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DATA PACKAGE

METALS

PROJECT NAME : NWIRP BETHPAGE 112G08005-WE13

TETRA TECH NUS, INC.

661 Andersen Drive

Suite 200

Pittsburgh, PA - 15220-2745

Phone No: 412-921-7090

ORDER ID : Q3142

ATTENTION : Ernie Wu

Laboratory Certification ID # 20012

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Cover Page

Order ID : Q3142

Project ID : NWIRP Bethpage 112G08005-WE13

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
Q3142-01	RW8-SP100-20250918
Q3142-02	RW8-SP303-20250918

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

Signature : _____ Date: 9/26/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

Tetra Tech NUS, Inc.
Project Name: NWIRP Bethpage 112G08005-WE13
Project Manager : Ernie Wu
Order ID # Q3142
Test Name: Metals Group4

A. Number of Samples and Date of Receipt:
2 Water samples were received on 09/18/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Metals Group4. This data package contains results for Metals Group4.

C. Analytical Techniques:
The analysis of Metals Group4 was based on method 6010D and digestion based on method 3010 (waters).

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

E. Additional Comments:
The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

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

Signature_____

Alliance TECHNICAL GROUP
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

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q3142 MATRIX: Water

METHOD: 6010D

		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:

The laboratory certifies that the all-electronic diskette deliverable exactly match the data summary forms (i.e. Form Is).

_____ _____

QA REVIEW Date

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q3142

	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:** 09/26/2025

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LAB CHRONICLE

OrderID:	Q3142	**OrderDate:**	9/18/2025 4:02:00 PM
Client:	Tetra Tech NUS, Inc.	**Project:**	NWIRP Bethpage 112G08005-WE13
Contact:	Ernie Wu	**Location:**	J51

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3142-01	**RW8-SP100-20250918**	**Water**			**09/18/25**			**09/18/25**
			Metals Group4	6010D		09/22/25	09/24/25	
Q3142-02	**RW8-SP303-20250918**	**Water**			**09/18/25**			**09/18/25**
			Metals Group4	6010D		09/22/25	09/24/25	

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Hit Summary Sheet
SW-846

SDG No.: Q3142 **Order ID:** Q3142

Client: Tetra Tech NUS, Inc. **Project ID:** NWIRP Bethpage 112G08005-WE13

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	LOD	RDL	Units
Client ID : RW8-SP100-20250918									
Q3142-01	RW8-SP100-20250918	Water	Iron	651		11.7	40.0	50.0	ug/L
Client ID : RW8-SP303-20250918									
Q3142-02	RW8-SP303-20250918	Water	Iron	49.3	J	11.7	40.0	50.0	ug/L

SAMPLE DATA

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	09/18/25
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	09/18/25
Client Sample ID:	RW8-SP100-20250918	SDG No.:	Q3142
Lab Sample ID:	Q3142-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	651		1	11.7	40.0	50.0	ug/L	09/22/25 10:40	09/24/25 15:11	6010D	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group4				

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

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

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	09/18/25
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	09/18/25
Client Sample ID:	RW8-SP303-20250918	SDG No.:	Q3142
Lab Sample ID:	Q3142-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOD	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7439-89-6	Iron	49.3	J	1	11.7	40.0	50.0	ug/L	09/22/25 10:40	09/24/25 15:15	6010D	SW3010

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	Metals Group4				

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

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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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	Iron	3960	4000	99	90 - 110	P	09/24/2025	11:34	LB137295

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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	Iron	115	100	115	80 - 120	P	09/24/2025	11:44	LB137295

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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	Iron	5200	5000	104	90 - 110	P	09/24/2025	12:21	LB137295
CCV02	Iron	5020	5000	100	90 - 110	P	09/24/2025	13:40	LB137295
CCV03	Iron	4740	5000	95	90 - 110	P	09/24/2025	14:42	LB137295
CCV04	Iron	4960	5000	99	90 - 110	P	09/24/2025	15:41	LB137295
CCV05	Iron	4990	5000	100	90 - 110	P	09/24/2025	16:31	LB137295
CCV06	Iron	4900	5000	98	90 - 110	P	09/24/2025	17:33	LB137295
CCV07	Iron	4850	5000	97	90 - 110	P	09/24/2025	18:37	LB137295
CCV08	Iron	4890	5000	98	90 - 110	P	09/24/2025	19:03	LB137295

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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
CRI01	Iron	94.1	100	94	65 - 135	P	09/24/2025	12:00	LB137295

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Iron	23.4	+/-50	U	80.0	100	P	09/24/2025	11:56	LB137295

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOD	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Iron	23.4	+/-50	U	80.0	100	P	09/24/2025	12:26	LB137295
CCB02	Iron	23.4	+/-50	U	80.0	100	P	09/24/2025	13:44	LB137295
CCB03	Iron	23.4	+/-50	U	80.0	100	P	09/24/2025	14:46	LB137295
CCB04	Iron	23.4	+/-50	U	80.0	100	P	09/24/2025	15:46	LB137295
CCB05	Iron	23.4	+/-50	U	80.0	100	P	09/24/2025	16:35	LB137295
CCB06	Iron	23.4	+/-50	U	80.0	100	P	09/24/2025	17:37	LB137295
CCB07	Iron	23.4	+/-50	U	80.0	100	P	09/24/2025	18:42	LB137295
CCB08	Iron	23.4	+/-50	U	80.0	100	P	09/24/2025	19:07	LB137295

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169760BL		**WATER**		**Batch Number:**		**PB169760**		**Prep Date:**	**09/22/2025**	
	Iron	11.7	<25	U	40.0	50.0	P	09/24/2025	15:25	LB137295

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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	Iron	103000	101000	102	85600	116500	09/24/2025	12:04	LB137295
ICSAB01	Iron	103000	99300	104	84400	114500	09/24/2025	12:08	LB137295

METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** Q3142

contract: TETR06 **lab code:** ACE

matrix: Water **sample id:** Q3151-02 **client id:** 1402MS

Percent Solids for Sample: NA **Spiked ID:** Q3151-02MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Iron	ug/L	87 - 115	1930		510		1500	95		P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** Q3142

contract: TETR06 **lab code:** ACE

matrix: Water **sample id:** Q3151-02 **client id:** 1402MSD

Percent Solids for Sample: NA **Spiked ID:** Q3151-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Iron	ug/L	87 - 115	1860		510		1500	90		P

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Metals
- 5b -

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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

Sample ID: **Spiked ID:**

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

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Metals

- 6 -
DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3151-02 **Client ID:** 1402DUP

Percent Solids for Sample: NA **Duplicate ID** Q3151-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Iron	ug/L	20	510		421		19		P

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3151-02MS **Client ID:** 1402MSD

Percent Solids for Sample: NA **Duplicate ID** Q3151-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Iron	ug/L	20	1930		1860		4		P

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169760BS							
Iron	ug/L	1500	1430		95	87 - 115	P

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Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

1402L

Lab Name: Alliance **Contract:** TETR06

Lab Code: ACE **Lb No.:** lb137295 **Lab Sample ID :** Q3151-02L **SDG No.:** Q3142

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
Iron	510		413		19		P

METAL PREPARATION & INSTRUMENT DATA

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	-0.0039600

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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
Iron	240.488	0.0000000	0.0000000	0.0000730	0.0000000	-0.0015250

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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
Iron	240.488	0.0000000	-0.0017000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE

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
Iron	240.488	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

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Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3142

Contract: TETR06 **Lab Code:** ACE **Method:**

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(mL)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB169760**						
PB169760BL	PB169760BL	MB	WATER	09/22/2025	50.0	25.0	
PB169760BS	PB169760BS	LCS	WATER	09/22/2025	50.0	25.0	
Q3142-01	RW8-SP100-20250918	SAM	WATER	09/22/2025	50.0	25.0	
Q3142-02	RW8-SP303-20250918	SAM	WATER	09/22/2025	50.0	25.0	
Q3151-02DUP	1402DUP	DUP	WATER	09/22/2025	50.0	25.0	
Q3151-02MS	1402MS	MS	WATER	09/22/2025	50.0	25.0	
Q3151-02MSD	1402MSD	MSD	WATER	09/22/2025	50.0	25.0	

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

metals
- 14 -
ANALYSIS RUN LOG

Client: Tetra Tech NUS, Inc. **Contract:** TETR06

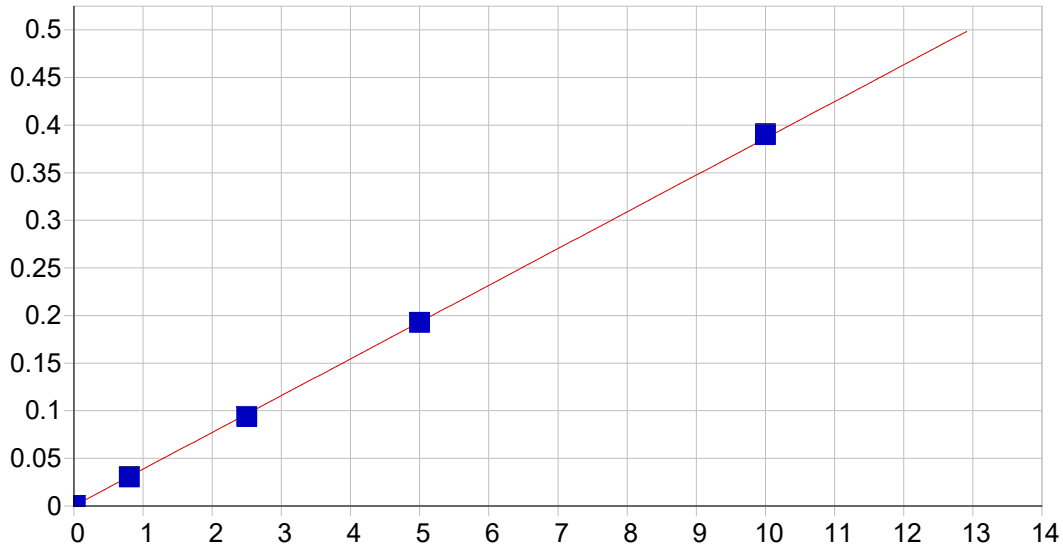
Lab code: ACE **Sdg no.:** Q3142

Instrument id number: **Method:** **Run number:** LB137295

Start date: 09/24/2025 **End date:** 09/24/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1054	Fe
S1	S1	1	1058	Fe
S2	S2	1	1103	Fe
S3	S3	1	1107	Fe
S4	S4	1	1110	Fe
S5	S5	1	1115	Fe
ICV01	ICV01	1	1134	Fe
LLICV01	LLICV01	1	1144	Fe
ICB01	ICB01	1	1156	Fe
CRI01	CRI01	1	1200	Fe
ICSA01	ICSA01	1	1204	Fe
ICSAB01	ICSAB01	1	1208	Fe
CCV01	CCV01	1	1221	Fe
CCB01	CCB01	1	1226	Fe
CCV02	CCV02	1	1340	Fe
CCB02	CCB02	1	1344	Fe
CCV03	CCV03	1	1442	Fe
CCB03	CCB03	1	1446	Fe
Q3151-02DUP	1402DUP	1	1450	Fe
Q3151-02L	1402L	5	1455	Fe
Q3151-02MS	1402MS	1	1459	Fe
Q3151-02MSD	1402MSD	1	1503	Fe
Q3142-01	RW8-SP100-20250918	1	1511	Fe
Q3142-02	RW8-SP303-20250918	1	1515	Fe
PB169760BL	PB169760BL	1	1525	Fe
PB169760BS	PB169760BS	1	1533	Fe
CCV04	CCV04	1	1541	Fe
CCB04	CCB04	1	1546	Fe
CCV05	CCV05	1	1631	Fe
CCB05	CCB05	1	1635	Fe
CCV06	CCV06	1	1733	Fe
CCB06	CCB06	1	1737	Fe
CCV07	CCV07	1	1837	Fe
CCB07	CCB07	1	1842	Fe
CCV08	CCV08	1	1903	Fe
CCB08	CCB08	1	1907	Fe

METAL
RAW DATA

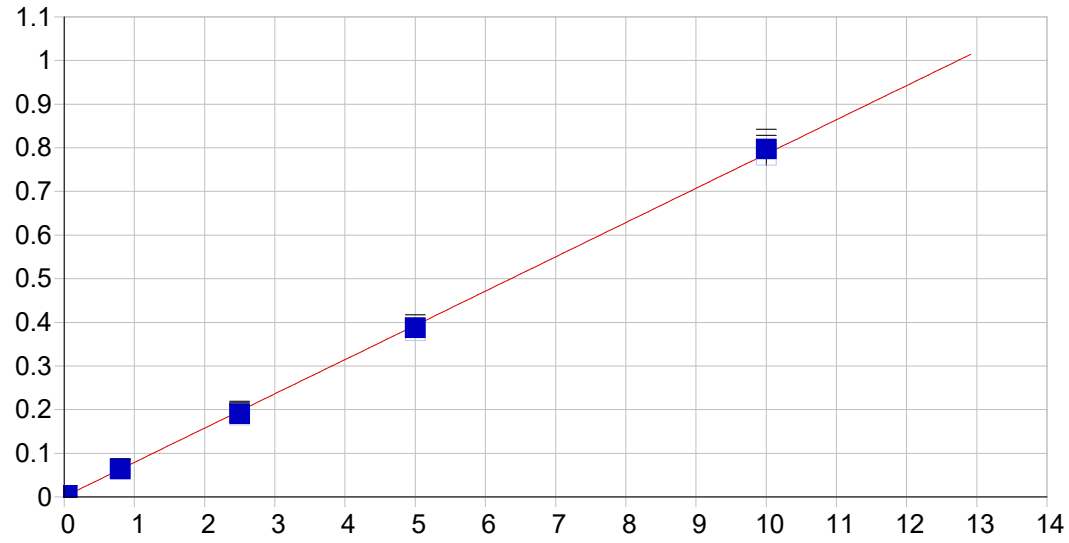


As 189.042 {479}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000139	Re-Slope:	1.000000
A1 (Gain):	0.038599	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999902	Status:	OK.
Std Error of Est:	0.000013		
Predicted MDL:	0.003014		
Predicted MQL:	0.010048		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00014	.000	1
S1	.02000	.02043	.000	2.14	.00092	.000	1
S3	2.5000	2.4254	-.075	-2.98	.09366	.000	1
S4	5.0000	4.9895	-.010	-.210	.19253	.000	1
S5	10.000	10.100	.100	1.00	.38961	.001	1
S2	.80000	.78427	-.016	-1.97	.03038	.000	1

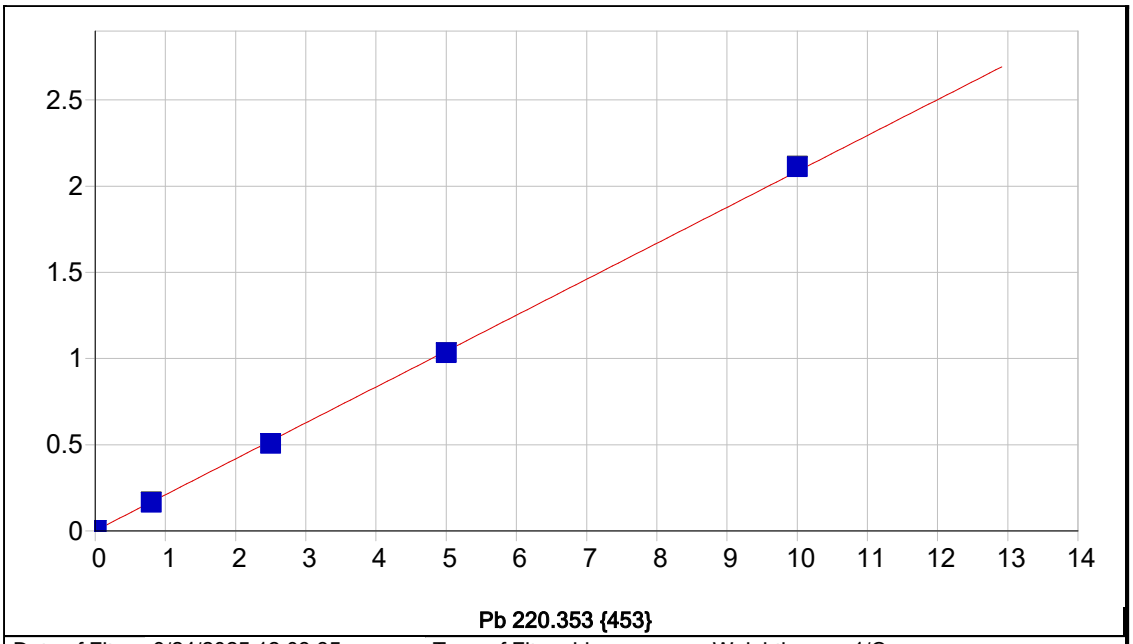


Tl 190.856 {477}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000584	Re-Slope:	1.000000
A1 (Gain):	0.078505	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999840	Status:	OK.
Std Error of Est:	0.000046		
Predicted MDL:	0.002502		
Predicted MQL:	0.008341		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00058	.000	1
S1	.04000	.04168	.002	4.21	.00366	.000	1
S3	2.5000	2.4209	-.079	-3.16	.18706	.006	1
S4	5.0000	4.9292	-.071	-1.42	.38039	.007	1
S5	10.000	10.143	.143	1.43	.78250	.023	1
S2	.80000	.80571	.006	.714	.06269	.001	1

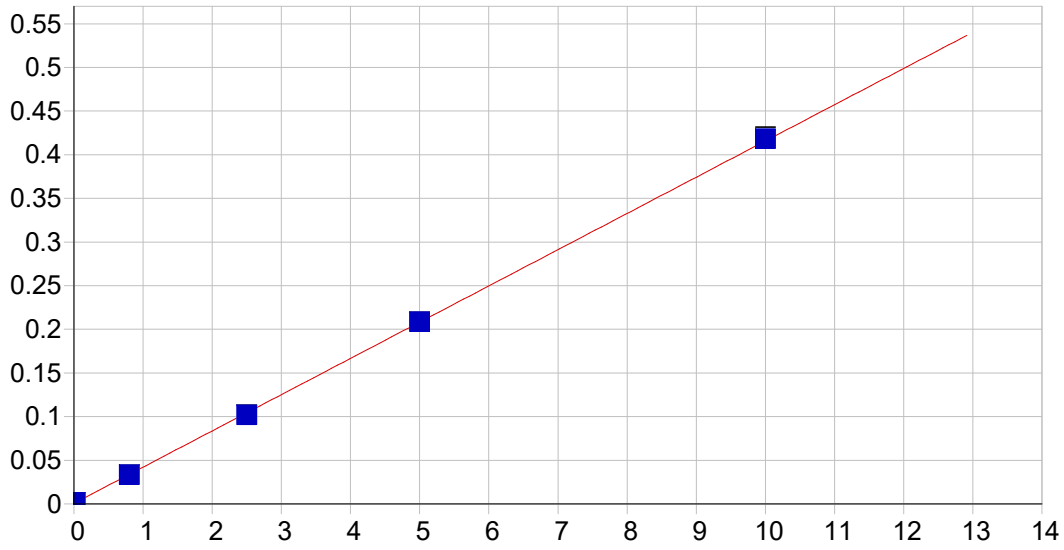


Pb 220.353 {453}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001387	Re-Slope:	1.000000
A1 (Gain):	0.208399	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999876	Status:	OK.
Std Error of Est:	0.000060		
Predicted MDL:	0.001502		
Predicted MQL:	0.005006		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00139	.000	1
S1	.01200	.01249	.000	4.05	.00394	.000	1
S3	2.5000	2.4258	-.074	-2.97	.50634	.001	1
S4	5.0000	4.9518	-.048	-.964	1.0322	.001	1
S5	10.000	10.132	.132	1.32	2.1105	.003	1
S2	.80000	.79011	-.010	-1.24	.16586	.001	1

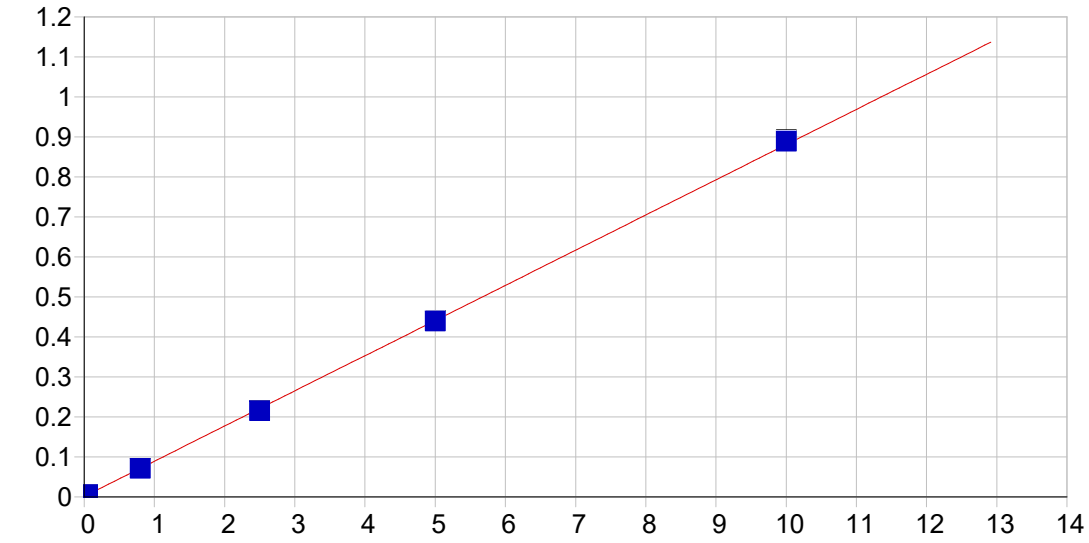


Se 196.090 {472}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000632	Re-Slope:	1.000000
A1 (Gain):	0.041511	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999923	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.003630		
Predicted MQL:	0.012101		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00063	.000	1
S1	.02000	.02374	.004	18.7	.00162	.000	1
S3	2.5000	2.4369	-.063	-2.52	.10176	.000	1
S4	5.0000	5.0078	.008	.155	.20845	.001	1
S5	10.000	10.061	.061	.614	.41817	.002	1
S2	.80000	.79013	-.010	-1.23	.03342	.000	1

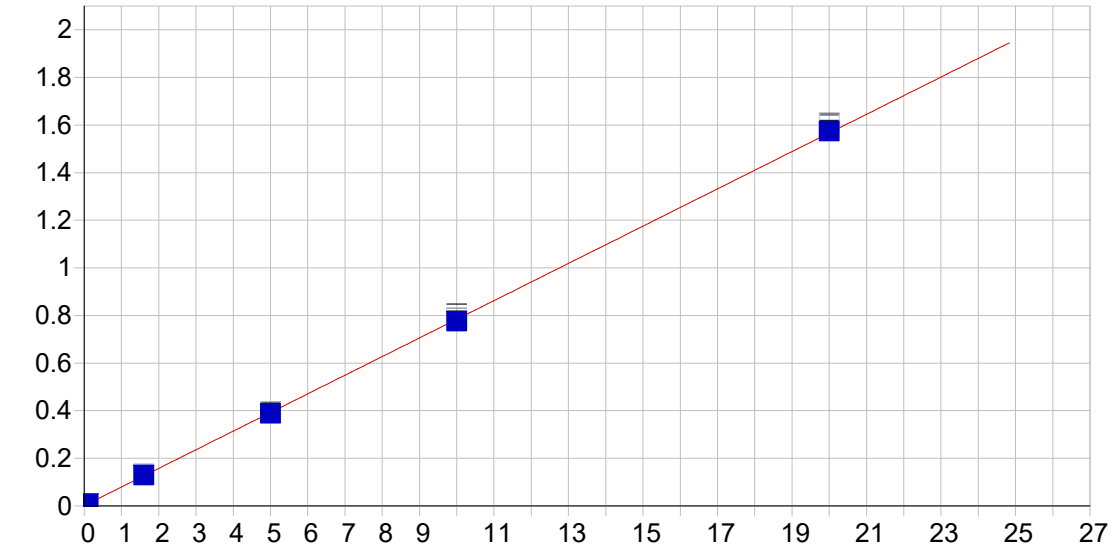


Sb 206.833 {463}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001250	Re-Slope:	1.000000
A1 (Gain):	0.087940	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999917	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.002246		
Predicted MQL:	0.007485		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00125	.000	1
S1	.05000	.05124	.001	2.47	.00576	.000	1
S3	2.5000	2.4296	-.070	-2.82	.21550	.000	1
S4	5.0000	4.9835	-.017	-.330	.44069	.000	1
S5	10.000	10.095	.095	.947	.89137	.001	1
S2	.80000	.79098	-.009	-1.13	.07100	.000	1

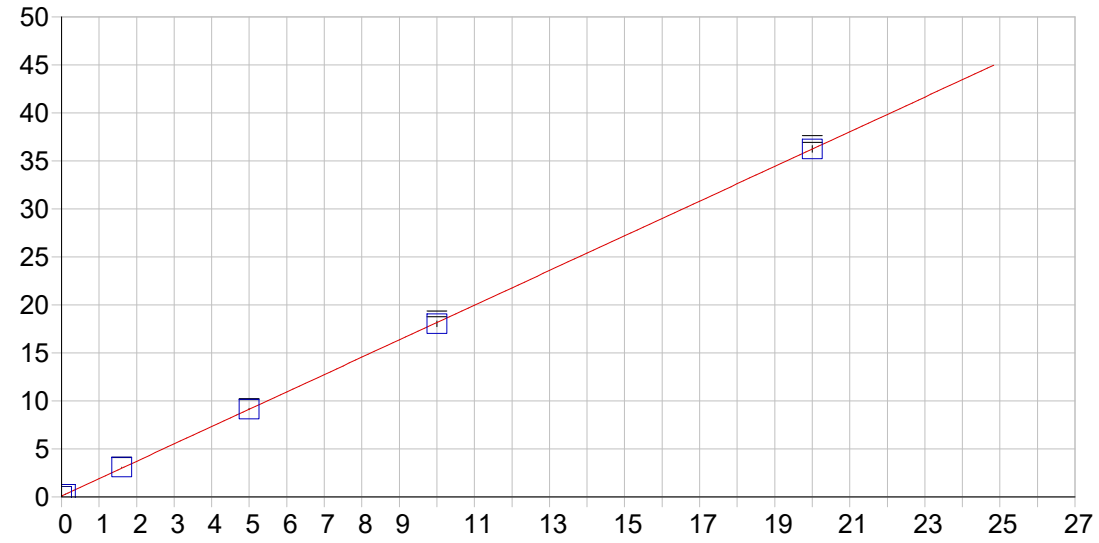


Al 396.152 { 85}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000956	Re-Slope:	1.000000
A1 (Gain):	0.078297	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999939	Status:	OK.
Std Error of Est:	0.000065		
Predicted MDL:	0.013786		
Predicted MQL:	0.045953		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00096	.001	1
S1	.10000	.11209	.012	12.1	.01034	.000	1
S3	5.0000	4.9494	-.051	-1.01	.39608	.001	1
S4	10.000	9.8989	-.101	-1.01	.79121	.015	1
S5	20.000	20.096	.096	.478	1.6048	.004	1
S2	1.6000	1.6432	.043	2.70	.13204	.001	1

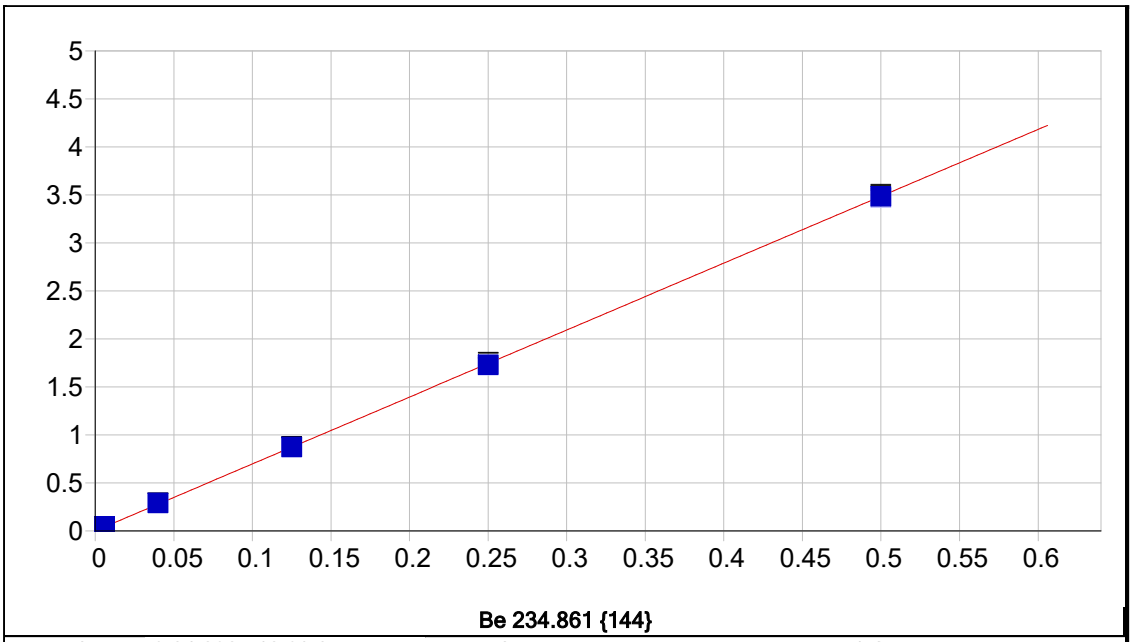


Ba 493.409 { 68}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.100671	Re-Slope:	1.000000
A1 (Gain):	1.806480	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.001093		
Predicted MDL:	0.001493		
Predicted MQL:	0.004977		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.10066	.002	1
S1	.10000	.10065	.001	.650	.28249	.003	1
S3	5.0000	5.0074	.007	.147	9.1464	.038	1
S4	10.000	9.9279	-.072	-.721	18.035	.300	1
S5	20.000	20.009	.009	.044	36.246	.349	1
S2	1.6000	1.6552	.055	3.45	3.0908	.014	1

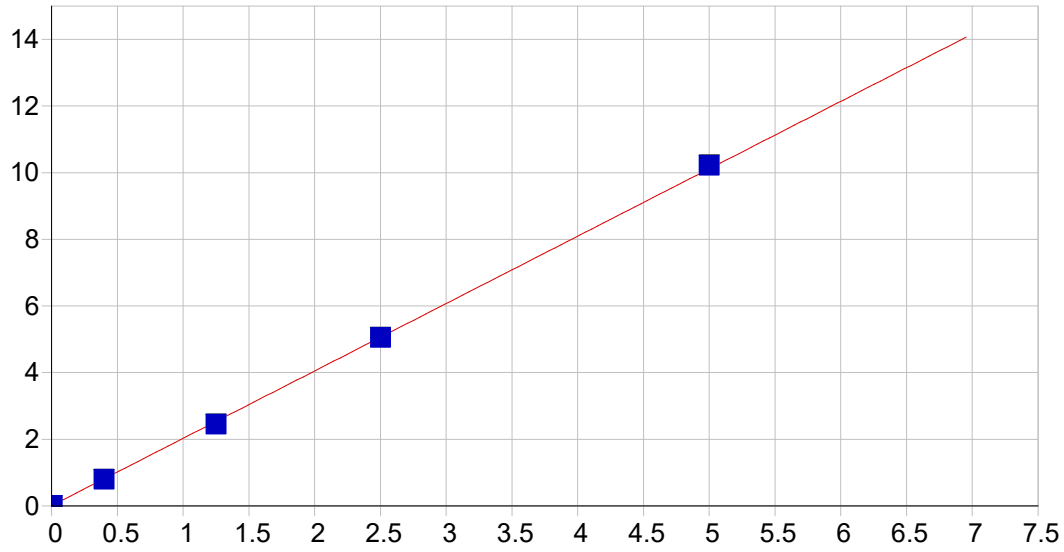


Be 234.861 {144}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000875	Re-Slope:	1.000000
A1 (Gain):	6.970879	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999940	Status:	OK.
Std Error of Est:	0.000218		
Predicted MDL:	0.000094		
Predicted MQL:	0.000314		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00087	.000	1
S1	.00600	.00639	.000	6.52	.04512	.000	1
S3	.12500	.12522	.000	.173	.86984	.005	1
S4	.25000	.24805	-.002	-.778	1.7222	.026	1
S5	.50000	.49969	-.000	-.061	3.4686	.023	1
S2	.04000	.04164	.002	4.11	.28993	.000	1

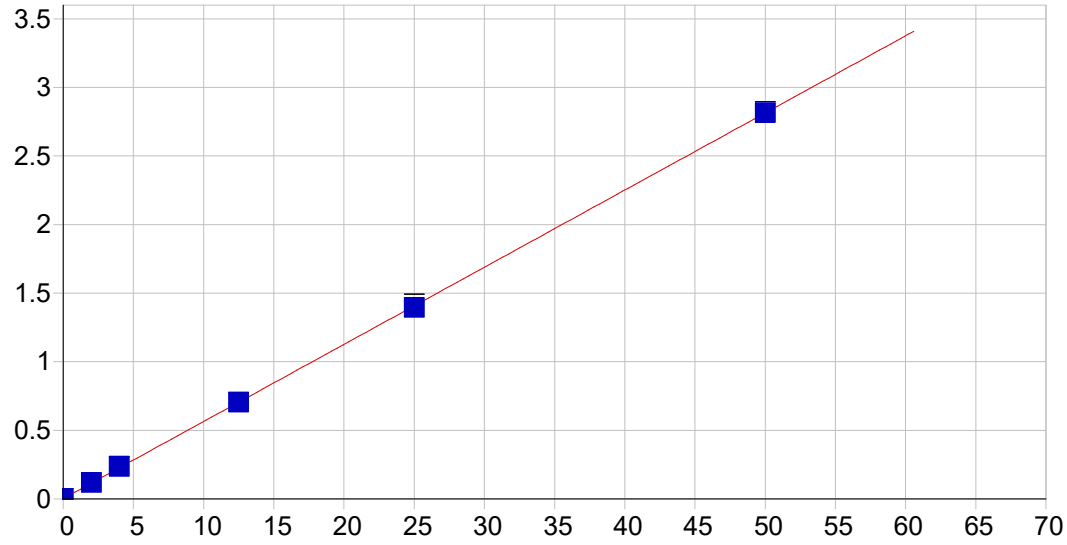


Cd 226.502 {449}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005279	Re-Slope:	1.000000
A1 (Gain):	2.022406	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999893	Status:	OK.
Std Error of Est:	0.000269		
Predicted MDL:	0.000120		
Predicted MQL:	0.000401		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00528	.000	1
S1	.00600	.00613	.000	2.16	.01772	.000	1
S3	1.2500	1.2105	-.040	-3.16	2.4550	.004	1
S4	2.5000	2.4969	-.003	-.125	5.0583	.005	1
S5	5.0000	5.0512	.051	1.02	10.227	.007	1
S2	.40000	.39138	-.009	-2.16	.79734	.001	1

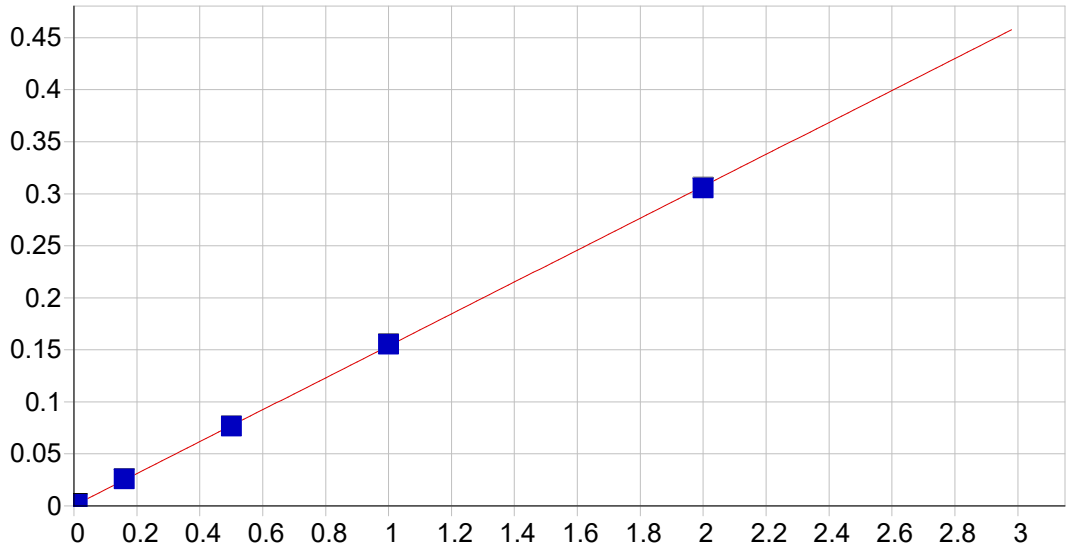


Ca 373.690 { 90}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002159	Re-Slope:	1.000000
A1 (Gain):	0.056236	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999942	Status:	OK.
Std Error of Est:	0.000320		
Predicted MDL:	0.015167		
Predicted MQL:	0.050555		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00013	-.000	.000	.00215	.000	1
S2	4.0000	4.1578	.158	3.95	.23598	.001	1
S3	12.500	12.471	-.029	-.234	.70346	.002	1
S4	25.000	24.777	-.223	-.893	1.3955	.026	1
S5	50.000	50.024	.024	.047	2.8153	.009	1
S1	2.0000	2.0709	.071	3.55	.11862	.000	1

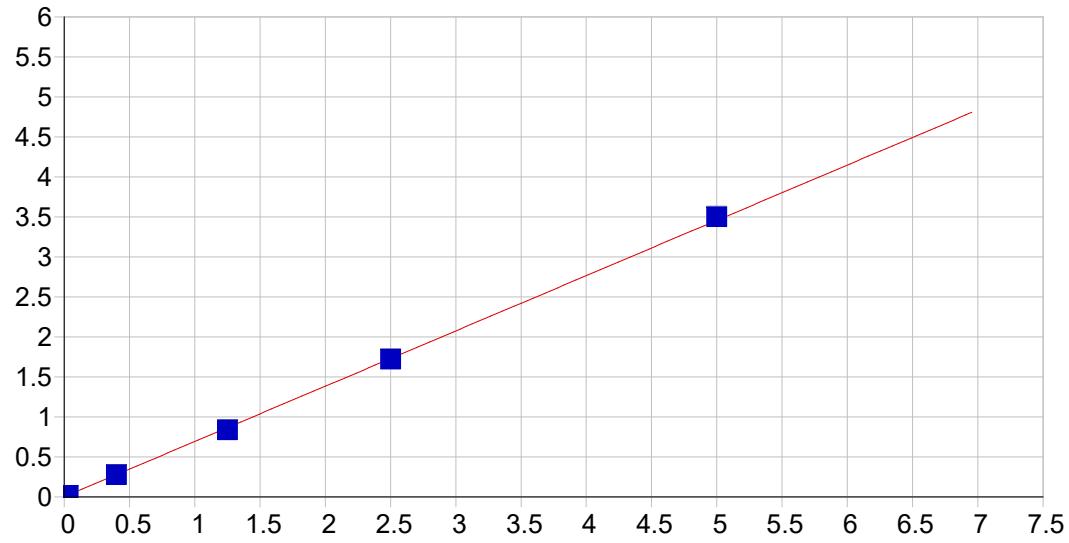


Cr 267.716 {126}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000399	Re-Slope:	1.000000
A1 (Gain):	0.153404	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.000503		
Predicted MQL:	0.001678		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00040	.000	1
S1	.01000	.01012	.000	1.16	.00195	.000	1
S3	.50000	.49619	-.004	-.763	.07658	.000	1
S4	1.0000	1.0093	.009	.931	.15535	.000	1
S5	2.0000	1.9890	-.011	-.549	.30577	.000	1
S2	.16000	.16537	.005	3.36	.02579	.000	1

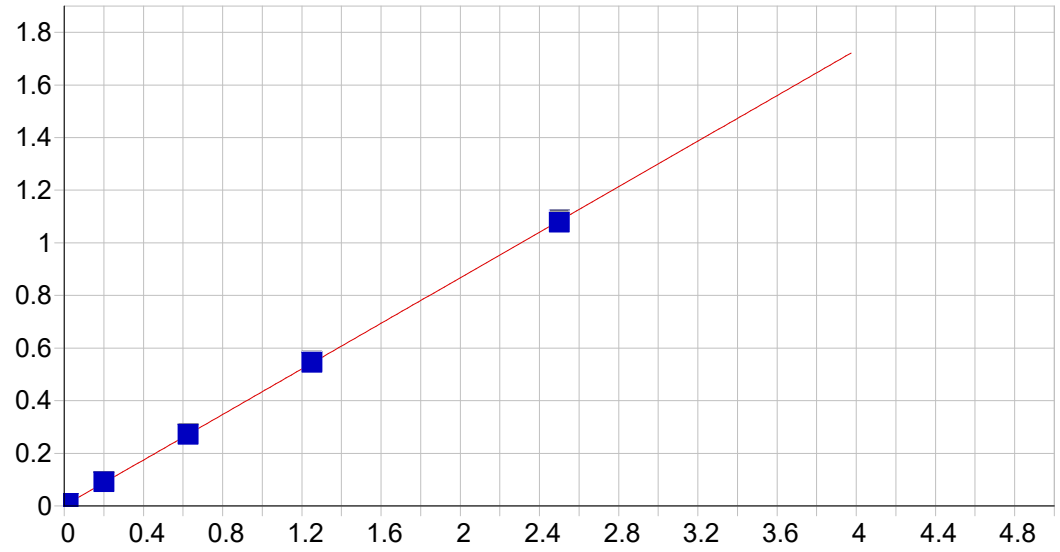


Co 228.616 {448}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001929	Re-Slope:	1.000000
A1 (Gain):	0.690992	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999873	Status:	OK.
Std Error of Est:	0.000224		
Predicted MDL:	0.000311		
Predicted MQL:	0.001035		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00193	.000	1
S1	.03000	.02975	-.000	-.825	.02240	.000	1
S3	1.2500	1.2082	-.042	-3.34	.83826	.001	1
S4	2.5000	2.4855	-.014	-.579	1.7223	.001	1
S5	5.0000	5.0622	.062	1.24	3.5057	.004	1
S2	.40000	.39435	-.006	-1.41	.27489	.000	1

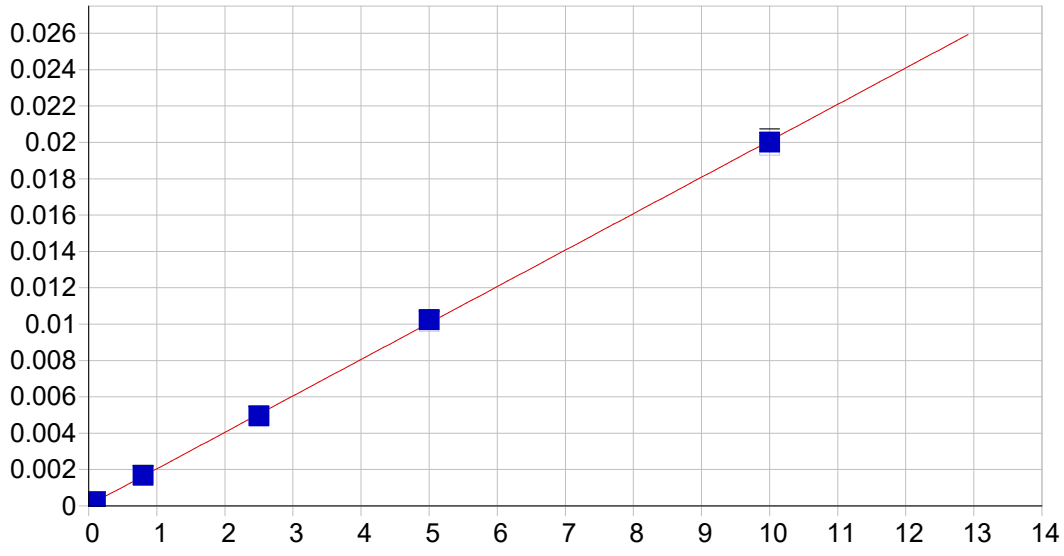


Cu 224.700 {450}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001369	Re-Slope:	1.000000
A1 (Gain):	0.432926	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999959	Status:	OK.
Std Error of Est:	0.000047		
Predicted MDL:	0.000637		
Predicted MQL:	0.002124		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00137	.000	1
S1	.02000	.02120	.001	5.99	.01064	.000	1
S3	.62500	.62358	-.001	-.228	.27359	.000	1
S4	1.2500	1.2565	.007	.520	.54985	.000	1
S5	2.5000	2.4872	-.013	-.511	1.0872	.001	1
S2	.20000	.20650	.007	3.25	.09149	.000	1

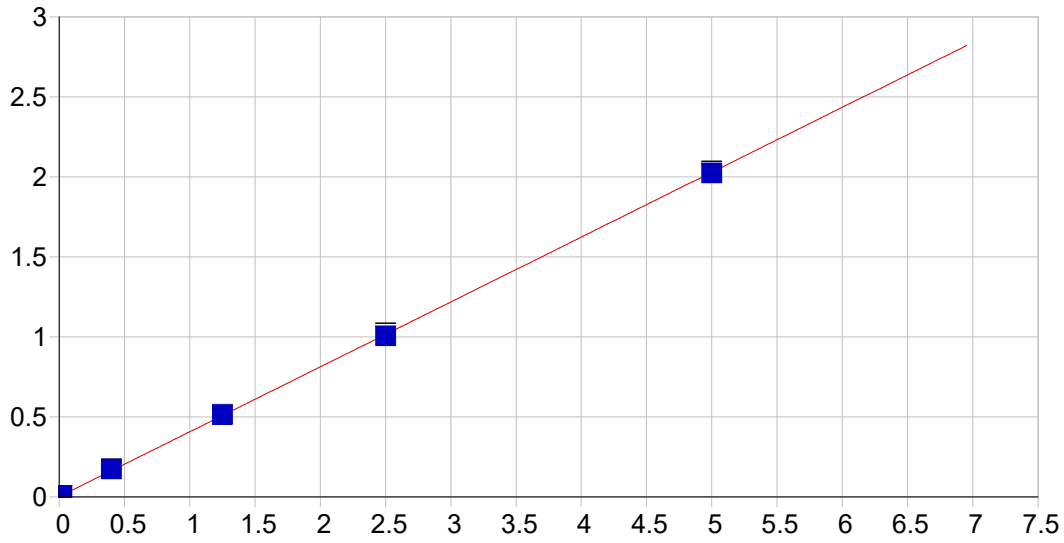


Fe 240.488 {140}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000036	Re-Slope:	1.000000
A1 (Gain):	0.002005	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.011664		
Predicted MQL:	0.038881		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00004	.000	1
S1	.10000	.09731	-.003	-2.69	.00023	.000	1
S3	2.5000	2.4455	-.054	-2.18	.00490	.000	1
S4	5.0000	5.0850	.085	1.70	.01015	.000	1
S5	10.000	9.9577	-.042	-.423	.01983	.000	1
S2	.80000	.81441	.014	1.80	.00166	.000	1

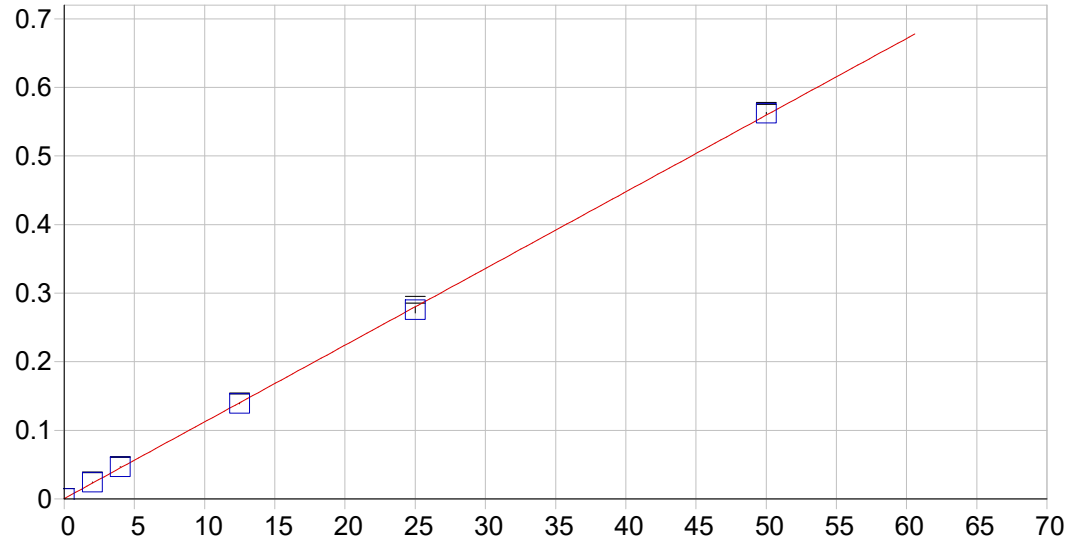


Mn 257.610 {131}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001559	Re-Slope:	1.000000
A1 (Gain):	0.405590	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999896	Status:	OK.
Std Error of Est:	0.000097		
Predicted MDL:	0.000771		
Predicted MQL:	0.002569		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00156	.000	1
S1	.02000	.02045	.000	2.26	.00986	.000	1
S3	1.2500	1.2641	.014	1.13	.51438	.002	1
S4	2.5000	2.4764	-.024	-.944	1.0062	.017	1
S5	5.0000	4.9847	-.015	-.306	2.0237	.012	1
S2	.40000	.42431	.024	6.08	.17369	.001	1

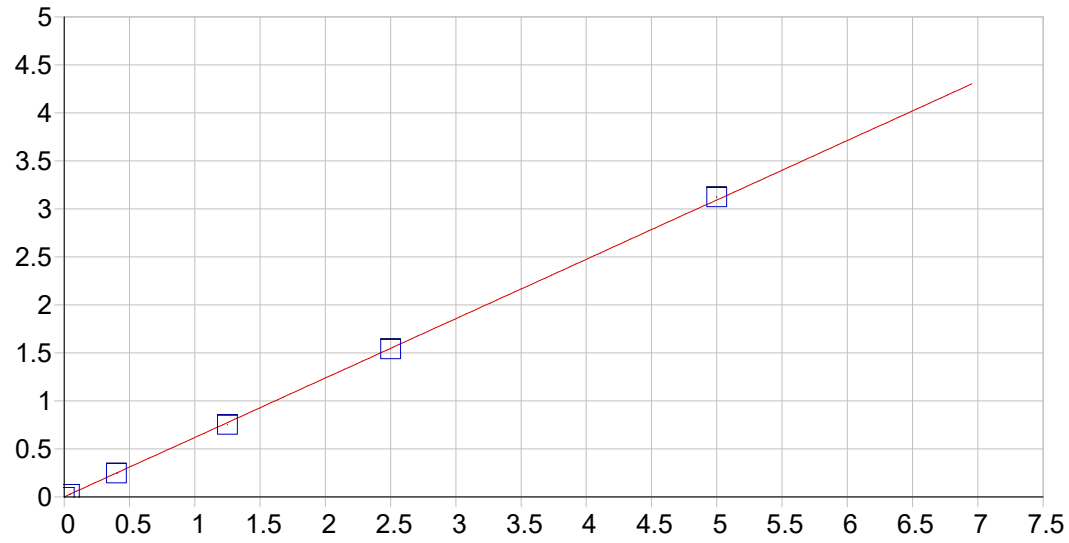


Mg 279.079 {121}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000538	Re-Slope:	1.000000
A1 (Gain):	0.011180	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999905	Status:	OK.
Std Error of Est:	0.000082		
Predicted MDL:	0.035463		
Predicted MQL:	0.118211		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00014	-.000	.000	.00054	.000	1
S2	4.0000	4.1246	.125	3.11	.04665	.001	1
S3	12.500	12.399	-.101	-.812	.13916	.001	1
S4	25.000	24.628	-.372	-1.49	.27589	.005	1
S5	50.000	50.235	.235	.471	.56218	.001	1
S1	2.0000	2.1136	.114	5.68	.02417	.000	1

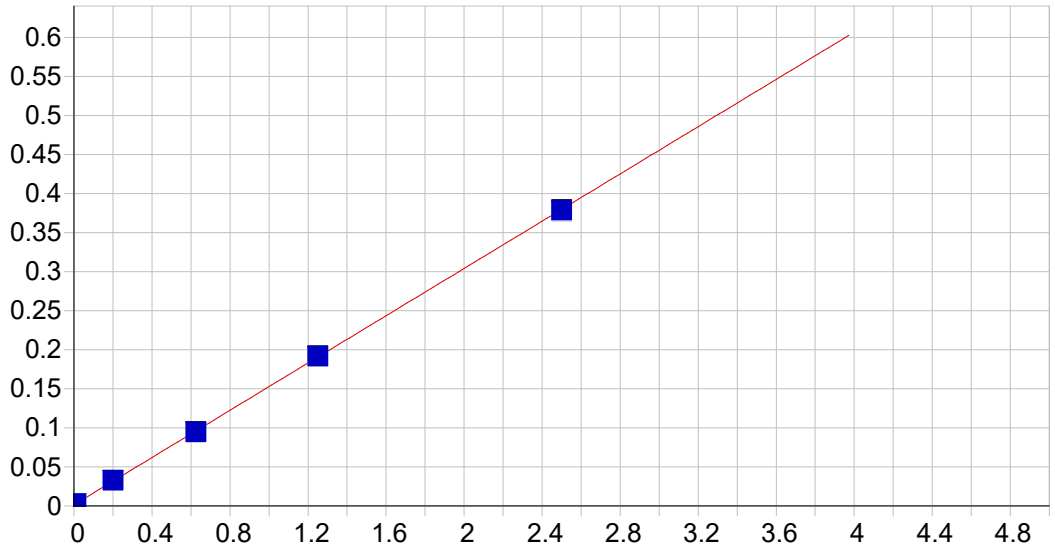


Ni 231.604 {446}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001028	Re-Slope:	1.000000
A1 (Gain):	0.618502	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000192		
Predicted MDL:	0.000402		
Predicted MQL:	0.001341		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00103	.000	1
S1	.04000	.04059	.001	1.48	.02613	.000	1
S3	1.2500	1.2141	-.036	-2.87	.75194	.001	1
S4	2.5000	2.4899	-.010	-.404	1.5410	.001	1
S5	5.0000	5.0492	.049	.985	3.1240	.003	1
S2	.40000	.39619	-.004	-.953	.24607	.001	1

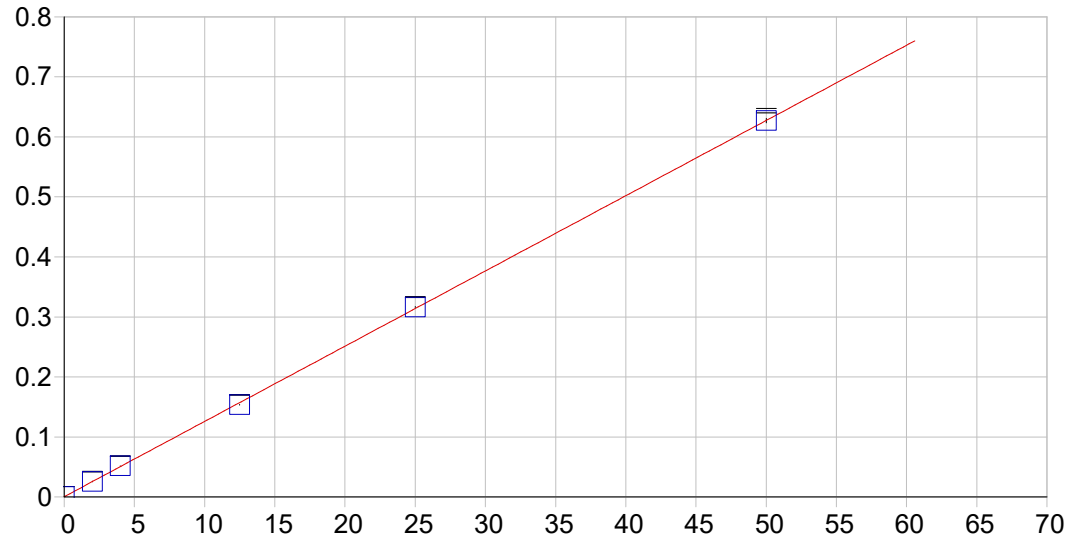


Ag 328.068 {103}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001410	Re-Slope:	1.000000
A1 (Gain):	0.151313	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999961	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.001083		
Predicted MQL:	0.003611		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00141	.000	1
S1	.01000	.01037	.000	3.67	.00296	.000	1
S3	.62500	.61740	-.008	-1.22	.09437	.000	1
S4	1.2500	1.2574	.007	.590	.19075	.001	1
S5	2.5000	2.4938	-.006	-.250	.37691	.001	1
S2	.20000	.20611	.006	3.05	.03245	.000	1

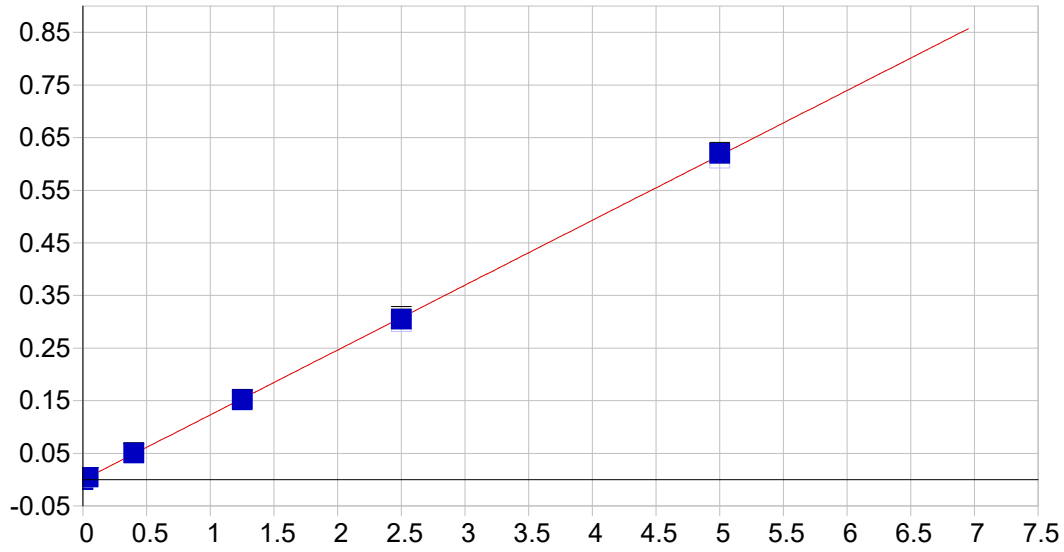


Na 589.592 { 57}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000425	Re-Slope:	1.000000
A1 (Gain):	0.012539	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999946	Status:	OK.
Std Error of Est:	0.000069		
Predicted MDL:	0.014034		
Predicted MQL:	0.046780		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00042	.000	1
S2	4.0000	4.0839	.084	2.10	.05163	.000	1
S3	12.500	12.214	-.286	-2.29	.15357	.001	1
S4	25.000	25.206	.206	.823	.31648	.001	1
S5	50.000	49.990	-.010	-.020	.62725	.004	1
S1	2.0000	2.0068	.007	.340	.02559	.000	1

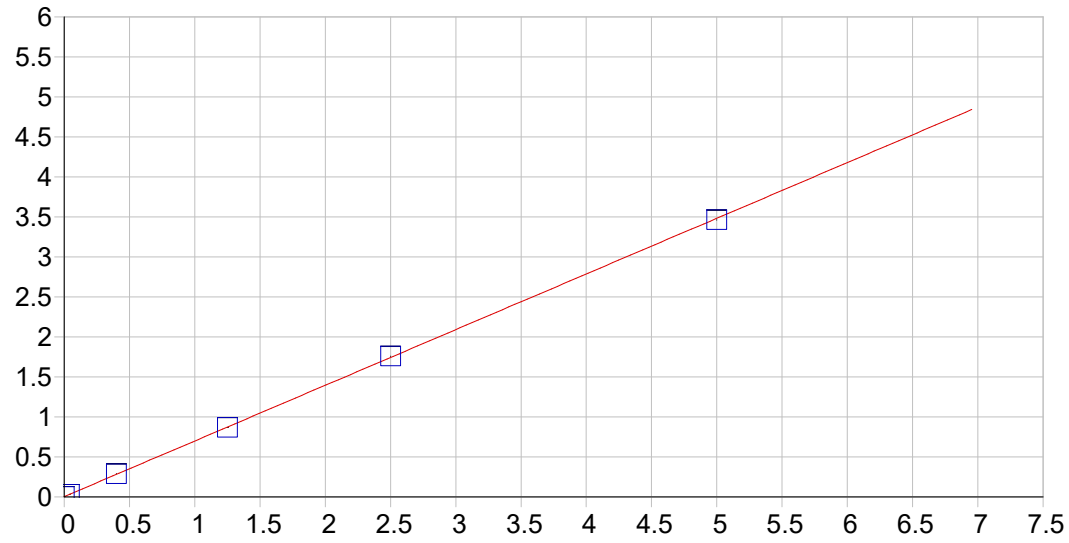


V 292.402 {115}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000398	Re-Slope:	1.000000
A1 (Gain):	0.123329	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.003832		
Predicted MQL:	0.012774		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00040	.000	1
S1	.04000	.04031	.000	.781	.00439	.000	1
S3	1.2500	1.2376	-.012	-.994	.14998	.000	1
S4	2.5000	2.4723	-.028	-1.11	.30001	.005	1
S5	5.0000	5.0287	.029	.574	.61079	.002	1
S2	.40000	.41110	.011	2.78	.04958	.001	1

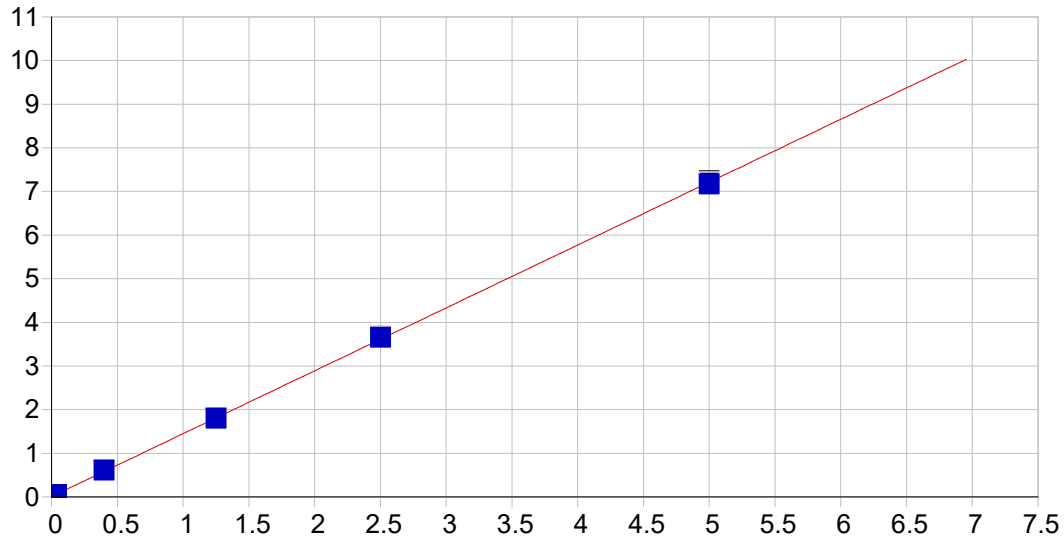


Zn 206.200 {464}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003449	Re-Slope:	1.000000
A1 (Gain):	0.695867	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999956	Status:	OK.
Std Error of Est:	0.000153		
Predicted MDL:	0.000232		
Predicted MQL:	0.000772		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00345	.000	1
S1	.04000	.04122	.001	3.04	.03213	.000	1
S3	1.2500	1.2435	-.007	-.524	.86873	.001	1
S4	2.5000	2.5234	.023	.937	1.7594	.002	1
S5	5.0000	4.9703	-.030	-.594	3.4621	.003	1
S2	.40000	.41160	.012	2.90	.28987	.001	1

