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

METALS

PROJECT NAME : CON EDISON - EAST RIVER SITE 2

PARSONS ENGINEERING OF NEW YORK, INC.

301 Plainfield Road

Suite 350

Syracuse, NY - 13212

Phone No: 315-451-9560

ORDER ID : Q2592

ATTENTION : Zohar Lavy

Laboratory Certification ID # 20012

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Cover Page

Order ID : Q2592

Project ID : Con Edison - East River Site 2

Client : PARSONS Engineering of New York, Inc.

Lab Sample Number	Client Sample Number
Q2592-01	WC-SOIL-20250711
Q2592-02	WC-SOIL-20250711

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 11:20 am, Jul 25, 2025

Date: 7/21/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

PARSONS Engineering of New York, Inc.
Project Name: Con Edison - East River Site 2
Project # N/A
Order ID # Q2592
Test Name: TCLP ICP Metals,TCLP Mercury

A. Number of Samples and Date of Receipt:
2 Solid samples were received on 07/11/2025.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Corrosivity, Ignitability, Mercury, Metals Group1, Metals ICP-Group1, PCB Group1, pH, RCRA CHARACTERISTICS, Reactive Cyanide, Reactive Sulfide, SVOCMS Group1, TCLP BNA, TCLP Extraction, TCLP Herbicide, TCLP ICP Metals, TCLP Mercury, TCLP METALS, TCLP Pesticide, TCLP VOA, TCLP ZHE Extraction, TPH GC and VOCMS Group1. This data package contains results for TCLP ICP Metals,TCLP Mercury.

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

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all Compounds.
The Duplicate analysis met criteria for all Compounds.
The Matrix Spike (HR-MCN-COMP-01MS) analysis met criteria for all Compounds except for Mercury due to sample matrix interference.
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:

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 11:20 am, Jul 25, 2025

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

DATA REPORTING QUALIFIERS- INORGANIC

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

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

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

ORDER ID: Q2592 MATRIX: TCLP

METHOD: 6010D,7470A,1311

		NA	NO	YES
1.	Calibration Summary met criteria.			✓
2.	ICP Interference Check Sample Results Summary Submitted.			✓
3.	Serial Dilution Summary (if applicable) Submitted.			✓
4.	Laboratory Control Sample Summary (if applicable) Submitted.			✓
5.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Met Criteria		✓	
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
	The Matrix Spike (HR-MCN-COMP-01MS) analysis met criteria for all Compounds except for Mercury due to sample matrix interference. The Matrix Spike Duplicate analysis met criteria for all Compounds.			
7.	Sample Duplicate Analysis Met QC Criteria			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
8.	Digestion Holding Time Met			✓
	If not met, list number of days exceeded for each sample:			
9.	Analysis Holding Time Met			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			

ADDITIONAL COMMENTS:

QA REVIEW

REVIEWED
By Sohil Jodhani, QA/QC Director at 10:12 am, Jul 25, 2025

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q2592

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

QA Review Signature: SOHIL JODHANI **Date:** 07/21/2025

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LAB CHRONICLE

OrderID:	Q2592	**OrderDate:**	7/11/2025 3:05:25 PM
Client:	PARSONS Engineering of New York, Inc.	**Project:**	Con Edison - East River Site 2
Contact:	Zohar Lavy	**Location:**	D51,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2592-01	**WC-SOIL-20250711**	**SOIL**			**07/11/25**			**07/11/25**
			Mercury	7471B		07/15/25	07/16/25	
			Metals ICP-Group1	6010D		07/14/25	07/17/25	
Q2592-02	**WC-SOIL-20250711**	**TCLP**			**07/11/25**			**07/11/25**
			TCLP ICP Metals	6010D		07/16/25	07/17/25	
			TCLP Mercury	7470A		07/16/25	07/17/25	

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Hit Summary Sheet
SW-846

SDG No.:	Q2592	**Order ID:**	Q2592
Client:	PARSONS Engineering of New York, Inc.	**Project ID:**	Con Edison - East River Site 2

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : WC-SOIL-20250711								
Q2592-02	WC-SOIL-20250711	TCLP	Barium	708		72.8	500	ug/L
Q2592-02	WC-SOIL-20250711	TCLP	Cadmium	10.2	J	2.50	30.0	ug/L
Q2592-02	WC-SOIL-20250711	TCLP	Lead	21.5	J	11.5	60.0	ug/L

SAMPLE DATA

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Report of Analysis

Client:	PARSONS Engineering of New York, Inc.	Date Collected:	07/11/25
Project:	Con Edison - East River Site 2	Date Received:	07/11/25
Client Sample ID:	WC-SOIL-20250711	SDG No.:	Q2592
Lab Sample ID:	Q2592-02	Matrix:	TCLP
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-38-2	Arsenic	100	U	1	25.6	100	ug/L	07/16/25 12:30	07/17/25 15:07	6010D	SW3050
7440-39-3	Barium	708		1	72.8	500	ug/L	07/16/25 12:30	07/17/25 15:07	6010D	SW3050
7440-43-9	Cadmium	10.2	J	1	2.50	30.0	ug/L	07/16/25 12:30	07/17/25 15:07	6010D	SW3050
7440-47-3	Chromium	50.0	U	1	10.6	50.0	ug/L	07/16/25 12:30	07/17/25 15:07	6010D	SW3050
7439-92-1	Lead	21.5	J	1	11.5	60.0	ug/L	07/16/25 12:30	07/17/25 15:07	6010D	SW3050
7439-97-6	Mercury	2.00	UN	1	0.76	2.00	ug/L	07/16/25 14:40	07/17/25 10:48	7470A	
7782-49-2	Selenium	100	U	1	48.2	100	ug/L	07/16/25 12:30	07/17/25 15:07	6010D	SW3050
7440-22-4	Silver	50.0	U	1	8.10	50.0	ug/L	07/16/25 12:30	07/17/25 15:07	6010D	SW3050

Color Before:	Colorless	Clarity Before:	Clear	Texture:	
Color After:	Colorless	Clarity After:	Clear	Artifacts:	
Comments:	TCLP METALS				

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: PARSONS Engineering of New York, Inc.
SDG No.: Q2592
Contract: PARS02
Lab Code: ACE
Initial Calibration Source: EPA
Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV31	Mercury	3.70	4.0	92	90 - 110	CV	07/17/2025	10:07	LB136516

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: PARSONS Engineering of New York, Inc.
SDG No.: Q2592
Contract: PARS02
Lab Code: ACE
Initial Calibration Source: EPA
Continuing Calibration Source: PLASMA-PURE

Sample ID	Analyte	Result ug/L	True Value	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV18	Mercury	5.00	5.0	100	90 - 110	CV	07/17/2025	10:14	LB136516
CCV19	Mercury	5.17	5.0	103	90 - 110	CV	07/17/2025	11:03	LB136516
CCV20	Mercury	5.33	5.0	106	90 - 110	CV	07/17/2025	11:30	LB136516
CCV21	Mercury	5.21	5.0	104	90 - 110	CV	07/17/2025	11:53	LB136516

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: PARSONS Engineering of New York, Inc.
SDG No.: Q2592
Contract: PARS02
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	Arsenic	3980	4000	100	90 - 110	P	07/17/2025	13:30	LB136533
	Barium	8280	8000	104	90 - 110	P	07/17/2025	13:30	LB136533
	Cadmium	1980	2000	99	90 - 110	P	07/17/2025	13:30	LB136533
	Chromium	865	800	108	90 - 110	P	07/17/2025	13:30	LB136533
	Lead	3890	4000	97	90 - 110	P	07/17/2025	13:30	LB136533
	Selenium	4020	4000	101	90 - 110	P	07/17/2025	13:30	LB136533
	Silver	1070	1000	107	90 - 110	P	07/17/2025	13:30	LB136533

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: PARSONS Engineering of New York, Inc.
SDG No.: Q2592
Contract: PARS02
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	Arsenic	23.3	20.0	117	80 - 120	P	07/17/2025	13:37	LB136533
	Barium	104	100	104	80 - 120	P	07/17/2025	13:37	LB136533
	Cadmium	5.95	6.0	99	80 - 120	P	07/17/2025	13:37	LB136533
	Chromium	9.40	10.0	94	80 - 120	P	07/17/2025	13:37	LB136533
	Lead	9.70	12.0	81	80 - 120	P	07/17/2025	13:37	LB136533
	Selenium	19.4	20.0	97	80 - 120	P	07/17/2025	13:37	LB136533
	Silver	11.0	10.0	110	80 - 120	P	07/17/2025	13:37	LB136533

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: PARSONS Engineering of New York, Inc.
SDG No.: Q2592
Contract: PARS02
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	Arsenic	5140	5000	103	90 - 110	P	07/17/2025	14:20	LB136533
	Barium	10400	10000	104	90 - 110	P	07/17/2025	14:20	LB136533
	Cadmium	2480	2500	99	90 - 110	P	07/17/2025	14:20	LB136533
	Chromium	948	1000	95	90 - 110	P	07/17/2025	14:20	LB136533
	Lead	4940	5000	99	90 - 110	P	07/17/2025	14:20	LB136533
	Selenium	5190	5000	104	90 - 110	P	07/17/2025	14:20	LB136533
	Silver	1270	1250	101	90 - 110	P	07/17/2025	14:20	LB136533
CCV02	Arsenic	5110	5000	102	90 - 110	P	07/17/2025	14:58	LB136533
	Barium	10600	10000	106	90 - 110	P	07/17/2025	14:58	LB136533
	Cadmium	2440	2500	98	90 - 110	P	07/17/2025	14:58	LB136533
	Chromium	947	1000	95	90 - 110	P	07/17/2025	14:58	LB136533
	Lead	4870	5000	97	90 - 110	P	07/17/2025	14:58	LB136533
	Selenium	5190	5000	104	90 - 110	P	07/17/2025	14:58	LB136533
	Silver	1290	1250	103	90 - 110	P	07/17/2025	14:58	LB136533
CCV03	Arsenic	5100	5000	102	90 - 110	P	07/17/2025	15:50	LB136533
	Barium	10500	10000	105	90 - 110	P	07/17/2025	15:50	LB136533
	Cadmium	2440	2500	98	90 - 110	P	07/17/2025	15:50	LB136533
	Chromium	940	1000	94	90 - 110	P	07/17/2025	15:50	LB136533
	Lead	4870	5000	98	90 - 110	P	07/17/2025	15:50	LB136533
	Selenium	5160	5000	103	90 - 110	P	07/17/2025	15:50	LB136533
	Silver	1270	1250	102	90 - 110	P	07/17/2025	15:50	LB136533
CCV04	Arsenic	5100	5000	102	90 - 110	P	07/17/2025	16:42	LB136533
	Barium	10400	10000	104	90 - 110	P	07/17/2025	16:42	LB136533
	Cadmium	2430	2500	97	90 - 110	P	07/17/2025	16:42	LB136533
	Chromium	923	1000	92	90 - 110	P	07/17/2025	16:42	LB136533
	Lead	4850	5000	97	90 - 110	P	07/17/2025	16:42	LB136533
	Selenium	5170	5000	103	90 - 110	P	07/17/2025	16:42	LB136533
	Silver	1250	1250	100	90 - 110	P	07/17/2025	16:42	LB136533
CCV05	Arsenic	5040	5000	101	90 - 110	P	07/17/2025	17:58	LB136533
	Barium	10700	10000	108	90 - 110	P	07/17/2025	17:58	LB136533
	Cadmium	2410	2500	96	90 - 110	P	07/17/2025	17:58	LB136533
	Chromium	933	1000	93	90 - 110	P	07/17/2025	17:58	LB136533
	Lead	4860	5000	97	90 - 110	P	07/17/2025	17:58	LB136533
	Selenium	5120	5000	102	90 - 110	P	07/17/2025	17:58	LB136533

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: PARSONS Engineering of New York, Inc.
SDG No.: Q2592
Contract: PARS02
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
CCV05	Silver	1280	1250	102	90 - 110	P	07/17/2025	17:58	LB136533
CCV06	Arsenic	5060	5000	101	90 - 110	P	07/17/2025	19:24	LB136533
	Barium	10400	10000	104	90 - 110	P	07/17/2025	19:24	LB136533
	Cadmium	2430	2500	97	90 - 110	P	07/17/2025	19:24	LB136533
	Chromium	909	1000	91	90 - 110	P	07/17/2025	19:24	LB136533
	Lead	4870	5000	97	90 - 110	P	07/17/2025	19:24	LB136533
	Selenium	5120	5000	102	90 - 110	P	07/17/2025	19:24	LB136533
	Silver	1250	1250	100	90 - 110	P	07/17/2025	19:24	LB136533
CCV07	Arsenic	5000	5000	100	90 - 110	P	07/17/2025	20:16	LB136533
	Barium	10400	10000	104	90 - 110	P	07/17/2025	20:16	LB136533
	Cadmium	2410	2500	96	90 - 110	P	07/17/2025	20:16	LB136533
	Chromium	924	1000	92	90 - 110	P	07/17/2025	20:16	LB136533
	Lead	4830	5000	97	90 - 110	P	07/17/2025	20:16	LB136533
	Selenium	5040	5000	101	90 - 110	P	07/17/2025	20:16	LB136533
	Silver	1250	1250	100	90 - 110	P	07/17/2025	20:16	LB136533

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Metals

- 2b -
CRDL STANDARD FOR AA & ICP

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **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
CRA	Mercury	0.23	0.2	116	70 - 130	CV	07/17/2025	10:26	LB136516
CRI01	Arsenic	18.9	20.0	95	65 - 135	P	07/17/2025	13:46	LB136533
	Barium	103	100	103	65 - 135	P	07/17/2025	13:46	LB136533
	Cadmium	5.94	6.0	99	65 - 135	P	07/17/2025	13:46	LB136533
	Chromium	9.06	10.0	91	65 - 135	P	07/17/2025	13:46	LB136533
	Lead	11.1	12.0	92	65 - 135	P	07/17/2025	13:46	LB136533
	Selenium	18.7	20.0	94	65 - 135	P	07/17/2025	13:46	LB136533
	Silver	10.8	10.0	108	65 - 135	P	07/17/2025	13:46	LB136533

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB31	Mercury	0.076	+/-0.2	U	0.20	CV	07/17/2025	10:12	LB136516

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB18	Mercury	0.076	+/-0.2	U	0.20	CV	07/17/2025	10:21	LB136516
CCB19	Mercury	0.076	+/-0.2	U	0.20	CV	07/17/2025	11:05	LB136516
CCB20	Mercury	0.076	+/-0.2	U	0.20	CV	07/17/2025	11:35	LB136516
CCB21	Mercury	0.076	+/-0.2	U	0.20	CV	07/17/2025	11:55	LB136516

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	13:41	LB136533
	Barium	14.6	+/-50	U	100	P	07/17/2025	13:41	LB136533
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	13:41	LB136533
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	13:41	LB136533
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	13:41	LB136533
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	13:41	LB136533
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	13:41	LB136533

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	14:25	LB136533
	Barium	14.6	+/-50	U	100	P	07/17/2025	14:25	LB136533
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	14:25	LB136533
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	14:25	LB136533
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	14:25	LB136533
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	14:25	LB136533
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	14:25	LB136533
CCB02	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	15:02	LB136533
	Barium	14.6	+/-50	U	100	P	07/17/2025	15:02	LB136533
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	15:02	LB136533
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	15:02	LB136533
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	15:02	LB136533
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	15:02	LB136533
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	15:02	LB136533
CCB03	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	15:56	LB136533
	Barium	14.6	+/-50	U	100	P	07/17/2025	15:56	LB136533
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	15:56	LB136533
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	15:56	LB136533
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	15:56	LB136533
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	15:56	LB136533
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	15:56	LB136533
CCB04	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	16:46	LB136533
	Barium	14.6	+/-50	U	100	P	07/17/2025	16:46	LB136533
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	16:46	LB136533
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	16:46	LB136533
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	16:46	LB136533
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	16:46	LB136533
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	16:46	LB136533
CCB05	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	18:02	LB136533
	Barium	14.6	+/-50	U	100	P	07/17/2025	18:02	LB136533
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	18:02	LB136533
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	18:02	LB136533
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	18:02	LB136533
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	18:02	LB136533
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	18:02	LB136533
CCB06	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	19:28	LB136533
	Barium	14.6	+/-50	U	100	P	07/17/2025	19:28	LB136533
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	19:28	LB136533
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	19:28	LB136533

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB06	Lead	2.30	+/-6	U	12.0	P	07/17/2025	19:28	LB136533
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	19:28	LB136533
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	19:28	LB136533
CCB07	Arsenic	5.12	+/-10	U	20.0	P	07/17/2025	20:20	LB136533
	Barium	14.6	+/-50	U	100	P	07/17/2025	20:20	LB136533
	Cadmium	0.50	+/-3	U	6.00	P	07/17/2025	20:20	LB136533
	Chromium	2.12	+/-5	U	10.0	P	07/17/2025	20:20	LB136533
	Lead	2.30	+/-6	U	12.0	P	07/17/2025	20:20	LB136533
	Selenium	9.64	+/-10	U	20.0	P	07/17/2025	20:20	LB136533
	Silver	1.62	+/-5	U	10.0	P	07/17/2025	20:20	LB136533

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Metals
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PREPARATION BLANK SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Instrument: CV1

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
pb168847TB		**WATER**		**Batch Number:**	**PB168893**		**Prep Date:**	**07/16/2025**	
	Mercury	0.76	<2	U	2.00	CV	07/17/2025	11:38	LB136516
Sample ID	**Analyte**	**Result (ug/L)**	**Acceptance Limit**	**Conc Qual**	**CRQL ug/L**	**M**	**Analysis Date**	**Analysis Time**	**Run**
PB168893BL		**WATER**		**Batch Number:**	**PB168893**		**Prep Date:**	**07/16/2025**	
	Mercury	0.094	<0.2	J	0.20	CV	07/17/2025	10:41	LB136516

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Metals
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PREPARATION BLANK SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB168847TB		**WATER**		**Batch Number:**	**PB168888**		**Prep Date:**	**07/16/2025**	
	Arsenic	25.6	<50	U	100	P	07/17/2025	16:50	LB136533
	Barium	72.8	<250	U	500	P	07/17/2025	16:50	LB136533
	Cadmium	2.50	<15	U	30.0	P	07/17/2025	16:50	LB136533
	Chromium	10.6	<25	U	50.0	P	07/17/2025	16:50	LB136533
	Lead	11.5	<30	U	60.0	P	07/17/2025	16:50	LB136533
	Selenium	48.2	<50	U	100	P	07/17/2025	16:50	LB136533
	Silver	8.10	<25	U	50.0	P	07/17/2025	16:50	LB136533

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB168888BL		**WATER**		**Batch Number:**	**PB168888**		**Prep Date:**	**07/16/2025**	
	Arsenic	25.6	<50	U	100	P	07/17/2025	16:33	LB136533
	Barium	72.8	<250	U	500	P	07/17/2025	16:33	LB136533
	Cadmium	2.50	<15	U	30.0	P	07/17/2025	16:33	LB136533
	Chromium	10.6	<25	U	50.0	P	07/17/2025	16:33	LB136533
	Lead	11.5	<30	U	60.0	P	07/17/2025	16:33	LB136533
	Selenium	48.2	<50	U	100	P	07/17/2025	16:33	LB136533
	Silver	8.10	<25	U	50.0	P	07/17/2025	16:33	LB136533

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Metals
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INTERFERENCE CHECK SAMPLE

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **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	Arsenic	9.77			-20	20	07/17/2025	13:51	LB136533
	Barium	1.77	6.0	30	-94	106	07/17/2025	13:51	LB136533
	Cadmium	-1.32	1.0	132	-5	7	07/17/2025	13:51	LB136533
	Chromium	51.4	52.0	99	42	62	07/17/2025	13:51	LB136533
	Lead	-4.86			-12	12	07/17/2025	13:51	LB136533
	Selenium	10.3			-20	20	07/17/2025	13:51	LB136533
	Silver	2.71			-10	10	07/17/2025	13:51	LB136533
ICSAB01	Arsenic	109	104	105	88.4	120	07/17/2025	13:56	LB136533
	Barium	520	537	97	437	637	07/17/2025	13:56	LB136533
	Cadmium	976	972	100	826	1120	07/17/2025	13:56	LB136533
	Chromium	512	542	94	460	624	07/17/2025	13:56	LB136533
	Lead	41.1	49.0	84	37	61	07/17/2025	13:56	LB136533
	Selenium	57.8	46.0	126	26	66	07/17/2025	13:56	LB136533
	Silver	218	201	108	170	232	07/17/2025	13:56	LB136533

METAL QC DATA

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metals
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MATRIX SPIKE SUMMARY

client: PARSONS Engineering of New York, Inc. **level:** low **sdg no.:** Q2592

contract: PARS02 **lab code:** ACE

matrix: Water **sample id:** Q2614-06 **client id:** HR-MCN-COMP-01MS

Percent Solids for Sample: NA **Spiked ID:** Q2614-06MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	4090		100	U	4000	102		P
Barium	ug/L	75 - 125	2000		777		1000	122		P
Cadmium	ug/L	75 - 125	964		30.0	U	1000	96		P
Chromium	ug/L	75 - 125	1800		50.0	U	2000	90		P
Lead	ug/L	75 - 125	4620		60.0	U	5000	92		P
Mercury	ug/L	75 - 125	26.6		2.00	U	40.0	66	N	CV
Selenium	ug/L	75 - 125	10400		100	U	10000	104		P
Silver	ug/L	75 - 125	378		50.0	U	380	100		P

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metals
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MATRIX SPIKE DUPLICATE SUMMARY

client: PARSONS Engineering of New York, Inc. **level:** low **sdg no.:** Q2592

contract: PARS02 **lab code:** ACE

matrix: Water **sample id:** Q2614-06 **client id:** HR-MCN-COMP-01MSD

Percent Solids for Sample: NA **Spiked ID:** Q2614-06MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Arsenic	ug/L	75 - 125	4040		100	U	4000	101		P
Barium	ug/L	75 - 125	1930		777		1000	115		P
Cadmium	ug/L	75 - 125	945		30.0	U	1000	94		P
Chromium	ug/L	75 - 125	1780		50.0	U	2000	89		P
Lead	ug/L	75 - 125	4520		60.0	U	5000	90		P
Mercury	ug/L	75 - 125	31.5		2.00	U	40.0	79		CV
Selenium	ug/L	75 - 125	10200		100	U	10000	102		P
Silver	ug/L	75 - 125	371		50.0	U	380	98		P

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Metals
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POST DIGEST SPIKE SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Matrix: Water **Level:** LOW **Client ID:** HR-MCN-COMP-01A

Sample ID: Q2614-06 **Spiked ID:** Q2614-06A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Mercury	ug/L	75 - 125	42.6		2.00	U	40.0	106		CV

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: PARSONS Engineering of New York, Inc. **Level:** LOW **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q2614-06 **Client ID:** HR-MCN-COMP-01DUP

Percent Solids for Sample: NA **Duplicate ID** Q2614-06DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	100	U	100	U			P
Barium	ug/L	20	777		795		2		P
Cadmium	ug/L	20	30.0	U	30.0	U			P
Chromium	ug/L	20	50.0	U	50.0	U			P
Lead	ug/L	20	60.0	U	11.8	J	200.0		P
Mercury	ug/L	20	2.00	U	2.00	U			CV
Selenium	ug/L	20	100	U	100	U			P
Silver	ug/L	20	50.0	U	50.0	U			P

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: PARSONS Engineering of New York, Inc. **Level:** LOW **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q2614-06MS **Client ID:** HR-MCN-COMP-01MSD

Percent Solids for Sample: NA **Duplicate ID** Q2614-06MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Arsenic	ug/L	20	4090		4040		1		P
Barium	ug/L	20	2000		1930		4		P
Cadmium	ug/L	20	964		945		2		P
Chromium	ug/L	20	1800		1780		1		P
Lead	ug/L	20	4620		4520		2		P
Mercury	ug/L	20	26.6		31.5		17		CV
Selenium	ug/L	20	10400		10200		2		P
Silver	ug/L	20	378		371		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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LABORATORY CONTROL SAMPLE SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168888BS							
Arsenic	ug/L	4000	4070		102	80 - 120	P
Barium	ug/L	1000	1050		105	80 - 120	P
Cadmium	ug/L	1000	968		97	80 - 120	P
Chromium	ug/L	2000	1850		92	80 - 120	P
Lead	ug/L	5000	4810		96	80 - 120	P
Selenium	ug/L	10000	10400		104	80 - 120	P
Silver	ug/L	380	384		101	80 - 120	P

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LABORATORY CONTROL SAMPLE SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB168893BS							
Mercury	ug/L	4.0	4.48		112	80 - 120	CV

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

HR-MCN-COMP-01L

Lab Name: Alliance **Contract:** PARS02

Lab Code: ACE **Lb No.:** lb136533 **Lab Sample ID :** Q2614-06L **SDG No.:** Q2592

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Arsenic	100	U	500	U			P
Barium	777		753	J	3		P
Cadmium	30.0	U	150	U			P
Chromium	50.0	U	250	U			P
Lead	60.0	U	300	U			P
Mercury	2.00	U	10.0	U			CV
Selenium	100	U	500	U			P
Silver	50.0	U	250	U			P

METAL PREPARATION & INSTRUMENT DATA

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **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
Arsenic	193.759	0.0000000	0.0000000	-0.0000440	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	-0.0001440	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000

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ICP INTERELEMENT CORRECTION FACTORS

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **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
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	-0.0003570
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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ICP INTERELEMENT CORRECTION FACTORS

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **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
Arsenic	193.759	-0.0029000	0.0000000	0.0000000	0.0000000	0.0004900
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0002200	0.0000000
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0007460	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120

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ICP INTERELEMENT CORRECTION FACTORS

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **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
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290
Selenium	196.090	0.0000000	0.0000000	0.0003330	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **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
Arsenic	193.759	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Barium	493.409	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000000	0.0001110	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000
Selenium	196.090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

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Metals
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SAMPLE PREPARATION SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **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:	**PB168888**						
PB168847TB	PB168847TB	MB	WATER	07/16/2025	5.0	25.0	
PB168888BL	PB168888BL	MB	WATER	07/16/2025	5.0	25.0	
PB168888BS	PB168888BS	LCS	WATER	07/16/2025	5.0	25.0	
Q2592-02	WC-SOIL-20250711	SAM	WATER	07/16/2025	5.0	25.0	
Q2614-06DUP	HR-MCN-COMP-01DUP	DUP	WATER	07/16/2025	5.0	25.0	
Q2614-06MS	HR-MCN-COMP-01MS	MS	WATER	07/16/2025	5.0	25.0	
Q2614-06MSD	HR-MCN-COMP-01MSD	MSD	WATER	07/16/2025	5.0	25.0	

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Metals
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SAMPLE PREPARATION SUMMARY

Client: PARSONS Engineering of New York, Inc. **SDG No.:** Q2592

Contract: PARS02 **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:	**PB168893**						
pb168847TB	pb168847TB	MB	WATER	07/16/2025	3.0	30.0	
PB168893BL	PB168893BL	MB	WATER	07/16/2025	30.0	30.0	
PB168893BS	PB168893BS	LCS	WATER	07/16/2025	30.0	30.0	
Q2592-02	WC-SOIL-20250711	SAM	WATER	07/16/2025	3.0	30.0	
Q2614-06DUP	HR-MCN-COMP-01DUP	DUP	WATER	07/16/2025	3.0	30.0	
Q2614-06MS	HR-MCN-COMP-01MS	MS	WATER	07/16/2025	3.0	30.0	
Q2614-06MSD	HR-MCN-COMP-01MSD	MSD	WATER	07/16/2025	3.0	30.0	

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metals
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ANALYSIS RUN LOG

Client: PARSONS Engineering of New York, Inc. **Contract:** PARS02

Lab code: ACE **Sdg no.:** Q2592

Instrument id number: **Method:** **Run number:** LB136516

Start date: 07/17/2025 **End date:** 07/17/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	0953	HG
S0.2	S0.2	1	0955	HG
S2.5	S2.5	1	0957	HG
S5	S5	1	1000	HG
S7.5	S7.5	1	1002	HG
S10	S10	1	1004	HG
ICV31	ICV31	1	1007	HG
ICB31	ICB31	1	1012	HG
CCV18	CCV18	1	1014	HG
CCB18	CCB18	1	1021	HG
CRA	CRA	1	1026	HG
PB168893BL	PB168893BL	1	1041	HG
PB168893BS	PB168893BS	1	1046	HG
Q2592-02	WC-SOIL-20250711	1	1048	HG
CCV19	CCV19	1	1103	HG
CCB19	CCB19	1	1105	HG
Q2614-06DUP	HR-MCN-COMP-01DUP	1	1121	HG
Q2614-06MS	HR-MCN-COMP-01MS	1	1123	HG
Q2614-06MSD	HR-MCN-COMP-01MSD	1	1125	HG
CCV20	CCV20	1	1130	HG
CCB20	CCB20	1	1135	HG
pb168847TB	pb168847TB	1	1138	HG
Q2614-06L	HR-MCN-COMP-01L	5	1140	HG
Q2614-06A	HR-MCN-COMP-01A	1	1142	HG
CCV21	CCV21	1	1153	HG
CCB21	CCB21	1	1155	HG

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metals
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ANALYSIS RUN LOG

Client: PARSONS Engineering of New York, Inc. **Contract:** PARS02

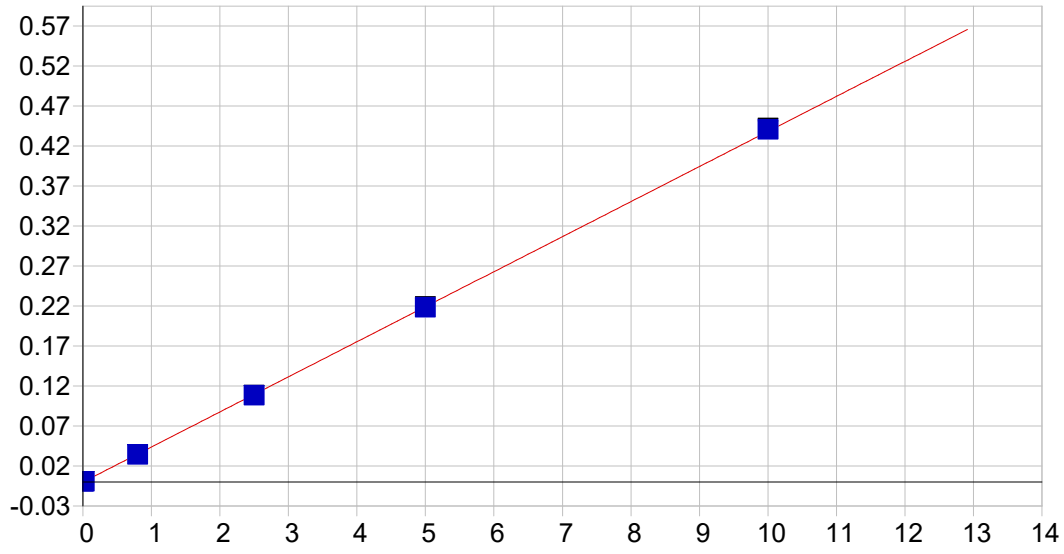
Lab code: ACE **Sdg no.:** Q2592

Instrument id number: **Method:** **Run number:** LB136533

Start date: 07/17/2025 **End date:** 07/17/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1305	Ag,As,Ba,Cd,Cr,Pb,Se
S1	S1	1	1309	Ag,As,Ba,Cd,Cr,Pb,Se
S2	S2	1	1313	Ag,As,Ba,Cd,Cr,Pb,Se
S3	S3	1	1318	Ag,As,Ba,Cd,Cr,Pb,Se
S4	S4	1	1322	Ag,As,Ba,Cd,Cr,Pb,Se
S5	S5	1	1326	Ag,As,Ba,Cd,Cr,Pb,Se
ICV01	ICV01	1	1330	Ag,As,Ba,Cd,Cr,Pb,Se
LLICV01	LLICV01	1	1337	Ag,As,Ba,Cd,Cr,Pb,Se
ICB01	ICB01	1	1341	Ag,As,Ba,Cd,Cr,Pb,Se
CRI01	CRI01	1	1346	Ag,As,Ba,Cd,Cr,Pb,Se
ICSA01	ICSA01	1	1351	Ag,As,Ba,Cd,Cr,Pb,Se
ICSAB01	ICSAB01	1	1356	Ag,As,Ba,Cd,Cr,Pb,Se
CCV01	CCV01	1	1420	Ag,As,Ba,Cd,Cr,Pb,Se
CCB01	CCB01	1	1425	Ag,As,Ba,Cd,Cr,Pb,Se
CCV02	CCV02	1	1458	Ag,As,Ba,Cd,Cr,Pb,Se
CCB02	CCB02	1	1502	Ag,As,Ba,Cd,Cr,Pb,Se
Q2592-02	WC-SOIL-20250711	1	1507	Ag,As,Ba,Cd,Cr,Pb,Se
CCV03	CCV03	1	1550	Ag,As,Ba,Cd,Cr,Pb,Se
CCB03	CCB03	1	1556	Ag,As,Ba,Cd,Cr,Pb,Se
Q2614-06DUP	HR-MCN-COMP-01DUP	1	1612	Ag,As,Ba,Cd,Cr,Pb,Se
Q2614-06L	HR-MCN-COMP-01L	5	1617	Ag,As,Ba,Cd,Cr,Pb,Se
Q2614-06MS	HR-MCN-COMP-01MS	1	1621	Ag,As,Ba,Cd,Cr,Pb,Se
Q2614-06MSD	HR-MCN-COMP-01MSD	1	1625	Ag,As,Ba,Cd,Cr,Pb,Se
PB168888BL	PB168888BL	1	1633	Ag,As,Ba,Cd,Cr,Pb,Se
PB168888BS	PB168888BS	1	1638	Ag,As,Ba,Cd,Cr,Pb,Se
CCV04	CCV04	1	1642	Ag,As,Ba,Cd,Cr,Pb,Se
CCB04	CCB04	1	1646	Ag,As,Ba,Cd,Cr,Pb,Se
PB168847TB	PB168847TB	1	1650	Ag,As,Ba,Cd,Cr,Pb,Se
CCV05	CCV05	1	1758	Ag,As,Ba,Cd,Cr,Pb,Se
CCB05	CCB05	1	1802	Ag,As,Ba,Cd,Cr,Pb,Se
CCV06	CCV06	1	1924	Ag,As,Ba,Cd,Cr,Pb,Se
CCB06	CCB06	1	1928	Ag,As,Ba,Cd,Cr,Pb,Se
CCV07	CCV07	1	2016	Ag,As,Ba,Cd,Cr,Pb,Se
CCB07	CCB07	1	2020	Ag,As,Ba,Cd,Cr,Pb,Se

METAL
RAW DATA

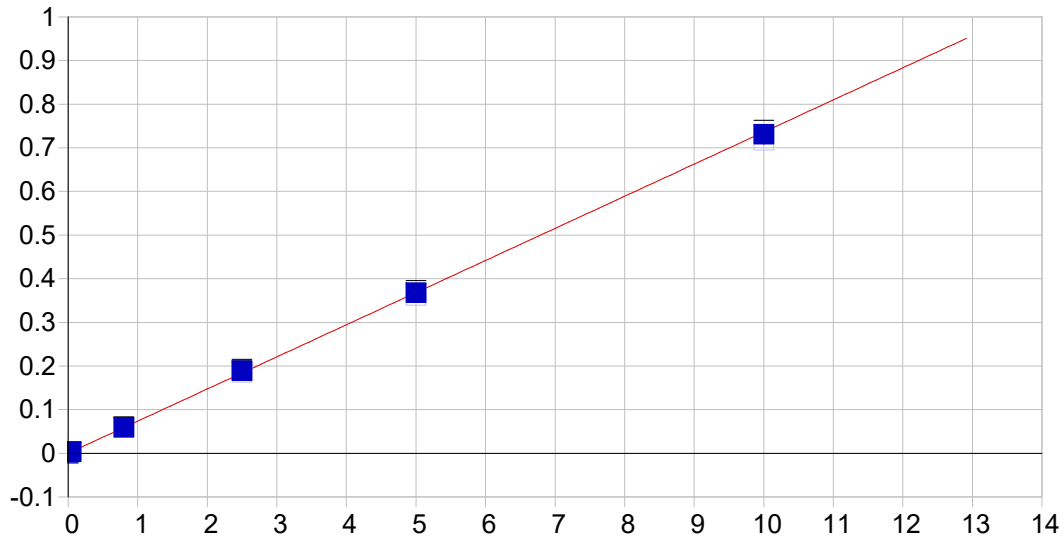


As 189.042 {479}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000006	Re-Slope:	1.000000
A1 (Gain):	0.043828	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999968	Status:	OK.
Std Error of Est:	0.000008		
Predicted MDL:	0.002702		
Predicted MQL:	0.009007		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00001	.000	1
S1	.02000	.02088	.001	4.40	.00090	.000	1
S3	2.5000	2.4734	-.027	-1.06	.10828	.000	1
S4	5.0000	4.9806	-.019	-.388	.21805	.001	1
S5	10.000	10.063	.063	.627	.44055	.001	1
S2	.80000	.78242	-.018	-2.20	.03425	.000	1

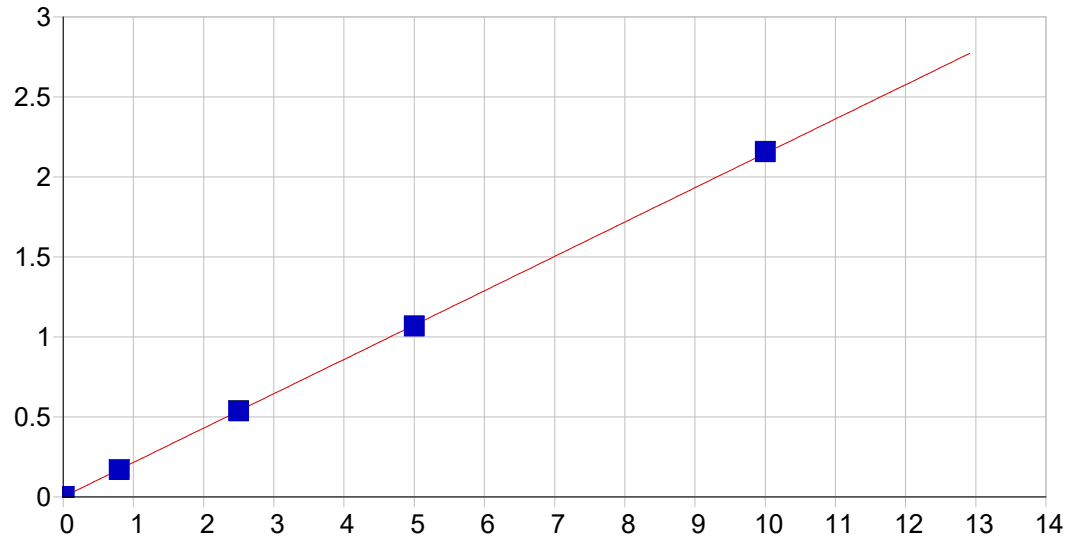


Tl 190.856 {477}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000060	Re-Slope:	1.000000
A1 (Gain):	0.073617	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999933	Status:	OK.
Std Error of Est:	0.000028		
Predicted MDL:	0.001981		
Predicted MQL:	0.006603		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00006	.000	1
S1	.04000	.04107	.001	2.67	.00289	.000	1
S3	2.5000	2.5664	.066	2.66	.18561	.004	1
S4	5.0000	5.0011	.001	.022	.36146	.005	1
S5	10.000	9.9259	-.074	-.741	.71724	.009	1
S2	.80000	.80556	.006	.695	.05828	.001	1

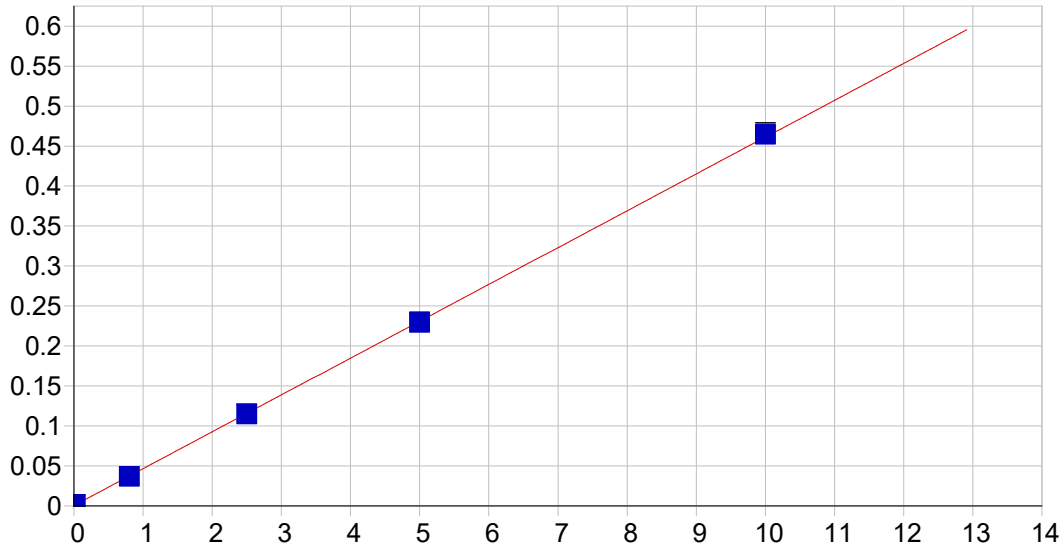


Pb 220.353 {453}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000518	Re-Slope:	1.000000
A1 (Gain):	0.214653	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.001402		
Predicted MQL:	0.004674		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00052	.000	1
S1	.01200	.01089	-.001	-9.26	.00281	.000	1
S3	2.5000	2.4974	-.003	-.106	.53603	.001	1
S4	5.0000	4.9683	-.032	-.633	1.0659	.002	1
S5	10.000	10.045	.045	.448	2.1545	.003	1
S2	.80000	.79057	-.009	-1.18	.17004	.001	1

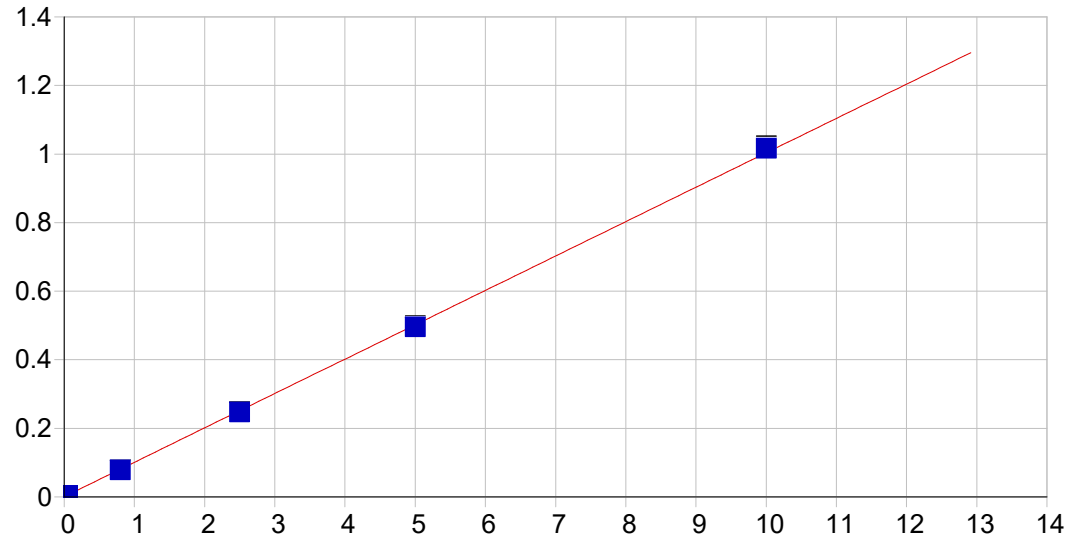


Se 196.090 {472}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000618	Re-Slope:	1.000000
A1 (Gain):	0.046056	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999959	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	0.004223		
Predicted MQL:	0.014078		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00062	.000	1
S1	.02000	.01860	-.001	-7.02	.00147	.000	1
S3	2.5000	2.4761	-.024	-.957	.11460	.000	1
S4	5.0000	4.9661	-.034	-.678	.22923	.001	1
S5	10.000	10.076	.076	.759	.46445	.002	1
S2	.80000	.78328	-.017	-2.09	.03668	.000	1

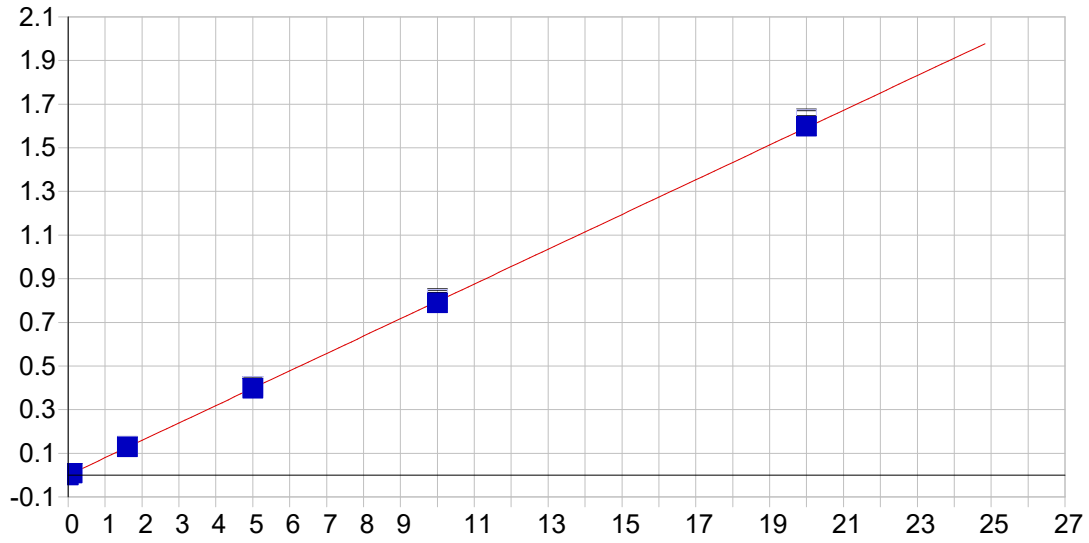


Sb 206.833 {463}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000709	Re-Slope:	1.000000
A1 (Gain):	0.100276	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999892	Status:	OK.
Std Error of Est:	0.000055		
Predicted MDL:	0.001998		
Predicted MQL:	0.006659		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00071	.000	1
S1	.05000	.04921	-.001	-1.58	.00565	.000	1
S3	2.5000	2.4550	-.045	-1.80	.24757	.001	1
S4	5.0000	4.9363	-.064	-1.27	.49707	.002	1
S5	10.000	10.132	.132	1.32	1.0194	.004	1
S2	.80000	.77766	-.022	-2.79	.07891	.000	1

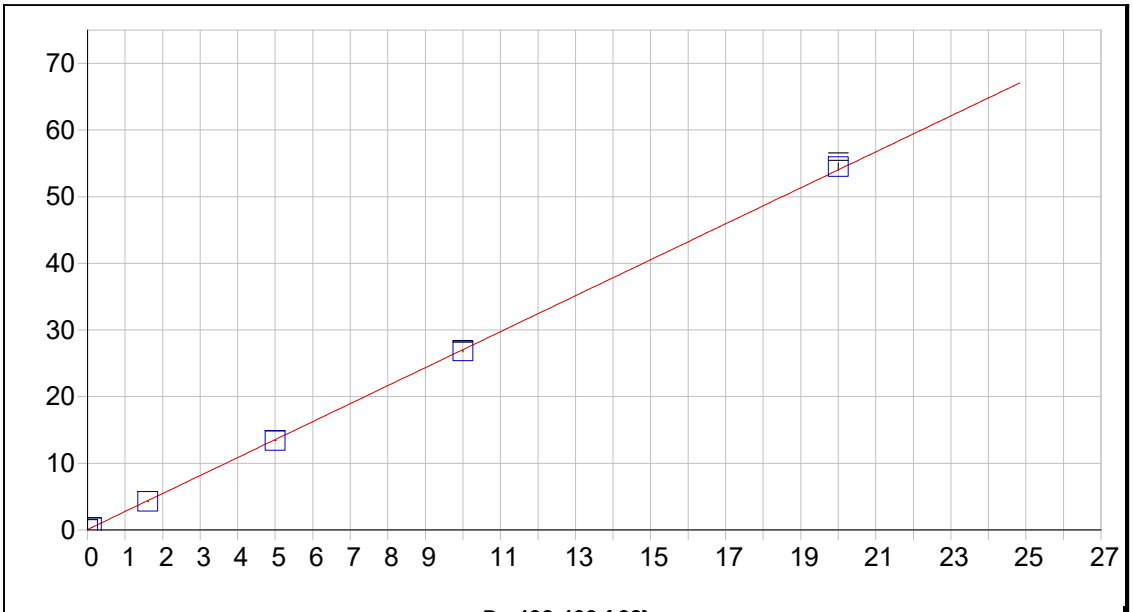


Al 396.152 { 85}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000106	Re-Slope:	1.000000
A1 (Gain):	0.079613	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999972	Status:	OK.
Std Error of Est:	0.000045		
Predicted MDL:	0.012251		
Predicted MQL:	0.040836		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00011	.000	1
S1	.10000	.10988	.010	9.88	.00947	.000	1
S3	5.0000	4.9950	-.005	-.100	.40550	.001	1
S4	10.000	9.9117	-.088	-.883	.80465	.003	1
S5	20.000	20.068	.068	.339	1.6287	.004	1
S2	1.6000	1.6151	.015	.941	.13116	.000	1

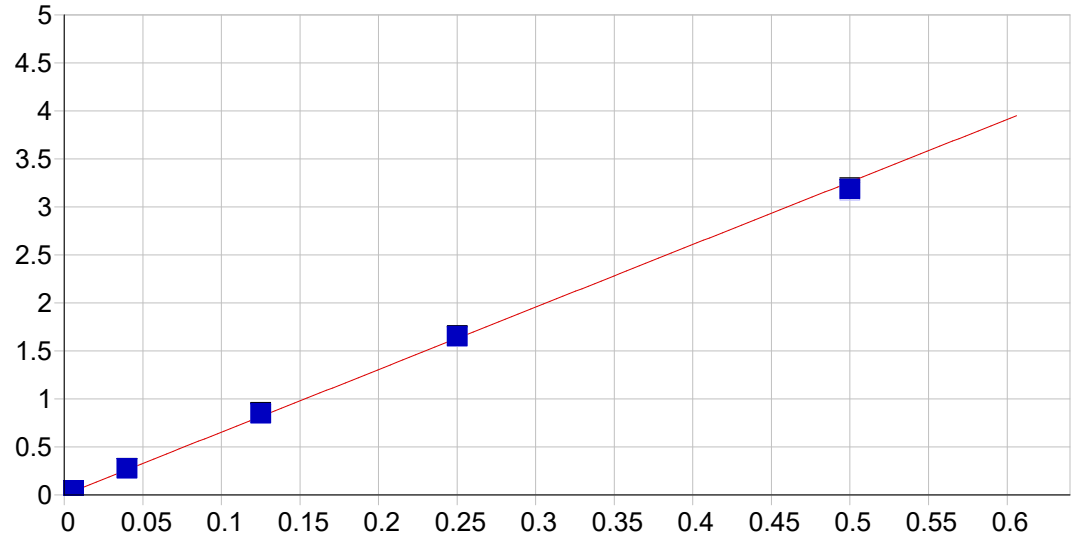


Ba 493.409 { 68}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.065088	Re-Slope:	1.000000
A1 (Gain):	2.698016	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.002130		
Predicted MDL:	0.000851		
Predicted MQL:	0.002836		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.06509	.000	1
S1	.10000	.10185	.002	1.85	.33987	.001	1
S3	5.0000	4.9368	-.063	-1.26	13.385	.006	1
S4	10.000	9.9168	-.083	-.832	26.821	.106	1
S5	20.000	20.184	.184	.918	54.521	.562	1
S2	1.6000	1.5610	-.039	-2.44	4.2767	.014	1

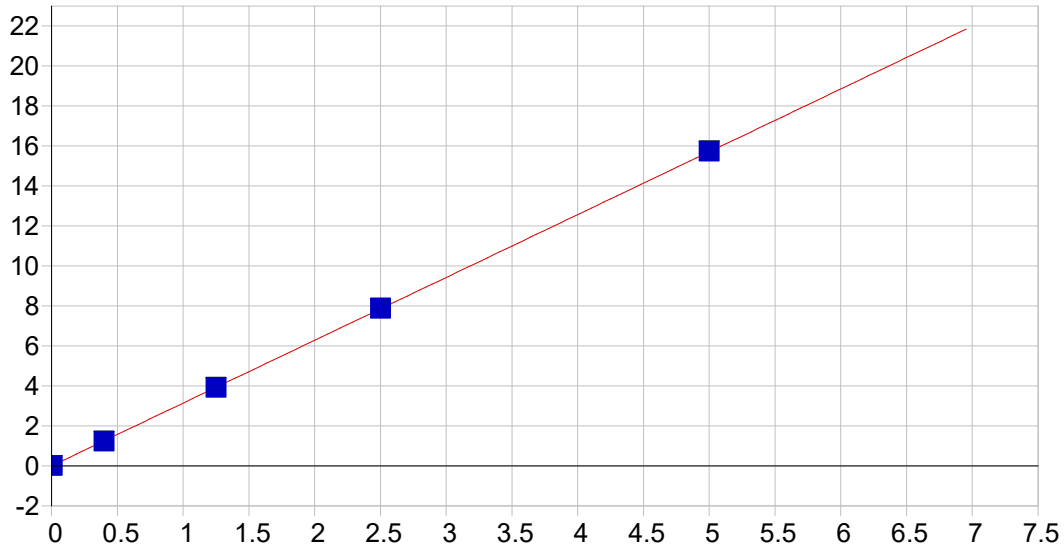


Be 234.861 {144}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002014	Re-Slope:	1.000000
A1 (Gain):	6.515656	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999604	Status:	OK.
Std Error of Est:	0.000525		
Predicted MDL:	0.000080		
Predicted MQL:	0.000265		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00201	.000	1
S1	.00600	.00678	.001	12.9	.04587	.001	1
S3	.12500	.13011	.005	4.09	.84612	.009	1
S4	.25000	.25363	.004	1.45	1.6473	.005	1
S5	.50000	.48852	-.011	-2.30	3.1704	.016	1
S2	.04000	.04198	.002	4.94	.27435	.001	1

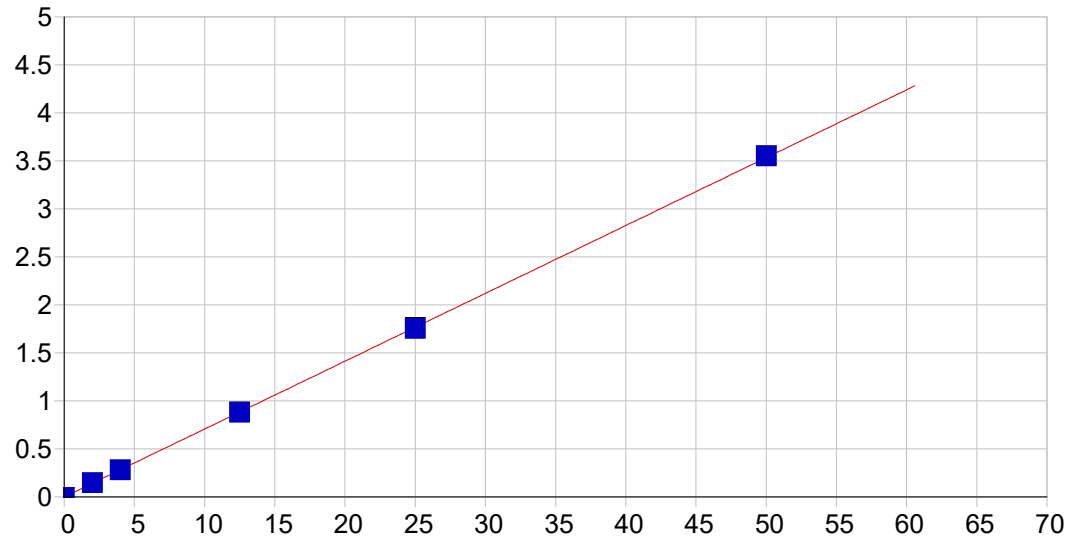


Cd 226.502 {449}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000645	Re-Slope:	1.000000
A1 (Gain):	3.142462	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999988	Status:	OK.
Std Error of Est:	0.000138		
Predicted MDL:	0.000081		
Predicted MQL:	0.000270		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00064	.000	1
S1	.00600	.00603	.000	.428	.01836	.000	1
S3	1.2500	1.2478	-.002	-.180	3.9231	.009	1
S4	2.5000	2.5040	.004	.160	7.8736	.015	1
S5	5.0000	5.0070	.007	.140	15.745	.027	1
S2	.40000	.39121	-.009	-2.20	1.2296	.002	1

