284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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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 : Q3690

ATTENTION : Ernie Wu

Laboratory Certification ID # 20012

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Cover Page

Order ID : Q3690

Project ID : NWIRP Bethpage 112G08005-WE13

Client : Tetra Tech NUS, Inc.

Lab Sample Number	Client Sample Number
Q3690-01	RW8-SP100-20251118
Q3690-02	RW8-SP303-20251118

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

Signature : APPROVED
By Nimisha Pandya, QA/QC Supervisor at 9:36 am, Dec 05, 2025

Date: 11/26/2025

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 # Q3690
Test Name: Metals Group4

A. Number of Samples and Date of Receipt:
2 Water samples were received on 11/20/2025.

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_ APPROVED
By Nimisha Pandya, QA/QC Supervisor at 9:36 am, Dec 05, 2025

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Tel. 908-789-8900 Fax: 908-789-8922

DATA REPORTING QUALIFIERS- INORGANIC

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

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

ALLIANCE 284 Sheffield Street, Mountainside New Jersey 07092

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

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q3690 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

REVIEWED

By Sohil Jodhani, QA/QC Director at 9:15 am, Dec 05, 2025

Date

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q3690

	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: MOHAMMAD AHMED **Date:** 11/26/2025

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LAB CHRONICLE

OrderID:	Q3690	**OrderDate:**	11/20/2025 9:59:00 AM
Client:	Tetra Tech NUS, Inc.	**Project:**	NWIRP Bethpage 112G08005-WE13
Contact:	Ernie Wu	**Location:**	A11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3690-01	**RW8-SP100-20251118**	**Water**			**11/18/25**			**11/20/25**
			Metals Group4	6010D		11/20/25	11/21/25	
Q3690-02	**RW8-SP303-20251118**	**Water**			**11/18/25**			**11/20/25**
			Metals Group4	6010D		11/20/25	11/21/25	

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Hit Summary Sheet
SW-846

SDG No.: Q3690 **Order ID:** Q3690

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-SP100-20251118									
Q3690-01	RW8-SP100-20251118	Water	Iron	718		11.7	40.0	50.0	ug/L
Client ID : RW8-SP303-20251118									
Q3690-02	RW8-SP303-20251118	Water	Iron	101		11.7	40.0	50.0	ug/L

SAMPLE DATA

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Report of Analysis

Client:	Tetra Tech NUS, Inc.	Date Collected:	11/18/25
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	11/20/25
Client Sample ID:	RW8-SP100-20251118	SDG No.:	Q3690
Lab Sample ID:	Q3690-01	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	718		1	11.7	40.0	50.0	ug/L	11/20/25 10:35	11/21/25 16:11	6010D	M3010A

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:	11/18/25
Project:	NWIRP Bethpage 112G08005-WE13	Date Received:	11/20/25
Client Sample ID:	RW8-SP303-20251118	SDG No.:	Q3690
Lab Sample ID:	Q3690-02	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	101		1	11.7	40.0	50.0	ug/L	11/20/25 10:35	11/21/25 16:15	6010D	M3010A

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.:** Q3690

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	3840	4000	96	90 - 110	P	11/21/2025	13:00	LB138017

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3690

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	101	100	101	80 - 120	P	11/21/2025	13:09	LB138017

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3690

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	5020	5000	100	90 - 110	P	11/21/2025	13:44	LB138017
CCV02	Iron	4800	5000	96	90 - 110	P	11/21/2025	14:48	LB138017
CCV03	Iron	4870	5000	98	90 - 110	P	11/21/2025	15:38	LB138017
CCV04	Iron	4860	5000	97	90 - 110	P	11/21/2025	16:28	LB138017
CCV05	Iron	4860	5000	97	90 - 110	P	11/21/2025	17:50	LB138017
CCV06	Iron	4950	5000	99	90 - 110	P	11/21/2025	18:41	LB138017
CCV07	Iron	4950	5000	99	90 - 110	P	11/21/2025	19:31	LB138017

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3690

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	97.1	100	97	65 - 135	P	11/21/2025	13:17	LB138017

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3690

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	11/21/2025	13:13	LB138017

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3690

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	11/21/2025	13:48	LB138017
CCB02	Iron	23.4	+/-50	U	80.0	100	P	11/21/2025	14:52	LB138017
CCB03	Iron	23.4	+/-50	U	80.0	100	P	11/21/2025	15:42	LB138017
CCB04	Iron	23.4	+/-50	U	80.0	100	P	11/21/2025	16:32	LB138017
CCB05	Iron	23.4	+/-50	U	80.0	100	P	11/21/2025	17:55	LB138017
CCB06	Iron	23.4	+/-50	U	80.0	100	P	11/21/2025	18:45	LB138017
CCB07	Iron	23.4	+/-50	U	80.0	100	P	11/21/2025	19:35	LB138017

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3690

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	LOD ug/L	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB170663BL		**WATER**		**Batch Number:**		**PB170663**		**Prep Date:**	**11/20/2025**	
	Iron	11.7	<25	U	40.0	50.0	P	11/21/2025	14:01	LB138017

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3690

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	95400	101000	94	85600	116500	11/21/2025	13:22	LB138017
ICSAB01	Iron	92700	99300	93	84400	114500	11/21/2025	13:26	LB138017

METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** Q3690

contract: TETR06 **lab code:** ACE

matrix: Water **sample id:** Q3687-01 **client id:** N43502MS

Percent Solids for Sample: NA **Spiked ID:** Q3687-01MS **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	11800		10700		1500	73		P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: Tetra Tech NUS, Inc. **level:** low **sdg no.:** Q3690

contract: TETR06 **lab code:** ACE

matrix: Water **sample id:** Q3687-01 **client id:** N43502MSD

Percent Solids for Sample: NA **Spiked ID:** Q3687-01MSD **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	12300		10700		1500	109		P

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Metals
- 5b -

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3690

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.:** Q3690

Contract: TETR06 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3687-01 **Client ID:** N43502DUP

Percent Solids for Sample: NA **Duplicate ID** Q3687-01DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Iron	ug/L	20	10700		10900		2		P

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

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Metals

- 6 -

DUPLICATE SAMPLE SUMMARY

Client: Tetra Tech NUS, Inc. **Level:** LOW **SDG No.:** Q3690

Contract: TETR06 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3687-01MS **Client ID:** N43502MSD

Percent Solids for Sample: NA **Duplicate ID** Q3687-01MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Iron	ug/L	20	11800		12300		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.:** Q3690

Contract: TETR06 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB170663BS							
Iron	ug/L	1500	1550		103	87 - 115	P

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Metals

-9 -

ICP SERIAL DILUTIONS

SAMPLE NO.

N43502L

Lab Name: Alliance **Contract:** TETR06

Lab Code: ACE **Lb No.:** lb138017 **Lab Sample ID :** Q3687-01L **SDG No.:** Q3690

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	10700		10800		1		P

METAL PREPARATION & INSTRUMENT DATA

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: Tetra Tech NUS, Inc. **SDG No.:** Q3690

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.:** Q3690

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.:** Q3690

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.:** Q3690

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.:** Q3690

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.:** Q3690

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:	**PB170663**						
PB170663BL	PB170663BL	MB	WATER	11/20/2025	50.0	25.0	
PB170663BS	PB170663BS	LCS	WATER	11/20/2025	50.0	25.0	
Q3687-01DUP	N43502DUP	DUP	WATER	11/20/2025	50.0	25.0	
Q3687-01MS	N43502MS	MS	WATER	11/20/2025	50.0	25.0	
Q3687-01MSD	N43502MSD	MSD	WATER	11/20/2025	50.0	25.0	
Q3690-01	RW8-SP100-20251118	SAM	WATER	11/20/2025	50.0	25.0	
Q3690-02	RW8-SP303-20251118	SAM	WATER	11/20/2025	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

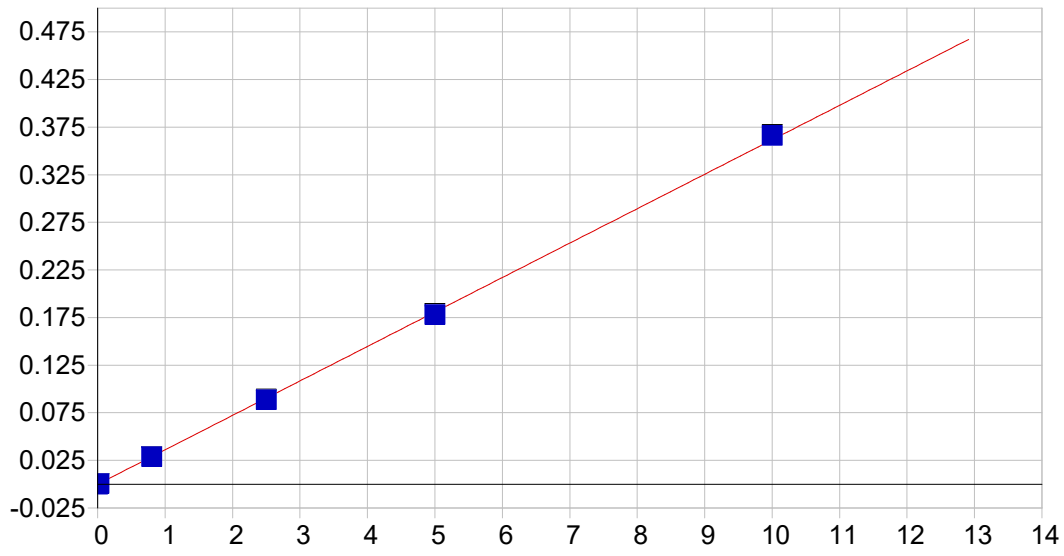
Lab code: ACE **Sdg no.:** Q3690

Instrument id number: **Method:** **Run number:** LB138017

Start date: 11/21/2025 **End date:** 11/21/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1213	Fe
S1	S1	1	1217	Fe
S2	S2	1	1222	Fe
S3	S3	1	1226	Fe
S4	S4	1	1230	Fe
S5	S5	1	1234	Fe
ICV01	ICV01	1	1300	Fe
LLICV01	LLICV01	1	1309	Fe
ICB01	ICB01	1	1313	Fe
CRI01	CRI01	1	1317	Fe
ICSA01	ICSA01	1	1322	Fe
ICSAB01	ICSAB01	1	1326	Fe
CCV01	CCV01	1	1344	Fe
CCB01	CCB01	1	1348	Fe
PB170663BL	PB170663BL	1	1401	Fe
PB170663BS	PB170663BS	1	1405	Fe
CCV02	CCV02	1	1448	Fe
CCB02	CCB02	1	1452	Fe
CCV03	CCV03	1	1538	Fe
CCB03	CCB03	1	1542	Fe
Q3687-01DUP	N43502DUP	1	1551	Fe
Q3687-01L	N43502L	5	1555	Fe
Q3687-01MS	N43502MS	1	1559	Fe
Q3687-01MSD	N43502MSD	1	1603	Fe
Q3690-01	RW8-SP100-20251118	1	1611	Fe
Q3690-02	RW8-SP303-20251118	1	1615	Fe
CCV04	CCV04	1	1628	Fe
CCB04	CCB04	1	1632	Fe
CCV05	CCV05	1	1750	Fe
CCB05	CCB05	1	1755	Fe
CCV06	CCV06	1	1841	Fe
CCB06	CCB06	1	1845	Fe
CCV07	CCV07	1	1931	Fe
CCB07	CCB07	1	1935	Fe

METAL
RAW DATA

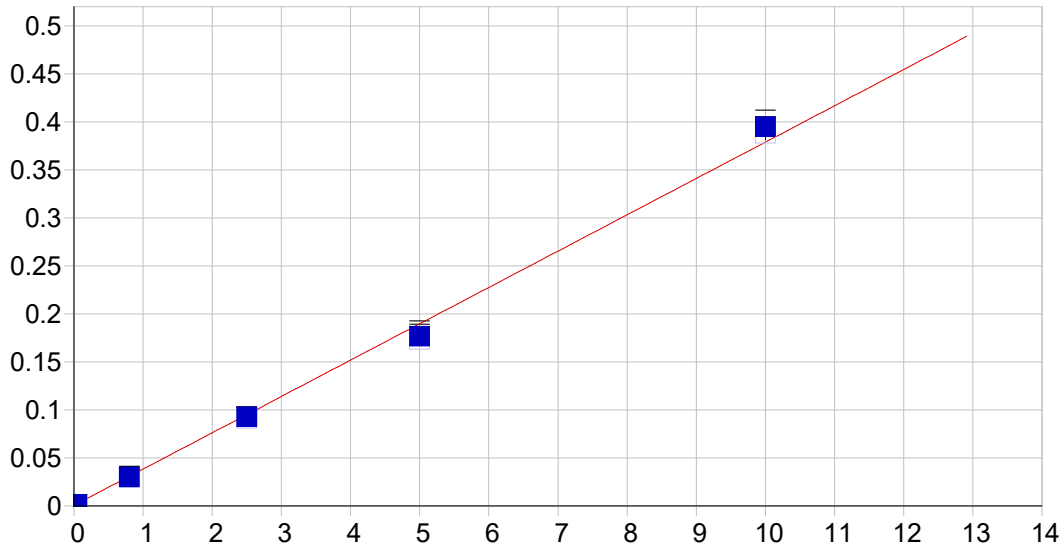


As 189.042 {479}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000072	Re-Slope:	1.000000
A1 (Gain):	0.036181	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999905	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.005176		
Predicted MQL:	0.017252		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00007	.000	1
S1	.02000	.02023	.000	1.14	.00066	.000	1
S3	2.5000	2.4540	-.046	-1.84	.08862	.001	1
S4	5.0000	4.9250	-.075	-1.50	.17793	.001	1
S5	10.000	10.122	.122	1.22	.36577	.001	1
S2	.80000	.79914	-.001	-.108	.02881	.000	1

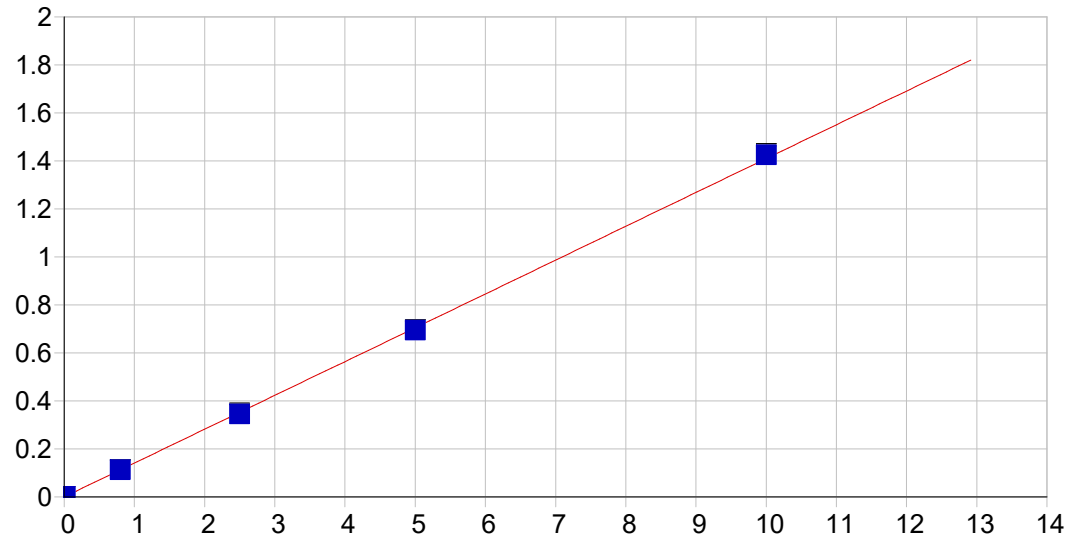


Tl 190.856 {477}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000495	Re-Slope:	1.000000
A1 (Gain):	0.037843	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998768	Status:	OK.
Std Error of Est:	0.000061		
Predicted MDL:	0.005070		
Predicted MQL:	0.016901		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00049	.000	1
S1	.04000	.03664	-.003	-8.41	.00178	.000	1
S3	2.5000	2.4350	-.065	-2.60	.09092	.000	1
S4	5.0000	4.6596	-.340	-6.81	.17338	.005	1
S5	10.000	10.426	.426	4.26	.38813	.007	1
S2	.80000	.78278	-.017	-2.15	.02957	.001	1

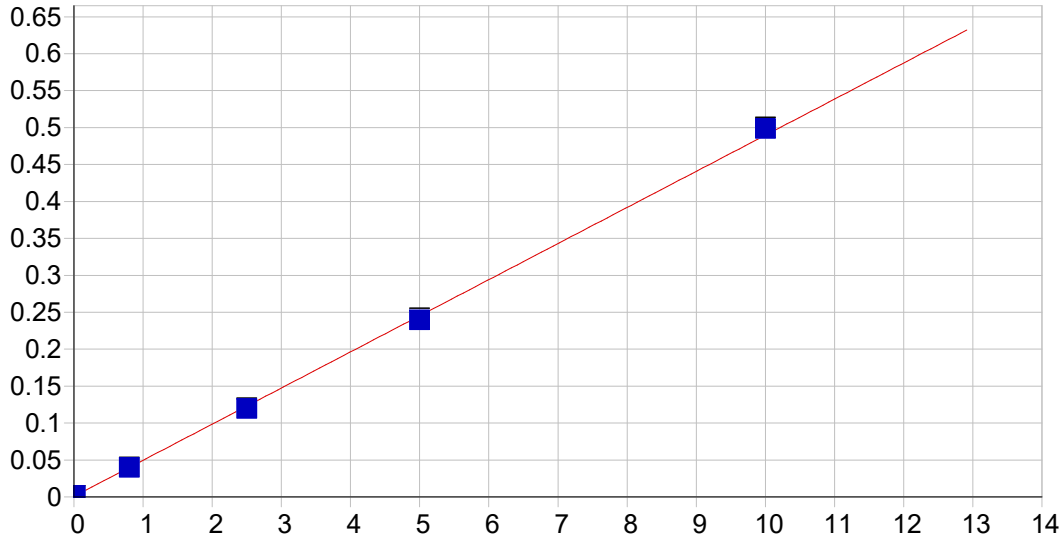


Pb 220.353 {453}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000106	Re-Slope:	1.000000
A1 (Gain):	0.140934	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999904	Status:	OK.
Std Error of Est:	0.000035		
Predicted MDL:	0.002204		
Predicted MQL:	0.007348		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00011	.000	1
S1	.01200	.01379	.002	14.9	.00202	.000	1
S3	2.5000	2.4526	-.047	-1.90	.34537	.004	1
S4	5.0000	4.9297	-.070	-1.41	.69409	.003	1
S5	10.000	10.117	.117	1.17	1.4244	.005	1
S2	.80000	.79893	-.001	-.133	.11258	.000	1

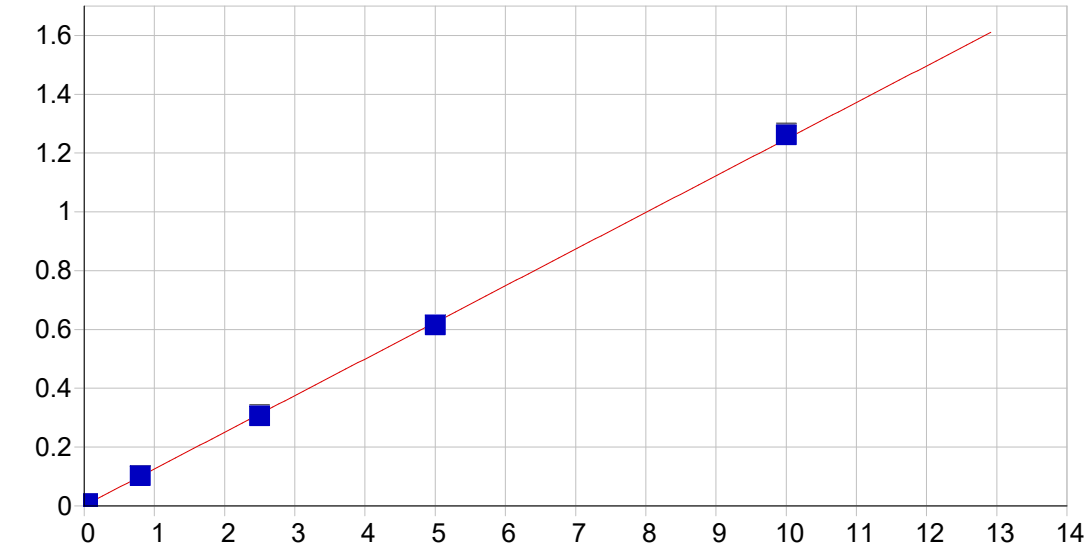


Se 196.090 {472}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000758	Re-Slope:	1.000000
A1 (Gain):	0.048889	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999788	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.004987		
Predicted MQL:	0.016623		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00076	.000	1
S1	.02000	.02019	.000	.949	.00175	.000	1
S3	2.5000	2.4304	-.070	-2.78	.11954	.001	1
S4	5.0000	4.8892	-.111	-2.22	.23972	.002	1
S5	10.000	10.183	.183	1.83	.49846	.002	1
S2	.80000	.79738	-.003	-.327	.03973	.001	1

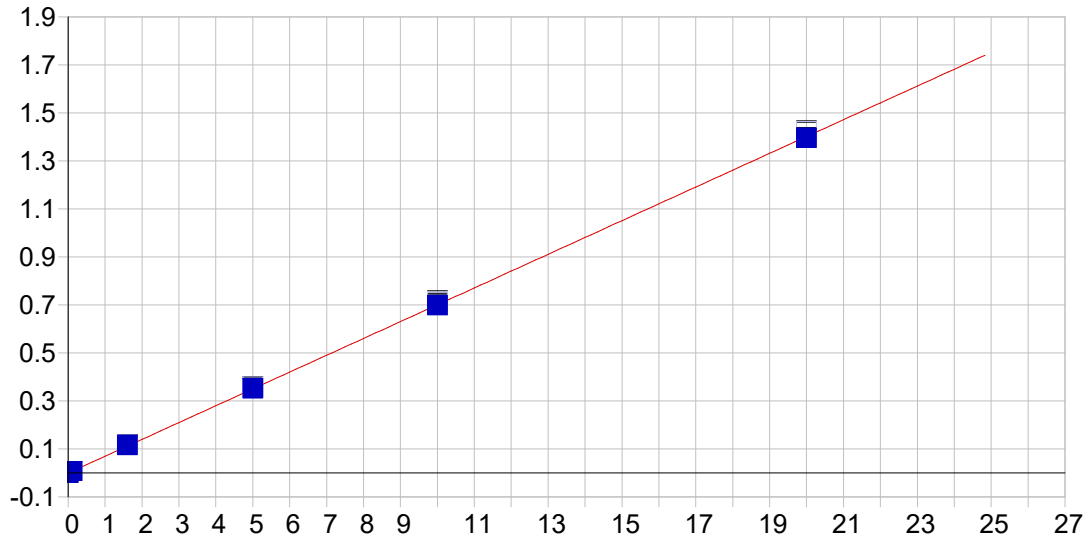


Sb 206.833 {463}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001079	Re-Slope:	1.000000
A1 (Gain):	0.124612	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999900	Status:	OK.
Std Error of Est:	0.000066		
Predicted MDL:	0.002479		
Predicted MQL:	0.008264		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00108	.000	1
S1	.05000	.05266	.003	5.31	.00765	.000	1
S3	2.5000	2.4486	-.051	-2.06	.30705	.003	1
S4	5.0000	4.9258	-.074	-1.48	.61659	.001	1
S5	10.000	10.114	.114	1.14	1.2648	.003	1
S2	.80000	.80869	.009	1.09	.10212	.001	1

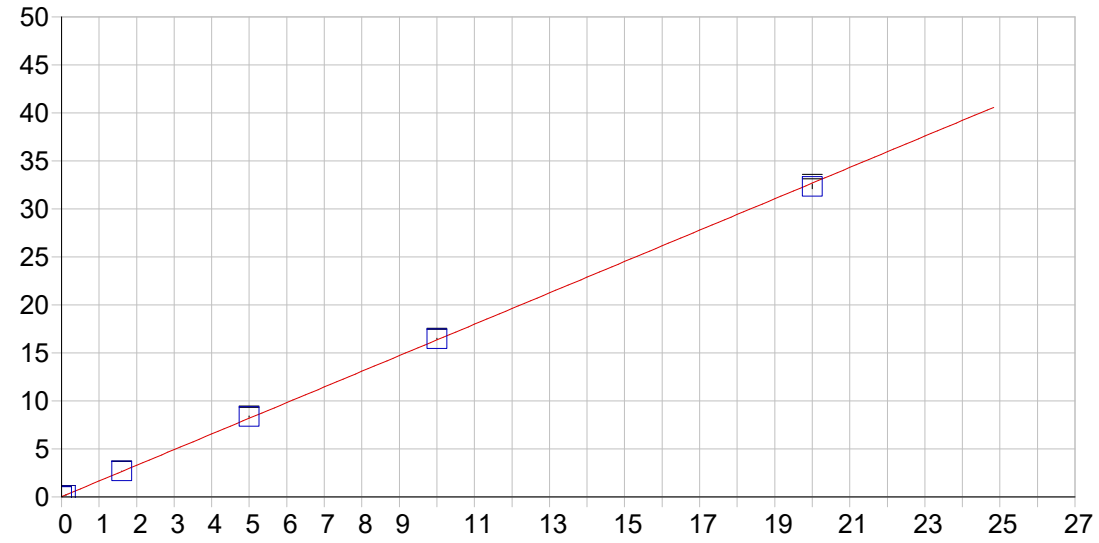


Al 396.152 { 85}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000582	Re-Slope:	1.000000
A1 (Gain):	0.070107	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000070		
Predicted MDL:	0.011732		
Predicted MQL:	0.039108		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	-.00058	.001	1
S1	.10000	.11951	.020	19.5	.00834	.000	1
S3	5.0000	5.0323	.032	.646	.35902	.001	1
S4	10.000	9.9765	-.024	-.235	.71244	.005	1
S5	20.000	19.912	-.088	-.441	1.4226	.002	1
S2	1.6000	1.6588	.059	3.68	.11789	.001	1

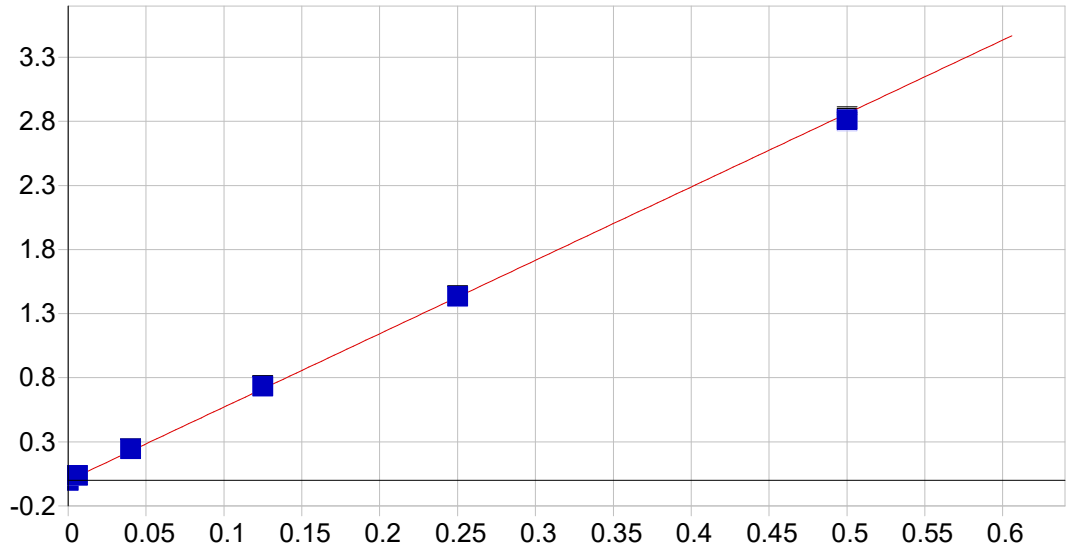


Ba 493.409 { 68}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.022959	Re-Slope:	1.000000
A1 (Gain):	1.633206	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999914	Status:	OK.
Std Error of Est:	0.001591		
Predicted MDL:	0.001356		
Predicted MQL:	0.004520		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.02294	.002	1
S1	.10000	.10659	.007	6.59	.19704	.000	1
S3	5.0000	5.1037	.104	2.07	8.3583	.073	1
S4	10.000	10.073	.073	.734	16.475	.052	1
S5	20.000	19.781	-.219	-1.10	32.329	.235	1
S2	1.6000	1.6358	.036	2.24	2.6945	.019	1

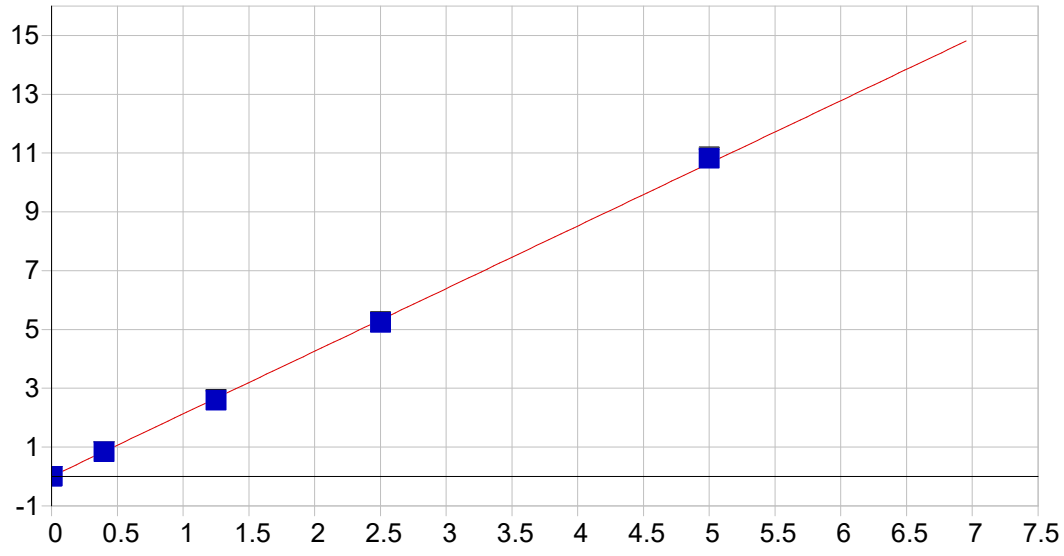


Be 234.861 {144}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002004	Re-Slope:	1.000000
A1 (Gain):	5.727234	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999676	Status:	OK.
Std Error of Est:	0.000417		
Predicted MDL:	0.000086		
Predicted MQL:	0.000286		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00201	.000	1
S1	.00600	.00673	.001	12.2	.03630	.000	1
S3	.12500	.12845	.003	2.76	.73047	.006	1
S4	.25000	.25108	.001	.431	1.4296	.005	1
S5	.50000	.49153	-.008	-1.69	2.8003	.023	1
S2	.04000	.04321	.003	8.02	.24444	.000	1

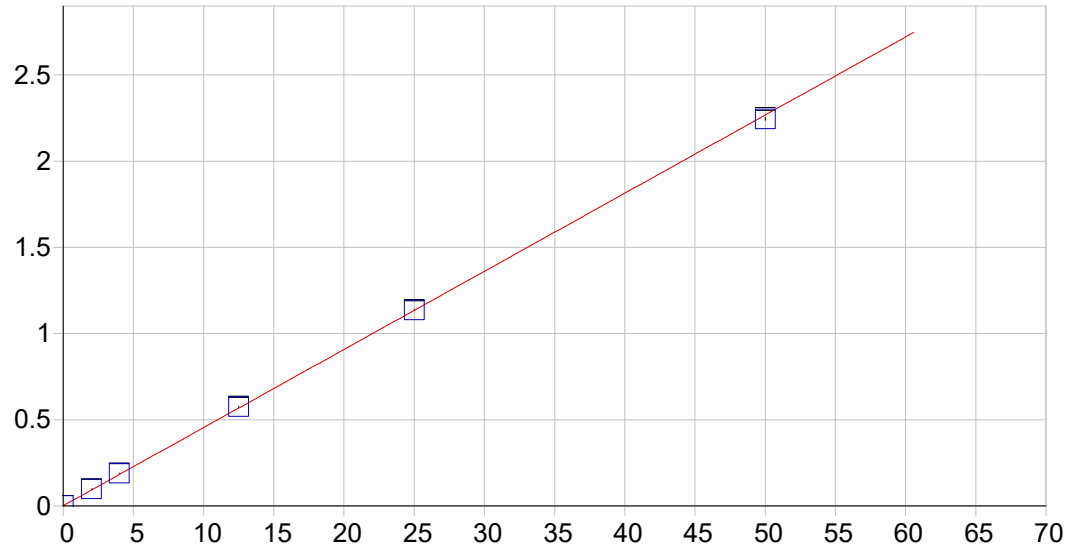


Cd 226.502 {449}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000629	Re-Slope:	1.000000
A1 (Gain):	2.130560	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999843	Status:	OK.
Std Error of Est:	0.000343		
Predicted MDL:	0.000124		
Predicted MQL:	0.000413		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00063	.000	1
S1	.00600	.00617	.000	2.90	.01257	.000	1
S3	1.2500	1.2163	-.034	-2.70	2.5925	.019	1
S4	2.5000	2.4586	-.041	-1.66	5.2411	.022	1
S5	5.0000	5.0790	.079	1.58	10.827	.038	1
S2	.40000	.39597	-.004	-1.01	.84358	.001	1

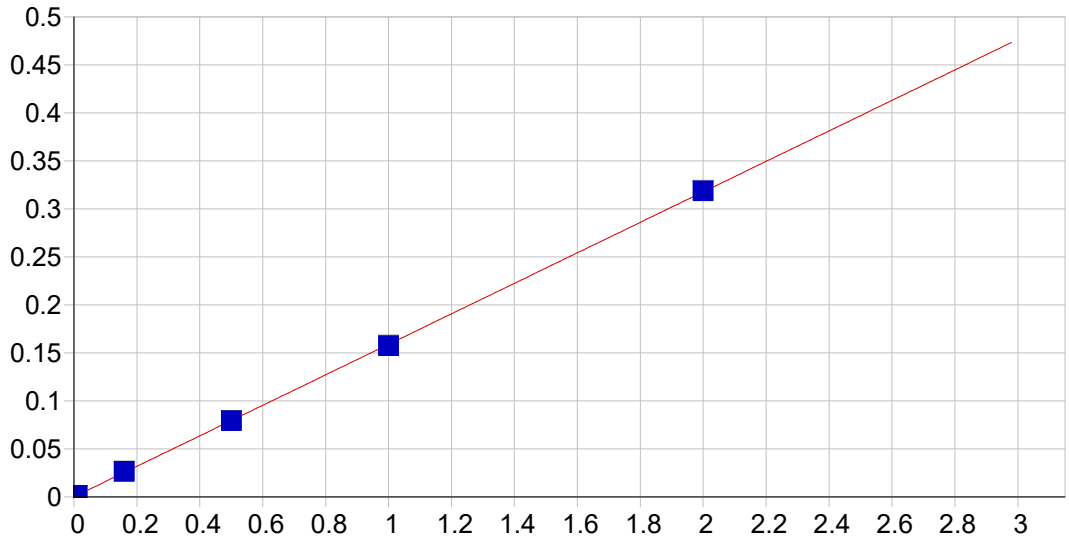


Ca 373.690 { 90}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001325	Re-Slope:	1.000000
A1 (Gain):	0.045326	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999878	Status:	OK.
Std Error of Est:	0.000375		
Predicted MDL:	0.014191		
Predicted MQL:	0.047304		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00023	-.000	.000	.00132	.000	1
S2	4.0000	4.1545	.155	3.86	.18963	.002	1
S3	12.500	12.674	.174	1.39	.57580	.004	1
S4	25.000	25.030	.030	.120	1.1358	.004	1
S5	50.000	49.504	-.496	-.992	2.2451	.008	1
S1	2.0000	2.1374	.137	6.87	.09821	.001	1

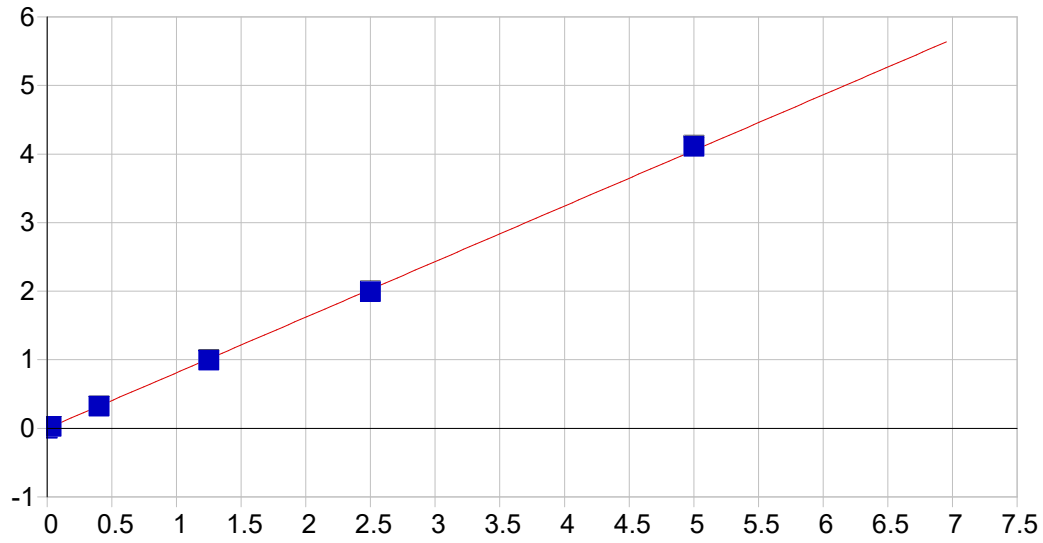


Cr 267.716 {126}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000126	Re-Slope:	1.000000
A1 (Gain):	0.158815	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.000627		
Predicted MQL:	0.002089		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00013	.000	1
S1	.01000	.01010	.000	1.04	.00173	.000	1
S3	.50000	.49818	-.002	-.363	.07931	.000	1
S4	1.0000	.98944	-.011	-1.06	.15739	.000	1
S5	2.0000	2.0063	.006	.317	.31902	.000	1
S2	.16000	.16593	.006	3.71	.02650	.000	1

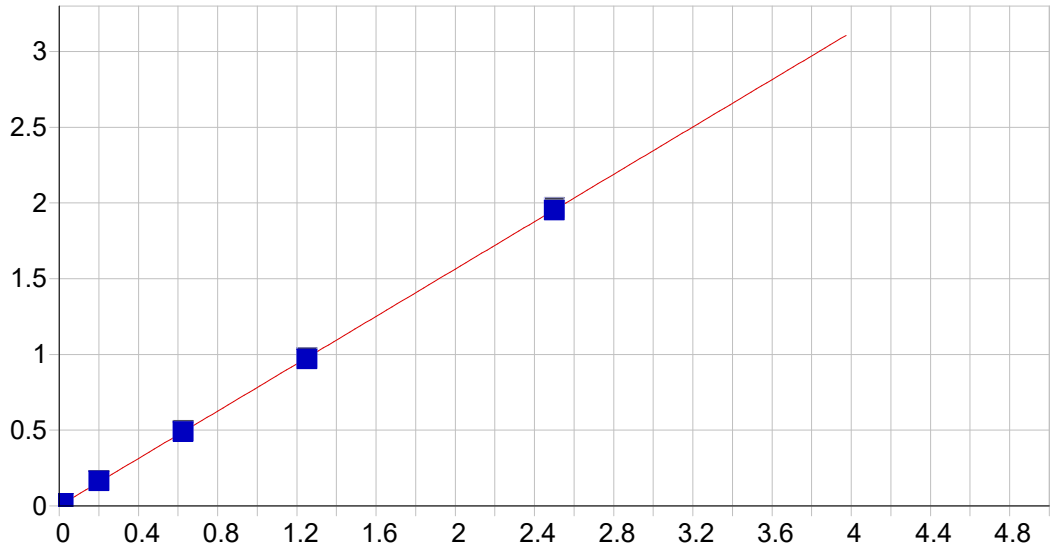


Co 228.616 {448}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000075	Re-Slope:	1.000000
A1 (Gain):	0.810535	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999871	Status:	OK.
Std Error of Est:	0.000265		
Predicted MDL:	0.000289		
Predicted MQL:	0.000964		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00007	.000	1
S1	.03000	.03045	.000	1.50	.02450	.000	1
S3	1.2500	1.2227	-.027	-2.19	.99267	.007	1
S4	2.5000	2.4570	-.043	-1.72	1.9948	.008	1
S5	5.0000	5.0718	.072	1.44	4.1177	.013	1
S2	.40000	.39811	-.002	-.474	.32315	.000	1

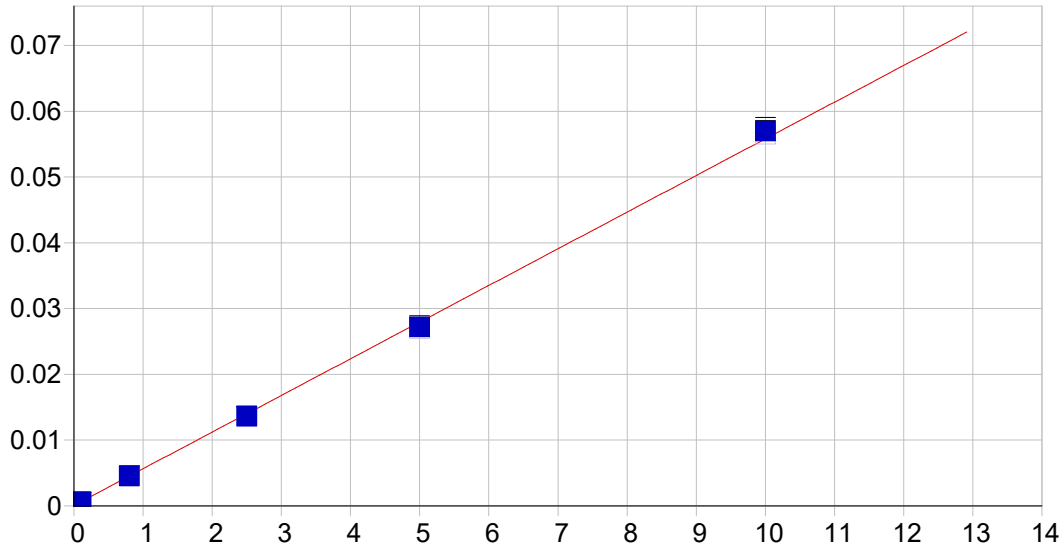


Cu 224.700 {450}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000623	Re-Slope:	1.000000
A1 (Gain):	0.781687	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999913	Status:	OK.
Std Error of Est:	0.000122		
Predicted MDL:	0.000574		
Predicted MQL:	0.001913		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00062	.000	1
S1	.02000	.02264	.003	13.2	.01850	.000	1
S3	.62500	.62736	.002	.378	.49521	.004	1
S4	1.2500	1.2406	-.009	-.753	.97874	.002	1
S5	2.5000	2.4957	-.004	-.172	1.9682	.003	1
S2	.20000	.20872	.009	4.36	.16512	.001	1

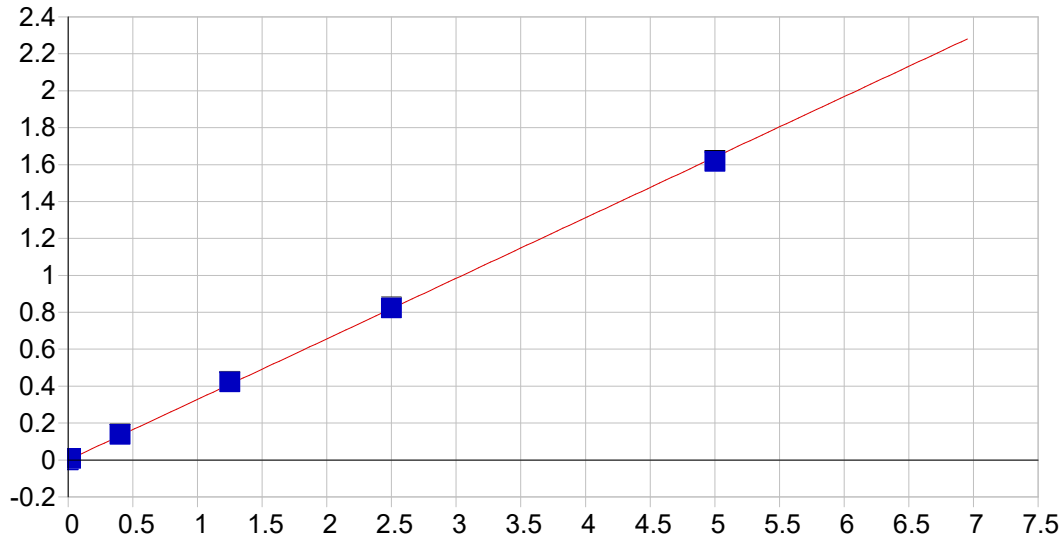


Fe 240.488 {140}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000078	Re-Slope:	1.000000
A1 (Gain):	0.005574	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999710	Status:	OK.
Std Error of Est:	0.000007		
Predicted MDL:	0.007200		
Predicted MQL:	0.024000		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00008	.000	1
S1	.10000	.09332	-.007	-6.68	.00059	.000	1
S3	2.5000	2.4320	-.068	-2.72	.01351	.000	1
S4	5.0000	4.8628	-.137	-2.74	.02694	.000	1
S5	10.000	10.210	.210	2.10	.05651	.001	1
S2	.80000	.80188	.002	.235	.00451	.000	1

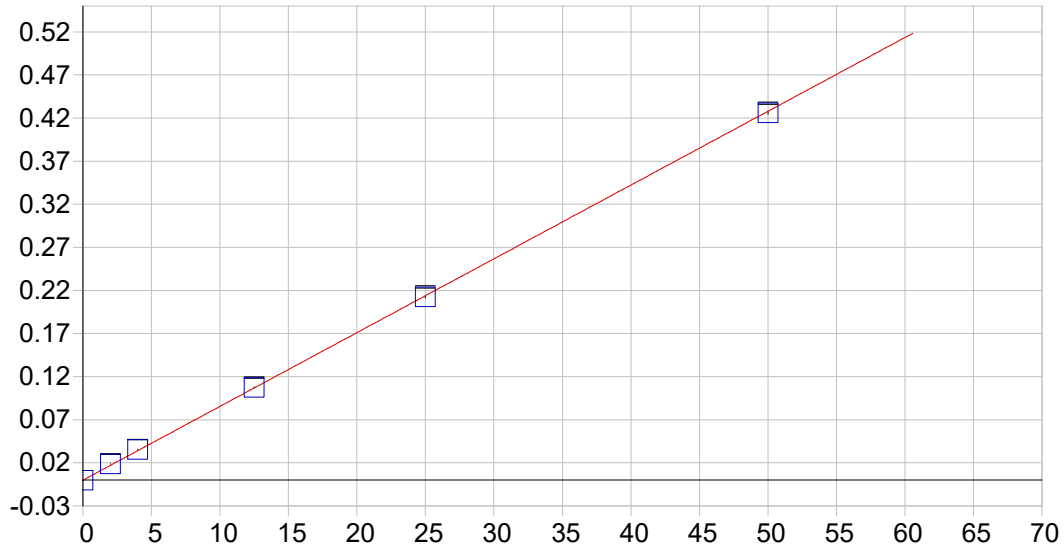


Mn 257.610 {131}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.328031	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999791	Status:	OK.
Std Error of Est:	0.000111		
Predicted MDL:	0.000749		
Predicted MQL:	0.002497		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00000	.000	1
S1	.02000	.02278	.003	13.9	.00748	.000	1
S3	1.2500	1.2864	.036	2.91	.42205	.003	1
S4	2.5000	2.5100	.010	.402	.82354	.004	1
S5	5.0000	4.9279	-.072	-1.44	1.6168	.004	1
S2	.40000	.42290	.023	5.72	.13876	.001	1

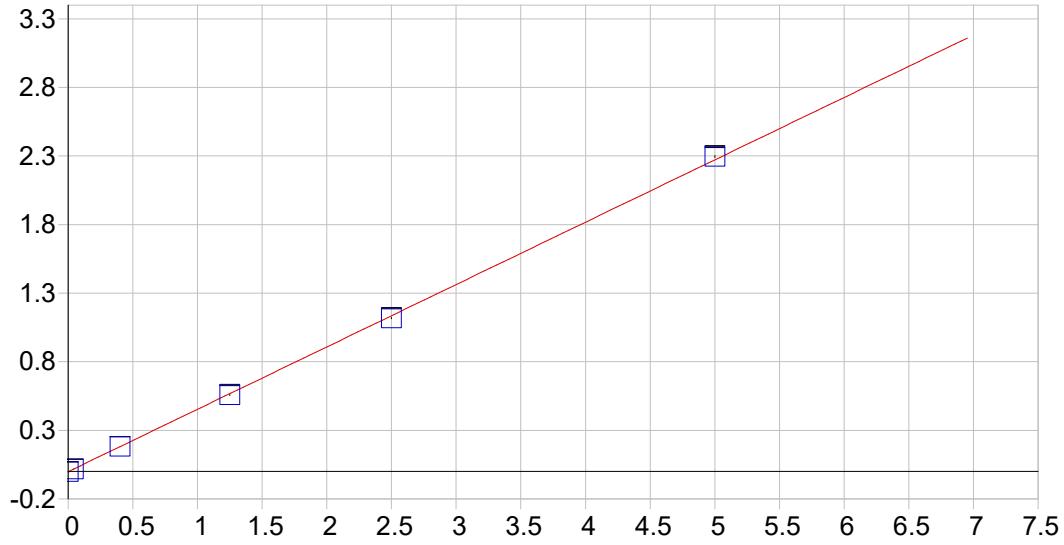


Mg 279.079 {121}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000126	Re-Slope:	1.000000
A1 (Gain):	0.008561	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999866	Status:	OK.
Std Error of Est:	0.000074		
Predicted MDL:	0.036336		
Predicted MQL:	0.121121		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00025	-.000	.000	-.00013	.000	1
S2	4.0000	4.1536	.154	3.84	.03543	.000	1
S3	12.500	12.547	.047	.377	.10729	.001	1
S4	25.000	24.854	-.146	-.583	.21265	.001	1
S5	50.000	49.761	-.239	-.478	.42587	.001	1
S1	2.0000	2.1837	.184	9.19	.01857	.000	1

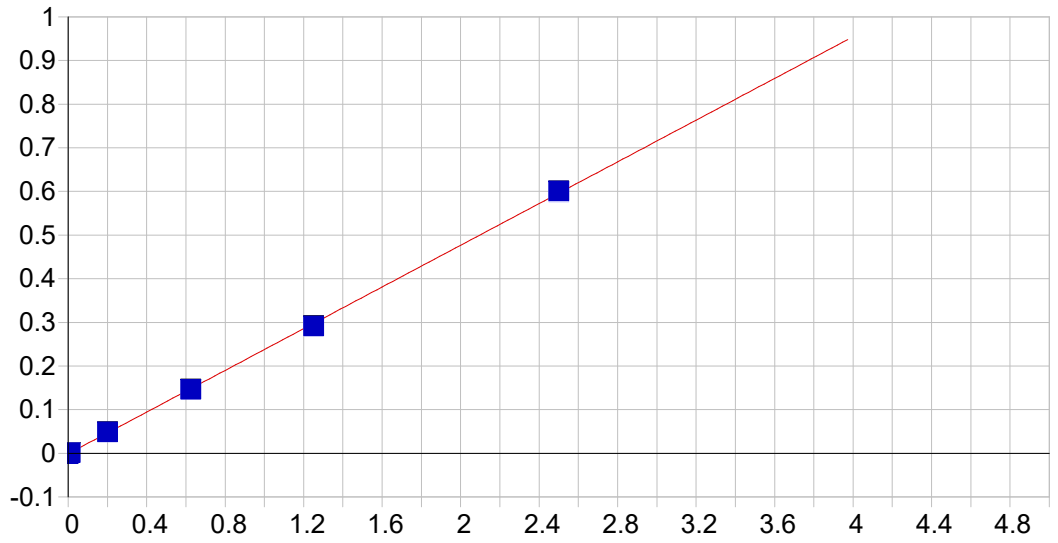


Ni 231.604 {446}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001079	Re-Slope:	1.000000
A1 (Gain):	0.454645	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999914	Status:	OK.
Std Error of Est:	0.000140		
Predicted MDL:	0.000551		
Predicted MQL:	0.001838		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00108	.000	1
S1	.04000	.04188	.002	4.69	.01796	.000	1
S3	1.2500	1.2308	-.019	-1.54	.55848	.004	1
S4	2.5000	2.4612	-.039	-1.55	1.1179	.004	1
S5	5.0000	5.0541	.054	1.08	2.2967	.007	1
S2	.40000	.40205	.002	.512	.18171	.000	1

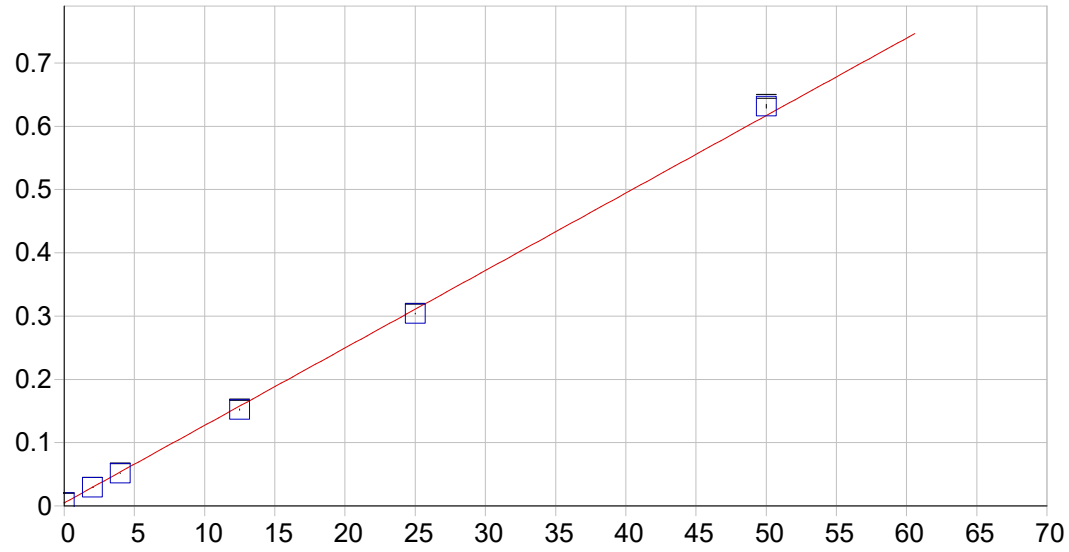


Ag 328.068 {103}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001180	Re-Slope:	1.000000
A1 (Gain):	0.238931	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999877	Status:	OK.
Std Error of Est:	0.000031		
Predicted MDL:	0.000712		
Predicted MQL:	0.002374		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00118	.000	1
S1	.01000	.01104	.001	10.4	.00144	.000	1
S3	.62500	.61896	-.006	-.966	.14605	.000	1
S4	1.2500	1.2265	-.023	-1.88	.29055	.000	1
S5	2.5000	2.5201	.020	.804	.59830	.000	1
S2	.20000	.20837	.008	4.18	.04839	.000	1

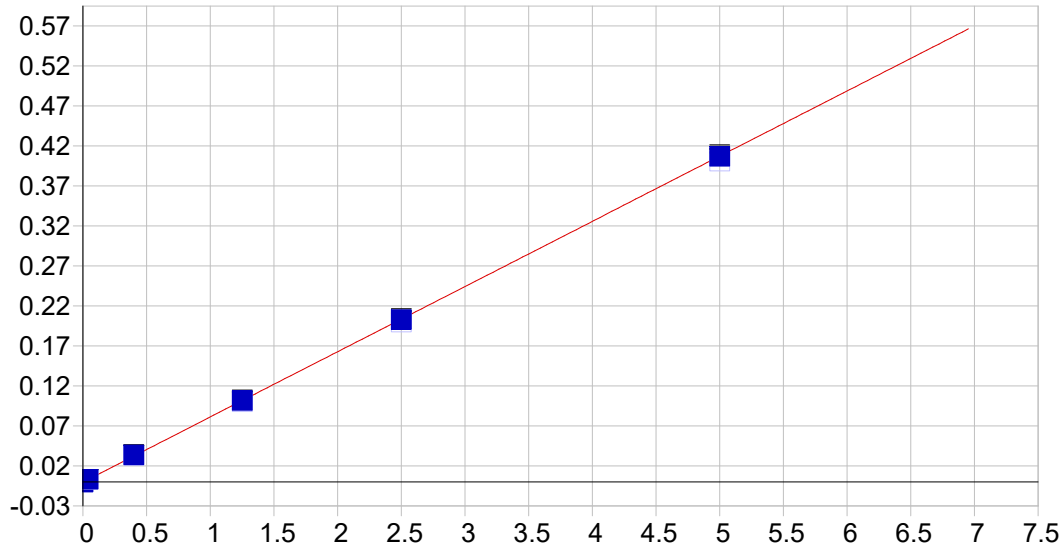


Na 589.592 { 57}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004821	Re-Slope:	1.000000
A1 (Gain):	0.012241	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999638	Status:	OK.
Std Error of Est:	0.000174		
Predicted MDL:	0.020276		
Predicted MQL:	0.067585		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00016	.000	.000	.00482	.000	1
S2	4.0000	3.8189	-.181	-4.53	.05157	.000	1
S3	12.500	12.041	-.459	-3.68	.15221	.001	1
S4	25.000	24.427	-.573	-2.29	.30384	.001	1
S5	50.000	51.214	1.21	2.43	.63174	.003	1
S1	2.0000	1.9993	-.001	-.036	.02929	.000	1

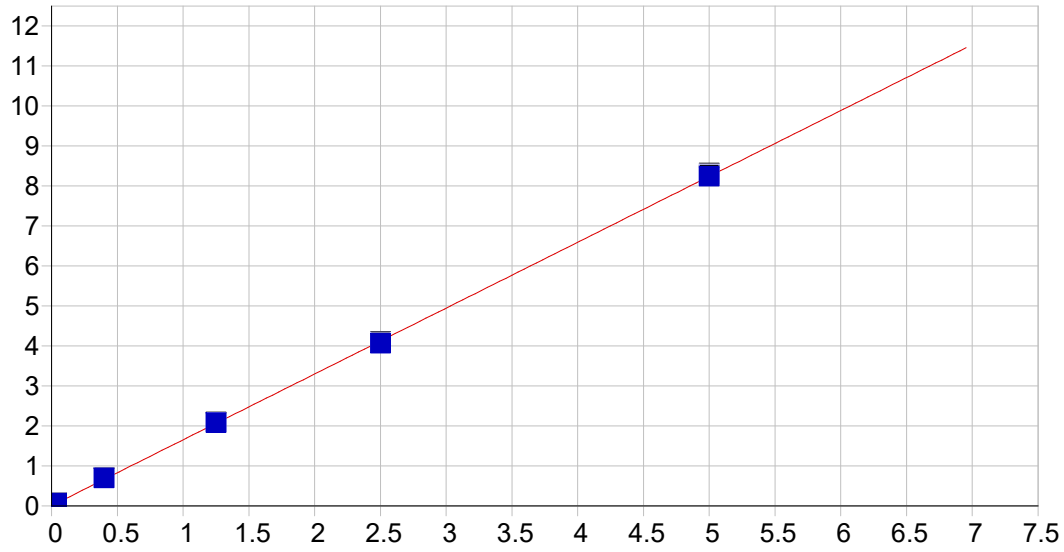


V 292.402 {115}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000256	Re-Slope:	1.000000
A1 (Gain):	0.081520	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999968	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	0.004238		
Predicted MQL:	0.014127		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00026	.000	1
S1	.04000	.04141	.001	3.52	.00300	.000	1
S3	1.2500	1.2507	.001	.060	.10022	.001	1
S4	2.5000	2.4906	-.009	-.375	.19981	.001	1
S5	5.0000	4.9934	-.007	-.132	.40086	.002	1
S2	.40000	.41387	.014	3.47	.03301	.000	1

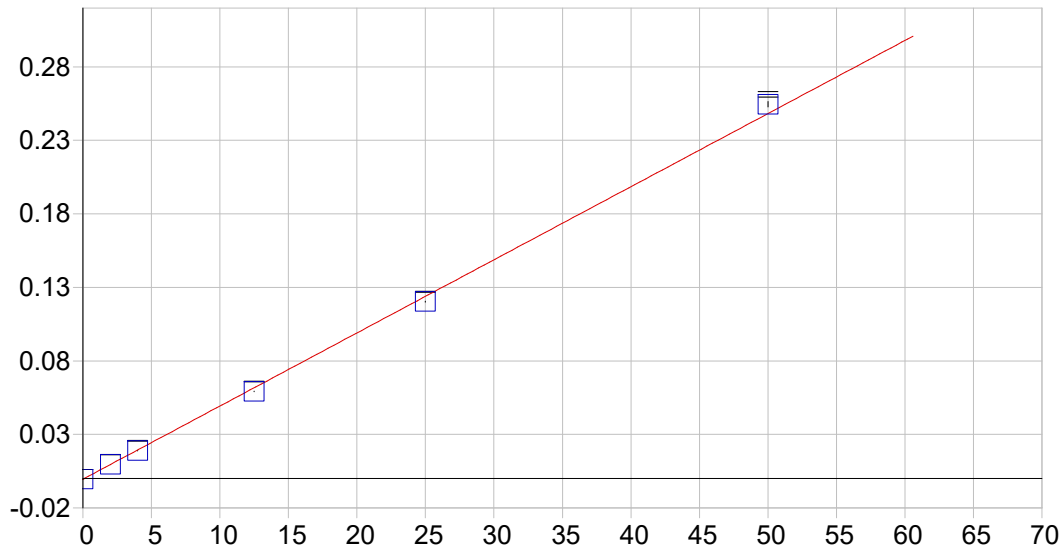


Zn 213.856 {158}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005185	Re-Slope:	1.000000
A1 (Gain):	1.647067	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999908	Status:	OK.
Std Error of Est:	0.000528		
Predicted MDL:	0.000467		
Predicted MQL:	0.001556		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00518	.000	1
S1	.04000	.04291	.003	7.28	.07633	.000	1
S3	1.2500	1.2587	.009	.694	2.0926	.006	1
S4	2.5000	2.4668	-.033	-1.33	4.0967	.013	1
S5	5.0000	5.0017	.002	.034	8.3006	.024	1
S2	.40000	.41999	.020	5.00	.70151	.003	1

