	1.568659
Stddev	.029390
%RSD	1.873601
#1	1.548864
#2	1.554684
#3	1.602430

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3301.596	74706.59	16184.73	2274.687	3423.432
Stddev	5.106	146.14	180.95	6.086	6.342
%RSD	.1546385	.1956158	1.118030	.2675407	.1852593
#1	3295.701	74874.95	16260.76	2276.050	3418.368
#2	3304.563	74632.30	16315.25	2268.036	3430.546
#3	3304.525	74612.52	15978.16	2279.976	3421.383

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1243-01 Acquired: 2/10/2025 20:23:53 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.0185069	-.024399	.1018960	-.016726	-.001436	90.35936
Stddev	.0026167	.001140	.0024764	.001920	.000937	.17218
%RSD	14.13905	4.670300	2.430316	11.47818	65.24275	.1905537
#1	.0181368	-.025321	.0990376	-.014690	-.002197	90.33066
#2	.0212890	-.024750	.1033943	-.016984	-.001722	90.20332
#3	.0160950	-.023125	.1032561	-.018503	-.000389	90.54409

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5515002	.0053121	.0105470	85.36323	.3668254	.1168027
Stddev	.0007346	.0000548	.0001353	.27991	.0018596	.0006252
%RSD	.1332042	1.031189	1.283062	.3279087	.5069440	.5352705
#1	.5507356	.0053092	.0103917	85.21185	.3676932	.1162661
#2	.5515643	.0052588	.0106096	85.19160	.3646906	.1166529
#3	.5522006	.0053683	.0106397	85.68623	.3680926	.1174892

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2766923	217.2631	1.956291	76.45422	.2577194	.0082075
Stddev	.0008396	.3052	.005029	.21704	.0004328	.0002600
%RSD	.3034347	.1404591	.2570523	.2838847	.1679482	3.167219
#1	.2761472	217.5665	1.954011	76.42970	.2572677	.0082327
#2	.2762705	216.9562	1.952807	76.25047	.2577602	.0084540
#3	.2776591	217.2668	1.962056	76.68247	.2581304	.0079359

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	199.5981	.3029234	.3966424	37.70790	.0854034	.0075728
Stddev	1.1255	.0012902	.0019062	.10266	.0011430	.0000240
%RSD	.5639011	.4259015	.4805862	.2722463	1.338349	.3163873
#1	200.5601	.3031568	.3988148	37.81971	.0848897	.0075521
#2	199.8738	.3015325	.3952494	37.68611	.0867131	.0075674
#3	198.3603	.3040809	.3958630	37.61789	.0846074	.0075991

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: Q1243-01 Acquired: 2/10/2025 20:23:53 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	-.015231	8.900697	F 15.13982	9.974020	9.209957	.1972245
Stddev	.001359	.021113	.01289	.037696	.030231	.0001487
%RSD	8.922692	.2372060	.0851080	.3779374	.3282452	.0753909
#1	-.013970	8.894067	15.15211	9.949886	9.178738	.1972655
#2	-.015052	8.883695	15.12641	9.954716	9.212039	.1973484
#3	-.016670	8.924330	15.14093	10.01746	9.239093	.1970596

Elem	Sr4077
Units	ppm
Avg	-.054186
Stddev	.000358
%RSD	.6604808
#1	-.054599
#2	-.053976
#3	-.053984

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3687.687	81776.12	17359.45	2523.836	3655.504
Stddev	3.376	284.74	85.32	9.197	9.361
%RSD	.0915502	.3481915	.4915047	.3643987	.2560835
#1	3691.389	81618.25	17367.21	2514.234	3665.561
#2	3686.895	82104.82	17440.62	2532.565	3653.906
#3	3684.778	81605.29	17270.51	2524.709	3647.045

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166414BL Acquired: 2/10/2025 20:32:32 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	-.000085	-.001585	-.000267	-.000682	.0007399	.0006812	-.008266
Stddev	.002102	.000843	.000605	.002085	.0001096	.0012046	.000316
%RSD	2476.054	53.15614	226.6925	305.7415	14.80916	176.8467	3.820641
#1	-.001516	-.002470	-.000953	-.002569	.0006358	.0002446	-.008182
#2	-.001066	-.000792	-.000039	.001556	.0007296	-.000244	-.008001
#3	.002328	-.001493	.000191	-.001032	.0008543	.002043	-.008616

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000043	-.000118	.0017977	-.000361	-.000049	-.000136	.0040152
Stddev	.000017	.000024	.0050058	.000263	.000033	.000227	.0028688
%RSD	39.31286	20.78408	278.4493	72.71866	67.93717	167.2804	71.44765
#1	-.000023	-.000090	-.002249	-.000660	-.000011	-.000040	.0047432
#2	-.000052	-.000127	.007395	-.000259	-.000069	-.000396	.0064499
#3	-.000052	-.000137	.000247	-.000165	-.000066	.000028	.0008526

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000154	.0030837	-.000150	.0006900	-.652837	.0002555	-.000096
Stddev	.000161	.0107569	.000287	.0002045	.024242	.0013215	.000157
%RSD	104.8006	348.8275	190.9453	29.63887	3.713356	517.2353	163.8824
#1	-.000307	-.007070	-.000110	.0009235	-.671204	-.001063	-.000172
#2	.000014	.014356	-.000456	.0005424	-.661946	.001580	.000085
#3	-.000169	.001965	.000114	.0006042	-.625359	.000249	-.000200

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.157646	-.002145	-.000308	-.004369	.0013433	-.010321	-.001677
Stddev	.036269	.000496	.000250	.000086	.0003158	.009690	.000812
%RSD	23.00656	23.12819	81.23409	1.968618	23.51115	93.88138	48.43146
#1	-.185648	-.001756	-.000509	-.004296	.0010180	-.021098	-.002580
#2	-.170614	-.002704	-.000028	-.004464	.0016488	-.002326	-.001440
#3	-.116676	-.001976	-.000389	-.004347	.0013631	-.007541	-.001009

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166414BL Acquired: 2/10/2025 20:32:32 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	-.003162	-.003261	-.000099
Stddev	.002759	.000882	.000024
%RSD	87.25007	27.02951	23.78549
#1	-.006045	-.003621	-.000076
#2	-.002892	-.003907	-.000099
#3	-.000548	-.002257	-.000123

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3426.074	75301.72	14924.38	2342.884	4442.499
Stddev	13.814	395.12	39.94	9.047	16.771
%RSD	.4031975	.5247163	.2676327	.3861588	.3775127
#1	3442.024	75210.69	14942.12	2334.276	4460.636
#2	3417.986	75734.41	14952.38	2352.315	4427.552
#3	3418.211	74960.06	14878.64	2342.061	4439.310

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV07 Acquired: 2/10/2025 20:36:52 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	4.890709	4.765338	4.646121	5.009834	5.027826	9.705590	9.291325
Stddev	.007683	.011392	.010216	.004860	.001479	.028339	.149114
%RSD	.1570843	.2390601	.2198862	.0970002	.0294149	.2919838	1.604869
#1	4.899567	4.776696	4.656314	5.014700	5.027945	9.731224	9.410514
#2	4.886688	4.765406	4.635882	5.009820	5.029242	9.675159	9.124118
#3	4.885871	4.753913	4.646168	5.004981	5.026291	9.710387	9.339341

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2331127	2.292874	23.35541	.9682831	2.335909	1.223700	4.706059
Stddev	.0017789	.004424	.14025	.0019139	.003820	.001268	.030355
%RSD	.7630969	.1929431	.6004987	.1976621	.1635411	.1035932	.6450223
#1	.2351086	2.297368	23.48486	.9674986	2.340134	1.223393	4.673249
#2	.2316944	2.288524	23.20642	.9668860	2.332698	1.225094	4.711782
#3	.2325352	2.292730	23.37496	.9704646	2.334896	1.222615	4.733145

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.266879	23.22434	2.333918	1.200460	24.94712	2.333560	2.429584
Stddev	.010801	.15979	.004768	.002858	.16851	.004147	.003304
%RSD	.4764900	.6880090	.2043062	.2381041	.6754641	.1777224	.1359749
#1	2.276893	23.39864	2.338991	1.203717	24.75386	2.335793	2.433309
#2	2.255433	23.08479	2.329528	1.199296	25.06331	2.328774	2.428432
#3	2.268311	23.18958	2.333236	1.198367	25.02419	2.336112	2.427010

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.21358	4.584335	4.924234	4.635263	4.672685	5.039075	4.698932
Stddev	.16968	.040929	.002692	.006010	.026822	.052857	.010237
%RSD	.7007445	.8927935	.0546733	.1296680	.5740268	1.048946	.2178650
#1	24.01769	4.629056	4.926326	4.641949	4.698353	4.983506	4.702757
#2	24.30835	4.548739	4.921197	4.630307	4.644840	5.088722	4.687333
#3	24.31470	4.575209	4.925179	4.633533	4.674863	5.044998	4.706706

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV07 Acquired: 2/10/2025 20:36:52 Type: Unk
Method: NON EPA-6010-200.7(v2682) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.640225	4.736382	5.052534
Stddev	.005597	.021041	.055252
%RSD	.1206238	.4442520	1.093546
#1	4.645724	4.752542	5.034022
#2	4.634534	4.712590	5.008915
#3	4.640417	4.744015	5.114664

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3326.240	71903.89	13983.75	2231.606	4084.539
Stddev	5.600	237.32	115.95	7.431	10.354
%RSD	.1683527	.3300562	.8292058	.3329868	.2534996
#1	3320.247	71973.89	13849.86	2231.454	4073.209
#2	3331.339	71639.44	14051.14	2224.253	4093.510
#3	3327.134	72098.34	14050.26	2239.112	4086.900

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB07 Acquired: 2/10/2025 20:41:03 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	.0004844	-.000914	-.000303	.0015916	-.000577	.0013458	-.007533
Stddev	.0030739	.000519	.001004	.0012810	.001489	.0021853	.000511
%RSD	634.5969	56.82961	331.7230	80.48760	258.1640	162.3816	6.783838
#1	-.002329	-.000729	-.001258	.0028242	.000136	-.000888	-.008123
#2	.000016	-.000513	-.000395	.0002670	.000421	.001447	-.007214
#3	.003766	-.001501	.000745	.0016837	-.002288	.003479	-.007263

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000037	-.000046	.0035898	-.000019	-.000046	.0002207	.0007659
Stddev	.000019	.000054	.0100308	.000367	.000194	.0005609	.0022500
%RSD	51.82294	118.5589	279.4239	1886.849	417.7518	254.1161	293.7860
#1	-.000057	-.000019	-.006873	-.000134	-.000168	-.000423	-.001150
#2	-.000035	-.000010	.013124	-.000316	.000177	.000604	.003243
#3	-.000019	-.000109	.004518	.000391	-.000148	.000481	.000204

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000017	-.003361	-.000168	.0007896	-.619616	-.001212	.0004469
Stddev	.000101	.007403	.000168	.0000636	.018327	.000912	.0000264
%RSD	601.3254	220.3014	100.3787	8.056026	2.957731	75.24218	5.905132
#1	-.000063	-.001299	-.000353	.0007315	-.639808	-.002184	.0004466
#2	.000099	.002794	-.000024	.0007798	-.615005	-.000375	.0004735
#3	-.000086	-.011576	-.000127	.0008575	-.604035	-.001077	.0004207

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.053705	.0029442	.0000611	-.003691	.0011019	-.006451	-.002285
Stddev	.045718	.0002190	.0004225	.000288	.0004291	.006454	.000808
%RSD	85.12845	7.436740	690.9434	7.803828	38.94153	100.0511	35.37738
#1	-.090977	.0027624	-.000319	-.003999	.0013860	-.011982	-.002095
#2	-.067446	.0028829	.000516	-.003429	.0006083	.000641	-.001588
#3	-.002692	.0031873	-.000014	-.003646	.0013113	-.008012	-.003171

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB07 Acquired: 2/10/2025 20:41:03 Type: Unk
Method: NON EPA-6010-200.7(v2682) 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	-.000275	-.004584	.0000025
Stddev	.001736	.000754	.0000050
%RSD	630.6622	16.44182	199.2025
#1	-.002158	-.004677	.0000060
#2	.001263	-.005287	-.000003
#3	.000069	-.003788	.000005

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3369.596	75487.71	14628.84	2347.648	4349.876
Stddev	7.609	186.96	71.54	8.592	1.943
%RSD	.2258275	.2476631	.4890445	.3659678	.0446586
#1	3361.248	75564.28	14554.68	2353.787	4348.032
#2	3376.144	75274.62	14634.40	2337.830	4351.904
#3	3371.397	75624.22	14697.44	2351.329	4349.692

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166414BS Acquired: 2/10/2025 20:49:28 Type: Unk
Method: NON EPA-6010-200.7(v2672) 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	.7790639	1.886395	.9096711	2.008219	.8089723	1.877262
Stddev	.0019187	.012699	.0023684	.006300	.0016019	.001401
%RSD	.2462860	.6731715	.2603557	.3137310	.1980178	.0746282
#1	.7809715	1.895435	.9080989	2.010700	.8097776	1.875944
#2	.7790861	1.871877	.9123951	2.001056	.8071275	1.877110
#3	.7771342	1.891874	.9085194	2.012901	.8100118	1.878733

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1745745	.1821455	.1814202	.9696920	.3884808	.1873776
Stddev	.0008442	.0003287	.0001326	.0075987	.0016592	.0001155
%RSD	.4835640	.1804690	.0730960	.7836151	.4270917	.0616471
#1	.1738268	.1823419	.1815340	.9641458	.3881444	.1873626
#2	.1744067	.1823287	.1814520	.9783531	.3902824	.1872702
#3	.1754899	.1817660	.1812746	.9665770	.3870156	.1874998

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3058355	2.848980	.1824876	1.812960	.4714408	.0726943
Stddev	.0006549	.014484	.0004868	.016309	.0006942	.0004147
%RSD	.2141204	.5084077	.2667877	.8995647	.1472433	.5704968
#1	.3059919	2.832294	.1819592	1.820123	.4720995	.0724266
#2	.3051166	2.856330	.1825855	1.824461	.4715071	.0731720
#3	.3063980	2.858316	.1829180	1.794295	.4707159	.0724842

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.401818	.2730457	.1998467	9.462813	.2660705	.3991513
Stddev	.011614	.0014140	.0012282	.021636	.0002957	.0004462
%RSD	.4835704	.5178528	.6145635	.2286407	.1111400	.1117839
#1	2.388512	.2714153	.1984327	9.446935	.2658117	.3987101
#2	2.407018	.2739369	.2006485	9.487456	.2663928	.3991414
#3	2.409924	.2737848	.2004587	9.454049	.2660071	.3996023

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: PB166414BS Acquired: 2/10/2025 20:49:28 Type: Unk
Method: NON EPA-6010-200.7(v2672) 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	.6401376	.1851515	.7651079	5.437102	F -.011853	.1910631
Stddev	.0011750	.0006085	.0046289	.011410	.002524	.0005130
%RSD	.1835574	.3286642	.6050046	.2098494	21.29310	.2684855
#1	.6414570	.1858141	.7682203	5.449933	-.009231	.1904945
#2	.6392038	.1846176	.7597884	5.428097	-.014266	.1912034
#3	.6397519	.1850228	.7673148	5.433275	-.012063	.1914913

Elem	Sr4077
Units	ppm
Avg	.1911627
Stddev	.0003309
%RSD	.1731100
#1	.1911519
#2	.1914988
#3	.1908373

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3371.842	74651.02	14680.77	2332.502	4303.901
Stddev	3.458	194.96	60.89	5.893	4.036
%RSD	.1025561	.2611569	.4147861	.2526298	.0937755
#1	3368.680	74531.79	14614.07	2328.624	4300.237
#2	3375.535	74545.28	14694.84	2329.599	4303.240
#3	3371.311	74876.00	14733.39	2339.283	4308.227

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: LR1 Acquired: 2/10/2025 20:53:07 Type: Unk
Method: NON EPA-6010-200.7(v2683) 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	.0214109	.0676667	.0495390	-.067012	-.002865	2123.689	.0175049
Stddev	.0060930	.0008720	.0073808	.007577	.004353	16.753	.0004496
%RSD	28.45755	1.288688	14.89894	11.30700	151.9490	.7888809	2.568583
#1	.0144040	.0675342	.0535514	-.075649	-.005522	2121.268	.0174689
#2	.0254636	.0668686	.0540444	-.061482	-.005231	2141.521	.0179714
#3	.0243652	.0685974	.0410211	-.063906	.002159	2108.278	.0170744

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080509	.0422999	1850.530	.0036661	.0257657	-.213615	951.2211
Stddev	.0000456	.0013081	11.876	.0012746	.0003644	.009439	10.3040
%RSD	.5657796	3.092472	.6417394	34.76785	1.414298	4.418858	1.083240
#1	.0079983	.0411812	1838.980	.0043511	.0255983	-.222905	960.0546
#2	.0080787	.0437382	1849.904	.0044517	.0255150	-.204033	939.9015
#3	.0080756	.0419804	1862.706	.0021954	.0261837	-.213905	953.7071

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.077594	1683.120	.0261000	.0278762	2129.081	.0114807	.2821002
Stddev	.000387	3.019	.0008749	.0009795	1.930	.0009820	.0024142
%RSD	.4986197	.1793493	3.351986	3.513741	.0906699	8.553297	.8558081
#1	-.077911	1679.634	.0258519	.0282184	2131.266	.0110309	.2842086
#2	-.077163	1684.841	.0270721	.0267715	2128.370	.0126070	.2794666
#3	-.077709	1684.884	.0253759	.0286386	2127.606	.0108042	.2826253

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1319.963	.3395829	.0067326	-.011182	-.039837	.1381466	.0747905
Stddev	13.033	.0184698	.0008504	.002221	.000540	.0151118	.0105245
%RSD	.9873642	5.438951	12.63120	19.85846	1.355138	10.93896	14.07192
#1	1334.900	.3544853	.0074982	-.011858	-.039388	.1393645	.0864308
#2	1310.905	.3189192	.0068824	-.012986	-.040436	.1526126	.0659467
#3	1314.085	.3453442	.0058173	-.008702	-.039688	.1224627	.0719939

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: LR1 Acquired: 2/10/2025 20:53:07 Type: Unk
Method: NON EPA-6010-200.7(v2683) 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	-.224090	.0896028	-.938817
Stddev	.011090	.0044397	.010296
%RSD	4.948890	4.954862	1.096703
#1	-.236323	.0945622	-.947665
#2	-.214693	.0859987	-.927516
#3	-.221256	.0882474	-.941270

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2297.693	50878.88	12406.10	1542.716	2486.470
Stddev	8.549	137.34	69.88	7.200	5.887
%RSD	.3720665	.2699285	.5632940	.4667116	.2367441
#1	2303.153	50771.05	12486.76	1534.847	2490.441
#2	2302.085	51033.50	12363.57	1548.974	2489.261
#3	2287.841	50832.09	12367.99	1544.326	2479.707

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: LR2 Acquired: 2/10/2025 20:58:05 Type: Unk
Method: NON EPA-6010-200.7(v2683) 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	.0129349	-.031809	258.0229	.0025087	-.007593	.2218229	101.4886
Stddev	.0012884	.001491	.4784	.0039948	.000594	.0032342	1.9590
%RSD	9.960723	4.688079	.1854124	159.2348	7.827661	1.457992	1.930311
#1	.0142603	-.031493	257.8093	.0030182	-.008239	.2218606	99.4205
#2	.0116870	-.033433	257.6884	-.001716	-.007471	.2250380	103.3165
#3	.0128573	-.030501	258.5709	.006224	-.007070	.2185700	101.7287

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002488	-.005072	.2270640	.0135423	-.023413	248.8961	.0944050
Stddev	.000060	.000136	.0063586	.0002730	.000231	.7670	.0056557
%RSD	2.398112	2.677887	2.800333	2.015677	.9862851	.3081558	5.990876
#1	-.002426	-.005209	.2294205	.0132299	-.023679	249.5386	.1008750
#2	-.002545	-.005071	.2319079	.0136623	-.023299	248.0469	.0919386
#3	-.002494	-.004937	.2198636	.0137347	-.023262	249.1026	.0904013

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	47.65522	-.004600	45.88337	.0018267	-.448994	-.011401	37.58990
Stddev	.61516	.008800	.15585	.0004619	.004275	.001010	.27480
%RSD	1.290848	191.3133	.3396593	25.28574	.9521302	8.862102	.7310345
#1	47.02799	-.011723	45.74661	.0022392	-.445429	-.011827	37.88880
#2	48.25755	.005238	45.85047	.0013276	-.453734	-.010247	37.34822
#3	47.68011	-.007315	46.05305	.0019133	-.447820	-.012128	37.53269

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0158311	-.000804	-.005882	-.010500	-.038869	-.027755	-.238206
Stddev	.0194074	.000467	.000228	.000726	.000414	.004604	.004776
%RSD	122.5904	58.10350	3.868798	6.917581	1.065635	16.58862	2.004845
#1	.0316147	-.001330	-.005880	-.010366	-.039034	-.023744	-.242318
#2	.0217165	-.000646	-.005656	-.011284	-.039174	-.032782	-.232968
#3	-.005838	-.000436	-.006111	-.009850	-.038397	-.026737	-.239332

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: LR2 Acquired: 2/10/2025 20:58:05 Type: Unk
Method: NON EPA-6010-200.7(v2683) 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	-.060044	-.005658	.0012216
Stddev	.002930	.000958	.0000552
%RSD	4.880590	16.93792	4.521154
#1	-.059230	-.006625	.0011784
#2	-.057607	-.004709	.0012838
#3	-.063296	-.005640	.0012024

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3110.802	74141.71	14731.65	2208.767	4234.650
Stddev	5.956	312.30	138.69	18.178	7.848
%RSD	.1914609	.4212230	.9414582	.8229731	.1853223
#1	3111.177	73859.80	14870.25	2193.173	4237.443
#2	3116.561	74477.41	14592.86	2228.731	4240.719
#3	3104.667	74087.92	14731.85	2204.396	4225.788

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV08 Acquired: 2/10/2025 21:02:21 Type: Unk
Method: NON EPA-6010-200.7(v2672) 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	4.915212	4.781436	4.702838	5.014116	5.079630	9.747795	9.297187
Stddev	.015850	.028372	.009301	.016182	.016027	.011248	.145197
%RSD	.3224733	.5933744	.1977705	.3227206	.3155147	.1153923	1.561730
#1	4.915240	4.803027	4.698221	5.021949	5.082546	9.739140	9.426484
#2	4.899348	4.749302	4.696748	4.995508	5.062346	9.743736	9.324971
#3	4.931048	4.791979	4.713544	5.024890	5.093999	9.760509	9.140105

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2381255	2.320852	23.45840	.9832211	2.368186	1.238333	4.863479
Stddev	.0004644	.006006	.00421	.0012010	.003439	.003241	.003808
%RSD	.1950364	.2587647	.0179545	.1221477	.1452367	.2617590	.0783050
#1	.2384357	2.316885	23.45754	.9846022	2.366668	1.238655	4.861113
#2	.2375915	2.317910	23.45468	.9826382	2.365768	1.234942	4.861451
#3	.2383492	2.327762	23.46298	.9824228	2.372124	1.241401	4.867872

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.277706	23.22159	2.360477	1.215658	24.93154	2.340415	2.464650
Stddev	.003806	.03994	.006444	.000773	.03815	.001882	.005641
%RSD	.1671082	.1719996	.2730130	.0636094	.1530088	.0804333	.2288712
#1	2.277652	23.23786	2.356442	1.216514	24.90933	2.342570	2.463689
#2	2.281540	23.17608	2.357080	1.215011	24.97559	2.339090	2.470709
#3	2.273928	23.25082	2.367909	1.215450	24.90970	2.339586	2.459551