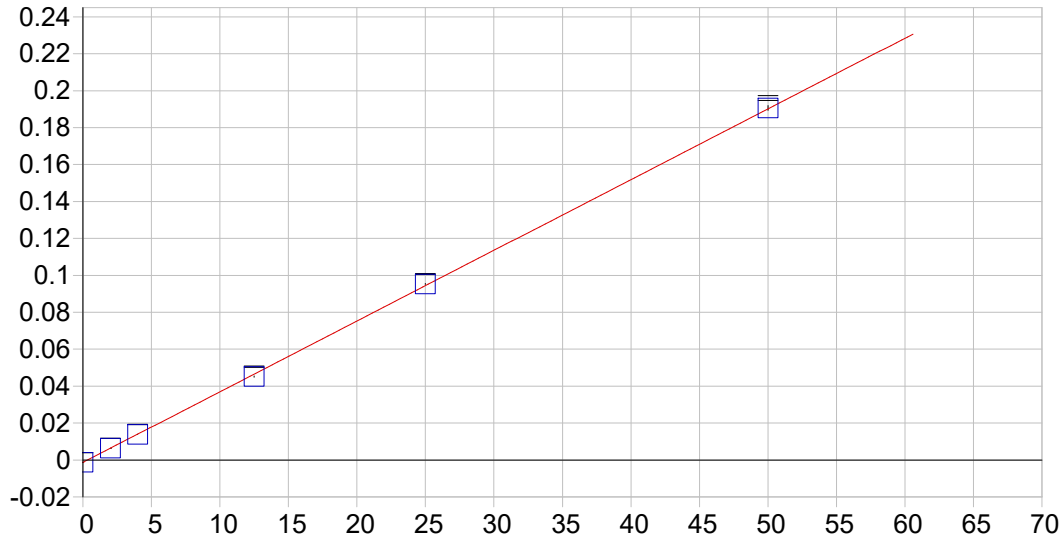


Zn 213.856 {158}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008159	Re-Slope:	1.000000
A1 (Gain):	1.441012	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999933	Status:	OK.
Std Error of Est:	0.000394		
Predicted MDL:	0.000398		
Predicted MQL:	0.001327		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00816	.001	1
S1	.04000	.04100	.001	2.50	.06764	.001	1
S3	1.2500	1.2409	-.009	-.730	1.8088	.004	1
S4	2.5000	2.5279	.028	1.11	3.6759	.004	1
S5	5.0000	4.9648	-.035	-.704	7.2126	.032	1
S2	.40000	.41548	.015	3.87	.61089	.002	1

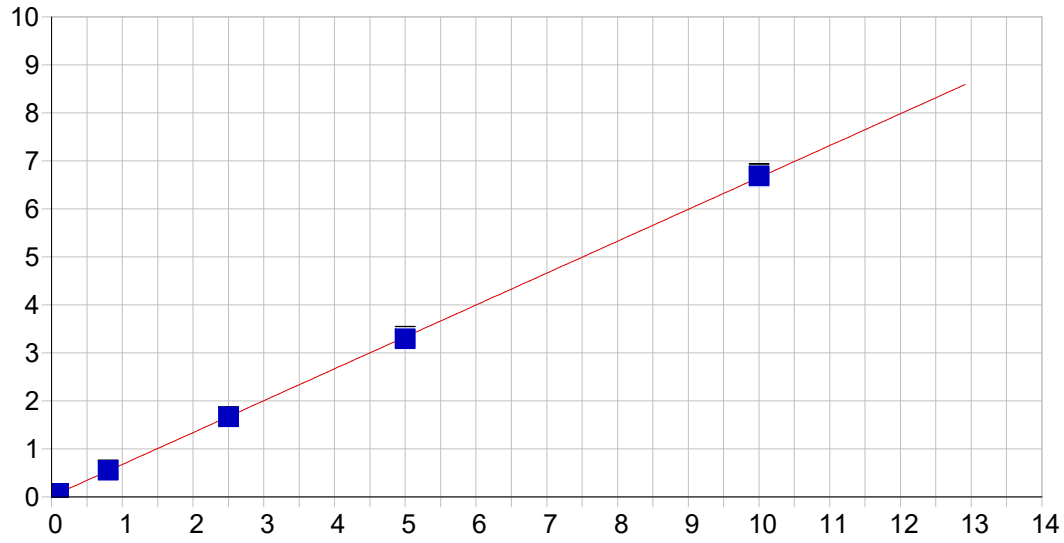


K 766.490 { 44}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001335	Re-Slope:	1.000000
A1 (Gain):	0.003829	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999929	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.052502		
Predicted MQL:	0.175006		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	-.00134	.000	1
S2	4.0000	3.9704	-.030	-.740	.01387	.000	1
S3	12.500	12.141	-.359	-2.87	.04516	.000	1
S4	25.000	25.238	.238	.953	.09531	.000	1
S5	50.000	50.138	.138	.275	.19065	.001	1
S1	2.0000	2.0127	.013	.635	.00637	.000	1

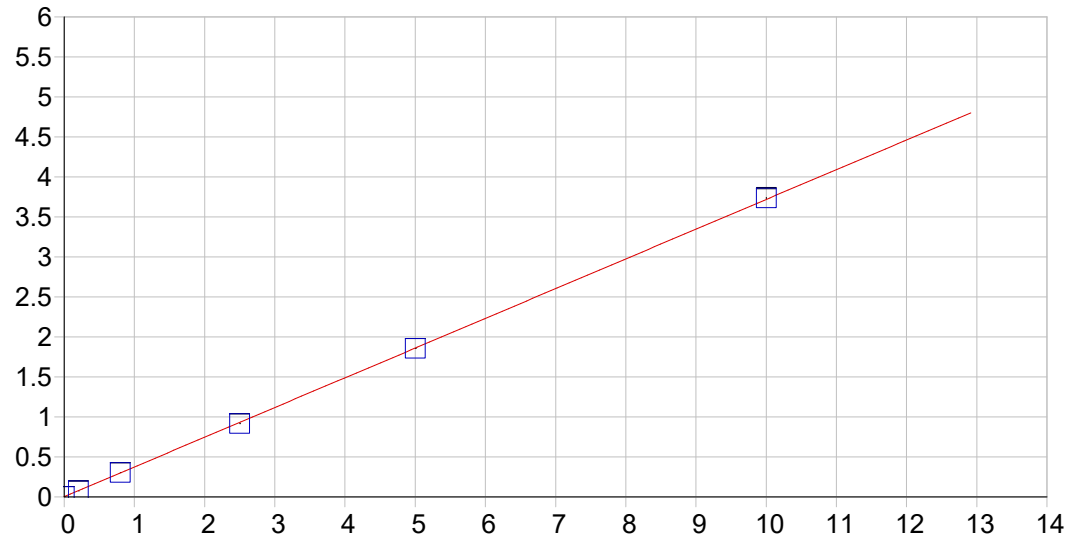


B 249.678 {135}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.011586	Re-Slope:	1.000000
A1 (Gain):	0.664316	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999961	Status:	OK.
Std Error of Est:	0.000308		
Predicted MDL:	0.001042		
Predicted MQL:	0.003474		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.01158	.000	1
S1	.10000	.10049	.000	.489	.07795	.001	1
S3	2.5000	2.4881	-.012	-.475	1.6585	.012	1
S4	5.0000	4.9435	-.057	-1.13	3.2836	.054	1
S5	10.000	10.048	.048	.478	6.6626	.052	1
S2	.80000	.82008	.020	2.51	.55447	.002	1

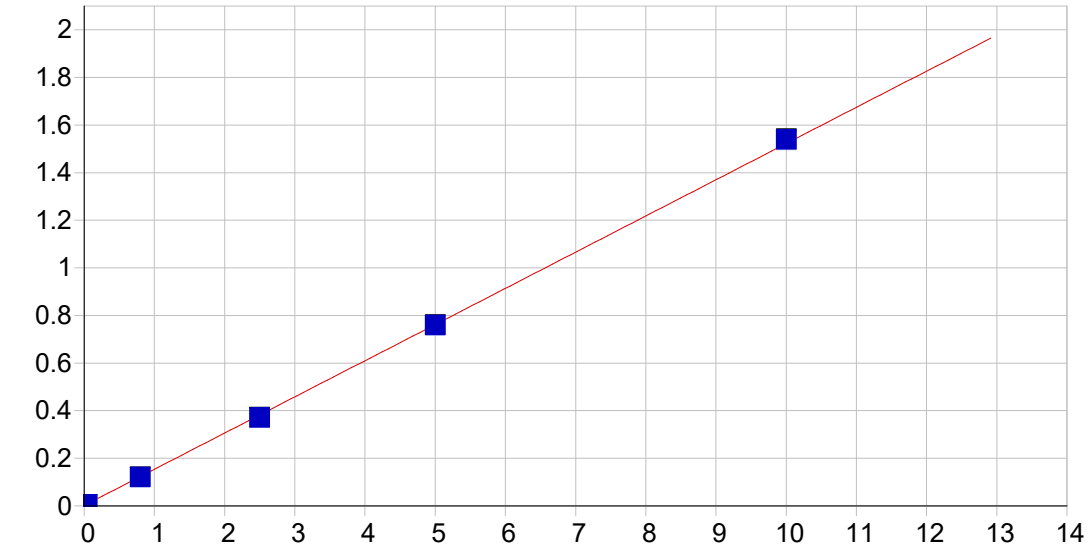


Mo 202.030 {467}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002547	Re-Slope:	1.000000
A1 (Gain):	0.371552	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000226		
Predicted MDL:	0.000451		
Predicted MQL:	0.001503		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00255	.000	1
S1	.20000	.19619	-.004	-1.90	.07544	.000	1
S3	2.5000	2.4565	-.043	-1.74	.91527	.001	1
S4	5.0000	4.9886	-.011	-.228	1.8561	.002	1
S5	10.000	10.047	.047	.475	3.7357	.007	1
S2	.80000	.81121	.011	1.40	.30395	.001	1

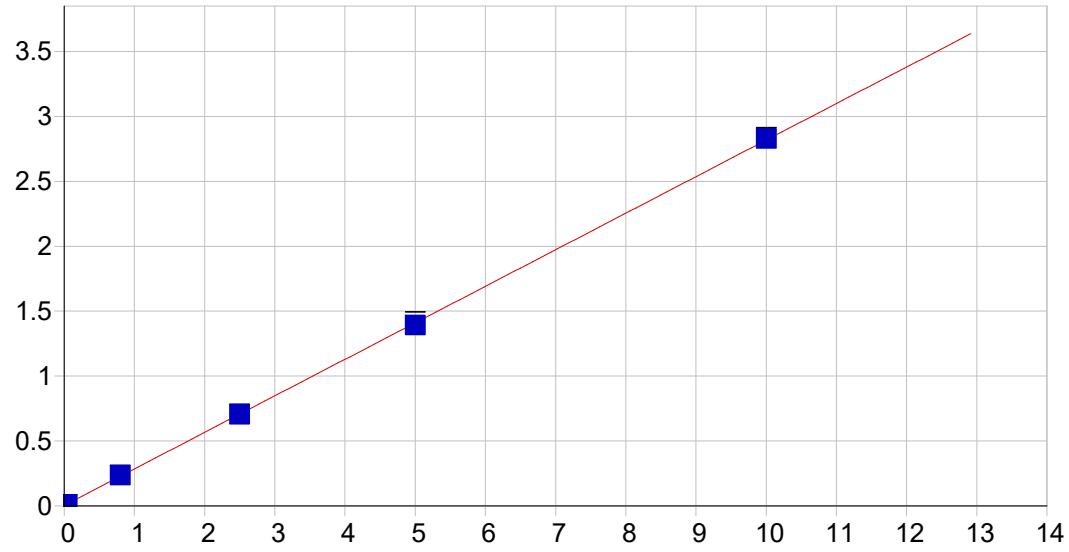


Sn 189.989 {478}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001828	Re-Slope:	1.000000
A1 (Gain):	0.152043	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999900	Status:	OK.
Std Error of Est:	0.000071		
Predicted MDL:	0.000724		
Predicted MQL:	0.002415		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00183	.000	1
S1	.04000	.03810	-.002	-4.75	.00761	.000	1
S3	2.5000	2.4301	-.070	-2.80	.37091	.001	1
S4	5.0000	4.9802	-.020	-.395	.75826	.002	1
S5	10.000	10.108	.108	1.08	1.5372	.004	1
S2	.80000	.78326	-.017	-2.09	.12079	.000	1

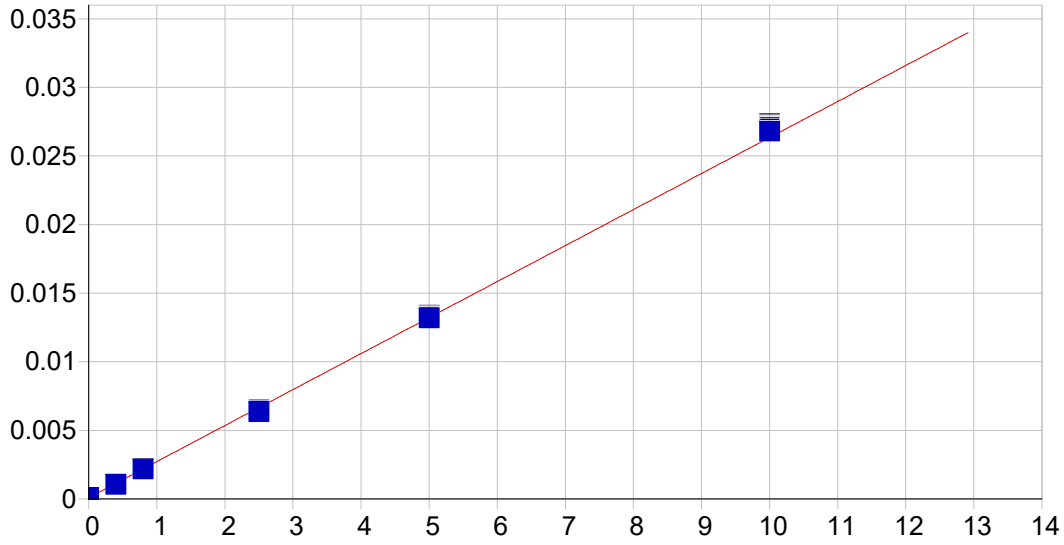


Ti 336.121 {100}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003369	Re-Slope:	1.000000
A1 (Gain):	0.281391	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999952	Status:	OK.
Std Error of Est:	0.000092		
Predicted MDL:	0.002205		
Predicted MQL:	0.007351		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00337	.001	1
S1	.04000	.03877	-.001	-3.07	.01427	.000	1
S3	2.5000	2.4957	-.004	-.174	.70537	.002	1
S4	5.0000	4.9383	-.062	-1.23	1.3924	.026	1
S5	10.000	10.042	.042	.423	2.8282	.010	1
S2	.80000	.82498	.025	3.12	.23543	.001	1

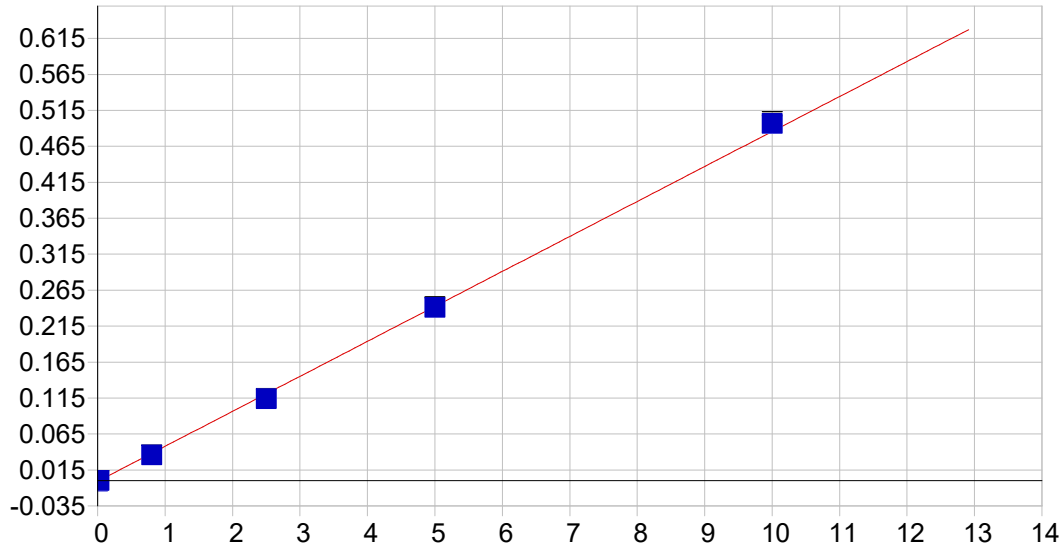


Si 288.158 {117}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000093	Re-Slope:	1.000000
A1 (Gain):	0.002625	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999690	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.016874		
Predicted MQL:	0.056247		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00006	.000	.000	.00009	.000	1
S1	.40000	.36319	-.037	-9.20	.00105	.000	1
S3	2.5000	2.3856	-.114	-4.58	.00645	.000	1
S4	5.0000	4.9863	-.014	-.275	.01338	.000	1
S5	10.000	10.176	.176	1.76	.02721	.000	1
S2	.80000	.78821	-.012	-1.47	.00219	.000	1

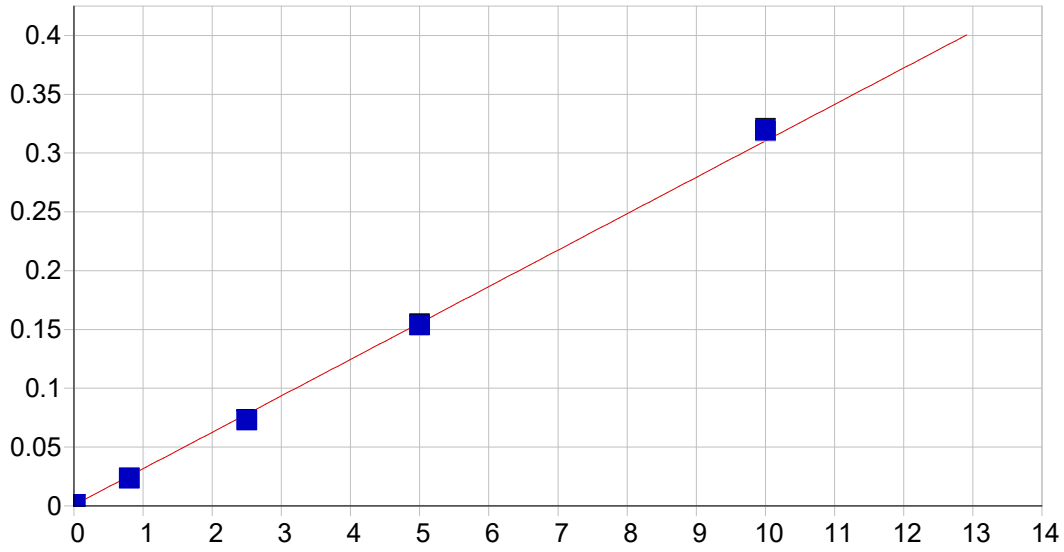


P 177.495 {490}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000770	Re-Slope:	1.000000
A1 (Gain):	0.048635	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999538	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.001863		
Predicted MQL:	0.006210		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00077	.000	1
S1	.02000	.01975	-.000	-1.25	.00019	.000	1
S3	2.5000	2.3567	-.143	-5.73	.11383	.001	1
S4	5.0000	4.9710	-.029	-.580	.24096	.001	1
S5	10.000	10.225	.225	2.25	.49645	.003	1
S2	.80000	.74730	-.053	-6.59	.03557	.000	1

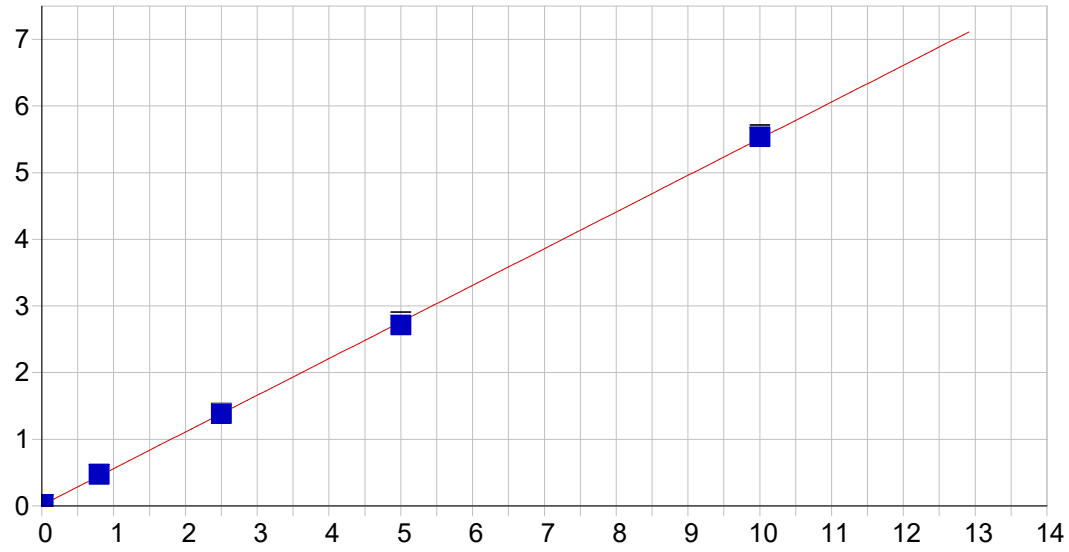


S 182.034 {485}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000666	Re-Slope:	1.000000
A1 (Gain):	0.030969	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999304	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	0.003227		
Predicted MQL:	0.010756		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00067	.000	1
S1	.02000	.01643	-.004	-17.8	.00115	.000	1
S3	2.5000	2.3327	-.167	-6.69	.07271	.000	1
S4	5.0000	4.9467	-.053	-1.07	.15345	.001	1
S5	10.000	10.286	.286	2.86	.31841	.002	1
S2	.80000	.73789	-.062	-7.76	.02345	.000	1

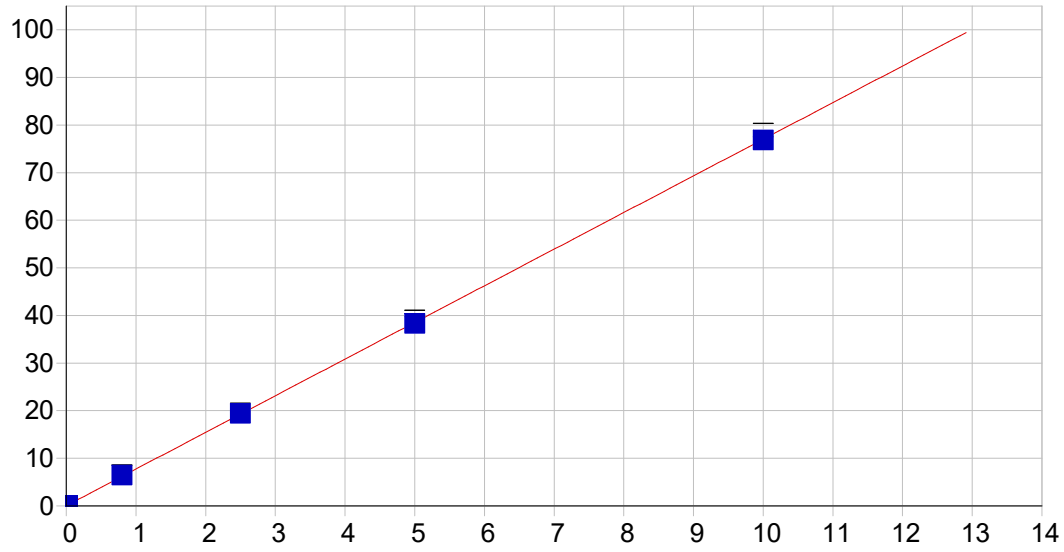


Li 670.784 { 50}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.009848	Re-Slope:	1.000000
A1 (Gain):	0.550027	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999894	Status:	OK.
Std Error of Est:	0.000188		
Predicted MDL:	0.003223		
Predicted MQL:	0.010744		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00985	.001	1
S5	10.000	10.047	.047	.475	5.5406	.029	1
S4	5.0000	4.9123	-.088	-1.75	2.7140	.047	1
S3	2.5000	2.5000	.000	.001	1.3860	.004	1
S1	.02000	.01913	-.001	-4.34	.02056	.001	1
S2	.80000	.84104	.041	5.13	.47280	.002	1

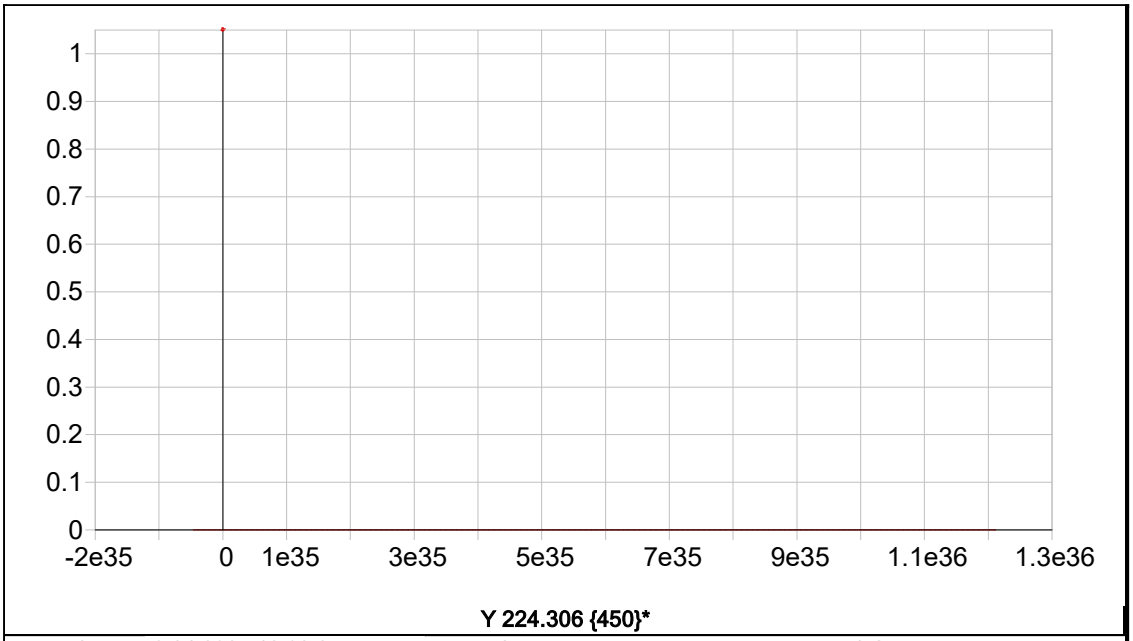


Sr 407.771 { 83}

Date of Fit:	9/24/2025 12:03:35	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.045908	Re-Slope:	1.000000
A1 (Gain):	7.697604	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.001836		
Predicted MDL:	0.000138		
Predicted MQL:	0.000461		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.04589	.000	1
S1	.02000	.02097	.001	4.85	.20806	.002	1
S3	2.5000	2.5157	.016	.627	19.429	.072	1
S4	5.0000	4.9705	-.029	-.589	38.344	.686	1
S5	10.000	9.9778	-.022	-.222	76.925	1.42	1
S2	.80000	.83499	.035	4.37	6.4792	.024	1

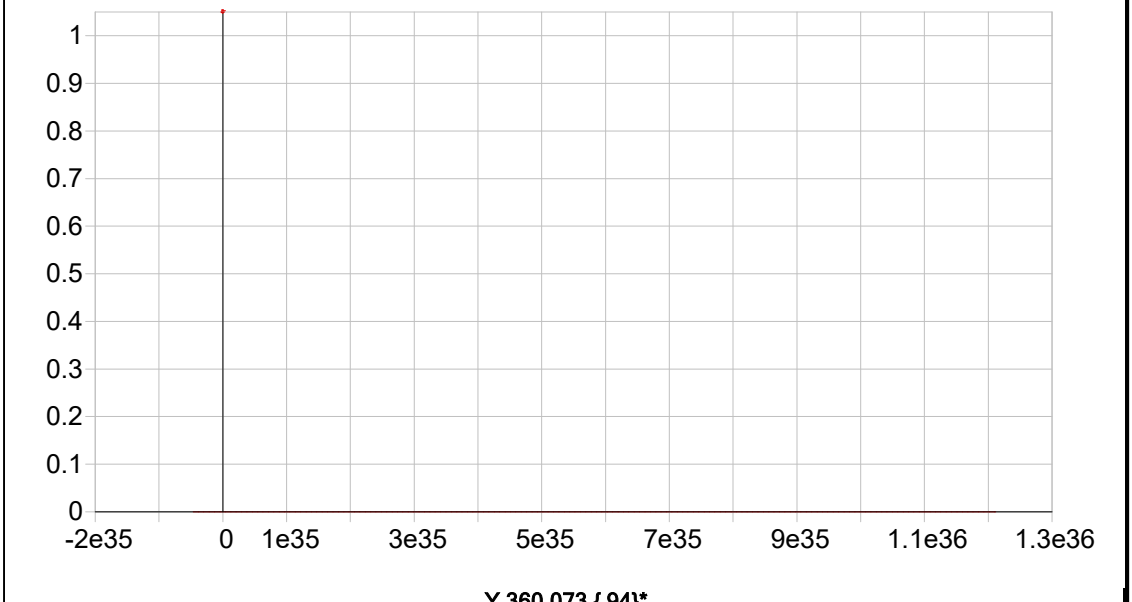


Y 224.306 {450}*

Date of Fit:	9/24/2025 12:03:35	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



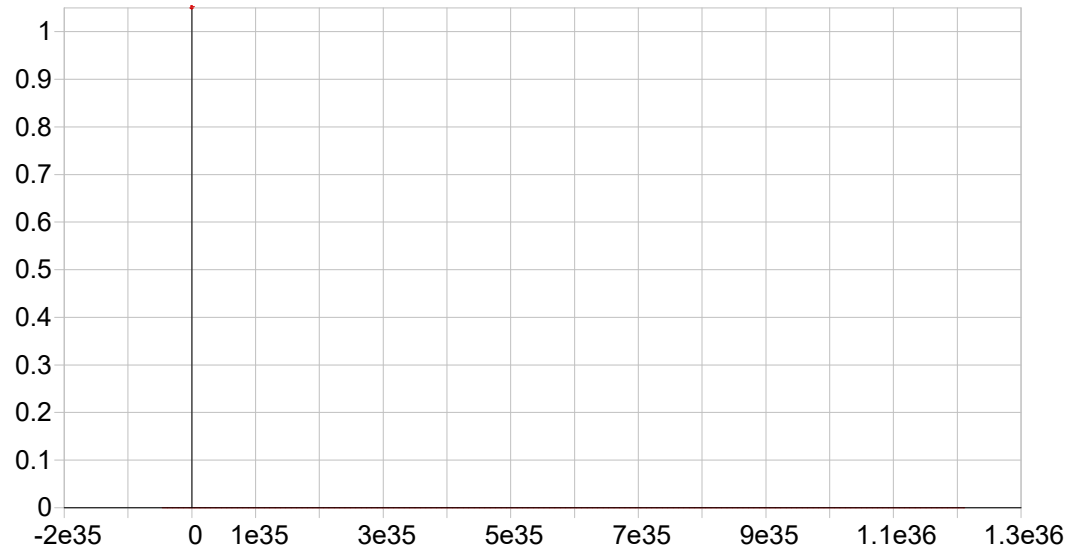
Y 360.073 { 94}*

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					

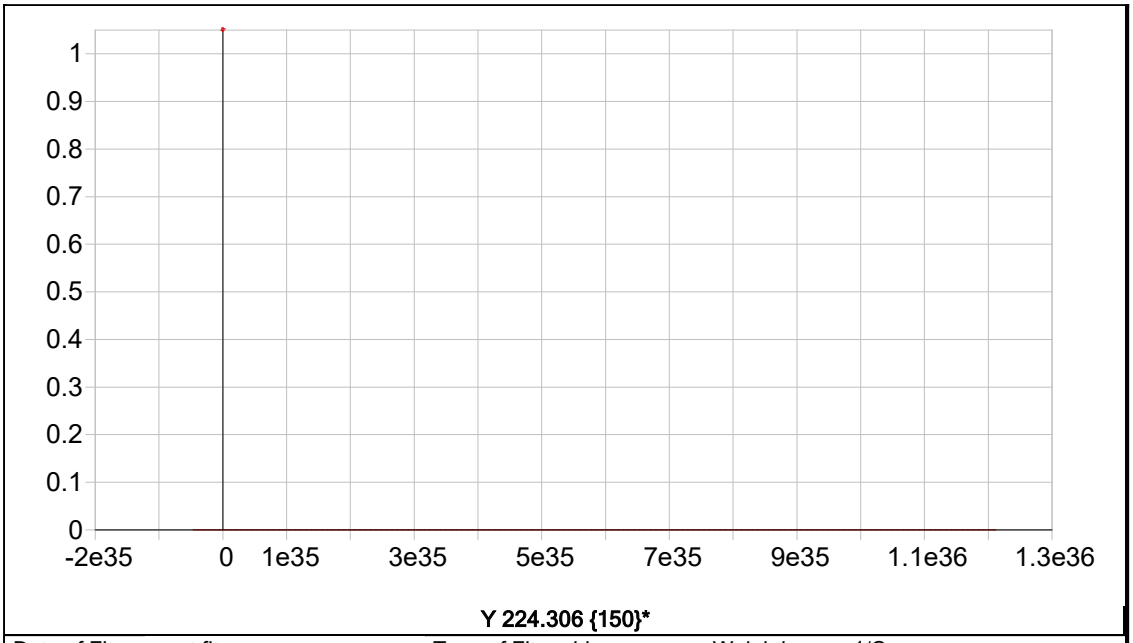
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



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				

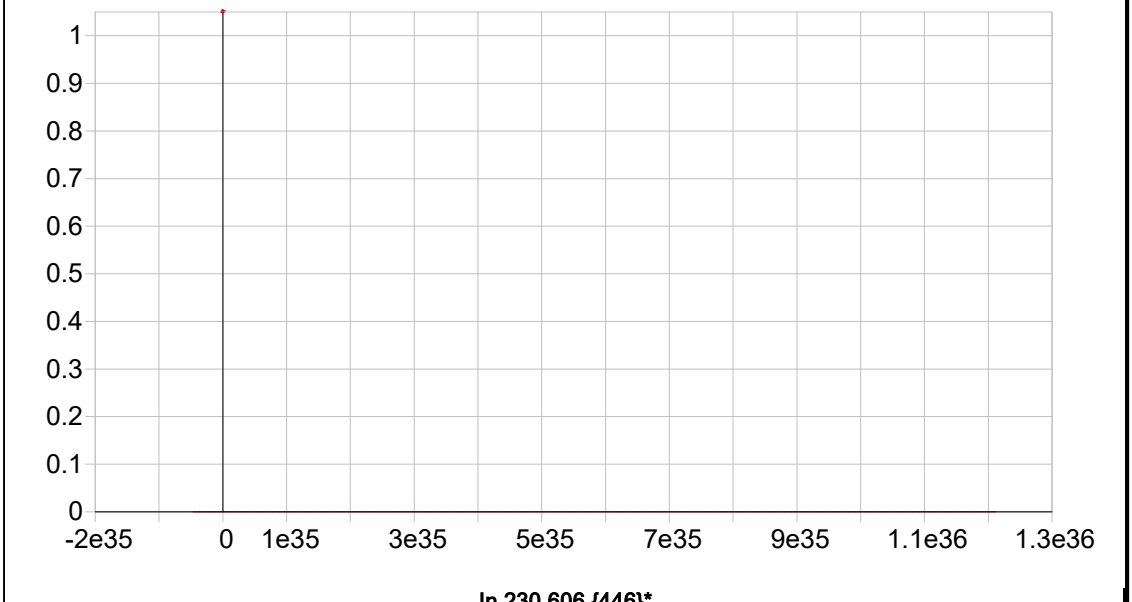
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



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**

Sample Name: S0 Acquired: 9/24/2025 10:54:21 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00014**	**.00058**	**.00139**	**.00063**	**.00125**	**.00096**	**.10066**	**.00087**
Stddev	.00007	.00017	.00019	.00012	.00023	.00055	.00162	.00037
%RSD	51.308	29.756	13.413	19.607	18.563	57.417	1.6106	42.609
#1	.00020	.00063	.00157	.00053	.00138	.00043	.10223	.00121
#2	.00016	.00039	.00138	.00059	.00098	.00153	.09899	.00093
#3	.00006	.00073	.00120	.00077	.00138	.00090	.10078	.00047

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	**.00528**	**.00215**	**.00040**	**.00193**	**.00137**	**.00004**	**.00156**	**.00054**
Stddev	.00005	.00040	.00006	.00024	.00018	.00000	.00024	.00004
%RSD	.92989	18.817	14.193	12.408	12.858	1.4771	15.467	7.0840
#1	.00526	.00256	.00039	.00169	.00117	.00004	.00155	.00051
#2	.00524	.00215	.00046	.00217	.00144	.00004	.00132	.00052
#3	.00533	.00175	.00035	.00192	.00149	.00004	.00180	.00058

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	**.00103**	**.00141**	**.00042**	**-.00040**	**.00816**	**-.00134**	**.01158**	**.00255**
Stddev	.00016	.00018	.00006	.00033	.00054	.00012	.00047	.00015
%RSD	16.002	12.960	15.272	81.603	6.6773	8.6752	4.0945	5.9529
#1	.00084	.00128	.00050	-.00043	.00822	-.00123	.01125	.00237
#2	.00110	.00133	.00038	-.00006	.00866	-.00132	.01213	.00262
#3	.00115	.00162	.00039	-.00071	.00758	-.00146	.01137	.00265

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	**.00183**	**.00337**	**.00009**	**-.00077**	**.00067**	**.00985**	**.04589**
Stddev	.00006	.00074	.00003	.00009	.00005	.00102	.00023
%RSD	3.3588	22.084	36.767	11.142	7.9070	10.346	.50439
#1	.00187	.00335	.00006	-.00084	.00061	.01074	.04614
#2	.00185	.00264	.00009	-.00067	.00068	.01006	.04568
#3	.00176	.00412	.00013	-.00080	.00071	.00874	.04587

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: S0 Acquired: 9/24/2025 10:54:21 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5623.3	88025.	7540.1	4581.2	6507.4
Stddev	1.4	258.	47.8	8.9	6.5
%RSD	.02462	.29304	.63402	.19357	.10022
#1	5624.9	88317.	7553.6	4580.4	6514.5
#2	5622.3	87930.	7486.9	4590.5	6506.2
#3	5622.8	87827.	7579.6	4572.8	6501.6

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: S1 Acquired: 9/24/2025 10:58:45 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.00092**	**.00366**	**.00394**	**.00162**	**.00576**	**.01034**	**.28249**	**.04512**
Stddev	.00003	.00008	.00037	.00005	.00008	.00018	.00264	.00010
%RSD	3.7243	2.2726	9.4394	3.0909	1.3176	1.7132	.93430	.21734
#1	.00095	.00371	.00390	.00161	.00577	.01051	.28322	.04520
#2	.00094	.00356	.00433	.00167	.00569	.01036	.28469	.04501
#3	.00088	.00370	.00359	.00157	.00584	.01015	.27957	.04514

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	**.01772**	**.11862**	**.00195**	**.02240**	**.01064**	**.00023**	**.00986**	**.02417**
Stddev	.00008	.00037	.00008	.00005	.00012	.00001	.00021	.00035
%RSD	.42490	.31476	4.3298	.24267	1.1598	3.7661	2.1658	1.4683
#1	.01773	.11858	.00204	.02237	.01070	.00022	.01003	.02379
#2	.01778	.11827	.00187	.02236	.01050	.00022	.00962	.02422
#3	.01763	.11901	.00195	.02246	.01073	.00024	.00993	.02449

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	**.02613**	**.00296**	**.02559**	**.00439**	**.06764**	**.00637**	**.07795**	**.07544**
Stddev	.00030	.00006	.00037	.00022	.00070	.00005	.00051	.00019
%RSD	1.1646	2.1025	1.4649	4.9379	1.0330	.85748	.65378	.25142
#1	.02578	.00293	.02560	.00416	.06798	.00643	.07837	.07554
#2	.02628	.00292	.02521	.00441	.06684	.00634	.07809	.07523
#3	.02634	.00304	.02596	.00459	.06810	.00634	.07738	.07557

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	**.00761**	**.01427**	**.00105**	**.00019**	**.00115**	**.02056**	**.20806**
Stddev	.00008	.00021	.00001	.00010	.00008	.00053	.00181
%RSD	.98823	1.4563	1.4255	52.407	6.5362	2.5590	.86791
#1	.00769	.01418	.00105	.00025	.00110	.02110	.21001
#2	.00754	.01413	.00103	.00008	.00123	.02005	.20772
#3	.00761	.01451	.00106	.00025	.00111	.02055	.20645

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: S1 Acquired: 9/24/2025 10:58:45 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5604.8	88376.	7573.9	4553.3	6449.6
Stddev	8.6	428.	37.6	17.9	9.2
%RSD	.15352	.48442	.49662	.39376	.14237
#1	5606.1	88027.	7534.2	4533.5	6449.4
#2	5612.8	88854.	7578.6	4568.4	6458.8
#3	5595.7	88246.	7609.0	4558.0	6440.4

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: S2 Acquired: 9/24/2025 11:03:01 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.03038**	**.06269**	**.16586**	**.03342**	**.07100**	**.13204**	**3.0908**	**.28993**
Stddev	.00006	.00084	.00054	.00007	.00012	.00130	.0142	.00040
%RSD	.20950	1.3433	.32572	.22114	.17575	.98279	.45908	.13640
#1	.03032	.06172	.16626	.03338	.07112	.13102	3.1059	.29001
#2	.03045	.06320	.16525	.03338	.07087	.13350	3.0888	.28950
#3	.03037	.06316	.16607	.03351	.07101	.13161	3.0777	.29027

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	**.79734**	**.23598**	**.02579**	**.27489**	**.09149**	**.00166**	**.17369**	**.04665**
Stddev	.00094	.00115	.00001	.00040	.00019	.00002	.00068	.00065
%RSD	.11752	.48536	.03520	.14554	.20828	1.4615	.39034	1.3919
#1	.79649	.23470	.02580	.27476	.09133	.00168	.17398	.04690
#2	.79717	.23691	.02579	.27458	.09170	.00165	.17417	.04592
#3	.79834	.23633	.02578	.27534	.09143	.00164	.17291	.04714

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	**.24607**	**.03245**	**.05163**	**.04958**	**.61089**	**.01387**	**.55447**	**.30395**
Stddev	.00105	.00017	.00022	.00058	.00172	.00009	.00194	.00055
%RSD	.42470	.51904	.42396	1.1793	.28172	.62691	.35038	.18083
#1	.24497	.03261	.05186	.05018	.61088	.01396	.55432	.30350
#2	.24619	.03247	.05143	.04902	.60917	.01379	.55648	.30457
#3	.24705	.03227	.05161	.04955	.61261	.01385	.55260	.30379

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	**.12079**	**.23543**	**.00219**	**.03557**	**.02345**	**.47280**	**6.4792**
Stddev	.00033	.00070	.00002	.00015	.00021	.00203	.0244
%RSD	.27688	.29780	.83540	.41690	.87628	.43026	.37641
#1	.12044	.23612	.00218	.03548	.02327	.47507	6.5028
#2	.12111	.23471	.00221	.03574	.02367	.47216	6.4808
#3	.12083	.23546	.00219	.03549	.02342	.47115	6.4541

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: S2 Acquired: 9/24/2025 11:03:01 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5614.0	87069.	7478.4	4454.9	6476.5
Stddev	5.0	305.	16.3	13.8	3.0
%RSD	.08829	.34978	.21756	.31084	.04687
#1	5610.1	86721.	7470.8	4443.5	6478.8
#2	5619.6	87197.	7467.3	4470.3	6477.7
#3	5612.2	87287.	7497.1	4450.9	6473.1

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: S3 Acquired: 9/24/2025 11:07:04 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.09366**	**.18706**	**.50634**	**.10176**	**.21550**	**.39608**	**9.1464**	**.86984**
Stddev	.00031	.00555	.00054	.00034	.00050	.00077	.0383	.00495
%RSD	.33397	2.9657	.10634	.33225	.23201	.19440	.41880	.56900
#1	.09366	.19237	.50611	.10210	.21503	.39608	9.1094	.86973
#2	.09335	.18130	.50596	.10143	.21545	.39530	9.1439	.86494
#3	.09397	.18750	.50696	.10176	.21603	.39684	9.1858	.87484

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2.4550**	**.70346**	**.07658**	**.83826**	**.27359**	**.00490**	**.51438**	**.13916**
Stddev	.0042	.00155	.00011	.00124	.00048	.00001	.00181	.00073
%RSD	.16932	.22100	.13921	.14836	.17626	.19416	.35197	.52428
#1	2.4549	.70311	.07650	.83838	.27308	.00489	.51233	.13841
#2	2.4509	.70211	.07653	.83696	.27404	.00490	.51506	.13987
#3	2.4592	.70516	.07670	.83944	.27363	.00491	.51575	.13920

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	**.75194**	**.09437**	**.15357**	**.14998**	**1.8088**	**.04516**	**1.6585**	**.91527**
Stddev	.00110	.00008	.00056	.00030	.0043	.00039	.0115	.00109
%RSD	.14588	.08946	.36223	.20188	.23920	.86941	.69496	.11898
#1	.75120	.09430	.15302	.14987	1.8057	.04483	1.6542	.91498
#2	.75143	.09435	.15413	.14975	1.8137	.04559	1.6498	.91435
#3	.75320	.09446	.15356	.15033	1.8069	.04504	1.6716	.91647

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	**.37091**	**.70537**	**.00645**	**.11383**	**.07271**	**1.3860**	**19.429**
Stddev	.00125	.00203	.00004	.00073	.00049	.0043	.072
%RSD	.33789	.28716	.65176	.64345	.66979	.31123	.37156
#1	.37166	.70338	.00642	.11398	.07320	1.3815	19.362
#2	.36947	.70530	.00650	.11304	.07223	1.3864	19.420
#3	.37161	.70743	.00644	.11448	.07268	1.3901	19.505

Sample Name: S3 Acquired: 9/24/2025 11:07:04 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5591.9	89046.	7633.5	4496.8	6328.3
Stddev	4.1	212.	16.8	20.2	8.1
%RSD	.07307	.23765	.21950	.44832	.12802
#1	5593.6	89104.	7630.9	4487.1	6329.4
#2	5594.9	88811.	7651.4	4483.4	6335.7
#3	5587.3	89222.	7618.1	4520.0	6319.6

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: S4 Acquired: 9/24/2025 11:10:59 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.19253**	**.38039**	**1.0322**	**.20845**	**.44069**	**.79121**	**18.035**	**1.7222**
Stddev	.00007	.00668	.0006	.00058	.00020	.01478	.300	.0262
%RSD	.03515	1.7555	.06312	.27739	.04582	1.8685	1.6632	1.5201
#1	.19246	.38380	1.0319	.20859	.44076	.77414	17.696	1.6920
#2	.19256	.38468	1.0317	.20895	.44046	.79968	18.144	1.7374
#3	.19258	.37270	1.0329	.20781	.44085	.79980	18.266	1.7373

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5.0583**	**1.3955**	**.15535**	**1.7223**	**.54985**	**.01015**	**1.0062**	**.27589**
Stddev	.0047	.0261	.00012	.0015	.00048	.00001	.0174	.00488
%RSD	.09272	1.8721	.08027	.08676	.08668	.13845	1.7248	1.7688
#1	5.0553	1.3655	.15548	1.7215	.54967	.01015	.98646	.27025
#2	5.0559	1.4079	.15523	1.7214	.54948	.01013	1.0129	.27880
#3	5.0637	1.4131	.15536	1.7241	.55039	.01016	1.0192	.27860

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	**1.5410**	**.19075**	**.31648**	**.30001**	**3.6759**	**.09531**	**3.2836**	**1.8561**
Stddev	.0015	.00066	.00101	.00545	.0041	.00029	.0542	.0018
%RSD	.09600	.34766	.31948	1.8173	.11176	.30709	1.6507	.09515
#1	1.5402	.19126	.31537	.29386	3.6720	.09497	3.2211	1.8546
#2	1.5402	.19099	.31674	.30197	3.6802	.09545	3.3119	1.8580
#3	1.5427	.19000	.31734	.30422	3.6755	.09550	3.3179	1.8556

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	**.75826**	**1.3924**	**.01338**	**.24096**	**.15345**	**2.7140**	**38.344**
Stddev	.00175	.0256	.00002	.00066	.00087	.0472	.686
%RSD	.23100	1.8416	.15231	.27497	.56719	1.7398	1.7895
#1	.75901	1.3630	.01336	.24149	.15378	2.6598	37.586
#2	.75951	1.4046	.01339	.24117	.15412	2.7358	38.522
#3	.75626	1.4097	.01340	.24021	.15247	2.7464	38.924

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: S4 Acquired: 9/24/2025 11:10:59 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5451.1	86659.	7712.1	4378.7	6056.9
Stddev	14.3	98.	120.3	19.5	10.1
%RSD	.26218	.11364	1.5599	.44557	.16689
#1	5467.5	86649.	7850.3	4365.9	6068.5
#2	5440.9	86566.	7631.1	4369.0	6050.0
#3	5445.0	86762.	7654.8	4401.1	6052.3

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: S5 Acquired: 9/24/2025 11:15:01 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.38961**	**.78250**	**2.1105**	**.41817**	**.89137**	**1.6048**	**36.246**	**3.4686**
Stddev	.00099	.02325	.0028	.00204	.00115	.0038	.349	.0232
%RSD	.25435	2.9713	.13162	.48683	.12905	.23804	.96394	.66877
#1	.39051	.79071	2.1090	.41891	.89212	1.6045	36.650	3.4917
#2	.38978	.80054	2.1088	.41974	.89194	1.6011	36.042	3.4453
#3	.38855	.75626	2.1137	.41587	.89005	1.6087	36.047	3.4687

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**10.227**	**2.8153**	**.30577**	**3.5057**	**1.0872**	**.01983**	**2.0237**	**.56218**
Stddev	.007	.0085	.00049	.0038	.0007	.00019	.0124	.00148
%RSD	.06541	.30279	.16183	.10853	.06097	.96489	.61157	.26274
#1	10.220	2.8114	.30584	3.5028	1.0869	.01967	2.0245	.56066
#2	10.228	2.8094	.30524	3.5043	1.0879	.01978	2.0110	.56228
#3	10.234	2.8251	.30622	3.5100	1.0867	.02004	2.0357	.56361

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	**3.1240**	**.37691**	**.62725**	**.61079**	**7.2126**	**.19065**	**6.6626**	**3.7357**
Stddev	.0035	.00060	.00356	.00237	.0319	.00136	.0519	.0067
%RSD	.11118	.15830	.56697	.38731	.44296	.71462	.77942	.17950
#1	3.1219	.37728	.62316	.61022	7.2184	.18947	6.7148	3.7417
#2	3.1221	.37622	.62897	.60876	7.1781	.19034	6.6109	3.7370
#3	3.1280	.37723	.62962	.61339	7.2412	.19214	6.6620	3.7284

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	**1.5372**	**2.8282**	**.02721**	**.49645**	**.31841**	**5.5406**	**76.925**
Stddev	.0039	.0100	.00014	.00275	.00191	.0293	1.417
%RSD	.25488	.35204	.50479	.55347	.60052	.52862	1.8419
#1	1.5406	2.8287	.02705	.49961	.31973	5.5372	78.560
#2	1.5380	2.8180	.02727	.49518	.31927	5.5132	76.044
#3	1.5329	2.8379	.02729	.49457	.31622	5.5715	76.171

Sample Name: S5 Acquired: 9/24/2025 11:15:01 Type: Cal
Method: 6010-200.7 NEW(v201) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5353.4	86636.	7500.8	4282.3	5833.8
Stddev	12.7	210.	30.8	21.6	8.5
%RSD	.23662	.24215	.41051	.50435	.14590
#1	5339.3	86864.	7471.6	4300.8	5824.0
#2	5356.9	86593.	7533.0	4287.5	5838.6
#3	5363.9	86451.	7497.9	4258.6	5838.9

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: ICV01 Acquired: 9/24/2025 11:34:09 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.845504**	**3.782269**	**3.723138**	**3.874921**	**4.023105**	**7.746437**
Stddev	.007742	.043499	.004274	.004362	.005202	.020998
%RSD	.2013169	1.150072	.1148051	.1125718	.1292967	.2710701
#1	3.836717	3.807402	3.720461	3.873791	4.019784	7.732232
#2	3.848472	3.732041	3.720886	3.879738	4.029100	7.770557
#3	3.851322	3.807365	3.728068	3.871236	4.020432	7.736522

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.678997**	**.1934507**	**1.900643**	**19.20031**	**.8013773**	**1.918257**
Stddev	.049636	.0003715	.002060	.01856	.0012652	.001334
%RSD	.6463848	.1920316	.1083606	.0966661	.1578808	.0695547
#1	7.719023	.1938198	1.899094	19.18394	.8000549	1.917390
#2	7.694512	.1934555	1.899854	19.22047	.8025763	1.917587
#3	7.623458	.1930769	1.902980	19.19652	.8015007	1.919793

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9854526**	**3.959323**	**1.909384**	**19.33197**	**1.919352**	**1.004563**
Stddev	.0019214	.006318	.011078	.02125	.001141	.001590
%RSD	.1949749	.1595831	.5802106	.1099126	.0594708	.1583139
#1	.9835009	3.960662	1.914076	19.32867	1.918110	1.004385
#2	.9855149	3.964864	1.917344	19.35468	1.920354	1.003070
#3	.9873421	3.952442	1.896731	19.31257	1.919593	1.006235

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.78811**	**1.932786**	**1.985775**	**19.66273**	**3.782894**	**3.986118**
Stddev	.04910	.002277	.004156	.04877	.020684	.003694
%RSD	.2481046	.1178150	.2092787	.2480524	.5467806	.0926705
#1	19.77530	1.933461	1.989844	19.69966	3.805073	3.983268
#2	19.74668	1.930248	1.985944	19.60744	3.779479	3.984794
#3	19.84233	1.934649	1.981538	19.68109	3.764130	3.990291

Sample Name: ICV01 Acquired: 9/24/2025 11:34:09 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	3.817988	3.875049	F 3.586487	F .0047777	F .0171925	F -.001458
Stddev	.005648	.014112	.014204	.0017519	.0021677	.000454
%RSD	.1479243	.3641726	.3960292	36.66858	12.60828	31.17857
#1	3.824408	3.886085	3.587893	.0063921	.0150104	-.001676
#2	3.815768	3.879913	3.571632	.0029148	.0172217	-.000935
#3	3.813787	3.859148	3.599935	.0050262	.0193454	-.001762

Elem	Sr4077
Units	ppm
Avg	F -.004007
Stddev	.000144
%RSD	3.585800
#1	-.003843
#2	-.004066
#3	-.004111

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5797.325	89773.78	8116.947	4478.807	6584.450
Stddev	7.087	127.07	43.556	6.991	18.562
%RSD	.1222459	.1415391	.5366118	.1560964	.2819126
#1	5791.296	89765.05	8090.103	4482.608	6566.421
#2	5805.132	89651.30	8093.535	4470.738	6603.503
#3	5795.547	89904.98	8167.203	4483.073	6583.427

Sample Name: LLICV01 Acquired: 9/24/2025 11:44:37 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0232250**	**.0377798**	**.0118558**	**.0239080**	**.0535025**	**.1011432**
Stddev	.0007646	.0007188	.0004618	.0042015	.0013189	.0009761
%RSD	3.292026	1.902574	3.895495	17.57379	2.465136	.9650656
#1	.0240922	.0372618	.0123348	.0230999	.0550043	.1020593
#2	.0229346	.0386004	.0114132	.0284549	.0529708	.1001166
#3	.0226482	.0374771	.0118195	.0201692	.0525324	.1012537

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0973496**	**.0062410**	**.0060486**	**2.101838**	**.0105898**	**.0303220**
Stddev	.0008872	.0001462	.0000549	.012525	.0001915	.0002508
%RSD	.9113437	2.343205	.9079400	.5958934	1.807915	.8270700
#1	.0963256	.0060898	.0060221	2.089534	.0107756	.0303269
#2	.0978368	.0062517	.0061118	2.101408	.0106008	.0300689
#3	.0978864	.0063817	.0060119	2.114573	.0103931	.0305704

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0216668**	**.1152174**	**.0208539**	**2.125929**	**.0415986**	**.0117914**
Stddev	.0006412	.0134060	.0006013	.029462	.0001367	.0007917
%RSD	2.959503	11.63540	2.883629	1.385854	.3287180	6.714303
#1	.0218268	.1063489	.0215226	2.159857	.0417314	.0111118
#2	.0209607	.1306395	.0206814	2.111135	.0416061	.0126607
#3	.0222128	.1086638	.0203576	2.106796	.0414582	.0116016

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.253481**	**.0445861**	**.0461329**	**2.138564**	**.0994107**	**.2089423**
Stddev	.018860	.0016210	.0005143	.062443	.0014952	.0004156
%RSD	.8369387	3.635671	1.114731	2.919841	1.504103	.1988891
#1	2.265314	.0428368	.0461146	2.193337	.0978570	.2088900
#2	2.263398	.0460375	.0466561	2.151786	.0995354	.2093815
#3	2.231731	.0448839	.0456281	2.070570	.1008397	.2085553

Sample Name: LLICV01 Acquired: 9/24/2025 11:44:37 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal 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	.0394616	.0391602	.4221631	.0206780	F .0148509	.0192381
Stddev	.0007452	.0004757	.0196638	.0007774	.0010173	.0030755
%RSD	1.888445	1.214815	4.657856	3.759636	6.849899	15.98668
#1	.0399899	.0395850	.4423777	.0209818	.0137834	.0203436
#2	.0386092	.0386462	.4031009	.0197945	.0149601	.0157626
#3	.0397858	.0392495	.4210107	.0212576	.0158092	.0216080

Elem	Sr4077
Units	ppm
Avg	.0209513
Stddev	.0001794
%RSD	.8563047
#1	.0207592
#2	.0209801
#3	.0211146

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5656.094	86064.78	8156.866	4355.492	6592.331
Stddev	13.502	111.06	71.961	18.140	12.562
%RSD	.2387205	.1290429	.8822082	.4164867	.1905519
#1	5657.546	85951.67	8212.560	4334.581	6589.747
#2	5641.924	86173.67	8182.423	4367.000	6581.263
#3	5668.811	86069.01	8075.615	4364.895	6605.984

Sample Name: ICB01 Acquired: 9/24/2025 11:56:16 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000148**	**.0001346**	**-.001925**	**-.001897**	**.0006752**	**-.002806**	**-.003796**
Stddev	.0021139	.0013318	.000817	.002548	.0015721	.008995	.002482
%RSD	14321.71	989.0369	42.42892	134.3419	232.8410	320.5460	65.38047
#1	-.001231	-.000136	-.002502	-.001881	.0009244	.002594	-.005115
#2	-.001180	.001581	-.000990	.000644	.0021077	.002178	-.000933
#3	.002456	-.001041	-.002284	-.004452	-.001007	-.013191	-.005341

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000329**	**-.000276**	**-.001710**	**.0000341**	**-.000265**	**-.000169**	**-.004795**
Stddev	.0000335	.000082	.013032	.0001275	.000256	.000245	.007245
%RSD	101.8526	29.76946	762.0245	373.4422	96.54578	144.6499	151.0927
#1	.0000701	-.000306	.003432	-.000113	-.000168	-.000319	.002468
#2	.0000050	-.000183	.007966	.000110	-.000072	-.000302	-.012022
#3	.0000237	-.000338	-.016529	.000105	-.000555	.000113	-.004832

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000644**	**-.019425**	**-.000153**	**.0012319**	**-.005902**	**.0015887**	**-.000267**
Stddev	.000530	.035965	.000395	.0001127	.009072	.0016200	.000086
%RSD	82.29081	185.1508	258.9514	9.144420	153.7203	101.9657	32.19722
#1	-.000033	.005394	.000037	.0011270	-.010982	.0010438	-.000185
#2	-.000920	-.002998	-.000607	.0012176	-.011296	.0034109	-.000258
#3	-.000980	-.060670	.000112	.0013510	.004572	.0003115	-.000356

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.015665**	**-.005287**	**-.000147**	**-.000404**	**.0002526**	**.0035105**	**-.001452**
Stddev	.028666	.001030	.000304	.000577	.0008858	.0094400	.000298
%RSD	182.9931	19.48279	207.0795	142.7632	350.6026	268.9061	20.49213
#1	-.044246	-.005420	-.000314	-.001055	.0010267	-.007242	-.001135
#2	-.015832	-.004196	-.000331	.000044	-.000713	.007337	-.001726
#3	.013084	-.006243	.000204	-.000202	.000445	.010437	-.001495

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: ICB01 Acquired: 9/24/2025 11:56:16 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.005398**	**-.004931**	**-.000545**
Stddev	.001079	.001469	.000111
%RSD	19.98137	29.79285	20.38991
#1	-.006630	-.004680	-.000418
#2	-.004619	-.006510	-.000627
#3	-.004947	-.003604	-.000590

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5898.670**	**91607.46**	**8062.360**	**4509.510**	**7160.773**
Stddev	6.985	245.70	32.371	26.715	18.083
%RSD	.1184200	.2682081	.4015048	.5924119	.2525262
#1	5891.110	91530.13	8087.785	4521.925	7151.327
#2	5900.015	91882.52	8073.376	4527.759	7149.370
#3	5904.885	91409.73	8025.919	4478.847	7181.623

Sample Name: CRI01 Acquired: 9/24/2025 12:00:35 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0209347**	**.0374537**	**.0110895**	**.0217150**	**.0509242**	**.1085742**	**.0972152**
Stddev	.0013467	.0029922	.0008105	.0037021	.0011909	.0037641	.0010063
%RSD	6.432732	7.989004	7.308536	17.04838	2.338498	3.466832	1.035086
#1	.0214407	.0363917	.0111880	.0177918	.0522834	.1089310	.0969678
#2	.0219552	.0408321	.0118462	.0251468	.0504252	.1046444	.0983221
#3	.0194084	.0351374	.0102343	.0222065	.0500640	.1121472	.0963557

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061580**	**.0058432**	**2.078912**	**.0099307**	**.0294882**	**.0207251**	**.0940543**
Stddev	.0000509	.0000869	.012237	.0002561	.0001295	.0002429	.0053578
%RSD	.8270866	1.486525	.5886319	2.579110	.4391726	1.171841	5.696545
#1	.0061010	.0058892	2.086993	.0101332	.0293431	.0205942	.0954260
#2	.0061990	.0057430	2.064833	.0100160	.0295294	.0205757	.0985929
#3	.0061741	.0058974	2.084910	.0096428	.0295922	.0210053	.0881440

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0203797**	**2.080805**	**.0399605**	**.0114716**	**2.112528**	**.0442507**	**.0458368**
Stddev	.0002053	.008864	.0002507	.0003058	.010266	.0039079	.0002408
%RSD	1.007127	.4259980	.6273715	2.665648	.4859680	8.831211	.5253410
#1	.0201599	2.088232	.0397586	.0117682	2.124278	.0430191	.0456981
#2	.0204127	2.070992	.0398819	.0114892	2.108018	.0486259	.0456974
#3	.0205665	2.083190	.0402411	.0111574	2.105290	.0411069	.0461149

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.995505**	**.0935950**	**.2042498**	**.0389105**	**.0387080**	**.3785762**	**.0180542**
Stddev	.024961	.0010389	.0006053	.0007345	.0011725	.0139741	.0020960
%RSD	1.250853	1.109954	.2963395	1.887625	3.029196	3.691222	11.60931
#1	1.981550	.0945368	.2036556	.0387200	.0378364	.3942496	.0184312
#2	2.024322	.0937675	.2042284	.0397215	.0400411	.3740612	.0157953
#3	1.980642	.0924807	.2048655	.0382901	.0382466	.3674178	.0199361

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CRI01 Acquired: 9/24/2025 12:00:35 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0246122	.0185852	.0203800
Stddev	.0027347	.0019763	.0001307
%RSD	11.11110	10.63373	.6414473
#1	.0237530	.0203124	.0205192
#2	.0276733	.0164299	.0203610
#3	.0224102	.0190134	.0202598