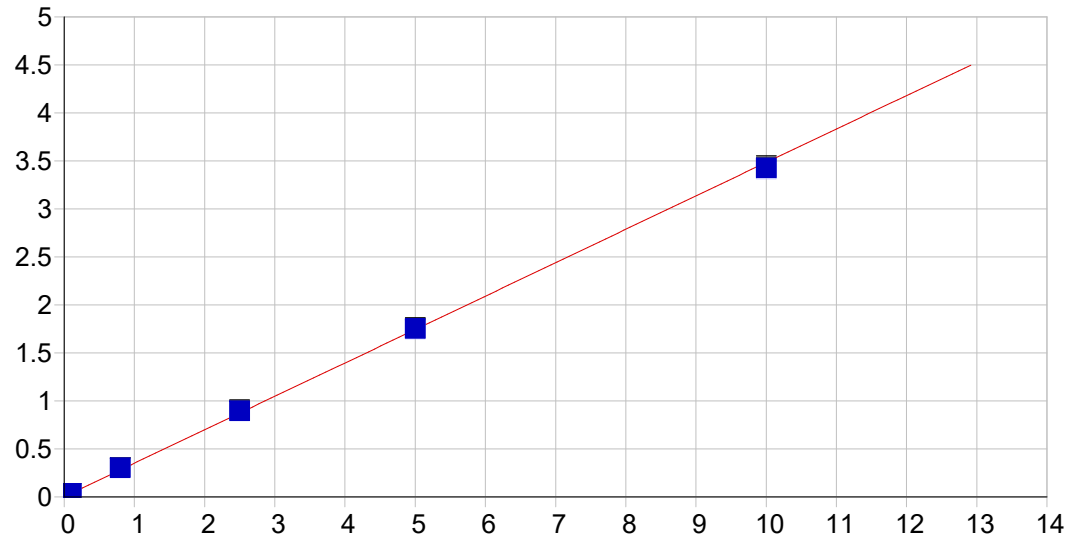


K 766.490 { 44}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000456	Re-Slope:	1.000000
A1 (Gain):	0.004974	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999606	Status:	OK.
Std Error of Est:	0.000074		
Predicted MDL:	0.051951		
Predicted MQL:	0.173168		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00012	.000	.000	-.00046	.000	1
S2	4.0000	3.9080	-.092	-2.30	.01898	.000	1
S3	12.500	12.015	-.485	-3.88	.05930	.000	1
S4	25.000	24.291	-.709	-2.84	.12036	.000	1
S5	50.000	51.276	1.28	2.55	.25458	.002	1
S1	2.0000	2.0108	.011	.538	.00954	.000	1

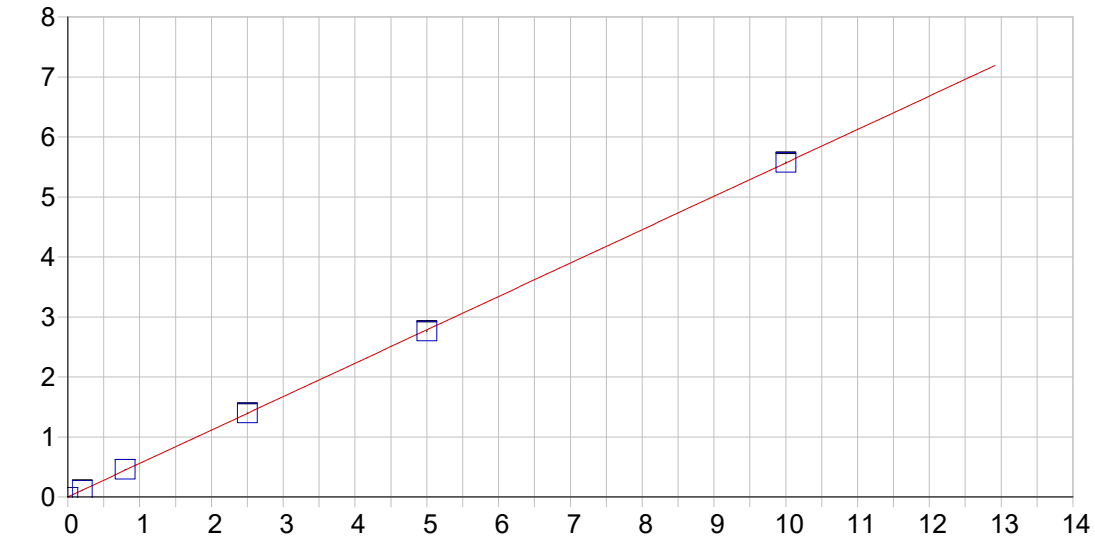


B 249.678 {135}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003146	Re-Slope:	1.000000
A1 (Gain):	0.348072	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999731	Status:	OK.
Std Error of Est:	0.000422		
Predicted MDL:	0.001345		
Predicted MQL:	0.004483		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00314	.001	1
S1	.10000	.10875	.009	8.75	.04079	.000	1
S3	2.5000	2.5680	.068	2.72	.89386	.008	1
S4	5.0000	5.0292	.029	.584	1.7474	.008	1
S5	10.000	9.8353	-.165	-1.65	3.4140	.022	1
S2	.80000	.85876	.059	7.35	.30105	.001	1

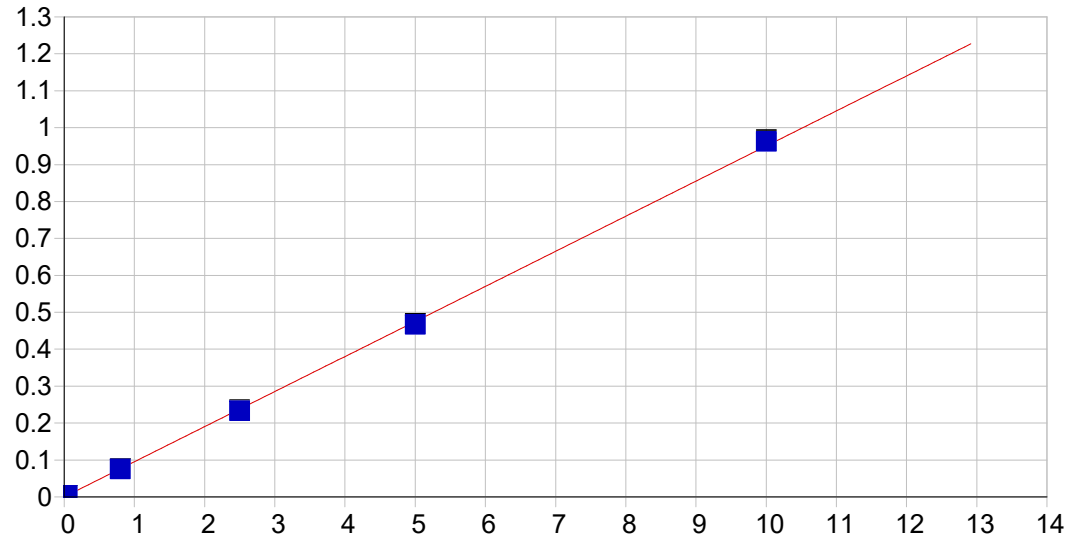


Mo 202.030 {467}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000905	Re-Slope:	1.000000
A1 (Gain):	0.556666	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999974	Status:	OK.
Std Error of Est:	0.000300		
Predicted MDL:	0.000475		
Predicted MQL:	0.001584		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00090	.000	1
S1	.20000	.20429	.004	2.15	.11463	.000	1
S3	2.5000	2.5042	.004	.167	1.3949	.010	1
S4	5.0000	4.9626	-.037	-.748	2.7634	.012	1
S5	10.000	10.007	.007	.073	5.5716	.013	1
S2	.80000	.82163	.022	2.70	.45828	.002	1

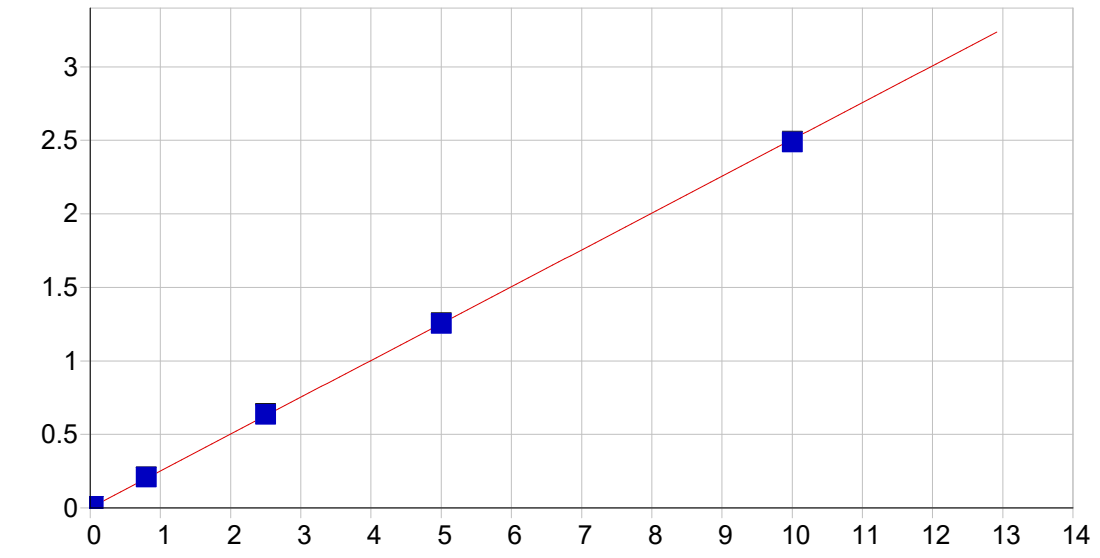


Sn 189.989 {478}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000247	Re-Slope:	1.000000
A1 (Gain):	0.094999	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999891	Status:	OK.
Std Error of Est:	0.000046		
Predicted MDL:	0.001204		
Predicted MQL:	0.004013		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00025	.000	1
S1	.04000	.04022	.000	.555	.00406	.000	1
S3	2.5000	2.4541	-.046	-1.84	.23314	.002	1
S4	5.0000	4.9190	-.081	-1.62	.46706	.003	1
S5	10.000	10.133	.133	1.33	.96191	.004	1
S2	.80000	.79351	-.006	-.811	.07555	.000	1

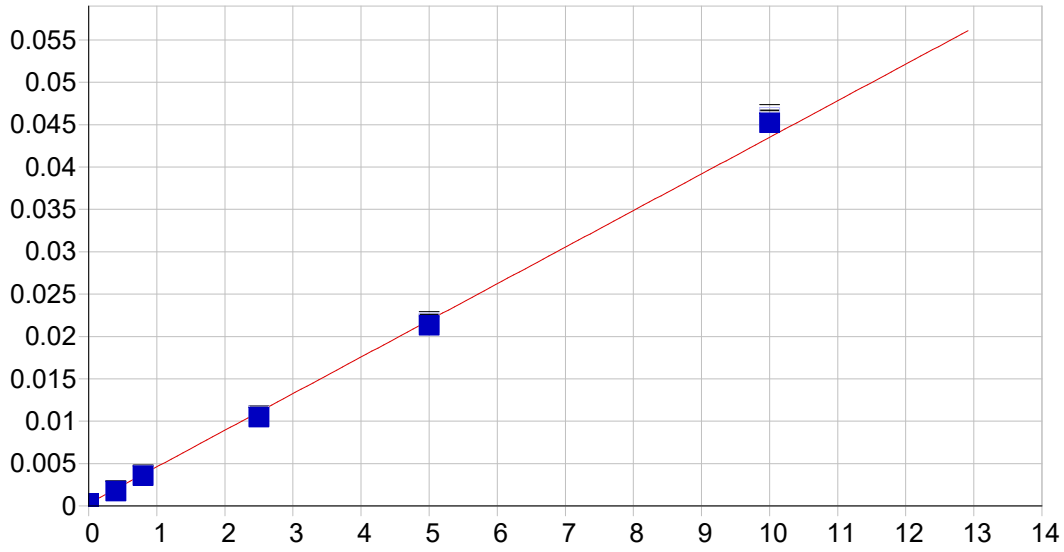


Ti 336.121 {100}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001068	Re-Slope:	1.000000
A1 (Gain):	0.250517	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999937	Status:	OK.
Std Error of Est:	0.000094		
Predicted MDL:	0.001894		
Predicted MQL:	0.006313		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00107	.000	1
S1	.04000	.04205	.002	5.11	.01159	.000	1
S3	2.5000	2.5365	.037	1.46	.63628	.004	1
S4	5.0000	5.0047	.005	.094	1.2544	.003	1
S5	10.000	9.9265	-.074	-.735	2.4869	.006	1
S2	.80000	.83026	.030	3.78	.20899	.001	1

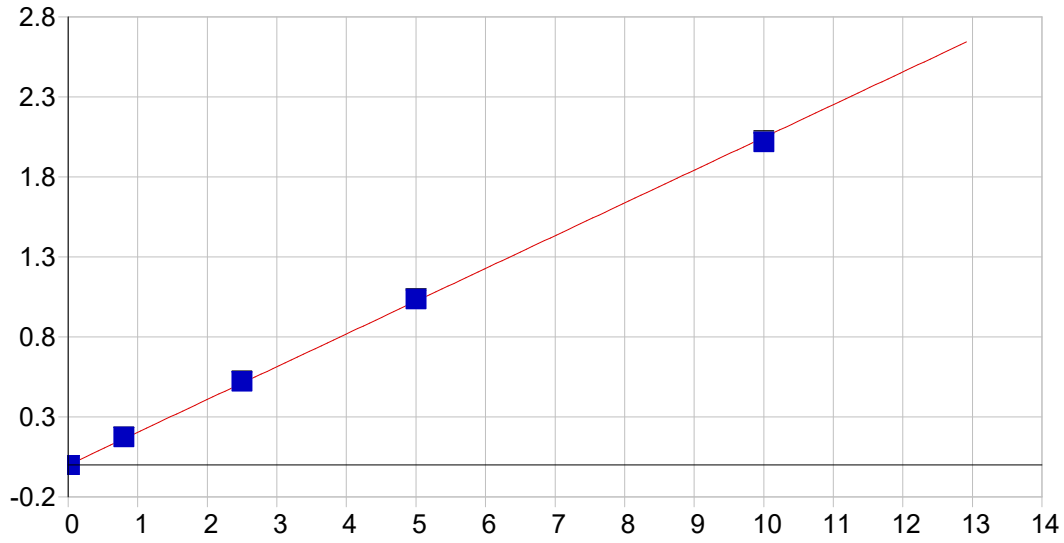


Si 288.158 {117}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000287	Re-Slope:	1.000000
A1 (Gain):	0.004322	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998940	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.014882		
Predicted MQL:	0.049607		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00011	.000	.000	.00029	.000	1
S1	.40000	.33422	-.066	-16.4	.00173	.000	1
S3	2.5000	2.3556	-.144	-5.78	.01063	.000	1
S4	5.0000	4.8596	-.140	-2.81	.02161	.000	1
S5	10.000	10.393	.393	3.93	.04585	.000	1
S2	.80000	.75697	-.043	-5.38	.00361	.000	1

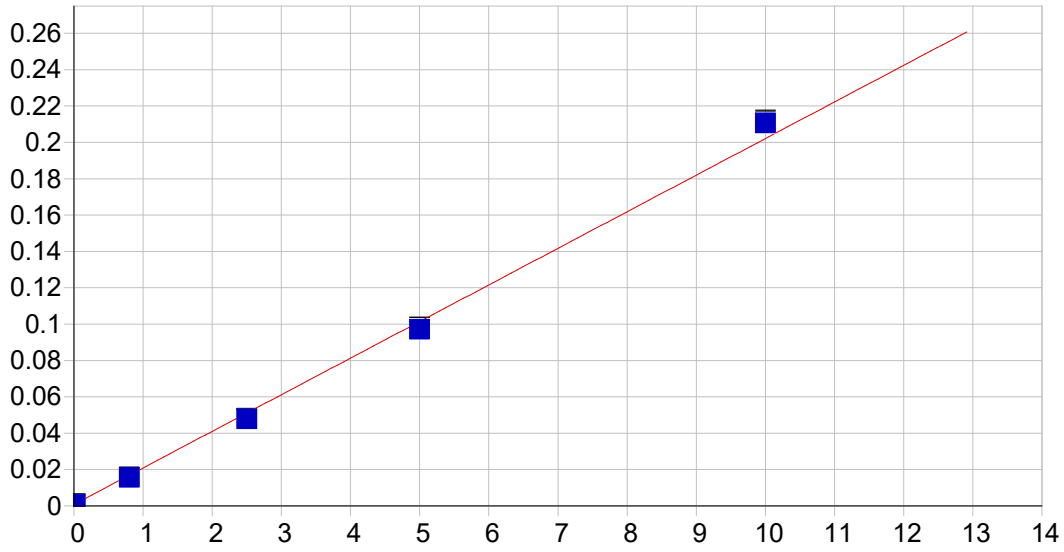


P 177.495 {490}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000581	Re-Slope:	1.000000
A1 (Gain):	0.204732	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999379	Status:	OK.
Std Error of Est:	0.000169		
Predicted MDL:	0.000453		
Predicted MQL:	0.001510		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	-.00058	.000	1
S1	.02000	.00216	-.018	-89.2	-.00013	.000	1
S3	2.5000	2.5494	.049	1.98	.52129	.002	1
S4	5.0000	5.0612	.061	1.22	1.0354	.005	1
S5	10.000	9.8576	-.142	-1.42	2.0173	.008	1
S2	.80000	.84960	.050	6.20	.17333	.001	1

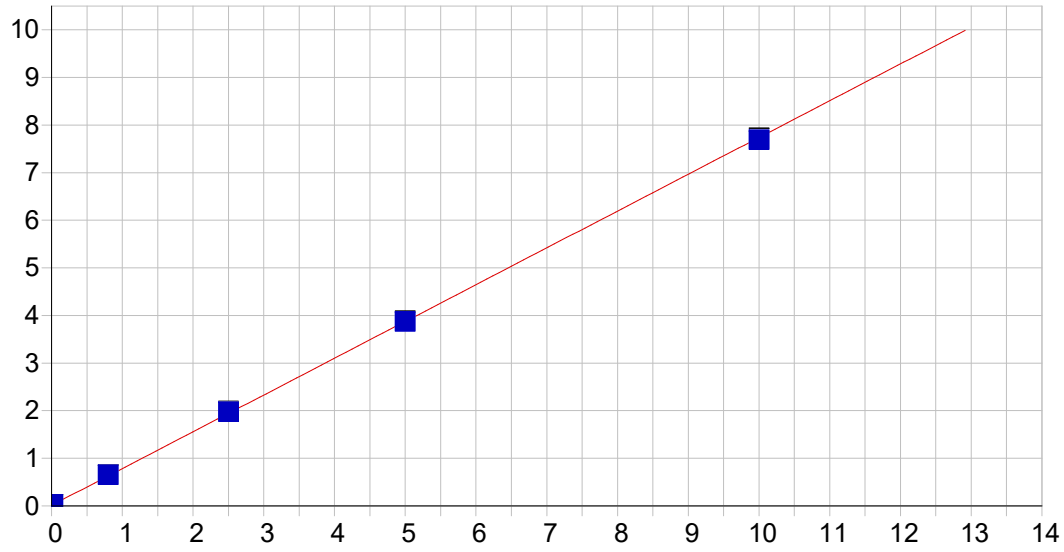


S 182.034 {485}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000772	Re-Slope:	1.000000
A1 (Gain):	0.020133	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998831	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.005366		
Predicted MQL:	0.017886		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00077	.000	1
S1	.02000	.01460	-.005	-27.0	.00105	.000	1
S3	2.5000	2.3417	-.158	-6.33	.04779	.000	1
S4	5.0000	4.7919	-.208	-4.16	.09699	.001	1
S5	10.000	10.429	.429	4.29	.21022	.002	1
S2	.80000	.74250	-.057	-7.19	.01568	.000	1

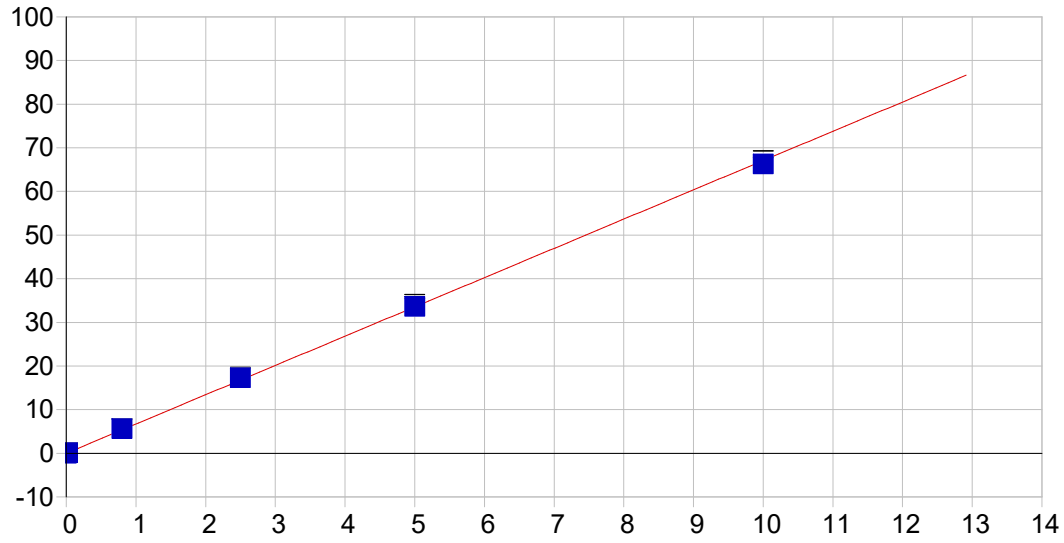


Li 670.784 { 50}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.011312	Re-Slope:	1.000000
A1 (Gain):	0.772759	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999942	Status:	OK.
Std Error of Est:	0.000195		
Predicted MDL:	0.001980		
Predicted MQL:	0.006600		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.01131	.001	1
S5	10.000	9.9359	-.064	-.641	7.6955	.033	1
S4	5.0000	4.9949	-.005	-.102	3.8743	.014	1
S3	2.5000	2.5412	.041	1.65	1.9766	.012	1
S1	.02000	.02185	.002	9.25	.02847	.001	1
S2	.80000	.82617	.026	3.27	.65023	.003	1

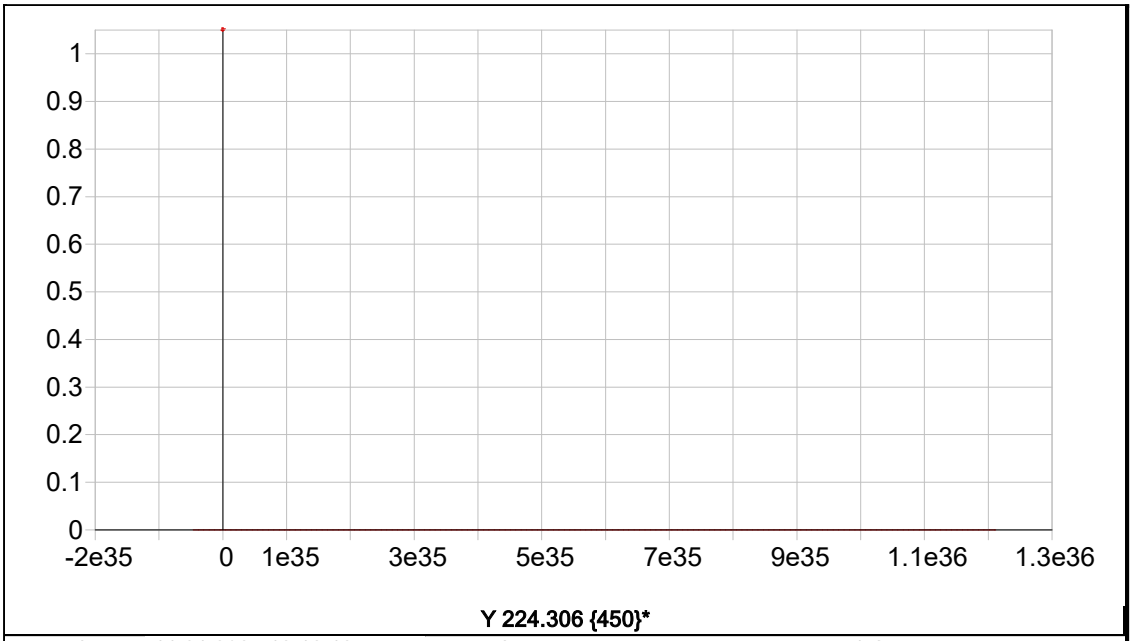


Sr 407.771 { 83}

Date of Fit:	11/21/2025 12:38:29	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000446	Re-Slope:	1.000000
A1 (Gain):	6.707813	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999847	Status:	OK.
Std Error of Est:	0.002752		
Predicted MDL:	0.000119		
Predicted MQL:	0.000397		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00047	.000	1
S1	.02000	.02251	.003	12.6	.15120	.001	1
S3	2.5000	2.5741	.074	2.96	17.282	.143	1
S4	5.0000	5.0128	.013	.255	33.656	.454	1
S5	10.000	9.8757	-.124	-1.24	66.308	.784	1
S2	.80000	.83492	.035	4.37	5.6052	.027	1

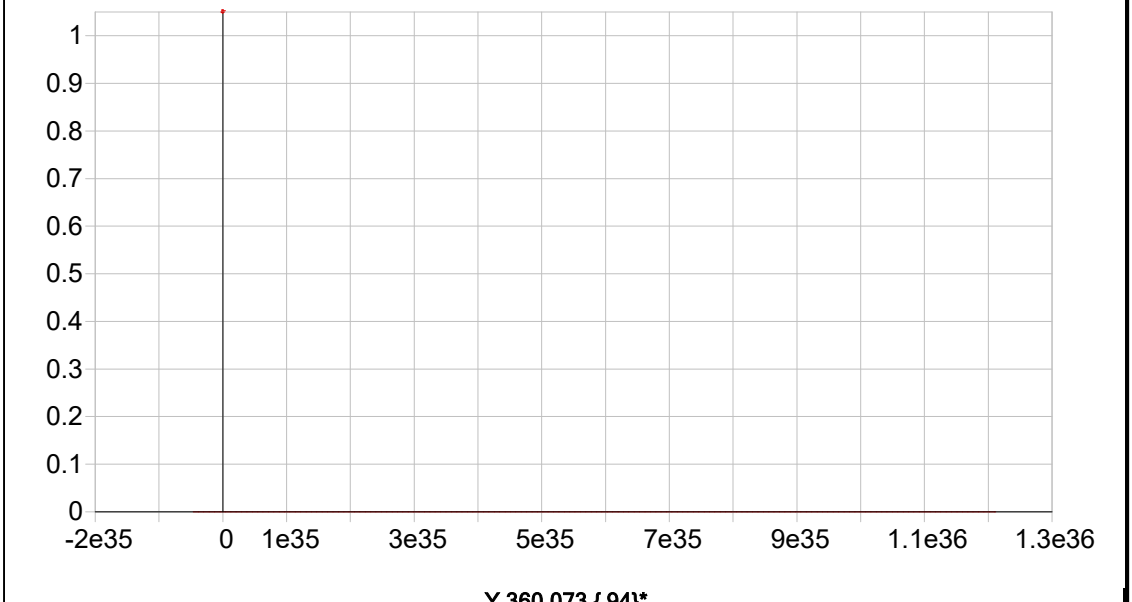


Y 224.306 {450}*

Date of Fit:	11/21/2025 12:12:12	Type of Fit:	Linear	Weighting:	1/Conc

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

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



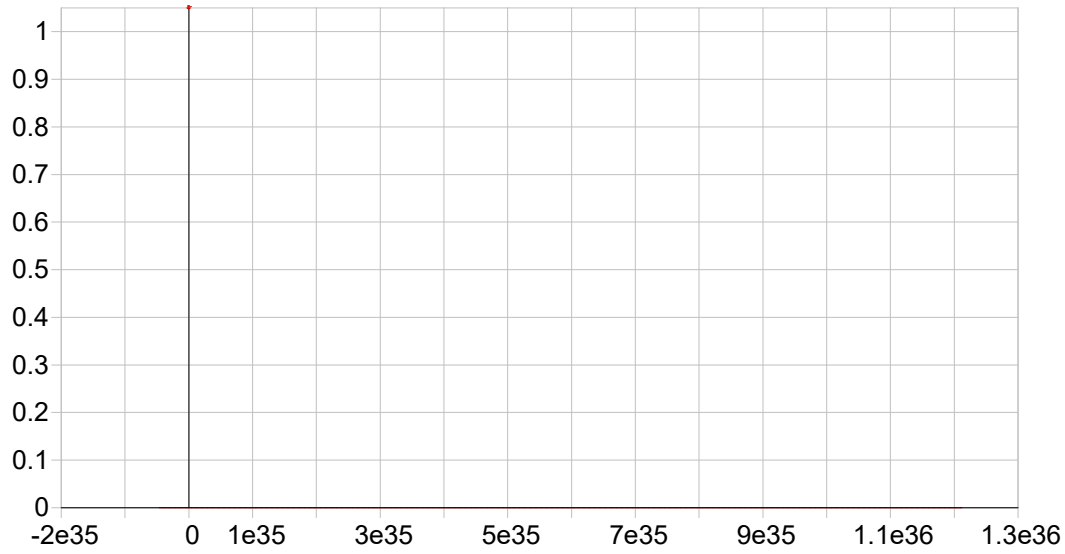
Y 360.073 { 94}*

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

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

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

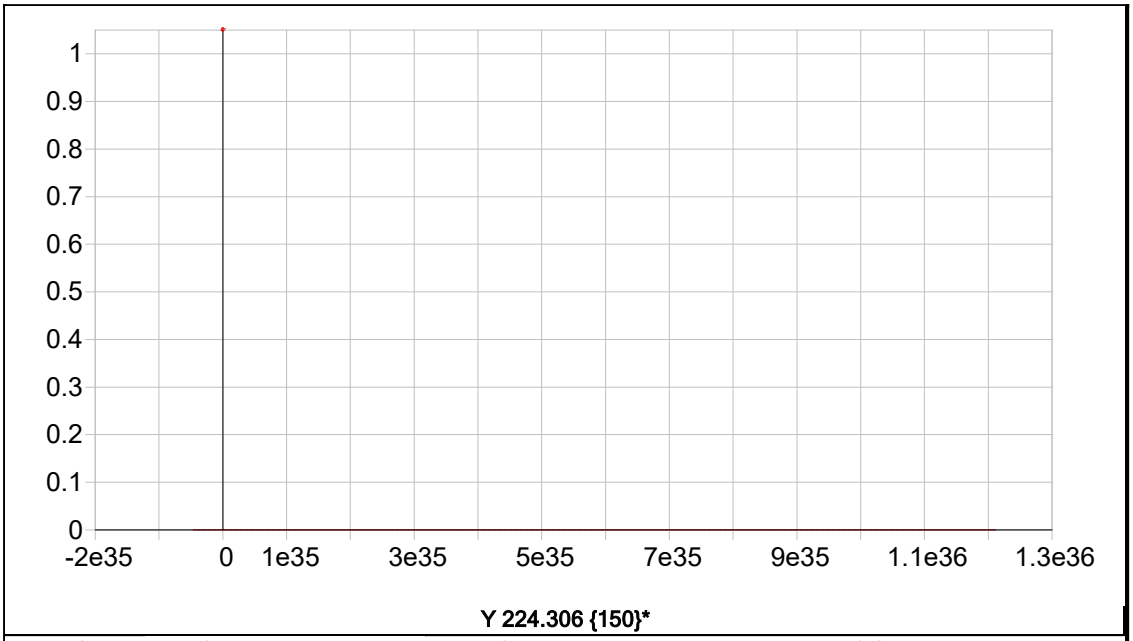
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

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

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

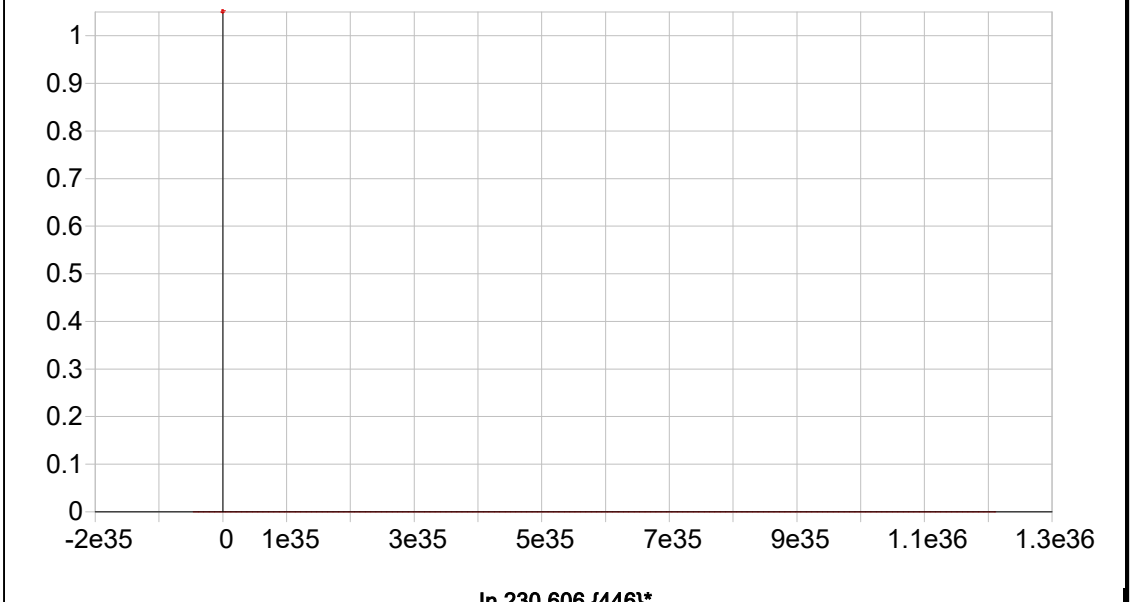


Y 224.306 {150}*

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

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

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



In 230.606 {446}*

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

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

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

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S0 Acquired: 11/21/2025 12:13:15 Type: Cal
Method: 6010-200.7 NEW(v377) 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	**-.00007**	**.00049**	**.00011**	**.00076**	**.00108**	**-.00058**	**.02294**	**-.00201**
Stddev	.00010	.00014	.00006	.00012	.00015	.00055	.00160	.00048
%RSD	138.41	28.761	53.707	16.073	13.930	94.736	6.9908	23.996
#1	-.00012	.00056	.00017	.00065	.00125	-.00116	.02283	-.00158
#2	-.00014	.00033	.00009	.00074	.00100	-.00006	.02140	-.00253
#3	.00004	.00059	.00006	.00089	.00099	-.00053	.02460	-.00192

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	**-.00063**	**.00132**	**.00013**	**-.00007**	**.00062**	**.00008**	**.00000**	**-.00013**
Stddev	.00015	.00036	.00007	.00010	.00021	.00002	.00002	.00018
%RSD	24.067	27.357	54.020	128.26	33.414	20.768	574.41	142.59
#1	-.00060	.00131	.00005	-.00016	.00040	.00010	-.00001	-.00034
#2	-.00049	.00096	.00015	-.00010	.00066	.00006	.00003	-.00003
#3	-.00079	.00168	.00018	.00003	.00080	.00007	-.00001	-.00002

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	**-.00108**	**-.00118**	**.00482**	**-.00026**	**.00518**	**-.00046**	**.00314**	**.00090**
Stddev	.00012	.00005	.00017	.00008	.00009	.00011	.00064	.00018
%RSD	11.173	4.4409	3.5251	31.932	1.8098	24.318	20.243	19.923
#1	-.00102	-.00115	.00467	-.00019	.00526	-.00058	.00254	.00088
#2	-.00122	-.00124	.00500	-.00023	.00508	-.00039	.00381	.00109
#3	-.00100	-.00115	.00480	-.00035	.00519	-.00039	.00307	.00073

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	**.00025**	**.00107**	**.00029**	**-.00058**	**.00077**	**.01131**	**-.00047**
Stddev	.00007	.00009	.00002	.00008	.00009	.00106	.00026
%RSD	29.538	8.5299	5.5388	14.465	12.116	9.3739	55.092
#1	.00017	.00110	.00027	-.00064	.00076	.01218	-.00034
#2	.00032	.00096	.00029	-.00061	.00087	.01162	-.00030
#3	.00025	.00114	.00030	-.00048	.00068	.01013	-.00077

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S0 Acquired: 11/21/2025 12:13:15 Type: Cal
Method: 6010-200.7 NEW(v377) 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	**2610.4**	**49019.**	**8214.8**	**2507.2**	**4681.4**
Stddev	10.5	145.	33.4	17.1	13.8
%RSD	.40203	.29497	.40696	.68332	.29399
#1	2619.9	48885.	8184.2	2508.6	4691.9
#2	2612.3	49001.	8250.5	2489.5	4686.5
#3	2599.1	49172.	8209.9	2523.7	4665.8

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S1 Acquired: 11/21/2025 12:17:39 Type: Cal
Method: 6010-200.7 NEW(v377) 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	**.00066**	**.00178**	**.00202**	**.00175**	**.00765**	**.00834**	**.19704**	**.03630**
Stddev	.00005	.00009	.00035	.00010	.00015	.00025	.00030	.00026
%RSD	7.3310	5.1885	17.180	5.5940	1.9918	2.9458	.15295	.71729
#1	.00060	.00175	.00182	.00185	.00766	.00841	.19685	.03660
#2	.00068	.00171	.00242	.00174	.00781	.00807	.19739	.03612
#3	.00069	.00189	.00181	.00165	.00750	.00854	.19689	.03618

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	**.01257**	**.09821**	**.00173**	**.02450**	**.01850**	**.00059**	**.00748**	**.01857**
Stddev	.00026	.00067	.00003	.00016	.00030	.00001	.00013	.00043
%RSD	2.0708	.68101	1.9336	.64728	1.6306	2.1102	1.6829	2.3393
#1	.01242	.09887	.00177	.02454	.01859	.00058	.00762	.01906
#2	.01241	.09754	.00171	.02433	.01875	.00060	.00743	.01826
#3	.01287	.09821	.00172	.02464	.01817	.00059	.00739	.01838

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	**.01796**	**.00144**	**.02929**	**.00300**	**.07633**	**.00954**	**.04079**	**.11463**
Stddev	.00028	.00006	.00011	.00014	.00041	.00012	.00010	.00045
%RSD	1.5499	4.1463	.38516	4.6336	.53597	1.2687	.25536	.38885
#1	.01772	.00148	.02918	.00296	.07674	.00941	.04089	.11447
#2	.01789	.00137	.02940	.00288	.07632	.00963	.04069	.11428
#3	.01826	.00146	.02931	.00315	.07592	.00960	.04080	.11513

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	**.00406**	**.01159**	**.00173**	**-.00013**	**.00105**	**.02847**	**.15120**
Stddev	.00011	.00022	.00003	.00002	.00009	.00074	.00147
%RSD	2.8255	1.9165	1.7139	17.346	8.9370	2.5855	.97029
#1	.00414	.01166	.00176	-.00015	.00095	.02784	.15227
#2	.00393	.01135	.00170	-.00011	.00105	.02829	.15180
#3	.00412	.01178	.00174	-.00015	.00114	.02928	.14953

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S1 Acquired: 11/21/2025 12:17:39 Type: Cal
Method: 6010-200.7 NEW(v377) 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	**2589.7**	**48788.**	**8257.6**	**2536.7**	**4597.9**
Stddev	8.0	93.	36.4	4.7	20.5
%RSD	.30914	.19103	.44113	.18600	.44578
#1	2593.5	48685.	8218.3	2534.2	4602.9
#2	2595.0	48867.	8264.5	2542.1	4615.4
#3	2580.5	48812.	8290.1	2533.8	4575.3

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S2 Acquired: 11/21/2025 12:22:01 Type: Cal
Method: 6010-200.7 NEW(v377) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.02881	.02957	.11258	.03973	.10212	.11789	2.6945	.24444	.84358
Stddev	.00012	.00078	.00022	.00051	.00054	.00085	.0190	.00023	.00130
%RSD	.41894	2.6405	.19796	1.2962	.53113	.71764	.70364	.09280	.15362
#1	.02891	.03041	.11236	.03998	.10232	.11742	2.7126	.24452	.84432
#2	.02868	.02888	.11257	.03914	.10151	.11738	2.6962	.24462	.84208
#3	.02885	.02941	.11281	.04008	.10254	.11887	2.6748	.24418	.84434

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.18963	.02650	.32315	.16512	.00451	.13876	.03543	.18171	.04839
Stddev	.00152	.00010	.00029	.00097	.00006	.00078	.00021	.00042	.00017
%RSD	.80237	.38751	.08941	.58792	1.4090	.55977	.59782	.23296	.35522
#1	.18788	.02643	.32322	.16488	.00458	.13934	.03557	.18191	.04853
#2	.19062	.02662	.32284	.16428	.00446	.13905	.03519	.18200	.04845
#3	.19039	.02646	.32340	.16618	.00448	.13787	.03554	.18122	.04820

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.05157	.03301	.70151	.01898	.30105	.45828	.07555	.20899	.00361
Stddev	.00041	.00035	.00264	.00019	.00106	.00219	.00046	.00061	.00004
%RSD	.79912	1.0480	.37585	.97466	.35327	.47681	.61063	.28956	.97973
#1	.05198	.03340	.70069	.01912	.30000	.45939	.07578	.20955	.00363
#2	.05157	.03277	.70446	.01877	.30213	.45576	.07502	.20908	.00363
#3	.05115	.03285	.69938	.01906	.30103	.45968	.07585	.20834	.00357

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.17333	.01568	.65023	5.6052
Stddev	.00084	.00016	.00276	.0268
%RSD	.48425	1.0038	.42399	.47900
#1	.17424	.01585	.65201	5.6300
#2	.17258	.01555	.65163	5.6089
#3	.17318	.01564	.64706	5.5767

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S2 Acquired: 11/21/2025 12:22:01 Type: Cal
Method: 6010-200.7 NEW(v377) 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	**2558.4**	**47769.**	**8021.3**	**2476.4**	**4498.4**
Stddev	3.2	130.	35.9	12.8	5.8
%RSD	.12505	.27121	.44710	.51635	.12971
#1	2559.6	47675.	8030.0	2466.4	4496.2
#2	2560.7	47716.	7981.9	2472.0	4493.9
#3	2554.7	47917.	8052.1	2490.8	4505.0

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S3 Acquired: 11/21/2025 12:26:07 Type: Cal
Method: 6010-200.7 NEW(v377) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.08862**	**.09092**	**.34537**	**.11954**	**.30705**	**.35902**	**8.3583**	**.73047**	**2.5925**
Stddev	.00062	.00039	.00380	.00090	.00256	.00132	.0726	.00625	.0192
%RSD	.70221	.42454	1.0996	.75679	.83489	.36843	.86867	.85562	.74051
#1	.08816	.09067	.34158	.11879	.30450	.35754	8.2973	.72481	2.5732
#2	.08838	.09136	.34533	.11929	.30701	.36008	8.4386	.73718	2.5926
#3	.08933	.09072	.34918	.12055	.30962	.35944	8.3390	.72943	2.6116

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.57580**	**.07931**	**.99267**	**.49521**	**.01351**	**.42205**	**.10729**	**.55848**	**.14605**
Stddev	.00385	.00011	.00683	.00429	.00006	.00335	.00076	.00400	.00035
%RSD	.66821	.13376	.68771	.86532	.44382	.79473	.70644	.71574	.24298
#1	.57206	.07940	.98579	.49076	.01346	.41926	.10651	.55467	.14643
#2	.57975	.07919	.99279	.49557	.01358	.42577	.10802	.55814	.14573
#3	.57558	.07933	.99944	.49930	.01350	.42112	.10733	.56264	.14598

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.15221**	**.10022**	**2.0926**	**.05930**	**.89386**	**1.3949**	**.23314**	**.63628**	**.01063**
Stddev	.00081	.00079	.0057	.00018	.00802	.0097	.00206	.00440	.00004
%RSD	.53112	.79077	.27340	.30790	.89770	.69794	.88301	.69077	.36144
#1	.15226	.09947	2.0974	.05918	.88618	1.3851	.23111	.63248	.01059
#2	.15300	.10105	2.0863	.05951	.90219	1.3950	.23308	.64109	.01065
#3	.15138	.10014	2.0942	.05922	.89323	1.4046	.23523	.63527	.01066

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.52129**	**.04779**	**1.9766**	**17.282**
Stddev	.00243	.00030	.0122	.143
%RSD	.46660	.63492	.61909	.82551
#1	.51952	.04748	1.9652	17.123
#2	.52029	.04779	1.9895	17.326
#3	.52406	.04809	1.9750	17.398

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: S3 Acquired: 11/21/2025 12:26:07 Type: Cal
Method: 6010-200.7 NEW(v377) 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	2589.7	49125.	8290.2	2513.0	4476.5
Stddev	16.6	155.	44.0	10.8	27.7
%RSD	.63925	.31635	.53086	.43098	.61905
#1	2605.3	48951.	8335.0	2502.4	4503.1
#2	2591.3	49250.	8247.0	2524.1	4478.8
#3	2572.3	49173.	8288.4	2512.6	4447.8

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S4 Acquired: 11/21/2025 12:30:14 Type: Cal
Method: 6010-200.7 NEW(v377) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.17793**	**.17338**	**.69409**	**.23972**	**.61659**	**.71244**	**16.475**	**1.4296**	**5.2411**
Stddev	.00124	.00548	.00297	.00229	.00097	.00464	.052	.0052	.0219
%RSD	.69688	3.1625	.42787	.95637	.15666	.65126	.31573	.36538	.41718
#1	.17735	.17350	.69147	.23866	.61591	.70750	16.422	1.4242	5.2277
#2	.17709	.16783	.69348	.23815	.61616	.71312	16.526	1.4298	5.2292
#3	.17936	.17880	.69732	.24235	.61770	.71671	16.477	1.4347	5.2663

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.1358**	**.15739**	**1.9948**	**.97874**	**.02694**	**.82354**	**.21265**	**1.1179**	**.29055**
Stddev	.0040	.00049	.0076	.00186	.00019	.00429	.00132	.0041	.00014
%RSD	.34809	.31132	.37969	.19009	.71981	.52099	.62032	.36476	.04927
#1	1.1315	.15710	1.9889	.97763	.02682	.81869	.21118	1.1151	.29059
#2	1.1367	.15711	1.9922	.97771	.02717	.82684	.21373	1.1160	.29038
#3	1.1393	.15796	2.0034	.98089	.02684	.82508	.21303	1.1226	.29066

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.30384**	**.19981**	**4.0967**	**.12036**	**1.7474**	**2.7634**	**.46706**	**1.2544**	**.02161**
Stddev	.00060	.00113	.0127	.00031	.0083	.0120	.00258	.0029	.00015
%RSD	.19680	.56475	.30991	.25583	.47798	.43461	.55201	.23190	.70464
#1	.30360	.19869	4.0955	.12001	1.7384	2.7588	.46633	1.2513	.02153
#2	.30452	.19980	4.0847	.12047	1.7490	2.7544	.46493	1.2571	.02152
#3	.30340	.20094	4.1100	.12060	1.7548	2.7770	.46993	1.2546	.02179

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.0354**	**.09699**	**3.8743**	**33.656**
Stddev	.0054	.00119	.0140	.454
%RSD	.52029	1.2305	.36223	1.3480
#1	1.0363	.09664	3.8580	33.133
#2	1.0297	.09600	3.8822	33.892
#3	1.0403	.09831	3.8825	33.944

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S4 Acquired: 11/21/2025 12:30:14 Type: Cal
Method: 6010-200.7 NEW(v377) 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	2547.1	48780.	8415.6	2474.2	4328.3
Stddev	5.0	102.	37.7	10.3	11.4
%RSD	.19544	.20862	.44830	.41659	.26407
#1	2550.7	48852.	8454.7	2476.8	4336.6
#2	2549.3	48824.	8412.7	2483.0	4333.1
#3	2541.4	48663.	8379.4	2462.9	4315.3

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S5 Acquired: 11/21/2025 12:34:17 Type: Cal
Method: 6010-200.7 NEW(v377) Mode: IR Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.36577	.38813	1.4244	.49846	1.2648	1.4226	32.329	2.8003	10.827
Stddev	.00111	.00691	.0047	.00202	.0028	.0024	.235	.0227	.038
%RSD	.30219	1.7806	.32915	.40620	.22150	.17207	.72758	.80948	.34976
#1	.36454	.38353	1.4226	.49700	1.2638	1.4253	32.570	2.8251	10.809
#2	.36612	.38479	1.4208	.49761	1.2627	1.4218	32.317	2.7808	10.802
#3	.36666	.39608	1.4297	.50077	1.2680	1.4206	32.100	2.7949	10.871

Elem	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.2451	.31902	4.1177	1.9682	.05651	1.6168	.42587	2.2967	.59830
Stddev	.0079	.00019	.0126	.0028	.00057	.0044	.00140	.0069	.00042
%RSD	.35296	.05811	.30667	.14047	1.0151	.27315	.32815	.29987	.07092
#1	2.2543	.31883	4.1105	1.9677	.05620	1.6198	.42747	2.2929	.59821
#2	2.2405	.31902	4.1103	1.9658	.05717	1.6189	.42526	2.2926	.59876
#3	2.2406	.31920	4.1322	1.9712	.05615	1.6118	.42488	2.3047	.59792

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.63174	.40086	8.3006	.25458	3.4140	5.5716	.96191	2.4869	.04585
Stddev	.00315	.00208	.0239	.00178	.0223	.0126	.00403	.0060	.00036
%RSD	.49833	.51968	.28757	.69945	.65264	.22611	.41907	.24071	.79414
#1	.63085	.40322	8.2768	.25350	3.4390	5.5691	.95792	2.4934	.04544
#2	.63524	.40010	8.3245	.25663	3.3961	5.5605	.96183	2.4859	.04614
#3	.62913	.39927	8.3004	.25361	3.4069	5.5853	.96598	2.4815	.04596

Elem	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.0173	.21022	7.6955	66.308
Stddev	.0076	.00165	.0329	.784
%RSD	.37604	.78544	.42809	1.1824
#1	2.0087	.20859	7.7318	66.354
#2	2.0200	.21017	7.6872	65.502
#3	2.0231	.21189	7.6676	67.068

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: S5 Acquired: 11/21/2025 12:34:17 Type: Cal
Method: 6010-200.7 NEW(v377) 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	2494.0	47416.	8661.5	2382.3	4126.0
Stddev	6.3	95.	57.2	7.5	12.5
%RSD	.25260	.20046	.66031	.31438	.30260
#1	2488.9	47427.	8596.8	2390.7	4123.3
#2	2501.1	47315.	8705.5	2376.3	4139.7
#3	2492.1	47505.	8682.2	2380.0	4115.2

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICV01 Acquired: 11/21/2025 13:00:37 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**3.900133**	**3.720186**	**3.804172**	**3.967086**	**3.950346**	**7.720336**
Stddev	.022051	.061601	.018688	.020701	.012062	.027011
%RSD	.5654017	1.655870	.4912598	.5218144	.3053301	.3498625
#1	3.893871	3.774305	3.786566	3.965265	3.949684	7.690730
#2	3.881891	3.653150	3.802168	3.947356	3.938629	7.743636
#3	3.924639	3.733101	3.823782	3.988637	3.962725	7.726640

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.688031**	**.1962194**	**1.925006**	**19.28458**	**.7911226**	**1.919346**
Stddev	.052033	.0016262	.007493	.05615	.0018989	.006825
%RSD	.6768059	.8287489	.3892418	.2911548	.2400298	.3555771
#1	7.672275	.1943649	1.919236	19.28892	.7902201	1.915436
#2	7.746121	.1974015	1.922308	19.33842	.7933045	1.915375
#3	7.645696	.1968919	1.933474	19.22638	.7898432	1.927226

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9900629**	**3.841876**	**1.917487**	**19.19473**	**1.930827**	**.9655497**
Stddev	.0022609	.019424	.012310	.13372	.004985	.0009145
%RSD	.2283638	.5055803	.6419771	.6966259	.2581725	.0947149
#1	.9876927	3.831974	1.911341	19.09356	1.926871	.9665818
#2	.9903003	3.864256	1.931660	19.34632	1.929183	.9652272
#3	.9921958	3.829399	1.909460	19.14430	1.936426	.9648402

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**18.61959**	**1.916712**	**1.978186**	**18.97300**	**3.882433**	**3.911546**
Stddev	.18906	.002013	.005226	.17066	.035774	.006976
%RSD	1.015387	.1050389	.2641906	.8994875	.9214224	.1783505
#1	18.69899	1.917331	1.981426	19.11894	3.841868	3.909099
#2	18.75600	1.918343	1.980976	19.01471	3.909469	3.906122
#3	18.40378	1.914462	1.972157	18.78535	3.895962	3.919416

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICV01 Acquired: 11/21/2025 13:00:37 Type: Unk
Method: 6010-200.7 NEW(v377) 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	3.848847	3.862179	F 3.455427	F .0000544	F .0184876	F -.004112
Stddev	.014876	.014417	.018500	.0001437	.0036138	.000808
%RSD	.3865110	.3732780	.5353816	264.3903	19.54697	19.66111
#1	3.840514	3.850635	3.466636	.0002199	.0196247	-.004515
#2	3.840005	3.878338	3.465570	-.000019	.0144421	-.004640
#3	3.866022	3.857563	3.434074	-.000038	.0213961	-.003181

Elem	Sr4077
Units	ppm
Avg	F -.003055
Stddev	.000031
%RSD	1.011919
#1	-.003044
#2	-.003031
#3	-.003090

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2527.959	47407.19	8463.075	2404.514	4321.718
Stddev	1.913	65.06	41.159	12.659	6.824
%RSD	.0756735	.1372399	.4863311	.5264565	.1579021
#1	2529.945	47333.49	8510.599	2394.324	4326.318
#2	2527.803	47431.47	8439.708	2400.534	4324.958
#3	2526.129	47456.63	8438.918	2418.685	4313.877

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: LLICV01 Acquired: 11/21/2025 13:09:17 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0212091**	**.0422695**	**.0117680**	**.0215000**	**.0528370**	**.1159612**
Stddev	.0040751	.0015257	.0006546	.0035546	.0023445	.0030111
%RSD	19.21368	3.609447	5.562490	16.53286	4.437227	2.596621
#1	.0221174	.0433989	.0117699	.0249793	.0529820	.1135618
#2	.0167565	.0405338	.0124216	.0216459	.0551056	.1193401
#3	.0247534	.0428757	.0111124	.0178747	.0504234	.1149818

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1005720**	**.0066397**	**.0062661**	**2.123698**	**.0103880**	**.0309927**
Stddev	.0002877	.0000642	.0000624	.029491	.0001219	.0002874
%RSD	.2860536	.9671772	.9951374	1.388667	1.173169	.9272942
#1	.1002937	.0065697	.0062534	2.089738	.0103390	.0309213
#2	.1008682	.0066958	.0062110	2.142860	.0102983	.0307478
#3	.1005542	.0066535	.0063338	2.138496	.0105267	.0313091

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0223674**	**.1010101**	**.0209724**	**2.187083**	**.0423249**	**.0113215**
Stddev	.0005960	.0064399	.0003671	.015296	.0001828	.0007657
%RSD	2.664557	6.375467	1.750328	.6993708	.4319912	6.763248
#1	.0216805	.0942823	.0206928	2.195629	.0425353	.0109436
#2	.0226741	.1071171	.0213881	2.196196	.0422051	.0122027
#3	.0227476	.1016309	.0208364	2.169424	.0422342	.0108182

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.908919**	**.0402090**	**.0441513**	**1.988953**	**.1085963**	**.2080402**
Stddev	.015226	.0033852	.0006675	.043224	.0014479	.0016857
%RSD	.7976073	8.419068	1.511777	2.173215	1.333274	.8102578
#1	1.912587	.0416102	.0435413	1.967874	.1084697	.2070554
#2	1.921975	.0363481	.0448643	2.038672	.1101033	.2070787
#3	1.892194	.0426686	.0440484	1.960312	.1072158	.2099866

Sample Name: LLICV01 Acquired: 11/21/2025 13:09:17 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0389675	.0424152	.3285625	F .0022908	.0160206	.0196993
Stddev	.0008919	.0010790	.0210756	.0000526	.0044202	.0010721
%RSD	2.288755	2.543990	6.414494	2.294399	27.59038	5.442468
#1	.0393941	.0434328	.3073303	.0022310	.0127818	.0186042
#2	.0379425	.0425292	.3494780	.0023296	.0142238	.0207469
#3	.0395661	.0412837	.3288791	.0023117	.0210562	.0197470

Elem	Sr4077
Units	ppm
Avg	.0219740
Stddev	.0001548
%RSD	.7043999
#1	.0218504
#2	.0219239
#3	.0221476

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2591.435	48468.64	8617.812	2447.571	4621.954
Stddev	8.597	175.12	36.985	4.798	12.275
%RSD	.3317537	.3613052	.4291675	.1960232	.2655871
#1	2599.384	48286.64	8629.101	2442.145	4628.927
#2	2592.611	48635.95	8576.498	2451.253	4629.154
#3	2582.310	48483.34	8647.836	2449.315	4607.780

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICB01 Acquired: 11/21/2025 13:13:37 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0002676**	**-.001392**	**-.001706**	**.0011202**	**.0022446**	**.0079134**	**-.001422**
Stddev	.0047018	.004705	.000394	.0009041	.0013835	.0041081	.001287
%RSD	1756.839	338.1095	23.10936	80.70748	61.63435	51.91342	90.53074
#1	.0050497	-.004170	-.001665	.0003124	.0019380	.0126562	-.001935
#2	.0001026	-.004046	-.001334	.0009514	.0010402	.0056200	-.002374
#3	-.004349	.004041	-.002119	.0020969	.0037557	.0054640	.000043

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000044**	**.0000508**	**-.009216**	**-.000625**	**.0001476**	**.0002526**	**-.009464**
Stddev	.0000130	.0001101	.001214	.000473	.0002100	.0002130	.000512
%RSD	297.2544	216.6880	13.17241	75.60253	142.2660	84.32406	5.410014
#1	.0000042	-.000075	-.008589	-.001170	.0003634	.0000284	-.008910
#2	.0000174	.000131	-.008443	-.000326	-.000056	.0002771	-.009919
#3	-.000009	.000096	-.010615	-.000380	.000136	.0004523	-.009563

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000148**	**.0114625**	**-.000239**	**-.000071**	**-.133852**	**.0016109**	**.0000071**
Stddev	.000170	.0089918	.000190	.000697	.012334	.0021329	.0002525
%RSD	114.6825	78.44600	79.38937	977.5849	9.214677	132.4036	3572.745
#1	-.000269	.0015751	-.000336	-.000868	-.120565	.0027585	.0000145
#2	-.000222	.0191509	-.000020	.000226	-.144935	-.000850	-.000249
#3	.000046	.0136613	-.000361	.000428	-.136058	.002924	.000256

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.119261**	**.0041646**	**-.000062**	**-.001054**	**.0034101**	**-.027452**	**-.000438**
Stddev	.045478	.0003006	.000709	.001251	.0005702	.005660	.000066
%RSD	38.13312	7.217384	1147.950	118.6720	16.72164	20.61794	14.98010
#1	-.133157	.0043188	-.000879	-.002484	.0035571	-.029000	-.000451
#2	-.068457	.0038182	.000390	-.000518	.0027808	-.021179	-.000367
#3	-.156171	.0043567	.000303	-.000161	.0038925	-.032178	-.000496

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICB01 Acquired: 11/21/2025 13:13:37 Type: Unk
Method: 6010-200.7 NEW(v377) 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	F -.012756	-.003158	.0000106
Stddev	.004905	.001267	.0001049
%RSD	38.45276	40.11139	985.9172
#1	-.018411	-.004601	.0000477
#2	-.009665	-.002232	-.000108
#3	-.010190	-.002640	.000092

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2601.856	49537.49	8484.498	2497.861	4705.845
Stddev	.580	161.43	30.148	12.875	3.055
%RSD	.0222910	.3258823	.3553317	.5154337	.0649137
#1	2602.004	49648.39	8457.012	2500.188	4708.069
#2	2602.347	49352.28	8516.742	2483.981	4707.105
#3	2601.216	49611.79	8479.740	2509.413	4702.362

Sample Name: CRI01 Acquired: 11/21/2025 13:17:59 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0210528**	**.0333840**	**.0116006**	**.0191709**	**.0518521**	**.1170467**
Stddev	.0010730	.0023128	.0015822	.0015239	.0018819	.0052017
%RSD	5.096576	6.927871	13.63883	7.948803	3.629359	4.444145
#1	.0200169	.0307557	.0100255	.0208855	.0508165	.1158166
#2	.0209823	.0351082	.0115865	.0186562	.0507155	.1125704
#3	.0221594	.0342882	.0131898	.0179711	.0540244	.1227533

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1038617**	**.0064444**	**.0059753**	**2.083540**	**.0098316**	**.0295607**
Stddev	.0007858	.0000584	.0001141	.011626	.0004674	.0002539
%RSD	.7565931	.9067247	1.909166	.5580162	4.754114	.8587289
#1	.1047444	.0063791	.0058913	2.084472	.0103360	.0292780
#2	.1032383	.0064918	.0059294	2.094672	.0097457	.0296352
#3	.1036024	.0064622	.0061052	2.071475	.0094131	.0297690