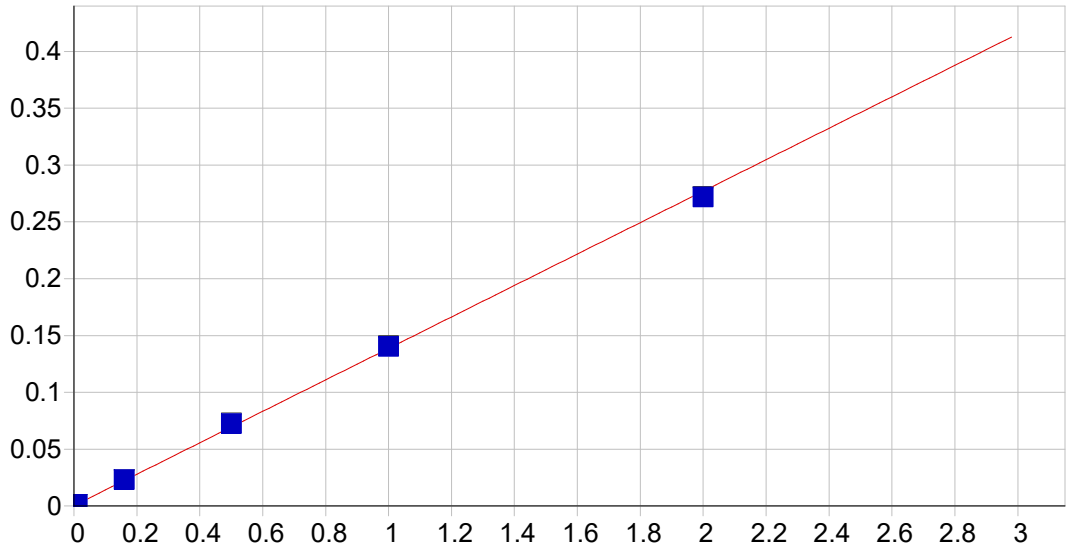


Ca 373.690 { 90}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000717	Re-Slope:	1.000000
A1 (Gain):	0.070654	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999971	Status:	OK.
Std Error of Est:	0.000284		
Predicted MDL:	0.011292		
Predicted MQL:	0.037641		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00072	.000	1
S2	4.0000	3.9348	-.065	-1.63	.27873	.001	1
S3	12.500	12.448	-.052	-.419	.88020	.002	1
S4	25.000	24.817	-.183	-.733	1.7541	.008	1
S5	50.000	50.245	.245	.489	3.5507	.003	1
S1	2.0000	2.0561	.056	2.80	.14599	.000	1

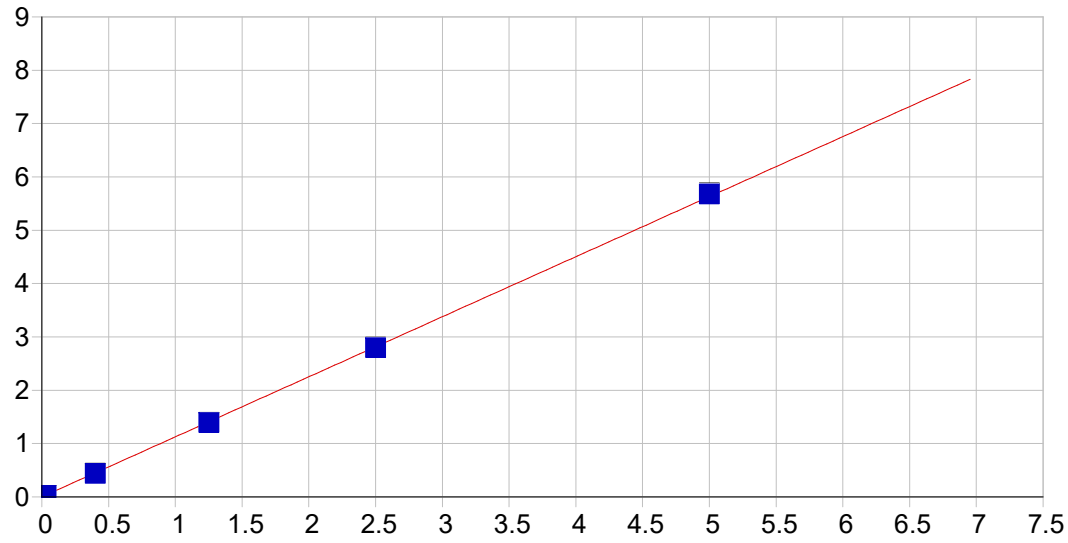


Cr 267.716 {126}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000189	Re-Slope:	1.000000
A1 (Gain):	0.138440	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999728	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.000523		
Predicted MQL:	0.001742		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00019	.000	1
S1	.01000	.01061	.001	6.05	.00166	.000	1
S3	.50000	.52166	.022	4.33	.07244	.000	1
S4	1.0000	1.0118	.012	1.18	.14031	.000	1
S5	2.0000	1.9613	-.039	-1.93	.27183	.001	1
S2	.16000	.16466	.005	2.91	.02299	.000	1

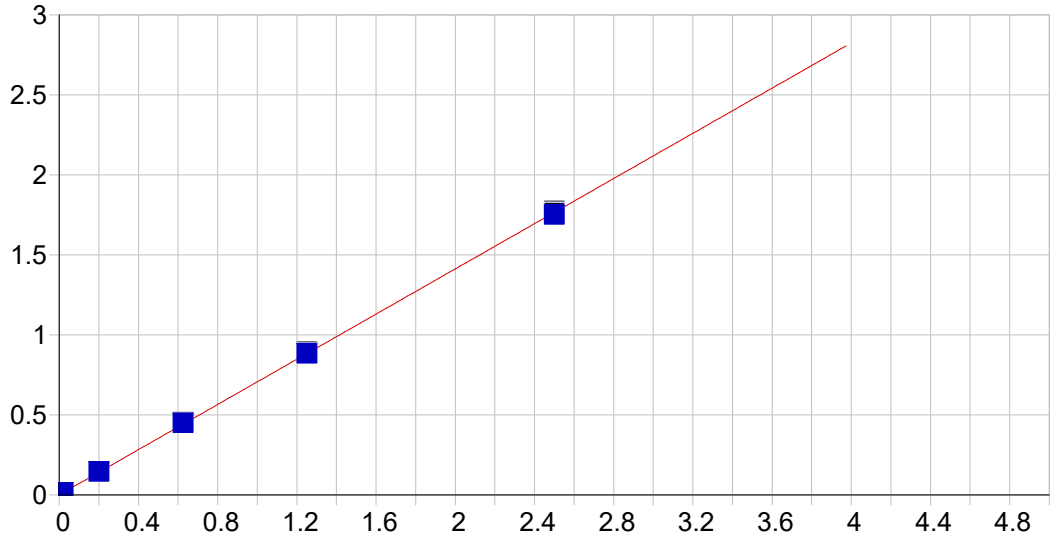


Co 228.616 {448}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000228	Re-Slope:	1.000000
A1 (Gain):	1.125930	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999953	Status:	OK.
Std Error of Est:	0.000222		
Predicted MDL:	0.000204		
Predicted MQL:	0.000681		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00023	.000	1
S1	.03000	.03023	.000	.782	.03413	.000	1
S3	1.2500	1.2352	-.015	-1.19	1.3933	.002	1
S4	2.5000	2.4835	-.017	-.661	2.8012	.006	1
S5	5.0000	5.0409	.041	.819	5.6855	.014	1
S2	.40000	.39018	-.010	-2.46	.44031	.001	1

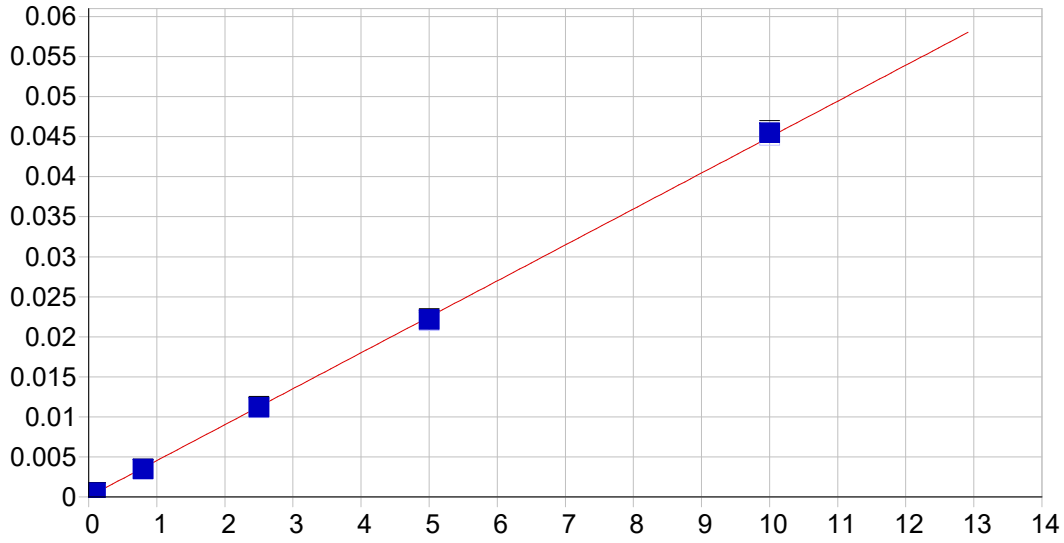


Cu 224.700 {450}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000598	Re-Slope:	1.000000
A1 (Gain):	0.706062	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999929	Status:	OK.
Std Error of Est:	0.000099		
Predicted MDL:	0.000431		
Predicted MQL:	0.001436		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00060	.000	1
S1	.02000	.02213	.002	10.6	.01638	.000	1
S3	.62500	.63509	.010	1.61	.45269	.001	1
S4	1.2500	1.2516	.002	.125	.89164	.003	1
S5	2.5000	2.4812	-.019	-.754	1.7672	.007	1
S2	.20000	.20506	.005	2.53	.14656	.000	1

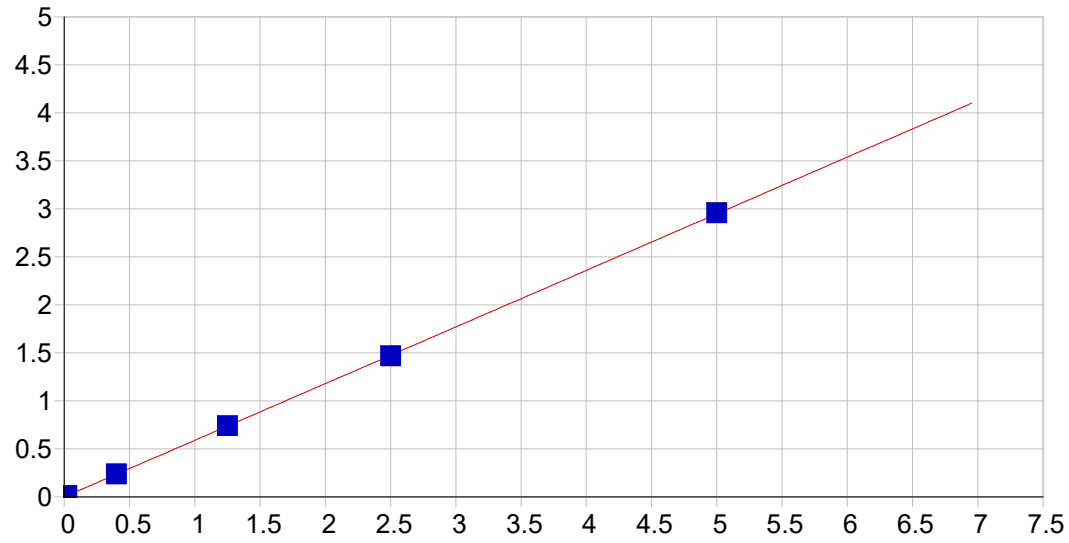


Fe 240.488 {140}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000041	Re-Slope:	1.000000
A1 (Gain):	0.004490	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999870	Status:	OK.
Std Error of Est:	0.000004		
Predicted MDL:	0.006090		
Predicted MQL:	0.020300		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00004	.000	1
S1	.10000	.10337	.003	3.37	.00050	.000	1
S3	2.5000	2.4851	-.015	-.594	.01110	.000	1
S4	5.0000	4.9256	-.074	-1.49	.02197	.000	1
S5	10.000	10.124	.124	1.24	.04512	.000	1
S2	.80000	.76153	-.038	-4.81	.00343	.000	1

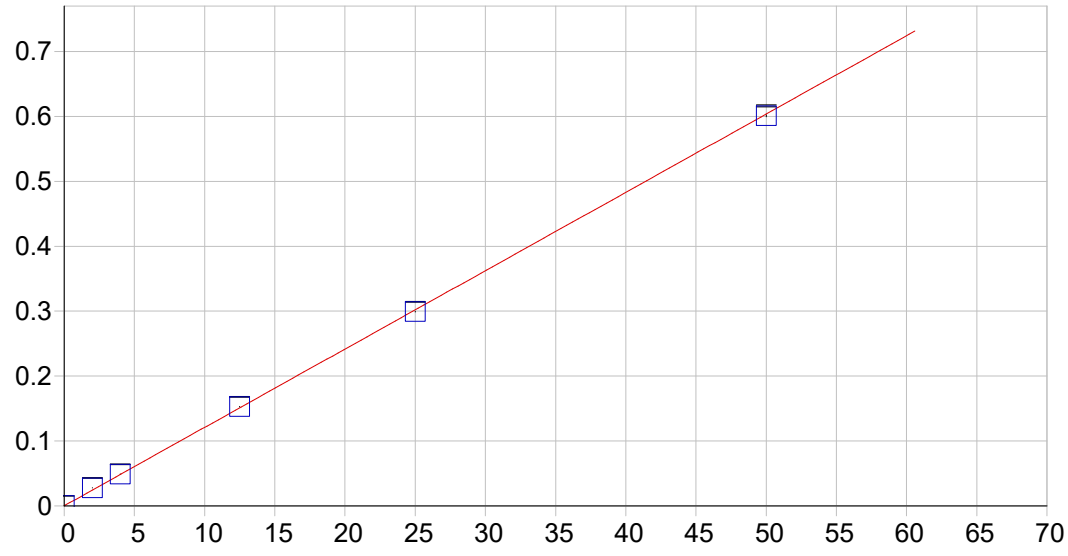


Mn 257.610 {131}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000266	Re-Slope:	1.000000
A1 (Gain):	0.589850	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000053		
Predicted MDL:	0.000531		
Predicted MQL:	0.001770		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00026	.000	1
S1	.02000	.02155	.002	7.77	.01298	.001	1
S3	1.2500	1.2524	.002	.189	.73912	.001	1
S4	2.5000	2.4833	-.017	-.666	1.4654	.003	1
S5	5.0000	5.0134	.013	.267	2.9580	.003	1
S2	.40000	.39938	-.001	-.156	.23589	.001	1

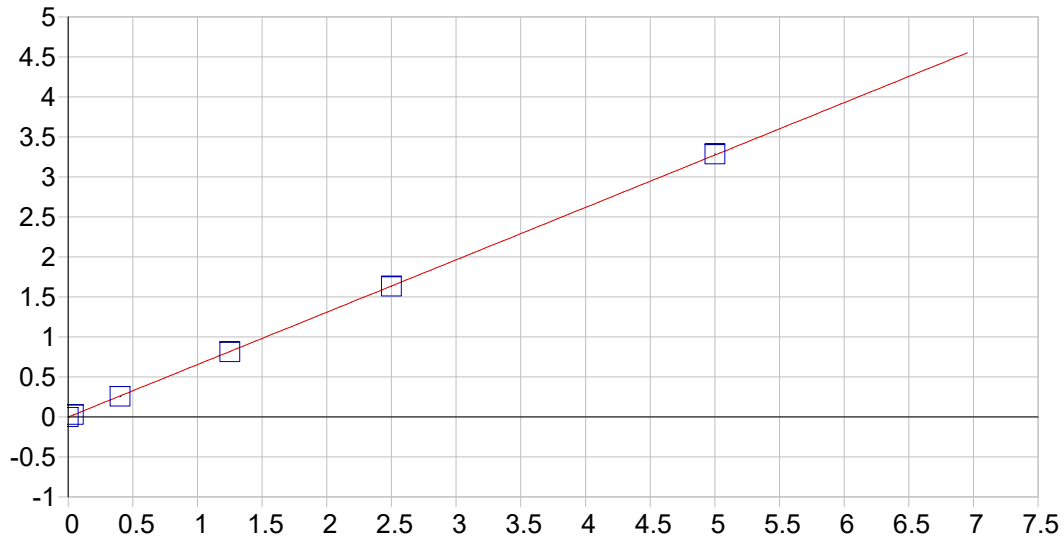


Mg 279.079 {121}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000289	Re-Slope:	1.000000
A1 (Gain):	0.012068	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999770	Status:	OK.
Std Error of Est:	0.000137		
Predicted MDL:	0.029726		
Predicted MQL:	0.099086		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00029	-.000	.000	.00029	.000	1
S2	4.0000	4.0392	.039	.980	.04903	.000	1
S3	12.500	12.641	.141	1.13	.15283	.000	1
S4	25.000	24.781	-.219	-.875	.29934	.001	1
S5	50.000	49.763	-.237	-.474	.60080	.001	1
S1	2.0000	2.2756	.276	13.8	.02775	.000	1

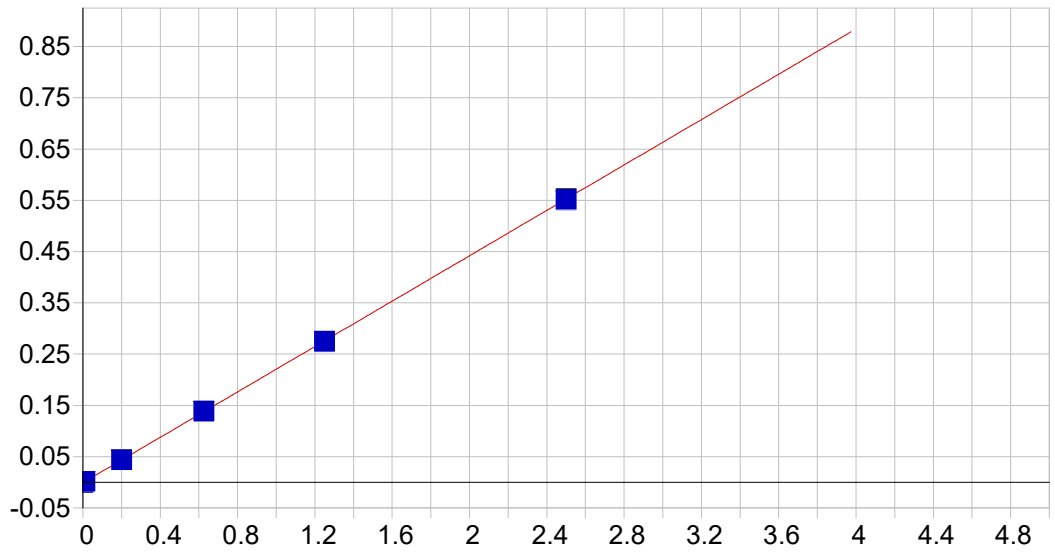


Ni 231.604 {446}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000659	Re-Slope:	1.000000
A1 (Gain):	0.654771	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.000092		
Predicted MDL:	0.000374		
Predicted MQL:	0.001247		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00066	.000	1
S1	.04000	.04143	.001	3.58	.02647	.000	1
S3	1.2500	1.2441	-.006	-.469	.81397	.001	1
S4	2.5000	2.4933	-.007	-.269	1.6319	.003	1
S5	5.0000	5.0192	.019	.384	3.2858	.006	1
S2	.40000	.39195	-.008	-2.01	.25598	.001	1

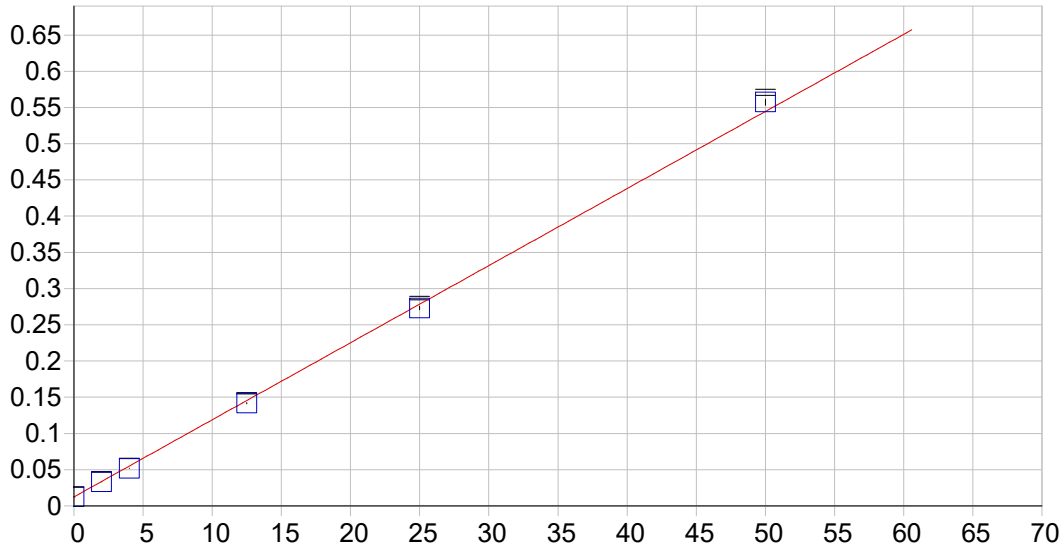


Ag 328.068 {103}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000859	Re-Slope:	1.000000
A1 (Gain):	0.221345	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000011		
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	-.00086	.000	1
S1	.01000	.01100	.001	10.0	.00156	.000	1
S3	.62500	.62978	.005	.764	.13787	.000	1
S4	1.2500	1.2452	-.005	-.383	.27342	.001	1
S5	2.5000	2.4975	-.002	-.099	.54927	.001	1
S2	.20000	.20149	.001	.744	.04352	.000	1

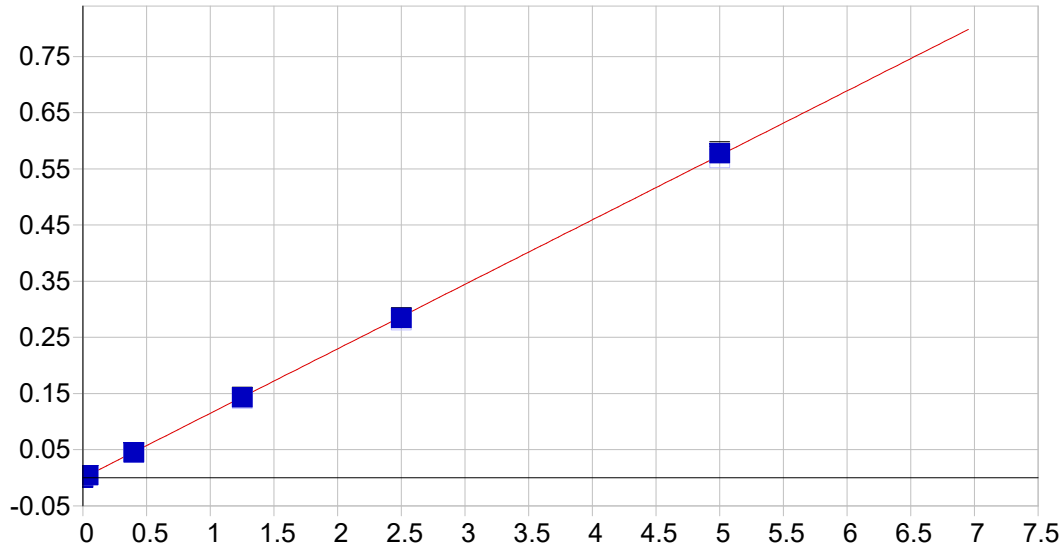


Na 589.592 { 57}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.012484	Re-Slope:	1.000000
A1 (Gain):	0.010640	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999610	Status:	OK.
Std Error of Est:	0.000157		
Predicted MDL:	0.016743		
Predicted MQL:	0.055811		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00025	.000	.000	.01249	.000	1
S2	4.0000	3.7021	-.298	-7.45	.05188	.000	1
S3	12.500	12.148	-.352	-2.81	.14175	.001	1
S4	25.000	24.491	-.509	-2.04	.27308	.002	1
S5	50.000	51.208	1.21	2.42	.55736	.004	1
S1	2.0000	1.9500	-.050	-2.50	.03323	.000	1

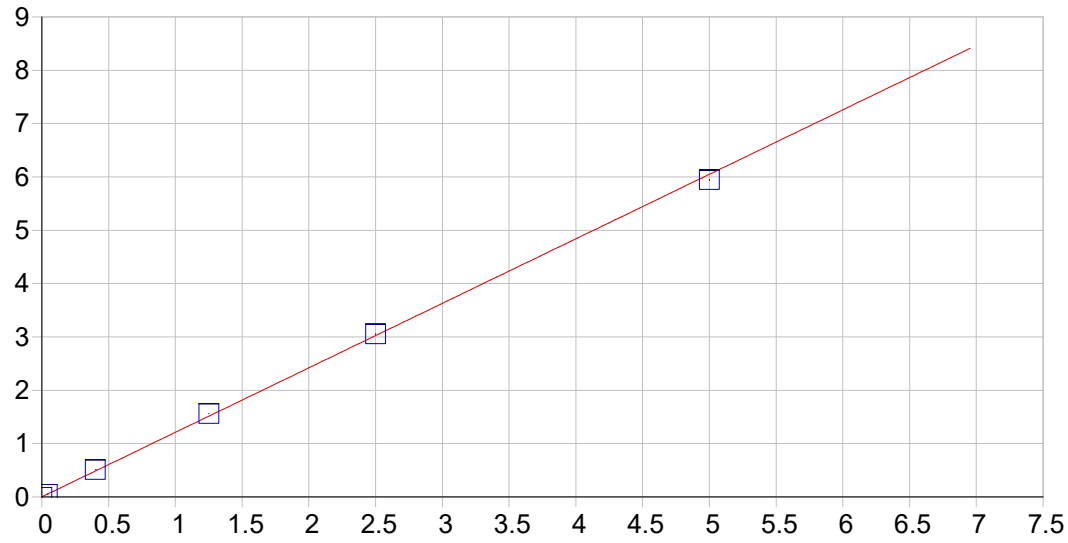


V 292.402 {115}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000034	Re-Slope:	1.000000
A1 (Gain):	0.114833	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999969	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.003442		
Predicted MQL:	0.011473		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00003	.000	1
S1	.04000	.03979	-.000	-.524	.00443	.000	1
S3	1.2500	1.2468	-.003	-.256	.14111	.001	1
S4	2.5000	2.4785	-.021	-.858	.28047	.000	1
S5	5.0000	5.0324	.032	.648	.56955	.003	1
S2	.40000	.39246	-.008	-1.89	.04443	.000	1

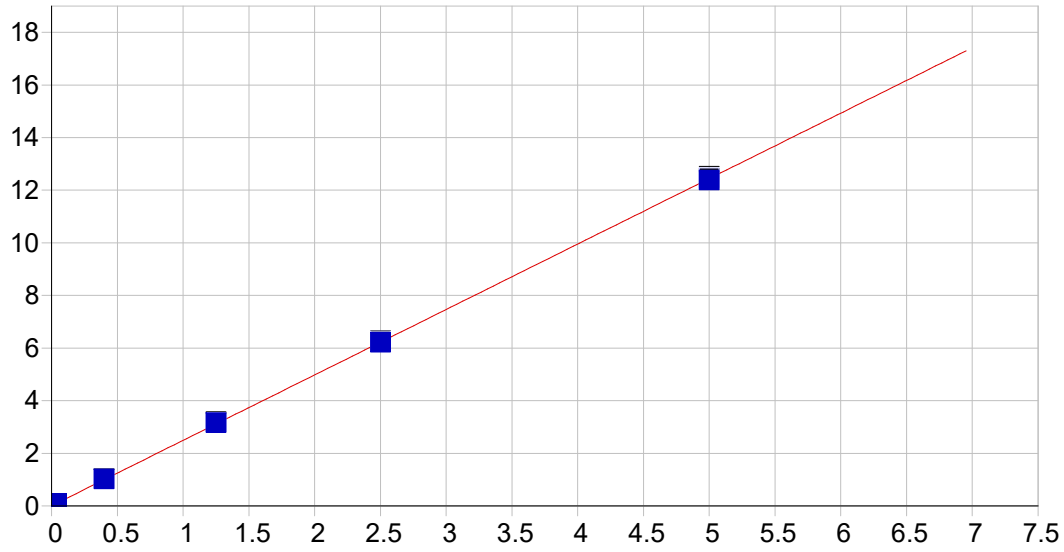


Zn 206.200 {464}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001259	Re-Slope:	1.000000
A1 (Gain):	1.209460	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999766	Status:	OK.
Std Error of Est:	0.000614		
Predicted MDL:	0.000151		
Predicted MQL:	0.000502		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00125	.000	1
S1	.04000	.04405	.004	10.1	.05454	.000	1
S3	1.2500	1.2912	.041	3.30	1.5630	.004	1
S4	2.5000	2.5219	.022	.876	3.0514	.006	1
S5	5.0000	4.9142	-.086	-1.72	5.9448	.010	1
S2	.40000	.41858	.019	4.65	.50752	.000	1

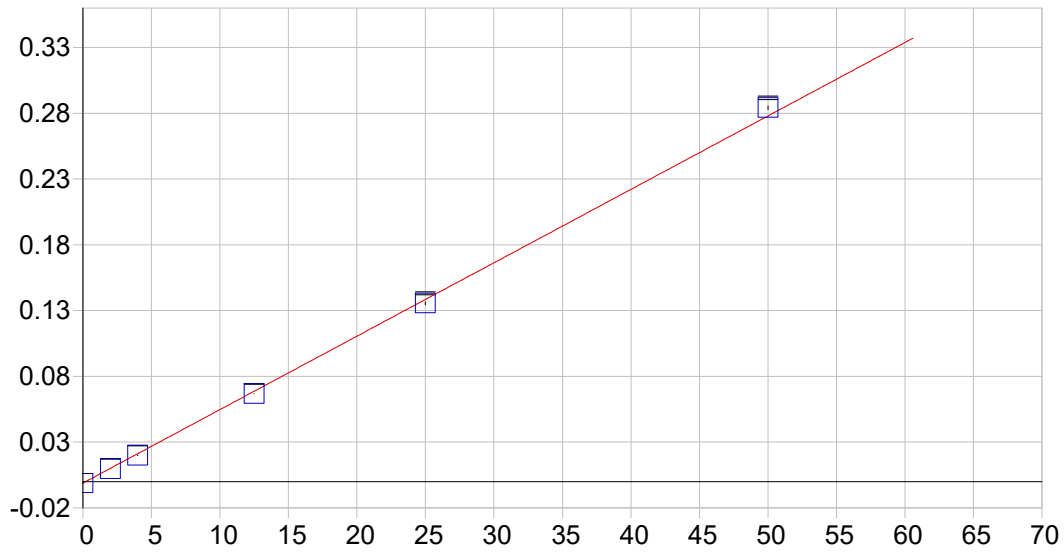


Zn 213.856 {158}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003747	Re-Slope:	1.000000
A1 (Gain):	2.487584	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999964	Status:	OK.
Std Error of Est:	0.000499		
Predicted MDL:	0.000241		
Predicted MQL:	0.000805		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00374	.001	1
S1	.04000	.04244	.002	6.10	.11002	.000	1
S3	1.2500	1.2680	.018	1.44	3.1797	.015	1
S4	2.5000	2.4970	-.003	-.120	6.2585	.015	1
S5	5.0000	4.9752	-.025	-.496	12.466	.060	1
S2	.40000	.40735	.007	1.84	1.0240	.004	1

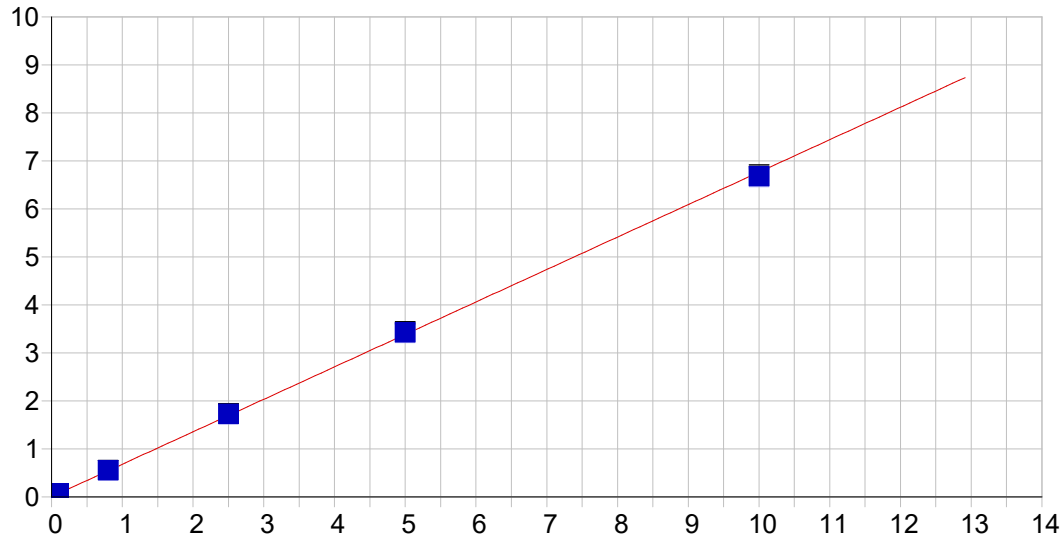


K 766.490 { 44}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001137	Re-Slope:	1.000000
A1 (Gain):	0.005583	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999689	Status:	OK.
Std Error of Est:	0.000074		
Predicted MDL:	0.036858		
Predicted MQL:	0.122861		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00021	.000	.000	-.00114	.000	1
S2	4.0000	3.7775	-.223	-5.56	.01995	.000	1
S3	12.500	12.157	-.343	-2.74	.06674	.000	1
S4	25.000	24.498	-.502	-2.01	.13564	.001	1
S5	50.000	51.118	1.12	2.24	.28426	.001	1
S1	2.0000	1.9495	-.051	-2.53	.00975	.000	1

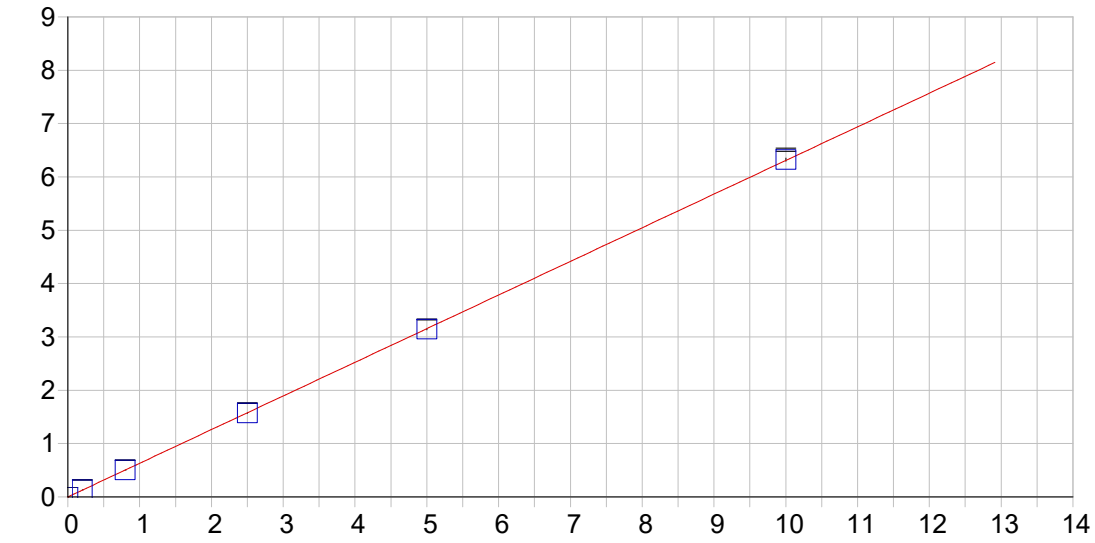


B 249.678 {135}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004617	Re-Slope:	1.000000
A1 (Gain):	0.676119	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999903	Status:	OK.
Std Error of Est:	0.000492		
Predicted MDL:	0.000918		
Predicted MQL:	0.003060		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00461	.000	1
S1	.10000	.10554	.006	5.54	.07558	.000	1
S3	2.5000	2.5463	.046	1.85	1.7201	.011	1
S4	5.0000	5.0609	.061	1.22	3.4142	.018	1
S5	10.000	9.8775	-.123	-1.23	6.6586	.029	1
S2	.80000	.80976	.010	1.22	.55016	.001	1

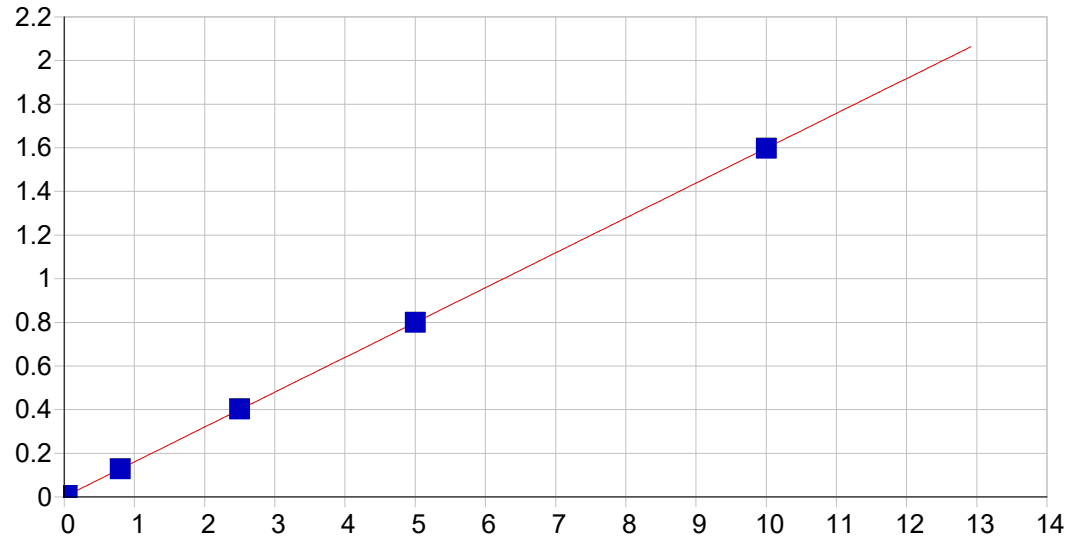


Mo 202.030 {467}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000244	Re-Slope:	1.000000
A1 (Gain):	0.630820	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999983	Status:	OK.
Std Error of Est:	0.000271		
Predicted MDL:	0.000294		
Predicted MQL:	0.000980		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00024	.000	1
S1	.20000	.20916	.009	4.58	.13219	.000	1
S3	2.5000	2.4900	-.010	-.400	1.5710	.004	1
S4	5.0000	4.9794	-.021	-.413	3.1413	.011	1
S5	10.000	10.024	.024	.244	6.3238	.028	1
S2	.80000	.79707	-.003	-.367	.50305	.001	1

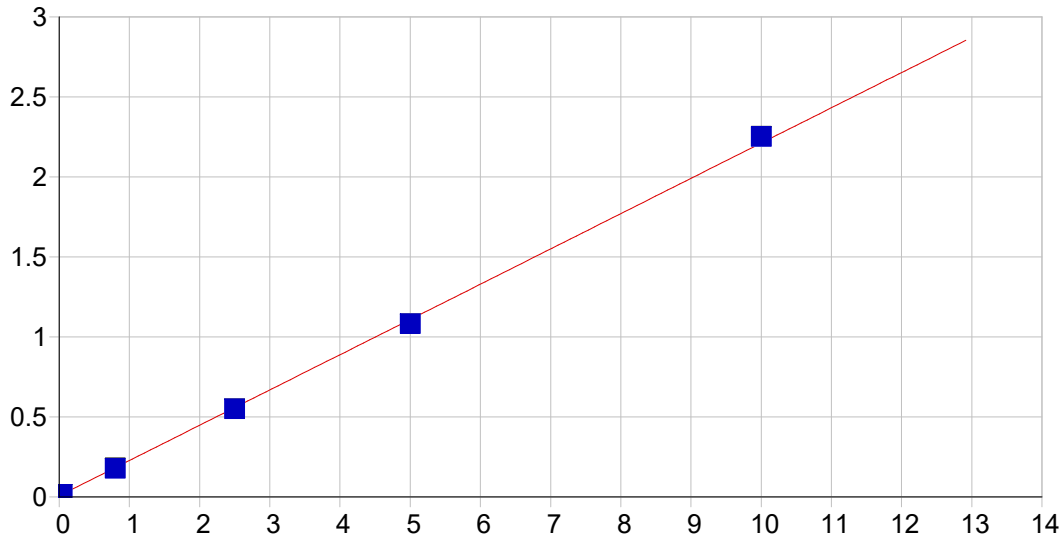


Sn 189.989 {478}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000674	Re-Slope:	1.000000
A1 (Gain):	0.159725	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999996	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	0.000684		
Predicted MQL:	0.002279		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00067	.000	1
S1	.04000	.04096	.001	2.40	.00721	.000	1
S3	2.5000	2.5134	.013	.538	.40173	.001	1
S4	5.0000	4.9981	-.002	-.037	.79819	.001	1
S5	10.000	9.9937	-.006	-.063	1.5953	.002	1
S2	.80000	.79374	-.006	-.782	.12732	.000	1

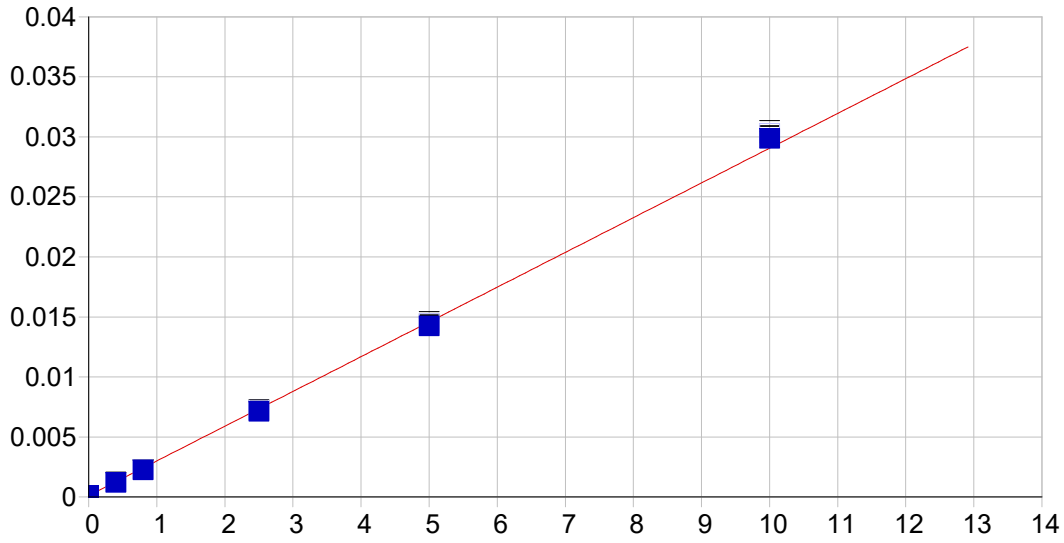


Ti 336.121 {100}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006882	Re-Slope:	1.000000
A1 (Gain):	0.220440	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999794	Status:	OK.
Std Error of Est:	0.000148		
Predicted MDL:	0.002214		
Predicted MQL:	0.007381		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00688	.000	1
S1	.04000	.04147	.001	3.66	.01602	.000	1
S3	2.5000	2.4622	-.038	-1.51	.54944	.001	1
S4	5.0000	4.8757	-.124	-2.49	1.0813	.002	1
S5	10.000	10.182	.182	1.82	2.2505	.002	1
S2	.80000	.77898	-.021	-2.63	.17854	.001	1

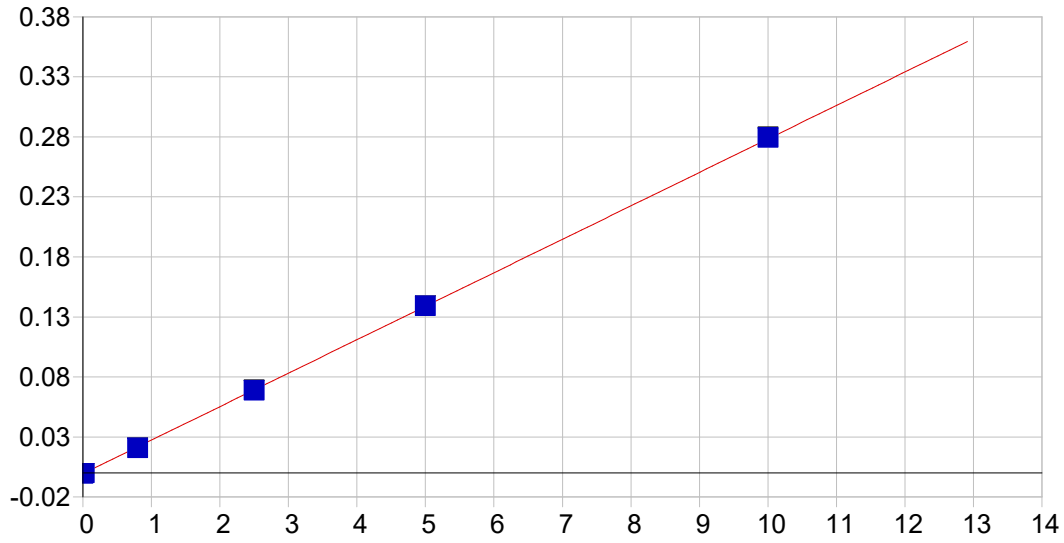


Si 288.158 {117}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000100	Re-Slope:	1.000000
A1 (Gain):	0.002896	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999522	Status:	OK.
Std Error of Est:	0.000010		
Predicted MDL:	0.014953		
Predicted MQL:	0.049844		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00006	.000	.000	.00010	.000	1
S1	.40000	.38069	-.019	-4.83	.00120	.000	1
S3	2.5000	2.4232	-.077	-3.07	.00723	.000	1
S4	5.0000	4.8815	-.119	-2.37	.01446	.000	1
S5	10.000	10.276	.276	2.76	.03030	.000	1
S2	.80000	.73877	-.061	-7.65	.00227	.000	1

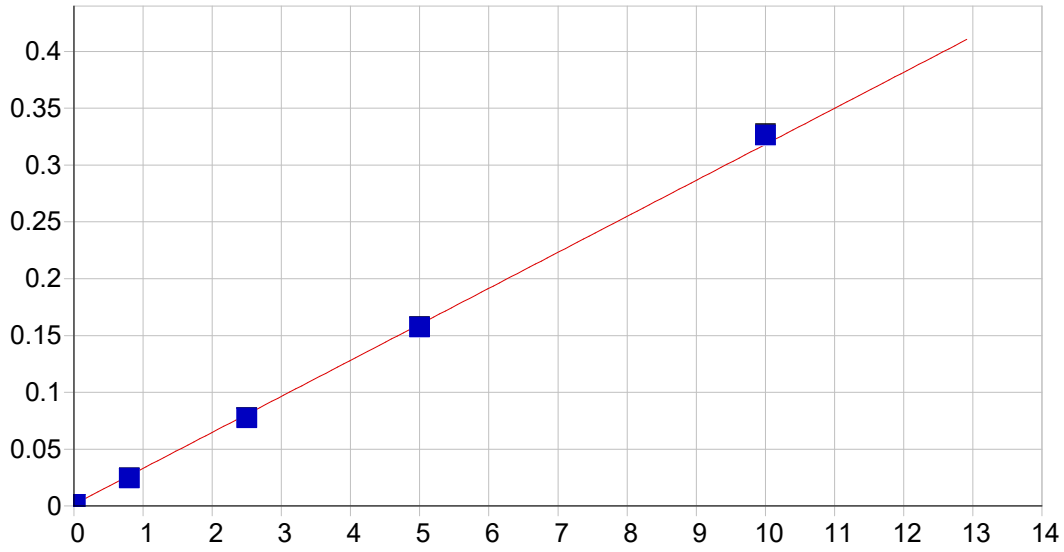


P 177.495 {490}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000549	Re-Slope:	1.000000
A1 (Gain):	0.027885	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000006		
Predicted MDL:	0.002794		
Predicted MQL:	0.009314		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00055	.000	1
S1	.02000	.01874	-.001	-6.31	-.00003	.000	1
S3	2.5000	2.4888	-.011	-.449	.06884	.000	1
S4	5.0000	5.0081	.008	.161	.13908	.000	1
S5	10.000	10.039	.039	.390	.27935	.000	1
S2	.80000	.76541	-.035	-4.32	.02079	.000	1

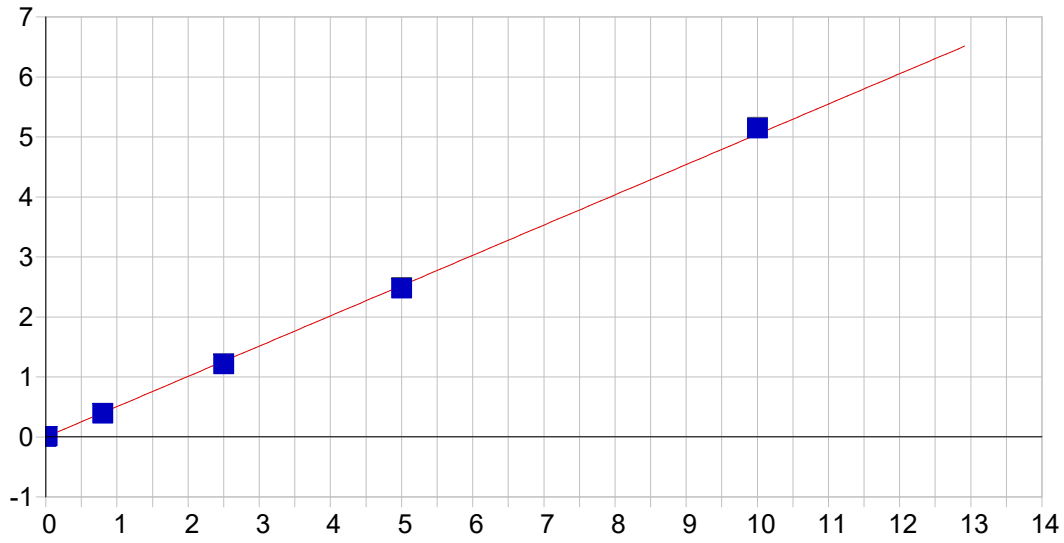


S 182.034 {485}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001403	Re-Slope:	1.000000
A1 (Gain):	0.031686	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999301	Status:	OK.
Std Error of Est:	0.000028		
Predicted MDL:	0.003049		
Predicted MQL:	0.010163		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00140	.000	1
S1	.02000	.00858	-.011	-57.1	.00165	.000	1
S3	2.5000	2.4015	-.098	-3.94	.07729	.000	1
S4	5.0000	4.9221	-.078	-1.56	.15695	.000	1
S5	10.000	10.262	.262	2.62	.32575	.001	1
S2	.80000	.72513	-.075	-9.36	.02431	.000	1

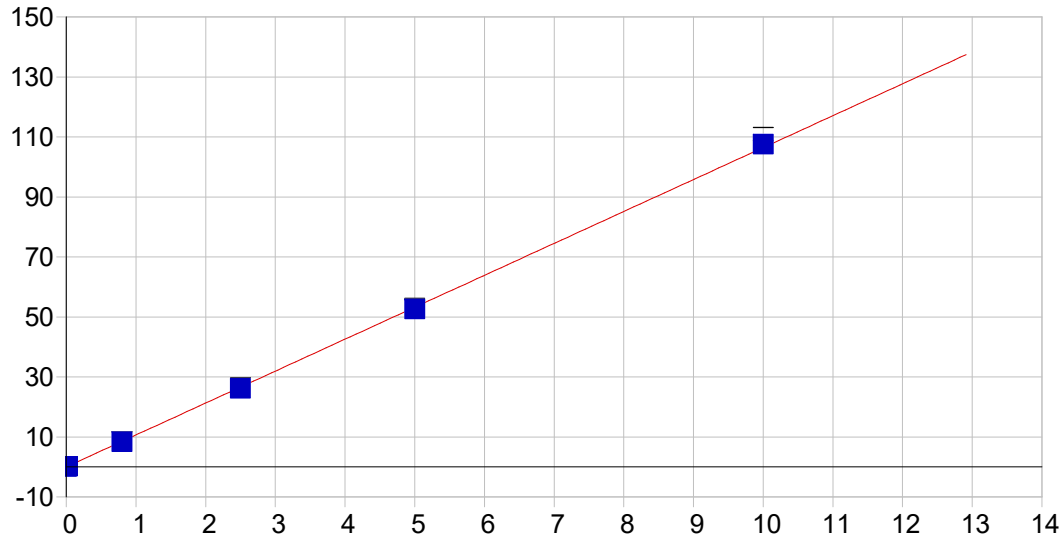


Li 670.784 { 50}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000393	Re-Slope:	1.000000
A1 (Gain):	0.504381	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999730	Status:	OK.
Std Error of Est:	0.000275		
Predicted MDL:	0.003764		
Predicted MQL:	0.012547		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00039	.002	1
S5	10.000	10.201	.201	2.01	5.1475	.012	1
S4	5.0000	4.9084	-.092	-1.83	2.4765	.005	1
S3	2.5000	2.4106	-.089	-3.57	1.2161	.006	1
S1	.02000	.02250	.002	12.5	.01111	.002	1
S2	.80000	.77711	-.023	-2.86	.39177	.002	1