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5788.162	91589.92	8250.991	4547.819	6763.511
Stddev	7.949	467.29	38.842	17.475	2.637
%RSD	.1373236	.5101956	.4707497	.3842447	.0389869
#1	5790.298	91664.46	8295.812	4565.829	6761.679
#2	5794.824	91089.85	8229.968	4530.934	6766.533
#3	5779.363	92015.47	8227.191	4546.695	6762.320

Sample Name: ICSA01 Acquired: 9/24/2025 12:04:48 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0070441**	**-.000065**	**.0002898**	**.0055810**	**-.001568**	**246.8161**
Stddev	.0049876	.001951	.0004837	.0042746	.001994	.1588
%RSD	70.80551	2990.053	166.9173	76.59120	127.2167	.0643472
#1	.0061124	-.000686	.0008058	.0010224	.000496	246.6703
#2	.0124320	.002120	-.000153	.0062212	-.003484	246.7927
#3	.0025881	-.001630	.000217	.0094993	-.001715	246.9854

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013799**	**.0018973**	**.0010544**	**233.6979**	**.0491896**	**.0015232**
Stddev	.0011751	.0001374	.0001808	.1596	.0006799	.0000169
%RSD	85.16151	7.241096	17.15072	.0682842	1.382240	1.109252
#1	.0018068	.0020304	.0010682	233.5267	.0499065	.0015288
#2	.0000509	.0017560	.0008670	233.7248	.0491083	.0015365
#3	.0022818	.0019056	.0012279	233.8424	.0485539	.0015042

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0152731**	**102.5556**	**.0070556**	**247.7983**	**.0039968**	**.0037300**
Stddev	.0009291	.7986	.0002565	.4811	.0005125	.0006202
%RSD	6.083057	.7787424	3.635122	.1941535	12.82136	16.62813
#1	.0151663	102.9955	.0071924	247.3324	.0042728	.0040245
#2	.0144020	103.0375	.0067597	247.7690	.0043122	.0041481
#3	.0162510	101.6337	.0072147	248.2933	.0034055	.0030174

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0576816**	**.0068712**	**.0052316**	**.0874412**	**.0460001**	**.0038929**
Stddev	.0129417	.0005545	.0004101	.0404343	.0043277	.0001785
%RSD	22.43647	8.069982	7.838858	46.24175	9.408107	4.583905
#1	.0698772	.0071915	.0048061	.1306427	.0488910	.0040226
#2	.0441046	.0062309	.0052642	.0505056	.0480846	.0036894
#3	.0590629	.0071910	.0056244	.0811752	.0410246	.0039666

Sample Name: ICSA01 Acquired: 9/24/2025 12:04:48 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000507	-.001040	.0313134	.0040260	-.010054	F -.026633
Stddev	.000396	.000990	.0163099	.0019398	.006511	.001857
%RSD	78.01190	95.20246	52.08607	48.18145	64.75826	6.973275
#1	-.000882	-.000198	.0457891	.0019874	-.010377	-.024570
#2	-.000093	-.002130	.0345088	.0058490	-.016398	-.028172
#3	-.000547	-.000791	.0136422	.0042418	-.003388	-.027157

Elem	Sr4077
Units	ppm
Avg	F .0289581
Stddev	.0002444
%RSD	.8441003
#1	.0287334
#2	.0289224
#3	.0292184

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5302.768	81639.24	7933.374	4081.006	5838.842
Stddev	8.859	156.78	43.655	25.737	7.346
%RSD	.1670574	.1920353	.5502645	.6306619	.1258064
#1	5302.358	81803.89	7975.200	4108.495	5839.471
#2	5311.825	81491.76	7936.825	4057.480	5845.852
#3	5294.122	81622.05	7888.096	4077.042	5831.201

Sample Name: ICSAB01 Acquired: 9/24/2025 12:08:59 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1091534**	**.0877649**	**.0467410**	**.0555949**	**.6178469**	**248.0759**
Stddev	.0034863	.0037558	.0008579	.0002082	.0027379	.3008
%RSD	3.193924	4.279428	1.835400	.3745190	.4431409	.1212660
#1	.1056029	.0902567	.0471104	.0558096	.6149671	247.8555
#2	.1092854	.0895931	.0473523	.0553938	.6204166	248.4186
#3	.1125717	.0834450	.0457603	.0555814	.6181571	247.9536

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4767336**	**.4825965**	**.9594975**	**234.9328**	**.5485386**	**.4820094**
Stddev	.0013824	.0030148	.0014190	.4297	.0005022	.0009405
%RSD	.2899739	.6247106	.1478876	.1829219	.0915480	.1951216
#1	.4782827	.4837270	.9578612	235.0301	.5488400	.4809865
#2	.4762926	.4848827	.9602427	235.3056	.5488169	.4822052
#3	.4756254	.4791798	.9603887	234.4628	.5479589	.4828366

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4836668**	**103.1770**	**.4766426**	**248.6369**	**.9609776**	**.2138681**
Stddev	.0002197	.2748	.0025792	.6401	.0009558	.0008082
%RSD	.0454258	.2663850	.5411238	.2574502	.0994599	.3778880
#1	.4835024	103.2077	.4795571	248.4694	.9598777	.2143844
#2	.4839164	102.8880	.4757160	249.3442	.9616062	.2142831
#3	.4835817	103.4352	.4746546	248.0972	.9614490	.2129367

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0709089**	**.4785783**	**1.035759**	**.0155902**	**.9504507**	**1.005411**
Stddev	.0105939	.0029739	.002972	.0550158	.0049112	.001759
%RSD	14.94020	.6214069	.2869063	352.8865	.5167215	.1749695
#1	.0635517	.4756824	1.036612	-.039524	.9547704	1.006867
#2	.0830513	.4784280	1.038211	.070507	.9514727	1.003456
#3	.0661239	.4816246	1.032454	.015788	.9451089	1.005908

Sample Name: ICSAB01 Acquired: 9/24/2025 12:08:59 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9624338	.9444563	.9785363	F .0062223	F -.008665	F .0047671
Stddev	.0017778	.0055175	.0091349	.0020767	.002013	.0007472
%RSD	.1847182	.5841975	.9335322	33.37460	23.23664	15.67510
#1	.9620701	.9483056	.9683043	.0085516	-.010805	.0040174
#2	.9643653	.9469282	.9814328	.0045644	-.006808	.0055119
#3	.9608660	.9381350	.9858719	.0055509	-.008382	.0047721

Elem	Sr4077
Units	ppm
Avg	F -.000961
Stddev	.000620
%RSD	64.53272
#1	-.000245
#2	-.001323
#3	-.001315

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5250.726	82687.50	8059.344	4106.204	5782.753
Stddev	4.122	95.91	41.411	16.956	3.149
%RSD	.0785031	.1159866	.5138298	.4129370	.0544552
#1	5252.944	82796.21	8043.741	4108.898	5782.468
#2	5253.265	82614.85	8028.001	4088.062	5786.034
#3	5245.970	82651.45	8106.291	4121.651	5779.755

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: ICSADLX20 Acquired: 9/24/2025 12:13:01 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001601**	**.0005786**	**-.001218**	**.0003211**	**-.000665**	**12.20546**	**-.002339**
Stddev	.001137	.0003453	.000693	.0013951	.003068	.04383	.001037
%RSD	70.97410	59.67768	56.88096	434.4640	461.7081	.3590780	44.32592
#1	-.000578	.0007601	-.001927	-.000038	-.001049	12.15844	-.002581
#2	-.002825	.0001804	-.001183	.001861	.002578	12.24518	-.003233
#3	-.001402	.0007952	-.000543	-.000859	-.003522	12.21275	-.001202

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001895**	**-.000309**	**11.95464**	**.0019945**	**-.000245**	**.0012533**	**4.815268**
Stddev	.0000516	.000076	.02580	.0003404	.000074	.0002843	.047616
%RSD	27.21822	24.66034	.2158274	17.06588	30.32393	22.67960	.9888636
#1	.0001325	-.000221	11.92936	.0019669	-.000324	.0009367	4.849044
#2	.0002330	-.000352	11.98093	.0023479	-.000177	.0014867	4.760807
#3	.0002030	-.000354	11.95364	.0016688	-.000234	.0013366	4.835952

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000872**	**12.51915**	**.0001644**	**.0010241**	**.0104619**	**.0030459**	**-.000368**
Stddev	.000646	.00147	.0002368	.0007294	.0102919	.0014759	.000455
%RSD	74.15038	.0117139	144.0793	71.22336	98.37520	48.45457	123.6713
#1	-.000302	12.51937	.0000503	.0014050	-.001137	.0029623	-.000792
#2	-.000738	12.51758	.0004367	.0001831	.014019	.0016136	.000113
#3	-.001575	12.52049	.0000062	.0014842	.018503	.0045618	-.000426

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.022170**	**-.005014**	**-.000201**	**-.003889**	**-.000393**	**.0138021**	**-.002728**
Stddev	.024604	.000732	.000188	.000719	.001306	.0095636	.001126
%RSD	110.9794	14.59400	93.52962	18.48450	332.4826	69.29082	41.28372
#1	.005090	-.005212	-.000352	-.004197	-.001706	.0044393	-.001444
#2	-.028870	-.005627	.000009	-.004402	-.000378	.0134125	-.003195
#3	-.042730	-.004204	-.000259	-.003067	.000906	.0235545	-.003546

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: ICSADLX20 Acquired: 9/24/2025 12:13:01 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.006936**	**-.007752**	**-.000470**
Stddev	.001419	.001936	.000088
%RSD	20.46382	24.97521	18.67911
#1	-.007542	-.006515	-.000526
#2	-.007953	-.009983	-.000369
#3	-.005315	-.006758	-.000515

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5852.429**	**93229.65**	**8291.137**	**4580.197**	**6884.629**
Stddev	13.180	292.39	52.004	23.649	22.816
%RSD	.2252026	.3136258	.6272295	.5163389	.3314047
#1	5837.703	93026.74	8347.104	4562.495	6858.532
#2	5863.120	93564.80	8244.307	4607.056	6900.802
#3	5856.462	93097.41	8281.999	4571.042	6894.553

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: ICSABDLX20 Acquired: 9/24/2025 12:17:18 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044322	.0036061	.0017456	.0035199	.0275284	12.06235	.0182413
Stddev	.0004535	.0017299	.0004795	.0024834	.0012542	.02790	.0029845
%RSD	10.23318	47.97221	27.47112	70.55241	4.555935	.2313273	16.36153
#1	.0049553	.0016199	.0013298	.0024944	.0266072	12.04538	.0184837
#2	.0041921	.0047832	.0022702	.0017136	.0270214	12.04711	.0151429
#3	.0041492	.0044153	.0016369	.0063519	.0289568	12.09455	.0210973

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0241615	.0456572	11.78496	.0268685	.0226663	.0245674	4.888898
Stddev	.0001200	.0001175	.05138	.0002438	.0000551	.0003087	.015349
%RSD	.4966470	.2574099	.4359783	.9074168	.2432670	1.256690	.3139519
#1	.0242400	.0456604	11.72723	.0271405	.0227234	.0243602	4.876681
#2	.0240234	.0455381	11.80196	.0266696	.0226134	.0244198	4.906126
#3	.0242212	.0457731	11.82568	.0267955	.0226620	.0249222	4.883887

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0232599	12.33102	.0459002	.0101619	.0062813	.0246836	.0488132
Stddev	.0002035	.05376	.0001989	.0001065	.0078078	.0021518	.0005080
%RSD	.8747337	.4359438	.4333317	1.048378	124.3037	8.717584	1.040741
#1	.0233035	12.29453	.0460309	.0102843	.0095149	.0257947	.0482322
#2	.0230382	12.30578	.0459983	.0100907	.0119528	.0260527	.0491739
#3	.0234380	12.39275	.0456713	.0101105	-.002624	.0222033	.0490334

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.057702	.0408041	.0490911	.0425479	.0482080	.0500503	-.002388
Stddev	.035476	.0010154	.0003372	.0005105	.0011980	.0118232	.001329
%RSD	61.48088	2.488484	.6868573	1.199895	2.485060	23.62261	55.68043
#1	-.096702	.0399218	.0487045	.0422882	.0468293	.0498209	-.003645
#2	-.049053	.0405766	.0492439	.0431361	.0489957	.0383435	-.002522
#3	-.027351	.0419140	.0493248	.0422194	.0487990	.0619866	-.000996

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: ICSABDLX20 Acquired: 9/24/2025 12:17:18 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01DLX20 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.009957**	**-.004937**	**-.000509**
Stddev	.001843	.003270	.000057
%RSD	18.51267	66.24084	11.14325
#1	-.012085	-.005929	-.000457
#2	-.008842	-.001286	-.000570
#3	-.008945	-.007596	-.000500

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5710.889**	**88557.40**	**8041.833**	**4419.956**	**6702.341**
Stddev	4.978	166.76	49.451	11.448	5.699
%RSD	.0871623	.1883052	.6149226	.2590062	.0850349
#1	5705.239	88745.17	8080.239	4413.336	6699.874
#2	5714.628	88500.49	8059.223	4433.175	6708.858
#3	5712.801	88426.55	7986.035	4413.358	6698.291

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV01 Acquired: 9/24/2025 12:21:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.986683**	**4.574232**	**4.866355**	**5.035876**	**5.159339**	**10.00223**	**9.723003**
Stddev	.009684	.062251	.000437	.014125	.006169	.01623	.081266
%RSD	.1941940	1.360911	.0089780	.2804783	.1195683	.1623039	.8358073
#1	4.987305	4.589980	4.866466	5.049915	5.166032	10.01245	9.718091
#2	4.996041	4.627096	4.865874	5.036045	5.153882	10.01074	9.806613
#3	4.976703	4.505619	4.866726	5.021668	5.158101	9.98351	9.644305

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2456134**	**2.449381**	**24.90242**	**1.023861**	**2.448885**	**1.243113**	**5.200945**
Stddev	.0023434	.000638	.07271	.000605	.000899	.000742	.028815
%RSD	.9541087	.0260672	.2919646	.0591228	.0367093	.0597080	.5540424
#1	.2479216	2.448702	24.93110	1.024490	2.448021	1.243538	5.176171
#2	.2456822	2.449969	24.95642	1.023812	2.448818	1.243545	5.194095
#3	.2432362	2.449471	24.81975	1.023282	2.449815	1.242256	5.232568

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.466922**	**24.93078**	**2.452750**	**1.268078**	**25.88449**	**2.511169**	**2.574898**
Stddev	.012850	.08349	.001725	.000546	.20387	.004454	.006436
%RSD	.5208944	.3348857	.0703238	.0430740	.7876207	.1773811	.2499624
#1	2.473372	24.91251	2.451175	1.268203	25.72141	2.507022	2.580650
#2	2.475270	25.02190	2.454594	1.267480	25.81900	2.515878	2.576098
#3	2.452124	24.85794	2.452482	1.268551	26.11306	2.510606	2.567946

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.69548**	**4.863598**	**5.184390**	**4.938030**	**5.003951**	**5.019924**	**5.227775**
Stddev	.22945	.037635	.007146	.005119	.011074	.045216	.022612
%RSD	.8929679	.7738169	.1378345	.1036624	.2213100	.9007316	.4325340
#1	25.51946	4.889644	5.191008	4.938397	5.007812	4.976701	5.240573
#2	25.61199	4.880701	5.185351	4.942955	5.012578	5.016171	5.241086
#3	25.95499	4.820448	5.176813	4.932737	4.991463	5.066899	5.201667

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV01 Acquired: 9/24/2025 12:21:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.709000**	**4.763862**	**4.995164**
Stddev	.025733	.014616	.048476
%RSD	.5464623	.3068101	.9704642
#1	4.715891	4.770161	4.988239
#2	4.730585	4.774273	5.046731
#3	4.680523	4.747153	4.950524

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5720.598**	**89420.99**	**8156.351**	**4405.124**	**6457.688**
Stddev	3.587	253.58	62.783	11.228	8.866
%RSD	.0627108	.2835753	.7697472	.2548962	.1372981
#1	5724.492	89713.56	8126.362	4393.500	6467.926
#2	5717.427	89284.76	8114.185	4405.961	6452.542
#3	5719.874	89264.63	8228.505	4415.911	6452.596

Sample Name: CCB01 Acquired: 9/24/2025 12:26:56 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010056**	**.0015640**	**-.000747**	**.0014830**	**-.001428**	**.0049753**	**-.002452**
Stddev	.0020934	.0000626	.001035	.0033850	.000746	.0031476	.000410
%RSD	208.1834	3.999515	138.6266	228.2583	52.22088	63.26378	16.72527
#1	.0028058	.0014919	-.000353	-.002231	-.001989	.0029674	-.002572
#2	-.001292	.0015967	.000033	.004395	-.001712	.0033557	-.002788
#3	.001502	.0016033	-.001921	.002285	-.000582	.0086029	-.001995

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000022**	**-.000298**	**.0217908**	**-.000557**	**-.000121**	**.0001271**	**.0008176**
Stddev	.000044	.000071	.0029957	.000246	.000178	.0001968	.0069847
%RSD	200.8913	23.84356	13.74759	44.25562	146.2767	154.8079	854.2702
#1	-.000002	-.000269	.0191130	-.000374	.000082	.0001864	-.000081
#2	.000008	-.000246	.0212333	-.000837	-.000249	-.000092	.008208
#3	-.000073	-.000379	.0250261	-.000459	-.000197	.000287	-.005674

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000760**	**-.039390**	**-.000279**	**.0007583**	**.0017656**	**.0015228**	**.0043769**
Stddev	.000610	.013939	.000306	.0002862	.0150364	.0051178	.0002471
%RSD	80.32157	35.38787	109.5020	37.73828	851.6553	336.0803	5.645811
#1	-.000101	-.043833	-.000100	.0007444	-.006173	.0056055	.0041124
#2	-.001305	-.050566	-.000106	.0010512	-.007638	-.004219	.0044164
#3	-.000874	-.023771	-.000633	.0004794	.019107	.003181	.0046018

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0212091**	**-.000881**	**.0000834**	**-.000140**	**-.000557**	**.0031287**	**-.002626**
Stddev	.0220993	.000885	.0001725	.000437	.001562	.0122713	.000937
%RSD	104.1973	100.4599	206.8748	311.8966	280.3571	392.2250	35.67956
#1	-.000872	-.000320	.0002720	-.000116	-.002350	-.011026	-.003708
#2	.021173	-.000421	-.000067	-.000589	.000168	.010777	-.002071
#3	.043326	-.001900	.000045	.000284	.000510	.009635	-.002100

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCB01 Acquired: 9/24/2025 12:26:56 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077		
Units	ppm	ppm	ppm		
Avg	**-.004287**	**-.001603**	**-.000495**		
Stddev	.000447	.002644	.000017		
%RSD	10.42837	164.9584	3.370746		
#1	-.004725	.000587	-.000512		
#2	-.003832	-.004539	-.000478		
#3	-.004303	-.000855	-.000496		
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5966.078**	**93448.87**	**8272.697**	**4562.329**	**7213.738**
Stddev	5.018	301.33	28.896	11.173	11.036
%RSD	.0841037	.3224578	.3492962	.2448880	.1529838
#1	5965.430	93716.29	8298.893	4556.049	7206.866
#2	5971.388	93507.94	8277.496	4575.228	7207.880
#3	5961.415	93122.38	8241.702	4555.709	7226.467

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: LR-2 Acquired: 9/24/2025 12:35:43 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0872981**	**-.184865**	**.1025944**	**.0691465**	**-.109727**	**1822.333**	**.0161523**
Stddev	.0005751	.005784	.0064303	.0075195	.011571	20.017	.0018461
%RSD	.6587317	3.128733	6.267670	10.87473	10.54523	1.098415	11.42914
#1	.0879576	-.189649	.0954621	.0740924	-.097439	1806.311	.0146159
#2	.0870350	-.186508	.1043726	.0604932	-.120415	1844.771	.0182001
#3	.0869016	-.178437	.1079484	.0728538	-.111326	1815.916	.0156407

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0433783**	**-.003796**	**12.00600**	**-.245030**	**.0394599**	**.2891193**	**2649.502**
Stddev	.0002559	.001200	.06883	.002155	.0002864	.0363826	21.856
%RSD	.5899526	31.61734	.5732815	.8794951	.7258874	12.58393	.8249279
#1	.0436658	-.005151	12.07252	-.247518	.0396806	.2474808	2673.674
#2	.0432936	-.003369	11.93508	-.243778	.0391362	.3147725	2631.132
#3	.0431755	-.002867	12.01039	-.243793	.0395628	.3051046	2643.699

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.177095**	**2.151773**	**.0491943**	**^ *****	**8.161189**	**.0516537**	**.0769224**
Stddev	.001956	.020076	.0010681	-----	.054627	.0014515	.0032656
%RSD	1.104594	.9330094	2.171176	-----	.6693552	2.810032	4.245356
#1	-.176147	2.152785	.0497058	^ -----	8.200088	.0506083	.0733420
#2	-.175793	2.131209	.0479666	^ -----	8.184742	.0510418	.0797372
#3	-.179344	2.171323	.0499104	^ -----	8.098736	.0533109	.0776880

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1809.919**	**^ *****	**-.019367**	**.0203610**	**.0027255**	**.4998786**	**.0857375**
Stddev	21.695	-----	.000552	.0017534	.0014696	.0072350	.0004581
%RSD	1.198646	-----	2.852392	8.611476	53.92075	1.447361	.5343033
#1	1830.017	^ -----	-.019783	.0205840	.0043570	.4924693	.0860858
#2	1812.820	^ -----	-.018740	.0219922	.0015055	.5069258	.0852186
#3	1786.920	^ -----	-.019578	.0185068	.0023141	.5002407	.0859080

Sample Name: LR-2 Acquired: 9/24/2025 12:35:43 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.475244**	**.2911673**	**-2.54064**
Stddev	.002785	.0013168	.02089
%RSD	.5860693	.4522471	.8223265
#1	-.478011	.2925117	-2.56369
#2	-.475281	.2911102	-2.52296
#3	-.472441	.2898799	-2.53525

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4808.041**	**73969.34**	**8040.534**	**3677.566**	**5084.889**
Stddev	10.322	221.98	27.158	17.510	8.881
%RSD	.2146804	.3000997	.3377615	.4761208	.1746579
#1	4816.217	73767.11	8038.224	3661.234	5088.181
#2	4811.463	73934.07	8014.604	3675.409	5091.655
#3	4796.443	74206.85	8068.773	3696.054	5074.832

Sample Name: Q3153-04 Acquired: 9/24/2025 12:45:03 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001291**	**-.000862**	**.0155256**	**.0040523**	**.0012923**	**.0712387**	**.1507717**
Stddev	.001735	.003190	.0009301	.0030219	.0013074	.0084082	.0012078
%RSD	134.4355	370.1909	5.990581	74.57067	101.1710	11.80281	.8010663
#1	-.002941	-.001790	.0165862	.0006386	.0025040	.0801046	.1504929
#2	.000519	.002689	.0151420	.0051335	.0014661	.0633788	.1520945
#3	-.001451	-.003485	.0148488	.0063849	-.000093	.0702327	.1497277

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000286**	**.0000653**	**10.51588**	**.0023332**	**.0010965**	**.0058634**	**.0890133**
Stddev	.000059	.0001070	.07459	.0003308	.0001340	.0004304	.0044411
%RSD	20.58879	163.7579	.7093037	14.17837	12.22035	7.341183	4.989262
#1	-.000262	-.000047	10.46426	.0027149	.0009421	.0058368	.0938357
#2	-.000353	.000076	10.60140	.0021305	.0011649	.0054469	.0881125
#3	-.000243	.000167	10.48198	.0021541	.0011825	.0063066	.0850916

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.063473**	**1.634519**	**.0005576**	**.0009961**	**303.9428**	**.0045063**	**.0340463**
Stddev	.012455	.030910	.0003654	.0003171	.7407	.0017765	.0005096
%RSD	.6036107	1.891047	65.53425	31.83186	.2436928	39.42364	1.496812
#1	2.056283	1.647390	.0002701	.0013491	304.0638	.0025599	.0342436
#2	2.077855	1.656913	.0004339	.0009041	304.6155	.0060405	.0344277
#3	2.056280	1.599254	.0009688	.0007352	303.1490	.0049185	.0334675

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.610894**	**.0506922**	**.0008911**	**-.005072**	**-.000244**	**.7976629**	**.0300008**
Stddev	.002498	.0004696	.0002443	.000575	.000944	.0090321	.0010781
%RSD	.1550922	.9262763	27.41112	11.34478	387.0519	1.132323	3.593585
#1	1.611742	.0504643	.0006739	-.005402	.000531	.8080101	.0312422
#2	1.608082	.0503800	.0008439	-.004408	-.001295	.7936215	.0292986
#3	1.612858	.0512322	.0011555	-.005406	.000033	.7913572	.0294617

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3153-04 Acquired: 9/24/2025 12:45:03 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.6013621	-.007088	.0665164
Stddev	.0100605	.003299	.0003533
%RSD	1.672954	46.55054	.5310890
#1	.5904430	-.003868	.0663835
#2	.6033873	-.010461	.0669168
#3	.6102559	-.006933	.0662488

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5564.803	83738.34	7877.177	4229.023	6226.789
Stddev	23.927	295.34	23.878	4.000	28.563
%RSD	.4299672	.3526949	.3031336	.0945823	.4587178
#1	5540.115	83400.63	7880.260	4232.756	6195.038
#2	5566.406	83948.31	7851.906	4224.801	6234.934
#3	5587.888	83866.08	7899.364	4229.513	6250.396

Sample Name: LR-1 Acquired: 9/24/2025 12:49:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003537**	**.0106923**	**.0176893**	**-.023332**	**.0137420**	**.2127131**	**.0135264**
Stddev	.0024726	.0037617	.0030803	.011082	.0030196	.0060904	.0006797
%RSD	699.1000	35.18135	17.41345	47.49770	21.97347	2.863194	5.025216
#1	.0022949	.0132920	.0212454	-.012685	.0151981	.2197309	.0132068
#2	-.002430	.0124061	.0158460	-.034804	.0102703	.2088098	.0130653
#3	.001196	.0063789	.0159766	-.022508	.0157577	.2095985	.0143070

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007691**	**.0005818**	**2414.868**	**.0548362**	**.0064277**	**.0100059**	**.7575975**
Stddev	.0000822	.0003979	16.195	.0006571	.0004702	.0010692	.0126303
%RSD	10.69087	68.39941	.6706193	1.198296	7.315679	10.68552	1.667147
#1	.0007583	.0001232	2433.430	.0547714	.0069252	.0112351	.7436240
#2	.0008562	.0007859	2403.623	.0542139	.0059906	.0092917	.7682009
#3	.0006928	.0008361	2407.550	.0555233	.0063673	.0094909	.7609676

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0249371**	**2208.209**	**.0407768**	**-.000430**	**2271.016**	**.0152834**	**.0705576**
Stddev	.0009331	24.749	.0008279	.000839	35.650	.0027632	.0009944
%RSD	3.741814	1.120768	2.030272	194.8636	1.569778	18.07981	1.409385
#1	.0239159	2233.048	.0398751	.000205	2293.985	.0169486	.0695525
#2	.0257453	2208.028	.0409528	-.000115	2289.115	.0168078	.0715410
#3	.0251502	2183.551	.0415025	-.001381	2229.947	.0120937	.0705795

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**28.24117**	**.0031159**	**.0086594**	**-.006637**	**-.110769**	**-.022916**	**.0134165**
Stddev	3.18393	.0009696	.0003645	.000601	.002060	.029072	.0023193
%RSD	11.27408	31.11752	4.209606	9.059476	1.859970	126.8652	17.28713
#1	24.79617	.0039841	.0085828	-.006944	-.111428	.009017	.0132903
#2	28.85175	.0032939	.0090561	-.007022	-.108460	-.047848	.0111629
#3	31.07560	.0020696	.0083392	-.005944	-.112419	-.029915	.0157964

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: LR-1 Acquired: 9/24/2025 12:49:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2176575	-.335778	.0599342
Stddev	.0018927	.002494	.0008598
%RSD	.8695740	.7428670	1.434540
#1	.2160460	-.335576	.0604345
#2	.2171847	-.333390	.0604267
#3	.2197418	-.338367	.0589414

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3819.802	64571.87	7122.773	3010.998	3940.348
Stddev	28.452	595.77	42.871	26.035	42.351
%RSD	.7448563	.9226397	.6018872	.8646780	1.074806
#1	3849.655	65174.93	7073.535	3040.849	3982.208
#2	3816.756	64557.02	7142.956	2992.985	3941.315
#3	3792.996	63983.68	7151.826	2999.161	3897.522

Sample Name: LR-3 Acquired: 9/24/2025 12:53:57 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1310338**	**.0090825**	**235.7379**	**.0047190**	**.1415376**	**.0495753**	**.0004221**
Stddev	.0027688	.0028544	1.5429	.0021556	.0092830	.0032551	.0019035
%RSD	2.113062	31.42734	.6544855	45.68026	6.558706	6.565923	450.9594
#1	.1299390	.0096132	237.1848	.0025018	.1495977	.0491690	-.001163
#2	.1341827	.0116343	235.9146	.0068072	.1436272	.0530145	-.000104
#3	.1289798	.0060000	234.1142	.0048479	.1313878	.0465425	.002533

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.006558**	**-.004004**	**.2297453**	**23.80077**	**.0109934**	**51.52429**	**.0386738**
Stddev	.000073	.000160	.0072419	.11565	.0002547	.17965	.0033023
%RSD	1.120719	4.008362	3.152142	.4858918	2.317335	.3486668	8.538852
#1	-.006642	-.003986	.2380609	23.68673	.0108933	51.53198	.0401260
#2	-.006526	-.004173	.2263512	23.79763	.0112830	51.69998	.0410010
#3	-.006505	-.003853	.2248239	23.91796	.0108040	51.34093	.0348942

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**52.72017**	**-.266324**	**23.10511**	**.0041179**	**2.168345**	**-.035272**	**32.41063**
Stddev	.12224	.022679	.08260	.0005575	.170329	.003654	.23867
%RSD	.2318696	8.515695	.3574958	13.53947	7.855247	10.35911	.7364026
#1	52.80725	-.253381	23.14023	.0046245	2.341416	-.035570	32.68529
#2	52.58042	-.292511	23.16436	.0042087	2.162721	-.031478	32.29297
#3	52.77284	-.253079	23.01076	.0035206	2.000898	-.038768	32.25364

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.870282**	**-.002321**	**-.021831**	**-.004339**	**-.045274**	**-.113146**	**.1715368**
Stddev	.084170	.000683	.000763	.001305	.001405	.012942	.0015754
%RSD	4.500368	29.43798	3.493942	30.08237	3.103329	11.43860	.9184270
#1	1.929758	-.003065	-.022689	-.002833	-.043960	-.101258	.1724303
#2	1.907115	-.002177	-.021575	-.005040	-.046755	-.126933	.1697178
#3	1.773975	-.001722	-.021229	-.005145	-.045106	-.111245	.1724624

Sample Name: LR-3 Acquired: 9/24/2025 12:53:57 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0681874	.0112653	-.000314
Stddev	.0040039	.0021060	.000168
%RSD	5.871919	18.69421	53.45620
#1	.0727713	.0108964	-.000121
#2	.0664170	.0093681	-.000401
#3	.0653739	.0135313	-.000420

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5352.362	87777.96	7601.808	4202.983	6602.142
Stddev	73.465	420.87	45.478	26.745	96.703
%RSD	1.372580	.4794753	.5982476	.6363368	1.464715
#1	5296.618	87600.70	7653.161	4175.695	6521.355
#2	5324.858	88258.47	7585.640	4229.150	6575.780
#3	5435.611	87474.72	7566.624	4204.105	6709.293

Sample Name: Q3153-08 Acquired: 9/24/2025 12:58:48 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000573**	**-.002992**	**.0072194**	**.0039415**	**.0007032**	**.0923116**	**.1743111**
Stddev	.002317	.001578	.0016172	.0024383	.0016102	.0024248	.0006868
%RSD	404.5039	52.75474	22.40046	61.86218	228.9880	2.626740	.3940117
#1	.001428	-.004188	.0086205	.0014833	-.001140	.0929202	.1750947
#2	-.003112	-.001203	.0054497	.0039819	.001836	.0943742	.1738140
#3	-.000034	-.003584	.0075880	.0063594	.001414	.0896405	.1740245

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000110**	**-.000203**	**14.84216**	**.0015167**	**.0038821**	**.0060237**	**.0347754**
Stddev	.000105	.000069	.01221	.0000410	.0002127	.0001167	.0088251
%RSD	95.26978	33.81229	.0822851	2.701761	5.479102	1.937580	25.37757
#1	-.000049	-.000202	14.83455	.0015621	.0041191	.0060978	.0279791
#2	-.000050	-.000135	14.83569	.0014826	.0038194	.0060841	.0447493
#3	-.000231	-.000272	14.85625	.0015053	.0037078	.0058891	.0315977

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.153072**	**2.346473**	**.0010596**	**.0000148**	**315.2235**	**.0021643**	**.0371296**
Stddev	.005308	.032081	.0002122	.0005619	2.2529	.0060253	.0001687
%RSD	.4603000	1.367201	20.02716	3785.766	.7147015	278.3996	.4543043
#1	1.157132	2.360368	.0009447	-.000070	313.7348	.0090729	.0371603
#2	1.147066	2.369265	.0009297	.000614	317.8154	-.002002	.0372808
#3	1.155019	2.309787	.0013045	-.000500	314.1204	-.000578	.0369477

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.190499**	**.0147540**	**.0007782**	**-.005906**	**.0015957**	**.7345816**	**.0197787**
Stddev	.050329	.0015091	.0002842	.000614	.0009199	.0195816	.0005330
%RSD	4.227555	10.22856	36.51858	10.39094	57.64723	2.665687	2.694695
#1	1.133270	.0163120	.0008015	-.006234	.0005627	.7179128	.0192068
#2	1.227867	.0146511	.0004831	-.005198	.0023262	.7561468	.0198679
#3	1.210361	.0132990	.0010501	-.006287	.0018984	.7296851	.0202615

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3153-08 Acquired: 9/24/2025 12:58:48 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3444219	-.008903	.0590486
Stddev	.0029483	.001883	.0002483
%RSD	.8560173	21.14806	.4205178
#1	.3434521	-.008663	.0589779
#2	.3420807	-.010895	.0588434
#3	.3477330	-.007153	.0593246

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5500.207	85272.30	7595.641	4252.861	6136.479
Stddev	9.815	514.48	124.612	17.714	18.868
%RSD	.1784561	.6033362	1.640570	.4165255	.3074702
#1	5508.982	84832.64	7452.472	4233.316	6145.579
#2	5502.033	85146.14	7654.770	4257.406	6149.072
#3	5489.608	85838.13	7679.680	4267.859	6114.785

Sample Name: Q3145-01 Acquired: 9/24/2025 13:03:14 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1142777	-.031454	1.254122	.0159975	-.012435	243.4099	1.359146
Stddev	.0063018	.003459	.001499	.0039452	.002933	.8029	.004716
%RSD	5.514485	10.99583	.1195323	24.66159	23.58357	.3298624	.3469655
#1	.1148353	-.027500	1.255031	.0129036	-.010414	242.7522	1.357303
#2	.1202823	-.033913	1.252391	.0204403	-.015798	243.1728	1.364505
#3	.1077157	-.032950	1.254942	.0146487	-.011091	244.3046	1.355630

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0168365	.0100198	67.96699	.3352688	.1769664	.5271361	366.7009
Stddev	.0002693	.0003439	.12855	.0013368	.0001054	.0049629	3.2731
%RSD	1.599514	3.432510	.1891372	.3987106	.0595632	.9414927	.8925890
#1	.0166893	.0101597	67.87879	.3337945	.1769995	.5309566	364.5756
#2	.0166730	.0096279	67.90769	.3356098	.1770513	.5215267	370.4702
#3	.0171473	.0102717	68.11448	.3364020	.1768484	.5289251	365.0571

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.063832	75.36292	.3700067	.0094574	12.05687	.5203399	1.367940
Stddev	.001904	.19778	.0001306	.0014729	.09174	.0026413	.003135
%RSD	.0314072	.2624410	.0352844	15.57435	.7608628	.5076110	.2291539
#1	6.065549	75.22781	.3701564	.0087632	12.02616	.5226051	1.365179
#2	6.064163	75.27101	.3699162	.0111492	12.16002	.5174387	1.367294
#3	6.061783	75.58993	.3699476	.0084598	11.98443	.5209760	1.371347

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.47474	.2060793	.0085075	.0782174	4.175655	5.039561	7.777045
Stddev	.24001	.0170809	.0002922	.0003897	.005020	.044910	.028207
%RSD	1.067900	8.288493	3.434849	.4982219	.1202159	.8911472	.3626976
#1	22.29947	.1954084	.0083089	.0777723	4.170232	5.008904	7.745574
#2	22.74829	.2257798	.0083706	.0783828	4.176596	5.091111	7.800049
#3	22.37647	.1970497	.0088431	.0784972	4.180138	5.018668	7.785511

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3145-01 Acquired: 9/24/2025 13:03:14 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.186359**	**.4898591**	**-.017089**
Stddev	.004316	.0032860	.002648
%RSD	.1973924	.6708046	15.49664
#1	2.183775	.4869108	-.015004
#2	2.183961	.4934017	-.020069
#3	2.191342	.4892647	-.016195

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6291.588**	**98662.57**	**9328.611**	**4855.206**	**6036.261**
Stddev	1.066	389.78	59.945	15.141	3.859
%RSD	.0169484	.3950640	.6425889	.3118608	.0639310
#1	6290.363	99065.32	9324.592	4872.663	6031.981
#2	6292.089	98287.20	9390.464	4845.641	6039.473
#3	6292.311	98635.20	9270.777	4847.314	6037.331

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3145-03 Acquired: 9/24/2025 13:07:15 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1052235**	**-.033534**	**1.054639**	**.0148900**	**-.011218**	**224.4192**	**1.343546**
Stddev	.0017680	.003478	.006145	.0028174	.003022	.0570	.004548
%RSD	1.680269	10.37161	.5826737	18.92170	26.93485	.0253799	.3385237
#1	.1067041	-.031688	1.059554	.0170598	-.014186	224.4353	1.348761
#2	.1032659	-.031368	1.047749	.0117058	-.011323	224.3559	1.340404
#3	.1057004	-.037546	1.056613	.0159043	-.008146	224.4663	1.341473

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0152002**	**.0055038**	**101.4976**	**.2991157**	**.1624775**	**.4760876**	**352.6972**
Stddev	.0001594	.0001194	.1110	.0014519	.0010227	.0032469	.9044
%RSD	1.048425	2.168949	.1093914	.4854111	.6294533	.6819905	.2564173
#1	.0151561	.0055706	101.6062	.2992799	.1636352	.4792929	353.6229
#2	.0153769	.0055747	101.3843	.3004785	.1616969	.4728007	351.8157
#3	.0150675	.0053659	101.5022	.2975886	.1621003	.4761694	352.6529

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.107870**	**75.15495**	**.3437165**	**.0120011**	**11.49194**	**.4847373**	**1.451406**
Stddev	.009071	.15300	.0021252	.0007910	.03203	.0011417	.007543
%RSD	.1775830	.2035762	.6183030	6.590800	.2787278	.2355363	.5197162
#1	5.117917	74.99876	.3456222	.0119994	11.52163	.4853675	1.460016
#2	5.100282	75.30454	.3414248	.0112110	11.45799	.4834193	1.448243
#3	5.105411	75.16155	.3441026	.0127929	11.49620	.4854249	1.445960

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.94529**	**.2978499**	**.0064513**	**.0489150**	**4.101091**	**4.680143**	**7.014576**
Stddev	.14058	.0042661	.0001173	.0014205	.007653	.021170	.028432
%RSD	.6126857	1.432312	1.817866	2.904058	.1866079	.4523426	.4053232
#1	23.10733	.2985765	.0064741	.0501330	4.109925	4.677275	7.047386
#2	22.85582	.2932672	.0065556	.0473546	4.096856	4.660553	6.999161
#3	22.87273	.3017062	.0063244	.0492574	4.096491	4.702601	6.997181

Sample Name: Q3145-03 Acquired: 9/24/2025 13:07:15 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.205031	.4242216	-.000039
Stddev	.015295	.0024795	.000882
%RSD	.6936385	.5844746	2260.937
#1	2.221122	.4260692	.000823
#2	2.203292	.4251919	-.000001
#3	2.190680	.4214037	-.000939

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6102.173	92993.62	9185.817	4661.084	5972.285
Stddev	35.059	379.62	37.731	17.487	42.520
%RSD	.5745338	.4082255	.4107506	.3751680	.7119544
#1	6075.426	92716.42	9176.095	4640.906	5936.184
#2	6141.863	92838.15	9153.898	4671.827	6019.153
#3	6089.228	93426.30	9227.457	4670.519	5961.517

Sample Name: Q3146-01 Acquired: 9/24/2025 13:11:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.160072	-.092701	F 853.3007	-.016252	.8113279	422.1635
Stddev	.007573	.007727	20.2205	.013040	.0243574	3.3703
%RSD	.6527720	8.335341	2.369679	80.23768	3.002160	.7983448
#1	1.161021	-.084813	876.0388	-.030836	.8195841	425.7004
#2	1.152069	-.093035	837.3377	-.005717	.7839156	418.9891
#3	1.167125	-.100256	846.5257	-.012202	.8304841	421.8010

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.67480	.0272791	.1405647	105.6793	F 71.93520	3.130746
Stddev	.24932	.0003765	.0025635	.5639	.57216	.033534
%RSD	1.335062	1.379976	1.823715	.5335808	.7953850	1.071110
#1	18.44900	.0270883	.1413644	105.2680	72.57415	3.158639
#2	18.94237	.0277128	.1376967	105.4478	71.47020	3.093541
#3	18.63304	.0270363	.1426331	106.3221	71.76125	3.140060

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.19197	1256.501	9.995538	135.6416	.8482032	^ *****
Stddev	.22156	19.010	.058505	.6771	.0108538	-----
%RSD	1.979640	1.512909	.5853157	.4992182	1.279627	-----
#1	11.03762	1239.837	9.929672	135.3664	.8584445	^ -----
#2	11.09245	1252.461	10.01547	135.1454	.8368261	^ -----
#3	11.44584	1277.207	10.04148	136.4130	.8493392	^ -----

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.764477	.3458483	F 70.31978	22.22926	^ *****	.1711031
Stddev	.050679	.0022987	.83208	.31366	-----	.0060805
%RSD	1.346249	.6646439	1.183286	1.411042	-----	3.553705
#1	3.717819	.3476536	69.36145	21.98750	^ -----	.1652076
#2	3.757217	.3466306	70.73932	22.11658	^ -----	.1707487
#3	3.818395	.3432606	70.85858	22.58370	^ -----	.1773531

Sample Name: Q3146-01 Acquired: 9/24/2025 13:11:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3021796	5.918035	5.781914	F 58.02706	F 48.63621	.2425744
Stddev	.0054195	.034766	.084031	.92817	.41997	.0014176
%RSD	1.793456	.5874527	1.453348	1.599551	.8634961	.5843788
#1	.3074265	5.890679	5.720439	59.00612	48.95438	.2428109
#2	.2966027	5.906269	5.747638	57.15993	48.16018	.2410535
#3	.3025094	5.957157	5.877666	57.91512	48.79407	.2438589

Elem	Sr4077
Units	ppm
Avg	-.186335
Stddev	.012612
%RSD	6.768412
#1	-.176483
#2	-.181973
#3	-.200549

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4606.472	86841.29	8099.555	3726.271	5750.909
Stddev	90.957	136.17	54.026	15.016	136.288
%RSD	1.974552	.1567980	.6670242	.4029865	2.369851
#1	4512.061	86706.52	8061.695	3710.629	5598.002
#2	4693.529	86978.81	8075.546	3727.611	5859.596
#3	4613.825	86838.54	8161.424	3740.572	5795.127

Sample Name: Q3153-01 Acquired: 9/24/2025 13:16:15 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0472080**	**-.020137**	**1.220817**	**.0025076**	**-.007672**	**137.7756**
Stddev	.0029014	.002041	.001875	.0014051	.000760	.1497
%RSD	6.145992	10.13624	.1535609	56.03487	9.909991	.1086617
#1	.0478749	-.020211	1.219564	.0032364	-.008234	137.6719
#2	.0497179	-.018060	1.219915	.0008878	-.006807	137.9472
#3	.0440312	-.022140	1.222972	.0033985	-.007977	137.7077

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7135136**	**.0097857**	**.0044474**	**30.21776**	**.1449994**	**.0821916**
Stddev	.0040839	.0001501	.0001913	.04121	.0003739	.0001524
%RSD	.5723626	1.533712	4.302388	.1363717	.2578333	.1854009
#1	.7175956	.0096184	.0042370	30.19282	.1453783	.0820884
#2	.7094279	.0098304	.0046109	30.19514	.1449891	.0821198
#3	.7135172	.0099084	.0044945	30.26533	.1446309	.0823666

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4137991**	**179.5942**	**4.513155**	**36.42311**	**.1565002**	**.0032066**
Stddev	.0005692	.6112	.018297	.15280	.0004370	.0006654
%RSD	.1375575	.3403095	.4054206	.4195042	.2792113	20.75009
#1	.4132234	180.2920	4.524202	36.26363	.1569862	.0039288
#2	.4138125	179.3369	4.492035	36.43749	.1563749	.0030722
#3	.4143616	179.1538	4.523229	36.56821	.1561396	.0026186

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.74238**	**.3811940**	**.6913871**	**10.19762**	**.1880918**	**.0018996**
Stddev	.05953	.0032812	.0024875	.02278	.0041513	.0002349
%RSD	.5541680	.8607772	.3597879	.2234082	2.207053	12.36436
#1	10.78674	.3788082	.6914820	10.19371	.1928786	.0020411
#2	10.76568	.3798379	.6938258	10.22210	.1859173	.0016285
#3	10.67472	.3849359	.6888535	10.17704	.1854795	.0020292

Sample Name: Q3153-01 Acquired: 9/24/2025 13:16:15 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0763879	2.885808	4.324350	F 10.33985	1.924816	.1210888
Stddev	.0003049	.006595	.032943	.02519	.014479	.0009260
%RSD	.3991784	.2285324	.7617993	.2436629	.7522250	.7647100
#1	.0764086	2.889568	4.356020	10.34052	1.936505	.1221340
#2	.0760731	2.878193	4.326764	10.31433	1.908619	.1203710
#3	.0766819	2.889663	4.290267	10.36471	1.929323	.1207614

Elem	Sr4077
Units	ppm
Avg	-.000475
Stddev	.000329
%RSD	69.16741
#1	-.000606
#2	-.000718
#3	-.000101

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6417.843	99209.91	8959.088	4927.838	6324.477
Stddev	17.774	105.86	36.997	27.227	20.540
%RSD	.2769477	.1066990	.4129521	.5525049	.3247639
#1	6412.223	99088.00	8984.325	4943.627	6319.106
#2	6437.748	99278.58	8976.320	4943.487	6347.168
#3	6403.559	99263.15	8916.618	4896.399	6307.155

Sample Name: Q3153-05 Acquired: 9/24/2025 13:20:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0415856**	**-.018895**	**.3967491**	**.0052671**	**-.007192**	**129.9485**	**.4992209**
Stddev	.0060069	.002137	.0021485	.0019123	.002974	.1813	.0043261
%RSD	14.44460	11.30839	.5415302	36.30572	41.35667	.1394787	.8665632
#1	.0363159	-.021255	.3960385	.0069892	-.010599	130.1577	.5013488
#2	.0481263	-.018336	.3991629	.0056028	-.005118	129.8396	.4942431
#3	.0403147	-.017093	.3950459	.0032092	-.005858	129.8481	.5020709

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0093441**	**.0028589**	**14.95561**	**.1454010**	**.0714981**	**.1843904**	**171.3205**
Stddev	.0001312	.0001179	.02171	.0011031	.0002548	.0007736	1.4076
%RSD	1.403684	4.122463	.1451624	.7586479	.3564036	.4195525	.8215985
#1	.0092345	.0028760	14.97714	.1451666	.0712275	.1849333	170.4016
#2	.0093085	.0027334	14.93373	.1466025	.0717334	.1835046	172.9409
#3	.0094894	.0029672	14.95595	.1444340	.0715335	.1847332	170.6189

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.127330**	**33.58812**	**.1416603**	**.0032148**	**7.778813**	**.2652406**	**.3695179**
Stddev	.015827	.09931	.0004837	.0005060	.060671	.0025400	.0023050
%RSD	.5060719	.2956732	.3414348	15.73855	.7799530	.9576107	.6237861
#1	3.140614	33.60204	.1415503	.0028603	7.727670	.2637591	.3687065
#2	3.109819	33.67973	.1421896	.0029898	7.845849	.2681734	.3721189
#3	3.131557	33.48258	.1412412	.0037942	7.762921	.2637892	.3677284

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.392398**	**.0804761**	**.0021295**	**.0226795**	**2.649640**	**4.008802**	**6.490532**
Stddev	.076891	.0058765	.0004704	.0009813	.008368	.035729	.004801
%RSD	.9161929	7.302194	22.08779	4.326863	.3158107	.8912606	.0739736
#1	8.307274	.0765735	.0017590	.0232717	2.649216	3.977823	6.484990
#2	8.456813	.0872348	.0026587	.0232200	2.641492	4.047887	6.493421
#3	8.413108	.0776201	.0019709	.0215467	2.658212	4.000695	6.493186

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3153-05 Acquired: 9/24/2025 13:20:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.244938**	**.1247808**	**-.072524**
Stddev	.005313	.0012327	.001996
%RSD	.2366582	.9879315	2.752268
#1	2.242211	.1251563	-.071098
#2	2.251061	.1234040	-.074805
#3	2.241543	.1257821	-.071668

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6305.766**	**95416.47**	**8915.844**	**4802.438**	**6319.032**
Stddev	5.535	386.07	75.447	21.522	11.091
%RSD	.0877798	.4046185	.8462150	.4481489	.1755146
#1	6310.885	95465.05	8842.496	4817.249	6327.116
#2	6299.892	95008.41	8993.228	4777.751	6306.388
#3	6306.522	95775.96	8911.809	4812.316	6323.593

Sample Name: CCV02 Acquired: 9/24/2025 13:40:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.129269**	**5.009733**	**4.946940**	**5.195187**	**5.255582**	**10.06504**	**9.827577**
Stddev	.007364	.036146	.006141	.005533	.001443	.01987	.080426
%RSD	.1435618	.7215079	.1241394	.1065051	.0274642	.1973934	.8183753
#1	5.137725	4.996003	4.940077	5.200036	5.255691	10.04676	9.761253
#2	5.125815	4.982465	4.948824	5.189160	5.254088	10.06218	9.804442
#3	5.124268	5.050732	4.951917	5.196364	5.256968	10.08619	9.917035

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2557297**	**2.492090**	**25.02864**	**1.037959**	**2.485522**	**1.262842**	**5.023318**
Stddev	.0022366	.001620	.07283	.005504	.001654	.001366	.030074
%RSD	.8745947	.0649898	.2910063	.5302384	.0665449	.1081842	.5986921
#1	.2535403	2.490442	24.95069	1.032645	2.483740	1.261326	5.006068
#2	.2556382	2.493679	25.04027	1.037596	2.485819	1.263220	5.058045
#3	.2580107	2.492150	25.09497	1.043635	2.487007	1.263979	5.005843

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.446916**	**24.95865**	**2.492076**	**1.274056**	**25.34105**	**2.512067**	**2.512854**
Stddev	.008006	.10965	.001895	.002598	.07773	.007407	.009716
%RSD	.3271703	.4393263	.0760213	.2039290	.3067517	.2948667	.3866653
#1	2.439377	24.86216	2.490219	1.272012	25.39856	2.508776	2.505577
#2	2.455318	24.93591	2.494005	1.273175	25.37197	2.520549	2.523888
#3	2.446053	25.07789	2.492003	1.276980	25.25261	2.506875	2.509097

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.79994**	**4.978899**	**5.323166**	**5.087550**	**4.960304**	**4.937292**	**5.403914**
Stddev	.03992	.034902	.006274	.004551	.014783	.027904	.018836
%RSD	.1547351	.7010017	.1178695	.0894545	.2980302	.5651744	.3485551
#1	25.76568	4.944769	5.320664	5.088504	4.946642	4.915754	5.413934
#2	25.84378	4.977402	5.330305	5.091548	4.975998	4.927306	5.382186
#3	25.79035	5.014525	5.318528	5.082597	4.958272	4.968815	5.415621

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV02 Acquired: 9/24/2025 13:40:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.878194**	**4.781672**	**4.909250**
Stddev	.024760	.017791	.060144
%RSD	.5075686	.3720611	1.225113
#1	4.895758	4.767183	4.878847
#2	4.849875	4.801528	4.870377
#3	4.888950	4.776304	4.978526

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5444.604**	**85377.55**	**7595.819**	**4215.205**	**6127.900**
Stddev	20.620	264.27	50.015	6.137	20.152
%RSD	.3787279	.3095314	.6584485	.1455997	.3288545
#1	5443.257	85618.09	7642.938	4221.015	6126.242
#2	5424.690	85419.91	7601.180	4215.814	6108.628
#3	5465.864	85094.66	7543.340	4208.786	6148.829

Sample Name: CCB02 Acquired: 9/24/2025 13:44:27 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019640**	**.0002093**	**-.001157**	**-.000040**	**.0004614**	**.0009197**	**-.004011**
Stddev	.0003815	.0007907	.000381	.001468	.0020691	.0105327	.001007
%RSD	19.42617	377.7544	32.89259	3640.201	448.4460	1145.243	25.10862
#1	.0023929	-.000419	-.001597	.001085	.0028413	.0111796	-.003013
#2	.0018366	.001097	-.000948	.000494	-.000546	.0014455	-.005027
#3	.0016625	-.000051	-.000928	-.001700	-.000911	-.009866	-.003991

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000138**	**-.000370**	**-.004798**	**-.000260**	**-.000480**	**-.000626**	**-.003046**
Stddev	.0000588	.000080	.012689	.000182	.000237	.000516	.006141
%RSD	425.6193	21.64929	264.4646	70.05886	49.35465	82.37759	201.6132
#1	.0000809	-.000306	-.004665	-.000470	-.000750	-.000627	-.008807
#2	-.000029	-.000345	.007824	-.000160	-.000310	-.001141	-.003746
#3	-.000011	-.000460	-.017552	-.000150	-.000380	-.000110	.003415

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000707**	**-.023114**	**-.000634**	**.0011257**	**.2639685**	**.0021320**	**-.001102**
Stddev	.000249	.029078	.000205	.0002902	.0099373	.0030582	.000573
%RSD	35.26255	125.8013	32.34427	25.78420	3.764598	143.4423	52.02793
#1	-.000778	-.014712	-.000489	.0008016	.2555649	.0017304	-.001605
#2	-.000430	.000837	-.000869	.0012136	.2749368	-.000706	-.001224
#3	-.000913	-.055469	-.000545	.0013618	.2614037	.005371	-.000478

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5916840**	**-.001958**	**-.000540**	**-.000344**	**.0002102**	**.0089263**	**-.003950**
Stddev	.0563910	.000559	.000350	.000359	.0017371	.0091704	.000898
%RSD	9.530592	28.55079	64.81957	104.4432	826.3701	102.7340	22.73870
#1	.5285901	-.001393	-.000136	-.000620	.0011973	.0069471	-.003271
#2	.6092914	-.001971	-.000746	-.000474	-.001796	.0009072	-.004969
#3	.6371705	-.002511	-.000740	.000062	.001229	.0189248	-.003612

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCB02 Acquired: 9/24/2025 13:44:27 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.005318**	**.0044274**	**-.000940**
Stddev	.002307	.0021776	.000091
%RSD	43.38670	49.18467	9.637027
#1	-.006532	.0045270	-.000874
#2	-.006764	.0022017	-.000902
#3	-.002657	.0065535	-.001043

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5662.486**	**87109.94**	**7933.021**	**4394.607**	**6647.683**
Stddev	5.803	421.15	19.575	23.171	13.110
%RSD	.1024805	.4834672	.2467577	.5272564	.1972124
#1	5665.045	87273.87	7945.382	4385.480	6652.506
#2	5666.569	87424.47	7943.229	4420.952	6657.699
#3	5655.843	86631.47	7910.452	4377.390	6632.845

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3151-02 Acquired: 9/24/2025 13:48:46 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001858**	**-.001141**	**.0023744**	**.0029670**	**.0005961**	**2.253516**
Stddev	.002983	.001639	.0006354	.0027614	.0014830	.013880
%RSD	160.5189	143.6243	26.76216	93.07238	248.7911	.6159106
#1	.000459	-.002929	.0023844	.0032749	.0019914	2.262715
#2	-.000810	-.000785	.0017341	.0055615	-.000961	2.260283
#3	-.005224	.000290	.0030049	.0000645	.000758	2.237551

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0894005**	**-.000155**	**-.000352**	**45.72136**	**.0169645**	**-.000007**
Stddev	.0008112	.000082	.000109	.08396	.0003515	.000226
%RSD	.9073478	52.84546	30.84513	.1836378	2.072151	3021.693
#1	.0903081	-.000247	-.000301	45.81089	.0173683	-.000057
#2	.0887461	-.000127	-.000477	45.64437	.0167268	-.000204
#3	.0891474	-.000091	-.000278	45.70882	.0167985	.000239

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0060862**	**1.020448**	**.0111734**	**.5966269**	**.0014162**	**.0001904**
Stddev	.0008201	.012348	.0003879	.0603730	.0002417	.0002247
%RSD	13.47497	1.210098	3.471409	10.11906	17.06626	117.9790
#1	.0054747	1.016050	.0115813	.5938020	.0013348	-.000013
#2	.0057659	1.010900	.0108093	.5377159	.0016880	.000432
#3	.0070182	1.034393	.0111294	.6583629	.0012257	.000152

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**158.0602**	**.0182757**	**.0153022**	**120.7345**	**.2503878**	**.0198009**
Stddev	.7566	.0010721	.0002512	.5175	.0014391	.0002560
%RSD	.4786728	5.866168	1.641765	.4286340	.5747364	1.292797
#1	158.2656	.0175395	.0152479	121.1277	.2515824	.0195081
#2	158.6929	.0177818	.0150826	120.9275	.2487902	.0199125
#3	157.2221	.0195056	.0155761	120.1482	.2507909	.0199822

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3151-02 Acquired: 9/24/2025 13:48:46 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005479	.0370517	F 10.64029	.0416039	F 27.55212	.0363078
Stddev	.000275	.0036657	.05803	.0004295	.13955	.0020136
%RSD	5.010481	9.893444	.5453433	1.032350	.5064968	5.545806
#1	-.005793	.0403438	10.66467	.0420663	27.51970	.0357247
#2	-.005282	.0377098	10.68215	.0412174	27.43163	.0385485
#3	-.005362	.0331015	10.57405	.0415280	27.70503	.0346500

Elem	Sr4077
Units	ppm
Avg	.4923805
Stddev	.0007945
%RSD	.1613588
#1	.4930825
#2	.4915180
#3	.4925408

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5579.238	86182.68	7996.897	4274.023	6276.949
Stddev	17.445	495.49	41.473	19.967	9.126
%RSD	.3126817	.5749251	.5186126	.4671819	.1453844
#1	5565.540	85643.03	7956.529	4250.995	6269.612
#2	5573.296	86287.92	8039.393	4286.541	6274.066
#3	5598.878	86617.09	7994.771	4284.531	6287.167

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3146-01DLX5 Acquired: 9/24/2025 14:01:49 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2455335**	**-.017482**	**214.1627**	**.0024369**	**.1006536**	**87.27109**
Stddev	.0017394	.002149	.7781	.0019622	.0044845	.09899
%RSD	.7084097	12.29109	.3633103	80.51704	4.455386	.1134291
#1	.2470137	-.019414	214.8182	.0024475	.1054956	87.16955
#2	.2436178	-.017864	213.3028	.0004695	.0998221	87.36732
#3	.2459691	-.015168	214.3671	.0043938	.0966430	87.27638

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.905787**	**.0058807**	**.0260285**	**22.95988**	**17.23627**	**.6612173**
Stddev	.007798	.0001299	.0000888	.04943	.05419	.0022908
%RSD	.1996586	2.209547	.3409684	.2152751	.3143849	.3464527
#1	3.899944	.0058675	.0260535	22.92517	17.17378	.6620752
#2	3.914642	.0057578	.0259299	23.01647	17.26465	.6586213
#3	3.902775	.0060167	.0261020	22.93801	17.27037	.6629552

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.130061**	**301.6899**	**2.174784**	**29.34705**	**.1836026**	**.0218641**
Stddev	.010452	1.1035	.008043	.08716	.0003258	.0010415
%RSD	.4906743	.3657587	.3698298	.2969837	.1774723	4.763623
#1	2.118971	300.5076	2.169890	29.35348	.1839786	.0213190
#2	2.131483	302.6924	2.184067	29.43081	.1834281	.0212082
#3	2.139729	301.8697	2.170396	29.25686	.1834013	.0230651

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.612263**	**.0776010**	F **40.91808**	**6.267053**	**.1653397**	**.0066073**
Stddev	.033779	.0031730	.44938	.073322	.0046735	.0010251
%RSD	2.095132	4.088818	1.098240	1.169961	2.826581	15.51493
#1	1.644435	.0812030	41.26646	6.183184	.1599445	.0076744
#2	1.615277	.0763802	41.07693	6.298955	.1679349	.0056301
#3	1.577078	.0752197	40.41085	6.319020	.1681397	.0065174

Sample Name: Q3146-01DLX5 Acquired: 9/24/2025 14:01:49 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0613602	1.256043	1.272284	F 12.69226	F 10.06444	.0708074
Stddev	.0008749	.006458	.008821	.13119	.11587	.0003049
%RSD	1.425913	.5141226	.6933449	1.033614	1.151237	.4306101
#1	.0606644	1.251001	1.280131	12.56293	9.96538	.0709655
#2	.0623424	1.263322	1.262736	12.68863	10.03608	.0704559
#3	.0610736	1.253806	1.273984	12.82523	10.19185	.0710006

Elem	Sr4077
Units	ppm
Avg	-.077516
Stddev	.000745
%RSD	.9614384
#1	-.076687
#2	-.077730
#3	-.078130

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5451.040	87535.55	8531.981	4238.870	6382.861
Stddev	8.569	207.09	30.797	13.490	14.251
%RSD	.1572023	.2365799	.3609541	.3182559	.2232621
#1	5458.757	87644.97	8523.320	4250.252	6387.883
#2	5452.545	87296.70	8506.443	4223.969	6393.920
#3	5441.818	87664.97	8566.181	4242.388	6366.779

Sample Name: Q3157-02 Acquired: 9/24/2025 14:06:24 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000595**	**-.001052**	**.0040677**	**.0056165**	**.0005019**	**.1144092**	**.1395936**
Stddev	.001212	.001551	.0012392	.0013847	.0014603	.0073379	.0021429
%RSD	203.6415	147.3849	30.46326	24.65334	290.9855	6.413723	1.535129
#1	-.001992	-.001545	.0028280	.0060761	-.001090	.1064821	.1414042
#2	.000032	.000685	.0053063	.0040605	.001780	.1209642	.1401491
#3	.000175	-.002297	.0040688	.0067130	.000816	.1157813	.1372277

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000138**	**.0001644**	**20.74742**	**.0024989**	**.0002367**	**.0098733**	**.0602215**
Stddev	.000044	.0001347	.07270	.0003864	.0002250	.0004379	.0073089
%RSD	31.89678	81.90445	.3504267	15.46380	95.04923	4.435218	12.13670
#1	-.000129	.0000383	20.77101	.0028442	.0000297	.0103709	.0529372
#2	-.000099	.0001487	20.80539	.0020815	.0002043	.0097022	.0675547
#3	-.000186	.0003063	20.66585	.0025709	.0004761	.0095467	.0601725

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5847521**	**2.265819**	**.0038347**	**.0006624**	**358.7257**	**.0036614**	**.0454327**
Stddev	.0012173	.024277	.0003216	.0003464	2.9715	.0013299	.0003435
%RSD	.2081790	1.071448	8.387766	52.28912	.8283598	36.32317	.7560264
#1	.5844054	2.282371	.0034650	.0006370	356.0140	.0051892	.0457824
#2	.5837457	2.277137	.0039878	.0010208	358.2607	.0030316	.0450958
#3	.5861051	2.237950	.0040511	.0003295	361.9023	.0027633	.0454200