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0217666**	**.0970744**	**.0216982**	**2.180479**	**.0401300**	**.0105818**
Stddev	.0002110	.0090638	.0008717	.042397	.0006287	.0001948
%RSD	.9692024	9.336915	4.017344	1.944405	1.566728	1.840955
#1	.0215813	.1031469	.0224901	2.226462	.0401116	.0107641
#2	.0217224	.1014203	.0218403	2.172039	.0407677	.0103765
#3	.0219962	.0866561	.0207642	2.142937	.0395106	.0106049

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.896727**	**.0422088**	**.0423422**	**1.896222**	**.1060608**	**.1978906**
Stddev	.021010	.0029585	.0004225	.027382	.0011290	.0008500
%RSD	1.107696	7.009308	.9977002	1.444005	1.064509	.4295462
#1	1.885788	.0424554	.0423614	1.911655	.1047582	.1969650
#2	1.883443	.0391347	.0419104	1.864608	.1066666	.1980708
#3	1.920949	.0450364	.0427547	1.912403	.1067576	.1986361

Sample Name: CRI01 Acquired: 11/21/2025 13:17:59 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0377988	.0407209	F .3145796	F .0020153	F .0098183	.0193424
Stddev	.0007881	.0012137	.0082497	.0001223	.0042695	.0009494
%RSD	2.084990	2.980641	2.622460	6.067645	43.48486	4.908411
#1	.0385823	.0420498	.3207538	.0019043	.0146557	.0203595
#2	.0370062	.0404419	.3052102	.0019952	.0082235	.0184795
#3	.0378079	.0396709	.3177747	.0021464	.0065758	.0191882

Elem	Sr4077
Units	ppm
Avg	.0218694
Stddev	.0001055
%RSD	.4824585
#1	.0217531
#2	.0218962
#3	.0219590

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2580.407	48552.04	8309.043	2497.183	4597.912
Stddev	12.427	98.11	21.098	6.021	16.765
%RSD	.4816057	.2020755	.2539191	.2411119	.3646234
#1	2582.769	48474.18	8288.091	2490.614	4602.845
#2	2591.483	48662.24	8308.755	2498.496	4611.657
#3	2566.967	48519.70	8330.284	2502.439	4579.234

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICSA01 Acquired: 11/21/2025 13:22:19 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0083715**	**.0125121**	**.0083187**	**.0130642**	**.0000436**	**251.6127**	**.0019162**
Stddev	.0076226	.0018594	.0040855	.0047063	.0031572	.6101	.0011028
%RSD	91.05383	14.86056	49.11158	36.02412	7249.392	.2424810	57.54837
#1	.0171417	.0108482	.0101112	.0163432	.0013526	250.9113	.0031893
#2	.0033410	.0121688	.0112016	.0076717	-.003558	252.0204	.0012558
#3	.0046319	.0145191	.0036434	.0151776	.002336	251.9064	.0013036

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008775**	**.0039976**	**239.1585**	**.0502984**	**.0021198**	**.0015977**	**95.38774**
Stddev	.0000590	.0003328	.5147	.0000395	.0001979	.0004447	.07635
%RSD	6.726892	8.326188	.2152244	.0784526	9.336192	27.83535	.0800402
#1	.0009145	.0041494	238.5670	.0502840	.0018916	.0012229	95.36303
#2	.0008094	.0036159	239.5052	.0502681	.0022446	.0020892	95.32681
#3	.0009086	.0042274	239.4031	.0503430	.0022232	.0014812	95.47338

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0091391**	**254.2259**	**.0055831**	**-.005790**	**-.004497**	**.0028943**	**.0063291**
Stddev	.0013656	.8428	.0001954	.000646	.002594	.0035230	.0003639
%RSD	14.94264	.3315029	3.499081	11.15795	57.69660	121.7255	5.750138
#1	.0104897	253.3188	.0053632	-.006536	-.001551	.0069508	.0062529
#2	.0077589	254.9846	.0056495	-.005419	-.006440	.0011311	.0060092
#3	.0091688	254.3743	.0057365	-.005414	-.005499	.0006009	.0067250

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.009927**	**.0219988**	**.0005827**	**-.005185**	**-.003570**	**-.017631**	**.0007086**
Stddev	.022410	.0014444	.0003799	.000801	.001392	.004799	.0006489
%RSD	225.7422	6.565684	65.19085	15.45372	39.00870	27.21849	91.56908
#1	-.010170	.0234352	.0005948	-.004425	-.002171	-.017470	.0009672
#2	.012603	.0205466	.0009564	-.005107	-.003581	-.022509	-.000030
#3	-.032215	.0220145	.0001969	-.006022	-.004956	-.012915	.001188

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICSA01 Acquired: 11/21/2025 13:22:19 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.003763	F -.033331	.0111128
Stddev	.004993	.000471	.0006848
%RSD	132.6707	1.412408	6.162483
#1	-.000262	-.033637	.0103972
#2	-.009480	-.032789	.0117620
#3	-.001547	-.033568	.0111793

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2392.512	45405.18	8178.169	2299.706	3858.451
Stddev	4.882	85.86	25.251	12.086	10.342
%RSD	.2040493	.1890988	.3087635	.5255544	.2680423
#1	2391.336	45334.92	8206.313	2285.939	3862.639
#2	2397.874	45500.89	8157.496	2304.607	3866.043
#3	2388.325	45379.74	8170.698	2308.572	3846.672

Sample Name: ICSAB01 Acquired: 11/21/2025 13:26:36 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.1085709**	**.1065698**	**.0527552**	**.0494354**	**.5871863**	**242.8742**
Stddev	.0068356	.0034928	.0031758	.0063755	.0013642	.8366
%RSD	6.296001	3.277442	6.019810	12.89658	.2323221	.3444775
#1	.1016994	.1054942	.0491024	.0433797	.5879363	243.3597
#2	.1086431	.1037413	.0548619	.0488378	.5856117	241.9081
#3	.1153700	.1104738	.0543012	.0560886	.5880109	243.3546

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4770147**	**.4915276**	**.9751812**	**229.9396**	**.5395959**	**.4877940**
Stddev	.0035712	.0013232	.0040471	.9429	.0003483	.0028876
%RSD	.7486632	.2692061	.4150055	.4100833	.0645533	.5919731
#1	.4784546	.4930504	.9730157	230.1800	.5391943	.4861687
#2	.4729483	.4906580	.9726777	228.8997	.5398162	.4860854
#3	.4796413	.4908744	.9798503	230.7391	.5397771	.4911280

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4697607**	**92.71754**	**.4786885**	**246.2515**	**.9723520**	**.1830216**
Stddev	.0019774	.69431	.0012205	.2559	.0048829	.0006068
%RSD	.4209415	.7488466	.2549692	.1039187	.5021754	.3315664
#1	.4683598	92.54804	.4773922	246.3527	.9683295	.1825123
#2	.4688997	92.12367	.4788579	245.9605	.9709416	.1828594
#3	.4720227	93.48091	.4798155	246.4413	.9777849	.1836930

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.050879**	**.4706377**	**1.015158**	**-.042386**	**1.119126**	**1.114611**
Stddev	.008398	.0022856	.000425	.018643	.001942	.003182
%RSD	16.50609	.4856388	.0418349	43.98426	.1735141	.2855198
#1	-.041219	.4709391	1.015630	-.021427	1.120494	1.112794
#2	-.056443	.4727577	1.014807	-.048608	1.116903	1.112754
#3	-.054974	.4682164	1.015037	-.057122	1.119980	1.118286

Sample Name: ICSAB01 Acquired: 11/21/2025 13:26:36 Type: Unk
Method: 6010-200.7 NEW(v377) 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	1.122113	1.094082	1.023315	F .0001269	F -.000080	F -.031557
Stddev	.001258	.005309	.017543	.0001502	.004023	.002110
%RSD	.1121494	.4852606	1.714325	118.3768	5002.306	6.685687
#1	1.123328	1.091670	1.003891	.0001734	.004491	-.032345
#2	1.122196	1.090407	1.028049	.0002484	-.003080	-.029167
#3	1.120816	1.100169	1.038005	-.000041	-.001651	-.033160

Elem	Sr4077
Units	ppm
Avg	F .0084399
Stddev	.0002523
%RSD	2.989407
#1	.0086093
#2	.0081499
#3	.0085605

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2416.399	45500.26	8387.720	2297.602	3900.323
Stddev	5.864	106.37	12.365	4.481	11.631
%RSD	.2426632	.2337841	.1474127	.1950289	.2981978
#1	2421.457	45567.33	8376.252	2294.201	3904.779
#2	2417.768	45555.84	8400.819	2302.679	3909.067
#3	2409.972	45377.61	8386.088	2295.926	3887.124

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICSA01DLX20 Acquired: 11/21/2025 13:30:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.000457**	**-.002727**	**-.000305**	**-.002586**	**.0004621**	**11.21530**	**-.001189**
Stddev	.002732	.003407	.000836	.001375	.0033732	.02727	.000598
%RSD	597.5437	124.9507	273.8825	53.17915	729.9519	.2431680	50.28254
#1	.000652	-.005524	.000658	-.001005	.0000601	11.21365	-.001757
#2	.001546	.001068	-.000843	-.003505	-.002692	11.24335	-.000565
#3	-.003569	-.003725	-.000732	-.003249	.004018	11.18889	-.001245

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000809**	**.0001553**	**11.05697**	**.0020109**	**.0001807**	**.0005194**	**4.299485**
Stddev	.0000694	.0001092	.01934	.0003317	.0002100	.0001200	.004688
%RSD	85.77403	70.32396	.1749370	16.49477	116.2260	23.09392	.1090415
#1	.0001088	.0000589	11.07710	.0021104	.0001176	.0005877	4.300406
#2	.0001319	.0002740	11.05528	.0022815	.0004150	.0005895	4.303644
#3	.0000019	.0001332	11.03853	.0016408	.0000095	.0003809	4.294405

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016481**	**11.37522**	**.0004187**	**-.000660**	**-.152909**	**.0035509**	**.0007245**
Stddev	.0006783	.02161	.0002736	.000091	.012970	.0031051	.0000120
%RSD	41.15892	.1900131	65.33065	13.82860	8.482213	87.44500	1.656564
#1	.0012890	11.37150	.0003071	-.000594	-.162422	.0034389	.0007311
#2	.0012248	11.39846	.0007305	-.000764	-.158169	.0005033	.0007317
#3	.0024305	11.35571	.0002186	-.000622	-.138135	.0067105	.0007106

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.123898**	**.0015361**	**-.000379**	**-.001857**	**.0006868**	**-.032700**	**.0000065**
Stddev	.023658	.0005693	.000724	.000439	.0026253	.009142	.0000827
%RSD	19.09497	37.06432	190.8585	23.66420	382.2431	27.95654	1279.500
#1	-.145492	.0008953	.000236	-.001864	.0016730	-.030471	.0000999
#2	-.098610	.0017293	-.001177	-.001414	-.002289	-.024879	-.000057
#3	-.127591	.0019836	-.000197	-.002292	.002676	-.042750	-.000023

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICSA01DLX20 Acquired: 11/21/2025 13:30:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	-.012469	-.006069	.0003897
Stddev	.007845	.001929	.0000637
%RSD	62.91248	31.77481	16.33846
#1	-.019011	-.004006	.0004455
#2	-.014625	-.006376	.0003204
#3	-.003772	-.007826	.0004032

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2592.855	48956.37	8514.999	2458.067	4558.524
Stddev	5.188	134.31	6.155	3.206	16.639
%RSD	.2000925	.2743374	.0722810	.1304216	.3650096
#1	2593.768	48866.14	8508.005	2454.648	4569.013
#2	2597.526	49110.72	8517.402	2461.006	4567.221
#3	2587.271	48892.25	8519.590	2458.546	4539.339

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICSAB01DLX20 Acquired: 11/21/2025 13:34:57 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0060378**	**.0038682**	**.0008466**	**.0016619**	**.0298178**	**12.27394**	**.0221182**
Stddev	.0040303	.0020342	.0005561	.0022858	.0009827	.00281	.0001854
%RSD	66.75058	52.58644	65.69126	137.5413	3.295772	.0228655	.8382629
#1	.0028014	.0016627	.0012337	.0025790	.0295186	12.27170	.0219905
#2	.0105521	.0056706	.0002093	.0033466	.0290195	12.27302	.0223309
#3	.0047599	.0042714	.0010967	-.000940	.0309154	12.27709	.0220333

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0251834**	**.0475832**	**12.05288**	**.0277917**	**.0238772**	**.0249141**	**4.664008**
Stddev	.0000710	.0002890	.01907	.0005310	.0000822	.0002488	.028205
%RSD	.2819125	.6073293	.1582388	1.910759	.3441801	.9985939	.6047387
#1	.0252375	.0474571	12.07216	.0277257	.0237830	.0246407	4.632560
#2	.0252097	.0473787	12.05247	.0283526	.0239143	.0249744	4.687067
#3	.0251030	.0479138	12.03402	.0272968	.0239344	.0251272	4.672397

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0252023**	**12.47098**	**.0483033**	**.0089718**	**-.145209**	**.0263472**	**.0502195**
Stddev	.0005465	.02673	.0003027	.0002991	.007611	.0015742	.0006326
%RSD	2.168311	.2143666	.6266810	3.333322	5.241152	5.974839	1.259661
#1	.0256444	12.44648	.0480107	.0091765	-.138058	.0246531	.0499691
#2	.0253712	12.49950	.0482839	.0091104	-.144361	.0277649	.0509390
#3	.0245914	12.46697	.0486152	.0086286	-.153208	.0266237	.0497505

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.123025**	**.0564022**	**.0560238**	**.0535954**	**.0575275**	**.0125497**	**-.000422**
Stddev	.018004	.0011377	.0004734	.0013545	.0018630	.0062507	.000357
%RSD	14.63447	2.017176	.8449230	2.527273	3.238393	49.80737	84.47558
#1	-.139926	.0551049	.0559155	.0521127	.0559338	.0183705	-.000130
#2	-.125059	.0572300	.0556139	.0547679	.0595757	.0133351	-.000317
#3	-.104091	.0568719	.0565419	.0539056	.0570732	.0059434	-.000820

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: ICSAB01DLX20 Acquired: 11/21/2025 13:34:57 Type: Unk
Method: 6010-200.7 NEW(v377) 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	-.010487	-.005300	.0005562
Stddev	.004099	.002549	.0000077
%RSD	39.08308	48.08827	1.388605
#1	-.007603	-.007134	.0005476
#2	-.008679	-.006377	.0005585
#3	-.015179	-.002390	.0005625

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2598.703	49078.20	8553.556	2464.885	4571.714
Stddev	2.668	134.48	11.549	5.317	6.802
%RSD	.1026723	.2740183	.1350251	.2157015	.1487806
#1	2600.869	49118.33	8548.007	2461.620	4577.836
#2	2599.517	48928.22	8545.829	2462.014	4572.914
#3	2595.722	49188.05	8566.833	2471.020	4564.392

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV01 Acquired: 11/21/2025 13:44:23 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.949786**	**4.801014**	**4.948774**	**4.887386**	**5.005789**	**10.11850**
Stddev	.040440	.176515	.031422	.046222	.027186	.03336
%RSD	.8169962	3.676610	.6349378	.9457357	.5430915	.3297228
#1	4.959628	4.959586	4.924532	4.900804	5.001841	10.09564
#2	4.905334	4.610829	4.937517	4.835940	4.980793	10.10308
#3	4.984396	4.832628	4.984274	4.925414	5.034734	10.15678

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.23031**	**.2548827**	**2.463543**	**25.30946**	**1.005729**	**2.475179**
Stddev	.06519	.0013631	.015564	.04756	.000772	.012809
%RSD	.6371936	.5348024	.6317837	.1879196	.0767961	.5175121
#1	10.18154	.2537046	2.454726	25.29913	1.005005	2.467343
#2	10.20503	.2563757	2.454388	25.26792	1.005640	2.468233
#3	10.30435	.2545676	2.481514	25.36135	1.006542	2.489961

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.264451**	**5.022605**	**2.540046**	**25.01849**	**2.482899**	**1.264583**
Stddev	.005390	.047572	.016131	.07549	.013234	.002083
%RSD	.4262700	.9471532	.6350547	.3017242	.5330064	.1647157
#1	1.263507	5.008962	2.527230	25.09473	2.473942	1.263090
#2	1.259596	4.983345	2.534748	24.94378	2.476656	1.263697
#3	1.270251	5.075508	2.558159	25.01696	2.498100	1.266963

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.33992**	**2.512559**	**2.524445**	**25.02391**	**5.080671**	**4.983296**
Stddev	.24149	.016680	.008408	.20788	.027175	.028811
%RSD	.9530167	.6638470	.3330668	.8307369	.5348618	.5781576
#1	25.24645	2.502194	2.516255	25.04554	5.056421	4.985280
#2	25.15914	2.503683	2.533056	24.80606	5.110041	4.953543
#3	25.61418	2.531799	2.524024	25.22013	5.075549	5.011063

Sample Name: CCV01 Acquired: 11/21/2025 13:44:23 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.928178**	**5.061806**	**4.979471**	F **5.273475**	**4.790566**	**5.092496**
Stddev	.032439	.018052	.032488	.044990	.032298	.028690
%RSD	.6582347	.3566257	.6524390	.8531369	.6741992	.5633704
#1	4.929982	5.047724	4.979475	5.282866	4.802850	5.067782
#2	4.894874	5.055538	4.946981	5.224530	4.753929	5.085749
#3	4.959677	5.082157	5.011957	5.313028	4.814921	5.123958

Elem	Sr4077
Units	ppm
Avg	**5.049140**
Stddev	.025971
%RSD	.5143730
#1	5.030936
#2	5.037602
#3	5.078881

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2506.709**	**47417.26**	**8340.016**	**2419.080**	**4262.122**
Stddev	10.960	96.59	38.678	6.227	18.064
%RSD	.4372217	.2036936	.4637642	.2573998	.4238355
#1	2504.791	47455.11	8373.267	2424.880	4269.568
#2	2518.501	47489.20	8297.569	2412.500	4275.273
#3	2496.834	47307.49	8349.212	2419.859	4241.525

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB01 Acquired: 11/21/2025 13:48:26 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0007802**	**-.003467**	**-.000553**	**-.002535**	**-.001343**	**.0022315**	**.0002837**
Stddev	.0007366	.002837	.001291	.001144	.001767	.0101350	.0009289
%RSD	94.40678	81.83212	233.6619	45.14605	131.5394	454.1842	327.4521
#1	.0014823	-.000280	-.001178	-.001481	-.001234	.0013823	.0011668
#2	.0000134	-.004406	.000932	-.002371	-.003162	-.007452	.0003694
#3	.0008450	-.005716	-.001412	-.003752	.000367	.012764	-.000685

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000707**	**.0000127**	**-.009415**	**-.000274**	**.0000672**	**-.000268**	**-.010456**
Stddev	.0000401	.0000746	.001550	.000429	.0002387	.000086	.004371
%RSD	56.76034	585.8451	16.45896	156.4223	355.2675	32.29813	41.80255
#1	.0000321	.0000267	-.007920	-.000141	.0001568	-.000170	-.011767
#2	.0001122	-.000068	-.011014	-.000754	-.000203	-.000300	-.005580
#3	.0000677	.000079	-.009313	.000072	.000248	-.000333	-.014022

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002067**	**.0092605**	**.0005749**	**.0004692**	**-.152828**	**.0011723**	**-.000336**
Stddev	.0005019	.0168763	.0003493	.0001060	.014232	.0017287	.000174
%RSD	242.8641	182.2385	60.76238	22.59294	9.312314	147.4670	51.84699
#1	.0007860	-.002233	.0003624	.0005221	-.161925	-.000307	-.000176
#2	-.000070	.001379	.0009781	.0003471	-.160131	.003073	-.000521
#3	-.000096	.028636	.0003842	.0005382	-.136427	.000751	-.000311

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.049093**	**.0074748**	**-.000022**	**-.000618**	**.0003412**	**-.021872**	**-.000366**
Stddev	.044383	.0008527	.000266	.001139	.0008007	.006914	.000116
%RSD	90.40703	11.40822	1187.627	184.4107	234.6496	31.61376	31.76818
#1	-.072688	.0065137	-.000297	-.001345	.0007824	-.016168	-.000421
#2	-.076694	.0081409	-.000005	-.001203	-.000583	-.019885	-.000445
#3	.002104	.0077698	.000234	.000695	.000824	-.029562	-.000232

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB01 Acquired: 11/21/2025 13:48:26 Type: Unk
Method: 6010-200.7 NEW(v377) 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	F -.012405	-.002463	.0000436
Stddev	.006997	.000922	.0000825
%RSD	56.40400	37.43085	189.1378
#1	-.020472	-.002665	.0000196
#2	-.008751	-.001457	.0001355
#3	-.007992	-.003267	-.000024

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2625.113	49168.46	8518.668	2491.558	4742.785
Stddev	10.724	52.41	77.046	5.878	21.349
%RSD	.4084971	.1065990	.9044356	.2359044	.4501404
#1	2635.041	49200.95	8434.898	2488.610	4764.240
#2	2626.557	49107.99	8534.612	2487.738	4742.572
#3	2613.740	49196.43	8586.495	2498.327	4721.543

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170660BL Acquired: 11/21/2025 13:52:47 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.004883**	**-.006485**	**-.003286**	**-.003160**	**-.000240**	**.0057642**	**-.000611**
Stddev	.001439	.002351	.001456	.002427	.002880	.0094164	.000364
%RSD	29.46265	36.25229	44.30800	76.81784	1199.903	163.3602	59.55247
#1	-.003933	-.008767	-.004724	-.001132	-.003138	.0139560	-.000500
#2	-.004178	-.004071	-.001812	-.002499	.002621	.0078602	-.001017
#3	-.006538	-.006616	-.003323	-.005849	-.000203	-.004524	-.000316

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000662**	**-.000056**	**-.004463**	**-.000285**	**.0000005**	**-.000012**	**-.011871**
Stddev	.0000354	.000075	.001955	.000179	.0001461	.000216	.002061
%RSD	53.46924	133.8823	43.81225	62.76167	30005.78	1748.760	17.36436
#1	.0000757	.000014	-.006198	-.000446	.0001635	.000211	-.014211
#2	.0000270	-.000136	-.002344	-.000317	-.000119	-.000029	-.010322
#3	.0000959	-.000046	-.004847	-.000092	-.000043	-.000219	-.011081

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000453**	**-.019953**	**.0001906**	**-.000025**	**-.086370**	**.0006633**	**-.000248**
Stddev	.000948	.024136	.0001638	.000818	.011430	.0040001	.000260
%RSD	209.1238	120.9617	85.92538	3289.437	13.23321	603.0493	104.5883
#1	-.001249	.005601	.0001668	.000025	-.099128	.0052687	-.000338
#2	-.000706	-.042362	.0000400	.000767	-.077066	-.001945	.000044
#3	.000596	-.023099	.0003650	-.000867	-.082916	-.001334	-.000452

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.122816**	**.0042045**	**-.000488**	**-.000701**	**.0016182**	**-.031244**	**-.000092**
Stddev	.018349	.0014281	.000503	.001259	.0019799	.011362	.000133
%RSD	14.94004	33.96601	102.9173	179.7390	122.3501	36.36672	145.0447
#1	-.143552	.0056156	.000022	-.001506	-.000289	-.028082	-.000163
#2	-.108679	.0027600	-.000503	-.001347	.001479	-.021797	.000062
#3	-.116218	.0042378	-.000983	.000751	.003664	-.043852	-.000174

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170660BL Acquired: 11/21/2025 13:52:47 Type: Unk
Method: 6010-200.7 NEW(v377) 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	F -.016909	-.004311	.0000879
Stddev	.001420	.000326	.0001047
%RSD	8.396247	7.571867	119.0967
#1	-.018216	-.003958	.0000850
#2	-.017113	-.004602	.0001941
#3	-.015399	-.004374	-.000015

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2571.528	48294.95	8348.047	2422.866	4624.245
Stddev	9.307	72.47	38.724	5.171	13.172
%RSD	.3619102	.1500644	.4638662	.2134135	.2848379
#1	2574.003	48259.16	8331.716	2420.666	4624.013
#2	2579.347	48378.35	8392.261	2419.159	4637.531
#3	2561.234	48247.33	8320.164	2428.773	4611.191

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170660BS Acquired: 11/21/2025 13:57:06 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8104642**	**2.140009**	**.9988073**	**2.096797**	**.8315058**	**2.075983**
Stddev	.0052845	.068505	.0057443	.008749	.0038132	.011559
%RSD	.6520336	3.201151	.5751114	.4172483	.4585875	.5567808
#1	.8111279	2.062570	1.000575	2.095648	.8299771	2.062868
#2	.8048792	2.164755	.992387	2.088679	.8286942	2.080394
#3	.8153855	2.192703	1.003460	2.106063	.8358462	2.084686

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1991373**	**.2088641**	**.2034448**	**1.058671**	**.4268754**	**.2035433**
Stddev	.0001481	.0011562	.0007174	.008614	.0007365	.0009087
%RSD	.0743518	.5535564	.3526110	.8136908	.1725276	.4464220
#1	.1992387	.2075732	.2039060	1.053277	.4261609	.2037799
#2	.1989674	.2098043	.2026183	1.054131	.4276320	.2025398
#3	.1992059	.2092149	.2038101	1.068606	.4268332	.2043103

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3176502**	**3.104879**	**.2056922**	**2.108365**	**.5131886**	**.0797182**
Stddev	.0015470	.014909	.0006012	.032517	.0026314	.0004487
%RSD	.4870038	.4801740	.2922743	1.542309	.5127597	.5628026
#1	.3186259	3.108748	.2052390	2.078720	.5145475	.0798156
#2	.3158665	3.088417	.2063742	2.143144	.5101555	.0792288
#3	.3184581	3.117471	.2054634	2.103232	.5148627	.0801102

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.931127**	**.3094968**	**.2171633**	**9.991857**	**.3117817**	**.4195696**
Stddev	.019365	.0036353	.0012656	.043450	.0018192	.0023035
%RSD	.6606699	1.174584	.5827622	.4348494	.5835015	.5490087
#1	2.942104	.3100246	.2175922	9.993686	.3096840	.4197502
#2	2.942510	.3128393	.2181587	10.03436	.3129276	.4171811
#3	2.908768	.3056264	.2157391	9.94752	.3127335	.4217774

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170660BS Acquired: 11/21/2025 13:57:06 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.7015444	.2033591	.8777422	F .6455057	F -.016903	.2061385
Stddev	.0021149	.0026210	.0042009	.0030094	.001483	.0010542
%RSD	.3014625	1.288842	.4786067	.4662153	8.774340	.5113842
#1	.7022093	.2003944	.8780965	.6424162	-.016250	.2056660
#2	.6991769	.2043148	.8817547	.6456730	-.015858	.2073462
#3	.7032469	.2053681	.8733753	.6484281	-.018600	.2054032

Elem	Sr4077
Units	ppm
Avg	.2016102
Stddev	.0009159
%RSD	.4542882
#1	.2010801
#2	.2026678
#3	.2010828

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2566.722	47632.81	8541.574	2388.581	4515.500
Stddev	10.571	106.50	47.751	12.117	17.496
%RSD	.4118421	.2235953	.5590385	.5072973	.3874626
#1	2562.304	47714.40	8586.739	2391.659	4508.112
#2	2578.784	47512.32	8491.601	2375.221	4535.478
#3	2559.076	47671.71	8546.382	2398.862	4502.910

Sample Name: PB170663BL Acquired: 11/21/2025 14:01:12 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.000175**	**-.002348**	**-.000468**	**-.004754**	**.0002427**	**.0046985**	**-.001654**
Stddev	.003364	.001301	.001761	.001474	.0023719	.0056340	.001485
%RSD	1918.978	55.38552	376.0540	31.00195	977.0859	119.9125	89.76542
#1	.001956	-.003453	.001109	-.006440	.0024982	.0078159	.000021
#2	.001571	-.002678	-.002368	-.003711	.0004606	.0080848	-.002807
#3	-.004053	-.000915	-.000145	-.004112	-.002231	-.001805	-.002177

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001397**	**.0000856**	**-.008670**	**-.000065**	**.0001019**	**.0000622**	**-.009057**
Stddev	.0000283	.0000755	.004677	.000370	.0000476	.0000539	.003370
%RSD	20.25984	88.17050	53.94485	567.4587	46.73925	86.60339	37.20812
#1	.0001630	.0000308	-.010339	.000325	.0000559	.0000574	-.011108
#2	.0001082	.0000543	-.003387	-.000411	.0000989	.0001183	-.005168
#3	.0001480	.0001717	-.012283	-.000109	.0001511	.0000109	-.010896

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000177**	**-.002803**	**-.000012**	**-.000239**	**-.104282**	**-.000364**	**.0004640**
Stddev	.000224	.012042	.000742	.000448	.011854	.000864	.0000892
%RSD	126.5078	429.5800	6117.930	187.5712	11.36709	237.4297	19.23169
#1	-.000248	-.001368	-.000257	-.000600	-.106882	-.000369	.0004927
#2	.000074	.008457	-.000601	-.000379	-.114620	-.001226	.0005354
#3	-.000357	-.015498	.000822	.000263	-.091344	.000503	.0003639

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.087782**	**.0011958**	**-.000743**	**-.000818**	**.0021917**	**-.022179**	**.0001256**
Stddev	.041087	.0007977	.000300	.000539	.0009472	.006145	.0003468
%RSD	46.80575	66.71038	40.35372	65.88831	43.22002	27.70863	276.0635
#1	-.133174	.0021087	-.000583	-.000225	.0011731	-.025360	-.000087
#2	-.077037	.0006323	-.001089	-.001278	.0030461	-.015095	-.000062
#3	-.053135	.0008466	-.000557	-.000951	.0023558	-.026081	.000526

Sample Name: PB170663BL Acquired: 11/21/2025 14:01:12 Type: Unk
Method: 6010-200.7 NEW(v377) 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	F -.012494	-.004616	.0000336
Stddev	.004532	.001314	.0001009
%RSD	36.27208	28.46075	300.5038
#1	-.016225	-.005718	.0000562
#2	-.013806	-.003162	-.000077
#3	-.007451	-.004968	.000121

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2608.008	49156.77	8487.274	2468.828	4720.139
Stddev	4.796	153.27	53.929	6.289	8.718
%RSD	.1838850	.3117948	.6354089	.2547444	.1846876
#1	2607.313	49293.38	8526.251	2473.247	4719.659
#2	2613.114	48991.02	8425.727	2471.609	4729.086
#3	2603.598	49185.92	8509.843	2461.627	4711.671

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170663BS Acquired: 11/21/2025 14:05:32 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8121968**	**2.125383**	**.9955852**	**2.069524**	**.8274251**	**2.074578**
Stddev	.0038539	.043102	.0053806	.008076	.0080333	.009458
%RSD	.4745068	2.027977	.5404436	.3902424	.9708740	.4559196
#1	.8105799	2.164154	.9906354	2.067135	.8223221	2.077719
#2	.8094148	2.078971	.9948083	2.062912	.8232681	2.063949
#3	.8165959	2.133024	1.001312	2.078526	.8366850	2.082066

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2050381**	**.2122678**	**.2020938**	**1.040273**	**.4195139**	**.2031361**
Stddev	.0011434	.0012054	.0012452	.011352	.0019689	.0008360
%RSD	.5576600	.5678512	.6161550	1.091205	.4693283	.4115574
#1	.2055324	.2120501	.2013727	1.031188	.4192389	.2024826
#2	.2058513	.2135672	.2013771	1.052998	.4216058	.2028476
#3	.2037307	.2111861	.2035316	1.036633	.4176969	.2040782

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3191857**	**3.093632**	**.2108568**	**2.099892**	**.5122917**	**.0795950**
Stddev	.0016161	.013388	.0013108	.026541	.0026018	.0005179
%RSD	.5063123	.4327447	.6216338	1.263940	.5078738	.6506602
#1	.3175672	3.107669	.2105570	2.119063	.5119569	.0799564
#2	.3191906	3.092221	.2122915	2.069599	.5098735	.0798269
#3	.3207993	3.081006	.2097219	2.111013	.5150447	.0790017

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.929221**	**.3100637**	**.2172544**	**9.957629**	**.3164167**	**.4183245**
Stddev	.034113	.0019903	.0006278	.026093	.0012882	.0014552
%RSD	1.164576	.6418885	.2889879	.2620411	.4071177	.3478632
#1	2.921085	.3118476	.2176110	9.928502	.3154859	.4172817
#2	2.966667	.3104264	.2165294	9.978869	.3178869	.4177049
#3	2.899912	.3079170	.2176227	9.965514	.3158772	.4199869

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170663BS Acquired: 11/21/2025 14:05:32 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.7011057	.2053497	.8384301	F .6569931	F -.015080	.2126252
Stddev	.0045306	.0021493	.0170696	.0011143	.005573	.0017199
%RSD	.6462020	1.046642	2.035904	.1695982	36.95720	.8088696
#1	.7008458	.2032218	.8372040	.6573149	-.021002	.2112032
#2	.6967106	.2075197	.8220066	.6557534	-.009937	.2145368
#3	.7057606	.2053075	.8560798	.6579110	-.014302	.2121356

Elem	Sr4077
Units	ppm
Avg	.2056905
Stddev	.0003009
%RSD	.1462665
#1	.2059024
#2	.2058230
#3	.2053461

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2585.728	48425.46	8439.805	2473.921	4559.174
Stddev	8.810	154.13	41.106	7.654	13.964
%RSD	.3407002	.3182780	.4870456	.3093846	.3062750
#1	2593.157	48578.89	8459.483	2480.323	4565.151
#2	2588.031	48270.65	8392.560	2465.443	4569.154
#3	2575.996	48426.85	8467.373	2475.997	4543.216

Sample Name: Q3677-01 Acquired: 11/21/2025 14:09:38 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0117969**	**.0107550**	**.0803632**	**-.039944**	**.0102384**	**67.46496**
Stddev	.0059828	.0132438	.0069096	.009114	.0059173	.15188
%RSD	50.71562	123.1413	8.597947	22.81630	57.79495	.2251246
#1	.0055376	.0059434	.0813354	-.049168	.0049310	67.40377
#2	.0123946	.0257320	.0730190	-.030944	.0091655	67.63790
#3	.0174584	.0005896	.0867352	-.039720	.0166188	67.35323

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5709109**	**.0052138**	**.0038640**	F **5019.595**	**.1114135**	**.0322789**
Stddev	.0068097	.0000158	.0002091	39.734	.0017755	.0000269
%RSD	1.192774	.3021833	5.410719	.7915789	1.593583	.0832747
#1	.5720720	.0052110	.0036495	5065.186	.1118824	.0322622
#2	.5635953	.0051997	.0040671	4992.340	.1129075	.0323099
#3	.5770653	.0052308	.0038752	5001.260	.1094507	.0322646

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2400930**	**64.71358**	**1.539477**	**229.9999**	**.0680892**	**-.010035**
Stddev	.0006572	.33271	.012326	.1279	.0005714	.000187
%RSD	.2737106	.5141229	.8006417	.0556191	.8391612	1.865543
#1	.2394161	64.89771	1.538889	229.8586	.0685827	-.009843
#2	.2407285	64.32951	1.527456	230.0332	.0682217	-.010218
#3	.2401342	64.91351	1.552087	230.1079	.0674632	-.010045

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.081647**	**.0767591**	**1.393742**	**10.89485**	**.1484080**	**.0669119**
Stddev	.044569	.0028072	.003089	.10403	.0013358	.0015226
%RSD	.8770678	3.657127	.2216348	.9548594	.9000607	2.275496
#1	5.091252	.0787549	1.391004	10.94814	.1496933	.0654342
#2	5.033058	.0735493	1.393130	10.77497	.1470269	.0684757
#3	5.120631	.0779732	1.397091	10.96143	.1485039	.0668258

Sample Name: Q3677-01 Acquired: 11/21/2025 14:09:38 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0431704	2.970405	2.648494	.1966159	F 43.31508	-.706010
Stddev	.0022418	.016451	.016885	.0008251	.23483	.008558
%RSD	5.192813	.5538137	.6375455	.4196522	.5421489	1.212190
#1	.0419445	2.967524	2.637500	.1958068	43.05275	-.715735
#2	.0457577	2.955586	2.667936	.1974561	43.38683	-.699626
#3	.0418089	2.988106	2.640046	.1965849	43.50567	-.702669

Elem	Sr4077
Units	ppm
Avg	7.096596
Stddev	.055912
%RSD	.7878641
#1	7.057756
#2	7.071354
#3	7.160678

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2114.283	40730.07	8071.787	2039.110	2929.511
Stddev	3.061	124.68	16.765	10.005	7.245
%RSD	.1447614	.3061111	.2077023	.4906545	.2473025
#1	2116.978	40603.36	8058.852	2029.513	2930.696
#2	2114.915	40734.23	8090.728	2038.338	2936.091
#3	2110.955	40852.62	8065.780	2049.478	2921.747

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3678-01 Acquired: 11/21/2025 14:14:05 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0495345**	**.0091128**	**.0071665**	**-.003868**	**-.001061**	**122.6204**
Stddev	.0013045	.0061628	.0024173	.006702	.002388	.3461
%RSD	2.633555	67.62782	33.73017	173.2818	225.0558	.2822479
#1	.0480739	.0057299	.0059574	-.011327	-.003762	123.0153
#2	.0499460	.0162262	.0055925	-.001921	.000770	122.4762
#3	.0505836	.0053824	.0099498	.001645	-.000191	122.3698

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.103636**	**.0045584**	**.0123924**	**62.71819**	**.5876602**	**.1526671**
Stddev	.006016	.0001366	.0002709	.29839	.0031155	.0014622
%RSD	.5450788	2.996129	2.185639	.4757582	.5301442	.9577672
#1	1.109128	.0046791	.0121302	63.04610	.5864663	.1512716
#2	1.097206	.0044101	.0126712	62.46263	.5853182	.1525418
#3	1.104573	.0045859	.0123759	62.64583	.5911960	.1541879

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1262368**	**227.5446**	**1.231130**	**149.8293**	**.4207567**	**-.016903**
Stddev	.0007901	.5426	.006586	.2682	.0003055	.000622
%RSD	.6259022	.2384575	.5349610	.1790315	.0726144	3.680956
#1	.1261008	227.1276	1.237509	150.0731	.4206060	-.017553
#2	.1255235	227.3481	1.224355	149.5420	.4205558	-.016844
#3	.1270861	228.1581	1.231527	149.8729	.4211083	-.016313

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.997126**	**.5974123**	**.2319301**	**106.7252**	**.0798411**	**.0031037**
Stddev	.006162	.0042492	.0003831	.1172	.0024311	.0001407
%RSD	.3085384	.7112704	.1651835	.1098147	3.044870	4.531828
#1	1.992267	.5948184	.2320537	106.6170	.0822598	.0032659
#2	1.995054	.6023162	.2315004	106.7089	.0773978	.0030153
#3	2.004057	.5951024	.2322360	106.8497	.0798656	.0030299

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3678-01 Acquired: 11/21/2025 14:14:05 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0488360	F 22.21925	3.254176	1.375043	F 12.45183	.3194289
Stddev	.0007699	.08746	.007976	.006812	.09329	.0018935
%RSD	1.576547	.3936185	.2451134	.4954071	.7492340	.5927781
#1	.0497231	22.31816	3.247975	1.372352	12.38481	.3207735
#2	.0484424	22.15215	3.263175	1.369988	12.41230	.3172635
#3	.0483423	22.18744	3.251380	1.382790	12.55838	.3202497

Elem	Sr4077
Units	ppm
Avg	-.136360
Stddev	.000808
%RSD	.5926911
#1	-.135434
#2	-.136724
#3	-.136923

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2826.783	53799.23	9929.730	2681.928	3973.896
Stddev	9.697	166.64	40.746	9.219	14.314
%RSD	.3430401	.3097427	.4103474	.3437377	.3601962
#1	2830.747	53951.99	9897.741	2682.974	3980.900
#2	2833.870	53824.18	9975.604	2690.579	3983.360
#3	2815.732	53621.52	9915.844	2672.231	3957.429

Sample Name: Q3681-01 Acquired: 11/21/2025 14:18:10 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0658408**	**.0009907**	**1.693898**	**-.004535**	**-.006642**	**167.3616**	**1.409331**
Stddev	.0049587	.0016617	.001181	.002584	.002456	.1433	.007092
%RSD	7.531315	167.7388	.0696961	56.98183	36.97357	.0856364	.5031977
#1	.0715224	.0027099	1.693200	-.004142	-.004357	167.4385	1.414610
#2	.0636146	.0008690	1.693233	-.007293	-.006331	167.1962	1.401270
#3	.0623853	-.000607	1.695261	-.002170	-.009239	167.4500	1.412113

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0116595**	**.0168734**	**47.64880**	**.3085030**	**.1494275**	**1.083828**	**286.1584**
Stddev	.0000615	.0002344	.07424	.0002812	.0005696	.004932	1.0476
%RSD	.5275626	1.389343	.1558111	.0911493	.3812083	.4550436	.3660861
#1	.0116311	.0166619	47.72131	.3084515	.1491045	1.078284	287.0146
#2	.0116173	.0171254	47.57294	.3082511	.1490927	1.085473	284.9903
#3	.0117301	.0168328	47.65214	.3088064	.1500852	1.087727	286.4704

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.693002**	**45.60662**	**.3426218**	**-.015099**	**3.505634**	**.3913087**	**1.065222**
Stddev	.028681	.14197	.0015208	.000567	.011638	.0024059	.003863
%RSD	.5037892	.3112923	.4438804	3.755277	.3319817	.6148325	.3626562
#1	5.707507	45.48795	.3411257	-.015185	3.516254	.3911547	1.068590
#2	5.659966	45.76390	.3425736	-.015618	3.493193	.3937879	1.061005
#3	5.711533	45.56802	.3441662	-.014493	3.507456	.3889835	1.066072

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.99376**	**.1645334**	**.0034619**	**.1118055**	**3.362711**	**3.325307**	**1.003461**
Stddev	.03732	.0031273	.0001557	.0007249	.006272	.013088	.005374
%RSD	.2333178	1.900695	4.496368	.6483184	.1865074	.3935825	.5355655
#1	15.96562	.1674662	.0033009	.1112970	3.362817	3.315879	.998594
#2	15.97956	.1612425	.0036116	.1114840	3.356386	3.340250	1.002560
#3	16.03609	.1648914	.0034733	.1126355	3.368928	3.319792	1.009228

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3681-01 Acquired: 11/21/2025 14:18:10 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**3.447494**	**.2443115**	**-.058856**
Stddev	.022589	.0014627	.000264
%RSD	.6552334	.5986992	.4490270
#1	3.427307	.2442119	-.059113
#2	3.471893	.2429012	-.058585
#3	3.443283	.2458215	-.058870

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3044.353**	**57307.83**	**10595.93**	**2866.286**	**4162.020**
Stddev	7.604	110.61	14.69	.979	13.147
%RSD	.2497852	.1930186	.1386125	.0341426	.3158909
#1	3050.570	57307.70	10588.66	2866.390	4169.941
#2	3046.615	57197.28	10586.31	2865.260	4169.274
#3	3035.874	57418.51	10612.84	2867.209	4146.843

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3681-01DUP Acquired: 11/21/2025 14:22:14 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0616958**	**-.004421**	**1.693893**	**-.004649**	**-.008381**	**167.6972**	**1.425470**
Stddev	.0027134	.005981	.004890	.003052	.001549	.1596	.001964
%RSD	4.398017	135.2849	.2887031	65.64091	18.47968	.0951902	.1377598
#1	.0631583	-.011327	1.690172	-.004629	-.007760	167.8787	1.426787
#2	.0585649	-.001037	1.692075	-.007711	-.010143	167.5788	1.426411
#3	.0633643	-.000899	1.699432	-.001607	-.007238	167.6340	1.423213

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0116260**	**.0163279**	**47.47113**	**.3075281**	**.1488116**	**1.080013**	**288.6008**
Stddev	.0001388	.0000778	.03288	.0016631	.0007441	.003966	1.0474
%RSD	1.194099	.4761581	.0692577	.5407869	.5000411	.3671837	.3629177
#1	.0117822	.0164078	47.50711	.3094484	.1482555	1.079055	289.1471
#2	.0115169	.0162525	47.44266	.3065557	.1485224	1.076614	289.2620
#3	.0115788	.0163236	47.46361	.3065801	.1496569	1.084370	287.3932

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.674734**	**45.89611**	**.3088588**	**-.014807**	**3.214927**	**.3953698**	**1.029090**
Stddev	.004701	.15612	.0018839	.000637	.019818	.0014952	.007446
%RSD	.0828325	.3401656	.6099720	4.303204	.6164237	.3781836	.7235642
#1	5.678792	45.71858	.3069066	-.014922	3.233746	.3942258	1.023074
#2	5.669583	45.95774	.3090038	-.014120	3.194243	.3970617	1.037417
#3	5.675828	46.01201	.3106661	-.015379	3.216792	.3948220	1.026778

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.74466**	**.1737405**	**.0034898**	**.0829744**	**3.381457**	**3.398824**	**1.002709**
Stddev	.04781	.0064161	.0003996	.0005552	.005399	.025839	.004288
%RSD	.3036453	3.692937	11.44942	.6691354	.1596651	.7602251	.4276460
#1	15.79303	.1762082	.0038773	.0825927	3.387685	3.403973	.997759
#2	15.74353	.1785564	.0035129	.0827192	3.378108	3.421700	1.005283
#3	15.69743	.1664569	.0030792	.0836114	3.378578	3.370798	1.005086

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3681-01DUP Acquired: 11/21/2025 14:22:14 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**3.015003**	**.2474786**	**-.060802**
Stddev	.018391	.0002049	.001151
%RSD	.6099944	.0828099	1.893718
#1	3.009480	.2473566	-.061656
#2	3.035523	.2473641	-.061258
#3	3.000006	.2477152	-.059493

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3033.481**	**57048.45**	**10609.12**	**2861.191**	**4154.629**
Stddev	7.217	14.44	24.49	14.300	14.483
%RSD	.2379200	.0253139	.2308126	.4997970	.3485943
#1	3038.952	57055.55	10612.18	2864.621	4170.061
#2	3036.191	57031.83	10631.94	2845.489	4152.494
#3	3025.301	57057.97	10583.25	2873.465	4141.332

Sample Name: Q3681-01LX5 Acquired: 11/21/2025 14:26:19 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0118292**	**-.001742**	**.3295646**	**-.002238**	**-.004858**	**38.21710**	**.3218353**
Stddev	.0031193	.002891	.0006484	.004941	.002892	.05644	.0010419
%RSD	26.36955	165.9696	.1967519	220.7480	59.52114	.1476914	.3237378
#1	.0084243	-.000272	.3293428	.001957	-.007903	38.19443	.3229736
#2	.0145490	-.005073	.3290562	-.007684	-.002149	38.28135	.3216035
#3	.0125143	.000119	.3302949	-.000988	-.004523	38.17551	.3209288

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029057**	**.0021051**	**11.01614**	**.0700575**	**.0285747**	**.2578466**	**64.48252**
Stddev	.0000413	.0001624	.02000	.0002672	.0002140	.0005250	.28515
%RSD	1.421240	7.714000	.1815862	.3813296	.7489724	.2036263	.4422133
#1	.0029217	.0020153	11.03288	.0699151	.0284486	.2573894	64.81175
#2	.0028588	.0020074	11.02155	.0698917	.0284538	.2577303	64.32178
#3	.0029366	.0022925	10.99398	.0703657	.0288219	.2584200	64.31402

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.340457**	**10.51189**	**.0664068**	**-.003893**	**.6917501**	**.0876249**	**.2421666**
Stddev	.003355	.05208	.0005584	.000441	.0067603	.0032099	.0012530
%RSD	.2502675	.4954702	.8408185	11.31703	.9772775	3.663206	.5174338
#1	1.344287	10.45252	.0667145	-.004401	.6915720	.0904257	.2407216
#2	1.338042	10.54987	.0667437	-.003633	.6850806	.0841221	.2429533
#3	1.339041	10.53328	.0657623	-.003644	.6985977	.0883270	.2428249

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.384012**	**.0343225**	**.0005046**	**.0197429**	**.7934099**	**1.174488**	**.1942060**
Stddev	.056690	.0009079	.0002334	.0015980	.0058678	.012392	.0014754
%RSD	1.675218	2.645110	46.26004	8.094233	.7395686	1.055119	.7597264
#1	3.318554	.0343259	.0003215	.0181729	.7991857	1.166722	.1928316
#2	3.416387	.0352287	.0007675	.0213676	.7935898	1.188780	.1940213
#3	3.417095	.0334129	.0004248	.0196883	.7874542	1.167964	.1957651

Sample Name: Q3681-01LX5 Acquired: 11/21/2025 14:26:19 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.6236401	.0537779	-.011428
Stddev	.0032801	.0020252	.000135
%RSD	.5259641	3.765859	1.183609
#1	.6265793	.0525062	-.011478
#2	.6201017	.0527142	-.011531
#3	.6242391	.0561134	-.011275

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2674.244	50306.60	8936.132	2537.526	4441.880
Stddev	4.948	52.07	13.665	12.818	9.615
%RSD	.1850057	.1035090	.1529165	.5051421	.2164694
#1	2679.276	50299.31	8938.267	2539.164	4452.392
#2	2674.073	50258.57	8921.525	2523.968	4439.720
#3	2669.385	50361.94	8948.603	2549.447	4433.529

Sample Name: Q3681-01MS Acquired: 11/21/2025 14:30:31 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7275385**	**1.998084**	**2.138994**	**1.643797**	**.3449059**	**177.6889**	**1.376221**
Stddev	.0096473	.041505	.008243	.003384	.0019368	.3028	.010591
%RSD	1.326016	2.077232	.3853462	.2058508	.5615386	.1703880	.7696038
#1	.7277562	2.027902	2.136893	1.641803	.3453441	177.3601	1.369494
#2	.7177843	2.015669	2.132006	1.641885	.3465859	177.7506	1.388430
#3	.7370751	1.950682	2.148084	1.647704	.3427875	177.9561	1.370740

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1791690**	**.2136737**	**36.07842**	**.6473648**	**.3508917**	**.9680149**	**269.2305**
Stddev	.0001883	.0006729	.12177	.0006612	.0018404	.0012139	1.0439
%RSD	.1050984	.3149268	.3375215	.1021357	.5244846	.1254056	.3877251
#1	.1792287	.2132357	35.94361	.6480465	.3497010	.9677286	268.0704
#2	.1793202	.2133369	36.18044	.6467262	.3499627	.9669697	269.5269
#3	.1789581	.2144485	36.11122	.6473217	.3530114	.9693464	270.0941

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.273868**	**44.39301**	**.8040522**	**.0525865**	**6.038972**	**.6754633**	**1.198222**
Stddev	.025525	.11114	.0024652	.0002197	.062897	.0031360	.008516
%RSD	.4839939	.2503566	.3065970	.4178731	1.041515	.4642702	.7106958
#1	5.261699	44.26469	.8025580	.0527320	5.982696	.6789104	1.207153
#2	5.303201	44.45874	.8027010	.0523337	6.106869	.6747001	1.197321
#3	5.256705	44.45560	.8068976	.0526939	6.027350	.6727794	1.190193

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.89723**	**.3494339**	**.3410312**	**.7284165**	**4.692588**	**4.278274**	**1.522502**
Stddev	.11993	.0058817	.0013687	.0019626	.010857	.013457	.003968
%RSD	.5476934	1.683220	.4013520	.2694299	.2313629	.3145357	.2606410
#1	21.76249	.3430072	.3408068	.7269774	4.683477	4.266123	1.519097
#2	21.99230	.3507450	.3397885	.7276200	4.704601	4.275962	1.521549
#3	21.93691	.3545494	.3424983	.7306521	4.689685	4.292737	1.526859

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3681-01MS Acquired: 11/21/2025 14:30:31 Type: Unk
Method: 6010-200.7 NEW(v377) 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	1.869379	.4041660	.0841432
Stddev	.004913	.0041227	.0020117
%RSD	.2628087	1.020053	2.390847
#1	1.871880	.4003458	.0841065
#2	1.863719	.4085360	.0861730
#3	1.872539	.4036162	.0821500

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2946.632	55870.58	10131.53	2828.830	4125.816
Stddev	4.561	71.37	22.51	13.889	10.230
%RSD	.1547771	.1277505	.2221944	.4909795	.2479436
#1	2944.995	55952.97	10129.01	2827.369	4130.984
#2	2951.785	55831.40	10110.38	2815.729	4132.430
#3	2943.115	55827.38	10155.19	2843.392	4114.033

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV02 Acquired: 11/21/2025 14:48:36 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**4.812510**	**4.770705**	**4.789319**	**4.852541**	**4.885296**	**9.695942**	**9.469242**
Stddev	.032449	.039351	.014517	.018950	.021400	.006388	.016124
%RSD	.6742612	.8248571	.3031189	.3905145	.4380543	.0658793	.1702793
#1	4.778748	4.761517	4.776897	4.843970	4.870633	9.699995	9.462080
#2	4.815318	4.813838	4.785782	4.839391	4.875402	9.688579	9.487706
#3	4.843463	4.736761	4.805278	4.874263	4.909853	9.699252	9.457939

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2429966**	**2.391473**	**23.88969**	**.9782227**	**2.395907**	**1.222250**	**4.804868**
Stddev	.0008401	.006623	.10342	.0008721	.009516	.007128	.015843
%RSD	.3457132	.2769622	.4328906	.0891529	.3971616	.5831530	.3297352
#1	.2429568	2.388408	23.79012	.9779860	2.389991	1.216971	4.786611
#2	.2421771	2.386937	23.88238	.9774933	2.390846	1.219421	4.815006
#3	.2438558	2.399074	23.99656	.9791887	2.406884	1.230358	4.812987

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.369899**	**23.93570**	**2.397168**	**1.213932**	**25.09130**	**2.395190**	**2.442805**
Stddev	.005528	.09331	.009469	.001722	.08052	.002068	.009749
%RSD	.2332714	.3898386	.3949985	.1418597	.3209237	.0863342	.3991014
#1	2.364082	23.97381	2.388329	1.213506	25.05982	2.394751	2.449381
#2	2.375085	23.82937	2.396012	1.212464	25.18281	2.397441	2.431604
#3	2.370529	24.00393	2.407161	1.215828	25.03127	2.393376	2.447430

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.52605**	**4.817050**	**4.901925**	**4.795756**	**4.776762**	**4.794353**	**5.008770**
Stddev	.07360	.012891	.016821	.019821	.009682	.007368	.025756
%RSD	.3128413	.2676037	.3431604	.4132958	.2026928	.1536730	.5142128
#1	23.50379	4.819013	4.892953	4.778742	4.768501	4.795310	4.982951
#2	23.60821	4.803291	4.891492	4.791006	4.787417	4.786554	5.008898
#3	23.46615	4.828848	4.921331	4.817520	4.774369	4.801196	5.034462

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV02 Acquired: 11/21/2025 14:48:36 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**4.734761**	**4.691080**	**4.789812**
Stddev	.028291	.006058	.004408
%RSD	.5975253	.1291449	.0920337
#1	4.711856	4.685460	4.784894
#2	4.726041	4.697497	4.791134
#3	4.766386	4.690283	4.793408

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2542.921**	**48456.31**	**8596.843**	**2420.407**	**4340.342**
Stddev	7.159	97.65	42.272	10.600	6.668
%RSD	.2815290	.2015196	.4917159	.4379279	.1536188
#1	2542.827	48491.55	8609.009	2419.481	4342.324
#2	2550.127	48531.45	8631.698	2431.439	4345.794
#3	2535.810	48345.93	8549.822	2410.301	4332.908

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB02 Acquired: 11/21/2025 14:52:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.001850**	**-.003546**	**-.000002**	**-.003043**	**.0022415**	**.0115161**	**-.001186**
Stddev	.001336	.004482	.000672	.003083	.0011621	.0013966	.001023
%RSD	72.23277	126.3938	43642.29	101.3175	51.84389	12.12782	86.28139
#1	-.002091	.000188	-.000768	-.004272	.0026635	.0117016	-.002197
#2	-.000410	-.008516	.000279	-.005321	.0009274	.0100360	-.001209
#3	-.003049	-.002310	.000485	.000465	.0031337	.0128107	-.000151

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000274**	**.0000878**	**-.012038**	**-.000378**	**-.000111**	**.0002637**	**-.005784**
Stddev	.0000542	.0000769	.010329	.000189	.000285	.0001756	.004227
%RSD	197.6838	87.63792	85.80601	50.06326	257.5483	66.58015	73.08018
#1	-.000020	.0000170	-.018145	-.000387	.000215	.0004115	-.010435
#2	.000016	.0000767	-.000112	-.000185	-.000313	.0003099	-.002178
#3	.000086	.0001697	-.017856	-.000563	-.000235	.0000696	-.004739

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000020**	**-.021148**	**.0005435**	**.0005240**	**-.082875**	**-.001580**	**-.000091**
Stddev	.000173	.014144	.0003149	.0006840	.013726	.002015	.000589
%RSD	860.4869	66.88060	57.93463	130.5211	16.56164	127.5481	643.6098
#1	.000037	-.004817	.0007744	.0006431	-.068492	-.002188	-.000770
#2	-.000215	-.029169	.0001848	.0011407	-.095832	-.003222	.000282
#3	.000117	-.029458	.0006713	-.000212	-.084302	.000669	.000214

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.110976**	**.0100082**	**.0002223**	**-.000530**	**.0013318**	**-.014280**	**-.000013**
Stddev	.033383	.0011377	.0003967	.001002	.0015101	.002106	.000256
%RSD	30.08113	11.36749	178.4198	188.8426	113.3922	14.74517	1921.377
#1	-.072663	.0088771	.0005781	.000468	.0009146	-.014618	-.000226
#2	-.126465	.0111523	.0002943	-.000524	.0030067	-.016196	.000270
#3	-.133802	.0099952	-.000205	-.001535	.0000741	-.012026	-.000084

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB02 Acquired: 11/21/2025 14:52:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	-.009987	-.000824	-.000049
Stddev	.001505	.000169	.000059
%RSD	15.07483	20.55811	122.0176
#1	-.011505	-.000918	-.000023
#2	-.009962	-.000628	-.000117
#3	-.008494	-.000925	-.000007

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2604.393	49377.72	8496.599	2505.029	4681.851
Stddev	8.963	128.15	37.689	13.434	15.825
%RSD	.3441530	.2595239	.4435826	.5362677	.3380025
#1	2603.224	49318.73	8512.603	2508.015	4676.114
#2	2613.883	49524.73	8453.549	2516.719	4699.744
#3	2596.072	49289.68	8523.646	2490.354	4669.694

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3681-01MSD Acquired: 11/21/2025 14:56:59 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7276507**	**1.955500**	**2.146799**	**1.648717**	**.3433302**	**179.9287**	**1.382980**
Stddev	.0067893	.041566	.006416	.003298	.0021748	.2061	.006806
%RSD	.9330365	2.125616	.2988626	.2000149	.6334279	.1145576	.4921201
#1	.7203972	1.978422	2.144213	1.650310	.3436664	180.0001	1.388569
#2	.7287016	1.907520	2.142078	1.644925	.3410069	180.0896	1.384969
#3	.7338532	1.980560	2.154104	1.650916	.3453172	179.6964	1.375401

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1795758**	**.2146410**	**36.41753**	**.6484649**	**.3516592**	**.9668422**	**269.7634**
Stddev	.0003606	.0010980	.09902	.0014201	.0013159	.0034496	1.2974
%RSD	.2007977	.5115339	.2719114	.2189879	.3741894	.3567947	.4809439
#1	.1798299	.2142622	36.52164	.6493407	.3510985	.9637532	271.2554
#2	.1797344	.2137827	36.40641	.6468265	.3507165	.9662087	268.9003
#3	.1791631	.2158782	36.32453	.6492276	.3531625	.9705647	269.1345

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.281914**	**44.94593**	**.7998620**	**.0522629**	**6.114899**	**.6860030**	**1.192334**
Stddev	.038144	.09827	.0041534	.0008511	.016276	.0017335	.000651
%RSD	.7221616	.2186343	.5192616	1.628578	.2661772	.2526905	.0546304
#1	5.322591	44.94687	.7980890	.0531495	6.126235	.6850313	1.191869
#2	5.276205	44.84720	.7968894	.0521869	6.096249	.6880043	1.193078
#3	5.246947	45.04373	.8046077	.0514524	6.122214	.6849733	1.192055

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.00849**	**.3488710**	**.3421145**	**.7250045**	**4.748202**	**4.621022**	**1.521245**
Stddev	.07412	.0041505	.0010759	.0043307	.018970	.026720	.005345
%RSD	.3367792	1.189707	.3144843	.5973374	.3995206	.5782292	.3513782
#1	22.06063	.3491390	.3416791	.7251087	4.767537	4.601445	1.522935
#2	22.04121	.3445930	.3413245	.7206226	4.747452	4.610159	1.515258
#3	21.92364	.3528810	.3433398	.7292821	4.729619	4.651463	1.525541

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3681-01MSD Acquired: 11/21/2025 14:56:59 Type: Unk
Method: 6010-200.7 NEW(v377) 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	1.821396	.4094292	.0846359
Stddev	.009061	.0030362	.0017840
%RSD	.4974942	.7415764	2.107791
#1	1.811118	.4122614	.0844967
#2	1.828233	.4098027	.0864854
#3	1.824838	.4062235	.0829257

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2977.655	56446.40	10246.87	2842.973	4171.758
Stddev	5.588	199.68	37.09	12.382	10.947
%RSD	.1876599	.3537471	.3619654	.4355247	.2624087
#1	2972.866	56222.75	10209.26	2848.564	4166.569
#2	2983.794	56606.76	10247.92	2851.574	4184.334
#3	2976.306	56509.70	10283.42	2828.782	4164.369