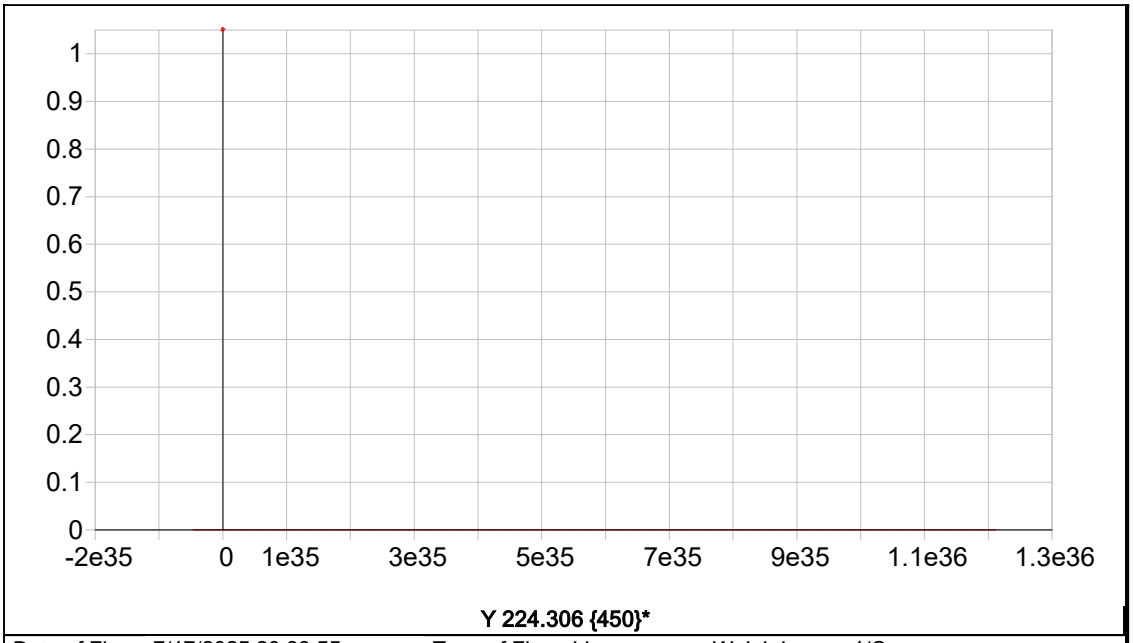


Sr 407.771 { 83}

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000307	Re-Slope:	1.000000
A1 (Gain):	10.642502	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999928	Status:	OK.
Std Error of Est:	0.002996		
Predicted MDL:	0.000096		
Predicted MQL:	0.000319		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00031	.001	1
S1	.02000	.02031	.000	1.53	.21744	.001	1
S3	2.5000	2.4629	-.037	-1.48	26.237	.207	1
S4	5.0000	4.9395	-.060	-1.21	52.620	.293	1
S5	10.000	10.109	.109	1.09	107.69	2.19	1
S2	.80000	.78832	-.012	-1.46	8.3982	.018	1

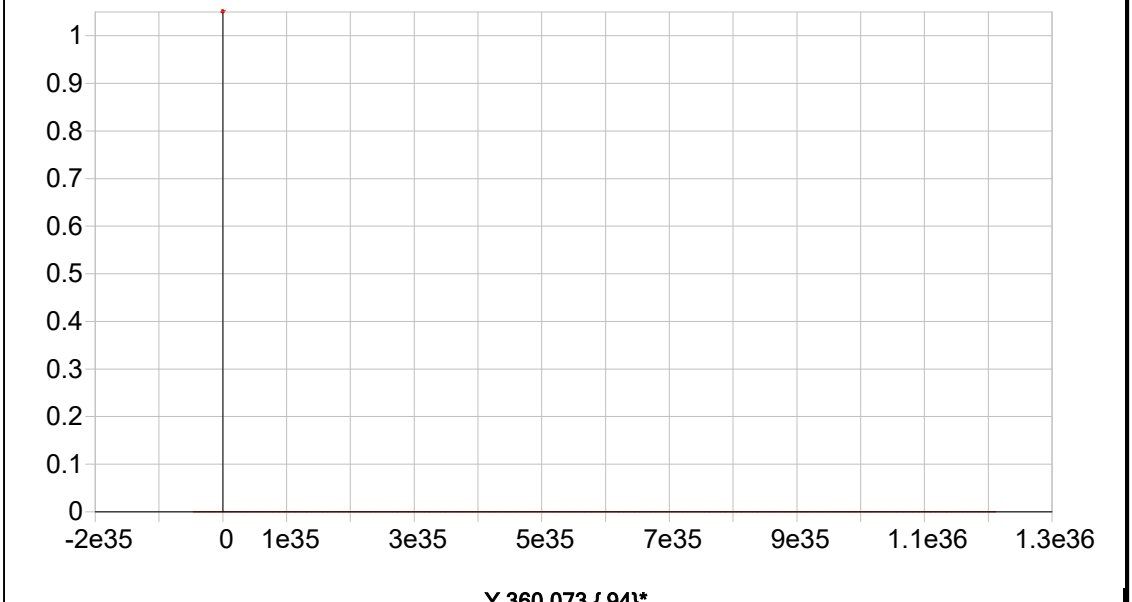


Y 224.306 {450}*

Date of Fit:	7/17/2025 20:39:55	Type of Fit:	Linear	Weighting:	1/Conc

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

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



Y 360.073 { 94}*

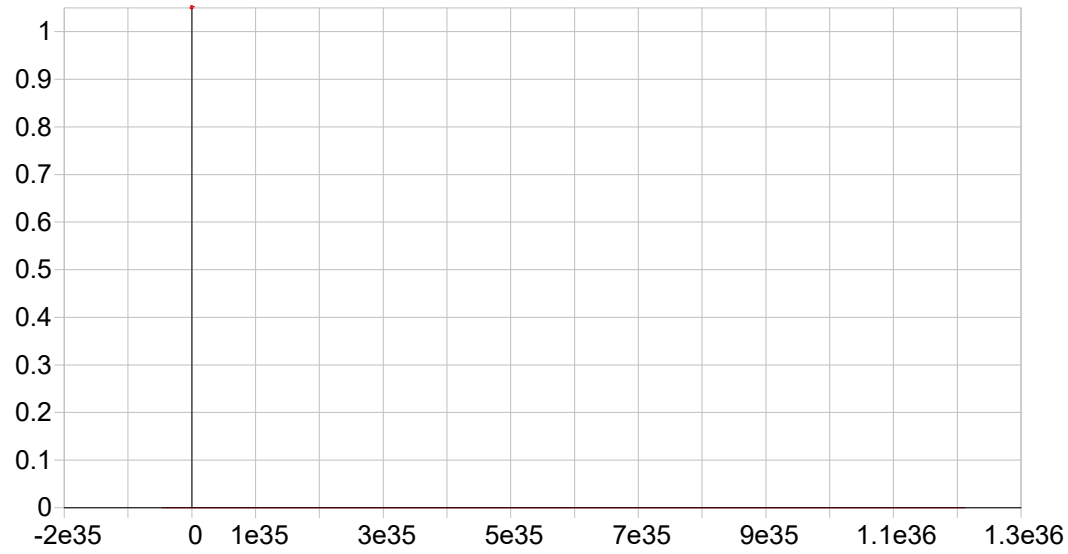
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

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					

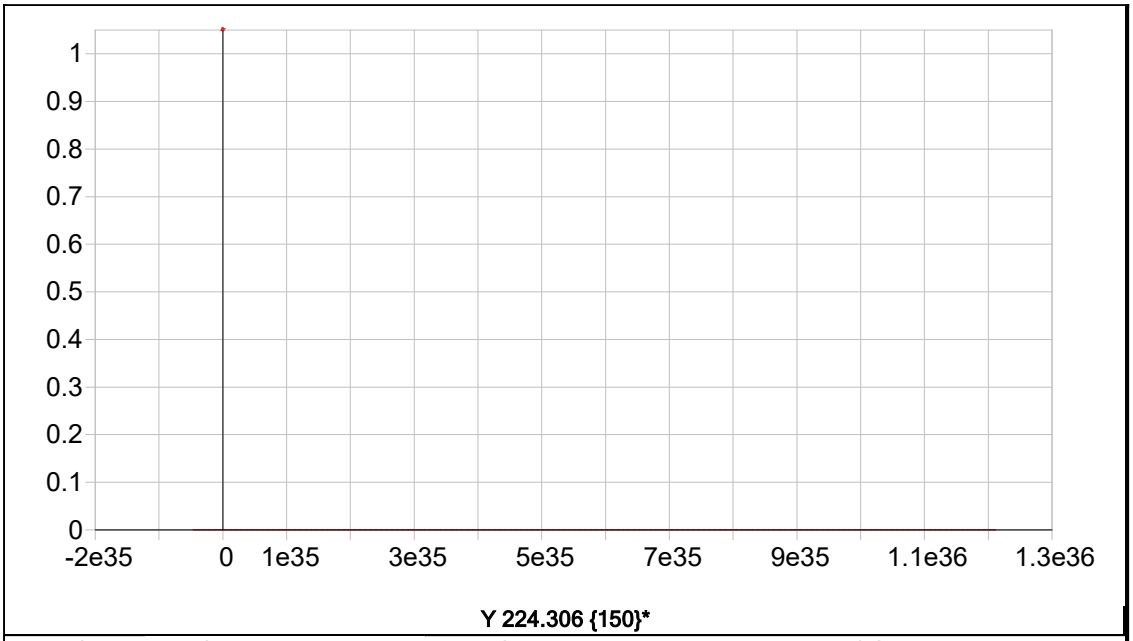
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



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

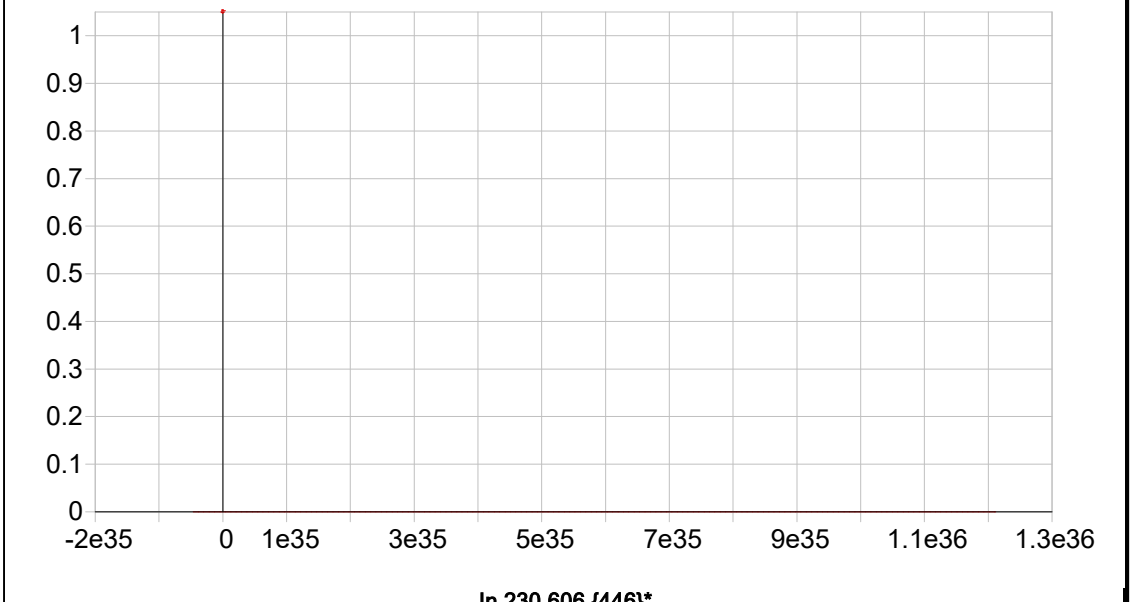


Y 224.306 {150}*

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:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S0 Acquired: 7/17/2025 13:05:14 Type: Cal
Method: 6010-200.7 NEW(v42) 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	**-.00001**	**.00006**	**.00052**	**.00062**	**.00071**	**.00011**	**.06509**	**.00201**
Stddev	.00004	.00009	.00013	.00008	.00008	.00034	.00017	.00003
%RSD	626.82	144.39	25.226	12.522	10.842	318.29	.25576	1.5053
#1	-.00001	.00003	.00058	.00063	.00079	.00007	.06521	.00204
#2	.00003	.00016	.00061	.00069	.00070	.00046	.06517	.00198
#3	-.00005	-.00001	.00037	.00054	.00064	-.00021	.06490	.00199

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	**-.00064**	**.00072**	**.00019**	**.00023**	**.00060**	**.00004**	**.00026**	**.00029**
Stddev	.00015	.00017	.00003	.00015	.00013	.00001	.00004	.00027
%RSD	23.414	23.315	16.786	66.216	22.533	27.643	15.943	92.970
#1	-.00081	.00073	.00016	.00008	.00050	.00003	.00028	.00023
#2	-.00062	.00087	.00018	.00038	.00075	.00005	.00022	.00005
#3	-.00051	.00054	.00022	.00022	.00054	.00004	.00029	.00057

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	**-.00066**	**-.00086**	**.01249**	**.00003**	**.00374**	**-.00114**	**.00461**	**.00024**
Stddev	.00016	.00005	.00026	.00015	.00063	.00019	.00033	.00010
%RSD	24.571	6.1476	2.0724	436.12	16.919	16.867	7.0676	43.215
#1	-.00058	-.00082	.01266	.00007	.00335	-.00116	.00433	.00022
#2	-.00055	-.00084	.01261	-.00013	.00447	-.00093	.00497	.00015
#3	-.00085	-.00092	.01219	.00016	.00340	-.00131	.00453	.00035

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	**.00067**	**.00688**	**.00010**	**-.00055**	**.00140**	**-.00039**	**.00031**
Stddev	.00012	.00034	.00001	.00006	.00009	.00218	.00091
%RSD	17.207	4.9005	12.724	11.469	6.6429	552.98	292.15
#1	.00075	.00652	.00009	-.00054	.00148	-.00251	-.00073
#2	.00073	.00693	.00009	-.00049	.00143	.00184	.00089
#3	.00054	.00719	.00011	-.00062	.00130	-.00051	.00078

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S0 Acquired: 7/17/2025 13:05:14 Type: Cal
Method: 6010-200.7 NEW(v42) 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	**5474.9**	**85439.**	**8237.0**	**4827.3**	**6572.1**
Stddev	14.1	490.	60.6	21.6	22.2
%RSD	.25748	.57403	.73569	.44803	.33810
#1	5483.0	85894.	8184.2	4824.9	6575.8
#2	5483.0	85504.	8303.1	4850.0	6592.2
#3	5458.6	84920.	8223.6	4806.9	6548.3

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S1 Acquired: 7/17/2025 13:09:39 Type: Cal
Method: 6010-200.7 NEW(v42) 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	**.00090**	**.00289**	**.00281**	**.00147**	**.00565**	**.00947**	**.33987**	**.04587**
Stddev	.00007	.00007	.00021	.00009	.00007	.00037	.00139	.00059
%RSD	8.1978	2.4344	7.6264	5.7863	1.3249	3.9219	.40778	1.2833
#1	.00082	.00296	.00257	.00157	.00561	.00972	.33865	.04548
#2	.00096	.00282	.00299	.00144	.00561	.00966	.34138	.04655
#3	.00093	.00291	.00286	.00141	.00574	.00904	.33958	.04558

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	**.01836**	**.14599**	**.00166**	**.03413**	**.01638**	**.00050**	**.01298**	**.02775**
Stddev	.00017	.00024	.00006	.00021	.00015	.00000	.00054	.00027
%RSD	.93998	.16282	3.5144	.61076	.93459	.80348	4.1222	.96512
#1	.01855	.14623	.00160	.03395	.01654	.00050	.01281	.02752
#2	.01831	.14598	.00166	.03408	.01635	.00050	.01358	.02804
#3	.01822	.14575	.00172	.03436	.01624	.00050	.01256	.02769

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	**.02647**	**.00156**	**.03323**	**.00443**	**.11002**	**.00975**	**.07558**	**.13219**
Stddev	.00024	.00009	.00029	.00024	.00030	.00007	.00044	.00024
%RSD	.89854	5.8695	.88418	5.4238	.27685	.70405	.57699	.17807
#1	.02670	.00162	.03345	.00417	.11036	.00983	.07517	.13194
#2	.02622	.00159	.03335	.00463	.10991	.00971	.07604	.13241
#3	.02649	.00145	.03290	.00450	.10978	.00970	.07552	.13220

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	**.00721**	**.01602**	**.00120**	**-.00003**	**.00165**	**.01111**	**.21744**
Stddev	.00008	.00031	.00002	.00008	.00007	.00241	.00062
%RSD	1.0737	1.9243	1.4378	291.69	4.5319	21.642	.28413
#1	.00730	.01637	.00122	.00004	.00173	.00835	.21724
#2	.00715	.01587	.00119	-.00011	.00162	.01275	.21814
#3	.00719	.01581	.00121	-.00000	.00159	.01224	.21695

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S1 Acquired: 7/17/2025 13:09:39 Type: Cal
Method: 6010-200.7 NEW(v42) 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	**5512.8**	**83937.**	**8128.5**	**4729.5**	**6593.1**
Stddev	8.7	531.	43.9	5.8	18.5
%RSD	.15837	.63282	.53964	.12318	.27986
#1	5511.8	83616.	8129.9	4723.4	6579.4
#2	5522.0	83645.	8084.0	4730.1	6614.1
#3	5504.6	84550.	8171.7	4735.0	6585.8

Sample Name: S2 Acquired: 7/17/2025 13:13:59 Type: Cal
Method: 6010-200.7 NEW(v42) 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	**.03425**	**.05828**	**.17004**	**.03668**	**.07891**	**.13116**	**4.2767**	**.27435**
Stddev	.00004	.00102	.00060	.00021	.00013	.00037	.0139	.00058
%RSD	.11295	1.7458	.35048	.56989	.16869	.28077	.32605	.21001
#1	.03422	.05945	.16994	.03653	.07898	.13090	4.2687	.27473
#2	.03424	.05782	.16950	.03658	.07899	.13158	4.2687	.27462
#3	.03429	.05758	.17068	.03691	.07875	.13099	4.2929	.27368

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.2296**	**.27873**	**.02299**	**.44031**	**.14656**	**.00343**	**.23589**	**.04903**
Stddev	.0020	.00096	.00020	.00089	.00034	.00002	.00080	.00048
%RSD	.16219	.34425	.88400	.20150	.23305	.51998	.33960	.97850
#1	1.2289	.27835	.02306	.44045	.14646	.00342	.23529	.04877
#2	1.2280	.27801	.02315	.43935	.14628	.00342	.23557	.04874
#3	1.2318	.27982	.02276	.44111	.14694	.00345	.23680	.04959

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	**.25598**	**.04352**	**.05188**	**.04443**	**1.0240**	**.01995**	**.55016**	**.50305**
Stddev	.00059	.00007	.00032	.00023	.0038	.00023	.00123	.00066
%RSD	.23032	.15428	.62452	.52571	.37226	1.1329	.22360	.13103
#1	.25563	.04360	.05151	.04445	1.0206	.01975	.55150	.50312
#2	.25565	.04347	.05199	.04419	1.0232	.01991	.54909	.50235
#3	.25666	.04350	.05212	.04465	1.0281	.02020	.54989	.50367

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	**.12732**	**.17854**	**.00227**	**.02079**	**.02431**	**.39177**	**8.3982**
Stddev	.00014	.00060	.00001	.00021	.00011	.00204	.0185
%RSD	.11192	.33424	.22360	.99570	.43956	.52055	.22027
#1	.12737	.17817	.00227	.02073	.02435	.38942	8.3941
#2	.12716	.17822	.00228	.02062	.02419	.39309	8.3821
#3	.12744	.17923	.00228	.02102	.02439	.39279	8.4184

Sample Name: S2 Acquired: 7/17/2025 13:13:59 Type: Cal
Method: 6010-200.7 NEW(v42) 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	5472.8	84696.	8127.5	4721.9	6462.4
Stddev	7.7	126.	33.0	26.9	8.7
%RSD	.14018	.14881	.40583	.56947	.13432
#1	5473.1	84635.	8111.9	4748.8	6459.0
#2	5480.3	84613.	8105.2	4721.7	6472.2
#3	5465.0	84841.	8165.4	4695.1	6455.8

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S3 Acquired: 7/17/2025 13:18:04 Type: Cal
Method: 6010-200.7 NEW(v42) 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	**.10828**	**.18561**	**.53603**	**.11460**	**.24757**	**.40550**	**13.385**	**.84612**
Stddev	.00024	.00360	.00105	.00032	.00104	.00072	.006	.00901
%RSD	.21839	1.9422	.19666	.28070	.42092	.17827	.04467	1.0643
#1	.10818	.18355	.53649	.11424	.24680	.40600	13.378	.85145
#2	.10812	.18977	.53482	.11484	.24715	.40581	13.389	.83572
#3	.10855	.18351	.53678	.11473	.24876	.40467	13.387	.85118

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.9231**	**.88020**	**.07244**	**1.3933**	**.45269**	**.01110**	**.73912**	**.15283**
Stddev	.0094	.00208	.00039	.0018	.00103	.00010	.00108	.00047
%RSD	.23842	.23680	.54228	.13162	.22792	.86397	.14608	.30792
#1	3.9128	.87789	.07286	1.3917	.45198	.01110	.73931	.15254
#2	3.9255	.88074	.07208	1.3929	.45223	.01120	.73795	.15258
#3	3.9310	.88195	.07237	1.3953	.45388	.01101	.74009	.15338

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	**.81397**	**.13787**	**.14175**	**.14111**	**3.1797**	**.06674**	**1.7201**	**1.5710**
Stddev	.00138	.00027	.00094	.00072	.0152	.00018	.0105	.0044
%RSD	.16957	.19943	.66110	.51025	.47766	.26253	.61193	.28089
#1	.81281	.13761	.14171	.14056	3.1700	.06681	1.7194	1.5672
#2	.81360	.13816	.14270	.14086	3.1718	.06686	1.7100	1.5699
#3	.81550	.13783	.14083	.14193	3.1972	.06654	1.7310	1.5758

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	**.40173**	**.54944**	**.00723**	**.06884**	**.07729**	**1.2161**	**26.237**
Stddev	.00108	.00116	.00005	.00023	.00025	.0055	.207
%RSD	.26901	.21052	.72709	.34129	.32691	.45497	.78974
#1	.40050	.55063	.00717	.06858	.07702	1.2154	26.324
#2	.40255	.54937	.00727	.06889	.07752	1.2220	26.001
#3	.40213	.54832	.00724	.06905	.07733	1.2110	26.387

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S3 Acquired: 7/17/2025 13:18:04 Type: Cal
Method: 6010-200.7 NEW(v42) 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	5391.7	82861.	8073.6	4584.3	6228.2
Stddev	12.3	306.	35.6	19.5	9.9
%RSD	.22728	.36897	.44118	.42632	.15913
#1	5395.2	82649.	8053.1	4606.7	6234.2
#2	5401.8	82722.	8114.7	4570.8	6233.6
#3	5378.1	83211.	8053.0	4575.4	6216.8

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S4 Acquired: 7/17/2025 13:22:09 Type: Cal
Method: 6010-200.7 NEW(v42) 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	**.21805**	**.36146**	**1.0659**	**.22923**	**.49707**	**.80465**	**26.821**	**1.6473**
Stddev	.00098	.00498	.0015	.00066	.00222	.00277	.106	.0054
%RSD	.44817	1.3777	.14519	.28631	.44617	.34431	.39405	.32637
#1	.21692	.35666	1.0661	.22878	.49478	.80770	26.708	1.6527
#2	.21852	.36113	1.0642	.22892	.49721	.80397	26.837	1.6471
#3	.21869	.36660	1.0673	.22998	.49921	.80229	26.918	1.6419

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7.8736**	**1.7541**	**.14031**	**2.8012**	**.89164**	**.02197**	**1.4654**	**.29934**
Stddev	.0155	.0078	.00043	.0064	.00279	.00012	.0033	.00052
%RSD	.19632	.44483	.30904	.22761	.31328	.55182	.22272	.17447
#1	7.8735	1.7626	.13993	2.8003	.88877	.02193	1.4691	.29928
#2	7.8582	1.7473	.14022	2.7954	.89181	.02187	1.4642	.29988
#3	7.8891	1.7525	.14078	2.8080	.89435	.02210	1.4629	.29884

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.6319**	**.27342**	**.27308**	**.28047**	**6.2585**	**.13564**	**3.4142**	**3.1413**
Stddev	.0033	.00054	.00248	.00038	.0151	.00109	.0184	.0113
%RSD	.20444	.19696	.90789	.13601	.24143	.80202	.53748	.35917
#1	1.6322	.27384	.27046	.28018	6.2437	.13498	3.4279	3.1289
#2	1.6284	.27281	.27339	.28031	6.2579	.13503	3.4214	3.1443
#3	1.6350	.27361	.27539	.28090	6.2739	.13689	3.3934	3.1508

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	**.79819**	**1.0813**	**.01446**	**.13908**	**.15695**	**2.4765**	**52.620**
Stddev	.00132	.0017	.00015	.00026	.00032	.0053	.293
%RSD	.16533	.15665	1.0678	.18409	.20079	.21370	.55744
#1	.79796	1.0814	.01428	.13928	.15706	2.4708	52.947
#2	.79699	1.0795	.01450	.13879	.15660	2.4776	52.379
#3	.79960	1.0829	.01458	.13917	.15720	2.4812	52.535

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S4 Acquired: 7/17/2025 13:22:09 Type: Cal
Method: 6010-200.7 NEW(v42) 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	5354.1	83976.	8161.4	4562.0	6091.5
Stddev	12.2	323.	82.2	16.9	12.2
%RSD	.22735	.38487	1.0070	.37131	.20042
#1	5366.0	83604.	8076.7	4543.6	6091.7
#2	5354.6	84190.	8166.6	4577.0	6103.7
#3	5341.7	84133.	8240.9	4565.4	6079.3

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S5 Acquired: 7/17/2025 13:26:21 Type: Cal
Method: 6010-200.7 NEW(v42) 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	**.44055**	**.71724**	**2.1545**	**.46445**	**1.0194**	**1.6287**	**54.521**	**3.1704**
Stddev	.00149	.00928	.0032	.00200	.0042	.0042	.562	.0159
%RSD	.33894	1.2936	.14787	.43096	.41359	.25722	1.0307	.50113
#1	.44022	.72204	2.1510	.46486	1.0188	1.6275	53.897	3.1794
#2	.43925	.70655	2.1552	.46228	1.0155	1.6333	54.676	3.1797
#3	.44218	.72315	2.1572	.46622	1.0239	1.6252	54.989	3.1521

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	**15.745**	**3.5507**	**.27183**	**5.6855**	**1.7672**	**.04512**	**2.9580**	**.60080**
Stddev	.027	.0033	.00054	.0144	.0066	.00028	.0030	.00140
%RSD	.16942	.09230	.19745	.25266	.37522	.62862	.10269	.23230
#1	15.717	3.5522	.27243	5.6766	1.7631	.04502	2.9615	.60164
#2	15.747	3.5529	.27141	5.6778	1.7636	.04490	2.9567	.59919
#3	15.770	3.5469	.27163	5.7021	1.7748	.04544	2.9558	.60158

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**3.2858**	**.54927**	**.55736**	**.56955**	**12.466**	**.28426**	**6.6586**	**6.3238**
Stddev	.0063	.00103	.00411	.00267	.060	.00134	.0292	.0281
%RSD	.19095	.18776	.73685	.46922	.48345	.47072	.43906	.44366
#1	3.2824	.54944	.55809	.57190	12.475	.28321	6.6705	6.3165
#2	3.2819	.54817	.55294	.56664	12.403	.28381	6.6800	6.3002
#3	3.2930	.55021	.56106	.57009	12.522	.28577	6.6253	6.3548

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**1.5953**	**2.2505**	**.03030**	**.27935**	**.32575**	**5.1475**	**107.69**
Stddev	.0016	.0023	.00024	.00048	.00102	.0120	2.19
%RSD	.10291	.10215	.78338	.17247	.31197	.23382	2.0292
#1	1.5935	2.2512	.03026	.27909	.32555	5.1596	105.67
#2	1.5956	2.2524	.03008	.27905	.32485	5.1473	107.38
#3	1.5968	2.2480	.03055	.27990	.32685	5.1356	110.01

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: S5 Acquired: 7/17/2025 13:26:21 Type: Cal
Method: 6010-200.7 NEW(v42) 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	**5190.9**	**83253.**	**8237.5**	**4371.0**	**5817.4**
Stddev	21.1	343.	21.8	24.0	16.2
%RSD	.40726	.41154	.26468	.54969	.27919
#1	5201.6	83211.	8220.8	4373.4	5828.6
#2	5204.5	83615.	8229.5	4393.7	5824.8
#3	5166.5	82933.	8262.1	4345.8	5798.7

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: ICV01 Acquired: 7/17/2025 13:30:32 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**3.982428**	**3.759010**	**3.889112**	**4.022321**	**4.222178**	**8.025030**
Stddev	.005920	.044678	.010265	.010723	.005441	.042233
%RSD	.1486543	1.188566	.2639329	.2665997	.1288740	.5262605
#1	3.975709	3.782005	3.877983	4.009942	4.217310	8.041161
#2	3.984698	3.787506	3.891147	4.028243	4.221172	7.977109
#3	3.986877	3.707517	3.898207	4.028777	4.228052	8.056819

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.276738**	**.2018729**	**1.975449**	**20.25463**	**.8650662**	**2.019605**
Stddev	.053557	.0010478	.003252	.17072	.0034248	.003736
%RSD	.6470786	.5190634	.1646323	.8428446	.3959013	.1849931
#1	8.317665	.2006758	1.972136	20.06494	.8627569	2.016056
#2	8.296425	.2026237	1.975573	20.30304	.8634406	2.019256
#3	8.216124	.2023192	1.978637	20.39591	.8690011	2.023504

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.036289**	**4.308268**	**2.029542**	**19.85413**	**2.059569**	**1.065642**
Stddev	.001319	.057293	.006372	.02881	.004427	.002540
%RSD	.1272699	1.329837	.3139605	.1451240	.2149518	.2383958
#1	1.035242	4.333874	2.022957	19.85342	2.055576	1.065217
#2	1.035855	4.242638	2.029993	19.82568	2.058803	1.063342
#3	1.037771	4.348293	2.035677	19.88329	2.064330	1.068369

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.44991**	**2.029357**	**2.044843**	**20.13821**	F **.0156351**	F **.0115267**
Stddev	.17703	.004810	.006507	.12642	.0005027	.0001864
%RSD	.9101699	.2370350	.3181941	.6277390	3.215166	1.616814
#1	19.53968	2.030461	2.040815	20.12977	.0150681	.0115736
#2	19.24598	2.024090	2.052350	20.01622	.0158111	.0113213
#3	19.56406	2.033519	2.041365	20.26863	.0160261	.0116851

Sample Name: ICV01 Acquired: 7/17/2025 13:30:32 Type: Unk
Method: 6010-200.7 NEW(v42) 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	F .0036721	F .0043289	F -.047984	F .0055525	F -.014700	F .0024372
Stddev	.0004718	.0006429	.009032	.0007243	.001278	.0048973
%RSD	12.84892	14.85157	18.82295	13.04511	8.696970	200.9419
#1	.0040366	.0038329	-.057771	.0047742	-.013725	.0044976
#2	.0038406	.0040986	-.046212	.0056763	-.014227	.0059676
#3	.0031392	.0050553	-.039970	.0062069	-.016147	-.003154

Elem	Sr4077
Units	ppm
Avg	F -.003638
Stddev	.000061
%RSD	1.682353
#1	-.003708
#2	-.003604
#3	-.003600

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5276.537	84016.89	8253.799	4438.903	6117.618
Stddev	17.191	277.41	77.469	14.540	14.690
%RSD	.3257972	.3301878	.9385851	.3275695	.2401208
#1	5280.657	84250.89	8335.342	4452.785	6125.506
#2	5291.293	84089.33	8181.176	4423.783	6126.678
#3	5257.661	83710.44	8244.879	4440.141	6100.669

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: LLICV01 Acquired: 7/17/2025 13:37:17 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0233318**	**.0412924**	**.0097032**	**.0193530**	**.0518769**	**.1038487**
Stddev	.0004869	.0016134	.0000814	.0015717	.0016169	.0015432
%RSD	2.086785	3.907297	.8393411	8.121084	3.116827	1.485962
#1	.0238916	.0423014	.0097884	.0192230	.0526056	.1029304
#2	.0230965	.0421441	.0096261	.0178503	.0500239	.1029854
#3	.0230072	.0394316	.0096951	.0209855	.0530012	.1056303

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1039542**	**.0062642**	**.0059498**	**2.144913**	**.0093999**	**.0305242**
Stddev	.0007025	.0000351	.0000279	.002000	.0003746	.0000552
%RSD	.6757701	.5609238	.4686099	.0932553	3.985306	.1807228
#1	.1037896	.0062898	.0059815	2.143378	.0097426	.0304680
#2	.1047244	.0062786	.0059387	2.147175	.0094573	.0305782
#3	.1033486	.0062241	.0059292	2.144185	.0089999	.0305263

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0218091**	**.1100971**	**.0221772**	**2.151952**	**.0417073**	**.0109796**
Stddev	.0004534	.0064844	.0002558	.010019	.0006586	.0002409
%RSD	2.078758	5.889693	1.153356	.4655995	1.579208	2.194214
#1	.0216496	.1069639	.0219586	2.162659	.0411799	.0109634
#2	.0223206	.1057744	.0224585	2.142802	.0414965	.0107472
#3	.0214569	.1175531	.0221145	2.150396	.0424455	.0112283

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.892571**	**.0373510**	**.0436040**	**2.048612**	**.1168567**	**.2123177**
Stddev	.018626	.0005233	.0003981	.019752	.0005867	.0006599
%RSD	.9841423	1.401127	.9130281	.9641706	.5021019	.3107865
#1	1.908522	.0374075	.0440348	2.042484	.1164370	.2119166
#2	1.872102	.0368016	.0432497	2.032651	.1175271	.2119572
#3	1.897088	.0378437	.0435276	2.070702	.1166059	.2130793

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: LLICV01 Acquired: 7/17/2025 13:37:17 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.0401011	F .0483022	.3618367	.0214472	F -.008140	F .0261294
Stddev	.0006679	.0024139	.0108773	.0014458	.001597	.0021978
%RSD	1.665457	4.997549	3.006145	6.741254	19.61962	8.411025
#1	.0408618	.0494820	.3711660	.0213290	-.006335	.0256402
#2	.0398300	.0498994	.3498893	.0229484	-.009368	.0242175
#3	.0396113	.0455253	.3644549	.0200641	-.008719	.0285305

Elem	Sr4077
Units	ppm
Avg	.0212513
Stddev	.0000842
%RSD	.3960943
#1	.0211616
#2	.0213285
#3	.0212639

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5474.605	88338.23	8427.739	4598.888	6626.575
Stddev	11.860	280.90	61.005	7.284	9.705
%RSD	.2166306	.3179861	.7238655	.1583932	.1464617
#1	5477.950	88016.24	8428.612	4603.423	6635.767
#2	5484.433	88533.16	8366.301	4602.755	6627.532
#3	5461.432	88465.27	8488.303	4590.485	6616.427

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: ICB01 Acquired: 7/17/2025 13:41:33 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001223**	**-.000355**	**-.001065**	**.0014762**	**.0002956**	**.0030413**
Stddev	.001014	.002246	.000445	.0008160	.0000806	.0133058
%RSD	82.85685	631.8235	41.75369	55.27797	27.28422	437.5013
#1	-.002360	-.002908	-.001472	.0016792	.0002467	.0004351
#2	-.000895	.001319	-.000590	.0005779	.0002514	-.008769
#3	-.000415	.000522	-.001131	.0021716	.0003886	.017457

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001813**	**-.000083**	**-.000001**	**.0003119**	**-.000360**	**.0000991**
Stddev	.001228	.000116	.000055	.0058549	.000570	.0001802
%RSD	67.69985	140.1836	5944.705	1877.381	158.3891	181.9391
#1	-.000714	-.000135	.000042	-.005860	-.000392	.0001476
#2	-.003138	.000050	-.000062	.005788	-.000912	.0002501
#3	-.001589	-.000164	.000018	.001007	.000225	-.000100

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000560**	**.0008537**	**.0000984**	**-.030526**	**.0002145**	**.0006848**
Stddev	.000144	.0021168	.0001894	.011712	.0000651	.0003564
%RSD	25.73072	247.9476	192.4031	38.36546	30.34697	52.04872
#1	-.000695	.0026551	.0003142	-.026901	.0001750	.0004610
#2	-.000575	-.001478	-.000041	-.021056	.0002896	.0010959
#3	-.000408	.001384	.000022	-.043622	.0001789	.0004976

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.338142**	**-.002087**	**-.000331**	**.0199203**	**.0066941**	**.0002072**
Stddev	.013911	.002359	.000159	.0092673	.0005682	.0001793
%RSD	4.113832	113.0265	48.01451	46.52158	8.488304	86.51807
#1	-.341445	-.001139	-.000148	.0300009	.0073489	.0003588
#2	-.350104	-.000350	-.000435	.0179895	.0064016	.0000094
#3	-.322877	-.004772	-.000409	.0117706	.0063317	.0002534

Sample Name: ICB01 Acquired: 7/17/2025 13:41:33 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000438	.0104001	-.003279	.0003721	F -.031053	.0023082
Stddev	.0003262	.0003697	.009442	.0033172	.000229	.0042008
%RSD	744.2959	3.554334	287.9962	891.6131	.7371406	181.9953
#1	-.000332	.0099870	-.005436	.0040930	-.030936	.0052049
#2	.000245	.0106996	-.011456	-.002276	-.030906	.0042293
#3	.000219	.0105136	.007056	-.000701	-.031317	-.002510

Elem	Sr4077
Units	ppm
Avg	-.000007
Stddev	.000047
%RSD	679.7438
#1	-.000009
#2	-.000052
#3	.000041

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5417.990	88698.05	8493.265	4594.631	6625.766
Stddev	5.692	172.84	75.039	20.949	14.238
%RSD	.1050613	.1948626	.8835103	.4559434	.2148869
#1	5411.815	88694.88	8409.644	4571.363	6613.782
#2	5419.129	88526.82	8554.734	4611.994	6622.010
#3	5423.027	88872.46	8515.418	4600.535	6641.505

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CRI01 Acquired: 7/17/2025 13:46:28 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0189492**	**.0411911**	**.0110999**	**.0187207**	**.0512800**	**.1145389**
Stddev	.0032661	.0023548	.0010911	.0039186	.0021879	.0083135
%RSD	17.23609	5.716764	9.829510	20.93166	4.266577	7.258188
#1	.0157246	.0435054	.0100696	.0168690	.0511360	.1063056
#2	.0222553	.0412703	.0122430	.0232220	.0491676	.1229302
#3	.0188678	.0387978	.0109871	.0160712	.0535363	.1143808

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1031455**	**.0060505**	**.0059439**	**2.135623**	**.0090630**	**.0306468**
Stddev	.0008997	.0000555	.0000682	.009568	.0001761	.0001032
%RSD	.8722421	.9178978	1.146581	.4480003	1.943495	.3368045
#1	.1023216	.0059888	.0059263	2.138214	.0091273	.0305537
#2	.1041054	.0060662	.0060191	2.143628	.0091979	.0306289
#3	.1030096	.0060964	.0058862	2.125026	.0088637	.0307578

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0216259**	**.1032450**	**.0220513**	**2.110819**	**.0410264**	**.0107736**
Stddev	.0003554	.0013948	.0006804	.005384	.0003733	.0001534
%RSD	1.643431	1.350979	3.085764	.2550784	.9098335	1.424021
#1	.0212542	.1016857	.0218943	2.104617	.0406063	.0106455
#2	.0219625	.1036753	.0227965	2.113551	.0413199	.0107317
#3	.0216609	.1043739	.0214630	2.114291	.0411531	.0109436

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.844893**	**.0370735**	**.0425557**	**2.052058**	**.1103406**	**.2120429**
Stddev	.024817	.0028621	.0004038	.038316	.0007405	.0001756
%RSD	1.345161	7.719998	.9488152	1.867206	.6711393	.0828363
#1	1.869456	.0389253	.0428836	2.008392	.1096510	.2118462
#2	1.819830	.0337770	.0426788	2.080061	.1111232	.2121841
#3	1.845392	.0385180	.0421047	2.067722	.1102474	.2120983

Sample Name: CRI01 Acquired: 7/17/2025 13:46:28 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.0393820	.0497864	.3582958	.0192501	F -.011191	F .0288416
Stddev	.0006695	.0011258	.0062079	.0014990	.000908	.0025196
%RSD	1.700040	2.261199	1.732607	7.787222	8.110775	8.735922
#1	.0391336	.0494190	.3633564	.0201369	-.010172	.0310335
#2	.0388721	.0510500	.3601622	.0175193	-.011913	.0294025
#3	.0401402	.0488903	.3513689	.0200940	-.011488	.0260889

Elem	Sr4077
Units	ppm
Avg	.0213526
Stddev	.0000642
%RSD	.3008608
#1	.0213169
#2	.0213141
#3	.0214268

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5363.418	89788.51	8553.948	4616.167	6448.495
Stddev	5.613	161.09	62.803	6.053	10.553
%RSD	.1046600	.1794149	.7341970	.1311303	.1636526
#1	5369.392	89858.87	8613.763	4610.247	6455.245
#2	5362.609	89604.20	8488.533	4622.345	6453.906
#3	5358.253	89902.44	8559.548	4615.910	6436.334

Sample Name: ICSA01 Acquired: 7/17/2025 13:51:42 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0097688**	**.0095927**	**-.004863**	**.0103496**	**-.003295**	**253.5776**
Stddev	.0034153	.0025939	.001337	.0042109	.000783	5.3811
%RSD	34.96179	27.04087	27.48284	40.68671	23.77709	2.122057
#1	.0119292	.0070277	-.004647	.0083513	-.002815	247.8114
#2	.0115459	.0122146	-.006295	.0075099	-.002871	258.4655
#3	.0058313	.0095358	-.003648	.0151876	-.004199	254.4560

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017746**	**.0004591**	**-.001315**	**244.0744**	**.0513988**	**.0023106**
Stddev	.0010834	.0000996	.000086	.7177	.0002178	.0001527
%RSD	61.04948	21.69766	6.575360	.2940339	.4237622	6.609172
#1	.0008791	.0005518	-.001399	243.3662	.0511577	.0024847
#2	.0014658	.0004715	-.001226	244.8011	.0514573	.0021993
#3	.0029788	.0003538	-.001321	244.0559	.0515813	.0022478

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0065222**	**98.25468**	**.0084818**	**249.4304**	**.0030475**	**.0027145**
Stddev	.0002054	.39565	.0003391	.3419	.0001457	.0003895
%RSD	3.148957	.4026766	3.997946	.1370844	4.779993	14.34785
#1	.0066769	98.54487	.0080909	249.1741	.0028804	.0029663
#2	.0066005	97.80400	.0086575	249.8187	.0031144	.0022659
#3	.0062892	98.41516	.0086969	249.2985	.0031477	.0029113

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0230132**	**.0005131**	**.0018686**	**.0681168**	**.0238318**	**.0005155**
Stddev	.0072082	.0031797	.0000825	.0275804	.0048673	.0000742
%RSD	31.32188	619.6650	4.414737	40.48990	20.42334	14.38638
#1	.0312466	-.001617	.0019520	.0622238	.0262594	.0005730
#2	.0178398	.004168	.0017870	.0981674	.0182282	.0005418
#3	.0199532	-.001012	.0018670	.0439591	.0270078	.0004318

Sample Name: ICSA01 Acquired: 7/17/2025 13:51:42 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002027**	**.0045307**	**.0187158**	**.0056808**	F **-.038470**	F **.0588462**
Stddev	.000273	.0010693	.0097722	.0031210	.004202	.0008673
%RSD	13.45312	23.60091	52.21352	54.93931	10.92220	1.473772
#1	-.001901	.0049196	.0074373	.0090077	-.036761	.0589700
#2	-.002339	.0033214	.0246587	.0028177	-.043257	.0596448
#3	-.001839	.0053511	.0240515	.0052168	-.035392	.0579236

Elem	Sr4077
Units	ppm
Avg	**.0085953**
Stddev	.0006283
%RSD	7.310091
#1	.0082027
#2	.0093200
#3	.0082631

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4927.366**	**80808.00**	**8393.604**	**4172.868**	**5455.462**
Stddev	8.570	163.47	63.314	5.745	14.553
%RSD	.1739345	.2022955	.7543155	.1376750	.2667607
#1	4922.892	80984.58	8454.294	4178.923	5465.690
#2	4937.248	80777.48	8327.957	4167.494	5461.895
#3	4921.959	80661.93	8398.559	4172.188	5438.801

Sample Name: ICSAB01 Acquired: 7/17/2025 13:56:59 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.1094404**	**.1026995**	**.0410818**	**.0577949**	**.6204009**	**251.4521**
Stddev	.0010101	.0044998	.0012092	.0032237	.0016546	5.0559
%RSD	.9229926	4.381532	2.943333	5.577809	.2666952	2.010699
#1	.1105503	.0977069	.0423742	.0544233	.6186556	253.1199
#2	.1085750	.1064422	.0408931	.0581144	.6206006	245.7730
#3	.1091958	.1039495	.0399781	.0608469	.6219466	255.4635

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5195272**	**.4861632**	**.9760823**	**244.8156**	**.5118203**	**.5021326**
Stddev	.0010460	.0040466	.0017697	.6900	.0010733	.0002933
%RSD	.2013327	.8323637	.1813040	.2818607	.2096926	.0584043
#1	.5207111	.4871012	.9740420	245.2450	.5130565	.5023032
#2	.5191423	.4817299	.9772003	244.0197	.5111256	.5023005
#3	.5187282	.4896584	.9770046	245.1822	.5112790	.5017939

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4925950**	**97.59312**	**.5075430**	**249.2251**	**.9884359**	**.2180528**
Stddev	.0010140	.66050	.0012458	.4868	.0014014	.0004664
%RSD	.2058488	.6767883	.2454624	.1953298	.1417841	.2138755
#1	.4919734	97.80444	.5070604	249.6594	.9870805	.2179837
#2	.4920464	98.12210	.5066106	249.3170	.9883479	.2185499
#3	.4937651	96.85282	.5089579	248.6989	.9898793	.2176249

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0376086**	**.4769222**	**1.060106**	**.0558164**	**.9788038**	**1.014958**
Stddev	.0105361	.0037382	.001377	.0384408	.0019567	.002854
%RSD	28.01498	.7838114	.1298766	68.86995	.1999061	.2811828
#1	.0481564	.4727112	1.058762	.0857739	.9779971	1.013601
#2	.0375852	.4798490	1.061513	.0692033	.9773795	1.013036
#3	.0270843	.4782064	1.060043	.0124722	.9810349	1.018238

Sample Name: ICSAB01 Acquired: 7/17/2025 13:56:59 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.9944091**	**.9714193**	**.9468986**	F **.0118804**	F **-.031893**	F **1.168117**
Stddev	.0007749	.0033424	.0052907	.0015111	.003392	.003079
%RSD	.0779251	.3440744	.5587401	12.71911	10.63419	.2635738
#1	.9935146	.9693835	.9511199	.0133788	-.030920	1.171510
#2	.9948382	.9752768	.9486125	.0119055	-.035664	1.167339
#3	.9948744	.9695977	.9409634	.0103569	-.029094	1.165501

Elem	Sr4077
Units	ppm
Avg	**1.074983**
Stddev	.002462
%RSD	.2290273
#1	1.076188
#2	1.072150
#3	1.076610

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4914.723**	**80627.55**	**8298.157**	**4134.534**	**5445.406**
Stddev	5.227	27.10	47.924	8.815	4.606
%RSD	.1063545	.0336155	.5775265	.2132137	.0845831
#1	4910.101	80628.41	8296.208	4142.695	5440.850
#2	4920.396	80600.02	8347.027	4125.185	5445.308
#3	4913.673	80654.21	8251.238	4135.724	5450.060

Sample Name: ICSADLX20 Acquired: 7/17/2025 14:01:09 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.003276**	**-.000286**	**-.003061**	**-.000066**	**-.002076**	**12.49118**	**-.001980**
Stddev	.000461	.001782	.002252	.003018	.000090	.05323	.001513
%RSD	14.07341	623.9458	73.58150	4539.517	4.351619	.4261683	76.40638
#1	-.003140	.000018	-.003485	-.000516	-.002032	12.46611	-.002476
#2	-.003790	.001325	-.000627	.003151	-.002016	12.45511	-.003183
#3	-.002899	-.002201	-.005071	-.002834	-.002180	12.55232	-.000281

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000239**	**-.000087**	**12.82095**	**.0025789**	**.0000741**	**.0002593**	**4.821810**
Stddev	.0000510	.000021	.07712	.0003805	.0001647	.0001982	.028503
%RSD	212.8204	24.10101	.6015409	14.75521	222.4165	76.45001	.5911256
#1	-.000002	-.000063	12.76481	.0029584	-.000116	.0003833	4.853364
#2	-.000009	-.000101	12.78916	.0021973	.000166	.0003638	4.797929
#3	.000083	-.000096	12.90889	.0025811	.000173	.0000307	4.814137

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006933**	**12.57563**	**.0005422**	**.0009499**	**-.316069**	**-.003798**	**.0003623**
Stddev	.0002793	.13797	.0002248	.0003367	.015343	.001055	.0000768
%RSD	40.29229	1.097141	41.45367	35.44438	4.854330	27.77374	21.19870
#1	.0003944	12.45689	.0005808	.0013386	-.314972	-.003739	.0004351
#2	.0009478	12.54301	.0007452	.0007484	-.331931	-.002774	.0002820
#3	.0007377	12.72699	.0003007	.0007627	-.301304	-.004881	.0003699

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0013310**	**.0020073**	**.0003509**	**-.000203**	**.0109562**	**-.006922**	**.0020940**
Stddev	.0194657	.0001894	.0001122	.000531	.0017332	.006461	.0014492
%RSD	1462.446	9.434502	31.96937	262.1763	15.81968	93.33580	69.20905
#1	-.003884	.0021388	.0003209	.000349	.0089822	-.008446	.0021571
#2	-.014996	.0020930	.0004750	-.000712	.0116576	.000165	.0006142
#3	.022873	.0017903	.0002567	-.000245	.0122288	-.012484	.0035106

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: ICSADLX20 Acquired: 7/17/2025 14:01:09 Type: Unk
Method: 6010-200.7 NEW(v42) 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	-.032796	.0011974	.0006685
Stddev	.001269	.0014405	.0000759
%RSD	3.868886	120.2980	11.34971
#1	-.032594	.0022771	.0005931
#2	-.031640	-.000438	.0006675
#3	-.034154	.001753	.0007449

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5380.000	88945.90	8518.318	4557.052	6479.368
Stddev	12.685	236.60	99.383	25.641	16.530
%RSD	.2357875	.2659998	1.166698	.5626703	.2551169
#1	5393.520	88975.69	8597.864	4528.008	6494.511
#2	5378.122	89166.19	8550.179	4576.552	6481.859
#3	5368.358	88695.82	8406.912	4566.597	6461.734

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: ICSABDLX20 Acquired: 7/17/2025 14:05:26 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0041105**	**.0061110**	**.0007428**	**.0003292**	**.0288318**	**12.37382**	**.0248949**
Stddev	.0018521	.0016178	.0006692	.0022252	.0010475	.01066	.0005573
%RSD	45.05671	26.47348	90.08945	675.9137	3.633181	.0861472	2.238453
#1	.0024382	.0063640	.0010486	.0021659	.0277244	12.36506	.0255351
#2	.0061011	.0043815	.0012046	-.002145	.0289643	12.38569	.0245190
#3	.0037922	.0075873	-.000025	.000967	.0298068	12.37069	.0246304

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0245227**	**.0472412**	**12.72218**	**.0257894**	**.0242654**	**.0259574**	**4.813797**
Stddev	.0001173	.0001580	.05096	.0003819	.0001184	.0002018	.030530
%RSD	.4784597	.3345342	.4005703	1.480867	.4879094	.7775952	.6342083
#1	.0245424	.0473193	12.70314	.0261187	.0241332	.0257788	4.829236
#2	.0243967	.0470594	12.68348	.0253707	.0243617	.0259172	4.833523
#3	.0246289	.0473451	12.77992	.0258786	.0243013	.0261764	4.778631

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0260921**	**12.47415**	**.0486696**	**.0108911**	**-.370343**	**.0216944**	**.0524745**
Stddev	.0003227	.02565	.0005178	.0005190	.001696	.0012519	.0000458
%RSD	1.236669	.2055858	1.063871	4.765421	.4580374	5.770355	.0873138
#1	.0262013	12.45589	.0488305	.0114033	-.372294	.0220141	.0524621
#2	.0257290	12.50347	.0480904	.0103655	-.369512	.0227555	.0524361
#3	.0263460	12.46309	.0490878	.0109044	-.369222	.0203137	.0525252

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004420**	**.0505095**	**.0516900**	**.0481093**	**.0572976**	**.0448742**	**.0029924**
Stddev	.003829	.0002946	.0002674	.0003141	.0011496	.0026308	.0021017
%RSD	86.62578	.5832897	.5173558	.6528854	2.006294	5.862663	70.23292
#1	-.007712	.0503947	.0517562	.0484638	.0576825	.0477216	.0054028
#2	-.000218	.0502895	.0513957	.0478655	.0582054	.0443674	.0020314
#3	-.005330	.0508442	.0519181	.0479986	.0560050	.0425337	.0015431

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: ICSABDLX20 Acquired: 7/17/2025 14:05:26 Type: Unk
Method: 6010-200.7 NEW(v42) 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	-.034112	.0557269	.0538177
Stddev	.001811	.0025445	.0002531
%RSD	5.309206	4.566050	.4703365
#1	-.032823	.0583542	.0538344
#2	-.036183	.0555523	.0535567
#3	-.033330	.0532741	.0540621

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5354.506	87918.26	8474.915	4501.102	6473.511
Stddev	17.677	393.13	30.056	9.610	19.950
%RSD	.3301278	.4471506	.3546503	.2135049	.3081758
#1	5365.741	87761.24	8477.248	4491.907	6485.527
#2	5363.646	87627.90	8503.737	4500.320	6484.525
#3	5334.130	88365.62	8443.761	4511.079	6450.483

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV01 Acquired: 7/17/2025 14:20:47 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.143306**	**5.008334**	**4.942209**	**5.191795**	**5.213152**	**10.08750**	**10.44375**
Stddev	.019037	.119866	.023893	.003043	.008530	.07427	.18425
%RSD	.3701268	2.393328	.4834551	.0586171	.1636251	.7362198	1.764204
#1	5.130237	5.146101	4.928885	5.195230	5.205098	10.04597	10.35596
#2	5.134533	4.950984	4.927949	5.189434	5.222089	10.04328	10.31980
#3	5.165147	4.927916	4.969794	5.190722	5.212269	10.17324	10.65547

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2410163**	**2.478408**	**26.11207**	**.9479562**	**2.501235**	**1.284238**	**5.042390**
Stddev	.0020452	.007736	.18715	.0021946	.007648	.003475	.024054
%RSD	.8485686	.3121489	.7167328	.2315127	.3057882	.2705584	.4770358
#1	.2390080	2.477527	26.09048	.9471001	2.498539	1.282054	5.065744
#2	.2409446	2.471150	25.93664	.9463188	2.495299	1.282416	5.017692
#3	.2430964	2.486547	26.30908	.9504499	2.509866	1.288245	5.043734

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.569899**	**24.47431**	**2.516293**	**1.266331**	**23.62657**	**2.503334**	**2.554982**
Stddev	.015829	.25445	.009418	.002923	.04112	.016826	.008639
%RSD	.6159285	1.039671	.3742945	.2308548	.1740433	.6721520	.3381234
#1	2.564539	24.33732	2.512496	1.269181	23.64121	2.498457	2.564824
#2	2.557446	24.31771	2.509366	1.266474	23.58013	2.489486	2.548651
#3	2.587712	24.76791	2.527018	1.263340	23.65836	2.522060	2.551472

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.64066**	**5.105856**	**5.184169**	**4.966228**	**4.995643**	**4.826289**	**4.863050**
Stddev	.14208	.028827	.005517	.011992	.043930	.015214	.014773
%RSD	.5541017	.5645905	.1064153	.2414663	.8793758	.3152274	.3037710
#1	25.72108	5.080920	5.185091	4.962577	4.977980	4.829895	4.862439
#2	25.47662	5.099227	5.178249	4.956486	4.963293	4.809596	4.848592
#3	25.72429	5.137420	5.189166	4.979621	5.045656	4.839376	4.878118

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV01 Acquired: 7/17/2025 14:20:47 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.973394**	**5.063061**	**5.260958**
Stddev	.002744	.057108	.106770
%RSD	.0551674	1.127932	2.029470
#1	4.972779	5.039272	5.236266
#2	4.976393	5.021693	5.168697
#3	4.971010	5.128218	5.377910

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5179.167**	**87468.23**	**8447.577**	**4405.850**	**6002.780**
Stddev	14.750	251.32	29.512	28.669	19.219
%RSD	.2847867	.2873290	.3493525	.6507072	.3201668
#1	5190.936	87306.75	8480.916	4376.792	6015.664
#2	5183.945	87340.16	8437.016	4406.645	6011.985
#3	5162.621	87757.79	8424.799	4434.114	5980.690