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.07155	4.683451	5.005282	4.679847	4.673107	5.018167	4.688740
Stddev	.05085	.009052	.016157	.008115	.007310	.039898	.022500
%RSD	.2112500	.1932671	.3228064	.1734124	.1564256	.7950751	.4798806
#1	24.01842	4.689283	5.001810	4.675545	4.680877	4.978203	4.696156
#2	24.11977	4.673023	4.991144	4.674789	4.672077	5.018299	4.663467
#3	24.07645	4.688045	5.022894	4.689208	4.666366	5.057999	4.706596

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCV08 Acquired: 2/10/2025 21:02:21 Type: Unk
Method: NON EPA-6010-200.7(v2672) 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	4.632937	4.747754	5.089167
Stddev	.012287	.009551	.030110
%RSD	.2652047	.2011625	.5916563
#1	4.627160	4.748049	5.121519
#2	4.624604	4.757153	5.084021
#3	4.647048	4.738059	5.061961

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3333.085	71727.49	13847.32	2228.207	4100.320
Stddev	5.366	75.32	23.86	5.693	5.529
%RSD	.1609836	.1050021	.1723284	.2555002	.1348376
#1	3333.320	71647.93	13821.97	2227.499	4102.669
#2	3338.329	71736.87	13869.35	2222.901	4104.286
#3	3327.606	71797.68	13850.65	2234.221	4094.004

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB08 Acquired: 2/10/2025 21:06:32 Type: Unk
Method: NON EPA-6010-200.7(v2672) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008136	-.002225	.0011438	-.000664	.0009129	.0050361	-.007714
Stddev	.0015444	.000790	.0008127	.001464	.0015181	.0033725	.000435
%RSD	189.8293	35.51599	71.05330	220.5054	166.2859	66.96716	5.643399
#1	-.000740	-.002758	.0003609	.001024	-.000834	.0039547	-.008204
#2	.000832	-.001317	.0010872	-.001594	.001662	.0023369	-.007371
#3	.002349	-.002600	.0019834	-.001421	.001911	.0088167	-.007567

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000018	-.000038	.0017357	.0001340	-.000118	.0006096	.0017089
Stddev	.000048	.000055	.0040319	.0001807	.000193	.0002022	.0019083
%RSD	267.2632	145.0849	232.2905	134.8779	163.4353	33.17040	111.6652
#1	.000012	-.000031	-.002917	.0003022	.000082	.0007095	.0036578
#2	-.000073	.000013	.003908	-.000057	-.000132	.0003769	-.000156
#3	.000008	-.000096	.004216	.000157	-.000304	.0007424	.001625

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001558	-.001643	-.000241	.0006540	-.524858	-.002477	.0001921
Stddev	.0002467	.010675	.000116	.0001520	.013479	.000518	.0001836
%RSD	158.3733	649.7208	48.02440	23.23670	2.568108	20.92509	95.55404
#1	-.000121	-.004080	-.000368	.0007581	-.540420	-.002992	.0000019
#2	.000354	-.010889	-.000142	.0007242	-.517305	-.001956	.0002064
#3	.000234	.010040	-.000213	.0004796	-.516849	-.002483	.0003682

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.137006	.0029069	.0000444	-.004119	.0010092	-.007807	-.003710
Stddev	.020324	.0004419	.0001325	.000586	.0006905	.010073	.001436
%RSD	14.83434	15.20285	298.4626	14.23242	68.42581	129.0334	38.69624
#1	-.151917	.0025247	.0001260	-.004281	.0008673	-.016624	-.002220
#2	-.145244	.0033908	-.000108	-.004608	.0004006	-.009967	-.005084
#3	-.113856	.0028051	.000116	-.003469	.0017596	.003171	-.003827

Reviewed By:JANVI
On:2/12/2025 12:45:47 PM
Inst Id :P4
LB :LB134659

Sample Name: CCB08 Acquired: 2/10/2025 21:06:32 Type: Unk
Method: NON EPA-6010-200.7(v2672) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.002452	-.004727	-.000049
Stddev	.002334	.000713	.000011
%RSD	95.20234	15.08182	23.50530
#1	-.000775	-.004747	-.000036
#2	-.005117	-.005430	-.000058
#3	-.001463	-.004004	-.000052

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3376.650	74537.87	14615.02	2339.967	4351.735
Stddev	2.938	220.28	38.63	8.198	7.991
%RSD	.0870203	.2955254	.2642870	.3503292	.1836371
#1	3380.025	74581.13	14625.58	2340.059	4355.089
#2	3375.260	74299.17	14572.21	2331.723	4357.503
#3	3374.663	74733.31	14647.26	2348.117	4342.613

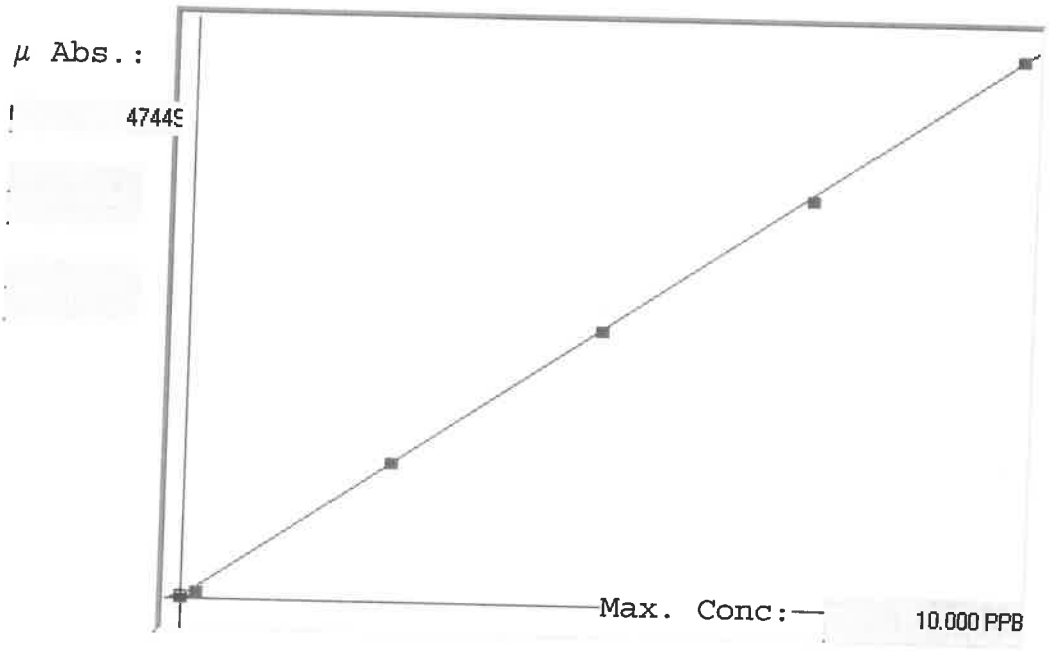
Reviewed By:Mohan
On:2/12/2025 10:54:13 AM
Inst Id :CV1
LB :LB134537

LB134537

7470A

INSTRUMENT: CV1

Linear



A= 0.0000e+000

B= 2.1186e-004

C= -1.4816e-002

Rho= 0.9999413

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	blk
0.0	0.000	0.033	0.033	226	0.000	226	0				-
0.2	0.200	0.156	-0.044	807	0.0 %	807					-22
2.5	2.500	2.535	0.035	12037	0.0 %	12037					1
5.0	5.000	5.000	-0.000	23669	0.0 %	23669					6
7.5	7.500	7.438	-0.062	35176	0.0 %	35176					-1
10.0	10.000	10.038	0.038	47449	0.0 %	47449					0

Reviewed By:Mohan
On:2/12/2025 10:54:13 AM
Inst Id :CV1
LB :LB134537

LB134537 INSTRUMENT ID : CV1

Method: 7470A Operator: Admin Date of Analysis: 03 Feb 2025 15:33:04

Sample ID	Extended ID	µ Abs.	Conc.	Stnd Conc	Method	Units	Date	Type	Type
0.0 - 1	S0	226	-	0.00000	7470A	PPB	03 Feb 2025 15:35:03	S	Std
0.2 - 1	S0.2	807	-	0.20000	7470A	PPB	03 Feb 2025 15:37:20	S	Std
2.5 - 1	S2.5	12037	-	2.50000	7470A	PPB	03 Feb 2025 15:41:39	S	Std
5.0 - 1	S5	23669	-	5.00000	7470A	PPB	03 Feb 2025 15:43:55	S	Std
7.5 - 1	S7.5	35176	-	7.50000	7470A	PPB	03 Feb 2025 15:46:13	S	Std
10.0 - 1	S10	47449	-	10.00000	7470A	PPB	03 Feb 2025 15:54:16	S	Std
ICV81 - 1	ICV81	17473	3.6871		-7470A	PPB	03 Feb 2025 15:59:27	U	SMPL
ICB81 - 1	ICB81	110	0.0085		-7470A	PPB	03 Feb 2025 16:01:42	U	SMPL
CCV10 - 1	CCV10	23707	5.0078		-7470A	PPB	03 Feb 2025 16:03:58	U	SMPL
CCB10 - 1	CCB10	109	0.0083		-7470A	PPB	03 Feb 2025 16:06:13	U	SMPL
CRA - 1	CRA	1296	0.2598		-7470A	PPB	03 Feb 2025 16:08:30	U	SMPL
HighStd - 1	HighStd	46943	9.9307		-7470A	PPB	03 Feb 2025 16:10:45	U	SMPL
ChkStd - 1	ChkStd	32540	6.8792		-7470A	PPB	03 Feb 2025 16:13:00	U	SMPL
PB166487BL - 1	PBW	-178	-0.0525		-7470A	PPB	03 Feb 2025 16:15:19	U	SMPL
PB166487BS - 1	LCSW	19423	4.1002		-7470A	PPB	03 Feb 2025 16:20:08	U	SMPL
Q1215-04 - 1	JPP-29.1-012825	115	0.0095		-7470A	PPB	03 Feb 2025 16:22:25	U	SMPL
Q1215-08 - 1	JPP-29.2-012825	322	0.0534		-7470A	PPB	03 Feb 2025 16:24:44	U	SMPL
Q1216-04 - 1	JPP-18.1-012825	292	0.0470		-7470A	PPB	03 Feb 2025 16:27:00	U	SMPL
Q1216-08 - 1	JPP-21.1-012825	262	0.0407		-7470A	PPB	03 Feb 2025 16:29:18	U	SMPL
Q1216-12 - 1	JPP-21.2-012825	327	0.0545		-7470A	PPB	03 Feb 2025 16:31:34	U	SMPL
CCV11 - 1	CCV11	24341	5.1422		-7470A	PPB	03 Feb 2025 16:33:49	U	SMPL
CCB11 - 1	CCB11	24	-0.0097		-7470A	PPB	03 Feb 2025 16:36:04	U	SMPL
Q1216-16 - 1	JPP-26.1-012825	421	0.0744		-7470A	PPB	03 Feb 2025 16:38:21	U	SMPL
Q1216-20 - 1	JPP-26.2-012825	650	0.1229		-7470A	PPB	03 Feb 2025 16:40:37	U	SMPL
Q1218-02 - 1	BELL-25-002	748	0.1437		-7470A	PPB	03 Feb 2025 16:42:52	U	SMPL
Q1219-02 - 1	LAW-25-0015	573	0.1066		-7470A	PPB	03 Feb 2025 16:45:07	U	SMPL
Q1221-02 - 1	CHESTNUT-CONCRETE	310	0.0509		-7470A	PPB	03 Feb 2025 16:47:24	U	SMPL
Q1232-04 - 1	JPP-46.2-012925	416	0.0733		-7470A	PPB	03 Feb 2025 16:49:40	U	SMPL
Q1232-08 - 1	JPP-46.1-012925	398	0.0695		-7470A	PPB	03 Feb 2025 16:51:56	U	SMPL
Q1232-12 - 1	JPP-42.1-012925	334	0.0559		-7470A	PPB	03 Feb 2025 16:54:13	U	SMPL
Q1232-16 - 1	JPP-42.2-012925	268	0.0420		-7470A	PPB	03 Feb 2025 16:56:30	U	SMPL
Q1232-20 - 1	JPP-51.1-012925	155	0.0180		-7470A	PPB	03 Feb 2025 16:58:47	U	SMPL
CCV12 - 1	CCV12	23574	4.9797		-7470A	PPB	03 Feb 2025 17:01:02	U	SMPL
CCB12 - 1	CCB12	103	0.0070		-7470A	PPB	03 Feb 2025 17:03:18	U	SMPL
Q1235-04 - 1	JPP-51.2-012925	155	0.0180		-7470A	PPB	03 Feb 2025 17:05:35	U	SMPL
Q1235-08 - 1	JPP-16.1-012925	202	0.0280		-7470A	PPB	03 Feb 2025 17:07:51	U	SMPL
Q1235-08DUP - 1	JPP-16.1-012925DUP	344	0.0581		-7470A	PPB	03 Feb 2025 17:10:06	U	SMPL
Q1235-08MS - 1	JPP-16.1-012925MS	20940	4.4216		-7470A	PPB	03 Feb 2025 17:12:22	U	SMPL
Q1235-08MSD - 1	JPP-16.1-012925MSD	19521	4.1210		-7470A	PPB	03 Feb 2025 17:14:38	U	SMPL
PB16+6356TB - 1		-9	-0.0167		-7470A	PPB	03 Feb 2025 17:16:56	U	SMPL
Q1235-08LX5 - 1		89	0.0040		-7470A	PPB	03 Feb 2025 17:19:14	U	SMPL
Q1235-08A - 1		17947	3.7875		-7470A	PPB	03 Feb 2025 17:21:31	U	SMPL
CCV13 - 1	CCV13	23619	4.9892		-7470A	PPB	03 Feb 2025 17:23:49	U	SMPL
CCB13 - 1	CCB13	71	0.0002		-7470A	PPB	03 Feb 2025 17:26:06	U	SMPL

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166425

SOP ID : M3050B-Digestion-20

SDG No : N/A

Matrix : WATER

Pippete ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 01/31/2025 **Time :** 12:30 **Temp :** 96 °C

End Digest Date: 01/31/2025 **Time :** 15:40 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SLS

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#1 CELL#50 TEMP:96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/31/25 16:40	SLS. met dig.	Metals Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB166425

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB166356TB	PB166356TB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	1
PB166425BL	PBW425	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	2
PB166425BS	LCS425	<2	5	25	Colorless	Colorless	Clear	Clear	M6002,M6011	3
Q1215-04	JPP-29.1-012825	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	4
Q1215-08	JPP-29.2-012825	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	5
Q1216-04	JPP-18.1-012825	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	6
Q1216-08	JPP-21.1-012825	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	7
Q1216-12	JPP-21.2-012825	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	8
Q1216-16	JPP-26.1-012825	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	9
Q1216-20	JPP-26.2-012825	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	10
Q1218-02	BELL-25-002	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	11
Q1219-02	LAW-25-0015	<2	5	25	Colorless	Colorless	Cloudy	Clear	N/A	12
Q1221-02	CHESTNUT-CONCRETE	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	13
Q1232-04	JPP-46.2-012925	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	14
Q1232-08	JPP-46.1-012925	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	15
Q1232-12	JPP-42.1-012925	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	16
Q1232-16	JPP-42.2-012925	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	17
Q1232-20	JPP-51.1-012925	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	18
Q1235-04	JPP-51.2-012925	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	19
Q1235-08	JPP-16.1-012925	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	20
Q1235-08MS	JPP-16.1-012925MS	<2	5	25	Colorless	Colorless	Clear	Clear	M6002,M6011	22
Q1235-08MSD	JPP-16.1-012925MSD	<2	5	25	Colorless	Colorless	Clear	Clear	M6002,M6011	23
Q1235-08DUP	JPP-16.1-012925DUP	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	21

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166356

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Pre Po
PB166356TB	LEB356	N/A	N/A	2000	N/A	N/A	N/A	4.94	1.0	T-2
Q1215-04	JPP-29.1-012825	01	100.02	2000	N/A	N/A	N/A	6.0	1.5	T-1
Q1215-08	JPP-29.2-012825	02	100.03	2000	N/A	N/A	N/A	7.2	1.0	T-1
Q1216-04	JPP-18.1-012825	03	100.02	2000	N/A	N/A	N/A	7.0	1.5	T-1
Q1216-08	JPP-21.1-012825	04	100.01	2000	N/A	N/A	N/A	7.2	1.0	T-1
Q1216-12	JPP-21.2-012825	05	100.02	2000	N/A	N/A	N/A	7.0	1.5	T-1
Q1216-16	JPP-26.1-012825	06	100.03	2000	N/A	N/A	N/A	6.2	1.0	T-1
Q1216-20	JPP-26.2-012825	07	100.04	2000	N/A	N/A	N/A	7.2	1.0	T-1
Q1218-02	BELL-25-002	08	100.02	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q1219-02	LAW-25-0015	09	100.02	2000	N/A	N/A	N/A	3.0	1.0	T-1
Q1221-02	CHESTNUT-CONCRETE	10	100.03	2000	N/A	N/A	N/A	10.5	1.5	T-1
Q1232-04	JPP-46.2-012925	11	100.04	2000	N/A	N/A	N/A	5.8	1.0	T-2
Q1232-08	JPP-46.1-012925	12	100.02	2000	N/A	N/A	N/A	7.6	1.5	T-2
Q1232-12	JPP-42.1-012925	13	100.03	2000	N/A	N/A	N/A	7.6	1.0	T-2
Q1232-16	JPP-42.2-012925	14	100.02	2000	N/A	N/A	N/A	7.2	1.5	T-2
Q1232-20	JPP-51.1-012925	15	100.01	2000	N/A	N/A	N/A	7.0	1.0	T-2
Q1235-04	JPP-51.2-012925	16	100.03	2000	N/A	N/A	N/A	7.6	1.5	T-2
Q1235-08	JPP-16.1-012925	17	100.04	2000	N/A	N/A	N/A	7.6	1.0	T-2

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166487

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: 02/03/2025 **Time :** 09:25 **Temp :** 94 °C

End Digest Date: 02/03/2025 **Time :** 11:25 **Temp :** 95 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: MB

Supervisor Signature: MB

Temp : 1. 94°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP84326
CCV	30mL	MP84328
CRA	30mL	MP84330
Blank Spike	0.48mL	MP84319
Matrix Spike	0.48mL	MP84319

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	MP84320
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP84321
2.5 ppb	S2.5	30mL	MP84322
5.0 ppb	S5.0	30mL	MP84323
7.5 ppb	S7.5	30mL	MP84324
10.0 ppb	S10.0	30mL	MP84325
ICV	ICV	30mL	MP84326
ICB	ICB	30mL	MP84327
CCV	CCV	30mL	MP84328
CCB	CCB	30mL	MP84329
CRI	CRI	30mL	MP84330
CHK STD	CHK STD	30mL	MP84331

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
2/3/25 @ 11:50	MB - Mtg. Lab	MB - Metal Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB166487

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB166356TB	PB166356TB	3	30	<2	N/A	1
PB166487BL	PBW487	30	30	<2	N/A	2
PB166487BS	LCS487	30	30	<2	MP84319	3
Q1215-04	JPP-29.1-012825	3	30	<2	N/A	4
Q1215-08	JPP-29.2-012825	3	30	<2	N/A	5
Q1216-04	JPP-18.1-012825	3	30	<2	N/A	6
Q1216-08	JPP-21.1-012825	3	30	<2	N/A	7
Q1216-12	JPP-21.2-012825	3	30	<2	N/A	8
Q1216-16	JPP-26.1-012825	3	30	<2	N/A	9
Q1216-20	JPP-26.2-012825	3	30	<2	N/A	10
Q1218-02	BELL-25-002	3	30	<2	N/A	11
Q1219-02	LAW-25-0015	3	30	<2	N/A	12
Q1221-02	CHESTNUT-CONCRETE	3	30	<2	N/A	13
Q1232-04	JPP-46.2-012925	3	30	<2	N/A	14
Q1232-08	JPP-46.1-012925	3	30	<2	N/A	15
Q1232-08DUP	JPP-46.1-012925DUP	3	30	<2	N/A	16
Q1232-08MS	JPP-46.1-012925MS	3	30	<2	MP84319	17
Q1232-08MSD	JPP-46.1-012925MSD	3	30	<2	MP84319	18
Q1232-12	JPP-42.1-012925	3	30	<2	N/A	19
Q1232-16	JPP-42.2-012925	3	30	<2	N/A	20
Q1232-20	JPP-51.1-012925	3	30	<2	N/A	21
Q1235-04	JPP-51.2-012925	3	30	<2	N/A	22
Q1235-08	JPP-16.1-012925	3	30	<2	N/A	23
Q1235-08DUP	JPP-16.1-012925DUP	3	30	<2	N/A	24
Q1235-08MS	JPP-16.1-012925MS	3	30	<2	N/A	25
Q1235-08MSD	JPP-16.1-012925MSD	3	30	<2	N/A	26

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166356

SOP ID : M1311-TCLP-15

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1 / T-2

TCLP Filter ID : 114771

Start Prep Date : 01/30/2025 **Time :** 14:00

End Prep Date : 01/31/2025 **Time :** 07:15

Combination Ratio : 20

ZHE Cleaning Batch : N/A

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JP

Supervisor By : 12

Standared Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP110801
HCL-TCLP,1N	N/A	WP110803
HNO3-TCLP,1N	N/A	WP110804
pH Strips	N/A	W1931,W1934,W3171,W3172
pH Strips	W1941,W1942	W1937,W1938,W1939,W1940,W1941,W1942
1 Liter Amber	N/A	90424-08
120ml Plastic bottle	N/A	405130101
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. TUMBLER T-1 / T-2 checked,30 rpm. Particle size reduction is not required. p1235-08 Is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/31/25 09:45	JP / TCLP Room	SKG. & TCL
	Preparation Group	Analysis Group Inorg.