Sample Name: Q3681-01A Acquired: 11/21/2025 15:01:01 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7201646**	**1.924567**	**2.610859**	**1.626855**	**.6461350**	**166.8582**	**1.553013**
Stddev	.0095727	.038697	.015261	.009691	.0034097	.2887	.005568
%RSD	1.329232	2.010667	.5845326	.5957130	.5277053	.1730381	.3585531
#1	.7170961	1.918132	2.606541	1.618614	.6428068	167.1319	1.559435
#2	.7125024	1.966078	2.598222	1.637532	.6459776	166.5565	1.550080
#3	.7308953	1.889491	2.627814	1.624418	.6496207	166.8861	1.549524

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1700906**	**.2106652**	**47.43514**	**.6307286**	**.3427430**	**1.293114**	**280.0683**
Stddev	.0004785	.0012879	.04078	.0012711	.0017220	.007129	1.8360
%RSD	.2813373	.6113750	.0859795	.2015233	.5024215	.5512742	.6555554
#1	.1698062	.2098833	47.48132	.6320580	.3415111	1.288585	282.1639
#2	.1698226	.2099607	47.40407	.6295252	.3420074	1.289425	279.2981
#3	.1706431	.2121518	47.42001	.6306025	.3447107	1.301331	278.7428

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.725147**	**46.74892**	**.7864681**	**.0477400**	**5.337323**	**.6303115**	**1.165933**
Stddev	.027594	.13104	.0039346	.0007617	.044254	.0039195	.005649
%RSD	.4819837	.2803119	.5002909	1.595542	.8291416	.6218310	.4845156
#1	5.756812	46.70528	.7835947	.0484898	5.386752	.6296549	1.164185
#2	5.712385	46.64527	.7848570	.0477634	5.323834	.6267618	1.172249
#3	5.706244	46.89622	.7909526	.0469669	5.301383	.6345178	1.161364

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.22485**	**.3700741**	**.3457774**	**.7752775**	**3.490729**	**4.307972**	**1.602431**
Stddev	.13186	.0084937	.0021486	.0005175	.007573	.042047	.007825
%RSD	.5677655	2.295120	.6213906	.0667523	.2169437	.9760173	.4883217
#1	23.37709	.3789861	.3435289	.7758111	3.499433	4.305825	1.595776
#2	23.15085	.3620720	.3459935	.7747778	3.485651	4.267040	1.600465
#3	23.14660	.3691643	.3478098	.7752437	3.487103	4.351050	1.611052

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3681-01A Acquired: 11/21/2025 15:01:01 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**2.920227**	**.4048097**	**.1029200**
Stddev	.006860	.0006008	.0002746
%RSD	.2348980	.1484239	.2668100
#1	2.916200	.4041163	.1026275
#2	2.928148	.4051362	.1029602
#3	2.916334	.4051767	.1031723

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3053.959**	**58129.59**	**10581.09**	**2890.467**	**4197.830**
Stddev	12.126	198.00	20.09	1.943	18.186
%RSD	.3970721	.3406103	.1898740	.0672377	.4332153
#1	3061.686	57910.32	10561.09	2888.571	4209.469
#2	3060.209	58183.15	10601.27	2890.375	4207.148
#3	3039.983	58295.30	10580.91	2892.455	4176.874

Sample Name: Q3686-01 Acquired: 11/21/2025 15:05:02 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0187805**	**-.020272**	**.0365034**	**-.014569**	**-.013615**	**17.85896**	**.3797001**
Stddev	.0059134	.004939	.0021753	.001529	.001247	.23990	.0048263
%RSD	31.48686	24.36341	5.959280	10.49283	9.161612	1.343314	1.271086
#1	.0251689	-.025463	.0390145	-.014623	-.012219	17.71531	.3756616
#2	.0176745	-.019722	.0351939	-.016070	-.014005	17.72566	.3783934
#3	.0134983	-.015631	.0353018	-.013014	-.014621	18.13591	.3850452

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0035319**	**.0167704**	**37.98527**	**.0038922**	**.0556825**	**.2281227**	**278.9289**
Stddev	.0000427	.0008621	.58624	.0003126	.0004030	.0064829	5.9060
%RSD	1.209125	5.140592	1.543329	8.030447	.7237681	2.841840	2.117376
#1	.0034827	.0160705	37.63095	.0037189	.0553637	.2218782	284.1347
#2	.0035594	.0165074	37.66292	.0037047	.0555484	.2276696	280.1411
#3	.0035537	.0177334	38.66195	.0042530	.0561355	.2348202	272.5109

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.221072**	**9.740206**	**.0319297**	**-.016898**	**1.712906**	**.0472676**	**.3639352**
Stddev	.034890	.203082	.0006340	.001426	.064471	.0039344	.0035181
%RSD	1.570872	2.084985	1.985526	8.437730	3.763839	8.323655	.9666806
#1	2.196998	9.601623	.0317536	-.016395	1.772875	.0441543	.3679968
#2	2.205132	9.645672	.0326332	-.015792	1.721121	.0459588	.3618365
#3	2.261085	9.973321	.0314024	-.018507	1.644721	.0516895	.3619723

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.767883**	**.0768376**	**.1180389**	**.0265954**	**3.084671**	**2.113243**	**1.727662**
Stddev	.168243	.0378393	.0010432	.0008808	.031364	.055069	.012562
%RSD	2.485901	49.24576	.8837407	3.311713	1.016774	2.605895	.7270975
#1	6.924162	.1049996	.1171650	.0262681	3.058316	2.167706	1.714061
#2	6.789686	.0916874	.1177581	.0275929	3.076336	2.114435	1.730099
#3	6.589802	.0338259	.1191938	.0259250	3.119361	2.057587	1.738827

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3686-01 Acquired: 11/21/2025 15:05:02 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**7.214884**	**.0296124**	**-.212198**
Stddev	.063327	.0009246	.006304
%RSD	.8777266	3.122495	2.970805
#1	7.153615	.0287014	-.217650
#2	7.210953	.0305501	-.213649
#3	7.280085	.0295858	-.205295

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3427.469**	**65805.77**	**11700.71**	**3238.032**	**4405.991**
Stddev	6.376	828.28	329.21	26.967	13.818
%RSD	.1860406	1.258668	2.813552	.8328184	.3136162
#1	3433.080	64849.36	11882.52	3207.034	4409.438
#2	3428.791	66286.01	11898.91	3256.094	4417.759
#3	3420.534	66281.93	11320.69	3250.968	4390.776

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3676-01 Acquired: 11/21/2025 15:09:09 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.005413**	**-.002293**	**.0012326**	**.0000739**	**-.001480**	**.1420906**
Stddev	.001849	.006451	.0036539	.0040601	.002331	.0088584
%RSD	34.16040	281.3793	296.4265	5495.800	157.5632	6.234307
#1	-.007140	-.008749	.0050987	-.000110	-.001969	.1460751
#2	-.003462	-.002283	-.002164	-.003891	-.003528	.1319397
#3	-.005635	.004154	.000763	.004223	.001057	.1482569

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0872219**	**.0000142**	**.0003858**	**59.67402**	**.0033469**	**.0004415**
Stddev	.0013105	.0000727	.0003451	.15121	.0004067	.0004993
%RSD	1.502523	512.0455	89.45804	.2533938	12.15237	113.1070
#1	.0860781	.0000391	.0002241	59.72573	.0031574	.0003312
#2	.0869358	.0000711	.0001511	59.79259	.0030695	.0000065
#3	.0886519	-.000068	.0007820	59.50374	.0038138	.0009867

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1689480**	**.1356962**	**.0262289**	**15.06376**	**.0064319**	**-.000555**
Stddev	.0013143	.0071489	.0004503	.02095	.0004722	.000354
%RSD	.7779579	5.268301	1.716833	.1391003	7.341151	63.78908
#1	.1689387	.1363134	.0267113	15.08727	.0059479	-.000928
#2	.1676383	.1282587	.0258196	15.04706	.0064564	-.000223
#3	.1702669	.1425164	.0261557	15.05694	.0068913	-.000515

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**72.29464**	**.0014159**	**.0547374**	**5.917943**	**.0579034**	**.0025567**
Stddev	.62694	.0024276	.0003118	.064189	.0012502	.0007423
%RSD	.8671948	171.4529	.5695467	1.084646	2.159105	29.03349
#1	71.73852	.0002879	.0545486	5.860511	.0593458	.0022948
#2	72.17132	.0042022	.0545664	5.906085	.0571304	.0019808
#3	72.97406	-.000242	.0550972	5.987235	.0572341	.0033944

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3676-01 Acquired: 11/21/2025 15:09:09 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0645016**	**.0046716**	**6.616983**	**.1205372**	F **29.35103**	**-.012978**
Stddev	.0011142	.0020933	.076239	.0022338	.11036	.000890
%RSD	1.727391	44.80882	1.152176	1.853163	.3760032	6.859995
#1	.0646062	.0030561	6.550141	.1200431	29.45436	-.013685
#2	.0633388	.0070364	6.600789	.1185919	29.23477	-.011978
#3	.0655598	.0039222	6.700018	.1229766	29.36397	-.013271

Elem	Sr4077
Units	ppm
Avg	**.2656877**
Stddev	.0002443
%RSD	.0919580
#1	.2654061
#2	.2658436
#3	.2658134

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2522.350**	**47914.33**	**8713.558**	**2399.230**	**4395.289**
Stddev	4.007	71.42	56.149	5.251	9.557
%RSD	.1588598	.1490678	.6443863	.2188534	.2174280
#1	2526.204	47995.94	8675.611	2393.167	4391.277
#2	2522.640	47883.88	8687.005	2402.260	4406.198
#3	2518.205	47863.19	8778.059	2402.263	4388.393

Sample Name: Q3676-01DUP Acquired: 11/21/2025 15:13:22 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.003006**	**-.006145**	**.0006425**	**-.001647**	**.0007742**	**.1251964**
Stddev	.005265	.005136	.0041407	.003895	.0021451	.0042814
%RSD	175.1419	83.58114	644.4504	236.5609	277.0634	3.419742
#1	-.008591	-.000578	-.000647	-.005637	.0021108	.1294660
#2	-.002293	-.007158	-.002700	-.001449	-.001700	.1252198
#3	.001866	-.010700	.005275	.002146	.001912	.1209033

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0893183**	**-.000009**	**.0000787**	**59.97142**	**.0033984**	**.0002360**
Stddev	.0012011	.000010	.0001778	.17567	.0003803	.0001918
%RSD	1.344766	107.9359	225.7892	.2929244	11.18947	81.30206
#1	.0892389	-.000003	-.000102	60.08089	.0031725	.0001272
#2	.0881588	-.000004	.000253	59.76879	.0038374	.0001232
#3	.0905571	-.000021	.000086	60.06458	.0031852	.0004575

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1641363**	**.1193680**	**.0184250**	**15.18317**	**.0042805**	**-.000081**
Stddev	.0013052	.0037297	.0002335	.07679	.0002059	.000501
%RSD	.7951843	3.124544	1.267310	.5057618	4.811331	617.5571
#1	.1633852	.1200517	.0186915	15.17767	.0043754	-.000636
#2	.1633802	.1153437	.0182565	15.10928	.0040442	.000340
#3	.1656433	.1227085	.0183270	15.26256	.0044219	.000053

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**73.62280**	**-.002841**	**.0354053**	**5.756254**	**.0565618**	**.0018104**
Stddev	.58660	.002270	.0004186	.030899	.0012258	.0003404
%RSD	.7967629	79.88927	1.182283	.5367916	2.167210	18.80397
#1	73.66374	-.005221	.0349222	5.724338	.0579202	.0016425
#2	74.18786	-.002600	.0356328	5.786025	.0555381	.0022021
#3	73.01681	-.000701	.0356609	5.758398	.0562271	.0015864

Sample Name: Q3676-01DUP Acquired: 11/21/2025 15:13:22 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0021327	.0036774	6.533328	.1187739	F 29.52082	-.013525
Stddev	.0005765	.0011448	.056847	.0004412	.17643	.002026
%RSD	27.03144	31.13134	.8701115	.3714247	.5976406	14.97834
#1	.0025162	.0034795	6.528124	.1186793	29.35583	-.015808
#2	.0014697	.0026444	6.592599	.1183877	29.70681	-.012821
#3	.0024122	.0049083	6.479262	.1192547	29.49983	-.011945

Elem	Sr4077
Units	ppm
Avg	.2694597
Stddev	.0011263
%RSD	.4179677
#1	.2705976
#2	.2683454
#3	.2694362

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2530.285	48017.07	8591.716	2417.009	4407.079
Stddev	11.931	231.79	76.463	6.591	10.575
%RSD	.4715396	.4827212	.8899617	.2726955	.2399472
#1	2536.124	48235.09	8595.093	2409.399	4415.705
#2	2538.172	47773.61	8666.434	2420.735	4410.250
#3	2516.559	48042.52	8513.620	2420.893	4395.281

Sample Name: Q3676-01LX5 Acquired: 11/21/2025 15:17:38 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.003593**	**-.005862**	**.0005448**	**-.003743**	**-.002015**	**.0310687**	**.0163428**
Stddev	.003414	.003660	.0012142	.002278	.000331	.0130730	.0005065
%RSD	95.02922	62.43416	222.8878	60.86894	16.40377	42.07766	3.099429
#1	.000146	-.003489	.0000079	-.002476	-.002380	.0234170	.0169117
#2	-.006545	-.004020	-.000308	-.006373	-.001735	.0236255	.0159407
#3	-.004379	-.010077	.001935	-.002380	-.001931	.0461636	.0161760

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000114**	**.0000116**	**12.03751**	**.0004749**	**-.000082**	**.0341163**	**.0194184**
Stddev	.0000434	.0000761	.04739	.0003216	.000247	.0004111	.0044005
%RSD	379.6857	657.2413	.3936734	67.70735	301.9051	1.204942	22.66175
#1	.0000027	.0000399	12.07177	.0001768	.000077	.0337796	.0152936
#2	.0000586	-.000075	12.05733	.0008157	-.000366	.0339950	.0189109
#3	-.000027	.000070	11.98343	.0004323	.000044	.0345744	.0240507

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0041088**	**3.026612**	**.0013068**	**-.000177**	**13.22203**	**-.000236**	**.0068916**
Stddev	.0003699	.018825	.0005336	.000054	.14797	.002927	.0001857
%RSD	9.001832	.6219970	40.83353	30.30850	1.119119	1238.242	2.694240
#1	.0042950	3.006365	.0018742	-.000235	13.07498	-.002962	.0067380
#2	.0043485	3.029881	.0008151	-.000167	13.37090	-.000605	.0070980
#3	.0036828	3.043588	.0012311	-.000129	13.22022	.002858	.0068389

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9861120**	**.0120517**	**.0002055**	**.0003393**	**.0023677**	**1.241424**	**.0240373**
Stddev	.0197638	.0004323	.0000524	.0006842	.0018516	.009555	.0005104
%RSD	2.004214	3.586673	25.48100	201.6311	78.20173	.7696447	2.123261
#1	1.008020	.0118699	.0001962	.0011267	.0017465	1.231775	.0241643
#2	.980692	.0117400	.0002619	-.000111	.0009066	1.241615	.0234755
#3	.969624	.0125452	.0001584	.000003	.0044500	1.250881	.0244723

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3676-01LX5 Acquired: 11/21/2025 15:17:38 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**6.131373**	**-.003599**	**.0549119**
Stddev	.070352	.000827	.0001897
%RSD	1.147403	22.96808	.3454706
#1	6.141919	-.004312	.0549871
#2	6.056344	-.003793	.0550525
#3	6.195856	-.002693	.0546961

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2567.920**	**48360.67**	**8500.055**	**2461.097**	**4520.994**
Stddev	6.076	284.70	28.760	11.337	12.091
%RSD	.2366299	.5887012	.3383485	.4606371	.2674334
#1	2572.080	48624.44	8470.736	2469.606	4527.993
#2	2570.734	48058.86	8501.208	2448.228	4527.955
#3	2560.947	48398.72	8528.221	2465.458	4507.032

Sample Name: Q3676-01MS Acquired: 11/21/2025 15:21:55 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7752389**	**1.900569**	**.9063329**	**1.917906**	**.7840502**	**2.045849**
Stddev	.0119450	.049535	.0024231	.029286	.0062543	.004322
%RSD	1.540820	2.606327	.2673512	1.526985	.7976965	.2112625
#1	.7670526	1.848041	.9055844	1.905785	.7781329	2.047277
#2	.7697184	1.907231	.9043723	1.896627	.7834232	2.049277
#3	.7889457	1.946436	.9090419	1.951307	.7905944	2.040994

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2751415**	**.1919066**	**.1847902**	**59.97496**	**.3975696**	**.1895873**
Stddev	.0016132	.0002171	.0007358	.07062	.0015228	.0010406
%RSD	.5863266	.1131306	.3981583	.1177464	.3830264	.5488884
#1	.2769883	.1917101	.1842940	59.91205	.3987847	.1890720
#2	.2740071	.1921396	.1844411	60.05135	.3958613	.1889049
#3	.2744291	.1918701	.1856355	59.96147	.3980628	.1907850

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4458773**	**2.923653**	**.2051784**	**16.83714**	**.4722848**	**.0632243**
Stddev	.0025825	.006955	.0009848	.04284	.0031120	.0023828
%RSD	.5791854	.2378954	.4799611	.2544428	.6589248	3.768822
#1	.4444391	2.920930	.2041637	16.86879	.4708131	.0611587
#2	.4443342	2.931558	.2061303	16.85425	.4701817	.0626830
#3	.4488587	2.918471	.2052411	16.78839	.4758597	.0658312

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**70.84966**	**.2919203**	**.2301411**	**14.78558**	**.3304407**	**.4262258**
Stddev	.31189	.0024349	.0005159	.05733	.0018986	.0032663
%RSD	.4402097	.8340917	.2241646	.3877276	.5745628	.7663408
#1	71.03085	.2943733	.2304869	14.83578	.3282779	.4235502
#2	70.48952	.2918835	.2295481	14.72311	.3312117	.4252616
#3	71.02860	.2895040	.2303882	14.79786	.3318325	.4298657

Sample Name: Q3676-01MS Acquired: 11/21/2025 15:21:55 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.6786615**	**.1966290**	**7.050234**	**.7208417**	F **30.03245**	**.1808380**
Stddev	.0041582	.0009649	.009122	.0044365	.21678	.0018644
%RSD	.6127016	.4907073	.1293922	.6154610	.7218250	1.030967
#1	.6773547	.1961091	7.047556	.7192255	29.87053	.1791879
#2	.6753136	.1977423	7.042750	.7174399	29.94809	.1804657
#3	.6833161	.1960355	7.060395	.7258597	30.27873	.1828605

Elem	Sr4077
Units	ppm
Avg	**.4520693**
Stddev	.0007850
%RSD	.1736392
#1	.4522394
#2	.4512133
#3	.4527553

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2513.391**	**48214.45**	**8351.438**	**2409.369**	**4370.356**
Stddev	9.740	169.04	22.453	15.979	10.804
%RSD	.3875151	.3505980	.2688553	.6632145	.2472192
#1	2522.732	48019.67	8336.008	2391.137	4381.080
#2	2514.142	48300.94	8341.110	2420.942	4370.516
#3	2503.296	48322.75	8377.197	2416.027	4359.473

Sample Name: Q3676-01MSD Acquired: 11/21/2025 15:25:57 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8241935**	**1.884108**	**.9605832**	**2.044028**	**.8312910**	**2.170374**
Stddev	.0030183	.137317	.0020551	.011208	.0003843	.010573
%RSD	.3662148	7.288184	.2139403	.5483154	.0462324	.4871454
#1	.8208180	1.967673	.9585520	2.049855	.8316547	2.166501
#2	.8266326	1.959024	.9605362	2.051123	.8313295	2.162284
#3	.8251301	1.725626	.9626614	2.031107	.8308889	2.182337

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2900253**	**.2000819**	**.1957638**	**63.21917**	**.4206834**	**.2007935**
Stddev	.0016904	.0005143	.0006786	.14873	.0018808	.0009157
%RSD	.5828535	.2570401	.3466529	.2352554	.4470859	.4560227
#1	.2915445	.1995230	.1949906	63.21962	.4190808	.1997445
#2	.2882043	.2005352	.1962609	63.07022	.4202154	.2012035
#3	.2903270	.2001875	.1960397	63.36767	.4227541	.2014326

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4708730**	**3.110924**	**.2171644**	**17.74621**	**.4987553**	**.0582943**
Stddev	.0016697	.032128	.0011954	.04607	.0019243	.0019179
%RSD	.3545888	1.032747	.5504350	.2596125	.3858098	3.290062
#1	.4691136	3.132879	.2183640	17.79352	.4967572	.0573217
#2	.4724355	3.074049	.2171560	17.74362	.5005961	.0570575
#3	.4710697	3.125843	.2159733	17.70149	.4989126	.0605036

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**77.93691**	**.3109822**	**.2415940**	**15.90114**	**.3411472**	**.4535763**
Stddev	.88861	.0012739	.0008459	.15046	.0027556	.0016976
%RSD	1.140169	.4096240	.3501421	.9462397	.8077546	.3742643
#1	78.76059	.3112638	.2425526	16.04189	.3379772	.4524273
#2	76.99517	.3120916	.2412773	15.74255	.3429712	.4555262
#3	78.05497	.3095910	.2409522	15.91897	.3424931	.4527755

Sample Name: Q3676-01MSD Acquired: 11/21/2025 15:25:57 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.7168993	.2082639	7.533842	.7530489	F 31.11504	.1941551
Stddev	.0041144	.0024914	.050725	.0014367	.36798	.0010935
%RSD	.5739104	1.196258	.6732971	.1907796	1.182647	.5631945
#1	.7150029	.2086395	7.539288	.7536806	31.27220	.1931282
#2	.7216199	.2105462	7.480614	.7540615	31.37834	.1940323
#3	.7140752	.2056061	7.581625	.7514046	30.69457	.1953048

Elem	Sr4077
Units	ppm
Avg	.4781320
Stddev	.0025642
%RSD	.5362888
#1	.4805554
#2	.4754471
#3	.4783936

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2492.574	47612.82	8373.446	2372.113	4332.932
Stddev	5.031	210.95	18.591	6.104	11.123
%RSD	.2018406	.4430552	.2220179	.2573200	.2567189
#1	2498.025	47546.32	8394.859	2366.099	4337.815
#2	2488.110	47849.00	8361.433	2378.303	4320.203
#3	2491.586	47443.13	8364.044	2371.936	4340.779

Sample Name: Q3676-01A Acquired: 11/21/2025 15:30:00 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7574999**	**1.833535**	**.8981311**	**1.907752**	**.7849809**	**2.026916**
Stddev	.0052272	.024748	.0039570	.011025	.0058588	.003325
%RSD	.6900635	1.349723	.4405816	.5779123	.7463559	.1640641
#1	.7619449	1.857574	.8997401	1.909346	.7850794	2.026741
#2	.7517411	1.808135	.8936230	1.896017	.7790736	2.023682
#3	.7588137	1.834898	.9010301	1.917894	.7907898	2.030326

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2723349**	**.1865284**	**.1824158**	**60.73037**	**.3940875**	**.1865266**
Stddev	.0012390	.0005820	.0007427	.23900	.0015618	.0009060
%RSD	.4549676	.3120068	.4071455	.3935348	.3963062	.4857087
#1	.2719616	.1869414	.1820086	60.72790	.3924764	.1866015
#2	.2713254	.1858628	.1819658	60.49262	.3955949	.1855855
#3	.2737177	.1867809	.1832730	60.97059	.3941911	.1873928

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4454345**	**2.957409**	**.2051393**	**17.06474**	**.4667984**	**.0568076**
Stddev	.0028070	.021061	.0008503	.10674	.0020407	.0012375
%RSD	.6301676	.7121362	.4145155	.6254913	.4371776	2.178420
#1	.4434307	2.933382	.2051211	17.13681	.4664721	.0556678
#2	.4442301	2.972675	.2042982	16.94211	.4649405	.0566313
#3	.4486427	2.966170	.2059986	17.11529	.4689827	.0581239

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**75.01786**	**.2902089**	**.2352029**	**15.23949**	**.3235244**	**.4242144**
Stddev	.30001	.0038168	.0008849	.03925	.0004976	.0016705
%RSD	.3999118	1.315202	.3762322	.2575560	.1537909	.3937877
#1	74.69297	.2944302	.2358912	15.22641	.3237777	.4249621
#2	75.28442	.2870012	.2355129	15.28361	.3229511	.4223007
#3	75.07618	.2891953	.2342047	15.20844	.3238442	.4253805

Sample Name: Q3676-01A Acquired: 11/21/2025 15:30:00 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.6785775**	**.1939340**	**7.447492**	**.7161040**	F **30.73407**	**.1799247**
Stddev	.0033205	.0007475	.026241	.0039666	.27041	.0008319
%RSD	.4893396	.3854595	.3523468	.5539167	.8798388	.4623401
#1	.6781445	.1946306	7.417516	.7181267	30.72715	.1803824
#2	.6754946	.1931443	7.466311	.7115338	30.46719	.1789645
#3	.6820933	.1940270	7.458648	.7186515	31.00788	.1804273

Elem	Sr4077
Units	ppm
Avg	**.4527211**
Stddev	.0009197
%RSD	.2031401
#1	.4531126
#2	.4516705
#3	.4533803

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2496.583**	**47071.31**	**8471.172**	**2354.206**	**4330.436**
Stddev	10.574	112.76	43.603	5.800	12.059
%RSD	.4235379	.2395477	.5147258	.2463886	.2784753
#1	2495.792	47177.44	8459.284	2359.238	4331.331
#2	2507.530	47083.58	8519.487	2355.517	4342.024
#3	2486.426	46952.93	8434.746	2347.862	4317.955

Sample Name: Q3676-04 Acquired: 11/21/2025 15:34:03 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.001144**	**-.014241**	**.0429482**	**-.003200**	**.0259994**	**8.315802**
Stddev	.006216	.006041	.0036752	.008511	.0031608	.038478
%RSD	543.3075	42.41875	8.557343	266.0199	12.15728	.4627149
#1	-.004112	-.020768	.0416316	.001357	.0223588	8.286158
#2	-.005321	-.013110	.0471003	-.013019	.0275954	8.359286
#3	.006000	-.008846	.0401126	.002064	.0280439	8.301962

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.572766**	**.0007640**	**.0033826**	**693.1816**	**.0954703**	**.0066651**
Stddev	.014552	.0000663	.0000820	8.9796	.0009267	.0003355
%RSD	.5656077	8.677839	2.422648	1.295422	.9706771	5.033053
#1	2.560470	.0007008	.0034771	692.1280	.0947700	.0069723
#2	2.588831	.0007583	.0033299	702.6415	.0965211	.0063072
#3	2.568997	.0008330	.0033409	684.7752	.0951198	.0067158

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9829289**	**22.09526**	**.2384058**	**137.5434**	**.1186950**	**.0080093**
Stddev	.0034972	.17702	.0016569	.5120	.0002135	.0004119
%RSD	.3557887	.8011862	.6949918	.3722106	.1799099	5.142717
#1	.9796302	21.90639	.2368291	137.2784	.1188111	.0078371
#2	.9825609	22.25739	.2401327	138.1335	.1188254	.0084793
#3	.9865954	22.12201	.2382556	137.2182	.1184486	.0077114

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1277.464**	**.0149379**	**1.715364**	**64.73957**	**.0816610**	**.0081181**
Stddev	5.057	.0026019	.012965	.41978	.0007451	.0004575
%RSD	.3958634	17.41796	.7558411	.6484194	.9123648	5.635265
#1	1271.819	.0159630	1.701944	64.34549	.0810743	.0083399
#2	1281.582	.0119796	1.727821	65.18104	.0824992	.0084224
#3	1278.990	.0168711	1.716325	64.69218	.0814094	.0075920

Sample Name: Q3676-04 Acquired: 11/21/2025 15:34:03 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.1197230	.0533629	F 24.91918	.7316165	F 51.07481	-.097139
Stddev	.0009340	.0019737	.16982	.0012324	.13306	.001745
%RSD	.7801450	3.698628	.6814660	.1684506	.2605279	1.796627
#1	.1186595	.0518400	24.78292	.7330019	51.22650	-.096931
#2	.1204103	.0555927	25.10943	.7306422	51.02021	-.098979
#3	.1200991	.0526560	24.86520	.7312055	50.97774	-.095507

Elem	Sr4077
Units	ppm
Avg	3.468767
Stddev	.025697
%RSD	.7408069
#1	3.458929
#2	3.497930
#3	3.449443

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2140.702	42828.46	8429.025	2062.875	3471.985
Stddev	5.218	189.18	40.069	12.921	6.554
%RSD	.2437427	.4417259	.4753717	.6263540	.1887733
#1	2145.028	42862.16	8446.915	2073.461	3470.898
#2	2142.172	42624.69	8383.127	2048.477	3479.014
#3	2134.907	42998.53	8457.032	2066.687	3466.042

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV03 Acquired: 11/21/2025 15:38:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**4.851961**	**4.892124**	**4.804955**	**4.904378**	**4.900880**	**9.699990**	**9.554775**
Stddev	.027500	.131257	.023252	.038166	.025200	.014560	.097733
%RSD	.5667708	2.683019	.4839113	.7782029	.5141982	.1501040	1.022866
#1	4.865939	5.040163	4.787986	4.936316	4.912546	9.683447	9.644595
#2	4.820280	4.789968	4.795420	4.862110	4.871960	9.710859	9.450696
#3	4.869663	4.846240	4.831458	4.914708	4.918133	9.705663	9.569034

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2445370**	**2.392672**	**23.98897**	**.9763825**	**2.399716**	**1.223304**	**4.874966**
Stddev	.0005780	.012502	.05463	.0015172	.012991	.005867	.011488
%RSD	.2363468	.5225278	.2277207	.1553930	.5413618	.4796153	.2356521
#1	.2449505	2.387072	24.05090	.9767922	2.392265	1.221562	4.878918
#2	.2438766	2.383950	23.94764	.9776528	2.392166	1.218505	4.883957
#3	.2447840	2.406996	23.96837	.9747025	2.414716	1.229845	4.862024

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.399805**	**23.98121**	**2.403832**	**1.231590**	**26.22984**	**2.406610**	**2.469211**
Stddev	.011645	.05256	.011600	.002931	.16295	.008647	.007976
%RSD	.4852372	.2191787	.4825474	.2379797	.6212348	.3592919	.3230221
#1	2.413214	23.92127	2.396830	1.232807	26.41666	2.400895	2.460016
#2	2.393966	24.01947	2.397445	1.233717	26.15581	2.416557	2.473352
#3	2.392234	24.00288	2.417222	1.228247	26.11705	2.402377	2.474265

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.03303**	**4.847871**	**4.898337**	**4.838636**	**4.806082**	**4.869665**	**5.088236**
Stddev	.17658	.012141	.019489	.022149	.020471	.024057	.014896
%RSD	.7347377	.2504498	.3978722	.4577465	.4259423	.4940130	.2927484
#1	24.23080	4.861870	4.907810	4.843308	4.829719	4.843006	5.074429
#2	23.97708	4.840212	4.875922	4.814524	4.794413	4.876234	5.086255
#3	23.89120	4.841530	4.911279	4.858076	4.794112	4.889755	5.104023

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV03 Acquired: 11/21/2025 15:38:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**4.823554**	**4.744111**	**4.810239**
Stddev	.023004	.024480	.039494
%RSD	.4769172	.5160174	.8210422
#1	4.843601	4.771681	4.841955
#2	4.798438	4.724918	4.822760
#3	4.828625	4.735736	4.766002

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2528.909**	**47666.86**	**8543.333**	**2432.045**	**4292.955**
Stddev	9.522	160.12	31.775	8.841	15.640
%RSD	.3765280	.3359176	.3719269	.3635107	.3643132
#1	2532.959	47591.30	8509.414	2440.883	4303.000
#2	2535.736	47558.49	8548.178	2423.202	4300.929
#3	2518.031	47850.78	8572.407	2432.049	4274.935

Sample Name: CCB03 Acquired: 11/21/2025 15:42:44 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.002540**	**-.001079**	**-.000648**	**-.001824**	**-.000146**	**.0080827**	**-.001522**
Stddev	.000602	.004246	.000873	.004023	.000683	.0016656	.000358
%RSD	23.71883	393.6391	134.6035	220.5586	468.0819	20.60695	23.50226
#1	-.002851	.003823	.000279	-.002495	.000542	.0062153	-.001224
#2	-.002923	-.003442	-.001454	-.005470	-.000824	.0086175	-.001918
#3	-.001845	-.003617	-.000770	.002492	-.000155	.0094151	-.001423

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000767**	**.0000896**	**-.012194**	**-.000678**	**.0002528**	**.0000602**	**-.010771**
Stddev	.0000462	.0000975	.006434	.000260	.0002000	.0004093	.002412
%RSD	60.19846	108.7905	52.76121	38.34841	79.12828	679.5538	22.39301
#1	.0000283	-.000006	-.019624	-.000732	.0001497	.0005169	-.012674
#2	.0001203	.000087	-.008460	-.000395	.0001254	-.000273	-.011581
#3	.0000814	.000189	-.008499	-.000906	.0004833	-.000063	-.008058

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000776**	**.0053205**	**-.000028**	**-.000200**	**.0740749**	**.0013710**	**.0006171**
Stddev	.0000452	.0338675	.000148	.000419	.0046999	.0013976	.0003392
%RSD	58.24660	636.5527	520.6414	209.0002	6.344831	101.9391	54.96635
#1	.0000278	-.033689	.000032	.000130	.0714656	.0001251	.0003057
#2	.0000891	.022438	-.000197	-.000059	.0712585	.0011057	.0005670
#3	.0001160	.027212	.000080	-.000671	.0795006	.0028823	.0009785

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0413854**	**.0035013**	**.0001913**	**.0009195**	**.0009664**	**-.030255**	**.0000658**
Stddev	.0549218	.0006935	.0001917	.0012643	.0003364	.009434	.0002422
%RSD	132.7081	19.80801	100.1813	137.4915	34.80642	31.18180	368.1449
#1	.0083889	.0041572	.0000246	-.000149	.0005898	-.020687	-.000197
#2	.1047859	.0035713	.0004007	.000593	.0012369	-.039550	.000279
#3	.0109814	.0027754	.0001487	.002315	.0010725	-.030529	.000116

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB03 Acquired: 11/21/2025 15:42:44 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0075317	.0018418	.0000526
Stddev	.0048447	.0005983	.0000900
%RSD	64.32435	32.48311	171.0680
#1	.0073189	.0017454	-.000023
#2	.0124792	.0012976	.000028
#3	.0027969	.0024824	.000152

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2605.798	49146.09	8610.335	2476.279	4668.365
Stddev	7.466	168.70	48.062	2.400	9.380
%RSD	.2865283	.3432600	.5581932	.0969058	.2009335
#1	2604.210	49256.81	8569.007	2473.985	4672.740
#2	2613.931	49229.53	8663.077	2478.772	4674.759
#3	2599.254	48951.93	8598.921	2476.078	4657.597

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3687-01 Acquired: 11/21/2025 15:47:05 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0067321**	**.0087897**	**.1230544**	**-.002749**	**.0011768**	**11.34388**
Stddev	.0030964	.0030174	.0028033	.005756	.0002010	.02189
%RSD	45.99426	34.32831	2.278088	209.3447	17.07556	.1929318
#1	.0100210	.0071362	.1256010	.000856	.0013348	11.36755
#2	.0038731	.0122724	.1235117	-.009387	.0009507	11.33973
#3	.0063022	.0069606	.1200506	.000283	.0012450	11.32437

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1251479**	**.0004662**	**.0015064**	**71.44773**	**.0401883**	**.0274387**
Stddev	.0016792	.0000136	.0001455	.15204	.0002935	.0001162
%RSD	1.341773	2.925300	9.658899	.2128043	.7302170	.4235794
#1	.1269856	.0004721	.0013410	71.57773	.0398976	.0275061
#2	.1247646	.0004760	.0015638	71.48493	.0404844	.0275055
#3	.1236935	.0004506	.0016146	71.28054	.0401829	.0273045

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1038095**	**21.31779**	**1.761936**	**19.24775**	**.0764717**	**-.000939**
Stddev	.0008065	.16448	.003852	.01135	.0003749	.000505
%RSD	.7768691	.7715809	.2186195	.0589669	.4902556	53.81018
#1	.1041463	21.41017	1.765302	19.26082	.0761548	-.000368
#2	.1028892	21.41532	1.762770	19.24206	.0763746	-.001330
#3	.1043930	21.12788	1.757735	19.24038	.0768855	-.001119

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**84.08087**	**.0311687**	**.4712949**	**9.181903**	**.1296163**	**.3819259**
Stddev	.56510	.0020968	.0006145	.070742	.0007876	.0025001
%RSD	.6720926	6.727327	.1303801	.7704517	.6075976	.6545897
#1	84.31027	.0287475	.4719858	9.174736	.1297589	.3802731
#2	84.49521	.0323748	.4708094	9.255956	.1303229	.3807025
#3	83.43715	.0323838	.4710897	9.115017	.1287673	.3848020

Sample Name: Q3687-01 Acquired: 11/21/2025 15:47:05 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0467065	.3974105	F 32.04234	.1240179	F 34.14341	-.003519
Stddev	.0009300	.0021959	.28041	.0005018	.11206	.001263
%RSD	1.991191	.5525565	.8751249	.4046497	.3282092	35.89370
#1	.0459774	.3948855	32.11935	.1243407	34.03471	-.004360
#2	.0477539	.3988731	32.27620	.1234398	34.13695	-.002067
#3	.0463882	.3984731	31.73147	.1242733	34.25856	-.004131

Elem	Sr4077
Units	ppm
Avg	.3561073
Stddev	.0005955
%RSD	.1672205
#1	.3567598
#2	.3559688
#3	.3555932

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2580.229	49648.08	8775.962	2453.498	4423.804
Stddev	8.173	102.15	30.901	2.175	11.633
%RSD	.3167415	.2057449	.3521130	.0886597	.2629636
#1	2581.863	49663.13	8781.677	2451.053	4424.474
#2	2587.461	49539.24	8803.607	2455.219	4435.087
#3	2571.363	49741.87	8742.602	2454.222	4411.850

Sample Name: Q3687-01DUP Acquired: 11/21/2025 15:51:14 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0056633**	**.0002263**	**.1240754**	**-.001203**	**.0007686**	**11.26786**
Stddev	.0030407	.0028354	.0016027	.001960	.0009348	.01527
%RSD	53.69125	1252.920	1.291733	162.8580	121.6123	.1355213
#1	.0054203	.0031214	.1223978	-.002924	-.000098	11.25044
#2	.0088182	.0001029	.1242374	-.001616	.001759	11.27421
#3	.0027514	-.002545	.1255910	.000930	.000644	11.27893

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1228647**	**.0004761**	**.0011967**	**70.92988**	**.0399401**	**.0276716**
Stddev	.0007176	.0000434	.0000691	.12306	.0005467	.0003091
%RSD	.5840935	9.114634	5.773765	.1734924	1.368749	1.116890
#1	.1235907	.0005245	.0012258	71.03245	.0393218	.0278296
#2	.1228477	.0004633	.0012464	70.79343	.0401392	.0273155
#3	.1221557	.0004406	.0011178	70.96375	.0403594	.0278698

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1017063**	**21.87127**	**1.739163**	**19.13372**	**.0757825**	**-.000862**
Stddev	.0005489	.19766	.008131	.04269	.0004920	.000222
%RSD	.5397367	.9037461	.4675139	.2231013	.6492713	25.73486
#1	.1015034	21.73707	1.743918	19.17170	.0752337	-.000910
#2	.1012877	21.77850	1.729775	19.08752	.0759296	-.001055
#3	.1023278	22.09826	1.743797	19.14195	.0761842	-.000620

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**86.34922**	**.0256310**	**.4536476**	**9.278828**	**.1307773**	**.3906185**
Stddev	.61746	.0009742	.0012052	.079945	.0004063	.0015395
%RSD	.7150707	3.801055	.2656636	.8615817	.3106604	.3941290
#1	85.85516	.0261652	.4536886	9.189400	.1312366	.3921330
#2	86.15108	.0245065	.4524224	9.303715	.1306305	.3890551
#3	87.04143	.0262214	.4548317	9.343369	.1304649	.3906674

Sample Name: Q3687-01DUP Acquired: 11/21/2025 15:51:14 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0118521	.3925185	F 32.91396	.1251310	F 34.47013	-.003942
Stddev	.0004876	.0006850	.21204	.0009298	.25168	.001007
%RSD	4.113619	.1745193	.6442130	.7430493	.7301539	25.55477
#1	.0123936	.3918119	32.73791	.1241074	34.43542	-.003319
#2	.0114481	.3931796	32.85463	.1253626	34.23760	-.005104
#3	.0117145	.3925639	33.14935	.1259232	34.73736	-.003403

Elem	Sr4077
Units	ppm
Avg	.3533846
Stddev	.0005564
%RSD	.1574579
#1	.3533319
#2	.3528563
#3	.3539654

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2562.345	48353.47	8868.013	2425.649	4373.599
Stddev	3.930	145.04	36.363	5.016	6.769
%RSD	.1533579	.2999587	.4100455	.2068068	.1547676
#1	2558.450	48518.19	8847.199	2424.482	4375.263
#2	2566.308	48244.87	8846.839	2421.319	4379.380
#3	2562.277	48297.36	8910.001	2431.146	4366.153

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3687-01LX5 Acquired: 11/21/2025 15:55:24 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.001996**	**-.002143**	**.0240275**	**-.006424**	**-.000462**	**2.369898**	**.0244886**
Stddev	.004877	.004420	.0012446	.004282	.000997	.015141	.0014007
%RSD	244.3577	206.2333	5.179844	66.65142	215.9215	.6388781	5.719747
#1	.003314	.002949	.0251572	-.009027	-.000066	2.381580	.0258122
#2	-.003027	-.004985	.0226933	-.008764	-.001596	2.375323	.0246317
#3	-.006274	-.004395	.0242319	-.001482	.000277	2.352793	.0230219

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001641**	**.0003202**	**14.89724**	**.0076320**	**.0057047**	**.0215732**	**4.312964**
Stddev	.0000627	.0001140	.06795	.0002314	.0000211	.0002302	.031563
%RSD	38.19559	35.59619	.4561136	3.032249	.3701711	1.067190	.7318182
#1	.0001012	.0002158	14.96876	.0073650	.0057290	.0218153	4.339434
#2	.0002266	.0003029	14.88942	.0077740	.0056908	.0213570	4.278033
#3	.0001646	.0004418	14.83354	.0077571	.0056942	.0215473	4.321426

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3683237**	**4.005731**	**.0156042**	**-.000531**	**15.85959**	**.0053567**	**.0951550**
Stddev	.0039813	.054674	.0001561	.000517	.13219	.0028351	.0006067
%RSD	1.080928	1.364885	1.000234	97.51466	.8334925	52.92569	.6375685
#1	.3727738	3.975497	.0155850	-.000222	15.92074	.0044630	.0950079
#2	.3670979	4.068844	.0154587	-.000242	15.70790	.0030762	.0946353
#3	.3650995	3.972851	.0157690	-.001128	15.95013	.0085309	.0958216

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.740181**	**.0265384**	**.0754939**	**.0064809**	**.0836721**	**6.317517**	**.0258758**
Stddev	.015971	.0013840	.0002531	.0011344	.0003644	.032589	.0001441
%RSD	.9177647	5.215193	.3352019	17.50366	.4355356	.5158463	.5570016
#1	1.727282	.0281173	.0752068	.0063682	.0836877	6.318827	.0257546
#2	1.735217	.0259637	.0755902	.0054071	.0833001	6.284293	.0260352
#3	1.758045	.0255344	.0756846	.0076675	.0840284	6.349430	.0258378

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3687-01LX5 Acquired: 11/21/2025 15:55:24 Type: Unk
Method: 6010-200.7 NEW(v377) 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	6.917104	.0015048	.0748330
Stddev	.022324	.0013561	.0008370
%RSD	.3227295	90.12044	1.118454
#1	6.908109	.0021018	.0757993
#2	6.900680	.0024601	.0743626
#3	6.942521	-.000047	.0743370

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2663.052	51116.79	8719.109	2557.826	4706.871
Stddev	5.507	59.94	67.994	13.978	6.883
%RSD	.2067884	.1172636	.7798223	.5464960	.1462364
#1	2662.014	51153.29	8672.870	2548.695	4708.354
#2	2669.004	51149.47	8687.278	2573.918	4712.891
#3	2658.138	51047.61	8797.180	2550.865	4699.367

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3687-01MS Acquired: 11/21/2025 15:59:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7752842**	**1.823307**	**1.013041**	**1.894139**	**.7218040**	**13.51936**
Stddev	.0057859	.056227	.007782	.014726	.0021025	.05743
%RSD	.7462932	3.083772	.7681365	.7774646	.2912883	.4247643
#1	.7692564	1.759091	1.007176	1.891505	.7195898	13.58567
#2	.7758028	1.847130	1.010078	1.880907	.7237734	13.48575
#3	.7807933	1.863701	1.021869	1.910004	.7220488	13.48667

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3149530**	**.1906378**	**.1853829**	**70.74674**	**.4255195**	**.2144205**
Stddev	.0016747	.0007828	.0004827	.10525	.0013524	.0010366
%RSD	.5317336	.4106398	.2603997	.1487703	.3178240	.4834443
#1	.3132510	.1915399	.1854563	70.84995	.4260367	.2141477
#2	.3165990	.1902367	.1848677	70.63957	.4239848	.2135475
#3	.3150090	.1901367	.1858248	70.75069	.4265370	.2155662

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3788203**	**23.51043**	**1.949924**	**20.47954**	**.5433101**	**.0281188**
Stddev	.0009250	.17900	.007185	.03537	.0011107	.0004847
%RSD	.2441695	.7613734	.3684621	.1727195	.2044317	1.723747
#1	.3779523	23.30626	1.941769	20.51841	.5432891	.0286084
#2	.3787153	23.58462	1.955321	20.47098	.5422101	.0276392
#3	.3797932	23.64041	1.952682	20.44923	.5444312	.0281088

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**90.68202**	**.3142888**	**.6216563**	**18.76003**	**.3949049**	**.7753049**
Stddev	.64072	.0026421	.0008400	.09638	.0010588	.0035982
%RSD	.7065548	.8406698	.1351256	.5137588	.2681108	.4641030
#1	89.98573	.3163531	.6226192	18.65515	.3957571	.7728650
#2	91.24675	.3113112	.6212763	18.78022	.3937197	.7736124
#3	90.81357	.3152021	.6210734	18.84472	.3952381	.7794373

Sample Name: Q3687-01MS Acquired: 11/21/2025 15:59:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.6006693	.5788126	F 32.90644	.7277898	F 33.24581	.1995545
Stddev	.0033332	.0024314	.11895	.0008512	.20412	.0005749
%RSD	.5549156	.4200585	.3614698	.1169523	.6139667	.2881037
#1	.5981346	.5773061	32.76977	.7287536	33.01772	.2001582
#2	.5994284	.5816176	32.96299	.7271410	33.30842	.1994919
#3	.6044450	.5775143	32.98656	.7274749	33.41129	.1990135

Elem	Sr4077
Units	ppm
Avg	.5486383
Stddev	.0020392
%RSD	.3716878
#1	.5472651
#2	.5509815
#3	.5476684

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2586.080	49096.66	8677.866	2495.487	4398.600
Stddev	6.218	97.77	32.969	17.248	2.095
%RSD	.2404342	.1991416	.3799197	.6911797	.0476246
#1	2586.964	49148.87	8640.418	2508.352	4397.716
#2	2591.808	49157.24	8702.520	2502.223	4400.992
#3	2579.467	48983.86	8690.661	2475.888	4397.093

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3687-01MSD Acquired: 11/21/2025 16:03:40 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8187451**	**1.925570**	**1.067341**	**2.007303**	**.7497819**	**14.04450**
Stddev	.0010176	.103675	.006982	.013309	.0033640	.05706
%RSD	.1242865	5.384102	.6541355	.6630355	.4486573	.4063156
#1	.8197604	1.816207	1.064381	1.995080	.7512942	14.10992
#2	.8177252	1.938081	1.062328	2.005347	.7459272	14.01858
#3	.8187498	2.022421	1.075316	2.021482	.7521243	14.00499

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3245824**	**.1969033**	**.1947973**	**74.21695**	**.4391237**	**.2250314**
Stddev	.0044417	.0001906	.0009358	.33589	.0005539	.0004410
%RSD	1.368423	.0967840	.4803913	.4525829	.1261391	.1959842
#1	.3285797	.1970033	.1939503	74.58995	.4389075	.2249280
#2	.3253668	.1970231	.1946398	74.12254	.4397531	.2246513
#3	.3198008	.1966836	.1958019	73.93837	.4387104	.2255150

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3943470**	**24.58851**	**2.015539**	**21.51024**	**.5642053**	**.0552014**
Stddev	.0006937	.14871	.024066	.03618	.0012308	.0005616
%RSD	.1759024	.6047848	1.194043	.1681994	.2181546	1.017347
#1	.3935804	24.71416	2.040144	21.46854	.5640323	.0546353
#2	.3945293	24.62704	2.014423	21.53328	.5630701	.0557584
#3	.3949314	24.42433	1.992050	21.52890	.5655135	.0552104

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**91.88870**	**.3277459**	**.6531238**	**19.45622**	**.4100990**	**.8263874**
Stddev	1.23686	.0017311	.0031925	.22246	.0004525	.0045466
%RSD	1.346045	.5281918	.4888082	1.143386	.1103395	.5501828
#1	92.96120	.3280649	.6510134	19.60438	.4096222	.8227604
#2	92.16923	.3258775	.6567966	19.56386	.4101525	.8249138
#3	90.53567	.3292954	.6515613	19.20041	.4105224	.8314881

Sample Name: Q3687-01MSD Acquired: 11/21/2025 16:03:40 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.6105587**	**.5974364**	F **34.53091**	**.7552483**	F **35.29344**	**.2009609**
Stddev	.0019166	.0106432	.07599	.0030618	.28838	.0026612
%RSD	.3139029	1.781478	.2200712	.4054064	.8170857	1.324236
#1	.6085093	.6095823	34.52949	.7517732	35.00178	.2035668
#2	.6108600	.5929868	34.60761	.7564220	35.30012	.2010683
#3	.6123068	.5897401	34.45564	.7575496	35.57842	.1982476

Elem	Sr4077
Units	ppm
Avg	**.5695502**
Stddev	.0072059
%RSD	1.265196
#1	.5765293
#2	.5699842
#3	.5621371

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2572.032**	**49249.30**	**8778.053**	**2483.184**	**4379.696**
Stddev	5.567	71.70	17.282	6.026	10.524
%RSD	.2164363	.1455851	.1968823	.2426648	.2402975
#1	2576.296	49240.39	8760.084	2489.801	4387.918
#2	2574.065	49182.47	8779.521	2481.740	4383.336
#3	2565.734	49325.04	8794.555	2478.012	4367.836

Sample Name: Q3687-01A Acquired: 11/21/2025 16:07:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8279551**	**2.018746**	**1.086832**	**2.060710**	**.8023564**	**13.20966**
Stddev	.0058717	.033496	.008454	.001593	.0077005	.09149
%RSD	.7091768	1.659256	.7779016	.0772924	.9597417	.6925934
#1	.8281501	2.057265	1.082970	2.058893	.7967957	13.31527
#2	.8219884	2.002524	1.080999	2.061865	.7991278	13.15444
#3	.8337269	1.996450	1.096528	2.061370	.8111457	13.15927

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3246860**	**.1977599**	**.1984790**	**71.91705**	**.4444643**	**.2279686**
Stddev	.0025289	.0008044	.0006798	.35252	.0015562	.0013199
%RSD	.7788845	.4067686	.3425167	.4901702	.3501247	.5789945
#1	.3272880	.1981004	.1980182	72.30676	.4454854	.2266151
#2	.3245330	.1983380	.1981590	71.82399	.4452343	.2280386
#3	.3222371	.1968412	.1992598	71.62041	.4426733	.2292521

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3996224**	**24.64364**	**1.948948**	**21.06438**	**.5724697**	**.0561578**
Stddev	.0023968	.11409	.009557	.10567	.0027641	.0017495
%RSD	.5997740	.4629753	.4903516	.5016416	.4828388	3.115346
#1	.3971216	24.67861	1.948577	21.18145	.5702458	.0568424
#2	.3998459	24.73616	1.958685	21.03563	.5715988	.0574616
#3	.4018996	24.51616	1.939583	20.97606	.5755643	.0541695

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**90.68902**	**.3337678**	**.6494821**	**19.41815**	**.4111684**	**.8116634**
Stddev	.46262	.0070256	.0045552	.04051	.0029886	.0027218
%RSD	.5101214	2.104948	.7013572	.2086218	.7268470	.3353306
#1	90.89891	.3414804	.6496569	19.43958	.4120525	.8101797
#2	91.00949	.3277330	.6539474	19.44345	.4136151	.8100058
#3	90.15866	.3320899	.6448421	19.37143	.4078375	.8148046

Sample Name: Q3687-01A Acquired: 11/21/2025 16:07:39 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.7051905	.5859984	F 33.07948	.7595831	F 34.23619	.2043451
Stddev	.0032649	.0030073	.13722	.0043745	.15830	.0025917
%RSD	.4629827	.5131974	.4148230	.5759095	.4623732	1.268296
#1	.7028751	.5854262	33.20990	.7566412	34.22791	.2059543
#2	.7037717	.5892508	33.09218	.7574982	34.08219	.2057257
#3	.7089248	.5833183	32.93635	.7646101	34.39846	.2013554

Elem	Sr4077
Units	ppm
Avg	.5594826
Stddev	.0029010
%RSD	.5185075
#1	.5618721
#2	.5603209
#3	.5562548

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2560.674	48713.84	8772.862	2435.777	4355.292
Stddev	11.574	146.67	29.114	12.517	17.777
%RSD	.4519956	.3010890	.3318597	.5138677	.4081679
#1	2562.709	48635.39	8751.088	2424.227	4363.286
#2	2571.096	48623.08	8761.568	2434.027	4367.669
#3	2548.217	48883.06	8805.931	2449.076	4334.922

Sample Name: Q3690-01 Acquired: 11/21/2025 16:11:40 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.000832**	**-.005446**	**.0030473**	**-.002502**	**-.000762**	**.0902281**	**.0019815**
Stddev	.001798	.002032	.0004593	.001329	.001752	.0112980	.0009756
%RSD	215.9934	37.30445	15.07136	53.11440	229.8688	12.52159	49.23255
#1	-.001099	-.006305	.0026863	-.001477	-.002274	.0823272	.0009359
#2	-.002482	-.003126	.0028914	-.002025	-.001171	.0851882	.0021415
#3	.001084	-.006907	.0035642	-.004003	.001158	.1031689	.0028672

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000015**	**.0000891**	**4.615008**	**.0284957**	**.0079027**	**.0053562**	**1.436381**
Stddev	.000078	.0000415	.022966	.0003038	.0001240	.0002668	.010251
%RSD	504.3497	46.52370	.4976302	1.066244	1.568884	4.981552	.7136974
#1	.000045	.0000847	4.617129	.0281746	.0079090	.0050538	1.427682
#2	.000012	.0000500	4.591056	.0287787	.0077757	.0055586	1.447683
#3	-.000103	.0001326	4.636840	.0285337	.0080234	.0054561	1.433778

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0189531**	**1.844930**	**.0220700**	**-.000178**	**14.73565**	**.0019975**	**.0583378**
Stddev	.0002369	.021063	.0005202	.000813	.11313	.0032029	.0006353
%RSD	1.249879	1.141682	2.357261	456.8178	.7676982	160.3439	1.088992
#1	.0188887	1.839697	.0225074	.000754	14.73517	-.000882	.0590445
#2	.0187550	1.826976	.0222078	-.000545	14.84901	.001428	.0578140
#3	.0192155	1.868116	.0214947	-.000742	14.62276	.005447	.0581549

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8717901**	**.0071423**	**.0004453**	**-.000420**	**.0024666**	**6.050608**	**.0008373**
Stddev	.0030890	.0005932	.0000648	.000893	.0020363	.046167	.0004707
%RSD	.3543278	8.305145	14.55558	212.3854	82.55386	.7630115	56.21719
#1	.8695636	.0075047	.0004821	-.001437	.0029958	6.021231	.0003234
#2	.8704902	.0074644	.0003705	-.000061	.0041860	6.103821	.0009409
#3	.8753167	.0064577	.0004833	.000237	.0002180	6.026773	.0012476

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3690-01 Acquired: 11/21/2025 16:11:40 Type: Unk
Method: 6010-200.7 NEW(v377) 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	6.183313	-.008386	.0245501
Stddev	.022413	.001619	.0002364
%RSD	.3624752	19.31224	.9629008
#1	6.162291	-.008685	.0248099
#2	6.180752	-.009834	.0244926
#3	6.206897	-.006637	.0243476

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2653.773	50394.63	8878.612	2526.323	4807.854
Stddev	9.784	118.16	56.774	15.151	21.383
%RSD	.3686973	.2344620	.6394462	.5997185	.4447566
#1	2663.286	50276.43	8860.167	2510.824	4826.845
#2	2654.295	50394.71	8942.315	2541.100	4812.025
#3	2643.738	50512.75	8833.354	2527.044	4784.693

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3690-02 Acquired: 11/21/2025 16:15:55 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.003749**	**-.005744**	**-.000122**	**-.003375**	**-.001711**	**.0596294**	**.0013425**
Stddev	.004229	.003568	.000960	.004318	.000391	.0024026	.0006382
%RSD	112.8179	62.10876	784.1311	127.9126	22.84953	4.029179	47.54263
#1	-.001940	-.009451	.000114	-.006746	-.001480	.0618331	.0011645
#2	-.000725	-.005449	-.001179	-.004871	-.001490	.0570680	.0020508
#3	-.008582	-.002333	.000698	.001491	-.002162	.0599871	.0008121

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000032**	**-.000019**	**3.529760**	**.0009485**	**.0057198**	**.0049348**	**.2023497**
Stddev	.000135	.000054	.007373	.0002126	.0001998	.0005563	.0071796
%RSD	425.9968	279.4491	.2088833	22.41364	3.492562	11.27345	3.548117
#1	-.000169	-.000017	3.522730	.0007363	.0059317	.0043785	.2105605
#2	-.000026	.000034	3.529116	.0009476	.0056928	.0054912	.1992362
#3	.000100	-.000074	3.537434	.0011615	.0055349	.0049348	.1972523

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0151704**	**1.414735**	**.0070499**	**-.000369**	**10.78363**	**.0020868**	**.0183549**
Stddev	.0007506	.026434	.0002729	.000199	.15888	.0026969	.0004287
%RSD	4.947610	1.868454	3.871711	53.93970	1.473339	129.2393	2.335874
#1	.0150609	1.388317	.0071466	-.000526	10.94634	-.000819	.0184985
#2	.0144805	1.441185	.0067417	-.000435	10.77567	.004509	.0186935
#3	.0159696	1.414704	.0072613	-.000145	10.62888	.002571	.0178728

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5373027**	**.0040803**	**.0000144**	**.0000776**	**.0010805**	**4.385490**	**.0014706**
Stddev	.0471601	.0005505	.0003810	.0009060	.0002394	.039935	.0003933
%RSD	8.777196	13.49219	2642.339	1167.087	22.16052	.9106177	26.74795
#1	.5315639	.0035438	.0004500	.0011163	.0008960	4.429026	.0010606
#2	.5870697	.0040532	-.000257	-.000550	.0013511	4.376884	.0015061
#3	.4932746	.0046438	-.000150	-.000333	.0009944	4.350559	.0018449

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3690-02 Acquired: 11/21/2025 16:15:55 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**4.621702**	**-.008418**	**.0196305**
Stddev	.034088	.001186	.0000441
%RSD	.7375596	14.08842	.2245489
#1	4.612222	-.008200	.0196805
#2	4.593357	-.007356	.0195972
#3	4.659526	-.009698	.0196138

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2726.468**	**52669.58**	**8830.037**	**2629.544**	**4980.212**
Stddev	6.588	211.79	65.512	13.936	11.371
%RSD	.2416293	.4021199	.7419261	.5299879	.2283325
#1	2730.178	52550.66	8904.563	2632.824	4987.625
#2	2730.365	52543.96	8781.535	2614.260	4985.892
#3	2718.862	52914.10	8804.013	2641.547	4967.120

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170683BL Acquired: 11/21/2025 16:20:12 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.000634**	**-.004177**	**-.001317**	**-.005939**	**-.000274**	**.0193298**
Stddev	.001158	.005661	.000927	.001168	.003732	.0086349
%RSD	182.7552	135.5299	70.38076	19.66599	1359.985	44.67166
#1	-.001940	-.009272	-.002107	-.007101	-.004360	.0292793
#2	.000269	.001917	-.000297	-.004765	.000580	.0137914
#3	-.000231	-.005176	-.001546	-.005951	.002957	.0149186

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002775**	**-.000018**	**.0001117**	**-.005200**	**-.000188**	**-.000105**
Stddev	.000453	.000112	.0000305	.012565	.000022	.000357
%RSD	16.32903	610.4639	27.33549	241.6471	11.60054	339.7394
#1	-.002307	.000109	.0001457	.002243	-.000189	.000307
#2	-.002806	-.000062	.0000867	.001864	-.000210	-.000298
#3	-.003212	-.000102	.0001028	-.019706	-.000166	-.000324

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000446**	**-.005403**	**.0001308**	**-.012145**	**.0006820**	**.0002928**
Stddev	.0000924	.005510	.0000768	.030840	.0002190	.0001530
%RSD	207.0014	101.9657	58.74196	253.9291	32.11231	52.27000
#1	.0001296	-.009429	.0001151	-.025665	.0009132	.0004041
#2	.0000579	-.007657	.0002142	-.033916	.0004777	.0003560
#3	-.000054	.000876	.0000629	.023146	.0006549	.0001183

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.009496**	**.0030471**	**-.000305**	**-.027960**	**-.002417**	**-.000301**
Stddev	.022346	.0013682	.000256	.052509	.001237	.000478
%RSD	235.3358	44.90234	84.06489	187.7969	51.17367	158.5568
#1	-.027781	.0019412	-.000264	-.076905	-.003224	.000194
#2	-.016119	.0026229	-.000071	.027504	-.000993	-.000338
#3	.015414	.0045771	-.000579	-.034481	-.003035	-.000760