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCB01 Acquired: 7/17/2025 14:25:07 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001101**	**.0002972**	**-.001435**	**-.001609**	**-.001594**	**-.004553**
Stddev	.000999	.0020824	.000703	.001519	.002051	.005962
%RSD	90.79164	700.5979	48.99374	94.40630	128.6663	130.9470
#1	-.000651	.0009748	-.002227	-.000046	-.003956	-.010817
#2	-.002246	-.002040	-.001189	-.003080	-.000560	.001053
#3	-.000406	.001956	-.000887	-.001702	-.000266	-.003896

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002773**	**-.000089**	**.0000493**	**.0092692**	**-.000169**	**-.000055**
Stddev	.000412	.000063	.0000642	.0078441	.000299	.000112
%RSD	14.84570	70.52455	130.2078	84.62555	177.2900	202.0257
#1	-.002715	-.000124	.0001112	.0020045	-.000072	.000018
#2	-.003211	-.000127	-.000017	.0082168	-.000504	-.000184
#3	-.002394	-.000017	.000054	.0175865	.000070	-.000000

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000318**	**.0022374**	**-.000110**	**-.031503**	**.0003007**	**.0001824**
Stddev	.000151	.0036672	.000282	.012898	.0002677	.0004229
%RSD	47.37713	163.9043	257.2286	40.94284	89.05308	231.7566
#1	-.000215	-.000722	.000095	-.037168	.0000748	.0002456
#2	-.000491	.001095	-.000431	-.040600	.0002308	-.000268
#3	-.000249	.006340	.000007	-.016742	.0005964	.000570

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.437089**	**-.002637**	**-.000103**	**.0684925**	**.0085290**	**.0007203**
Stddev	.023900	.001672	.000127	.0243494	.0008149	.0002295
%RSD	5.467907	63.42351	123.8715	35.55054	9.554457	31.85712
#1	-.423259	-.004388	.000026	.0506661	.0093353	.0008592
#2	-.423323	-.002464	-.000106	.0585759	.0077057	.0008464
#3	-.464686	-.001057	-.000228	.0962354	.0085459	.0004554

Sample Name: CCB01 Acquired: 7/17/2025 14:25:07 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000997**	**.0115200**	**.0020751**	**.0020383**	F **-.035165**	**-.002642**
Stddev	.0005568	.0016100	.0053387	.0014536	.001266	.002761
%RSD	558.2084	13.97553	257.2711	71.31223	3.598820	104.5150
#1	-.000063	.0109486	-.003979	.0035500	-.036613	-.000160
#2	.000720	.0133377	.006107	.0006509	-.034611	-.005616
#3	-.000358	.0102736	.004098	.0019139	-.034270	-.002149

Elem	Sr4077
Units	ppm
Avg	**.0000895**
Stddev	.0000398
%RSD	44.46711
#1	.0000742
#2	.0000595
#3	.0001346

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5438.365**	**89109.32**	**8628.341**	**4546.828**	**6718.425**
Stddev	18.555	161.27	45.287	9.966	30.412
%RSD	.3411883	.1809830	.5248654	.2191796	.4526676
#1	5417.118	89288.59	8619.297	4552.218	6683.420
#2	5451.377	89063.32	8677.468	4535.328	6738.350
#3	5446.601	88976.04	8588.259	4552.938	6733.506

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2606-01 Acquired: 7/17/2025 14:32:24 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.003503**	**-.005623**	**-.001563**	**.0003643**	**.0013529**	**.4163402**
Stddev	.001844	.001775	.000991	.0028096	.0009816	.0122331
%RSD	52.63520	31.55963	63.39311	771.1866	72.55532	2.938246
#1	-.004144	-.003680	-.001824	-.000714	.0008574	.4084054
#2	-.001424	-.007158	-.000468	.003553	.0024834	.4304282
#3	-.004940	-.006031	-.002397	-.001747	.0007178	.4101868

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1455369**	**-.000271**	**-.000050**	**109.7589**	**.0031179**	**.0016575**
Stddev	.0004813	.000053	.000034	.9650	.0002448	.0000910
%RSD	.3307287	19.60152	68.97338	.8792398	7.852268	5.487545
#1	.1460338	-.000221	-.000011	110.7588	.0033254	.0016187
#2	.1455043	-.000265	-.000076	109.6850	.0028479	.0015923
#3	.1450728	-.000327	-.000062	108.8330	.0031803	.0017614

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002398**	**.0142259**	**.0056241**	**32.45348**	**.0127413**	**-.000041**
Stddev	.0004472	.0101862	.0003883	.29696	.0000542	.000074
%RSD	186.5175	71.60332	6.904848	.9150414	.4252922	183.2480
#1	.0005471	.0257733	.0059645	32.73983	.0127005	-.000072
#2	-.000273	.0103894	.0057066	32.47369	.0128028	-.000094
#3	.000445	.0065150	.0052011	32.14693	.0127206	.000044

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**362.7543**	**.0018276**	**.0659282**	**22.45818**	**.3589018**	**.0116214**
Stddev	2.8497	.0026805	.0001658	.17564	.0055340	.0000413
%RSD	.7855767	146.6639	.2514967	.7820868	1.541916	.3550673
#1	359.4923	.0047109	.0657381	22.32595	.3634387	.0115800
#2	364.0110	.0013606	.0660036	22.39110	.3605303	.0116218
#3	364.7597	-.000589	.0660429	22.65747	.3527362	.0116625

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2606-01 Acquired: 7/17/2025 14:32:24 Type: Unk
Method: 6010-200.7 NEW(v42) 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	-.004239	.0085449	12.04620	.0654145	F 37.10071	.0199479
Stddev	.000976	.0006504	.02831	.0009821	.04642	.0015254
%RSD	23.02811	7.611231	.2350261	1.501337	.1251177	7.646984
#1	-.003603	.0079029	12.05334	.0665255	37.04879	.0198136
#2	-.003752	.0092033	12.01500	.0650557	37.13821	.0184941
#3	-.005363	.0085285	12.07026	.0646623	37.11513	.0215360

Elem	Sr4077
Units	ppm
Avg	1.147512
Stddev	.002232
%RSD	.1945468
#1	1.150049
#2	1.145845
#3	1.146643

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4865.242	82400.11	8404.397	4128.596	5538.689
Stddev	3.455	305.99	112.652	2.826	9.650
%RSD	.0710155	.3713421	1.340397	.0684389	.1742225
#1	4867.603	82049.95	8299.686	4131.737	5548.488
#2	4866.848	82616.02	8389.916	4126.261	5538.381
#3	4861.277	82534.37	8523.590	4127.791	5529.196

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2600-02 Acquired: 7/17/2025 14:36:47 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0067985**	**-.004003**	**.1069061**	**.0024816**	**.0049740**	**.1272954**	**.6478059**
Stddev	.0008509	.001699	.0002303	.0011249	.0002024	.0109630	.0016017
%RSD	12.51626	42.44656	.2154043	45.33103	4.070228	8.612272	.2472456
#1	.0073990	-.002583	.1066967	.0037526	.0049221	.1397499	.6460496
#2	.0058248	-.003540	.1068689	.0020784	.0048026	.1191054	.6481822
#3	.0071717	-.005885	.1071527	.0016138	.0051974	.1230310	.6491860

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000266**	**-.000040**	**117.0497**	**.0000017**	**.0041141**	**.0030169**	**9.455366**
Stddev	.000022	.000045	.5184	.0004417	.0000772	.0002090	.112391
%RSD	8.226170	111.3624	.4429121	26829.90	1.876313	6.927349	1.188649
#1	-.000241	-.000008	116.7646	-.000166	.0040337	.0029065	9.325971
#2	-.000277	-.000092	116.7365	-.000332	.0041209	.0028862	9.511430
#3	-.000280	-.000021	117.6482	.000503	.0041877	.0032579	9.528696

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.338693**	**2.151519**	**.0115939**	**.0008031**	**337.1423**	**-.003499**	**.4877826**
Stddev	.001578	.015058	.0003322	.0004212	5.1929	.002897	.0028623
%RSD	.1178632	.6998750	2.865429	52.44967	1.540259	82.78792	.5868021
#1	1.337370	2.136119	.0115476	.0003186	331.9979	-.000399	.4857937
#2	1.338268	2.166210	.0119468	.0010827	342.3823	-.006137	.4910631
#3	1.340439	2.152227	.0112873	.0010078	337.0467	-.003960	.4864911

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.811123**	**.0363123**	**.0017285**	**-.004835**	**.0099079**	**.7679331**	**.0302089**
Stddev	.044974	.0003780	.0003221	.000272	.0044472	.0174223	.0007393
%RSD	2.483223	1.040907	18.63447	5.618898	44.88547	2.268730	2.447215
#1	1.774493	.0359983	.0015826	-.005020	.0064782	.7516160	.0299282
#2	1.797559	.0367318	.0020978	-.004962	.0083129	.7862824	.0296511
#3	1.861318	.0362069	.0015053	-.004523	.0149327	.7659009	.0310474

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2600-02 Acquired: 7/17/2025 14:36:47 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.5241136	.0117077	.3325591
Stddev	.0026144	.0024766	.0008825
%RSD	.4988170	21.15355	.2653547
#1	.5231650	.0122428	.3316891
#2	.5221060	.0138731	.3325348
#3	.5270699	.0090074	.3334535

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4979.533	84069.48	8256.717	4198.944	5682.606
Stddev	9.869	692.85	15.364	25.646	11.101
%RSD	.1982005	.8241359	.1860828	.6107705	.1953518
#1	4990.884	84858.05	8239.253	4220.890	5685.407
#2	4974.733	83558.35	8268.156	4170.752	5692.038
#3	4972.981	83792.03	8262.740	4205.189	5670.372

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2600-06 Acquired: 7/17/2025 14:41:11 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0080183**	**-.003558**	**.2782996**	**.0036087**	**.0054602**	**.1280618**	**.4176404**
Stddev	.0015287	.002007	.0009786	.0017234	.0010554	.0112555	.0019385
%RSD	19.06481	56.40852	.3516302	47.75614	19.32864	8.789146	.4641552
#1	.0062655	-.003423	.2780187	.0016517	.0052395	.1151479	.4154839
#2	.0087145	-.001622	.2793879	.0048995	.0066085	.1332494	.4181990
#3	.0090750	-.005630	.2774921	.0042750	.0045327	.1357879	.4192383

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000165**	**.0012045**	**52.64911**	**.0017809**	**.0081355**	**.0026165**	**16.92009**
Stddev	.000047	.0000580	.20947	.0003777	.0001157	.0003833	.14067
%RSD	28.65558	4.813146	.3978591	21.21130	1.421891	14.65103	.8314066
#1	-.000172	.0012633	52.47015	.0021951	.0080181	.0022322	16.91932
#2	-.000115	.0012028	52.87951	.0016920	.0081389	.0029989	17.06115
#3	-.000209	.0011473	52.59768	.0014555	.0082494	.0026183	16.77980

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7408927**	**1.555016**	**.0273450**	**.0010991**	**333.1463**	**-.003264**	**1.060735**
Stddev	.0022951	.009436	.0001616	.0000870	3.7156	.001619	.001929
%RSD	.3097734	.6067988	.5907844	7.916848	1.115299	49.58806	.1818475
#1	.7382600	1.564797	.0275257	.0011183	333.0638	-.001396	1.059601
#2	.7424719	1.545968	.0272144	.0010041	336.9025	-.004140	1.062962
#3	.7419464	1.554285	.0272949	.0011749	329.4727	-.004256	1.059641

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.622690**	**.0266214**	**.0007327**	**-.004529**	**.0099976**	**.6771471**	**.0158154**
Stddev	.027874	.0009944	.0001467	.000354	.0017536	.0112619	.0034418
%RSD	1.717746	3.735509	20.02524	7.808126	17.54061	1.663135	21.76231
#1	1.623080	.0261823	.0005636	-.004419	.0098410	.6875253	.0118604
#2	1.650367	.0277598	.0008082	-.004244	.0118243	.6651720	.0174544
#3	1.594624	.0259220	.0008263	-.004925	.0083275	.6787439	.0181313

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2600-06 Acquired: 7/17/2025 14:41:11 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.4534891	.0095009	.1337187
Stddev	.0044252	.0010049	.0002673
%RSD	.9758010	10.57716	.1999168
#1	.4536216	.0106203	.1334178
#2	.4489992	.0086766	.1338098
#3	.4578465	.0092058	.1339287

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5101.101	85572.26	8727.090	4304.552	5849.959
Stddev	9.295	403.21	44.643	25.328	13.709
%RSD	.1822077	.4711981	.5115446	.5884105	.2343478
#1	5098.977	85592.63	8761.980	4295.198	5849.917
#2	5111.274	85159.25	8742.509	4285.232	5863.690
#3	5093.052	85964.91	8676.782	4333.228	5836.271

Sample Name: Q2600-10 Acquired: 7/17/2025 14:45:33 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.003454**	**-.004934**	**.4292368**	**.0006095**	**.0023704**	**.1467064**	**.2837892**
Stddev	.004648	.000480	.0008063	.0045859	.0013726	.0061976	.0010471
%RSD	134.5804	9.724916	.1878463	752.3890	57.90694	4.224496	.3689671
#1	-.000184	-.005301	.4283644	.0039016	.0011900	.1435292	.2844468
#2	-.001403	-.005111	.4299546	.0025554	.0038767	.1538483	.2825817
#3	-.008774	-.004391	.4293913	-.004629	.0020446	.1427417	.2843390

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000168**	**.0042222**	**23.15560**	**.0020416**	**.0055219**	**.0129029**	**3.484306**
Stddev	.000084	.0000413	.02256	.0000510	.0000512	.0001136	.051283
%RSD	50.29449	.9777821	.0974300	2.497297	.9264566	.8803015	1.471838
#1	-.000131	.0041747	23.16689	.0020196	.0055354	.0129002	3.515696
#2	-.000108	.0042422	23.12963	.0020052	.0055649	.0127906	3.512097
#3	-.000265	.0042496	23.17029	.0020998	.0054653	.0130177	3.425126

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6444785**	**2.058383**	**.0119626**	**.0005019**	**349.7596**	**-.003800**	**2.990895**
Stddev	.0031004	.020864	.0002303	.0002328	5.4866	.001738	.004267
%RSD	.4810770	1.013591	1.925574	46.38737	1.568682	45.74421	.1426626
#1	.6455562	2.066741	.0121230	.0002816	345.5178	-.005788	2.988660
#2	.6409830	2.034636	.0120661	.0004786	355.9558	-.002561	2.988211
#3	.6468963	2.073772	.0116986	.0007455	347.8052	-.003053	2.995816

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7679229**	**.0118545**	**-.000271**	**-.003698**	**.0123087**	**.3558698**	**.0230625**
Stddev	.0273896	.0005409	.000067	.000209	.0003252	.0179186	.0012598
%RSD	3.566718	4.562910	24.64676	5.647205	2.641721	5.035163	5.462589
#1	.7951488	.0122742	-.000235	-.003868	.0126094	.3567194	.0217690
#2	.7682474	.0120452	-.000348	-.003761	.0123531	.3733485	.0242857
#3	.7403724	.0112441	-.000230	-.003465	.0119637	.3375415	.0231329

Sample Name: Q2600-10 Acquired: 7/17/2025 14:45:33 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.6454954	.0022310	.0529430
Stddev	.0009525	.0010537	.0000852
%RSD	.1475598	47.23009	.1609519
#1	.6447256	.0017858	.0529251
#2	.6465606	.0034342	.0530358
#3	.6452000	.0014730	.0528683

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5168.186	85594.63	8943.317	4308.558	5935.537
Stddev	3.226	154.62	124.767	17.244	14.526
%RSD	.0624202	.1806385	1.395092	.4002309	.2447365
#1	5171.845	85595.84	8971.451	4327.706	5949.350
#2	5165.750	85439.41	9051.615	4303.715	5936.871
#3	5166.964	85748.64	8806.885	4294.254	5920.390

Sample Name: Q2611-01 Acquired: 7/17/2025 14:49:56 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0733029**	**.0006434**	**.7486596**	**.0118588**	**-.009168**	**94.26990**	**1.590388**
Stddev	.0032198	.0009976	.0042076	.0049303	.002467	.02219	.002909
%RSD	4.392428	155.0457	.5620230	41.57529	26.91022	.0235425	.1829335
#1	.0726203	-.000428	.7534940	.0140098	-.012011	94.29383	1.589510
#2	.0768093	.000813	.7466616	.0062184	-.007905	94.24999	1.593636
#3	.0704792	.001545	.7458233	.0153482	-.007588	94.26588	1.588019

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0061486**	**.0028796**	**101.9841**	**.1951435**	**.1079784**	**.3736532**	**203.7857**
Stddev	.0000902	.0000482	.3203	.0009520	.0006474	.0007975	.3425
%RSD	1.467314	1.673629	.3140258	.4878390	.5995762	.2134443	.1680643
#1	.0061440	.0028779	102.1728	.1949432	.1086401	.3734134	204.1394
#2	.0060608	.0029287	101.6143	.1943076	.1079486	.3745431	203.4556
#3	.0062410	.0028323	102.1652	.1961797	.1073463	.3730031	203.7621

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.288434**	**29.06728**	**.2068529**	**.0066405**	**12.90898**	**.3410617**	**.8795793**
Stddev	.008095	.06808	.0006066	.0002938	.08948	.0011991	.0023837
%RSD	.1530678	.2342228	.2932526	4.424994	.6931503	.3515836	.2710092
#1	5.294866	29.14523	.2071774	.0065052	12.82215	.3423915	.8787899
#2	5.279345	29.03709	.2072283	.0069776	12.90390	.3400627	.8776904
#3	5.291092	29.01951	.2061531	.0064387	13.00090	.3407309	.8822576

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.085982**	**.0043912**	**.0037021**	**.0538942**	**1.945080**	**2.176809**	**8.398981**
Stddev	.014363	.0039623	.0002835	.0007863	.002757	.006833	.036918
%RSD	.1776257	90.23368	7.658358	1.458968	.1417631	.3138856	.4395499
#1	8.101679	.0082082	.0038093	.0547796	1.948249	2.173844	8.436888
#2	8.073498	.0046673	.0039163	.0532775	1.943761	2.171959	8.396918
#3	8.082770	.0002980	.0033806	.0536253	1.943229	2.184623	8.363139

Sample Name: Q2611-01 Acquired: 7/17/2025 14:49:56 Type: Unk
Method: 6010-200.7 NEW(v42) 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	3.825351	.2149643	.2399958
Stddev	.015801	.0013988	.0005744
%RSD	.4130496	.6507154	.2393536
#1	3.843383	.2164356	.2393941
#2	3.818744	.2136515	.2405384
#3	3.813927	.2148059	.2400548

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6046.417	102306.7	10501.73	5114.261	5811.654
Stddev	14.093	302.5	32.15	9.833	23.595
%RSD	.2330854	.2957137	.3061268	.1922685	.4059967
#1	6034.672	102275.8	10500.90	5110.813	5784.560
#2	6062.044	102623.5	10534.28	5106.615	5827.683
#3	6042.533	102020.8	10470.00	5125.353	5822.720

Sample Name: Q2622-01 Acquired: 7/17/2025 14:54:00 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0474270**	**-.004804**	**3.337175**	**.0082942**	**.0086325**	**99.69212**
Stddev	.0015395	.000712	.005890	.0018245	.0014209	.37137
%RSD	3.245989	14.82964	.1764971	21.99694	16.46027	.3725129
#1	.0492046	-.005243	3.340701	.0078107	.0071444	99.78234
#2	.0465211	-.005186	3.340449	.0067602	.0087781	100.0101
#3	.0465554	-.003982	3.330376	.0103117	.0099751	99.2840

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6777919**	**.0117220**	**.0062056**	**71.89185**	**.3068113**	**.1327051**
Stddev	.0006754	.0000901	.0000611	.13504	.0009270	.0000193
%RSD	.0996453	.7685170	.9851668	.1878373	.3021322	.0145811
#1	.6774072	.0118014	.0062361	72.00282	.3067768	.1327272
#2	.6785717	.0116241	.0062454	71.93125	.3059020	.1326912
#3	.6773967	.0117405	.0061352	71.74150	.3077550	.1326969

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2493019**	**139.5833**	**2.806917**	**82.42554**	**.2166154**	**.0038916**
Stddev	.0007346	.9679	.006415	.40226	.0006100	.0007469
%RSD	.2946806	.6934034	.2285561	.4880335	.2816143	19.19272
#1	.2495090	139.3940	2.813437	82.77389	.2169343	.0035098
#2	.2499108	138.7241	2.806703	82.51745	.2170000	.0034128
#3	.2484860	140.6319	2.800612	81.98527	.2159120	.0047522

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.333125**	**.3792596**	**1.216472**	**13.24229**	**.0214649**	**.0084093**
Stddev	.027400	.0034214	.000987	.11900	.0045422	.0004236
%RSD	.8220475	.9021272	.0811664	.8986642	21.16115	5.037222
#1	3.321037	.3823085	1.216692	13.19563	.0215657	.0079682
#2	3.313849	.3799111	1.215393	13.15369	.0168731	.0084468
#3	3.364491	.3755593	1.217330	13.37755	.0259559	.0088130

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2622-01 Acquired: 7/17/2025 14:54:00 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.0435116	1.736879	2.901612	F 21.37172	7.327392	.1448511
Stddev	.0006469	.008284	.020606	.02569	.038455	.0014368
%RSD	1.486747	.4769714	.7101415	.1201857	.5248121	.9918844
#1	.0431827	1.742160	2.881597	21.34269	7.288505	.1463393
#2	.0442569	1.741147	2.900479	21.38094	7.328270	.1447419
#3	.0430953	1.727331	2.922761	21.39152	7.365400	.1434720

Elem	Sr4077
Units	ppm
Avg	.1378132
Stddev	.0011526
%RSD	.8363746
#1	.1382117
#2	.1387138
#3	.1365142

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6332.994	105619.7	10833.76	5311.464	5834.935
Stddev	23.727	555.5	82.85	30.067	19.876
%RSD	.3746508	.5259501	.7647474	.5660825	.3406365
#1	6317.666	106225.4	10867.96	5345.767	5818.068
#2	6320.993	105499.8	10739.28	5289.672	5829.890
#3	6360.324	105134.0	10894.03	5298.953	5856.847

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV02 Acquired: 7/17/2025 14:58:02 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.114447**	**5.028033**	**4.872001**	**5.185559**	**5.212571**	**10.05685**	**10.57531**
Stddev	.015825	.121086	.036243	.023234	.010803	.00813	.18521
%RSD	.3094081	2.408224	.7439075	.4480442	.2072409	.0808827	1.751318
#1	5.131911	5.149764	4.913173	5.211651	5.222010	10.05076	10.58818
#2	5.101058	4.907602	4.844916	5.167109	5.214915	10.06609	10.75375
#3	5.110374	5.026735	4.857914	5.177917	5.200789	10.05371	10.38401

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2438318**	**2.437385**	**26.27241**	**.9472949**	**2.479536**	**1.274937**	**5.076160**
Stddev	.0013750	.014224	.15431	.0051833	.007507	.003405	.042319
%RSD	.5639317	.5835917	.5873453	.5471707	.3027735	.2670927	.8336804
#1	.2423446	2.451854	26.34233	.9504423	2.487230	1.278624	5.124120
#2	.2440938	2.423418	26.37939	.9413124	2.472231	1.271910	5.060290
#3	.2450570	2.436882	26.09552	.9501300	2.479147	1.274276	5.044070

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.574303**	**24.30881**	**2.488747**	**1.290527**	**22.87298**	**2.477764**	**2.590504**
Stddev	.007978	.07194	.008640	.003201	.16831	.009009	.011494
%RSD	.3098961	.2959314	.3471577	.2480444	.7358360	.3636077	.4436892
#1	2.577883	24.24969	2.497378	1.294190	23.02981	2.488159	2.577462
#2	2.579863	24.38890	2.480098	1.288266	22.69517	2.472206	2.594893
#3	2.565162	24.28784	2.488766	1.289125	22.89397	2.472928	2.599157

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.99860**	**5.214517**	**5.168206**	**4.888631**	**4.949532**	**4.813270**	**4.804761**
Stddev	.22836	.028668	.009025	.039992	.018726	.038588	.041994
%RSD	.8783606	.5497717	.1746210	.8180609	.3783471	.8017064	.8740132
#1	26.26172	5.185755	5.162125	4.933141	4.971126	4.852280	4.847444
#2	25.88199	5.243090	5.163917	4.855723	4.939701	4.775118	4.763491
#3	25.85208	5.214707	5.178575	4.877028	4.937768	4.812414	4.803348

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV02 Acquired: 7/17/2025 14:58:02 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**4.918676**	**5.008604**	**5.386780**
Stddev	.052002	.018306	.103044
%RSD	1.057229	.3654942	1.912900
#1	4.973840	5.020713	5.458472
#2	4.870555	4.987545	5.433172
#3	4.911634	5.017553	5.268695

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5155.912**	**85780.46**	**8337.390**	**4323.434**	**5992.196**
Stddev	2.338	208.62	64.987	29.373	10.764
%RSD	.0453544	.2432033	.7794664	.6793909	.1796386
#1	5157.311	85602.99	8393.891	4351.142	5981.495
#2	5157.212	85728.13	8266.372	4292.640	6003.023
#3	5153.212	86010.27	8351.907	4326.520	5992.069

Sample Name: CCB02 Acquired: 7/17/2025 15:02:14 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000858**	**-.000591**	**-.001809**	**-.000237**	**-.000908**	**-.001128**
Stddev	.002761	.001059	.000286	.000408	.000650	.008326
%RSD	321.9894	179.2362	15.79951	171.8291	71.58261	737.9839
#1	.001380	-.000827	-.002037	-.000668	-.001502	-.010124
#2	-.000009	-.001513	-.001489	.000143	-.000213	.000432
#3	-.003944	.000566	-.001902	-.000187	-.001009	.006307

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004243**	**-.000099**	**.0000024**	**.0059718**	**-.000337**	**.0000374**
Stddev	.000747	.000042	.0000492	.0064493	.000208	.0001364
%RSD	17.59394	42.40506	2019.104	107.9958	61.80665	364.3885
#1	-.004045	-.000148	-.000005	.0002870	-.000565	.0000023
#2	-.003615	-.000080	.000055	.0129803	-.000288	-.000078
#3	-.005069	-.000070	-.000042	.0046483	-.000157	.000188

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000104**	**-.000390**	**-.000132**	**-.025753**	**.0001872**	**.0009021**
Stddev	.000219	.003508	.000309	.017951	.0002695	.0006574
%RSD	210.6320	900.5026	233.9007	69.70498	144.0025	72.87564
#1	-.000357	-.004071	-.000303	-.030669	.0004362	.0012157
#2	.000024	.002914	-.000319	-.040733	.0002242	.0013440
#3	.000021	-.000012	.000225	-.005856	-.000099	.0001466

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.253049**	**-.001068**	**-.000147**	**.0966507**	**.0057590**	**.0008904**
Stddev	.013423	.001577	.000127	.0059386	.0005215	.0001353
%RSD	5.304314	147.6812	86.77793	6.144362	9.056012	15.19120
#1	-.262717	-.002826	-.000011	.1007528	.0058018	.0009974
#2	-.237724	-.000600	-.000165	.0898409	.0052174	.0007384
#3	-.258707	.000222	-.000263	.0993585	.0062578	.0009354

Sample Name: CCB02 Acquired: 7/17/2025 15:02:14 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000073	.0151079	.0496644	.0015236	F -.032538	-.003399
Stddev	.000195	.0018594	.0531182	.0007052	.000880	.002693
%RSD	266.1839	12.30750	106.9544	46.28098	2.703357	79.23787
#1	.000027	.0131135	.0134786	.0007599	-.033412	-.005840
#2	-.000298	.0167937	.1106465	.0016611	-.032549	-.000510
#3	.000051	.0154165	.0248681	.0021500	-.031653	-.003846

Elem	Sr4077
Units	ppm
Avg	.0000852
Stddev	.0000357
%RSD	41.85985
#1	.0000443
#2	.0001015
#3	.0001098

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5372.489	88788.44	8386.837	4429.980	6719.208
Stddev	13.318	168.42	66.488	17.278	22.008
%RSD	.2478833	.1896897	.7927633	.3900163	.3275376
#1	5378.510	88981.86	8324.417	4431.978	6740.711
#2	5381.732	88674.19	8379.338	4411.790	6720.185
#3	5357.224	88709.27	8456.757	4446.172	6696.728

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2592-02 Acquired: 7/17/2025 15:07:55 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.005813**	**-.003541**	**.0043055**	**.0027115**	**-.000030**	**.0998584**	**.1416334**
Stddev	.000826	.000624	.0004286	.0034891	.002244	.0096876	.0003937
%RSD	14.21458	17.63063	9.954971	128.6769	7405.171	9.701339	.2779368
#1	-.005029	-.004261	.0045072	-.001313	.001855	.0888506	.1419758
#2	-.006676	-.003222	.0038132	.004887	-.002513	.1070859	.1417213
#3	-.005733	-.003141	.0045961	.004561	.000567	.1036387	.1412033

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000230**	**.0020382**	**72.58829**	**.0001506**	**.0048562**	**.0398175**	**.0323611**
Stddev	.000027	.0001345	.13434	.0002283	.0001332	.0002375	.0071670
%RSD	11.58298	6.598748	.1850733	151.6377	2.742465	.5963425	22.14697
#1	-.000260	.0021401	72.68336	-.000094	.0049725	.0399946	.0395693
#2	-.000209	.0020887	72.64691	.000358	.0048853	.0395477	.0252361
#3	-.000220	.0018857	72.43460	.000187	.0047109	.0399102	.0322778

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3917584**	**19.61335**	**.0082914**	**.0007321**	**317.0479**	**-.004005**	**1.417445**
Stddev	.0008650	.05960	.0000774	.0002963	2.1350	.001272	.003096
%RSD	.2208044	.3038792	.9332434	40.47451	.6733937	31.74461	.2184279
#1	.3910126	19.68157	.0083630	.0003905	315.6078	-.003922	1.415818
#2	.3927067	19.58712	.0083020	.0009206	319.5008	-.002778	1.421015
#3	.3915558	19.57137	.0082093	.0008851	316.0351	-.005317	1.415502

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6669007**	**.0299427**	**.0004056**	**-.004426**	**.0124650**	**1.852516**	**.0570199**
Stddev	.0202233	.0005296	.0003235	.000487	.0011159	.021589	.0034505
%RSD	3.032432	1.768654	79.76732	11.01198	8.952182	1.165372	6.051408
#1	.6480222	.0294165	.0000395	-.004983	.0114541	1.874120	.0561248
#2	.6882431	.0299360	.0006533	-.004214	.0136624	1.830943	.0541051
#3	.6644368	.0304756	.0005240	-.004080	.0122785	1.852486	.0608298

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2592-02 Acquired: 7/17/2025 15:07:55 Type: Unk
Method: 6010-200.7 NEW(v42) 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	6.307479	.0100585	.1932721
Stddev	.000512	.0025744	.0002696
%RSD	.0081105	25.59391	.1395122
#1	6.308066	.0113073	.1932557
#2	6.307126	.0117703	.1935496
#3	6.307245	.0070979	.1930110

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4965.826	84532.57	8241.257	4123.115	5711.569
Stddev	10.604	146.78	23.350	17.709	8.487
%RSD	.2135476	.1736341	.2833317	.4295025	.1485858
#1	4959.341	84426.24	8215.309	4109.003	5704.056
#2	4978.064	84471.45	8260.576	4117.355	5720.774
#3	4960.074	84700.04	8247.885	4142.987	5709.877

Sample Name: Q2614-06 Acquired: 7/17/2025 15:12:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.003081**	**-.004096**	**.0020794**	**.0025791**	**-.000405**	**.1071784**	**.1553727**
Stddev	.001432	.001587	.0020200	.0007196	.002024	.0054566	.0001395
%RSD	46.46713	38.75041	97.14042	27.90005	500.2716	5.091107	.0897915
#1	-.001451	-.005869	.0042334	.0030044	.001932	.1134732	.1555328
#2	-.004133	-.002807	.0017773	.0029847	-.001534	.1037948	.1553077
#3	-.003661	-.003612	.0002276	.0017483	-.001611	.1042672	.1552774

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000296**	**.0002214**	**48.74616**	**-.000077**	**.0005801**	**.0108468**	**.1153094**
Stddev	.000029	.0000787	.12771	.000350	.0001892	.0002418	.0024691
%RSD	9.914796	35.55741	.2619948	452.9926	32.62114	2.229580	2.141237
#1	-.000275	.0003034	48.67209	.000247	.0004473	.0108734	.1129855
#2	-.000330	.0001465	48.67275	-.000449	.0004962	.0105928	.1179016
#3	-.000285	.0002143	48.89362	-.000031	.0007967	.0110743	.1150410

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5474385**	**2.689558**	**.0012274**	**.0008243**	**287.1110**	**-.002012**	**.1880130**
Stddev	.0008571	.015279	.0000489	.0001044	2.5784	.002650	.0011352
%RSD	.1565648	.5680738	3.982976	12.66881	.8980592	131.7320	.6037912
#1	.5484165	2.697200	.0011893	.0009250	290.0130	.001041	.1891619
#2	.5468180	2.699507	.0012825	.0007165	285.0838	-.003355	.1879852
#3	.5470810	2.671966	.0012105	.0008316	286.2361	-.003721	.1868921

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.314050**	**.0353902**	**.0007252**	**-.004385**	**.0137609**	**.6366596**	**.3719331**
Stddev	.018528	.0009607	.0002561	.000433	.0006584	.0037046	.0024746
%RSD	1.409982	2.714716	35.30911	9.881117	4.784519	.5818722	.6653422
#1	1.296305	.0346099	.0010111	-.004885	.0133089	.6362488	.3729839
#2	1.333272	.0350973	.0005169	-.004162	.0134575	.6405524	.3691065
#3	1.312573	.0364632	.0006477	-.004109	.0145163	.6331776	.3737089

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-06 Acquired: 7/17/2025 15:12:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.5173461	.0038070	.2518866
Stddev	.0032755	.0038583	.0002083
%RSD	.6331361	101.3474	.0827100
#1	.5156063	.0059007	.2521014
#2	.5153076	-.000646	.2516854
#3	.5211244	.006166	.2518730

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5032.703	86157.05	8543.222	4228.954	5813.632
Stddev	9.458	232.35	56.802	11.122	7.304
%RSD	.1879267	.2696828	.6648788	.2630078	.1256291
#1	5029.538	86111.08	8551.417	4222.268	5810.696
#2	5043.337	85951.12	8595.481	4222.800	5821.946
#3	5025.233	86408.95	8482.767	4241.793	5808.253

Sample Name: Q2612-01 Acquired: 7/17/2025 15:16:42 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.1041664**	**.0037766**	**.4579143**	**.0181233**	**.0111553**	**132.0663**	**.7388516**
Stddev	.0021249	.0012976	.0032388	.0036056	.0015327	.1396	.0019293
%RSD	2.039942	34.35965	.7072852	19.89483	13.73957	.1056774	.2611144
#1	.1024950	.0037181	.4609178	.0207185	.0119402	132.2273	.7410098
#2	.1065578	.0025092	.4583422	.0196451	.0093891	131.9930	.7372942
#3	.1034463	.0051024	.4544828	.0140063	.0121366	131.9788	.7382508

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0086383**	**.0001484**	**34.50495**	**.1894975**	**.1491373**	**.3462546**	**277.6668**
Stddev	.0000742	.0001275	.10933	.0009840	.0004818	.0013660	1.8762
%RSD	.8592380	85.89025	.3168400	.5192575	.3230529	.3945128	.6757004
#1	.0087120	.0002674	34.63016	.1887360	.1493115	.3471060	275.7609
#2	.0085636	.0001641	34.45635	.1906085	.1495078	.3469788	277.7278
#3	.0086392	.0000139	34.42836	.1891480	.1485926	.3446789	279.5118

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.649851**	**46.45185**	**.2593744**	**.0074435**	**11.36744**	**.3345518**	**.7242512**
Stddev	.018108	.19023	.0004773	.0005723	.09228	.0019074	.0015503
%RSD	.2723107	.4095259	.1840379	7.689113	.8117983	.5701246	.2140513
#1	6.664590	46.54895	.2598265	.0069548	11.27034	.3361710	.7228250
#2	6.655327	46.57393	.2588753	.0073025	11.37800	.3324492	.7259012
#3	6.629637	46.23266	.2594214	.0080731	11.45399	.3350351	.7240274

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.02889**	**.0041342**	**.0056585**	**.3840165**	**3.022215**	**2.043393**	**6.360451**
Stddev	.11330	.0093699	.0001088	.0025674	.000230	.014203	.015695
%RSD	.7539066	226.6429	1.923002	.6685701	.0076144	.6950604	.2467648
#1	14.98131	-.005131	.0056538	.3861745	3.022372	2.038344	6.378490
#2	14.94713	.003927	.0055520	.3846978	3.022322	2.032404	6.352938
#3	15.15822	.013606	.0057695	.3811771	3.021951	2.059430	6.349924

Sample Name: Q2612-01 Acquired: 7/17/2025 15:16:42 Type: Unk
Method: 6010-200.7 NEW(v42) 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	1.327315	.3370326	-.038115
Stddev	.003288	.0039161	.002245
%RSD	.2476826	1.161928	5.889499
#1	1.329706	.3329665	-.035599
#2	1.323566	.3373521	-.038834
#3	1.328674	.3407791	-.039912

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5907.232	101093.6	10053.88	5014.709	5703.677
Stddev	10.565	566.1	48.50	14.956	11.069
%RSD	.1788511	.5599785	.4823754	.2982434	.1940621
#1	5910.734	101743.5	10036.26	5030.950	5701.096
#2	5895.361	100830.1	10016.66	5011.674	5694.127
#3	5915.602	100707.3	10108.73	5001.503	5715.808

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01 Acquired: 7/17/2025 15:20:46 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0861103**	**.0024670**	**1.729214**	**.0132227**	**.0035311**	**79.82431**	**1.612553**
Stddev	.0017998	.0006935	.009703	.0028908	.0007509	.04679	.003398
%RSD	2.090141	28.10953	.5611380	21.86278	21.26602	.0586201	.2106917
#1	.0862724	.0032303	1.737569	.0161708	.0042345	79.80251	1.614664
#2	.0842350	.0022950	1.718571	.0131045	.0036184	79.87803	1.608634
#3	.0878237	.0018758	1.731501	.0103927	.0027403	79.79240	1.614361

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0044924**	**.0113569**	**212.7945**	**.2934755**	**.1219046**	**1.320694**	**216.4401**
Stddev	.0000945	.0001548	.9027	.0010542	.0003840	.004905	1.7431
%RSD	2.103956	1.362895	.4242319	.3592228	.3149910	.3714016	.8053725
#1	.0045437	.0113235	212.4539	.2927074	.1221901	1.323301	217.2127
#2	.0043834	.0112215	212.1116	.2946774	.1214680	1.315036	217.6635
#3	.0045502	.0115256	213.8180	.2930416	.1220556	1.323745	214.4442

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.632906**	**42.51726**	**.2945621**	**.0124679**	**5.764476**	**.3075101**	**3.236093**
Stddev	.004965	.08146	.0007804	.0006128	.073656	.0008969	.010946
%RSD	.0748563	.1915916	.2649275	4.914658	1.277760	.2916669	.3382450
#1	6.627873	42.44592	.2953637	.0131608	5.809052	.3070958	3.235472
#2	6.633044	42.60602	.2938049	.0119976	5.804918	.3085392	3.247336
#3	6.637800	42.49983	.2945176	.0122451	5.679459	.3068952	3.225471

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.88209**	**.2505523**	**.0166503**	**.1195805**	**3.174109**	**4.250686**	**17.58973**
Stddev	.03983	.0048938	.0002942	.0007953	.004765	.065642	.03247
%RSD	.3660043	1.953197	1.766664	.6650776	.1501295	1.544279	.1845770
#1	10.88589	.2529769	.0168108	.1200521	3.173753	4.283238	17.57140
#2	10.91988	.2537604	.0168293	.1200271	3.179042	4.293691	17.57058
#3	10.84049	.2449196	.0163108	.1186622	3.169532	4.175129	17.62722

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01 Acquired: 7/17/2025 15:20:46 Type: Unk
Method: 6010-200.7 NEW(v42) 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	18.98174	.2058533	.7251207
Stddev	.07550	.0020755	.0034883
%RSD	.3977555	1.008221	.4810599
#1	19.06507	.2057707	.7256611
#2	18.91788	.2079688	.7213937
#3	18.96228	.2038203	.7283072

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5701.700	96945.21	9886.578	4739.896	5706.089
Stddev	20.025	497.41	51.531	8.370	23.667
%RSD	.3512069	.5130798	.5212260	.1765847	.4147619
#1	5681.376	96997.27	9939.140	4740.438	5681.422
#2	5721.411	96423.82	9884.453	4731.268	5728.610
#3	5702.314	97414.54	9836.142	4747.982	5708.235

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2608-01 Acquired: 7/17/2025 15:24:48 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.1187337	-.006542	.0021843	-.001282	.0011827	.3657214
Stddev	.0022204	.000730	.0014277	.003560	.0014416	.0188956
%RSD	1.870068	11.15235	65.36117	277.7215	121.8956	5.166660
#1	.1171850	-.006462	.0016057	-.004597	.0000951	.3439671
#2	.1177384	-.005856	.0011368	-.001730	.0028178	.3751474
#3	.1212776	-.007308	.0038105	.002481	.0006351	.3780497

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.665995	-.000281	-.000166	236.8432	.0018449	.0016613
Stddev	.004805	.000051	.000125	.2594	.0005416	.0002280
%RSD	.1029802	18.26886	75.44766	.1095355	29.35500	13.72503
#1	4.664914	-.000294	-.000125	237.0726	.0024695	.0014022
#2	4.671248	-.000325	-.000067	236.8954	.0015061	.0018314
#3	4.661822	-.000225	-.000307	236.5617	.0015591	.0017503

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034881	4.671771	2.099034	62.76302	.0074385	.0004894
Stddev	.0000402	.022996	.001494	.23202	.0004200	.0004889
%RSD	1.152973	.4922421	.0711747	.3696780	5.646422	99.88044
#1	.0034423	4.655342	2.097357	62.73222	.0076102	.0010532
#2	.0035043	4.661919	2.099523	63.00890	.0077455	.0001823
#3	.0035177	4.698052	2.100222	62.54794	.0069599	.0002329

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	459.3537	.0012380	.0696669	45.11741	1.167689	.0145003
Stddev	5.4678	.0008007	.0003778	.10801	.004467	.0001155
%RSD	1.190315	64.67631	.5422361	.2393952	.3825212	.7962098
#1	453.9321	.0006123	.0692378	44.99361	1.163260	.0146196
#2	459.2623	.0009613	.0699493	45.19239	1.172192	.0144922
#3	464.8665	.0021403	.0698137	45.16622	1.167615	.0143891

Sample Name: Q2608-01 Acquired: 7/17/2025 15:24:48 Type: Unk
Method: 6010-200.7 NEW(v42) 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	-.004169	.0126832	F 27.04961	1.379145	F 44.53765	.1426894
Stddev	.000679	.0005011	.05530	.003536	.17414	.0016603
%RSD	16.27664	3.950966	.2044316	.2564160	.3909853	1.163577
#1	-.004584	.0122276	26.98654	1.375786	44.56060	.1408758
#2	-.004537	.0132199	27.07255	1.378815	44.69918	.1441345
#3	-.003386	.0126020	27.08976	1.382835	44.35318	.1430578

Elem	Sr4077
Units	ppm
Avg	1.896829
Stddev	.001859
%RSD	.0979906
#1	1.896729
#2	1.898737
#3	1.895023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4721.214	80874.82	8286.842	3955.690	5350.574
Stddev	4.669	374.71	16.628	29.486	7.632
%RSD	.0989002	.4633199	.2006593	.7453981	.1426348
#1	4726.488	81302.73	8305.534	3989.407	5354.765
#2	4717.607	80605.37	8273.695	3934.736	5341.765
#3	4719.547	80716.38	8281.295	3942.926	5355.193

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2585-04 Acquired: 7/17/2025 15:29:09 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.003299**	**-.004294**	**.0034703**	**.0036355**	**-.000222**	**.1688241**	**.0173051**
Stddev	.000186	.000910	.0003703	.0003873	.002107	.0104873	.0007557
%RSD	5.647876	21.19082	10.66992	10.65439	950.0046	6.211983	4.366699
#1	-.003369	-.005332	.0034306	.0040822	-.002652	.1808291	.0171692
#2	-.003088	-.003630	.0031215	.0033933	.001085	.1614453	.0181195
#3	-.003440	-.003921	.0038589	.0034310	.000902	.1641979	.0166266

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000218**	**.0001014**	**31.42793**	**.0005880**	**-.000078**	**.2382506**	**.7794338**
Stddev	.000011	.0000589	.08610	.0001749	.000103	.0001629	.0065915
%RSD	5.016259	58.06181	.2739668	29.74134	132.1410	.0683800	.8456736
#1	-.000205	.0000344	31.44783	.0003875	.000018	.2381808	.7767120
#2	-.000224	.0001250	31.33362	.0006670	-.000187	.2384368	.7746391
#3	-.000224	.0001448	31.50234	.0007093	-.000065	.2381342	.7869503

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0773728**	**7.164475**	**.0017208**	**.0007471**	**65.18949**	**-.002692**	**.3683972**
Stddev	.0003812	.057303	.0001934	.0000753	.16807	.002742	.0003878
%RSD	.4926332	.7998155	11.24153	10.07834	.2578137	101.8546	.1052551
#1	.0774013	7.099560	.0016955	.0008087	65.08885	-.001871	.3680886
#2	.0769782	7.208029	.0019256	.0007693	65.38352	-.000454	.3688325
#3	.0777390	7.185835	.0015412	.0006632	65.09612	-.005751	.3682706

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.934159**	**.0214570**	**.0012647**	**-.004361**	**.0152201**	**3.620172**	**1.746828**
Stddev	.025822	.0006177	.0000235	.000300	.0005755	.010924	.005363
%RSD	.2599351	2.878716	1.857798	6.880344	3.780969	.3017625	.3069937
#1	9.910984	.0220563	.0012918	-.004680	.0148281	3.608976	1.752089
#2	9.929499	.0208225	.0012503	-.004320	.0149515	3.630802	1.747026
#3	9.961994	.0214923	.0012520	-.004084	.0158808	3.620736	1.741369

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2585-04 Acquired: 7/17/2025 15:29:09 Type: Unk
Method: 6010-200.7 NEW(v42) 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	7.384344	.0004348	.1048838
Stddev	.043127	.0028393	.0002721
%RSD	.5840334	652.9603	.2594277
#1	7.433989	.0012654	.1049645
#2	7.356131	.0027662	.1045805
#3	7.362913	-.002727	.1051064

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5122.364	85577.51	8516.350	4191.202	6191.338
Stddev	3.868	379.54	17.377	22.675	3.424
%RSD	.0755119	.4435081	.2040450	.5410121	.0553109
#1	5125.101	85982.65	8528.495	4217.324	6188.676
#2	5124.053	85230.21	8524.110	4179.682	6190.136
#3	5117.939	85519.68	8496.445	4176.599	6195.201

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2606-01DUP Acquired: 7/17/2025 15:33:23 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.003717**	**-.003336**	**-.002072**	**.0017101**	**.0011512**	**.3104442**
Stddev	.001629	.003626	.000883	.0032110	.0006044	.0205095
%RSD	43.81585	108.6900	42.62372	187.7698	52.49877	6.606491
#1	-.003101	-.001125	-.001658	.0049840	.0007921	.2954384
#2	-.005564	-.001363	-.001471	.0015803	.0018489	.3338140
#3	-.002487	-.007522	-.003085	-.001434	.0008125	.3020802

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1422331**	**-.000226**	**-.000040**	**109.8202**	**.0022674**	**.0016377**
Stddev	.0013580	.000048	.000026	.3562	.0003210	.0000902
%RSD	.9547990	21.35672	65.93673	.3243315	14.15865	5.510993
#1	.1414300	-.000172	-.000070	109.4463	.0026379	.0016725
#2	.1414683	-.000265	-.000029	109.8590	.0020917	.0015352
#3	.1438011	-.000242	-.000021	110.1555	.0020725	.0017054

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000112**	**.0346084**	**.0053936**	**32.06164**	**.0123793**	**.0005216**
Stddev	.000361	.0037918	.0004722	.08829	.0001864	.0000538
%RSD	322.6433	10.95635	8.754994	.2753788	1.505932	10.31474
#1	.000242	.0388992	.0051986	32.05019	.0125193	.0005837
#2	-.000097	.0317080	.0050502	31.97964	.0121677	.0004908
#3	-.000480	.0332181	.0059321	32.15510	.0124510	.0004902

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**347.1671**	**-.000012**	**.0644439**	**21.95801**	**.3563153**	**.0117050**
Stddev	6.6413	.001660	.0009132	.37582	.0020866	.0000917
%RSD	1.913002	13663.41	1.417041	1.711558	.5856154	.7831292
#1	339.5782	.001761	.0634260	21.57078	.3571348	.0117890
#2	351.9174	-.000267	.0651912	22.32128	.3539433	.0117188
#3	350.0056	-.001530	.0647145	21.98198	.3578678	.0116072

Sample Name: Q2606-01DUP Acquired: 7/17/2025 15:33:23 Type: Unk
Method: 6010-200.7 NEW(v42) 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	-.004407	.0104859	11.57358	.0636372	F 36.03736	.0211894
Stddev	.000290	.0004334	.15495	.0016767	.22738	.0025407
%RSD	6.586458	4.133133	1.338823	2.634747	.6309594	11.99063
#1	-.004104	.0101898	11.42696	.0653570	35.85036	.0222768
#2	-.004435	.0109833	11.73570	.0635472	36.29047	.0230054
#3	-.004683	.0102846	11.55809	.0620073	35.97126	.0182859

Elem	Sr4077
Units	ppm
Avg	1.150986
Stddev	.001033
%RSD	.0897862
#1	1.150084
#2	1.152114
#3	1.150760

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4900.948	83395.48	8270.642	4105.168	5619.477
Stddev	6.482	1236.07	39.783	46.029	14.596
%RSD	.1322550	1.482180	.4810119	1.121255	.2597313
#1	4894.038	84756.35	8303.109	4158.291	5610.642
#2	4901.912	82342.36	8282.554	4080.074	5611.466
#3	4906.893	83087.73	8226.265	4077.139	5636.324

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2606-01LX5 Acquired: 7/17/2025 15:37:44 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.002128**	**.0006552**	**-.002691**	**-.000250**	**-.001625**	**.0741533**	**.0272022**
Stddev	.001306	.0010237	.001140	.003564	.001497	.0046081	.0012955
%RSD	61.34637	156.2501	42.35915	1425.945	92.08996	6.214254	4.762664
#1	-.003445	.0004535	-.002522	.002916	-.002646	.0752341	.0285536
#2	-.002107	-.000253	-.003906	-.004111	-.002324	.0691009	.0259708
#3	-.000834	.001765	-.001645	.000445	.000093	.0781249	.0270821

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000087**	**-.000045**	**23.71908**	**.0001961**	**.0001985**	**-.000316**	**.0024176**
Stddev	.000024	.000049	.16915	.0002754	.0002368	.000327	.0028178
%RSD	27.49077	109.7935	.7131242	140.4248	119.3087	103.6746	116.5516
#1	-.000109	-.000012	23.89836	.0001337	.0002451	-.000275	-.000465
#2	-.000062	-.000021	23.56232	-.000043	-.000058	-.000661	.005166
#3	-.000091	-.000102	23.69657	.000497	.000409	-.000011	.002552

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011611**	**6.878910**	**.0027384**	**.0011587**	**61.26426**	**-.000129**	**.0131463**
Stddev	.0002688	.043746	.0004195	.0005233	.16822	.002656	.0000853
%RSD	23.14717	.6359377	15.31941	45.16094	.2745793	2060.320	.6486488
#1	.0009180	6.912536	.0027505	.0015696	61.12647	-.000932	.0132108
#2	.0014497	6.894740	.0023130	.0005696	61.45172	.002836	.0131785
#3	.0011155	6.829452	.0031517	.0013368	61.21459	-.002291	.0130497

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.580396**	**.0827674**	**.0024699**	**.0002872**	**.0144160**	**2.349040**	**.0104909**
Stddev	.051979	.0006772	.0002839	.0005193	.0022120	.014737	.0016513
%RSD	1.134808	.8181819	11.49364	180.8106	15.34384	.6273732	15.74025
#1	4.602373	.0834363	.0021507	-.000276	.0169379	2.347949	.0088743
#2	4.617776	.0827835	.0026940	.000747	.0135054	2.364292	.0121748
#3	4.521039	.0820822	.0025652	.000390	.0128047	2.334878	.0104237

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2606-01LX5 Acquired: 7/17/2025 15:37:44 Type: Unk
Method: 6010-200.7 NEW(v42) 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	7.230779	.0012980	.2433403
Stddev	.073305	.0010153	.0016161
%RSD	1.013798	78.22131	.6641101
#1	7.314652	.0019917	.2450739
#2	7.198723	.0017697	.2430717
#3	7.178961	.0001326	.2418754

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5136.048	86112.26	8202.623	4256.163	6088.459
Stddev	13.263	120.11	40.209	11.494	10.899
%RSD	.2582374	.1394807	.4901953	.2700460	.1790145
#1	5122.518	86076.66	8156.215	4264.922	6076.371
#2	5149.027	86013.98	8227.055	4260.418	6091.472
#3	5136.601	86246.15	8224.598	4243.148	6097.536

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2606-01MS Acquired: 7/17/2025 15:42:02 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8217122**	**1.870102**	**.9147352**	**2.042397**	**.8488802**	**2.305365**
Stddev	.0017957	.039532	.0011263	.011100	.0030504	.012095
%RSD	.2185251	2.113875	.1231241	.5434911	.3593459	.5246352
#1	.8196767	1.907827	.9144148	2.053954	.8516615	2.318539
#2	.8223880	1.828983	.9159869	2.031818	.8456178	2.302795
#3	.8230719	1.873496	.9138038	2.041418	.8493612	2.294762

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3477321**	**.1840838**	**.1910561**	**110.9892**	**.3606330**	**.1993508**
Stddev	.0010069	.0014034	.0003157	.1538	.0025808	.0003379
%RSD	.2895673	.7623448	.1652172	.1385516	.7156291	.1694903
#1	.3479608	.1826932	.1908946	111.1113	.3592942	.1992349
#2	.3486050	.1840586	.1914198	111.0398	.3589967	.1997314
#3	.3466305	.1854996	.1908537	110.8165	.3636081	.1990861

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2954825**	**2.964503**	**.2072546**	**33.89574**	**.5057056**	**.0765805**
Stddev	.0006526	.005587	.0008383	.21552	.0005939	.0003212
%RSD	.2208620	.1884574	.4044544	.6358218	.1174476	.4193885
#1	.2960376	2.960796	.2072589	34.09395	.5051737	.0762330
#2	.2956462	2.961784	.2080907	33.66632	.5063465	.0768664
#3	.2947636	2.970929	.2064142	33.92693	.5055966	.0766421

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**348.6673**	**.2973274**	**.2840869**	**32.19467**	**.6364677**	**.4424868**
Stddev	2.3313	.0019289	.0016512	.07864	.0039377	.0012358
%RSD	.6686451	.6487513	.5812360	.2442533	.6186823	.2792753
#1	351.3583	.2995513	.2847357	32.28415	.6333790	.4437943
#2	347.3873	.2963210	.2822098	32.13655	.6351223	.4413381
#3	347.2564	.2961098	.2853152	32.16332	.6409018	.4423281

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2606-01MS Acquired: 7/17/2025 15:42:02 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.6898676	.2029582	12.35157	6.177689	F 36.49660	.2212666
Stddev	.0004027	.0006342	.09145	.016470	.11378	.0060706
%RSD	.0583765	.3124623	.7403819	.2665997	.3117609	2.743565
#1	.6899249	.2022517	12.44590	6.164045	36.57679	.2210124
#2	.6902386	.2031446	12.26330	6.195984	36.36638	.2153270
#3	.6894393	.2034782	12.34550	6.173038	36.54664	.2274602