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 # LB134537

Review By	jaswal	Review On	2/3/2025 8:21:10 PM
Supervise By	Mohan	Supervise On	2/12/2025 10:54:13 AM

STD. NAME	STD REF.#
ICAL Standard	MP84320,MP84321,MP84322,MP84322223,MP84324,MP84325
ICV Standard	MP84326
CCV Standard	MP84328
ICSA Standard	
CRI Standard	MP84330
LCS Standard	
Chk Standard	MP84327,MP84329,MP84331,MP84333

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	02/03/25 15:35		Mohan	OK
2	S0.2	S0.2	CAL2	02/03/25 15:37		Mohan	OK
3	S2.5	S2.5	CAL3	02/03/25 15:41		Mohan	OK
4	S5	S5	CAL4	02/03/25 15:43		Mohan	OK
5	S7.5	S7.5	CAL5	02/03/25 15:46		Mohan	OK
6	S10	S10	CAL6	02/03/25 15:54		Mohan	OK
7	ICV81	ICV81	ICV	02/03/25 15:59		Mohan	OK
8	ICB81	ICB81	ICB	02/03/25 16:01		Mohan	OK
9	CCV10	CCV10	CCV	02/03/25 16:03		Mohan	OK
10	CCB10	CCB10	CCB	02/03/25 16:06		Mohan	OK
11	CRA	CRA	CRDL	02/03/25 16:08		Mohan	OK
12	HighStd	HighStd	HIGH STD	02/03/25 16:10		Mohan	OK
13	ChkStd	ChkStd	SAM	02/03/25 16:13		Mohan	OK
14	PB166487BL	PB166487BL	MB	02/03/25 16:15		Mohan	OK
15	PB166487BS	PB166487BS	LCS	02/03/25 16:20		Mohan	OK
16	Q1215-04	JPP-29.1-012825	SAM	02/03/25 16:22		Mohan	OK
17	Q1215-08	JPP-29.2-012825	SAM	02/03/25 16:24		Mohan	OK
18	Q1216-04	JPP-18.1-012825	SAM	02/03/25 16:27		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 # LB134537

Review By	jaswal	Review On	2/3/2025 8:21:10 PM
Supervise By	Mohan	Supervise On	2/12/2025 10:54:13 AM

STD. NAME	STD REF.#
ICAL Standard	MP84320,MP84321,MP84322,MP84322223,MP84324,MP84325
ICV Standard	MP84326
CCV Standard	MP84328
ICSA Standard	
CRI Standard	MP84330
LCS Standard	
Chk Standard	MP84327,MP84329,MP84331,MP84333

19	Q1216-08	JPP-21.1-012825	SAM	02/03/25 16:29		Mohan	OK
20	Q1216-12	JPP-21.2-012825	SAM	02/03/25 16:31		Mohan	OK
21	CCV11	CCV11	CCV	02/03/25 16:33		Mohan	OK
22	CCB11	CCB11	CCB	02/03/25 16:36		Mohan	OK
23	Q1216-16	JPP-26.1-012825	SAM	02/03/25 16:38		Mohan	OK
24	Q1216-20	JPP-26.2-012825	SAM	02/03/25 16:40		Mohan	OK
25	Q1218-02	BELL-25-002	SAM	02/03/25 16:42		Mohan	OK
26	Q1219-02	LAW-25-0015	SAM	02/03/25 16:45		Mohan	OK
27	Q1221-02	CHESTNUT-CONCRE	SAM	02/03/25 16:47		Mohan	OK
28	Q1232-04	JPP-46.2-012925	SAM	02/03/25 16:49		Mohan	OK
29	Q1232-08	JPP-46.1-012925	SAM	02/03/25 16:51		Mohan	OK
30	Q1232-12	JPP-42.1-012925	SAM	02/03/25 16:54		Mohan	OK
31	Q1232-16	JPP-42.2-012925	SAM	02/03/25 16:56		Mohan	OK
32	Q1232-20	JPP-51.1-012925	SAM	02/03/25 16:58		Mohan	OK
33	CCV12	CCV12	CCV	02/03/25 17:01		Mohan	OK
34	CCB12	CCB12	CCB	02/03/25 17:03		Mohan	OK
35	Q1235-04	JPP-51.2-012925	SAM	02/03/25 17:05		Mohan	OK
36	Q1235-08	JPP-16.1-012925	SAM	02/03/25 17:07		Mohan	OK
37	Q1235-08DUP	JPP-16.1-012925DUP	DUP	02/03/25 17:10		Mohan	OK
38	Q1235-08MS	JPP-16.1-012925MS	MS	02/03/25 17:12		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 # LB134537

Review By	jaswal	Review On	2/3/2025 8:21:10 PM
Supervise By	Mohan	Supervise On	2/12/2025 10:54:13 AM

STD. NAME	STD REF.#
ICAL Standard	MP84320,MP84321,MP84322,MP84322223,MP84324,MP84325
ICV Standard	MP84326
CCV Standard	MP84328
ICSA Standard	
CRI Standard	MP84330
LCS Standard	
Chk Standard	MP84327,MP84329,MP84331,MP84333

39	Q1235-08MSD	JPP-16.1-012925MSD	MSD	02/03/25 17:14		Mohan	OK
40	PB166356TB	PB166356TB	MB	02/03/25 17:16		Mohan	OK
41	Q1235-08L	JPP-16.1-012925L	SD	02/03/25 17:19		Mohan	OK
42	Q1235-08A	JPP-16.1-012925A	PS	02/03/25 17:21		Mohan	OK
43	CCV13	CCV13	CCV	02/03/25 17:23		Mohan	OK
44	CCB13	CCB13	CCB	02/03/25 17:26		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 # LB134659

Review By	kareem	Review On	2/11/2025 1:15:07 PM
Supervise By	JANVI	Supervise On	2/12/2025 12:45:47 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84446
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	02/10/25 13:28		Kareem	OK
2	S1	S1	CAL2	02/10/25 13:32		Kareem	OK
3	S2	S2	CAL3	02/10/25 13:36		Kareem	OK
4	S3	S3	CAL4	02/10/25 13:40		Kareem	OK
5	S4	S4	CAL5	02/10/25 13:44		Kareem	OK
6	S5	S5	CAL6	02/10/25 13:49		Kareem	OK
7	ICV01	ICV01	ICV	02/10/25 14:06	ICV Fail for Sb,Cur,Se,Tl (200.7)	Kareem	OK
8	LLICV01	LLICV01	LLICV	02/10/25 14:20		Kareem	OK
9	ICB01	ICB01	ICB	02/10/25 14:26		Kareem	OK
10	CRI01	CRI01	CRDL	02/10/25 14:31		Kareem	OK
11	ICSA01	ICSA01	ICSA	02/10/25 14:35		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	02/10/25 14:41		Kareem	OK
13	ICSADL	ICSADL	ICSA	02/10/25 14:45		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	02/10/25 14:49		Kareem	OK
15	CCV01	CCV01	CCV	02/10/25 14:59		Kareem	OK
16	CCB01	CCB01	CCB	02/10/25 15:03		Kareem	OK
17	PB166356TB	PB166356TB	MB	02/10/25 15:07		Kareem	OK
18	PB166425BL	PB166425BL	MB	02/10/25 15:12		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 # LB134659

Review By	kareem	Review On	2/11/2025 1:15:07 PM
Supervise By	JANVI	Supervise On	2/12/2025 12:45:47 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84446
CCV Standard	MP84232
ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

19	PB166425BS	PB166425BS	LCS	02/10/25 15:16		Kareem	OK
20	Q1215-04	JPP-29.1-012825	SAM	02/10/25 15:20		Kareem	OK
21	Q1215-08	JPP-29.2-012825	SAM	02/10/25 15:25		Kareem	OK
22	Q1216-04	JPP-18.1-012825	SAM	02/10/25 15:29		Kareem	OK
23	Q1216-08	JPP-21.1-012825	SAM	02/10/25 15:33		Kareem	OK
24	Q1216-12	JPP-21.2-012825	SAM	02/10/25 15:38		Kareem	OK
25	Q1216-16	JPP-26.1-012825	SAM	02/10/25 15:42		Kareem	OK
26	Q1216-20	JPP-26.2-012825	SAM	02/10/25 15:47		Kareem	OK
27	CCV02	CCV02	CCV	02/10/25 16:05		Kareem	OK
28	CCB02	CCB02	CCB	02/10/25 16:08		Kareem	OK
29	Q1232-04	JPP-46.2-012925	SAM	02/10/25 16:13		Kareem	OK
30	Q1232-08	JPP-46.1-012925	SAM	02/10/25 16:17		Kareem	OK
31	Q1232-12	JPP-42.1-012925	SAM	02/10/25 16:22		Kareem	OK
32	Q1232-16	JPP-42.2-012925	SAM	02/10/25 16:26		Kareem	OK
33	Q1232-20	JPP-51.1-012925	SAM	02/10/25 16:30		Kareem	OK
34	Q1235-04	JPP-51.2-012925	SAM	02/10/25 16:35		Kareem	OK
35	Q1235-08	JPP-16.1-012925	SAM	02/10/25 16:39		Kareem	OK
36	Q1235-08DUP	JPP-16.1-012925DUP	DUP	02/10/25 16:44		Kareem	OK
37	Q1235-08L	JPP-16.1-012925L	SD	02/10/25 16:48		Kareem	OK
38	Q1235-08MS	JPP-16.1-012925MS	MS	02/10/25 16:52		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 # LB134659

Review By	kareem	Review On	2/11/2025 1:15:07 PM
Supervise By	JANVI	Supervise On	2/12/2025 12:45:47 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84446
CCV Standard	MP84232
ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

39	CCV03	CCV03	CCV	02/10/25 16:57		Kareem	OK
40	CCB03	CCB03	CCB	02/10/25 17:06		Kareem	OK
41	Q1235-08MSD	JPP-16.1-012925MSD	MSD	02/10/25 17:11		Kareem	OK
42	Q1235-08A	JPP-16.1-012925A	PS	02/10/25 17:15		Kareem	OK
43	PB166613BL	PB166613BL	MB	02/10/25 17:19		Kareem	OK
44	PB166613BS	PB166613BS	LCS	02/10/25 17:23		Kareem	OK
45	Q1325-03	DSN001	SAM	02/10/25 17:27		Kareem	OK
46	Q1325-05	DSN003	SAM	02/10/25 17:32		Kareem	OK
47	Q1325-05DUP	DSN003DUP	DUP	02/10/25 17:36		Kareem	OK
48	Q1325-05L	DSN003L	SD	02/10/25 17:41		Kareem	OK
49	Q1325-05MS	DSN003MS	MS	02/10/25 17:45	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
50	Q1325-05MSD	DSN003MSD	MSD	02/10/25 17:49	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
51	CCV04	CCV04	CCV	02/10/25 17:53		Kareem	OK
52	CCB04	CCB04	CCB	02/10/25 18:00		Kareem	OK
53	Q1325-05A	DSN003A	PS	02/10/25 18:04	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
54	PB166591TB	PB166591TB	MB	02/10/25 18:09		Kareem	OK
55	PB166593BL	PB166593BL	MB	02/10/25 18:13		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 # LB134659

Review By	kareem	Review On	2/11/2025 1:15:07 PM
Supervise By	JANVI	Supervise On	2/12/2025 12:45:47 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84446
CCV Standard	MP84232
ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

56	PB166593BS	PB166593BS	LCS	02/10/25 18:17	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
57	Q1299-04	WC-1	SAM	02/10/25 18:21		Kareem	OK
58	Q1299-08	WC-2	SAM	02/10/25 18:26		Kareem	OK
59	Q1309-04	WC-2	SAM	02/10/25 18:30		Kareem	OK
60	Q1309-08	WC-3	SAM	02/10/25 18:35		Kareem	OK
61	Q1309-12	WC-4	SAM	02/10/25 18:39		Kareem	OK
62	Q1309-16	WC-5	SAM	02/10/25 18:44		Kareem	OK
63	CCV05	CCV05	CCV	02/10/25 18:48		Kareem	OK
64	CCB05	CCB05	CCB	02/10/25 18:52		Kareem	OK
65	Q1309-20	WC-6	SAM	02/10/25 18:57		Kareem	OK
66	Q1309-24	WC-8	SAM	02/10/25 19:01		Kareem	OK
67	Q1309-24DUP	WC-8DUP	DUP	02/10/25 19:05		Kareem	OK
68	Q1309-24L	WC-8L	SD	02/10/25 19:10		Kareem	OK
69	Q1309-24MS	WC-8MS	MS	02/10/25 19:14	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
70	Q1309-24MSD	WC-8MSD	MSD	02/10/25 19:18	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
71	Q1309-24A	WC-8A	PS	02/10/25 19:23	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	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 # LB134659

Review By	kareem	Review On	2/11/2025 1:15:07 PM
Supervise By	JANVI	Supervise On	2/12/2025 12:45:47 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84446
CCV Standard	MP84232
ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

72	Q1241-03	JPP-3.5-013025	SAM	02/10/25 19:27		Kareem	OK
73	Q1241-07	JPP-5.3-013025	SAM	02/10/25 19:31		Kareem	OK
74	Q1241-11	JPP-5.2-013025	SAM	02/10/25 19:36		Kareem	OK
75	CCV06	CCV06	CCV	02/10/25 19:40		Kareem	OK
76	CCB06	CCB06	CCB	02/10/25 19:45		Kareem	OK
77	Q1241-15	JPP-5.4-013025	SAM	02/10/25 19:49		Kareem	OK
78	Q1241-19	JPP-51.4-013025	SAM	02/10/25 19:53		Kareem	OK
79	Q1241-19DUP	JPP-51.4-013025DUP	DUP	02/10/25 19:58		Kareem	OK
80	Q1241-19L	JPP-51.4-013025L	SD	02/10/25 20:02		Kareem	OK
81	Q1241-19MS	JPP-51.4-013025MS	MS	02/10/25 20:06	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
82	Q1241-19MSD	JPP-51.4-013025MSD	MSD	02/10/25 20:11	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
83	Q1241-19A	JPP-51.4-013025A	PS	02/10/25 20:15	0.1 ML M6001 AND M6010 WERE ADDED TO 10 ML OF SAMPLE	Kareem	OK
84	Q1242-03	JPP-6.2-013025	SAM	02/10/25 20:19		Kareem	OK
85	Q1243-01	CL-01-01302025	SAM	02/10/25 20:23		Kareem	OK
86	PB166414BL	PB166414BL	MB	02/10/25 20:32	Not Use	Kareem	Not Ok
87	CCV07	CCV07	CCV	02/10/25 20:36		Kareem	OK
88	CCB07	CCB07	CCB	02/10/25 20:41		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 # LB134659

Review By	kareem	Review On	2/11/2025 1:15:07 PM
Supervise By	JANVI	Supervise On	2/12/2025 12:45:47 PM

STD. NAME	STD REF.#
ICAL Standard	MP84204,MP84223,MP84224,MP84225,MP84226,MP84228
ICV Standard	MP84446
CCV Standard	MP84232
ICSA Standard	MP84230,MP84231
CRI Standard	MP84228
LCS Standard	
Chk Standard	MP84218,MP84219

89	PB166414BS	PB166414BS	LCS	02/10/25 20:49	Not Use	Kareem	Not Ok
90	LR1	LR1	HIGH STD	02/10/25 20:53		Kareem	OK
91	LR2	LR2	HIGH STD	02/10/25 20:58		Kareem	OK
92	CCV08	CCV08	CCV	02/10/25 21:02		Kareem	OK
93	CCB08	CCB08	CCB	02/10/25 21:06		Kareem	OK

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166356

SOP ID : M1311-TCLP-15

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1 / T-2

TCLP Filter ID : 114771

Start Prep Date : 01/30/2025 **Time :** 14:00

End Prep Date : 01/31/2025 **Time :** 07:15

Combination Ratio : 20

ZHE Cleaning Batch : N/A

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JP

Supervisor By : 12

Standared Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP110801
HCL-TCLP,1N	N/A	WP110803
HNO3-TCLP,1N	N/A	WP110804
pH Strips	N/A	W1931,W1934,W3171,W3172
pH Strips	W1941,W1942	W1937,W1938,W1939,W1940,W1941,W1942
1 Liter Amber	N/A	90424-08
120ml Plastic bottle	N/A	405130101
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

Matrix spikes are added after fiftration and before preservation. TUMBLER T-1 / T-2 checked,30 rpm. Particle size reduction is not required. p1235-08 is used for MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/31/25 09:45	JP / TCLP Room	SKG. & TGL
	Preparation Group	Analysis Group & Inorg.

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB166356

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB166356TB	LEB356	N/A	N/A	2000	N/A	N/A	N/A	4.94	1.0	T-2
Q1215-04	JPP-29.1-012825	01	100.02	2000	N/A	N/A	N/A	6.0	1.5	T-1
Q1215-08	JPP-29.2-012825	02	100.03	2000	N/A	N/A	N/A	7.2	1.0	T-1
Q1216-04	JPP-18.1-012825	03	100.02	2000	N/A	N/A	N/A	7.0	1.5	T-1
Q1216-08	JPP-21.1-012825	04	100.01	2000	N/A	N/A	N/A	7.2	1.0	T-1
Q1216-12	JPP-21.2-012825	05	100.02	2000	N/A	N/A	N/A	7.0	1.5	T-1
Q1216-16	JPP-26.1-012825	06	100.03	2000	N/A	N/A	N/A	6.2	1.0	T-1
Q1216-20	JPP-26.2-012825	07	100.04	2000	N/A	N/A	N/A	7.2	1.0	T-1
Q1218-02	BELL-25-002	08	100.02	2000	N/A	N/A	N/A	3.0	1.5	T-1
Q1219-02	LAW-25-0015	09	100.02	2000	N/A	N/A	N/A	3.0	1.0	T-1
Q1221-02	CHESTNUT-CONCRETE	10	100.03	2000	N/A	N/A	N/A	10.5	1.5	T-1
Q1232-04	JPP-46.2-012925	11	100.04	2000	N/A	N/A	N/A	5.8	1.0	T-2
Q1232-08	JPP-46.1-012925	12	100.02	2000	N/A	N/A	N/A	7.6	1.5	T-2
Q1232-12	JPP-42.1-012925	13	100.03	2000	N/A	N/A	N/A	7.6	1.0	T-2
Q1232-16	JPP-42.2-012925	14	100.02	2000	N/A	N/A	N/A	7.2	1.5	T-2
Q1232-20	JPP-51.1-012925	15	100.01	2000	N/A	N/A	N/A	7.0	1.0	T-2
Q1235-04	JPP-51.2-012925	16	100.03	2000	N/A	N/A	N/A	7.6	1.5	T-2
Q1235-08	JPP-16.1-012925	17	100.04	2000	N/A	N/A	N/A	7.6	1.0	T-2

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB166356TB	LEB356	N/A	N/A	N/A	N/A	N/A	N/A
Q1215-04	JPP-29.1-012825	N/A	N/A	N/A	N/A	100	N/A
Q1215-08	JPP-29.2-012825	N/A	N/A	N/A	N/A	100	N/A
Q1216-04	JPP-18.1-012825	N/A	N/A	N/A	N/A	100	N/A
Q1216-08	JPP-21.1-012825	N/A	N/A	N/A	N/A	100	N/A
Q1216-12	JPP-21.2-012825	N/A	N/A	N/A	N/A	100	N/A
Q1216-16	JPP-26.1-012825	N/A	N/A	N/A	N/A	100	N/A
Q1216-20	JPP-26.2-012825	N/A	N/A	N/A	N/A	100	N/A
Q1218-02	BELL-25-002	N/A	N/A	N/A	N/A	100	N/A
Q1219-02	LAW-25-0015	N/A	N/A	N/A	N/A	100	N/A
Q1221-02	CHESTNUT-CONCRETE	N/A	N/A	N/A	N/A	100	N/A
Q1232-04	JPP-46.2-012925	N/A	N/A	N/A	N/A	100	N/A
Q1232-08	JPP-46.1-012925	N/A	N/A	N/A	N/A	100	N/A
Q1232-12	JPP-42.1-012925	N/A	N/A	N/A	N/A	100	N/A
Q1232-16	JPP-42.2-012925	N/A	N/A	N/A	N/A	100	N/A
Q1232-20	JPP-51.1-012925	N/A	N/A	N/A	N/A	100	N/A
Q1235-04	JPP-51.2-012925	N/A	N/A	N/A	N/A	100	N/A
Q1235-08	JPP-16.1-012925	N/A	N/A	N/A	N/A	100	N/A

Alliance TECHNICAL GROUP

TCLP Fluid Determination

PB166356

Hot Block ID : WC S-1 /WC S-2

Thermometer ID : FLASHPOINT

SampleID	ClientID	Sample Weight (g)	Volume DI Water (mL)	PH after 5 min stir	PH after 10 min stir	Extraction Fluid 1 or 2	pH Extraction Fluid
PB166356TB	LEB356	N/A	N/A	N/A	N/A	#1	4.94
Q1215-04	JPP-29.1-012825	5.02	96.5	8.2	3.5	#1	4.94
Q1215-08	JPP-29.2-012825	5.03	96.5	9.0	4.0	#1	4.94
Q1216-04	JPP-18.1-012825	5.02	96.5	8.6	3.5	#1	4.94
Q1216-08	JPP-21.1-012825	5.01	96.5	9.0	4.0	#1	4.94
Q1216-12	JPP-21.2-012825	5.02	96.5	9.1	4.0	#1	4.94
Q1216-16	JPP-26.1-012825	5.00	96.5	8.6	3.5	#1	4.94
Q1216-20	JPP-26.2-012825	5.03	96.5	9.3	4.0	#1	4.94
Q1218-02	BELL-25-002	5.04	96.5	5.6	2.0	#1	4.94
Q1219-02	LAW-25-0015	5.03	96.5	5.5	2.5	#1	4.94
Q1221-02	CHESTNUT-CONCRETE	5.04	96.5	11.0	4.5	#1	4.94
Q1232-04	JPP-46.2-012925	5.02	96.5	7.2	2.5	#1	4.94
Q1232-08	JPP-46.1-012925	5.01	96.5	10.5	3.5	#1	4.94
Q1232-12	JPP-42.1-012925	5.02	96.5	11.5	4.5	#1	4.94
Q1232-16	JPP-42.2-012925	5.00	96.5	10.0	4.0	#1	4.94
Q1232-20	JPP-51.1-012925	5.03	96.5	9.1	3.5	#1	4.94
Q1235-04	JPP-51.2-012925	5.04	96.5	11.5	4.5	#1	4.94
Q1235-08	JPP-16.1-012925	5.05	96.5	10.5	4.0	#1	4.94

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900, Fax : 908 789 8922

Prep Standard - Chemical Standard Summary

Order ID : Q1235

Test : TCLP ICP Metals,TCLP Mercury

Prepbatch ID : PB166425,PB166487,

Sequence ID/Qc Batch ID: LB134537,LB134659,

Standard ID :
MP83691,MP83692,MP83693,MP83694,MP84204,MP84218,MP84219,MP84223,MP84224,MP84225,MP84226,MP84227,MP84228,MP84230,MP84231,MP84232,MP84297,MP84319,MP84320,MP84321,MP84322,MP84322223,MP84324,MP84325,MP84326,MP84327,MP84328,MP84329,MP84330,MP84331,MP84333,MP84446,

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,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,M6150,W3112,

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

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
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP84319	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 1.00000ml of M6126 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP84320	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

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	MP84321	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84319 = Final Quantity: 250.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP84322	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 245.00000ml of W3112 + 2.50000ml of MP84319 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP84324	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 240.00000ml of W3112 + 7.50000ml of MP84319 = Final Quantity: 250.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP84325	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 237.50000ml of W3112 + 10.00000ml of MP84319 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP84326	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M5532 + 2.50000ml of M6126 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP84327	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M5789 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP84328	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6126 + 10.00000ml of MP84319 = Final Quantity: 500.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP84329	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 02/04/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP84330	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 247.30000ml of W3112 + 0.20000ml of MP84319 = Final Quantity: 250.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP84331	02/03/2025	02/04/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 02/04/2025

FROM 2.50000ml of M6126 + 240.50000ml of W3112 + 7.00000ml of MP84319 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP84333	02/03/2025	02/04/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 02/04/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6121 = Final Quantity: 500.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
912	ICP AES ICV SOLN	MP84446	01/27/2025	02/24/2025	Kareem Khairalla	None	None	Janvi Patel 02/12/2025

FROM 0.02500ml of M5429 + 0.02500ml of M5815 + 0.02500ml of M5817 + 0.10000ml of M5467 + 0.25000ml of M5218 + 0.25000ml of M5472 + 10.00000ml of M6150 + 87.77500ml of MP84204 = Final Quantity: 100.000 ml

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-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 / jaswal	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 / jaswal	04/20/2021 / bin	M5130

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 / jaswal	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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 / jaswal	03/30/2023 / mohan	M5532

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-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

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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	07/07/2025	02/07/2025 / JANVI	04/20/2021 / JANVI	M6150