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170683BL Acquired: 11/21/2025 16:20:12 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0000474	.0017333	-.028590	.0001186	F .0133920	.0029774
Stddev	.0007525	.0009954	.008634	.0004058	.0042211	.0009972
%RSD	1587.209	57.42745	30.19844	342.0803	31.51972	33.49186
#1	-.000513	.0018397	-.034227	-.000335	.0179705	.0039867
#2	.000903	.0006890	-.018651	.000244	.0096551	.0029527
#3	-.000247	.0026713	-.032894	.000447	.0125504	.0019928

Elem	Sr4077
Units	ppm
Avg	.0000266
Stddev	.0001280
%RSD	480.7390
#1	.0001696
#2	-.000012
#3	-.000078

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2639.264	50059.23	8635.526	2533.418	4762.527
Stddev	4.835	212.81	46.004	23.181	15.687
%RSD	.1832123	.4251191	.5327319	.9150215	.3293797
#1	2643.165	50299.05	8681.049	2536.609	4769.576
#2	2640.774	49985.70	8589.055	2554.838	4773.453
#3	2633.854	49892.93	8636.476	2508.806	4744.552

Sample Name: PB170683BS Acquired: 11/21/2025 16:24:32 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8171966**	**2.072841**	**.9934274**	**2.079593**	**.8293945**	**2.094836**
Stddev	.0045882	.043525	.0067473	.003836	.0065599	.007142
%RSD	.5614575	2.099795	.6791910	.1844701	.7909240	.3409263
#1	.8121380	2.049367	.9877807	2.075168	.8262423	2.102881
#2	.8183625	2.123064	.9916019	2.081635	.8250056	2.089242
#3	.8210894	2.046091	1.000900	2.081976	.8369354	2.092386

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2086702**	**.2109028**	**.2020765**	**1.066063**	**.4176076**	**.2034578**
Stddev	.0010365	.0002704	.0007326	.004395	.0021336	.0009153
%RSD	.4967208	.1282103	.3625462	.4122493	.5109016	.4498691
#1	.2089881	.2106059	.2015419	1.061645	.4166336	.2029876
#2	.2095104	.2111349	.2017761	1.070434	.4200543	.2028731
#3	.2075119	.2109676	.2029116	1.066109	.4161348	.2045126

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3191586**	**3.124217**	**.2123936**	**2.080611**	**.5124534**	**.0799785**
Stddev	.0011560	.032647	.0026969	.018146	.0023861	.0005407
%RSD	.3621934	1.044967	1.269769	.8721435	.4656158	.6760441
#1	.3198053	3.139831	.2135880	2.101400	.5104116	.0806004
#2	.3178240	3.146126	.2142870	2.072479	.5118722	.0797152
#3	.3198466	3.086695	.2093057	2.067952	.5150764	.0796199

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.077266**	**.3143213**	**.2173876**	**10.11828**	**.3154546**	**.4199353**
Stddev	.047806	.0038783	.0011631	.12715	.0016375	.0026034
%RSD	1.553536	1.233861	.5350521	1.256589	.5191014	.6199582
#1	3.075428	.3139414	.2165574	10.06492	.3148389	.4178164
#2	3.125965	.3183756	.2168885	10.26341	.3173107	.4191482
#3	3.030405	.3106470	.2187170	10.02651	.3142142	.4228415

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170683BS Acquired: 11/21/2025 16:24:32 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.7017594	.2060358	.8625901	F .6492469	F .0011192	.2160977
Stddev	.0024514	.0021531	.0159922	.0018063	.0056813	.0009713
%RSD	.3493267	1.044989	1.853973	.2782211	507.6364	.4494649
#1	.6989303	.2060452	.8545763	.6471841	.0017945	.2153946
#2	.7030911	.2081841	.8810047	.6505456	-.004870	.2172060
#3	.7032567	.2038780	.8521891	.6500109	.006433	.2156925

Elem	Sr4077
Units	ppm
Avg	.2084610
Stddev	.0013158
%RSD	.6311895
#1	.2089629
#2	.2094519
#3	.2069681

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2613.611	49227.18	8591.487	2503.155	4608.117
Stddev	8.229	320.19	20.580	12.563	14.663
%RSD	.3148500	.6504411	.2395375	.5018997	.3181886
#1	2618.686	49280.51	8601.277	2504.359	4621.173
#2	2618.029	48883.67	8567.840	2490.033	4610.923
#3	2604.116	49517.36	8605.345	2515.073	4592.254

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV04 Acquired: 11/21/2025 16:28:38 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.817704**	**4.735718**	**4.793713**	**4.873323**	**4.888770**	**9.779324**	**9.879755**
Stddev	.028611	.102720	.018777	.030737	.013836	.032537	.056195
%RSD	.5938789	2.169046	.3916940	.6307259	.2830125	.3327072	.5687874
#1	4.797415	4.631658	4.777660	4.838145	4.882492	9.808021	9.861383
#2	4.805269	4.837043	4.789118	4.886833	4.879185	9.785976	9.942836
#3	4.850429	4.738454	4.814360	4.894991	4.904631	9.743976	9.835046

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2410916**	**2.399050**	**24.37997**	**.9704720**	**2.404636**	**1.221401**	**4.861121**
Stddev	.0004530	.011573	.06802	.0015863	.012085	.006156	.027587
%RSD	.1878877	.4824002	.2789803	.1634588	.5025872	.5039727	.5674999
#1	.2413596	2.390019	24.41347	.9714522	2.395426	1.217194	4.892963
#2	.2413467	2.395035	24.42474	.9686419	2.400160	1.218542	4.845997
#3	.2405686	2.412095	24.30170	.9713221	2.418320	1.228466	4.844405

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.436296**	**24.17539**	**2.405180**	**1.204198**	**26.86940**	**2.436168**	**2.438776**
Stddev	.002276	.06818	.010421	.000742	.13735	.014031	.006561
%RSD	.0934331	.2820238	.4332779	.0616468	.5111874	.5759251	.2690456
#1	2.438829	24.17058	2.395419	1.204199	27.01650	2.450938	2.445003
#2	2.435634	24.24585	2.403966	1.204939	26.74449	2.434548	2.439401
#3	2.434423	24.10975	2.416155	1.203455	26.84721	2.423018	2.431925

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.96560**	**4.827521**	**4.906663**	**4.805388**	**4.895151**	**4.831509**	**4.929773**
Stddev	.08525	.015463	.014477	.021082	.010705	.002917	.022284
%RSD	.3557032	.3203044	.2950490	.4387104	.2186954	.0603801	.4520232
#1	24.06343	4.840862	4.896432	4.788015	4.906365	4.828456	4.906059
#2	23.90727	4.831126	4.900329	4.799307	4.894051	4.831804	4.932980
#3	23.92610	4.810574	4.923227	4.828842	4.885039	4.834268	4.950279

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Sample Name: CCV04 Acquired: 11/21/2025 16:28:38 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.754529**	**4.837379**	**4.918836**
Stddev	.034092	.020646	.046850
%RSD	.7170382	.4267940	.9524588
#1	4.717265	4.860202	4.945693
#2	4.784153	4.831934	4.946077
#3	4.762169	4.820002	4.864739

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2601.422**	**49941.85**	**8800.519**	**2495.006**	**4429.779**
Stddev	10.067	49.10	40.432	3.975	13.698
%RSD	.3869825	.0983083	.4594315	.1593122	.3092347
#1	2599.564	49935.89	8792.788	2496.728	4431.725
#2	2612.289	49896.01	8764.510	2497.829	4442.400
#3	2592.414	49993.66	8844.258	2490.460	4415.211

Sample Name: CCB04 Acquired: 11/21/2025 16:32:48 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.003618**	**-.000690**	**-.003238**	**-.004856**	**-.000773**	**.0057016**	**-.002238**
Stddev	.005064	.001564	.001048	.003105	.002042	.0072113	.001849
%RSD	139.9503	226.6395	32.35285	63.95281	264.0996	126.4772	82.61177
#1	.000265	-.002262	-.004196	-.001270	.000640	.0140077	-.004293
#2	-.009346	.000867	-.003400	-.006671	.000155	.0010394	-.000708
#3	-.001774	-.000675	-.002119	-.006626	-.003115	.0020578	-.001714

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000601**	**.0000786**	**-.010464**	**-.000074**	**-.000059**	**-.000073**	**-.008743**
Stddev	.0000547	.0000555	.009068	.000110	.000164	.000399	.007235
%RSD	90.98426	70.64900	86.66079	149.1831	277.4512	544.9153	82.74556
#1	.0000281	.0000905	-.019631	.000048	-.000176	-.000148	-.004046
#2	.0001232	.0001272	-.001498	-.000105	.000129	-.000430	-.017074
#3	.0000289	.0000181	-.010262	-.000165	-.000130	.000358	-.005109

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000260**	**-.005994**	**.0002666**	**.0003385**	**-.065874**	**.0003517**	**-.000226**
Stddev	.000799	.017659	.0003666	.0003045	.014749	.0012404	.000414
%RSD	307.4779	294.6027	137.5066	89.94527	22.39014	352.6772	182.8809
#1	.000350	.013358	.0006899	.0006106	-.051920	.0001695	-.000367
#2	-.001164	-.021234	.0000589	.0003952	-.064396	-.000788	.000239
#3	.000035	-.010107	.0000510	.0000097	-.081307	.001673	-.000552

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.043649**	**.0034651**	**-.000167**	**-.000769**	**.0021180**	**-.027917**	**-.000100**
Stddev	.034483	.0005772	.000184	.000712	.0002488	.008616	.000276
%RSD	79.00155	16.65798	110.1216	92.56875	11.74449	30.86384	275.1816
#1	-.065699	.0033878	.000013	-.001367	.0022953	-.036004	-.000408
#2	-.061336	.0029304	-.000160	.000018	.0022251	-.028892	-.000019
#3	-.003911	.0040770	-.000355	-.000958	.0018337	-.018854	.000126

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Sample Name: CCB04 Acquired: 11/21/2025 16:32:48 Type: Unk
Method: 6010-200.7 NEW(v377) 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	-.007984	-.003203	.0000281
Stddev	.003323	.000959	.0000419
%RSD	41.62392	29.93782	149.4386
#1	-.011527	-.002476	.0000022
#2	-.004935	-.004290	.0000765
#3	-.007491	-.002844	.0000056

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2611.573	49073.56	8753.461	2453.939	4680.590
Stddev	4.328	118.67	64.051	3.824	9.650
%RSD	.1657260	.2418166	.7317248	.1558240	.2061810
#1	2614.683	49207.83	8742.888	2455.296	4672.250
#2	2613.407	49030.10	8695.355	2449.622	4691.161
#3	2606.630	48982.75	8822.141	2456.900	4678.360

Reviewed By:Sagar
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LB :LB138017

Sample Name: LR-1 Acquired: 11/21/2025 16:36:54 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.006498**	**.0189502**	**.0258322**	**-.020933**	**.0172831**	**.3499540**	**.0020211**
Stddev	.004469	.0130763	.0068610	.003707	.0023353	.0176477	.0016977
%RSD	68.77313	69.00354	26.56011	17.70849	13.51200	5.042850	83.99861
#1	-.005931	.0039736	.0304645	-.021077	.0189554	.3302417	.0003571
#2	-.011224	.0281015	.0290820	-.017157	.0146150	.3642832	.0019556
#3	-.002340	.0247753	.0179500	-.024566	.0182789	.3553370	.0037506

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005862**	**.0017112**	**2115.045**	**.0574716**	**.0025037**	**.0079359**	**.8071126**
Stddev	.0000623	.0001327	11.723	.0003902	.0002261	.0011468	.0113373
%RSD	10.63579	7.753241	.5542567	.6788549	9.032011	14.45063	1.404670
#1	.0005143	.0018627	2118.231	.0571333	.0024638	.0087994	.8165577
#2	.0006200	.0016158	2124.845	.0573831	.0023002	.0066347	.7945398
#3	.0006245	.0016552	2102.059	.0578984	.0027472	.0083736	.8102402

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0201657**	**2366.134**	**.0421878**	**.0059779**	**2356.020**	**.0085614**	**.0569450**
Stddev	.0002277	4.031	.0009852	.0007866	12.763	.0038646	.0003743
%RSD	1.128906	.1703508	2.335234	13.15800	.5417340	45.14031	.6573537
#1	.0204109	2370.774	.0418460	.0050711	2345.729	.0067817	.0565265
#2	.0199610	2364.135	.0414191	.0064759	2352.030	.0129952	.0570606
#3	.0201251	2363.494	.0432984	.0063867	2370.302	.0059071	.0572478

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9938669**	**.0125192**	**.0146509**	**-.006823**	**-.084724**	**-.062861**	**.0017058**
Stddev	.0235340	.0006775	.0010810	.001445	.002179	.012213	.0003283
%RSD	2.367921	5.411456	7.378619	21.17186	2.572403	19.42853	19.24915
#1	1.007454	.0130805	.0151010	-.006183	-.087237	-.063770	.0016054
#2	1.007455	.0127103	.0154342	-.005809	-.083356	-.050219	.0020726
#3	.966692	.0117667	.0134176	-.008477	-.083579	-.074594	.0014394

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: LR-1 Acquired: 11/21/2025 16:36:54 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.2237356	-.332067	.0589853
Stddev	.0016066	.003789	.0003999
%RSD	.7180701	1.141072	.6779864
#1	.2235979	-.334130	.0593642
#2	.2222023	-.334376	.0585673
#3	.2254066	-.327694	.0590244

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1855.170	37006.66	7737.346	1794.275	2787.941
Stddev	5.413	48.24	6.318	14.385	9.783
%RSD	.2918001	.1303581	.0816584	.8017268	.3509021
#1	1859.089	37028.85	7743.443	1796.293	2794.347
#2	1857.429	37039.81	7737.766	1807.545	2792.794
#3	1848.993	36951.32	7730.828	1778.988	2776.680

Sample Name: LR-2 Acquired: 11/21/2025 16:49:56 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.1077029**	**-.035077**	**.1708887**	**.0141779**	**-.083139**	**1831.133**	**.0233757**
Stddev	.0067636	.019465	.0041426	.0089916	.008965	9.821	.0005385
%RSD	6.279829	55.49222	2.424172	63.41962	10.78275	.5363562	2.303791
#1	.1098659	-.025826	.1705075	.0169133	-.076498	1825.063	.0235497
#2	.1131204	-.021964	.1669499	.0041363	-.093336	1842.464	.0238057
#3	.1001225	-.057443	.1752088	.0214841	-.079583	1825.873	.0227717

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0226899**	**.1320948**	**8.019412**	**-.228739**	**.0783182**	**.0523961**	**2450.757**
Stddev	.0000284	.0021639	.085131	.000504	.0003934	.0107282	6.515
%RSD	.1252135	1.638151	1.061556	.2201584	.5022733	20.47509	.2658551
#1	.0227220	.1308070	7.987560	-.228643	.0783494	.0405346	2457.127
#2	.0226679	.1308843	8.115875	-.228290	.0779101	.0552330	2444.106
#3	.0226799	.1345931	7.954800	-.229284	.0786950	.0614207	2451.039

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.204285**	**1.391489**	**.0634633**	**^ *****	**3.717314**	**.0482526**	**.1338004**
Stddev	.000948	.025950	.0027722	-----	.008273	.0006070	.0013769
%RSD	.4638937	1.864882	4.368237	-----	.2225644	1.258010	1.029090
#1	-.203197	1.361875	.0639664	^ -----	3.722316	.0482074	.1348108
#2	-.204927	1.410251	.0604739	^ -----	3.707764	.0476695	.1343584
#3	-.204731	1.402342	.0659495	^ -----	3.721861	.0488811	.1322321

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1814.907**	**^ *****	**-.018237**	**.0395658**	**.0053025**	**.4045902**	**.0140090**
Stddev	9.156	-----	.001063	.0023456	.0009328	.0072819	.0006659
%RSD	.5045150	-----	5.829098	5.928292	17.59234	1.799834	4.753429
#1	1824.063	^ -----	-.017373	.0370919	.0057470	.4013308	.0139209
#2	1805.750	^ -----	-.019424	.0398480	.0059299	.3995074	.0147146
#3	1814.908	^ -----	-.017914	.0417575	.0042305	.4129326	.0133916

Reviewed By:Sagar
On:11/26/2025
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LB :LB138017

Sample Name: LR-2 Acquired: 11/21/2025 16:49:56 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.388333**	**.2401050**	**-2.34898**
Stddev	.006720	.0016683	.00622
%RSD	1.730389	.6948315	.2648022
#1	-.380630	.2420315	-2.35508
#2	-.391376	.2391404	-2.34265
#3	-.392993	.2391433	-2.34922

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2277.345**	**42342.10**	**8393.210**	**2122.853**	**3142.046**
Stddev	10.117	32.29	25.701	4.036	10.543
%RSD	.4442300	.0762626	.3062116	.1901126	.3355410
#1	2283.907	42322.62	8406.920	2118.265	3144.880
#2	2282.434	42324.30	8363.561	2125.854	3150.883
#3	2265.695	42379.37	8409.148	2124.439	3130.376

Reviewed By:Sagar
On:11/26/2025
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LB :LB138017

Sample Name: LR-3 Acquired: 11/21/2025 17:16:04 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.1125431**	**.0185813**	**227.6798**	**-.008983**	**.0537511**	**.0973080**	**-.002707**
Stddev	.0040857	.0055724	.5188	.002111	.0075503	.0036614	.000391
%RSD	3.630308	29.98911	.2278681	23.50071	14.04677	3.762727	14.42566
#1	.1149330	.0148399	227.3845	-.010862	.0603683	.1010520	-.002299
#2	.1078255	.0249855	227.3760	-.009387	.0455266	.0937352	-.003078
#3	.1148707	.0159185	228.2788	-.006699	.0553585	.0971369	-.002744

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003373**	**-.001159**	**.2214364**	**24.68506**	**.0058907**	**49.79958**	**.2572145**
Stddev	.000055	.000085	.0060149	.09354	.0002503	.17108	.0031357
%RSD	1.635188	7.368730	2.716320	.3789498	4.249525	.3435342	1.219109
#1	-.003356	-.001064	.2274388	24.61653	.0060857	49.78616	.2606598
#2	-.003328	-.001228	.2214614	24.79163	.0056084	49.63560	.2545274
#3	-.003434	-.001186	.2154091	24.64703	.0059779	49.97697	.2564563

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**50.43870**	**-.201651**	**24.49365**	**.0030864**	**.0370784**	**-.034785**	**27.63131**
Stddev	.33689	.007098	.05812	.0000618	.0304927	.002912	.07804
%RSD	.6679294	3.519834	.2372876	2.003528	82.23860	8.372517	.2824284
#1	50.73072	-.204641	24.45882	.0030538	.0118659	-.037616	27.60254
#2	50.51526	-.206764	24.46137	.0031577	.0283995	-.034943	27.71965
#3	50.07011	-.193547	24.56074	.0030478	.0709697	-.031797	27.57173

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.047045**	**-.000536**	**-.009878**	**-.003869**	**-.042806**	**-.150884**	**-.009026**
Stddev	.010323	.000542	.000089	.001057	.001993	.003932	.000488
%RSD	21.94372	101.0914	.9056517	27.31942	4.656407	2.605667	5.409029
#1	-.050785	-.001035	-.009814	-.002650	-.041205	-.146376	-.008756
#2	-.035373	-.000614	-.009839	-.004435	-.045039	-.152667	-.008733
#3	-.054976	.000041	-.009980	-.004523	-.042174	-.153607	-.009590

Sample Name: LR-3 Acquired: 11/21/2025 17:16:04 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0307758	-.004280	.0005634
Stddev	.0020999	.000523	.0000499
%RSD	6.823113	12.22209	8.853089
#1	.0301056	-.003744	.0005623
#2	.0331290	-.004307	.0005141
#3	.0290929	-.004789	.0006138

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2450.221	49983.48	8895.935	2424.000	4594.915
Stddev	4.839	73.95	33.813	13.611	4.570
%RSD	.1974836	.1479564	.3800950	.5615192	.0994608
#1	2448.287	50061.06	8858.435	2439.488	4598.327
#2	2455.727	49975.61	8905.271	2413.941	4596.695
#3	2446.648	49913.78	8924.100	2418.572	4589.723

Sample Name: Q3678-02 Acquired: 11/21/2025 17:20:34 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0007460**	**-.003738**	**.0026729**	**-.001460**	**-.001325**	**.2828597**	**.0582941**
Stddev	.0021670	.002962	.0002657	.000740	.002037	.0004591	.0006755
%RSD	290.4685	79.25124	9.942102	50.70058	153.7496	.1623030	1.158735
#1	.0012628	-.000338	.0029521	-.001983	-.003676	.2824749	.0588685
#2	-.001633	-.005764	.0026434	-.001784	-.000115	.2833679	.0575499
#3	.002608	-.005112	.0024230	-.000613	-.000182	.2827363	.0584639

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000379**	**.0000734**	**7.609488**	**.0025360**	**.0003212**	**.0324269**	**.5471317**
Stddev	.0000617	.0000984	.013158	.0002939	.0001908	.0006876	.0114570
%RSD	162.9267	134.0628	.1729109	11.58743	59.39184	2.120394	2.094004
#1	-.000033	.0000412	7.594475	.0026905	.0001730	.0323983	.5595067
#2	.000074	.0001839	7.614971	.0027205	.0002543	.0317540	.5368937
#3	.000073	-.000005	7.619017	.0021972	.0005365	.0331283	.5449946

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0705409**	**.3187101**	**.0019121**	**.0000766**	**299.1801**	**.0000522**	**.0407278**
Stddev	.0010688	.0127697	.0007332	.0003196	2.1658	.0020700	.0006329
%RSD	1.515150	4.006684	38.34528	417.2243	.7239025	3969.005	1.553977
#1	.0707364	.3309252	.0010733	-.000270	301.5520	-.001326	.0414548
#2	.0693878	.3197552	.0024311	.000360	297.3077	.002433	.0402993
#3	.0714984	.3054500	.0022320	.000139	298.6805	-.000951	.0404294

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.004613**	**.0034983**	**.0004007**	**.0017894**	**.0027953**	**.5358348**	**.0006942**
Stddev	.027139	.0011723	.0001680	.0002105	.0003515	.0085654	.0000891
%RSD	1.353817	33.51016	41.91688	11.76460	12.57356	1.598514	12.83204
#1	1.976824	.0037732	.0005888	.0017242	.0024614	.5385844	.0007672
#2	2.031051	.0045087	.0003478	.0016193	.0031620	.5262323	.0007206
#3	2.005964	.0022130	.0002656	.0020249	.0027625	.5426878	.0005950

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3678-02 Acquired: 11/21/2025 17:20:34 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**2.006515**	**-.009976**	**.0132512**
Stddev	.007882	.000417	.0001338
%RSD	.3928354	4.180523	1.009802
#1	2.009442	-.010443	.0133741
#2	1.997588	-.009638	.0131086
#3	2.012515	-.009849	.0132710

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2564.595**	**48764.61**	**8836.130**	**2460.440**	**4354.377**
Stddev	6.870	109.64	40.643	13.312	17.973
%RSD	.2678841	.2248449	.4599616	.5410363	.4127472
#1	2566.071	48673.47	8835.812	2448.742	4362.399
#2	2570.607	48734.06	8795.647	2457.652	4366.942
#3	2557.107	48886.28	8876.931	2474.925	4333.791

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-01 Acquired: 11/21/2025 17:25:00 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.000538**	**-.004377**	**.0003632**	**.0020304**	**-.000260**	**.0359096**	**.2680135**
Stddev	.002121	.001874	.0007603	.0024459	.002267	.0050137	.0018079
%RSD	394.1056	42.80958	209.3324	120.4596	871.0214	13.96190	.6745425
#1	.000693	-.006368	-.000506	.0005023	.002330	.0361777	.2699889
#2	-.002987	-.002648	.000904	.0007376	-.001882	.0307673	.2664413
#3	.000679	-.004116	.000692	.0048514	-.001229	.0407839	.2676102

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000099**	**.0142994**	**124.0776**	**.0005132**	**.0027398**	**.0040352**	**.0041799**
Stddev	.000009	.0000830	.2679	.0004392	.0000843	.0001512	.0023093
%RSD	9.237702	.5803461	.2158816	85.59000	3.077448	3.747660	55.24736
#1	-.000108	.0143946	124.3867	.0008272	.0028034	.0039029	.0032182
#2	-.000090	.0142418	123.9307	.0007010	.0026442	.0040026	.0025069
#3	-.000100	.0142619	123.9153	.0000113	.0027719	.0042000	.0068147

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4866413**	**7.565636**	**.0071561**	**-.000272**	**296.1267**	**.0005868**	**.9540126**
Stddev	.0016165	.015664	.0003201	.000031	2.4141	.0012355	.0020803
%RSD	.3321659	.2070377	4.473062	11.31694	.8152109	210.5338	.2180610
#1	.4850355	7.582487	.0073103	-.000239	298.8796	-.000769	.9551731
#2	.4866201	7.562901	.0073699	-.000279	294.3708	.001649	.9552538
#3	.4882682	7.551519	.0067881	-.000299	295.1298	.000880	.9516109

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.76146**	**.0892824**	**.0026774**	**-.005024**	**-.002874**	**6.020054**	**.0028077**
Stddev	.09806	.0012267	.0003811	.001071	.001284	.003583	.0006482
%RSD	.6643039	1.373908	14.23461	21.31738	44.67250	.0595145	23.08510
#1	14.87265	.0899445	.0025222	-.006144	-.002575	6.016252	.0033372
#2	14.68732	.0900358	.0023984	-.004011	-.001766	6.020544	.0030010
#3	14.72441	.0878670	.0031116	-.004916	-.004281	6.023367	.0020849

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-01 Acquired: 11/21/2025 17:25:00 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**3.706234**	**-.017988**	**.6852657**
Stddev	.011282	.001245	.0028100
%RSD	.3043931	6.922287	.4100580
#1	3.694978	-.019318	.6880856
#2	3.706181	-.016849	.6824657
#3	3.717541	-.017797	.6852458

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2511.597**	**48419.23**	**8836.296**	**2424.597**	**4217.141**
Stddev	10.084	204.23	10.846	12.432	17.208
%RSD	.4015071	.4217857	.1227490	.5127612	.4080580
#1	2517.513	48208.47	8833.270	2413.694	4226.218
#2	2517.325	48432.99	8827.284	2421.961	4227.910
#3	2499.953	48616.22	8848.334	2438.136	4197.294

Sample Name: Q3697-02 Acquired: 11/21/2025 17:29:24 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.003839**	**-.003253**	**-.000322**	**-.001224**	**.0007111**	**.0189389**	**.1590754**
Stddev	.001736	.002408	.000229	.001274	.0013950	.0047648	.0008742
%RSD	45.22058	74.01382	71.14968	104.0357	196.1717	25.15877	.5495393
#1	-.002448	-.005245	-.000571	-.000453	.0022331	.0214954	.1595397
#2	-.005785	-.000577	-.000277	-.002694	-.000507	.0134415	.1580670
#3	-.003285	-.003937	-.000119	-.000525	.000407	.0218799	.1596194

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000037**	**.0000373**	**.1197997**	**.0018224**	**-.000258**	**.0002289**	**.0052878**
Stddev	.000095	.0000545	.0108928	.0002870	.000139	.0002303	.0034864
%RSD	258.1316	146.1164	9.092546	15.74531	53.68898	100.6264	65.93319
#1	.000070	-.000026	.1221265	.0021366	-.000141	.0004890	.0013463
#2	-.000115	.000070	.1079314	.0017565	-.000411	.0000508	.0079681
#3	-.000066	.000068	.1293411	.0015742	-.000222	.0001469	.0065489

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0078150**	**.0191189**	**.0022065**	**-.000289**	**324.6114**	**.0012296**	**.1075351**
Stddev	.0003413	.0221417	.0004801	.000742	3.3350	.0008509	.0003394
%RSD	4.367006	115.8103	21.75838	256.5948	1.027379	69.20351	.3155830
#1	.0075407	-.003588	.0027449	-.000386	327.6286	.0003341	.1074948
#2	.0081972	.040648	.0020514	-.000978	325.1751	.0020275	.1072177
#3	.0077071	.020297	.0018230	.000496	321.0305	.0013272	.1078928

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1814294**	**.0400878**	**.0003606**	**.0008032**	**.0009020**	**-.007708**	**.0008212**
Stddev	.0490226	.0003050	.0004158	.0001933	.0003167	.007488	.0002473
%RSD	27.02019	.7608987	115.3074	24.06369	35.11073	97.13798	30.11308
#1	.2356442	.0400027	-.000106	.0006000	.0008960	-.016354	.0006103
#2	.1684211	.0404264	.000690	.0008248	.0012216	-.003356	.0010933
#3	.1402230	.0398343	.000498	.0009848	.0005883	-.003415	.0007599

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-02 Acquired: 11/21/2025 17:29:24 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.2219120	-.008151	.0031743
Stddev	.0055093	.000564	.0000720
%RSD	2.482661	6.914511	2.268681
#1	.2220537	-.007503	.0032497
#2	.2163333	-.008428	.0031670
#3	.2273492	-.008523	.0031063

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2572.207	49421.13	8875.791	2456.541	4372.021
Stddev	19.470	102.91	41.926	17.109	22.222
%RSD	.7569557	.2082373	.4723677	.6964532	.5082877
#1	2581.031	49307.36	8916.395	2445.198	4385.224
#2	2585.703	49507.74	8878.322	2476.220	4384.474
#3	2549.887	49448.29	8832.657	2448.206	4346.364

Sample Name: Q3697-03 Acquired: 11/21/2025 17:33:51 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.003690**	**-.004309**	**.0028562**	**-.003933**	**.0012264**	**.1269953**	**.1188560**
Stddev	.001676	.000288	.0010568	.002602	.0011226	.0089562	.0010665
%RSD	45.42726	6.693857	37.00242	66.14395	91.53346	7.052389	.8973387
#1	-.001966	-.004235	.0032391	-.001213	.0012264	.1279539	.1199415
#2	-.005314	-.004627	.0016612	-.004191	.0001038	.1175983	.1188171
#3	-.003791	-.004065	.0036681	-.006397	.0023490	.1354336	.1178095

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000058**	**.0016809**	**9.081674**	**.0018216**	**.0001751**	**.0390869**	**.1642704**
Stddev	.000018	.0000158	.033542	.0003619	.0001838	.0004868	.0041694
%RSD	30.89247	.9402832	.3693331	19.86497	104.9637	1.245509	2.538113
#1	-.000050	.0016768	9.078101	.0014080	.0000879	.0394790	.1690817
#2	-.000045	.0016984	9.116859	.0019769	.0000511	.0385420	.1620151
#3	-.000078	.0016676	9.050061	.0020799	.0003863	.0392398	.1617146

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0468349**	**1.227807**	**.0024017**	**-.000264**	**234.0641**	**.0007050**	**2.753204**
Stddev	.0007032	.017302	.0003602	.000504	3.3617	.0027338	.006305
%RSD	1.501542	1.409215	14.99970	191.0812	1.436224	387.7612	.2290096
#1	.0469114	1.215174	.0026913	.000113	237.1932	.0010336	2.750507
#2	.0474967	1.220720	.0025154	-.000837	234.4889	-.002178	2.748696
#3	.0460965	1.247528	.0019983	-.000068	230.5102	.003260	2.760409

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4266965**	**.0470362**	**.0044810**	**.0001893**	**.0017601**	**.2720089**	**.0247259**
Stddev	.0343704	.0009783	.0006389	.0005189	.0011625	.0045057	.0003269
%RSD	8.054992	2.079882	14.25820	274.1072	66.04505	1.656448	1.322084
#1	.4374198	.0471970	.0049453	.0002202	.0007449	.2719188	.0247799
#2	.4544268	.0479241	.0047453	-.000344	.0015073	.2675490	.0243754
#3	.3882428	.0459874	.0037523	.000692	.0030282	.2765590	.0250224

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-03 Acquired: 11/21/2025 17:33:51 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.6310797	.0429509	.0174447
Stddev	.0037820	.0012581	.0000305
%RSD	.5992948	2.929094	.1747559
#1	.6273290	.0416559	.0174453
#2	.6348923	.0441684	.0174748
#3	.6310178	.0430284	.0174139

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2561.954	48523.44	8983.781	2424.190	4386.543
Stddev	17.891	48.25	16.191	2.470	35.733
%RSD	.6983320	.0994319	.1802197	.1018965	.8145977
#1	2571.879	48549.47	9000.284	2426.162	4412.279
#2	2572.683	48467.76	8983.135	2424.989	4401.604
#3	2541.301	48553.08	8967.922	2421.420	4345.745

Sample Name: Q3697-03DUP Acquired: 11/21/2025 17:38:10 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.005029**	**-.002170**	**.0026871**	**-.002324**	**-.000528**	**.1278529**	**.1203223**
Stddev	.003051	.001117	.0012979	.002180	.000790	.0035672	.0006433
%RSD	60.67505	51.47262	48.30202	93.80896	149.4775	2.790066	.5346603
#1	-.003242	-.002254	.0032606	-.003779	-.000113	.1307932	.1208566
#2	-.008552	-.001014	.0012012	-.003375	-.001439	.1238846	.1196082
#3	-.003292	-.003243	.0035994	.000183	-.000033	.1288810	.1205021

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000068**	**.0016980**	**9.212074**	**.0016283**	**.0001420**	**.0395243**	**.1721286**
Stddev	.000032	.0000369	.078087	.0002571	.0000936	.0003319	.0047396
%RSD	46.52396	2.173715	.8476624	15.79165	65.90757	.8396296	2.753500
#1	-.000095	.0016687	9.179346	.0014308	.0001990	.0399009	.1700303
#2	-.000076	.0016858	9.155677	.0019190	.0000340	.0393971	.1688004
#3	-.000033	.0017395	9.301200	.0015350	.0001929	.0392748	.1775551

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0462073**	**1.258457**	**.0025371**	**-.000088**	**237.7648**	**.0013364**	**2.799307**
Stddev	.0004088	.020755	.0000988	.000338	1.1952	.0011939	.008225
%RSD	.8847975	1.649221	3.895704	382.7262	.5026957	89.33838	.2938223
#1	.0459674	1.282401	.0026279	-.000123	236.8367	.0002470	2.789823
#2	.0459751	1.247383	.0025517	-.000408	239.1135	.0011494	2.804489
#3	.0466794	1.245589	.0024318	.000266	237.3442	.0026128	2.803609

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3919150**	**.0483638**	**.0051460**	**.0012878**	**.0013849**	**.2751477**	**.0258132**
Stddev	.0115658	.0010204	.0000975	.0003538	.0011623	.0058106	.0003949
%RSD	2.951086	2.109828	1.895127	27.47088	83.92626	2.111792	1.529815
#1	.3940528	.0471865	.0052360	.0016618	.0002188	.2784532	.0254511
#2	.4022628	.0489932	.0051596	.0009585	.0013926	.2684385	.0262342
#3	.3794296	.0489117	.0050424	.0012429	.0025434	.2785515	.0257544

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-03DUP Acquired: 11/21/2025 17:38:10 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.6451571	.0430186	.0176412
Stddev	.0020110	.0014797	.0001931
%RSD	.3117089	3.439653	1.094734
#1	.6429008	.0442788	.0174474
#2	.6458096	.0413893	.0176424
#3	.6467608	.0433876	.0178337

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2533.646	47828.28	8885.662	2403.804	4323.019
Stddev	6.287	291.90	39.387	10.088	10.579
%RSD	.2481599	.6103156	.4432602	.4196830	.2447074
#1	2536.121	47509.01	8902.257	2392.217	4330.860
#2	2538.319	48081.49	8914.035	2410.638	4327.210
#3	2526.497	47894.33	8840.693	2408.556	4310.987

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-03LX5 Acquired: 11/21/2025 17:42:36 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.002905**	**-.005820**	**.0001486**	**-.002451**	**-.001448**	**.0312880**	**.0213043**
Stddev	.000922	.001693	.0015691	.003995	.002509	.0053327	.0003425
%RSD	31.74683	29.07886	1055.857	162.9587	173.3156	17.04377	1.607690
#1	-.003068	-.006579	.0015222	-.007036	-.003251	.0360849	.0215292
#2	-.003734	-.003881	-.001561	-.000604	-.002510	.0255460	.0214735
#3	-.001912	-.007001	.000485	.000285	.001418	.0322330	.0209101

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000636**	**.0003886**	**1.826029**	**-.000006**	**.0000388**	**.0087056**	**.0368052**
Stddev	.0000182	.0000550	.006897	.000428	.0000356	.0002800	.0052792
%RSD	28.56836	14.15205	.3777140	7327.458	91.83952	3.216342	14.34349
#1	.0000481	.0004324	1.819805	.000086	.0000024	.0089423	.0310243
#2	.0000590	.0004065	1.833444	.000369	.0000736	.0087779	.0413706
#3	.0000836	.0003269	1.824839	-.000472	.0000403	.0083965	.0380208

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0152349**	**.2767563**	**.0007244**	**.0001236**	**45.86828**	**.0005959**	**.5649190**
Stddev	.0004844	.0285905	.0002661	.0001931	.26426	.0026548	.0010566
%RSD	3.179556	10.33058	36.74027	156.2025	.5761179	445.4929	.1870305
#1	.0148894	.2587031	.0008107	-.000099	45.62832	-.002470	.5640658
#2	.0157886	.2618459	.0009367	.000250	45.82502	.002146	.5661008
#3	.0150267	.3097199	.0004258	.000220	46.15150	.002111	.5645904

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2052349**	**.0071342**	**.0007132**	**-.000726**	**.0020193**	**.0228355**	**.0050631**
Stddev	.0210602	.0008614	.0001698	.001046	.0017408	.0152947	.0007282
%RSD	10.26151	12.07473	23.80048	144.1524	86.20864	66.97774	14.38334
#1	.1814969	.0063405	.0008514	.000482	.0001248	.0317061	.0052187
#2	.2216771	.0080503	.0005237	-.001305	.0035483	.0051748	.0057009
#3	.2125307	.0070119	.0007646	-.001353	.0023848	.0316256	.0042696

Sample Name: Q3697-03LX5 Acquired: 11/21/2025 17:42:36 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.1306271	.0137353	.0035216
Stddev	.0056495	.0012356	.0000813
%RSD	4.324936	8.995655	2.308497
#1	.1361771	.0147143	.0034829
#2	.1248830	.0141446	.0034668
#3	.1308212	.0123470	.0036150

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2559.962	48100.01	8908.048	2416.765	4476.419
Stddev	4.027	84.16	79.771	12.278	7.747
%RSD	.1572956	.1749676	.8954933	.5080495	.1730611
#1	2560.678	48183.07	8997.477	2429.205	4473.302
#2	2563.583	48102.18	8882.447	2404.655	4485.239
#3	2555.625	48014.79	8844.221	2416.435	4470.715

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-03MS Acquired: 11/21/2025 17:46:53 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7835885**	**1.884039**	**.9289641**	**1.957086**	**.7894764**	**2.061532**	**.3075623**
Stddev	.0067683	.070459	.0051459	.023111	.0076288	.011462	.0021802
%RSD	.8637523	3.739803	.5539340	1.180888	.9663063	.5560080	.7088670
#1	.7758578	1.805789	.9231682	1.933237	.7834295	2.072290	.3053576
#2	.7884474	1.903873	.9307285	1.958642	.7869525	2.049476	.3097172
#3	.7864601	1.942456	.9329956	1.979380	.7980473	2.062831	.3076121

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1885140**	**.1903158**	**9.480370**	**.4044966**	**.1928309**	**.3203754**	**3.131841**
Stddev	.0002236	.0018937	.033546	.0016960	.0016105	.0020879	.030350
%RSD	.1186149	.9950513	.3538419	.4192901	.8352046	.6517185	.9690727
#1	.1885561	.1882918	9.451420	.4025880	.1910515	.3185003	3.096798
#2	.1882723	.1906109	9.472559	.4058310	.1932526	.3200004	3.149674
#3	.1887135	.1920446	9.517133	.4050708	.1941886	.3226254	3.149052

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2362406**	**3.064046**	**.4857191**	**.0714329**	**219.7959**	**.3006884**	**2.652715**
Stddev	.0017759	.044370	.0048237	.0003855	1.9734	.0034669	.019548
%RSD	.7517107	1.448088	.9930986	.5396786	.8978293	1.152970	.7369214
#1	.2344112	3.013207	.4808685	.0715632	217.6735	.3036357	2.644556
#2	.2379576	3.083973	.4857735	.0709992	221.5753	.2968687	2.675021
#3	.2363530	3.094960	.4905154	.0717364	220.1388	.3015609	2.638567

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.08787**	**.3137827**	**.4286645**	**.6936444**	**.1979863**	**1.079726**	**.6491959**
Stddev	.11838	.0025759	.0036038	.0074294	.0005942	.016481	.0070084
%RSD	1.173511	.8209048	.8407119	1.071064	.3001269	1.526450	1.079557
#1	9.96826	.3140782	.4250769	.6867320	.1985794	1.060755	.6426446
#2	10.20499	.3110718	.4286322	.6927008	.1979884	1.090521	.6483573
#3	10.09036	.3161981	.4322843	.7015005	.1973910	1.087901	.6565860

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-03MS Acquired: 11/21/2025 17:46:53 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.5670846	.2422267	.2095242
Stddev	.0087590	.0034455	.0006358
%RSD	1.544566	1.422441	.3034459
#1	.5576393	.2392472	.2087925
#2	.5686753	.2414331	.2099417
#3	.5749393	.2459998	.2098385

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2508.306	48197.90	8474.491	2433.963	4272.501
Stddev	11.867	237.50	11.554	18.922	19.698
%RSD	.4731176	.4927551	.1363354	.7774260	.4610304
#1	2520.607	48466.84	8477.040	2447.348	4294.039
#2	2507.383	48016.97	8484.558	2412.314	4268.065
#3	2496.927	48109.89	8461.876	2442.227	4255.400

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV05 Acquired: 11/21/2025 17:50:59 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.883207**	**4.812182**	**4.830806**	**4.943399**	**4.946277**	**9.711698**	**9.610675**
Stddev	.024529	.029676	.030995	.029632	.016893	.009427	.060269
%RSD	.5023095	.6166951	.6416092	.5994163	.3415336	.0970735	.6271069
#1	4.861393	4.778662	4.816940	4.909906	4.933010	9.701437	9.578052
#2	4.878468	4.835105	4.809166	4.954084	4.940527	9.713680	9.680223
#3	4.909759	4.822780	4.866314	4.966205	4.965295	9.719977	9.573749

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2439910**	**2.401476**	**24.06000**	**.9739531**	**2.407493**	**1.231148**	**4.861767**
Stddev	.0007038	.013701	.01681	.0019652	.011987	.008213	.035980
%RSD	.2884674	.5705147	.0698494	.2017739	.4979021	.6671389	.7400674
#1	.2439907	2.392971	24.04085	.9716915	2.400979	1.226250	4.828259
#2	.2446951	2.394175	24.07228	.9752447	2.400172	1.226563	4.857249
#3	.2432874	2.417281	24.06687	.9749230	2.421326	1.240630	4.899793

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.403155**	**24.00013**	**2.409663**	**1.224290**	**26.27084**	**2.406025**	**2.419508**
Stddev	.017889	.15145	.011499	.002963	.17481	.006838	.007996
%RSD	.7444173	.6310219	.4772191	.2420312	.6654188	.2842092	.3304997
#1	2.384045	23.84728	2.403256	1.222113	26.07131	2.404563	2.410893
#2	2.419503	24.15013	2.402795	1.227664	26.34417	2.413476	2.420938
#3	2.405915	24.00298	2.422938	1.223091	26.39704	2.400036	2.426693

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**23.89108**	**4.871367**	**4.936997**	**4.843351**	**4.823605**	**4.811030**	**5.057741**
Stddev	.13139	.016570	.020770	.013861	.020229	.044602	.008902
%RSD	.5499686	.3401489	.4207037	.2861820	.4193648	.9270742	.1760057
#1	23.75861	4.875037	4.923829	4.833037	4.801323	4.761922	5.048144
#2	24.02137	4.885795	4.926221	4.837910	4.840814	4.822146	5.059352
#3	23.89326	4.853270	4.960940	4.859107	4.828678	4.849023	5.065728

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV05 Acquired: 11/21/2025 17:50:59 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.816152**	**4.716061**	**4.844090**
Stddev	.026226	.016561	.053761
%RSD	.5445462	.3511539	1.109828
#1	4.791176	4.699670	4.829039
#2	4.843471	4.732787	4.903773
#3	4.813807	4.715724	4.799459

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2561.096**	**48763.96**	**8681.948**	**2464.210**	**4362.868**
Stddev	11.161	140.58	45.747	5.448	18.728
%RSD	.4357716	.2882898	.5269252	.2210828	.4292617
#1	2563.815	48765.96	8667.409	2469.410	4364.112
#2	2570.646	48622.39	8645.237	2464.676	4380.943
#3	2548.828	48903.53	8733.198	2458.544	4343.548

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB05 Acquired: 11/21/2025 17:55:08 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.002168**	**-.000994**	**-.001151**	**-.001263**	**-.000259**	**.0108609**	**-.001947**
Stddev	.003836	.001876	.001315	.000670	.001785	.0049671	.000840
%RSD	176.9508	188.7480	114.2811	53.06113	689.0927	45.73340	43.12806
#1	-.003011	-.003119	-.002565	-.002033	-.001739	.0070802	-.001143
#2	-.005512	.000432	.000035	-.000937	.001723	.0164864	-.001880
#3	.002020	-.000295	-.000923	-.000817	-.000761	.0090162	-.002819

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000427**	**.0001715**	**-.011678**	**.0001317**	**-.000139**	**.0001475**	**-.011797**
Stddev	.0000137	.0001057	.008231	.0002959	.000091	.0002349	.006075
%RSD	32.21000	61.62870	70.48790	224.6611	65.72429	159.3016	51.49404
#1	.0000372	.0000923	-.010853	-.000088	-.000102	-.000123	-.011256
#2	.0000583	.0002916	-.020291	.000015	-.000072	.000271	-.006010
#3	.0000325	.0001307	-.003890	.000468	-.000243	.000295	-.018123

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000421**	**-.001204**	**.0004033**	**.0001963**	**.0808129**	**.0010779**	**-.000089**
Stddev	.000430	.023099	.0003229	.0004642	.0177061	.0022309	.000462
%RSD	102.0612	1917.912	80.07860	236.5310	21.90995	206.9787	519.3828
#1	-.000375	-.008408	.0006194	-.000249	.0696885	.0018548	.000346
#2	-.000017	-.019843	.0005583	.000160	.0715194	-.001438	-.000040
#3	-.000873	.024638	.0000321	.000677	.1012307	.002816	-.000573

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0588654**	**.0028532**	**.0000512**	**.0001777**	**.0017183**	**-.044650**	**.0002281**
Stddev	.0436437	.0012392	.0004739	.0008393	.0020613	.007835	.0001285
%RSD	74.14152	43.43211	925.5690	472.3165	119.9599	17.54744	56.33489
#1	.0162502	.0016331	-.000385	-.000723	.0040256	-.052018	.0000947
#2	.0568764	.0028157	.000556	.000938	.0000583	-.045514	.0002386
#3	.1034696	.0041107	-.000017	.000317	.0010711	-.036420	.0003510

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB05 Acquired: 11/21/2025 17:55:08 Type: Unk
Method: 6010-200.7 NEW(v377) 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	-.005237	-.000077	.0000724
Stddev	.004706	.001678	.0000420
%RSD	89.85865	2188.372	57.99297
#1	-.003258	-.000840	.0000243
#2	-.001844	.001847	.0001018
#3	-.010609	-.001237	.0000911

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2625.055	49750.14	8733.939	2496.335	4741.321
Stddev	5.369	140.44	52.022	9.940	8.245
%RSD	.2045391	.2822936	.5956317	.3981779	.1738919
#1	2623.553	49642.43	8720.320	2487.787	4739.185
#2	2631.016	49908.98	8690.082	2507.242	4750.423
#3	2620.597	49699.00	8791.416	2493.975	4734.354

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-03MSD Acquired: 11/21/2025 17:59:28 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8078168**	**1.852650**	**.9523060**	**2.046338**	**.8074052**	**2.086108**	**.3456594**
Stddev	.0024813	.075246	.0040218	.012915	.0013616	.009148	.0013072
%RSD	.3071632	4.061557	.4223168	.6311133	.1686343	.4385135	.3781819
#1	.8106489	1.766487	.9506967	2.034032	.8058768	2.096668	.3471658
#2	.8067765	1.905429	.9493380	2.045197	.8084884	2.080610	.3448230
#3	.8060250	1.886033	.9568832	2.059785	.8078504	2.081047	.3449895

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1880897**	**.1970417**	**13.28718**	**.4034889**	**.1969758**	**.3425569**	**3.190951**
Stddev	.0008116	.0007465	.01850	.0011388	.0007870	.0002900	.008498
%RSD	.4314785	.3788456	.1391996	.2822460	.3995460	.0846625	.2663003
#1	.1889137	.1963756	13.28253	.4039630	.1965063	.3422239	3.191056
#2	.1872912	.1969009	13.27145	.4043142	.1965367	.3427545	3.199395
#3	.1880641	.1978486	13.30755	.4021897	.1978844	.3426922	3.182401

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2428385**	**3.572271**	**.4915361**	**.0738106**	**312.0655**	**.2988118**	**3.901453**
Stddev	.0009117	.024834	.0014818	.0003846	3.6122	.0042058	.009879
%RSD	.3754280	.6951814	.3014612	.5210475	1.157527	1.407506	.2532238
#1	.2438887	3.585934	.4902930	.0738478	315.9087	.2993853	3.902989
#2	.2423766	3.543606	.4911396	.0741752	311.5477	.2943487	3.910474
#3	.2422502	3.587273	.4931759	.0734087	308.7401	.3027014	3.890895

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.59215**	**.3364784**	**.4317140**	**.7001553**	**.1906740**	**1.246669**	**.6751961**
Stddev	.04850	.0009911	.0020918	.0015539	.0010343	.003959	.0020295
%RSD	.4578431	.2945543	.4845412	.2219390	.5424379	.3175991	.3005819
#1	10.61897	.3370608	.4302817	.7003143	.1918193	1.243328	.6730490
#2	10.62131	.3353341	.4307457	.6985280	.1903946	1.245636	.6754566
#3	10.53616	.3370404	.4341145	.7016237	.1898082	1.251042	.6770829

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-03MSD Acquired: 11/21/2025 17:59:28 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.8531879	.2528721	.2096922
Stddev	.0084620	.0013333	.0009800
%RSD	.9918091	.5272568	.4673368
#1	.8457363	.2541988	.2108036
#2	.8623873	.2528851	.2089522
#3	.8514400	.2515323	.2093208

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2506.739	47502.55	8789.446	2384.031	4219.230
Stddev	4.012	173.59	51.906	15.957	12.452
%RSD	.1600330	.3654272	.5905530	.6693212	.2951188
#1	2506.696	47338.60	8733.701	2367.818	4225.193
#2	2510.772	47484.67	8836.388	2384.555	4227.578
#3	2502.749	47684.39	8798.249	2399.719	4204.918

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3697-03A Acquired: 11/21/2025 18:03:42 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7687505**	**1.666629**	**.9100736**	**1.950055**	**.7841184**	**2.030836**	**.3061670**
Stddev	.0131572	.115953	.0080364	.023788	.0058827	.006889	.0013011
%RSD	1.711510	6.957356	.8830504	1.219888	.7502328	.3392379	.4249744
#1	.7635130	1.692256	.9094622	1.953295	.7819917	2.036481	.3071304
#2	.7590186	1.540006	.9023604	1.924812	.7795948	2.032868	.3046869
#3	.7837199	1.767624	.9183982	1.972057	.7907687	2.023160	.3066837

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1817343**	**.1878271**	**10.09427**	**.3897257**	**.1892697**	**.3178357**	**3.059753**
Stddev	.0007709	.0016734	.00621	.0043548	.0017007	.0028051	.012412
%RSD	.4242204	.8909355	.0614945	1.117400	.8985528	.8825612	.4056662
#1	.1824896	.1877545	10.08813	.3905594	.1888461	.3170826	3.047783
#2	.1817648	.1861911	10.09414	.3936035	.1878209	.3154840	3.072565
#3	.1809486	.1895356	10.10054	.3850144	.1911422	.3209404	3.058912

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2352497**	**3.132817**	**.4721957**	**.0711950**	**234.1009**	**.2946219**	**2.876535**
Stddev	.0010006	.023743	.0052252	.0006945	1.8504	.0048899	.017130
%RSD	.4253202	.7578845	1.106575	.9754863	.7904157	1.659708	.5955125
#1	.2353793	3.105410	.4709169	.0708144	235.4122	.2934715	2.871778
#2	.2341906	3.147141	.4677286	.0719966	234.9062	.2999844	2.895541
#3	.2361791	3.145900	.4779416	.0707740	231.9844	.2904099	2.862286

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.10026**	**.3115596**	**.4224794**	**.6761900**	**.1919431**	**1.130676**	**.6246466**
Stddev	.03166	.0008660	.0044920	.0083747	.0003985	.002551	.0115230
%RSD	.3134349	.2779424	1.063251	1.238505	.2076094	.2255904	1.844722
#1	10.06407	.3120717	.4221451	.6744162	.1921195	1.128195	.6188856
#2	10.12283	.3120474	.4181640	.6688443	.1922229	1.133291	.6171402
#3	10.11387	.3105598	.4271293	.6853094	.1914868	1.130542	.6379140

Sample Name: Q3697-03A Acquired: 11/21/2025 18:03:42 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.6143665	.2356068	.2045191
Stddev	.0179574	.0000278	.0012904
%RSD	2.922913	.0117820	.6309404
#1	.6089157	.2355938	.2046541
#2	.5997660	.2355879	.2031666
#3	.6344177	.2356387	.2057367

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2564.433	49111.89	8879.212	2429.856	4378.962
Stddev	12.101	242.00	30.561	14.763	29.181
%RSD	.4718854	.4927473	.3441827	.6075673	.6663997
#1	2562.975	48948.84	8844.355	2427.524	4380.859
#2	2577.197	48996.88	8901.405	2416.397	4407.148
#3	2553.126	49389.95	8891.876	2445.646	4348.878

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170645TB Acquired: 11/21/2025 18:07:53 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0019805**	**.0025186**	**.0013404**	**-.004148**	**.0006205**	**.0153079**	**-.001373**
Stddev	.0006471	.0037053	.0028076	.006833	.0005373	.0063815	.000383
%RSD	32.67521	147.1182	209.4556	164.7042	86.59291	41.68735	27.87459
#1	.0025288	-.000283	.0043226	-.006835	.0008922	.0226056	-.000935
#2	.0012667	.006720	.0009506	.003619	.0009678	.0125432	-.001640
#3	.0021461	.001119	-.001252	-.009229	.0000016	.0107750	-.001544

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000835**	**.0003939**	**.0406966**	**.0044926**	**.0001615**	**.0005498**	**.0277401**
Stddev	.0000202	.0000605	.0065454	.0004480	.0001018	.0004014	.0068111
%RSD	24.23394	15.36207	16.08342	9.971585	63.02383	73.00333	24.55325
#1	.0000639	.0004553	.0482307	.0050044	.0002493	.0000924	.0249025
#2	.0000823	.0003343	.0374494	.0043015	.0001854	.0007139	.0228066
#3	.0001044	.0003923	.0364097	.0041718	.0000499	.0008431	.0355113

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004844**	**.6708511**	**.0035277**	**.0011583**	**280.7812**	**.0004261**	**.0056200**
Stddev	.0001382	.0058711	.0002060	.0005485	2.6986	.0025072	.0002426
%RSD	28.52200	.8751651	5.839855	47.35408	.9610874	588.3797	4.316356
#1	.0006348	.6699757	.0033873	.0017800	279.2030	.0033203	.0056439
#2	.0004555	.6654669	.0037642	.0009522	279.2434	-.000960	.0058498
#3	.0003630	.6771107	.0034317	.0007427	283.8971	-.001081	.0053664

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1482660**	**-.002184**	**.0008630**	**.0000134**	**.0009065**	**-.047497**	**-.000011**
Stddev	.0581717	.000276	.0003663	.0011430	.0009445	.016546	.000225
%RSD	39.23469	12.63799	42.44990	8526.209	104.1970	34.83539	2010.896
#1	.1267476	-.001867	.0012844	.0013331	.0007437	-.028826	-.000029
#2	.1039192	-.002364	.0006831	-.000630	.0000539	-.060340	-.000227
#3	.2141311	-.002323	.0006213	-.000663	.0019218	-.053325	.000222

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170645TB Acquired: 11/21/2025 18:07:53 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.0009606	.0050962	.0000877
Stddev	.0019073	.0023133	.0000760
%RSD	198.5535	45.39270	86.63214
#1	.0018036	.0027219	.0001196
#2	.0023011	.0073432	.0000010
#3	-.001223	.0052235	.0001426

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2579.881	48999.30	8658.385	2469.480	4287.686
Stddev	7.350	151.80	44.029	7.060	10.987
%RSD	.2849058	.3097987	.5085157	.2858831	.2562346
#1	2581.840	48838.73	8650.407	2467.086	4294.967
#2	2586.053	49140.46	8705.858	2477.426	4293.042
#3	2571.750	49018.70	8618.890	2463.929	4275.048

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170679BL Acquired: 11/21/2025 18:12:21 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.003499**	**-.002305**	**-.001177**	**-.001707**	**-.002002**	**.0077082**	**-.004519**
Stddev	.004659	.001127	.000635	.001572	.001956	.0042672	.000853
%RSD	133.1723	48.87573	53.96635	92.11387	97.74173	55.36001	18.86848
#1	-.001692	-.002728	-.000680	-.003496	-.001782	.0031342	-.004756
#2	-.000014	-.001029	-.000958	-.000547	-.000164	.0084081	-.005228
#3	-.008790	-.003160	-.001893	-.001077	-.004058	.0115821	-.003573

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000030**	**.0000645**	**-.005561**	**-.000126**	**-.000236**	**.0002135**	**-.005943**
Stddev	.000042	.0000638	.006914	.000521	.000051	.0005417	.006347
%RSD	140.0879	98.79822	124.3279	414.2330	21.42177	253.7669	106.8024
#1	-.000041	.0001236	-.004136	-.000687	-.000213	-.000412	-.009116
#2	.000016	.0000732	.000529	.000344	-.000294	.000515	-.010077
#3	-.000065	-.000003	-.013077	-.000035	-.000201	.000537	.001365

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002280**	**.0071101**	**.0006699**	**.0000453**	**.0971557**	**-.000231**	**.0007654**
Stddev	.0008013	.0168782	.0000839	.0007701	.0156261	.002930	.0003145
%RSD	351.4426	237.3818	12.52223	1700.068	16.08361	1266.446	41.08719
#1	.0002898	.0036175	.0006699	-.000227	.0936159	-.003405	.0010189
#2	-.000602	-.007748	.0005860	-.000552	.1142481	.000339	.0004135
#3	.000997	.025461	.0007537	.000914	.0836032	.002371	.0008638

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1203851**	**-.001782**	**-.000601**	**-.000211**	**.0005833**	**-.032995**	**.0003078**
Stddev	.0374709	.000384	.000323	.000830	.0004970	.005285	.0005322
%RSD	31.12590	21.54549	53.79967	393.4998	85.20269	16.01881	172.8774
#1	.1414692	-.002156	-.000479	.000738	.0011243	-.026894	.0002088
#2	.0771220	-.001388	-.000356	-.000797	.0001469	-.035903	.0008826
#3	.1425640	-.001802	-.000967	-.000573	.0004787	-.036187	-.000168

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170679BL Acquired: 11/21/2025 18:12:21 Type: Unk
Method: 6010-200.7 NEW(v377) 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	F -.013039	.0000839	.0000434
Stddev	.001292	.0011209	.0000692
%RSD	9.909589	1336.078	159.3115
#1	-.014491	.0013781	-.000019
#2	-.012611	-.000572	.000118
#3	-.012016	-.000554	.000031

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2690.771	51558.44	8991.902	2602.492	4864.313
Stddev	10.418	216.55	77.081	12.999	16.828
%RSD	.3871770	.4200130	.8572216	.4994947	.3459517
#1	2698.225	51763.27	8961.974	2594.361	4870.948
#2	2695.223	51331.81	9079.458	2595.630	4876.812
#3	2678.867	51580.23	8934.273	2617.484	4845.179

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170679BS Acquired: 11/21/2025 18:16:40 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8195880**	**2.048973**	**.9946967**	**2.114912**	**.8232240**	**2.063041**
Stddev	.0118737	.036199	.0066486	.022689	.0039385	.007254
%RSD	1.448739	1.766706	.6684035	1.072790	.4784205	.3516007
#1	.8139243	2.074633	.9942602	2.122097	.8207878	2.061471
#2	.8116065	2.007567	.9882771	2.089501	.8211163	2.056701
#3	.8332331	2.064719	1.001553	2.133138	.8277678	2.070951

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2049493**	**.2052738**	**.2009941**	**1.053982**	**.4127795**	**.2021388**
Stddev	.0022707	.0011439	.0008344	.004411	.0015367	.0018268
%RSD	1.107921	.5572565	.4151422	.4185331	.3722909	.9037262
#1	.2064698	.2065142	.2008322	1.052283	.4141772	.2020115
#2	.2060389	.2050469	.2002525	1.050672	.4130273	.2003789
#3	.2023392	.2042604	.2018976	1.058990	.4111339	.2040258

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3202764**	**3.164649**	**.2100806**	**2.042258**	**.5097581**	**.0798574**
Stddev	.0022449	.034838	.0004643	.013201	.0039776	.0003808
%RSD	.7009156	1.100836	.2210118	.6464064	.7802973	.4768541
#1	.3207378	3.129277	.2095604	2.036695	.5096576	.0796396
#2	.3178367	3.198926	.2102282	2.057331	.5058318	.0796354
#3	.3222548	3.165744	.2104531	2.032749	.5137851	.0802971