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7354484**	**.0080741**	**.0004913**	**-.005927**	**.0017374**	**1.597433**	**.0145853**
Stddev	.0446593	.0008108	.0000470	.000391	.0009278	.008821	.0008643
%RSD	6.072388	10.04224	9.559484	6.603933	53.40234	.5521822	5.925892
#1	.6897002	.0071982	.0005282	-.005969	.0007263	1.593039	.0153451
#2	.7377123	.0087985	.0004385	-.006295	.0019362	1.591672	.0136450
#3	.7789326	.0082255	.0005072	-.005516	.0025498	1.607588	.0147659

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-02 Acquired: 9/24/2025 14:06:24 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8164789	-.010876	.0959638
Stddev	.0094375	.004508	.0001044
%RSD	1.155875	41.44933	.1087671
#1	.8063470	-.010294	.0960424
#2	.8180699	-.006687	.0960035
#3	.8250197	-.015647	.0958453

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5514.941	85720.34	7897.843	4243.485	6124.152
Stddev	23.695	219.13	72.710	35.061	26.827
%RSD	.4296597	.2556377	.9206259	.8262268	.4380521
#1	5499.843	85726.18	7822.764	4224.858	6103.526
#2	5502.728	85936.50	7902.840	4283.928	6114.450
#3	5542.251	85498.35	7967.925	4221.670	6154.480

Sample Name: Q3157-02DUP Acquired: 9/24/2025 14:10:51 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000526**	**-.001981**	**.0031133**	**.0022355**	**.0021774**	**.1157890**	**.1446197**
Stddev	.002562	.002204	.0017826	.0014574	.0015709	.0101238	.0012997
%RSD	487.0305	111.2509	57.25786	65.19527	72.14664	8.743320	.8987192
#1	-.001569	.000100	.0051477	.0008006	.0010931	.1142642	.1440358
#2	-.002402	-.004290	.0023671	.0021914	.0039789	.1265887	.1437144
#3	.002393	-.001754	.0018250	.0037145	.0014601	.1065141	.1461090

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000040**	**.0001444**	**21.65347**	**.0052831**	**.0003830**	**.0056641**	**.0601727**
Stddev	.000054	.0000615	.05640	.0001556	.0001604	.0000852	.0040373
%RSD	134.8539	42.60620	.2604563	2.944807	41.87635	1.504809	6.709591
#1	.000018	.0000756	21.59913	.0054158	.0002063	.0056259	.0560368
#2	-.000049	.0001940	21.64956	.0051119	.0005194	.0056047	.0641037
#3	-.000088	.0001638	21.71172	.0053217	.0004233	.0057618	.0603777

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6163105**	**2.343436**	**.0026935**	**.0007508**	**385.1852**	**.0003201**	**.0322292**
Stddev	.0021407	.024092	.0002542	.0002165	1.4444	.0013118	.0003072
%RSD	.3473441	1.028073	9.438176	28.83206	.3749988	409.7480	.9530103
#1	.6185454	2.367454	.0025259	.0005273	383.5818	.0001713	.0320661
#2	.6142784	2.343583	.0025687	.0009595	385.5891	.0017000	.0320381
#3	.6161075	2.319270	.0029861	.0007656	386.3847	-.000911	.0325835

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9441504**	**.0056659**	**.0005353**	**-.006420**	**-.001609**	**1.676220**	**.0159841**
Stddev	.0445495	.0004102	.0004258	.001003	.001664	.018375	.0007807
%RSD	4.718477	7.238851	79.54968	15.61787	103.4233	1.096199	4.884126
#1	.8955359	.0061325	.0001056	-.006290	-.001741	1.682554	.0166463
#2	.9538926	.0055029	.0009570	-.005488	-.003204	1.655517	.0161827
#3	.9830225	.0053624	.0005431	-.007481	.000117	1.690590	.0151233

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-02DUP Acquired: 9/24/2025 14:10:51 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077		
Units	ppm	ppm	ppm		
Avg	.8672019	-.013171	.1013856		
Stddev	.0080489	.002219	.0003187		
%RSD	.9281512	16.85169	.3143104		
#1	.8696816	-.014746	.1014344		
#2	.8582049	-.010632	.1010454		
#3	.8737193	-.014134	.1016771		

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5516.729	87504.33	8222.672	4272.238	6147.259
Stddev	25.375	358.77	17.911	13.281	28.882
%RSD	.4599660	.4100042	.2178265	.3108589	.4698407
#1	5487.565	87687.02	8207.095	4282.361	6116.464
#2	5528.858	87734.98	8218.678	4277.153	6151.570
#3	5533.763	87090.98	8242.243	4257.201	6173.744

Sample Name: Q3146-01DL2X10 Acquired: 9/24/2025 14:15:16 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1307862**	**-.010518**	**112.5918**	**.0031696**	**.0420036**	**47.44521**
Stddev	.0010796	.003481	2.2905	.0011728	.0035401	.06048
%RSD	.8255069	33.09387	2.034309	37.00184	8.428171	.1274796
#1	.1315939	-.006564	114.9227	.0033045	.0460349	47.46809
#2	.1312048	-.013120	112.5087	.0019352	.0405742	47.49091
#3	.1295600	-.011870	110.3440	.0042691	.0394015	47.37662

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.204581**	**.0031326**	**.0122634**	**12.61259**	**9.219239**	**.3396896**
Stddev	.038211	.0000472	.0004267	.05367	.039563	.0071523
%RSD	1.733275	1.506847	3.479387	.4255128	.4291356	2.105548
#1	2.212403	.0030799	.0126594	12.66228	9.262583	.3472608
#2	2.238277	.0031469	.0123193	12.61983	9.210064	.3387613
#3	2.163064	.0031710	.0118116	12.55568	9.185069	.3330468

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.088876**	**163.8657**	**1.193235**	**15.88121**	**.0938379**	**.0134146**
Stddev	.022012	1.3353	.010119	.08128	.0022099	.0008172
%RSD	2.021509	.8149009	.8480111	.5117717	2.355040	6.091547
#1	1.111410	165.4074	1.202987	15.92815	.0961352	.0138462
#2	1.087792	163.1189	1.193931	15.92812	.0936513	.0139255
#3	1.067426	163.0709	1.182786	15.78736	.0917272	.0124722

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.121025**	**.0424579**	F **31.25891**	**4.979845**	**.0884927**	**-.001853**
Stddev	.080558	.0031154	.33541	.068083	.0040159	.000295
%RSD	3.798051	7.337621	1.073017	1.367175	4.538123	15.93376
#1	2.196510	.0456710	31.03271	5.036995	.0924823	-.001594
#2	2.130358	.0422522	31.64427	4.998022	.0844510	-.002175
#3	2.036208	.0394504	31.09974	4.904518	.0885448	-.001791

Sample Name: Q3146-01DL2X10 Acquired: 9/24/2025 14:15:16 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0306809	.7396298	.7274091	6.465653	5.154410	.0580007
Stddev	.0005885	.0073348	.0192611	.117481	.087689	.0032437
%RSD	1.918219	.9916803	2.647899	1.816996	1.701234	5.592480
#1	.0307627	.7479109	.7276224	6.588239	5.252099	.0603424
#2	.0312243	.7370278	.7080423	6.454670	5.128631	.0593615
#3	.0300558	.7339509	.7465627	6.354049	5.082501	.0542983

Elem	Sr4077
Units	ppm
Avg	-.040715
Stddev	.000862
%RSD	2.117502
#1	-.040994
#2	-.039748
#3	-.041403

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5595.875	91590.67	8830.467	4396.599	6588.729
Stddev	12.838	13.76	36.158	11.742	18.792
%RSD	.2294235	.0150242	.4094739	.2670706	.2852103
#1	5590.160	91597.26	8842.611	4394.925	6572.353
#2	5586.887	91574.85	8789.800	4409.088	6584.588
#3	5610.579	91599.90	8858.990	4385.783	6609.246

Sample Name: Q3146-01DL3X50 Acquired: 9/24/2025 14:21:35 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0238904**	**-.003554**	**23.74492**	**.0007440**	**.0096640**	**9.738330**	**.4382426**
Stddev	.0027443	.001667	.35714	.0018449	.0022665	.014601	.0108519
%RSD	11.48722	46.91534	1.504068	247.9559	23.45264	.1499296	2.476233
#1	.0208366	-.003536	24.10390	.0008120	.0122802	9.723351	.4357431
#2	.0246842	-.005229	23.74123	.0025540	.0082960	9.752520	.4288586
#3	.0261503	-.001895	23.38965	-.001134	.0084159	9.739119	.4501262

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006839**	**.0021935**	**2.573394**	**1.911476**	**.0701949**	**.2280609**	**33.05701**
Stddev	.0000502	.0001364	.013743	.009354	.0012388	.0039675	.21734
%RSD	7.338572	6.219055	.5340386	.4893649	1.764858	1.739681	.6574800
#1	.0006475	.0023369	2.557562	1.901429	.0713065	.2321771	32.81270
#2	.0007411	.0021784	2.582244	1.913066	.0704188	.2277446	33.12945
#3	.0006631	.0020653	2.580376	1.919933	.0688594	.2242609	33.22889

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2435595**	**3.234354**	**.0188808**	**.0032210**	**.5520527**	**.0133293**	**10.46064**
Stddev	.0014228	.039276	.0004323	.0003202	.0218261	.0019867	.01280
%RSD	.5841576	1.214346	2.289729	9.940801	3.953625	14.90456	.1223986
#1	.2421906	3.268498	.0193708	.0035853	.5435739	.0147665	10.47278
#2	.2434572	3.243132	.0187181	.0029840	.5768459	.0141593	10.46187
#3	.2450306	3.191431	.0185533	.0030937	.5357382	.0110623	10.44726

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.195907**	**.0075823**	**-.002574**	**.0052007**	**.1591060**	**.1535310**	**1.338272**
Stddev	.010369	.0011516	.000569	.0003390	.0035717	.0146829	.015919
%RSD	.8670366	15.18822	22.11852	6.519388	2.244833	9.563457	1.189483
#1	1.191178	.0064880	-.002598	.0055005	.1570251	.1366581	1.355536
#2	1.207797	.0087837	-.003132	.0052688	.1570627	.1634047	1.335105
#3	1.188745	.0074752	-.001994	.0048327	.1632301	.1605302	1.324175

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3146-01DL3X50 Acquired: 9/24/2025 14:21:35 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.044587	.0123293	-.008955
Stddev	.006811	.0011534	.000246
%RSD	.6520053	9.355258	2.743358
#1	1.052285	.0134514	-.008905
#2	1.042133	.0123895	-.009221
#3	1.039344	.0111469	-.008737

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5815.689	91503.27	8599.185	4459.018	6857.867
Stddev	16.211	268.22	28.790	18.175	22.167
%RSD	.2787416	.2931303	.3348023	.4075940	.3232278
#1	5799.033	91774.19	8595.736	4477.354	6836.208
#2	5816.620	91497.79	8629.545	4458.690	6856.884
#3	5831.414	91237.83	8572.275	4441.009	6880.508

Sample Name: Q3157-02LX5 Acquired: 9/24/2025 14:25:42 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000747**	**.0004376**	**-.000681**	**.0005623**	**-.001663**	**.0222149**	**.0210396**
Stddev	.000796	.0010062	.000792	.0005996	.002028	.0040565	.0016745
%RSD	106.5444	229.9167	116.3413	106.6387	121.9518	18.26052	7.958706
#1	-.001439	.0011248	-.000301	.0010048	-.003979	.0242105	.0227273
#2	.000123	-.000717	-.000150	-.000120	-.000802	.0175471	.0193786
#3	-.000925	.000905	-.001591	.000802	-.000207	.0248870	.0210128

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000045**	**-.000362**	**4.002833**	**-.000538**	**-.000333**	**.0010452**	**.0021396**
Stddev	.000013	.000050	.006670	.000300	.000137	.0003157	.0004548
%RSD	28.95872	13.90000	.1666363	55.77610	40.98038	30.20918	21.25663
#1	-.000035	-.000413	4.002563	-.000647	-.000432	.0007517	.0023890
#2	-.000040	-.000362	3.996302	-.000769	-.000390	.0010046	.0016146
#3	-.000060	-.000312	4.009634	-.000199	-.000177	.0013792	.0024151

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1097349**	**.3583277**	**-.000114**	**.0004280**	**68.76640**	**.0033956**	**.0046699**
Stddev	.0000707	.0191910	.000187	.0001904	.43585	.0013573	.0003503
%RSD	.0644411	5.355707	164.0373	44.50271	.6338189	39.97332	7.500777
#1	.1097758	.3382596	-.000303	.0002235	68.76187	.0018788	.0042893
#2	.1097757	.3765011	.000072	.0004599	69.20450	.0038119	.0049788
#3	.1096533	.3602223	-.000112	.0006004	68.33282	.0044959	.0047415

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6123681**	**-.005652**	**-.000556**	**-.003064**	**-.000429**	**.2966462**	**-.001568**
Stddev	.0106997	.000499	.000252	.000594	.001263	.0053073	.000689
%RSD	1.747265	8.835723	45.35125	19.37111	294.0424	1.789098	43.94827
#1	.6000226	-.005173	-.000330	-.002734	.000420	.2953225	-.002357
#2	.6181231	-.005615	-.000828	-.003749	.000172	.2921261	-.001266
#3	.6189587	-.006170	-.000509	-.002709	-.001881	.3024901	-.001082

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-02LX5 Acquired: 9/24/2025 14:25:42 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1496651	.0014685	.0173938
Stddev	.0028448	.0026386	.0000176
%RSD	1.900764	179.6872	.1009450
#1	.1521533	-.001186	.0174080
#2	.1502783	.001501	.0173993
#3	.1465637	.004091	.0173742

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5806.248	91466.95	8283.487	4492.775	6646.228
Stddev	9.621	357.84	31.975	18.387	10.167
%RSD	.1656956	.3912225	.3860107	.4092483	.1529775
#1	5810.476	91477.08	8274.623	4506.673	6654.100
#2	5813.031	91104.16	8318.960	4471.926	6649.836
#3	5795.238	91819.62	8256.880	4499.725	6634.749

Sample Name: Q3157-02MS Acquired: 9/24/2025 14:30:02 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7986410**	**1.769303**	**.9208660**	**2.014001**	**.7997916**	**2.037960**	**.3078829**
Stddev	.0030025	.087251	.0047778	.020471	.0014425	.012084	.0007954
%RSD	.3759484	4.931407	.5188347	1.016451	.1803598	.5929447	.2583501
#1	.8019356	1.859001	.9262431	2.037616	.7991950	2.051901	.3081315
#2	.7979287	1.764183	.9171087	2.001280	.7987432	2.031498	.3069929
#3	.7960587	1.684724	.9192463	2.003107	.8014368	2.030481	.3085244

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1892413**	**.1913979**	**19.46580**	**.4104527**	**.1934003**	**.2898157**	**3.072911**
Stddev	.0028072	.0010837	.03127	.0019546	.0011217	.0009667	.043630
%RSD	1.483402	.5661851	.1606426	.4762029	.5799747	.3335711	1.419818
#1	.1902958	.1926482	19.49357	.4083051	.1946935	.2904899	3.043010
#2	.1913686	.1907290	19.43193	.4121276	.1926910	.2887081	3.052748
#3	.1860595	.1908165	19.47190	.4109253	.1928165	.2902492	3.122976

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7086473**	**3.911286**	**.4831369**	**.0741731**	**326.3671**	**.2978901**	**.2332886**
Stddev	.0019727	.009935	.0025990	.0002639	3.9826	.0013088	.0010913
%RSD	.2783708	.2539960	.5379387	.3557824	1.220269	.4393471	.4678005
#1	.7077411	3.912428	.4859871	.0738729	322.8200	.2974462	.2331508
#2	.7072905	3.900829	.4808983	.0743688	325.6059	.2968610	.2344422
#3	.7109102	3.920599	.4825253	.0742775	330.6752	.2993631	.2322727

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.90507**	**.2643645**	**.4286608**	**.6869578**	**.1908859**	**2.286977**	**6.225221**
Stddev	.18523	.0038259	.0019574	.0054123	.0010663	.046597	.046469
%RSD	1.698594	1.447213	.4566268	.7878686	.5586048	2.037485	.7464616
#1	10.75720	.2659448	.4309131	.6931373	.1915816	2.244433	6.276763
#2	10.84515	.2671470	.4276989	.6846764	.1914177	2.279724	6.212370
#3	11.11284	.2600015	.4273706	.6830597	.1896582	2.336776	6.186530

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-02MS Acquired: 9/24/2025 14:30:02 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7481966	.1811534	.2696491
Stddev	.0105812	.0010292	.0006789
%RSD	1.414224	.5681306	.2517641
#1	.7598581	.1823418	.2696419
#2	.7455228	.1805523	.2689739
#3	.7392087	.1805662	.2703315

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5588.889	87133.03	8093.558	4288.945	6222.179
Stddev	24.156	461.23	85.575	17.491	28.778
%RSD	.4322063	.5293419	1.057325	.4078220	.4625097
#1	5565.150	87649.06	8058.677	4282.039	6195.084
#2	5588.076	86989.13	8030.932	4275.960	6219.064
#3	5613.440	86760.91	8191.065	4308.835	6252.387

Sample Name: Q3157-02MSD Acquired: 9/24/2025 14:34:11 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8317126**	**1.809529**	**.9699630**	**2.097266**	**.8476752**	**2.142061**	**.3379974**
Stddev	.0019985	.042140	.0011918	.004852	.0028341	.009957	.0011970
%RSD	.2402815	2.328793	.1228717	.2313704	.3343381	.4648291	.3541463
#1	.8295734	1.857106	.9713314	2.102833	.8499465	2.149427	.3378565
#2	.8335317	1.794581	.9694057	2.093935	.8444992	2.146024	.3392587
#3	.8320327	1.776900	.9691519	2.095029	.8485799	2.130733	.3368772

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2017626**	**.2017205**	**22.51731**	**.4286530**	**.2030821**	**.3034239**	**3.143340**
Stddev	.0009685	.0003284	.09988	.0015756	.0003779	.0007498	.014737
%RSD	.4800182	.1627987	.4435759	.3675802	.1860863	.2471122	.4688265
#1	.2017209	.2014084	22.46723	.4270792	.2034066	.3031043	3.159385
#2	.2008157	.2016902	22.63232	.4302305	.2026672	.3028869	3.130410
#3	.2027514	.2020631	22.45237	.4286494	.2031726	.3042805	3.140224

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8039152**	**4.341898**	**.5076210**	**.0769934**	**367.1828**	**.3129932**	**.2456059**
Stddev	.0028921	.054790	.0005429	.0008766	5.1915	.0011858	.0006563
%RSD	.3597546	1.261897	.1069503	1.138501	1.413866	.3788461	.2672200
#1	.8036084	4.329632	.5079720	.0760365	366.6499	.3132872	.2462790
#2	.8069484	4.401781	.5069957	.0777575	372.6202	.3140043	.2449678
#3	.8011886	4.294280	.5078953	.0771863	362.2784	.3116881	.2455708

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.20215**	**.2830106**	**.4541598**	**.7349962**	**.2023628**	**2.486819**	**6.565049**
Stddev	.08385	.0003519	.0013857	.0010726	.0018075	.022692	.013519
%RSD	.7485096	.1243527	.3051072	.1459270	.8932167	.9124964	.2059294
#1	11.24399	.2833332	.4526265	.7340440	.2008907	2.460646	6.580022
#2	11.25685	.2830633	.4545306	.7361582	.2043802	2.500975	6.561387
#3	11.10562	.2826353	.4553224	.7347865	.2018176	2.498837	6.553737

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-02MSD Acquired: 9/24/2025 14:34:11 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8755260	.1863372	.2911545
Stddev	.0041709	.0017176	.0011783
%RSD	.4763927	.9217874	.4046918
#1	.8803365	.1878435	.2922061
#2	.8729173	.1867014	.2913764
#3	.8733243	.1844667	.2898811

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5378.815	85011.00	7632.431	4193.024	5957.619
Stddev	11.645	459.42	34.263	11.121	6.705
%RSD	.2165036	.5404284	.4489190	.2652272	.1125371
#1	5390.970	85372.10	7669.358	4195.042	5965.182
#2	5377.720	84493.88	7601.667	4181.033	5952.405
#3	5367.756	85167.01	7626.269	4202.998	5955.271

Sample Name: Q3157-02A Acquired: 9/24/2025 14:38:20 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8000535**	**1.754885**	**.9149467**	**2.034064**	**.8184319**	**2.006766**	**.3155308**
Stddev	.0034391	.039074	.0015860	.001377	.0039928	.002440	.0013253
%RSD	.4298632	2.226596	.1733405	.0677105	.4878591	.1216004	.4200320
#1	.7994094	1.784699	.9132324	2.035405	.8185627	2.005947	.3156109
#2	.7969820	1.710650	.9163617	2.034134	.8223578	2.004841	.3168144
#3	.8037692	1.769307	.9152460	2.032653	.8143754	2.009511	.3141673

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1891885**	**.1914188**	**21.00259**	**.3951063**	**.1926367**	**.2908801**	**2.947111**
Stddev	.0009716	.0001846	.03012	.0010923	.0008584	.0005655	.023733
%RSD	.5135456	.0964426	.1434044	.2764524	.4456119	.1944075	.8053051
#1	.1884689	.1912181	21.02380	.3939487	.1916560	.2906209	2.967864
#2	.1888030	.1914570	20.96812	.3952515	.1932518	.2915288	2.952236
#3	.1902937	.1915814	21.01584	.3961187	.1930023	.2904907	2.921235

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7456893**	**4.044017**	**.4823381**	**.0615471**	**342.2933**	**.2944970**	**.2321901**
Stddev	.0034055	.004585	.0005504	.0009286	4.1650	.0023398	.0012035
%RSD	.4566986	.1133717	.1141189	1.508810	1.216798	.7945000	.5183367
#1	.7462401	4.048930	.4817526	.0611922	340.0995	.2970466	.2308893
#2	.7487858	4.043266	.4824166	.0608483	347.0966	.2924482	.2324169
#3	.7420419	4.039854	.4828450	.0626008	339.6837	.2939962	.2332640

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.68860**	**.2682662**	**.4331303**	**.6960155**	**.1870580**	**2.395618**	**6.286520**
Stddev	.06538	.0010372	.0002878	.0019313	.0008837	.024064	.028035
%RSD	.6116518	.3866262	.0664486	.2774810	.4724466	1.004511	.4459539
#1	10.66665	.2682449	.4328092	.6942200	.1860575	2.407058	6.273657
#2	10.76212	.2672398	.4332165	.6957678	.1877320	2.411829	6.267225
#3	10.63702	.2693138	.4333651	.6980587	.1873846	2.367968	6.318678

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-02A Acquired: 9/24/2025 14:38:20 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7938487	.1749373	.2719427
Stddev	.0041001	.0021869	.0008968
%RSD	.5164885	1.250120	.3297774
#1	.7913294	.1725015	.2718605
#2	.7916370	.1755782	.2728778
#3	.7985798	.1767322	.2710899

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5578.854	88169.41	8045.619	4361.361	6199.533
Stddev	10.388	132.82	15.189	8.915	12.610
%RSD	.1861994	.1506379	.1887853	.2044179	.2034035
#1	5589.595	88160.28	8042.325	4359.663	6214.071
#2	5568.860	88041.40	8062.184	4353.417	6191.558
#3	5578.108	88306.56	8032.347	4371.003	6192.968

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV03 Acquired: 9/24/2025 14:42:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.897926**	**4.989830**	**4.764063**	**4.960374**	**5.078254**	**9.942017**	**9.576171**
Stddev	.017183	.122092	.003405	.018698	.012564	.001916	.163427
%RSD	.3508136	2.446826	.0714803	.3769491	.2474099	.0192750	1.706600
#1	4.891402	4.885302	4.767981	4.956028	5.076072	9.944110	9.616755
#2	4.917415	5.124021	4.761816	4.980862	5.091767	9.941590	9.715482
#3	4.884961	4.960168	4.762393	4.944231	5.066925	9.940350	9.396276

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2551427**	**2.395082**	**24.58968**	**1.015959**	**2.389671**	**1.208664**	**4.742596**
Stddev	.0043765	.000936	.09076	.002007	.001529	.000106	.058929
%RSD	1.715328	.0390604	.3690951	.1975862	.0639917	.0087340	1.242552
#1	.2601917	2.394236	24.69432	1.013690	2.387936	1.208561	4.680392
#2	.2524310	2.396087	24.53226	1.017503	2.390822	1.208772	4.749810
#3	.2528056	2.394924	24.54247	1.016683	2.390256	1.208658	4.797586

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.404866**	**24.79194**	**2.390217**	**1.229787**	**24.24093**	**2.473915**	**2.360821**
Stddev	.011357	.11729	.001312	.002125	.24585	.007670	.010698
%RSD	.4722675	.4731099	.0548879	.1728186	1.014188	.3100165	.4531645
#1	2.416093	24.89467	2.389985	1.231866	23.97634	2.479101	2.362070
#2	2.393383	24.66414	2.391629	1.227618	24.46231	2.465105	2.349553
#3	2.405120	24.81701	2.389037	1.229878	24.28414	2.477538	2.370840

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.23536**	**5.008402**	**5.208497**	**4.907076**	**4.874172**	**4.626771**	**5.238065**
Stddev	.31479	.086932	.010536	.014581	.020382	.086935	.019081
%RSD	1.247423	1.735728	.2022783	.2971421	.4181603	1.878963	.3642848
#1	24.87209	5.108122	5.209701	4.913645	4.888312	4.529046	5.224222
#2	25.40610	4.948589	5.218379	4.917217	4.850809	4.655758	5.259832
#3	25.42790	4.968493	5.197411	4.890366	4.883394	4.695510	5.230143

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV03 Acquired: 9/24/2025 14:42:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.562232**	**4.617054**	**4.823345**
Stddev	.035424	.015411	.087894
%RSD	.7764582	.3337797	1.822254
#1	4.550225	4.634486	4.886554
#2	4.602099	4.605242	4.860507
#3	4.534373	4.611435	4.722975

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5775.254**	**88961.86**	**7601.571**	**4375.022**	**6542.997**
Stddev	22.996	846.00	85.655	20.697	23.413
%RSD	.3981869	.9509670	1.126808	.4730770	.3578310
#1	5752.788	89742.11	7515.699	4389.420	6518.127
#2	5774.227	88062.70	7602.006	4351.304	6546.251
#3	5798.746	89080.77	7687.008	4384.343	6564.612

Sample Name: CCB03 Acquired: 9/24/2025 14:46:38 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003838**	**.0010187**	**-.001525**	**.0029074**	**-.000392**	**.0057321**	**-.005406**
Stddev	.0011754	.0006235	.000503	.0014998	.001265	.0087646	.002784
%RSD	306.2302	61.20266	32.96191	51.58584	322.2465	152.9034	51.50318
#1	.0017237	.0004005	-.001763	.0015661	-.001836	.0007532	-.002818
#2	-.000099	.0010082	-.000948	.0045267	.000520	.0158522	-.005048
#3	-.000473	.0016473	-.001865	.0026293	.000138	.0005910	-.008353

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000537**	**-.000562**	**-.000111**	**-.000541**	**-.000501**	**-.000412**	**-.005617**
Stddev	.0000532	.000070	.005077	.000529	.000171	.000139	.003964
%RSD	98.93154	12.48607	4584.211	97.69779	34.23397	33.80220	70.57325
#1	.0000071	-.000486	.003717	-.000536	-.000340	-.000466	-.004957
#2	.0000424	-.000575	.001820	-.000015	-.000482	-.000517	-.002024
#3	.0001116	-.000624	-.005870	-.001073	-.000681	-.000254	-.009869

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001391**	**-.037235**	**-.000633**	**.0010305**	**.6064924**	**.0020027**	**-.001739**
Stddev	.000263	.022772	.000438	.0001889	.0043708	.0032787	.000218
%RSD	18.87166	61.15756	69.21144	18.33362	.7206767	163.7149	12.55227
#1	-.001097	-.031529	-.000996	.0012480	.6112677	.0052478	-.001738
#2	-.001602	-.017858	-.000756	.0009367	.6055194	-.001309	-.001521
#3	-.001474	-.062317	-.000146	.0009069	.6026900	.002069	-.001958

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8198497**	**-.001821**	**-.000695**	**-.000895**	**-.001262**	**.0014418**	**-.004294**
Stddev	.0297679	.000113	.000272	.000421	.001686	.0193288	.000842
%RSD	3.630895	6.223939	39.14817	47.05315	133.5494	1340.607	19.60075
#1	.8475086	-.001708	-.000983	-.000748	.000215	-.020395	-.004602
#2	.7883464	-.001935	-.000443	-.000566	-.003098	.008365	-.003342
#3	.8236942	-.001819	-.000659	-.001369	-.000903	.016355	-.004938

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCB03 Acquired: 9/24/2025 14:46:38 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.004946**	**.0089332**	**-.001322**
Stddev	.001130	.0040138	.000105
%RSD	22.84023	44.93173	7.924620
#1	-.003653	.0092102	-.001208
#2	-.005439	.0128014	-.001346
#3	-.005745	.0047880	-.001413

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5689.148**	**89023.30**	**7702.289**	**4425.536**	**6705.145**
Stddev	10.282	134.64	50.195	18.567	8.357
%RSD	.1807299	.1512402	.6516832	.4195509	.1246417
#1	5700.183	89008.17	7644.836	4435.203	6714.426
#2	5687.424	89164.87	7737.635	4437.276	6702.796
#3	5679.837	88896.87	7724.398	4404.130	6698.214

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3151-02DUP Acquired: 9/24/2025 14:50:57 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001725**	**-.001338**	**.0206284**	**.0030602**	**.0020833**	**1.764339**
Stddev	.000946	.001297	.0008066	.0004447	.0014083	.012023
%RSD	54.84752	96.95373	3.910130	14.53141	67.59989	.6814603
#1	-.001194	.000103	.0206404	.0025845	.0009130	1.760950
#2	-.001164	-.002413	.0198159	.0031305	.0016907	1.754374
#3	-.002818	-.001704	.0214289	.0034656	.0036463	1.777693

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0830123**	**-.000128**	**-.000467**	**43.92743**	**.0165693**	**-.000280**
Stddev	.0004080	.000059	.000185	.18874	.0002823	.000127
%RSD	.4914496	46.22722	39.59001	.4296570	1.703673	45.19861
#1	.0834703	-.000195	-.000574	44.14434	.0166483	-.000307
#2	.0828785	-.000081	-.000253	43.80069	.0162560	-.000392
#3	.0826880	-.000109	-.000573	43.83726	.0168037	-.000142

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0066385**	**.8418501**	**.0089578**	**.5480400**	**.0010985**	**.0006792**
Stddev	.0002654	.0119474	.0005940	.0172021	.0002728	.0003369
%RSD	3.997601	1.419188	6.631484	3.138850	24.83709	49.59478
#1	.0067705	.8314215	.0083260	.5625866	.0014034	.0004870
#2	.0063330	.8392430	.0090422	.5290530	.0010146	.0010682
#3	.0068120	.8548858	.0095051	.5524804	.0008775	.0004825

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**146.1004**	**.0199292**	**.0182369**	**111.8784**	**.2435491**	**.0188918**
Stddev	.7467	.0020688	.0001265	.6654	.0018677	.0002959
%RSD	.5111145	10.38073	.6934901	.5947699	.7668600	1.566232
#1	145.5590	.0175886	.0181097	111.6173	.2452056	.0192190
#2	145.7899	.0215131	.0182383	111.3831	.2415249	.0188134
#3	146.9523	.0206859	.0183627	112.6347	.2439169	.0186430

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3151-02DUP Acquired: 9/24/2025 14:50:57 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006316	.0178304	9.236236	.0378392	F 26.24051	.0340760
Stddev	.000129	.0013934	.049285	.0006990	.06608	.0009763
%RSD	2.047127	7.814794	.5336016	1.847278	.2518290	2.865099
#1	-.006169	.0177731	9.194274	.0385162	26.16422	.0350130
#2	-.006369	.0164665	9.223925	.0378814	26.27751	.0341505
#3	-.006411	.0192515	9.290509	.0371201	26.27981	.0330646

Elem	Sr4077
Units	ppm
Avg	.4710968
Stddev	.0023804
%RSD	.5052847
#1	.4735697
#2	.4688213
#3	.4708993

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5600.671	87257.60	7833.323	4324.096	6328.456
Stddev	7.141	285.73	34.495	16.133	10.344
%RSD	.1275004	.3274592	.4403668	.3730868	.1634466
#1	5597.924	87526.66	7797.771	4340.724	6329.626
#2	5608.777	87288.44	7835.544	4308.510	6338.165
#3	5595.311	86957.69	7866.654	4323.053	6317.577

Sample Name: Q3151-02LX5 Acquired: 9/24/2025 14:55:12 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003226**	**.0000952**	**-.000343**	**-.000636**	**.0013925**	**.3773559**	**.0126836**
Stddev	.0004324	.0005448	.000349	.002135	.0003925	.0060471	.0011930
%RSD	134.0416	572.5082	101.5173	335.8182	28.18715	1.602492	9.405518
#1	.0006015	.0007220	-.000053	-.001149	.0018381	.3770507	.0124580
#2	-.000176	-.000264	-.000730	.001709	.0012414	.3714672	.0139732
#3	.000542	-.000173	-.000248	-.002468	.0010980	.3835498	.0116195

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000048**	**-.000591**	**9.455490**	**.0028680**	**-.000343**	**.0011523**	**.1650992**
Stddev	.000021	.000045	.024647	.0003530	.000248	.0004799	.0071072
%RSD	43.48835	7.678394	.2606658	12.30870	72.23591	41.64699	4.304837
#1	-.000024	-.000643	9.459680	.0024690	-.000473	.0017059	.1726863
#2	-.000062	-.000572	9.477773	.0029952	-.000498	.0008966	.1585964
#3	-.000058	-.000558	9.429016	.0031398	-.000057	.0008544	.1640150

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013851**	**.0728306**	**-.000556**	**.0013005**	**31.13091**	**.0055116**	**.0018716**
Stddev	.0007156	.0274865	.000046	.0001152	.23804	.0022249	.0003599
%RSD	51.66571	37.74034	8.188509	8.860933	.7646428	40.36731	19.22932
#1	.0019465	.0607842	-.000512	.0011675	30.99086	.0029928	.0022079
#2	.0005793	.1042835	-.000602	.0013705	30.99612	.0072090	.0019150
#3	.0016294	.0534241	-.000553	.0013636	31.40576	.0063331	.0014920

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.29338**	**.0506402**	**.0031806**	**-.001853**	**.0034582**	**1.960455**	**.0023789**
Stddev	.18595	.0014172	.0001642	.000699	.0012696	.010995	.0008925
%RSD	.7654152	2.798508	5.163935	37.71749	36.71356	.5608521	37.51904
#1	24.20559	.0522765	.0029911	-.001102	.0046936	1.966296	.0032883
#2	24.16758	.0498310	.0032685	-.002484	.0035239	1.947771	.0023439
#3	24.50696	.0498130	.0032823	-.001972	.0021570	1.967296	.0015043

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3151-02LX5 Acquired: 9/24/2025 14:55:12 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.592042	.0196097	.0995363
Stddev	.027200	.0021834	.0004587
%RSD	.4863968	11.13421	.4608150
#1	5.620691	.0184198	.1000258
#2	5.588865	.0221296	.0994664
#3	5.566571	.0182798	.0991165

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5636.632	87048.68	7797.701	4316.269	6504.390
Stddev	22.342	322.41	53.043	11.151	24.168
%RSD	.3963666	.3703813	.6802327	.2583466	.3715689
#1	5660.810	87337.47	7762.113	4328.761	6531.521
#2	5632.338	87107.76	7772.324	4307.320	6496.487
#3	5616.750	86700.82	7858.665	4312.727	6485.163

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3151-02MS Acquired: 9/24/2025 14:59:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8075038**	**1.800475**	**.9367926**	**1.994058**	**.8257490**	**3.948428**
Stddev	.0030113	.017720	.0028732	.005570	.0026710	.015429
%RSD	.3729081	.9841955	.3067028	.2793290	.3234694	.3907698
#1	.8070931	1.815619	.9354730	1.996932	.8248264	3.943974
#2	.8047190	1.804818	.9348163	1.987638	.8287591	3.935717
#3	.8106993	1.780987	.9400885	1.997603	.8236616	3.965595

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2775494**	**.2008076**	**.1920951**	**46.79836**	**.4363145**	**.1952866**
Stddev	.0008355	.0003628	.0001254	.05898	.0046349	.0001713
%RSD	.3010221	.1806870	.0652896	.1260356	1.062275	.0876973
#1	.2782420	.2010030	.1921407	46.77033	.4395958	.1953038
#2	.2766215	.2010308	.1919533	46.86613	.4383353	.1951074
#3	.2777847	.2003889	.1921914	46.75863	.4310123	.1954486

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2983034**	**3.860257**	**.2027786**	**2.533089**	**.4882071**	**.0629740**
Stddev	.0010242	.035208	.0006956	.017385	.0012734	.0010971
%RSD	.3433532	.9120700	.3430420	.6863168	.2608373	1.742070
#1	.2971672	3.893965	.2029133	2.517955	.4887820	.0632845
#2	.2985873	3.863089	.2020255	2.529234	.4867475	.0638824
#3	.2991558	3.823719	.2033970	2.552078	.4890917	.0617552

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**153.4975**	**.3204683**	**.2254891**	**125.8748**	**.5347362**	**.4646816**
Stddev	1.4412	.0008829	.0022590	1.3146	.0031153	.0006343
%RSD	.9389178	.2755006	1.001817	1.044344	.5825834	.1364936
#1	154.0961	.3209095	.2260315	127.0534	.5363442	.4646575
#2	154.5430	.3194518	.2274275	126.1138	.5367189	.4640597
#3	151.8535	.3210437	.2230083	124.4571	.5311455	.4653275

Sample Name: Q3151-02MS Acquired: 9/24/2025 14:59:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7040748	.2165235	F 10.49452	6.269989	F 27.19347	.2279690
Stddev	.0050251	.0022401	.07172	.017123	.11522	.0030272
%RSD	.7137216	1.034590	.6834233	.2730942	.4237159	1.327894
#1	.7025773	.2142208	10.50901	6.268926	27.25217	.2280446
#2	.6999687	.2166544	10.55789	6.253422	27.06072	.2309577
#3	.7096785	.2186953	10.41666	6.287619	27.26753	.2249047

Elem	Sr4077
Units	ppm
Avg	.6867156
Stddev	.0037039
%RSD	.5393586
#1	.6909463
#2	.6840576
#3	.6851429

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5545.854	85544.63	7587.090	4243.828	6238.874
Stddev	14.941	877.21	36.965	37.959	13.058
%RSD	.2694161	1.025437	.4872049	.8944479	.2093041
#1	5560.096	84748.54	7544.607	4217.265	6250.229
#2	5547.166	85400.30	7611.902	4226.916	6241.789
#3	5530.299	86485.05	7604.762	4287.304	6224.605

Sample Name: Q3151-02MSD Acquired: 9/24/2025 15:03:28 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8048929**	**1.749820**	**.9343297**	**1.995683**	**.8265882**	**3.761581**
Stddev	.0141416	.076336	.0127993	.032299	.0101021	.013312
%RSD	1.756949	4.362507	1.369890	1.618428	1.222140	.3539026
#1	.7890731	1.662775	.9215190	1.963805	.8180934	3.748992
#2	.8163075	1.781319	.9471176	2.028387	.8377588	3.775514
#3	.8092981	1.805365	.9343525	1.994858	.8239125	3.760237

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2622693**	**.1925129**	**.1922461**	**44.34904**	**.4204922**	**.1944722**
Stddev	.0016484	.0024114	.0022126	.09236	.0009073	.0020812
%RSD	.6285056	1.252608	1.150917	.2082605	.2157651	1.070159
#1	.2618363	.1914284	.1901093	44.25822	.4211882	.1925624
#2	.2608807	.1908342	.1945274	44.34604	.4208224	.1966904
#3	.2640910	.1952762	.1921017	44.44287	.4194661	.1941639

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2984481**	**3.718583**	**.1945997**	**2.419810**	**.4878650**	**.0641956**
Stddev	.0041196	.057125	.0007643	.030164	.0063557	.0004980
%RSD	1.380341	1.536191	.3927578	1.246527	1.302765	.7757205
#1	.2945078	3.692285	.1948614	2.415914	.4815818	.0636484
#2	.3027262	3.784120	.1951988	2.391783	.4942909	.0646223
#3	.2981101	3.679343	.1937389	2.451732	.4877221	.0643161

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**147.5305**	**.3066457**	**.2173911**	**120.6144**	**.5082928**	**.4610532**
Stddev	1.7036	.0020176	.0007130	1.3384	.0066187	.0068457
%RSD	1.154749	.6579534	.3279872	1.109621	1.302139	1.484788
#1	147.5861	.3072179	.2166586	120.4069	.5040497	.4539815
#2	149.2057	.3083154	.2174318	122.0444	.5049094	.4676478
#3	145.7998	.3044038	.2180829	119.3919	.5159193	.4615304

Sample Name: Q3151-02MSD Acquired: 9/24/2025 15:03:28 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7046843	.2053998	F 10.11855	6.321323	F 26.85840	.2165415
Stddev	.0110463	.0011685	.10462	.114807	.47955	.0006517
%RSD	1.567556	.5688846	1.033898	1.816182	1.785478	.3009651
#1	.6932436	.2044900	10.14137	6.193350	26.32427	.2160992
#2	.7152888	.2049919	10.20988	6.415272	27.25194	.2172899
#3	.7055205	.2067176	10.00441	6.355347	26.99900	.2162355

Elem	Sr4077
Units	ppm
Avg	.6479620
Stddev	.0017550
%RSD	.2708546
#1	.6461266
#2	.6481357
#3	.6496238

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5402.787	85675.23	7717.270	4263.326	6061.341
Stddev	58.811	268.25	74.053	10.544	65.828
%RSD	1.088530	.3131065	.9595689	.2473160	1.086034
#1	5464.383	85644.96	7743.639	4253.652	6130.373
#2	5347.227	85423.40	7774.528	4261.761	5999.269
#3	5396.752	85957.34	7633.642	4274.565	6054.381

Sample Name: Q3151-01A Acquired: 9/24/2025 15:07:28 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8161970**	**1.816387**	**.9550724**	**2.032728**	**.8435766**	**4.012669**
Stddev	.0047024	.060364	.0021618	.010229	.0025043	.034084
%RSD	.5761383	3.323317	.2263535	.5032237	.2968660	.8494158
#1	.8174056	1.869465	.9529594	2.034651	.8407562	3.985806
#2	.8110082	1.750721	.9549778	2.021674	.8444343	4.051011
#3	.8201772	1.828976	.9572800	2.041860	.8455394	4.001189

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2818939**	**.2000908**	**.1956021**	**47.98601**	**.4315570**	**.1976689**
Stddev	.0016479	.0019957	.0002714	.23370	.0009177	.0002987
%RSD	.5845734	.9973862	.1387285	.4870215	.2126421	.1510953
#1	.2801234	.1982141	.1957285	47.74918	.4309101	.1973986
#2	.2833829	.2021873	.1952906	48.21646	.4326073	.1976184
#3	.2821753	.1998712	.1957872	47.99239	.4311536	.1979895

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3037131**	**3.981781**	**.2036623**	**2.561977**	**.4957949**	**.0733973**
Stddev	.0007839	.041224	.0011960	.035228	.0008783	.0012260
%RSD	.2580977	1.035317	.5872710	1.375018	.1771400	1.670416
#1	.3029370	3.940892	.2027568	2.594962	.4960707	.0744947
#2	.3036976	4.023333	.2050181	2.566099	.4948118	.0736230
#3	.3045046	3.981118	.2032119	2.524870	.4965021	.0720740

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**159.8320**	**.3249807**	**.2256568**	**130.7603**	**.5389766**	**.4692501**
Stddev	.2084	.0064316	.0016008	.1857	.0053520	.0008379
%RSD	.1303708	1.979070	.7093882	.1419983	.9929841	.1785554
#1	159.8778	.3175554	.2246663	130.9149	.5347487	.4692547
#2	159.6045	.3285770	.2275037	130.8118	.5449940	.4684099
#3	160.0137	.3288097	.2248006	130.5544	.5371872	.4700856

Sample Name: Q3151-01A Acquired: 9/24/2025 15:07:28 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7223202	.2223568	F 11.09272	6.440677	F 28.28950	.2323366
Stddev	.0043861	.0011321	.04735	.060111	.33848	.0011091
%RSD	.6072285	.5091216	.4268922	.9332999	1.196503	.4773722
#1	.7237678	.2223533	11.04008	6.475448	28.50920	.2317646
#2	.7173933	.2212266	11.13185	6.371267	27.89970	.2336150
#3	.7257996	.2234907	11.10623	6.475317	28.45960	.2316303

Elem	Sr4077
Units	ppm
Avg	.6991823
Stddev	.0033355
%RSD	.4770543
#1	.6974122
#2	.7030297
#3	.6971050

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5283.050	82287.56	7436.463	4098.645	5929.401
Stddev	3.336	374.58	46.499	29.943	2.328
%RSD	.0631450	.4552135	.6252850	.7305587	.0392666
#1	5286.492	81965.48	7435.530	4089.819	5931.726
#2	5282.829	82198.59	7390.437	4074.108	5929.408
#3	5279.831	82698.62	7483.421	4132.010	5927.069

Sample Name: Q3142-01 Acquired: 9/24/2025 15:11:27 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000048**	**-.000353**	**.0094670**	**.0026248**	**.0001382**	**.0657090**	**.0003200**
Stddev	.0014280	.001113	.0012954	.0021590	.0007831	.0062128	.0019020
%RSD	29539.13	315.0721	13.68288	82.25174	566.8118	9.455042	594.4353
#1	.0014176	-.001470	.0107791	.0031640	-.000625	.0596588	.0005326
#2	.0000348	-.000344	.0094328	.0044632	.000940	.0720725	.0021068
#3	-.001438	.000755	.0081891	.0002474	.000099	.0653957	-.001679

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000132**	**-.000803**	**4.379012**	**.0033087**	**.0063652**	**.0325507**	**1.301136**
Stddev	.000057	.000009	.005734	.0004254	.0000392	.0007576	.020018
%RSD	43.10617	1.139618	.1309415	12.85566	.6158491	2.327513	1.538486
#1	-.000180	-.000809	4.377509	.0037128	.0063578	.0320474	1.320462
#2	-.000069	-.000793	4.385348	.0033484	.0063303	.0321826	1.302454
#3	-.000148	-.000808	4.374180	.0028649	.0064076	.0334220	1.280492

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0172732**	**1.735780**	**.0084858**	**.0009407**	**14.54601**	**.0015031**	**.0502647**
Stddev	.0002581	.021374	.0002671	.0003508	.04592	.0020101	.0008744
%RSD	1.494121	1.231404	3.147280	37.29106	.3157101	133.7270	1.739586
#1	.0173672	1.711647	.0081803	.0012683	14.54595	-.000335	.0500028
#2	.0174711	1.743364	.0086751	.0009833	14.50011	.001195	.0512401
#3	.0169813	1.752327	.0086021	.0005706	14.59196	.003650	.0495512

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.113832**	**.0007612**	**-.000093**	**-.004658**	**-.001091**	**5.883486**	**.0000556**
Stddev	.004670	.0015263	.000199	.000085	.000987	.031206	.0012860
%RSD	.4192808	200.5008	213.8622	1.828025	90.50875	.5304017	2314.257
#1	1.110258	.0002056	.000058	-.004578	-.000916	5.915820	-.001391
#2	1.112122	.0024874	-.000319	-.004650	-.002154	5.853546	.000486
#3	1.119116	-.000409	-.000019	-.004747	-.000203	5.881092	.001071

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3142-01 Acquired: 9/24/2025 15:11:27 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.694289**	**-.009615**	**.0208244**
Stddev	.031032	.001073	.0001420
%RSD	.5449650	11.16372	.6818151
#1	5.701899	-.010689	.0209883
#2	5.720808	-.008542	.0207462
#3	5.660160	-.009616	.0207387

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5792.525**	**90387.36**	**7833.224**	**4457.523**	**6880.947**
Stddev	5.259	314.20	27.456	7.230	5.718
%RSD	.0907851	.3476192	.3505015	.1621988	.0831048
#1	5793.502	90094.62	7803.215	4450.282	6883.475
#2	5786.847	90719.34	7857.083	4464.742	6874.400
#3	5797.227	90348.11	7839.373	4457.543	6884.966

Sample Name: Q3142-02 Acquired: 9/24/2025 15:15:43 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002056**	**-.001789**	**.0062207**	**.0007799**	**-.000292**	**.0670959**	**.0001376**
Stddev	.002003	.001000	.0004199	.0043094	.001163	.0005266	.0020855
%RSD	97.45994	55.91973	6.749296	552.5823	397.9196	.7847842	1516.181
#1	-.001513	-.002243	.0063199	.0051237	-.000836	.0674664	.0011324
#2	-.000379	-.000642	.0057602	-.003494	.001043	.0673281	-.002259
#3	-.004274	-.002482	.0065821	.000710	-.001084	.0664932	.001539

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000157**	**-.000802**	**4.647236**	**.0004064**	**.0073352**	**.0201733**	**.0986985**
Stddev	.000011	.000083	.007397	.0002451	.0002002	.0001988	.0030696
%RSD	7.015880	10.30974	.1591699	60.30311	2.728876	.9852064	3.110039
#1	-.000157	-.000812	4.654258	.0001321	.0075145	.0200144	.0957909
#2	-.000168	-.000715	4.639514	.0004832	.0071193	.0201095	.1019078
#3	-.000146	-.000879	4.647936	.0006038	.0073719	.0203962	.0983969

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0193800**	**1.801479**	**.0081090**	**.0011616**	**15.67674**	**.0018315**	**.0440307**
Stddev	.0003463	.011597	.0000576	.0004334	.01918	.0020563	.0002961
%RSD	1.787006	.6437557	.7105503	37.31619	.1223177	112.2727	.6724927
#1	.0194875	1.803667	.0081753	.0013076	15.66994	.0018084	.0437394
#2	.0196599	1.788943	.0080794	.0006740	15.66190	.0038993	.0443314
#3	.0189927	1.811826	.0080721	.0015031	15.69839	-.000213	.0440213

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.141702**	**-.000830**	**-.000165**	**-.005173**	**-.000985**	**6.305185**	**.0078897**
Stddev	.033032	.000476	.000209	.000124	.003056	.019978	.0010689
%RSD	2.893181	57.42946	126.3446	2.388957	310.2092	.3168575	13.54847
#1	1.177817	-.000896	-.000354	-.005314	-.002019	6.316526	.0089358
#2	1.113021	-.000324	-.000199	-.005084	.002453	6.282117	.0079340
#3	1.134269	-.001270	.000058	-.005120	-.003390	6.316911	.0067993

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3142-02 Acquired: 9/24/2025 15:15:43 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	6.156044	-.010811	.0234648
Stddev	.047049	.000475	.0000590
%RSD	.7642757	4.390489	.2515207
#1	6.113700	-.011351	.0235274
#2	6.147739	-.010459	.0234567
#3	6.206692	-.010623	.0234102

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5631.288	87636.65	7703.340	4343.914	6631.903
Stddev	8.102	127.27	35.163	20.528	8.764
%RSD	.1438763	.1452290	.4564602	.4725765	.1321517
#1	5640.006	87768.00	7742.433	4362.307	6641.730
#2	5623.989	87513.89	7674.297	4321.768	6629.083
#3	5629.870	87628.05	7693.288	4347.668	6624.897

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169760BL Acquired: 9/24/2025 15:25:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000972**	**.0000670**	**-.001986**	**.0022020**	**-.001906**	**-.007511**	**-.005693**
Stddev	.002102	.0007326	.000565	.0005629	.000524	.005438	.001103
%RSD	216.2346	1093.040	28.47338	25.56052	27.49472	72.40431	19.38024
#1	-.000541	.0006378	-.001368	.0027978	-.001755	-.011945	-.006964
#2	.000881	.0003223	-.002479	.0021291	-.001474	-.009144	-.005139
#3	-.003256	-.000759	-.002110	.0016792	-.002489	-.001443	-.004977

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000022**	**-.000698**	**.0009278**	**-.000684**	**-.000656**	**-.000401**	**-.007551**
Stddev	.000031	.000101	.0050563	.000288	.000187	.000233	.003885
%RSD	139.0074	14.52375	544.9565	42.14005	28.56768	58.21512	51.45720
#1	.000003	-.000607	.0047737	-.000377	-.000570	-.000203	-.012030
#2	-.000056	-.000680	.0028093	-.000949	-.000870	-.000340	-.005532
#3	-.000013	-.000808	-.004799	-.000727	-.000526	-.000658	-.005090

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001361**	**-.027899**	**-.000823**	**.0007996**	**.3969736**	**.0027002**	**-.000017**
Stddev	.000215	.016263	.000031	.0003866	.0107568	.0036046	.000564
%RSD	15.77504	58.29386	3.813823	48.34178	2.709710	133.4946	3321.995
#1	-.001497	-.022514	-.000789	.0010513	.3950527	.0043529	.000625
#2	-.001471	-.015011	-.000852	.0003546	.4085614	-.001434	-.000431
#3	-.001113	-.046171	-.000827	.0009930	.3873066	.005182	-.000246

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6182991**	**-.008068**	**-.001207**	**-.001128**	**-.001384**	**-.001473**	**-.005402**
Stddev	.0263411	.000407	.000329	.000957	.000800	.008112	.000900
%RSD	4.260250	5.050600	27.28277	84.83911	57.80389	550.7100	16.66638
#1	.5881204	-.007752	-.000837	-.000738	-.000948	.003060	-.005199
#2	.6366726	-.008528	-.001316	-.000428	-.002308	.003360	-.004620
#3	.6301044	-.007924	-.001469	-.002218	-.000897	-.010839	-.006386

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169760BL Acquired: 9/24/2025 15:25:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.004251	.0017633	-.001700
Stddev	.002531	.0006520	.000096
%RSD	59.52671	36.97476	5.620767
#1	-.001667	.0019860	-.001801
#2	-.004362	.0022748	-.001685
#3	-.006725	.0010292	-.001612

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5693.622	90386.29	7895.689	4489.585	6673.146
Stddev	12.896	475.08	56.390	11.664	17.272
%RSD	.2264908	.5256052	.7141817	.2598097	.2588339
#1	5679.576	90321.44	7838.868	4498.374	6659.079
#2	5704.926	89946.97	7896.563	4476.352	6692.424
#3	5696.364	90890.46	7951.637	4494.029	6667.936

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169760BS Acquired: 9/24/2025 15:33:56 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7596748**	**1.781340**	**.9073667**	**1.951994**	**.7914852**	**1.907537**
Stddev	.0020668	.017019	.0007018	.005421	.0014800	.009988
%RSD	.2720602	.9553921	.0773452	.2777103	.1869899	.5235995
#1	.7572903	1.762266	.9080297	1.946150	.7911704	1.917013
#2	.7607826	1.786782	.9066316	1.952974	.7930972	1.908492
#3	.7609515	1.794972	.9074388	1.956859	.7901878	1.897106

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1760166**	**.2001211**	**.1833105**	**.9570244**	**.3973245**	**.1844771**
Stddev	.0010153	.0016986	.0001502	.0074901	.0010237	.0001598
%RSD	.5768121	.8487935	.0819160	.7826463	.2576494	.0866079
#1	.1749266	.2004442	.1831759	.9655290	.3965405	.1843824
#2	.1769354	.1982841	.1832831	.9514099	.3969504	.1843874
#3	.1761878	.2016349	.1834725	.9541344	.3984826	.1846616

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2925169**	**2.866238**	**.1857529**	**1.887244**	**.4650304**	**.0748881**
Stddev	.0004471	.014251	.0010121	.017134	.0003112	.0006833
%RSD	.1528444	.4972187	.5448602	.9079059	.0669257	.9124084
#1	.2920528	2.849922	.1867985	1.867999	.4647242	.0750017
#2	.2929448	2.876250	.1847780	1.892888	.4653464	.0755075
#3	.2925532	2.872542	.1856823	1.900844	.4650206	.0741551

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.057887**	**.2880216**	**.1941616**	**9.670654**	**.2800699**	**.4044773**
Stddev	.022794	.0014045	.0003929	.092802	.0029342	.0005490
%RSD	.7454330	.4876490	.2023674	.9596226	1.047662	.1357361
#1	3.049771	.2884590	.1942621	9.641806	.2800758	.4038684
#2	3.083629	.2891554	.1937281	9.774453	.2771327	.4049346
#3	3.040262	.2864504	.1944944	9.595702	.2830011	.4046289

Sample Name: PB169760BS Acquired: 9/24/2025 15:33:56 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6568066	.1831846	.8282999	5.856131	F -.009286	.1858441
Stddev	.0006431	.0009526	.0141042	.017681	.001866	.0022045
%RSD	.0979165	.5200366	1.702788	.3019184	20.09275	1.186189
#1	.6575448	.1837033	.8322044	5.838274	-.007745	.1872557
#2	.6565074	.1837652	.8126547	5.856488	-.008752	.1869727
#3	.6563676	.1820851	.8400404	5.873630	-.011361	.1833038

Elem	Sr4077
Units	ppm
Avg	.1809972
Stddev	.0002867
%RSD	.1584017
#1	.1811889
#2	.1811352
#3	.1806676

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5816.815	87847.59	7841.393	4422.664	6816.303
Stddev	7.402	306.71	80.215	8.905	9.325
%RSD	.1272547	.3491365	1.022974	.2013511	.1368089
#1	5814.075	87622.54	7819.007	4427.243	6807.749
#2	5811.175	88196.94	7930.423	4428.348	6814.917
#3	5825.197	87723.30	7774.749	4412.401	6826.244

Sample Name: Q3155-01 Acquired: 9/24/2025 15:37:58 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1296900**	**-.051490**	**1.816132**	**-.000042**	**-.010511**	**242.5695**
Stddev	.0016041	.008840	.003780	.005517	.002743	1.7400
%RSD	1.236890	17.16810	.2081174	13057.17	26.09713	.7173121
#1	.1281936	-.042596	1.811950	-.006048	-.008718	241.4439
#2	.1313836	-.051600	1.817142	.001121	-.013668	244.5736
#3	.1294928	-.060275	1.819304	.004800	-.009146	241.6910

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.556692**	**.0204207**	**.0267443**	**216.6398**	**.4857163**	**.2189987**
Stddev	.010382	.0001465	.0000580	1.2282	.0043835	.0005934
%RSD	.6669301	.7175443	.2168040	.5669192	.9024761	.2709643
#1	1.544867	.0202535	.0267361	215.4694	.4807002	.2188794
#2	1.560902	.0204824	.0268059	217.9186	.4876374	.2184740
#3	1.564309	.0205263	.0266908	216.5314	.4888111	.2196427

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9694068**	**402.2379**	**5.799077**	**153.8329**	**.3642578**	**.0013556**
Stddev	.0016521	2.3666	.033358	1.0062	.0003322	.0006645
%RSD	.1704216	.5883692	.5752278	.6540972	.0912018	49.02026
#1	.9698621	399.9684	5.760910	152.8858	.3638770	.0020875
#2	.9675748	402.0543	5.813664	154.8893	.3644882	.0007901
#3	.9707835	404.6910	5.822657	153.7234	.3644083	.0011891

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.712569**	**.6875736**	**2.636489**	**43.93825**	**.0819433**	**.0057172**
Stddev	.010745	.0052407	.021244	.30043	.0077129	.0004446
%RSD	.6273937	.7621964	.8057752	.6837638	9.412518	7.776272
#1	1.700695	.6827958	2.611962	43.63052	.0876703	.0053678
#2	1.721622	.6931787	2.648424	43.95340	.0731730	.0062176
#3	1.715390	.6867462	2.649083	44.23082	.0849867	.0055661

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3155-01 Acquired: 9/24/2025 15:37:58 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0511757	9.785707	3.083194	F 15.38997	6.924442	.1779237
Stddev	.0011827	.044362	.021696	.10004	.045438	.0013314
%RSD	2.311063	.4533380	.7036748	.6500113	.6561902	.7482710
#1	.0515737	9.735403	3.058827	15.28336	6.873026	.1771083
#2	.0521080	9.819235	3.100415	15.40478	6.959198	.1794601
#3	.0498453	9.802483	3.090341	15.48178	6.941102	.1772028

Elem	Sr4077
Units	ppm
Avg	-.140713
Stddev	.001047
%RSD	.7437252
#1	-.140254
#2	-.139974
#3	-.141910

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7044.431	110200.6	10671.56	5443.771	5640.610
Stddev	7.835	776.0	73.26	39.396	10.993
%RSD	.1112258	.7041734	.6864672	.7236924	.1948912
#1	7050.383	111089.3	10752.74	5489.027	5652.108
#2	7047.355	109855.8	10610.37	5425.145	5639.519
#3	7035.554	109656.8	10651.58	5417.142	5630.203

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV04 Acquired: 9/24/2025 15:41:59 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.112498**	**5.042416**	**4.908903**	**5.193818**	**5.284155**	**9.914546**
Stddev	.063920	.016715	.060408	.058311	.064886	.040082
%RSD	1.250279	.3314847	1.230583	1.122694	1.227942	.4042706
#1	5.040132	5.039970	4.842509	5.129644	5.211746	9.916614
#2	5.136105	5.027060	4.923580	5.208259	5.303687	9.953553
#3	5.161257	5.060220	4.960620	5.243551	5.337031	9.873470

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.491449**	**.2534848**	**2.471615**	**24.50698**	**1.031525**	**2.461469**
Stddev	.094463	.0003520	.031606	.05215	.001650	.029759
%RSD	.9952422	.1388724	1.278765	.2127780	.1599631	1.208975
#1	9.591163	.2533158	2.438116	24.54991	1.033221	2.430117
#2	9.479879	.2538895	2.475822	24.52208	1.029924	2.464965
#3	9.403303	.2532492	2.500907	24.44895	1.031432	2.489326

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.253463**	**4.961688**	**2.395213**	**24.60788**	**2.469768**	**1.259415**
Stddev	.016139	.018800	.006682	.06941	.031959	.001095
%RSD	1.287519	.3789055	.2789716	.2820775	1.294023	.0869416
#1	1.236415	4.942040	2.394315	24.68623	2.435408	1.258305
#2	1.255469	4.963515	2.402298	24.55409	2.475290	1.259444
#3	1.268505	4.979507	2.389025	24.58331	2.498607	1.260495

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.85779**	**2.481707**	**2.464291**	**24.86979**	**4.927868**	**5.340352**
Stddev	.01852	.006850	.010598	.07564	.005052	.064713
%RSD	.0745128	.2760130	.4300658	.3041624	.1025244	1.211781
#1	24.85394	2.486298	2.474109	24.80475	4.929141	5.268453
#2	24.84150	2.484989	2.465709	24.95280	4.932162	5.358678
#3	24.87794	2.473834	2.453056	24.85183	4.922301	5.393927

Sample Name: CCV04 Acquired: 9/24/2025 15:41:59 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.051532**	**4.862850**	**4.823071**	F **5.527248**	**4.765637**	**4.559383**
Stddev	.062614	.007940	.032691	.085477	.050305	.015173
%RSD	1.239505	.1632698	.6777944	1.546471	1.055571	.3327961
#1	4.983278	4.864544	4.793068	5.433473	4.708196	4.550028
#2	5.065004	4.869806	4.818235	5.547470	4.786874	4.576890
#3	5.106313	4.854201	4.857910	5.600801	4.801841	4.551231

Elem	Sr4077
Units	ppm
Avg	**4.805318**
Stddev	.006564
%RSD	.1366037
#1	4.801386
#2	4.801672
#3	4.812896

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5551.671**	**86542.84**	**7731.837**	**4279.352**	**6270.957**
Stddev	43.827	91.60	26.960	9.096	50.833
%RSD	.7894409	.1058398	.3486923	.2125454	.8106025
#1	5597.131	86614.19	7732.260	4271.716	6322.765
#2	5548.199	86439.55	7704.668	4289.415	6268.947
#3	5509.683	86574.77	7758.583	4276.926	6221.159