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

ThermoFisher SCIENTIFIC

M5882 M3

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6032

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R: 8/5/24

CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

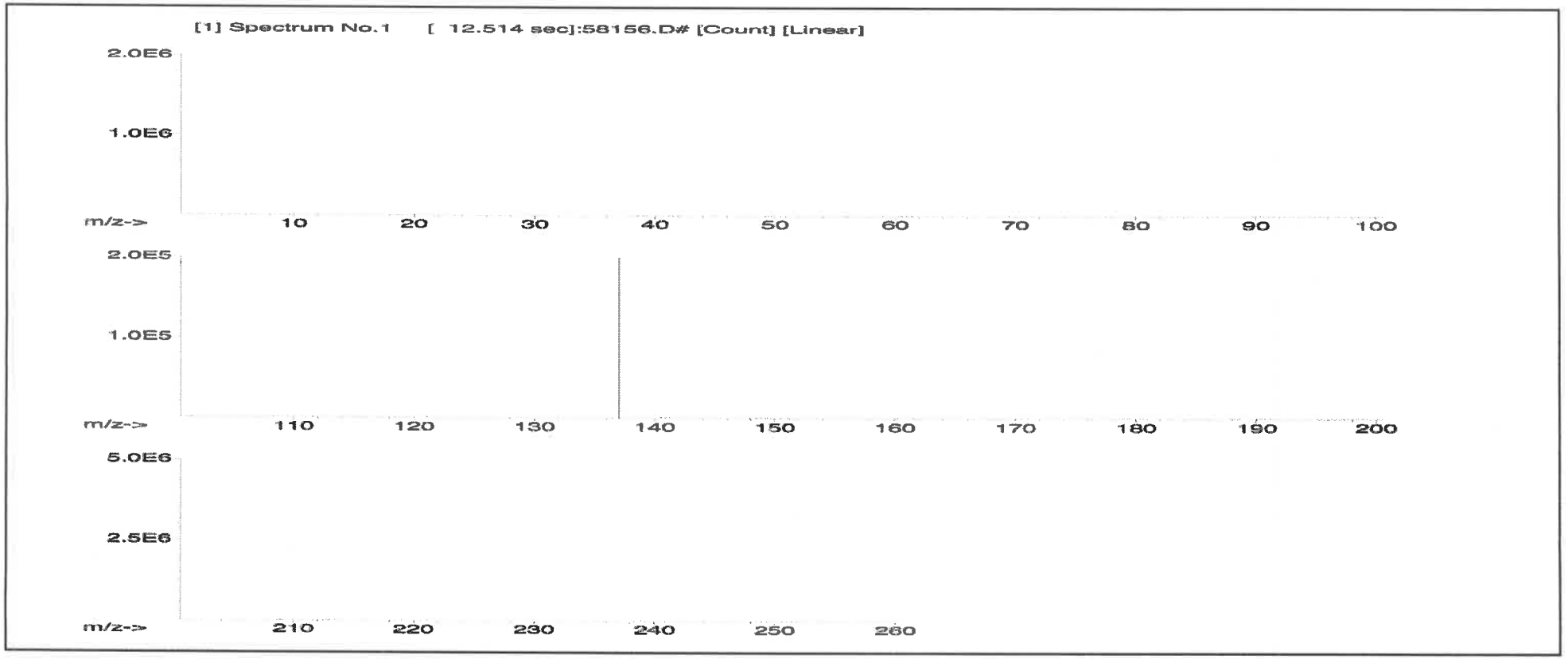
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6028

R 8/15/24

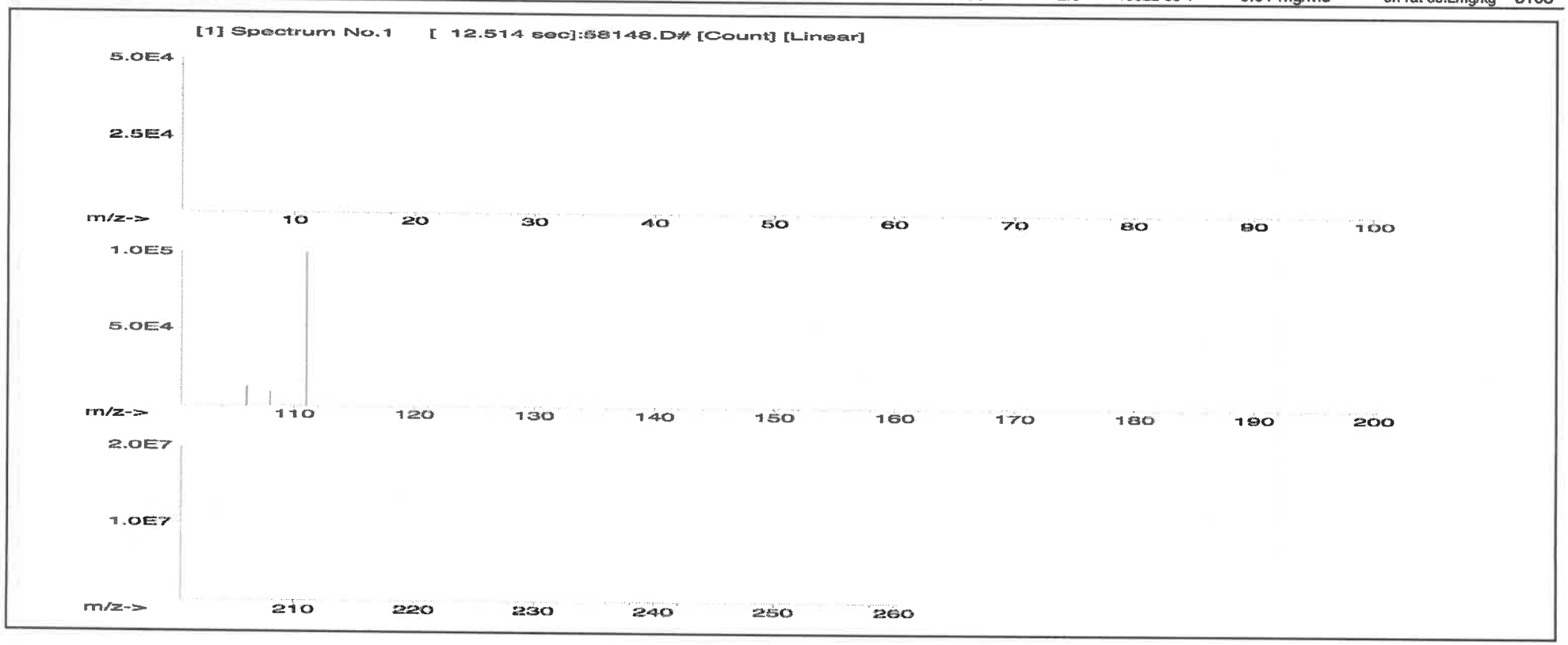
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

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:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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

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

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

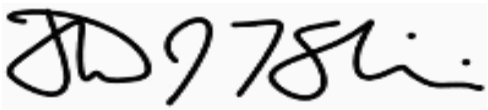
- Sealed TCT Bag Open Date: _____

- 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



INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-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:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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

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

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

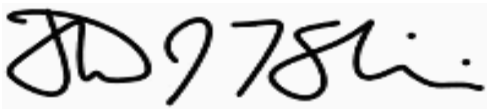
- Sealed TCT Bag Open Date: _____

- 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

Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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 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

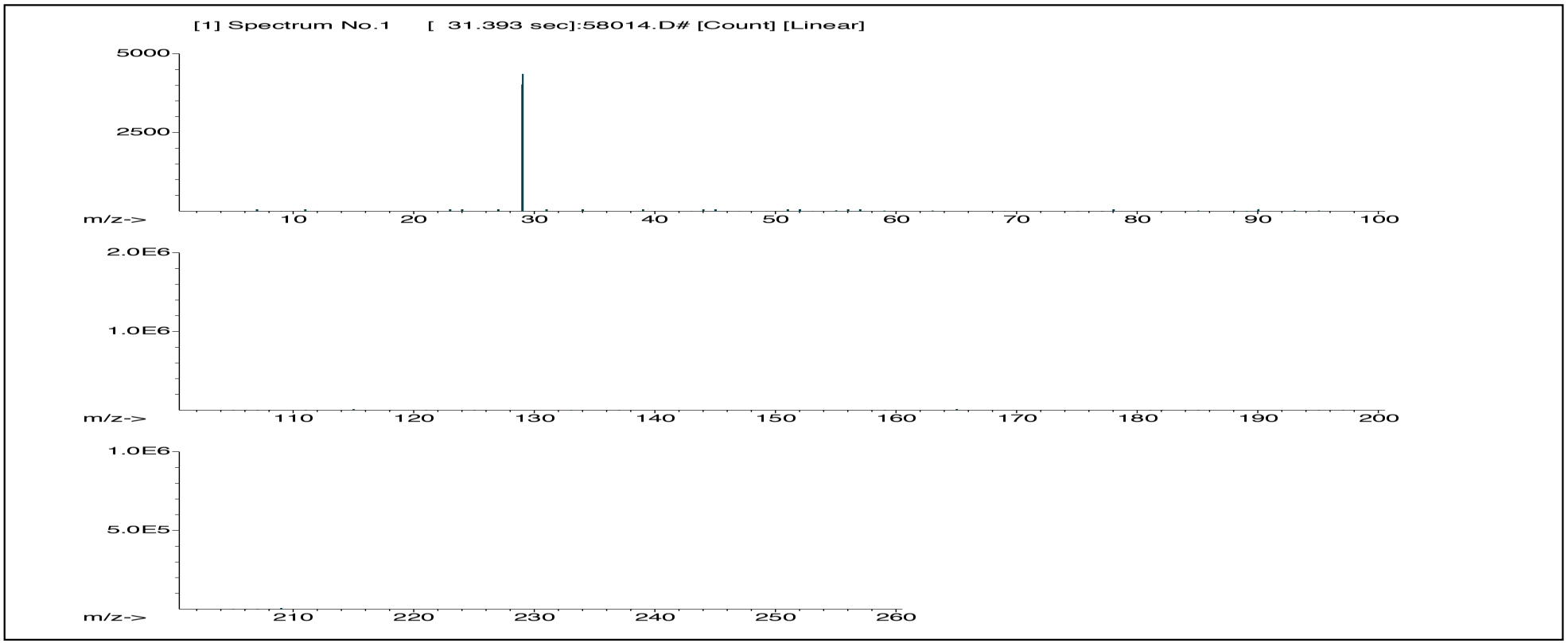
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

	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 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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com



Certified Reference Material CRM



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass 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:

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).

M4913-16
MB

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO3 / LDPE container, stable in 10% HNO3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO3); Oxide (Soluble in HNO3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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:

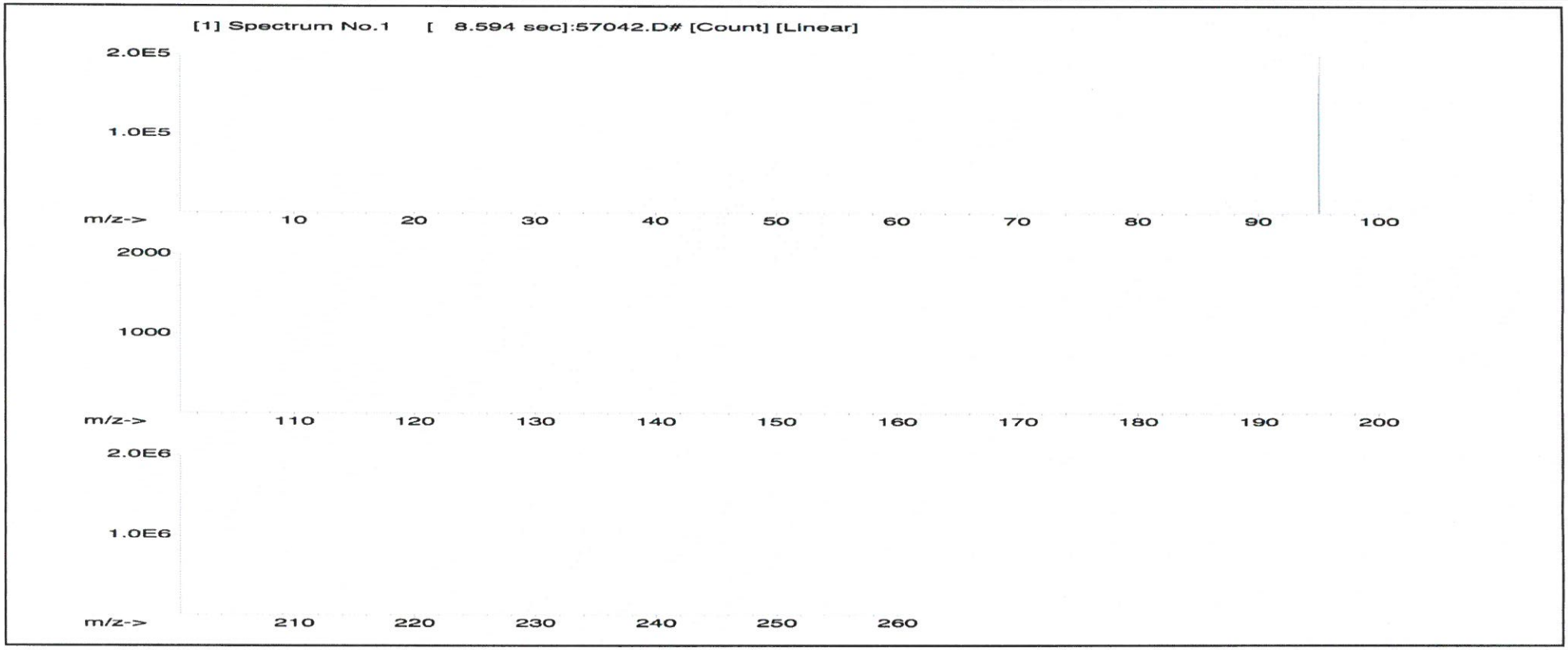
Part Number: 57042
Lot Number: 051722
Description: Molybdenum (Mo)
Expiration Date: 051725
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 3000.41

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass 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:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

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.

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5288 R: 07/21/2022

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

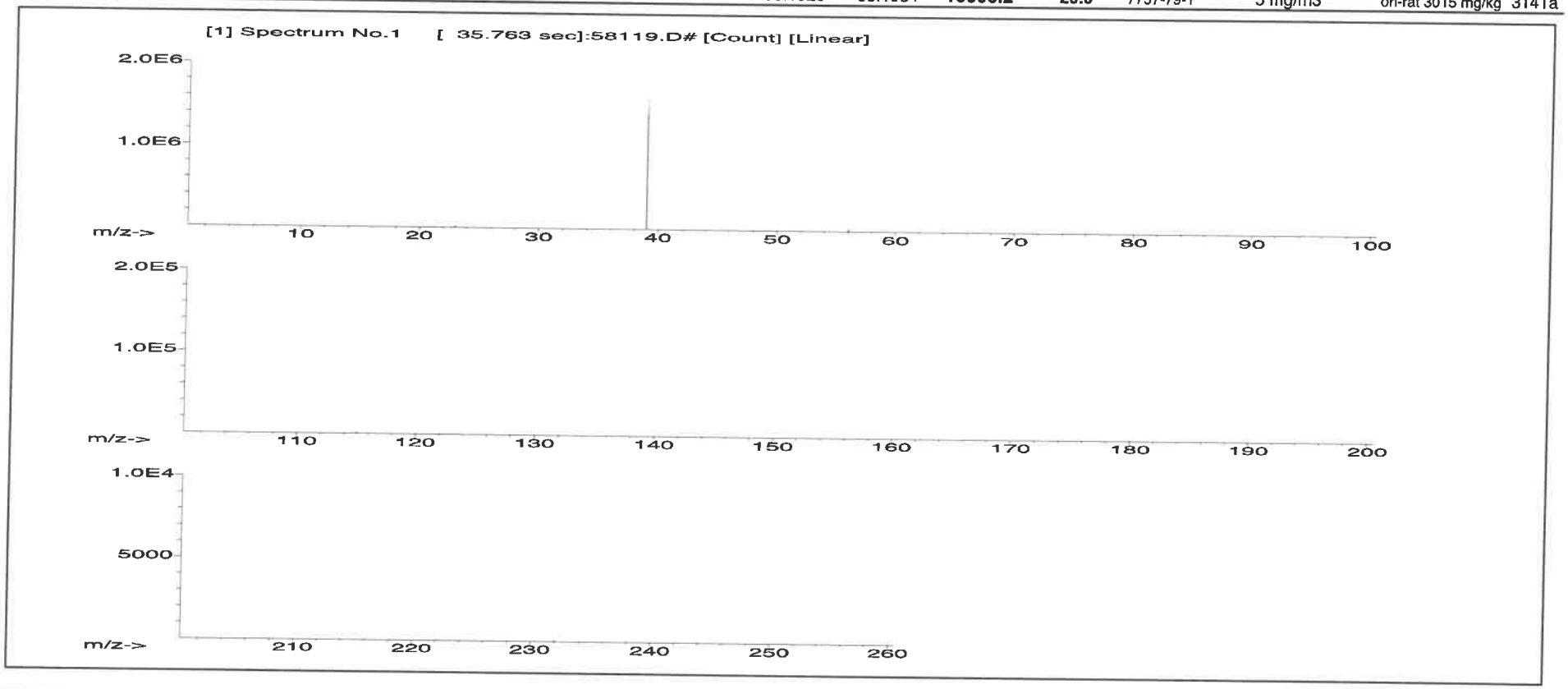
Part Number: 58119
Lot Number: 071122
Description: Potassium (K)

Expiration Date: 071125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	071122
Reviewed By:	Pedro L. Rentas	071122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	53.1925	53.1934	**10000.2**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<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).

Part # **58119** Lot # **071122**

Printed: 8/2/2022, 11:20:01 PM

SJ 6/15/22

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 020422
Description: Iron (Fe)

M5298

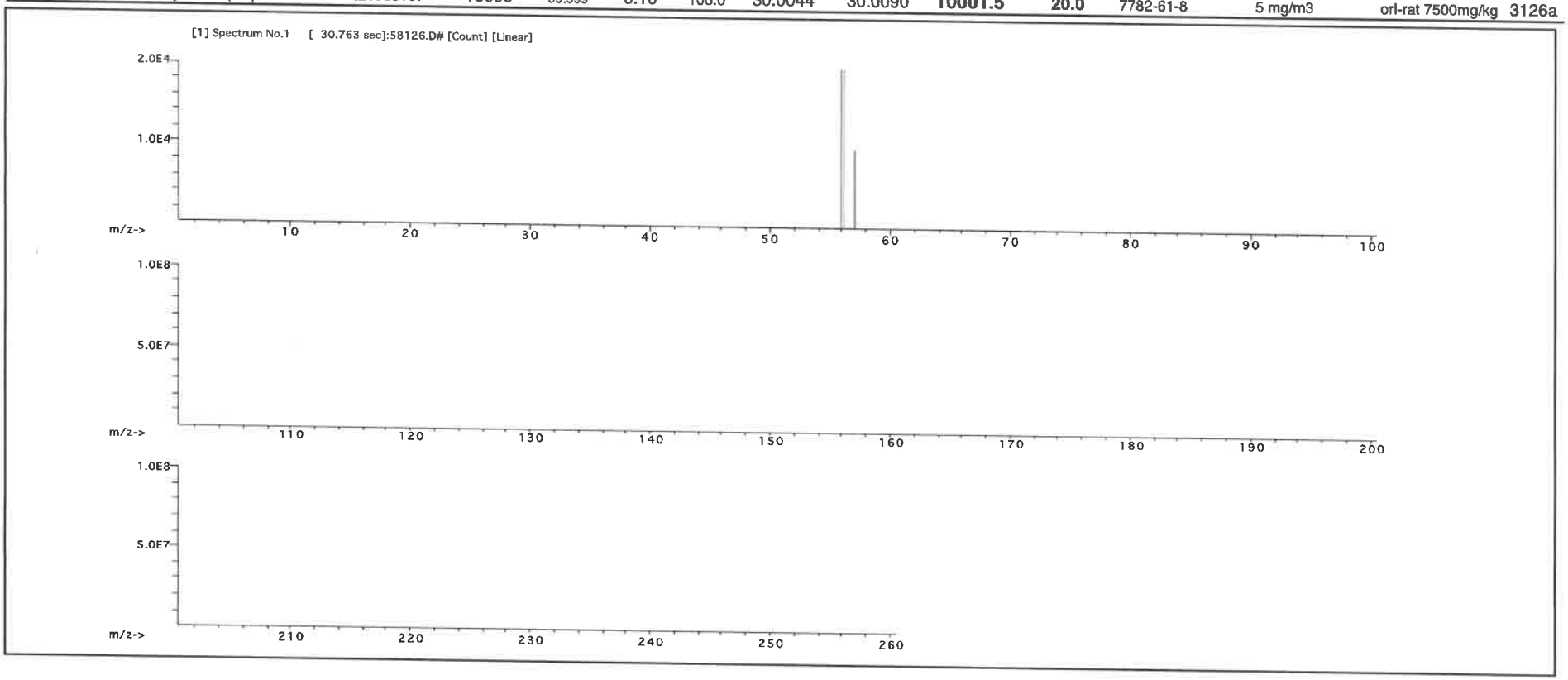
Expiration Date: 020425
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5429 R1 01/26/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

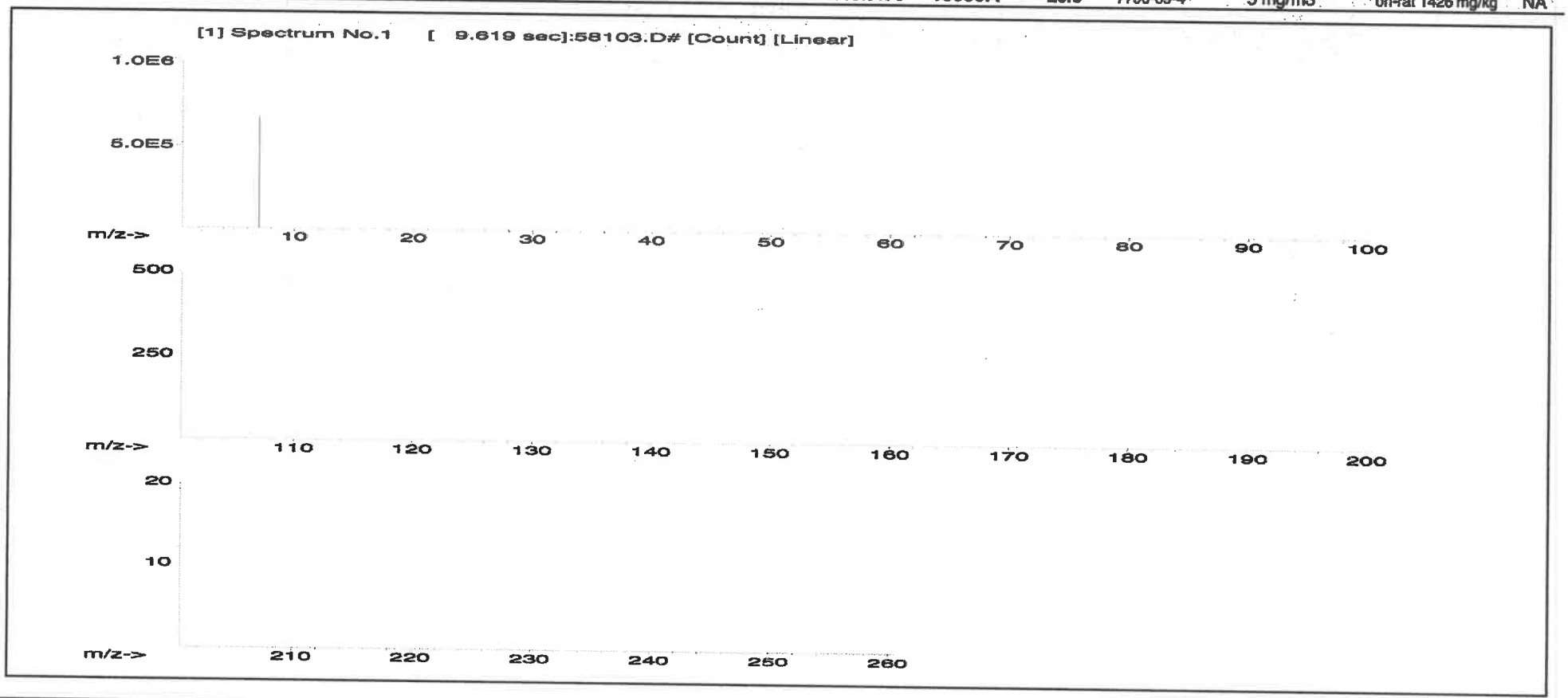
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