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.078039**	**.3099084**	**.2153417**	**10.24371**	**.3073370**	**.4104038**
Stddev	.050658	.0015689	.0009017	.14339	.0021122	.0029777
%RSD	1.645800	.5062332	.4187284	1.399813	.6872571	.7255584
#1	3.048415	.3093313	.2160711	10.08577	.3096834	.4110011
#2	3.136533	.3116841	.2156203	10.36572	.3067401	.4071727
#3	3.049170	.3087098	.2143336	10.27965	.3055875	.4130375

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: PB170679BS Acquired: 11/21/2025 18:16:40 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.6828920**	**.2020533**	**.8423310**	F **.6420395**	F **-.009097**	**.2105204**
Stddev	.0050931	.0004356	.0081575	.0042931	.006618	.0024533
%RSD	.7458184	.2155772	.9684469	.6686686	72.74679	1.165331
#1	.6811725	.2015779	.8465354	.6426648	-.004111	.2129521
#2	.6788813	.2024332	.8329289	.6374680	-.016605	.2080461
#3	.6886224	.2021489	.8475286	.6459857	-.006576	.2105629

Elem	Sr4077
Units	ppm
Avg	**.2070466**
Stddev	.0008089
%RSD	.3907006
#1	.2072438
#2	.2077386
#3	.2061573

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2684.570**	**50890.21**	**9099.781**	**2568.789**	**4748.045**
Stddev	8.660	150.28	50.939	11.797	15.462
%RSD	.3225859	.2953095	.5597785	.4592397	.3256510
#1	2679.533	50969.90	9048.249	2581.919	4738.178
#2	2694.570	50716.87	9100.990	2559.082	4765.865
#3	2679.608	50983.87	9150.105	2565.367	4740.092

Reviewed By:Sagar
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Inst Id :P4
LB :LB138017

Sample Name: Q3699-01 Acquired: 11/21/2025 18:20:46 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.2792692**	**-.004101**	**.1428541**	**.0053827**	**-.006296**	**191.9740**	**.3276728**
Stddev	.0043308	.005420	.0014134	.0013168	.004112	.0963	.0009681
%RSD	1.550767	132.1610	.9894012	24.46385	65.31796	.0501407	.2954633
#1	.2785215	.000907	.1438882	.0039108	-.002686	192.0070	.3265635
#2	.2753609	-.003354	.1434304	.0064490	-.005429	192.0494	.3283477
#3	.2839252	-.009855	.1412436	.0057883	-.010773	191.8656	.3281072

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0080610**	**.0070495**	**19.92357**	**.2818857**	**.0593738**	**.1917744**	**237.7845**
Stddev	.0000347	.0001622	.03379	.0007494	.0001143	.0011107	1.0035
%RSD	.4310366	2.301108	.1696138	.2658466	.1925549	.5791552	.4220225
#1	.0080215	.0072331	19.89620	.2815161	.0593994	.1920038	236.8340
#2	.0080870	.0069255	19.91317	.2827481	.0594732	.1905669	237.6856
#3	.0080745	.0069900	19.96134	.2813929	.0592489	.1927524	238.8337

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.041728**	**14.40711**	**.1185731**	**-.008923**	**3.322228**	**.4975290**	**.2796351**
Stddev	.004484	.06870	.0005458	.000441	.034173	.0015952	.0020110
%RSD	.4303938	.4768539	.4602829	4.944033	1.028611	.3206171	.7191411
#1	1.038307	14.33934	.1182691	-.009358	3.293881	.4962253	.2814895
#2	1.040073	14.40528	.1192031	-.008476	3.312628	.4993077	.2774976
#3	1.046804	14.47671	.1182469	-.008935	3.360174	.4970541	.2799181

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.772934**	**.1676779**	**.0127019**	**.0332904**	**1.929853**	**4.623971**	**.3237325**
Stddev	.036706	.0020629	.0001838	.0005954	.006729	.032910	.0011735
%RSD	.4722293	1.230249	1.447239	1.788439	.3486835	.7117295	.3624922
#1	7.753501	.1660768	.0125091	.0339104	1.922144	4.591945	.3226024
#2	7.815271	.1700058	.0128753	.0327232	1.934549	4.622270	.3236502
#3	7.750029	.1669512	.0127213	.0332375	1.932866	4.657699	.3249450

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: Q3699-01 Acquired: 11/21/2025 18:20:46 Type: Unk
Method: 6010-200.7 NEW(v377) 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	1.871625	.0639926	-.122980
Stddev	.007722	.0017392	.000603
%RSD	.4125989	2.717878	.4900083
#1	1.864005	.0619922	-.122601
#2	1.871424	.0648388	-.122664
#3	1.879446	.0651469	-.123675

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2832.719	54010.67	9894.262	2714.075	4463.941
Stddev	9.975	137.46	22.614	5.720	17.329
%RSD	.3521455	.2545080	.2285553	.2107610	.3882011
#1	2838.484	54019.06	9871.285	2709.122	4476.045
#2	2838.473	54143.74	9916.494	2720.336	4471.690
#3	2821.201	53869.20	9895.006	2712.767	4444.090

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: Q3699-03 Acquired: 11/21/2025 18:24:55 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0872552**	**-.003803**	**.5792824**	**-.001750**	**-.009579**	**184.6809**	**.6805119**
Stddev	.0015687	.004041	.0034448	.001157	.001460	.6343	.0037926
%RSD	1.797847	106.2543	.5946644	66.10761	15.23700	.3434363	.5573208
#1	.0873277	-.001629	.5776917	-.002111	-.008402	185.0598	.6827258
#2	.0856515	-.001315	.5769204	-.002684	-.009123	183.9487	.6761326
#3	.0887864	-.008467	.5832351	-.000456	-.011212	185.0343	.6826772

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0075093**	**.0098817**	**67.51561**	**.2555367**	**.0956623**	**.3529946**	**247.5767**
Stddev	.0000512	.0002161	.26275	.0007181	.0004413	.0005455	1.0795
%RSD	.6818375	2.186575	.3891638	.2810355	.4613065	.1545292	.4360354
#1	.0074611	.0099120	67.67875	.2547255	.0957737	.3530426	247.1451
#2	.0075038	.0100810	67.21251	.2560912	.0951760	.3524267	246.7798
#3	.0075631	.0096520	67.65556	.2557935	.0960372	.3535144	248.8053

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.756974**	**39.51799**	**.2048735**	**-.010441**	**4.937904**	**.4583780**	**.9793872**
Stddev	.025620	.14272	.0004402	.000658	.035520	.0008828	.0045301
%RSD	.6819430	.3611431	.2148900	6.298641	.7193247	.1925876	.4625474
#1	3.776901	39.64665	.2043963	-.010786	4.931648	.4587329	.9841262
#2	3.728074	39.36448	.2052639	-.010854	4.905928	.4590282	.9789355
#3	3.765948	39.54285	.2049602	-.009683	4.976136	.4573731	.9750998

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.24692**	**.2159351**	**.0048264**	**.0512338**	**2.584539**	**8.841570**	**.6732475**
Stddev	.05928	.0022357	.0003186	.0015049	.010572	.061492	.0023586
%RSD	.4475348	1.035357	6.600410	2.937347	.4090435	.6954838	.3503246
#1	13.18251	.2147083	.0046893	.0496053	2.588035	8.773036	.6757706
#2	13.25904	.2145813	.0051906	.0525732	2.572662	8.859758	.6710982
#3	13.29920	.2185156	.0045993	.0515229	2.592921	8.891917	.6728738

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: Q3699-03 Acquired: 11/21/2025 18:24:55 Type: Unk
Method: 6010-200.7 NEW(v377) 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	1.832263	.1672436	.0975789
Stddev	.008307	.0001743	.0010843
%RSD	.4533739	.1042199	1.111187
#1	1.841756	.1671189	.0988295
#2	1.826327	.1671690	.0969022
#3	1.828707	.1674427	.0970050

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2843.842	54304.46	10053.41	2695.899	4323.294
Stddev	8.555	120.35	26.54	8.783	15.353
%RSD	.3008300	.2216221	.2640111	.3257899	.3551223
#1	2843.198	54441.56	10023.75	2685.937	4323.575
#2	2852.701	54216.22	10061.58	2699.235	4338.505
#3	2835.627	54255.60	10074.91	2702.526	4307.803

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: Q3699-03DUP Acquired: 11/21/2025 18:28:59 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0894280**	**-.000631**	**.5735024**	**-.001884**	**-.008508**	**181.4338**	**.6726276**
Stddev	.0065878	.006490	.0051360	.006531	.002131	.8142	.0021210
%RSD	7.366551	1028.738	.8955479	346.7374	25.04165	.4487859	.3153356
#1	.0871575	-.001816	.5756298	-.008634	-.007793	182.0272	.6714173
#2	.0842758	.006370	.5676445	.004403	-.006826	181.7688	.6750767
#3	.0968507	-.006447	.5772329	-.001420	-.010904	180.5055	.6713887

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0074531**	**.0092361**	**66.36467**	**.2523127**	**.0937550**	**.3448892**	**246.2544**
Stddev	.0001788	.0000867	.27139	.0018299	.0005356	.0022666	1.7995
%RSD	2.398270	.9381527	.4089330	.7252657	.5712564	.6571866	.7307518
#1	.0072953	.0091386	66.51095	.2513002	.0935804	.3435674	245.3342
#2	.0076472	.0093044	66.53153	.2512128	.0933285	.3435939	245.1010
#3	.0074167	.0092653	66.05152	.2544251	.0943561	.3475064	248.3279

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.690615**	**38.80827**	**.2001285**	**-.009602**	**4.723354**	**.4537020**	**.9536013**
Stddev	.015828	.12654	.0015735	.000766	.037617	.0041829	.0021714
%RSD	.4288719	.3260637	.7862505	7.981428	.7963947	.9219406	.2277073
#1	3.693762	38.79658	.2007897	-.010357	4.700138	.4585214	.9512240
#2	3.704633	38.94025	.1983323	-.009626	4.703169	.4510167	.9540998
#3	3.673450	38.68798	.2012635	-.008824	4.766755	.4515678	.9554802

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.14015**	**.2288305**	**.0050881**	**.0461296**	**2.561860**	**9.216527**	**.6624023**
Stddev	.07858	.0128364	.0002764	.0010318	.010989	.048900	.0063763
%RSD	.5980507	5.609559	5.432834	2.236659	.4289424	.5305695	.9626023
#1	13.10700	.2250697	.0053962	.0450100	2.569617	9.171527	.6624698
#2	13.08357	.2182946	.0050065	.0463367	2.566677	9.209488	.6559925
#3	13.22988	.2431272	.0048617	.0470421	2.549285	9.268565	.6687445

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: Q3699-03DUP Acquired: 11/21/2025 18:28:59 Type: Unk
Method: 6010-200.7 NEW(v377) 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	1.714316	.1650035	.0946268
Stddev	.007337	.0010727	.0029604
%RSD	.4279954	.6500962	3.128452
#1	1.716216	.1641223	.0956836
#2	1.706215	.1661979	.0969136
#3	1.720516	.1646904	.0912830

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2870.837	54724.72	10209.89	2716.963	4379.570
Stddev	13.244	339.98	62.52	19.115	16.991
%RSD	.4613419	.6212595	.6123066	.7035378	.3879520
#1	2875.415	55018.23	10215.12	2726.238	4384.390
#2	2881.185	54803.74	10144.93	2729.672	4393.630
#3	2855.911	54352.18	10269.63	2694.981	4360.690

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3699-03LX5 Acquired: 11/21/2025 18:33:03 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.0151063**	**.0020436**	**.1084249**	**-.002647**	**-.001550**	**37.39010**	**.1368823**
Stddev	.0031992	.0052946	.0011516	.003252	.000980	.15393	.0006040
%RSD	21.17800	259.0811	1.062120	122.8243	63.20949	.4116914	.4412599
#1	.0146990	-.003584	.1072973	-.004877	-.001872	37.43352	.1368755
#2	.0121302	.002790	.1095991	-.004149	-.000450	37.51766	.1374897
#3	.0184897	.006926	.1083783	.001084	-.002328	37.21913	.1362818

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0016527**	**.0012640**	**13.99259**	**.0514986**	**.0177975**	**.0762636**	**48.85391**
Stddev	.0000979	.0000991	.01707	.0004106	.0001455	.0002012	.09787
%RSD	5.922191	7.839745	.1219648	.7973243	.8178398	.2637578	.2003293
#1	.0015580	.0013095	13.97748	.0516951	.0176676	.0761908	48.94786
#2	.0016465	.0011503	14.01110	.0517741	.0177700	.0761091	48.86133
#3	.0017535	.0013321	13.98920	.0510267	.0179548	.0764911	48.75254

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7859684**	**8.079852**	**.0378566**	**-.002056**	**.8367059**	**.0930743**	**.1921738**
Stddev	.0022730	.041747	.0005220	.000363	.0167013	.0033082	.0004208
%RSD	.2891974	.5166745	1.378801	17.64255	1.996073	3.554366	.2189460
#1	.7884973	8.082436	.0379519	-.001908	.8186690	.0968826	.1923999
#2	.7853123	8.120247	.0372936	-.002469	.8398136	.0909117	.1924333
#3	.7840956	8.036874	.0383244	-.001790	.8516350	.0914286	.1916884

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.427548**	**.0365064**	**.0005264**	**.0079658**	**.5341525**	**1.672098**	**.1243129**
Stddev	.024117	.0012500	.0003908	.0011068	.0048507	.034154	.0018432
%RSD	.9934797	3.424057	74.23897	13.89445	.9081086	2.042599	1.482716
#1	2.400933	.0352956	.0009405	.0080872	.5312880	1.664809	.1236827
#2	2.433756	.0377922	.0004745	.0068033	.5314164	1.709308	.1228674
#3	2.447954	.0364313	.0001642	.0090069	.5397531	1.642176	.1263885

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3699-03LX5 Acquired: 11/21/2025 18:33:03 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.3032492	.0299225	.0227048
Stddev	.0050723	.0006481	.0000412
%RSD	1.672648	2.166001	.1814567
#1	.3016551	.0303814	.0227377
#2	.2991654	.0291811	.0226586
#3	.3089270	.0302051	.0227182

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2788.936	53934.89	9382.213	2669.513	4786.950
Stddev	14.352	117.95	16.850	14.499	27.444
%RSD	.5145919	.2186883	.1795972	.5431474	.5733181
#1	2783.328	53853.02	9362.976	2652.780	4785.380
#2	2805.245	54070.09	9389.308	2678.377	4815.146
#3	2778.235	53881.57	9394.356	2677.380	4760.324

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3699-03MS Acquired: 11/21/2025 18:37:16 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8086829**	**1.849588**	**1.497217**	**1.791046**	**.3655603**	**182.8743**	**.7878925**
Stddev	.0071471	.020234	.009688	.018114	.0051161	.3127	.0060344
%RSD	.8838012	1.093998	.6470607	1.011353	1.399534	.1710125	.7658933
#1	.8014668	1.835131	1.488532	1.770588	.3657871	182.9582	.7870907
#2	.8088229	1.840920	1.495454	1.797507	.3603345	183.1366	.7942877
#3	.8157591	1.872712	1.507666	1.805044	.3705593	182.5282	.7822990

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1830488**	**.2044892**	**118.3937**	**.6912669**	**.3029582**	**.5773021**	**277.7731**
Stddev	.0008553	.0013986	.5197	.0014191	.0018504	.0045195	1.0726
%RSD	.4672660	.6839687	.4389470	.2052818	.6107800	.7828589	.3861343
#1	.1823342	.2036830	118.1051	.6913243	.3014167	.5745818	278.5665
#2	.1839965	.2036804	118.9937	.6926564	.3024476	.5748053	278.2000
#3	.1828155	.2061042	118.0825	.6898201	.3050103	.5825191	276.5528

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.113853**	**60.05591**	**.7314687**	**.0586612**	**7.741187**	**.7319054**	**1.053399**
Stddev	.030251	.21813	.0038892	.0000335	.036229	.0075575	.002455
%RSD	.7353494	.3632150	.5317034	.0571786	.4680043	1.032573	.2330948
#1	4.096960	59.84728	.7290007	.0586945	7.770988	.7281582	1.050813
#2	4.148777	60.28244	.7294532	.0586274	7.751713	.7406043	1.053684
#3	4.095820	60.03802	.7359520	.0586618	7.700860	.7269538	1.055699

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.27109**	**.4606405**	**.3682801**	**.7128897**	**2.665464**	**7.970999**	**1.361840**
Stddev	.10975	.0047695	.0025355	.0036025	.010347	.038392	.006245
%RSD	.5414028	1.035415	.6884817	.5053397	.3881943	.4816397	.4585883
#1	20.26025	.4649941	.3654338	.7107873	2.660294	8.010966	1.357732
#2	20.38586	.4555426	.3702971	.7108323	2.677378	7.934406	1.358761
#3	20.16717	.4613849	.3691095	.7170494	2.658721	7.967626	1.369027

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3699-03MS Acquired: 11/21/2025 18:37:16 Type: Unk
Method: 6010-200.7 NEW(v377) 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	1.827867	.3459567	.4318535
Stddev	.010733	.0013763	.0037747
%RSD	.5871601	.3978142	.8740584
#1	1.815496	.3454551	.4309566
#2	1.833421	.3475134	.4359959
#3	1.834685	.3449016	.4286081

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2761.279	53223.90	9845.294	2670.384	4185.334
Stddev	9.784	50.06	54.770	1.878	20.447
%RSD	.3543285	.0940467	.5563077	.0703251	.4885394
#1	2765.478	53223.12	9896.874	2671.397	4193.569
#2	2768.263	53174.23	9787.812	2668.217	4200.380
#3	2750.097	53274.33	9851.197	2671.539	4162.054

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV06 Acquired: 11/21/2025 18:41:17 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**4.842515**	**4.839183**	**4.784790**	**4.926538**	**4.930835**	**9.687150**	**9.753301**
Stddev	.009729	.104533	.017203	.015836	.017154	.011384	.098096
%RSD	.2009014	2.160127	.3595297	.3214464	.3478848	.1175210	1.005773
#1	4.832532	4.744395	4.773624	4.924097	4.926325	9.696814	9.709944
#2	4.843045	4.951296	4.776146	4.912064	4.916387	9.690035	9.865605
#3	4.851967	4.821858	4.804601	4.943453	4.949793	9.674601	9.684355

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2355002**	**2.381855**	**24.05997**	**.9663392**	**2.390980**	**1.224023**	**4.947292**
Stddev	.0008300	.007543	.08175	.0017375	.007363	.004907	.043469
%RSD	.3524558	.3167063	.3397825	.1798040	.3079653	.4009202	.8786466
#1	.2363518	2.377384	24.07477	.9675193	2.387334	1.222950	4.903237
#2	.2354553	2.377616	24.13331	.9643440	2.386150	1.219740	4.948490
#3	.2346936	2.390564	23.97183	.9671545	2.399455	1.229378	4.990150

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.404818**	**23.74044**	**2.394954**	**1.206671**	**27.04419**	**2.414785**	**2.423084**
Stddev	.002447	.10270	.004591	.002277	.01148	.006689	.002250
%RSD	.1017692	.4326026	.1916763	.1886878	.0424555	.2770042	.0928634
#1	2.402193	23.70358	2.391718	1.208856	27.03398	2.414622	2.425681
#2	2.407036	23.66125	2.392937	1.206846	27.04198	2.408178	2.421858
#3	2.405226	23.85649	2.400208	1.204312	27.05662	2.421553	2.421713

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.16883**	**4.744418**	**4.910197**	**4.786957**	**4.852682**	**4.902299**	**4.869062**
Stddev	.01756	.009279	.018259	.008321	.008066	.005781	.009589
%RSD	.0726587	.1955817	.3718492	.1738216	.1662145	.1179323	.1969384
#1	24.18389	4.754949	4.902766	4.791654	4.860816	4.908974	4.858131
#2	24.17305	4.737439	4.896825	4.777350	4.852543	4.898871	4.876054
#3	24.14954	4.740868	4.930999	4.791868	4.844686	4.899053	4.873002

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV06 Acquired: 11/21/2025 18:41:17 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**4.788893**	**4.746179**	**4.863028**
Stddev	.021745	.007458	.054985
%RSD	.4540782	.1571447	1.130672
#1	4.780021	4.754452	4.926298
#2	4.813671	4.744117	4.835977
#3	4.772986	4.739969	4.826809

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2634.205**	**50531.81**	**9146.108**	**2514.994**	**4492.751**
Stddev	11.522	78.90	31.970	11.549	9.581
%RSD	.4374020	.1561462	.3495441	.4592113	.2132500
#1	2636.802	50460.28	9110.880	2501.659	4494.919
#2	2644.207	50518.70	9154.168	2521.743	4501.063
#3	2621.606	50616.44	9173.276	2521.582	4482.273

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB06 Acquired: 11/21/2025 18:45:29 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.001064**	**-.002903**	**.0018540**	**-.003001**	**.0003274**	**.0085309**	**-.004250**
Stddev	.006340	.002530	.0007504	.005553	.0023462	.0077181	.001359
%RSD	595.5450	87.17529	40.47540	185.0267	716.6533	90.47199	31.98755
#1	.005957	-.001969	.0009885	-.006879	-.000509	.0087557	-.005320
#2	-.006369	-.000972	.0022505	.003360	.002977	.0007028	-.004709
#3	-.002782	-.005767	.0023229	-.005484	-.001486	.0161341	-.002720

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001173**	**.0000944**	**-.002071**	**-.000143**	**.0000494**	**-.000158**	**-.009114**
Stddev	.0000136	.0000841	.003135	.000468	.0000523	.000497	.006286
%RSD	11.59709	89.08486	151.3541	327.8738	105.9905	314.9029	68.97313
#1	.0001143	.0000084	.000403	-.000074	.0000522	-.000543	-.016350
#2	.0001322	.0001764	-.001020	-.000642	.0001003	-.000333	-.004998
#3	.0001055	.0000983	-.005597	.000287	-.000004	.000403	-.005994

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000042**	**-.003604**	**.0002870**	**-.000483**	**-.064356**	**.0031415**	**.0001200**
Stddev	.000434	.007854	.0000871	.000410	.015480	.0017319	.0001404
%RSD	1044.019	217.8958	30.35637	84.84703	24.05394	55.13023	117.0246
#1	-.000381	-.000244	.0002385	-.000011	-.063706	.0018220	.0000913
#2	-.000190	-.012580	.0003876	-.000743	-.080151	.0024999	.0002725
#3	.000447	.002010	.0002349	-.000695	-.049211	.0051027	-.000004

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.020440**	**.0035641**	**-.000076**	**.0006112**	**.0006464**	**-.029493**	**.0003997**
Stddev	.029611	.0004177	.000267	.0006881	.0027137	.000654	.0001979
%RSD	144.8663	11.71997	349.4788	112.5732	419.8131	2.218393	49.51039
#1	-.024907	.0034681	-.000120	.0002907	-.001690	-.030194	.0001835
#2	.011150	.0032027	-.000319	.0014011	.003623	-.029385	.0005720
#3	-.047564	.0040214	.000210	.0001419	.000006	-.028899	.0004436

Sample Name: CCB06 Acquired: 11/21/2025 18:45:29 Type: Unk
Method: 6010-200.7 NEW(v377) 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	F -.014886	-.004448	.0000804
Stddev	.002914	.000452	.0000826
%RSD	19.57870	10.17093	102.6590
#1	-.012308	-.003951	-.000013
#2	-.018048	-.004837	.000111
#3	-.014301	-.004555	.000143

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2699.191	52037.91	9193.898	2562.052	4901.363
Stddev	4.256	187.99	11.865	13.687	3.894
%RSD	.1576584	.3612526	.1290565	.5342304	.0794504
#1	2703.008	52007.97	9186.099	2551.208	4905.859
#2	2699.963	52239.06	9188.041	2577.431	4899.190
#3	2694.603	51866.68	9207.552	2557.517	4899.040

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3699-03MSD Acquired: 11/21/2025 18:49:49 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.8122328**	**1.856906**	**1.519706**	**1.817819**	**.3684000**	**185.1041**	**.7974649**
Stddev	.0043200	.011481	.007295	.011828	.0034646	.2902	.0040696
%RSD	.5318650	.6182941	.4800140	.6506464	.9404354	.1567739	.5103124
#1	.8074288	1.854484	1.514065	1.821608	.3718142	185.2030	.8005949
#2	.8157982	1.846830	1.517110	1.804561	.3648872	185.3319	.7989354
#3	.8134713	1.869405	1.527944	1.827288	.3684985	184.7773	.7928645

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1813592**	**.2066997**	**120.2020**	**.7022964**	**.3049403**	**.5753835**	**284.8097**
Stddev	.0006218	.0012999	.3318	.0038859	.0013371	.0035946	1.4216
%RSD	.3428542	.6289016	.2760739	.5533142	.4384880	.6247276	.4991475
#1	.1820626	.2057371	120.4905	.7045455	.3037257	.5719524	285.5249
#2	.1811321	.2061836	120.2762	.7045344	.3047220	.5750763	285.7317
#3	.1808828	.2081785	119.8393	.6978094	.3063731	.5791219	283.1725

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.140667**	**61.00137**	**.7381625**	**.0594770**	**8.012592**	**.7440326**	**1.058007**
Stddev	.009540	.13790	.0035065	.0008825	.060862	.0037881	.002642
%RSD	.2303925	.2260566	.4750251	1.483708	.7595769	.5091319	.2497082
#1	4.151019	60.85273	.7345130	.0602184	8.026705	.7483372	1.060768
#2	4.138754	61.12514	.7384687	.0597116	8.065157	.7425530	1.057751
#3	4.132229	61.02624	.7415059	.0585009	7.945913	.7412077	1.055503

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**20.91705**	**.4871637**	**.3757151**	**.7032417**	**2.699004**	**8.519873**	**1.351269**
Stddev	.17428	.0031776	.0021279	.0052481	.010867	.032411	.008687
%RSD	.8331799	.6522708	.5663494	.7462764	.4026417	.3804202	.6428757
#1	20.99530	.4908204	.3742565	.6976765	2.693503	8.544739	1.344011
#2	21.03848	.4855980	.3747320	.7039473	2.711522	8.531662	1.348900
#3	20.71736	.4850728	.3781567	.7081013	2.691987	8.483217	1.360894

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3699-03MSD Acquired: 11/21/2025 18:49:49 Type: Unk
Method: 6010-200.7 NEW(v377) 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	1.595291	.3513026	.4343535
Stddev	.010648	.0018111	.0018876
%RSD	.6674779	.5155338	.4345750
#1	1.585449	.3533185	.4362904
#2	1.593831	.3507763	.4342507
#3	1.606594	.3498129	.4325195

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2761.710	53168.15	10041.15	2626.587	4194.555
Stddev	10.319	183.28	7.62	12.086	17.673
%RSD	.3736576	.3447177	.0758776	.4601564	.4213216
#1	2771.437	53147.22	10032.63	2614.891	4209.856
#2	2762.808	52996.22	10047.30	2625.841	4198.597
#3	2750.886	53360.99	10043.53	2639.029	4175.212

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3699-03A Acquired: 11/21/2025 18:53:50 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7861329**	**1.790226**	**1.475512**	**1.771062**	**.7162907**	**179.0226**
Stddev	.0073566	.016960	.003276	.010989	.0049878	.2408
%RSD	.9357914	.9473522	.2220498	.6204562	.6963331	.1345083
#1	.7924073	1.806085	1.473663	1.775084	.7172448	178.7767
#2	.7780366	1.792248	1.473579	1.758629	.7108948	179.0331
#3	.7879547	1.772346	1.479295	1.779472	.7207325	179.2580

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8211439**	**.1746649**	**.1964323**	**65.35820**	**.5918680**	**.2819615**
Stddev	.0023462	.0002198	.0006261	.07028	.0009236	.0013032
%RSD	.2857250	.1258372	.3187199	.1075274	.1560526	.4621924
#1	.8228522	.1744144	.1964174	65.39321	.5921138	.2819383
#2	.8184687	.1747550	.1958138	65.27729	.5908464	.2806701
#3	.8221106	.1748254	.1970657	65.40410	.5926439	.2832762

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5967521**	**239.1699**	**3.749443**	**39.57799**	**.6683468**	**.0569983**
Stddev	.0049550	.9591	.013354	.09040	.0030993	.0015311
%RSD	.8303340	.4010067	.3561609	.2284032	.4637224	2.686248
#1	.5940477	240.2741	3.762813	39.47744	.6674258	.0578132
#2	.5937378	238.6910	3.736105	39.65255	.6658124	.0552321
#3	.6024709	238.5445	3.749412	39.60398	.6718022	.0579496

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.973006**	**.7017129**	**1.101564**	**21.45771**	**.4556937**	**.3740750**
Stddev	.032757	.0062372	.003247	.10213	.0042271	.0013794
%RSD	.4697738	.8888472	.2947186	.4759524	.9276288	.3687586
#1	7.005590	.6985884	1.098084	21.56915	.4605272	.3737021
#2	6.940078	.6976556	1.102097	21.36858	.4538659	.3729204
#3	6.973349	.7088948	1.104510	21.43541	.4526880	.3756025

Sample Name: Q3699-03A Acquired: 11/21/2025 18:53:50 Type: Unk
Method: 6010-200.7 NEW(v377) 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	.7211669	2.697911	F 11.01657	1.256151	1.669382	.3362439
Stddev	.0022379	.001527	.12835	.004186	.010708	.0022599
%RSD	.3103146	.0565959	1.165092	.3332727	.6414258	.6721097
#1	.7198463	2.699579	10.92083	1.252967	1.667139	.3385145
#2	.7199036	2.696582	10.96646	1.254593	1.659974	.3339948
#3	.7237508	2.697572	11.16242	1.260893	1.681034	.3362224

Elem	Sr4077
Units	ppm
Avg	.2670785
Stddev	.0011551
%RSD	.4324901
#1	.2679070
#2	.2657590
#3	.2675694

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2856.667	55182.05	10166.37	2739.759	4356.868
Stddev	13.985	90.20	13.41	8.040	15.865
%RSD	.4895701	.1634581	.1319281	.2934731	.3641414
#1	2865.152	55099.39	10161.96	2732.175	4368.414
#2	2864.325	55278.26	10181.43	2748.189	4363.412
#3	2840.526	55168.49	10155.71	2738.913	4338.777

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: PB170685BL Acquired: 11/21/2025 18:57:51 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.000751**	**-.003187**	**.0003550**	**-.002632**	**-.001948**	**.0091260**	**-.004071**
Stddev	.004435	.001991	.0009165	.003463	.001377	.0081920	.000592
%RSD	590.6505	62.46827	258.1967	131.5909	70.67534	89.76661	14.54408
#1	-.004091	-.004015	.0006614	-.004804	-.002070	.0028141	-.004318
#2	.004282	-.000915	-.000675	.001362	-.000514	.0061803	-.003395
#3	-.002444	-.004629	.001079	-.004452	-.003260	.0183835	-.004500

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000418**	**.0000855**	**-.015433**	**.0000718**	**-.000129**	**.0001554**	**-.009713**
Stddev	.0000416	.0000373	.005824	.0002350	.000221	.0000393	.002482
%RSD	99.48564	43.70002	37.73979	327.3023	171.8174	25.29940	25.54948
#1	.0000039	.0000950	-.017334	-.000066	.000122	.0002004	-.006947
#2	.0000862	.0000443	-.020069	.000343	-.000298	.0001277	-.011745
#3	.0000352	.0001171	-.008896	-.000061	-.000210	.0001381	-.010447

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001415**	**.0194921**	**.0004694**	**.0002276**	**-.116997**	**.0001408**	**-.000202**
Stddev	.0001081	.0218452	.0004445	.0004055	.007131	.0008129	.000188
%RSD	76.36111	112.0722	94.68604	178.1984	6.094767	577.2286	93.17749
#1	.0002006	.0076523	.0007908	.0000799	-.112354	.0004916	-.000059
#2	.0002072	.0061226	.0006553	-.000083	-.125207	.0007194	-.000415
#3	.0000168	.0447012	-.000038	.000686	-.113429	-.000789	-.000132

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.090103**	**-.001438**	**-.000261**	**-.000615**	**.0023788**	**-.036038**	**-.000119**
Stddev	.050723	.000618	.000322	.000982	.0005682	.009068	.000493
%RSD	56.29486	42.99212	123.3018	159.6858	23.88772	25.16214	415.5917
#1	-.117871	-.002005	.000100	-.001011	.0023842	-.032687	.000444
#2	-.031558	-.001530	-.000364	.000503	.0029444	-.029122	-.000322
#3	-.120879	-.000779	-.000518	-.001337	.0018079	-.046305	-.000477

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: PB170685BL Acquired: 11/21/2025 18:57:51 Type: Unk
Method: 6010-200.7 NEW(v377) 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	F -.014017	-.003101	.0000190
Stddev	.003368	.000955	.0000554
%RSD	24.02718	30.78159	292.2755
#1	-.010876	-.003819	.0000544
#2	-.017573	-.003466	.0000474
#3	-.013601	-.002018	-.000045

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2693.864	50887.43	9148.796	2552.049	4837.291
Stddev	9.878	137.39	41.678	22.019	19.370
%RSD	.3666762	.2699813	.4555553	.8627849	.4004323
#1	2692.536	50821.48	9121.567	2526.935	4835.577
#2	2704.338	50795.45	9196.776	2568.038	4857.461
#3	2684.717	51045.36	9128.046	2561.175	4818.835

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: PB170685BS Acquired: 11/21/2025 19:02:11 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7803665**	**1.942257**	**.9484860**	**2.002375**	**.8177278**	**1.984789**
Stddev	.0024656	.034126	.0057187	.004563	.0025922	.011379
%RSD	.3159536	1.757010	.6029289	.2279004	.3169990	.5733312
#1	.7804203	1.980708	.9472812	2.007271	.8179274	1.991115
#2	.7778745	1.930497	.9434656	2.001613	.8150416	1.971652
#3	.7828048	1.915567	.9547111	1.998240	.8202144	1.991599

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1955608**	**.1972271**	**.1917803**	**.9987954**	**.3948368**	**.1940303**
Stddev	.0018368	.0009536	.0008425	.0112509	.0018095	.0011786
%RSD	.9392542	.4835016	.4393092	1.126450	.4582888	.6074208
#1	.1976020	.1982124	.1918730	1.011572	.3936372	.1941161
#2	.1950393	.1963088	.1908952	.994443	.3969182	.1928111
#3	.1940412	.1971601	.1925726	.990371	.3939551	.1951636

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3084427**	**2.938999**	**.2002610**	**1.974727**	**.4875641**	**.0754728**
Stddev	.0011779	.024704	.0014039	.052191	.0018029	.0004583
%RSD	.3818748	.8405709	.7010203	2.642965	.3697759	.6071685
#1	.3093478	2.928832	.2018821	1.933864	.4889040	.0757874
#2	.3071110	2.967165	.1994486	1.956797	.4855143	.0749470
#3	.3088693	2.921000	.1994524	2.033520	.4882740	.0756838

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.669101**	**.3028467**	**.2053868**	**9.391715**	**.2977738**	**.4123121**
Stddev	.034842	.0015434	.0007398	.086517	.0032965	.0011806
%RSD	1.305391	.5096208	.3602131	.9212057	1.107043	.2863255
#1	2.643097	.3015257	.2046948	9.340678	.3000241	.4130215
#2	2.708689	.3024711	.2061666	9.491609	.2939899	.4109493
#3	2.655517	.3045432	.2052990	9.342859	.2993073	.4129655

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: PB170685BS Acquired: 11/21/2025 19:02:11 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.6746057**	**.1995323**	**.8144452**	F **.6076341**	F **-.015571**	**.1979874**
Stddev	.0034266	.0002877	.0074496	.0003870	.004524	.0010357
%RSD	.5079484	.1441920	.9146877	.0636954	29.05354	.5231031
#1	.6784616	.1998332	.8062623	.6080653	-.010462	.1979537
#2	.6719091	.1992599	.8162392	.6075200	-.019068	.1990395
#3	.6734463	.1995038	.8208340	.6073169	-.017184	.1969689

Elem	Sr4077
Units	ppm
Avg	**.1976990**
Stddev	.0009335
%RSD	.4721963
#1	.1987691
#2	.1972765
#3	.1970515

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2710.073**	**52451.31**	**9096.298**	**2621.258**	**4832.936**
Stddev	7.700	238.93	46.403	17.498	20.437
%RSD	.2841403	.4555340	.5101307	.6675483	.4228723
#1	2709.917	52562.23	9050.018	2628.247	4825.058
#2	2717.850	52177.07	9142.824	2601.345	4856.140
#3	2702.452	52614.62	9096.053	2634.181	4817.611

Sample Name: Q3700-04 Acquired: 11/21/2025 19:06:16 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.002963**	**-.009159**	**.0016522**	**-.001696**	**-.001462**	**.1009120**	**.0207583**
Stddev	.002611	.003190	.0006557	.001559	.000624	.0121869	.0004997
%RSD	88.13860	34.82908	39.68390	91.90076	42.65269	12.07674	2.407233
#1	-.005971	-.006260	.0008951	-.001792	-.001996	.1140947	.0202035
#2	-.001629	-.008640	.0020311	-.003204	-.001613	.0985850	.0211729
#3	-.001287	-.012576	.0020305	-.000092	-.000777	.0900564	.0208986

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000057**	**.0000199**	**28.11571**	**.0024260**	**.0005942**	**.1349843**	**.5262009**
Stddev	.000062	.0000709	.19697	.0008663	.0000419	.0003850	.0070530
%RSD	109.9789	356.6936	.7005595	35.70820	7.055800	.2852423	1.340369
#1	-.000110	.0000590	27.97932	.0029539	.0006188	.1349655	.5292977
#2	.000012	.0000625	28.02629	.0028979	.0006179	.1346091	.5311757
#3	-.000072	-.000062	28.34153	.0014262	.0005458	.1353785	.5181292

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0606491**	**6.800299**	**.0029923**	**.0001503**	**60.99705**	**.0027211**	**.4127999**
Stddev	.0002600	.014557	.0002766	.0005946	.73189	.0014814	.0077533
%RSD	.4286052	.2140663	9.244595	395.5204	1.199886	54.44061	1.878232
#1	.0603815	6.786129	.0031090	-.000229	61.78914	.0018020	.4217524
#2	.0606652	6.799554	.0031915	.000836	60.34584	.0044300	.4082647
#3	.0609006	6.815214	.0026765	-.000155	60.85615	.0019313	.4083825

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.30071**	**.0204038**	**.0009988**	**-.001111**	**.0016587**	**2.469780**	**.1759428**
Stddev	.27934	.0011969	.0002615	.001074	.0011393	.042674	.0011965
%RSD	1.023189	5.866141	26.18272	96.63895	68.68378	1.727859	.6800624
#1	27.61942	.0217829	.0012204	.000128	.0010776	2.518772	.1747314
#2	27.09833	.0196363	.0007103	-.001698	.0029714	2.449855	.1759733
#3	27.18440	.0197922	.0010658	-.001764	.0009271	2.440713	.1771239

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3700-04 Acquired: 11/21/2025 19:06:16 Type: Unk
Method: 6010-200.7 NEW(v377) 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	5.559378	-.011126	.0912315
Stddev	.032044	.000873	.0009525
%RSD	.5764011	7.849305	1.044058
#1	5.522895	-.011039	.0908413
#2	5.572270	-.010300	.0905360
#3	5.582967	-.012040	.0923171

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2612.321	49791.74	9200.356	2486.944	4592.261
Stddev	9.371	826.95	2.952	49.148	12.562
%RSD	.3587149	1.660825	.0320886	1.976231	.2735409
#1	2613.471	48919.79	9203.580	2437.064	4594.648
#2	2621.064	49890.62	9199.701	2488.443	4603.458
#3	2602.428	50564.81	9197.786	2535.325	4578.677

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3700-04DUP Acquired: 11/21/2025 19:10:32 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.004022**	**-.003936**	**.0015811**	**-.000815**	**-.000978**	**.1022951**	**.0209401**
Stddev	.002569	.002901	.0020068	.006053	.000725	.0114344	.0012121
%RSD	63.86449	73.68648	126.9238	742.7842	74.15620	11.17784	5.788637
#1	-.001389	-.001118	-.000630	.005865	-.000150	.0891848	.0219251
#2	-.006521	-.006912	.002087	-.002376	-.001283	.1102051	.0195864
#3	-.004157	-.003779	.003286	-.005934	-.001500	.1074953	.0213087

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000063**	**.0000402**	**28.32751**	**.0023493**	**.0006203**	**.1344927**	**.5171581**
Stddev	.000018	.0001043	.08748	.0001539	.0000734	.0002910	.0102092
%RSD	28.55566	259.6693	.3088260	6.549571	11.83414	.2163526	1.974099
#1	-.000071	-.000002	28.42112	.0022260	.0005485	.1344582	.5271219
#2	-.000042	.000159	28.31360	.0023003	.0006952	.1342206	.5176323
#3	-.000075	-.000036	28.24782	.0025217	.0006171	.1347994	.5067200

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0615868**	**6.880065**	**.0036212**	**-.000161**	**61.73661**	**.0015385**	**.4070567**
Stddev	.0003032	.033185	.0002390	.000688	.19520	.0022712	.0018395
%RSD	.4922738	.4823343	6.599578	427.7964	.3161841	147.6275	.4519070
#1	.0615836	6.898108	.0038920	.000445	61.89545	-.001081	.4064815
#2	.0618915	6.900320	.0034400	-.000018	61.51869	.002737	.4055736
#3	.0612852	6.841768	.0035315	-.000908	61.79569	.002959	.4091151

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.34912**	**.0204949**	**.0007671**	**-.001207**	**.0030165**	**2.475905**	**.1732980**
Stddev	.16453	.0000559	.0001807	.000606	.0026309	.017171	.0002822
%RSD	.6015894	.2727396	23.55241	50.19376	87.21701	.6935272	.1628444
#1	27.38518	.0205474	.0006847	-.000862	.0010542	2.469248	.1735451
#2	27.16956	.0205013	.0009742	-.000852	.0019893	2.463058	.1733585
#3	27.49264	.0204361	.0006423	-.001906	.0060062	2.495407	.1729905

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3700-04DUP Acquired: 11/21/2025 19:10:32 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**5.503441**	**-.011425**	**.0918867**
Stddev	.011137	.001232	.0003133
%RSD	.2023672	10.78127	.3409944
#1	5.502194	-.012633	.0922429
#2	5.492979	-.010171	.0917634
#3	5.515149	-.011469	.0916538

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2641.575**	**50389.93**	**9234.818**	**2509.786**	**4654.116**
Stddev	7.590	204.27	46.078	10.371	9.148
%RSD	.2873235	.4053780	.4989602	.4132408	.1965571
#1	2643.046	50161.87	9194.483	2503.793	4652.048
#2	2648.322	50556.09	9224.937	2521.762	4664.121
#3	2633.358	50451.83	9285.036	2503.804	4646.179

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3700-04LX5 Acquired: 11/21/2025 19:14:46 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**-.002867**	**-.000833**	**-.002134**	**-.003345**	**-.000747**	**.0226291**	**-.001363**
Stddev	.002989	.001890	.000686	.004173	.001337	.0048937	.000512
%RSD	104.2666	226.7867	32.15811	124.7484	179.0345	21.62554	37.57081
#1	-.006128	-.002095	-.002782	-.004653	.000739	.0281620	-.000792
#2	-.002215	-.001744	-.001415	.001325	-.001127	.0188684	-.001519
#3	-.000257	.001339	-.002205	-.006708	-.001853	.0208569	-.001780

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000594**	**.0000312**	**5.559087**	**.0000895**	**.0002005**	**.0281287**	**.0944395**
Stddev	.0000102	.0000925	.018975	.0004335	.0003409	.0005969	.0091889
%RSD	17.09345	296.4900	.3413383	484.4922	170.0646	2.122072	9.729981
#1	.0000674	-.000076	5.537831	-.000402	.0005830	.0278091	.1043506
#2	.0000480	.000081	5.574317	.000254	-.000071	.0288173	.0927651
#3	.0000628	.000088	5.565115	.000417	.000089	.0277597	.0862030

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0120946**	**1.354560**	**.0006875**	**-.000319**	**11.35967**	**-.000432**	**.0811064**
Stddev	.0000294	.001582	.0001455	.000518	.17573	.001066	.0015600
%RSD	.2433418	.1167849	21.15693	162.4461	1.546929	246.7880	1.923440
#1	.0120663	1.355231	.0005956	-.000863	11.55918	.000795	.0828520
#2	.0121250	1.355696	.0008552	-.000262	11.29195	-.000962	.0798483
#3	.0120925	1.352753	.0006117	.000169	11.22788	-.001128	.0806190

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.229708**	**.0017873**	**-.000159**	**-.000888**	**.0018038**	**.4611600**	**.0348417**
Stddev	.103105	.0003215	.000200	.000404	.0010876	.0213040	.0007661
%RSD	1.971532	17.98566	125.6192	45.56414	60.29741	4.619662	2.198747
#1	5.344402	.0021140	-.000182	-.000695	.0028685	.4753030	.0343836
#2	5.144708	.0014714	-.000347	-.000616	.0018482	.4715198	.0357261
#3	5.200015	.0017766	.000051	-.001353	.0006946	.4366574	.0344155

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: Q3700-04LX5 Acquired: 11/21/2025 19:14:46 Type: Unk
Method: 6010-200.7 NEW(v377) 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	1.104891	-.006045	.0181892
Stddev	.019919	.000846	.0000300
%RSD	1.802825	13.99194	.1650997
#1	1.081948	-.005071	.0181546
#2	1.114957	-.006474	.0182082
#3	1.117769	-.006591	.0182049

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2672.458	50689.46	9387.313	2503.253	4771.761
Stddev	13.501	884.63	8.883	45.004	30.178
%RSD	.5051782	1.745198	.0946253	1.797815	.6324306
#1	2687.764	49668.61	9385.282	2452.930	4804.227
#2	2662.243	51168.77	9379.621	2539.641	4744.566
#3	2667.367	51231.01	9397.035	2517.187	4766.488

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3700-05 Acquired: 11/21/2025 19:19:05 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7862848**	**1.802926**	**.9069086**	**1.979656**	**.7997244**	**1.976298**	**.1985821**
Stddev	.0047912	.049120	.0021789	.005911	.0032073	.014015	.0014588
%RSD	.6093493	2.724447	.2402596	.2986025	.4010550	.7091701	.7346127
#1	.7899817	1.846904	.9053348	1.973006	.7960776	1.963597	.2002202
#2	.7808719	1.811956	.9059955	1.984314	.8021070	1.973962	.1981028
#3	.7880009	1.749918	.9093955	1.981648	.8009886	1.991334	.1974231

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1797956**	**.1844499**	**26.02950**	**.3946278**	**.1890221**	**.4000326**	**3.422303**
Stddev	.0003755	.0002333	.04856	.0012637	.0000935	.0017657	.009435
%RSD	.2088522	.1264957	.1865481	.3202120	.0494914	.4413881	.2756916
#1	.1796135	.1846962	26.06093	.3954565	.1889323	.3991183	3.415835
#2	.1802274	.1844214	26.05399	.3952534	.1890151	.3989116	3.433129
#3	.1795458	.1842321	25.97357	.3931734	.1891190	.4020680	3.417945

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2677447**	**8.372271**	**.4673764**	**.0713245**	**59.84465**	**.2933519**	**.5731103**
Stddev	.0014550	.023107	.0004673	.0006815	.33909	.0023351	.0015957
%RSD	.5434321	.2759952	.0999846	.9555153	.5666204	.7960201	.2784276
#1	.2692872	8.358423	.4673533	.0708397	60.23397	.2913346	.5734293
#2	.2675499	8.398946	.4669211	.0710301	59.68617	.2959100	.5745224
#3	.2663968	8.359443	.4678548	.0721038	59.61382	.2928111	.5713792

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**35.54516**	**.2757609**	**.4265915**	**.6644653**	**.1914829**	**3.231057**	**.7493430**
Stddev	.09118	.0010104	.0012511	.0008201	.0017605	.012311	.0009292
%RSD	.2565241	.3663976	.2932663	.1234225	.9193841	.3810156	.1240012
#1	35.64951	.2761872	.4255315	.6639879	.1920517	3.235073	.7487428
#2	35.50513	.2764882	.4262716	.6639958	.1928887	3.217240	.7504133
#3	35.48084	.2746072	.4279714	.6654123	.1895084	3.240858	.7488730

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3700-05 Acquired: 11/21/2025 19:19:05 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**5.361640**	**.1800042**	**.2683604**
Stddev	.024647	.0006392	.0013934
%RSD	.4596874	.3551127	.5192081
#1	5.343642	.1801355	.2695318
#2	5.389731	.1793096	.2687300
#3	5.351546	.1805676	.2668196

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2625.209**	**50612.50**	**9370.332**	**2486.863**	**4608.189**
Stddev	5.299	75.14	45.737	10.453	5.215
%RSD	.2018445	.1484676	.4881094	.4203174	.1131689
#1	2630.381	50580.35	9368.639	2490.453	4612.464
#2	2625.455	50558.78	9325.464	2475.088	4609.724
#3	2619.791	50698.37	9416.892	2495.047	4602.379

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: Q3700-06 Acquired: 11/21/2025 19:23:09 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7659399**	**1.792457**	**.8801075**	**1.917838**	**.7806336**	**1.978501**	**.1983004**
Stddev	.0074257	.058137	.0025373	.016286	.0030247	.003383	.0009825
%RSD	.9694890	3.243405	.2882919	.8491792	.3874630	.1709820	.4954475
#1	.7638534	1.739247	.8785756	1.914951	.7801329	1.981008	.1994317
#2	.7597807	1.783616	.8787106	1.903188	.7778906	1.974654	.1976612
#3	.7741857	1.854508	.8830362	1.935374	.7838774	1.979843	.1978084

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1770562**	**.1786432**	**26.87197**	**.3835923**	**.1840848**	**.3993182**	**3.345412**
Stddev	.0004673	.0007611	.07911	.0008173	.0011560	.0021393	.043916
%RSD	.2639064	.4260204	.2944077	.2130733	.6279955	.5357369	1.312733
#1	.1767606	.1782720	26.96234	.3827305	.1834927	.3985868	3.383882
#2	.1768131	.1781390	26.83837	.3843564	.1833447	.3976405	3.354790
#3	.1775949	.1795187	26.81521	.3836900	.1854169	.4017272	3.297565

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2428113**	**8.419532**	**.4552462**	**.0690491**	**60.74271**	**.2902093**	**.5799272**
Stddev	.0004416	.038379	.0023144	.0002424	.44568	.0016295	.0009340
%RSD	.1818617	.4558309	.5083833	.3510036	.7337099	.5615004	.1610524
#1	.2424711	8.375478	.4545974	.0689134	61.19374	.2887395	.5796119
#2	.2426524	8.445724	.4533255	.0693289	60.73180	.2899269	.5791916
#3	.2433103	8.437394	.4578158	.0689049	60.30259	.2919616	.5809780

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**34.99878**	**.2741109**	**.4209802**	**.6518155**	**.1935268**	**3.152984**	**.7385195**
Stddev	.20356	.0015378	.0030237	.0036146	.0004048	.015579	.0040517
%RSD	.5816192	.5610315	.7182448	.5545425	.2091924	.4940894	.5486266
#1	35.21067	.2742059	.4192888	.6509043	.1932368	3.163647	.7358151
#2	34.98093	.2725278	.4191806	.6487436	.1939894	3.160198	.7365654
#3	34.80473	.2755991	.4244710	.6557985	.1933544	3.135106	.7431779

Reviewed By:Sagar
On:11/26/2025
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Inst Id :P4
LB :LB138017

Sample Name: Q3700-06 Acquired: 11/21/2025 19:23:09 Type: Unk
Method: 6010-200.7 NEW(v377) 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	5.252663	.1795131	.2716701
Stddev	.060856	.0021017	.0012065
%RSD	1.158570	1.170784	.4440852
#1	5.230778	.1818519	.2729717
#2	5.205776	.1789045	.2705893
#3	5.321435	.1777828	.2714492

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2649.370	51613.42	9305.020	2538.490	4662.381
Stddev	8.233	101.94	18.855	3.292	13.153
%RSD	.3107503	.1975029	.2026374	.1296990	.2820994
#1	2655.442	51520.95	9311.566	2534.690	4670.113
#2	2652.669	51596.59	9319.730	2540.301	4669.837
#3	2639.999	51722.73	9283.764	2540.480	4647.195

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3700-04A Acquired: 11/21/2025 19:27:13 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**.7862588**	**1.848360**	**.9123198**	**1.978225**	**.8035173**	**2.025040**	**.2158489**
Stddev	.0115358	.025516	.0042576	.008959	.0025660	.014653	.0023811
%RSD	1.467180	1.380461	.4666767	.4528613	.3193516	.7236010	1.103148
#1	.7745437	1.833138	.9094641	1.969209	.8057336	2.023705	.2149633
#2	.7866262	1.834124	.9102821	1.978340	.8007060	2.011100	.2140374
#3	.7976066	1.877817	.9172133	1.987125	.8041122	2.040315	.2185459

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1834756**	**.1840487**	**28.45649**	**.3925354**	**.1894591**	**.4224489**	**3.504834**
Stddev	.0014684	.0008065	.25645	.0022719	.0005265	.0026851	.024880
%RSD	.8002978	.4382018	.9011990	.5787813	.2778927	.6355958	.7098837
#1	.1820583	.1837863	28.27671	.3915024	.1891975	.4228773	3.478457
#2	.1833785	.1834061	28.34261	.3909634	.1891147	.4195753	3.508164
#3	.1849902	.1849537	28.75016	.3951402	.1900652	.4248940	3.527882

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2540941**	**8.538488**	**.4699549**	**.0691743**	**64.12414**	**.2947575**	**.6040226**
Stddev	.0020429	.125605	.0029125	.0006608	.43830	.0037856	.0022435
%RSD	.8039860	1.471050	.6197347	.9552310	.6835210	1.284322	.3714316
#1	.2525343	8.400978	.4686971	.0687957	63.99216	.2903871	.6018693
#2	.2533413	8.567308	.4678828	.0699373	63.76699	.2970174	.6038517
#3	.2564065	8.647180	.4732849	.0687899	64.61326	.2968681	.6063466

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**36.48562**	**.2866553**	**.4288822**	**.6768251**	**.1954540**	**3.312627**	**.7755722**
Stddev	.26001	.0020506	.0026012	.0047270	.0023448	.007590	.0049158
%RSD	.7126495	.7153624	.6065123	.6984110	1.199664	.2291087	.6338239
#1	36.39796	.2843088	.4283024	.6747795	.1931826	3.304633	.7745957
#2	36.28077	.2875537	.4266197	.6734655	.1953137	3.319735	.7712180
#3	36.77814	.2881034	.4317243	.6822305	.1978658	3.313512	.7809030

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: Q3700-04A Acquired: 11/21/2025 19:27:13 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**5.423431**	**.1895656**	**.2831068**
Stddev	.037421	.0016323	.0021109
%RSD	.6899846	.8610731	.7456288
#1	5.389877	.1887317	.2813559
#2	5.416630	.1885187	.2825136
#3	5.463786	.1914464	.2854508

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2613.105**	**50102.82**	**9165.010**	**2508.472**	**4576.902**
Stddev	8.458	230.06	63.175	6.866	14.243
%RSD	.3236579	.4591750	.6893084	.2737060	.3111931
#1	2611.538	50169.01	9221.703	2502.527	4578.691
#2	2622.236	50292.53	9176.421	2515.987	4590.167
#3	2605.540	49846.92	9096.907	2506.901	4561.850

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV07 Acquired: 11/21/2025 19:31:18 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**4.866434**	**4.774550**	**4.774531**	**4.946590**	**4.947435**	**9.722371**	**9.808997**
Stddev	.009400	.069964	.021381	.013573	.018924	.047375	.054438
%RSD	.1931595	1.465355	.4478155	.2743985	.3825053	.4872739	.5549762
#1	4.871215	4.784797	4.753286	4.949760	4.954283	9.688469	9.746315
#2	4.855605	4.838825	4.774259	4.931712	4.926040	9.776502	9.844423
#3	4.872483	4.700027	4.796046	4.958298	4.961982	9.702141	9.836254

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2349532**	**2.370058**	**24.07532**	**.9564864**	**2.384050**	**1.224824**	**4.951611**
Stddev	.0010591	.010627	.13078	.0003480	.010141	.005586	.032184
%RSD	.4507860	.4483837	.5432222	.0363887	.4253498	.4560609	.6499720
#1	.2360058	2.359594	24.08724	.9566305	2.374951	1.224421	4.919777
#2	.2349661	2.369740	24.19974	.9560894	2.382217	1.219450	4.984134
#3	.2338876	2.380841	23.93899	.9567392	2.394982	1.230600	4.950921

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.418453**	**23.85059**	**2.384759**	**1.205343**	**25.62000**	**2.423960**	**2.432677**
Stddev	.015706	.21078	.011147	.001415	.27993	.006435	.006378
%RSD	.6494407	.8837334	.4674415	.1174310	1.092619	.2654760	.2621713
#1	2.412955	23.97634	2.374942	1.205558	25.29704	2.417888	2.432332
#2	2.436169	23.96816	2.382456	1.203832	25.79287	2.430705	2.439221
#3	2.406234	23.60725	2.396877	1.206638	25.77010	2.423286	2.426479

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.26237**	**4.735831**	**4.904600**	**4.775994**	**4.880573**	**4.877667**	**4.909538**
Stddev	.19754	.024279	.020419	.010911	.036401	.030668	.012349
%RSD	.8141965	.5126682	.4163286	.2284630	.7458414	.6287358	.2515275
#1	24.03443	4.751446	4.913730	4.763582	4.853782	4.842271	4.900363
#2	24.36896	4.748188	4.881208	4.780325	4.922017	4.896286	4.904673
#3	24.38374	4.707859	4.918861	4.784075	4.865919	4.894443	4.923579

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCV07 Acquired: 11/21/2025 19:31:18 Type: Unk
Method: 6010-200.7 NEW(v377) 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	**4.786041**	**4.793899**	**4.911505**
Stddev	.008651	.038650	.007756
%RSD	.1807633	.8062239	.1579059
#1	4.776103	4.759677	4.908748
#2	4.790134	4.835818	4.920262
#3	4.791887	4.786203	4.905504

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**2644.646**	**50953.23**	**9174.902**	**2539.914**	**4514.452**
Stddev	13.672	67.71	54.952	12.506	10.933
%RSD	.5169555	.1328957	.5989433	.4923978	.2421672
#1	2637.546	50883.45	9129.329	2539.675	4515.966
#2	2660.407	51018.67	9159.451	2527.529	4524.549
#3	2635.985	50957.56	9235.925	2552.539	4502.842

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB07 Acquired: 11/21/2025 19:35:30 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001435**	**-.004477**	**.0007377**	**-.002091**	**.0012834**	**.0167815**	**-.005115**
Stddev	.002627	.005467	.0008967	.003700	.0005045	.0109249	.000871
%RSD	183.0311	122.1030	121.5569	176.8987	39.30892	65.10093	17.03220
#1	-.002774	-.002807	.0017510	-.002720	.0010605	.0045586	-.004761
#2	.001591	-.000040	.0000469	.001882	.0009288	.0255955	-.006107
#3	-.003123	-.010584	.0004151	-.005436	.0018610	.0201906	-.004476

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001354**	**.0000679**	**-.011346**	**.0002175**	**.0000895**	**.0002619**	**-.010446**
Stddev	.0000589	.0001170	.009948	.0005088	.0002115	.0005669	.002586
%RSD	43.51694	172.3734	87.68272	233.9345	236.4647	216.4131	24.75141
#1	.0001210	.0002030	-.022732	-.000193	-.000067	.0008858	-.007461
#2	.0000851	-.000000	-.004337	.000787	.000330	-.000222	-.011923
#3	.0002003	.000001	-.006968	.000058	.000005	.000122	-.011954

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000206**	**-.012556**	**.0007706**	**.0003319**	**-.067221**	**.0005172**	**-.000047**
Stddev	.000713	.030243	.0007684	.0002414	.015462	.0018138	.000387
%RSD	345.8901	240.8630	99.71267	72.72053	23.00209	350.6984	830.7909
#1	-.000009	.021006	.0016519	.0006058	-.081045	.0022333	.000390
#2	-.000996	-.020983	.0002411	.0002396	-.070095	.0006988	-.000348
#3	.000387	-.037691	.0004188	.0001504	-.050523	-.001381	-.000182

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001203**	**.0020538**	**-.000196**	**-.000106**	**.0005241**	**-.023005**	**.0000736**
Stddev	.043890	.0008106	.000180	.000451	.0014298	.003498	.0002508
%RSD	3648.693	39.46899	91.89047	425.6604	272.8080	15.20682	340.6645
#1	-.010529	.0023917	-.000259	-.000117	-.001126	-.026814	-.000203
#2	-.039680	.0011289	.000007	.000350	.001293	-.022262	.000136
#3	.046600	.0026408	-.000335	-.000551	.001405	-.019937	.000287

Reviewed By:Sagar
On:11/26/2025
12:17:04 PM
Inst Id :P4
LB :LB138017

Sample Name: CCB07 Acquired: 11/21/2025 19:35:30 Type: Unk
Method: 6010-200.7 NEW(v377) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.005207	-.003499	.0000794
Stddev	.002163	.001268	.0000753
%RSD	41.53252	36.24634	94.91158
#1	-.007676	-.002075	-.000006
#2	-.004299	-.003917	.000110
#3	-.003647	-.004506	.000134

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2714.631	52052.07	9271.385	2588.509	4903.998
Stddev	5.387	244.15	34.189	14.061	11.138
%RSD	.1984287	.4690406	.3687611	.5432053	.2271310
#1	2716.903	51827.16	9251.326	2573.894	4906.967
#2	2718.509	52311.73	9310.862	2601.941	4913.351
#3	2708.480	52017.34	9251.968	2589.693	4891.676