Elem	Sr4077
Units	ppm
Avg	1.364283
Stddev	.002753
%RSD	.2017841
#1	1.365962
#2	1.365780
#3	1.361105

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4846.763	83092.28	8155.468	4062.819	5532.497
Stddev	18.704	477.67	37.900	18.938	15.615
%RSD	.3859085	.5748643	.4647248	.4661324	.2822371
#1	4826.825	83003.68	8172.326	4050.096	5521.013
#2	4849.542	83608.05	8182.014	4084.584	5526.201
#3	4863.922	82665.12	8112.063	4053.779	5550.277

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2606-01MSD Acquired: 7/17/2025 15:46:08 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8068001**	**1.844138**	**.8977606**	**2.018734**	**.8347533**	**2.248973**
Stddev	.0021561	.013034	.0013362	.008097	.0039204	.004514
%RSD	.2672443	.7067702	.1488380	.4010936	.4696543	.2007112
#1	.8054680	1.830617	.8992514	2.009510	.8366227	2.249873
#2	.8092877	1.845175	.8973595	2.024668	.8302480	2.244077
#3	.8056447	1.856623	.8966708	2.022024	.8373890	2.252970

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3374058**	**.1781919**	**.1877485**	**106.5767**	**.3537915**	**.1955123**
Stddev	.0007707	.0011248	.0001062	.3120	.0023179	.0004594
%RSD	.2284294	.6312052	.0565787	.2927148	.6551668	.2349584
#1	.3382606	.1774101	.1876837	106.8993	.3531826	.1956840
#2	.3371928	.1794810	.1876908	106.5540	.3563531	.1949918
#3	.3367639	.1776847	.1878711	106.2767	.3518388	.1958611

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2890668**	**2.946089**	**.2030329**	**32.56203**	**.4953206**	**.0749636**
Stddev	.0003599	.031950	.0009830	.16518	.0010241	.0003203
%RSD	.1245061	1.084485	.4841719	.5072684	.2067460	.4272020
#1	.2886750	2.975451	.2029609	32.60348	.4948654	.0753134
#2	.2891427	2.912063	.2040500	32.38007	.4946031	.0746848
#3	.2893828	2.950754	.2020879	32.70253	.4964934	.0748925

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**333.7379**	**.2914938**	**.2764178**	**31.55016**	**.6075943**	**.4369223**
Stddev	5.7132	.0010468	.0004495	.13583	.0017696	.0000502
%RSD	1.711896	.3591085	.1626149	.4305193	.2912439	.0114827
#1	339.2943	.2926902	.2766621	31.70681	.6091338	.4369249
#2	327.8797	.2907464	.2758990	31.47847	.6056610	.4368709
#3	334.0396	.2910448	.2766922	31.46518	.6079881	.4369712

Sample Name: Q2606-01MSD Acquired: 7/17/2025 15:46:08 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.6788049	.2022817	12.00882	6.032963	F 34.76876	.2133374
Stddev	.0015653	.0025288	.06492	.013423	.07285	.0016330
%RSD	.2306009	1.250159	.5406125	.2224972	.2095188	.7654707
#1	.6775322	.2050445	12.06258	6.018241	34.70871	.2116840
#2	.6805528	.2017189	11.93670	6.036127	34.74778	.2133788
#3	.6783299	.2000816	12.02719	6.044522	34.84980	.2149493

Elem	Sr4077
Units	ppm
Avg	1.308446
Stddev	.004798
%RSD	.3667167
#1	1.312321
#2	1.309939
#3	1.303079

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4885.902	82898.12	8260.683	4066.132	5583.455
Stddev	3.797	337.10	8.156	28.687	3.457
%RSD	.0777050	.4066434	.0987352	.7055051	.0619122
#1	4889.776	82611.14	8251.689	4043.473	5584.149
#2	4882.188	83269.35	8262.760	4098.387	5586.513
#3	4885.741	82813.86	8267.600	4056.536	5579.704

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV03 Acquired: 7/17/2025 15:50:13 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**5.096795**	**5.135008**	**4.873552**	**5.156212**	**5.203268**	**10.06865**	**10.52412**
Stddev	.018779	.124146	.004072	.019290	.028223	.03430	.20172
%RSD	.3684499	2.417642	.0835449	.3741135	.5424060	.3406558	1.916695
#1	5.086550	5.226331	4.878236	5.160467	5.182798	10.09054	10.74203
#2	5.085367	5.185041	4.870859	5.135150	5.191543	10.02912	10.34393
#3	5.118469	4.993653	4.871561	5.173020	5.235464	10.08630	10.48639

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2418835**	**2.438429**	**26.39556**	**.9402416**	**2.479683**	**1.271193**	**5.028662**
Stddev	.0044202	.003192	.15363	.0047375	.005639	.004278	.057459
%RSD	1.827407	.1309199	.5820479	.5038559	.2274197	.3365552	1.142622
#1	.2469173	2.439807	26.53588	.9436227	2.479109	1.267856	4.968710
#2	.2386357	2.434779	26.23140	.9422752	2.474352	1.269707	5.083251
#3	.2400976	2.440701	26.41940	.9348268	2.485587	1.276016	5.034024

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.590024**	**24.28646**	**2.493581**	**1.273519**	**22.92100**	**2.489368**	**2.574040**
Stddev	.016230	.29161	.006934	.005147	.28644	.010554	.005370
%RSD	.6266392	1.200694	.2780807	.4041670	1.249692	.4239752	.2086375
#1	2.603404	24.54912	2.491661	1.273244	22.63939	2.501211	2.579739
#2	2.571970	23.97267	2.487810	1.278798	23.21204	2.485936	2.573308
#3	2.594698	24.33760	2.501273	1.268514	22.91157	2.480957	2.569073

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.88697**	**5.172115**	**5.195197**	**4.900634**	**4.965927**	**4.741709**	**4.927482**
Stddev	.31637	.074347	.018554	.011163	.022494	.038379	.009723
%RSD	1.222125	1.437464	.3571419	.2277821	.4529676	.8093901	.1973265
#1	25.62225	5.257303	5.186120	4.913227	4.988824	4.697529	4.936284
#2	26.23735	5.120312	5.182928	4.891957	4.943858	4.760794	4.917045
#3	25.80130	5.138730	5.216542	4.896718	4.965100	4.766804	4.929119

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV03 Acquired: 7/17/2025 15:50:13 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**4.928736**	**5.010876**	**5.365335**
Stddev	.013942	.008502	.107051
%RSD	.2828660	.1696728	1.995234
#1	4.944411	5.019279	5.455727
#2	4.924077	5.002278	5.247120
#3	4.917721	5.011070	5.393159

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5117.593**	**85034.54**	**8166.182**	**4272.035**	**5948.298**
Stddev	21.831	537.73	115.607	11.563	17.835
%RSD	.4265821	.6323666	1.415682	.2706713	.2998284
#1	5131.814	85048.94	8033.709	4281.821	5955.262
#2	5128.507	84489.76	8246.676	4259.275	5961.601
#3	5092.457	85564.93	8218.160	4275.008	5928.033

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCB03 Acquired: 7/17/2025 15:56:02 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001801**	**.0004195**	**-.001852**	**-.001539**	**-.000052**	**-.000000**
Stddev	.000468	.0017739	.000170	.002997	.001023	.004240
%RSD	25.99260	422.8355	9.175722	194.6887	1982.533	1175633.
#1	-.001447	.0017011	-.001949	-.004800	.001065	.004080
#2	-.001624	-.001605	-.001952	-.000910	-.000942	-.004383
#3	-.002331	.001163	-.001656	.001093	-.000278	.000301

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003559**	**-.000083**	**.0000357**	**.0383470**	**-.000534**	**-.000006**
Stddev	.000507	.000049	.0000382	.0041345	.000402	.000129
%RSD	14.24466	59.36112	106.9892	10.78181	75.33377	2114.736
#1	-.003017	-.000026	-.000007	.0430049	-.000070	-.000149
#2	-.003637	-.000108	.000067	.0369249	-.000744	.000100
#3	-.004022	-.000115	.000047	.0351113	-.000788	.000031

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000412**	**.0002232**	**.0002552**	**-.022654**	**.0002953**	**.0010922**
Stddev	.000093	.0043963	.0001782	.034211	.0002009	.0001169
%RSD	22.52344	1969.784	69.83163	151.0204	68.04203	10.70119
#1	-.000488	.0051546	.0000616	.013200	.0005263	.0009808
#2	-.000308	-.001199	.0002915	-.026218	.0001991	.0012139
#3	-.000440	-.003286	.0004125	-.054943	.0001606	.0010819

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.083058**	**-.004014**	**-.000130**	**.1409582**	**.0033342**	**.0004794**
Stddev	.012463	.001741	.000080	.0297643	.0003069	.0001281
%RSD	15.00463	43.38415	61.30370	21.11568	9.204321	26.71387
#1	-.068914	-.005183	-.000223	.1291625	.0030132	.0005723
#2	-.087837	-.004847	-.000082	.1748124	.0033647	.0003333
#3	-.092425	-.002013	-.000087	.1188996	.0036247	.0005324

Sample Name: CCB03 Acquired: 7/17/2025 15:56:02 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016067	.0141509	-.001589	.0014370	F -.031243	-.003033
Stddev	.0004440	.0028784	.006538	.0021340	.000862	.001802
%RSD	27.63667	20.34070	411.5359	148.5023	2.760089	59.41357
#1	.0015276	.0174744	-.004570	.0008619	-.030324	-.003322
#2	.0012076	.0124568	-.006104	.0037996	-.031369	-.001104
#3	.0020850	.0125215	.005908	-.000350	-.032035	-.004674

Elem	Sr4077
Units	ppm
Avg	-.000052
Stddev	.000057
%RSD	108.9490
#1	-.000116
#2	-.000035
#3	-.000006

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5287.072	86926.45	8166.481	4350.006	6590.541
Stddev	17.474	207.24	37.554	11.344	18.607
%RSD	.3304982	.2384091	.4598596	.2607824	.2823248
#1	5272.317	87165.74	8179.136	4344.646	6573.503
#2	5306.368	86808.81	8196.073	4342.335	6610.396
#3	5282.531	86804.81	8124.234	4363.037	6587.724

Sample Name: Q2606-01A Acquired: 7/17/2025 16:00:22 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8487185**	**1.886354**	**.9358504**	**2.108429**	**.8770983**	**2.359181**
Stddev	.0020446	.016946	.0014672	.004594	.0021355	.013529
%RSD	.2409025	.8983246	.1567775	.2179074	.2434778	.5734445
#1	.8510429	1.868306	.9365127	2.103274	.8747094	2.359671
#2	.8471983	1.901925	.9341688	2.109921	.8777629	2.345414
#3	.8479143	1.888831	.9368697	2.112092	.8788225	2.372458

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3526122**	**.1866353**	**.1959232**	**109.0690**	**.3735216**	**.2050620**
Stddev	.0004172	.0006649	.0005290	.0894	.0012364	.0003742
%RSD	.1183257	.3562715	.2700204	.0819768	.3310196	.1824889
#1	.3530940	.1859331	.1958049	109.0799	.3734789	.2054302
#2	.3523750	.1872553	.1954633	108.9747	.3747788	.2046820
#3	.3523676	.1867174	.1965014	109.1525	.3723070	.2050736

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3043856**	**3.126863**	**.2147969**	**33.26806**	**.5195430**	**.0758856**
Stddev	.0001831	.008785	.0006299	.03954	.0008058	.0004560
%RSD	.0601560	.2809367	.2932317	.1188651	.1551047	.6008378
#1	.3044206	3.128366	.2143013	33.23119	.5196083	.0756110
#2	.3041876	3.134799	.2145836	33.30982	.5187065	.0764119
#3	.3045487	3.117424	.2155057	33.26317	.5203141	.0756339

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**341.1549**	**.3052959**	**.2896268**	**32.37700**	**.6302333**	**.4578701**
Stddev	3.6505	.0009766	.0011086	.05119	.0015449	.0001710
%RSD	1.070038	.3199044	.3827588	.1581198	.2451354	.0373377
#1	343.9585	.3043060	.2891360	32.39097	.6315658	.4577304
#2	342.4791	.3062588	.2908960	32.41976	.6305942	.4580607
#3	337.0271	.3053228	.2888483	32.32027	.6285398	.4578192

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2606-01A Acquired: 7/17/2025 16:00:22 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.7063546**	**.2091041**	**12.28718**	**6.269808**	F **35.33740**	**.2262490**
Stddev	.0017331	.0012644	.02332	.018458	.04906	.0011696
%RSD	.2453661	.6046950	.1898290	.2943871	.1388409	.5169529
#1	.7067325	.2089076	12.29586	6.290928	35.38779	.2257835
#2	.7044637	.2079494	12.30493	6.261727	35.28978	.2253838
#3	.7078676	.2104553	12.26077	6.256770	35.33464	.2275797

Elem	Sr4077
Units	ppm
Avg	**1.344035**
Stddev	.001623
%RSD	.1207806
#1	1.345280
#2	1.342199
#3	1.344625

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**4842.463**	**82978.57**	**8255.909**	**4062.932**	**5552.854**
Stddev	4.472	378.20	19.938	20.167	8.965
%RSD	.0923591	.4557771	.2415027	.4963768	.1614486
#1	4842.182	82665.01	8236.189	4042.404	5551.999
#2	4847.070	82872.10	8255.479	4063.675	5562.216
#3	4838.138	83398.59	8276.058	4082.718	5544.347

Sample Name: PB168881BL Acquired: 7/17/2025 16:04:28 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.000940**	**-.000089**	**-.001919**	**-.002049**	**-.001072**	**-.007137**
Stddev	.001692	.000493	.000513	.002082	.001879	.005324
%RSD	179.9288	552.2236	26.72640	101.5857	175.2122	74.59344
#1	-.000013	.000464	-.002475	-.001025	-.002090	-.012553
#2	.000085	-.000482	-.001815	-.000679	-.002222	-.001910
#3	-.002893	-.000250	-.001466	-.004445	.001096	-.006948

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003470**	**-.000062**	**.0000125**	**.0619720**	**-.000922**	**.0000106**
Stddev	.001076	.000019	.0000139	.0056567	.000127	.0000123
%RSD	31.02150	31.23228	110.5768	9.127772	13.82379	116.5808
#1	-.003664	-.000041	.0000284	.0679757	-.000934	-.000002
#2	-.002309	-.000065	.0000068	.0567421	-.001043	.000023
#3	-.004436	-.000079	.0000025	.0611982	-.000789	.000011

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000415**	**-.001472**	**.0003323**	**-.031709**	**.0004534**	**.0010557**
Stddev	.000106	.003938	.0002437	.007455	.0000992	.0000829
%RSD	25.42174	267.5771	73.34573	23.51090	21.87837	7.849423
#1	-.000344	-.005722	.0000523	-.033002	.0003475	.0011047
#2	-.000537	.002051	.0004967	-.038432	.0005442	.0009600
#3	-.000366	-.000743	.0004478	-.023692	.0004684	.0011024

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.040712**	**-.003246**	**-.000208**	**.1375481**	**.0014503**	**.0001876**
Stddev	.001773	.001852	.000159	.0094714	.0004214	.0002836
%RSD	4.355461	57.04906	76.34329	6.885910	29.05723	151.2053
#1	-.041715	-.003906	-.000063	.1399275	.0010180	.0005149
#2	-.041756	-.001155	-.000184	.1456029	.0014729	.0000152
#3	-.038664	-.004677	-.000378	.1271138	.0018599	.0000326

Sample Name: PB168881BL Acquired: 7/17/2025 16:04:28 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.0024731	.0154502	-.004216	.0005261	F -.025846	-.001673
Stddev	.0001971	.0013816	.008478	.0008603	.003628	.001923
%RSD	7.968422	8.942285	201.0890	163.5167	14.03830	114.9424
#1	.0026985	.0140505	.003264	.0003837	-.023992	-.003891
#2	.0023334	.0168129	-.002487	-.000254	-.030027	-.000660
#3	.0023874	.0154871	-.013425	.001449	-.023519	-.000469

Elem	Sr4077
Units	ppm
Avg	-.000025
Stddev	.000084
%RSD	339.5901
#1	-.000005
#2	.000048
#3	-.000117

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5196.984	89624.76	7978.818	4413.501	6399.518
Stddev	7.330	234.00	28.796	5.997	11.568
%RSD	.1410401	.2610830	.3609088	.1358860	.1807667
#1	5196.724	89409.03	7993.711	4414.940	6392.892
#2	5189.787	89873.51	7997.117	4418.649	6412.875
#3	5204.440	89591.73	7945.625	4406.916	6392.785

Sample Name: PB168881BS Acquired: 7/17/2025 16:08:48 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8118528**	**2.027064**	**.9628973**	**2.076209**	**.8540056**	**2.070158**
Stddev	.0023020	.074732	.0023899	.008966	.0034354	.005622
%RSD	.2835454	3.686704	.2481978	.4318369	.4022633	.2715971
#1	.8125640	1.953097	.9609060	2.065985	.8521127	2.068885
#2	.8092791	2.102538	.9622384	2.079906	.8519330	2.065282
#3	.8137152	2.025558	.9655475	2.082735	.8579710	2.076309

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2127631**	**.2048841**	**.1920959**	**1.177944**	**.3747394**	**.2005345**
Stddev	.0011241	.0014333	.0000355	.006697	.0024850	.0003254
%RSD	.5283393	.6995839	.0185034	.5685659	.6631344	.1622550
#1	.2140382	.2050064	.1921299	1.180320	.3775501	.2001964
#2	.2119152	.2033935	.1920990	1.183129	.3728336	.2005614
#3	.2123358	.2062523	.1920590	1.170382	.3738346	.2008455

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3209223**	**2.860055**	**.2150943**	**1.963689**	**.5042208**	**.0775025**
Stddev	.0007349	.014499	.0007572	.033773	.0003646	.0003359
%RSD	.2289958	.5069619	.3520129	1.719876	.0723009	.4334364
#1	.3201851	2.876742	.2154168	1.963853	.5040137	.0778723
#2	.3209269	2.852891	.2142293	1.929835	.5040069	.0774189
#3	.3216549	2.850532	.2156368	1.997380	.5046417	.0772163

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.430961**	**.3005317**	**.2149979**	**10.08119**	**.3266729**	**.4271119**
Stddev	.007428	.0036998	.0005466	.04975	.0006071	.0012196
%RSD	.3055462	1.231087	.2542525	.4935323	.1858313	.2855512
#1	2.439525	.3003439	.2149614	10.07554	.3262280	.4258034
#2	2.426276	.2969294	.2144704	10.13353	.3264262	.4273151
#3	2.427082	.3043219	.2155618	10.03450	.3273645	.4282171

Sample Name: PB168881BS Acquired: 7/17/2025 16:08:48 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.6878227**	**.2097598**	**.7918588**	**5.732682**	F **-.028719**	**.2113220**
Stddev	.0017458	.0026235	.0102059	.014665	.002653	.0017910
%RSD	.2538100	1.250697	1.288855	.2558140	9.238341	.8475369
#1	.6860514	.2100439	.7936242	5.718480	-.026004	.2094929
#2	.6878749	.2070058	.8010669	5.731796	-.028847	.2130724
#3	.6895418	.2122296	.7808854	5.747770	-.031306	.2114009

Elem	Sr4077
Units	ppm
Avg	**.2168217**
Stddev	.0003332
%RSD	.1536641
#1	.2170153
#2	.2164370
#3	.2170128

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5223.364**	**88713.53**	**7995.579**	**4398.149**	**6367.972**
Stddev	8.784	174.62	58.320	14.335	12.701
%RSD	.1681604	.1968396	.7293983	.3259294	.1994475
#1	5221.903	88831.04	8031.423	4413.885	6359.428
#2	5232.786	88796.68	8027.028	4385.834	6382.566
#3	5215.402	88512.87	7928.285	4394.728	6361.921

Sample Name: Q2614-06DUP Acquired: 7/17/2025 16:12:48 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.001579**	**-.002508**	**.0023620**	**.0021541**	**-.000328**	**.1158906**	**.1589114**
Stddev	.000946	.001433	.0005269	.0022227	.001303	.0052328	.0008170
%RSD	59.87003	57.10678	22.30668	103.1887	397.3498	4.515283	.5141383
#1	-.002638	-.001715	.0019769	.0025195	-.001811	.1111936	.1595115
#2	-.001281	-.001648	.0021466	-.000229	.000634	.1149472	.1592417
#3	-.000819	-.004162	.0029624	.004171	.000194	.1215309	.1579809

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000315**	**.0002481**	**49.91588**	**.0000414**	**.0005436**	**.0113308**	**.1224148**
Stddev	.000034	.0000318	.16050	.0002661	.0000596	.0000881	.0030541
%RSD	10.79645	12.82385	.3215340	642.4287	10.95832	.7775776	2.494896
#1	-.000310	.0002212	49.84499	-.000266	.0005158	.0112642	.1250276
#2	-.000350	.0002399	50.09961	.000195	.0005030	.0112975	.1190572
#3	-.000283	.0002832	49.80303	.000196	.0006120	.0114307	.1231596

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5577936**	**2.745744**	**.0010326**	**.0007048**	**287.2117**	**-.002031**	**.1913229**
Stddev	.0007091	.018490	.0001407	.0005974	1.8244	.002604	.0010295
%RSD	.1271171	.6734065	13.62728	84.76064	.6351936	128.1899	.5380968
#1	.5585733	2.766809	.0010240	.0008659	285.3566	-.004777	.1903931
#2	.5576203	2.732199	.0011775	.0012051	289.0036	-.001719	.1911464
#3	.5571873	2.738223	.0008964	.0000434	287.2751	.000403	.1924293

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.321743**	**.0368788**	**.0008906**	**-.004290**	**.0143057**	**.6444364**	**.3823433**
Stddev	.040786	.0002656	.0002474	.000725	.0001974	.0077516	.0006972
%RSD	3.085777	.7201792	27.77514	16.90267	1.380187	1.202853	.1823618
#1	1.275020	.0367640	.0009867	-.005106	.0141245	.6378006	.3824014
#2	1.339983	.0371825	.0006096	-.004045	.0142763	.6529564	.3830097
#3	1.350225	.0366899	.0010755	-.003719	.0145161	.6425520	.3816189

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-06DUP Acquired: 7/17/2025 16:12:48 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.5133153	.0047494	.2573994
Stddev	.0043558	.0014547	.0000757
%RSD	.8485694	30.62888	.0294193
#1	.5082862	.0050855	.2573845
#2	.5158955	.0031560	.2574815
#3	.5157643	.0060066	.2573323

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5011.230	85517.81	8292.238	4178.752	5785.651
Stddev	9.314	603.99	15.542	16.044	8.285
%RSD	.1858660	.7062772	.1874326	.3839337	.1432059
#1	5004.375	85729.84	8281.319	4185.524	5779.640
#2	5021.834	85987.21	8285.361	4160.433	5795.102
#3	5007.480	84836.40	8310.032	4190.299	5782.210

Sample Name: Q2614-06LX5 Acquired: 7/17/2025 16:17:13 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.001557**	**-.001730**	**-.000777**	**-.005059**	**-.002872**	**.0251941**	**.0301063**
Stddev	.002365	.000833	.001002	.001588	.001823	.0052531	.0003419
%RSD	151.8911	48.14132	129.0578	31.38672	63.49021	20.85047	1.135635
#1	-.004277	-.000944	.000090	-.003299	-.004913	.0193052	.0303926
#2	.000013	-.001643	-.000545	-.006383	-.001404	.0268795	.0301987
#3	-.000407	-.002603	-.001874	-.005495	-.002299	.0293976	.0297277

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000155**	**.0000990**	**10.65326**	**-.000482**	**.0001448**	**.0019394**	**.0228141**
Stddev	.000071	.0000532	.03923	.000160	.0000932	.0004565	.0026068
%RSD	45.82055	53.78903	.3682724	33.15028	64.38895	23.53625	11.42635
#1	-.000199	.0000478	10.66870	-.000605	.0001939	.0024510	.0199818
#2	-.000193	.0000950	10.68243	-.000541	.0002031	.0015737	.0251128
#3	-.000073	.0001541	10.60866	-.000301	.0000373	.0017936	.0233478

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1168029**	**.5550529**	**.0004755**	**.0007506**	**51.04677**	**-.001499**	**.0383529**
Stddev	.0000312	.0177408	.0002785	.0001487	.57747	.000703	.0005080
%RSD	.0267189	3.196233	58.55884	19.80631	1.131256	46.88945	1.324591
#1	.1167683	.5400785	.0007965	.0009151	51.59706	-.002032	.0385670
#2	.1168289	.5504339	.0002990	.0007109	51.09777	-.001763	.0387188
#3	.1168115	.5746463	.0003310	.0006259	50.44550	-.000702	.0377729

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3843736**	**.0079310**	**.0004447**	**.0009060**	**.0169655**	**.1291781**	**.0762724**
Stddev	.0396211	.0004246	.0001833	.0005532	.0012450	.0094104	.0006835
%RSD	10.30796	5.353870	41.21515	61.05790	7.338295	7.284803	.8961795
#1	.4279878	.0080510	.0005556	.0004160	.0171851	.1312365	.0767604
#2	.3506008	.0082826	.0005454	.0015058	.0180861	.1373889	.0754911
#3	.3745323	.0074592	.0002331	.0007961	.0156253	.1189089	.0765655

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-06LX5 Acquired: 7/17/2025 16:17:13 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.0809428	.0002470	.0543370
Stddev	.0013877	.0039218	.0001387
%RSD	1.714429	1587.968	.2552193
#1	.0801538	-.001235	.0544922
#2	.0825452	-.002718	.0542933
#3	.0801295	.004694	.0542254

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5074.393	86946.35	8238.887	4275.237	6015.572
Stddev	6.177	213.91	50.800	10.598	2.969
%RSD	.1217351	.2460218	.6165913	.2479035	.0493497
#1	5070.439	86699.36	8289.724	4277.433	6012.480
#2	5081.511	87068.20	8238.813	4284.565	6015.834
#3	5071.228	87071.49	8188.123	4263.712	6018.400

Sample Name: Q2614-06MS Acquired: 7/17/2025 16:21:31 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8188416**	**1.828163**	**.9242572**	**2.072733**	**.8425872**	**2.115713**	**.3992978**
Stddev	.0019712	.036389	.0030239	.005927	.0025687	.018829	.0005630
%RSD	.2407316	1.990448	.3271752	.2859416	.3048647	.8899380	.1409944
#1	.8167861	1.861470	.9228610	2.066046	.8418444	2.107144	.3989793
#2	.8190227	1.833694	.9221836	2.077337	.8404717	2.137302	.3999478
#3	.8207160	1.789326	.9277270	2.074817	.8454455	2.102693	.3989662

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1819005**	**.1928457**	**61.17222**	**.3604271**	**.1998396**	**.3119106**	**3.139811**
Stddev	.0004148	.0000482	.09284	.0031360	.0002278	.0003804	.044033
%RSD	.2280302	.0249941	.1517655	.8700809	.1139733	.1219614	1.402403
#1	.1823287	.1928377	61.14593	.3570135	.2000982	.3116138	3.091349
#2	.1818722	.1928020	61.27537	.3610872	.1997519	.3117786	3.150720
#3	.1815006	.1928974	61.09537	.3631804	.1996687	.3123394	3.177364

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8777669**	**5.171009**	**.4990681**	**.0755347**	**356.9981**	**.2946707**	**.4478756**
Stddev	.0012006	.010736	.0006956	.0001877	7.5738	.0045031	.0011104
%RSD	.1367749	.2076142	.1393708	.2484982	2.121515	1.528195	.2479277
#1	.8766316	5.179705	.4996291	.0755482	348.2825	.2965422	.4488255
#2	.8776457	5.159010	.4982898	.0753406	361.9809	.2979364	.4481465
#3	.8790235	5.174313	.4992855	.0757153	360.7309	.2895336	.4466548

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**12.21848**	**.3140816**	**.4338925**	**.6851978**	**.2075509**	**1.649861**	**6.498607**
Stddev	.19858	.0031209	.0010815	.0017656	.0022695	.014276	.008073
%RSD	1.625274	.9936756	.2492456	.2576711	1.093485	.8652728	.1242279
#1	11.99858	.3176812	.4327192	.6866348	.2054174	1.635265	6.502274
#2	12.27214	.3124325	.4341092	.6832269	.2072999	1.650524	6.489351
#3	12.38472	.3121312	.4348493	.6857318	.2099356	1.663793	6.504196

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-06MS Acquired: 7/17/2025 16:21:31 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.6447661	.2058917	.5174034
Stddev	.0027229	.0021696	.0016945
%RSD	.4223016	1.053739	.3275085
#1	.6453308	.2066776	.5154468
#2	.6471624	.2034387	.5183655
#3	.6418052	.2075588	.5183979

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4937.959	84542.95	8358.568	4156.063	5652.191
Stddev	4.388	965.08	12.892	6.271	1.971
%RSD	.0888634	1.141529	.1542347	.1508874	.0348748
#1	4942.990	85423.73	8345.635	4152.961	5654.156
#2	4934.924	84693.79	8358.651	4151.947	5652.204
#3	4935.963	83511.33	8371.418	4163.280	5650.213

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-06MSD Acquired: 7/17/2025 16:25:39 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8089937**	**1.818693**	**.9031425**	**2.043356**	**.8355520**	**2.082437**	**.3852495**
Stddev	.0016608	.024173	.0038798	.005723	.0027568	.005243	.0003316
%RSD	.2052888	1.329121	.4295891	.2800758	.3299358	.2517636	.0860795
#1	.8075361	1.834714	.9056428	2.038302	.8323705	2.085703	.3855232
#2	.8086432	1.830477	.8986730	2.042196	.8372339	2.085218	.3848807
#3	.8108017	1.790888	.9051119	2.049571	.8370517	2.076389	.3853446

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1804551**	**.1889213**	**57.30179**	**.3558339**	**.1963312**	**.3053435**	**3.078384**
Stddev	.0009549	.0004796	.11751	.0021414	.0002522	.0003634	.004069
%RSD	.5291423	.2538708	.2050744	.6017869	.1284698	.1190064	.1321800
#1	.1815551	.1893365	57.34491	.3579868	.1965660	.3050799	3.073706
#2	.1799700	.1883963	57.16881	.3537043	.1960646	.3057580	3.081106
#3	.1798401	.1890311	57.39165	.3558107	.1963632	.3051926	3.080339

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8343695**	**4.956111**	**.4894891**	**.0741999**	**329.8022**	**.2944122**	**.4313906**
Stddev	.0053937	.045990	.0008881	.0007663	1.4882	.0041762	.0012562
%RSD	.6464398	.9279363	.1814289	1.032703	.4512314	1.418473	.2912059
#1	.8350336	4.983882	.4898713	.0749932	331.5175	.2978439	.4324489
#2	.8286745	4.903026	.4884739	.0741427	328.8559	.2956301	.4300023
#3	.8394004	4.981425	.4901221	.0734639	329.0331	.2897624	.4317207

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.90655**	**.3080070**	**.4342350**	**.6774623**	**.2062489**	**1.578437**	**6.267699**
Stddev	.07408	.0013031	.0009413	.0001447	.0003570	.007521	.009083
%RSD	.6221665	.4230699	.2167640	.0213629	.1730962	.4765129	.1449234
#1	11.98067	.3085467	.4338748	.6773457	.2066565	1.574436	6.273691
#2	11.83251	.3065208	.4335271	.6774169	.2060989	1.573762	6.257248
#3	11.90647	.3089535	.4353032	.6776242	.2059914	1.587114	6.272159

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-06MSD Acquired: 7/17/2025 16:25:39 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.5827757	.2011013	.4946444
Stddev	.0063332	.0010204	.0004398
%RSD	1.086723	.5074079	.0889178
#1	.5833903	.2001341	.4951387
#2	.5887792	.2010023	.4942963
#3	.5761577	.2021676	.4944982

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5009.276	85327.51	8342.709	4159.104	5766.103
Stddev	3.563	500.79	40.418	11.493	7.571
%RSD	.0711267	.5869083	.4844649	.2763226	.1313008
#1	5010.505	84761.82	8296.085	4150.267	5763.205
#2	5012.061	85714.25	8364.232	4172.096	5774.695
#3	5005.261	85506.45	8367.810	4154.948	5760.410

Sample Name: Q2614-06A Acquired: 7/17/2025 16:29:47 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8225881**	**1.866347**	**.9234162**	**2.079453**	**.8518723**	**2.106697**	**.3648297**
Stddev	.0035394	.037940	.0014049	.004521	.0022750	.011837	.0014218
%RSD	.4302796	2.032847	.1521446	.2173932	.2670557	.5618718	.3897236
#1	.8260545	1.879091	.9220365	2.080956	.8542266	2.118645	.3664695
#2	.8227297	1.896274	.9233671	2.074372	.8496860	2.106471	.3639398
#3	.8189799	1.823676	.9248450	2.083031	.8517044	2.094975	.3640798

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1846061**	**.1922632**	**49.57916**	**.3641761**	**.1999849**	**.3104450**	**3.102867**
Stddev	.0004618	.0004574	.05433	.0021500	.0002828	.0002589	.013395
%RSD	.2501646	.2379249	.1095830	.5903782	.1413935	.0834012	.4317110
#1	.1848606	.1918303	49.60229	.3637247	.1998451	.3104752	3.099102
#2	.1848847	.1927418	49.51709	.3665159	.1997993	.3101722	3.117742
#3	.1840730	.1922174	49.61810	.3622876	.2003103	.3106874	3.091756

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7533541**	**4.532170**	**.4988103**	**.0752824**	**281.6283**	**.3006509**	**.4046264**
Stddev	.0005858	.002820	.0003832	.0000853	.3705	.0020090	.0006172
%RSD	.0777564	.0622307	.0768308	.1133533	.1315482	.6682074	.1525293
#1	.7540252	4.534629	.4984635	.0753614	282.0516	.2998992	.4039138
#2	.7530920	4.529091	.4987457	.0752938	281.3633	.3029273	.4049830
#3	.7529451	4.532789	.4992217	.0751919	281.4700	.2991262	.4049825

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.83379**	**.3097375**	**.4455662**	**.6946254**	**.2086843**	**1.492429**	**6.268068**
Stddev	.02886	.0002063	.0008473	.0020194	.0019498	.024652	.010744
%RSD	.2438789	.0666151	.1901587	.2907235	.9343464	1.651805	.1714047
#1	11.80175	.3098277	.4464956	.6941655	.2087031	1.475081	6.265930
#2	11.85774	.3095014	.4448368	.6928755	.2067252	1.520648	6.279720
#3	11.84189	.3098834	.4453663	.6968351	.2106247	1.481557	6.258554

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-06A Acquired: 7/17/2025 16:29:47 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.5020811	.2069087	.4620495
Stddev	.0028703	.0011571	.0007267
%RSD	.5716736	.5592272	.1572743
#1	.5053617	.2062586	.4628758
#2	.5000325	.2082446	.4615101
#3	.5008491	.2062229	.4617626

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5048.082	86113.14	8344.002	4217.518	5827.885
Stddev	23.811	76.14	22.118	9.767	23.854
%RSD	.4716749	.0884219	.2650817	.2315783	.4093046
#1	5026.033	86182.73	8325.217	4216.261	5807.617
#2	5044.882	86031.81	8368.380	4227.853	5821.868
#3	5073.330	86124.88	8338.410	4208.441	5854.172

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: PB168888BL Acquired: 7/17/2025 16:33:55 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.000491**	**.0008566**	**-.001778**	**-.001379**	**-.001094**	**.0047426**
Stddev	.001338	.0009216	.000878	.002470	.001419	.0098391
%RSD	272.2948	107.5876	49.34658	179.0997	129.6890	207.4614
#1	-.002011	.0018793	-.002653	-.001135	.000110	.0016673
#2	.000031	.0000903	-.001785	-.003961	-.000734	-.003191
#3	.000506	.0006003	-.000897	.000960	-.002658	.015752

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.004331**	**-.000069**	**.0000375**	**.0630553**	**-.000137**	**.0000407**
Stddev	.001003	.000037	.0000489	.0068582	.000231	.0001584
%RSD	23.15221	53.59732	130.3622	10.87641	168.8067	389.1488
#1	-.003183	-.000060	.0000133	.0554125	-.000298	-.000141
#2	-.005036	-.000110	.0000055	.0686725	-.000242	.000111
#3	-.004775	-.000038	.0000939	.0650810	.000128	.000152

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000391**	**-.001421**	**-.000046**	**-.003702**	**.0002993**	**.0009261**
Stddev	.000291	.004052	.000628	.019365	.0001157	.0003098
%RSD	74.44936	285.0492	1354.186	523.1130	38.67614	33.44469
#1	-.000064	-.001490	.000236	.018031	.0001698	.0012196
#2	-.000487	-.005438	.000391	-.019127	.0003353	.0006023
#3	-.000623	.002664	-.000766	-.010009	.0003927	.0009565

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1925287**	**-.003488**	**.0000984**	**.1752411**	**-.001339**	**.0003646**
Stddev	.0341988	.003432	.0000551	.0080981	.000151	.0002625
%RSD	17.76294	98.37652	56.02070	4.621132	11.29465	71.98373
#1	.2283456	.000311	.0001129	.1726573	-.001485	.0000827
#2	.1890225	-.004414	.0001449	.1843159	-.001348	.0006019
#3	.1602182	-.006362	.0000375	.1687502	-.001183	.0004093

Sample Name: PB168888BL Acquired: 7/17/2025 16:33:55 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0024690**	**.0152037**	**.0023867**	**-.000273**	F **-.031445**	**-.001842**
Stddev	.0007615	.0006288	.0029718	.001460	.001988	.002083
%RSD	30.84358	4.135860	124.5131	534.0183	6.321735	113.0401
#1	.0017653	.0155043	.0020849	.000410	-.033699	-.003399
#2	.0032775	.0144810	.0054979	.000720	-.029945	-.002652
#3	.0023641	.0156258	-.000423	-.001950	-.030690	.000523

Elem	Sr4077
Units	ppm
Avg	**.0000076**
Stddev	.0000338
%RSD	446.3591
#1	.0000383
#2	-.000029
#3	.000013

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5307.800**	**88352.42**	**8169.991**	**4378.940**	**6618.700**
Stddev	11.106	209.45	109.474	15.165	15.149
%RSD	.2092477	.2370614	1.339957	.3463233	.2288829
#1	5306.465	88299.84	8075.101	4366.537	6620.084
#2	5319.513	88583.15	8145.106	4395.847	6633.109
#3	5297.420	88174.27	8289.766	4374.438	6602.906

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: PB168888BS Acquired: 7/17/2025 16:38:15 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8130767**	**1.938651**	**.9625782**	**2.082472**	**.8393491**	**2.043012**
Stddev	.0019672	.022476	.0023835	.002501	.0023187	.010175
%RSD	.2419427	1.159386	.2476143	.1200884	.2762478	.4980370
#1	.8109406	1.961098	.9652454	2.083541	.8367802	2.047148
#2	.8148139	1.938708	.9606568	2.084261	.8399800	2.050468
#3	.8134755	1.916145	.9618323	2.079615	.8412870	2.031420

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2107854**	**.1933347**	**.1936425**	**1.154428**	**.3692368**	**.2008314**
Stddev	.0018196	.0019475	.0004296	.013542	.0011520	.0004268
%RSD	.8632664	1.007323	.2218600	1.173088	.3119898	.2125092
#1	.2100382	.1943275	.1937910	1.142800	.3692360	.2012510
#2	.2128597	.1945858	.1931583	1.169297	.3680852	.2008454
#3	.2094582	.1910909	.1939781	1.151187	.3703891	.2003978

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3211233**	**2.980406**	**.2134042**	**1.960608**	**.5070249**	**.0767026**
Stddev	.0006391	.018151	.0011094	.018226	.0007804	.0001934
%RSD	.1990341	.6090161	.5198616	.9295875	.1539171	.2521653
#1	.3213111	2.969972	.2141807	1.942278	.5072177	.0767073
#2	.3204113	2.969880	.2138984	1.978727	.5061662	.0765069
#3	.3216475	3.001365	.2121336	1.960819	.5076908	.0768937

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.549276**	**.2989573**	**.2138508**	**10.29193**	**.3100773**	**.4179048**
Stddev	.020167	.0020033	.0002506	.09148	.0033900	.0007969
%RSD	.7910887	.6701107	.1171693	.8888427	1.093275	.1906820
#1	2.567655	.3008797	.2136633	10.18704	.3121441	.4178886
#2	2.527703	.2991105	.2141354	10.33356	.3119229	.4171161
#3	2.552471	.2968818	.2137539	10.35520	.3061650	.4187096

Sample Name: PB168888BS Acquired: 7/17/2025 16:38:15 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.6779591	.2078707	.8076252	5.777137	F -.033011	.2034180
Stddev	.0028995	.0017754	.0084642	.015055	.001877	.0015168
%RSD	.4276820	.8540786	1.048030	.2605900	5.687256	.7456729
#1	.6802944	.2064063	.8013726	5.787133	-.035165	.2020902
#2	.6747137	.2098453	.8042462	5.759822	-.031723	.2050711
#3	.6788691	.2073605	.8172569	5.784456	-.032145	.2030928

Elem	Sr4077
Units	ppm
Avg	.2127119
Stddev	.0009358
%RSD	.4399525
#1	.2120801
#2	.2137870
#3	.2122686

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5193.567	89868.40	8467.204	4415.797	6294.595
Stddev	9.196	192.83	67.709	9.221	10.225
%RSD	.1770708	.2145734	.7996582	.2088163	.1624343
#1	5199.624	89809.12	8427.153	4413.238	6297.034
#2	5198.092	90083.92	8429.079	4426.027	6303.379
#3	5182.985	89712.17	8545.379	4408.126	6283.371

Sample Name: CCV04 Acquired: 7/17/2025 16:42:16 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**5.098741**	**5.010192**	**4.854151**	**5.170354**	**5.222136**	**9.946854**	**10.43477**
Stddev	.008284	.015173	.007324	.018762	.016479	.009928	.09456
%RSD	.1624753	.3028523	.1508913	.3628710	.3155605	.0998143	.9061745
#1	5.090191	5.027605	4.851095	5.156563	5.210525	9.957464	10.50052
#2	5.099300	4.999807	4.848848	5.162780	5.214886	9.937788	10.47738
#3	5.106732	5.003164	4.862508	5.191719	5.240997	9.945309	10.32640

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2307374**	**2.430751**	**25.91593**	**.9228037**	**2.470103**	**1.272099**	**5.037358**
Stddev	.0011366	.003997	.04051	.0057544	.005478	.003396	.017929
%RSD	.4925783	.1644327	.1563237	.6235743	.2217636	.2669684	.3559108
#1	.2319834	2.429383	25.96271	.9289907	2.467445	1.270367	5.035271
#2	.2297575	2.427618	25.89278	.9218089	2.466462	1.269918	5.020564
#3	.2304712	2.435252	25.89231	.9176117	2.476403	1.276012	5.056238

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.553274**	**23.86656**	**2.488046**	**1.254848**	**23.50683**	**2.470740**	**2.552825**
Stddev	.007047	.10109	.004972	.002565	.10220	.009586	.002925
%RSD	.2759816	.4235831	.1998554	.2043978	.4347884	.3879877	.1145732
#1	2.557826	23.95161	2.487361	1.255198	23.60149	2.481010	2.551363
#2	2.545158	23.75479	2.483451	1.252125	23.52054	2.462028	2.556193
#3	2.556840	23.89327	2.493326	1.257219	23.39847	2.469183	2.550920

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.92869**	**4.965403**	**5.186133**	**4.876623**	**4.944607**	**4.744151**	**4.878310**
Stddev	.02573	.023885	.011247	.008759	.012771	.018271	.010613
%RSD	.0992229	.4810195	.2168628	.1796049	.2582887	.3851226	.2175483
#1	25.90535	4.968385	5.177602	4.883556	4.954308	4.759227	4.886294
#2	25.95628	4.940168	5.181918	4.866780	4.930137	4.723832	4.866267
#3	25.92445	4.987657	5.198878	4.879535	4.949375	4.749394	4.882368

Sample Name: CCV04 Acquired: 7/17/2025 16:42:16 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**4.917705**	**4.999379**	**5.249576**
Stddev	.005905	.003108	.002872
%RSD	.1200704	.0621664	.0547121
#1	4.912419	5.000949	5.247020
#2	4.924078	4.995800	5.252684
#3	4.916617	5.001390	5.249023

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5091.437**	**86336.27**	**8444.506**	**4258.028**	**5922.150**
Stddev	15.360	299.03	20.723	17.375	15.441
%RSD	.3016864	.3463583	.2454058	.4080529	.2607246
#1	5100.476	86118.13	8423.698	4269.702	5927.451
#2	5100.134	86213.52	8444.674	4238.060	5934.242
#3	5073.702	86677.14	8465.144	4266.322	5904.757

Sample Name: CCB04 Acquired: 7/17/2025 16:46:27 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.000887**	**-.001091**	**-.001221**	**-.002324**	**-.001325**	**.0022222**
Stddev	.001479	.001137	.000869	.002472	.000590	.0046994
%RSD	166.7608	104.1624	71.13693	106.3690	44.55582	211.4725
#1	.000771	-.002359	-.002213	-.005010	-.001895	-.003092
#2	-.002069	-.000164	-.000595	-.001815	-.000717	.005828
#3	-.001363	-.000750	-.000855	-.000146	-.001362	.003931

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005523**	**-.000097**	**.0000603**	**.0444561**	**-.000314**	**.0000548**
Stddev	.000954	.000069	.0000352	.0044928	.000110	.0001310
%RSD	17.27675	70.56519	58.34196	10.10607	35.11450	239.3523
#1	-.006601	-.000172	.0000235	.0480029	-.000431	-.000096
#2	-.005183	-.000037	.0000935	.0459614	-.000211	.000137
#3	-.004785	-.000083	.0000639	.0394039	-.000300	.000123

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000240**	**.0039342**	**.0001790**	**-.027333**	**.0004158**	**.0011116**
Stddev	.000193	.0031079	.0003684	.021362	.0002738	.0001696
%RSD	80.27768	78.99833	205.8230	78.15526	65.83806	15.25483
#1	-.000032	.0061219	.0005031	-.028143	.0004987	.0009751
#2	-.000277	.0003767	.0002556	-.048279	.0006385	.0013014
#3	-.000412	.0053040	-.000222	-.005577	.0001102	.0010582

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.326096**	**-.003463**	**.0000539**	**.0970016**	**.0035046**	**.0009420**
Stddev	.002011	.001278	.0000839	.0254296	.0003146	.0003045
%RSD	.6166489	36.90980	155.7841	26.21561	8.975899	32.32159
#1	-.325807	-.004883	-.000038	.1230623	.0031430	.0012743
#2	-.328236	-.002405	.000127	.0722541	.0036550	.0008752
#3	-.324245	-.003102	.000072	.0956885	.0037156	.0006764

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCB04 Acquired: 7/17/2025 16:46:27 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.0013009	.0153794	-.002143	.0022319	F -.032858	-.000938
Stddev	.0000511	.0015589	.001949	.0011440	.000799	.002198
%RSD	3.930219	10.13623	90.92072	51.25786	2.431191	234.2429
#1	.0013166	.0170215	.000089	.0009249	-.032344	-.003323
#2	.0012438	.0151968	-.003012	.0030518	-.032453	.001007
#3	.0013424	.0139198	-.003506	.0027189	-.033779	-.000499

Elem	Sr4077
Units	ppm
Avg	.0001049
Stddev	.0000712
%RSD	67.93452
#1	.0001439
#2	.0001480
#3	.0000226

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5254.222	88969.03	8341.791	4417.158	6516.727
Stddev	17.599	164.26	50.055	26.918	20.273
%RSD	.3349556	.1846216	.6000550	.6093905	.3110890
#1	5271.091	89134.78	8399.581	4397.699	6532.581
#2	5255.602	88806.30	8313.780	4405.898	6523.717
#3	5235.974	88966.02	8312.011	4447.877	6493.885

Sample Name: PB168847TB Acquired: 7/17/2025 16:50:46 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.002677**	**-.003692**	**-.001798**	**.0035584**	**-.000558**	**.0018234**	**-.007120**
Stddev	.001899	.000953	.000689	.0030886	.001040	.0050907	.000654
%RSD	70.93196	25.81588	38.34841	86.79689	186.3411	279.1887	9.178239
#1	-.004838	-.004688	-.002084	.0070629	-.001712	.0067141	-.007841
#2	-.001916	-.002789	-.002298	.0012332	.000305	.0022021	-.006567
#3	-.001277	-.003599	-.001011	.0023791	-.000267	-.003446	-.006952

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000262**	**-.000073**	**.0047827**	**-.000210**	**-.000371**	**-.000594**	**-.001791**
Stddev	.000043	.000034	.0021883	.000320	.000135	.000404	.002394
%RSD	16.23820	46.57951	45.75420	152.6021	36.43797	68.11355	133.6634
#1	-.000282	-.000085	.0022564	.000135	-.000373	-.001043	-.003329
#2	-.000213	-.000035	.0060879	-.000498	-.000235	-.000258	-.003012
#3	-.000291	-.000100	.0060040	-.000267	-.000505	-.000480	.000967

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010433**	**-.028524**	**.0008543**	**.0005163**	**462.6419**	**-.003034**	**.0023797**
Stddev	.0004996	.007432	.0001277	.0000644	3.5254	.002358	.0000915
%RSD	47.88652	26.05362	14.94916	12.48052	.7620082	77.72142	3.843361
#1	.0013437	-.036722	.0009850	.0005145	466.2638	-.003783	.0024588
#2	.0004666	-.022228	.0007298	.0004528	459.2217	-.000392	.0024009
#3	.0013195	-.026624	.0008481	.0005816	462.4402	-.004926	.0022795

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1428931**	**.0000713**	**.0008991**	**-.002241**	**.0152401**	**.0106850**	**.0170682**
Stddev	.0200663	.0001640	.0001702	.000507	.0019273	.0068808	.0022668
%RSD	14.04287	229.8693	18.93305	22.61420	12.64620	64.39652	13.28108
#1	.1432154	.0002607	.0010652	-.001658	.0130518	.0168077	.0151281
#2	.1627964	-.000024	.0007250	-.002497	.0166847	.0032385	.0165165
#3	.1226676	-.000023	.0009070	-.002570	.0159839	.0120090	.0195599

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: PB168847TB Acquired: 7/17/2025 16:50:46 Type: Unk
Method: 6010-200.7 NEW(v42) 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	-.015109	-.002100	.0000254
Stddev	.000970	.004991	.0000438
%RSD	6.423299	237.6027	172.7534
#1	-.016208	-.007836	.0000397
#2	-.014748	.000277	-.000024
#3	-.014370	.001257	.000060

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4937.879	83688.63	8441.168	4108.671	5707.341
Stddev	6.330	57.45	59.510	14.492	17.565
%RSD	.1281868	.0686494	.7049982	.3527067	.3077628
#1	4941.933	83746.56	8418.765	4112.876	5718.012
#2	4941.118	83631.67	8396.111	4120.595	5716.943
#3	4930.585	83687.66	8508.628	4092.542	5687.068

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2605-01 Acquired: 7/17/2025 16:55:15 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.001013**	**-.003170**	**.0007665**	**.0014062**	**.0025616**	**.6027968**	**.2837845**
Stddev	.001829	.001823	.0015015	.0030714	.0006238	.0158708	.0007728
%RSD	180.4583	57.50155	195.8998	218.4136	24.35129	2.632859	.2723224
#1	-.001038	-.004860	-.000240	-.001507	.0018481	.6073978	.2829194
#2	.000828	-.001238	.002492	.004615	.0028328	.5851339	.2844066
#3	-.002829	-.003412	.000047	.001111	.0030038	.6158588	.2840274

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000253**	**.0010710**	**45.97562**	**.0013724**	**.0008113**	**.0068438**	**1.522906**
Stddev	.000033	.0000170	.22574	.0000634	.0000542	.0001784	.008942
%RSD	13.17089	1.586334	.4910101	4.620418	6.677402	2.606242	.5871437
#1	-.000284	.0010639	45.74347	.0013242	.0007688	.0066458	1.532899
#2	-.000218	.0010904	46.19436	.0013487	.0008723	.0068935	1.515661
#3	-.000258	.0010587	45.98904	.0014442	.0007928	.0069920	1.520157

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2205850**	**2.131006**	**.0025423**	**.0007919**	**337.5389**	**-.003822**	**16.39394**
Stddev	.0009993	.009014	.0001347	.0000909	5.2205	.001514	.08726
%RSD	.4530230	.4229690	5.299081	11.47509	1.546642	39.61172	.5322632
#1	.2197928	2.121416	.0023927	.0008567	334.2207	-.002236	16.49311
#2	.2217077	2.132299	.0025801	.0006880	334.8396	-.005252	16.35979
#3	.2202544	2.139303	.0026541	.0008310	343.5565	-.003978	16.32892

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5172572**	**.0147886**	**-.004309**	**-.004473**	**.0149035**	**.9183700**	**.0229166**
Stddev	.0222178	.0011691	.000056	.000880	.0008593	.0014972	.0020398
%RSD	4.295304	7.905290	1.299978	19.67511	5.766051	.1630264	8.901042
#1	.5040861	.0145292	-.004246	-.005451	.0153393	.9189625	.0251102
#2	.5047765	.0160656	-.004354	-.004221	.0154577	.9166672	.0225628
#3	.5429089	.0137710	-.004327	-.003746	.0139136	.9194802	.0210768

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2605-01 Acquired: 7/17/2025 16:55:15 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.8334098	.0039825	.2174090
Stddev	.0024216	.0018956	.0006008
%RSD	.2905680	47.59690	.2763202
#1	.8333432	.0048537	.2167823
#2	.8310222	.0052858	.2179799
#3	.8358640	.0018080	.2174648

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5010.526	85036.89	8406.107	4157.850	5755.676
Stddev	4.988	297.30	45.208	11.965	6.019
%RSD	.0995594	.3496104	.5378044	.2877585	.1045836
#1	5007.626	84891.98	8443.448	4152.734	5757.235
#2	5016.286	85378.86	8355.845	4171.522	5760.764
#3	5007.667	84839.83	8419.028	4149.293	5749.031

Sample Name: Q2605-02 Acquired: 7/17/2025 16:59:44 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0005906**	**-.003621**	**-.000725**	**.0022545**	**-.003281**	**.3873891**
Stddev	.0014942	.001367	.000863	.0023076	.001162	.0082448
%RSD	252.9908	37.75363	118.9512	102.3565	35.41168	2.128296
#1	.0018525	-.004111	.000051	.0025334	-.003127	.3955693
#2	-.001059	-.004676	-.000572	.0044101	-.002204	.3875168
#3	.000979	-.002077	-.001654	-.000180	-.004513	.3790812

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5018224**	**-.000231**	**.0006268**	**47.37925**	**.0013616**	**.0011956**
Stddev	.0004938	.000020	.0001051	.31830	.0003125	.0000209
%RSD	.0983945	8.512264	16.76067	.6718050	22.94819	1.746184
#1	.5018848	-.000254	.0007440	47.72400	.0010233	.0011724
#2	.5022820	-.000221	.0005409	47.31722	.0016393	.0012130
#3	.5013004	-.000219	.0005956	47.09654	.0014224	.0012014

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0087853**	**1.459478**	**.1925591**	**2.182487**	**.0032789**	**.0009612**
Stddev	.0006219	.003145	.0008172	.011146	.0000380	.0003095
%RSD	7.079350	.2154605	.4244021	.5106864	1.159413	32.20093
#1	.0092758	1.460963	.1933045	2.195300	.0032471	.0010759
#2	.0080858	1.461606	.1926877	2.175031	.0032687	.0011969
#3	.0089943	1.455866	.1916853	2.177131	.0033210	.0006107

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**378.6444**	**-.002575**	F **21.64609**	**.4950136**	**.0153635**	**-.006185**
Stddev	2.1946	.000963	.14263	.0031717	.0008983	.000072
%RSD	.5795831	37.41026	.6589132	.6407276	5.847183	1.157438
#1	380.4088	-.003024	21.72261	.4943096	.0163576	-.006252
#2	379.3374	-.001469	21.73413	.4984782	.0146098	-.006194
#3	376.1870	-.003231	21.48153	.4922531	.0151231	-.006110