Sample Name: CCB04 Acquired: 9/24/2025 15:46:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001880**	**-.000048**	**-.001906**	**.0011124**	**-.001099**	**-.008434**	**-.006793**
Stddev	.000832	.000564	.000877	.0012979	.000868	.007020	.001298
%RSD	44.26844	1182.255	45.98602	116.6769	78.94744	83.23240	19.10523
#1	-.002731	-.000251	-.000969	.0024233	-.000124	-.013957	-.007020
#2	-.001840	.000590	-.002706	-.000172	-.001387	-.000534	-.007963
#3	-.001068	-.000482	-.002044	.001086	-.001787	-.010812	-.005397

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000091**	**-.000782**	**.0405949**	**-.000451**	**-.000840**	**-.000594**	**-.005645**
Stddev	.000046	.000074	.0061740	.000324	.000290	.000568	.014556
%RSD	50.33979	9.427611	15.20877	71.69451	34.52743	95.49952	257.8397
#1	-.000055	-.000810	.0397820	-.000683	-.000767	-.001018	.000251
#2	-.000142	-.000699	.0348676	-.000082	-.001160	.000050	.005038
#3	-.000076	-.000838	.0471350	-.000590	-.000594	-.000815	-.022224

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000801**	**-.047916**	**-.000746**	**.0009746**	**.1583628**	**.0044774**	**.0084454**
Stddev	.000359	.010314	.000106	.0004231	.0079163	.0045292	.0002149
%RSD	44.81585	21.52434	14.15314	43.41468	4.998856	101.1571	2.545006
#1	-.000655	-.059815	-.000855	.0014306	.1626691	.0086478	.0085472
#2	-.000538	-.042397	-.000741	.0008987	.1492267	.0051251	.0085905
#3	-.001210	-.041536	-.000644	.0005946	.1631924	-.000341	.0081984

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2506063**	**-.002435**	**-.001172**	**-.000808**	**-.000940**	**.0065059**	**-.007732**
Stddev	.0283712	.000621	.000095	.000386	.000579	.0109249	.000946
%RSD	11.32103	25.48854	8.073198	47.73643	61.60271	167.9236	12.23748
#1	.2757507	-.002964	-.001204	-.000499	-.000956	-.004946	-.008426
#2	.2198478	-.001752	-.001247	-.000684	-.000354	.007649	-.008117
#3	.2562205	-.002590	-.001066	-.001240	-.001512	.016814	-.006654

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCB04 Acquired: 9/24/2025 15:46:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0009621	-.001001	-.001784
Stddev	.0033257	.000661	.000091
%RSD	345.6749	66.02492	5.094120
#1	-.002850	-.001759	-.001682
#2	.002468	-.000543	-.001812
#3	.003269	-.000702	-.001857

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5712.436	88546.76	7800.668	4424.879	6753.214
Stddev	27.552	176.84	15.437	25.725	28.401
%RSD	.4823088	.1997132	.1978881	.5813658	.4205479
#1	5727.057	88654.19	7818.490	4440.033	6767.699
#2	5729.596	88342.65	7791.487	4439.427	6771.453
#3	5680.657	88643.43	7792.026	4395.177	6720.492

Sample Name: Q3155-02 Acquired: 9/24/2025 15:50:28 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0949073**	**-.043772**	**2.132365**	**-.000951**	**-.007349**	**239.4524**
Stddev	.0025665	.003313	.017549	.002005	.002423	.6822
%RSD	2.704225	7.569099	.8229954	210.8287	32.96869	.2848894
#1	.0975133	-.046490	2.121422	.001353	-.004572	240.2228
#2	.0948262	-.040081	2.123065	-.001909	-.009031	238.9250
#3	.0923823	-.044746	2.152607	-.002297	-.008445	239.2093

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.410288**	**.0182716**	**.0236669**	**437.8160**	**.3651477**	**.2196418**
Stddev	.001369	.0001072	.0003898	3.1727	.0005448	.0016671
%RSD	.0970388	.5864385	1.646887	.7246571	.1492102	.7590212
#1	1.410683	.0183953	.0236136	441.3075	.3648389	.2185534
#2	1.408766	.0182089	.0233066	435.1097	.3657767	.2188109
#3	1.411416	.0182105	.0240806	437.0307	.3648273	.2215611

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7956523**	**352.2484**	**5.872820**	**295.4002**	**.3180036**	**.0015317**
Stddev	.0049357	1.6834	.012222	1.7050	.0022746	.0005912
%RSD	.6203321	.4779142	.2081055	.5771903	.7152852	38.59783
#1	.7927285	351.1508	5.886896	297.3572	.3164863	.0014354
#2	.7928776	351.4079	5.866659	294.6083	.3169057	.0009945
#3	.8013509	354.1866	5.864906	294.2353	.3206190	.0021651

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.325211**	**.6793936**	**3.012911**	**42.83847**	**.0730551**	**.0036915**
Stddev	.022270	.0022846	.004580	.32022	.0037732	.0002100
%RSD	1.680523	.3362744	.1520012	.7474985	5.164872	5.689356
#1	1.300315	.6810295	3.008340	42.51395	.0696967	.0034625
#2	1.332081	.6767833	3.017499	42.84725	.0723306	.0038751
#3	1.343238	.6803679	3.012893	43.15421	.0771380	.0037370

Sample Name: Q3155-02 Acquired: 9/24/2025 15:50:28 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0606238	8.951752	3.341430	F 12.99885	3.915009	.1323445
Stddev	.0014852	.023744	.010950	.13294	.019623	.0014957
%RSD	2.449903	.2652429	.3277154	1.022733	.5012166	1.130159
#1	.0593642	8.979167	3.336758	12.86726	3.901411	.1314669
#2	.0602457	8.937772	3.353942	12.99618	3.906111	.1340715
#3	.0622615	8.938316	3.333591	13.13311	3.937504	.1314951

Elem	Sr4077
Units	ppm
Avg	-.108394
Stddev	.001549
%RSD	1.429070
#1	-.107607
#2	-.107396
#3	-.110178

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6645.111	104883.9	10177.64	5143.489	5329.932
Stddev	19.092	327.8	49.33	17.073	26.402
%RSD	.2873052	.3125368	.4846911	.3319402	.4953477
#1	6664.967	105132.3	10123.01	5162.923	5353.343
#2	6643.477	105007.1	10191.00	5136.639	5335.139
#3	6626.888	104512.4	10218.92	5130.904	5301.315

Sample Name: Q3155-03 Acquired: 9/24/2025 15:54:38 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0819239**	**-.044413**	**2.070862**	**-.006823**	**-.004036**	**253.4357**
Stddev	.0056529	.004696	.001302	.000877	.003712	.4620
%RSD	6.900131	10.57423	.0628487	12.85997	91.96607	.1823005
#1	.0879614	-.046077	2.071609	-.005857	-.003039	253.9417
#2	.0810539	-.039111	2.071619	-.007042	-.008144	253.0362
#3	.0767565	-.048050	2.069360	-.007570	-.000924	253.3291

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.712298**	**.0190414**	**.0203962**	**507.7847**	**.3720589**	**.2292494**
Stddev	.003251	.0000770	.0003098	3.6119	.0004501	.0002039
%RSD	.1898389	.4041110	1.518705	.7113141	.1209656	.0889531
#1	1.715688	.0191297	.0205019	511.9448	.3723392	.2290174
#2	1.709208	.0190055	.0200475	505.9630	.3722978	.2294002
#3	1.711998	.0189890	.0206393	505.4464	.3715398	.2293307

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7928019**	**367.4211**	**6.270169**	**329.4935**	**.3333786**	**-.001296**
Stddev	.0025803	2.3677	.009980	.2170	.0003328	.000888
%RSD	.3254698	.6444143	.1591609	.0658573	.0998145	68.47061
#1	.7957798	365.5263	6.281495	329.7279	.3337502	-.002000
#2	.7912271	370.0754	6.262666	329.2997	.3331082	-.000299
#3	.7913989	366.6615	6.266347	329.4529	.3332774	-.001590

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.371222**	**.6671694**	**1.932085**	**57.65362**	**.0398770**	**.0026010**
Stddev	.006131	.0020396	.004079	.23189	.0110922	.0003921
%RSD	.4471407	.3057056	.2111006	.4022111	27.81603	15.07602
#1	1.364829	.6662830	1.936600	57.49915	.0321156	.0021624
#2	1.377052	.6657231	1.930989	57.92027	.0525814	.0029177
#3	1.371785	.6695022	1.928667	57.54144	.0349341	.0027228

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3155-03 Acquired: 9/24/2025 15:54:38 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0561613	F 11.86372	3.467247	F 10.74401	2.820529	.1356202
Stddev	.0002985	.02031	.021515	.01167	.008041	.0004347
%RSD	.5314611	.1712291	.6205122	.1086242	.2850895	.3205375
#1	.0561094	11.88497	3.444516	10.75748	2.818193	.1356141
#2	.0564823	11.86171	3.487293	10.73705	2.829479	.1360579
#3	.0558922	11.84449	3.469933	10.73749	2.813914	.1351886

Elem	Sr4077
Units	ppm
Avg	-.080495
Stddev	.003082
%RSD	3.828780
#1	-.077558
#2	-.083704
#3	-.080223

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6370.007	99022.69	9534.599	4829.357	5364.649
Stddev	8.959	54.00	66.373	2.056	3.998
%RSD	.1406429	.0545380	.6961295	.0425798	.0745204
#1	6359.664	99070.42	9480.773	4829.187	5360.052
#2	6375.008	98964.07	9608.761	4827.392	5367.309
#3	6375.349	99033.59	9514.263	4831.494	5366.586

Sample Name: Q3157-01 Acquired: 9/24/2025 15:58:48 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0579798**	**-.047419**	**1.130761**	**.0021886**	**-.014562**	**161.3754**	**.9094305**
Stddev	.0038016	.000190	.000641	.0080512	.001532	.1993	.0069593
%RSD	6.556746	.4010311	.0566470	367.8611	10.51817	.1235267	.7652417
#1	.0582874	-.047200	1.131488	-.007054	-.012944	161.1452	.9015467
#2	.0616183	-.047515	1.130279	.005941	-.014754	161.4913	.9147202
#3	.0540338	-.047542	1.130517	.007679	-.015989	161.4897	.9120247

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0129552**	**.0086972**	**47.55562**	**.3183514**	**.2036587**	**.6994153**	**367.0910**
Stddev	.0002433	.0003531	.12263	.0005928	.0007509	.0005387	.6649
%RSD	1.877611	4.059540	.2578754	.1862085	.3687003	.0770291	.1811168
#1	.0131219	.0090314	47.42280	.3179917	.2037349	.6999858	366.3838
#2	.0130677	.0087323	47.66456	.3180270	.2028726	.6989152	367.7033
#3	.0126761	.0083278	47.57949	.3190356	.2043686	.6993449	367.1858

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.616886**	**62.26117**	**.3272814**	**.0087923**	**12.54771**	**.6931734**	**.8123728**
Stddev	.021992	.10438	.0003062	.0002846	.05394	.0023516	.0044798
%RSD	.3323563	.1676420	.0935596	3.236727	.4298715	.3392562	.5514465
#1	6.594115	62.19513	.3276300	.0086589	12.52088	.6904588	.8139431
#2	6.638006	62.38150	.3271582	.0091191	12.51245	.6944701	.8073193
#3	6.618538	62.20687	.3270559	.0085989	12.60980	.6945911	.8158562

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.39225**	**.2356716**	**.0012589**	**.0349616**	**8.333812**	**3.298014**	**6.798014**
Stddev	.09228	.0066280	.0001612	.0004411	.033983	.006314	.043571
%RSD	.6890724	2.812408	12.80259	1.261620	.4077742	.1914573	.6409299
#1	13.34652	.2354180	.0012522	.0349985	8.295061	3.291111	6.823500
#2	13.33176	.2291739	.0011012	.0353831	8.358537	3.303497	6.822837
#3	13.49847	.2424227	.0014234	.0345032	8.347838	3.299434	6.747704

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-01 Acquired: 9/24/2025 15:58:48 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.183384**	**.2376602**	**-.120279**
Stddev	.022425	.0029099	.000528
%RSD	1.027070	1.224398	.4390728
#1	2.205831	.2343177	-.120888
#2	2.183338	.2396289	-.119952
#3	2.160982	.2390340	-.119996

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6281.339**	**95002.69**	**9311.126**	**4802.280**	**5921.175**
Stddev	5.792	261.87	46.371	9.630	6.006
%RSD	.0922081	.2756441	.4980176	.2005211	.1014287
#1	6282.387	95131.23	9331.045	4812.322	5914.579
#2	6286.536	94701.39	9258.123	4801.394	5926.327
#3	6275.095	95175.45	9344.209	4793.124	5922.620

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-01DUP Acquired: 9/24/2025 16:02:51 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0504077**	**-.044322**	**.3483563**	**-.001185**	**-.012414**	**150.4134**	**.8753675**
Stddev	.0021413	.002725	.0034396	.002513	.001168	.2908	.0023138
%RSD	4.247976	6.148310	.9873791	212.0296	9.410399	.1933636	.2643235
#1	.0492020	-.047171	.3522557	-.003329	-.011799	150.0777	.8737459
#2	.0528800	-.044055	.3457533	.001580	-.011682	150.5879	.8743395
#3	.0491411	-.041741	.3470599	-.001806	-.013761	150.5748	.8780172

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0128925**	**.0083201**	**56.97492**	**.2983588**	**.2097237**	**.6511961**	**341.6502**
Stddev	.0000372	.0003308	.10729	.0009240	.0005467	.0028064	3.1364
%RSD	.2889347	3.975398	.1883132	.3097017	.2606555	.4309643	.9180103
#1	.0128575	.0080724	56.91466	.2992916	.2093248	.6479726	345.2002
#2	.0129317	.0086957	56.91131	.2974438	.2094994	.6525202	339.2547
#3	.0128884	.0081923	57.09880	.2983411	.2103468	.6530955	340.4956

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.398668**	**61.61033**	**.3224290**	**.0055945**	**11.47109**	**.6369626**	**.7358051**
Stddev	.026426	.12888	.0004740	.0014980	.08915	.0043454	.0008716
%RSD	.3571690	.2091892	.1470198	26.77656	.7771766	.6822004	.1184608
#1	7.388167	61.49432	.3226583	.0071721	11.57380	.6329835	.7352734
#2	7.379106	61.58761	.3227449	.0041913	11.42580	.6363051	.7353308
#3	7.428730	61.74906	.3218840	.0054200	11.41368	.6415993	.7368110

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.53105**	**.1861894**	**.0019379**	**.0198002**	**7.130218**	**4.066037**	**6.739536**
Stddev	.07104	.0209937	.0006782	.0005841	.020999	.043033	.027984
%RSD	.5669195	11.27545	34.99690	2.949796	.2945090	1.058356	.4152270
#1	12.60778	.2103338	.0018321	.0196786	7.121530	4.113217	6.771719
#2	12.46756	.1722405	.0013188	.0204356	7.114956	4.055952	6.725961
#3	12.51782	.1759941	.0026628	.0192866	7.154166	4.028941	6.720928

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-01DUP Acquired: 9/24/2025 16:02:51 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.391400**	**.2364957**	**-.050371**
Stddev	.016132	.0025556	.003182
%RSD	.6746041	1.080626	6.317872
#1	2.410023	.2339592	-.054024
#2	2.381680	.2364579	-.048886
#3	2.382498	.2390700	-.048203

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6280.614**	**96838.08**	**9116.452**	**4849.902**	**6021.468**
Stddev	11.477	446.95	58.000	26.888	6.340
%RSD	.1827380	.4615447	.6362093	.5544113	.1052952
#1	6291.477	96326.87	9177.270	4819.168	6022.810
#2	6281.756	97155.04	9110.330	4869.085	6027.031
#3	6268.609	97032.33	9061.756	4861.454	6014.565

Sample Name: Q3157-01LX5 Acquired: 9/24/2025 16:06:52 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0126999**	**-.008997**	**.2512970**	**.0021324**	**-.004922**	**41.86261**	**.2280349**
Stddev	.0013863	.001507	.0012574	.0031617	.001675	.14815	.0014253
%RSD	10.91557	16.74406	.5003458	148.2716	34.03306	.3538948	.6250358
#1	.0113329	-.010351	.2524583	-.001124	-.003817	41.69365	.2279388
#2	.0141047	-.007375	.2514708	.005190	-.004100	41.92387	.2295059
#3	.0126622	-.009267	.2499617	.002332	-.006849	41.97030	.2266602

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0035513**	**.0003706**	**12.52878**	**.0824917**	**.0444038**	**.1872446**	**91.68561**
Stddev	.0000509	.0001974	.03495	.0006262	.0006798	.0006207	.03158
%RSD	1.432215	53.26664	.2789759	.7590484	1.530917	.3314726	.0344477
#1	.0035468	.0001441	12.48937	.0817948	.0451439	.1877844	91.66808
#2	.0035029	.0004615	12.55602	.0826732	.0442604	.1873829	91.66668
#3	.0036043	.0005061	12.54094	.0830070	.0438072	.1865664	91.72207

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.753513**	**16.46525**	**.0732476**	**.0020935**	**3.106294**	**.1836739**	**.2038523**
Stddev	.005625	.00872	.0008148	.0001965	.008366	.0010892	.0006336
%RSD	.3207767	.0529884	1.112423	9.384286	.2693252	.5929864	.3108297
#1	1.747020	16.45521	.0739701	.0021294	3.105956	.1830977	.2036187
#2	1.756894	16.47099	.0734082	.0022695	3.098102	.1849301	.2045695
#3	1.756625	16.46954	.0723644	.0018815	3.114824	.1829938	.2033686

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.360561**	**.0371478**	**-.000546**	**.0044880**	**2.178920**	**.9192863**	**1.496754**
Stddev	.010125	.0025884	.000491	.0002557	.007476	.0068995	.004984
%RSD	.3012965	6.967834	89.90750	5.696748	.3430832	.7505307	.3330147
#1	3.367323	.0347205	-.000968	.0042765	2.170310	.9173265	1.498499
#2	3.348920	.0368512	-.000007	.0044152	2.183759	.9269537	1.500633
#3	3.365440	.0398717	-.000663	.0047721	2.182691	.9135787	1.491132

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-01LX5 Acquired: 9/24/2025 16:06:52 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4503362	.0598581	-.028948
Stddev	.0033775	.0017890	.000213
%RSD	.7500034	2.988763	.7364590
#1	.4503846	.0582948	-.029192
#2	.4536893	.0594703	-.028850
#3	.4469348	.0618092	-.028800

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5727.015	86328.61	7924.472	4393.777	6312.449
Stddev	6.447	273.46	24.669	23.582	2.987
%RSD	.1125763	.3167650	.3113005	.5367111	.0473199
#1	5734.056	86271.29	7947.767	4412.013	6313.422
#2	5725.586	86626.19	7927.020	4402.172	6309.097
#3	5721.402	86088.36	7898.627	4367.147	6314.828

Sample Name: Q3157-01MS Acquired: 9/24/2025 16:10:57 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7266954**	**1.748466**	**1.391196**	**1.655347**	**.3351762**	**195.0382**
Stddev	.0041890	.016207	.003272	.006443	.0028004	.2952
%RSD	.5764388	.9269222	.2352090	.3892312	.8354963	.1513464
#1	.7219603	1.738362	1.387498	1.648902	.3341641	195.2460
#2	.7282074	1.739875	1.393718	1.661788	.3383419	195.1682
#3	.7299184	1.767159	1.392371	1.655353	.3330226	194.7003

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.187310**	**.1824335**	**.2123201**	**69.99839**	**.6932682**	**.4358519**
Stddev	.008794	.0008855	.0006018	.30526	.0009989	.0003468
%RSD	.7406414	.4853831	.2834565	.4360996	.1440855	.0795576
#1	1.194768	.1832976	.2122990	70.27873	.6944087	.4355110
#2	1.189549	.1824748	.2117292	70.04327	.6928472	.4362043
#3	1.177614	.1815281	.2129323	69.67318	.6925488	.4358405

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9728812**	**377.2020**	**7.805489**	**71.79672**	**.8726650**	**.0700509**
Stddev	.0006642	1.8797	.060177	.24391	.0011095	.0008504
%RSD	.0682716	.4983156	.7709626	.3397213	.1271348	1.214040
#1	.9721987	378.6604	7.864505	72.03258	.8725782	.0708347
#2	.9729195	377.8650	7.807750	71.81209	.8716015	.0701714
#3	.9735254	375.0807	7.744213	71.54549	.8738153	.0691467

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.32317**	**.9966562**	**.9879690**	**24.79715**	**.6808682**	**.3548680**
Stddev	.02855	.0035740	.0026751	.09807	.0077536	.0005872
%RSD	.1862950	.3585970	.2707695	.3954887	1.138786	.1654588
#1	15.29434	.9942035	.9908683	24.82157	.6896102	.3552128
#2	15.35142	.9950083	.9855964	24.88071	.6781711	.3541900
#3	15.32376	1.000757	.9874423	24.68918	.6748233	.3552012

Sample Name: Q3157-01MS Acquired: 9/24/2025 16:10:57 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7281546	9.106394	6.483330	F 20.76607	2.226718	.4346547
Stddev	.0004210	.044578	.018462	.07229	.008938	.0013130
%RSD	.0578121	.4895234	.2847556	.3480955	.4013881	.3020744
#1	.7276831	9.149286	6.478548	20.78262	2.219847	.4336573
#2	.7282880	9.109592	6.503713	20.68695	2.223485	.4361423
#3	.7284926	9.060303	6.467730	20.82865	2.236822	.4341646

Elem	Sr4077
Units	ppm
Avg	.1396167
Stddev	.0014101
%RSD	1.010006
#1	.1409795
#2	.1397070
#3	.1381635

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6494.678	101941.3	9409.869	5056.794	5875.652
Stddev	5.971	310.8	47.636	15.792	7.986
%RSD	.0919344	.3048867	.5062301	.3122975	.1359204
#1	6492.598	101781.2	9369.098	5040.910	5870.446
#2	6501.411	101743.1	9398.278	5056.978	5884.847
#3	6490.025	102299.5	9462.230	5072.493	5871.663

Sample Name: Q3157-01MSD Acquired: 9/24/2025 16:14:53 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6949537**	**1.661418**	**1.272021**	**1.575520**	**.3225684**	**178.2635**
Stddev	.0018048	.072448	.004928	.008908	.0036963	.4073
%RSD	.2597049	4.360625	.3874543	.5653917	1.145905	.2284607
#1	.6969691	1.706386	1.267085	1.579569	.3186272	178.1943
#2	.6934867	1.577843	1.272038	1.565307	.3259579	177.8954
#3	.6944053	1.700026	1.276942	1.581684	.3231201	178.7010

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.151869**	**.1732361**	**.1975501**	**56.06409**	**.6510515**	**.4100458**
Stddev	.003538	.0012230	.0005578	.09716	.0005548	.0005407
%RSD	.3071758	.7059500	.2823454	.1733005	.0852118	.1318580
#1	1.152706	.1745699	.1978354	56.07471	.6511713	.4097340
#2	1.147988	.1729710	.1969073	55.96206	.6504466	.4097333
#3	1.154914	.1721675	.1979074	56.15550	.6515366	.4106701

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9062139**	**359.4639**	**8.442389**	**70.84786**	**.8728302**	**.0703938**
Stddev	.0010254	2.8960	.019847	.26570	.0006094	.0008394
%RSD	.1131557	.8056360	.2350861	.3750273	.0698158	1.192391
#1	.9057337	357.7890	8.455994	71.12257	.8729730	.0698289
#2	.9055167	357.7948	8.419615	70.59220	.8721621	.0699941
#3	.9073914	362.8079	8.451557	70.82881	.8733555	.0713583

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.89528**	**.8977124**	**.9365114**	**23.31977**	**.4600974**	**.3434663**
Stddev	.14077	.0038542	.0016929	.24484	.0156207	.0004068
%RSD	.8856181	.4293398	.1807654	1.049920	3.395093	.1184316
#1	15.78146	.8950714	.9354058	23.14578	.4489386	.3436029
#2	15.85168	.8959306	.9356681	23.21379	.4534040	.3430088
#3	16.05269	.9021352	.9384603	23.59975	.4779494	.3437872

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-01MSD Acquired: 9/24/2025 16:14:53 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6760605	8.040581	4.259905	F 12.52453	1.908014	.4244479
Stddev	.0019202	.012363	.030531	.09256	.016799	.0001815
%RSD	.2840208	.1537620	.7167121	.7390185	.8804516	.0427715
#1	.6743243	8.037716	4.253734	12.49207	1.910158	.4244435
#2	.6781228	8.029902	4.232930	12.45257	1.890246	.4242687
#3	.6757342	8.054125	4.293050	12.62894	1.923638	.4246317

Elem	Sr4077
Units	ppm
Avg	.0471056
Stddev	.0019026
%RSD	4.039069
#1	.0487544
#2	.0475388
#3	.0450238

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6480.808	100134.3	9351.725	4982.672	5985.532
Stddev	9.065	405.0	31.429	20.575	4.403
%RSD	.1398705	.4044556	.3360723	.4129227	.0735648
#1	6483.780	100304.6	9316.970	4995.554	5987.144
#2	6488.014	100426.4	9360.058	4993.519	5988.902
#3	6470.631	99672.0	9378.148	4958.944	5980.550

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-01A Acquired: 9/24/2025 16:18:50 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7253125**	**1.738403**	**2.003989**	**1.671109**	**.6907201**	**165.2806**
Stddev	.0024690	.056104	.006947	.012787	.0046184	.4356
%RSD	.3404093	3.227332	.3466780	.7651565	.6686394	.2635273
#1	.7277413	1.775186	2.011816	1.683854	.6882593	165.5701
#2	.7228052	1.766195	2.001602	1.671192	.6960479	165.4920
#3	.7253911	1.673828	1.998550	1.658281	.6878533	164.7797

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.071705**	**.1805329**	**.1991476**	**48.79866**	**.6598943**	**.3949794**
Stddev	.003981	.0009587	.0003280	.10971	.0005293	.0005030
%RSD	.3714976	.5310621	.1647044	.2248287	.0802068	.1273386
#1	1.076108	.1809077	.1993320	48.90313	.6604418	.3945952
#2	1.070647	.1812477	.1993418	48.80849	.6598558	.3947945
#3	1.068359	.1794434	.1987688	48.68436	.6593853	.3955487

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9368284**	**360.5751**	**6.790271**	**64.61675**	**.8020299**	**.0736011**
Stddev	.0027286	2.4471	.033517	.07019	.0007933	.0010865
%RSD	.2912567	.6786570	.4936104	.1086222	.0989180	1.476226
#1	.9364494	360.7883	6.828774	64.68715	.8022009	.0736907
#2	.9397267	358.0284	6.774416	64.54677	.8027238	.0724726
#3	.9343092	362.9086	6.767622	64.61634	.8011650	.0746401

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.88253**	**.9484849**	**.9689773**	**22.03621**	**.4405267**	**.3672906**
Stddev	.07836	.0018965	.0031769	.14057	.0077209	.0007059
%RSD	.5265369	.1999509	.3278606	.6379240	1.752653	.1921936
#1	14.85928	.9504790	.9700155	22.04040	.4360271	.3681001
#2	14.81843	.9482715	.9715052	21.89359	.4361111	.3669688
#3	14.96989	.9467041	.9654112	22.17464	.4494419	.3668030

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3157-01A Acquired: 9/24/2025 16:18:50 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7327553	8.773300	6.485376	F 12.78024	2.035147	.4006163
Stddev	.0041222	.030630	.011109	.07248	.015164	.0009672
%RSD	.5625667	.3491226	.1712926	.5671494	.7451280	.2414210
#1	.7331763	8.807634	6.476955	12.83816	2.048673	.4016924
#2	.7366509	8.763486	6.497967	12.80360	2.038014	.3998195
#3	.7284388	8.748781	6.481207	12.69895	2.018753	.4003372

Elem	Sr4077
Units	ppm
Avg	.0490610
Stddev	.0035384
%RSD	7.212143
#1	.0510019
#2	.0512041
#3	.0449769

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6429.481	97054.34	9187.078	4850.027	6059.587
Stddev	5.212	347.91	39.964	9.381	4.306
%RSD	.0810702	.3584710	.4349997	.1934147	.0710655
#1	6425.016	97118.87	9161.035	4857.877	6056.285
#2	6428.218	97365.48	9167.108	4839.638	6058.019
#3	6435.209	96678.69	9233.090	4852.566	6064.458

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169761BS Acquired: 9/24/2025 16:22:47 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8092921**	**1.881696**	**.9731570**	**2.078883**	**.8421803**	**2.026340**
Stddev	.0018245	.031761	.0024812	.008613	.0016852	.006007
%RSD	.2254484	1.687898	.2549617	.4143334	.2000959	.2964284
#1	.8074951	1.845802	.9731630	2.069492	.8424732	2.023184
#2	.8111430	1.906162	.9706729	2.086415	.8403679	2.033267
#3	.8092383	1.893122	.9756352	2.080741	.8436998	2.022569

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1870384**	**.2170385**	**.1962438**	**1.031204**	**.4193048**	**.1978259**
Stddev	.0009196	.0008937	.0003217	.002730	.0018867	.0001950
%RSD	.4916447	.4117630	.1639300	.2647620	.4499580	.0985672
#1	.1876305	.2169421	.1959642	1.033511	.4196018	.1976385
#2	.1875057	.2161969	.1961718	1.031910	.4210253	.1978116
#3	.1859790	.2179764	.1965954	1.028190	.4172872	.1980277

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3119887**	**2.938152**	**.1985520**	**2.008264**	**.4986927**	**.0785080**
Stddev	.0008669	.010441	.0003744	.034293	.0008101	.0006001
%RSD	.2778529	.3553695	.1885709	1.707593	.1624420	.7643426
#1	.3118898	2.933111	.1981257	2.047840	.4988552	.0791532
#2	.3111756	2.950158	.1987025	1.987327	.4978136	.0779667
#3	.3129008	2.931188	.1988277	1.989626	.4994091	.0784041

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.037509**	**.3066732**	**.2037674**	**9.830923**	**.3062297**	**.4323541**
Stddev	.020973	.0032012	.0010452	.083345	.0015969	.0007326
%RSD	.6904769	1.043836	.5129330	.8477875	.5214676	.1694537
#1	3.030766	.3047784	.2049655	9.817542	.3051345	.4315196
#2	3.061025	.3048721	.2030424	9.920149	.3054925	.4328915
#3	3.020737	.3103692	.2032944	9.755078	.3080619	.4326513

Sample Name: PB169761BS Acquired: 9/24/2025 16:22:47 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7052185	.1945714	.8498665	6.317012	F -.008934	.1953168
Stddev	.0006874	.0006199	.0074789	.034177	.000653	.0029497
%RSD	.0974726	.3186111	.8800151	.5410318	7.308218	1.510227
#1	.7044592	.1940226	.8582127	6.280350	-.009393	.1977222
#2	.7053981	.1952438	.8476147	6.347992	-.009223	.1962025
#3	.7057984	.1944478	.8437722	6.322693	-.008187	.1920257

Elem	Sr4077
Units	ppm
Avg	.1921268
Stddev	.0004117
%RSD	.2142630
#1	.1916570
#2	.1922994
#3	.1924241

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5613.000	87102.04	7441.791	4360.575	6542.835
Stddev	15.024	284.97	37.589	14.804	23.190
%RSD	.2676603	.3271638	.5051094	.3394938	.3544301
#1	5626.154	87129.01	7449.188	4343.977	6564.843
#2	5616.217	86804.55	7475.132	4365.335	6545.041
#3	5596.628	87372.56	7401.053	4372.414	6518.621

Sample Name: PB169761BL Acquired: 9/24/2025 16:26:49 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015357**	**-.001234**	**-.000657**	**.0000940**	**-.001617**	**-.008782**
Stddev	.0018378	.000531	.000552	.0008289	.003309	.004893
%RSD	119.6756	43.01002	83.96902	881.3779	204.6109	55.71493
#1	.0024714	-.000911	-.000609	.0008143	-.000528	-.013025
#2	-.000582	-.000945	-.001231	.0002797	-.005333	-.003430
#3	.002717	-.001846	-.000131	-.000812	.001010	-.009893

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004107**	**-.000133**	**-.000953**	**-.016585**	**-.000568**	**-.000878**
Stddev	.001573	.000041	.000032	.021267	.000289	.000084
%RSD	38.31010	30.65438	3.337085	128.2305	50.84841	9.607512
#1	-.005060	-.000166	-.000930	.006747	-.000418	-.000818
#2	-.004970	-.000087	-.000990	-.021617	-.000385	-.000975
#3	-.002291	-.000146	-.000940	-.034884	-.000901	-.000842

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000225**	**-.009374**	**-.001257**	**-.057578**	**-.000749**	**.0005045**
Stddev	.000209	.008709	.000379	.010784	.000352	.0006479
%RSD	92.79724	92.90217	30.17692	18.72941	46.98177	128.4262
#1	-.000409	-.000877	-.000860	-.068995	-.000343	-.000138
#2	.000002	-.018280	-.001615	-.047564	-.000927	.000495
#3	-.000270	-.008966	-.001295	-.056175	-.000975	.001157

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.019652**	**.0020949**	**-.000560**	**-.074851**	**-.008799**	**-.000908**
Stddev	.008071	.0012941	.000328	.034105	.000621	.000274
%RSD	41.06904	61.77698	58.47908	45.56374	7.062961	30.17760
#1	-.028821	.0018383	-.000935	-.114217	-.008367	-.001223
#2	-.013622	.0034981	-.000423	-.054218	-.009511	-.000728
#3	-.016514	.0009482	-.000324	-.056119	-.008518	-.000772

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169761BL Acquired: 9/24/2025 16:26:49 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006841	-.000919	-.003563	-.006522	-.008846	F -.010780
Stddev	.000157	.001138	.008830	.001649	.001892	.001547
%RSD	2.299140	123.7866	247.8672	25.28873	21.38953	14.35472
#1	-.006990	.000339	-.013615	-.007675	-.011021	-.012566
#2	-.006857	-.001877	.002943	-.004633	-.007582	-.009846
#3	-.006676	-.001220	-.000016	-.007259	-.007934	-.009928

Elem	Sr4077
Units	ppm
Avg	-.001961
Stddev	.000105
%RSD	5.371998
#1	-.002070
#2	-.001953
#3	-.001860

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5836.157	90052.26	7827.493	4519.434	6925.588
Stddev	3.210	317.38	66.819	15.031	5.980
%RSD	.0550093	.3524440	.8536398	.3325908	.0863476
#1	5832.533	90277.01	7901.026	4524.864	6925.192
#2	5837.290	89689.19	7810.961	4502.442	6919.816
#3	5838.647	90190.59	7770.493	4530.996	6931.756

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV05 Acquired: 9/24/2025 16:31:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.203925**	**5.131289**	**5.002925**	**5.311641**	**5.357028**	**10.03779**
Stddev	.007115	.030393	.007999	.004476	.014954	.02031
%RSD	.1367299	.5923018	.1598834	.0842639	.2791463	.2023531
#1	5.202051	5.153062	4.994407	5.306475	5.347926	10.02898
#2	5.211790	5.144238	5.010277	5.314075	5.374287	10.02337
#3	5.197935	5.096566	5.004089	5.314371	5.348871	10.06102

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.768847**	**.2613181**	**2.521915**	**24.89128**	**1.046659**	**2.502248**
Stddev	.150098	.0012440	.003341	.05491	.003218	.003384
%RSD	1.536496	.4760577	.1324796	.2205914	.3074176	.1352382
#1	9.828180	.2601047	2.518832	24.94262	1.050313	2.498917
#2	9.598152	.2612590	2.525465	24.83339	1.044249	2.505683
#3	9.880210	.2625906	2.521449	24.89782	1.045416	2.502142

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.275506**	**4.994602**	**2.450484**	**25.04156**	**2.514514**	**1.278732**
Stddev	.002323	.053936	.011878	.07780	.001137	.001114
%RSD	.1821229	1.079884	.4847264	.3106769	.0452084	.0871038
#1	1.274227	5.052767	2.456087	24.96842	2.513222	1.280008
#2	1.278188	4.946240	2.436841	25.03297	2.514955	1.277956
#3	1.274104	4.984798	2.458524	25.12330	2.515364	1.278231

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.85074**	**2.514109**	**2.537969**	**24.94584**	**5.085163**	**5.367531**
Stddev	.13800	.010650	.014094	.17611	.028006	.011803
%RSD	.5552981	.4236133	.5553206	.7059501	.5507311	.2198885
#1	25.00654	2.511403	2.551889	25.14346	5.054920	5.358769
#2	24.80181	2.505073	2.523707	24.80554	5.090367	5.380952
#3	24.74388	2.525851	2.538311	24.88850	5.110201	5.362871

Sample Name: CCV05 Acquired: 9/24/2025 16:31:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.154499**	**4.951903**	**4.848890**	F **5.715995**	**4.938157**	**4.617856**
Stddev	.003613	.018135	.018028	.022240	.012434	.023686
%RSD	.0700981	.3662255	.3717933	.3890843	.2517998	.5129253
#1	5.150327	4.962279	4.841586	5.695362	4.925534	4.634413
#2	5.156547	4.930962	4.835661	5.739553	4.938543	4.590725
#3	5.156623	4.962467	4.869424	5.713071	4.950394	4.628431

Elem	Sr4077
Units	ppm
Avg	**4.967960**
Stddev	.039692
%RSD	.7989549
#1	5.007102
#2	4.927740
#3	4.969037

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5370.279**	**84605.58**	**7461.836**	**4222.638**	**6023.097**
Stddev	14.920	387.08	43.479	35.713	10.355
%RSD	.2778186	.4575086	.5826857	.8457505	.1719170
#1	5376.904	84312.64	7478.427	4197.381	6027.905
#2	5353.194	85044.40	7494.577	4263.498	6011.213
#3	5380.739	84459.70	7412.504	4207.036	6030.174

Sample Name: CCB05 Acquired: 9/24/2025 16:35:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008464**	**.0006555**	**-.001927**	**-.000679**	**-.002139**	**-.013181**	**-.006089**
Stddev	.0007606	.0013622	.000680	.002304	.002104	.007601	.001397
%RSD	89.85550	207.8169	35.26420	339.2889	98.33192	57.66484	22.94655
#1	.0014213	.0016599	-.002193	-.001637	-.003281	-.004621	-.004646
#2	.0011340	-.000895	-.001155	.001949	-.003425	-.015784	-.007436
#3	-.000016	.001201	-.002434	-.002349	.000288	-.019138	-.006184

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000037**	**-.000976**	**-.007101**	**-.000758**	**-.000937**	**-.000230**	**-.008708**
Stddev	.000048	.000025	.011845	.000201	.000130	.000503	.007169
%RSD	129.5331	2.584445	166.8145	26.52474	13.85023	218.9416	82.32107
#1	-.000067	-.000975	.006128	-.000949	-.001074	-.000249	-.000456
#2	.000018	-.000951	-.016724	-.000777	-.000815	-.000723	-.013392
#3	-.000062	-.001001	-.010705	-.000548	-.000921	.000283	-.012277

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001583**	**-.053844**	**-.001040**	**.0007738**	**.0873953**	**.0022200**	**-.001223**
Stddev	.000481	.018750	.000285	.0004595	.0134349	.0019905	.000130
%RSD	30.37684	34.82297	27.38528	59.38817	15.37252	89.66381	10.65165
#1	-.001987	-.042619	-.000713	.0008250	.0723629	.0045027	-.001220
#2	-.001711	-.075489	-.001232	.0002908	.0915924	.0013110	-.001354
#3	-.001051	-.043423	-.001174	.0012055	.0982305	.0008462	-.001094

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2349028**	**-.002117**	**-.001143**	**-.002005**	**-.003405**	**.0038775**	**-.005166**
Stddev	.0364093	.000417	.000015	.000535	.002433	.0101655	.001011
%RSD	15.49972	19.68225	1.296860	26.67585	71.43450	262.1674	19.56314
#1	.2022252	-.001638	-.001159	-.002603	-.006214	.0150141	-.006322
#2	.2283340	-.002322	-.001141	-.001570	-.002045	-.004903	-.004452
#3	.2741494	-.002392	-.001130	-.001844	-.001957	.001522	-.004723

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCB05 Acquired: 9/24/2025 16:35:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.008066**	**-.000889**	**-.001950**
Stddev	.001936	.001424	.000165
%RSD	24.00001	160.2600	8.476726
#1	-.005852	-.001025	-.001867
#2	-.009441	-.002239	-.001843
#3	-.008904	.000599	-.002140

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5882.341**	**91336.26**	**7610.712**	**4490.262**	**7116.214**
Stddev	3.101	74.56	52.343	15.768	3.574
%RSD	.0527220	.0816322	.6877559	.3511629	.0502228
#1	5879.828	91419.10	7670.871	4488.670	7112.087
#2	5885.807	91315.15	7585.684	4475.351	7118.258
#3	5881.389	91274.53	7575.582	4506.767	7118.298

Sample Name: Q3159-01 Acquired: 9/24/2025 16:44:03 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0880604**	**-.038515**	**.3481679**	**.0031031**	**-.017137**	**198.4854**	**.9087480**
Stddev	.0005259	.002356	.0022115	.0007504	.001074	.3053	.0041768
%RSD	.5971512	6.117015	.6351881	24.18363	6.266053	.1538068	.4596200
#1	.0879720	-.041034	.3494152	.0024581	-.018218	198.5644	.9089246
#2	.0875843	-.036366	.3494740	.0029244	-.016070	198.7435	.9128336
#3	.0886248	-.038144	.3456145	.0039268	-.017124	198.1484	.9044857

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0181453**	**.0064163**	**18.26388**	**.3108705**	**.1752743**	**.6956848**	**406.5880**
Stddev	.0001202	.0003383	.06408	.0006790	.0015196	.0062141	2.6379
%RSD	.6626563	5.271964	.3508605	.2184258	.8669601	.8932382	.6487975
#1	.0181266	.0066077	18.24965	.3100895	.1768238	.7016145	404.8248
#2	.0182738	.0066155	18.33388	.3112008	.1752125	.6962191	405.3186
#3	.0180355	.0060257	18.20811	.3113212	.1737865	.6892208	409.6207

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.882422**	**77.51791**	**.3733137**	**.0062644**	**6.999652**	**.4124169**	**1.270194**
Stddev	.032018	.28240	.0018868	.0006676	.062661	.0034032	.005097
%RSD	.5443026	.3643060	.5054285	10.65638	.8951980	.8251865	.4012906
#1	5.894200	77.64176	.3746817	.0055081	6.949212	.4096712	1.264577
#2	5.906882	77.71723	.3740982	.0065134	6.979947	.4162244	1.271482
#3	5.846183	77.19474	.3711612	.0067717	7.069797	.4113549	1.274524

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.23121**	**.1513233**	**.0039198**	**.0209134**	**4.348002**	**9.501922**	**5.876070**
Stddev	.15377	.0203892	.0000539	.0009196	.039719	.102260	.030360
%RSD	.6345914	13.47390	1.376231	4.397004	.9135034	1.076199	.5166703
#1	24.09125	.1420157	.0039594	.0201463	4.387826	9.569649	5.892477
#2	24.20658	.1372490	.0038584	.0219328	4.347793	9.384292	5.841037
#3	24.39582	.1747053	.0039416	.0206612	4.308388	9.551826	5.894696

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01 Acquired: 9/24/2025 16:44:03 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5923805	.4929678	-.234531
Stddev	.0066321	.0025338	.003484
%RSD	1.119566	.5139987	1.485615
#1	.6000050	.4920257	-.232691
#2	.5879477	.4958378	-.232353
#3	.5891888	.4910401	-.238550

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6464.802	99389.52	9243.084	4931.493	6290.338
Stddev	35.102	311.48	80.496	13.441	35.463
%RSD	.5429681	.3133981	.8708833	.2725572	.5637632
#1	6443.497	99397.06	9178.304	4940.394	6269.282
#2	6445.593	99697.18	9217.747	4938.054	6270.450
#3	6505.316	99074.34	9333.200	4916.031	6331.281

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-03 Acquired: 9/24/2025 16:48:04 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0597972	-.053185	.4481534	.0020770	-.019420	261.8923
Stddev	.0056133	.003365	.0011525	.0024943	.000705	5.4756
%RSD	9.387293	6.326747	.2571690	120.0907	3.630323	2.090785
#1	.0554923	-.057010	.4469286	-.000323	-.020233	257.2913
#2	.0577533	-.051863	.4483149	.001898	-.018972	267.9485
#3	.0661461	-.050682	.4492166	.004656	-.019055	260.4371

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.094195	.0264098	.0125275	18.08059	.4676038	.3638339
Stddev	.042407	.0004684	.0007253	.40546	.0008846	.0008947
%RSD	2.024974	1.773420	5.789311	2.242490	.1891662	.2459050
#1	2.062022	.0261460	.0132356	17.75049	.4673417	.3640791
#2	2.142251	.0269505	.0117862	18.53316	.4668799	.3628422
#3	2.078313	.0261327	.0125606	17.95811	.4685897	.3645805

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7025819	594.2186	15.30974	143.0850	.7388813	.0092636
Stddev	.0025427	3.4377	.29721	3.1440	.0008426	.0016525
%RSD	.3619028	.5785325	1.941309	2.197304	.1140408	17.83823
#1	.7031975	590.9801	15.10747	140.6319	.7392159	.0081846
#2	.6997879	597.8259	15.65098	146.6292	.7379228	.0111660
#3	.7047602	593.8497	15.17077	141.9940	.7395053	.0084402

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.856752	.6029983	1.662112	55.33637	^ *****	.0081413
Stddev	.039261	.0127834	.000542	.35271	-----	.0003668
%RSD	1.017984	2.119969	.0326224	.6373921	-----	4.505775
#1	3.812068	.5949677	1.662231	54.97320	^ -----	.0085476
#2	3.885722	.6177396	1.661520	55.67759	^ -----	.0080420
#3	3.872466	.5962876	1.662585	55.35833	^ -----	.0078344

Sample Name: Q3159-03 Acquired: 9/24/2025 16:48:04 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0235537	8.327994	F 10.94074	8.291549	.6872831	1.067474
Stddev	.0013380	.182924	.06062	.041421	.0080588	.019350
%RSD	5.680855	2.196495	.5540686	.4995601	1.172565	1.812682
#1	.0236414	8.190603	10.92673	8.313339	.6965823	1.050961
#2	.0248458	8.535628	11.00714	8.317526	.6823339	1.088766
#3	.0221740	8.257750	10.88835	8.243781	.6829333	1.062696

Elem	Sr4077
Units	ppm
Avg	-.417826
Stddev	.001079
%RSD	.2582741
#1	-.417065
#2	-.417352
#3	-.419061

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6841.649	105184.9	9937.959	5254.434	6064.712
Stddev	8.489	263.3	139.780	8.742	4.211
%RSD	.1240818	.2503376	1.406522	.1663658	.0694426
#1	6847.222	105462.2	10039.57	5244.365	6067.848
#2	6831.879	105154.4	9778.55	5258.853	6059.925
#3	6845.847	104938.2	9995.76	5260.084	6066.362

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01DUP Acquired: 9/24/2025 16:52:04 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0688245	-.062466	.5115295	.0056876	-.016213	262.1193
Stddev	.0027599	.004136	.0016866	.0050580	.000900	1.6897
%RSD	4.010080	6.620713	.3297126	88.93087	5.551456	.6446439
#1	.0690708	-.065549	.5134635	.0096763	-.017218	260.7689
#2	.0659497	-.064084	.5107606	-.000002	-.015482	264.0142
#3	.0714530	-.057766	.5103644	.007388	-.015938	261.5749

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.055190	.0268998	.0130412	18.52876	.4941984	.3670972
Stddev	.021827	.0001639	.0002740	.16935	.0033791	.0007696
%RSD	1.062054	.6093511	2.101191	.9139949	.6837595	.2096374
#1	2.033398	.0270495	.0127392	18.39458	.4946863	.3679448
#2	2.077052	.0269254	.0131105	18.71904	.4906018	.3669045
#3	2.055120	.0267246	.0132739	18.47266	.4973070	.3664423

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.162917	616.0363	14.69735	145.8590	.7834245	.0170515
Stddev	.002048	2.4651	.14959	1.0806	.0003148	.0011300
%RSD	.0946738	.4001569	1.017829	.7408244	.0401888	6.627113
#1	2.160790	618.2872	14.55821	145.0198	.7835587	.0180826
#2	2.163084	616.4197	14.85557	147.0782	.7836500	.0172284
#3	2.164876	613.4019	14.67827	145.4790	.7830647	.0158434

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.983500	.6126133	1.957654	56.16221	^ *****	.0203108
Stddev	.025248	.0025068	.004343	.43092	-----	.0002117
%RSD	.6338068	.4091907	.2218651	.7672803	-----	1.042118
#1	3.956746	.6109119	1.958884	55.75435	^ -----	.0201391
#2	3.986848	.6154920	1.952829	56.11928	^ -----	.0202459
#3	4.006907	.6114360	1.961250	56.61298	^ -----	.0205473

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01DUP Acquired: 9/24/2025 16:52:04 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0796605	8.217362	F 10.33284	8.926023	2.325365	1.084544
Stddev	.0010874	.074677	.14441	.009624	.002012	.011186
%RSD	1.365011	.9087679	1.397544	.1078201	.0865209	1.031406
#1	.0793599	8.143463	10.48816	8.925531	2.323827	1.077657
#2	.0808666	8.292792	10.30771	8.935885	2.324624	1.097451
#3	.0787550	8.215831	10.20265	8.916655	2.327642	1.078525

Elem	Sr4077
Units	ppm
Avg	-.439194
Stddev	.003412
%RSD	.7768443
#1	-.443122
#2	-.437492
#3	-.436968

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6649.988	103921.0	9919.854	5181.434	5878.077
Stddev	5.420	596.0	64.609	43.143	5.037
%RSD	.0815068	.5734971	.6513144	.8326455	.0856880
#1	6654.505	104318.3	9981.884	5211.952	5872.668
#2	6651.482	104209.0	9852.942	5200.275	5882.633
#3	6643.978	103235.7	9924.735	5132.075	5878.931

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01LX5 Acquired: 9/24/2025 16:56:09 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0131318**	**-.014577**	**.0988195**	**-.002059**	**-.008255**	**62.92376**	**.4842892**
Stddev	.0008858	.000853	.0002762	.001033	.002014	.10885	.0004765
%RSD	6.745270	5.849607	.2794879	50.19053	24.39168	.1729929	.0983887
#1	.0124365	-.013664	.0985324	-.000878	-.009323	62.92935	.4843761
#2	.0141291	-.015353	.0990832	-.002504	-.009509	62.81222	.4837752
#3	.0128298	-.014715	.0988429	-.002796	-.005932	63.02971	.4847163

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0067526**	**.0007020**	**4.421292**	**.1198402**	**.0775045**	**.1924950**	**147.4407**
Stddev	.0000316	.0001102	.026007	.0003200	.0002899	.0012142	1.5121
%RSD	.4682993	15.69182	.5882316	.2670589	.3740623	.6307414	1.025544
#1	.0067417	.0008091	4.418717	.1201108	.0778386	.1937150	145.7336
#2	.0067278	.0007081	4.396668	.1194869	.0773549	.1924831	147.9771
#3	.0067882	.0005890	4.448492	.1199229	.0773198	.1912868	148.6115

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.723911**	**35.22962**	**.1614067**	**.0025412**	**1.084999**	**.1472404**	**.4126126**
Stddev	.009741	.12874	.0007854	.0008207	.008924	.0056829	.0009573
%RSD	.2615685	.3654376	.4865693	32.29791	.8225228	3.859585	.2320109
#1	3.717976	35.09006	.1623032	.0015937	1.077717	.1418648	.4133258
#2	3.718605	35.25502	.1610770	.0029983	1.082327	.1466689	.4129873
#3	3.735153	35.34376	.1608400	.0030316	1.094955	.1531874	.4115245

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.33616**	**.0814569**	**.0004749**	**.0031218**	**2.023212**	**3.116210**	**1.783651**
Stddev	.15468	.0057397	.0003517	.0006443	.004294	.015644	.001790
%RSD	1.159845	7.046345	74.05727	20.63779	.2122409	.5020268	.1003579
#1	13.23609	.0749546	.0003824	.0027337	2.022647	3.132838	1.783338
#2	13.25808	.0835971	.0008636	.0027662	2.019228	3.114009	1.782038
#3	13.51432	.0858191	.0001787	.0038655	2.027761	3.101783	1.785577

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01LX5 Acquired: 9/24/2025 16:56:09 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1323814	.2472507	-.106140
Stddev	.0025123	.0041251	.001241
%RSD	1.897792	1.668394	1.169467
#1	.1350730	.2489317	-.104936
#2	.1300985	.2425505	-.106069
#3	.1319728	.2502699	-.107416

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5756.244	88314.93	8260.793	4484.551	6219.393
Stddev	11.128	319.55	42.030	13.258	14.949
%RSD	.1933246	.3618348	.5087862	.2956361	.2403630
#1	5743.431	88622.84	8216.331	4498.981	6202.195
#2	5761.802	88337.07	8299.872	4481.764	6229.274
#3	5763.498	87984.88	8266.175	4472.908	6226.711

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01MS Acquired: 9/24/2025 17:00:14 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6767669**	**1.547921**	**1.344334**	**1.478815**	**.2910010**	**293.7090**
Stddev	.0034624	.047131	.002057	.004865	.0010296	2.2117
%RSD	.5116087	3.044808	.1529888	.3289937	.3538231	.7530114
#1	.6727878	1.521980	1.341981	1.479982	.2902466	295.5478
#2	.6784196	1.519459	1.345790	1.473473	.2921740	291.2548
#3	.6790932	1.602324	1.345230	1.482991	.2905823	294.3244

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.121158**	**.1818438**	**.1999254**	**19.19663**	**.8286631**	**.5689262**
Stddev	.004002	.0009449	.0004722	.01197	.0026892	.0004265
%RSD	.1886636	.5196376	.2361944	.0623383	.3245181	.0749747
#1	2.122649	.1816371	.1999586	19.21042	.8277631	.5684389
#2	2.124199	.1810194	.1994374	19.18895	.8316869	.5692323
#3	2.116624	.1828750	.2003801	19.19052	.8265394	.5691072

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9608083**	**637.8298**	**17.22531**	**152.2305**	**1.239413**	**.0710969**
Stddev	.0032159	4.9553	.01406	.5541	.001051	.0013950
%RSD	.3347037	.7769057	.0815982	.3639785	.0848294	1.962187
#1	.9588557	636.3530	17.23720	152.0686	1.239082	.0704066
#2	.9590493	643.3557	17.22893	152.8476	1.238568	.0727025
#3	.9645200	633.7807	17.20980	151.7755	1.240591	.0701815

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.634564**	**.8804968**	**1.960984**	**70.20783**	**^ *****	**.3260147**
Stddev	.056567	.0024220	.000255	.53408	-----	.0003947
%RSD	.8526101	.2750662	.0129808	.7607169	-----	.1210673
#1	6.645448	.8830625	1.961274	70.35983	^ -----	.3258469
#2	6.684898	.8782502	1.960883	70.64943	^ -----	.3264656
#3	6.573345	.8801778	1.960796	69.61422	^ -----	.3257317

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01MS Acquired: 9/24/2025 17:00:14 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6499318	8.989503	F 14.22620	F 14.79401	.7784180	1.288416
Stddev	.0020992	.020708	.10171	.08143	.0059320	.005952
%RSD	.3229832	.2303561	.7149808	.5504220	.7620589	.4619840
#1	.6486590	8.999465	14.28332	14.80217	.7769135	1.286502
#2	.6487817	9.003348	14.10877	14.70880	.7733832	1.295090
#3	.6523546	8.965697	14.28652	14.87105	.7849574	1.283657

Elem	Sr4077
Units	ppm
Avg	-.301187
Stddev	.004158
%RSD	1.380634
#1	-.299404
#2	-.305939
#3	-.298217

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6712.751	100903.5	9743.851	5043.562	5932.887
Stddev	14.796	366.2	21.947	15.556	11.943
%RSD	.2204194	.3628762	.2252393	.3084284	.2013082
#1	6728.202	100872.3	9758.729	5030.563	5946.579
#2	6698.710	100553.9	9754.178	5039.325	5927.470
#3	6711.340	101284.2	9718.645	5060.797	5924.612

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01MSD Acquired: 9/24/2025 17:04:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6656942**	**1.551803**	**1.346343**	**1.452392**	**.2823188**	**287.0732**
Stddev	.0021962	.052773	.001039	.011115	.0016440	.9288
%RSD	.3299171	3.400732	.0772038	.7652738	.5823178	.3235266
#1	.6680915	1.554864	1.346789	1.463757	.2813869	286.0868
#2	.6652117	1.602978	1.347084	1.441546	.2813525	287.2017
#3	.6637792	1.497566	1.345154	1.451874	.2842170	287.9309

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.256689**	**.1803950**	**.2015201**	**19.59726**	**.8214589**	**.5461477**
Stddev	.000880	.0004389	.0008367	.03125	.0013894	.0007813
%RSD	.0389768	.2432702	.4151815	.1594838	.1691344	.1430503
#1	2.257688	.1806987	.2011882	19.58253	.8207542	.5469280
#2	2.256347	.1805944	.2009003	19.63316	.8230595	.5453655
#3	2.256032	.1798918	.2024718	19.57610	.8205632	.5461497

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9639010**	**615.6564**	**14.99697**	**154.3433**	**1.264101**	**.0644771**
Stddev	.0041882	8.1889	.00931	.0963	.002078	.0035059
%RSD	.4345052	1.330117	.0620911	.0624131	.1643538	5.437356
#1	.9639287	621.1845	15.00478	154.4118	1.266048	.0664356
#2	.9596990	619.5360	14.98667	154.3848	1.264342	.0665661
#3	.9680753	606.2487	14.99947	154.2331	1.261913	.0604296

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.516982**	**.8496924**	**1.939912**	**69.48470**	**^ *****	**.3197128**
Stddev	.014101	.0081427	.004531	.15832	-----	.0010706
%RSD	.2163736	.9583153	.2335419	.2278525	-----	.3348503
#1	6.520782	.8516552	1.945134	69.65214	^ -----	.3208748
#2	6.528794	.8566743	1.937574	69.46455	^ -----	.3187665
#3	6.501371	.8407477	1.937028	69.33742	^ -----	.3194971

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01MSD Acquired: 9/24/2025 17:04:29 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6478670	8.971451	F 15.37869	F 14.74476	.7210492	1.283956
Stddev	.0026575	.004424	.31026	.09277	.0071927	.002103
%RSD	.4101964	.0493140	2.017435	.6291644	.9975361	.1637604
#1	.6508772	8.972683	15.66009	14.83345	.7279487	1.283969
#2	.6468783	8.966541	15.43000	14.75245	.7216038	1.281847
#3	.6458455	8.975129	15.04598	14.64839	.7135953	1.286052

Elem	Sr4077
Units	ppm
Avg	-.277540
Stddev	.007786
%RSD	2.805344
#1	-.282731
#2	-.281301
#3	-.268587

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6768.592	103547.0	9776.145	5178.719	5917.686
Stddev	11.308	325.7	35.169	11.891	12.008
%RSD	.1670660	.3145873	.3597445	.2296109	.2029254
#1	6764.647	103593.9	9797.577	5168.757	5911.249
#2	6759.785	103200.3	9735.556	5175.516	5910.268
#3	6781.345	103846.7	9795.302	5191.883	5931.541

Sample Name: Q3167-01 Acquired: 9/24/2025 17:12:37 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1274556**	**-.040560**	**15.51060**	**.0118743**	**.0013593**	**91.36310**
Stddev	.0019372	.005706	.01110	.0022205	.0007276	.21664
%RSD	1.519879	14.06769	.0715740	18.70011	53.52624	.2371208
#1	.1285495	-.046275	15.52331	.0104061	.0020526	91.40618
#2	.1285984	-.040541	15.50277	.0107879	.0006017	91.55496
#3	.1252189	-.034863	15.50573	.0144288	.0014236	91.12815

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.710314**	**.0120691**	**.0227255**	**140.1673**	**.1849852**	**.1240672**
Stddev	.002770	.0001632	.0001439	.3493	.0009473	.0003569
%RSD	.0746587	1.352315	.6333727	.2491868	.5120720	.2877105
#1	3.713462	.0121447	.0227866	140.2355	.1843572	.1240842
#2	3.708248	.0121808	.0228287	140.4775	.1845237	.1237021
#3	3.709232	.0118818	.0225610	139.7890	.1860748	.1244154

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.389613**	**371.1646**	**3.328539**	**35.96965**	**.3466844**	**.0117267**
Stddev	.002028	.9636	.005812	.09426	.0007061	.0005685
%RSD	.0598209	.2596253	.1746025	.2620434	.2036764	4.847760
#1	3.388555	371.9813	3.335217	36.05102	.3459036	.0122387
#2	3.388333	370.1018	3.325776	35.99156	.3472782	.0111150
#3	3.391951	371.4109	3.324624	35.86637	.3468714	.0118265

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.86139**	**.4779330**	**9.042677**	**7.641165**	**.1829216**	**.0160627**
Stddev	.02320	.0004333	.011286	.030604	.0068480	.0007475
%RSD	.1462592	.0906660	.1248099	.4005202	3.743659	4.653820
#1	15.88081	.4782944	9.042561	7.624515	.1894122	.0167813
#2	15.83571	.4774526	9.054022	7.622496	.1757650	.0152893
#3	15.86766	.4780520	9.031450	7.676485	.1835875	.0161175

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3167-01 Acquired: 9/24/2025 17:12:37 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.670971	4.700124	8.114236	F 49.46209	F 14.44871	.1394983
Stddev	.012820	.012435	.170836	.28856	.10186	.0021120
%RSD	.3492158	.2645601	2.105384	.5833904	.7050055	1.514006
#1	3.684802	4.709284	8.309433	49.66978	14.55374	.1387768
#2	3.659487	4.705119	8.041305	49.13261	14.35034	.1378415
#3	3.668624	4.685968	7.991971	49.58389	14.44206	.1418765

Elem	Sr4077
Units	ppm
Avg	.0534106
Stddev	.0011856
%RSD	2.219782
#1	.0543418
#2	.0538141
#3	.0520760

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6241.166	95278.03	9070.102	4775.092	6325.717
Stddev	7.091	84.68	34.748	9.403	8.173
%RSD	.1136164	.0888813	.3831000	.1969274	.1291959
#1	6235.661	95227.48	9068.768	4772.316	6317.363
#2	6238.668	95230.81	9036.040	4767.390	6326.094
#3	6249.167	95375.80	9105.497	4785.571	6333.695

Sample Name: Q3159-01A Acquired: 9/24/2025 17:25:03 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6622490**	**1.517427**	**1.328879**	**1.444794**	**.2909694**	**288.5401**
Stddev	.0010967	.010365	.004647	.001570	.0012230	1.5452
%RSD	.1655972	.6830602	.3496797	.1086697	.4203236	.5355128
#1	.6610621	1.528009	1.327198	1.443200	.2896100	287.5448
#2	.6624601	1.507294	1.334133	1.444842	.2919804	287.7553
#3	.6632248	1.516977	1.325307	1.446339	.2913178	290.3201

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.168641**	**.1804433**	**.2003411**	**19.08698**	**.8079145**	**.5511052**
Stddev	.006481	.0012327	.0012016	.03865	.0059605	.0005686
%RSD	.2988488	.6831299	.5997541	.2025100	.7377587	.1031801
#1	2.164389	.1817867	.2000131	19.04804	.8038597	.5505039
#2	2.176100	.1793642	.1993376	19.08756	.8051257	.5511772
#3	2.165434	.1801791	.2016726	19.12534	.8147581	.5516343

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9654588**	**595.4467**	**15.87514**	**151.1718**	**1.236946**	**.0603161**
Stddev	.0050427	6.8692	.03921	.3384	.002351	.0032509
%RSD	.5223068	1.153622	.2470060	.2238523	.1900897	5.389796
#1	.9649935	591.7677	15.85875	150.9398	1.234231	.0598853
#2	.9606649	603.3718	15.91989	151.0155	1.238320	.0637609
#3	.9707179	591.2006	15.84678	151.5601	1.238287	.0573020