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB170663

SOP ID : M3010A-Digestion-17

SDG No : N/A

Matrix : WATER

Pippete ID: ICP A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #1 2. N/A

Start Digest Date: 11/20/2025 **Time :** 10:35 **Temp :** 96 °C

End Digest Date: 11/20/2025 **Time :** 13:37 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SKJ.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6209
LFS-2	0.25	M6201
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	M6187
1:1 HCL	5.00	MP87148
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 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/20/25 14:37	SKJ met dig	SJ (metals Lab)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB170663

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB170663BL	PBW663	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	20
PB170663BS	LCS663	<2	50	25	Colorless	Colorless	Clear	Clear	M6209,M6201	21
Q3687-01MS	N43502MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6209,M6201	24
Q3687-01MSD	N43502MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6209,M6201	25
Q3687-01DUP	N43502DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	23
Q3687-01	N43502	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	22
Q3690-01	RW8-SP100-20251118	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	26
Q3690-02	RW8-SP303-20251118	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	27

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB170663 **WorkList ID :** 193253 **Department :** Digestion **Date :** 11-20-2025 09:57:04

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3687-01	N43502	Water	Metals ICP-TAL	1:1 HNO3 to pH < 2	PSEG03	D41	11/19/2025	6010D
Q3690-01	RW8-SP100-20251118	Water	Metals Group4	1:1 HNO3 to pH < 2	TETR06	A11	11/18/2025	6010D
Q3690-02	RW8-SP303-20251118	Water	Metals Group4	1:1 HNO3 to pH < 2	TETR06	A11	11/18/2025	6010D

Date/Time 11/20/2025 10:10
Raw Sample Received by: Shg met dig
Raw Sample Relinquished by: CVP (SM)

Date/Time 11/20/2025 11:10
Raw Sample Received by: CVP (SM)
Raw Sample Relinquished by: Shg met dig

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 # LB138017

Review By	jaswal	Review On	11/25/2025 10:38:12 AM
Supervise By	Sagar	Supervise On	11/26/2025 12:17:04 PM

STD. NAME	STD REF.#
ICAL Standard	MP87637,MP87643,MP87641,MP87640,MP87639,MP87638
ICV Standard	MP87644,MP87643
CCV Standard	MP87647
ICSA Standard	MP87645,MP87646
CRI Standard	MP87643
LCS Standard	
Chk Standard	MP87668,MP87648,MP87651,MP87649,MP87650

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	11/21/25 12:13		Jaswal	OK
2	S1	S1	CAL2	11/21/25 12:17		Jaswal	OK
3	S2	S2	CAL3	11/21/25 12:22		Jaswal	OK
4	S3	S3	CAL4	11/21/25 12:26		Jaswal	OK
5	S4	S4	CAL5	11/21/25 12:30		Jaswal	OK
6	S5	S5	CAL6	11/21/25 12:34		Jaswal	OK
7	ICV01	ICV01	ICV	11/21/25 13:00		Jaswal	OK
8	LLICV01	LLICV01	LLICV	11/21/25 13:09		Jaswal	OK
9	ICB01	ICB01	ICB	11/21/25 13:13		Jaswal	OK
10	CRI01	CRI01	CRDL	11/21/25 13:17		Jaswal	OK
11	ICSA01	ICSA01	ICSA	11/21/25 13:22		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	11/21/25 13:26		Jaswal	OK
13	ICSADL	ICSADL	ICSA	11/21/25 13:30		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	11/21/25 13:34		Jaswal	OK
15	CCV01	CCV01	CCV	11/21/25 13:44		Jaswal	OK
16	CCB01	CCB01	CCB	11/21/25 13:48		Jaswal	OK
17	PB170660BL	PB170660BL	MB	11/21/25 13:52		Jaswal	OK
18	PB170660BS	PB170660BS	LCS	11/21/25 13:57		Jaswal	OK

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Supervise By	Sagar	Supervise On	11/26/2025 12:17:04 PM

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ICAL Standard	MP87637,MP87643,MP87641,MP87640,MP87639,MP87638
ICV Standard	MP87644,MP87643
CCV Standard	MP87647
ICSA Standard	MP87645,MP87646
CRI Standard	MP87643
LCS Standard	
Chk Standard	MP87668,MP87648,MP87651,MP87649,MP87650

19	PB170663BL	PB170663BL	MB	11/21/25 14:01		Jaswal	OK
20	PB170663BS	PB170663BS	LCS	11/21/25 14:05		Jaswal	OK
21	Q3677-01	COMP-1	SAM	11/21/25 14:09		Jaswal	OK
22	Q3678-01	COMPOSITE-STONE	SAM	11/21/25 14:14		Jaswal	OK
23	Q3681-01	ETGI-354	SAM	11/21/25 14:18		Jaswal	OK
24	Q3681-01DUP	ETGI-354DUP	DUP	11/21/25 14:22		Jaswal	OK
25	Q3681-01L	ETGI-354L	SD	11/21/25 14:26		Jaswal	OK
26	Q3681-01MS	ETGI-354MS	MS	11/21/25 14:30		Jaswal	OK
27	CCV02	CCV02	CCV	11/21/25 14:48		Jaswal	OK
28	CCB02	CCB02	CCB	11/21/25 14:52		Jaswal	OK
29	Q3681-01MSD	ETGI-354MSD	MSD	11/21/25 14:56		Jaswal	OK
30	Q3681-01A	ETGI-354A	PS	11/21/25 15:01	0.1ML EACH M6008,M6017-10ML SAMPLE	Jaswal	OK
31	Q3686-01	FAIRLAWN-GRAVEL	SAM	11/21/25 15:05		Jaswal	OK
32	Q3676-01	OUTFALL-DSN-001	SAM	11/21/25 15:09		Jaswal	OK
33	Q3676-01DUP	OUTFALL-DSN-001D	DUP	11/21/25 15:13		Jaswal	OK
34	Q3676-01L	OUTFALL-DSN-001L	SD	11/21/25 15:17		Jaswal	OK
35	Q3676-01MS	OUTFALL-DSN-001M	MS	11/21/25 15:21		Jaswal	OK
36	Q3676-01MSD	OUTFALL-DSN-001M	MSD	11/21/25 15:25		Jaswal	OK

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Supervise By	Sagar	Supervise On	11/26/2025 12:17:04 PM

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ICV Standard	MP87644,MP87643
CCV Standard	MP87647
ICSA Standard	MP87645,MP87646
CRI Standard	MP87643
LCS Standard	
Chk Standard	MP87668,MP87648,MP87651,MP87649,MP87650

37	Q3676-01A	OUTFALL-DSN-001A	PS	11/21/25 15:30	0.1ML EACH M6008,M6017-10ML SAMPLE	Jaswal	OK
38	Q3676-04	OUTFALL-DSN-002	SAM	11/21/25 15:34		Jaswal	OK
39	CCV03	CCV03	CCV	11/21/25 15:38		Jaswal	OK
40	CCB03	CCB03	CCB	11/21/25 15:42		Jaswal	OK
41	Q3687-01	N43502	SAM	11/21/25 15:47		Jaswal	OK
42	Q3687-01DUP	N43502DUP	DUP	11/21/25 15:51		Jaswal	OK
43	Q3687-01L	N43502L	SD	11/21/25 15:55		Jaswal	OK
44	Q3687-01MS	N43502MS	MS	11/21/25 15:59		Jaswal	OK
45	Q3687-01MSD	N43502MSD	MSD	11/21/25 16:03		Jaswal	OK
46	Q3687-01A	N43502A	PS	11/21/25 16:07	0.1ML EACH M6008,M6017-10ML SAMPLE	Jaswal	OK
47	Q3690-01	RW8-SP100-2025111	SAM	11/21/25 16:11		Jaswal	OK
48	Q3690-02	RW8-SP303-2025111	SAM	11/21/25 16:15		Jaswal	OK
49	PB170683BL	PB170683BL	MB	11/21/25 16:20		Jaswal	OK
50	PB170683BS	PB170683BS	LCS	11/21/25 16:24		Jaswal	OK
51	CCV04	CCV04	CCV	11/21/25 16:28		Jaswal	OK
52	CCB04	CCB04	CCB	11/21/25 16:32		Jaswal	OK
53	LR-1	LR-1	HIGH STD	11/21/25 16:36		Jaswal	OK
54	LR-2	LR-2	HIGH STD	11/21/25 16:49		Jaswal	OK

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CCV Standard	MP87647
ICSA Standard	MP87645,MP87646
CRI Standard	MP87643
LCS Standard	
Chk Standard	MP87668,MP87648,MP87651,MP87649,MP87650

55	LR-3	LR-3	HIGH STD	11/21/25 17:16		Jaswal	OK
56	Q3678-02	COMPOSITE-STONE	SAM	11/21/25 17:20		Jaswal	OK
57	Q3697-01	MOO-25-0331	SAM	11/21/25 17:25		Jaswal	OK
58	Q3697-02	MOO-25-0332	SAM	11/21/25 17:29		Jaswal	OK
59	Q3697-03	MOO-25-0333	SAM	11/21/25 17:33		Jaswal	OK
60	Q3697-03DUP	MOO-25-0333DUP	DUP	11/21/25 17:38		Jaswal	OK
61	Q3697-03L	MOO-25-0333L	SD	11/21/25 17:42		Jaswal	OK
62	Q3697-03MS	MOO-25-0333MS	MS	11/21/25 17:46		Jaswal	OK
63	CCV05	CCV05	CCV	11/21/25 17:50		Jaswal	OK
64	CCB05	CCB05	CCB	11/21/25 17:55		Jaswal	OK
65	Q3697-03MSD	MOO-25-0333MSD	MSD	11/21/25 17:59		Jaswal	OK
66	Q3697-03A	MOO-25-0333A	PS	11/21/25 18:03	0.1ML EACH M6008,M6017-10ML SAMPLE	Jaswal	OK
67	PB170645TB	PB170645TB	MB	11/21/25 18:07		Jaswal	OK
68	PB170679BL	PB170679BL	MB	11/21/25 18:12		Jaswal	OK
69	PB170679BS	PB170679BS	LCS	11/21/25 18:16		Jaswal	OK
70	Q3699-01	TR-04-112025	SAM	11/21/25 18:20		Jaswal	OK
71	Q3699-03	TR-06-112025	SAM	11/21/25 18:24		Jaswal	OK
72	Q3699-03DUP	TR-06-112025DUP	DUP	11/21/25 18:28		Jaswal	OK
73	Q3699-03L	TR-06-112025L	SD	11/21/25 18:33		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB138017

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Supervise By	Sagar	Supervise On	11/26/2025 12:17:04 PM

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CCV Standard	MP87647
ICSA Standard	MP87645,MP87646
CRI Standard	MP87643
LCS Standard	
Chk Standard	MP87668,MP87648,MP87651,MP87649,MP87650

74	Q3699-03MS	TR-06-112025MS	MS	11/21/25 18:37		Jaswal	OK
75	CCV06	CCV06	CCV	11/21/25 18:41		Jaswal	OK
76	CCB06	CCB06	CCB	11/21/25 18:45		Jaswal	OK
77	Q3699-03MSD	TR-06-112025MSD	MSD	11/21/25 18:49		Jaswal	OK
78	Q3699-03A	TR-06-112025A	PS	11/21/25 18:53	0.1ML EACH M6008,M6017-10ML SAMPLE	Jaswal	OK
79	PB170685BL	PB170685BL	MB	11/21/25 18:57		Jaswal	OK
80	PB170685BS	PB170685BS	LCS	11/21/25 19:02		Jaswal	OK
81	Q3700-04	EFF-WW	SAM	11/21/25 19:06		Jaswal	OK
82	Q3700-04DUP	EFF-WWDUP	DUP	11/21/25 19:10		Jaswal	OK
83	Q3700-04L	EFF-WWL	SD	11/21/25 19:14		Jaswal	OK
84	Q3700-05	EFF-WWMS	MS	11/21/25 19:19		Jaswal	OK
85	Q3700-06	EFF-WWMSD	MSD	11/21/25 19:23		Jaswal	OK
86	Q3700-04A	EFF-WWA	PS	11/21/25 19:27	0.1ML EACH M6008,M6017-10ML SAMPLE	Jaswal	OK
87	CCV07	CCV07	CCV	11/21/25 19:31		Jaswal	OK
88	CCB07	CCB07	CCB	11/21/25 19:35		Jaswal	OK

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

Prep Standard - Chemical Standard Summary

Order ID : Q3690

Test : Metals Group4

Prepbatch ID : PB170663,

Sequence ID/Qc Batch ID: LB138017,LB138017,

Standard ID :
MP87148,MP87637,MP87638,MP87639,MP87640,MP87641,MP87642,MP87643,MP87644,MP87645,MP87646,MP87647,MP87648,MP87649,MP87650,MP87651,MP87668,

Chemical ID :
M5467,M5658,M5697,M5748,M5798,M5799,M5800,M5801,M5814,M5820,M5962,M5969,M5971,M5979,M5985,M5998,M6021,M6023,M6026,M6027,M6028,M6030,M6032,M6058,M6077,M6086,M6128,M6137,M6140,M6142,M6144,M6145,M6151,M6159,M6160,M6163,M6164,M6165,M6171,M6174,M6176,M6177,M6178,M6179,M6182,M6184,M6187,M6200,M6201,M6209,W3112,

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Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP87148	09/09/2025	02/17/2026	Sagar Kanani	None	None	Sarabjit Jaswal 09/10/2025

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)	MP87637	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 125.00000ml of M6200 + 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)	MP87638	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

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 MP87637 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP87639	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 50.00000ml of MP87637 + 50.00000ml of MP87638 = 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	MP87640	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 25.00000ml of MP87638 + 75.00000ml of MP87637 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP87641	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 16.00000ml of MP87638 + 184.00000ml of MP87637 = 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	MP87642	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6140 + 0.05000ml of M6159 + 0.06000ml of M6177 + 0.10000ml of M5697 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5969 + 0.10000ml of M5971 + 0.10000ml of M6128 + 0.10000ml of M6176 + 0.15000ml of M5800 + 0.20000ml of M5799 + 0.20000ml of M5979 + 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 M6086 + 1.00000ml of M6142 + 1.00000ml of M6144 + 1.00000ml of M6171 + 1.00000ml of M6178 + 2.00000ml of M6137 + 89.03000ml of MP87637 = 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	MP87643	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 2.00000ml of MP87642 + 98.00000ml of MP87637 = 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
4163	NEW ICV-060925	MP87644	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 0.20000ml of M6058 + 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.60000ml of MP87637 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP87645	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 25.00000ml of M6182 + 225.00000ml of MP87637 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP87646	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 0.10000ml of M6077 + 10.00000ml of M6182 + 10.00000ml of M6184 + 79.90000ml of MP87637 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP87647	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 48.60000ml of MP87637 + 50.00000ml of MP87638 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP87648	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 200.00000ml of M6187 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4226	LR-2	MP87649	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 13.50000ml of M6140 + 9.00000ml of M6142 + 9.50000ml of M6159 + 18.00000ml of MP87637 = 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
4227	LR-3	MP87650	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 1.15000ml of M6026 + 1.25000ml of M5658 + 1.25000ml of M5748 + 1.50000ml of M6145 + 2.50000ml of M5697 + 2.50000ml of M6128 + 39.85000ml of MP87637 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4225	LR-1	MP87651	10/17/2025	11/28/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 11.50000ml of M6086 + 11.50000ml of M6144 + 11.50000ml of M6171 + 18.00000ml of MP87637 = 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
919	ICP AES INTERNAL STD	MP87668	10/17/2025	11/27/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/28/2025

FROM 1.00000ml of M6179 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6187 = Final Quantity: 2000.000 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.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ 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.	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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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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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.	58120 / Calcium, 500 ml, 10000 PPM	082324	08/23/2027	03/06/2025 / JANVI	10/14/2024 / jaswal	M6086

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.	58126 / Fe, 10000 PPM, 500 ml	011025	01/10/2028	06/25/2025 / Janvi	01/13/2025 / Jaswal	M6140

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

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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 #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

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

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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

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

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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 #
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	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	24D1562005	02/10/2026	09/11/2025 / Sagar	08/25/2025 / Sagar	M6200

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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-MEB743480	10/15/2026	10/15/2025 / Janvi	07/20/2025 / janvi	M6201

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	V2-MEB752149	10/15/2026	10/15/2025 / Janvi	07/20/2025 / Janvi	M6209

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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Certified Reference Material CRM

M6032

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**010924**				
Description:	**Barium (Ba)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

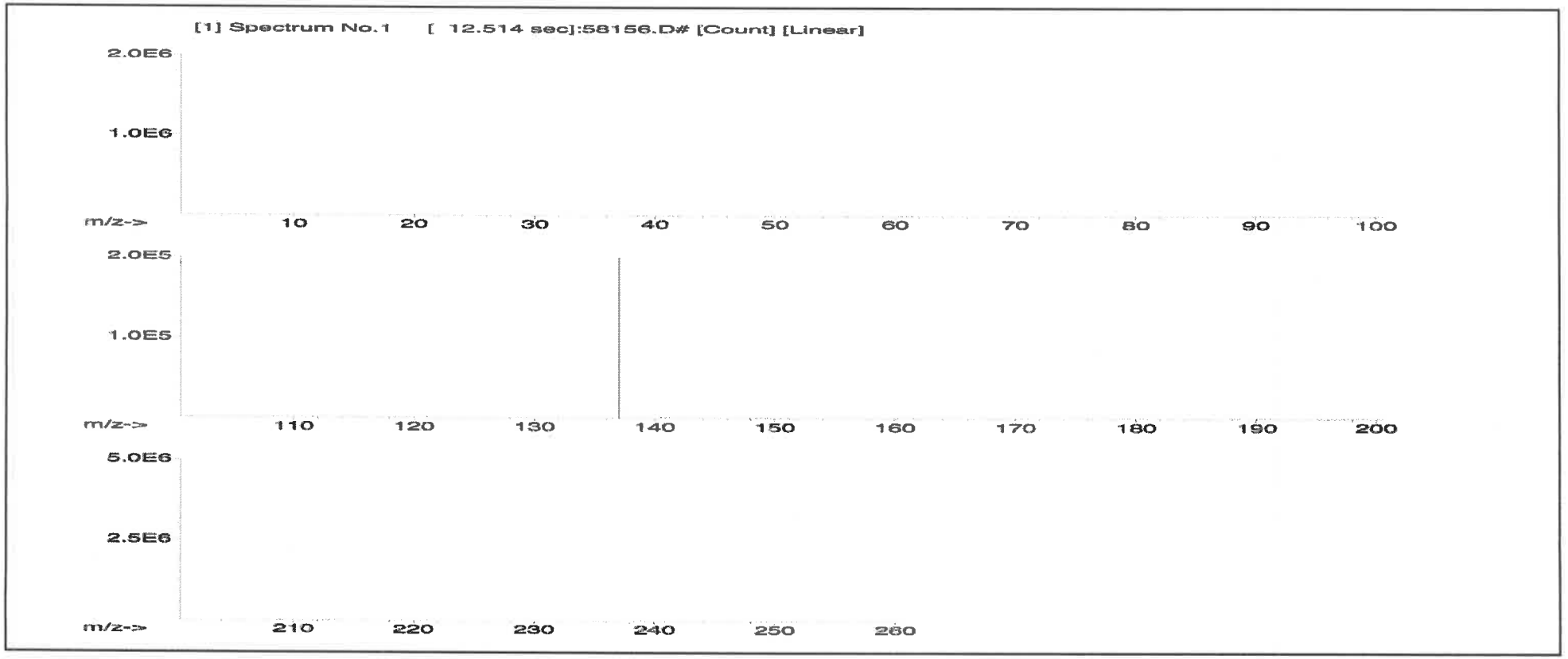
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



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Q3690-METALS

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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.
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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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Revd 10/14/2024 M6085/M6086/M6087

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 082324
Description: Calcium (Ca)

Expiration Date: 082327
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

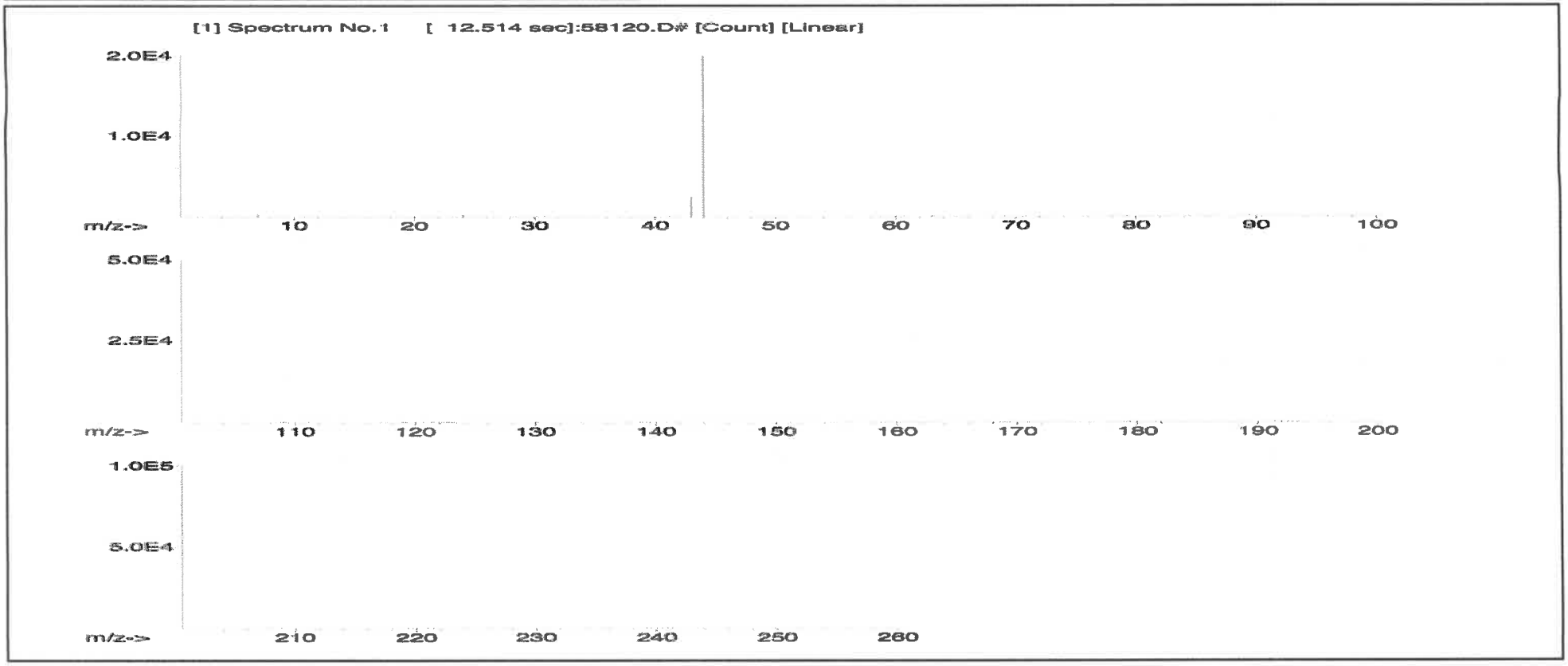
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 082324

Pedro Rentas
Reviewed By: Pedro L. Rentas 082324

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	100.2656	**10001.2**	**20.0**	471-34-1	5 mg/m3	ori-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.
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M6028

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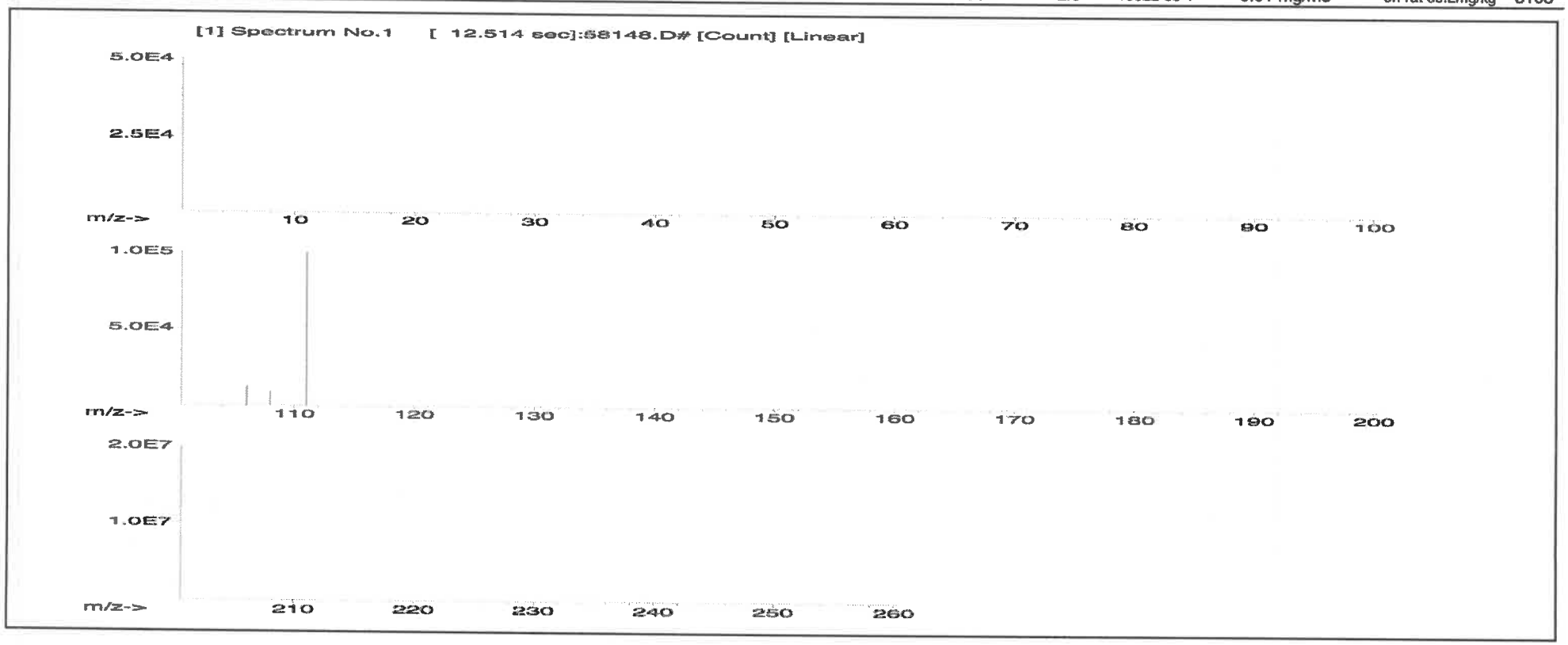
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CERTIFIED WEIGHT REPORT:

Part Number:	**57048**			**Lot #**	
Lot Number:	**070124**		**Solvent:**	24002546	Nitric Acid
Description:	**Cadmium (Cd)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady		
Formulated By:	Aleah O'Brady	070124
Pedro Rentas		
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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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:

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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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

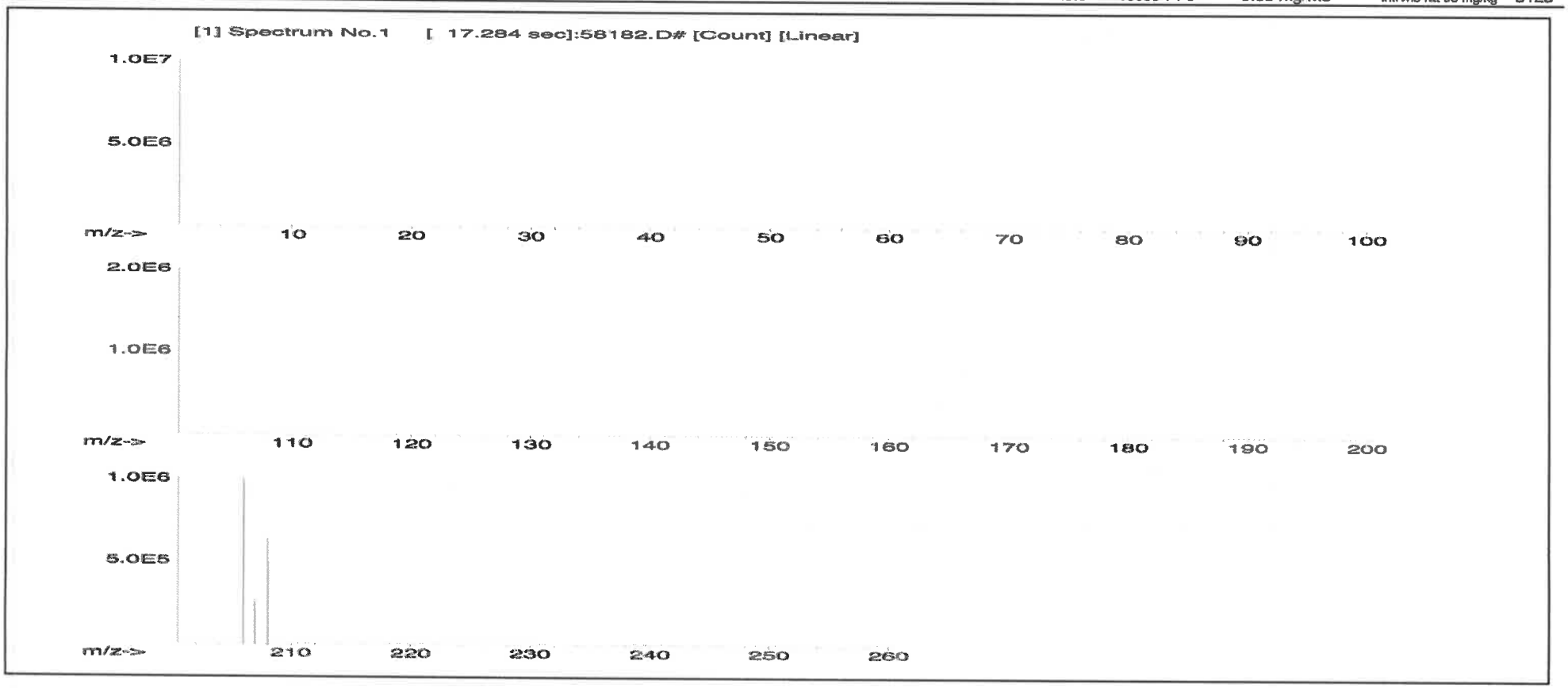
Weight shown below was diluted to (mL): 2000.02 ± 0.058 Flask Uncertainty

	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.

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M5467 R: 03/01/23 (LA)

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CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 020623
Description: Cerium (Ce)

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 1000.12 ± 0.058 Flask Uncertainty

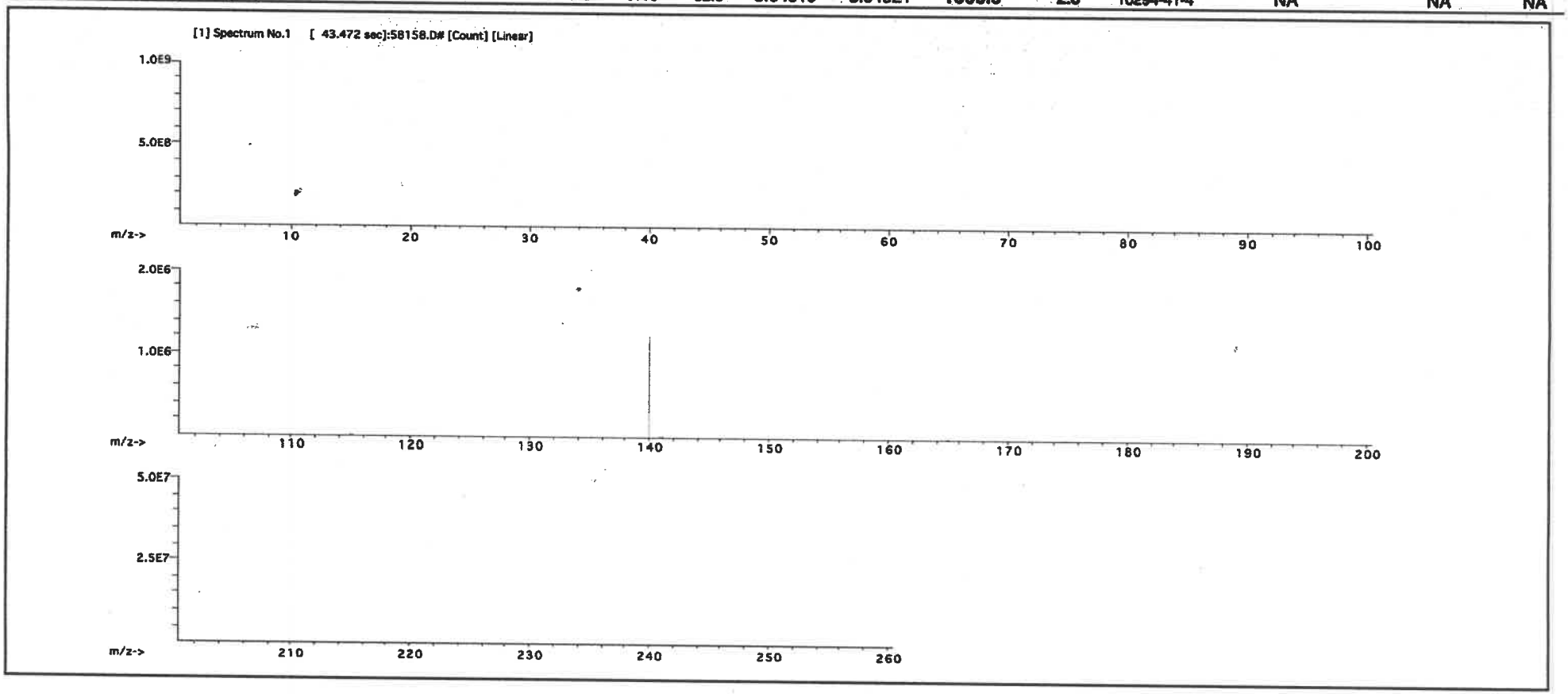
		Lot #	
Solvent:	21110221	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By: Lawrence Barry 020623

Reviewed By: Pedro L. Rentas 020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	**1000.0**	**2.0**	10294-41-4	NA	NA	NA



23689-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5658 R ! 8/25/23

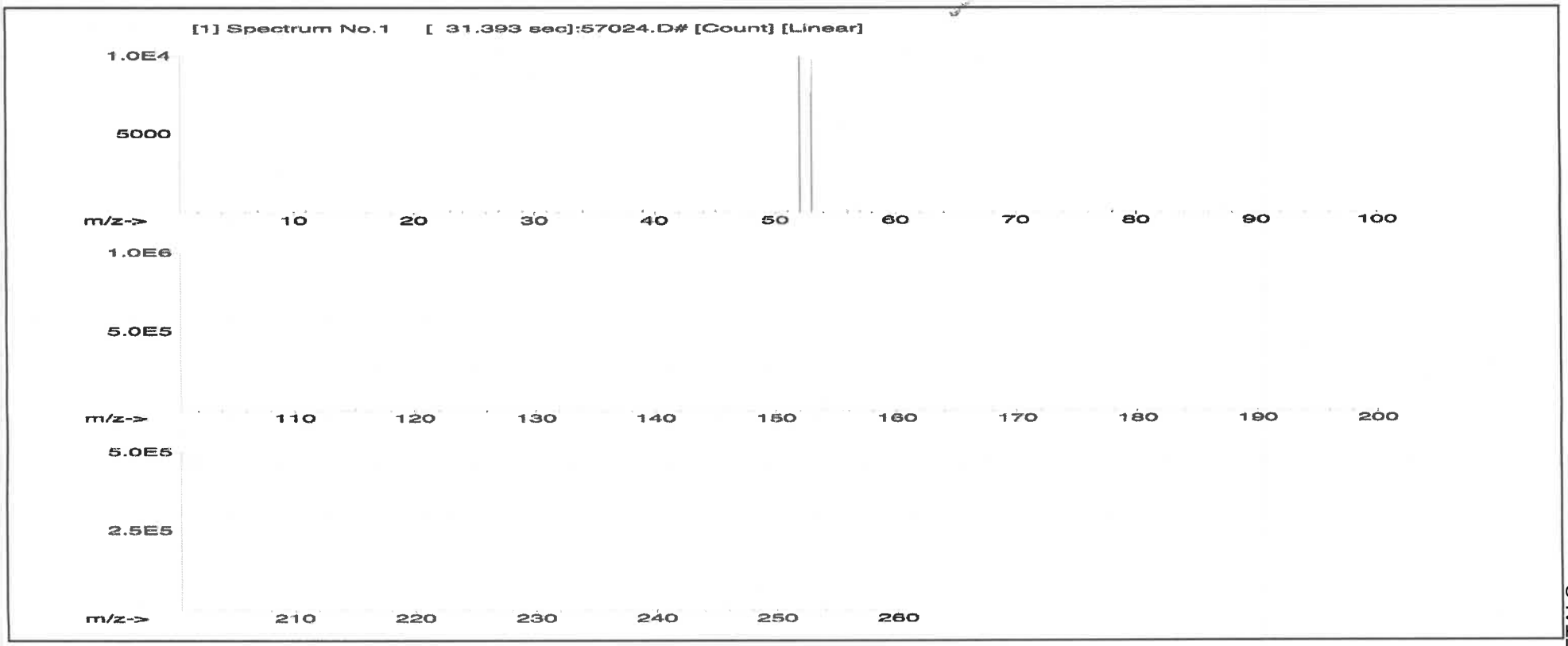
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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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.

* 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.
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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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M5697 R: 10/27/23

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CERTIFIED WEIGHT REPORT:

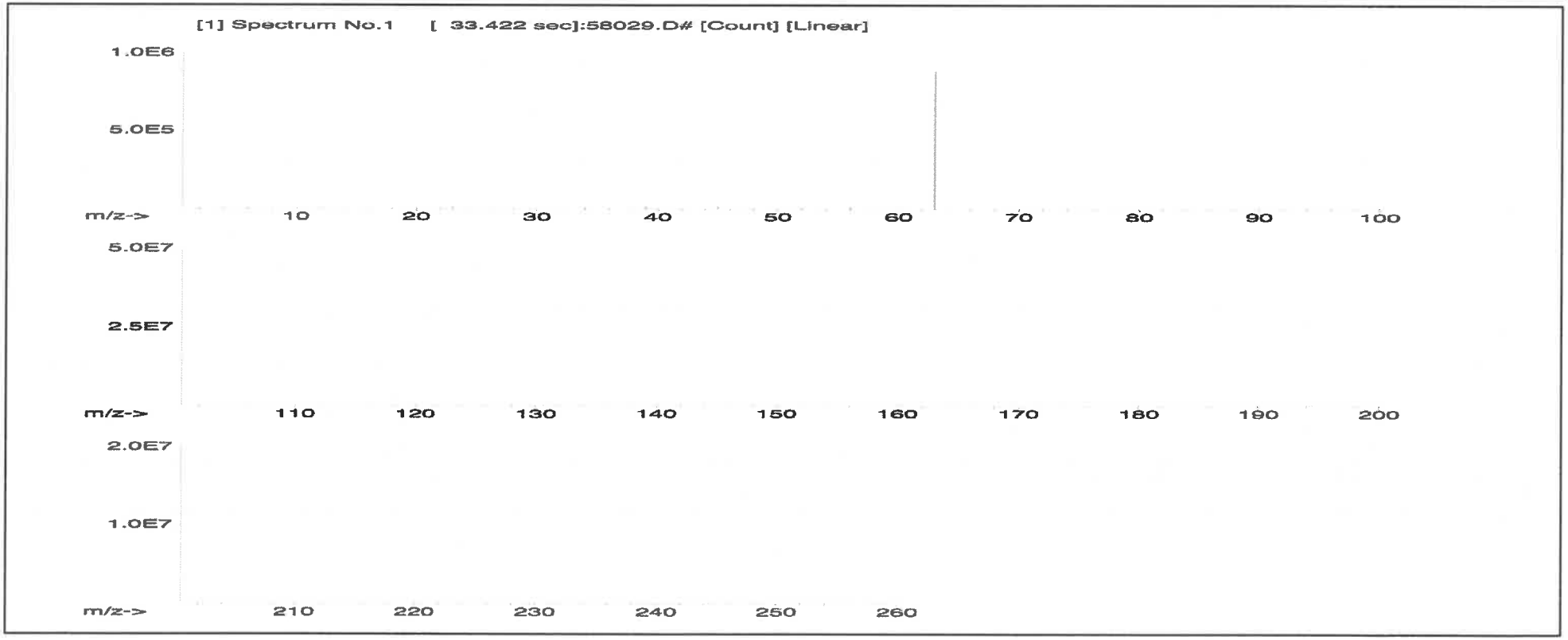
		Lot #	Solvent:
Part Number:	**58029**	24002546	Nitric Acid
Lot Number:	**102523**		
Description:	**Copper (Cu)**		

2.0%	40.0 (mL)	Nitric Acid	

Expiration Date:	102526		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05	Balance Uncertainty
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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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:

* 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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R: 12/20/23 M5748

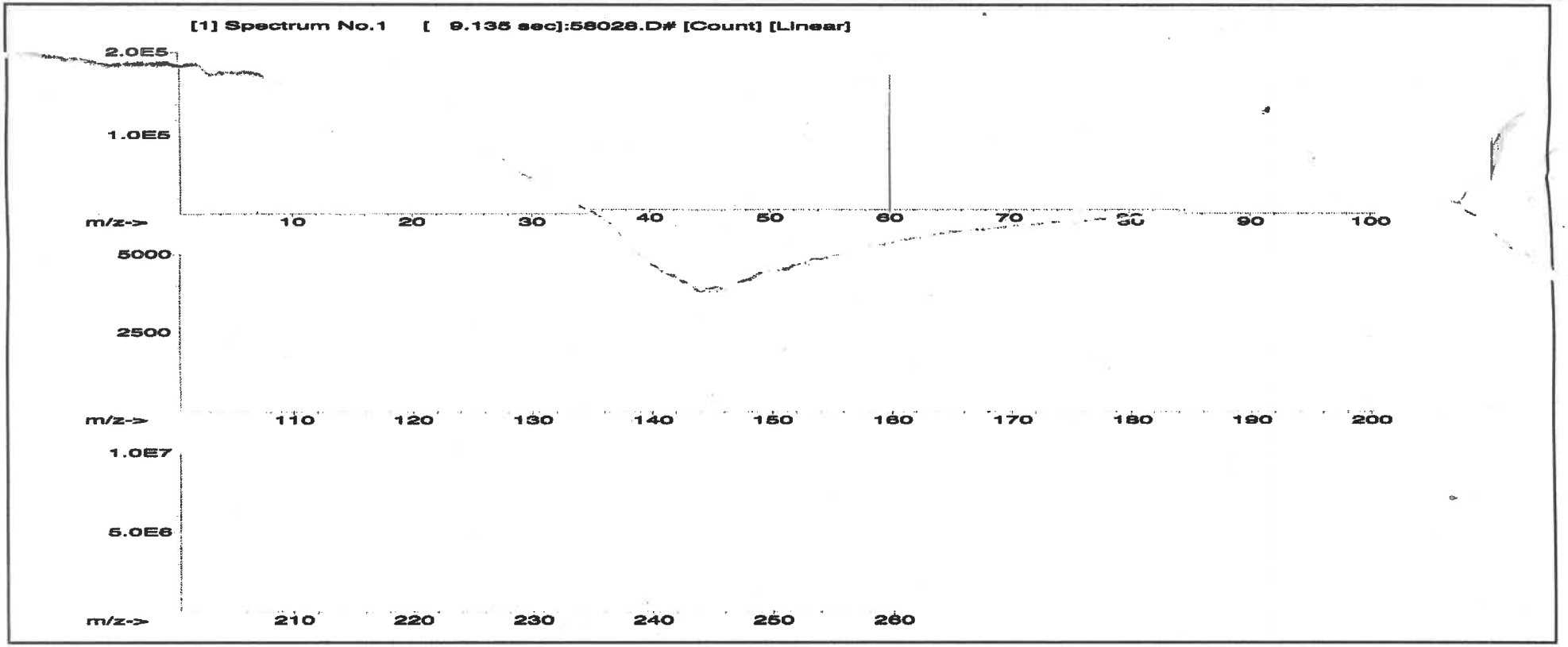
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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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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R: 02/09/24 M5798

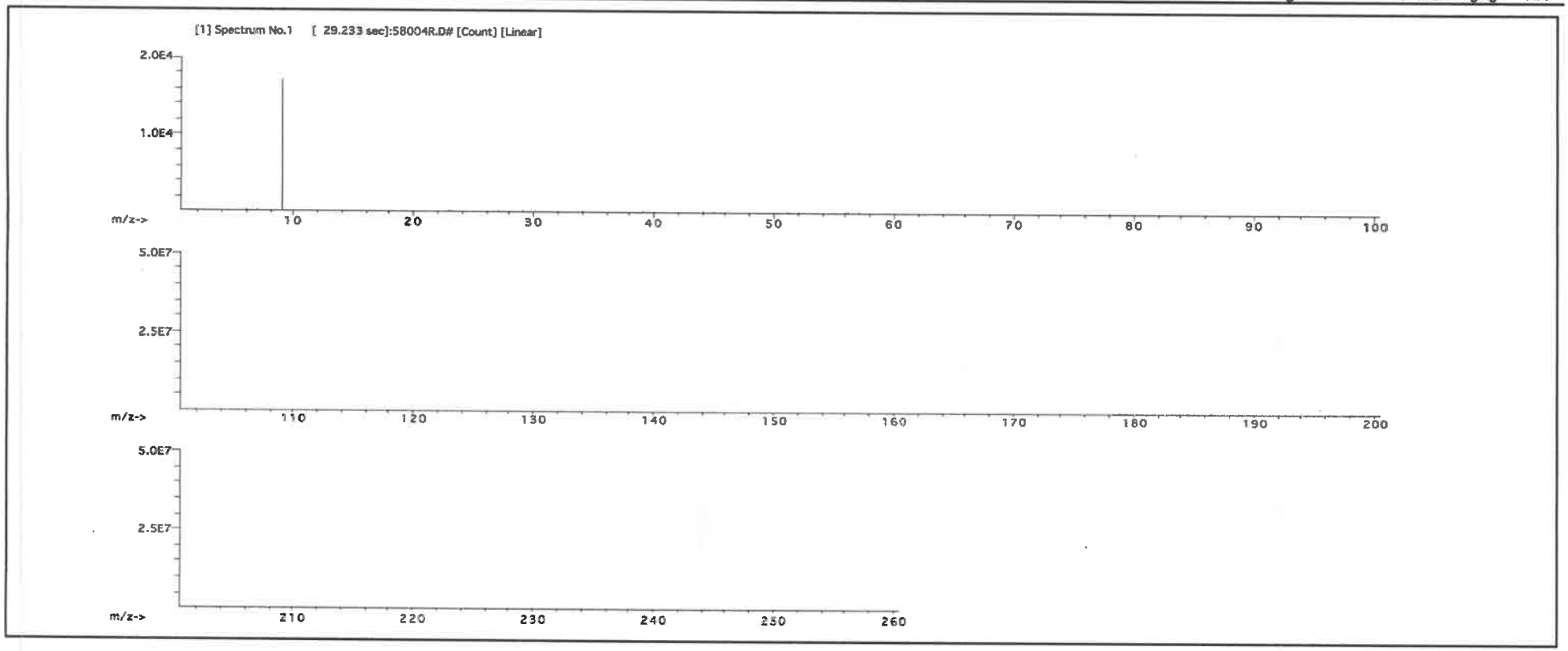
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57004**	24002546	Nitric Acid		
Lot Number:	**102523**				
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	102526				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Q3696-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R? 02/09/24 IV15799

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BA

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

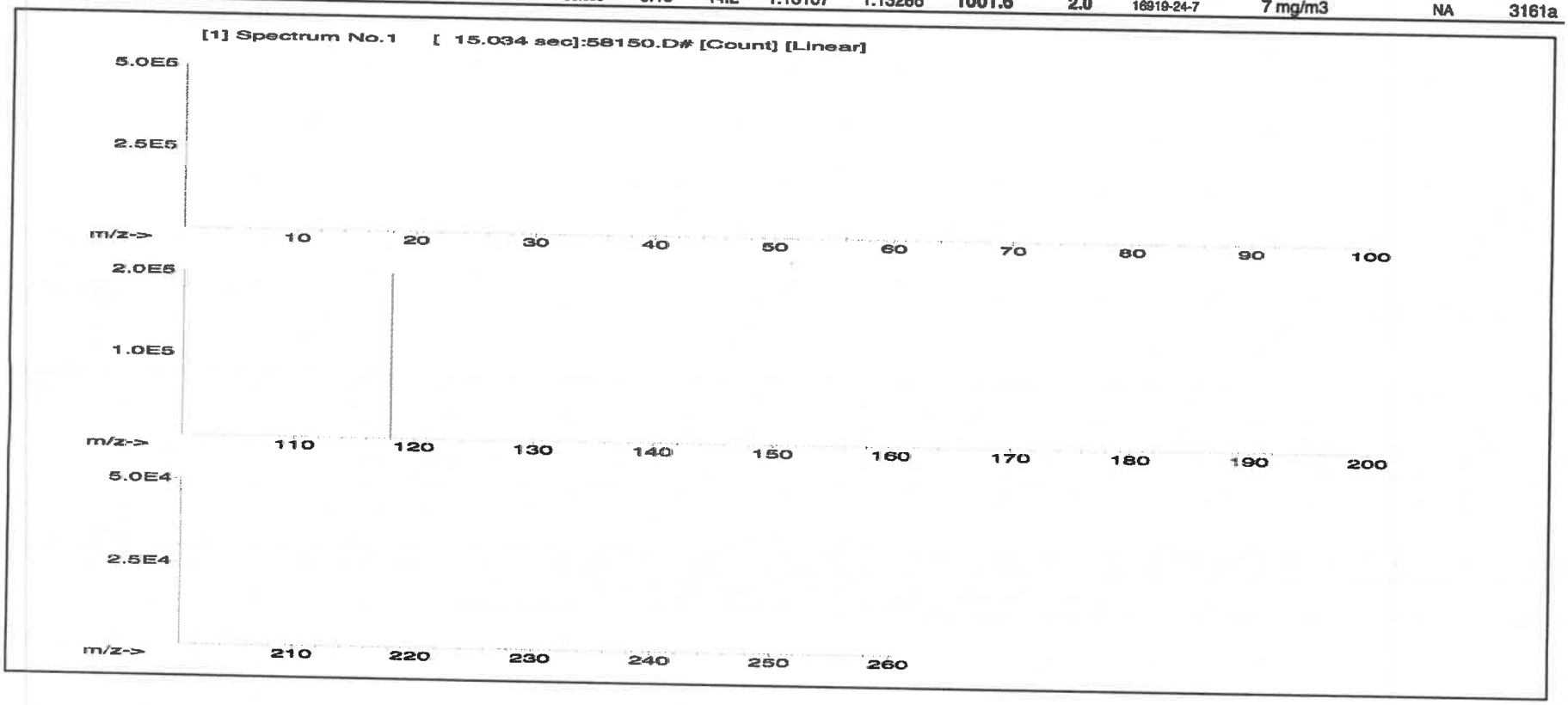
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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.
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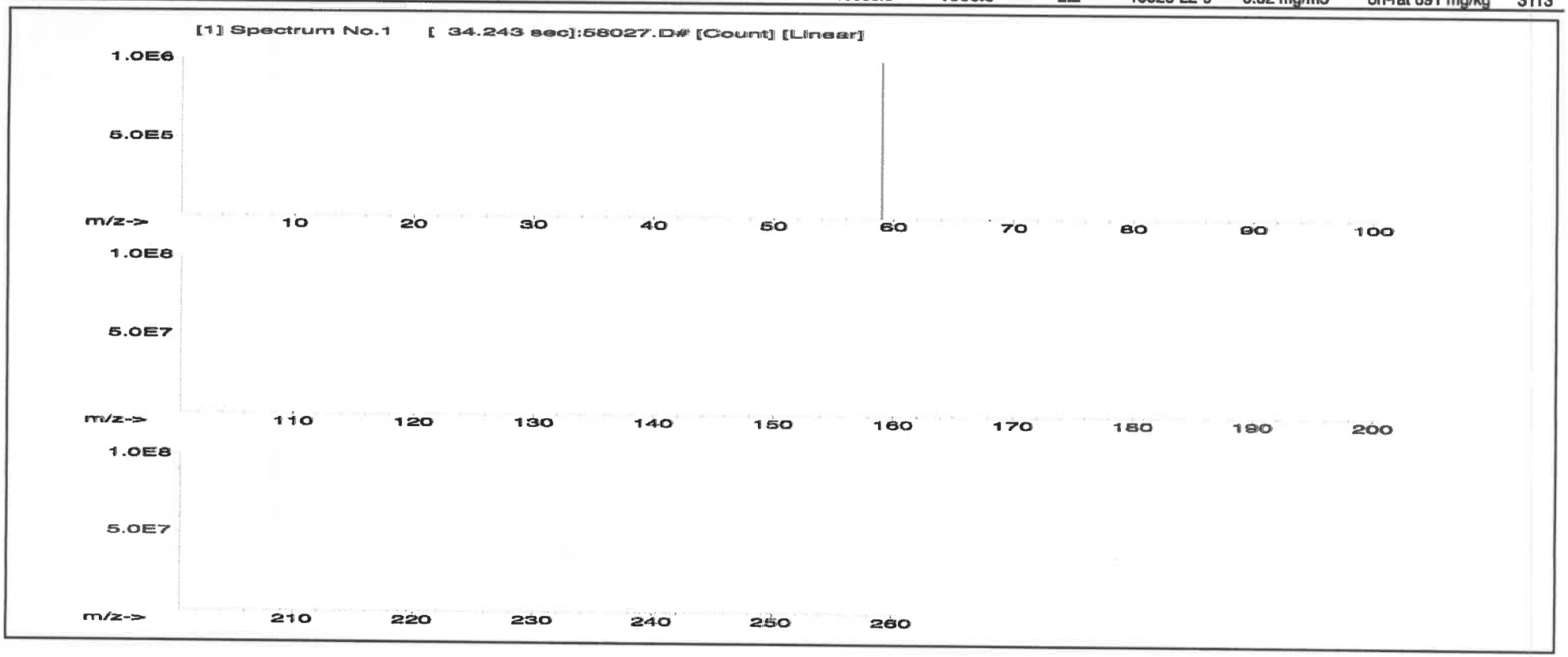
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



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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.

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R: 02/09/24 M5801 BH

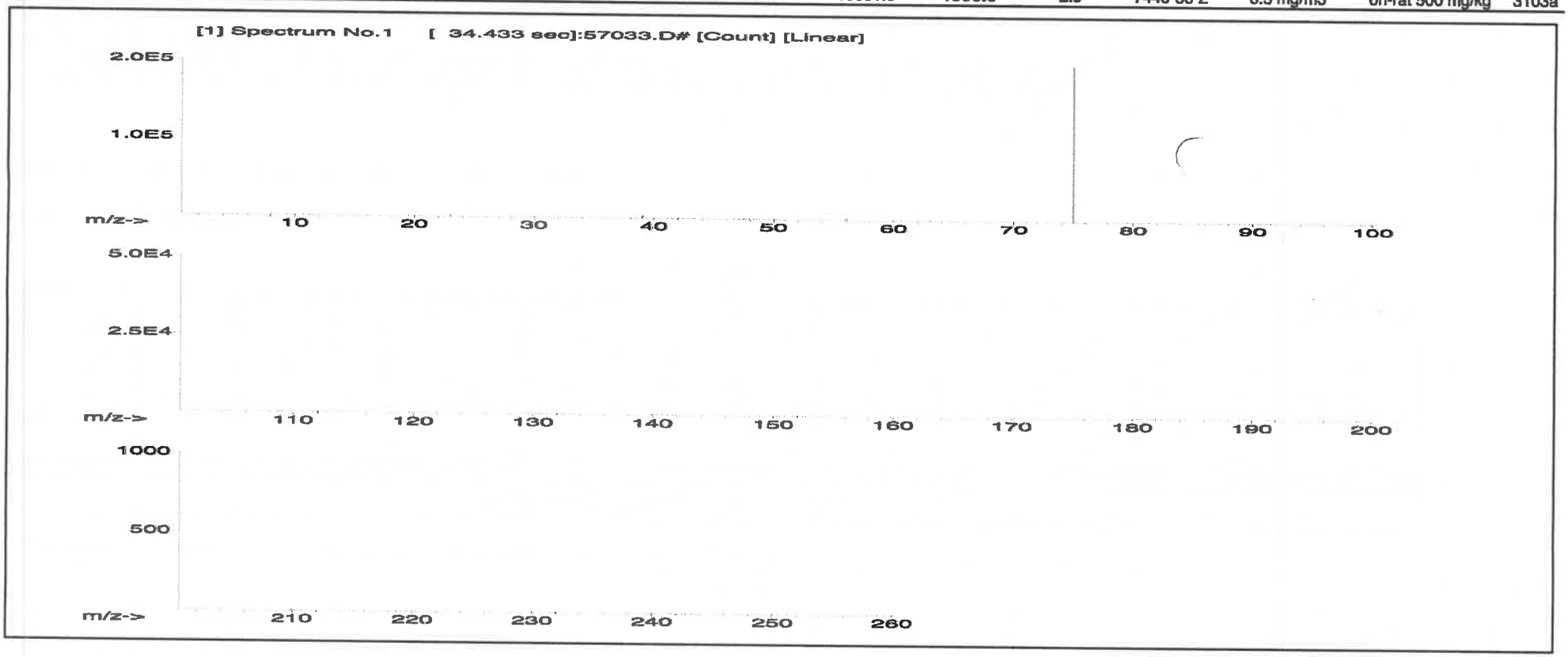
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CERTIFIED **WEIGHT** REPORT:

		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.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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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

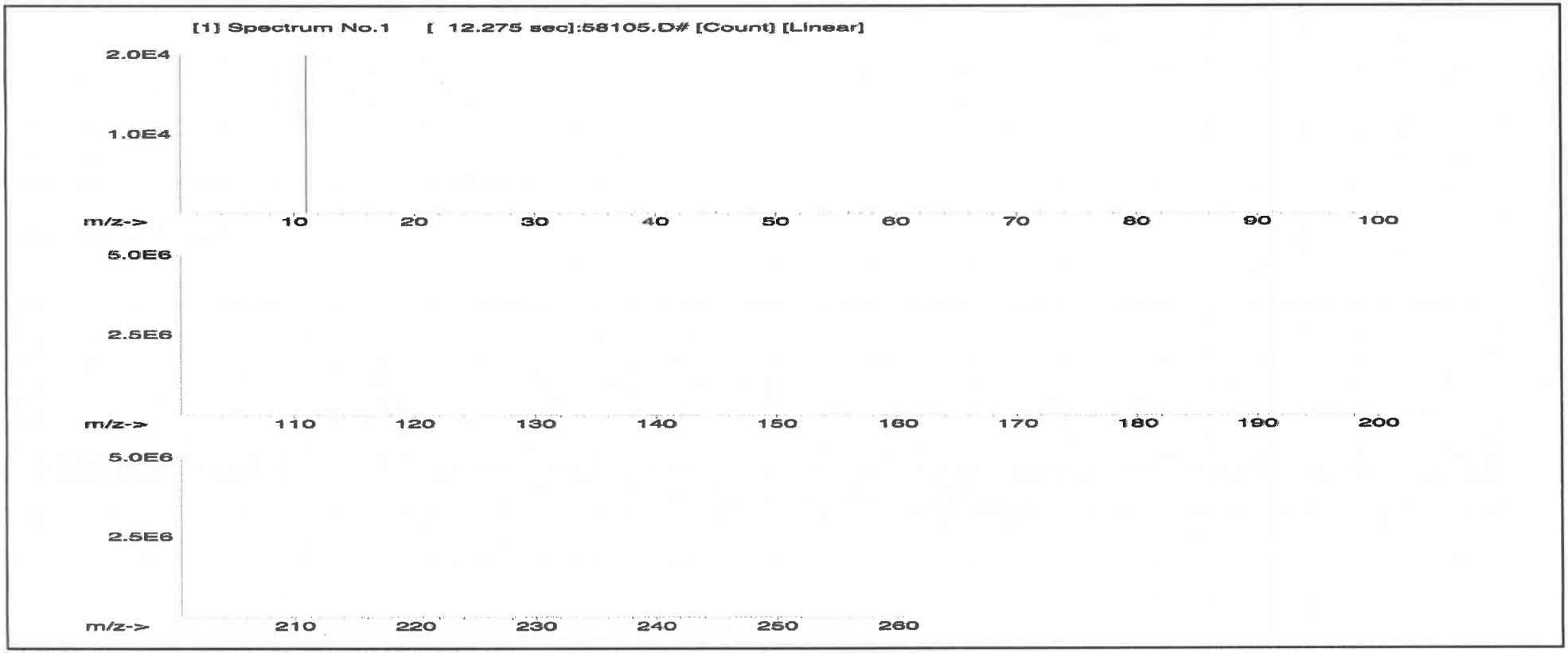
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

	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.
* 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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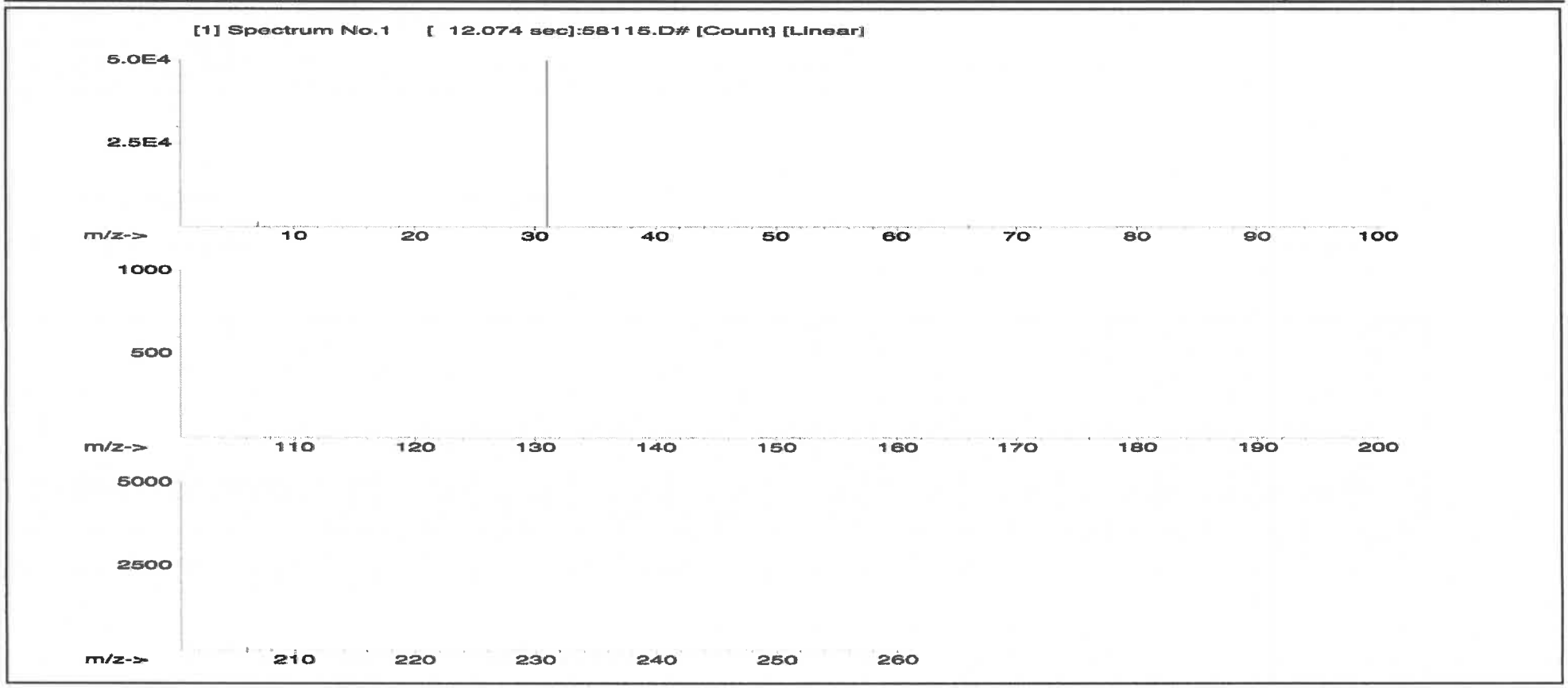
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CERTIFIED WEIGHT REPORT:

Part Number:	**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.