Lot #			
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	070622
Reviewed By:	Pedro L. Rentas	070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



QI-1235-METALS

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.
* 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

M5467 R: 03/01/23 (LA)

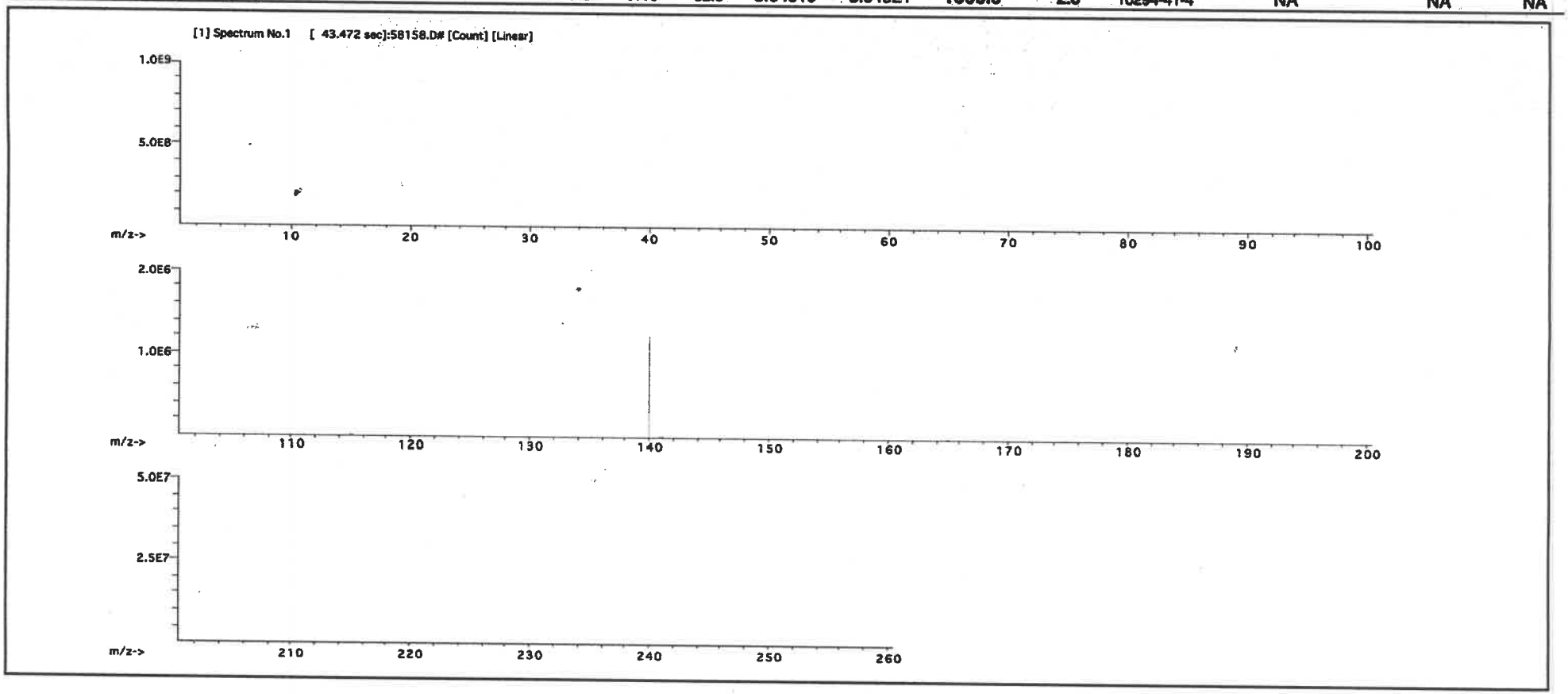
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	57058		**Lot #**	
Lot Number:	020623	**Solvent:**	21110221	Nitric Acid
Description:	Cerium (Ce)			
		2%	20.0 (mL)	Nitric Acid
Expiration Date:	020626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	1000			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	1000.12	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	**1000.0**	**2.0**	10294-41-4	NA	NA	NA



21-633-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5496 R 7/20/23

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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	

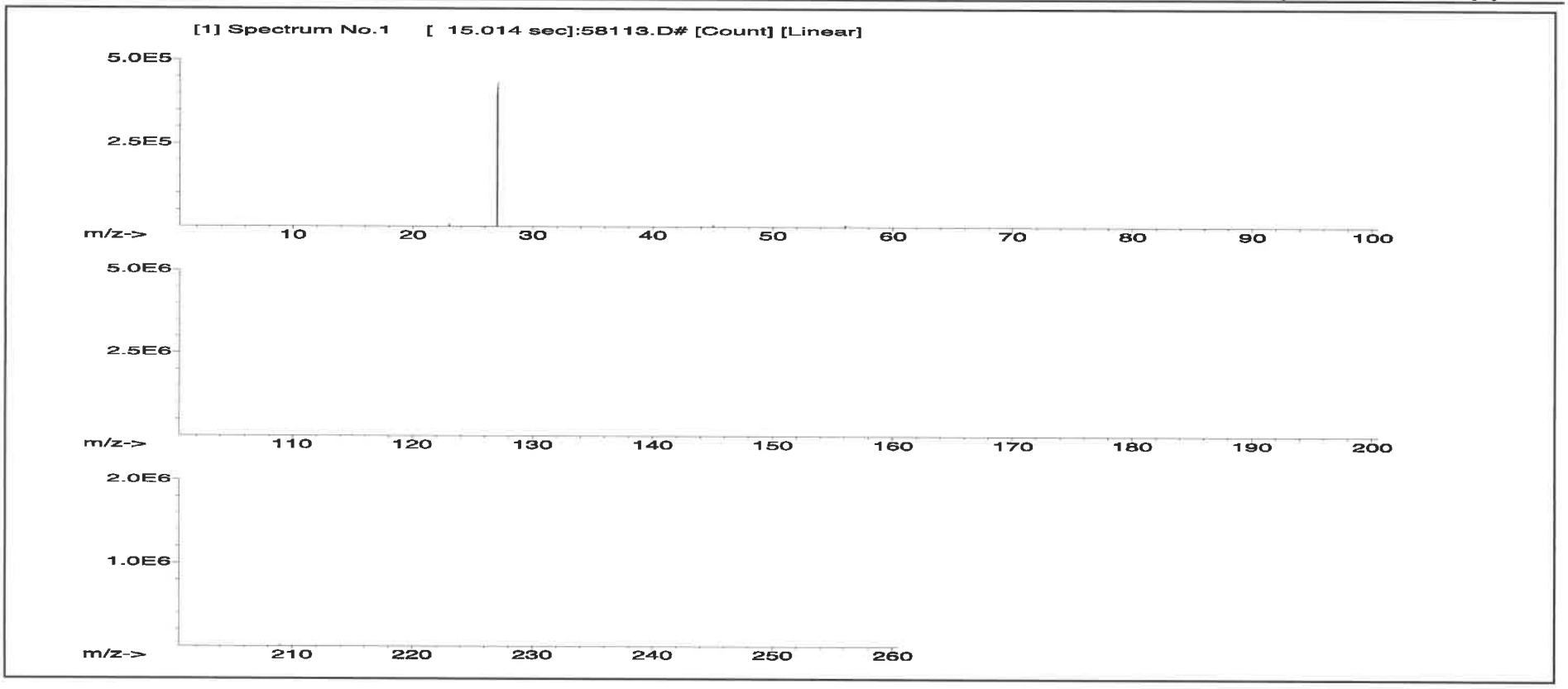
Giovanni Esposito

Formulated By:	Giovanni Esposito	011623

Pedro Rentas

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

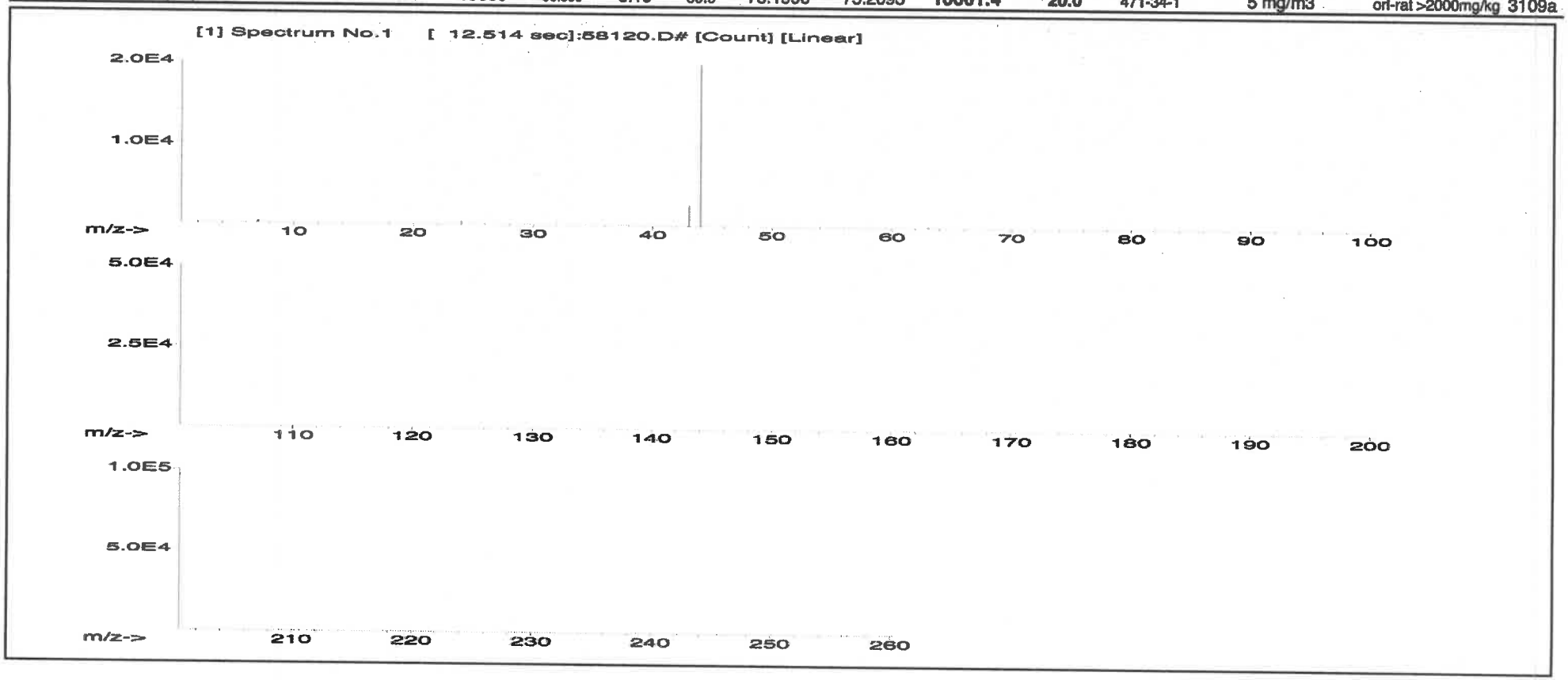
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask 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.

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5658 R ! 8/25/23

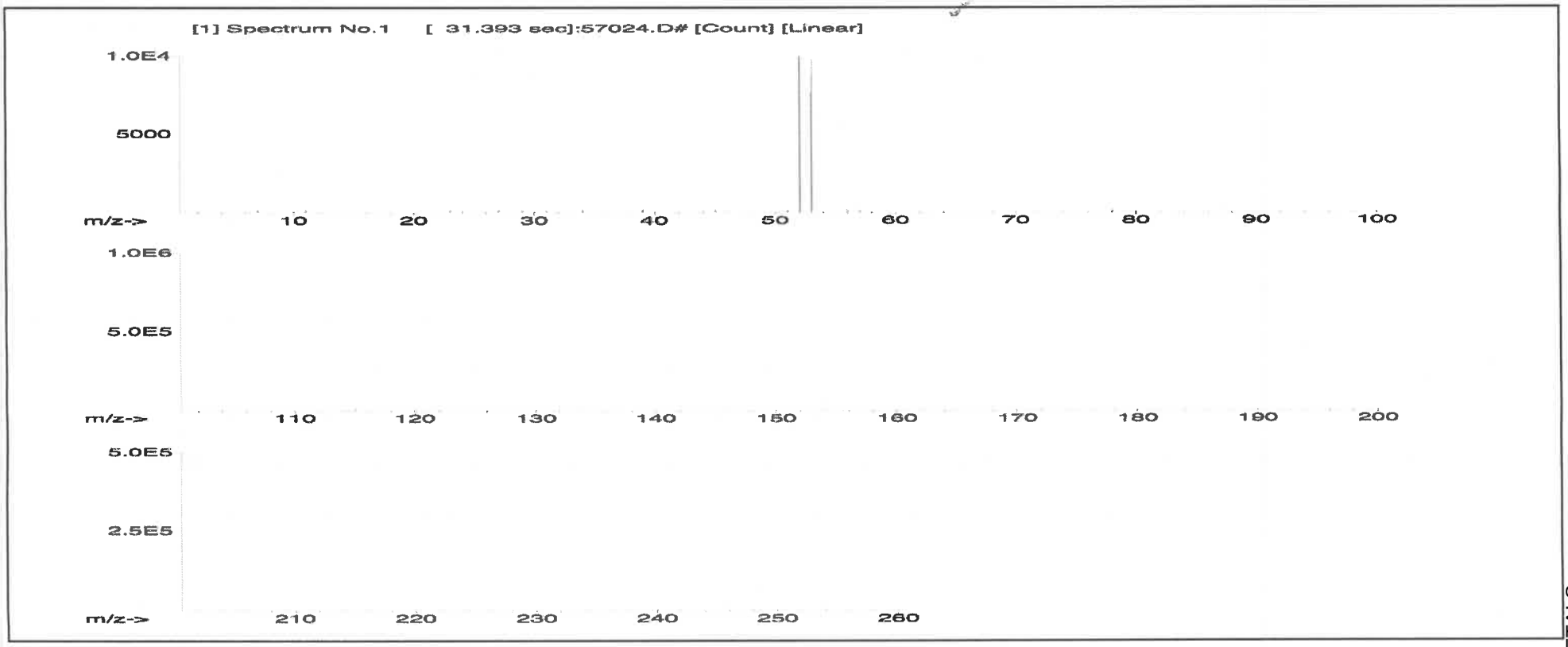
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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

M5697 R: 10/27/23

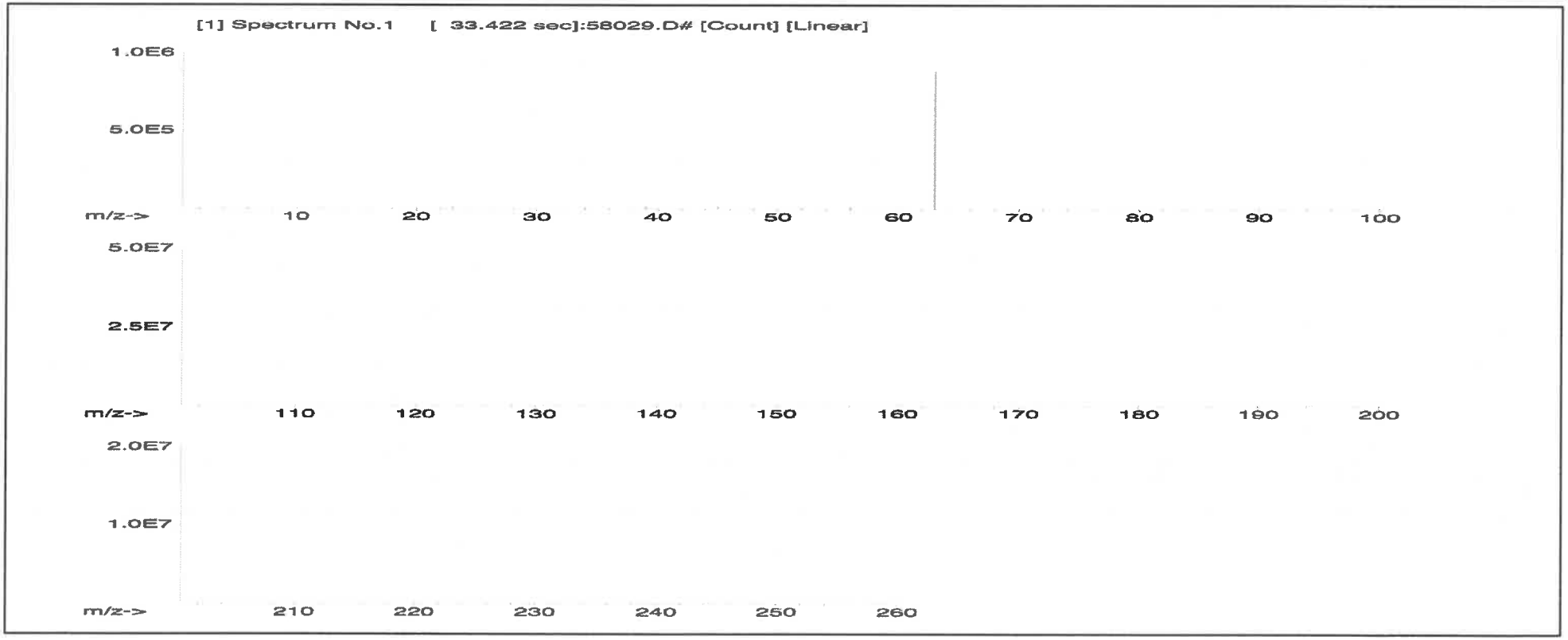
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
(304) 368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<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.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 12/20/23 M5747

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

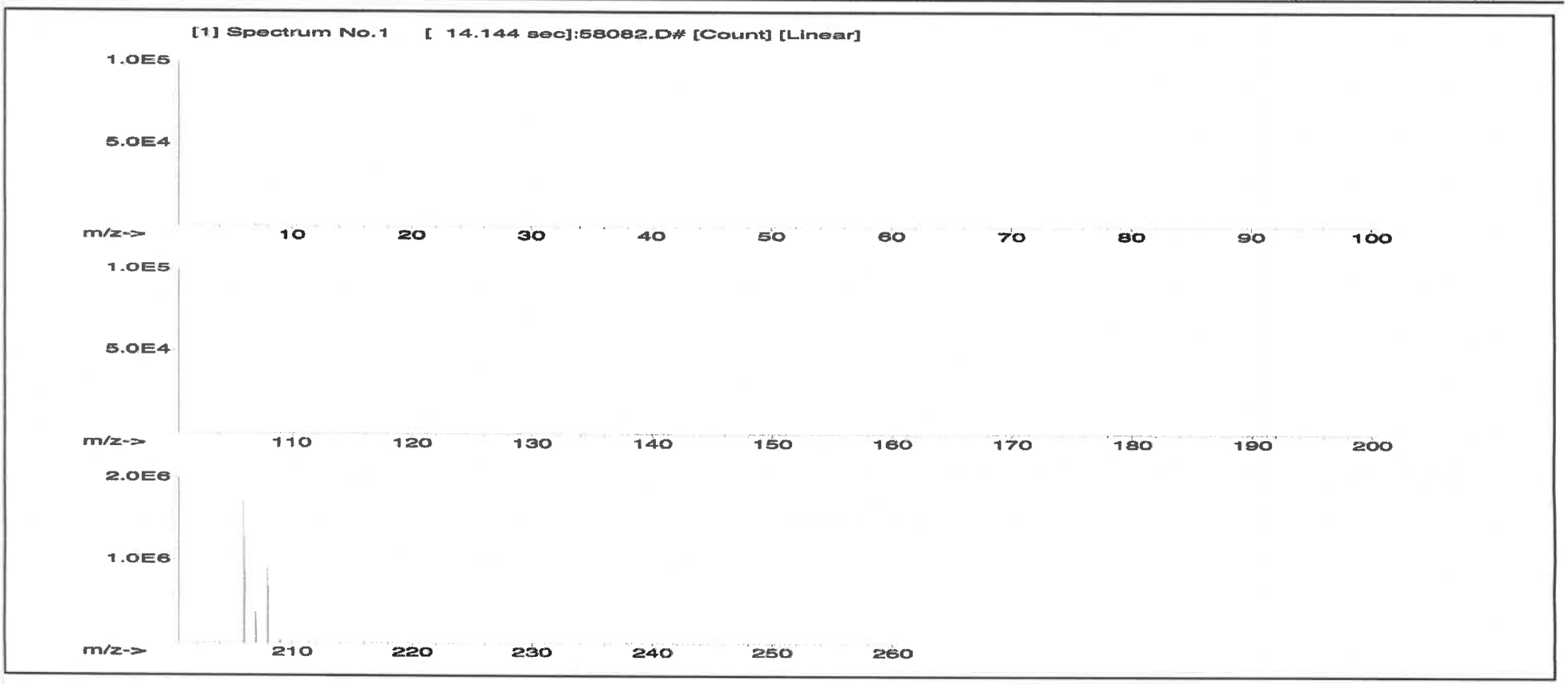
Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

	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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 12/20/23 M5748