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.487815**	**.8500811**	**1.898780**	**67.60664**	**^ *****	**.3190999**
Stddev	.087693	.0047382	.001225	.60713	-----	.0005424
%RSD	1.351651	.5573844	.0645347	.8980277	-----	.1699773
#1	6.388405	.8460101	1.898279	66.93003	^ -----	.3188854
#2	6.554199	.8552822	1.897885	68.10385	^ -----	.3197167
#3	6.520840	.8489511	1.900177	67.78605	^ -----	.3186976

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-01A Acquired: 9/24/2025 17:25:03 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6437741	9.118631	F 24.51179	F 14.57592	.7504178	1.248227
Stddev	.0035496	.031752	.21372	.07419	.0135545	.005313
%RSD	.5513778	.3482101	.8718898	.5090228	1.806254	.4256685
#1	.6407544	9.102819	24.34691	14.57320	.7488995	1.245759
#2	.6428837	9.155184	24.43521	14.50312	.7376864	1.254326
#3	.6476842	9.097889	24.75324	14.65144	.7646675	1.244598

Elem	Sr4077
Units	ppm
Avg	-.262126
Stddev	.005649
%RSD	2.155159
#1	-.258789
#2	-.268648
#3	-.258940

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6788.246	105566.4	9671.750	5252.905	5969.306
Stddev	17.011	841.9	33.204	31.099	11.855
%RSD	.2505906	.7975026	.3433090	.5920398	.1986037
#1	6792.532	106474.2	9662.423	5284.583	5974.396
#2	6769.502	105413.5	9708.620	5251.715	5955.756
#3	6802.704	104811.4	9644.207	5222.418	5977.766

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169811BS Acquired: 9/24/2025 17:29:06 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7621618**	**1.742775**	**.9215972**	**1.964891**	**.8042953**	**1.917843**
Stddev	.0073296	.008809	.0092888	.016837	.0071632	.004611
%RSD	.9616900	.5054420	1.007905	.8568793	.8906186	.2404330
#1	.7589012	1.748060	.9194517	1.958409	.7998372	1.922851
#2	.7570283	1.747659	.9135689	1.952258	.8004907	1.916906
#3	.7705560	1.732606	.9317711	1.984005	.8125581	1.913772

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1741555**	**.2070170**	**.1856808**	**.9628928**	**.3974293**	**.1870584**
Stddev	.0012263	.0006464	.0017789	.0143520	.0013936	.0018148
%RSD	.7041623	.3122360	.9580265	1.490503	.3506640	.9701505
#1	.1727796	.2067963	.1850900	.9689094	.3972996	.1864038
#2	.1745534	.2077449	.1842725	.9465118	.3961051	.1856617
#3	.1751335	.2065099	.1876799	.9732572	.3988833	.1891096

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2955591**	**2.795496**	**.1889381**	**1.891828**	**.4715510**	**.0739800**
Stddev	.0029513	.018452	.0002582	.025246	.0043565	.0000717
%RSD	.9985438	.6600725	.1366357	1.334497	.9238563	.0969855
#1	.2942559	2.784871	.1892258	1.913563	.4707275	.0740237
#2	.2934838	2.784815	.1887265	1.897785	.4676651	.0738971
#3	.2989377	2.816803	.1888621	1.864135	.4762604	.0740191

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.844898**	**.2873292**	**.1940268**	**9.314928**	**.2904326**	**.4118048**
Stddev	.027287	.0030515	.0005837	.075143	.0017641	.0037157
%RSD	.9591532	1.062037	.3008124	.8066966	.6073853	.9023027
#1	2.838744	.2908477	.1934513	9.290686	.2909158	.4097285
#2	2.821212	.2854058	.1940106	9.254899	.2919047	.4095913
#3	2.874736	.2857340	.1946183	9.399200	.2884773	.4160946

Sample Name: PB169811BS Acquired: 9/24/2025 17:29:06 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6677839**	**.1844898**	**.8258382**	**5.915905**	F **-.008507**	**.1808976**
Stddev	.0068265	.0019759	.0016867	.057534	.002129	.0014298
%RSD	1.022270	1.070987	.2042453	.9725314	25.02821	.7903876
#1	.6638457	.1833290	.8273059	5.889471	-.006265	.1819734
#2	.6638395	.1833691	.8239955	5.876339	-.008753	.1792751
#3	.6756665	.1867712	.8262131	5.981905	-.010502	.1814442

Elem	Sr4077
Units	ppm
Avg	**.1818827**
Stddev	.0005081
%RSD	.2793549
#1	.1814242
#2	.1824290
#3	.1817951

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5856.836**	**90242.90**	**7688.624**	**4517.095**	**6851.559**
Stddev	38.508	381.71	29.768	20.606	52.509
%RSD	.6574946	.4229833	.3871695	.4561833	.7663788
#1	5878.569	90408.61	7706.193	4520.396	6869.046
#2	5879.565	90513.76	7654.254	4535.851	6893.092
#3	5812.374	89806.34	7705.426	4495.037	6792.537

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV06 Acquired: 9/24/2025 17:33:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.040660**	**4.828278**	**4.886130**	**5.115218**	**5.168196**	**9.999090**	**9.651284**
Stddev	.019280	.063343	.008107	.024760	.012235	.018851	.203645
%RSD	.3824842	1.311923	.1659220	.4840494	.2367278	.1885299	2.110026
#1	5.051531	4.854558	4.895432	5.115605	5.181123	9.978943	9.436510
#2	5.052050	4.874252	4.880567	5.139783	5.166669	10.01630	9.841588
#3	5.018400	4.756025	4.882390	5.090267	5.156797	10.00202	9.675753

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2647652**	**2.458528**	**24.86199**	**1.036538**	**2.450526**	**1.243093**	**4.904224**
Stddev	.0019534	.002648	.06300	.004765	.004108	.003590	.045284
%RSD	.7377726	.1077212	.2533829	.4596902	.1676361	.2887793	.9233682
#1	.2648214	2.461578	24.78969	1.031106	2.454857	1.246658	4.853888
#2	.2666899	2.456807	24.90511	1.038497	2.450036	1.243143	4.941654
#3	.2627844	2.457200	24.89116	1.040012	2.446684	1.239479	4.917130

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.434922**	**24.89436**	**2.456773**	**1.268199**	**24.00062**	**2.511898**	**2.705125**
Stddev	.011002	.08944	.004128	.003512	.20643	.005742	.016998
%RSD	.4518315	.3592756	.1680377	.2769003	.8601136	.2286009	.6283613
#1	2.423111	24.83685	2.461501	1.264590	23.84807	2.506135	2.686286
#2	2.444879	24.99741	2.453885	1.268403	23.91827	2.511940	2.719314
#3	2.436777	24.84883	2.454932	1.271604	24.23552	2.517619	2.709775

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.23446**	**5.142147**	**5.285332**	**5.033472**	**4.903756**	**4.824261**	**5.419022**
Stddev	.31559	.033841	.014313	.011876	.010654	.040431	.026386
%RSD	1.302220	.6581198	.2708056	.2359361	.2172703	.8380713	.4869206
#1	23.95188	5.149466	5.298291	5.046605	4.892708	4.789444	5.426781
#2	24.17648	5.171730	5.287734	5.030325	4.913967	4.814735	5.440659
#3	24.57502	5.105245	5.269969	5.023487	4.904594	4.868604	5.389626

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV06 Acquired: 9/24/2025 17:33:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.774999**	**4.596733**	**4.825527**
Stddev	.035134	.024818	.042694
%RSD	.7357962	.5399020	.8847474
#1	4.785329	4.568196	4.816959
#2	4.803811	4.613274	4.787767
#3	4.735858	4.608730	4.871855

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5589.299**	**86042.47**	**7422.722**	**4319.718**	**6294.988**
Stddev	24.678	612.60	55.549	42.397	24.498
%RSD	.4415243	.7119690	.7483611	.9814716	.3891672
#1	5563.076	86748.50	7445.694	4368.656	6268.256
#2	5592.752	85651.76	7359.372	4296.405	6300.339
#3	5612.068	85727.17	7463.100	4294.094	6316.367

Sample Name: CCB06 Acquired: 9/24/2025 17:37:19 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000120**	**.0002724**	**-.002465**	**.0001664**	**-.000147**	**-.005256**	**-.003407**
Stddev	.002609	.0024810	.000301	.0023123	.001101	.005453	.001002
%RSD	2179.554	910.7402	12.19408	1390.063	750.7345	103.7566	29.40104
#1	.002645	.0018782	-.002422	.0020864	.001102	-.002903	-.002499
#2	-.000465	.0015243	-.002785	.0008132	-.000561	-.011490	-.004481
#3	-.002538	-.002585	-.002189	-.002401	-.000980	-.001374	-.003241

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000072**	**-.000858**	**.0308688**	**-.000847**	**-.000909**	**-.000392**	**.0012510**
Stddev	.000067	.000026	.0084790	.000415	.000142	.000620	.0081465
%RSD	93.47006	3.063746	27.46776	49.00040	15.58649	158.2695	651.1990
#1	-.000070	-.000888	.0348751	-.000378	-.000983	-.000937	.0105185
#2	-.000005	-.000846	.0366023	-.000996	-.000746	-.000522	-.001986
#3	-.000140	-.000840	.0211291	-.001167	-.000999	.000283	-.004779

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000996**	**-.053573**	**-.000828**	**.0008013**	**.0730721**	**.0023749**	**.0038829**
Stddev	.000745	.016339	.000293	.0006342	.0076691	.0014052	.0001542
%RSD	74.85261	30.49885	35.45671	79.14543	10.49521	59.17051	3.971278
#1	-.000758	-.034933	-.000782	.0011342	.0642566	.0013417	.0038394
#2	-.001831	-.065419	-.001141	.0011997	.0767514	.0039750	.0037552
#3	-.000398	-.060367	-.000560	.0000700	.0782082	.0018079	.0040542

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2110575**	**-.002671**	**-.001302**	**-.000861**	**-.002637**	**.0180534**	**-.006023**
Stddev	.0713046	.000558	.000201	.000797	.000319	.0118183	.000245
%RSD	33.78444	20.88700	15.40811	92.48560	12.08165	65.46322	4.071089
#1	.1299282	-.002683	-.001312	-.000982	-.002528	.0257771	-.005829
#2	.2394619	-.003222	-.001497	-.001591	-.002995	.0239349	-.006299
#3	.2637824	-.002107	-.001096	-.000011	-.002387	.0044483	-.005941

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCB06 Acquired: 9/24/2025 17:37:19 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.001594**	**-.001919**	**-.001793**
Stddev	.000544	.001783	.000091
%RSD	34.09655	92.92278	5.089603
#1	-.001491	-.003863	-.001691
#2	-.002182	-.000360	-.001819
#3	-.001110	-.001533	-.001867

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5689.078**	**87255.90**	**7469.291**	**4408.823**	**6716.002**
Stddev	13.762	302.00	40.322	21.125	21.400
%RSD	.2418992	.3461113	.5398391	.4791476	.3186410
#1	5696.121	86909.93	7422.745	4387.071	6735.551
#2	5697.894	87391.07	7491.553	4410.140	6719.316
#3	5673.221	87466.71	7493.574	4429.259	6693.138

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169811BL Acquired: 9/24/2025 17:41:38 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000327**	**-.001739**	**-.003074**	**.0007534**	**-.000163**	**-.000698**	**-.003675**
Stddev	.001836	.001848	.000464	.0006706	.001101	.011472	.001189
%RSD	562.1989	106.2435	15.08755	89.00771	674.5874	1643.931	32.35711
#1	.001777	-.002677	-.003199	.0004356	-.001253	.012368	-.004858
#2	-.001611	.000389	-.003462	.0015237	.000948	-.005344	-.002480
#3	-.001146	-.002930	-.002560	.0003007	-.000184	-.009117	-.003686

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000083**	**-.001054**	**-.011800**	**-.000647**	**-.001056**	**.0000828**	**-.011967**
Stddev	.000083	.000116	.001787	.000129	.000187	.0000832	.005388
%RSD	99.56638	11.03511	15.13987	19.87620	17.69699	100.4908	45.02158
#1	-.000056	-.001124	-.009760	-.000500	-.001025	.0001483	-.010225
#2	-.000017	-.000920	-.013087	-.000739	-.001256	-.000011	-.007666
#3	-.000176	-.001119	-.012554	-.000701	-.000887	.000111	-.018011

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001956**	**-.033107**	**-.001190**	**.0006545**	**.0549467**	**.0005794**	**-.001673**
Stddev	.000318	.019582	.000116	.0001770	.0038180	.0032711	.000225
%RSD	16.24204	59.14763	9.711811	27.04168	6.948590	564.6018	13.45482
#1	-.002000	-.012931	-.001316	.0007822	.0526115	-.000901	-.001866
#2	-.001619	-.052036	-.001089	.0007288	.0528759	-.001689	-.001727
#3	-.002250	-.034354	-.001166	.0004525	.0593528	.004329	-.001426

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1152785**	**-.005346**	**-.001820**	**-.001635**	**-.001365**	**-.004514**	**-.007279**
Stddev	.0106363	.000122	.000141	.000323	.002136	.007652	.000847
%RSD	9.226640	2.280583	7.750520	19.78295	156.5060	169.5051	11.63996
#1	.1041754	-.005301	-.001721	-.001691	-.003480	.003455	-.006373
#2	.1253767	-.005253	-.001981	-.001927	.000791	-.011803	-.007413
#3	.1162836	-.005484	-.001757	-.001287	-.001404	-.005195	-.008051

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169811BL Acquired: 9/24/2025 17:41:38 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077		
Units	ppm	ppm	ppm		
Avg	**-.008303**	**-.004307**	**-.002009**		
Stddev	.001602	.003009	.000090		
%RSD	19.29651	69.84942	4.461618		
#1	-.007494	-.007375	-.001979		
#2	-.007267	-.004186	-.002110		
#3	-.010148	-.001361	-.001938		
Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5665.663**	**88802.02**	**7493.856**	**4460.050**	**6689.147**
Stddev	8.461	288.82	84.825	22.323	9.972
%RSD	.1493353	.3252366	1.131932	.5004991	.1490797
#1	5674.734	89067.90	7591.760	4485.239	6700.356
#2	5657.985	88843.43	7442.365	4442.721	6681.261
#3	5664.270	88494.74	7447.443	4452.189	6685.823

Sample Name: Q3159-02 Acquired: 9/24/2025 17:45:58 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000329**	**-.001478**	**.0095066**	**.0020788**	**-.001049**	**.1652997**	**.2655122**
Stddev	.001475	.000941	.0016008	.0027742	.000758	.0029296	.0015803
%RSD	448.8938	63.64545	16.83926	133.4528	72.25860	1.772323	.5951763
#1	-.001940	-.002466	.0076926	-.000246	-.000623	.1623162	.2636963
#2	.000954	-.001377	.0107215	.001332	-.000600	.1681723	.2662651
#3	.000000	-.000592	.0101056	.005150	-.001925	.1654105	.2665753

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000672**	**-.000689**	**8.420515**	**-.000003**	**-.000179**	**.0140131**	**.0381486**
Stddev	.0000602	.000044	.057861	.000396	.000057	.0005566	.0044347
%RSD	89.46046	6.398797	.6871409	13751.06	31.85767	3.971888	11.62486
#1	.0001292	-.000649	8.365427	-.000291	-.000157	.0133852	.0342935
#2	.0000090	-.000736	8.415321	-.000166	-.000243	.0144459	.0429951
#3	.0000636	-.000681	8.480798	.000449	-.000135	.0142081	.0371572

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2039146**	**1.937686**	**.0050957**	**.0008185**	**292.4189**	**.0025836**	**.1172864**
Stddev	.0030599	.060541	.0001831	.0000842	3.2542	.0019513	.0010279
%RSD	1.500591	3.124414	3.593186	10.28818	1.112857	75.52695	.8763654
#1	.2009432	1.872053	.0048867	.0009028	288.7327	.0005987	.1184730
#2	.2037447	1.949657	.0052277	.0008184	293.6305	.0044995	.1167126
#3	.2070559	1.991348	.0051728	.0007344	294.8935	.0026525	.1166735

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.148009**	**.0391874**	**-.000705**	**-.005803**	**.0006103**	**.6051516**	**.0143586**
Stddev	.027325	.0014509	.000338	.000156	.0008634	.0122185	.0012670
%RSD	2.380177	3.702511	47.91828	2.692529	141.4794	2.019081	8.823858
#1	1.117316	.0395505	-.001062	-.005805	.0014414	.5914997	.0153081
#2	1.157021	.0375894	-.000660	-.005958	.0006716	.6088936	.0148478
#3	1.169688	.0404223	-.000392	-.005646	-.000282	.6150616	.0129200

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-02 Acquired: 9/24/2025 17:45:58 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2529902	-.009513	.0541776
Stddev	.0020064	.001590	.0003737
%RSD	.7930947	16.71274	.6897669
#1	.2529632	-.007912	.0540155
#2	.2550100	-.009535	.0539123
#3	.2509974	-.011091	.0546050

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5841.050	89272.87	7812.769	4473.742	6507.096
Stddev	4.068	58.37	39.437	10.628	2.523
%RSD	.0696401	.0653787	.5047776	.2375701	.0387711
#1	5841.432	89312.47	7798.993	4461.590	6509.894
#2	5836.804	89205.84	7857.246	4481.300	6504.995
#3	5844.913	89300.29	7782.068	4478.337	6506.399

Sample Name: Q3159-04 Acquired: 9/24/2025 17:50:23 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003762**	**-.001098**	**.0022119**	**.0029325**	**.0001702**	**.1270217**	**.2395462**
Stddev	.001288	.001369	.0012225	.0036380	.0004289	.0110319	.0026567
%RSD	34.24287	124.6669	55.26970	124.0585	252.0057	8.685039	1.109072
#1	-.003895	-.001532	.0026406	-.000913	.0002185	.1173651	.2402209
#2	-.002413	.000435	.0008328	.003390	-.000281	.1390448	.2418006
#3	-.004980	-.002197	.0031624	.006320	.000573	.1246553	.2366172

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001668**	**-.000671**	**6.863545**	**.0002815**	**-.000594**	**.0037642**	**.0124128**
Stddev	.0000893	.000079	.024217	.0004038	.000158	.0004306	.0035549
%RSD	53.50160	11.84765	.3528425	143.4676	26.56359	11.43927	28.63882
#1	.0002012	-.000654	6.881392	-.000115	-.000511	.0032982	.0088604
#2	.0002338	-.000601	6.873267	.000266	-.000494	.0038473	.0124078
#3	.0000655	-.000758	6.835978	.000693	-.000775	.0041472	.0159702

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1658850**	**3.725571**	**.0037766**	**.0007760**	**290.2428**	**.0046003**	**.0616864**
Stddev	.0005502	.039186	.0004367	.0004261	5.8087	.0023947	.0003377
%RSD	.3316994	1.051821	11.56281	54.90697	2.001333	52.05529	.5473820
#1	.1664114	3.764366	.0033477	.0002842	284.6564	.0026617	.0618837
#2	.1659299	3.686005	.0037616	.0010328	296.2509	.0072772	.0612965
#3	.1653137	3.726342	.0042206	.0010111	289.8211	.0038619	.0618790

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.893672**	**.0305679**	**-.000875**	**-.003784**	**-.000926**	**.8117874**	**.0137721**
Stddev	.015038	.0009340	.000116	.000619	.001822	.0123446	.0013976
%RSD	.7941438	3.055400	13.27312	16.35172	196.7596	1.520669	10.14777
#1	1.892942	.0309758	-.000813	-.003072	.000548	.7985803	.0153779
#2	1.879011	.0312284	-.001010	-.004190	-.002963	.8230352	.0131071
#3	1.909062	.0294993	-.000804	-.004089	-.000363	.8137469	.0128311

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3159-04 Acquired: 9/24/2025 17:50:23 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2316610	-.010987	.0330278
Stddev	.0009611	.003354	.0001677
%RSD	.4148834	30.52781	.5078428
#1	.2325899	-.011321	.0330557
#2	.2306706	-.007478	.0331799
#3	.2317224	-.014161	.0328480

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5706.961	86327.34	7753.900	4354.608	6345.937
Stddev	19.367	201.93	72.744	18.993	26.463
%RSD	.3393514	.2339069	.9381540	.4361566	.4170064
#1	5686.952	86548.83	7692.044	4356.170	6315.618
#2	5708.315	86279.68	7735.613	4372.771	6357.800
#3	5725.615	86153.51	7834.042	4334.882	6364.393

Sample Name: Q3167-02 Acquired: 9/24/2025 17:54:48 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004343**	**-.001988**	**1.215183**	**.0002156**	**-.000055**	**.0768231**	**.2486504**
Stddev	.002530	.001136	.001704	.0020633	.002802	.0057738	.0017151
%RSD	58.25128	57.12860	.1402321	956.8379	5076.851	7.515672	.6897565
#1	-.002023	-.003238	1.216817	.0025981	.001889	.0707922	.2496672
#2	-.003965	-.001706	1.215315	-.000980	-.003267	.0822998	.2496138
#3	-.007040	-.001019	1.213416	-.000971	.001213	.0773773	.2466702

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000136**	**.0035978**	**25.37493**	**.0005224**	**.0072094**	**.2077606**	**.0856455**
Stddev	.000008	.0000871	.03262	.0001533	.0000955	.0008620	.0043747
%RSD	5.654668	2.419798	.1285411	29.34070	1.324824	.4149164	5.107953
#1	-.000139	.0035044	25.38462	.0005086	.0070993	.2078374	.0811903
#2	-.000128	.0036768	25.40160	.0003765	.0072698	.2085817	.0858113
#3	-.000142	.0036122	25.33856	.0006821	.0072591	.2068628	.0899350

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6998097**	**1.444681**	**.0183599**	**.0006984**	**360.0427**	**.0018541**	**1.485319**
Stddev	.0030005	.031810	.0003321	.0002265	1.6054	.0017705	.002848
%RSD	.4287542	2.201874	1.808602	32.42608	.4458973	95.49298	.1917277
#1	.7023416	1.467596	.0185520	.0009599	361.7804	.0003596	1.488534
#2	.7005917	1.458085	.0179765	.0005667	358.6147	.0013931	1.484312
#3	.6964956	1.408363	.0185512	.0005687	359.7330	.0038094	1.483112

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.376901**	**.0143680**	**-.001426**	**-.005501**	**-.002321**	**.9514925**	**.0045253**
Stddev	.004309	.0006167	.000337	.000711	.000308	.0166311	.0015282
%RSD	.3129317	4.292242	23.64805	12.92795	13.28851	1.747897	33.77075
#1	1.380376	.0149608	-.001203	-.005113	-.002148	.9336805	.0027986
#2	1.378246	.0144132	-.001260	-.005069	-.002138	.9541820	.0057038
#3	1.372079	.0137299	-.001813	-.006322	-.002677	.9666149	.0050736

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3167-02 Acquired: 9/24/2025 17:54:48 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**1.383512**	**-.008406**	**.0808430**
Stddev	.007243	.001719	.0003456
%RSD	.5234954	20.45047	.4274678
#1	1.384473	-.008006	.0810459
#2	1.390226	-.006922	.0810392
#3	1.375836	-.010289	.0804440

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5717.237**	**87473.62**	**7690.368**	**4357.903**	**6400.752**
Stddev	19.626	262.34	27.813	23.472	24.523
%RSD	.3432758	.2999066	.3616539	.5386185	.3831306
#1	5703.075	87264.20	7718.361	4338.031	6376.576
#2	5708.996	87767.88	7662.740	4383.801	6400.072
#3	5739.639	87388.78	7690.002	4351.877	6425.608

Sample Name: Q3167-02LX5 Acquired: 9/24/2025 18:03:32 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002957**	**-.001357**	**.2473295**	**-.000814**	**-.003103**	**.0159092**	**.0439492**
Stddev	.003624	.000330	.0009456	.002258	.001364	.0030271	.0013734
%RSD	122.5325	24.35253	.3823250	277.4451	43.96052	19.02740	3.124850
#1	-.005319	-.001184	.2481418	-.003395	-.004619	.0182390	.0455347
#2	.001215	-.001149	.2475552	.000160	-.001976	.0124877	.0431834
#3	-.004767	-.001738	.2462914	.000794	-.002714	.0170010	.0431295

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000065**	**.0000131**	**5.272989**	**-.000507**	**.0007210**	**.0424226**	**.0097758**
Stddev	.000042	.0000785	.011882	.000221	.0000675	.0002728	.0023142
%RSD	65.01259	598.6474	.2253330	43.55091	9.364083	.6430658	23.67286
#1	-.000079	-.000076	5.259874	-.000373	.0007049	.0427061	.0124256
#2	-.000097	.000072	5.276057	-.000762	.0006630	.0421620	.0081516
#3	-.000017	.000044	5.283036	-.000387	.0007951	.0423996	.0087502

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1426035**	**.2483674**	**.0027961**	**.0004290**	**73.75336**	**.0036877**	**.3004348**
Stddev	.0004216	.0316940	.0000814	.0004052	.14656	.0014024	.0018127
%RSD	.2956232	12.76092	2.910373	94.43724	.1987231	38.02922	.6033507
#1	.1422067	.2785185	.0027058	.0008263	73.75284	.0052929	.3016505
#2	.1430461	.2512555	.0028189	.0000164	73.90018	.0030699	.3013025
#3	.1425575	.2153283	.0028637	.0004444	73.60705	.0027002	.2983514

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.663968**	**-.003213**	**-.001680**	**-.003454**	**-.002261**	**.1926568**	**-.003053**
Stddev	.034761	.000757	.000257	.000377	.000608	.0031210	.000337
%RSD	1.304847	23.55782	15.31416	10.91055	26.87789	1.619974	11.04647
#1	2.694974	-.002833	-.001517	-.003871	-.001560	.1938987	-.002788
#2	2.670540	-.002720	-.001977	-.003139	-.002590	.1891060	-.003433
#3	2.626391	-.004084	-.001547	-.003352	-.002632	.1949657	-.002939

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3167-02LX5 Acquired: 9/24/2025 18:03:32 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2778498	.0206544	.0147431
Stddev	.0027487	.0023016	.0002389
%RSD	.9892842	11.14349	1.620716
#1	.2809765	.0220914	.0146349
#2	.2758138	.0218720	.0150170
#3	.2767591	.0179997	.0145775

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6027.667	92701.83	8268.653	4623.237	6897.558
Stddev	12.954	359.80	19.697	15.424	15.945
%RSD	.2149135	.3881284	.2382102	.3336121	.2311672
#1	6038.653	92317.00	8246.168	4605.568	6905.530
#2	6013.382	92758.64	8282.861	4630.138	6879.199
#3	6030.966	93029.84	8276.930	4634.005	6907.944

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3167-02DUP Acquired: 9/24/2025 18:07:46 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004675**	**-.003856**	**1.210017**	**.0050944**	**-.000302**	**.0728739**	**.2521358**
Stddev	.001572	.002110	.003196	.0015109	.000729	.0068940	.0009457
%RSD	33.61560	54.72186	.2640945	29.65772	241.1865	9.460232	.3750801
#1	-.003492	-.006185	1.212023	.0066773	-.001125	.0707607	.2531123
#2	-.006459	-.003311	1.211696	.0036676	.000261	.0805772	.2520708
#3	-.004075	-.002072	1.206332	.0049384	-.000043	.0672838	.2512242

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000208**	**.0034797**	**25.65917**	**.0005920**	**.0073177**	**.2087518**	**.0851125**
Stddev	.000037	.0000522	.04860	.0002064	.0002710	.0006080	.0053639
%RSD	17.86705	1.501056	.1894002	34.85731	3.702658	.2912348	6.302135
#1	-.000251	.0035380	25.65242	.0008296	.0070820	.2094194	.0904348
#2	-.000186	.0034371	25.71080	.0004576	.0072573	.2086061	.0797079
#3	-.000187	.0034639	25.61431	.0004888	.0076137	.2082300	.0851947

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7079785**	**1.460259**	**.0181098**	**.0003279**	**380.8473**	**.0037464**	**1.512456**
Stddev	.0007143	.023418	.0002833	.0003476	1.9921	.0029395	.004099
%RSD	.1008883	1.603722	1.564380	106.0171	.5230601	78.46239	.2710125
#1	.7081086	1.451263	.0179906	.0004767	378.5689	.0050687	1.514426
#2	.7086187	1.486842	.0179055	-.000069	381.7128	.0003780	1.515198
#3	.7072081	1.442673	.0184332	.000576	382.2602	.0057926	1.507744

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.469546**	**.0129281**	**-.001265**	**-.005241**	**-.002632**	**1.011527**	**.0067947**
Stddev	.045279	.0005904	.000647	.000590	.001659	.009568	.0020515
%RSD	3.081180	4.566690	51.13749	11.26300	63.05099	.9459174	30.19270
#1	1.420527	.0135979	-.001409	-.005600	-.002273	1.021034	.0052148
#2	1.478307	.0127027	-.001828	-.004560	-.001181	1.011647	.0060561
#3	1.509805	.0124836	-.000558	-.005563	-.004441	1.001899	.0091132

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3167-02DUP Acquired: 9/24/2025 18:07:46 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**1.413431**	**-.007184**	**.0815026**
Stddev	.003760	.002025	.0002803
%RSD	.2660414	28.18536	.3439266
#1	1.416049	-.005512	.0818017
#2	1.409122	-.006605	.0812460
#3	1.415122	-.009435	.0814599

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5745.447**	**87839.84**	**8066.792**	**4377.066**	**6427.384**
Stddev	28.596	111.65	23.681	10.465	36.395
%RSD	.4977167	.1271067	.2935594	.2390839	.5662477
#1	5716.572	87715.48	8072.394	4367.929	6390.845
#2	5746.012	87931.47	8040.812	4374.785	6427.675
#3	5773.756	87872.58	8087.169	4388.483	6463.633

Sample Name: Q3167-02MS Acquired: 9/24/2025 18:12:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8100075**	**1.863240**	**1.968686**	**2.056882**	**.8225244**	**1.963957**	**.3982787**
Stddev	.0035057	.037220	.002548	.009923	.0028598	.007503	.0045477
%RSD	.4328000	1.997617	.1294296	.4824232	.3476866	.3820120	1.141848
#1	.8063316	1.832278	1.968353	2.046674	.8214440	1.959083	.3968090
#2	.8103772	1.852907	1.966321	2.057479	.8203622	1.972596	.4033795
#3	.8133137	1.904535	1.971384	2.066493	.8257670	1.960192	.3946475

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1949086**	**.1949924**	**22.58105**	**.4080960**	**.1994518**	**.4663847**	**3.075461**
Stddev	.0006241	.0003810	.06776	.0013177	.0002325	.0005725	.022304
%RSD	.3202151	.1953665	.3000929	.3228978	.1165723	.1227562	.7252291
#1	.1956152	.1946664	22.61421	.4070579	.1994564	.4669725	3.055347
#2	.1946782	.1948997	22.62584	.4095785	.1992170	.4658288	3.099448
#3	.1944324	.1954112	22.50309	.4076517	.1996819	.4663527	3.071588

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7811948**	**3.097327**	**.4973476**	**.0742229**	**319.9105**	**.2993609**	**1.477983**
Stddev	.0063380	.032419	.0010624	.0006181	2.7355	.0031428	.003858
%RSD	.8113187	1.046664	.2136234	.8328114	.8550959	1.049821	.2610280
#1	.7805556	3.105792	.4964348	.0742427	318.5639	.2996304	1.479106
#2	.7878281	3.124674	.4970943	.0748309	323.0582	.2960921	1.481156
#3	.7752006	3.061516	.4985138	.0735951	318.1092	.3023602	1.473689

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.08977**	**.2731791**	**.4386776**	**.7052822**	**.1898995**	**1.698787**	**6.330009**
Stddev	.09554	.0006340	.0002105	.0025362	.0015017	.018242	.035207
%RSD	.8614763	.2320830	.0479767	.3596027	.7907614	1.073808	.5561984
#1	11.04138	.2739111	.4384574	.7063900	.1883868	1.677848	6.307414
#2	11.19982	.2728041	.4388767	.7023805	.1913899	1.707270	6.312038
#3	11.02812	.2728220	.4386987	.7070761	.1899217	1.711241	6.370575

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3167-02MS Acquired: 9/24/2025 18:12:08 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**1.202385**	**.1763458**	**.2506954**
Stddev	.006964	.0001907	.0017211
%RSD	.5791861	.1081411	.6865434
#1	1.196286	.1761581	.2507186
#2	1.200896	.1765394	.2524049
#3	1.209973	.1763398	.2489628

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5606.473**	**86026.43**	**7851.549**	**4296.845**	**6241.055**
Stddev	19.289	391.98	30.689	19.017	18.754
%RSD	.3440562	.4556505	.3908713	.4425795	.3004949
#1	5584.203	86186.17	7830.386	4297.074	6220.529
#2	5617.956	85579.81	7837.514	4277.714	6257.295
#3	5617.259	86313.32	7886.746	4315.746	6245.342

Sample Name: Q3167-02MSD Acquired: 9/24/2025 18:16:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7949716**	**1.819077**	**2.007714**	**2.017919**	**.8069448**	**1.954445**	**.4074406**
Stddev	.0040505	.022920	.006086	.011536	.0029015	.004150	.0007848
%RSD	.5095108	1.259975	.3031197	.5716590	.3595700	.2123141	.1926191
#1	.7943281	1.798407	2.000916	2.029269	.8097593	1.949713	.4067235
#2	.7912813	1.843726	2.009572	2.006207	.8039634	1.957465	.4073194
#3	.7993052	1.815097	2.012654	2.018280	.8071117	1.956156	.4082790

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1923577**	**.1914167**	**23.92243**	**.4052439**	**.1961282**	**.4705909**	**3.087517**
Stddev	.0017860	.0003757	.07035	.0008728	.0002958	.0011353	.025534
%RSD	.9284979	.1962754	.2940856	.2153701	.1508251	.2412395	.8270002
#1	.1903382	.1910115	23.85712	.4062261	.1961301	.4692899	3.116674
#2	.1937298	.1914850	23.99692	.4049482	.1958315	.4711027	3.069145
#3	.1930050	.1917535	23.91325	.4045574	.1964231	.4713802	3.076733

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8176996**	**3.171870**	**.4896067**	**.0743987**	**344.6865**	**.2911111**	**1.562387**
Stddev	.0006888	.005400	.0012086	.0002036	3.5080	.0003515	.004187
%RSD	.0842407	.1702596	.2468619	.2737135	1.017722	.1207492	.2679922
#1	.8178867	3.167520	.4890013	.0743547	344.8628	.2907439	1.565680
#2	.8169366	3.170177	.4888205	.0746207	348.1030	.2911449	1.563806
#3	.8182756	3.177914	.4909985	.0742206	341.0937	.2914445	1.557675

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.28267**	**.2725416**	**.4332829**	**.6910668**	**.1885324**	**1.776339**	**6.152965**
Stddev	.05810	.0036740	.0007077	.0022736	.0026344	.022008	.002369
%RSD	.5149665	1.348048	.1633259	.3289987	1.397330	1.238937	.0385004
#1	11.34762	.2683002	.4332108	.6893699	.1875089	1.801104	6.154750
#2	11.23565	.2745847	.4326140	.6901804	.1865633	1.768889	6.150277
#3	11.26474	.2747400	.4340238	.6936501	.1915250	1.759023	6.153868

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3167-02MSD Acquired: 9/24/2025 18:16:17 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.260149	.1751598	.2526928
Stddev	.002945	.0025360	.0007095
%RSD	.2337212	1.447801	.2807907
#1	1.258170	.1753992	.2529511
#2	1.263534	.1725125	.2518903
#3	1.258743	.1775675	.2532370

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5679.690	85459.83	7924.599	4313.957	6333.212
Stddev	30.450	235.44	54.659	30.205	33.623
%RSD	.5361205	.2754925	.6897327	.7001635	.5308998
#1	5712.191	85191.88	7987.711	4284.267	6370.189
#2	5675.056	85554.04	7893.421	4312.952	6324.971
#3	5651.822	85633.58	7892.663	4344.651	6304.475

Sample Name: Q3167-02A Acquired: 9/24/2025 18:20:25 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8108262**	**1.849974**	**2.132516**	**2.073803**	**.8293606**	**1.988199**	**.4259918**
Stddev	.0042390	.056279	.002170	.007134	.0043773	.003830	.0027384
%RSD	.5228050	3.042166	.1017769	.3440145	.5277921	.1926397	.6428371
#1	.8116303	1.842553	2.130420	2.071414	.8313369	1.991781	.4243876
#2	.8146056	1.909596	2.134754	2.081826	.8243436	1.984161	.4244340
#3	.8062427	1.797774	2.132374	2.068171	.8324012	1.988655	.4291537

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1948638**	**.1958633**	**25.79382**	**.4029678**	**.2003479**	**.4930907**	**3.001251**
Stddev	.0008604	.0000989	.15459	.0006309	.0003170	.0007552	.027796
%RSD	.4415263	.0504706	.5993244	.1565706	.1582078	.1531672	.9261564
#1	.1958571	.1957493	25.70496	.4036696	.1999936	.4922261	3.017245
#2	.1943862	.1959148	25.70418	.4027862	.2004457	.4936219	2.969155
#3	.1943482	.1959257	25.97232	.4024476	.2006045	.4934242	3.017353

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8694118**	**3.273816**	**.5008751**	**.0738736**	**366.2764**	**.3012674**	**1.670824**
Stddev	.0080258	.032483	.0010502	.0005516	4.8405	.0043774	.004978
%RSD	.9231330	.9922184	.2096752	.7466797	1.321541	1.453005	.2979369
#1	.8633501	3.251874	.4996624	.0744698	363.6621	.2963113	1.676061
#2	.8663717	3.258443	.5014752	.0733813	371.8619	.3028856	1.666153
#3	.8785135	3.311133	.5014876	.0737699	363.3052	.3046054	1.670259

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.24331**	**.2808138**	**.4383171**	**.7077562**	**.1872054**	**1.872874**	**6.357642**
Stddev	.04262	.0017929	.0003134	.0027928	.0022881	.025637	.020685
%RSD	.3790635	.6384635	.0714988	.3946054	1.222217	1.368849	.3253532
#1	11.19453	.2828101	.4385408	.7071520	.1852825	1.852274	6.355963
#2	11.26207	.2793407	.4384516	.7108016	.1897359	1.864762	6.379115
#3	11.27333	.2802907	.4379589	.7053148	.1865978	1.901585	6.337848

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: Q3167-02A Acquired: 9/24/2025 18:20:25 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.402759	.1756091	.2594009
Stddev	.003569	.0005115	.0018717
%RSD	.2544122	.2912534	.7215499
#1	1.404022	.1751163	.2577405
#2	1.405524	.1761374	.2590329
#3	1.398730	.1755737	.2614292

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5557.809	86435.30	7835.958	4291.229	6170.443
Stddev	4.667	587.45	56.924	19.853	6.050
%RSD	.0839801	.6796371	.7264415	.4626413	.0980422
#1	5557.442	85867.17	7774.560	4268.495	6171.054
#2	5553.336	86398.40	7846.334	4300.042	6164.111
#3	5562.649	87040.32	7886.980	4305.149	6176.164

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169791TB Acquired: 9/24/2025 18:24:35 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002342**	**-.003419**	**-.003081**	**.0031559**	**.0000443**	**.0046809**	**-.006940**
Stddev	.001312	.001441	.000390	.0019354	.0023940	.0046619	.002492
%RSD	56.03438	42.15580	12.64178	61.32494	5406.847	99.59316	35.90122
#1	-.003712	-.002939	-.002984	.0053907	-.000329	.0017524	-.004537
#2	-.002219	-.002278	-.003511	.0020424	.002603	.0100568	-.009511
#3	-.001096	-.005038	-.002750	.0020347	-.002141	.0022335	-.006773

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000173**	**-.001052**	**.0313181**	**.0004048**	**-.000993**	**-.000332**	**.0037957**
Stddev	.000010	.000059	.0152655	.0000446	.000239	.000187	.0135452
%RSD	5.666852	5.603446	48.74329	11.00867	24.05979	56.41158	356.8589
#1	-.000182	-.001029	.0321818	.0004082	-.000726	-.000292	-.007110
#2	-.000163	-.001008	.0156392	.0003586	-.001067	-.000536	-.000461
#3	-.000173	-.001119	.0461335	.0004475	-.001186	-.000168	.018958

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012508**	**-.047090**	**-.000150**	**.0009183**	**389.1191**	**.0030438**	**-.000277**
Stddev	.0000690	.001322	.000245	.0007660	4.7734	.0006798	.000047
%RSD	5.517813	2.806567	163.2592	83.40700	1.226724	22.33423	16.89863
#1	.0011812	-.045564	-.000418	.0014866	387.7102	.0022848	-.000283
#2	.0012520	-.047854	.000062	.0000473	385.2087	.0035968	-.000227
#3	.0013192	-.047851	-.000093	.0012211	394.4384	.0032497	-.000320

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3468463**	**-.005754**	**-.000739**	**-.006030**	**-.002399**	**.0240716**	**.0024811**
Stddev	.0230856	.000533	.000366	.000548	.002091	.0057826	.0004328
%RSD	6.655871	9.257120	49.50762	9.086211	87.14698	24.02259	17.44629
#1	.3233004	-.005954	-.000655	-.005424	-.000949	.0221099	.0023613
#2	.3477962	-.006159	-.001140	-.006177	-.001453	.0195250	.0029612
#3	.3694424	-.005151	-.000423	-.006490	-.004796	.0305799	.0021207

Sample Name: PB169791TB Acquired: 9/24/2025 18:24:35 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0514045	-.010778	-.002169
Stddev	.0008863	.001538	.000076
%RSD	1.724136	14.27389	3.497133
#1	.0513477	-.011909	-.002254
#2	.0523178	-.009026	-.002111
#3	.0505480	-.011397	-.002141

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5543.375	85357.76	7874.772	4270.542	6159.138
Stddev	23.027	516.46	66.491	22.070	27.097
%RSD	.4153943	.6050536	.8443491	.5167849	.4399502
#1	5517.281	85783.97	7807.474	4287.528	6127.872
#2	5551.999	85505.88	7940.425	4278.502	6173.719
#3	5560.845	84783.42	7876.416	4245.597	6175.822

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV07 Acquired: 9/24/2025 18:37:34 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.032218**	**5.171533**	**4.818624**	**5.115573**	**5.152457**	**9.821077**	**9.456695**
Stddev	.007231	.034001	.002122	.013488	.013431	.025642	.047711
%RSD	.1436843	.6574643	.0440391	.2636670	.2606737	.2610882	.5045159
#1	5.025176	5.137686	4.818748	5.100328	5.145574	9.791788	9.464621
#2	5.031855	5.171228	4.816443	5.125955	5.143864	9.831968	9.405518
#3	5.039623	5.205686	4.820681	5.120436	5.167935	9.839477	9.499946

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2557479**	**2.423568**	**24.39334**	**1.023251**	**2.421926**	**1.229621**	**4.854910**
Stddev	.0015300	.001970	.09228	.002609	.001475	.000560	.042230
%RSD	.5982405	.0812941	.3782888	.2549802	.0608880	.0455766	.8698472
#1	.2550055	2.422711	24.29819	1.021128	2.420323	1.229158	4.836264
#2	.2575074	2.422172	24.48244	1.026164	2.422229	1.230244	4.825212
#3	.2547307	2.425822	24.39939	1.022462	2.423225	1.229461	4.903254

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.374632**	**24.46126**	**2.422830**	**1.253262**	**24.18047**	**2.470893**	**2.504206**
Stddev	.007968	.19699	.003156	.001779	.01387	.012161	.005656
%RSD	.3355277	.8053085	.1302515	.1419445	.0573555	.4921880	.2258541
#1	2.366498	24.23380	2.420235	1.251561	24.16650	2.456938	2.501507
#2	2.382422	24.57445	2.421913	1.255110	24.19424	2.479231	2.510705
#3	2.374975	24.57553	2.426343	1.253114	24.18067	2.476510	2.500404

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.59768**	**4.983343**	**5.270451**	**4.986799**	**4.801361**	**4.827943**	**5.293662**
Stddev	.13110	.018573	.006387	.004028	.019088	.033293	.012366
%RSD	.5329829	.3727103	.1211930	.0807721	.3975467	.6895825	.2336026
#1	24.45239	4.971336	5.263125	4.982150	4.779606	4.794617	5.291442
#2	24.63348	5.004736	5.273378	4.989223	4.809175	4.828009	5.306987
#3	24.70716	4.973955	5.274850	4.989025	4.815302	4.861203	5.282556

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV07 Acquired: 9/24/2025 18:37:34 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.792606**	**4.517196**	**4.751650**
Stddev	.009821	.016909	.075870
%RSD	.2049249	.3743342	1.596703
#1	4.782754	4.501833	4.699207
#2	4.802396	4.514442	4.838646
#3	4.792666	4.535313	4.717097

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5697.725**	**88043.25**	**7760.504**	**4375.952**	**6440.084**
Stddev	4.057	386.27	49.409	15.536	5.852
%RSD	.0711978	.4387301	.6366666	.3550294	.0908632
#1	5693.411	88473.99	7803.269	4388.560	6433.327
#2	5701.463	87727.60	7706.417	4358.596	6443.509
#3	5698.302	87928.17	7771.825	4380.699	6443.416

Sample Name: CCB07 Acquired: 9/24/2025 18:42:32 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003190**	**-.003684**	**-.002575**	**-.002065**	**-.002453**	**-.008157**
Stddev	.0002327	.002255	.000318	.002242	.002062	.000289
%RSD	72.95342	61.20318	12.35506	108.5869	84.05661	3.547738
#1	.0005329	-.005355	-.002898	-.000724	-.004236	-.008475
#2	.0000712	-.001119	-.002262	-.004653	-.000195	-.008088
#3	.0003529	-.004577	-.002565	-.000817	-.002928	-.007908

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004834**	**-.000119**	**-.001115**	**-.019133**	**-.000528**	**-.001062**
Stddev	.001496	.000060	.000117	.005203	.000181	.000285
%RSD	30.93525	50.91313	10.53501	27.19558	34.20362	26.82357
#1	-.005634	-.000179	-.000994	-.024927	-.000589	-.001376
#2	-.003109	-.000058	-.001229	-.014860	-.000325	-.000991
#3	-.005760	-.000120	-.001122	-.017611	-.000670	-.000819

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000034**	**-.009087**	**-.001794**	**-.045463**	**-.000987**	**.0004875**
Stddev	.000521	.006305	.000454	.005482	.000135	.0005250
%RSD	1514.854	69.38194	25.32938	12.05709	13.70182	107.6955
#1	-.000629	-.005534	-.002193	-.046433	-.000832	.0006665
#2	.000186	-.016366	-.001299	-.039562	-.001049	.0008996
#3	.000340	-.005360	-.001889	-.050396	-.001080	-.000104

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0810972**	**.0017288**	**-.001229**	**.0101581**	**-.004350**	**-.001458**
Stddev	.0106639	.0013384	.000036	.0315959	.000606	.000204
%RSD	13.14954	77.42286	2.943692	311.0422	13.92230	13.98875
#1	.0740882	.0001987	-.001252	-.008924	-.005044	-.001420
#2	.0758339	.0026826	-.001188	-.007230	-.003926	-.001276
#3	.0933695	.0023049	-.001248	.046629	-.004081	-.001679

Sample Name: CCB07 Acquired: 9/24/2025 18:42:32 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006220	-.001924	-.007553	-.005076	F -.010330	-.007971
Stddev	.000145	.001909	.006663	.000597	.002570	.000807
%RSD	2.324722	99.25375	88.21684	11.75464	24.87988	10.12667
#1	-.006139	-.003347	-.014456	-.005104	-.010306	-.008893
#2	-.006387	.000246	-.001159	-.004466	-.012912	-.007630
#3	-.006134	-.002671	-.007045	-.005659	-.007772	-.007390

Elem	Sr4077
Units	ppm
Avg	-.002311
Stddev	.000096
%RSD	4.157049
#1	-.002269
#2	-.002421
#3	-.002244

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5982.479	91523.99	7862.705	4532.569	7205.546
Stddev	11.303	240.26	50.086	15.319	18.586
%RSD	.1889377	.2625146	.6370031	.3379871	.2579419
#1	5969.910	91630.63	7863.978	4535.204	7185.687
#2	5985.717	91248.87	7811.995	4516.102	7208.429
#3	5991.810	91692.48	7912.142	4546.399	7222.522

Sample Name: PB169813BL Acquired: 9/24/2025 18:46:52 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000749**	**.0000138**	**-.002278**	**.0005861**	**-.001916**	**-.003534**	**-.007618**
Stddev	.000703	.0011217	.000621	.0008846	.001862	.011122	.003303
%RSD	93.88653	8143.795	27.24999	150.9408	97.18395	314.7307	43.36255
#1	-.000045	.0010599	-.002599	.0015062	.000169	-.003879	-.004112
#2	-.000750	.0001521	-.001562	-.000258	-.002504	-.014479	-.010671
#3	-.001451	-.001171	-.002671	.000510	-.003412	.007757	-.008070

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000045**	**-.001029**	**-.009941**	**-.000613**	**-.000942**	**-.000772**	**-.005571**
Stddev	.000033	.000090	.007710	.000056	.000192	.000243	.006100
%RSD	72.36599	8.720300	77.55708	9.203120	20.34570	31.49200	109.4816
#1	-.000035	-.000947	-.015617	-.000678	-.000725	-.000560	-.010410
#2	-.000081	-.001125	-.001163	-.000581	-.001012	-.000718	.001281
#3	-.000018	-.001015	-.013043	-.000579	-.001089	-.001037	-.007585

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001976**	**-.060480**	**-.000999**	**.0007535**	**.3788945**	**.0004930**	**-.001639**
Stddev	.000711	.031083	.000232	.0004085	.0127180	.0033716	.000231
%RSD	35.98944	51.39330	23.26691	54.21858	3.356604	683.8620	14.10212
#1	-.002235	-.086579	-.001112	.0006322	.3646564	.0010750	-.001529
#2	-.001172	-.026094	-.001153	.0012089	.3828983	-.003132	-.001905
#3	-.002522	-.068766	-.000732	.0004193	.3891287	.003536	-.001483

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4841023**	**-.004773**	**-.001813**	**-.002377**	**-.002574**	**.0161330**	**-.005917**
Stddev	.0521624	.001139	.000186	.000404	.000316	.0103648	.000999
%RSD	10.77508	23.86161	10.27228	17.00590	12.28610	64.24549	16.88860
#1	.4651274	-.006081	-.001631	-.001993	-.002520	.0041769	-.004904
#2	.4440833	-.003998	-.002003	-.002798	-.002288	.0225753	-.006902
#3	.5430961	-.004240	-.001805	-.002339	-.002914	.0216470	-.005947

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169813BL Acquired: 9/24/2025 18:46:52 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**-.007768**	**.0035886**	**-.002325**
Stddev	.001322	.0024177	.000041
%RSD	17.01619	67.37207	1.759137
#1	-.007746	.0010549	-.002372
#2	-.009100	.0038404	-.002304
#3	-.006457	.0058706	-.002298

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5790.007**	**89383.83**	**7957.240**	**4464.741**	**6833.740**
Stddev	19.760	421.10	49.880	16.142	32.246
%RSD	.3412718	.4711139	.6268561	.3615444	.4718577
#1	5805.846	89812.66	7952.616	4482.661	6851.742
#2	5796.310	89367.90	7909.833	4451.339	6852.966
#3	5767.864	88970.92	8009.272	4460.224	6796.513

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169813BS Acquired: 9/24/2025 18:59:20 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7631391**	**1.872553**	**.9124060**	**1.972733**	**.7956539**	**1.892497**
Stddev	.0039633	.038490	.0021331	.004915	.0042146	.006205
%RSD	.5193415	2.055498	.2337870	.2491664	.5297019	.3278482
#1	.7670918	1.849960	.9137955	1.968266	.8003967	1.885334
#2	.7591653	1.850703	.9134725	1.977999	.7942271	1.895948
#3	.7631602	1.916995	.9099500	1.971933	.7923379	1.896209

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1735271**	**.2032760**	**.1835790**	**.9462373**	**.3939940**	**.1844001**
Stddev	.0013191	.0009191	.0004260	.0120497	.0019045	.0004112
%RSD	.7601895	.4521511	.2320642	1.273429	.4833794	.2229788
#1	.1737327	.2035612	.1840504	.9512702	.3957049	.1848680
#2	.1721173	.2022481	.1832215	.9324871	.3919420	.1840964
#3	.1747314	.2040187	.1834653	.9549545	.3943350	.1842359

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2923301**	**2.765378**	**.1849237**	**1.895152**	**.4651938**	**.0734993**
Stddev	.0006120	.008375	.0009401	.018594	.0006058	.0004726
%RSD	.2093577	.3028587	.5083478	.9811443	.1302334	.6430211
#1	.2929939	2.767746	.1856579	1.915976	.4654853	.0732175
#2	.2922080	2.772314	.1838642	1.880209	.4655988	.0740449
#3	.2917883	2.756073	.1852490	1.889272	.4644973	.0732355

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.941091**	**.2887559**	**.1944593**	**9.247711**	**.2941555**	**.4066298**
Stddev	.017175	.0085998	.0006726	.044267	.0016139	.0015121
%RSD	.5839710	2.978228	.3458601	.4786798	.5486687	.3718531
#1	2.925765	.2963991	.1945729	9.198660	.2934941	.4082685
#2	2.959654	.2794441	.1950679	9.284688	.2929773	.4063324
#3	2.937854	.2904244	.1937372	9.259786	.2959951	.4052886

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: PB169813BS Acquired: 9/24/2025 18:59:20 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6648235**	**.1824712**	**.8185464**	**5.885094**	F **-.011429**	**.1800500**
Stddev	.0027325	.0016233	.0054402	.022519	.005245	.0021150
%RSD	.4110122	.8896324	.6646219	.3826370	45.89360	1.174675
#1	.6660726	.1811495	.8124457	5.859755	-.012377	.1823506
#2	.6667083	.1819808	.8228938	5.902819	-.005774	.1781900
#3	.6616897	.1842831	.8202997	5.892706	-.016135	.1796095

Elem	Sr4077
Units	ppm
Avg	**.1788493**
Stddev	.0004974
%RSD	.2781383
#1	.1790048
#2	.1782927
#3	.1792505

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5886.572**	**90571.63**	**7781.370**	**4527.599**	**6880.922**
Stddev	33.038	321.31	45.901	18.424	34.826
%RSD	.5612367	.3547537	.5898894	.4069205	.5061294
#1	5864.657	90263.13	7748.356	4520.773	6860.873
#2	5870.487	90547.40	7833.786	4513.562	6860.756
#3	5924.572	90904.37	7761.966	4548.461	6921.136

Sample Name: CCV08 Acquired: 9/24/2025 19:03:22 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.169979**	**5.111416**	**4.915534**	**5.271159**	**5.280241**	**9.854136**	**9.540196**
Stddev	.011474	.111991	.008465	.019640	.013650	.018620	.078203
%RSD	.2219360	2.191007	.1722103	.3725922	.2585061	.1889591	.8197244
#1	5.158535	5.007613	4.913486	5.252504	5.276383	9.875102	9.545420
#2	5.169920	5.096529	4.908282	5.269319	5.268936	9.847782	9.615657
#3	5.181482	5.230107	4.924836	5.291654	5.295405	9.839524	9.459513

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2589992**	**2.476886**	**24.43577**	**1.032270**	**2.470247**	**1.258105**	**4.890175**
Stddev	.0014016	.006042	.04418	.004288	.004752	.000233	.031535
%RSD	.5411738	.2439216	.1808047	.4154213	.1923682	.0185202	.6448708
#1	.2575133	2.475754	24.48672	1.028229	2.469206	1.258323	4.895574
#2	.2591866	2.471491	24.40798	1.031812	2.466102	1.257859	4.918663
#3	.2602978	2.483414	24.41262	1.036769	2.475433	1.258132	4.856289

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.383415**	**24.54243**	**2.475428**	**1.269980**	**24.36864**	**2.475370**	**2.541313**
Stddev	.012293	.09735	.003345	.005217	.09421	.015955	.012029
%RSD	.5157918	.3966405	.1351284	.4107663	.3866061	.6445627	.4733343
#1	2.397112	24.57736	2.475337	1.264245	24.47120	2.493225	2.528823
#2	2.379794	24.61749	2.472130	1.271251	24.28595	2.462510	2.542294
#3	2.373339	24.43244	2.478818	1.274443	24.34875	2.470375	2.552821

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.32291**	**5.035004**	**5.329757**	**5.089397**	**4.817157**	**4.878564**	**5.428079**
Stddev	.06372	.027465	.011389	.013083	.013065	.014045	.006497
%RSD	.2619841	.5454840	.2136918	.2570596	.2712148	.2878869	.1196910
#1	24.39238	5.003684	5.323062	5.078535	4.831135	4.892123	5.428242
#2	24.26717	5.046347	5.323302	5.085736	4.805254	4.864079	5.421502
#3	24.30918	5.054980	5.342908	5.103921	4.815083	4.879490	5.434493

Reviewed By:jaswal
On:9/26/2025 10:25:25 PM
Inst Id :P4
LB :LB137295

Sample Name: CCV08 Acquired: 9/24/2025 19:03:22 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.975580**	**4.564497**	**4.805409**
Stddev	.031210	.008233	.068350
%RSD	.6272599	.1803811	1.422361
#1	4.942540	4.573877	4.775982
#2	4.979636	4.561154	4.883544
#3	5.004563	4.558462	4.756700

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5634.923**	**88171.68**	**7789.255**	**4360.582**	**6347.981**
Stddev	7.942	208.36	19.556	9.372	7.652
%RSD	.1409397	.2363103	.2510686	.2149348	.1205501
#1	5633.815	88071.30	7797.658	4369.362	6344.172
#2	5643.360	88032.50	7766.902	4361.674	6356.791
#3	5627.593	88411.22	7803.206	4350.712	6342.981

Sample Name: CCB08 Acquired: 9/24/2025 19:07:34 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000786**	**-.001460**	**-.003077**	**-.003267**	**-.004557**	**-.005605**
Stddev	.001949	.000793	.000352	.001785	.001175	.008060
%RSD	248.1337	54.33319	11.44989	54.65297	25.78912	143.8153
#1	-.001908	-.002342	-.003411	-.005068	-.003733	-.000380
#2	-.001914	-.000808	-.002709	-.003235	-.005903	-.014888
#3	.001465	-.001228	-.003111	-.001497	-.004035	-.001547

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.007494**	**-.000106**	**-.001107**	**-.019571**	**-.000667**	**-.001065**
Stddev	.001888	.000035	.000021	.011063	.000156	.000116
%RSD	25.19392	33.02782	1.879819	56.52443	23.35389	10.84477
#1	-.005804	-.000084	-.001112	-.020831	-.000669	-.001090
#2	-.007147	-.000147	-.001126	-.029950	-.000822	-.000940
#3	-.009532	-.000088	-.001085	-.007933	-.000511	-.001167

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000561**	**-.010234**	**-.002217**	**-.043300**	**-.001324**	**.0009188**
Stddev	.000421	.006522	.000409	.016291	.000253	.0000651
%RSD	75.17254	63.72935	18.45554	37.62441	19.09041	7.088197
#1	-.000265	-.015876	-.002652	-.061242	-.001574	.0009547
#2	-.001043	-.003093	-.002158	-.029434	-.001330	.0009581
#3	-.000373	-.011734	-.001840	-.039224	-.001068	.0008436

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0132235**	**.0016530**	**-.000901**	**.0153328**	**-.002761**	**-.001176**
Stddev	.0164370	.0015949	.000213	.0381405	.000363	.000360
%RSD	124.3017	96.48816	23.59417	248.7513	13.15817	30.61517
#1	-.004942	.0034617	-.001133	-.015082	-.002920	-.001329
#2	.027070	.0004483	-.000715	.058125	-.003017	-.001435
#3	.017543	.0010489	-.000854	.002956	-.002345	-.000765

Sample Name: CCB08 Acquired: 9/24/2025 19:07:34 Type: Unk
Method: 6010-200.7 NEW(v201) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006353	-.002980	.0010100	-.005828	-.007522	F -.011941
Stddev	.000265	.002149	.0006125	.000371	.002804	.001012
%RSD	4.164789	72.10392	60.64445	6.357537	37.28000	8.477878
#1	-.006227	-.001483	.0005210	-.005445	-.009515	-.012417
#2	-.006175	-.005443	.0008120	-.006184	-.008737	-.012627
#3	-.006657	-.002016	.0016970	-.005856	-.004315	-.010778

Elem	Sr4077
Units	ppm
Avg	-.002353
Stddev	.000060
%RSD	2.542784
#1	-.002290
#2	-.002358
#3	-.002409

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6050.524	91802.43	7993.575	4618.166	7303.125
Stddev	29.024	286.63	16.374	23.996	40.600
%RSD	.4797013	.3122288	.2048367	.5195939	.5559236
#1	6082.841	91473.23	7986.222	4595.989	7347.433
#2	6042.055	91937.40	7982.167	4614.870	7294.235
#3	6026.676	91996.67	8012.337	4643.639	7267.707

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB169760

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pippete ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HG HOT BLOCK #3 2. N/A

Start Digest Date: 09/22/2025 **Time :** 10:40 **Temp :** 96 °C

End Digest Date: 09/22/2025 **Time :** 13:45 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG. #3

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	M6180
LFS-2	0.25	M6181
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	3.00	M6158
1:1 HCL	5.00	MP85156
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 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
09/22/25 14:45	SLS met bio	Metals Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB169760

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB169760BL	PBW760	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	28
PB169760BS	LCS760	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	29
Q3135-01	MH-121	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	30
Q3142-01	RW8-SP100-20250918	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	31
Q3142-02	RW8-SP303-20250918	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	32
Q3151-02	1402	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	33
Q3151-02MS	1402MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	35
Q3151-02MSD	1402MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	36
Q3151-02DUP	1402DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	34

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB169760 **WorkList ID :** 191992 **Department :** Digestion **Date :** 09-22-2025 09:49:12

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3135-01	MH-121	Water	Metals PSEG Group2	1:1 HNO3 to pH < 2	PSEG03	D41	09/18/2025	6010D
Q3142-01	RW8-SP100-20250918	Water	Metals Group4	1:1 HNO3 to pH < 2	TETR06	J51	09/18/2025	6010D
Q3142-02	RW8-SP303-20250918	Water	Metals Group4	1:1 HNO3 to pH < 2	TETR06	J51	09/18/2025	6010D
Q3151-02	1402	Water	Metals PSEG Group2	1:1 HNO3 to pH < 2	PSEG03	D31	09/19/2025	6010D

Date/Time 09/22/25 10:10
Raw Sample Received by: SLS metdio
Raw Sample Relinquished by: CPCSn)

Date/Time 09/22/2025 11:10
Raw Sample Received by: CPCSn)
Raw Sample Relinquished by: SLS metdio

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 # LB137295

Review By	Janvi	Review On	9/25/2025 3:54:42 PM
Supervise By	jaswal	Supervise On	9/26/2025 10:25:25 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	09/24/25 10:54		Jaswal	OK
2	S1	S1	CAL2	09/24/25 10:58		Jaswal	OK
3	S2	S2	CAL3	09/24/25 11:03		Jaswal	OK
4	S3	S3	CAL4	09/24/25 11:07		Jaswal	OK
5	S4	S4	CAL5	09/24/25 11:10		Jaswal	OK
6	S5	S5	CAL6	09/24/25 11:15		Jaswal	OK
7	ICV01	ICV01	ICV	09/24/25 11:34		Jaswal	OK
8	LLICV01	LLICV01	LLICV	09/24/25 11:44		Jaswal	OK
9	ICB01	ICB01	ICB	09/24/25 11:56		Jaswal	OK
10	CRI01	CRI01	CRDL	09/24/25 12:00		Jaswal	OK
11	ICSA01	ICSA01	ICSA	09/24/25 12:04		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	09/24/25 12:08		Jaswal	OK
13	ICSADL	ICSADL	ICSA	09/24/25 12:13		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	09/24/25 12:17		Jaswal	OK
15	CCV01	CCV01	CCV	09/24/25 12:21		Jaswal	OK
16	CCB01	CCB01	CCB	09/24/25 12:26		Jaswal	OK
17	LR-2	LR-2	HIGH STD	09/24/25 12:35		Jaswal	OK
18	Q3153-04	OR-500-COMP-39	SAM	09/24/25 12:45		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137295

Review By	Janvi	Review On	9/25/2025 3:54:42 PM
Supervise By	jaswal	Supervise On	9/26/2025 10:25:25 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