Sample Name: Q2605-02 Acquired: 7/17/2025 16:59:44 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.003561**	**.0144367**	**.6767697**	**.0283461**	**.4780319**	**.0042202**
Stddev	.000380	.0003836	.0040701	.0029053	.0022919	.0025496
%RSD	10.68103	2.656778	.6014057	10.24935	.4794514	60.41412
#1	-.003957	.0145117	.6740919	.0249927	.4757287	.0029290
#2	-.003525	.0140213	.6814534	.0301045	.4780545	.0025745
#3	-.003199	.0147773	.6747637	.0299412	.4803124	.0071571

Elem	Sr4077
Units	ppm
Avg	**.2311315**
Stddev	.0001913
%RSD	.0827730
#1	.2311379
#2	.2313196
#3	.2309371

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5010.754**	**86146.62**	**8747.630**	**4139.665**	**5812.281**
Stddev	2.258	491.27	92.004	9.124	4.951
%RSD	.0450714	.5702706	1.051756	.2203944	.0851902
#1	5012.178	85684.16	8651.237	4149.234	5817.079
#2	5011.933	86093.36	8757.149	4138.697	5807.189
#3	5008.150	86662.36	8834.505	4131.064	5812.575

Sample Name: Q2605-03 Acquired: 7/17/2025 17:04:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0032066**	**-.004305**	**-.003540**	**.0031118**	**-.004087**	**.3426619**
Stddev	.0011441	.000123	.000909	.0026460	.001892	.0016669
%RSD	35.67887	2.855945	25.68091	85.03044	46.29813	.4864499
#1	.0040352	-.004372	-.002550	.0027093	-.004250	.3441731
#2	.0019012	-.004163	-.003734	.0059359	-.005892	.3408740
#3	.0036834	-.004381	-.004336	.0006901	-.002118	.3429388

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4099710**	**-.000316**	**.0004484**	**45.11463**	**.0009518**	**.0017001**
Stddev	.0018561	.000076	.0001229	.18687	.0002521	.0001545
%RSD	.4527432	24.04448	27.39732	.4142063	26.48315	9.088789
#1	.4096188	-.000265	.0004463	45.27470	.0011199	.0018782
#2	.4083162	-.000280	.0003266	44.90928	.0006620	.0016011
#3	.4119779	-.000404	.0005723	45.15989	.0010735	.0016212

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0069458**	**1.175959**	**.1893805**	**2.004142**	**.0028265**	**.0007617**
Stddev	.0003132	.003985	.0004796	.024449	.0002158	.0000397
%RSD	4.509242	.3388324	.2532735	1.219902	7.636734	5.214620
#1	.0070102	1.178254	.1898553	1.975976	.0026639	.0007852
#2	.0066054	1.171358	.1893901	2.016564	.0030714	.0007840
#3	.0072218	1.178264	.1888961	2.019885	.0027441	.0007158

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**316.8808**	**-.002308**	F **21.44738**	**.4525388**	**.0119617**	**-.006152**
Stddev	2.5259	.001831	.06730	.0304436	.0000683	.000106
%RSD	.7971177	79.32534	.3137865	6.727301	.5705345	1.718340
#1	318.8346	-.004004	21.46653	.4865360	.0120345	-.006260
#2	314.0285	-.002554	21.50303	.4432836	.0119513	-.006049
#3	317.7793	-.000367	21.37258	.4277968	.0118992	-.006147

Sample Name: Q2605-03 Acquired: 7/17/2025 17:04:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.003274**	**.0149667**	**.6193152**	**.0246015**	**.4203931**	**.0036875**
Stddev	.000139	.0004827	.0161639	.0013315	.0052395	.0012542
%RSD	4.239783	3.225028	2.609955	5.412284	1.246342	34.01201
#1	-.003407	.0147350	.6368604	.0239483	.4148285	.0023949
#2	-.003284	.0146436	.6160557	.0237228	.4211188	.0048993
#3	-.003130	.0155216	.6050295	.0261335	.4252319	.0037682

Elem	Sr4077
Units	ppm
Avg	**.2188771**
Stddev	.0007388
%RSD	.3375452
#1	.2186698
#2	.2182641
#3	.2196974

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5066.082**	**87876.22**	**8761.178**	**4216.560**	**5886.168**
Stddev	4.600	260.32	36.580	15.637	3.747
%RSD	.0907993	.2962401	.4175271	.3708448	.0636565
#1	5062.127	87723.54	8720.405	4213.560	5886.317
#2	5071.130	88176.80	8791.120	4233.479	5889.839
#3	5064.990	87728.31	8772.009	4202.640	5882.349

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2605-04 Acquired: 7/17/2025 17:08:52 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0014685**	**-.003434**	**-.001299**	**.0030341**	**-.000532**	**.3470244**
Stddev	.0029935	.001949	.001191	.0011723	.001433	.0067406
%RSD	203.8495	56.74180	91.68622	38.63715	269.2165	1.942392
#1	-.001763	-.004093	-.002377	.0021898	-.002071	.3397015
#2	.002021	-.004968	-.000021	.0043725	-.000289	.3484019
#3	.004147	-.001242	-.001500	.0025398	.000763	.3529698

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3413105**	**-.000281**	**.0006331**	**39.80789**	**.0010732**	**.0006341**
Stddev	.0004578	.000030	.0000645	.02860	.0003834	.0001847
%RSD	.1341366	10.59511	10.18597	.0718392	35.72592	29.12946
#1	.3412682	-.000301	.0006132	39.77551	.0006662	.0004312
#2	.3408753	-.000295	.0007052	39.81847	.0011258	.0006788
#3	.3417880	-.000247	.0005809	39.82970	.0014275	.0007924

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062973**	**.8427673**	**.1434777**	**1.778114**	**.0025115**	**.0011277**
Stddev	.0003358	.0038720	.0005301	.029576	.0003714	.0003191
%RSD	5.332817	.4594414	.3694707	1.663349	14.78679	28.29895
#1	.0066670	.8471974	.1437236	1.752601	.0026588	.0014813
#2	.0060113	.8400294	.1438402	1.810532	.0027865	.0010406
#3	.0062135	.8410750	.1428693	1.771209	.0020890	.0008611

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**307.7519**	**.0005105**	F **18.89321**	**.3595216**	**.0098692**	**-.005465**
Stddev	1.1168	.0026885	.12551	.0159848	.0009563	.000127
%RSD	.3629041	526.6661	.6643251	4.446130	9.689940	2.316669
#1	308.6009	-.000484	18.97920	.3439473	.0096247	-.005441
#2	308.1681	-.001539	18.95125	.3758875	.0109241	-.005602
#3	306.4867	.003555	18.74919	.3587299	.0090589	-.005352

Sample Name: Q2605-04 Acquired: 7/17/2025 17:08:52 Type: Unk
Method: 6010-200.7 NEW(v42) 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	-.004031	.0155692	.5681334	.0231302	.3824034	.0054726
Stddev	.000999	.0014191	.0179310	.0022809	.0025843	.0018894
%RSD	24.78147	9.114489	3.156119	9.860920	.6757941	34.52538
#1	-.002945	.0164840	.5788261	.0256013	.3853858	.0067646
#2	-.004237	.0162892	.5474323	.0226838	.3808254	.0033041
#3	-.004911	.0139345	.5781418	.0211056	.3809991	.0063491

Elem	Sr4077
Units	ppm
Avg	.1942425
Stddev	.0006777
%RSD	.3488725
#1	.1942362
#2	.1935680
#3	.1949233

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4983.110	86639.15	8670.208	4203.807	5773.111
Stddev	12.981	308.38	26.893	19.454	11.634
%RSD	.2604901	.3559314	.3101794	.4627686	.2015136
#1	4968.757	86504.44	8701.091	4191.900	5759.800
#2	4986.549	86421.06	8651.956	4193.265	5781.332
#3	4994.026	86991.97	8657.576	4226.257	5778.200

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2609-02 Acquired: 7/17/2025 17:13:26 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.004151**	**-.003178**	**.0488038**	**.0017790**	**-.001435**	**.1919903**	**.2779776**
Stddev	.002712	.001234	.0002235	.0032906	.000415	.0080136	.0007797
%RSD	65.33724	38.81789	.4580176	184.9656	28.91311	4.173941	.2804857
#1	-.006789	-.004436	.0490475	.0055711	-.001363	.2012102	.2776656
#2	-.004293	-.003128	.0486084	-.000325	-.001881	.1880606	.2788650
#3	-.001371	-.001970	.0487554	.000091	-.001060	.1867001	.2774022

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000187**	**.0009616**	**5.772660**	**.0031568**	**.0042270**	**.2688033**	**4.053417**
Stddev	.000049	.0000722	.009180	.0002729	.0000312	.0007658	.038861
%RSD	26.35899	7.513896	.1590256	8.645815	.7379497	.2848991	.9587138
#1	-.000230	.0010449	5.771539	.0029879	.0042215	.2685990	4.053192
#2	-.000197	.0009169	5.782349	.0030107	.0042606	.2681604	4.092390
#3	-.000133	.0009229	5.764092	.0034717	.0041990	.2696506	4.014670

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1867908**	**.9040120**	**.0181000**	**.0013677**	**312.0421**	**-.002291**	**.2701646**
Stddev	.0005178	.0083129	.0000508	.0003772	.7732	.001529	.0001387
%RSD	.2772052	.9195504	.2805819	27.57790	.2477787	66.73514	.0513254
#1	.1862240	.8954545	.0181339	.0014514	311.4098	-.003598	.2702401
#2	.1872390	.9045249	.0180416	.0009557	312.9041	-.002665	.2702490
#3	.1869094	.9120565	.0181244	.0016960	311.8125	-.000610	.2700045

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7395454**	**.0394869**	**.0007871**	**.0325749**	**.0183298**	**.7462935**	**.0219407**
Stddev	.0169354	.0005552	.0003154	.0004214	.0011062	.0104934	.0008367
%RSD	2.289969	1.406071	40.06819	1.293514	6.034797	1.406067	3.813625
#1	.7280396	.0390493	.0005225	.0320902	.0188101	.7360848	.0227929
#2	.7589921	.0393000	.0011361	.0328539	.0191146	.7570501	.0219089
#3	.7316045	.0401115	.0007027	.0327806	.0170646	.7457458	.0211204

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2609-02 Acquired: 7/17/2025 17:13:26 Type: Unk
Method: 6010-200.7 NEW(v42) 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	1.744519	.0007549	.0254657
Stddev	.005269	.0019637	.0000976
%RSD	.3020530	260.1308	.3830980
#1	1.749781	.0014810	.0253571
#2	1.739242	.0022521	.0255460
#3	1.744534	-.001468	.0254938

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5028.335	87731.92	8649.577	4248.674	5890.751
Stddev	2.596	265.36	28.826	8.471	8.566
%RSD	.0516246	.3024705	.3332614	.1993683	.1454188
#1	5026.377	87577.59	8632.318	4249.787	5880.882
#2	5027.348	87579.85	8682.854	4239.702	5895.117
#3	5031.279	88038.34	8633.558	4256.533	5896.255

Sample Name: Q2609-06 Acquired: 7/17/2025 17:17:50 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0075230**	**-.001840**	**.2149652**	**.0021336**	**.0005295**	**.1950136**	**.1364587**
Stddev	.0011668	.001034	.0018858	.0038488	.0013291	.0158302	.0014232
%RSD	15.51033	56.19336	.8772792	180.3893	251.0050	8.117501	1.042915
#1	.0074639	-.002912	.2171376	-.000005	.0014266	.1928799	.1380662
#2	.0087183	-.001759	.2137497	.006577	-.000997	.1803584	.1353594
#3	.0063869	-.000849	.2140082	-.000170	.001159	.2118024	.1359504

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000106**	**.0010551**	**2.600220**	**.0016253**	**.0050921**	**.0173851**	**27.62003**
Stddev	.000130	.0000531	.020179	.0000845	.0000770	.0000882	.08303
%RSD	122.0497	5.032244	.7760377	5.199382	1.511177	.5073710	.3006020
#1	-.000014	.0010963	2.618034	.0016585	.0051787	.0174866	27.62883
#2	-.000050	.0010737	2.578306	.0016881	.0050661	.0173273	27.53295
#3	-.000255	.0009951	2.604318	.0015292	.0050316	.0173412	27.69830

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1825118**	**.3349664**	**.0435541**	**.0021878**	**342.1911**	**-.001806**	**.3365365**
Stddev	.0011458	.0239724	.0004978	.0004180	3.5016	.001356	.0008237
%RSD	.6278043	7.156666	1.143042	19.10699	1.023299	75.12322	.2447489
#1	.1836735	.3231473	.0440926	.0023387	339.0543	-.000742	.3367087
#2	.1813826	.3191985	.0434589	.0025093	341.5500	-.001341	.3356403
#3	.1824794	.3625533	.0431107	.0017152	345.9690	-.003333	.3372605

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7164349**	**.0375688**	**.0015313**	**-.002841**	**.0163578**	**1.246093**	**.0342448**
Stddev	.0332375	.0000135	.0001945	.000450	.0025630	.006275	.0014070
%RSD	4.639286	.0360134	12.70184	15.83531	15.66812	.5035456	4.108625
#1	.6931686	.0375541	.0015633	-.003152	.0137936	1.251103	.0326864
#2	.7016343	.0375718	.0013228	-.002325	.0189195	1.239055	.0354219
#3	.7545017	.0375807	.0017079	-.003045	.0163603	1.248121	.0346260

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2609-06 Acquired: 7/17/2025 17:17:50 Type: Unk
Method: 6010-200.7 NEW(v42) 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	3.775664	.0068424	-.019131
Stddev	.004094	.0010439	.000167
%RSD	.1084404	15.25668	.8714288
#1	3.779997	.0080022	-.019048
#2	3.771859	.0065466	-.019022
#3	3.775135	.0059782	-.019323

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5038.880	85835.15	8634.930	4162.047	5875.356
Stddev	19.137	94.78	40.191	23.163	12.638
%RSD	.3797915	.1104165	.4654450	.5565290	.2151063
#1	5052.509	85880.18	8591.202	4151.352	5871.523
#2	5047.129	85899.01	8670.256	4188.626	5889.467
#3	5017.002	85726.25	8643.330	4146.165	5865.079

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: PB168883BL Acquired: 7/17/2025 17:22:12 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.000110**	**.0004483**	**-.001971**	**-.000699**	**-.002022**	**-.004454**
Stddev	.002825	.0000282	.001586	.003797	.000364	.005001
%RSD	2570.746	6.279504	80.49989	543.3883	17.98961	112.2947
#1	-.003370	.0004486	-.000140	.000754	-.001906	-.006439
#2	.001621	.0004200	-.002942	.002158	-.002430	-.008157
#3	.001419	.0004763	-.002830	-.005008	-.001731	.001235

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.005126**	**-.000105**	**.0000295**	**.0632953**	**-.000975**	**.0000359**
Stddev	.001048	.000029	.0000855	.0072325	.000291	.0001700
%RSD	20.43689	27.26187	290.2136	11.42653	29.78626	472.8378
#1	-.003982	-.000087	-.000063	.0584308	-.001235	-.000012
#2	-.006038	-.000139	.000047	.0598487	-.001029	.000225
#3	-.005359	-.000091	.000105	.0716064	-.000662	-.000105

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000373**	**.0001848**	**.0000116**	**-.018434**	**.0002842**	**.0012743**
Stddev	.000206	.0017601	.0002289	.016234	.0000983	.0001474
%RSD	55.21819	952.3720	1973.609	88.06581	34.58109	11.56544
#1	-.000485	.0022051	-.000251	-.006509	.0002158	.0014012
#2	-.000498	-.001018	.000165	-.011871	.0002399	.0013091
#3	-.000135	-.000633	.000121	-.036922	.0003968	.0011127

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4361604**	**-.002593**	**-.000207**	**.2417425**	**-.002101**	**.0002809**
Stddev	.0601186	.000782	.000188	.0119807	.000500	.0001909
%RSD	13.78359	30.14779	90.72213	4.955978	23.80502	67.95939
#1	.4902266	-.003467	-.000125	.2372893	-.001940	.0001054
#2	.4468351	-.001959	-.000074	.2553121	-.002662	.0004842
#3	.3714195	-.002354	-.000421	.2326261	-.001702	.0002531

Sample Name: PB168883BL Acquired: 7/17/2025 17:22:12 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.0024432	.0151992	-.003064	.0003227	F -.030974	.0003677
Stddev	.0002135	.0017076	.001345	.0016905	.000471	.0018639
%RSD	8.738942	11.23466	43.89383	523.8497	1.520139	506.8500
#1	.0026840	.0135512	-.003706	.0010033	-.030556	.0022377
#2	.0023687	.0169607	-.003967	-.001602	-.030883	-.001490
#3	.0022770	.0150857	-.001518	.001567	-.031484	.000356

Elem	Sr4077
Units	ppm
Avg	-.000008
Stddev	.000013
%RSD	159.3595
#1	.000005
#2	-.000022
#3	-.000008

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5285.217	90783.32	8319.334	4445.661	6563.551
Stddev	1.227	502.33	54.151	9.896	3.820
%RSD	.0232180	.5533333	.6509034	.2225993	.0582051
#1	5285.519	90216.30	8292.361	4437.782	6562.930
#2	5283.868	90960.93	8381.674	4456.768	6560.079
#3	5286.266	91172.71	8283.968	4442.433	6567.644

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: PB168883BS Acquired: 7/17/2025 17:26:32 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.7933481**	**1.932173**	**.9381784**	**2.024145**	**.8324221**	**2.008146**
Stddev	.0016314	.030271	.0043375	.002123	.0020621	.011817
%RSD	.2056365	1.566702	.4623285	.1048999	.2477164	.5884660
#1	.7915619	1.921009	.9350171	2.021815	.8311763	1.997552
#2	.7947595	1.909070	.9363947	2.024651	.8312878	2.020891
#3	.7937229	1.966441	.9431233	2.025970	.8348023	2.005995

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2080300**	**.1948036**	**.1872155**	**1.149131**	**.3674466**	**.1954804**
Stddev	.0011402	.0010913	.0004544	.019629	.0003476	.0002491
%RSD	.5481127	.5602016	.2427120	1.708149	.0945988	.1274071
#1	.2075098	.1938319	.1869388	1.140837	.3672070	.1954445
#2	.2093376	.1959843	.1869678	1.171546	.3678452	.1952512
#3	.2072427	.1945948	.1877399	1.135011	.3672875	.1957454

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3137091**	**2.915940**	**.2114611**	**1.931958**	**.4934623**	**.0767429**
Stddev	.0012052	.008700	.0017045	.023440	.0010707	.0002637
%RSD	.3841898	.2983606	.8060472	1.213281	.2169769	.3436750
#1	.3126210	2.925621	.2098203	1.905132	.4932813	.0765092
#2	.3135018	2.913424	.2113403	1.948487	.4924937	.0770289
#3	.3150045	2.908775	.2132228	1.942255	.4946120	.0766904

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.567384**	**.2965816**	**.2083504**	**10.21737**	**.3076779**	**.4183917**
Stddev	.014633	.0023253	.0006351	.02493	.0014519	.0003971
%RSD	.5699682	.7840384	.3048127	.2440142	.4718833	.0949208
#1	2.573941	.2940597	.2088088	10.24348	.3060318	.4180747
#2	2.550619	.2986408	.2076255	10.21482	.3082261	.4182631
#3	2.577592	.2970442	.2086170	10.19381	.3087759	.4188372

Sample Name: PB168883BS Acquired: 7/17/2025 17:26:32 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.6686905	.2083452	.8039758	5.567860	F -.034325	.1988152
Stddev	.0013446	.0013097	.0070944	.012899	.003224	.0051807
%RSD	.2010778	.6286031	.8824083	.2316762	9.391909	2.605788
#1	.6688867	.2084657	.7960047	5.553444	-.031315	.2029672
#2	.6672586	.2069795	.8095973	5.571824	-.033933	.1930096
#3	.6699262	.2095905	.8063254	5.578313	-.037727	.2004688

Elem	Sr4077
Units	ppm
Avg	.2107287
Stddev	.0004497
%RSD	.2133981
#1	.2104438
#2	.2112471
#3	.2104952

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5307.126	88722.35	8315.702	4415.262	6480.871
Stddev	8.601	132.36	16.438	13.143	13.957
%RSD	.1620736	.1491801	.1976742	.2976745	.2153631
#1	5304.881	88569.73	8334.575	4400.970	6476.062
#2	5316.627	88805.67	8304.516	4426.829	6496.598
#3	5299.870	88791.64	8308.014	4417.988	6469.955

Sample Name: Q2604-02 Acquired: 7/17/2025 17:30:32 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.005474**	**-.003032**	**-.001025**	**.0031966**	**-.001683**	**.0563755**	**.0002912**
Stddev	.000703	.000377	.000135	.0035250	.001299	.0039058	.0004408
%RSD	12.83984	12.44301	13.13617	110.2759	77.20576	6.928216	151.3730
#1	-.005442	-.002925	-.000869	.0060187	-.000358	.0548398	.0006258
#2	-.006193	-.002719	-.001104	.0043256	-.001736	.0608158	.0004563
#3	-.004788	-.003451	-.001101	-.000755	-.002955	.0534710	-.000208

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000261**	**-.000030**	**4.479775**	**-.000300**	**.0066787**	**.0040082**	**.2011608**
Stddev	.000054	.000038	.018449	.000196	.0001734	.0002703	.0083905
%RSD	20.65163	126.3045	.4118310	65.39680	2.595642	6.743954	4.171019
#1	-.000258	.000009	4.497348	-.000283	.0067808	.0037612	.1914759
#2	-.000209	-.000066	4.460559	-.000113	.0064786	.0042970	.2062315
#3	-.000317	-.000032	4.481418	-.000504	.0067768	.0039665	.2057750

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0214024**	**1.581070**	**.0092989**	**.0009759**	**14.23327**	**-.003353**	**.0371310**
Stddev	.0003815	.021076	.0003722	.0002528	.01415	.002670	.0002146
%RSD	1.782733	1.332991	4.002081	25.90204	.0993866	79.61908	.5778469
#1	.0217983	1.582881	.0096609	.0011994	14.24722	-.001379	.0371026
#2	.0210370	1.559147	.0093185	.0007016	14.23364	-.006390	.0373583
#3	.0213719	1.601181	.0089174	.0010269	14.21893	-.002289	.0369321

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.150755**	**.0067398**	**.0005801**	**-.003187**	**.0142175**	**5.791697**	**.0226378**
Stddev	.019656	.0004513	.0001793	.000888	.0010548	.007080	.0024311
%RSD	1.708079	6.696424	30.91579	27.85547	7.419344	.1222490	10.73906
#1	1.128897	.0070775	.0004439	-.003800	.0138233	5.783525	.0248625
#2	1.166977	.0069148	.0005131	-.002169	.0154127	5.796010	.0200428
#3	1.156392	.0062272	.0007833	-.003591	.0134165	5.795556	.0230083

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-02 Acquired: 7/17/2025 17:30:32 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**4.784275**	**-.004085**	**.0249216**
Stddev	.013468	.002931	.0000536
%RSD	.2815137	71.76213	.2148850
#1	4.775796	-.000892	.0249803
#2	4.777224	-.004707	.0249090
#3	4.799805	-.006655	.0248754

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5367.183**	**90361.20**	**8460.700**	**4421.995**	**6642.617**
Stddev	5.372	488.90	31.236	27.712	5.826
%RSD	.1000813	.5410554	.3691931	.6266868	.0877108
#1	5373.265	89857.99	8430.991	4390.173	6649.151
#2	5365.193	90834.42	8493.267	4440.817	6640.737
#3	5363.090	90391.18	8457.841	4434.995	6637.962

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV05 Acquired: 7/17/2025 17:58:47 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**5.039543**	**5.053480**	**4.861307**	**5.124395**	**5.171328**	**10.16425**	**10.74865**
Stddev	.015118	.078503	.012781	.022170	.020256	.05487	.07797
%RSD	.2999814	1.553452	.2629064	.4326349	.3917036	.5398232	.7253955
#1	5.026132	4.997275	4.850361	5.110960	5.154317	10.12091	10.66131
#2	5.036570	5.143174	4.858209	5.112240	5.165931	10.14591	10.77340
#3	5.055926	5.019992	4.875353	5.149983	5.193736	10.22594	10.81124

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2460635**	**2.413323**	**26.94707**	**.9331925**	**2.456675**	**1.252745**	**4.969008**
Stddev	.0002247	.003480	.09084	.0225354	.006171	.004267	.113040
%RSD	.0913179	.1442130	.3371189	2.414869	.2511848	.3406046	2.274900
#1	.2458051	2.412144	26.86933	.9323387	2.452444	1.248604	4.942644
#2	.2461724	2.410586	26.92496	.9561426	2.453825	1.252504	5.092901
#3	.2462130	2.417240	27.04693	.9110961	2.463756	1.257128	4.871480

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.631917**	**24.67584**	**2.473911**	**1.281670**	**25.40871**	**2.513047**	**2.587927**
Stddev	.003674	.06494	.005697	.025106	.65078	.005296	.046602
%RSD	.1395992	.2631618	.2302836	1.958878	2.561258	.2107425	1.800737
#1	2.627804	24.61502	2.471171	1.282313	25.50699	2.507645	2.590749
#2	2.633071	24.66828	2.470101	1.306449	26.00477	2.518230	2.633054
#3	2.634875	24.74423	2.480460	1.256249	24.71438	2.513265	2.539978

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.48609**	**5.352270**	**5.119603**	**4.870670**	**5.026669**	**4.612751**	**5.069517**
Stddev	.61885	.021740	.015273	.009346	.003184	.102405	.005725
%RSD	2.428179	.4061736	.2983207	.1918921	.0633502	2.220051	.1129268
#1	25.42913	5.344811	5.105059	4.865273	5.029923	4.594527	5.074007
#2	26.13145	5.335242	5.118238	4.865275	5.026524	4.723045	5.071472
#3	24.89769	5.376757	5.135513	4.881463	5.023560	4.520681	5.063070

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV05 Acquired: 7/17/2025 17:58:47 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**4.934027**	**5.040946**	**5.430472**
Stddev	.021086	.006575	.072468
%RSD	.4273683	.1304331	1.334465
#1	4.909743	5.039883	5.357561
#2	4.947694	5.047988	5.431368
#3	4.944646	5.034968	5.502488

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5188.127**	**85055.18**	**7923.149**	**4195.504**	**6012.816**
Stddev	6.909	1916.32	23.400	71.587	13.089
%RSD	.1331769	2.253027	.2953327	1.706291	.2176909
#1	5187.721	85148.50	7948.906	4196.369	6003.492
#2	5195.230	83093.90	7917.343	4123.488	6027.780
#3	5181.429	86923.13	7903.199	4266.655	6007.175

Sample Name: CCB05 Acquired: 7/17/2025 18:02:58 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001318**	**-.000434**	**-.001778**	**-.002445**	**-.001729**	**.0030780**
Stddev	.000987	.001477	.001045	.001316	.000565	.0082638
%RSD	74.91054	340.6168	58.77594	53.80178	32.68795	268.4758
#1	-.000891	-.000532	-.001380	-.002493	-.001929	.0120909
#2	-.000615	.001090	-.002963	-.001106	-.002168	-.004143
#3	-.002446	-.001859	-.000990	-.003736	-.001091	.001286

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.002867**	**-.000065**	**.0000958**	**.0649430**	**-.000734**	**.0001211**
Stddev	.000517	.000102	.0000410	.0052817	.000550	.0000678
%RSD	18.02472	157.9773	42.75489	8.132885	74.91623	56.03412
#1	-.002477	-.000093	.0000960	.0592608	-.001340	.0001529
#2	-.003453	.000049	.0001367	.0658655	-.000266	.0000432
#3	-.002670	-.000150	.0000548	.0697027	-.000597	.0001671

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000532**	**-.000946**	**.0003447**	**-.003199**	**.0002480**	**.0009021**
Stddev	.000222	.001483	.0005568	.034814	.0001875	.0004888
%RSD	41.76452	156.6836	161.5154	1088.263	75.59714	54.19015
#1	-.000704	-.002093	.0007316	-.008448	.0001011	.0007577
#2	-.000281	-.001475	-.000293	.033942	.0001837	.0005017
#3	-.000612	.000728	.000596	-.035091	.0004592	.0014469

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.290602**	**-.003500**	**.0002094**	**.1260111**	**.0060449**	**.0011436**
Stddev	.008998	.005270	.0002884	.0033464	.0002308	.0001255
%RSD	3.096351	150.5820	137.7381	2.655679	3.817532	10.96919
#1	-.294632	.000594	-.000123	.1241040	.0059263	.0012646
#2	-.280293	-.001647	.000387	.1298751	.0058976	.0010141
#3	-.296880	-.009447	.000365	.1240541	.0063108	.0011521

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCB05 Acquired: 7/17/2025 18:02:58 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025601	.0155439	.0085850	.0005822	F -.035562	.0008006
Stddev	.0003928	.0002550	.0068483	.0015498	.001166	.0022213
%RSD	15.34433	1.640271	79.77079	266.2123	3.279508	277.4507
#1	.0029955	.0152637	.0152787	.0005024	-.036599	.0011293
#2	.0024526	.0157622	.0015918	.0021703	-.034300	.0028393
#3	.0022322	.0156058	.0088846	-.000926	-.035789	-.001567

Elem	Sr4077
Units	ppm
Avg	.0001926
Stddev	.0000344
%RSD	17.87260
#1	.0002322
#2	.0001700
#3	.0001755

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5380.656	86122.54	8264.501	4363.739	6726.978
Stddev	13.258	173.64	95.231	14.970	17.797
%RSD	.2463985	.2016229	1.152285	.3430533	.2645638
#1	5395.963	85929.57	8266.765	4349.451	6747.510
#2	5373.214	86266.16	8358.579	4379.309	6715.965
#3	5372.791	86171.90	8168.158	4362.457	6717.459

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-01 Acquired: 7/17/2025 18:07:17 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.002680**	**-.002136**	**.0000513**	**.0019456**	**.0001072**	**.0677660**	**-.001177**
Stddev	.001276	.001092	.0008396	.0018200	.0011933	.0085653	.000498
%RSD	47.62057	51.12542	1636.046	93.54178	1113.694	12.63946	42.28321
#1	-.002927	-.003354	.0000426	.0035164	.0011227	.0748835	-.001074
#2	-.001298	-.001245	.0008953	-.000049	.0004059	.0582600	-.000739
#3	-.003815	-.001809	-.000784	.002369	-.001207	.0701546	-.001719

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000226**	**-.000076**	**4.441747**	**-.000127**	**.0065179**	**.0713348**	**1.540197**
Stddev	.000014	.000014	.008243	.000249	.0003397	.0004606	.012654
%RSD	6.051571	18.74683	.1855843	196.5872	5.212205	.6456877	.8215810
#1	-.000239	-.000090	4.435221	-.000167	.0067822	.0718549	1.542672
#2	-.000227	-.000062	4.451011	-.000352	.0066367	.0711709	1.551432
#3	-.000212	-.000077	4.439010	.000140	.0061347	.0709785	1.526489

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0192631**	**1.592698**	**.0082624**	**.0007761**	**14.26146**	**-.000590**	**.0279396**
Stddev	.0005554	.021348	.0001438	.0000621	.12237	.001692	.0001074
%RSD	2.883233	1.340339	1.739789	8.000145	.8580537	286.9531	.3843896
#1	.0196576	1.616495	.0083951	.0008428	14.29810	.001341	.0280258
#2	.0186280	1.575233	.0082826	.0007200	14.36133	-.001298	.0278193
#3	.0195039	1.586365	.0081097	.0007656	14.12496	-.001812	.0279737

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.164350**	**.0096601**	**.0008588**	**-.002410**	**.0157725**	**5.834406**	**.0194052**
Stddev	.013110	.0004649	.0000932	.000145	.0027580	.045185	.0008624
%RSD	1.125968	4.812628	10.85298	6.027334	17.48632	.7744598	4.444143
#1	1.158098	.0094036	.0009022	-.002496	.0141157	5.849635	.0197881
#2	1.179416	.0093799	.0007518	-.002242	.0142455	5.870009	.0184177
#3	1.155535	.0101967	.0009224	-.002491	.0189563	5.783574	.0200100

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-01 Acquired: 7/17/2025 18:07:17 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**4.968742**	**-.003853**	**.0229242**
Stddev	.023913	.001943	.0000865
%RSD	.4812734	50.42911	.3771030
#1	4.986891	-.005940	.0229529
#2	4.977688	-.002097	.0228270
#3	4.941645	-.003520	.0229926

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5378.814**	**89781.73**	**8498.546**	**4433.431**	**6599.997**
Stddev	9.788	228.03	54.536	6.324	2.051
%RSD	.1819740	.2539793	.6417040	.1426434	.0310722
#1	5388.998	89765.63	8534.305	4427.028	6602.313
#2	5369.478	89562.19	8525.557	4439.673	6598.411
#3	5377.965	90017.39	8435.777	4433.592	6599.267

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-01DUP Acquired: 7/17/2025 18:11:33 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.004280**	**-.001474**	**.0002695**	**.0014042**	**-.002375**	**.0725605**	**.0010336**
Stddev	.002003	.002359	.0006375	.0042890	.000878	.0097329	.0010509
%RSD	46.80372	160.0833	236.5057	305.4445	36.95421	13.41344	101.6755
#1	-.004786	-.000396	.0009424	.0019268	-.001932	.0689107	.0015085
#2	-.002072	-.004179	-.000325	.0054079	-.003386	.0651801	.0017631
#3	-.005982	.000154	.000191	-.003122	-.001808	.0835907	-.000171

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000210**	**-.000102**	**4.455246**	**-.000427**	**.0064905**	**.0718557**	**1.472755**
Stddev	.000059	.000070	.013413	.000197	.0001000	.0001277	.008853
%RSD	27.98488	68.82504	.3010557	46.08200	1.541347	.1777727	.6011386
#1	-.000154	-.000047	4.442372	-.000648	.0064261	.0717847	1.464533
#2	-.000205	-.000079	4.454227	-.000363	.0066058	.0717792	1.471605
#3	-.000272	-.000181	4.469139	-.000271	.0064397	.0720032	1.482127

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0201363**	**1.590570**	**.0084432**	**.0007721**	**13.64624**	**-.003219**	**.0280547**
Stddev	.0004047	.006742	.0001069	.0002576	.09738	.002098	.0001758
%RSD	2.009854	.4239014	1.265574	33.35707	.7136237	65.18380	.6266990
#1	.0199215	1.586779	.0083866	.0008932	13.54725	-.003661	.0278632
#2	.0206031	1.598355	.0083766	.0009468	13.64953	-.005061	.0282088
#3	.0198842	1.586577	.0085665	.0004763	13.74193	-.000935	.0280922

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.116046**	**.0080871**	**.0005541**	**-.000321**	**.0154206**	**5.557390**	**.0195111**
Stddev	.015855	.0009342	.0000671	.000651	.0002444	.049463	.0011621
%RSD	1.420604	11.55135	12.10248	202.8879	1.584964	.8900445	5.956301
#1	1.129149	.0090908	.0006222	-.001055	.0155779	5.518679	.0197776
#2	1.098422	.0072431	.0004882	.000185	.0151390	5.540376	.0205168
#3	1.120566	.0079273	.0005519	-.000092	.0155448	5.613114	.0182388

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-01DUP Acquired: 7/17/2025 18:11:33 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**5.049443**	**-.001073**	**.0230156**
Stddev	.028204	.002629	.0000463
%RSD	.5585508	245.0649	.2011870
#1	5.044843	.000975	.0230543
#2	5.023821	-.004037	.0230281
#3	5.079663	-.000155	.0229643

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5367.949**	**90139.40**	**8149.871**	**4434.449**	**6579.094**
Stddev	33.144	515.48	11.863	18.924	39.680
%RSD	.6174449	.5718732	.1455545	.4267484	.6031268
#1	5395.569	90663.50	8140.131	4434.595	6615.423
#2	5377.083	90121.72	8146.400	4453.300	6585.111
#3	5331.196	89632.98	8163.082	4415.453	6536.749

Sample Name: Q2604-01LX5 Acquired: 7/17/2025 18:15:48 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.001342**	**-.000384**	**-.001439**	**-.000706**	**-.000651**	**.0120981**	**-.003531**
Stddev	.000992	.002088	.000899	.000306	.000920	.0092305	.000241
%RSD	73.92855	543.4384	62.49870	43.31185	141.1571	76.29738	6.832967
#1	-.000205	-.000855	-.002372	-.000747	-.000384	.0216993	-.003439
#2	-.002033	.001899	-.001368	-.000989	.000105	.0032893	-.003805
#3	-.001788	-.002196	-.000577	-.000382	-.001675	.0113056	-.003350

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000164**	**-.000019**	**.9856617**	**-.000651**	**.0013419**	**.0146234**	**.3047845**
Stddev	.000046	.000034	.0131219	.000270	.0001925	.0002036	.0052961
%RSD	28.39504	181.9981	1.331278	41.52749	14.34347	1.392583	1.737666
#1	-.000216	-.000024	.9726142	-.000370	.0013275	.0148430	.2995891
#2	-.000126	.000018	.9855141	-.000909	.0015411	.0145864	.3101759
#3	-.000149	-.000050	.9988568	-.000674	.0011570	.0144408	.3045886

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0039537**	**.3141917**	**.0019900**	**.0007079**	**2.218493**	**-.004202**	**.0056882**
Stddev	.0001934	.0220306	.0001638	.0002235	.006919	.002105	.0000754
%RSD	4.891648	7.011848	8.230791	31.57252	.3118776	50.10009	1.325122
#1	.0038266	.2894262	.0020102	.0005046	2.214082	-.002699	.0057641
#2	.0038582	.3215393	.0021427	.0009472	2.226467	-.003299	.0056873
#3	.0041762	.3316096	.0018170	.0006719	2.214930	-.006608	.0056133

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3213982**	**.0018161**	**.0001593**	**.0010776**	**.0151738**	**1.146844**	**.0027349**
Stddev	.0124910	.0003204	.0000070	.0002840	.0014229	.008280	.0017853
%RSD	3.886456	17.64211	4.410742	26.35674	9.377468	.7220179	65.27740
#1	.3109520	.0014562	.0001525	.0007539	.0153693	1.151016	.0032418
#2	.3180084	.0020703	.0001588	.0011940	.0136632	1.152207	.0042120
#3	.3352342	.0019217	.0001665	.0012849	.0164888	1.137307	.0007510

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-01LX5 Acquired: 7/17/2025 18:15:48 Type: Unk
Method: 6010-200.7 NEW(v42) 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	1.025251	-.000699	.0048135
Stddev	.006347	.000569	.0000224
%RSD	.6190325	81.39534	.4651284
#1	1.032579	-.000346	.0048394
#2	1.021545	-.000396	.0048005
#3	1.021629	-.001355	.0048007

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5383.394	88989.77	7978.783	4440.967	6647.167
Stddev	17.729	198.44	46.379	16.025	21.581
%RSD	.3293331	.2229946	.5812776	.3608507	.3246639
#1	5388.019	89078.91	8024.494	4431.115	6657.876
#2	5398.352	88762.39	7931.764	4432.328	6661.298
#3	5363.810	89128.01	7980.091	4459.458	6622.325

Sample Name: Q2604-01MS Acquired: 7/17/2025 18:20:08 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8015160**	**1.922877**	**.9325639**	**1.995732**	**.8303274**	**2.114507**	**.2156537**
Stddev	.0037102	.043683	.0051555	.004631	.0007323	.012451	.0003692
%RSD	.4628970	2.271732	.5528286	.2320551	.0881936	.5888576	.1711987
#1	.7974343	1.913871	.9298676	1.990459	.8301342	2.110074	.2152347
#2	.8024296	1.970361	.9293157	1.997598	.8297111	2.104880	.2157956
#3	.8046840	1.884400	.9385084	1.999138	.8311370	2.128569	.2159310

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1893181**	**.1883153**	**5.640815**	**.3755805**	**.2053574**	**.3855816**	**4.515142**
Stddev	.0007648	.0008548	.023706	.0012830	.0008556	.0008021	.011212
%RSD	.4039534	.4539341	.4202621	.3415957	.4166380	.2080187	.2483091
#1	.1884997	.1879591	5.638274	.3770616	.2051741	.3848299	4.527252
#2	.1900146	.1876962	5.665689	.3748674	.2046083	.3854887	4.505123
#3	.1894400	.1892907	5.618481	.3748125	.2062898	.3864260	4.513050

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2326155**	**3.620254**	**.5061314**	**.0748589**	**17.74239**	**.3048964**	**.2445716**
Stddev	.0009692	.044529	.0026473	.0004381	.12439	.0021422	.0011332
%RSD	.4166480	1.230003	.5230533	.5852528	.7010766	.7025885	.4633273
#1	.2319779	3.581411	.5049186	.0746234	17.74690	.3062695	.2432827
#2	.2337308	3.668852	.5043078	.0745889	17.61581	.3059917	.2450204
#3	.2321378	3.610500	.5091679	.0753644	17.86446	.3024280	.2454115

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.20909**	**.2906021**	**.4440755**	**.6810665**	**.2116374**	**6.759680**	**5.652765**
Stddev	.06542	.0008945	.0002210	.0039277	.0013309	.022838	.013488
%RSD	.5836153	.3078082	.0497712	.5766916	.6288768	.3378526	.2386009
#1	11.22766	.2896596	.4439117	.6787914	.2102798	6.770676	5.644794
#2	11.13639	.2914392	.4443269	.6788064	.2116924	6.733424	5.645162
#3	11.26322	.2907076	.4439878	.6856018	.2129399	6.774940	5.668337

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-01MS Acquired: 7/17/2025 18:20:08 Type: Unk
Method: 6010-200.7 NEW(v42) 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	5.226407	.2014750	.2347452
Stddev	.005806	.0023281	.0004032
%RSD	.1110874	1.155518	.1717405
#1	5.222085	.2034564	.2348475
#2	5.224130	.2020576	.2343008
#3	5.233006	.1989109	.2350874

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5258.727	89113.14	8298.466	4394.879	6378.272
Stddev	.931	208.70	32.137	3.780	13.565
%RSD	.0177107	.2341990	.3872665	.0860183	.2126705
#1	5259.609	89033.24	8327.489	4395.932	6380.131
#2	5258.820	89349.99	8263.928	4398.022	6390.812
#3	5257.753	88956.19	8303.979	4390.684	6363.874

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-01MSD Acquired: 7/17/2025 18:24:06 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.7758884**	**1.814396**	**.9118530**	**1.935864**	**.8092611**	**2.054390**	**.2094242**
Stddev	.0032978	.010732	.0007990	.001899	.0028799	.015892	.0011537
%RSD	.4250366	.5914858	.0876231	.0981006	.3558654	.7735515	.5508863
#1	.7720812	1.810210	.9109581	1.935301	.8088780	2.071292	.2087369
#2	.7778572	1.826590	.9121062	1.934309	.8065919	2.039751	.2087796
#3	.7777268	1.806388	.9124947	1.937980	.8123133	2.052126	.2107562

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1844980**	**.1829982**	**5.475461**	**.3712516**	**.1996867**	**.3742479**	**5.081906**
Stddev	.0002721	.0003170	.007866	.0010923	.0002549	.0006917	.016285
%RSD	.1475097	.1732472	.1436519	.2942294	.1276403	.1848379	.3204495
#1	.1843894	.1826956	5.473309	.3719234	.1995406	.3738822	5.077586
#2	.1842969	.1829711	5.484178	.3718402	.1995385	.3738157	5.099915
#3	.1848077	.1833279	5.468895	.3699912	.1999810	.3750457	5.068216

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2437608**	**3.541566**	**.4925829**	**.0731484**	**17.43615**	**.2956176**	**.2404244**
Stddev	.0002349	.005470	.0007581	.0001796	.08634	.0035360	.0012095
%RSD	.0963702	.1544546	.1539139	.2454790	.4951984	1.196139	.5030708
#1	.2439445	3.535280	.4917323	.0733022	17.52356	.2981443	.2409153
#2	.2434961	3.544167	.4928286	.0729510	17.43396	.2971317	.2390466
#3	.2438418	3.545250	.4931877	.0731919	17.35092	.2915766	.2413112

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.05284**	**.2817392**	**.4352605**	**.6686010**	**.2064331**	**6.625768**	**5.472031**
Stddev	.06948	.0024771	.0003779	.0003485	.0008708	.034909	.007537
%RSD	.6286194	.8791998	.0868102	.0521198	.4218122	.5268710	.1377321
#1	11.11025	.2817188	.4348815	.6684325	.2057105	6.654580	5.466388
#2	11.07266	.2792725	.4352628	.6690017	.2061889	6.635777	5.480590
#3	10.97560	.2842265	.4356372	.6683688	.2073999	6.586948	5.469114

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-01MSD Acquired: 7/17/2025 18:24:06 Type: Unk
Method: 6010-200.7 NEW(v42) 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	5.047449	.1942615	.2280918
Stddev	.002924	.0033616	.0003376
%RSD	.0579209	1.730431	.1480229
#1	5.046110	.1973680	.2282598
#2	5.050802	.1947238	.2283126
#3	5.045435	.1906927	.2277032

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5305.570	88491.27	8329.492	4416.328	6447.268
Stddev	21.362	80.28	34.788	11.358	23.627
%RSD	.4026393	.0907213	.4176465	.2571849	.3664583
#1	5328.129	88402.94	8355.161	4419.569	6472.508
#2	5302.933	88559.79	8343.416	4425.713	6443.615
#3	5285.650	88511.07	8289.899	4403.701	6425.681

Sample Name: Q2604-01A Acquired: 7/17/2025 18:28:02 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8108232**	**1.957703**	**.9445290**	**2.024641**	**.8460356**	**2.118837**	**.2160338**
Stddev	.0039200	.049130	.0070985	.010343	.0011936	.022926	.0002449
%RSD	.4834654	2.509553	.7515433	.5108421	.1410778	1.082020	.1133659
#1	.8113452	1.957683	.9430033	2.026518	.8457796	2.098317	.2158883
#2	.8066682	1.908583	.9383174	2.013489	.8473364	2.143582	.2163166
#3	.8144560	2.006842	.9522664	2.033918	.8449908	2.114611	.2158966

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1978204**	**.1902759**	**5.502255**	**.3759768**	**.2066790**	**.3848632**	**4.338141**
Stddev	.0016874	.0012404	.020929	.0024317	.0011221	.0010557	.060263
%RSD	.8529785	.6519105	.3803747	.6467804	.5429284	.2743137	1.389141
#1	.1996857	.1898885	5.480495	.3755224	.2059566	.3850091	4.270491
#2	.1973754	.1892754	5.522241	.3738044	.2061087	.3837421	4.357852
#3	.1964002	.1916638	5.504029	.3786038	.2079718	.3858384	4.386080

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2344987**	**3.556861**	**.5101318**	**.0754386**	**16.69445**	**.3026720**	**.2476280**
Stddev	.0009754	.012263	.0031082	.0003468	.20076	.0009449	.0002507
%RSD	.4159431	.3447791	.6092973	.4597164	1.202553	.3121683	.1012530
#1	.2334212	3.569740	.5086682	.0751187	16.46795	.3029412	.2475498
#2	.2347533	3.555521	.5080256	.0758072	16.76495	.3016218	.2479086
#3	.2353215	3.545323	.5137017	.0753899	16.85045	.3034531	.2474257

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.04511**	**.3038707**	**.4492908**	**.7023944**	**.2144234**	**6.367458**	**5.699815**
Stddev	.12181	.0014471	.0004774	.0023851	.0010965	.046705	.036068
%RSD	1.102815	.4762334	.1062656	.3395625	.5113747	.7334906	.6327981
#1	10.91811	.3055242	.4498401	.7018199	.2154061	6.316512	5.694048
#2	11.05627	.3028350	.4489755	.7003491	.2146235	6.408251	5.666978
#3	11.16095	.3032528	.4490568	.7050143	.2132406	6.377612	5.738420

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2604-01A Acquired: 7/17/2025 18:28:02 Type: Unk
Method: 6010-200.7 NEW(v42) 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	5.104426	.2024548	.2373186
Stddev	.033919	.0022685	.0007979
%RSD	.6645094	1.120487	.3362123
#1	5.096751	.1999989	.2364121
#2	5.075001	.2044716	.2379145
#3	5.141525	.2028940	.2376292

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5288.722	89119.10	8030.489	4422.299	6389.588
Stddev	16.766	419.24	34.198	9.332	37.531
%RSD	.3170086	.4704289	.4258561	.2110224	.5873785
#1	5288.348	89600.39	7999.405	4431.603	6402.252
#2	5305.671	88833.38	8024.941	4412.939	6419.149
#3	5272.146	88923.53	8067.123	4422.355	6347.363

Sample Name: PB168882BL Acquired: 7/17/2025 18:31:59 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**-.002340**	**-.000757**	**-.003025**	**-.002210**	**-.001823**	**.0049401**
Stddev	.001622	.001258	.000785	.001005	.003153	.0089335
%RSD	69.31315	166.1655	25.94045	45.48455	172.9804	180.8353
#1	-.003488	-.002205	-.003782	-.001077	-.002855	.0050328
#2	-.000485	-.000128	-.003078	-.002995	.001717	.0138269
#3	-.003047	.000062	-.002215	-.002557	-.004330	-.004039

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003717**	**-.000093**	**-.000012**	**.0589050**	**-.000532**	**-.000220**
Stddev	.001442	.000073	.000053	.0136665	.000299	.000078
%RSD	38.80552	78.09676	448.4385	23.20081	56.23654	35.36202
#1	-.004131	-.000116	.000011	.0606797	-.000247	-.000167
#2	-.004906	-.000151	-.000072	.0715975	-.000506	-.000183
#3	-.002112	-.000012	.000026	.0444379	-.000844	-.000309

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000233**	**.0010078**	**.0003591**	**-.021376**	**-.000003**	**.0009675**
Stddev	.000154	.0021073	.0004529	.029139	.000106	.0000871
%RSD	65.91968	209.0897	126.1225	136.3132	3151.259	9.001819
#1	-.000074	.0016167	.0007586	-.015021	-.000117	.0010267
#2	-.000244	.0027436	-.000133	-.053168	.000014	.0008675
#3	-.000381	-.001337	.000452	.004060	.000093	.0010084

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.298740**	**-.002410**	**-.000058**	**.1190217**	**.0002667**	**.0002979**
Stddev	.018116	.002590	.000029	.0231163	.0004522	.0000156
%RSD	6.063979	107.4749	51.26597	19.42194	169.5366	5.222841
#1	-.319399	-.004976	-.000083	.0925188	.0006365	.0003041
#2	-.285566	-.002458	-.000025	.1350231	.0004010	.0002802
#3	-.291256	.000204	-.000064	.1295232	-.000237	.0003093

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: PB168882BL Acquired: 7/17/2025 18:31:59 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0022281**	**.0149629**	**.0014187**	**.0020325**	F **-.031105**	**-.001282**
Stddev	.0003683	.0015271	.0121525	.0033645	.001437	.000860
%RSD	16.52900	10.20597	856.5981	165.5342	4.620419	67.06196
#1	.0020570	.0133333	-.011213	.0045708	-.030656	-.001421
#2	.0019765	.0151944	.002441	.0033106	-.032714	-.002065
#3	.0026508	.0163611	.013028	-.001784	-.029947	-.000362

Elem	Sr4077
Units	ppm
Avg	**-.000091**
Stddev	.000012
%RSD	12.95214
#1	-.000080
#2	-.000089
#3	-.000103

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5308.522**	**89089.24**	**7936.606**	**4418.045**	**6532.774**
Stddev	21.624	259.05	58.737	7.185	29.069
%RSD	.4073521	.2907772	.7400810	.1626225	.4449774
#1	5330.934	89327.13	7870.346	4426.340	6556.195
#2	5306.848	89127.33	7982.276	4413.790	6541.886
#3	5287.783	88813.25	7957.196	4414.004	6500.240

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: PB168882BS Acquired: 7/17/2025 18:54:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8049499**	**1.998684**	**.9644190**	**2.050858**	**.8453690**	**2.032201**
Stddev	.0016610	.028786	.0011796	.011613	.0035027	.001914
%RSD	.2063536	1.440250	.1223104	.5662410	.4143439	.0942044
#1	.8056436	1.972394	.9654212	2.040882	.8415654	2.030750
#2	.8030545	2.029444	.9631190	2.048085	.8460799	2.034371
#3	.8061517	1.994215	.9647166	2.063606	.8484618	2.031481

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2103705**	**.1968540**	**.1927443**	**1.140782**	**.3706364**	**.1998786**
Stddev	.0005773	.0007901	.0006718	.007180	.0005546	.0006182
%RSD	.2744312	.4013867	.3485497	.6293979	.1496472	.3093048
#1	.2099454	.1968316	.1924156	1.132492	.3703547	.1996538
#2	.2101384	.1960752	.1923001	1.145022	.3712754	.1994043
#3	.2110278	.1976550	.1935171	1.144832	.3702791	.2005778

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3177134**	**2.957431**	**.2136240**	**1.965200**	**.5044375**	**.0779458**
Stddev	.0009784	.015927	.0000080	.004039	.0013750	.0006180
%RSD	.3079451	.5385296	.0037576	.2055167	.2725864	.7928093
#1	.3166123	2.948588	.2136312	1.963327	.5038677	.0774159
#2	.3184828	2.975817	.2136154	1.962438	.5034390	.0777968
#3	.3180451	2.947887	.2136255	1.969835	.5060058	.0786246

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.975428**	**.2965440**	**.2132498**	**10.25017**	**.3127175**	**.4248734**
Stddev	.019714	.0024052	.0005699	.06996	.0015195	.0013943
%RSD	.6625472	.8110876	.2672325	.6825531	.4859041	.3281621
#1	2.968061	.2991228	.2133988	10.17232	.3137142	.4236674
#2	2.997764	.2961476	.2126203	10.30778	.3109686	.4245527
#3	2.960458	.2943616	.2137304	10.27042	.3134697	.4264001

Sample Name: PB168882BS Acquired: 7/17/2025 18:54:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.6919846**	**.2124124**	**.8207106**	**5.869468**	F **-.032454**	**.2030680**
Stddev	.0035271	.0010269	.0121009	.019208	.001115	.0024898
%RSD	.5097107	.4834370	1.474445	.3272577	3.434558	1.226086
#1	.6889008	.2112325	.8304476	5.847305	-.031770	.2010850
#2	.6912224	.2129002	.8071630	5.879795	-.033740	.2058622
#3	.6958304	.2131045	.8245211	5.881304	-.031852	.2022567

Elem	Sr4077
Units	ppm
Avg	**.2120836**
Stddev	.0003298
%RSD	.1555049
#1	.2119803
#2	.2118177
#3	.2124526

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5261.005**	**88533.75**	**8298.128**	**4412.726**	**6359.619**
Stddev	8.709	168.63	37.398	5.617	13.029
%RSD	.1655438	.1904695	.4506843	.1272810	.2048775
#1	5270.504	88726.11	8290.015	4418.479	6370.744
#2	5259.113	88463.72	8338.917	4412.443	6362.829
#3	5253.396	88411.41	8265.452	4407.257	6345.285

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2609-01 Acquired: 7/17/2025 19:06:37 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**3.490388**	**.2600752**	**17.87949**	**-.142604**	**.6727672**	**153.6913**
Stddev	.004180	.0044392	.06796	.004813	.0040173	.2180
%RSD	.1197655	1.706877	.3800831	3.375335	.5971320	.1418655
#1	3.485813	.2651337	17.85791	-.143730	.6693669	153.6014
#2	3.494009	.2568282	17.82493	-.146754	.6717347	153.9399
#3	3.491342	.2582638	17.95561	-.137327	.6772000	153.5326

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.426200**	**.0524192**	**.2326715**	**140.9354**	**2.324678**	**2.575509**
Stddev	.034168	.0005192	.0027693	.3277	.012970	.009069
%RSD	.4600973	.9904476	1.190197	.2325346	.5579386	.3521330
#1	7.453409	.0519756	.2294784	140.6372	2.324385	2.570916
#2	7.387853	.0529902	.2341192	141.2863	2.337792	2.569654
#3	7.437338	.0522919	.2344167	140.8828	2.311856	2.585955