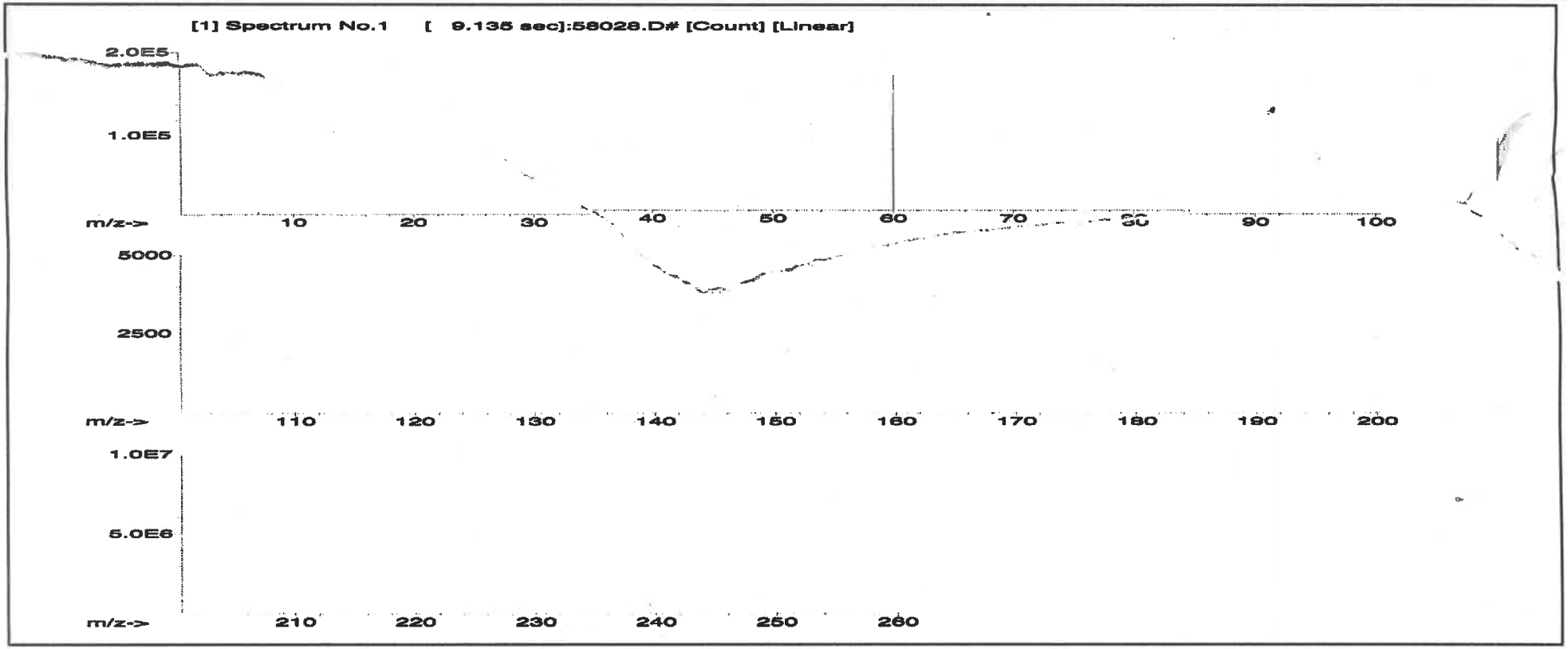
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5798

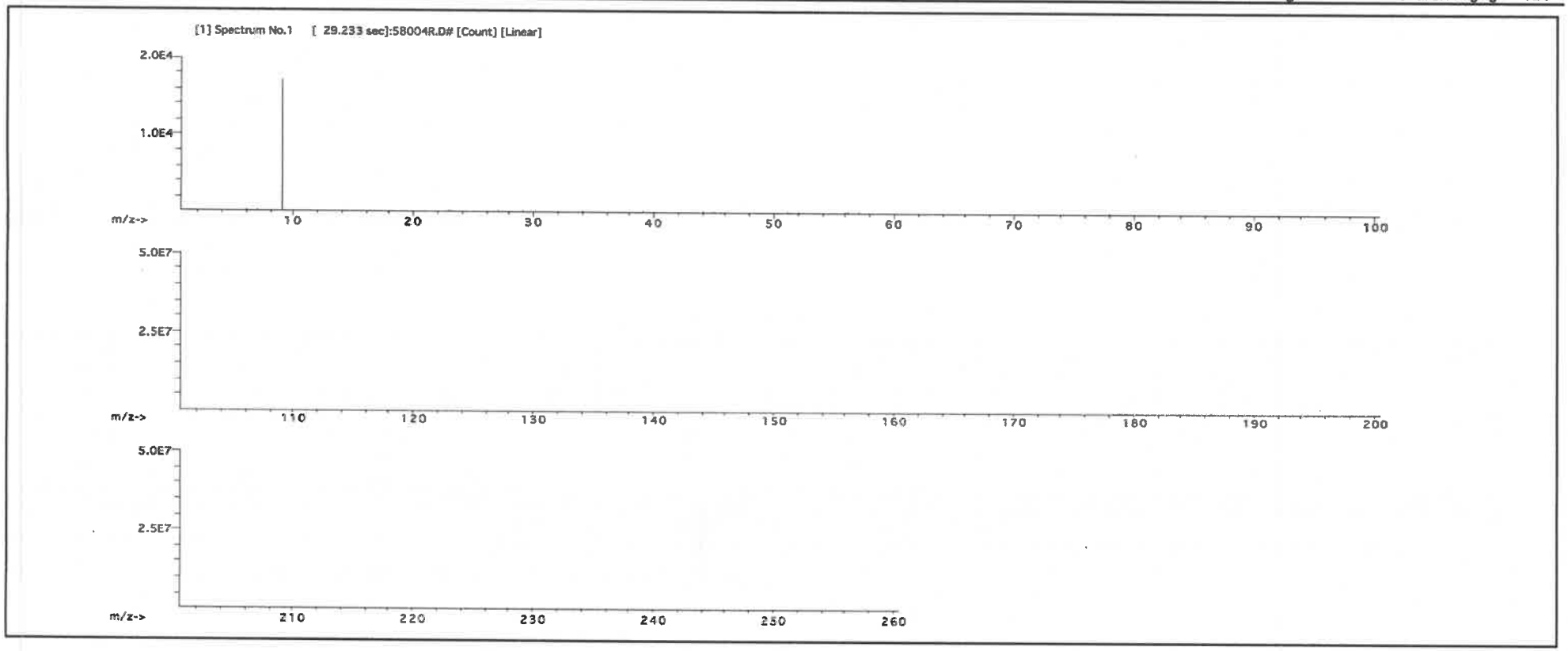
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**			
Lot Number:	**102523**	24002546	Nitric Acid	
Description:	**Beryllium (Be)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<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.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R? 02/09/24 IM5799

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

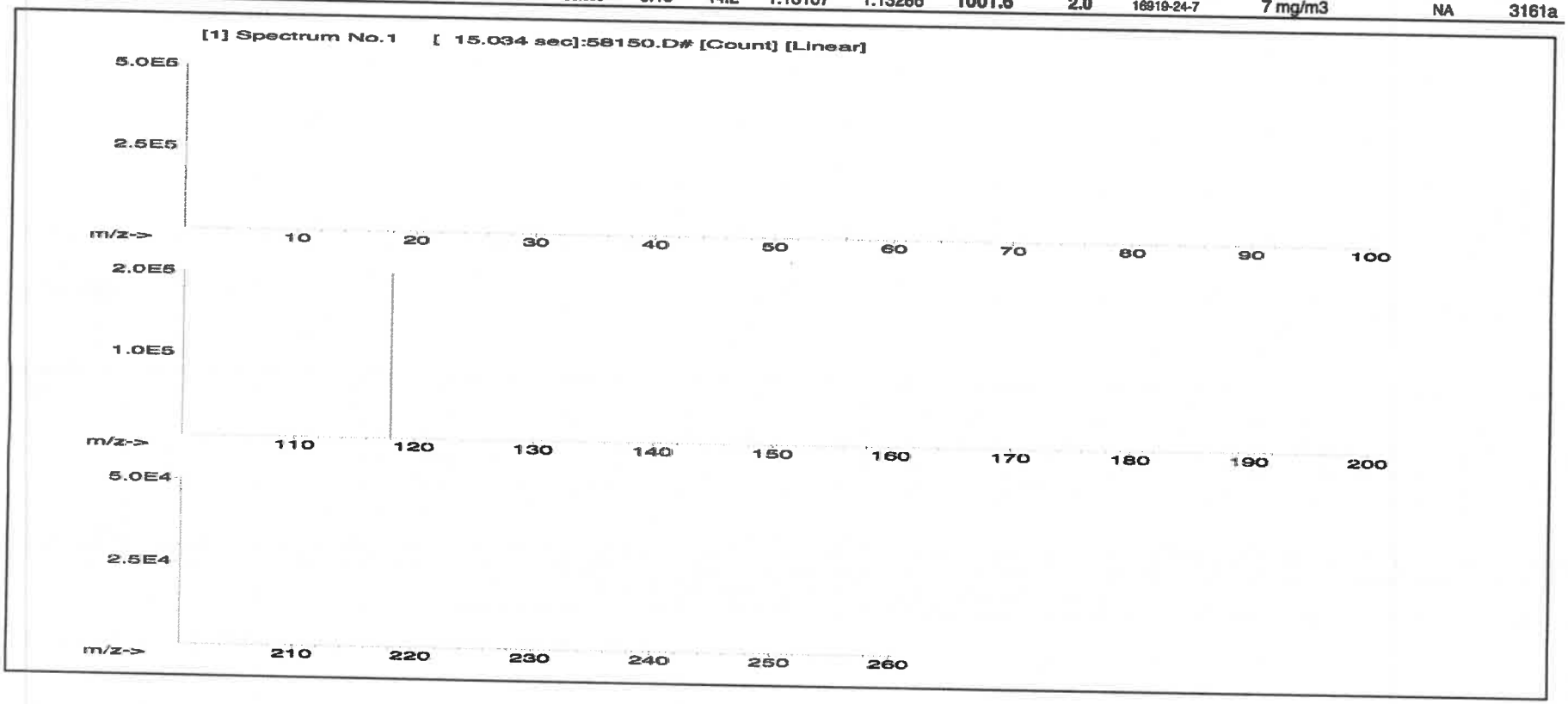
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

Solvents:	Lot #	
	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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<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:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 IM5800 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

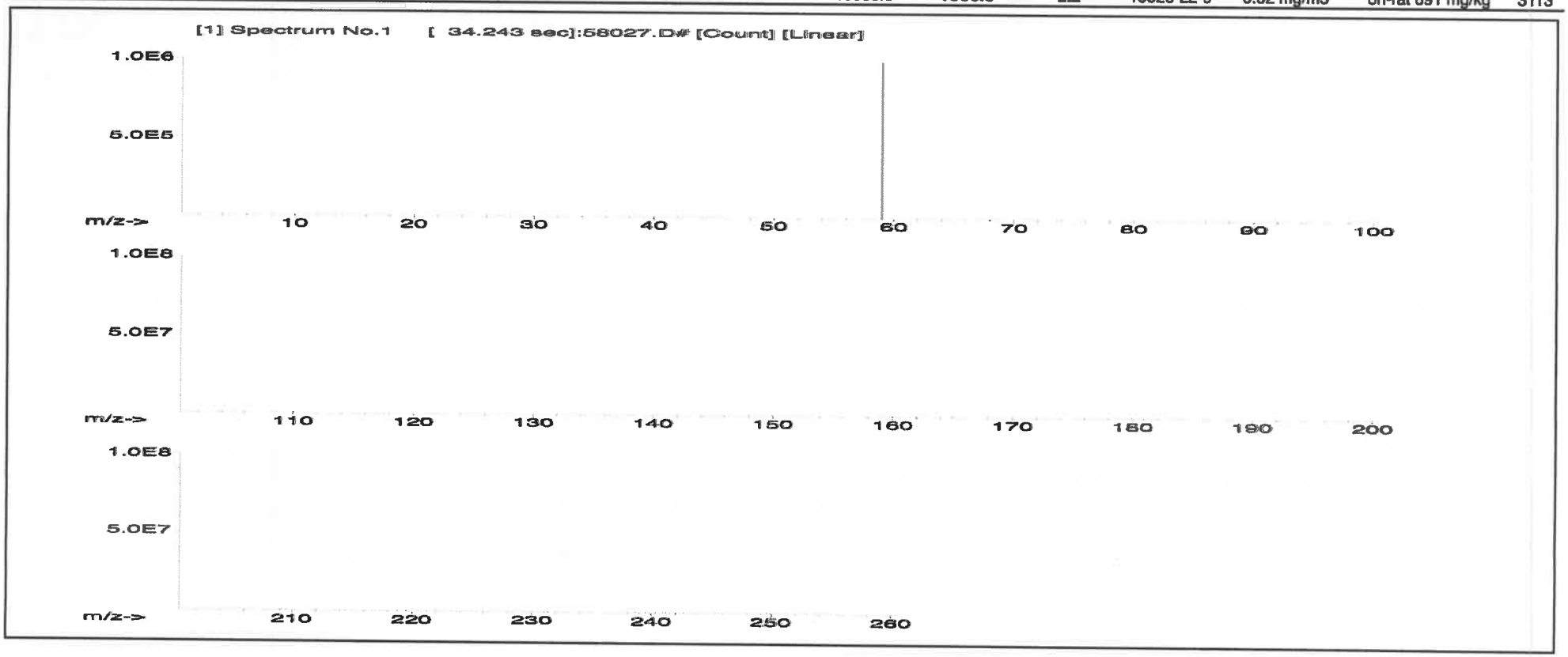
CERTIFIED WEIGHT REPORT:

		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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass 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.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5801 BH

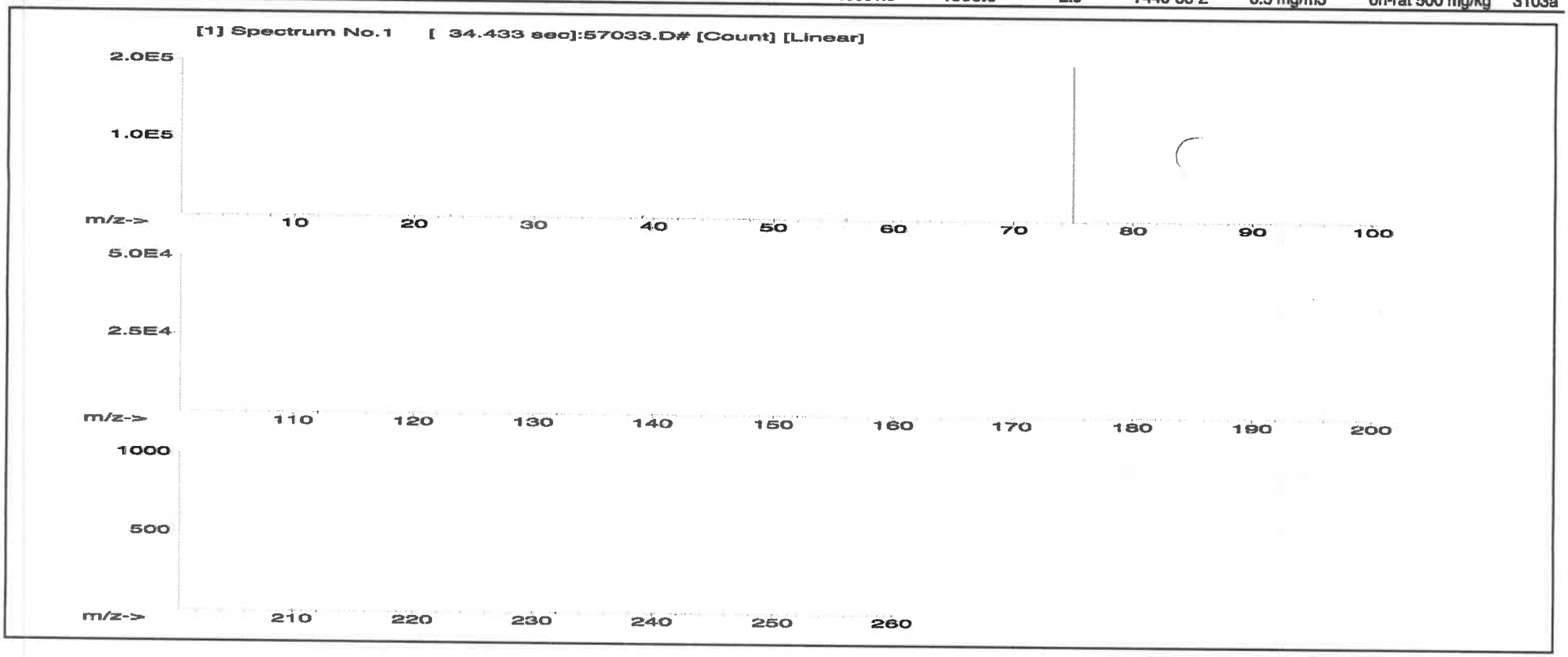
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	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.

* 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

A: 02/09/24 M.5814

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57005
Lot Number: 071123
Description: Boron (B)

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 1999.48 ± 0.058 Flask Uncertainty

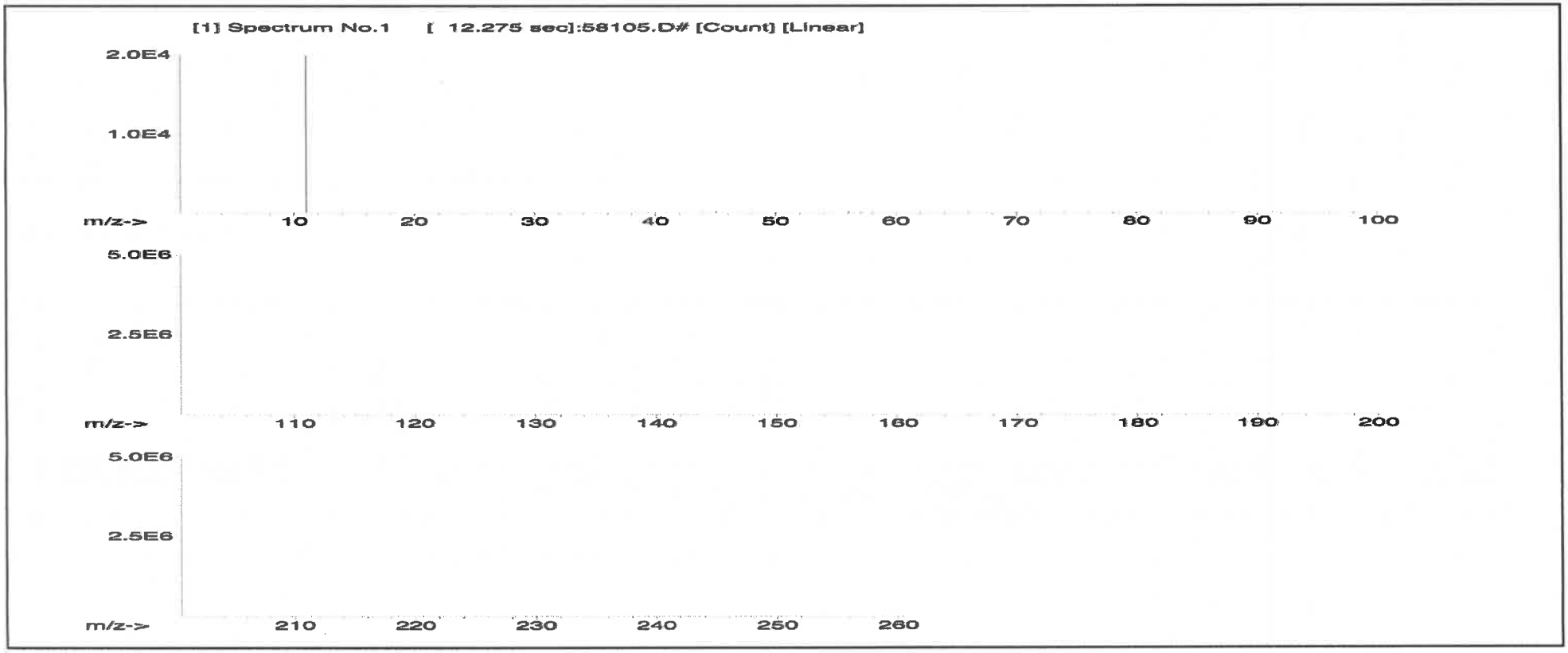
	Lot #			
Solvent:	MKBQ8597V	Ammonium hydroxide		
		2.0%	40.0 (mL)	Ammonium hydroxide

5E-05 Balance Uncertainty

Formulated By: Benson Chan 071123

Reviewed By: Pedro L. Rentas 071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass 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:

* 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

R1 02/09/24. M58165

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

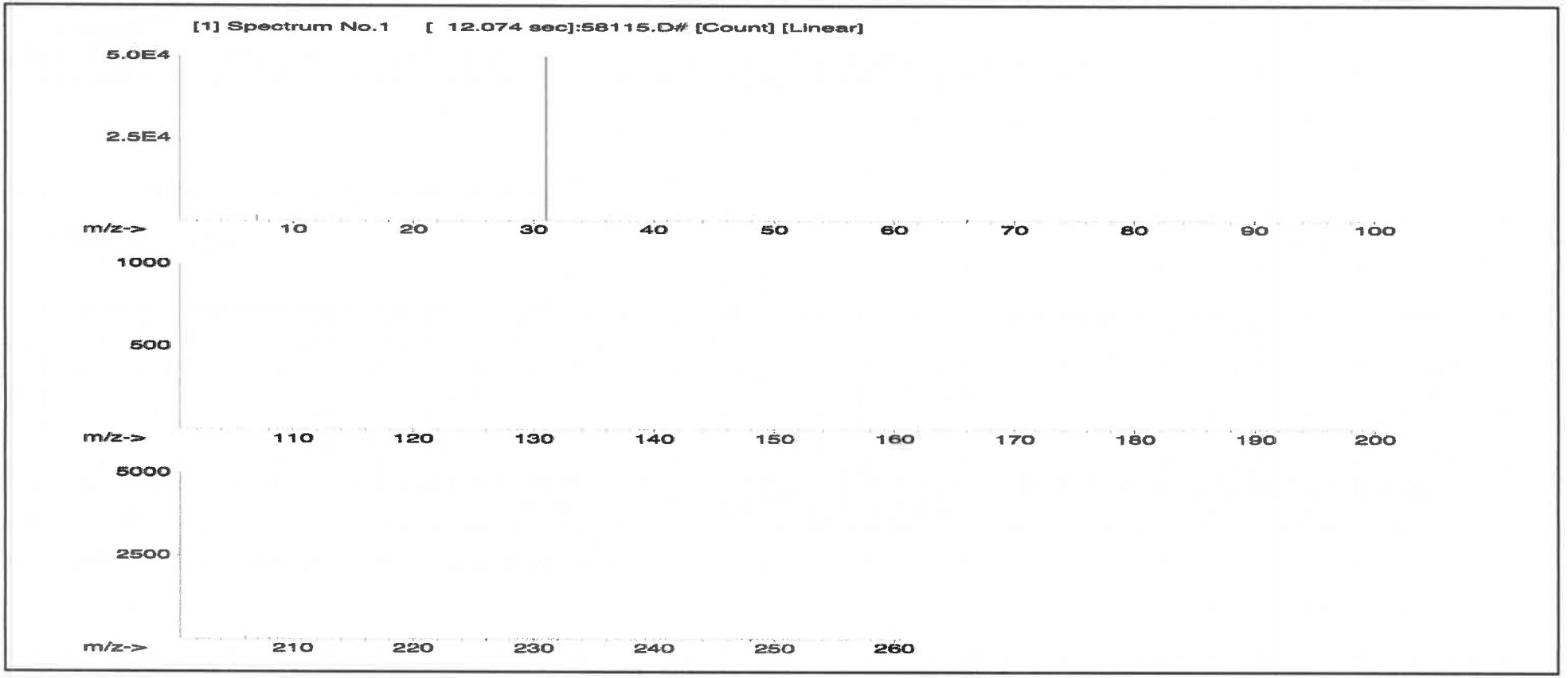
Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

Expiration Date: 041726
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221		Nitric Acid
	2%	40.0 (mL)	Nitric Acid
		5E-05	Balance 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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5816

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57016
Lot Number: 122923
Description: Sulfur (S)