19	LR-1	LR-1	HIGH STD	09/24/25 12:49		Jaswal	OK
20	LR-3	LR-3	HIGH STD	09/24/25 12:53		Jaswal	OK
21	Q3153-08	OR-500-COMP-40	SAM	09/24/25 12:58		Jaswal	OK
22	Q3145-01	SP-A	SAM	09/24/25 13:03		Jaswal	OK
23	Q3145-03	SP-B	SAM	09/24/25 13:07		Jaswal	OK
24	Q3146-01	MECHANIC-ST-PAINT	SAM	09/24/25 13:11	Pb is high, need dilution	Jaswal	Dilution
25	Q3153-01	OR-500-COMP-39	SAM	09/24/25 13:16		Jaswal	OK
26	Q3153-05	OR-500-COMP-40	SAM	09/24/25 13:20		Jaswal	OK
27	CCV02	CCV02	CCV	09/24/25 13:40		Jaswal	OK
28	CCB02	CCB02	CCB	09/24/25 13:44		Jaswal	OK
29	Q3151-02	1402	SAM	09/24/25 13:48		Jaswal	OK
30	Q3146-01DL	MECHANIC-ST-PAINT	SAM	09/24/25 14:01	5X For Pb	Jaswal	Confirms
31	Q3157-02	20-DEAD-1	SAM	09/24/25 14:06		Jaswal	OK
32	Q3157-02DUP	20-DEAD-1DUP	DUP	09/24/25 14:10		Jaswal	OK
33	Q3146-01DL2	MECHANIC-ST-PAINT	SAM	09/24/25 14:15	Not use	Jaswal	Not Ok
34	Q3146-01DL3	MECHANIC-ST-PAINT	SAM	09/24/25 14:21	Not use	Jaswal	Not Ok
35	Q3157-02L	20-DEAD-1L	SD	09/24/25 14:25		Jaswal	OK
36	Q3157-02MS	20-DEAD-1MS	MS	09/24/25 14:30		Jaswal	OK
37	Q3157-02MSD	20-DEAD-1MSD	MSD	09/24/25 14:34		Jaswal	OK
38	Q3157-02A	20-DEAD-1A	PS	09/24/25 14:38		Jaswal	OK

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Daily Analysis Runlog For Sequence/QCBatch ID # LB137295

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Supervise By	jaswal	Supervise On	9/26/2025 10:25:25 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

39	CCV03	CCV03	CCV	09/24/25 14:42		Jaswal	OK
40	CCB03	CCB03	CCB	09/24/25 14:46		Jaswal	OK
41	Q3151-02DUP	1402DUP	DUP	09/24/25 14:50		Jaswal	OK
42	Q3151-02L	1402L	SD	09/24/25 14:55		Jaswal	OK
43	Q3151-02MS	1402MS	MS	09/24/25 14:59		Jaswal	OK
44	Q3151-02MSD	1402MSD	MSD	09/24/25 15:03		Jaswal	OK
45	Q3151-02A	1402A	PS	09/24/25 15:07		Jaswal	OK
46	Q3142-01	RW8-SP100-2025091	SAM	09/24/25 15:11		Jaswal	OK
47	Q3142-02	RW8-SP303-2025091	SAM	09/24/25 15:15		Jaswal	OK
48	PB169760BL	PB169760BL	MB	09/24/25 15:25		Jaswal	OK
49	PB169760BS	PB169760BS	LCS	09/24/25 15:33		Jaswal	OK
50	Q3155-01	COMP-1	SAM	09/24/25 15:37		Jaswal	OK
51	CCV04	CCV04	CCV	09/24/25 15:41		Jaswal	OK
52	CCB04	CCB04	CCB	09/24/25 15:46		Jaswal	OK
53	Q3155-02	COMP-2	SAM	09/24/25 15:50		Jaswal	OK
54	Q3155-03	COMP-3	SAM	09/24/25 15:54		Jaswal	OK
55	Q3157-01	20-DEAD-1	SAM	09/24/25 15:58		Jaswal	OK
56	Q3157-01DUP	20-DEAD-1DUP	DUP	09/24/25 16:02		Jaswal	OK
57	Q3157-01L	20-DEAD-1L	SD	09/24/25 16:06		Jaswal	OK
58	Q3157-01MS	20-DEAD-1MS	MS	09/24/25 16:10		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137295

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Supervise By	jaswal	Supervise On	9/26/2025 10:25:25 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

59	Q3157-01MSD	20-DEAD-1MSD	MSD	09/24/25 16:14		Jaswal	OK
60	Q3157-01A	20-DEAD-1A	PS	09/24/25 16:18		Jaswal	OK
61	PB169761BS	PB169761BS	LCS	09/24/25 16:22		Jaswal	OK
62	PB169761BL	PB169761BL	MB	09/24/25 16:26		Jaswal	OK
63	CCV05	CCV05	CCV	09/24/25 16:31		Jaswal	OK
64	CCB05	CCB05	CCB	09/24/25 16:35		Jaswal	OK
65	Q3159-01	VNJ-245	SAM	09/24/25 16:44		Jaswal	OK
66	Q3159-03	VNJ-255	SAM	09/24/25 16:48		Jaswal	OK
67	Q3159-03DUP	VNJ-255DUP	DUP	09/24/25 16:52		Jaswal	OK
68	Q3159-03L	VNJ-255L	SD	09/24/25 16:56		Jaswal	OK
69	Q3159-03MS	VNJ-255MS	MS	09/24/25 17:00		Jaswal	OK
70	Q3159-03MSD	VNJ-255MSD	MSD	09/24/25 17:04		Jaswal	OK
71	Q3167-01	RT4784	SAM	09/24/25 17:12		Jaswal	OK
72	Q3159-03A	VNJ-255A	PS	09/24/25 17:25		Jaswal	OK
73	PB169811BS	PB169811BS	LCS	09/24/25 17:29		Jaswal	OK
74	CCV06	CCV06	CCV	09/24/25 17:33		Jaswal	OK
75	CCB06	CCB06	CCB	09/24/25 17:37		Jaswal	OK
76	PB169811BL	PB169811BL	MB	09/24/25 17:41		Jaswal	OK
77	Q3159-02	VNJ-245	SAM	09/24/25 17:45		Jaswal	OK
78	Q3159-04	VNJ-255	SAM	09/24/25 17:50		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137295

Review By	Janvi	Review On	9/25/2025 3:54:42 PM
Supervise By	jaswal	Supervise On	9/26/2025 10:25:25 PM

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87047,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87048
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

79	Q3167-02	RT4784	SAM	09/24/25 17:54		Jaswal	OK
80	Q3167-02L	RT4784L	SD	09/24/25 18:03		Jaswal	OK
81	Q3167-02DUP	RT4784DUP	DUP	09/24/25 18:07		Jaswal	OK
82	Q3167-02MS	RT4784MS	MS	09/24/25 18:12		Jaswal	OK
83	Q3167-02MSD	RT4784MSD	MSD	09/24/25 18:16		Jaswal	OK
84	Q3167-02A	RT4784A	PS	09/24/25 18:20		Jaswal	OK
85	PB169791TB	PB169791TB	MB	09/24/25 18:24		Jaswal	OK
86	CCV07	CCV07	CCV	09/24/25 18:37		Jaswal	OK
87	CCB07	CCB07	CCB	09/24/25 18:42		Jaswal	OK
88	PB169813BL	PB169813BL	MB	09/24/25 18:46		Jaswal	OK
89	PB169813BS	PB169813BS	LCS	09/24/25 18:59		Jaswal	OK
90	CCV08	CCV08	CCV	09/24/25 19:03		Jaswal	OK
91	CCB08	CCB08	CCB	09/24/25 19:07		Jaswal	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q3142

Test : Metals Group4

Prepbatch ID : PB169760,

Sequence ID/Qc Batch ID: LB137295,LB137295,

Standard ID :
MP85156,MP87031,MP87032,MP87033,MP87034,MP87035,MP87036,MP87038,MP87040,MP87042,MP87043,MP87044,MP87045,MP87046,MP87047,MP87048,MP87049,

Chemical ID :
M5467,M5658,M5748,M5751,M5798,M5799,M5800,M5801,M5814,M5820,M5962,M5969,M5971,M5979,M5985,M5998,M6021,M6023,M6026,M6027,M6028,M6030,M6032,M6058,M6076,M6077,M6128,M6137,M6138,M6140,M6142,M6144,M6145,M6151,M6158,M6159,M6160,M6163,M6164,M6165,M6171,M6174,M6176,M6177,M6178,M6179,M6180,M6181,M6182,M6184,M6187,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP85156	04/07/2025	10/08/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 1250.00000ml of M6151 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP87031	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6187 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP87032	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5820 + 5.00000ml of M5969 + 5.00000ml of M5971 + 5.00000ml of M5998 + 5.00000ml of M6077 + 5.00000ml of M6160 + 5.00000ml of M6174 + 5.00000ml of M6176 + 455.00000ml of MP87031 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP87033	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP87034	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 25.00000ml of MP87032 + 75.00000ml of MP87031 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP87035	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 16.00000ml of MP87032 + 184.00000ml of MP87031 = Final Quantity: 200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP87036	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6140 + 0.05000ml of M6159 + 0.06000ml of M6177 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5971 + 0.10000ml of M6128 + 0.10000ml of M6176 + 0.15000ml of M5800 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6027 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6160 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5979 + 1.00000ml of M6138 + 1.00000ml of M6142 + 1.00000ml of M6144 + 1.00000ml of M6171 + 1.00000ml of M6178 + 2.00000ml of M5969 + 88.29000ml of MP87031 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP87038	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 2.00000ml of MP87036 + 98.00000ml of MP87031 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP87040	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 25.00000ml of M6182 + 225.00000ml of MP87031 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP87042	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP87043	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 1.00000ml of M6179 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6187 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP87044	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 200.00000ml of M6187 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4225	LR-1	MP87045	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 11.50000ml of M6138 + 11.50000ml of M6144 + 11.50000ml of M6171 + 15.50000ml of MP87031 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4226	LR-2	MP87046	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 13.50000ml of M6140 + 9.00000ml of M6142 + 9.50000ml of M6159 + 18.00000ml of MP87031 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4163	NEW ICV-060925	MP87047	09/02/2025	10/03/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/04/2025

FROM 0.20000ml of M6058 + 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.60000ml of MP87031 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP87048	09/02/2025	10/03/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 09/04/2025

FROM 0.05000ml of M6076 + 5.00000ml of M6182 + 5.00000ml of M6184 + 39.95000ml of MP87031 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4227	LR-3	MP87049	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 1.15000ml of M6026 + 1.25000ml of M5658 + 1.25000ml of M5748 + 1.50000ml of M6145 + 2.50000ml of M5751 + 2.50000ml of M6128 + 39.85000ml of MP87031 = Final Quantity: 50.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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.	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.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

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CHEMICAL RECEIPT LOG BOOK

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.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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.	57016 / S, 1000 PPM, 125 ml	122923	03/31/2026	03/31/2025 / kareem	06/11/2024 / Jaswal	M5969

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	06/06/2025 / Janvi	07/01/2024 / Jaswal	M5971

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	08/05/2026	08/06/2025 / Janvi	02/22/2024 / Jaswal	M5979

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB727800	07/30/2026	07/30/2025 / Janvi	02/22/2024 / kareem	M5998

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	110923	11/09/2026	12/05/2024 / janvi	08/05/2024 / Jaswal	M6026

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	062024	06/20/2027	06/04/2025 / Janvi	08/05/2024 / Jaswal	M6027

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	V2-MEB746173	01/29/2026	01/29/2025 / JANVI	08/22/2024 / Jaswal	M6058

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	01/01/2026	01/01/2025 / kareem	09/19/2024 / kareem	M6076

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 #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	121824	12/18/2027	04/17/2025 / Janvi	01/13/2025 / Jaswal	M6138

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	011025	01/10/2028	06/25/2025 / Janvi	01/13/2025 / Jaswal	M6140

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	121724	12/17/2027	02/04/2025 / Jaswal	01/13/2025 / Jaswal	M6145

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	02/17/2026	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	10/09/2025	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	03/24/2025 / kareem	10/18/2024 / kareem	M6160

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-1-125ML / EPA CLP ICP Verification Standard1	V2-MEB744107	06/08/2026	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6164

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3	V2-MEB749572	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6165

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	011525	01/15/2028	07/15/2025 / Janvi	02/13/2025 / Janvi	M6171

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	V2-MEB742428	07/31/2026	07/31/2025 / Janvi	05/05/2025 / Janvi	M6174

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	092724	09/27/2027	08/06/2025 / Janvi	08/06/2025 / Janvi	M6176

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	031525	03/15/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6177

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	080528	08/05/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6178

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	08/05/2026	08/06/2025 / Janvi	06/02/2024 / Janvi	M6179

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	W2-MEB752149	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6180

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	V2-MEB7433480	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6181

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CHEMICAL RECEIPT LOG BOOK

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	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6182

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	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6184

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	01/28/2026	08/29/2025 / Sagar	08/08/2025 / Sagar	M6187

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

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M6032

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CERTIFIED WEIGHT REPORT:

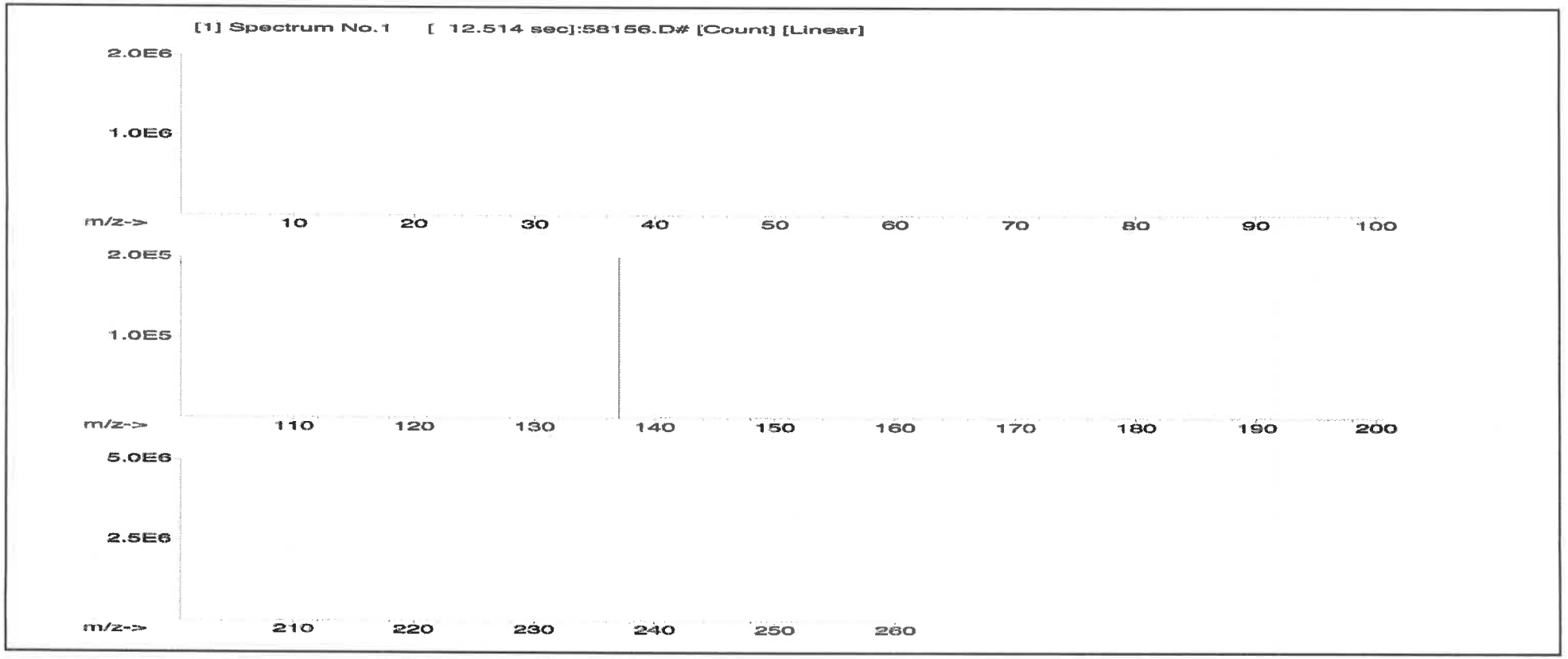
Part Number: 57056
Lot Number: 010924
Description: Barium (Ba)
Expiration Date: 010927
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M6028

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CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

Expiration Date: 070127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.07 ± 0.100 Flask Uncertainty

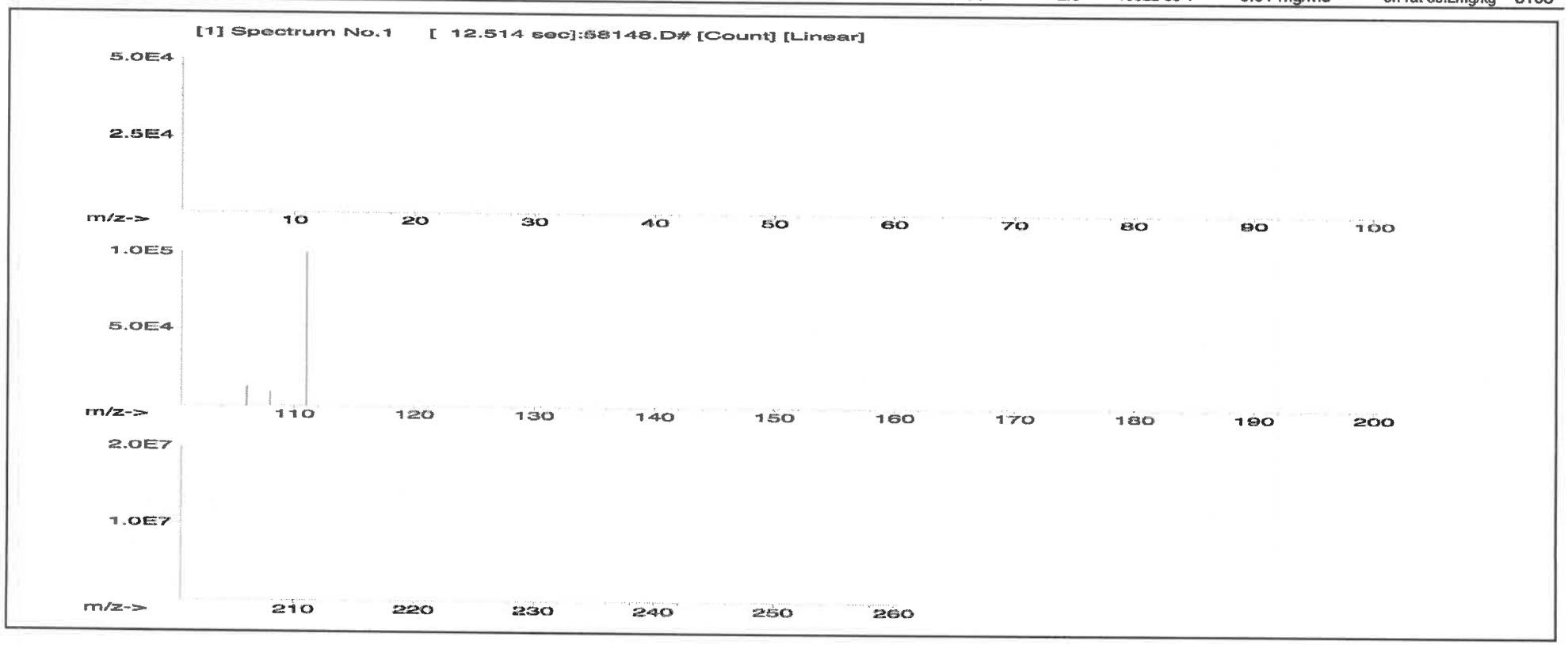
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance 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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M6026

R: 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

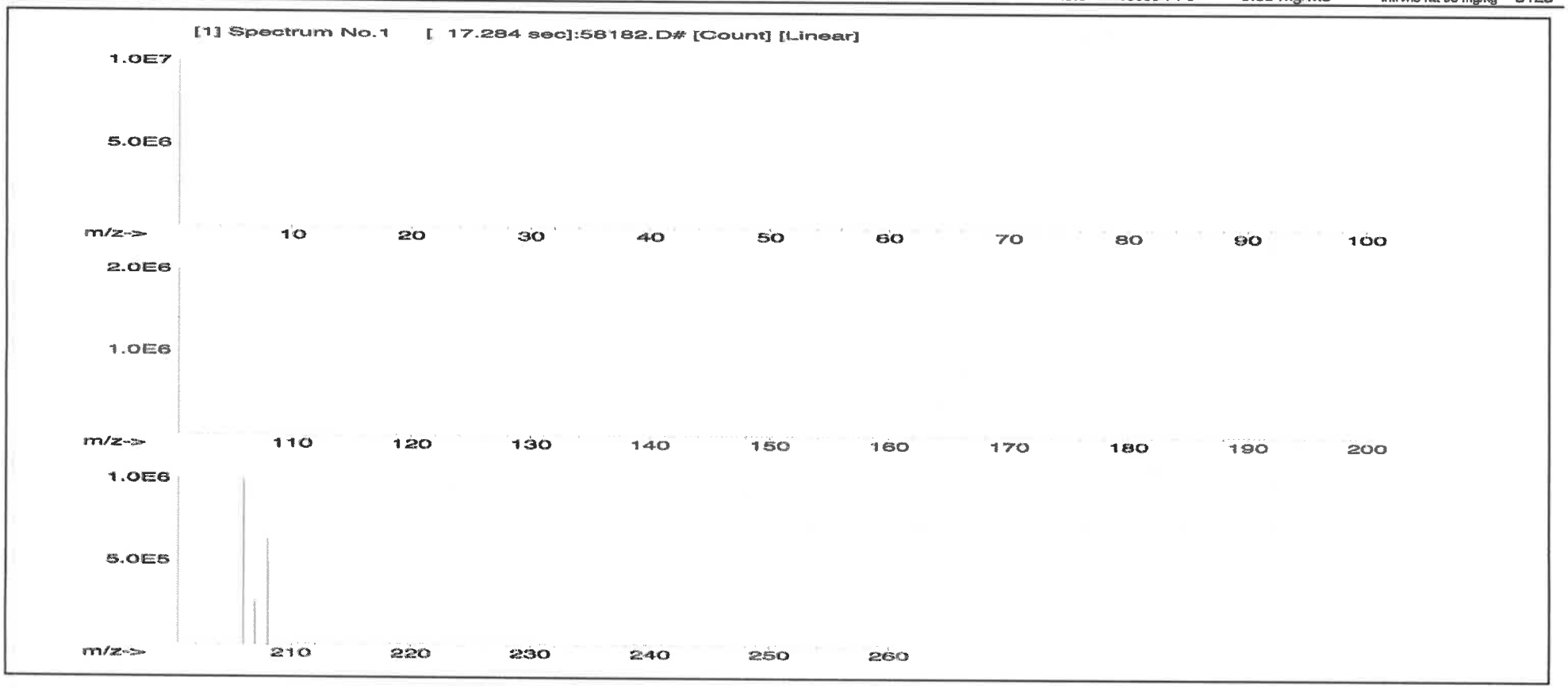
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

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	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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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.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5467 R: 03/01/23 (LA)

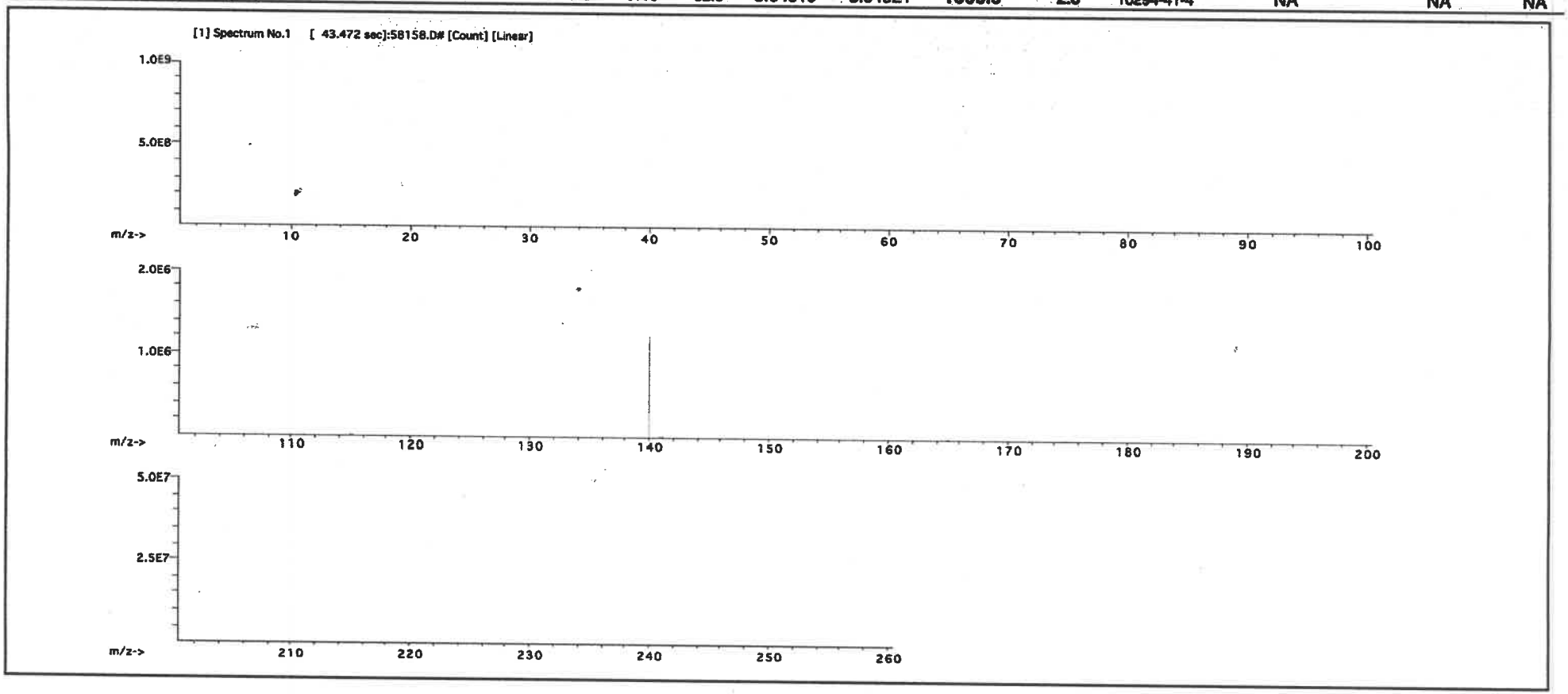
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CERTIFIED WEIGHT REPORT:

Part Number:	57058		**Lot #**		
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



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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.
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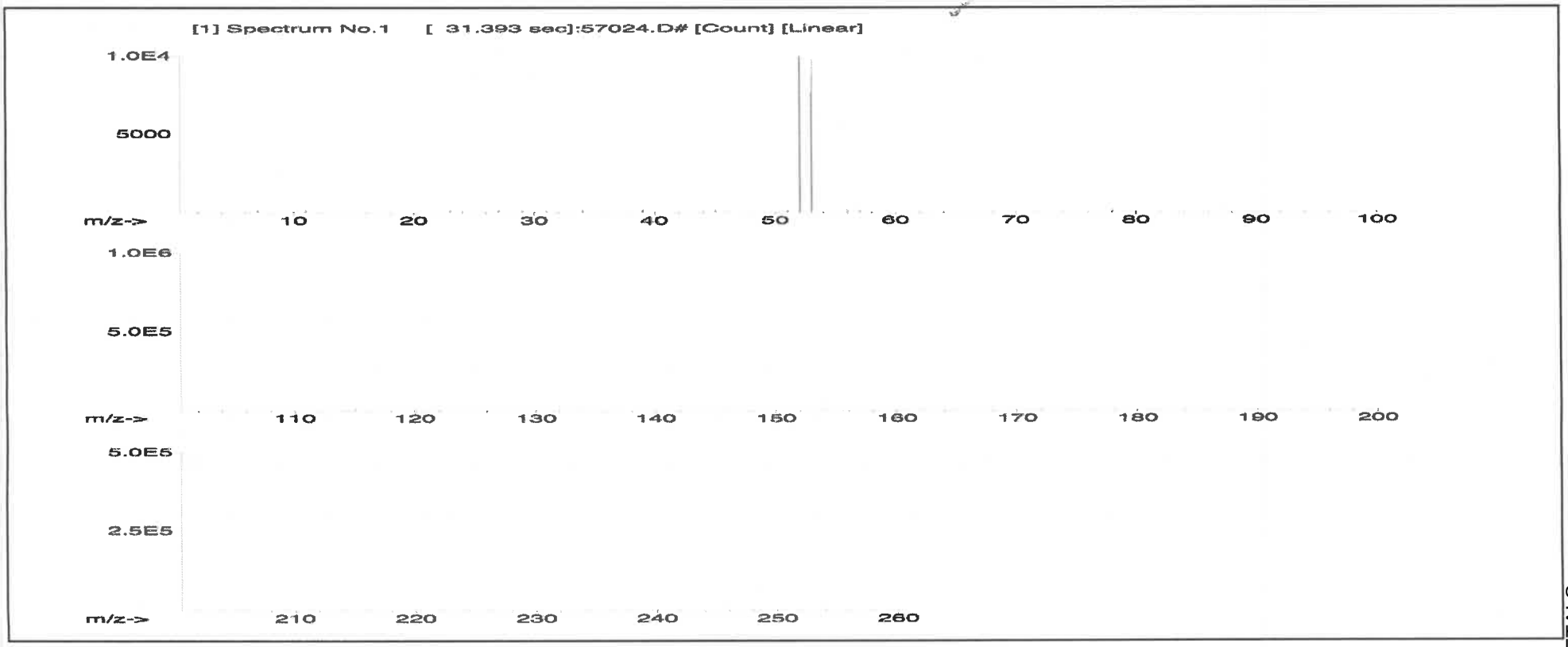
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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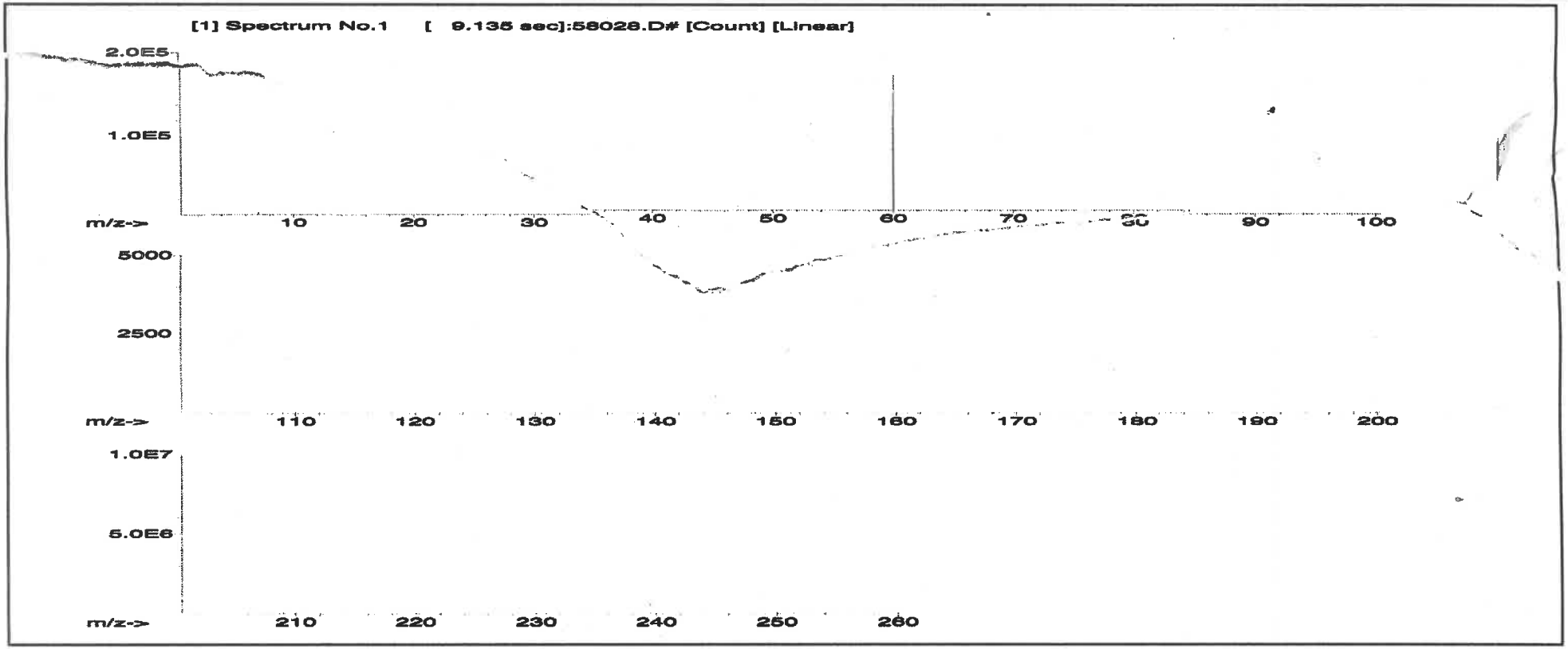
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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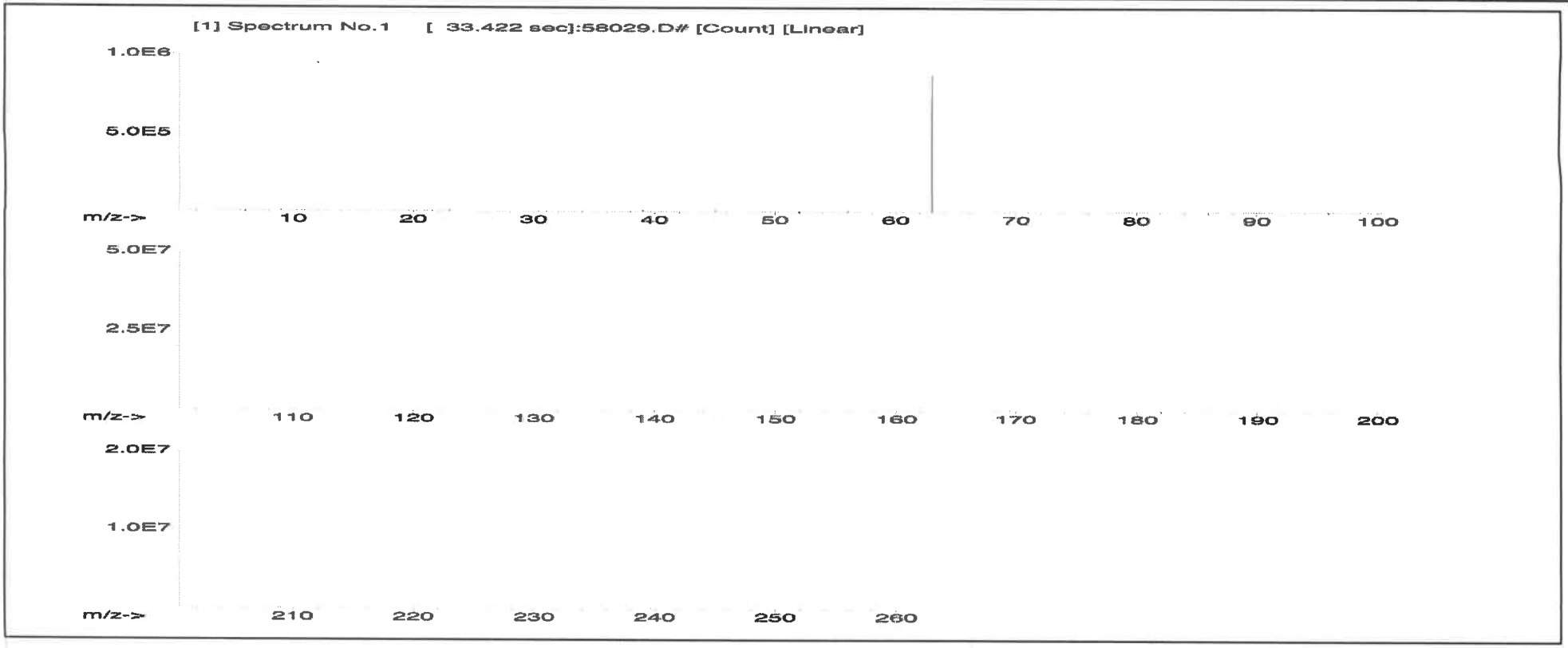
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CERTIFIED WEIGHT REPORT:

Part Number:	**58029**			**Lot #**	**Solvent:**	
Lot Number:	**071723**			21110221	Nitric Acid	
Description:	**Copper (Cu)**					
				2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726					
Recommended Storage:	Ambient (20 °C)					
Nominal Concentration (µg/mL):	**1000**					
NIST Test Number:	6UTB	5E-05	Balance Uncertainty			
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty			

Formulated By:	Benson Chan 071723
Reviewed By:	Pedro L. Rentas 071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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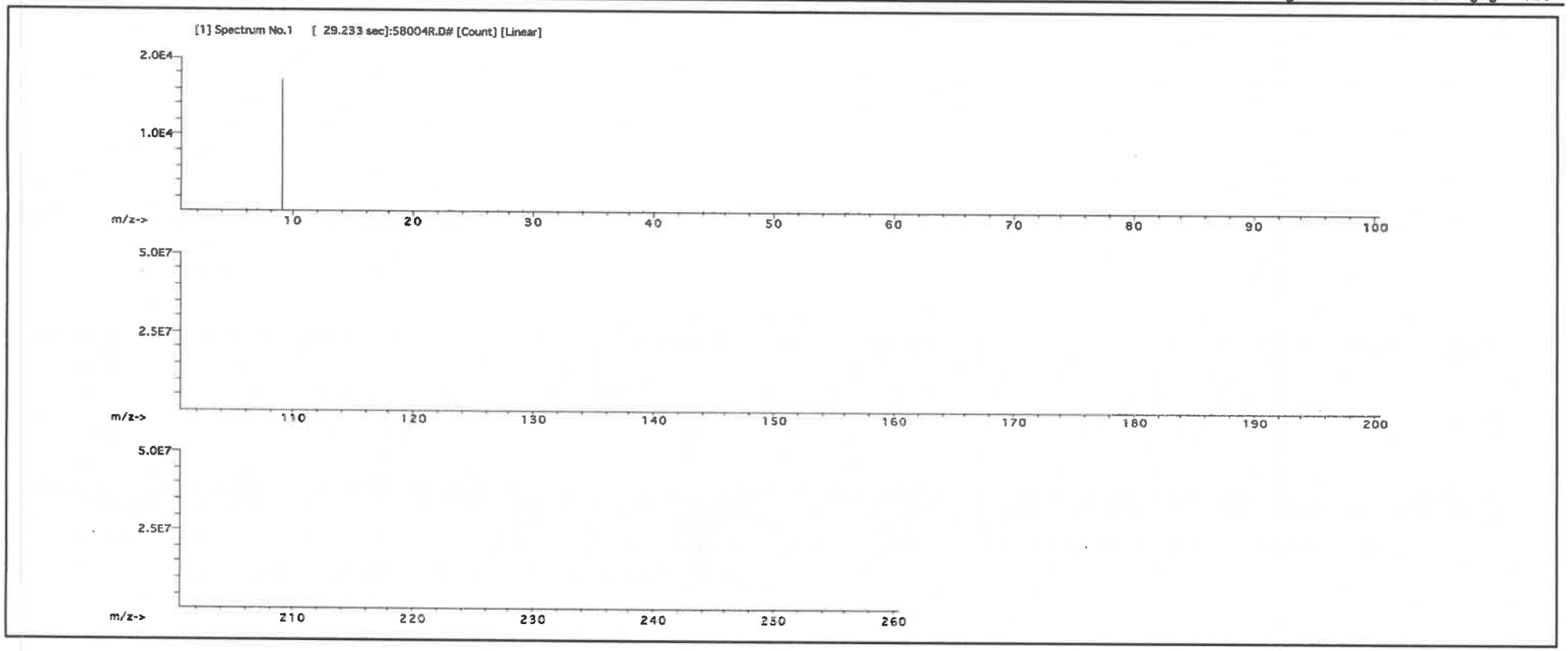
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CERTIFIED WEIGHT REPORT:

		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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

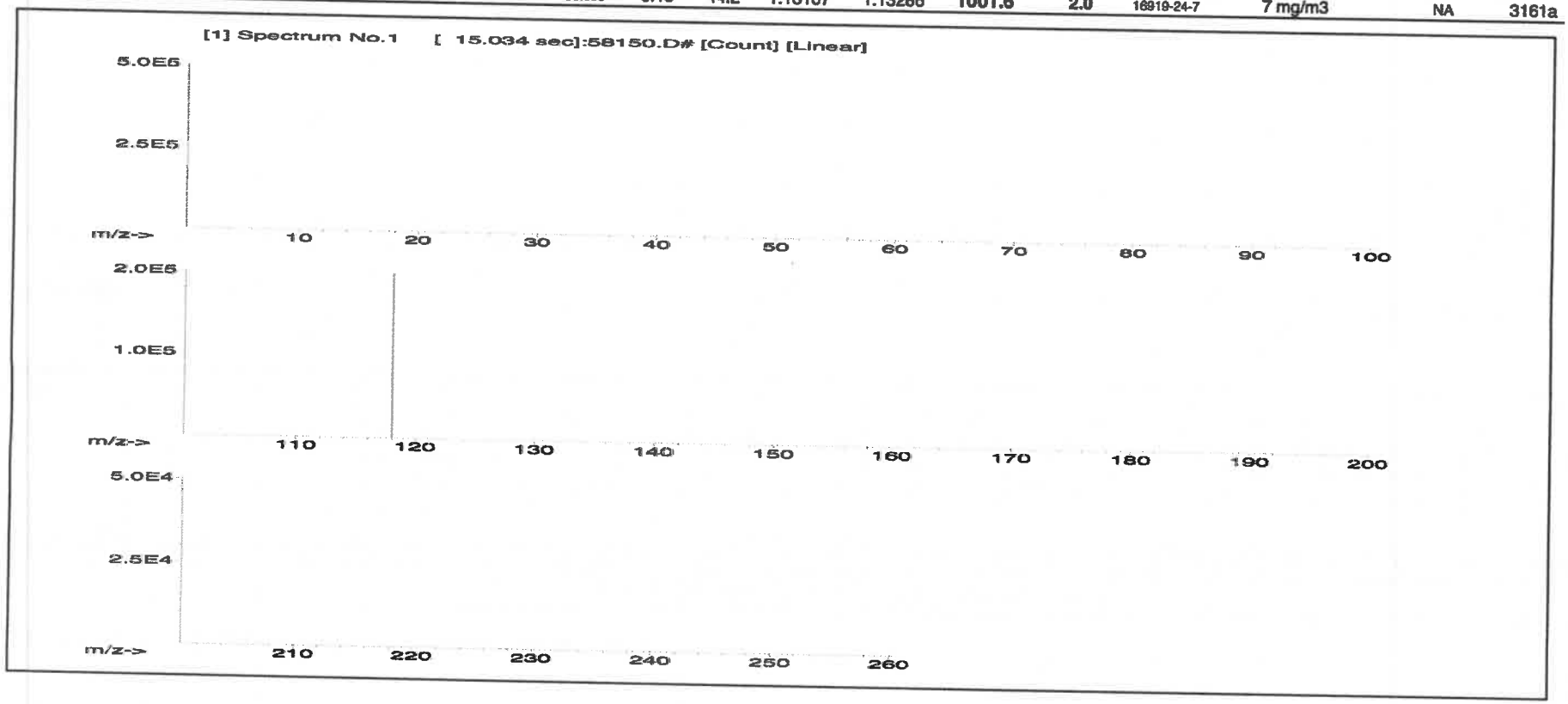
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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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.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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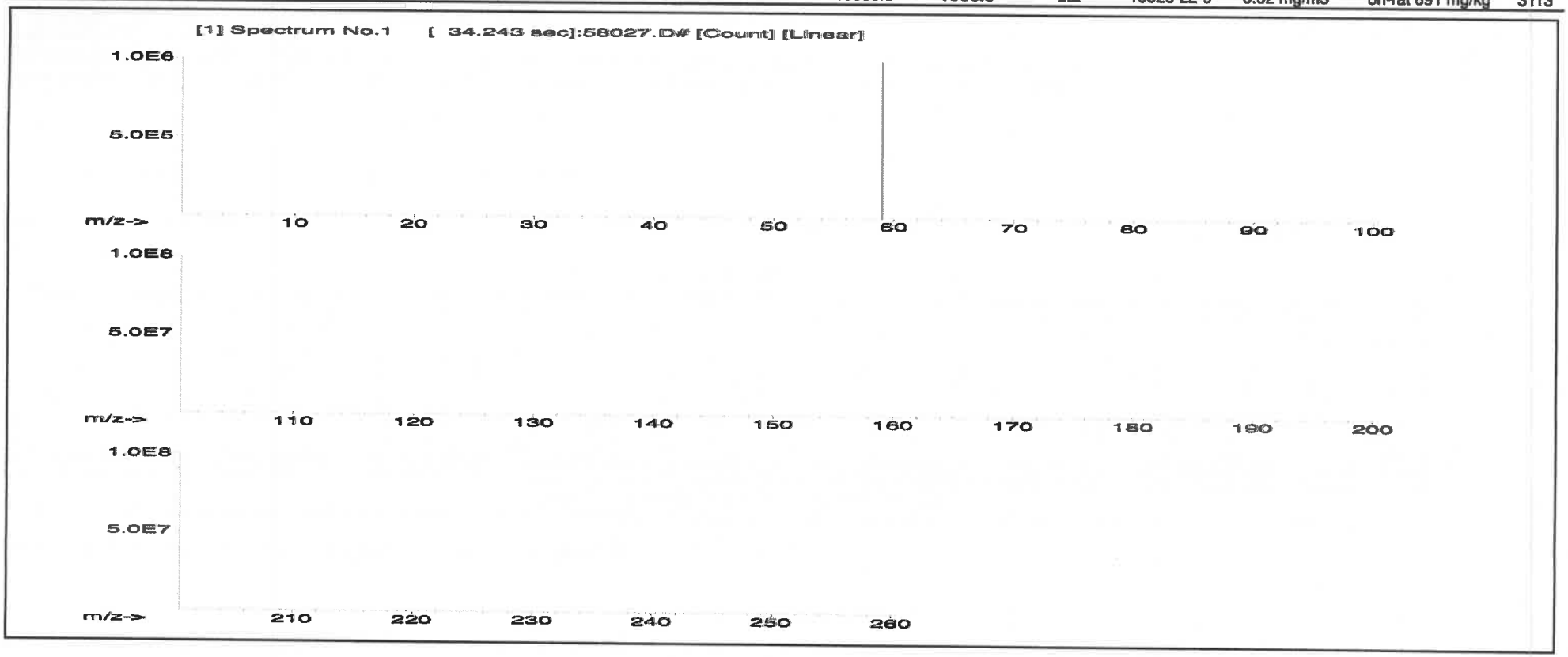
CERTIFIED WEIGHT REPORT:

Part Number:	57027
Lot Number:	091923
Description:	Cobalt (Co)
Expiration Date:	091926
Recommended Storage:	Ambient (20 °C)
Nominal Concentration (µg/mL):	1000
NIST Test Number:	6UTB
Volume shown below was diluted to (mL):	2000.02

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
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



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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.
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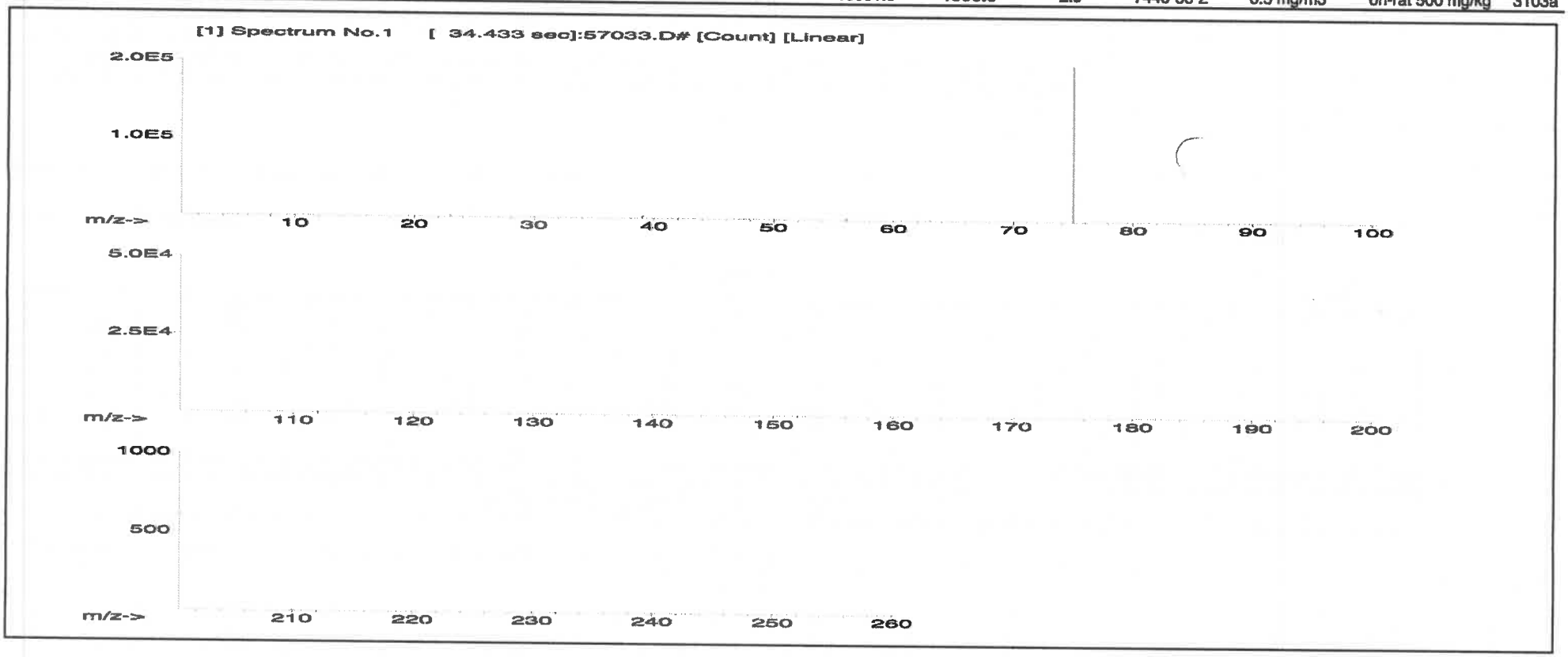
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CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**				
Lot Number:	**111323**	24002546	Nitric Acid		
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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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A: 02/09/24 M.5814

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CERTIFIED WEIGHT REPORT:

Part Number: 57005
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

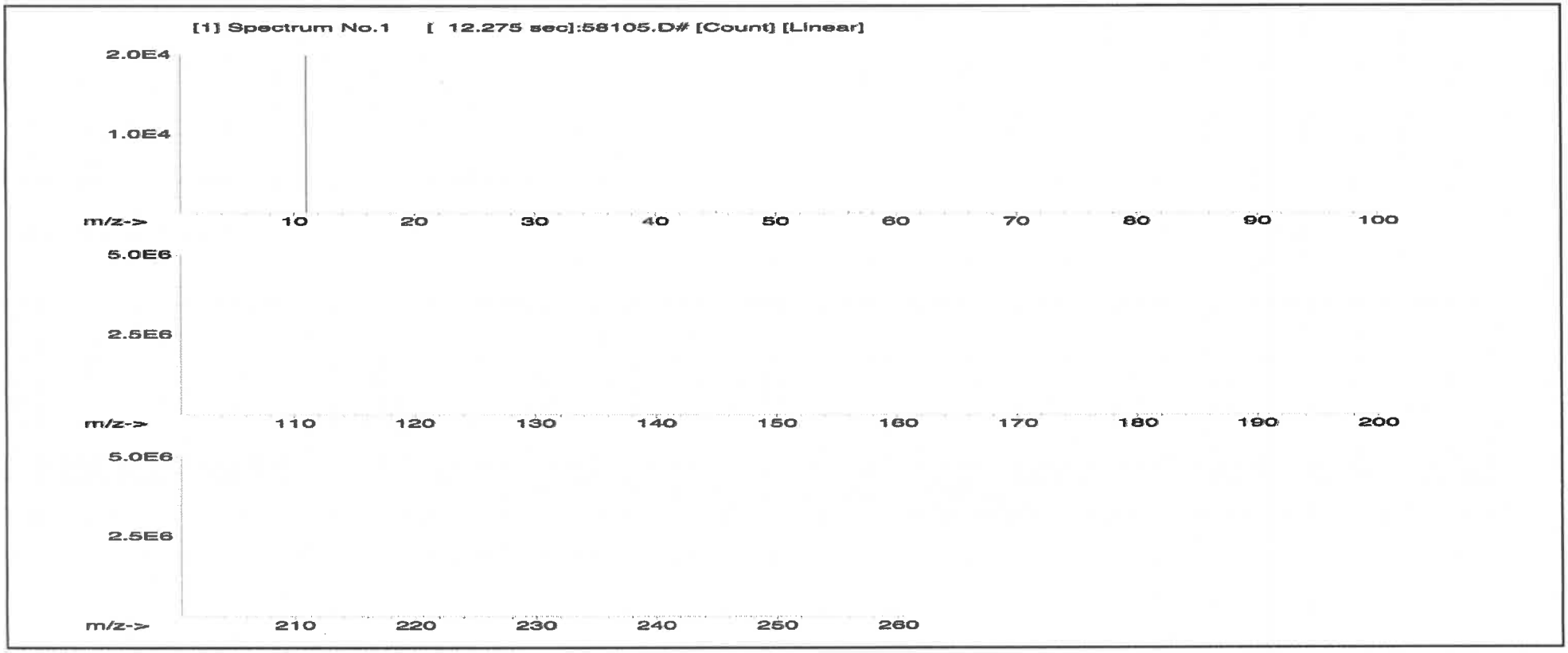
	Lot #			
Solvent:	MKBQ8597V	Ammonium hydroxide		
	2.0%	40.0 (mL)	Ammonium hydroxide	

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



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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.
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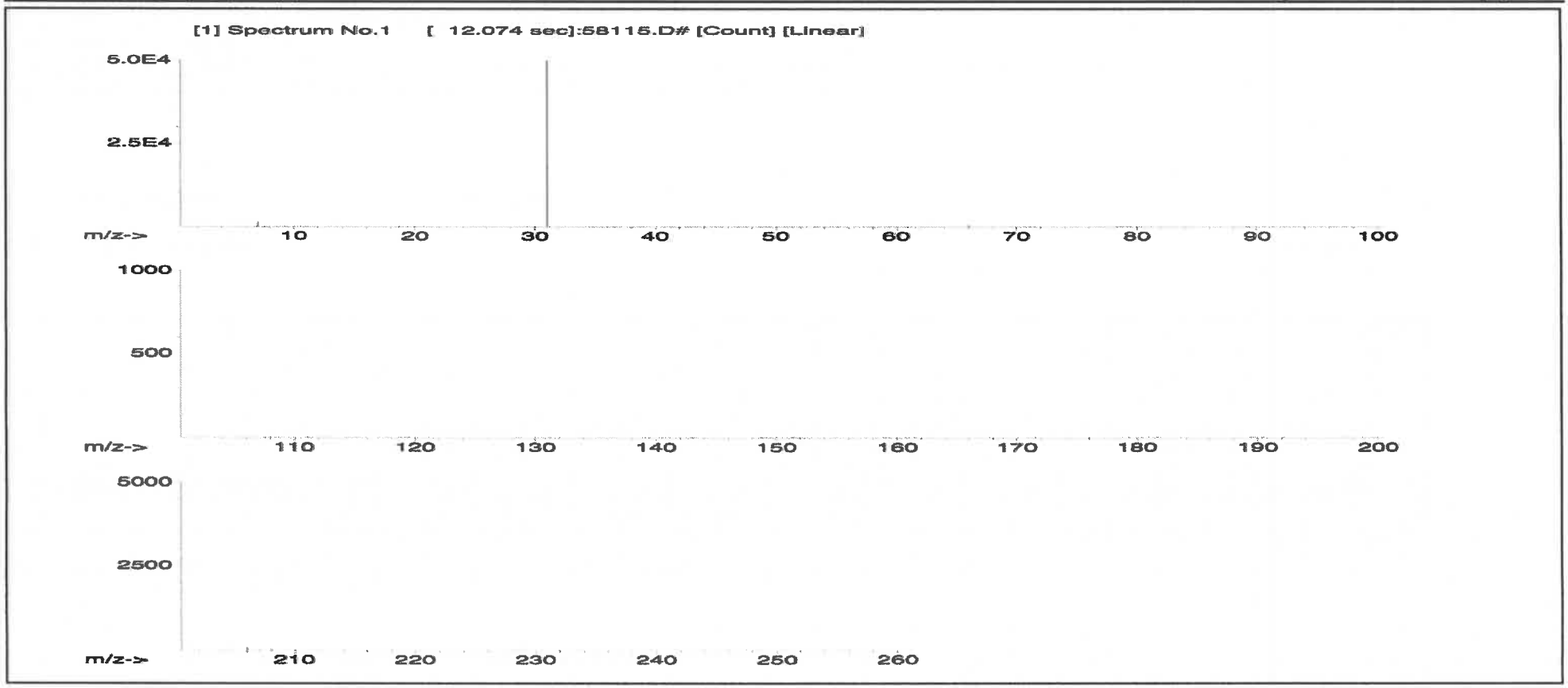
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CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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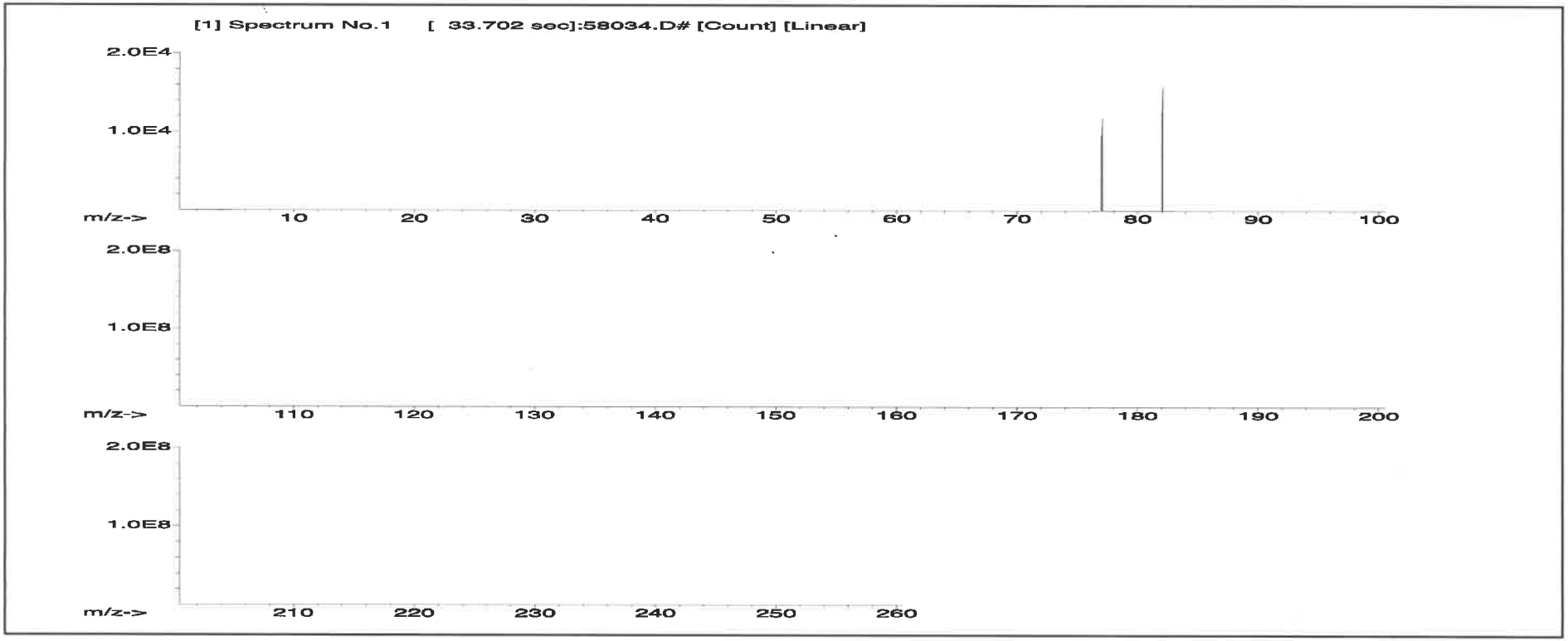
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CERTIFIED WEIGHT REPORT:

		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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5969 R: 06/11/24

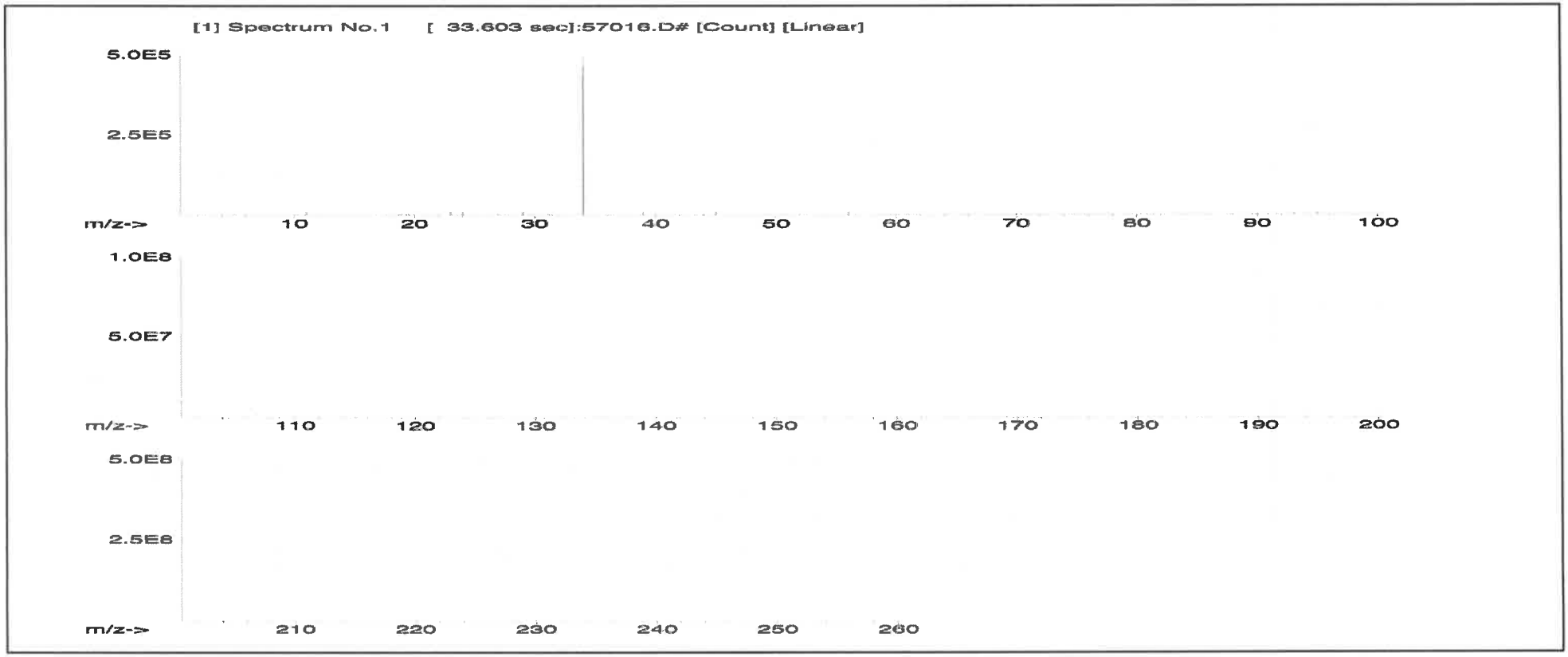
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57016**		**Solvent:**	Lot # 122923 ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05 Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.0	0.06 Flask Uncertainty		

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



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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:

Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11 0.016 Flask Uncertainty

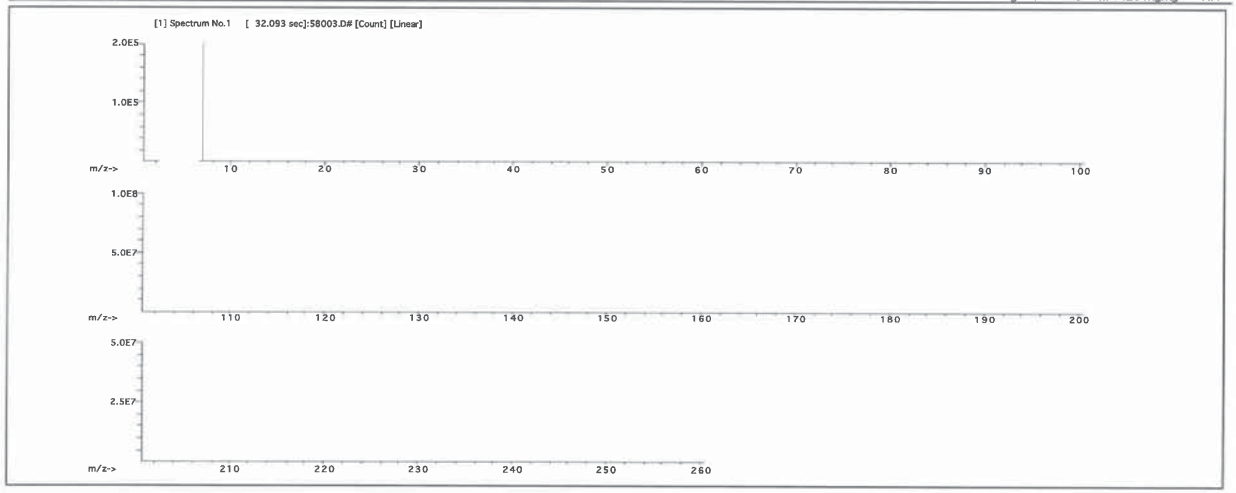
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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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).