* 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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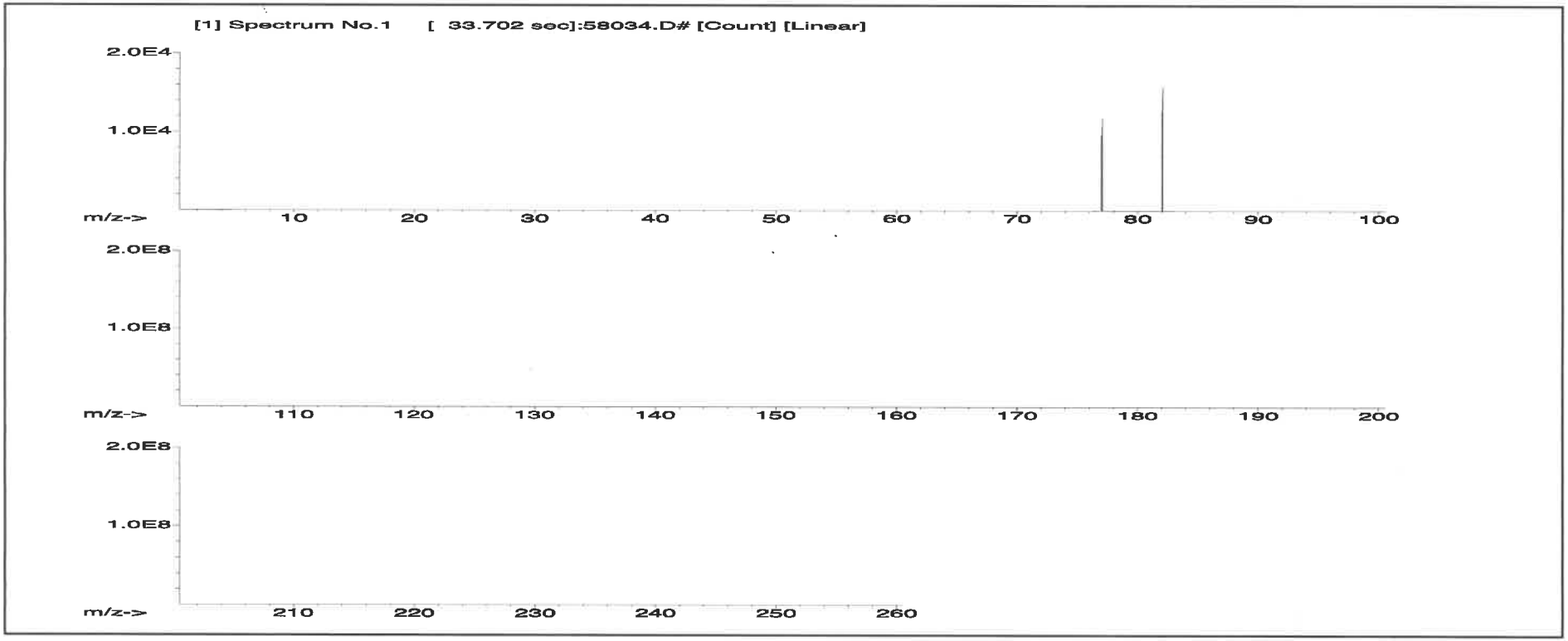
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**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:

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M5969 R: 06/11/24

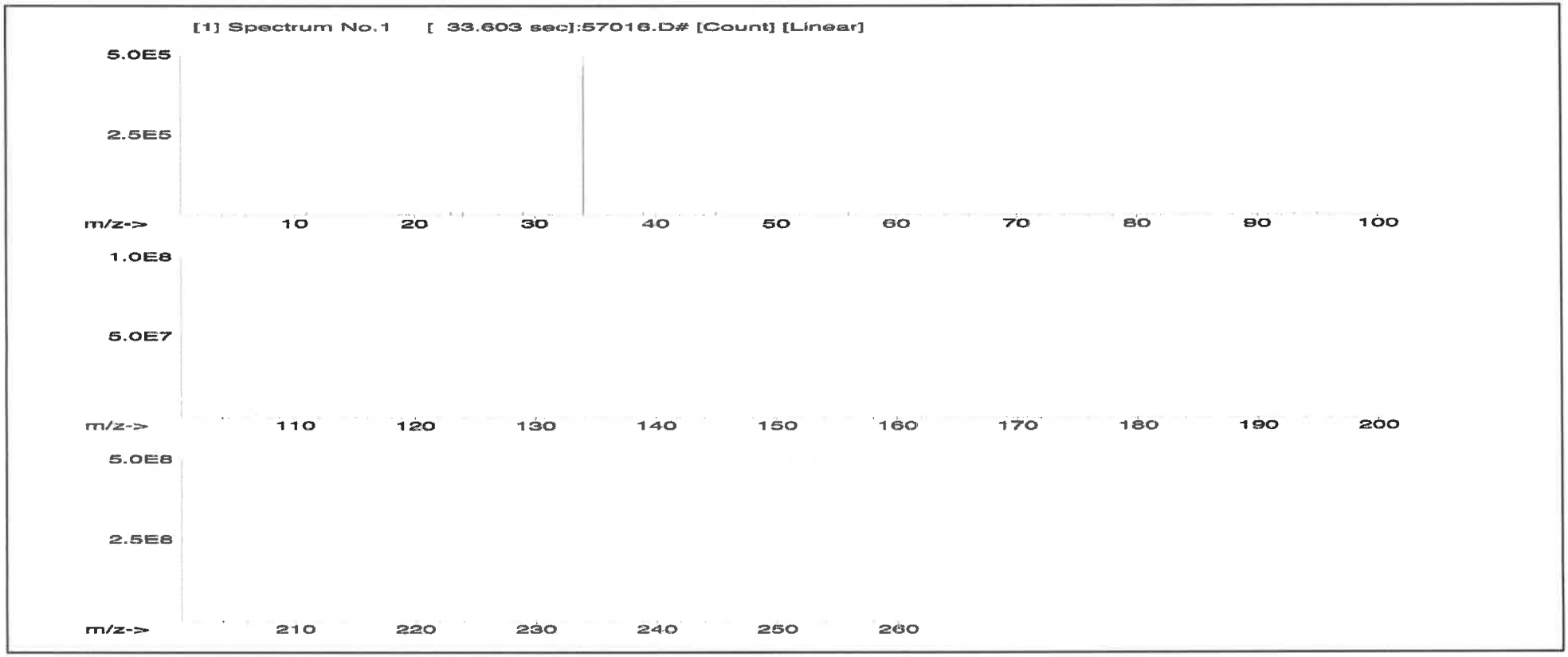
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CERTIFIED WEIGHT REPORT:

Part Number:	**57016**		**Solvent:**	**Lot #** 122923	ASTM Type 1 Water
Lot Number:	**122923**				
Description:	**Sulfur (S)**				
Expiration Date:	122926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Q3690-METALS

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M5970, M5971 R: 7/01/24

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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

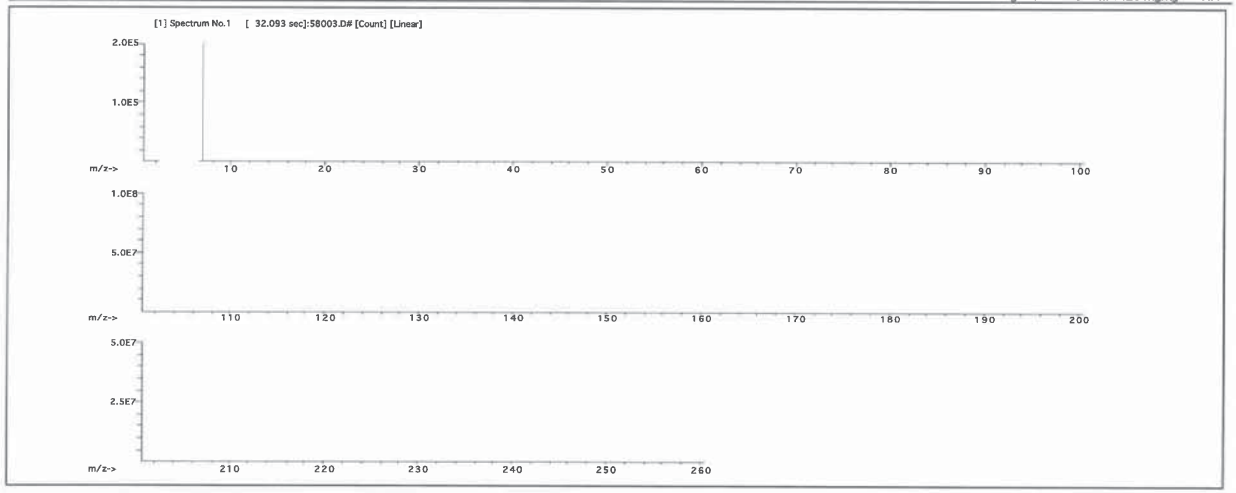
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.016 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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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.
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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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info@inorganicventures.com

R: 2/22/24

Certificate of Analysis

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:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium TI Metal
Starting Material:	
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 ($\pm$) = $u_{CRM/RM} = k\,(u^2_{Char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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:

$$X_{CRM/RM} = (\Sigma x_a)\,(n_{char\ a})$$

X_a = mean of Assay Method A with $n_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty ($\pm$) = $U_{CRM/RM} = k\,(u^2_{Char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{Char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form In Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 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: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 — **10021 ± 56 µg/mL**
ICP Assay NIST SRM 3124a Lot Number: 110516

Assay Method #2 — **10035 ± 25 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 — **10001 ± 33 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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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

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

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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R! 08/22/24 M6058, M6059

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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) 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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7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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:

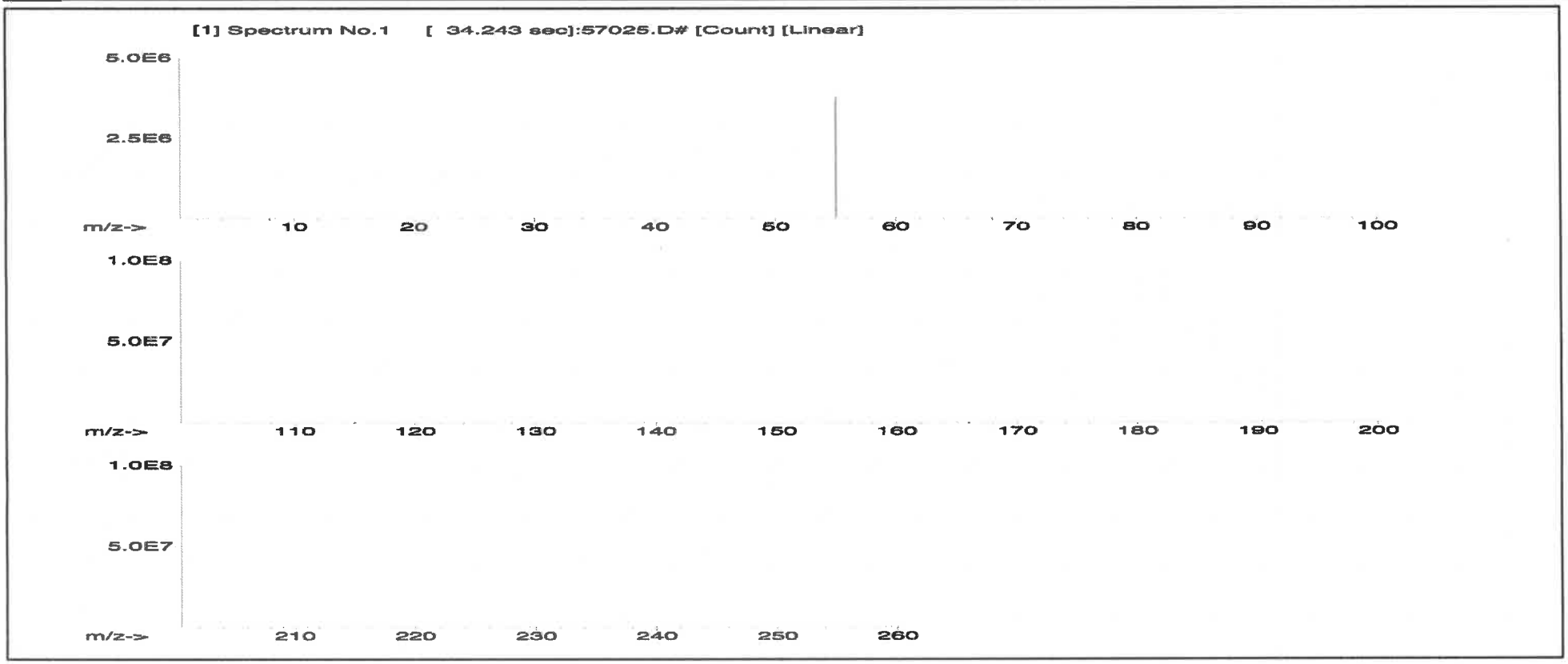
R->1/13/25
M6128

Part Number: 58025
Lot Number: 101124
Description: Manganese (Mn)
Expiration Date: 101127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.2 ± 0.10 Flask Uncertainty

		Lot #	
Solvent:	24002546	Nitric Acid	
	2%	80.0 (mL)	Nitric Acid
		5E-05	Balance Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 101124
Pedro Rentas
Reviewed By: Pedro L. Rentas 101124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



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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	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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M6137 R→10/3/24

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:	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

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www.absolutestandards.com

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CERTIFIED WEIGHT REPORT:

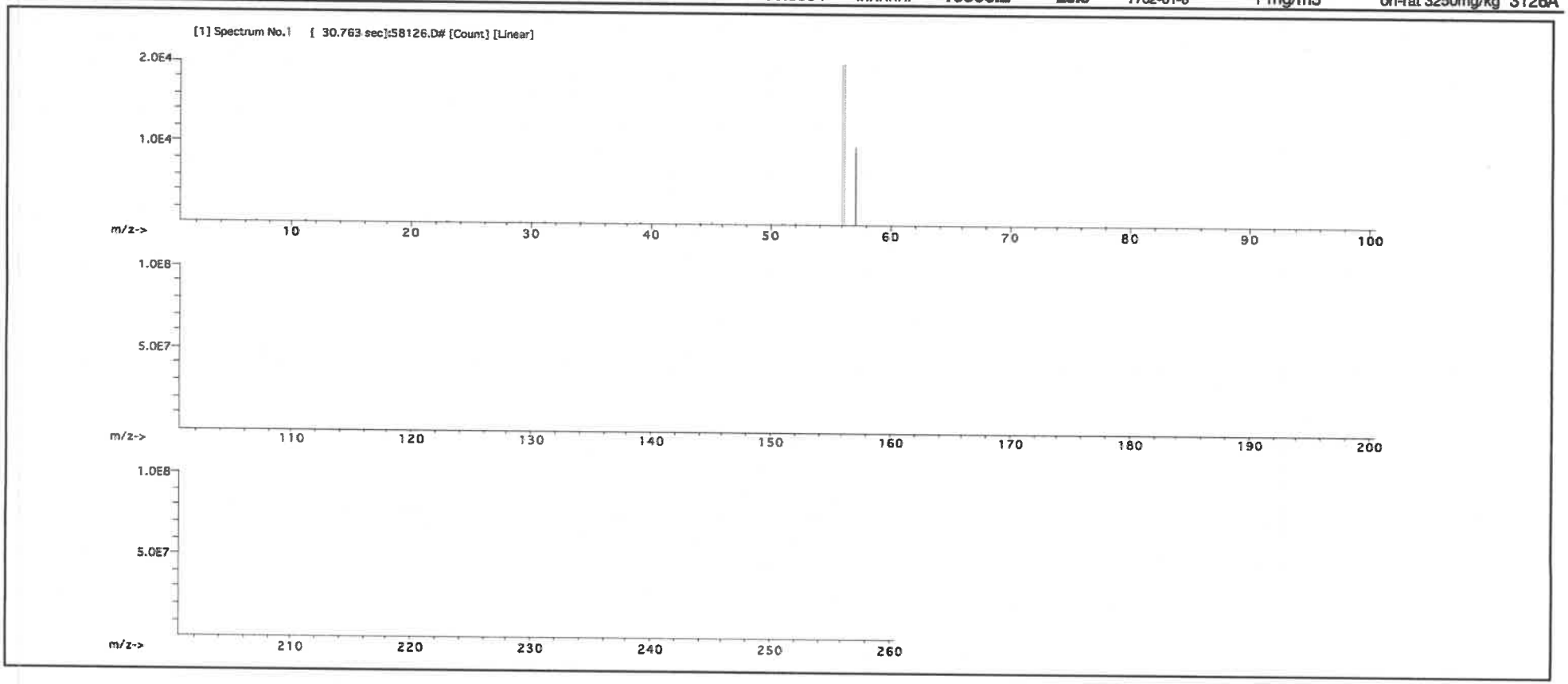
Part Number: 58126 R->1|B|2S
Lot Number: 011025
Description: Iron (Fe) M6140
Expiration Date: 011028
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

R-> 1/13/25

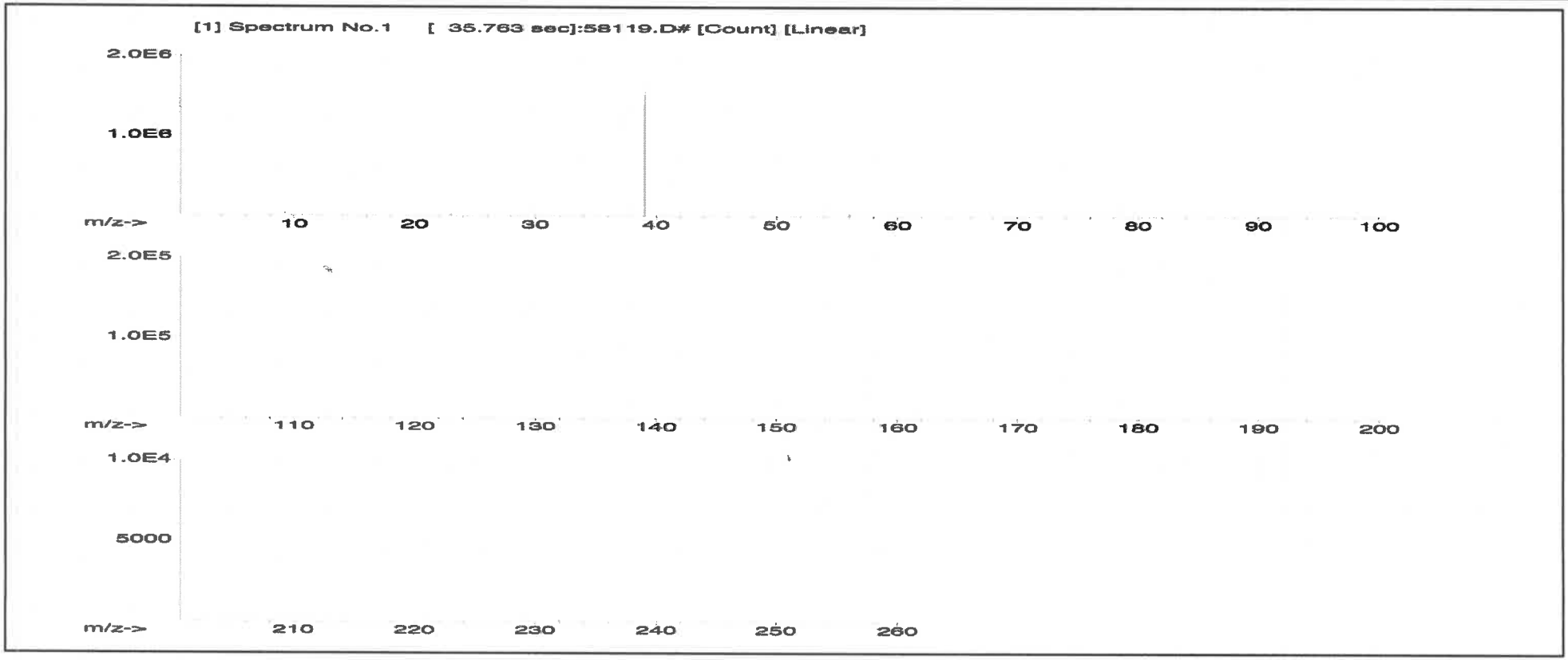
Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**	**Solvent:**	24002546	Nitric Acid	
Description:	**Potassium (K)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	103027				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.1	0.15	Flask Uncertainty		

M6141
M6142
M6143

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).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

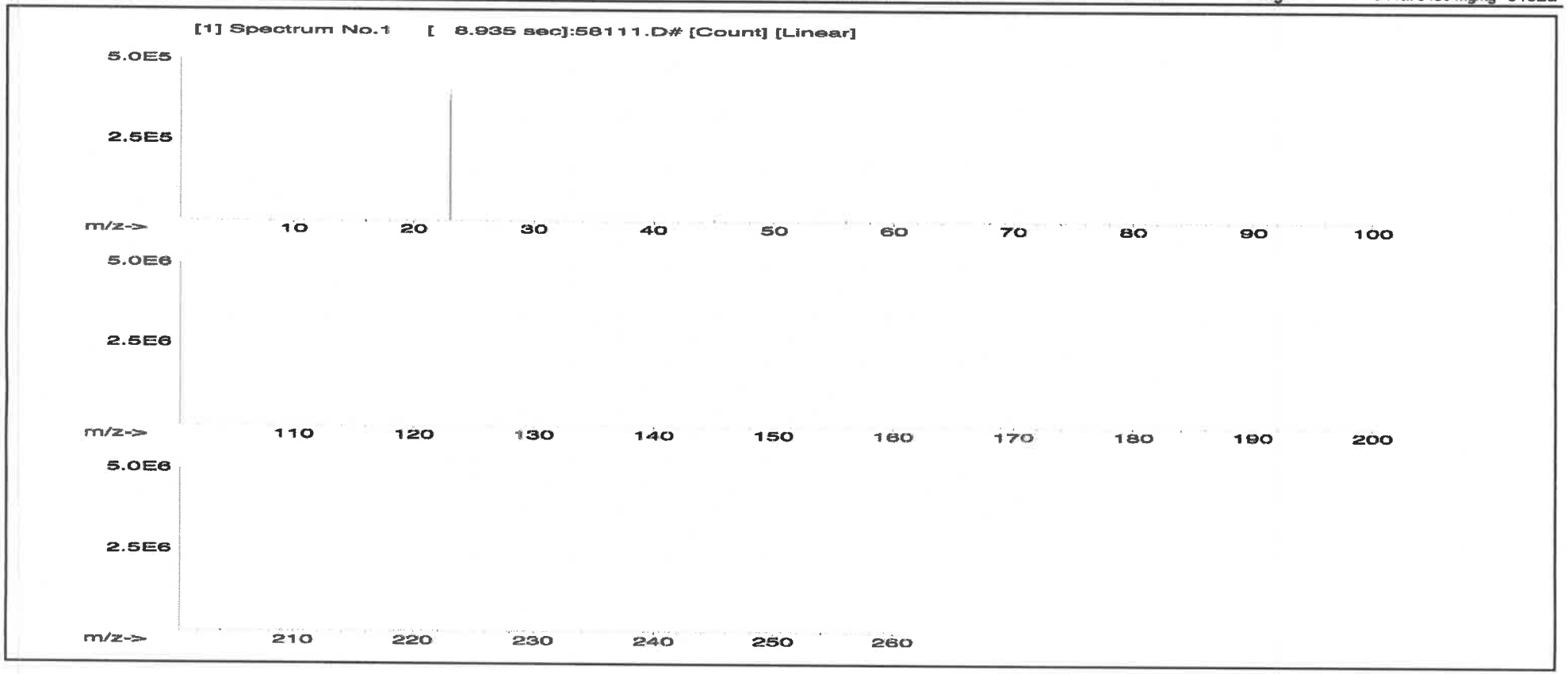
R->1/13/25

M6144

Part Number:	**58111**			**Lot #**	
Lot Number:	**072424**	**Solvent:**	24002546	Nitric Acid	
Description:	**Sodium (Na)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	072427				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty		

Formulated By:	Benson Chan	072424
Reviewed By:	Pedro L. Rentas	072424

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



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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.
* 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:

Part Number: 58030
Lot Number: 121724
Description: Zinc (Zn)

R → 1/13/25

M6145

Expiration Date: 121727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

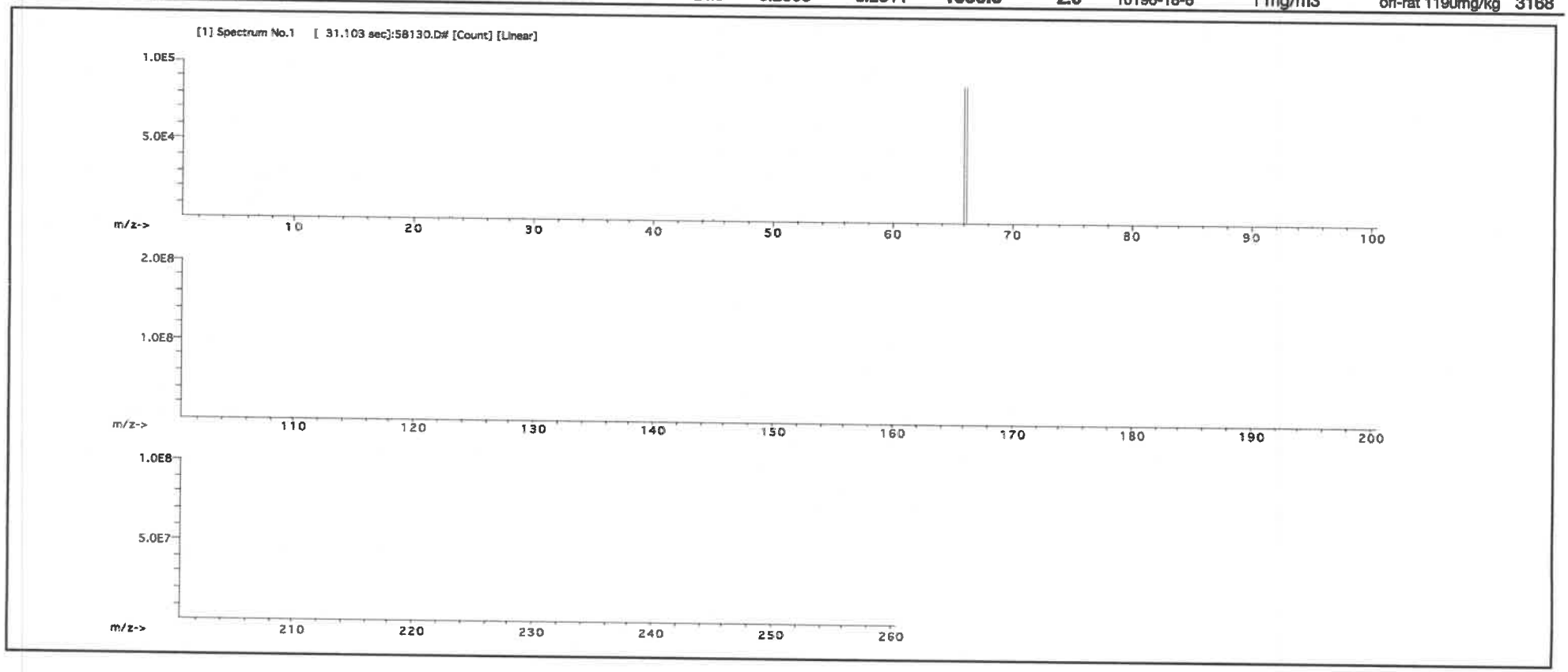
		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 2000.1 0.10 Flask Uncertainty

Aleah O'Brady

Formulated By:	Aleah O'Brady	121724
Reviewed By:	Pedro L. Rentas	121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



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800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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

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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
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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:	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

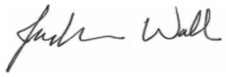
Certificate Prepared By:

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

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-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

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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

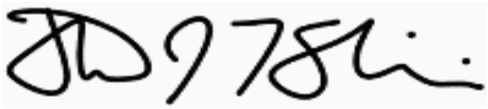
- Sealed TCT Bag Open Date: _____

- 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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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

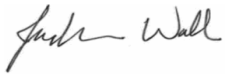
Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



R -> 013125

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

M 6171

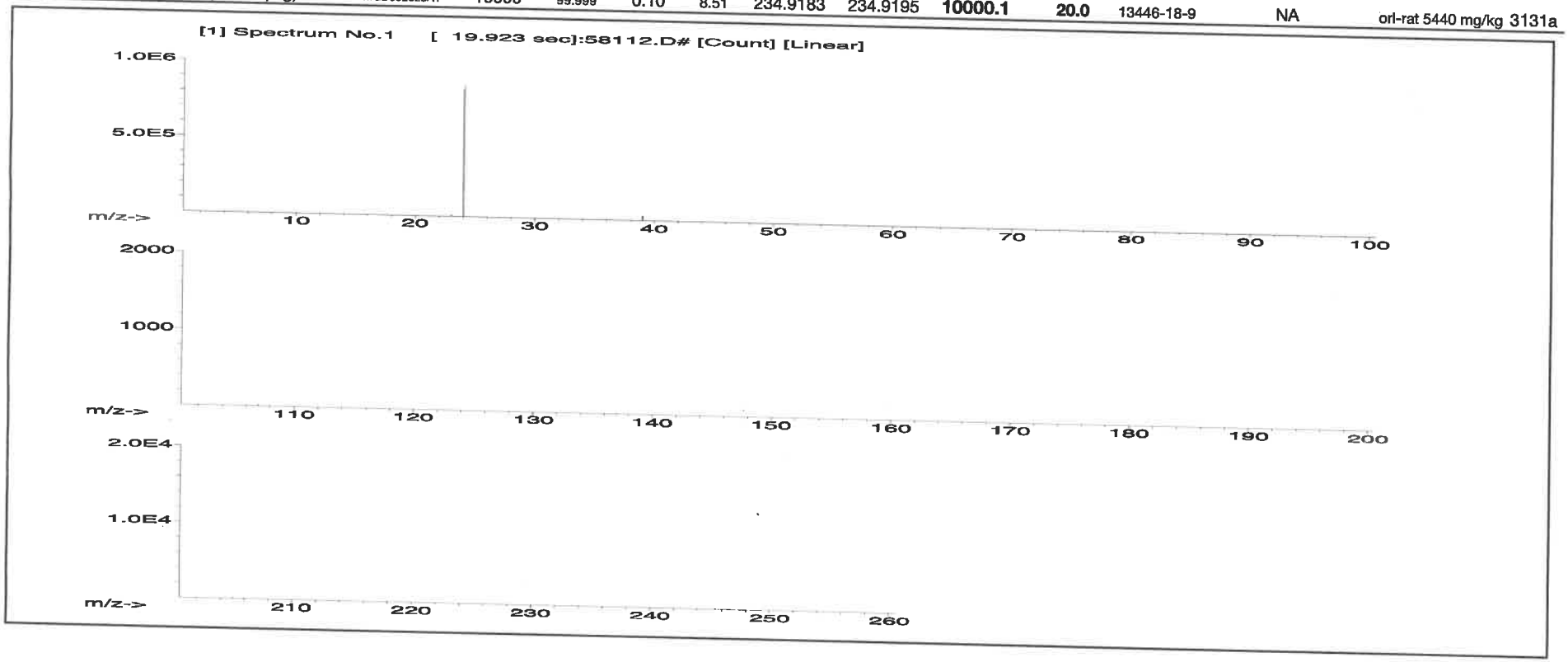
Part Number: 58112
Lot Number: 011525
Description: Magnesium (Mg)

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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Certificate of Analysis

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R->5/5/24

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:	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

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 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:

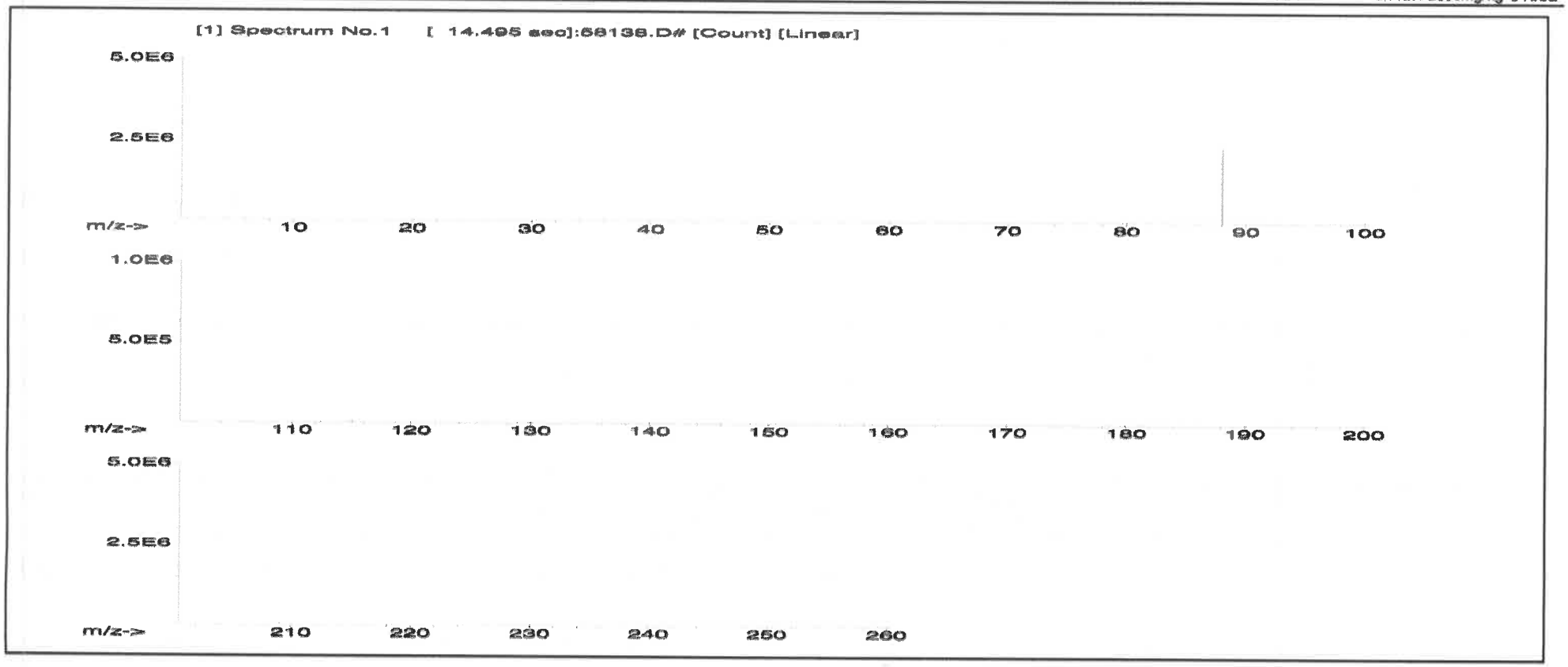
R->8/6/25

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
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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	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 Reference Material CRM

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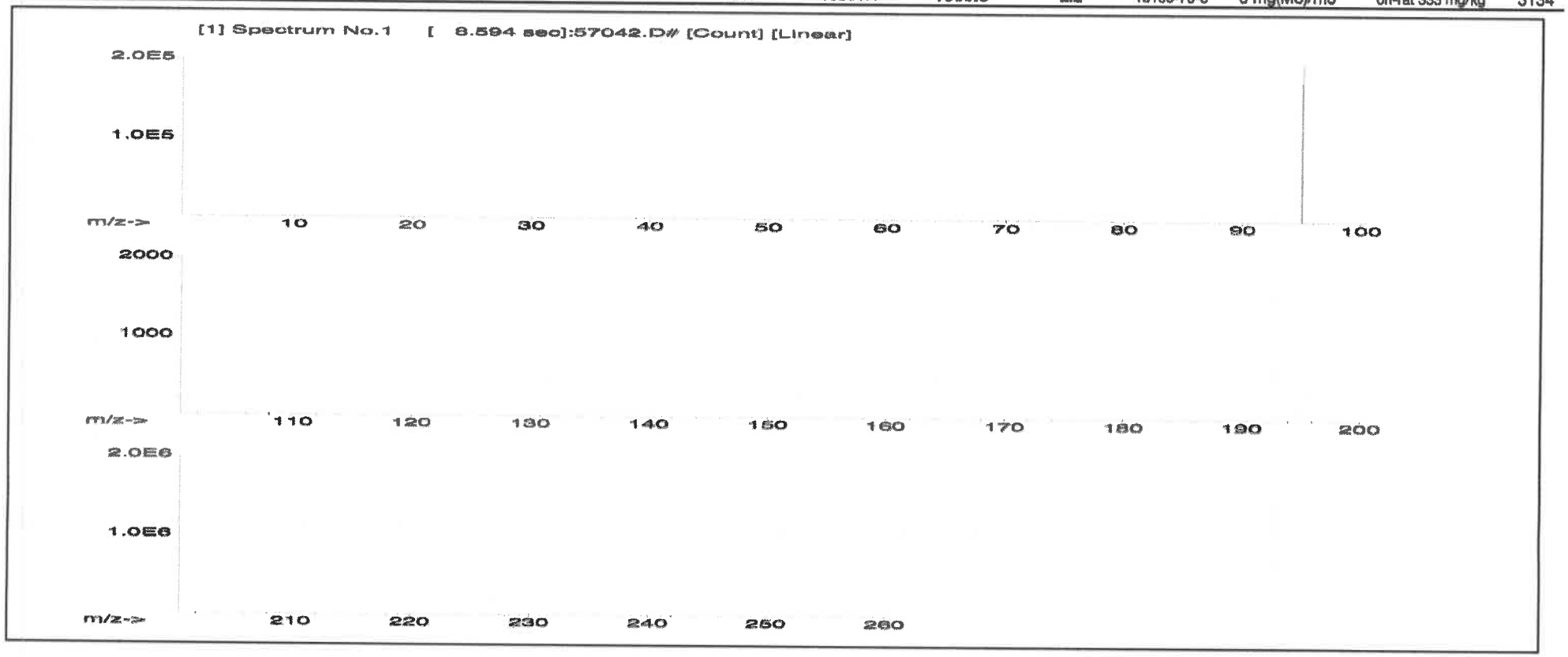
CERTIFIED WEIGHT REPORT:

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

Part Number:	**57082**		**Lot #**		
Lot Number:	**031525**	**Solvent:**	24014457	Nitric Acid	
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		

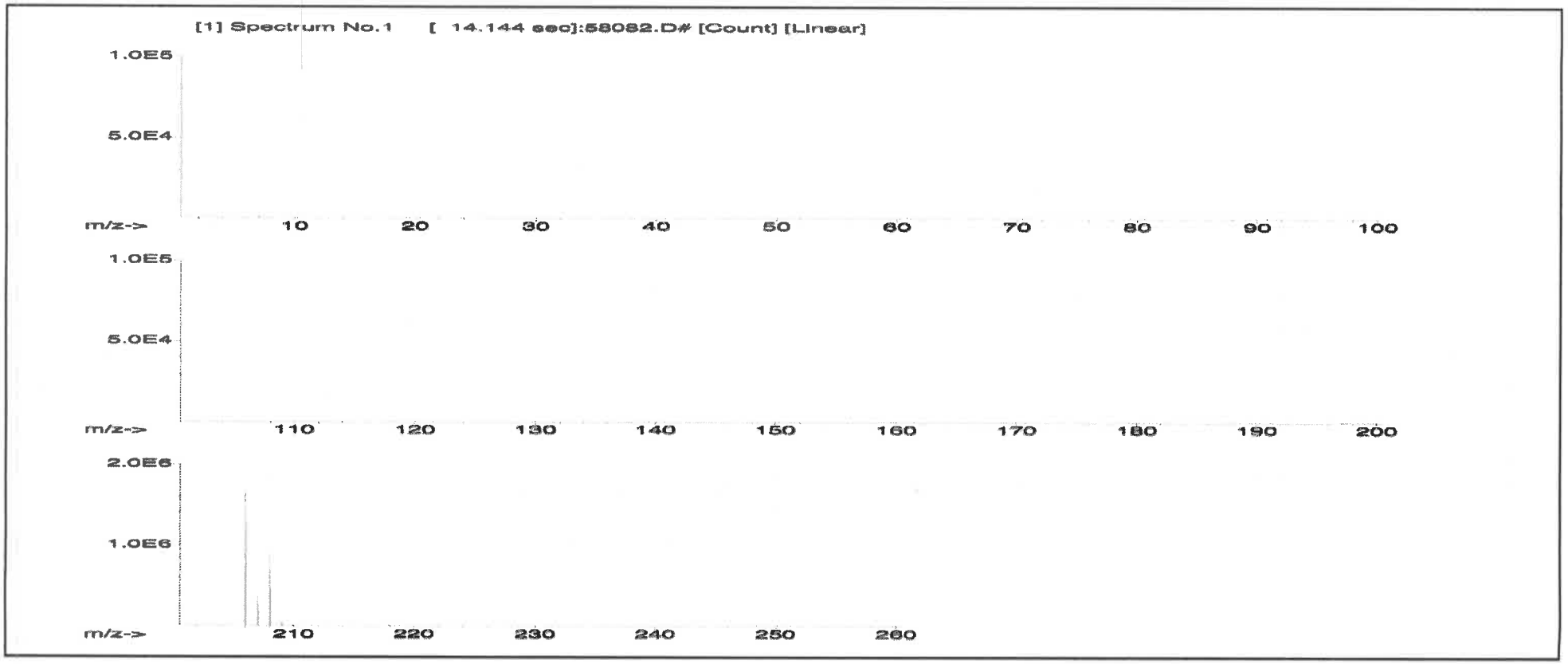
Giovanni Esposito

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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Certified Reference Material CRM

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AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<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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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

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



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

avantor™ | J.T.Baker®

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

avantor™ | J.T.Baker®

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

avantor™ | J.T.Baker®

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

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M6200
R.0 → 08/25/25

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
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	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 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	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855 282 6867 or +1 610 386 1700

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 1.0 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	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 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.: 24D1562005

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

Jamie Croak
Director Quality Operations, Bioscience Production

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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

R-7/20/23
M6201
M6202
M6203
M6204

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

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ 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

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



INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	W2-MEB752149
Matrix:	5% (v/v) HNO3

R -> 7/20/23

M6209
M6210
M6211
M6212

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



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R1 8/05/24

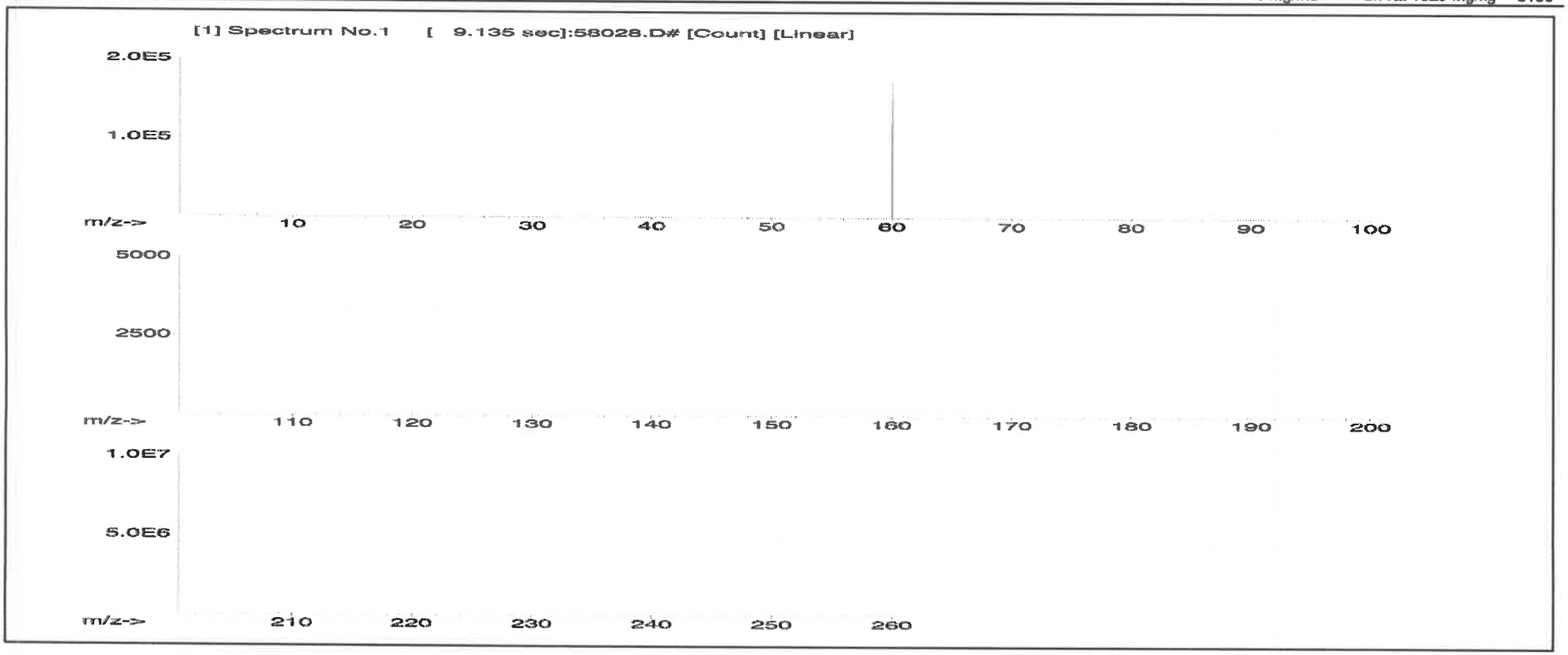
CERTIFIED WEIGHT REPORT:

Part Number:	**57028**
Lot Number:	**062024**
Description:	**Nickel (Ni)**
Expiration Date:	062027
Recommended Storage:	Ambient (20 °C)
Nominal Concentration (µg/mL):	**1000**
NIST Test Number:	6UTB
Volume shown below was diluted to (mL):	2000.07

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	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.
* 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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M6030

R: 8/5/24

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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

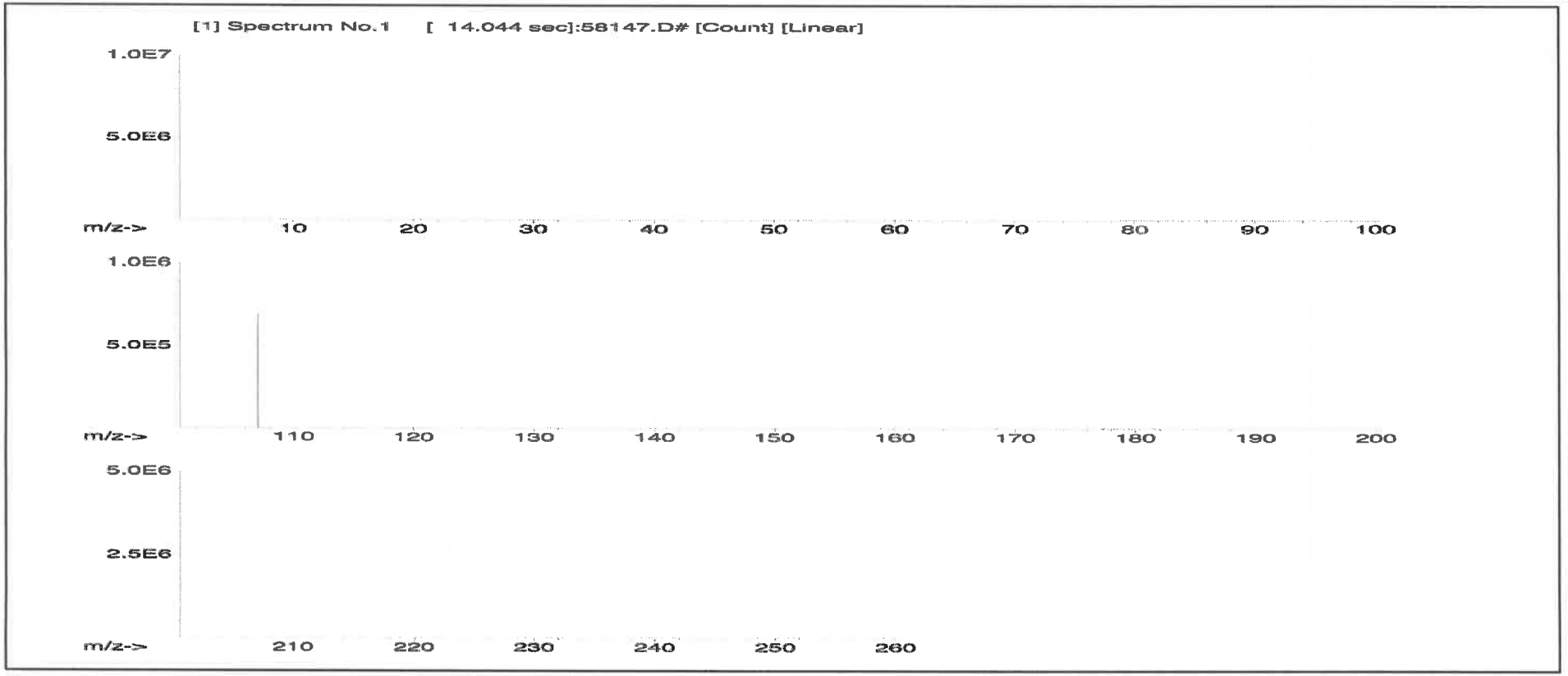
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	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.
* 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).

opened : 3/24/25

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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

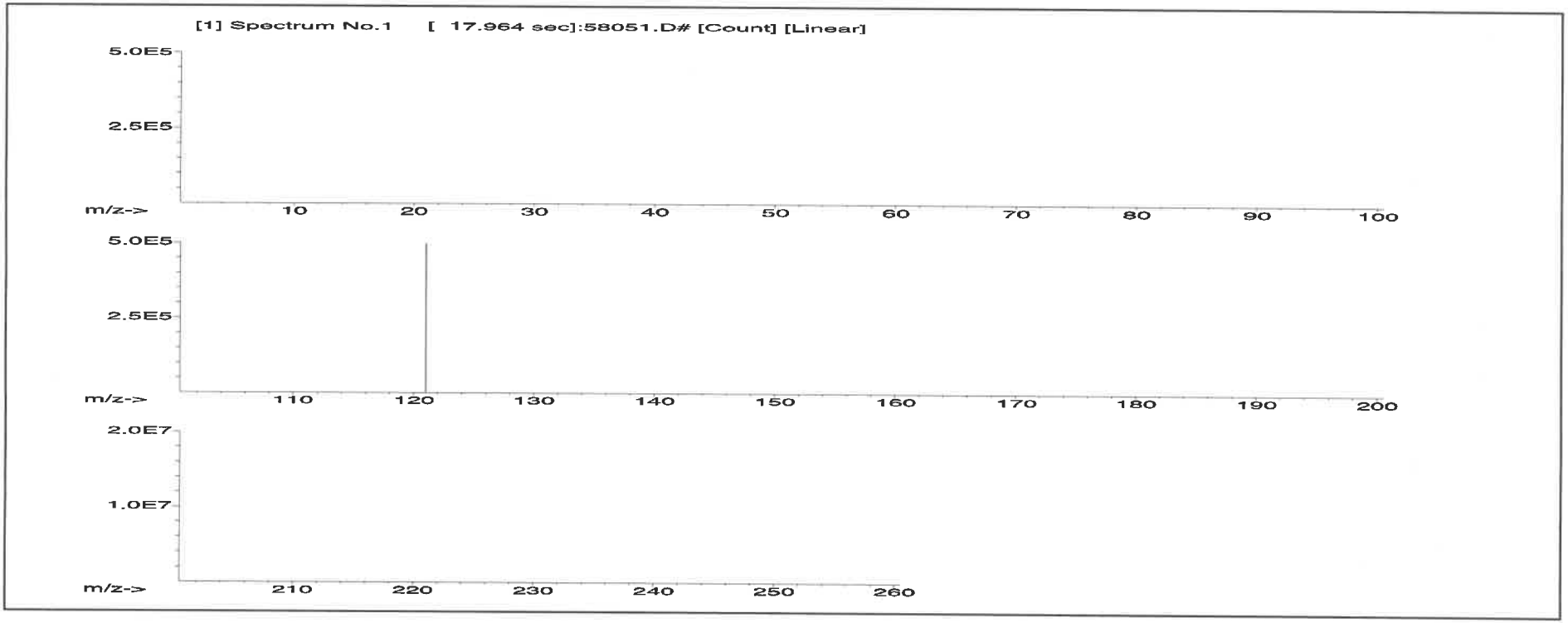
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 071724

Pedro Rentas
Reviewed By: Pedro L. Rentas 071724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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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.
* 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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M6023

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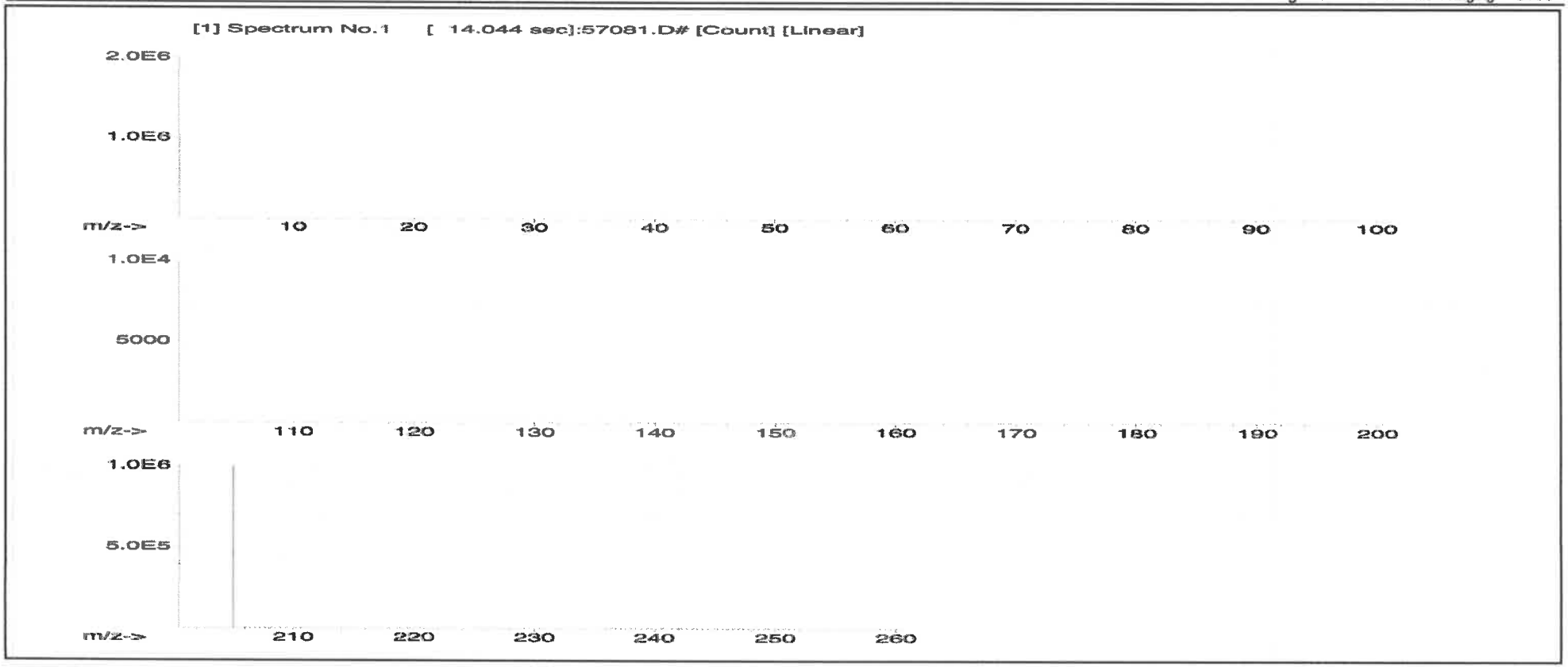
CERTIFIED WEIGHT REPORT:

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:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

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AR-1539 Certificate Number
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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	

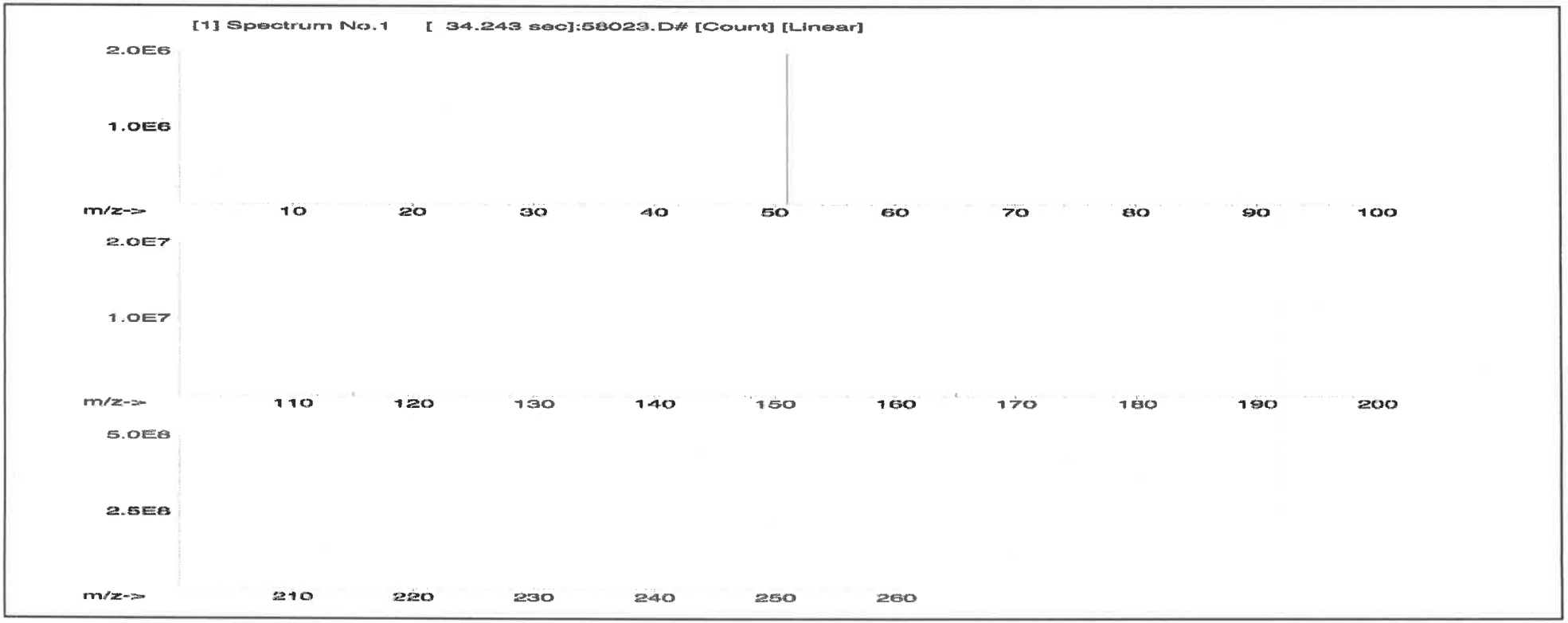
Aleah O'Brady

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



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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	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

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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: Q 3690

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

	1,4-Dioxane SW846 8270 SIM	Iron, Total	TSS	TDS					
	1	2	3	4	5	6	7	8	9
PRESERVATIVES		B							
	1	2	3	4	5	6	7	8	9

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	1	2	3	4	5	6	7	8	9	COMMENTS
1.	RW8-SP100-20251118	GW		x	11/18/25	13:05	4	x	x	x	x						
2.	RW8-SP303-20251118	GW		x	11/18/25	13:13	4	x	x	x	x						
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1.	11/19/25/1360	1.
RELINQUISHED BY	DATE/TIME	RECEIVED BY
2. Fed Ex	11-20-25 0952	2.
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY
3.		3.

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 2.3°C
MeOH extraction requires an additional 4oz. Jar for percent solid
Comments: ☐ Ice in Cooler?: Y

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

Alliance TECHNICAL GROUP 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