Expiration Date: 122926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

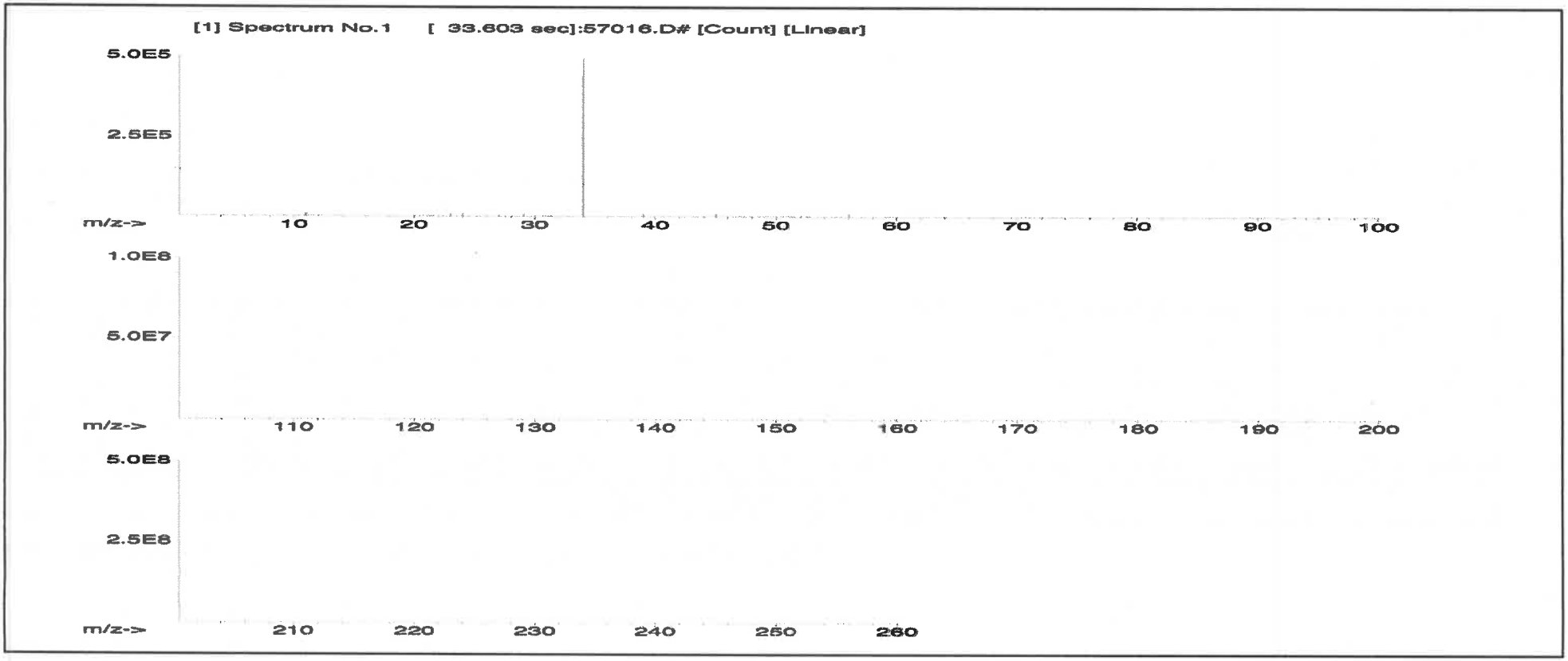
Weight shown below was diluted to (mL): 4000.0 0.06 Flask Uncertainty

Lot #		
Solvent:	122923	ASTM Type 1 Water

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5817

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

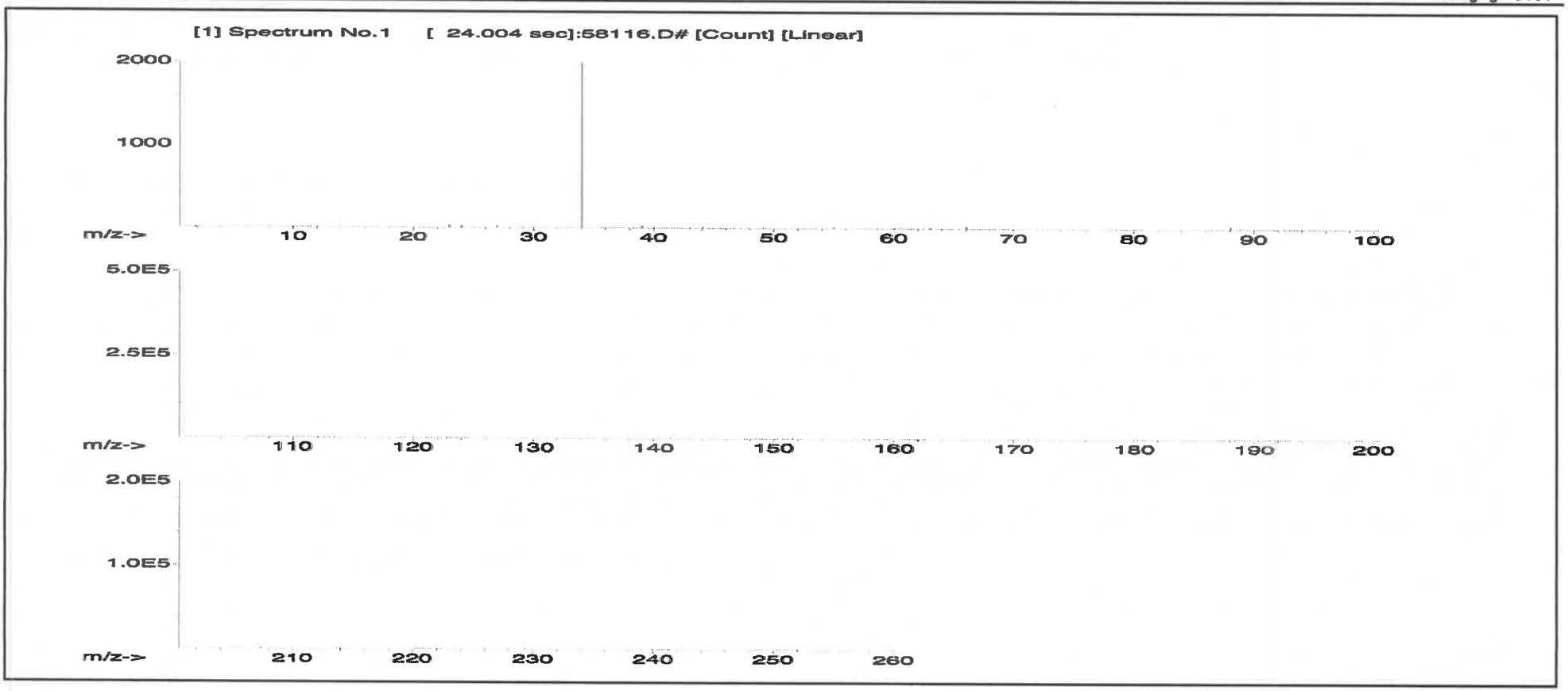
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	ori-rat 4250mg/kg	3181



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5819

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

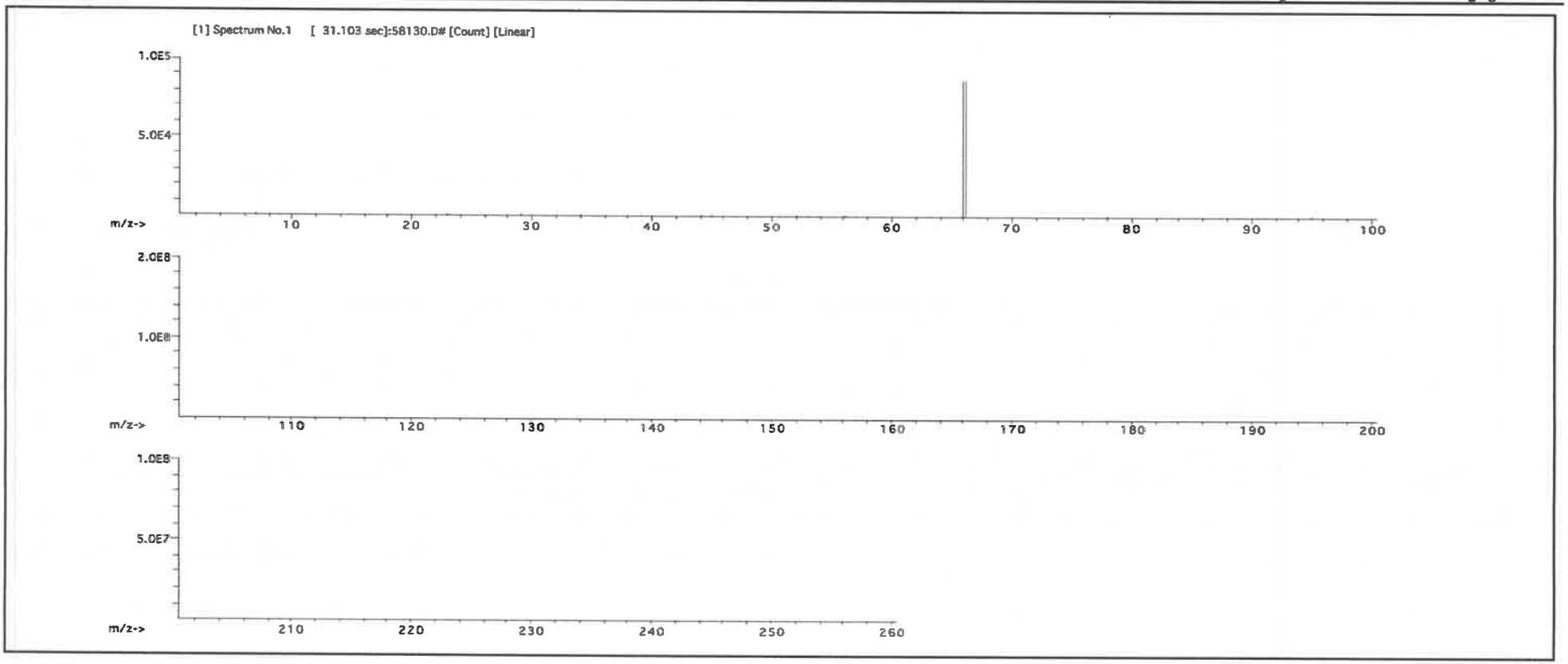
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

	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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5820

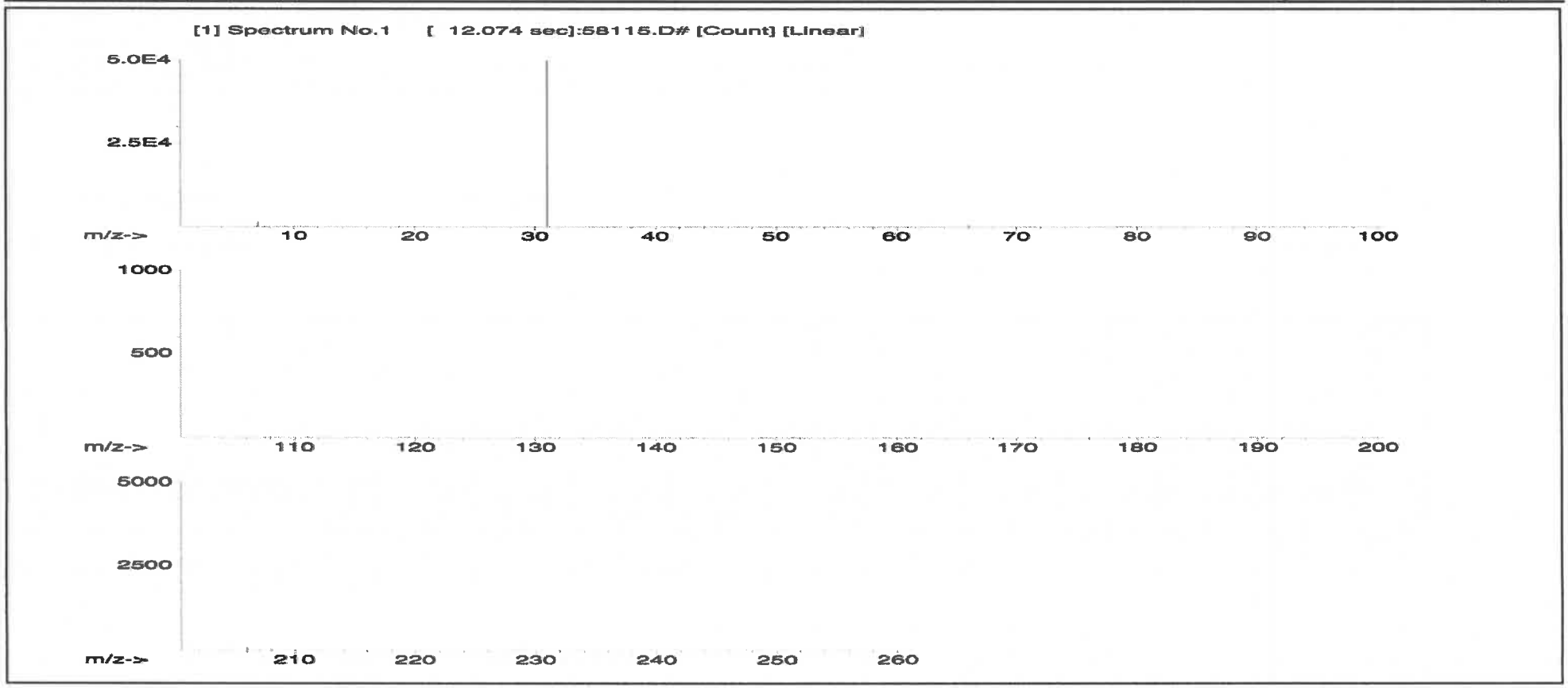
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MF884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

M5959 R: 6/14/24.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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.

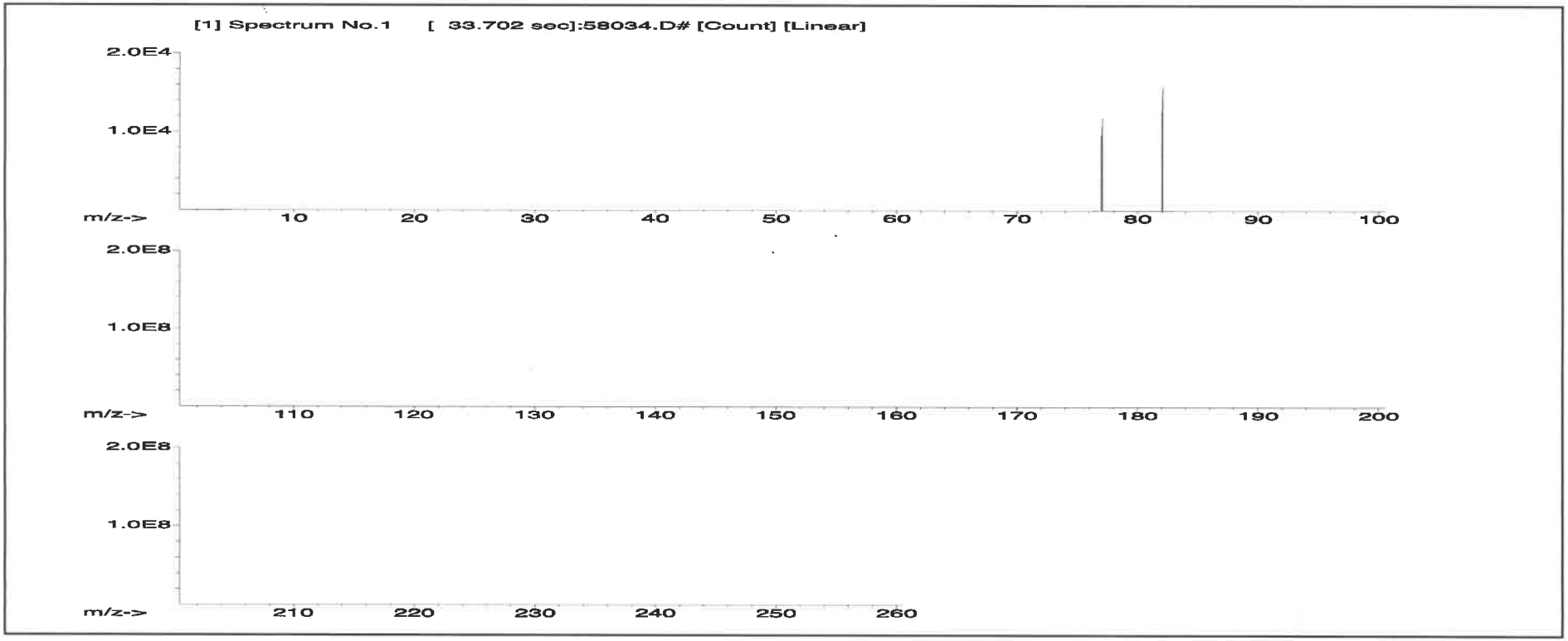
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	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

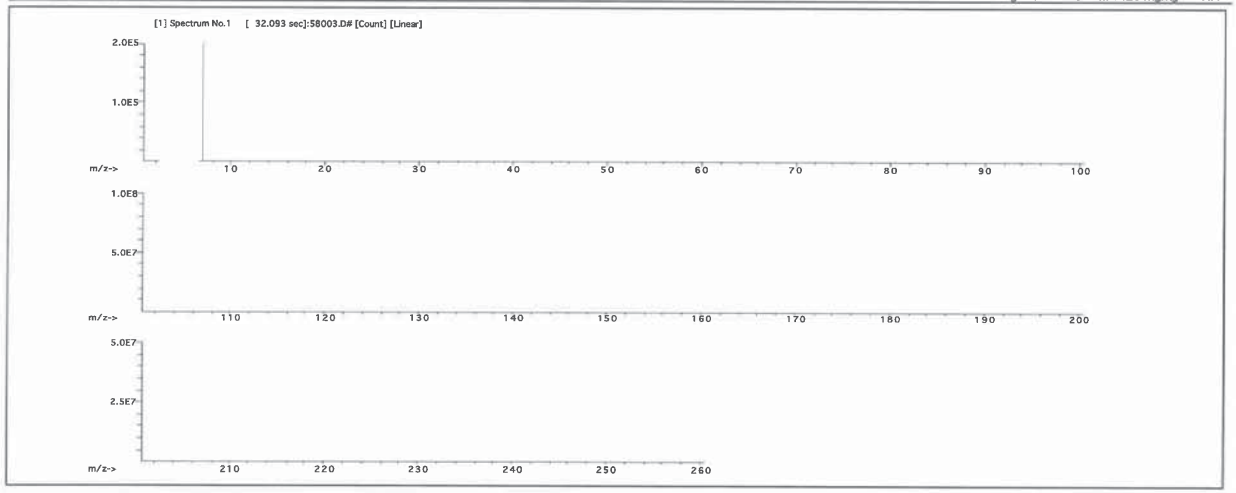
CERTIFIED WEIGHT REPORT:

		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

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

MS978, MS979

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

R: 2/22/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 865.01 — ACCREDITED Reference Material Producer Certificate 865.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGT11
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	TI Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**1002 ± 4 µg/mL**
	ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/MM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \Sigma(w_i)\,(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{Char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$$w_i = (1/u_{Char\ i})^2 \,/\, (\Sigma(1/u_{Char\ i})^2)$$

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\ (u^2_{Char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{Char} = [\Sigma((w_i)^2\ (u_{Char\ i})^2)]^{½}$ where $u_{Char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)\ (u_{Char\ a})$$

X_a = mean of Assay Method A with $u_{Char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\ (u^2_{Char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{Char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	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 for months in 1% 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.5798; 540.585.3030; Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 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 property stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozlkowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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

MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M 6041-46
MG

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

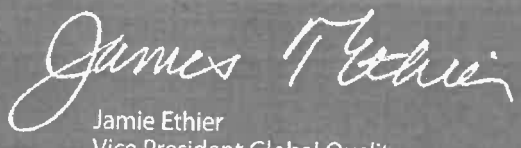
avantor™ | J.T.Baker®

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



Jamie Ethier
Vice President Global Quality

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

M6074
M6075
M6076
M6077

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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

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

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

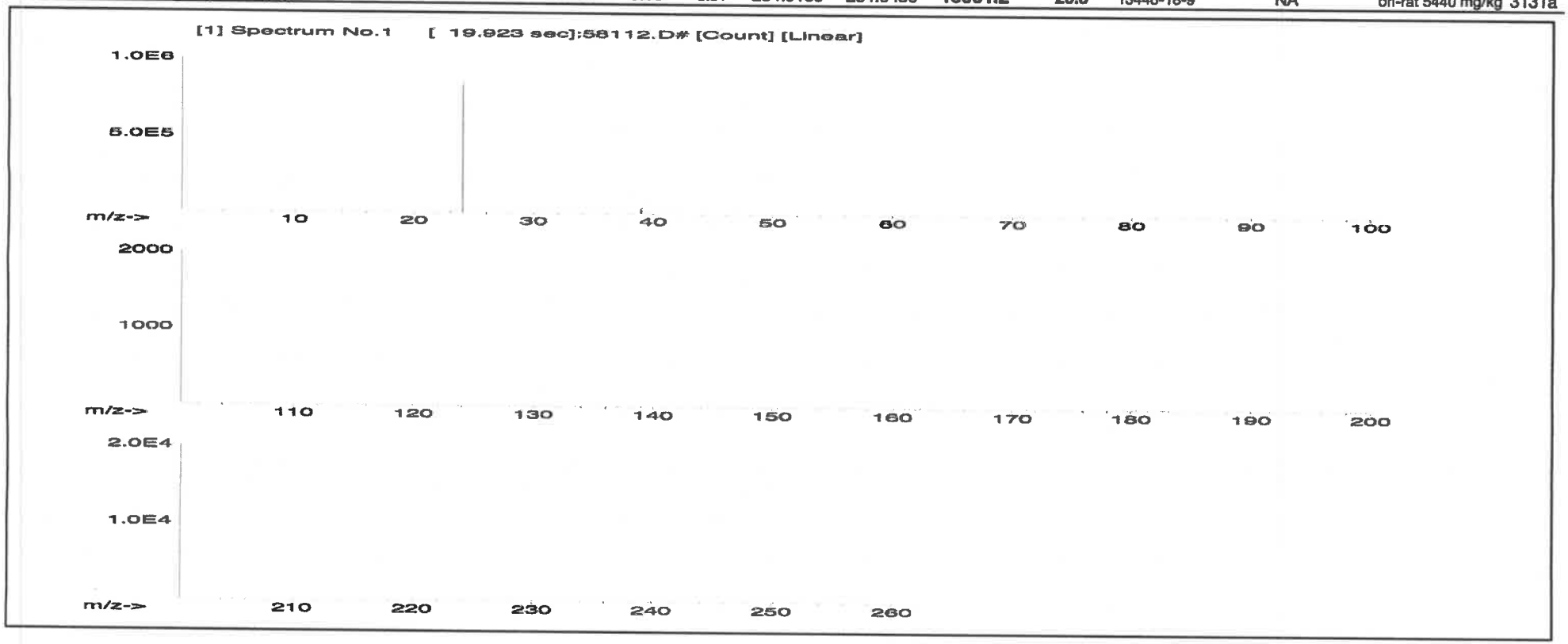
R→ 1/13/25
M 6127

			Lot #	
Part Number:	**58112**	**Solvent:**	24012496	Nitric Acid
Lot Number:	**112124**			
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	112127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	112124
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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