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**62.68635**	F **2128.243**	**7.208466**	**68.77939**	**3.917723**	^ *****
Stddev	.16606	14.975	.013420	.30944	.013032	-----
%RSD	.2649127	.7036520	.1861749	.4498957	.3326482	-----
#1	62.66160	2133.117	7.195954	68.42383	3.911415	^ -----
#2	62.53406	2111.438	7.222639	68.92669	3.909044	^ -----
#3	62.86341	2140.174	7.206804	68.98766	3.932709	^ -----

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.96007**	**.5227944**	F **29.03394**	**58.72997**	^ *****	**20.51916**
Stddev	.12026	.0047240	.55507	.17986	-----	.04420
%RSD	.4460702	.9036067	1.911797	.3062565	-----	.2153913
#1	27.09482	.5282198	29.52865	58.93506	^ -----	20.51312
#2	26.92180	.5205717	29.13951	58.65579	^ -----	20.47829
#3	26.86361	.5195917	28.43367	58.59905	^ -----	20.56606

Sample Name: Q2609-01 Acquired: 7/17/2025 19:06:37 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**2.910162**	**5.814714**	F **17.39562**	**6.141055**	F **76.81717**	**.9478821**
Stddev	.009992	.010546	.13725	.014963	.50389	.0069761
%RSD	.3433469	.1813655	.7889897	.2436562	.6559598	.7359641
#1	2.907243	5.805788	17.26895	6.139706	76.32959	.9499605
#2	2.901955	5.812003	17.37646	6.126812	76.78599	.9401030
#3	2.921288	5.826351	17.54144	6.156647	77.33592	.9535827

Elem	Sr4077
Units	ppm
Avg	F **-1.06333**
Stddev	.01517
%RSD	1.427004
#1	-1.06748
#2	-1.04652
#3	-1.07601

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5158.293**	**94876.26**	**9711.031**	**4302.452**	**4298.954**
Stddev	9.973	225.95	38.502	5.406	10.633
%RSD	.1933399	.2381571	.3964725	.1256429	.2473307
#1	5155.372	94862.64	9745.248	4307.205	4302.082
#2	5169.401	94657.42	9669.341	4296.571	4307.672
#3	5150.107	95108.72	9718.504	4303.580	4287.109

Sample Name: Q2609-05 Acquired: 7/17/2025 19:11:14 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**4.137392**	**.3056652**	**22.18638**	**-.240156**	**.7253657**	**165.4512**
Stddev	.013039	.0054408	.09008	.012183	.0042299	.2768
%RSD	.3151422	1.779981	.4060337	5.072808	.5831468	.1672798
#1	4.136118	.3094903	22.15103	-.243807	.7207259	165.5229
#2	4.125037	.3080687	22.11933	-.226565	.7290072	165.1457
#3	4.151021	.2994366	22.28878	-.250095	.7263641	165.6852

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.346529**	**.0637009**	**.3412376**	**166.1566**	**2.684361**	**3.219272**
Stddev	.143477	.0011039	.0032426	.7718	.017549	.013951
%RSD	2.260718	1.732934	.9502378	.4644874	.6537588	.4333610
#1	6.376346	.0646399	.3404830	166.5897	2.674373	3.214004
#2	6.190486	.0624849	.3384389	165.2655	2.674085	3.208722
#3	6.472754	.0639780	.3447910	166.6146	2.704624	3.235090

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**71.20239**	F **2400.479**	**8.233544**	**80.95322**	**4.701528**	^ *****
Stddev	.20855	7.390	.030836	.25731	.019231	-----
%RSD	.2928961	.3078710	.3745221	.3178460	.4090357	-----
#1	71.17649	2396.289	8.251207	80.96791	4.696276	^ -----
#2	71.00799	2409.013	8.197937	80.68888	4.685468	^ -----
#3	71.42267	2396.136	8.251487	81.20287	4.722839	^ -----

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**32.47501**	**.5325221**	F **29.18539**	**73.80897**	^ *****	F **23.28233**
Stddev	.20554	.0051437	.20320	.44626	-----	.05925
%RSD	.6329059	.9659231	.6962391	.6046198	-----	.2545050
#1	32.28412	.5271139	29.25879	73.51236	^ -----	23.29339
#2	32.69258	.5373526	29.34169	74.32220	^ -----	23.21833
#3	32.44832	.5330999	28.95569	73.59236	^ -----	23.33528

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2609-05 Acquired: 7/17/2025 19:11:14 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.509867	7.109258	F 34.06792	7.644916	F 117.2181	1.058881
Stddev	.009966	.006478	.25780	.015142	.3746	.002813
%RSD	.2839384	.0911176	.7567337	.1980714	.3196030	.2656245
#1	3.506333	7.104506	33.85961	7.640353	116.9025	1.060458
#2	3.502149	7.106630	34.35624	7.632580	117.1198	1.060552
#3	3.521118	7.116636	33.98790	7.661815	117.6322	1.055634

Elem	Sr4077
Units	ppm
Avg	F -1.25374
Stddev	.00942
%RSD	.7513770
#1	-1.24897
#2	-1.26459
#3	-1.24766

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5195.859	96513.46	9915.241	4318.882	4026.188
Stddev	21.989	230.88	82.038	19.015	20.914
%RSD	.4232040	.2392220	.8273887	.4402781	.5194394
#1	5184.096	96779.72	9878.392	4313.064	4020.150
#2	5221.228	96368.74	10009.24	4303.456	4049.457
#3	5182.253	96391.92	9858.09	4340.127	4008.959

Sample Name: CCV06 Acquired: 7/17/2025 19:24:03 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.064131**	**4.893983**	**4.865075**	**5.118918**	**5.148702**	**9.937737**
Stddev	.001995	.031835	.002908	.008551	.004112	.018881
%RSD	.0393920	.6504827	.0597759	.1670432	.0798586	.1899962
#1	5.062762	4.898533	4.864584	5.125553	5.151496	9.917143
#2	5.066420	4.923298	4.868198	5.121933	5.143981	9.941835
#3	5.063212	4.860118	4.862444	5.109268	5.150630	9.954233

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.43742**	**.2481483**	**2.432629**	**26.25984**	**.9088350**	**2.463455**
Stddev	.27854	.0011288	.004810	.03529	.0022807	.003261
%RSD	2.668712	.4548685	.1977095	.1343708	.2509489	.1323729
#1	10.61982	.2478957	2.431267	26.22007	.9082444	2.462033
#2	10.11679	.2471673	2.437972	26.27207	.9069078	2.467186
#3	10.57564	.2493820	2.428647	26.28738	.9113530	2.461147

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.263287**	**4.767243**	**2.568734**	**23.86580**	**2.487696**	**1.247754**
Stddev	.000491	.035535	.011744	.12376	.002799	.006377
%RSD	.0388300	.7453926	.4571808	.5185722	.1125261	.5110685
#1	1.263086	4.727155	2.555219	23.73456	2.486912	1.244400
#2	1.263847	4.794867	2.576454	23.88245	2.490804	1.243754
#3	1.262930	4.779705	2.574529	23.98039	2.485372	1.255108

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.31814**	**2.440622**	**2.496464**	**24.65573**	**5.359392**	**5.111608**
Stddev	.33939	.010615	.011255	.08050	.025733	.001868
%RSD	1.289558	.4349296	.4508330	.3265011	.4801432	.0365407
#1	26.05366	2.431395	2.509414	24.56336	5.353945	5.109651
#2	26.19995	2.438249	2.490935	24.69292	5.336818	5.113372
#3	26.70082	2.452223	2.489043	24.71091	5.387412	5.111799

Sample Name: CCV06 Acquired: 7/17/2025 19:24:03 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.880543**	**4.886021**	F **4.488265**	**5.044803**	**4.950456**	**4.950629**
Stddev	.003514	.006320	.029438	.016536	.014544	.013052
%RSD	.0719962	.1293508	.6558984	.3277732	.2937991	.2636494
#1	4.882656	4.880339	4.454318	5.028154	4.944288	4.940595
#2	4.882486	4.892828	4.503699	5.061223	4.967068	4.965386
#3	4.876487	4.884896	4.506776	5.045033	4.940012	4.945908

Elem	Sr4077
Units	ppm
Avg	**5.321616**
Stddev	.037813
%RSD	.7105537
#1	5.280268
#2	5.354437
#3	5.330144

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5151.614**	**87031.54**	**7864.898**	**4288.087**	**5955.494**
Stddev	9.334	63.98	14.504	19.600	16.569
%RSD	.1811786	.0735121	.1844094	.4570821	.2782123
#1	5162.200	87069.71	7848.373	4268.494	5973.220
#2	5144.568	87067.23	7875.514	4288.072	5940.396
#3	5148.074	86957.67	7870.808	4307.694	5952.866

Sample Name: CCB06 Acquired: 7/17/2025 19:28:14 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001240**	**.0014278**	**-.002037**	**-.003794**	**-.002504**	**.0002789**
Stddev	.000728	.0004476	.000226	.004752	.000352	.0004322
%RSD	58.72573	31.34593	11.07223	125.2677	14.06819	154.9515
#1	-.001996	.0018945	-.001777	-.007323	-.002146	-.000214
#2	-.000543	.0013868	-.002167	.001610	-.002515	.000460
#3	-.001180	.0010022	-.002168	-.005669	-.002850	.000592

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003375**	**-.000081**	**.0000424**	**.0621903**	**-.000275**	**-.000054**
Stddev	.000928	.000032	.0000375	.0123951	.000238	.000145
%RSD	27.48982	38.71976	88.47527	19.93099	86.60082	266.4773
#1	-.003764	-.000048	.0000698	.0521381	-.000385	-.000172
#2	-.004045	-.000086	.0000579	.0583929	-.000438	.000107
#3	-.002316	-.000110	-.000000	.0760399	-.000002	-.000098

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000371**	**-.000475**	**.0002877**	**-.002284**	**.0003116**	**.0011438**
Stddev	.000354	.000735	.0000312	.023900	.0000536	.0002451
%RSD	95.32132	154.7094	10.85631	1046.625	17.18208	21.42922
#1	-.000553	-.000572	.0003238	.020484	.0003354	.0009080
#2	-.000598	-.001157	.0002697	-.000161	.0002503	.0013972
#3	.000037	.000304	.0002697	-.027174	.0003492	.0011263

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.300284**	**-.003367**	**.0000885**	**.2222212**	**.0047977**	**.0012119**
Stddev	.013578	.000641	.0001475	.0374207	.0002099	.0002457
%RSD	4.521616	19.04534	166.7148	16.83939	4.374182	20.27077
#1	-.313592	-.002627	.0001396	.1836410	.0049569	.0014177
#2	-.300808	-.003713	-.000078	.2246594	.0045599	.0012782
#3	-.286451	-.003762	.000204	.2583631	.0048762	.0009399

Sample Name: CCB06 Acquired: 7/17/2025 19:28:14 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018512	.0160796	-.005569	.0010677	F -.028162	-.002699
Stddev	.0005848	.0006972	.016999	.0004230	.002564	.002573
%RSD	31.59188	4.336128	305.2352	39.61579	9.103008	95.32009
#1	.0014335	.0157017	.008206	.0006428	-.029356	-.000377
#2	.0016004	.0168842	-.000346	.0014888	-.025219	-.005464
#3	.0025195	.0156528	-.024567	.0010715	-.029911	-.002256

Elem	Sr4077
Units	ppm
Avg	.0002524
Stddev	.0001062
%RSD	42.10296
#1	.0003146
#2	.0003128
#3	.0001297

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5384.406	90823.21	8281.501	4509.484	6644.869
Stddev	18.892	31.32	107.621	19.007	21.105
%RSD	.3508567	.0344804	1.299539	.4214937	.3176186
#1	5382.784	90799.31	8157.238	4525.673	6648.891
#2	5404.056	90811.67	8344.797	4514.223	6663.674
#3	5366.378	90858.66	8342.468	4488.555	6622.042

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2609-01DLX10 Acquired: 7/17/2025 19:34:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.3903816**	**.0392005**	**1.675255**	**.0057349**	**.0719661**	**17.31775**	**.8547062**
Stddev	.0030402	.0010849	.008937	.0021744	.0012047	.03066	.0008481
%RSD	.7787832	2.767584	.5334924	37.91615	1.673969	.1770689	.0992242
#1	.3910609	.0404475	1.669457	.0034834	.0730945	17.34598	.8537335
#2	.3870592	.0386802	1.670760	.0058981	.0721063	17.32215	.8550942
#3	.3930247	.0384737	1.685547	.0078231	.0706974	17.28512	.8552908

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0043553**	**.0036528**	**17.60677**	**.2824734**	**.2307978**	**7.835576**	**309.6922**
Stddev	.0001213	.0003177	.01935	.0014406	.0007009	.031230	2.4667
%RSD	2.784983	8.697730	.1098951	.5099885	.3036683	.3985726	.7964995
#1	.0044387	.0037753	17.59252	.2808645	.2304916	7.814151	308.0683
#2	.0042161	.0032921	17.59900	.2836437	.2303021	7.821167	312.5307
#3	.0044110	.0038911	17.62880	.2829120	.2315996	7.871410	308.4778

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9093922**	**8.806973**	**.3641197**	**.0061040**	**2.336546**	**.0578179**	**7.034446**
Stddev	.0006490	.055215	.0013822	.0008639	.034216	.0023006	.010419
%RSD	.0713616	.6269520	.3796095	14.15376	1.464391	3.979064	.1481111
#1	.9101005	8.864232	.3630068	.0051078	2.324209	.0604741	7.027576
#2	.9092497	8.802629	.3636852	.0065565	2.375220	.0564519	7.046434
#3	.9088263	8.754058	.3656669	.0066476	2.310209	.0565278	7.029329

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.362213**	**-.132030**	**2.446660**	**.2692306**	**.6923336**	**1.842591**	**.5199318**
Stddev	.060502	.017630	.012620	.0007869	.0026497	.009329	.0005499
%RSD	.9509637	13.35294	.5158185	.2922802	.3827228	.5062972	.1057684
#1	6.307119	-.141498	2.435598	.2692519	.6894359	1.844207	.5205029
#2	6.426962	-.111689	2.443975	.2684332	.6946331	1.851007	.5194058
#3	6.352558	-.142902	2.460407	.2700066	.6929317	1.832560	.5198867

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2609-01DLX10 Acquired: 7/17/2025 19:34:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	6.622069	.1270016	-.184058
Stddev	.033381	.0017047	.002350
%RSD	.5040873	1.342280	1.276779
#1	6.586024	.1261299	-.182661
#2	6.628267	.1289659	-.186771
#3	6.651917	.1259090	-.182743

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5320.881	90051.68	8475.218	4430.987	6125.211
Stddev	6.945	531.22	32.820	11.439	6.582
%RSD	.1305247	.5899004	.3872490	.2581663	.1074640
#1	5325.305	90483.50	8457.788	4442.993	6130.436
#2	5324.460	89458.49	8513.076	4420.214	6127.378
#3	5312.876	90213.04	8454.790	4429.755	6117.818

Sample Name: Q2609-05DLX10 Acquired: 7/17/2025 19:38:21 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.4842684**	**.0479575**	**2.037889**	**.0134301**	**.0747946**	**19.27959**	**.7576911**
Stddev	.0014191	.0015485	.004305	.0045286	.0023984	.01945	.0013152
%RSD	.2930389	3.228876	.2112271	33.71979	3.206630	.1008776	.1735800
#1	.4836380	.0494281	2.032920	.0087630	.0753160	19.27860	.7588242
#2	.4858935	.0481029	2.040300	.0137212	.0768894	19.26065	.7580002
#3	.4832737	.0463414	2.040449	.0178062	.0721784	19.29951	.7562488

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0057634**	**.0046056**	**21.74778**	**.3438123**	**.2829447**	**9.290066**	**384.4663**
Stddev	.0003711	.0006703	.08335	.0072494	.0002503	.001772	6.0477
%RSD	6.439617	14.55429	.3832479	2.108544	.0884568	.0190730	1.573000
#1	.0058313	.0046893	21.83855	.3404968	.2829159	9.290026	382.6578
#2	.0053629	.0052301	21.73013	.3388135	.2827101	9.288315	379.5292
#3	.0060958	.0038973	21.67468	.3521266	.2832082	9.291858	391.2119

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.088966**	**10.81980**	**.4300041**	**.0074195**	**3.141261**	**.0618126**	**8.794486**
Stddev	.001407	.00344	.0010609	.0008032	.085017	.0044245	.116858
%RSD	.1292257	.0318117	.2467276	10.82575	2.706454	7.157932	1.328766
#1	1.089552	10.82079	.4298944	.0083272	3.104379	.0658041	8.694625
#2	1.089985	10.81597	.4290023	.0068009	3.080914	.0570551	8.765826
#3	1.087360	10.82263	.4311157	.0071303	3.238491	.0625784	8.923008

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.375081**	**-.100573**	**2.926425**	**.3202550**	**.8758365**	**3.840006**	**.6290483**
Stddev	.133033	.010389	.002461	.0000406	.0017957	.058976	.0060733
%RSD	1.588436	10.32978	.0841053	.0126916	.2050234	1.535822	.9654795
#1	8.290186	-.097373	2.924097	.3202985	.8738218	3.800950	.6242529
#2	8.306657	-.112185	2.929001	.3202180	.8772684	3.811221	.6270144
#3	8.528399	-.092160	2.926176	.3202483	.8764192	3.907846	.6358776

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2609-05DLX10 Acquired: 7/17/2025 19:38:21 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**10.07182**	**.1598272**	**-.242690**
Stddev	.03777	.0033074	.005800
%RSD	.3750129	2.069329	2.389803
#1	10.08583	.1615032	-.241088
#2	10.10059	.1560174	-.237860
#3	10.02905	.1619611	-.249123

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5286.334**	**88407.75**	**8507.348**	**4353.664**	**6013.303**
Stddev	9.150	1477.32	40.334	56.844	6.093
%RSD	.1730828	1.671029	.4741104	1.305650	.1013217
#1	5288.335	89353.98	8550.419	4405.273	6015.273
#2	5276.349	89163.84	8470.467	4362.981	6006.469
#3	5294.317	86705.42	8501.158	4292.737	6018.167

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01 Acquired: 7/17/2025 19:42:23 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0802262**	**.0049045**	**1.825424**	**.0082208**	**.0073708**	**84.71471**	**1.815245**
Stddev	.0014164	.0050381	.004304	.0058456	.0014133	.07630	.001161
%RSD	1.765563	102.7246	.2358000	71.10832	19.17390	.0900682	.0639793
#1	.0818275	-.000839	1.827677	.0130425	.0061848	84.76698	1.816112
#2	.0791369	.008576	1.820461	.0017191	.0089346	84.74999	1.815696
#3	.0797143	.006977	1.828135	.0099007	.0069931	84.62715	1.813925

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0049193**	**.0131042**	**217.5859**	**.2676760**	**.1014204**	**1.086186**	**200.9502**
Stddev	.0001535	.0000631	.8399	.0036652	.0001309	.001116	2.2052
%RSD	3.121240	.4813847	.3860021	1.369271	.1290546	.1026999	1.097406
#1	.0048002	.0130342	216.7429	.2661287	.1014941	1.085066	202.5054
#2	.0048652	.0131219	218.4226	.2650382	.1012693	1.086195	198.4265
#3	.0050926	.0131566	217.5922	.2718611	.1014978	1.087298	201.9189

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.210966**	**43.19753**	**.2834039**	**.0058232**	**5.784242**	**.3045523**	**3.286963**
Stddev	.010614	.05256	.0010649	.0002787	.070326	.0004425	.028877
%RSD	.1471966	.1216826	.3757583	4.786718	1.215828	.1452840	.8785180
#1	7.200882	43.22019	.2835607	.0060954	5.811192	.3049789	3.294280
#2	7.222041	43.13744	.2822692	.0055383	5.704426	.3045824	3.255132
#3	7.209974	43.23496	.2843817	.0058359	5.837107	.3040955	3.311477

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.26218**	**.1257586**	**.0179439**	**.0847033**	**2.723831**	**2.764669**	**17.90953**
Stddev	.11575	.0079680	.0001612	.0013673	.009216	.015352	.03443
%RSD	1.027776	6.335966	.8985672	1.614205	.3383300	.5553058	.1922628
#1	11.35437	.1339093	.0177697	.0833649	2.731790	2.777136	17.91944
#2	11.13228	.1179867	.0180879	.0846474	2.725969	2.747521	17.87123
#3	11.29987	.1253797	.0179740	.0860977	2.713735	2.769349	17.93793

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01 Acquired: 7/17/2025 19:42:23 Type: Unk
Method: 6010-200.7 NEW(v42) 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	14.92744	.2095389	.8204922
Stddev	.04345	.0011718	.0030808
%RSD	.2910782	.5592392	.3754764
#1	14.96609	.2081988	.8196059
#2	14.88041	.2100467	.8239190
#3	14.93582	.2103711	.8179518

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5759.249	96620.20	9414.384	4779.393	5628.301
Stddev	5.307	889.26	56.250	48.033	8.873
%RSD	.0921493	.9203663	.5974889	1.004999	.1576557
#1	5765.050	96379.99	9479.206	4764.807	5632.525
#2	5758.059	97604.89	9378.410	4833.028	5634.273
#3	5754.638	95875.71	9385.537	4740.343	5618.105

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01DUP Acquired: 7/17/2025 19:46:26 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.0815732	.0063904	1.853893	.0153111	.0072207	85.12242
Stddev	.0019317	.0007986	.007814	.0024461	.0013435	.52348
%RSD	2.368111	12.49624	.4214880	15.97627	18.60624	.6149775
#1	.0821736	.0071763	1.845442	.0125163	.0087410	84.53274
#2	.0794126	.0064151	1.855380	.0170629	.0061931	85.53232
#3	.0831335	.0055798	1.860856	.0163541	.0067280	85.30221

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.817787	.0050147	.0131334	219.0418	.2668203	.1028332
Stddev	.013189	.0000470	.0000656	1.5737	.0003443	.0003789
%RSD	.7255751	.9365089	.4992250	.7184685	.1290410	.3685012
#1	1.803679	.0050582	.0132004	217.9848	.2666092	.1032513
#2	1.829810	.0050211	.0131304	220.8505	.2672177	.1027359
#3	1.819871	.0049649	.0130694	218.2902	.2666342	.1025124

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.104295	202.5228	7.244237	43.68297	.2886082	.0055734
Stddev	.003653	.8702	.046848	.33643	.0007172	.0005351
%RSD	.3307899	.4296820	.6466885	.7701544	.2484997	9.600234
#1	1.100296	202.2767	7.196236	43.29947	.2877805	.0049601
#2	1.105134	201.8022	7.289839	43.92839	.2889976	.0058152
#3	1.107456	203.4896	7.246636	43.82104	.2890464	.0059449

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.870654	.3031713	3.319244	11.27411	.1056270	.0179916
Stddev	.055417	.0050812	.007444	.02256	.0065594	.0002235
%RSD	.9439728	1.676032	.2242593	.2001219	6.209999	1.242281
#1	5.849532	.2973245	3.325098	11.26931	.1083982	.0182390
#2	5.828903	.3056699	3.321768	11.25434	.0981367	.0179313
#3	5.933526	.3065195	3.310867	11.29869	.1103460	.0178044

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01DUP Acquired: 7/17/2025 19:46:26 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.0867460	2.747787	2.735342	F 18.24039	15.12395	.2112041
Stddev	.0010664	.019529	.017705	.02225	.06385	.0043751
%RSD	1.229291	.7107310	.6472828	.1219874	.4221825	2.071503
#1	.0871237	2.725239	2.727227	18.21991	15.11719	.2062883
#2	.0875721	2.759381	2.723149	18.23720	15.06374	.2146709
#3	.0855422	2.758739	2.755650	18.26407	15.19090	.2126530

Elem	Sr4077
Units	ppm
Avg	.8181383
Stddev	.0067629
%RSD	.8266208
#1	.8118956
#2	.8253227
#3	.8171965

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5672.806	96762.80	9435.853	4745.912	5530.531
Stddev	13.435	333.83	52.872	10.018	12.990
%RSD	.2368382	.3450024	.5603257	.2110908	.2348768
#1	5688.155	96458.90	9447.297	4738.175	5544.866
#2	5667.085	97120.12	9378.197	4757.228	5519.541
#3	5663.177	96709.37	9482.066	4742.334	5527.185

Sample Name: Q2614-01LX5 Acquired: 7/17/2025 19:50:29 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.0121684**	**.0007129**	**.3320030**	**.0001889**	**-.000206**	**16.30687**	**.3333221**
Stddev	.0034082	.0009877	.0012027	.0016786	.001951	.03969	.0011740
%RSD	28.00875	138.5585	.3622461	888.5213	948.2652	.2434013	.3521986
#1	.0160582	.0001202	.3313714	.0017094	.001328	16.35270	.3346547
#2	.0097055	.0001653	.3333898	.0004697	-.002402	16.28405	.3328711
#3	.0107416	.0018531	.3312477	-.001612	.000457	16.28385	.3324405

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007851**	**.0014637**	**45.99912**	**.0528634**	**.0223350**	**.2876963**	**43.22289**
Stddev	.0000700	.0000644	.20791	.0004643	.0001495	.0000649	.05292
%RSD	8.911138	4.396705	.4519817	.8782977	.6692873	.0225687	.1224351
#1	.0007155	.0014418	46.23722	.0523278	.0224816	.2877536	43.26555
#2	.0008554	.0015362	45.85344	.0531090	.0221828	.2877095	43.16367
#3	.0007846	.0014132	45.90672	.0531532	.0223407	.2876258	43.23944

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.451581**	**9.177744**	**.0552168**	**.0022947**	**.6874860**	**.0625588**	**.6739963**
Stddev	.004940	.044431	.0000949	.0001400	.0033048	.0008895	.0021977
%RSD	.3402850	.4841220	.1718038	6.103182	.4807030	1.421828	.3260704
#1	1.457161	9.198792	.0551224	.0021431	.6878811	.0633206	.6715771
#2	1.449817	9.126700	.0552158	.0024193	.6905755	.0627746	.6758696
#3	1.447766	9.207741	.0553121	.0023217	.6840015	.0615813	.6745422

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.223362**	**.0330118**	**.0035646**	**.0217745**	**.6837521**	**.8192677**	**3.410897**
Stddev	.016122	.0009753	.0001705	.0005960	.0023309	.0091056	.007174
%RSD	.7251029	2.954321	4.781730	2.737156	.3408921	1.111432	.2103381
#1	2.212919	.0339597	.0037304	.0223822	.6862791	.8176415	3.413668
#2	2.241930	.0320113	.0033898	.0211909	.6816864	.8110848	3.416272
#3	2.215238	.0330644	.0035736	.0217505	.6832906	.8290769	3.402750

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01LX5 Acquired: 7/17/2025 19:50:29 Type: Unk
Method: 6010-200.7 NEW(v42) 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	3.406188	.0375814	.1541324
Stddev	.015878	.0008308	.0001086
%RSD	.4661608	2.210581	.0704381
#1	3.420969	.0366650	.1542059
#2	3.408193	.0382853	.1540077
#3	3.389403	.0377938	.1541837

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5514.160	92150.87	8507.794	4532.466	6412.285
Stddev	10.280	420.00	67.641	11.953	7.502
%RSD	.1864310	.4557747	.7950440	.2637248	.1169959
#1	5502.295	91683.72	8430.126	4518.930	6405.227
#2	5519.757	92271.62	8539.489	4536.898	6420.164
#3	5520.426	92497.27	8553.767	4541.570	6411.466

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01MS Acquired: 7/17/2025 19:54:36 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.8067325**	**1.868206**	**4.058004**	**1.804943**	**.4004586**	**102.7807**
Stddev	.0025885	.030013	.002953	.004722	.0025898	.0291
%RSD	.3208636	1.606495	.0727783	.2615990	.6467015	.0283512
#1	.8043606	1.879878	4.054757	1.805137	.3980651	102.7914
#2	.8063434	1.834111	4.058723	1.809565	.4001029	102.8029
#3	.8094936	1.890629	4.060531	1.800128	.4032079	102.7477

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.518719**	**.1791552**	**.2107582**	**234.8343**	**.5716106**	**.3328753**
Stddev	.001651	.0004367	.0005708	.5852	.0002438	.0003191
%RSD	.0655555	.2437543	.2708131	.2492008	.0426561	.0958721
#1	2.517339	.1789213	.2101901	234.3209	.5713658	.3326889
#2	2.520548	.1788852	.2107528	234.7105	.5716124	.3326932
#3	2.518271	.1796590	.2113316	235.4715	.5718535	.3332438

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.388668**	**236.4201**	**6.965519**	**69.40185**	**.8458379**	**.0727602**
Stddev	.003571	.6463	.007046	.22689	.0026621	.0008602
%RSD	.2571522	.2733842	.1011580	.3269150	.3147231	1.182233
#1	1.387959	236.3815	6.960455	69.31055	.8439441	.0736490
#2	1.385505	235.7940	6.962535	69.23483	.8446880	.0719318
#3	1.392541	237.0849	6.973566	69.66016	.8488816	.0726997

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.555407**	**.6669078**	**4.686893**	**22.29862**	**.7223983**	**.3776102**
Stddev	.028813	.0018072	.015916	.05960	.0039969	.0004832
%RSD	.3015376	.2709873	.3395821	.2672648	.5532848	.1279526
#1	9.547308	.6676558	4.700428	22.23522	.7186969	.3774956
#2	9.587402	.6682210	4.690892	22.35350	.7218614	.3771947
#3	9.531509	.6648467	4.669359	22.30714	.7266365	.3781404

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01MS Acquired: 7/17/2025 19:54:36 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.7424262	3.609344	3.006583	F 23.88370	14.41272	.4270434
Stddev	.0015400	.000975	.023112	.03542	.03316	.0042623
%RSD	.2074245	.0270145	.7687267	.1482885	.2300470	.9981018
#1	.7409607	3.608615	3.003355	23.86145	14.39615	.4257325
#2	.7440312	3.608966	2.985254	23.92454	14.39111	.4235906
#3	.7422866	3.610452	3.031140	23.86512	14.45090	.4318073

Elem	Sr4077
Units	ppm
Avg	.9841113
Stddev	.0020778
%RSD	.2111360
#1	.9821190
#2	.9862652
#3	.9839495

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5670.049	96931.91	9206.775	4712.383	5515.931
Stddev	10.238	143.07	28.676	13.473	9.386
%RSD	.1805541	.1475969	.3114714	.2859090	.1701666
#1	5669.001	97096.88	9237.592	4698.856	5519.847
#2	5680.770	96841.83	9180.874	4712.490	5522.725
#3	5660.376	96857.03	9201.860	4725.802	5505.220

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01MSD Acquired: 7/17/2025 19:58:32 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.7215656**	**1.757583**	**2.497600**	**1.621940**	**.3583761**	**83.90242**
Stddev	.0031318	.029277	.003669	.001481	.0012162	.02173
%RSD	.4340319	1.665741	.1469070	.0913317	.3393651	.0258967
#1	.7221981	1.770334	2.495686	1.623038	.3572009	83.88020
#2	.7243329	1.778322	2.495283	1.622527	.3596296	83.92362
#3	.7181658	1.724093	2.501830	1.620255	.3582979	83.90344

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.712359**	**.1586948**	**.1958058**	**218.8556**	**.4891759**	**.2899647**
Stddev	.002426	.0011716	.0003728	.3042	.0020908	.0004570
%RSD	.1416946	.7382615	.1903697	.1390112	.4274213	.1575986
#1	1.714577	.1584494	.1954172	218.6284	.4911403	.2895163
#2	1.709768	.1599696	.1958398	218.7371	.4894092	.2899482
#3	1.712733	.1576653	.1961604	219.2012	.4869782	.2904298

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.114843**	**181.6250**	**5.866688**	**43.12238**	**.7382930**	**.0666502**
Stddev	.001918	1.0768	.011507	.07936	.0014168	.0004676
%RSD	.1720370	.5928731	.1961483	.1840456	.1918952	.7016003
#1	1.112732	181.7585	5.857328	43.13751	.7368500	.0662241
#2	1.115320	180.4877	5.863201	43.03654	.7383470	.0665759
#3	1.116478	182.6288	5.879536	43.19309	.7396820	.0671505

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.244916**	**.5147489**	**2.832791**	**21.02998**	**.2683360**	**.3447843**
Stddev	.051370	.0012719	.004268	.12758	.0044131	.0009852
%RSD	.7090507	.2470900	.1506788	.6066413	1.644615	.2857351
#1	7.232246	.5135370	2.837705	21.08381	.2710354	.3438049
#2	7.201066	.5146364	2.830011	20.88431	.2632432	.3457751
#3	7.301436	.5160733	2.830656	21.12182	.2707293	.3447730

Sample Name: Q2614-01MSD Acquired: 7/17/2025 19:58:32 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.6887301	2.936492	2.326781	F 21.36215	12.34254	.3742594
Stddev	.0007795	.002244	.025706	.05030	.03540	.0040151
%RSD	.1131740	.0764149	1.104772	.2354687	.2867817	1.072817
#1	.6889209	2.938320	2.321627	21.30687	12.34917	.3774935
#2	.6893965	2.937168	2.304042	21.40523	12.37415	.3697654
#3	.6878730	2.933988	2.354673	21.37435	12.30429	.3755193

Elem	Sr4077
Units	ppm
Avg	.9080903
Stddev	.0016246
%RSD	.1789064
#1	.9097166
#2	.9064673
#3	.9080871

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5931.146	102478.8	9812.751	5007.481	5592.877
Stddev	1.684	96.2	49.840	6.894	2.260
%RSD	.0283869	.0939055	.5079075	.1376793	.0404130
#1	5932.737	102409.6	9831.798	5000.845	5594.360
#2	5929.383	102438.1	9756.196	5014.608	5590.275
#3	5931.317	102588.7	9850.258	5006.991	5593.994

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01A Acquired: 7/17/2025 20:02:29 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**.7988443**	**1.830228**	**2.638450**	**1.841283**	**.7576885**	**79.59418**
Stddev	.0050174	.020759	.006124	.004935	.0033031	.11012
%RSD	.6280840	1.134250	.2321094	.2680431	.4359500	.1383482
#1	.8041848	1.853416	2.635732	1.846824	.7579521	79.51896
#2	.7981192	1.823896	2.634155	1.839667	.7608520	79.54301
#3	.7942289	1.813371	2.645463	1.837359	.7542615	79.72058

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.761140**	**.1731936**	**.2022038**	**209.8498**	**.5741254**	**.3213256**
Stddev	.003250	.0013898	.0007134	.2022	.0124294	.0009122
%RSD	.1845228	.8024368	.3528005	.0963432	2.164920	.2838868
#1	1.759395	.1739610	.2015526	209.9911	.5884456	.3216129
#2	1.764889	.1715894	.2020926	209.6182	.5661368	.3203044
#3	1.759136	.1740306	.2029663	209.9401	.5677937	.3220596

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.559602**	**210.2188**	**6.680701**	**43.46009**	**.7915414**	**.0781046**
Stddev	.004092	4.0349	.003058	.09378	.0014424	.0009548
%RSD	.2623985	1.919377	.0457722	.2157793	.1822206	1.222478
#1	1.555508	214.7645	6.679615	43.38626	.7899015	.0790947
#2	1.559605	208.8304	6.678335	43.42840	.7921094	.0780297
#3	1.563693	207.0614	6.684154	43.56560	.7926133	.0771895

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.029807**	**.5581298**	**3.372904**	**19.89569**	**.4552304**	**.3896007**
Stddev	.169365	.0029241	.064814	.37566	.0159253	.0014187
%RSD	2.109201	.5239158	1.921620	1.888160	3.498294	.3641505
#1	8.210955	.5561432	3.447742	20.30056	.4727976	.3911771
#2	8.003056	.5567586	3.336080	19.82807	.4511544	.3884265
#3	7.875410	.5614875	3.334890	19.55842	.4417393	.3891985

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: Q2614-01A Acquired: 7/17/2025 20:02:29 Type: Unk
Method: 6010-200.7 NEW(v42) 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	.8046791	3.287848	4.816574	F 23.90989	18.59516	.3789086
Stddev	.0032820	.008079	.089104	.08218	.04522	.0017398
%RSD	.4078616	.2457288	1.849947	.3437082	.2431789	.4591589
#1	.8059189	3.285420	4.906535	23.98145	18.63451	.3796175
#2	.8009579	3.281261	4.814835	23.92810	18.54576	.3801820
#3	.8071606	3.296863	4.728352	23.82014	18.60520	.3769263

Elem	Sr4077
Units	ppm
Avg	.8956540
Stddev	.0042248
%RSD	.4717048
#1	.8907899
#2	.8977621
#3	.8984100

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5713.567	95782.83	9498.022	4727.712	5709.809
Stddev	6.744	1684.18	48.245	73.691	3.985
%RSD	.1180270	1.758331	.5079526	1.558697	.0697895
#1	5712.577	93840.40	9510.460	4643.582	5711.519
#2	5707.373	96672.26	9538.831	4758.733	5712.653
#3	5720.751	96835.82	9444.776	4780.821	5705.255

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV07 Acquired: 7/17/2025 20:16:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**4.996888**	**4.740309**	**4.834061**	**5.042089**	**5.104145**	**9.930027**	**10.42018**
Stddev	.011118	.052674	.009996	.008151	.001103	.032544	.05524
%RSD	.2224977	1.111197	.2067825	.1616678	.0216006	.3277324	.5301609
#1	4.987699	4.764820	4.842194	5.032688	5.102872	9.966832	10.43067
#2	4.993720	4.679846	4.822901	5.047204	5.104775	9.905056	10.46943
#3	5.009247	4.776261	4.837087	5.046374	5.104788	9.918193	10.36044

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2423021**	**2.410692**	**26.03189**	**.9244644**	**2.447633**	**1.250057**	**4.893432**
Stddev	.0015146	.005379	.13400	.0037177	.004912	.002831	.023431
%RSD	.6250975	.2231326	.5147432	.4021482	.2006920	.2264694	.4788272
#1	.2440499	2.410715	26.16454	.9277484	2.447356	1.247950	4.867036
#2	.2414816	2.405301	25.89658	.9252167	2.442865	1.248945	4.901488
#3	.2413747	2.416059	26.03454	.9204280	2.452678	1.253275	4.911773

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.552347**	**23.98664**	**2.469390**	**1.248921**	**25.41556**	**2.450686**	**2.513540**
Stddev	.009433	.13584	.003620	.001836	.05349	.008138	.005811
%RSD	.3695850	.5663297	.1465772	.1470247	.2104691	.3320632	.2312010
#1	2.559328	24.11029	2.471055	1.247146	25.35500	2.456887	2.510334
#2	2.541616	23.84123	2.465238	1.250813	25.45634	2.441471	2.510037
#3	2.556099	24.00841	2.471878	1.248804	25.43535	2.453699	2.520248

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.91557**	**5.206416**	**5.085550**	**4.842493**	**4.897273**	**4.681972**	**4.984581**
Stddev	.04759	.023872	.007951	.011963	.021644	.017661	.009470
%RSD	.1910216	.4585083	.1563481	.2470369	.4419658	.3772140	.1899917
#1	24.87660	5.233334	5.082361	4.844186	4.906220	4.668638	4.986448
#2	24.96862	5.187816	5.079689	4.829774	4.872589	4.702001	4.974316
#3	24.90151	5.198097	5.094601	4.853519	4.913008	4.675275	4.992978

Reviewed By:jaswal
On:7/21/2025 4:45:05 AM
Inst Id :P4
LB :LB136533

Sample Name: CCV07 Acquired: 7/17/2025 20:16:18 Type: Unk
Method: 6010-200.7 NEW(v42) 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	**4.848374**	**4.905082**	**5.313662**
Stddev	.025204	.017856	.117830
%RSD	.5198447	.3640384	2.217490
#1	4.847151	4.904638	5.408119
#2	4.823803	4.887451	5.181626
#3	4.874167	4.923156	5.351240

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5221.092**	**86523.83**	**8079.179**	**4316.516**	**6047.589**
Stddev	7.484	332.29	55.857	5.112	8.240
%RSD	.1433453	.3840430	.6913736	.1184387	.1362464
#1	5226.196	86362.11	8015.551	4321.383	6048.067
#2	5224.579	86303.36	8101.842	4316.976	6055.580
#3	5212.500	86906.02	8120.142	4311.189	6039.121

Sample Name: CCB07 Acquired: 7/17/2025 20:20:28 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000626**	**.0005388**	**-.001897**	**.0008004**	**-.001200**	**.0011315**
Stddev	.001463	.0013372	.000490	.0033447	.002411	.0087083
%RSD	233.8241	248.1704	25.82401	417.8773	200.9856	769.6165
#1	-.000858	.0001976	-.002360	-.001068	-.000647	-.007833
#2	-.001959	-.000595	-.001384	-.001193	.000887	.001669
#3	.000940	.002014	-.001946	.004662	-.003839	.009559

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.003664**	**-.000031**	**.0001326**	**.0639996**	**-.000347**	**-.000012**
Stddev	.000208	.000077	.0001144	.0077374	.000256	.000081
%RSD	5.678751	249.2939	86.26040	12.08977	73.73238	690.3029
#1	-.003892	-.000112	.0002213	.0713241	-.000253	.000070
#2	-.003618	.000040	.0001729	.0559066	-.000152	-.000013
#3	-.003484	-.000021	.0000035	.0647682	-.000637	-.000092

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000536**	**-.000084**	**.0002620**	**-.022620**	**.0005037**	**.0008241**
Stddev	.000420	.001629	.0001816	.015354	.0000955	.0001080
%RSD	78.40342	1949.651	69.31184	67.87853	18.96307	13.10282
#1	-.000065	-.001709	.0000598	-.014696	.0006098	.0006994
#2	-.000672	.001549	.0003152	-.040318	.0004771	.0008853
#3	-.000872	-.000090	.0004111	-.012847	.0004244	.0008875

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.485307**	**-.003008**	**.0001790**	**.1459905**	**.0090643**	**.0011193**
Stddev	.028601	.001688	.0000953	.0325867	.0005418	.0001687
%RSD	5.893419	56.13855	53.22203	22.32109	5.977447	15.07042
#1	-.457871	-.001241	.0001082	.1729574	.0096489	.0013077
#2	-.483102	-.003176	.0001415	.1552332	.0089651	.0010681
#3	-.514946	-.004605	.0002873	.1097809	.0085790	.0009822

Sample Name: CCB07 Acquired: 7/17/2025 20:20:28 Type: Unk
Method: 6010-200.7 NEW(v42) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB07 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0028146**	**.0168534**	**-.004426**	**.0003515**	F **-.029601**	**-.004873**
Stddev	.0001916	.0022827	.002672	.0011202	.001243	.000372
%RSD	6.806435	13.54448	60.37084	318.6543	4.197501	7.636782
#1	.0028489	.0193286	-.007495	.0016418	-.030424	-.004481
#2	.0029866	.0148311	-.002610	-.000372	-.030208	-.005222
#3	.0026081	.0164004	-.003174	-.000215	-.028172	-.004916

Elem	Sr4077
Units	ppm
Avg	**.0001870**
Stddev	.0000878
%RSD	46.95732
#1	.0001070
#2	.0001731
#3	.0002809

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**5292.738**	**89966.42**	**7992.330**	**4443.637**	**6496.089**
Stddev	7.948	227.33	48.203	31.941	14.042
%RSD	.1501609	.2526882	.6031099	.7187920	.2161663
#1	5285.794	90034.43	8040.756	4476.802	6490.164
#2	5301.406	90152.00	7944.354	4441.028	6512.123
#3	5291.014	89712.85	7991.879	4413.081	6485.980

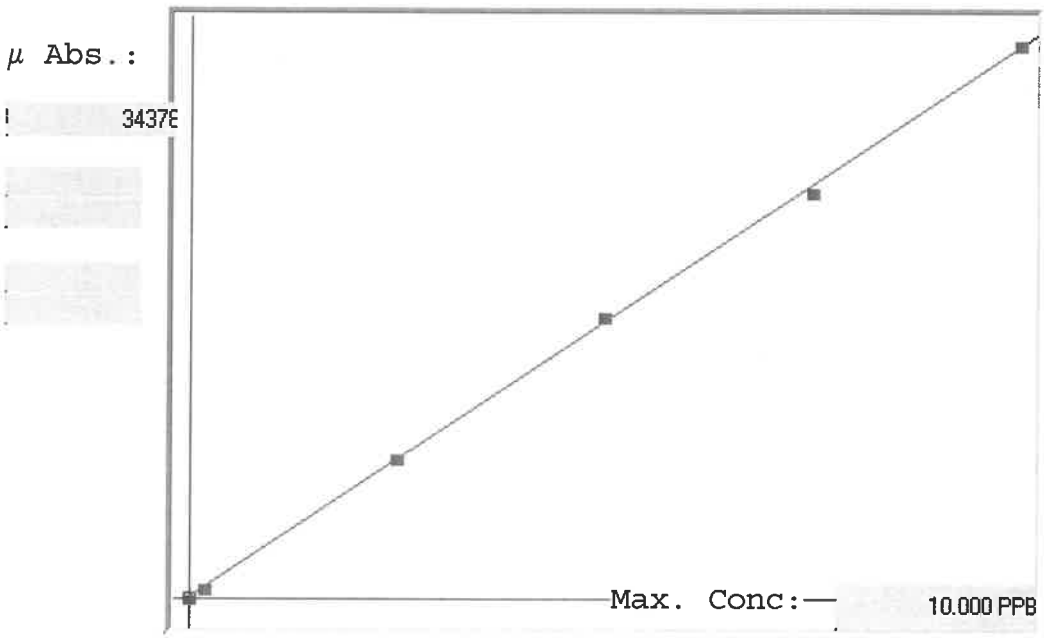
Reviewed By:jaswal
On:7/18/2025 9:17:09 AM
Inst Id :CV1
LB :LB136516

LB136516

7470A

INSTRUMENT ID: CV1

Linear



A= 0.0000e+000

B= 2.9269e-004

C= -3.0515e-002

Rho= 0.9998382

Accept=Accepted

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	%D
0.0	0.000	-0.019	-0.019	39	0.000	39	0				—
0.2	0.200	0.174	-0.026	698	0.0 %	698					-13
2.5	2.500	2.543	0.043	8791	0.0 %	8791					2
5.0	5.000	5.091	0.091	17498	0.0 %	17498					2
7.5	7.500	7.380	-0.120	25320	0.0 %	25320					-2
10.0	10.000	10.032	0.032	34378	0.0 %	34378					6

Reviewed By:jaswal
On:7/18/2025 9:17:09 AM
Inst Id :CV1
LB :LB136516

LB136516 INSTRUMENT ID : CV1

Method: 7470A Operator: Admin Date of Analysis: 17 Jul 2025 09:43:45

Type	Sample ID	Extended ID	Conc.	µ Abs.	Units	Type	Stnd Conc	Method	Date
S	0.0 - 1	S0	-	39	PPB	Std	0.0000	7470A	17 Jul 2025 09:53:13
S	0.2 - 1	S0.2	-	698	PPB	Std	0.2000	7470A	17 Jul 2025 09:55:30
S	2.5 - 1	S2.5	-	8791	PPB	Std	2.5000	7470A	17 Jul 2025 09:57:47
S	5.0 - 1	S5	-	17498	PPB	Std	5.0000	7470A	17 Jul 2025 10:00:03
S	7.5 - 1	S7.5	-	25320	PPB	Std	7.5000	7470A	17 Jul 2025 10:02:21
S	10.0 - 1	S10	-	34378	PPB	Std	10.0000	7470A	17 Jul 2025 10:04:39
U	ICV31 - 1	ICV31	3.7013	12750	PPB	SMPL		7470A	17 Jul 2025 10:07:33
U	ICB31 - 1	ICB31	0.0043	119	PPB	SMPL		7470A	17 Jul 2025 10:12:36
U	CCV18 - 1	CCV18	4.9967	17176	PPB	SMPL		7470A	17 Jul 2025 10:14:51
U	CCB18 - 1	CCB18	0.0687	339	PPB	SMPL		7470A	17 Jul 2025 10:21:36
U	CRA - 1	CRA	0.2317	896	PPB	SMPL		7470A	17 Jul 2025 10:26:31
U	HighStd - 1	HighStd	11.1786	38297	PPB	SMPL		7470A	17 Jul 2025 10:33:49
U	ChkStd - 1	ChkStd	7.4450	25541	PPB	SMPL		7470A	17 Jul 2025 10:36:06
U	PB168893BL - 1	PBW	0.0942	426	PPB	SMPL		7470A	17 Jul 2025 10:41:04
U	PB168893BS - 1	LCSW	4.4830	15421	PPB	SMPL		7470A	17 Jul 2025 10:46:02
U	Q2592-02 - 1	WC-SOIL-20250711	-0.0370	-22	PPB	SMPL		7470A	17 Jul 2025 10:48:18
U	Q2600-02 - 1	TRENCH	-0.0118	64	PPB	SMPL		7470A	17 Jul 2025 10:50:36
U	Q2600-06 - 1	STOCK-PILE	0.0330	217	PPB	SMPL		7470A	17 Jul 2025 10:52:53
U	Q2600-10 - 1	END-OF-TRENCH	-0.0428	-42	PPB	SMPL		7470A	17 Jul 2025 10:55:11
U	Q2605-01 - 1	V908	-0.0223	28	PPB	SMPL		7470A	17 Jul 2025 10:57:26
U	CCV19 - 1	CCV19	5.1720	17775	PPB	SMPL		7470A	17 Jul 2025 11:03:07
U	CCB19 - 1	CCB19	-0.0536	-79	PPB	SMPL		7470A	17 Jul 2025 11:05:22
U	Q2605-02 - 1	VB16135	-0.0127	61	PPB	SMPL		7470A	17 Jul 2025 11:07:40
U	Q2605-03 - 1	VB15061	-0.0086	75	PPB	SMPL		7470A	17 Jul 2025 11:09:55
U	Q2605-04 - 1	V897	-0.0147	54	PPB	SMPL		7470A	17 Jul 2025 11:12:11
U	Q2609-02 - 1	710-ABC	0.0069	128	PPB	SMPL		7470A	17 Jul 2025 11:14:27
U	Q2609-06 - 1	709-AB	0.1056	465	PPB	SMPL		7470A	17 Jul 2025 11:16:42
U	Q2614-06 - 1	HR-MCN-COMP-01	-0.1002	-238	PPB	SMPL		7470A	17 Jul 2025 11:18:58
U	Q2614-06DUP - 1	HR-MCN-COMP-01DUP	-0.0264	14	PPB	SMPL		7470A	17 Jul 2025 11:21:17
U	Q2614-06MS - 1	HR-MCN-COMP-01MS	2.6567	9181	PPB	SMPL		7470A	17 Jul 2025 11:23:34
U	Q2614-06MSD - 1	HR-MCN-COMP-01MSD	3.1492	10864	PPB	SMPL		7470A	17 Jul 2025 11:25:51
U	CCV20 - 1	CCV20	5.3268	18304	PPB	SMPL		7470A	17 Jul 2025 11:30:51
U	CCB20 - 1	CCB20	0.0146	154	PPB	SMPL		7470A	17 Jul 2025 11:35:50
U	pb168847TB - 1	pb168847TB	-0.0138	57	PPB	SMPL		7470A	17 Jul 2025 11:38:05
U	Q2614-06LX5 - 1		-0.0121	63	PPB	SMPL		7470A	17 Jul 2025 11:40:21
U	Q2614-06A - 1		4.2582	14653	PPB	SMPL		7470A	17 Jul 2025 11:42:37
U	CCV21 - 1	CCV21	5.2148	17921	PPB	SMPL		7470A	17 Jul 2025 11:53:37
U	CCB21 - 1	CCB21	-0.0370	-22	PPB	SMPL		7470A	17 Jul 2025 11:55:53

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB168888

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: 07/16/2025 **Time :** 12:30 **Temp :** 96 °C

End Digest Date: 07/16/2025 **Time :** 15:32 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: MET-DIG. #1

Dig Technician Signature: SPS

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6007
LFS-2	0.25	M6015
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	3.00	M6158
1:1 HCL	5.00	MP85156
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/16/25 16:32	SPS met. dig	[illegible]
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB168888

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB168847TB	PB168847TB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	1
PB168888BL	PBW888	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	2
PB168888BS	LCS888	<2	5	25	Colorless	Colorless	Clear	Clear	M6007,M6015	3
Q2592-02	WC-SOIL-20250711	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	4
Q2600-02	TRENCH	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	5
Q2600-06	STOCK-PILE	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	6
Q2600-10	END-OF-TRENCH	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	7
Q2605-01	V908	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	8
Q2605-02	VB16135	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	9
Q2605-03	VB15061	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	10
Q2605-04	V897	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	11
Q2609-02	710-ABC	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	12
Q2609-06	709-AB	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	13
Q2614-06	HR-MCN-COMP-01	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	14
Q2614-06MS	HR-MCN-COMP-01MS	<2	5	25	Colorless	Colorless	Clear	Clear	M6007,M6015	16
Q2614-06MSD	HR-MCN-COMP-01MSD	<2	5	25	Colorless	Colorless	Clear	Clear	M6007,M6015	17
Q2614-06DUP	HR-MCN-COMP-01DUP	<2	5	25	Colorless	Colorless	Clear	Clear	N/A	15

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168847

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep
PB168847TB	LEB847	12	N/A	2000	N/A	N/A	N/A	4.95	1.5	T-2
Q2592-02	WC-SOIL-20250711	01	100.02	2000	N/A	N/A	N/A	4.0	1.0	T-1
Q2600-02	TRENCH	02	100.03	2000	N/A	N/A	N/A	5.6	1.5	T-1
Q2600-06	STOCK-PILE	03	100.02	2000	N/A	N/A	N/A	5.6	1.0	T-1
Q2600-10	END-OF-TRENCH	04	100.03	2000	N/A	N/A	N/A	5.5	1.0	T-1
Q2605-01	V908	05	100.02	2000	N/A	N/A	N/A	6.6	1.5	T-1
Q2605-02	VB16135	06	100.02	2000	N/A	N/A	N/A	6.2	1.0	T-1
Q2605-03	VB15061	07	100.03	2000	N/A	N/A	N/A	6.6	1.5	T-1
Q2605-04	V897	08	100.02	2000	N/A	N/A	N/A	7.0	1.0	T-1
Q2609-02	710-ABC	09	100.03	2000	N/A	N/A	N/A	5.6	1.5	T-1
Q2609-06	709-AB	10	100.02	2000	N/A	N/A	N/A	5.0	1.0	T-1
Q2614-06	HR-MCN-COMP-01	11	100.03	2000	N/A	N/A	N/A	5.6	1.5	T-2

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB168893

SOP ID : M7470A-Mercury-20

SDG No : N/A

Matrix : WATER

Pippete ID: HG A

Balance ID : N/A

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #1

Block ID: 1. HG HOT BLOCK#3 2. N/A

Start Digest Date: 07/16/2025 **Time :** 14:40 **Temp :** 95 °C

End Digest Date: 07/16/2025 **Time :** 16:40 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: HG-DIG#3

Dig Technician Signature: AB

Supervisor Signature: 12

Temp : 1. 95°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
ICV	30mL	MP86394
CCV	30mL	MP86396
CRA	30mL	MP86398
Blank Spike	0.48mL	MP86387
Matrix Spike	0.48mL	MP86387

Chemical Used	ML/SAMPLE USED	Lot Number
HNO3/H2SO4(1:2)	2.25mL	MP85892
KMnO4 (5%)	4.5mL	MP85893
K2S2O8 (5%)	2.4mL	MP85894
Hydroxylamine HCL (12%)	1.8mL	MP85895
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
0.0 ppb	S0	30mL	MP86388
0.05 ppb	S0.05	N/A	N/A
0.2 ppb	S0.2	30mL	MP86389
2.5 ppb	S2.5	30mL	MP86390
5.0 ppb	S5.0	30mL	MP86391
7.5 ppb	S7.5	30mL	MP86392
10.0 ppb	S10.0	30mL	MP86393
ICV	ICV	30mL	MP86394
ICB	ICB	30mL	MP86395
CCV	CCV	30mL	MP86396
CCB	CCB	30mL	MP86397
CRI	CRI	30mL	MP86398
CHK STD	CHK STD	30mL	MP86399