Certificate of Analysis

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inorganicventures.com

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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 ($\pm$) = $U_{CRM/RM} = k\,(u^2_{Char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

$u_{Char} = [\Sigma(w_i)^2\,(u_{Char\ i})^2]^{½}$ 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

k = coverage factor = 2

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:

$$X_{CRM/RM} = (\Sigma x_a)\,(u_{Char\ a})$$

X_a = mean of Assay Method A with

$u_{Char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\,(u^2_{Char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

$u_{Char\ a}$ = 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

k = coverage factor = 2

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

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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	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



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Certificate of Analysis

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R: 2/22/24
MS-997

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB727800
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 7 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.2 µg/mL**
Lead, Pb	**1 000 ± 4 µg/mL**	**Selenium, Se**	**1 000 ± 6 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.042 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/(u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i}^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 21, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 21, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746172
Matrix:	3% (v/v) 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: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 12, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 12, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO_3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 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



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Certificate of Analysis

M6074
M6075
M6076
M6077

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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.

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- 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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

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11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

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12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

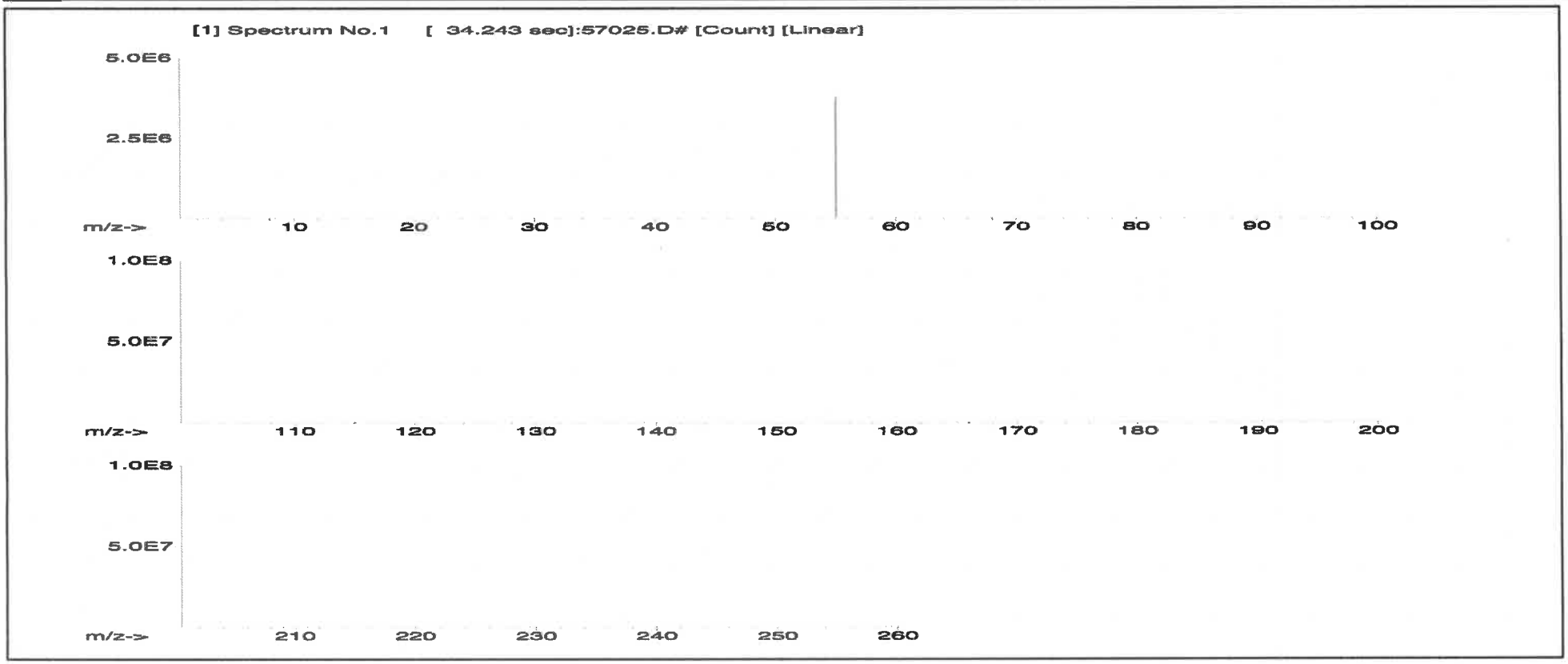
R->1/13/25
M6128

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



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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).

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Certificate of Analysis

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M6137 R→10/3/24

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	V2-SI744713
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon
Starting Material:	Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL

Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**999 ± 5 µg/mL** ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546
Assay Method #2	**1000 ± 7 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 10, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
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www.absolutestandards.com

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M6138
R->1/13/25

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 121824
Description: Calcium (Ca)

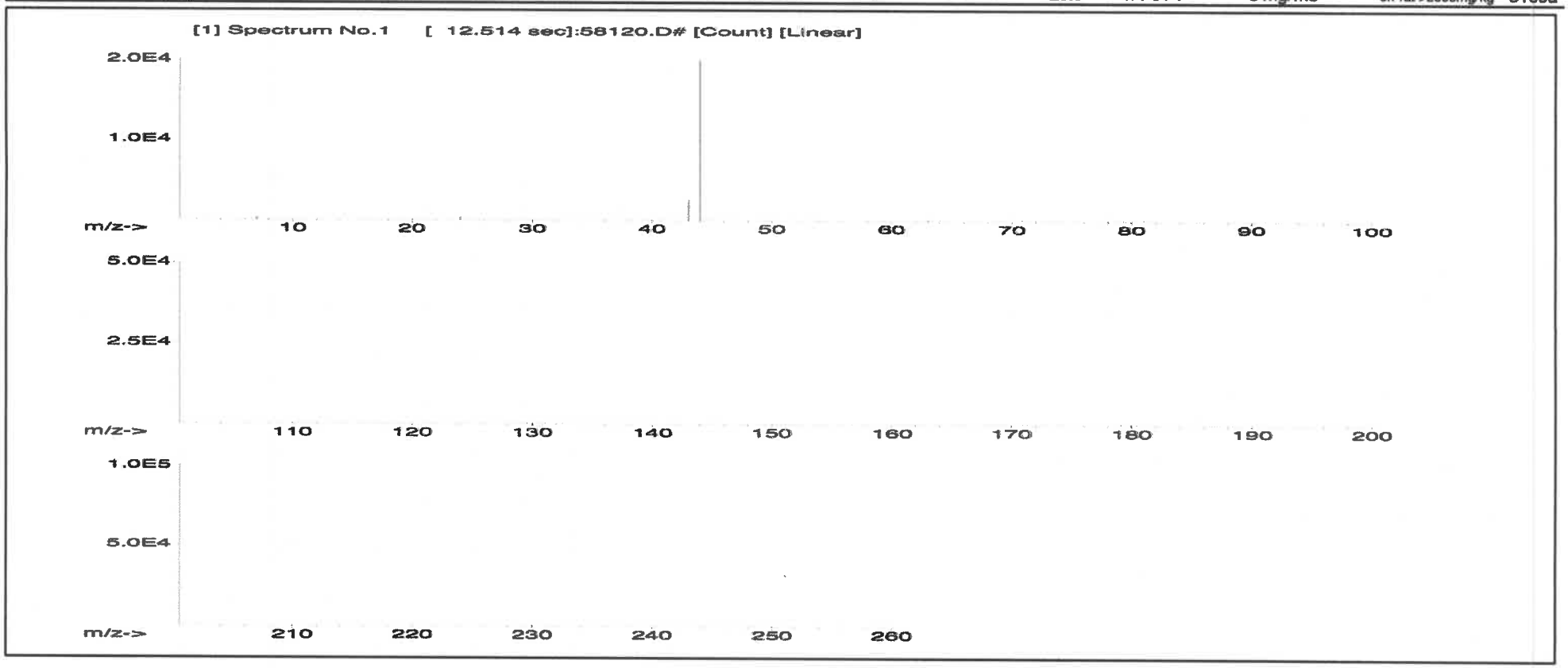
Expiration Date: 121827
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.1 0.15 Flask Uncertainty

		Lot #		
Solvent:	24012496	Nitric Acid		
2%	80.0 (mL)	Nitric Acid		
			5E-05	Balance Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 121824

Pedro Rentas
Reviewed By: Pedro L. Rentas 121824

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD03203B3	10000	99.999	0.10	39.9	100.2537	100.2677	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	30	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Part # **58120** Lot # **121824**

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CERTIFIED WEIGHT REPORT:

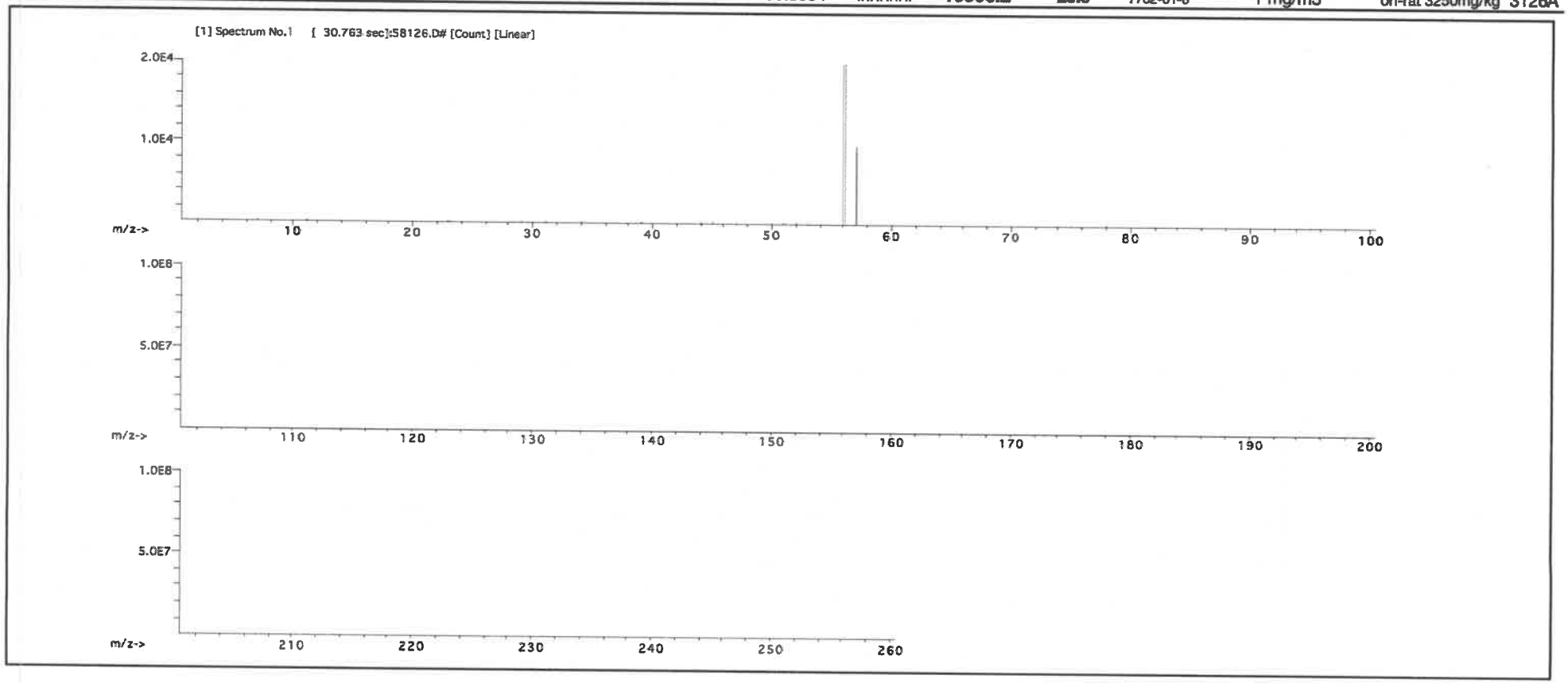
Part Number: 58126 R->1|B|2S
Lot Number: 011025
Description: Iron (Fe) M6140
Expiration Date: 011028
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24012496	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Formulated By:	Benson Chan	011025
Reviewed By:	Pedro L. Rentas	011025

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)	IN028	FED082023A1	10000	99.999	0.10	13.0	153.8534	######	**10000.2**	**20.0**	7782-61-8	1 mg/m3	orl-rat 3250mg/kg	3126A



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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	T	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

R-> 1/13/25

Part Number: 57119
Lot Number: 103024
Description: Potassium (K)

M6141
M6142
M6143

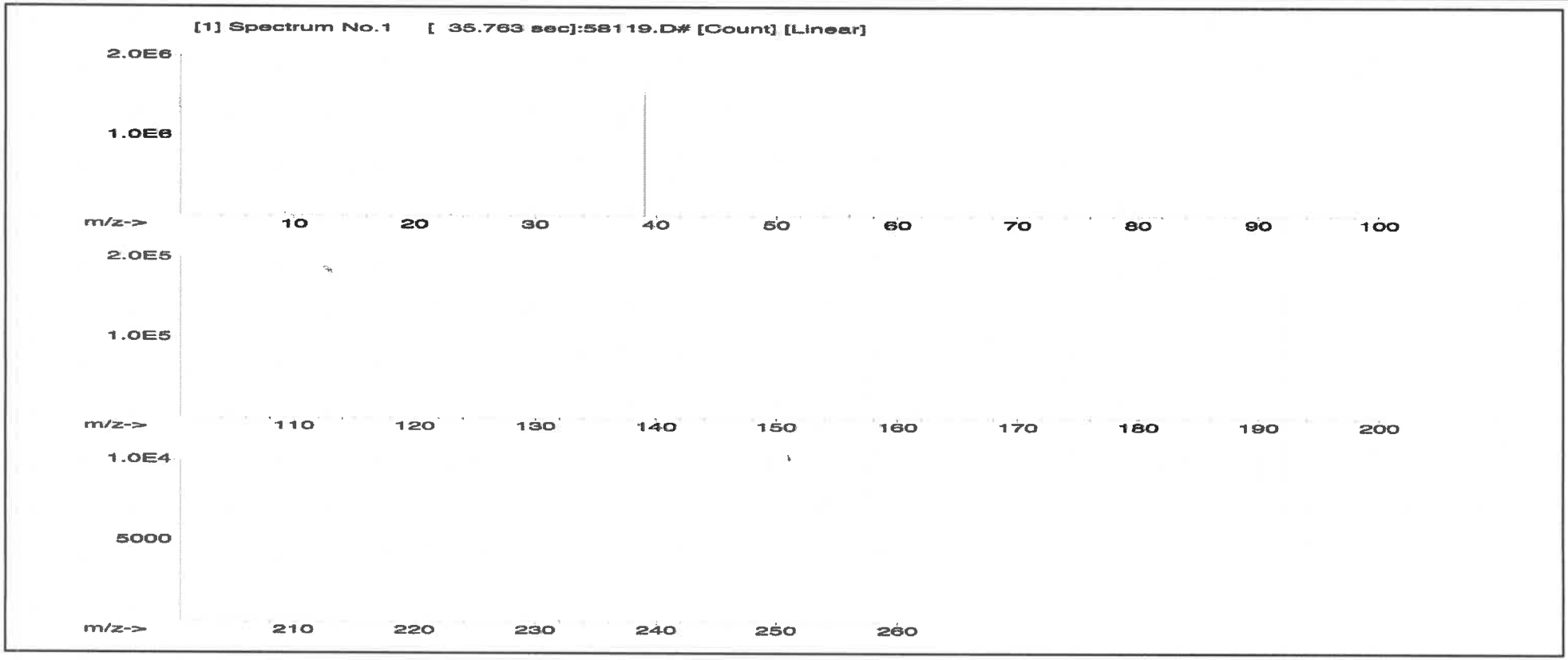
Expiration Date: 103027
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

		Lot #	
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.1	0.15	Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	103024
Reviewed By:	Pedro L. Rentas	103024

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD062022A1	10000	99.999	0.10	37.7	106.1040	######	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3750 mg/kg	3141a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

R->1/13/25

Part Number: 58111
Lot Number: 072424
Description: Sodium (Na)

M6144

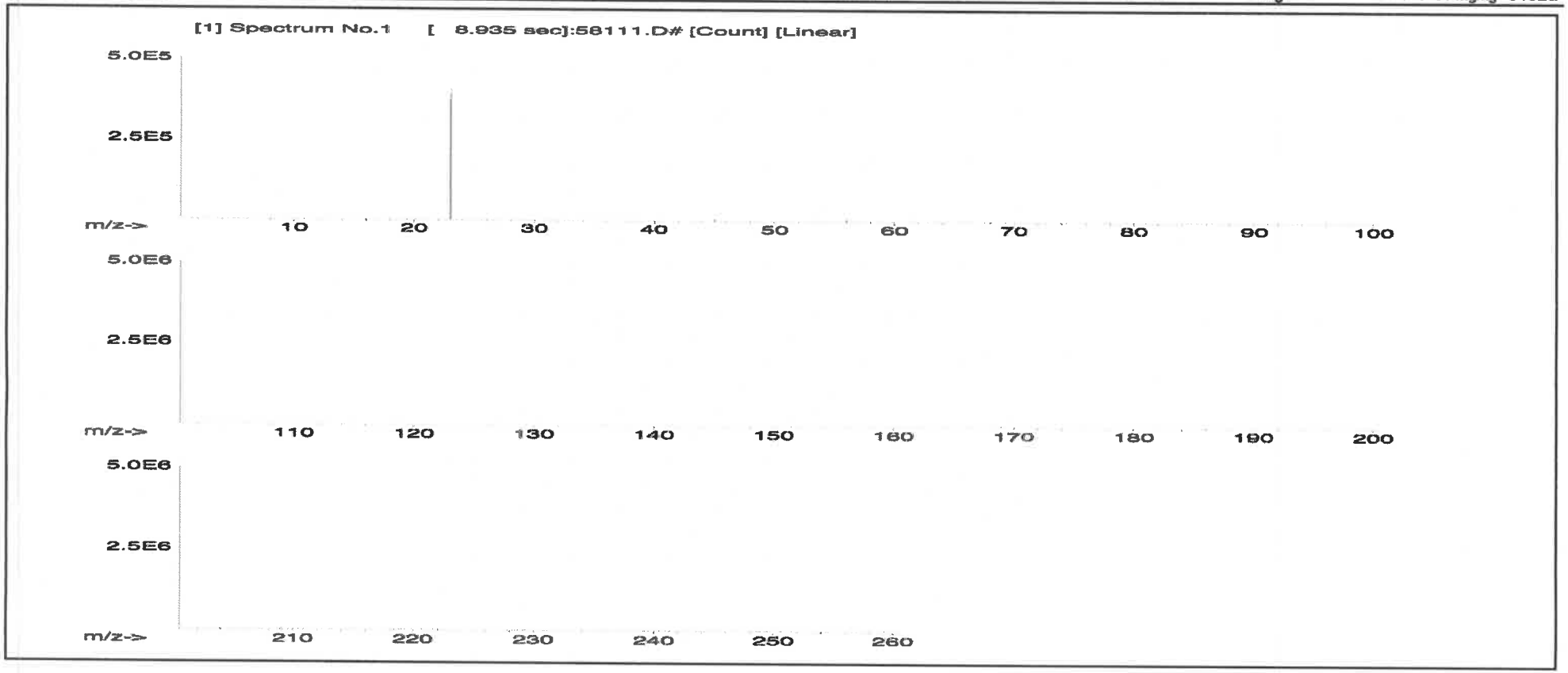
Expiration Date: 072427
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.2

	Lot #	
Solvent:	24002546	Nitric Acid
2%	80.0 (mL)	Nitric Acid
5E-05	Balance Uncertainty	
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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

R → 1/13/25

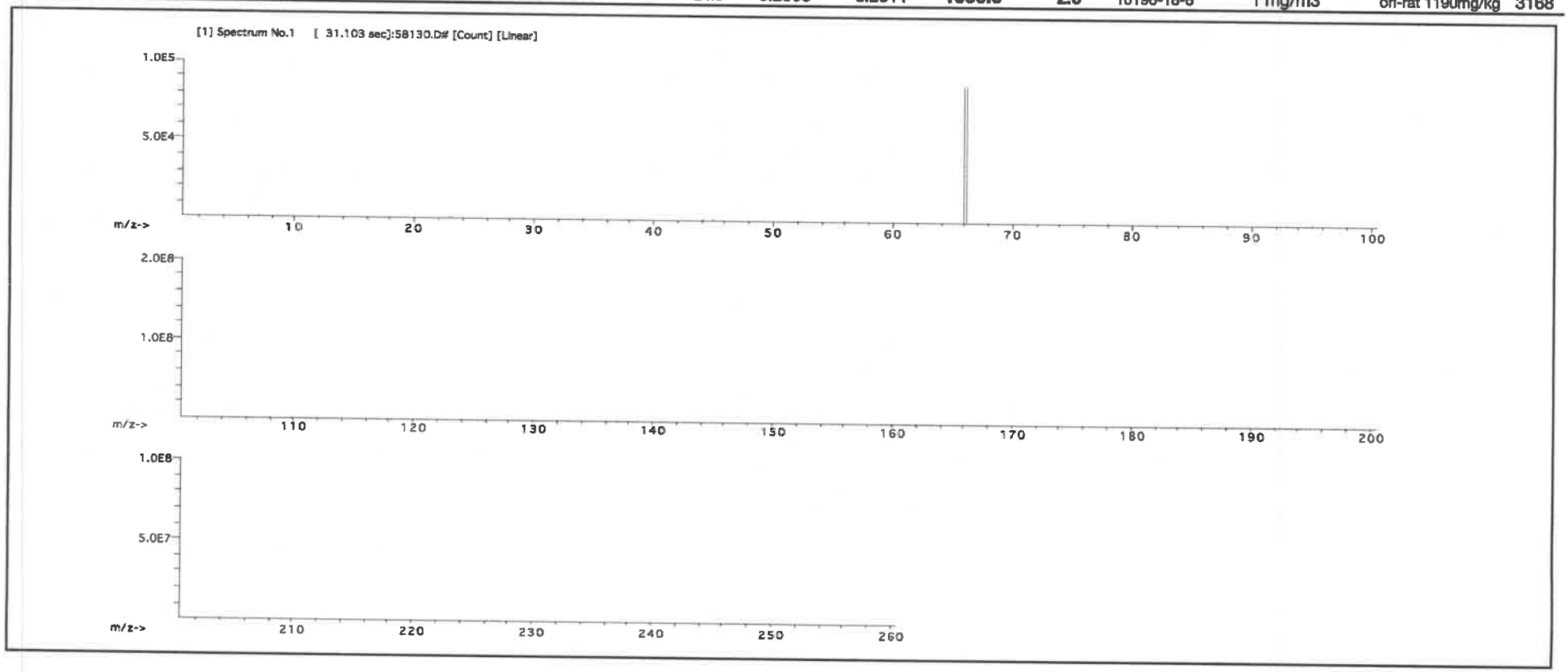
M6145

Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

				Lot #	
Solvent:			24012496	Nitric Acid
	2%		40.0 (mL)	Nitric Acid
		5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty	

Aleah O'Brady		
Formulated By:	Aleah O'Brady	121724
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	ori-rat 1190mg/kg	3168



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R-> 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R-02102/2025

M-6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

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Certificate of Analysis

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info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-1
Lot Number:	V2-MEB744107
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 000 µg/mL ea: Aluminum, Barium, 500 µg/mL ea: Iron, 250 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 125 µg/mL ea: Silver, Copper, 100 µg/mL ea: Chromium, 25 µg/mL ea: Beryllium

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
Aluminum, Al	1 000 ± 4 µg/mL	Barium, Ba	1 000 ± 6 µg/mL
Beryllium, Be	24.98 ± 0.12 µg/mL	Calcium, Ca	2 500 ± 8 µg/mL
Chromium, Cr	99.9 ± 0.6 µg/mL	Cobalt, Co	250.2 ± 1.2 µg/mL
Copper, Cu	125.0 ± 0.5 µg/mL	Iron, Fe	500.0 ± 2.2 µg/mL
Magnesium, Mg	2 500 ± 11 µg/mL	Manganese, Mn	249.9 ± 1.1 µg/mL
Nickel, Ni	250.0 ± 1.2 µg/mL	Potassium, K	2 500 ± 11 µg/mL
Silver, Ag	125.0 ± 0.6 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Vanadium, V	250.0 ± 1.1 µg/mL	Zinc, Zn	249.9 ± 1.1 µg/mL

Density: 1.081 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
Cu	ICP Assay	3114	120618
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	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP 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

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**

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

May 22, 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

- **May 22, 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

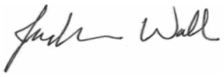
Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-2
Lot Number:	U2-MEB733713
Matrix:	3% (w/v) Tartaric acid 1% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Antimony

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
Antimony, Sb	**500.0 ± 2.8 µg/mL**		

Density: 1.017 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Sb	ICP Assay	3102a	140911

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**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 01, 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

- June 01, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

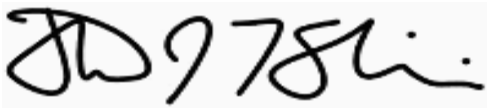
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certificate of Analysis

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inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-3
Lot Number:	V2-MEB749572
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 250 µg/mL ea: Cadmium

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
Arsenic, As	**500.0 ± 3.1 µg/mL**	**Cadmium, Cd**	**250.1 ± 1.1 µg/mL**
Lead, Pb	**500.0 ± 2.3 µg/mL**	**Selenium, Se**	**500.0 ± 3.2 µg/mL**
Thallium, Tl	**500.0 ± 3.0 µg/mL**		

Density: 1.040 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 02, 2025

- 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 02, 2030**

- 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

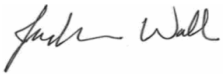
Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



R -> 013125

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:

M 6171

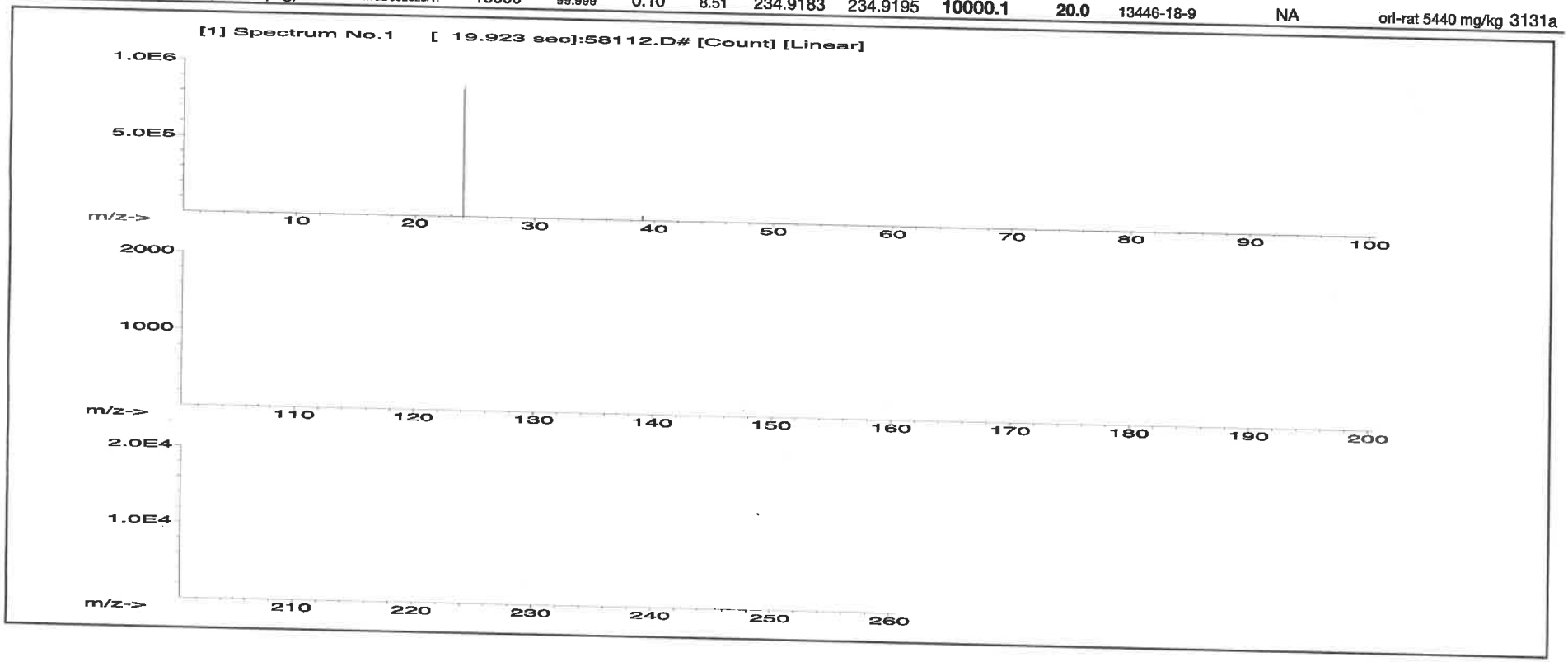
Part Number: 58112
Lot Number: 011525
Description: Magnesium (Mg)

Expiration Date: 011528
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24012496	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	011525
Reviewed By:	Pedro L. Rentas	011525

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	234.9195	**10000.1**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M6174
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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	V2-MEB742428
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	50.03 ± 0.30 µg/mL	Calcium, Ca	5 000 ± 16 µg/mL
Chromium, Cr	200.0 ± 1.1 µg/mL	Cobalt, Co	500.0 ± 2.3 µg/mL
Copper, Cu	250.0 ± 1.1 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 22 µg/mL	Manganese, Mn	499.9 ± 2.2 µg/mL
Nickel, Ni	500.1 ± 2.3 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.117 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
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	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP 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

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**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 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

- March 22, 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:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

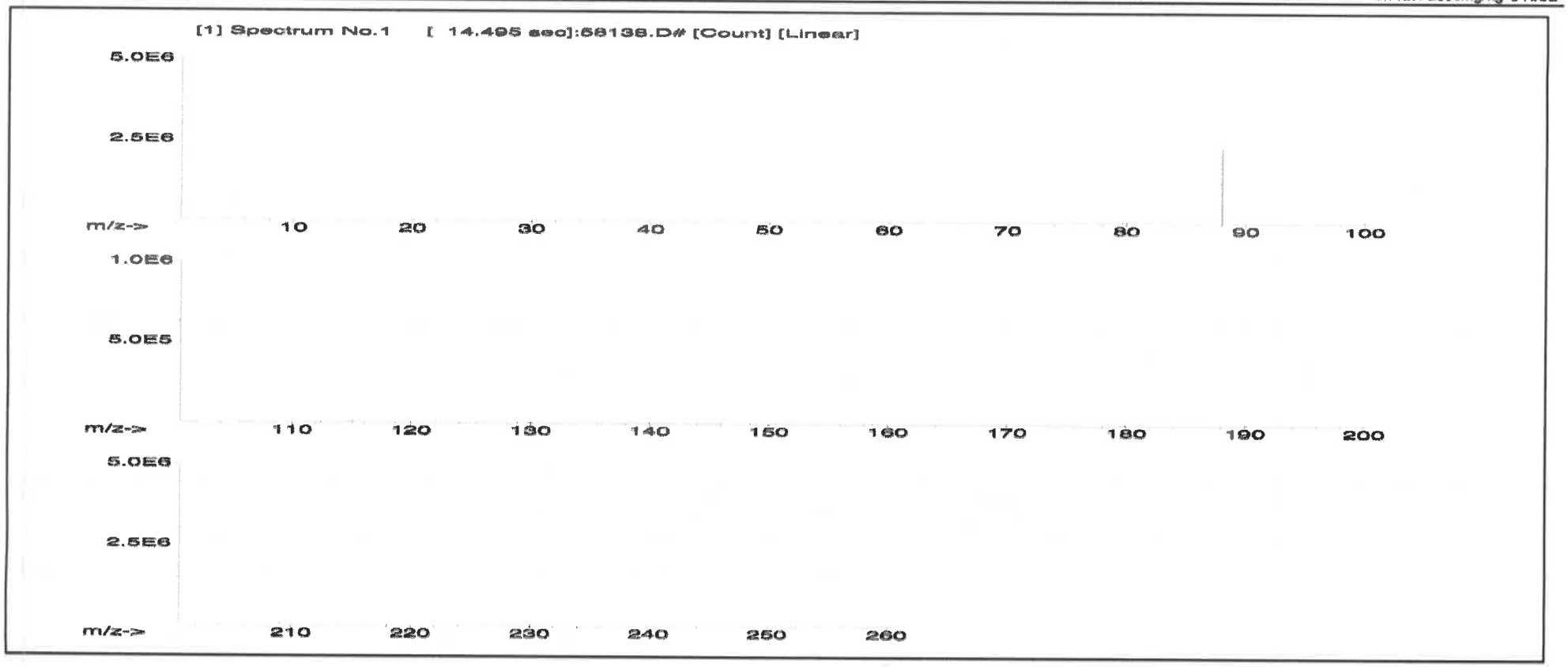
R->8/6/25

M6176

Part Number:	**57038**		**Lot #**		
Lot Number:	**092724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Strontium (Sr)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	092727				
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		

Formulated By:	Benson Chan	092724
Reviewed By:	Pedro L. Rentas	092724

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. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85481	**1000.0**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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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	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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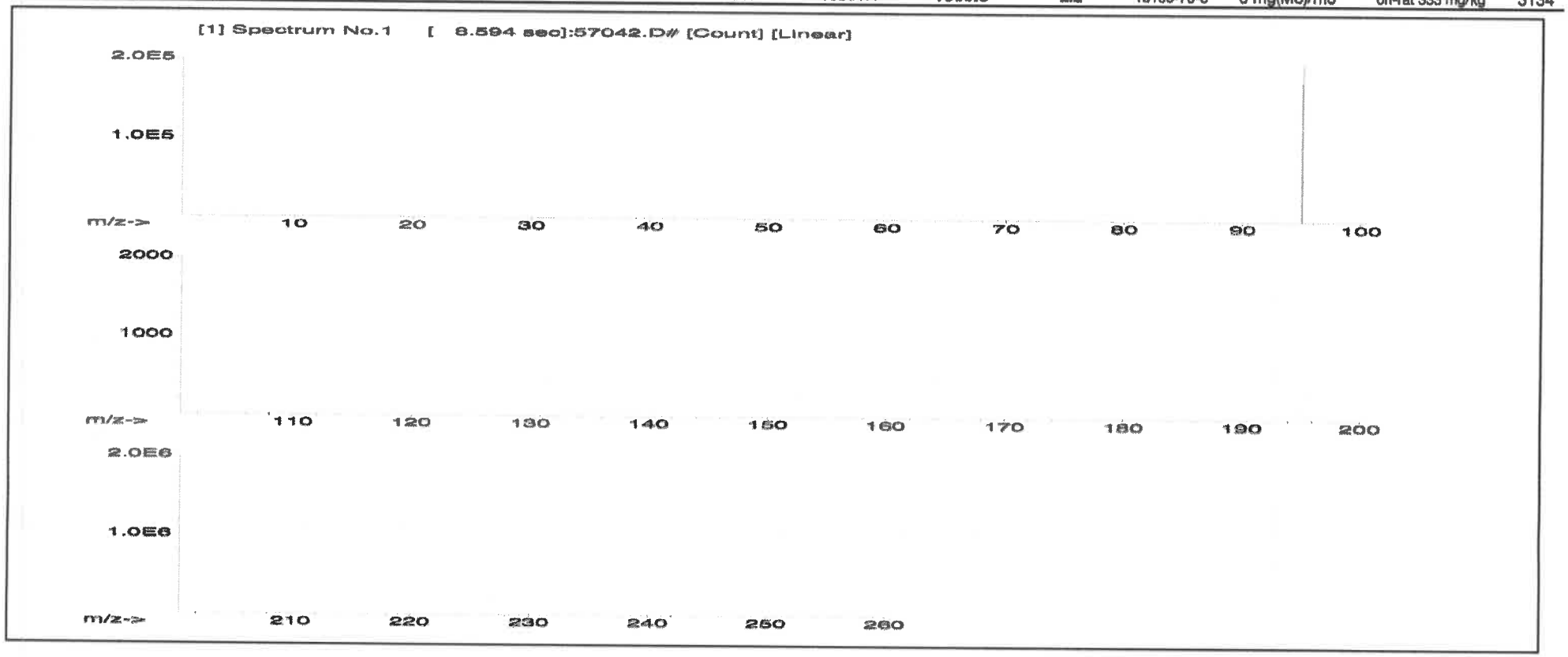
CERTIFIED WEIGHT REPORT:

R→ 8/6/25
M6177

		Lot #	Solvent:		
Part Number:	57042	MKBQ8597V	Ammonium hydroxide		
Lot Number:	080525	080525	ASTM Type 1 Water		
Description:	Molybdenum (Mo)	0.5%	10.0 (mL)	Ammonium hydroxide	
Expiration Date:	080528				
Recommended Storage:	Ambient (15 - 30 °C)				
Nominal Concentration (µg/mL):	1000				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	1999.41	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	080525
Reviewed By:	Pedro L. Rentas	080525

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium molybdate (Mo)	58142	112322	0.1000	200.0	0.084	1000	10001.4	**1000.5**	**2.2**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



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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	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:

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 by an ISO17025 certified organization with weights traceable through NIST to the SI kilogram (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).
Rev 1.0, 2/25/2025

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CERTIFIED WEIGHT REPORT:

R>8/6/28
M6178

			Lot #	
Part Number:	**57082**	**Solvent:**	24014457	Nitric Acid
Lot Number:	**031525**			
Description:	**Lead (Pb)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	031528			
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	0.10	Flask Uncertainty	

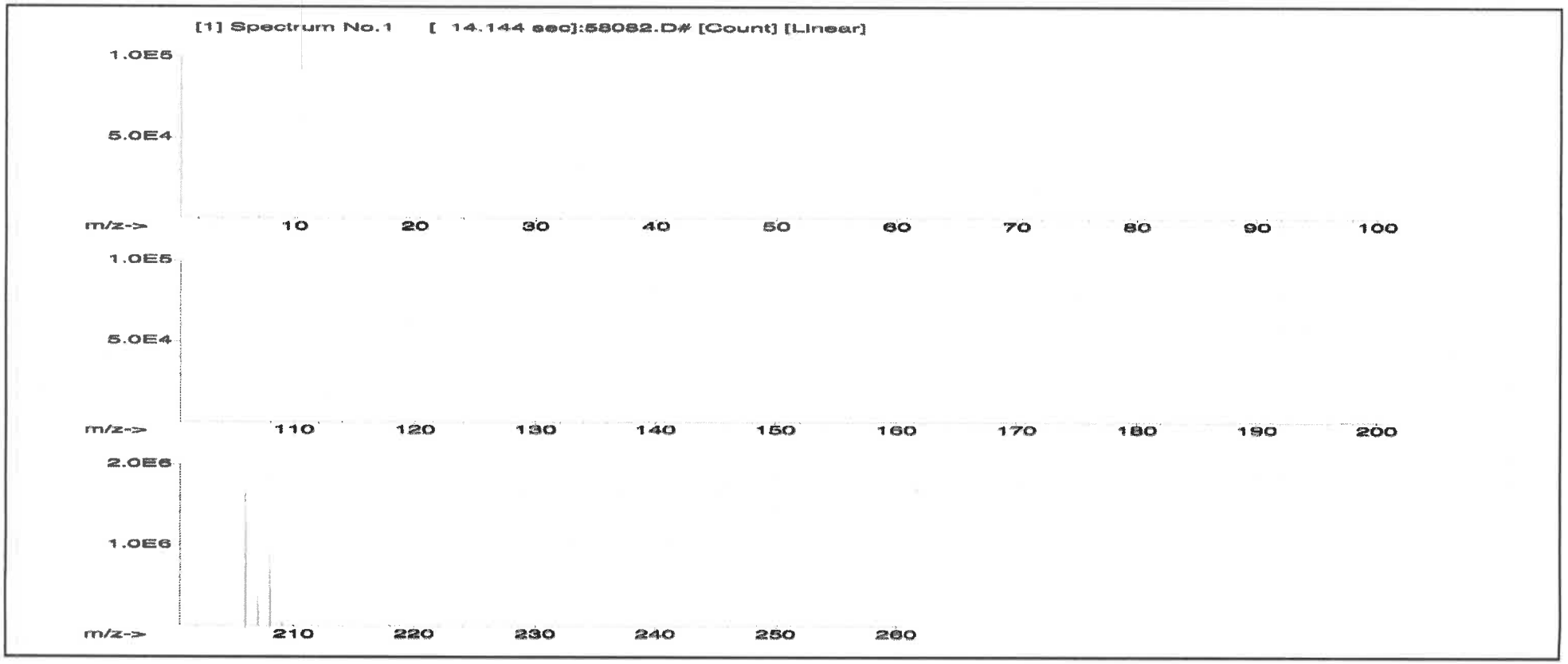
Giovanni Esposito

Formulated By:	Giovanni Esposito	031525

Pedro Rentas

Reviewed By:	Pedro L. Rentas	031525

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	3.20015	3.20067	**1000.2**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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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	<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

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M6179
R -> 6/2/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	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



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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	W2-MEB752149
Matrix:	5% (v/v) HNO3

M6180
R-7/22/25

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	200.2 ± 0.7 µg/mL	Arsenic, As	80.1 ± 0.5 µg/mL
Barium, Ba	20.02 ± 0.12 µg/mL	Beryllium, Be	20.02 ± 0.11 µg/mL
Boron, B	30.02 ± 0.15 µg/mL	Cadmium, Cd	20.04 ± 0.09 µg/mL
Calcium, Ca	100.1 ± 0.3 µg/mL	Cerium, Ce	200.2 ± 1.0 µg/mL
Chromium, Cr	40.02 ± 0.26 µg/mL	Cobalt, Co	20.03 ± 0.09 µg/mL
Copper, Cu	30.03 ± 0.13 µg/mL	Iron, Fe	300.3 ± 1.3 µg/mL
Lead, Pb	100.1 ± 0.5 µg/mL	Lithium, Li	20.03 ± 0.09 µg/mL
Magnesium, Mg	200.2 ± 0.9 µg/mL	Manganese, Mn	19.99 ± 0.09 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.05 ± 0.22 µg/mL
Phosphorus, P	600.5 ± 2.9 µg/mL	Potassium, K	1 001 ± 4 µg/mL
Selenium, Se	200.2 ± 1.1 µg/mL	Silver, Ag	7.52 ± 0.03 µg/mL
Sodium, Na	300.3 ± 1.3 µg/mL	Strontium, Sr	20.02 ± 0.10 µg/mL
Thallium, Tl	200.2 ± 1.0 µg/mL	Vanadium, V	30.02 ± 0.13 µg/mL
Zinc, Zn	20.05 ± 0.09 µg/mL		

Density: 1.037 g/mL (measured at 20 ± 5 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
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	160830
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
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	3152a	200413
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	ICP 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

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° - 25° C to minimize the effects of transpiration. Use at 20° ± 5° 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

April 08, 2025

- 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

- **April 08, 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:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



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

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	V2-MEB743480
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 ± 0.5 µg/mL	Molybdenum, Mo	40.05 ± 0.22 µg/mL
Silica, SiO2	200.3 ± 1.4 µg/mL	Tin, Sn	70.1 ± 0.4 µg/mL
Titanium, Ti	20.03 ± 0.12 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
Sb	ICP Assay	3102a	140911
SiO2	Calculated		See Sec. 4.2
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

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{¼}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 07, 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

- May 07, 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:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Thomas Kozikowski
Stock VS Manager



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.

M6182

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

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

M6184

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

Nitric Acid 69%
CMOS

M6187
R.D :- 08/08/25

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Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	0.1 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	0.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	0.1 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 1 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 1 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

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Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 1 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	1 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 1.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	13 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	5 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

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Material No.: 9606-03
Batch No.: 24H0162012

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

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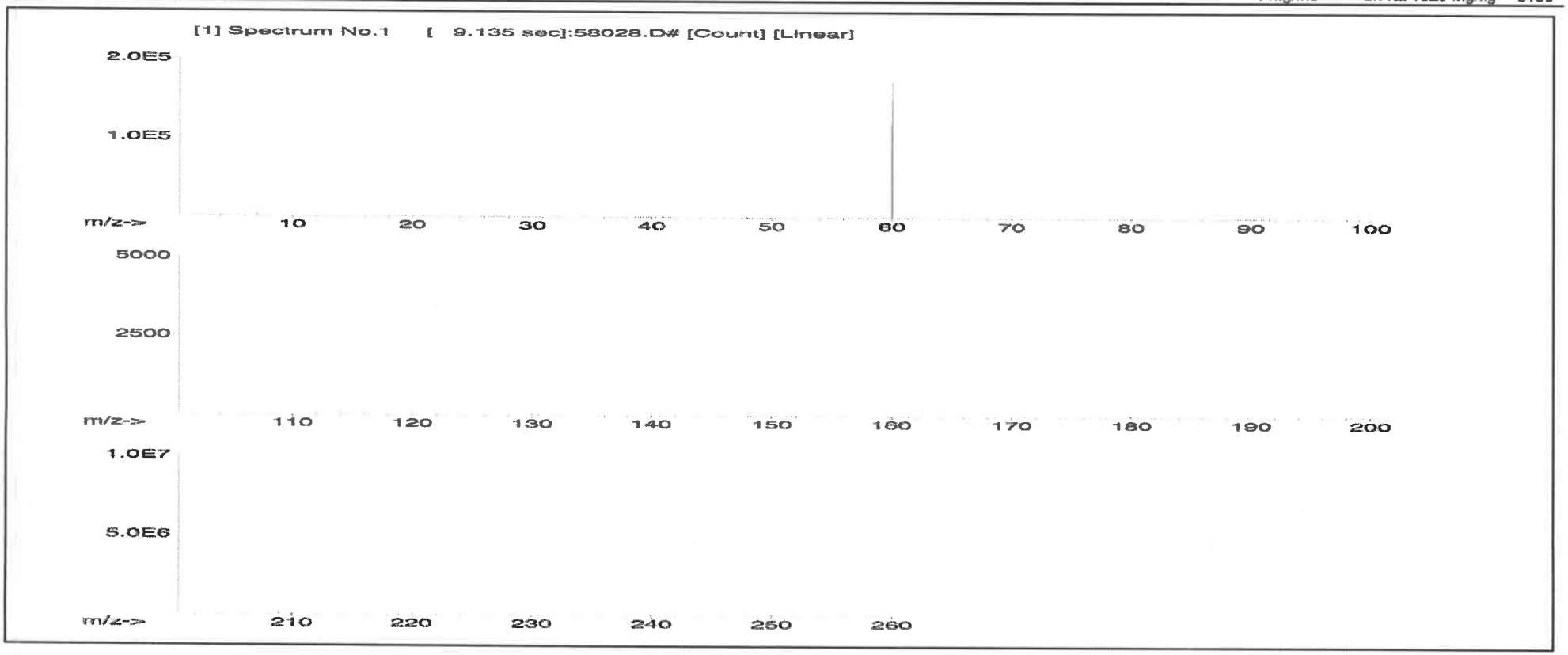
R1 8/05/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**062024**			
Description:	**Nickel (Ni)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062027			
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	062024
Reviewed By:	Pedro L. Rentas	062024

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



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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	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

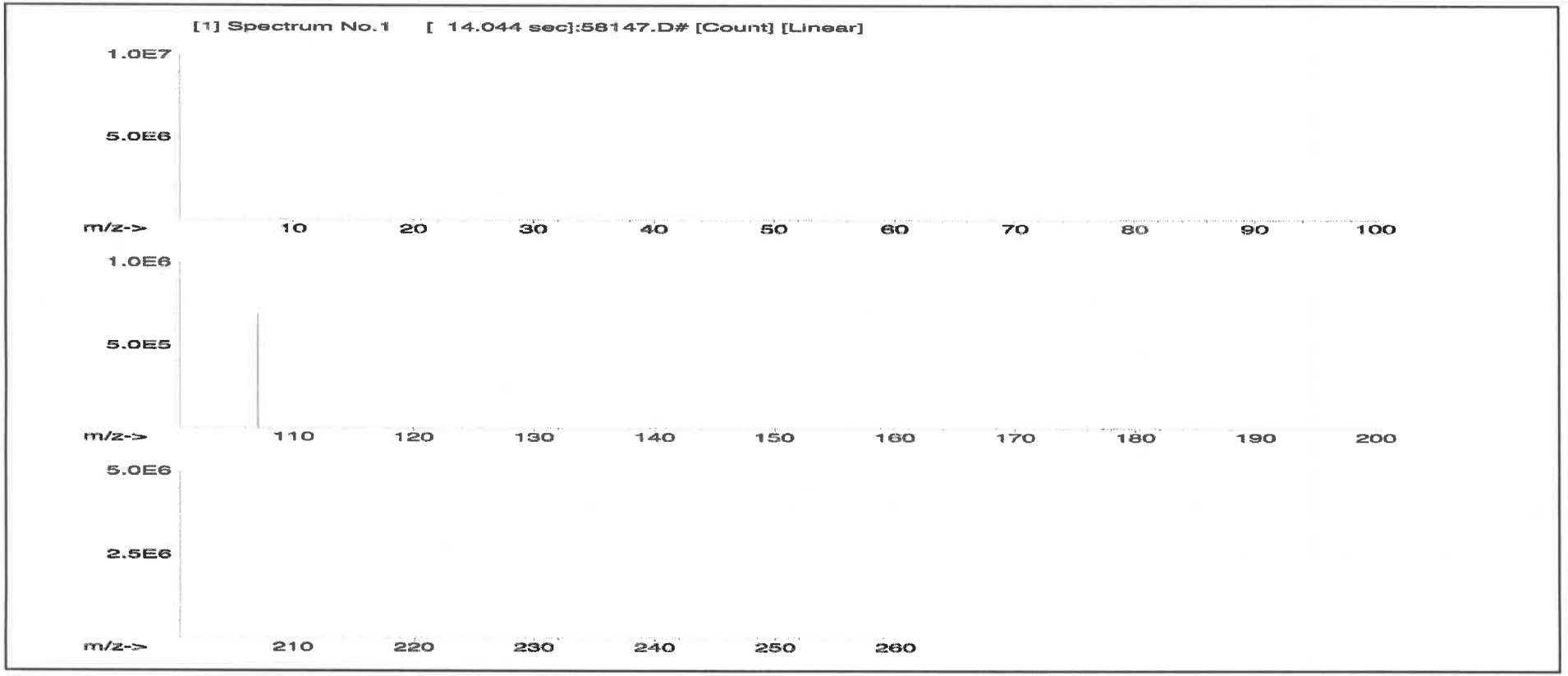
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	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



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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.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

M6160

Part Number: 57051
Lot Number: 071724
Description: Antimony (Sb)

Expiration Date: 071727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.26 ± 0.058 Flask Uncertainty

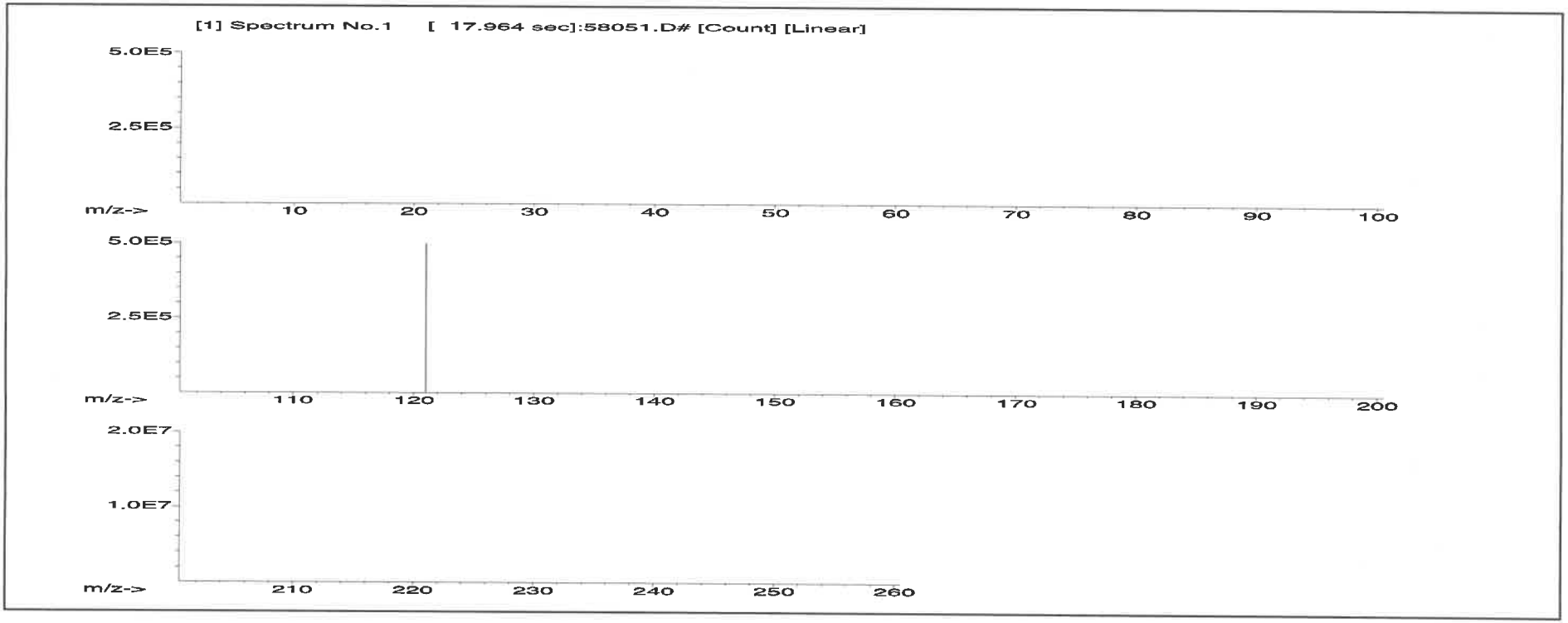
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	071724
Reviewed By:	Pedro L. Rentas	071724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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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.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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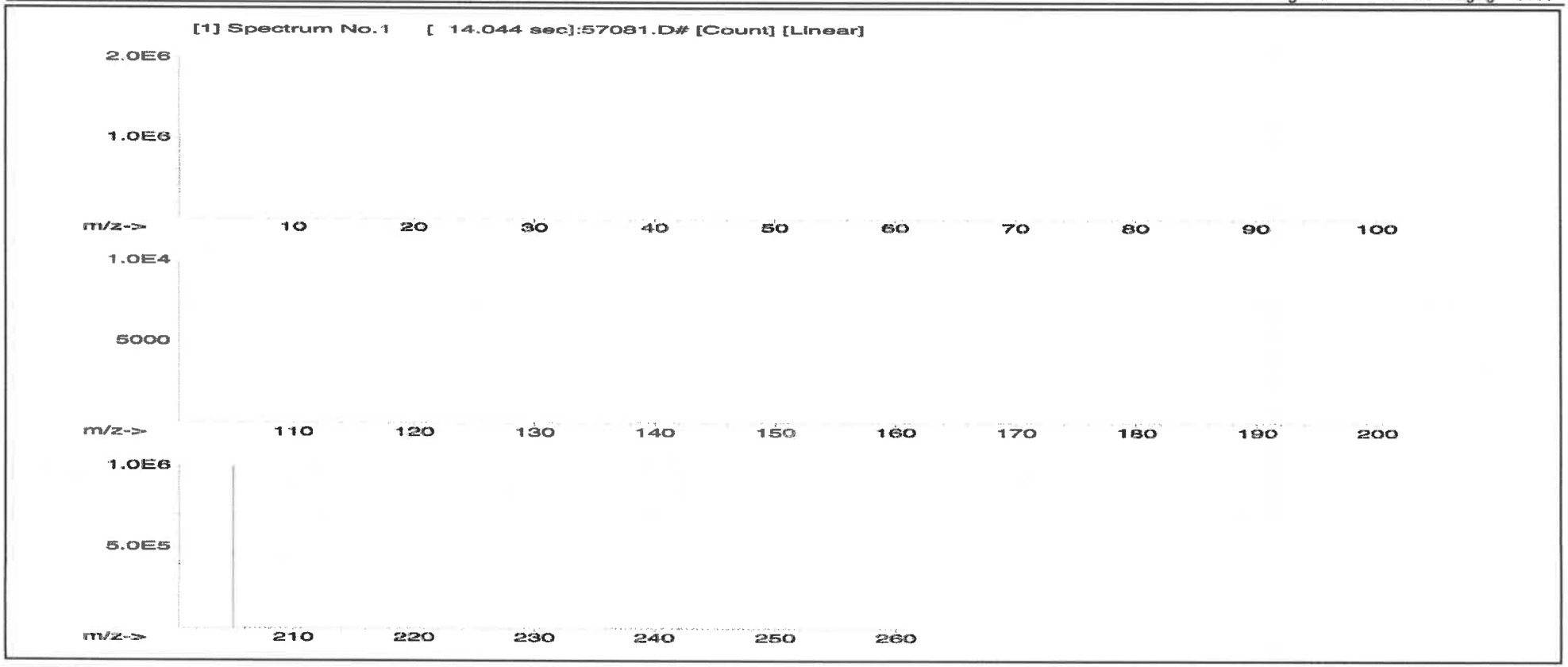
CERTIFIED WEIGHT REPORT:

Part Number:	**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



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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:



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Rc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**	24002546	Nitric Acid	
Description:	**Vanadium (V)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

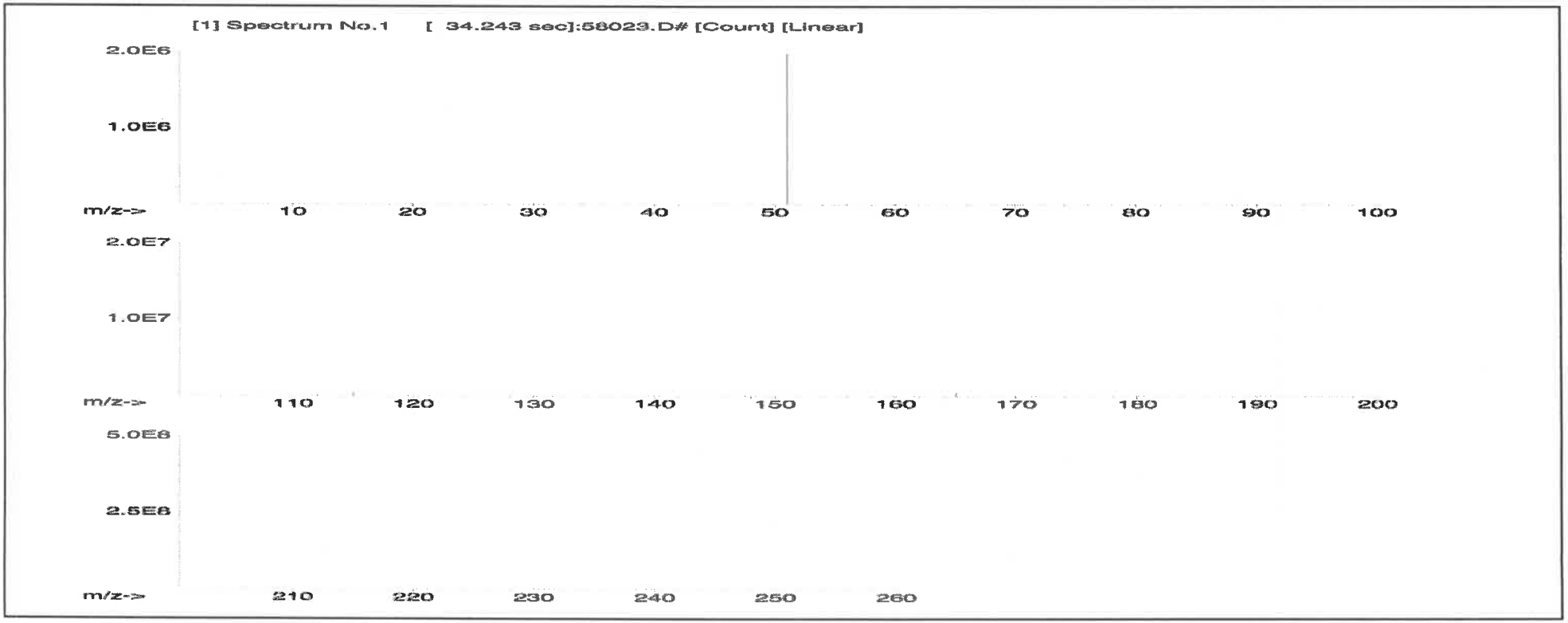
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



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) 78-8922
www.chemtech.net

Chemtech Project Number: Q3142

COC Number:

CLIENT INFORMATION	PROJECT INFORMATION	BILLING INFORMATION
COMPANY: Tetra Tech	PROJECT NAME: NWIRP Bethpage	BILL TO: PO#
ADDRESS: 4433 Corporation Ln, Suite 300	PROJECT #: 112G08005-WE13 LOCATION: RW8	ADDRESS:
CITY: Virginia Beach STATE: VA ZIP: 23462	PROJECT MANAGER: Ernie Wu	CITY: STATE: ZIP:
ATTENTION: Ernie Wu	E-MAIL: ernie,wu@tetratech.com	ATTENTION: PHONE:
PHONE: 757-466-4901 FAX: 757-461-4148	PHONE: 757-466-4901 FAX: 757-461-4148	

DATA TURNAROUND INFORMATION

FAX: 10 DAYS*
HARD COPY: 10 DAYS*
EDD 10 DAYS*
* TO BE APPROVED BY CHEMTECH
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY
- ☐ RESULTS + QC
- ☐ New Jersey REDUCED
- ☐ New Jersey CLP
- ☐ USEPA CLP
- ☐ New York State ASP "B"
- ☐ New York State ASP "A"
- ☐ Other
- ☐ EDD Format

ANALYSIS

	1	2	3	4	5	6	7	8	9
	1,4-Dioxane SW846 8270 SIM	Iron, Total	TSS	TDS					

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
									B								<-- Specify Preservatives A-HCl B-HNO3 C-H2SO4 D-NaOH E-ICE F-Other
1.	RW8-SP100-20250918	GW		x	9/18/25	13:05	4	x	x	x	x						
2.	RW8-SP303-20250918	GW		x	9/18/25	13:13	4	x	x	x	x						
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	9/18/25/1540	1. 1537 9-18-25
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2.		2.
RELINQUISHED BY	DATE/TIME 1405	RECEIVED FOR LAB BY
3.	9-18-25	3.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 2.1°C
MeOH extraction requires an additional 4oz. Jar for percent solid ☐ Ice in Cooler?:
Comments:

Page of

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
CHEMTECH: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - CHEMTECH COPYFOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312