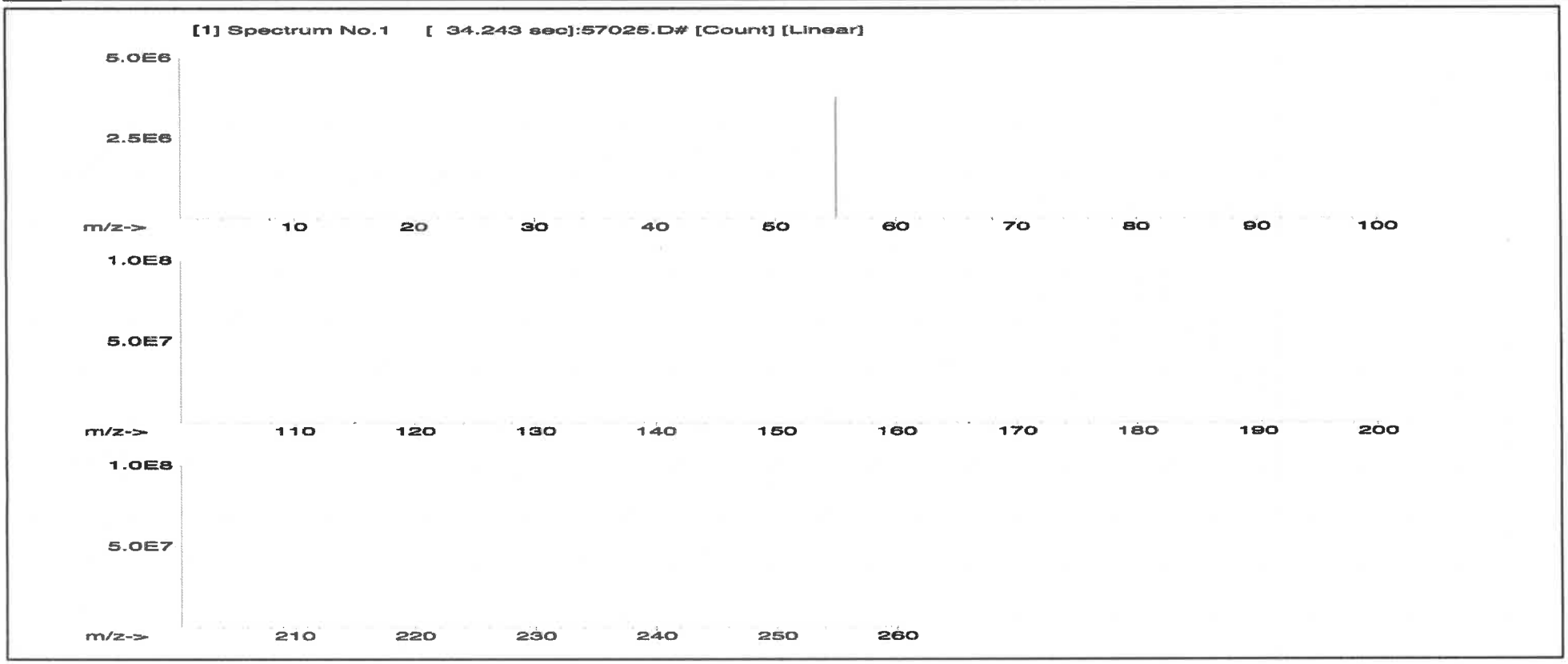
R->1/13/25
M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	101124
Reviewed By:	Pedro L. Rentas	101124

	Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

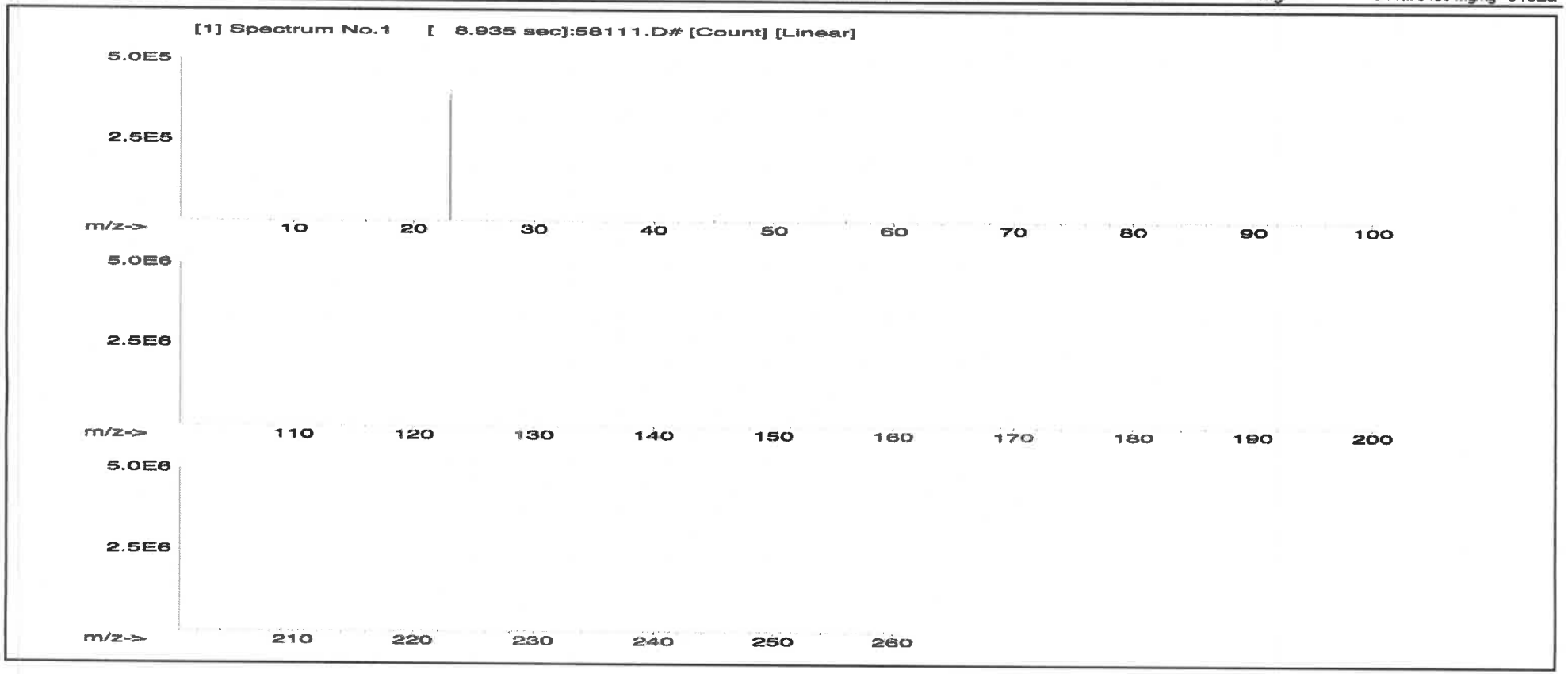
R->1/13/25

MG144

Part Number:	**58111**		**Lot #**		
Lot Number:	**072424**	**Solvent:**	24002546	Nitric Acid	
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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

R : 4/20/21

QATS LABORATORY INORGANIC REFERENCE MATERIAL INITIAL CALIBRATION VERIFICATION SOLUTIONS (ICV1, ICV5, AND ICV6)

M6150

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) ***CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS***

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	CN^-	99

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

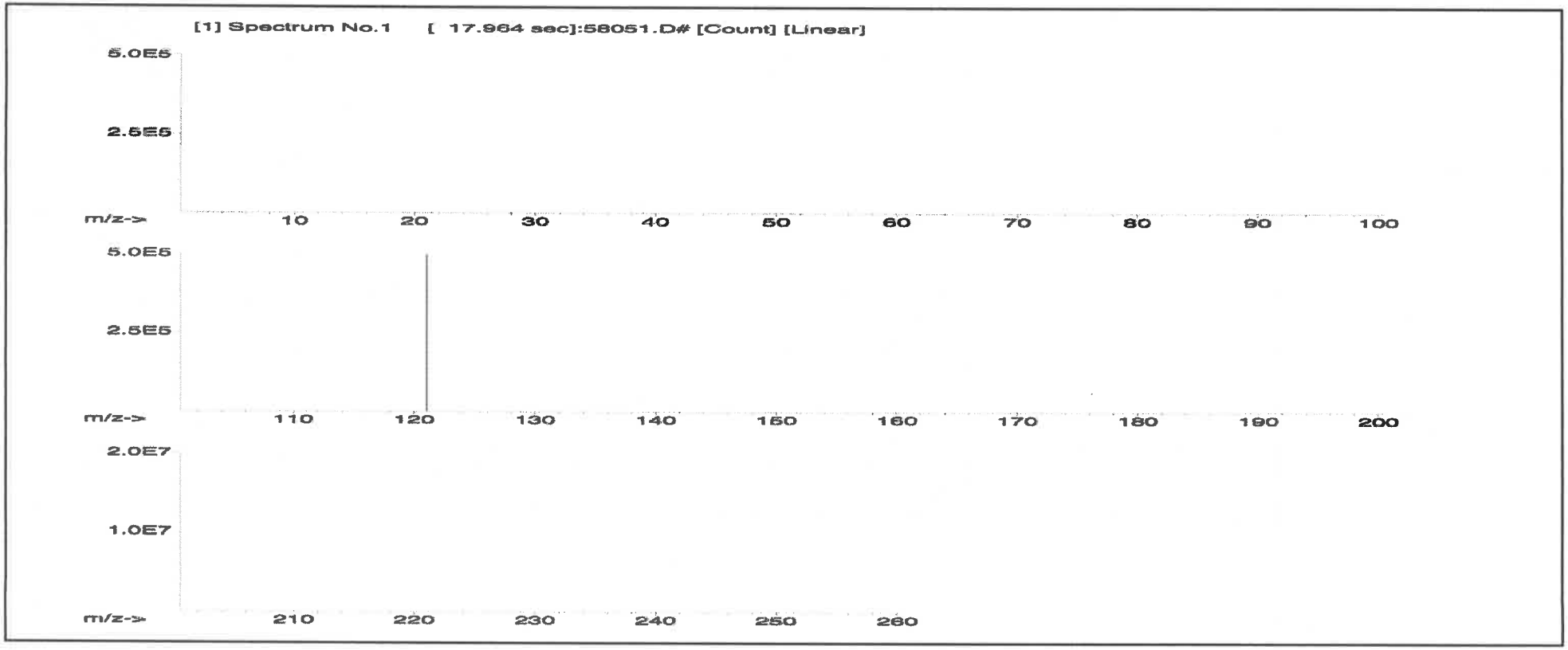
R: 01/03/24 M5802, M5803

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

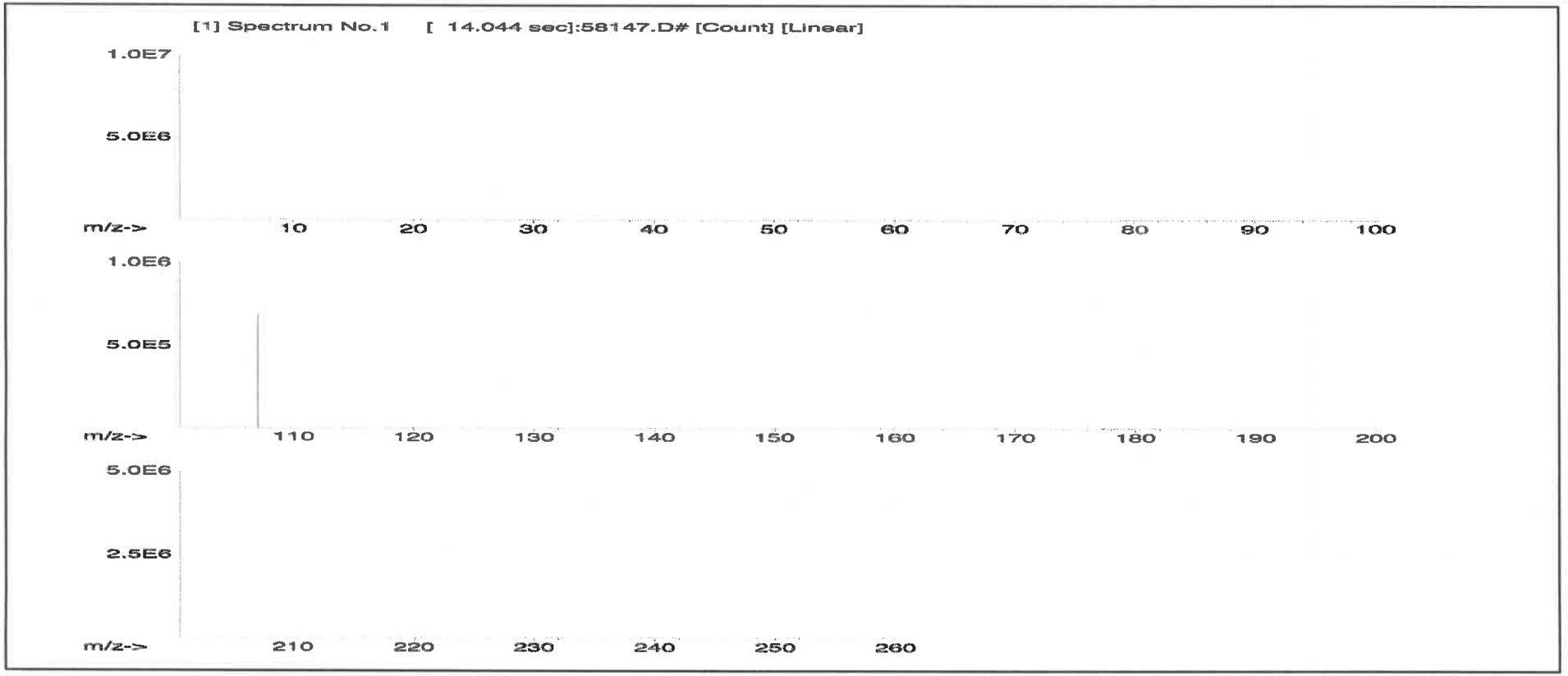
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

		Lot #	
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 8/5/24 M6019

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**998 ± 4 µg/mL** ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985
Assay Method #2	**1001 ± 3 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**1001 ± 2 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_{6}^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6023

R ! 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

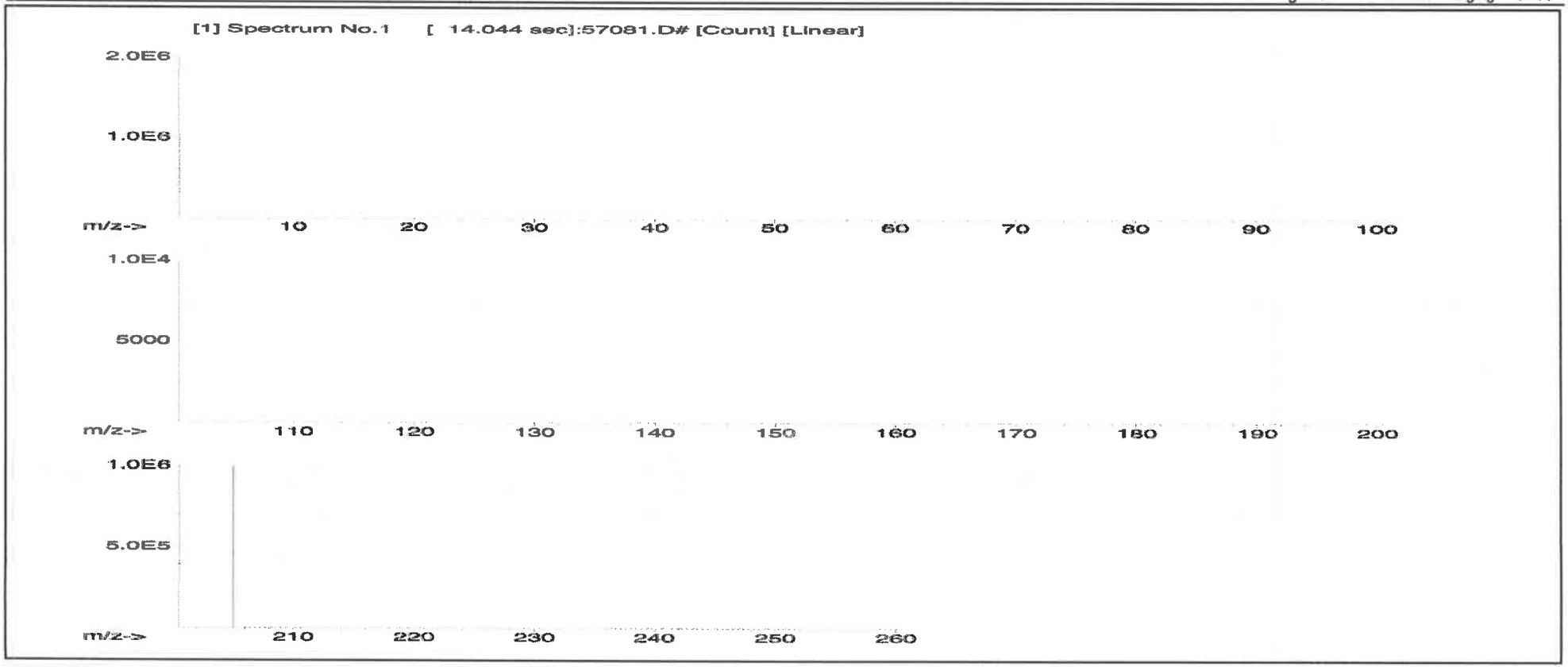
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	57023	24002546	Nitric Acid	
Lot Number:	062424			
Description:	Vanadium (V)	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	1000			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

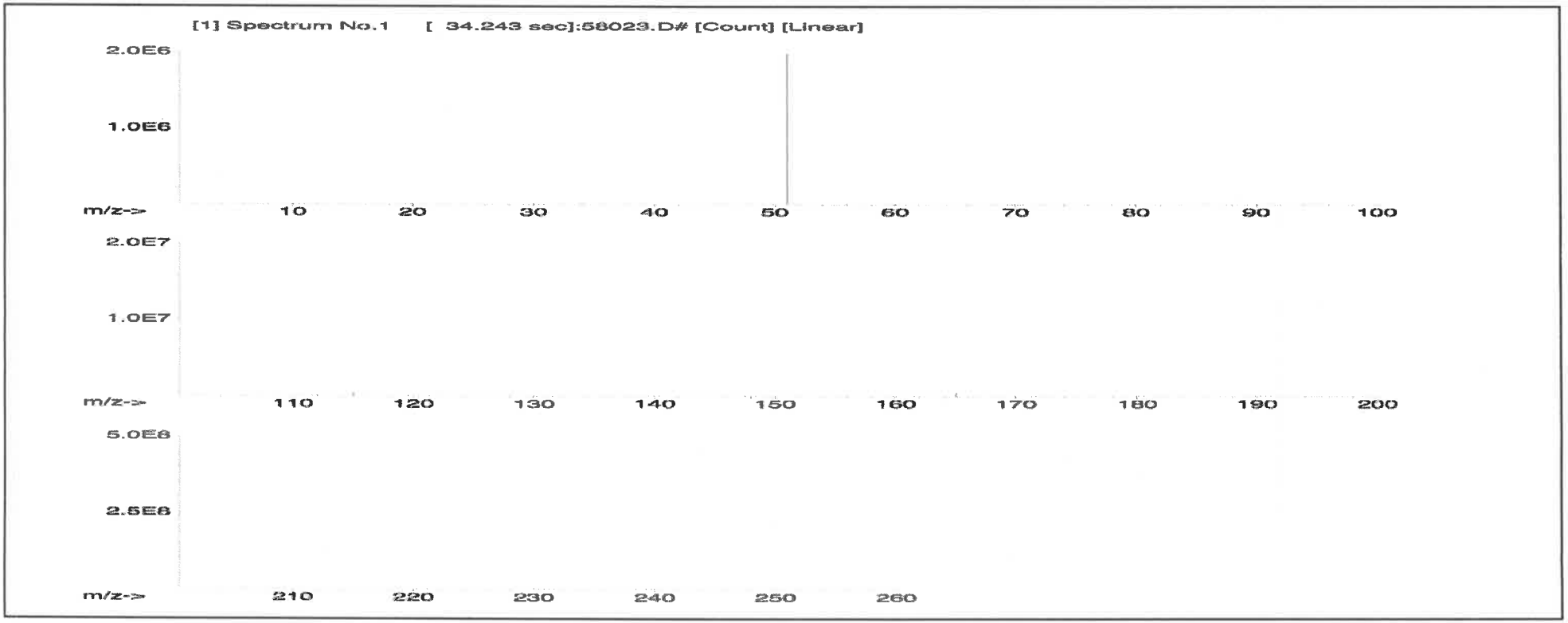
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	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

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. Q1235
QUOTE NO.
COC Number 2041689

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: RU2 Engineering LLC
ADDRESS: 2 Melinda Drive, Monroe Twp, NJ 08831
CITY STATE: ZIP:
ATTENTION: Rutu Manani
PHONE: 609-409-4564 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: SANDTWOBR BMCR Project
PROJECT NO.: LOCATION: Brooklyn, NYC
PROJECT MANAGER: Rutu Manani
e-mail: Rmanani@RU2eng.com
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: Same as company address PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) Standard 10 days DAYS*
HARDCOPY (DATA PACKAGE): Standard 10 days DAYS*
EDD: Standard 10 days DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced
- ☐ NYS ASP A
- ☒ NYS ASP B
- ☐ Other
- ☐ EDD FORMAT

ANALYSIS

1 TCL VOC + TICs MTBE/TBA
2 TCLP VOCs
3 TPH GRO-DRO
4 TCL SVOCs + TICs
5 TAL Metals
6 Pesticides, PCBs
7 RCRA Characteristics
8 Paint filter
9 full TCLP

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
1.	JPP-51.2-012925	So;l		G	1/29/25	14:50	3	X	X	X							
2.	JPP-51.2-012925	So;l	C		1/29/25	15:00	8			X	X	X	X	X	X	X	
3.	JPP-16.1-012925	So;l		G	1/29/25	15:54	3	X	X	X							
4.	JPP-16.1-012925	So;l	C		1/29/25	16:00	8			X	X	X	X	X	X	X	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

PRESERVATIVES: ← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. RA	1/30/2025	1. 1095 1-30-25
2.		2.
3.	DATE/TIME: 1152 1-30-25	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.1 °C
Comments: Preserve extra Sample Jar if additional analysis is Required.

Page 2 of 2

CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

Copyright © 2005

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

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

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1235 RUTW01
Client Name : RU2 Engineering, LLC
Client Contact : Rutu Manani
Invoice Name : RU2 Engineering, LLC
Invoice Contact : Rutu Manani

Order Date : 1/30/2025 12:15:00 PM
Project Name : ~~SANDTWOBR BMCR Bro~~ NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Receive DateTime : 1/30/2025 11:52:00 AM
Purchase Order :

YG 02/04/25

Project Mgr :
Report Type : NYS ASP B
EDD Type : Excel NY
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1235-01	JPP-51.2-012925	Solid	01/29/2025	14:50					
					VOCMS Group1		8260D		10 Bus. Days
Q1235-05	JPP-16.1-012925	Solid	01/29/2025	15:54					
					VOCMS Group1		8260D		10 Bus. Days

Relinguished By :
Date / Time : 1/30/25 1300

Received By :
Date / Time : 1-30-25 13:00

Storage Area : VOA Refridgerator Room

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
Fax : 908 789 8922

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1235 RUTW01
Client Name : RU2 Engineering, LLC
Client Contact : Rutu Manani
Invoice Name : RU2 Engineering, LLC
Invoice Contact : Rutu Manani

Order Date : 1/30/2025 12:15:00 PM
Project Name : ~~SANDTWOBR BMCR Bro~~ NYCDDC SANTWOBR Brooklyn Bridge BBMCR
Receive DateTime : 1/30/2025 11:52:00 AM
Purchase Order :

YG 02/04/25

Project Mgr :
Report Type : NYS ASP B
EDD Type : Excel NY
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1235-01	JPP-51.2-012925	Solid	01/29/2025	14:50					
					Gasoline Range Organics		8015D		10 Bus. Days
Q1235-05	JPP-16.1-012925	Solid	01/29/2025	15:54					
					Gasoline Range Organics		8015D		10 Bus. Days

Relinguished By :
Date / Time : 1/30/25 1300

Received By :
Date / Time : 1-30-25 13:00

Storage Area : VOA Refridgerator Room