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
7/16/25 @ 17:10	AB - HG1 Lab	AB - Method Lab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Mercury Preparation Sheet

PB168893

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Comment	Prep Pos
PB168847TB	PB168847TB	3	30	<2	N/A	1
PB168893BL	PBW893	30	30	<2	N/A	2
PB168893BS	LCS893	30	30	<2	MP86387	3
Q2592-02	WC-SOIL-20250711	3	30	<2	N/A	4
Q2600-02	TRENCH	3	30	<2	N/A	5
Q2600-06	STOCK-PILE	3	30	<2	N/A	6
Q2600-10	END-OF-TRENCH	3	30	<2	N/A	7
Q2605-01	V908	3	30	<2	N/A	8
Q2605-02	VB16135	3	30	<2	N/A	9
Q2605-03	VB15061	3	30	<2	N/A	10
Q2605-04	V897	3	30	<2	N/A	11
Q2609-02	710-ABC	3	30	<2	N/A	12
Q2609-06	709-AB	3	30	<2	N/A	13
Q2614-06	HR-MCN-COMP-01	3	30	<2	N/A	14
Q2614-06DUP	HR-MCN-COMP-01DUP	3	30	<2	N/A	15
Q2614-06MS	HR-MCN-COMP-01MS	3	30	<2	MP86387	16
Q2614-06MSD	HR-MCN-COMP-01MSD	3	30	<2	MP86387	17

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168847

SOP ID : M1311-TCLP-16

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1 / T-2

TCLP Filter ID : 115525

Start Prep Date : 07/15/2025 **Time :** 15:30

End Prep Date : 07/16/2025 **Time :** 08:15

Combination Ratio : 20

ZHE Cleaning Batch : 19 N/A

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JP

Supervisor By : 12

Standared Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP112804
HCL-TCLP,1N	N/A	WP112797
HNO3-TCLP,1N	N/A	WP112799
pH Strips	N/A	W1931,W1934,W3171,W3172
pH Strips	W1940,W1941,W1942	W3166,W1938,W1939,
1 Liter Amber	N/A	90924-08
120ml Plastic bottle	N/A	2738
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

MATRIX SPIKES are added after filtration and before preservation. TUMBLER T-1 / T-2 checked,30 rpm. Particle size reduction is not required. Q2614-06 IS USED FOR MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/16/25 10:00	JP Tech Room	SLG RJ
	Preparation Group	Analysis Group

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

Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136516

Review By	MOHAN	Review On	7/18/2025 8:57:07 AM
Supervise By	jaswal	Supervise On	7/18/2025 9:17:09 AM

STD. NAME	STD REF.#
ICAL Standard	MP86388,MP86389,MP86390,MP86391,MP86392,MP86393
ICV Standard	MP86394
CCV Standard	MP86396
ICSA Standard	
CRI Standard	MP86398
LCS Standard	
Chk Standard	MP86395,MP86397,MP86399,MP86405

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	07/17/25 09:53		MOHAN	OK
2	S0.2	S0.2	CAL2	07/17/25 09:55		MOHAN	OK
3	S2.5	S2.5	CAL3	07/17/25 09:57		MOHAN	OK
4	S5	S5	CAL4	07/17/25 10:00		MOHAN	OK
5	S7.5	S7.5	CAL5	07/17/25 10:02		MOHAN	OK
6	S10	S10	CAL6	07/17/25 10:04		MOHAN	OK
7	ICV31	ICV31	ICV	07/17/25 10:07		MOHAN	OK
8	ICB31	ICB31	ICB	07/17/25 10:12		MOHAN	OK
9	CCV18	CCV18	CCV	07/17/25 10:14		MOHAN	OK
10	CCB18	CCB18	CCB	07/17/25 10:21		MOHAN	OK
11	CRA	CRA	CRDL	07/17/25 10:26		MOHAN	OK
12	HighStd	HighStd	HIGH STD	07/17/25 10:33		MOHAN	OK
13	ChkStd	ChkStd	SAM	07/17/25 10:36		MOHAN	OK
14	PB168893BL	PB168893BL	MB	07/17/25 10:41		MOHAN	OK
15	PB168893BS	PB168893BS	LCS	07/17/25 10:46		MOHAN	OK
16	Q2592-02	WC-SOIL-20250711	SAM	07/17/25 10:48		MOHAN	OK
17	Q2600-02	TRENCH	SAM	07/17/25 10:50		MOHAN	OK
18	Q2600-06	STOCK-PILE	SAM	07/17/25 10:52		MOHAN	OK

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Instrument ID: CV1

Daily Analysis Runlog For Sequence/QCBatch ID # LB136516

Review By	MOHAN	Review On	7/18/2025 8:57:07 AM
Supervise By	jaswal	Supervise On	7/18/2025 9:17:09 AM

STD. NAME	STD REF.#
ICAL Standard	MP86388,MP86389,MP86390,MP86391,MP86392,MP86393
ICV Standard	MP86394
CCV Standard	MP86396
ICSA Standard	
CRI Standard	MP86398
LCS Standard	
Chk Standard	MP86395,MP86397,MP86399,MP86405

19	Q2600-10	END-OF-TRENCH	SAM	07/17/25 10:55		MOHAN	OK
20	Q2605-01	V908	SAM	07/17/25 10:57		MOHAN	OK
21	CCV19	CCV19	CCV	07/17/25 11:03		MOHAN	OK
22	CCB19	CCB19	CCB	07/17/25 11:05		MOHAN	OK
23	Q2605-02	VB16135	SAM	07/17/25 11:07		MOHAN	OK
24	Q2605-03	VB15061	SAM	07/17/25 11:09		MOHAN	OK
25	Q2605-04	V897	SAM	07/17/25 11:12		MOHAN	OK
26	Q2609-02	710-ABC	SAM	07/17/25 11:14		MOHAN	OK
27	Q2609-06	709-AB	SAM	07/17/25 11:16		MOHAN	OK
28	Q2614-06	HR-MCN-COMP-01	SAM	07/17/25 11:18		MOHAN	OK
29	Q2614-06DUP	HR-MCN-COMP-01D	DUP	07/17/25 11:21		MOHAN	OK
30	Q2614-06MS	HR-MCN-COMP-01M	MS	07/17/25 11:23		MOHAN	OK
31	Q2614-06MSD	HR-MCN-COMP-01M	MSD	07/17/25 11:25		MOHAN	OK
32	CCV20	CCV20	CCV	07/17/25 11:30		MOHAN	OK
33	CCB20	CCB20	CCB	07/17/25 11:35		MOHAN	OK
34	pb168847TB	pb168847TB	MB	07/17/25 11:38		MOHAN	OK
35	Q2614-06L	HR-MCN-COMP-01L	SD	07/17/25 11:40		MOHAN	OK
36	Q2614-06A	HR-MCN-COMP-01A	PS	07/17/25 11:42		MOHAN	OK
37	CCV21	CCV21	CCV	07/17/25 11:53		MOHAN	OK
38	CCB21	CCB21	CCB	07/17/25 11:55		MOHAN	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136533

Review By	Janvi	Review On	7/18/2025 11:48:20 AM
Supervise By	jaswal	Supervise On	7/21/2025 4:45:05 AM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	07/17/25 13:05		Jaswal	OK
2	S1	S1	CAL2	07/17/25 13:09		Jaswal	OK
3	S2	S2	CAL3	07/17/25 13:13		Jaswal	OK
4	S3	S3	CAL4	07/17/25 13:18		Jaswal	OK
5	S4	S4	CAL5	07/17/25 13:22		Jaswal	OK
6	S5	S5	CAL6	07/17/25 13:26		Jaswal	OK
7	ICV01	ICV01	ICV	07/17/25 13:30	Sb,Cr,Fe,Ag,Tl Fail For (95-105)	Jaswal	OK
8	LLICV01	LLICV01	LLICV	07/17/25 13:37		Jaswal	OK
9	ICB01	ICB01	ICB	07/17/25 13:41		Jaswal	OK
10	CRI01	CRI01	CRDL	07/17/25 13:46		Jaswal	OK
11	ICSA01	ICSA01	ICSA	07/17/25 13:51		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	07/17/25 13:56		Jaswal	OK
13	ICSADL	ICSADL	ICSA	07/17/25 14:01		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	07/17/25 14:05		Jaswal	OK
15	CCV01	CCV01	CCV	07/17/25 14:20		Jaswal	OK
16	CCB01	CCB01	CCB	07/17/25 14:25		Jaswal	OK
17	Q2606-01	402	SAM	07/17/25 14:32		Jaswal	OK
18	Q2600-02	TRENCH	SAM	07/17/25 14:36		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136533

Review By	Janvi	Review On	7/18/2025 11:48:20 AM
Supervise By	jaswal	Supervise On	7/21/2025 4:45:05 AM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

19	Q2600-06	STOCK-PILE	SAM	07/17/25 14:41		Jaswal	OK
20	Q2600-10	END-OF-TRENCH	SAM	07/17/25 14:45		Jaswal	OK
21	Q2611-01	EO-02-071525	SAM	07/17/25 14:49		Jaswal	OK
22	Q2622-01	2819	SAM	07/17/25 14:54		Jaswal	OK
23	CCV02	CCV02	CCV	07/17/25 14:58		Jaswal	OK
24	CCB02	CCB02	CCB	07/17/25 15:02		Jaswal	OK
25	Q2592-02	WC-SOIL-20250711	SAM	07/17/25 15:07		Jaswal	OK
26	Q2614-06	HR-MCN-COMP-01	SAM	07/17/25 15:12		Jaswal	OK
27	Q2612-01	OR-02-071525	SAM	07/17/25 15:16		Jaswal	OK
28	Q2614-01RE	HR-MCN-COMP-01RI	SAM	07/17/25 15:20	Not Use	Jaswal	Not Ok
29	Q2608-01	A2028	SAM	07/17/25 15:24		Jaswal	OK
30	Q2585-04	EFF-WW	SAM	07/17/25 15:29		Jaswal	OK
31	Q2606-01DUP	402DUP	DUP	07/17/25 15:33		Jaswal	OK
32	Q2606-01L	402L	SD	07/17/25 15:37		Jaswal	OK
33	Q2606-01MS	402MS	MS	07/17/25 15:42		Jaswal	OK
34	Q2606-01MSD	402MSD	MSD	07/17/25 15:46		Jaswal	OK
35	CCV03	CCV03	CCV	07/17/25 15:50		Jaswal	OK
36	CCB03	CCB03	CCB	07/17/25 15:56		Jaswal	OK
37	Q2606-01A	402A	PS	07/17/25 16:00		Jaswal	OK
38	PB168881BL	PB168881BL	MB	07/17/25 16:04		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136533

Review By	Janvi	Review On	7/18/2025 11:48:20 AM
Supervise By	jaswal	Supervise On	7/21/2025 4:45:05 AM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

39	PB168881BS	PB168881BS	LCS	07/17/25 16:08		Jaswal	OK
40	Q2614-06DUP	HR-MCN-COMP-01D	DUP	07/17/25 16:12		Jaswal	OK
41	Q2614-06L	HR-MCN-COMP-01L	SD	07/17/25 16:17		Jaswal	OK
42	Q2614-06MS	HR-MCN-COMP-01M	MS	07/17/25 16:21		Jaswal	OK
43	Q2614-06MSD	HR-MCN-COMP-01M	MSD	07/17/25 16:25		Jaswal	OK
44	Q2614-06A	HR-MCN-COMP-01A	PS	07/17/25 16:29	0.1ml of M6004,M6013 in 10ml sample.	Jaswal	OK
45	PB168888BL	PB168888BL	MB	07/17/25 16:33		Jaswal	OK
46	PB168888BS	PB168888BS	LCS	07/17/25 16:38		Jaswal	OK
47	CCV04	CCV04	CCV	07/17/25 16:42		Jaswal	OK
48	CCB04	CCB04	CCB	07/17/25 16:46		Jaswal	OK
49	PB168847TB	PB168847TB	MB	07/17/25 16:50		Jaswal	OK
50	Q2605-01	V908	SAM	07/17/25 16:55		Jaswal	OK
51	Q2605-02	VB16135	SAM	07/17/25 16:59		Jaswal	OK
52	Q2605-03	VB15061	SAM	07/17/25 17:04		Jaswal	OK
53	Q2605-04	V897	SAM	07/17/25 17:08		Jaswal	OK
54	Q2609-02	710-ABC	SAM	07/17/25 17:13		Jaswal	OK
55	Q2609-06	709-AB	SAM	07/17/25 17:17		Jaswal	OK
56	PB168883BL	PB168883BL	MB	07/17/25 17:22		Jaswal	OK
57	PB168883BS	PB168883BS	LCS	07/17/25 17:26		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136533

Review By	Janvi	Review On	7/18/2025 11:48:20 AM
Supervise By	jaswal	Supervise On	7/21/2025 4:45:05 AM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

58	Q2604-02	RW8-SP303-2025071	SAM	07/17/25 17:30		Jaswal	OK
59	CCV05	CCV05	CCV	07/17/25 17:58		Jaswal	OK
60	CCB05	CCB05	CCB	07/17/25 18:02		Jaswal	OK
61	Q2604-01	RW8-SP100-2025071	SAM	07/17/25 18:07		Jaswal	OK
62	Q2604-01DUP	RW8-SP100-2025071	DUP	07/17/25 18:11		Jaswal	OK
63	Q2604-01L	RW8-SP100-2025071	SD	07/17/25 18:15		Jaswal	OK
64	Q2604-01MS	RW8-SP100-2025071	MS	07/17/25 18:20		Jaswal	OK
65	Q2604-01MSD	RW8-SP100-2025071	MSD	07/17/25 18:24		Jaswal	OK
66	Q2604-01A	RW8-SP100-2025071	PS	07/17/25 18:28	0.1ml of M6004,M6013 in 10ml sample	Jaswal	OK
67	PB168882BL	PB168882BL	MB	07/17/25 18:31		Jaswal	OK
68	PB168882BS	PB168882BS	LCS	07/17/25 18:54		Jaswal	OK
69	Q2609-01	710-ABC	SAM	07/17/25 19:06	Fe,Zn High , Ag oversaturated	Jaswal	Dilution
70	Q2609-05	709-AB	SAM	07/17/25 19:11	Fe,Zn High , Ag oversaturated	Jaswal	Dilution
71	CCV06	CCV06	CCV	07/17/25 19:24		Jaswal	OK
72	CCB06	CCB06	CCB	07/17/25 19:28		Jaswal	OK
73	Q2609-01DL	710-ABCDL	SAM	07/17/25 19:34	10X For Fe,Ag,Zn	Jaswal	Confirms
74	Q2609-05DL	709-ABDL	SAM	07/17/25 19:38	10X For Fe,Ag,Zn	Jaswal	Confirms
75	Q2614-01	HR-MCN-COMP-01	SAM	07/17/25 19:42		Jaswal	OK
76	Q2614-01DUP	HR-MCN-COMP-01DU	DUP	07/17/25 19:46		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB136533

Review By	Janvi	Review On	7/18/2025 11:48:20 AM
Supervise By	jaswal	Supervise On	7/21/2025 4:45:05 AM

STD. NAME	STD REF.#
ICAL Standard	MP86192,MP86193,MP86194,MP86195,MP86196,MP86212
ICV Standard	MP86213
CCV Standard	MP86216
ICSA Standard	MP86214,MP86215
CRI Standard	MP86212
LCS Standard	
Chk Standard	MP86217,MP86218

77	Q2614-01L	HR-MCN-COMP-01L	SD	07/17/25 19:50		Jaswal	OK
78	Q2614-01MS	HR-MCN-COMP-01M	MS	07/17/25 19:54		Jaswal	OK
79	Q2614-01MSD	HR-MCN-COMP-01M	MSD	07/17/25 19:58		Jaswal	OK
80	Q2614-01A	HR-MCN-COMP-01A	PS	07/17/25 20:02		Jaswal	OK
81	CCV07	CCV07	CCV	07/17/25 20:16		Jaswal	OK
82	CCB07	CCB07	CCB	07/17/25 20:20		Jaswal	OK

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168847

SOP ID : M1311-TCLP-16

SDG No : N/A

Weigh By : JP

Balance ID : WC SC-7

pH Meter ID : WC PH METER-1

Extraction By : JP

Filter By : JP

Pippete ID : WC

Tumbler ID : T-1 / T-2

TCLP Filter ID : 115525

Start Prep Date : 07/15/2025 **Time :** 15:30

End Prep Date : 07/16/2025 **Time :** 08:15

Combination Ratio : 20

ZHE Cleaning Batch : ~~N/A~~ 18

Initial Room Temperature: 23 °C

Final Room Temperature: 22 °C

TCLP Technician Signature : JP

Supervisor By : 12

Standared Name	MLS USED	STD REF. # FROM LOG
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE U	Lot Number
TCLP-FLUID-1	N/A	WP112804
HCL-TCLP,1N	N/A	WP112797
HNO3-TCLP,1N	N/A	WP112799
pH Strips	N/A	W1931,W1934,W3171,W3172
pH Strips	W1940,W1941,W1942	W3166,W1938,W1939,
1 Liter Amber	N/A	90924-08
120ml Plastic bottle	N/A	2738
1:1 HNO3	N/A	MP84041

Extraction Conformance/Non-Conformance Comments:

MATRIX SPIKES are added after fiftration and before preservation. TUMBLER T-1 / T-2 checked,30 rpm. Particle size reduction is not required. Q2614-06 IS USED FOR MS-MSD.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
07/16/25 10:00	JP Tech Room	SLS. RJ / [illegible]
	Preparation Group	Analysis Group INST MC

Alliance TECHNICAL GROUP

TCLP EXTRACTION LOGPAGE

PB168847

Sample ID	ClientID	TCLP Vessel ID	Sample Wt (g)	Volume Extraction Fluid #1 (mL)	Multi phasic	Phase Miscible	Phases Combined	Final Leachate PH	Metals Leachate Adj. PH	Prep Pos
PB168847TB	LEB847	12	N/A	2000	N/A	N/A	N/A	4.95	1.5	T-2
Q2592-02	WC-SOIL-20250711	01	100.02	2000	N/A	N/A	N/A	4.0	1.0	T-1
Q2600-02	TRENCH	02	100.03	2000	N/A	N/A	N/A	5.6	1.5	T-1
Q2600-06	STOCK-PILE	03	100.02	2000	N/A	N/A	N/A	5.6	1.0	T-1
Q2600-10	END-OF-TRENCH	04	100.03	2000	N/A	N/A	N/A	5.5	1.0	T-1
Q2605-01	V908	05	100.02	2000	N/A	N/A	N/A	6.6	1.5	T-1
Q2605-02	VB16135	06	100.02	2000	N/A	N/A	N/A	6.2	1.0	T-1
Q2605-03	VB15061	07	100.03	2000	N/A	N/A	N/A	6.6	1.5	T-1
Q2605-04	V897	08	100.02	2000	N/A	N/A	N/A	7.0	1.0	T-1
Q2609-02	710-ABC	09	100.03	2000	N/A	N/A	N/A	5.6	1.5	T-1
Q2609-06	709-AB	10	100.02	2000	N/A	N/A	N/A	5.0	1.0	T-1
Q2614-06	HR-MCN-COMP-01	11	100.03	2000	N/A	N/A	N/A	5.6	1.5	T-2

SampleID	ClientID	Sample Weight (g)	Filter Weight (g)	Filtrate (mL)	Filter + Solid (After 100°C)	% solids	% Dry Solids
PB168847TB	LEB847	N/A	N/A	N/A	N/A	N/A	N/A
Q2592-02	WC-SOIL-20250711	N/A	N/A	N/A	N/A	100	N/A
Q2600-02	TRENCH	N/A	N/A	N/A	N/A	100	N/A
Q2600-06	STOCK-PILE	N/A	N/A	N/A	N/A	100	N/A
Q2600-10	END-OF-TRENCH	N/A	N/A	N/A	N/A	100	N/A
Q2605-01	V908	N/A	N/A	N/A	N/A	100	N/A
Q2605-02	VB16135	N/A	N/A	N/A	N/A	100	N/A
Q2605-03	VB15061	N/A	N/A	N/A	N/A	100	N/A
Q2605-04	V897	N/A	N/A	N/A	N/A	100	N/A
Q2609-02	710-ABC	N/A	N/A	N/A	N/A	100	N/A
Q2609-06	709-AB	N/A	N/A	N/A	N/A	100	N/A
Q2614-06	HR-MCN-COMP-01	N/A	N/A	N/A	N/A	100	N/A

Alliance TECHNICAL GROUP

TCLP Fluid Determination

PB168847

Hot Block ID : WC S-1 / WC S-2

Thermometer ID : FLASHPOINT

SampleID	ClientID	Sample Weight (g)	Volume DI Water (mL)	PH after 5 min stir	PH after 10 min stir	Extraction Fluid 1 or 2	pH Extraction Fluid
PB168847TB	LEB847	N/A	N/A	N/A	N/A	#1	4.95
Q2592-02	WC-SOIL-20250711	5.02	96.5	7.0	2.5	#1	4.95
Q2600-02	TRENCH	5.01	96.5	7.6	2.5	#1	4.95
Q2600-06	STOCK-PILE	5.02	96.5	7.6	2.5	#1	4.95
Q2600-10	END-OF-TRENCH	5.03	96.5	7.2	2.0	#1	4.95
Q2605-01	V908	5.02	96.5	8.6	3.5	#1	4.95
Q2605-02	VB16135	5.03	96.5	9.0	4.0	#1	4.95
Q2605-03	VB15061	5.03	96.5	9.0	4.0	#1	4.95
Q2605-04	V897	5.02	96.5	9.3	4.5	#1	4.95
Q2609-02	710-ABC	5.03	96.5	7.2	3.0	#1	4.95
Q2609-06	709-AB	5.02	96.5	6.2	2.5	#1	4.95
Q2614-06	HR-MCN-COMP-01	5.01	96.5	7.6	2.5	#1	4.95

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Prep Standard - Chemical Standard Summary

Order ID : Q2592

Test : TCLP ICP Metals,TCLP Mercury

Prepbatch ID : PB168888,PB168893,

Sequence ID/Qc Batch ID: LB136516,LB136533,

Standard ID :
MP85156,MP85892,MP85893,MP85894,MP85895,MP86192,MP86193,MP86194,MP86195,MP86196,MP86211,MP86212,MP86213,MP86214,MP86215,MP86216,MP86217,MP86218,MP86387,MP86388,MP86389,MP86390,MP86391,MP86392,MP86393,MP86394,MP86395,MP86396,MP86397,MP86398,MP86399,MP86405,

Chemical ID :
M4371,M4465,M4916,M5062,M5467,M5470,M5471,M5499,M5658,M5747,M5748,M5751,M5798,M5799,M5800,M5801,M5811,M5814,M5816,M5820,M5882,M5884,M5942,M5962,M5970,M5984,M5985,M5996,M5997,M6007,M6015,M6021,M6023,M6028,M6030,M6032,M6041,M6076,M6127,M6128,M6137,M6142,M6144,M6145,M6146,M6151,M6152,M6155,M6158,M6159,M6161,M6162,M6163,M6164,M6165,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP85156	04/07/2025	08/18/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 04/07/2025

FROM 1250.00000ml of M6151 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3965	2:1 H2SO4 : HNO3	MP85892	06/05/2025	11/27/2025	Mohan Bera	None	None	Sarabjit Jaswal 06/14/2025

FROM 1600.00000ml of M6041 + 800.00000ml of M6162 = Final Quantity: 3200.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
65	POTASSIUM PERMANGANATE SOLUTION 5 %	MP85893	06/05/2025	12/05/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 100.00000gram of M4916 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
66	POTASSIUM PERSULFATE SOLUTION 5 %	MP85894	06/05/2025	08/06/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 100.00000ml of M4465 + 2000.00000ml of W3112 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
67	SODIUM CHLORIDE - HYDROXYL- CHLORIDE SOLUTION	MP85895	06/05/2025	08/08/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 06/14/2025

FROM 2000.00000ml of W3112 + 240.00000gram of M4371 + 240.00000gram of M5884 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP86192	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6162 = 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)	MP86193	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5470 + 5.00000ml of M5816 + 5.00000ml of M5820 + 5.00000ml of M5970 + 5.00000ml of M5996 + 5.00000ml of M5997 + 5.00000ml of M6076 + 5.00000ml of M6146 + 455.00000ml of MP86192 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP86194	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 50.00000ml of MP86192 + 50.00000ml of MP86193 = 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	MP86195	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 25.00000ml of MP86193 + 75.00000ml of MP86192 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP86196	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 16.00000ml of MP86193 + 184.00000ml of MP86192 = 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	MP86211	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5658 + 0.05000ml of M5811 + 0.05000ml of M6030 + 0.05000ml of M6159 + 0.06000ml of M5747 + 0.10000ml of M5471 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5970 + 0.10000ml of M6128 + 0.15000ml of M5800 + 0.20000ml of M5748 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6146 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5499 + 1.00000ml of M5942 + 1.00000ml of M6127 + 1.00000ml of M6142 + 1.00000ml of M6144 + 2.00000ml of M5816 + 89.29000ml of MP86192 = 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	MP86212	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 2.00000ml of MP86211 + 98.00000ml of MP86192 = 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	MP86213	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 0.20000ml of M6163 + 0.20000ml of M6164 + 0.20000ml of M6165 + 49.40000ml of MP86192 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP86214	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 10.00000ml of M6152 + 80.00000ml of MP86192 = 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
3494	ICP AES ICSAB SOLN-1	MP86215	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 10.00000ml of M6152 + 10.00000ml of M6155 + 80.00000ml of MP86192 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP86216	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 50.00000ml of MP86192 + 50.00000ml of MP86193 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP86217	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 1.00000ml of M5984 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6162 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP86218	06/25/2025	07/18/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 07/03/2025

FROM 200.00000ml of M6162 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
871	MERCURY INTERMEDIATE B 250PPB WORKING STD.	MP86387	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 1.00000ml of M6162 + 2.50000ml of M5062 + 96.50000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1340	Hg 0.00 PPB STD	MP86388	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1341	Hg 0.2 PPB STD	MP86389	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86387 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1342	Hg 2.5 PPB STD	MP86390	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 245.00000ml of W3112 + 2.50000ml of MP86387 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1343	Hg 5.0 PPB STD	MP86391	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 242.50000ml of W3112 + 5.00000ml of MP86387 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1344	Hg 7.5 PPB STD	MP86392	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 240.00000ml of W3112 + 7.50000ml of MP86387 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1345	Hg 10.0 PPB STD	MP86393	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 237.50000ml of W3112 + 10.00000ml of MP86387 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1346	Hg ICV SOLUTION	MP86394	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6161 + 2.50000ml of M6162 + 245.00000ml of W3112 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1351	ICB (Hg 0.00 PPB SOLUTION)	MP86395	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.50000ml of W3112 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1358	CCV (Hg 5.0 PPB SOLUTION)	MP86396	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 485.00000ml of W3112 + 5.00000ml of M6162 + 10.00000ml of MP86387 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1352	CCB (Hg 0.00 PPB SOLUTION)	MP86397	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 495.00000ml of W3112 + 5.00000ml of M6162 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1349	CRA/CRI (Hg 0.2 PPB SOLUTION)	MP86398	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HGA)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 247.30000ml of W3112 + 0.20000ml of MP86387 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1350	CHK STD (Hg 7.0 PPB SOLUTION)	MP86399	07/16/2025	07/17/2025	Mohan Bera	None	METALS_PIPETTE_5 (HG A)	Sarabjit Jaswal 07/16/2025

FROM 2.50000ml of M6162 + 240.50000ml of W3112 + 7.00000ml of MP86387 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
68	STANNOUS CHLORIDE SOLUTION	MP86405	07/17/2025	07/18/2025	Mohan Bera	METALS_SCALE_3 (M SC-3)	None	Sarabjit Jaswal 07/17/2025

FROM 450.00000ml of W3112 + 50.00000gram of M5882 + 50.00000ml of M6151 = Final Quantity: 500.000 ml

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-2196-01 / Hydroxylamine Hydrochloride, Crystal (cs/4x500g)	0000215387	06/25/2025	07/01/2019 / RICHARD	06/07/2019 / RICHARD	M4371

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3238-05 / Potassium Persulfate (2.5kg)	0000234156	08/06/2025	07/23/2019 / jaswal	07/25/2019 / manojkumar	M4465

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3227-05 / Potassium Permanganate (2.5kg)	210800	03/31/2026	11/30/2022 / mohan	07/28/2021 / mohan	M4916

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	MSHG-10PPM / MERCURY HCl 125mL 10ug/mL	S2-HG709270	09/22/2026	05/28/2022 / mohan	01/27/2022 / mohan	M5062

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	020623	02/06/2026	03/06/2023 / bin	03/01/2023 / bin	M5467

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5470

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	082922	08/29/2025	04/14/2025 / jaswal	03/16/2023 / jaswal	M5471

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	04/17/2025 / Janvi	03/17/2023 / bin	M5499

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	100923	10/09/2026	05/20/2024 / Jaswal	12/20/2023 / jaswal	M5747

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	051523	05/15/2026	02/06/2025 / kareem	01/03/2024 / jaswal	M5811

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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 #
Seidler Chemical	BA-3980-01 / Stannous Chloride (cs/4x500g)	232820	08/31/2028	04/30/2024 / mohan	04/25/2024 / mohan	M5882

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-3624-05 / Sodium Chloride, Crystal (cs/4x2.5kg)	0000281938	07/06/2026	04/30/2024 / mohan	04/25/2024 / mohan	M5884

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	08/05/2024 / kareem	06/14/2024 / Jaswal	M5984

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-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	05/07/2024 / JANVI	02/22/2024 / kareem	M5996

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	12/21/2027	02/03/2025 / JANVI	02/22/2024 / kareem	M5997

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	05/27/2026	05/27/2025 / Janvi	05/14/2024 / Jaswal	M6007

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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	U2-MEB731108	03/17/2028	06/19/2025 / MOHAN	05/14/2024 / Jaswal	M6015

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	01/01/2026	01/01/2025 / kareem	09/19/2024 / kareem	M6076

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	112124	11/21/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6127

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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.	58119 / K, 10000 PPM, 500 ml	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

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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.	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 #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	01/31/2025 / kareem	10/18/2024 / kareem	M6146

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	08/24/2025	02/24/2025 / kareem	04/20/2021 / kareem	M6152

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	06/30/2025	02/10/2025 / kareem	02/09/2024 / kareem	M6155

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	03/25/2029	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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 #
EPA	ICV-5 / ICV (HG) STOCK SOLN	ICV 5 0415	07/31/2025	05/01/2025 / mohan	03/30/2024 / mohan	M6161

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	11/27/2025	05/27/2025 / Sagar	04/27/2025 / Sagar	M6162

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	05/22/2029	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/01/2028	06/09/2025 / jaswal	06/09/2025 / jaswal	M6164

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3	V2-MEB749572	01/02/2030	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 #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

ThermoFisher SCIENTIFIC

M5882 M3

Certificate of Analysis

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Fair Lawn, NJ 07410
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201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	T142	Quality Test / Release Date	08/17/2023
Lot Number	232820		
Description	STANNOUS CHLORIDE, DIHYDRATE CERTIFIED ACS (Suitable for Mercury Determination)		
Country of Origin	United States	Suggested Retest Date	Aug/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear crystals
ASSAY	%	Inclusive Between 98 - 103	100.65
CALCIUM	%	<= 0.005	0.0017
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	%	<= 0.003	0.0011
LEAD (Pb)	%	<= 0.01	0.0006
MERCURY (Hg)	ppm	<= 0.05	<0.05
POTASSIUM (K)	%	<= 0.005	0.0001
SODIUM (Na)	%	<= 0.01	<0.01
SOLUBILITY IN HCL	PASS/FAIL	= PASS TEST	PASS TEST
SULFATE (SO4)	PASS/FAIL	= P.T. (ABOUT 0.003%)	P.T. (ABOUT 0.003%)

Harout Sahagian - Quality Control Supervisor - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

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M6032

R: 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**010924**	**Solvent:**	24002546	Nitric Acid	
Description:	**Barium (Ba)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	010927				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

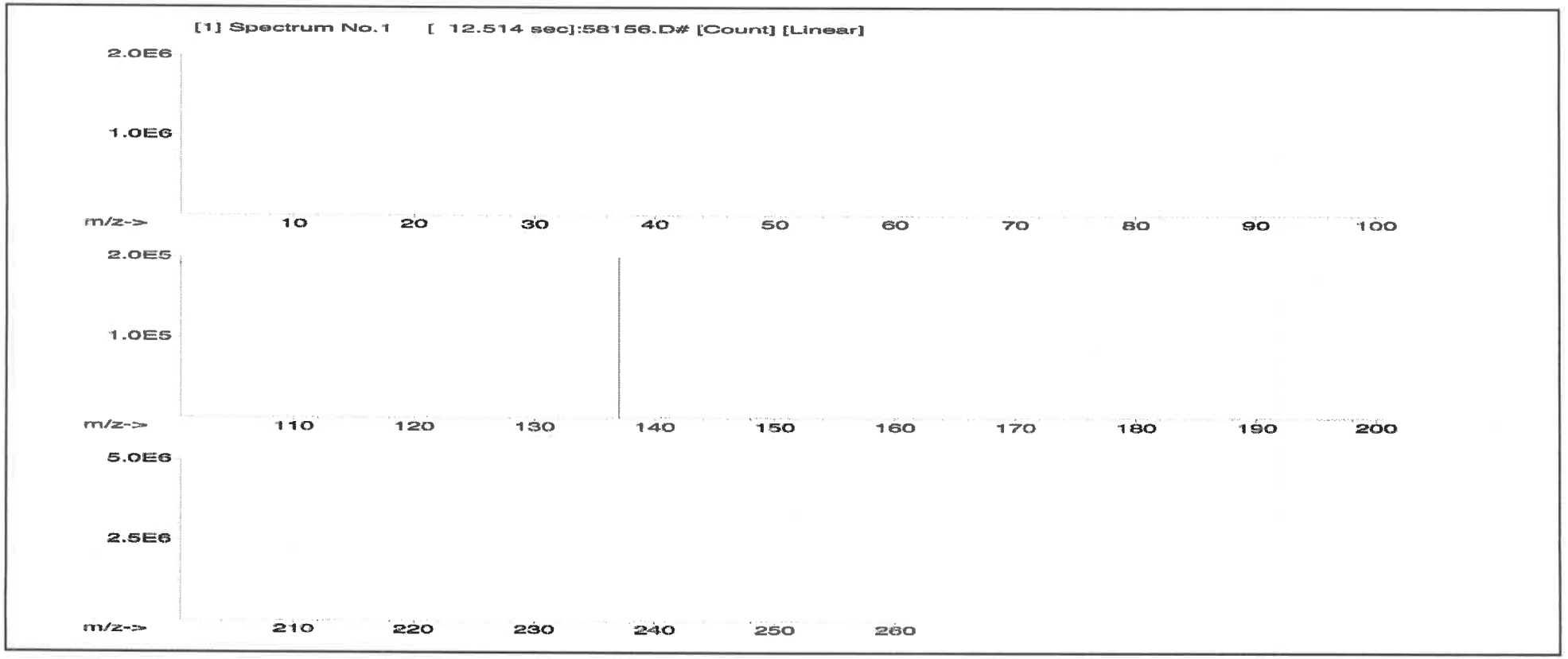
Giovanni Esposito

Formulated By:	Giovanni Esposito	010924

Pedro Rentas

Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R 8/15/24

CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

Expiration Date: 070127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.07 0.100 Flask Uncertainty

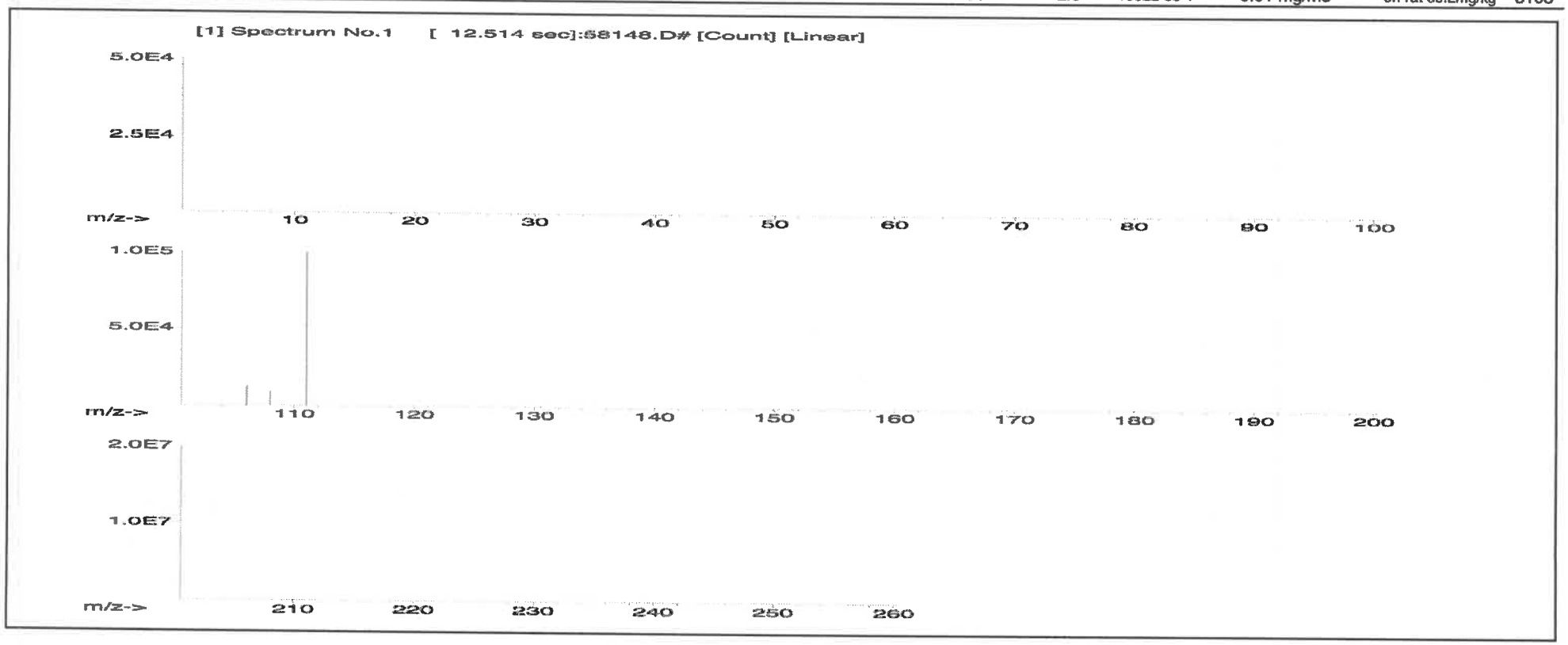
		Lot #	
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 070124

Pedro Rentas
Reviewed By: Pedro L. Rentas 070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R : 01/03/24. M5810, M5811

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 051523
Description: Iron (Fe)

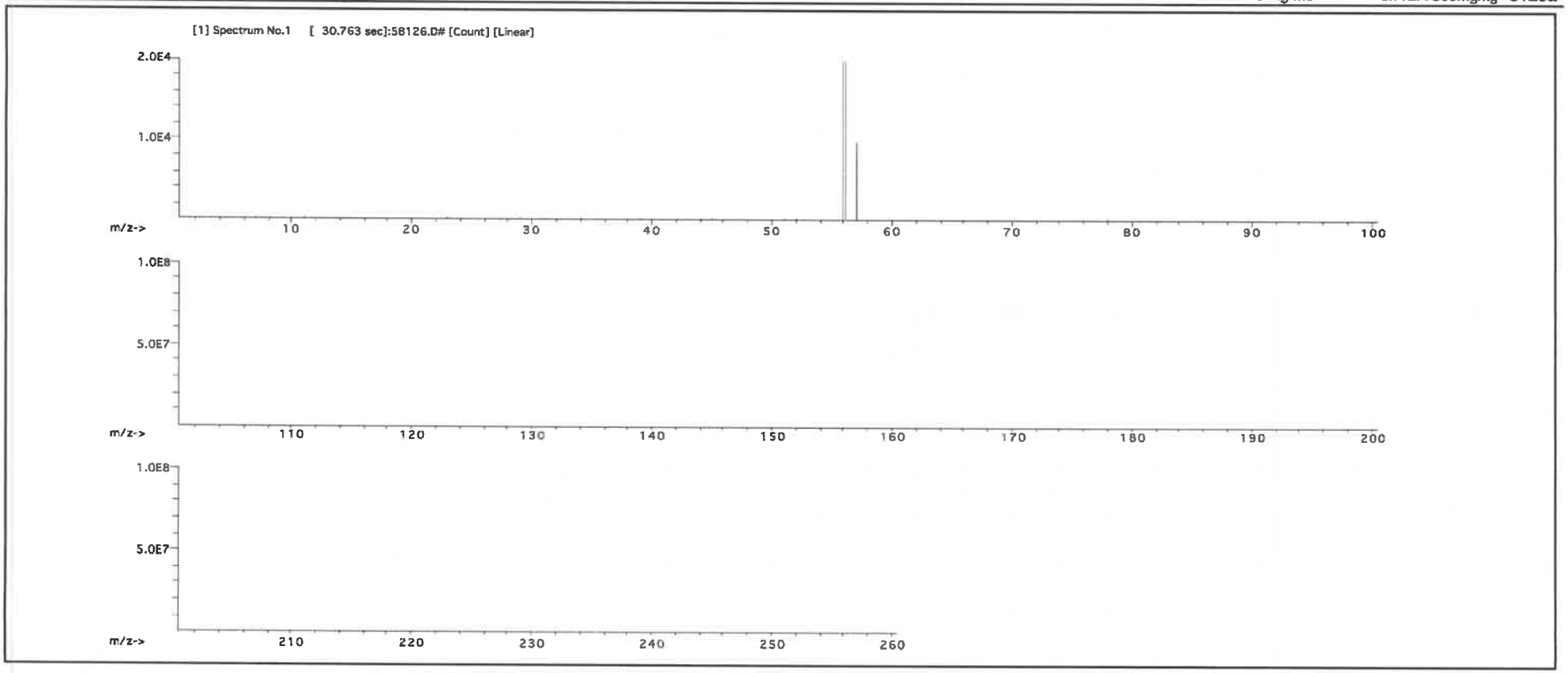
Expiration Date: 051526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1

	Lot #		
Solvent:	21110221	Nitric Acid	
5.0%	250.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
0.12	Flask Uncertainty		

Giovanni Esposito
Formulated By: Giovanni Esposito 051523

Pedro Rentas
Reviewed By: Pedro L. Rentas 051523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2302010-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



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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	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.10
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
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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:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 30, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES

Refine your results. Redefine your industry.

Certificate of Analysis

RD:05/14/2024

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01 ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	U2-MEB731108
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.6 µg/mL	Molybdenum, Mo	40.03 ± 0.18 µg/mL
Silica, SiO2	200.2 ± 1.3 µg/mL	Tin, Sn	70.0 ± 0.4 µg/mL
Titanium, Ti	20.01 ± 0.13 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Mo	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
SiO2	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
Ti	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

M4371

Hydroxylamine Hydrochloride, Crystal
BAKER ANALYZED® A.C.S. Reagent
Suitable for Mercury Determination
(hydroxylammonium chloride)

Rec – 06.07.19

J.T.Baker® | avantor™

Material No.: 2196-01
Batch No.: 0000215387
Manufactured Date: 2018/06/27
Retest Date: 2025/06/25
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NH_2OH \cdot HCl$) (by $KMnO_4$ titrn)	>= 96.0 %	99.1
Clarity of Alcohol Solution	Passes Test	PT
Residue after Ignition	<= 0.050 %	0.017
Titrable Free Acid (meq/g)	<= 0.25	0.19
Ammonium (NH_4)	Passes Test	PT
Sulfur Compounds (as SO_4)	<= 0.005 %	< 0.003
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	4
Trace Impurities - Iron (Fe)	<= 5 ppm	< 3
Trace Impurities - Mercury (Hg)	<= 0.050 ppm	< 0.005

For Laboratory, Research or Manufacturing Use

Country of Origin: CN
Packaging Site: Paris Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2015, FSSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M4913-16
MB

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	P279	Quality Test / Release Date	01/12/2021
Lot Number	210306		
Description	POTASSIUM PERMANGANATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Jan/2026

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Dark purple to purple green crystals
ASSAY	%	>= 99	99.3
CHLORIDE & CHLORATE	%	<= 0.005	<0.005
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
INSOLUBLE MATTER	%	<= 0.2	<0.2
MERCURY (Hg)	ppm	<= 0.05	<0.004
SULFATE (SO4)	%	<= 0.02	<0.02

Julian Burton

Julian Burton - Quality Control Manager – Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

M5062
M5063
M3

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Mass Spec Solution
Catalog Number:	MSHG-10PPM
Lot Number:	S2-HG709270
Matrix:	10% (v/v) HCl
Value / Analyte(s):	10 µg/mL ea: Mercury
Starting Material:	Hg metal
Starting Material Lot#:	1959
Starting Material Purity:	99.9994%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10.001 ± 0.053 µg/mL

Density: 1.020 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
Hg	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{CRM/RM} = \Sigma(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$$X_{CRM/RM} = (X_a)\,(u_{char\ a})$$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

O	Ag		0.000011	M	Eu	<	0.000201	O	Na		0.000004	M	Se	<	0.015915	O	Zn	<	0.001510
O	Al		0.000001	O	Fe		0.000001	M	Nb	<	0.000201	O	Si		0.000005	M	Zr	<	0.000201
M	As	<	0.000402	M	Ga	<	0.000201	M	Nd	<	0.000201	M	Sm	<	0.000201				
M	Au	<	0.003631	M	Gd	<	0.000201	M	Ni	<	0.000402	M	Sn	<	0.001007				
M	B	<	0.001208	M	Ge	<	0.000201	M	Os	<	0.000605	M	Sr	<	0.000201				
M	Ba	<	0.000201	M	Hf	<	0.000201	O	P	<	0.032370	M	Ta	<	0.000201				
M	Be	<	0.000201	s	Hg	<		M	Pb	<	0.000201	M	Tb	<	0.000201				
M	Bi	<	0.000201	M	Ho	<	0.000201	M	Pd	<	0.000403	M	Te	<	0.002216				
O	Ca		0.000007	M	In	<	0.000201	M	Pr	<	0.000201	M	Th	<	0.000201				
M	Cd	<	0.000201	M	Ir	<	0.000201	M	Pt	<	0.000402	M	Ti	<	0.000402				
M	Ce	<	0.000201	O	K		0.000020	M	Rb	<	0.000201	O	Tl	<	0.016508				
M	Co	<	0.000201	M	La	<	0.000201	M	Re	<	0.000201	M	Tm	<	0.000201				
O	Cr	<	0.003021	O	Li	<	0.000107	M	Rh	<	0.000201	M	U	<	0.008058				
M	Cs	<	0.001208	M	Lu	<	0.000201	M	Ru	<	0.000201	M	V	<	0.000201				
M	Cu	<	0.000402	O	Mg		0.000001	O	S	<	0.053950	M	W	<	0.000604				
M	Dy	<	0.000201	M	Mn	<	0.000604	M	Sb	<	0.001208	M	Y	<	0.000201				
M	Er	<	0.000201	M	Mo		0.000009	M	Sc	<	0.000201	M	Yb	<	0.000201				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 200.59 +2 4 Hg(OH)(aq) 1+

Chemical Compatibility - Stable in HNO_3. Avoid basic media forming insoluble carbonate. The sulfide, basic carbonate, oxalate, phosphate, arsenite, arsenate and iodide are insoluble in water.

Stability - 2-100 ppb levels not stable in 1% HNO_3 / LDPE container, stable in 10% HNO_3 packaged in borosilicate glass. 1-100 ppm levels stable in 7% HNO_3 packaged in borosilicate glass. 1000-10,000 ppm solutions are chemically stable for years in 5-10% HNO_3 / LDPE container.

Hg Containing Samples (Preparation and Solution) - Metal (soluble in HNO_3); Oxide (Soluble in HNO_3); Ores and Organic based (The literature has more references to the preparation of Hg containing samples than any other element. Please consult the literature for your specific sample type, since such preparations are prone to error. Or e-mail our technical staff and we will contact you to discuss your particular sample preparation questions in further detail.).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 202 amu	9 ppt	n/a	186W16O
ICP-OES 184.950 nm	0.03 / 0.005 µg/mL	1	
ICP-OES 194.227 nm	0.03 / 0.005 µg/mL	1	V
ICP-OES 253.652 nm	0.1 / 0.03 µg/mL	1	Ta, Co, Th ,Rh , Fe, U

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 22, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 22, 2026

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation

Certificate Approved By:

Michael Booth
Director, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5467 R: 03/01/23 (LA)

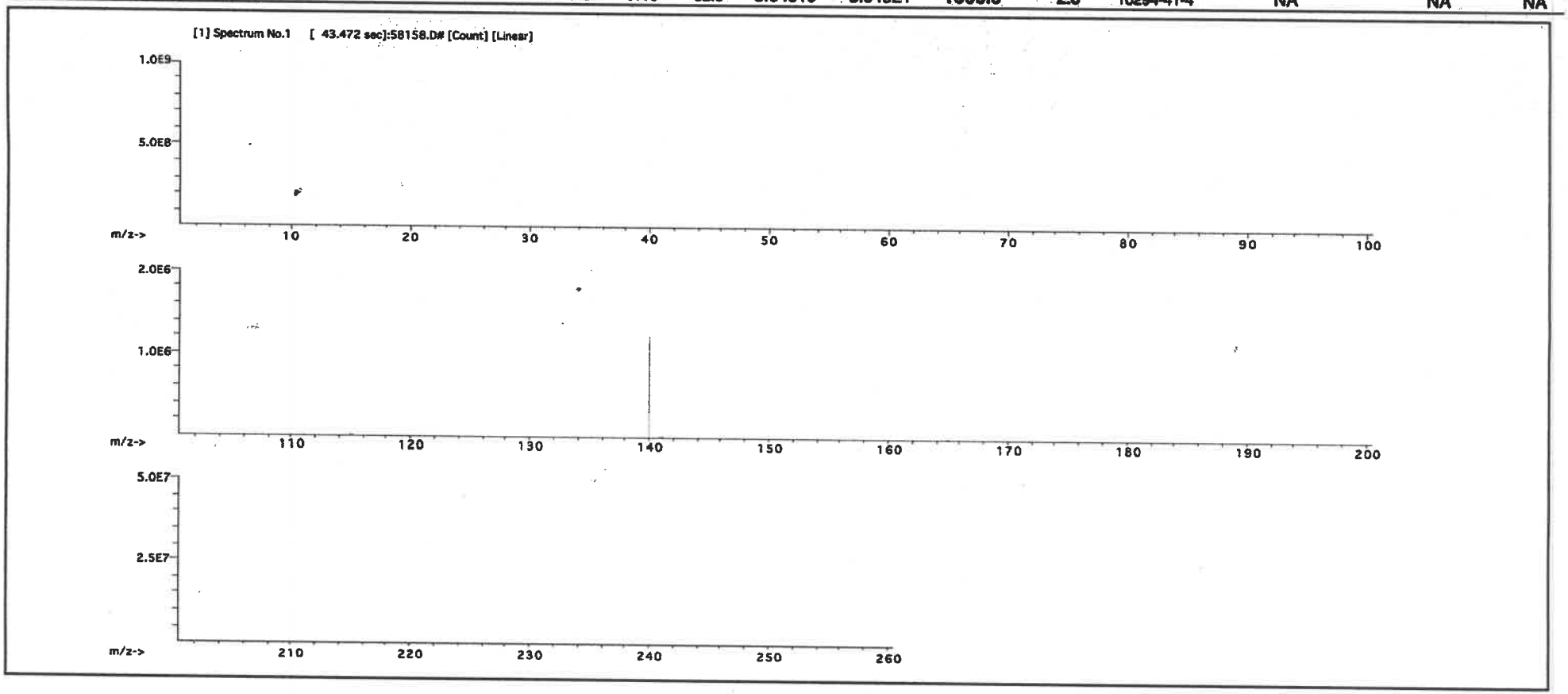
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	57058		**Lot #**	
Lot Number:	020623	**Solvent:**	21110221	Nitric Acid
Description:	Cerium (Ce)	2%	20.0 (mL)	Nitric Acid
Expiration Date:	020626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	1000			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	1000.12	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	1000.0	2.0	10294-41-4	NA	NA	NA



2392-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

M5493 – M5308
Rad on 4/14/23
JMG

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 2

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

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Certified Reference Material CRM

M5658 R ! 8/25/23

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AR-1539 Certificate Number
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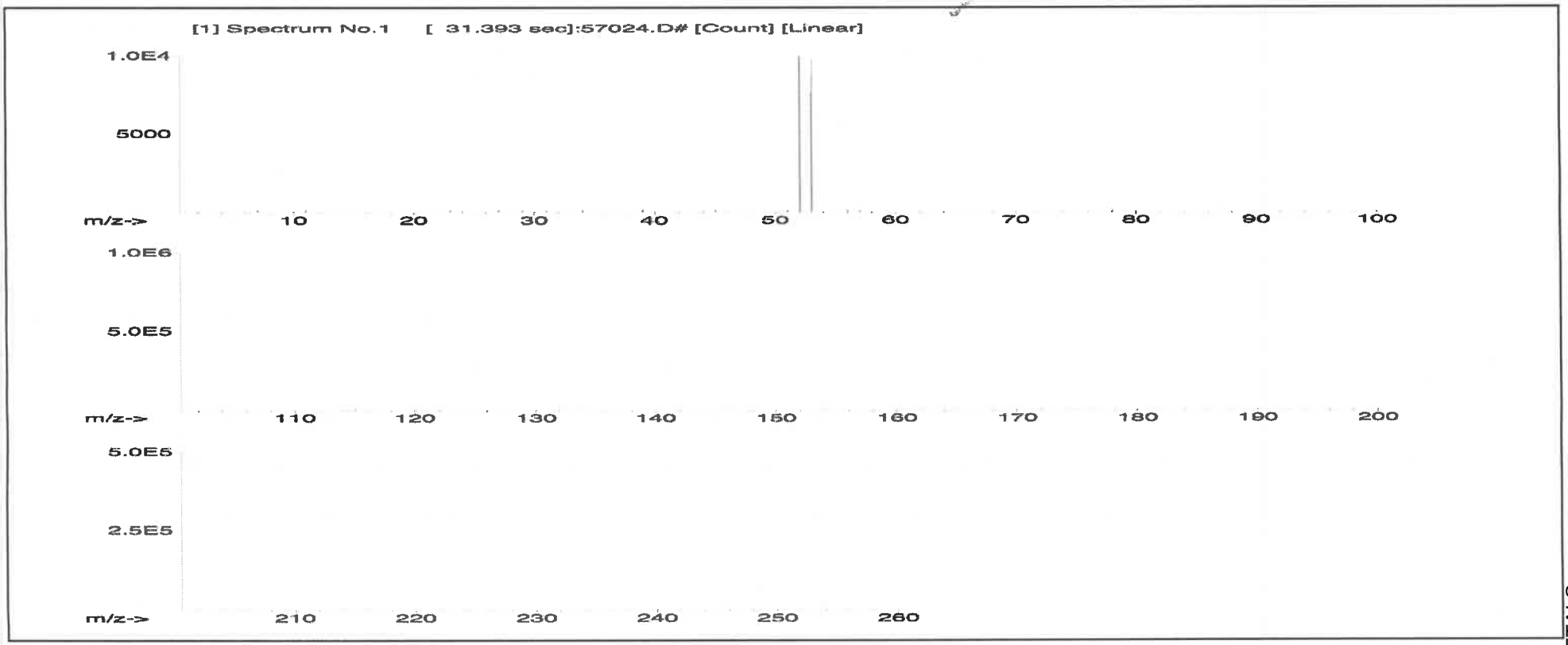
CERTIFIED WEIGHT REPORT:

		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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ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 12/20/23 M5747

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CERTIFIED WEIGHT REPORT:

Part Number: 57082
Lot Number: 100923
Description: Lead (Pb)

Expiration Date: 100926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

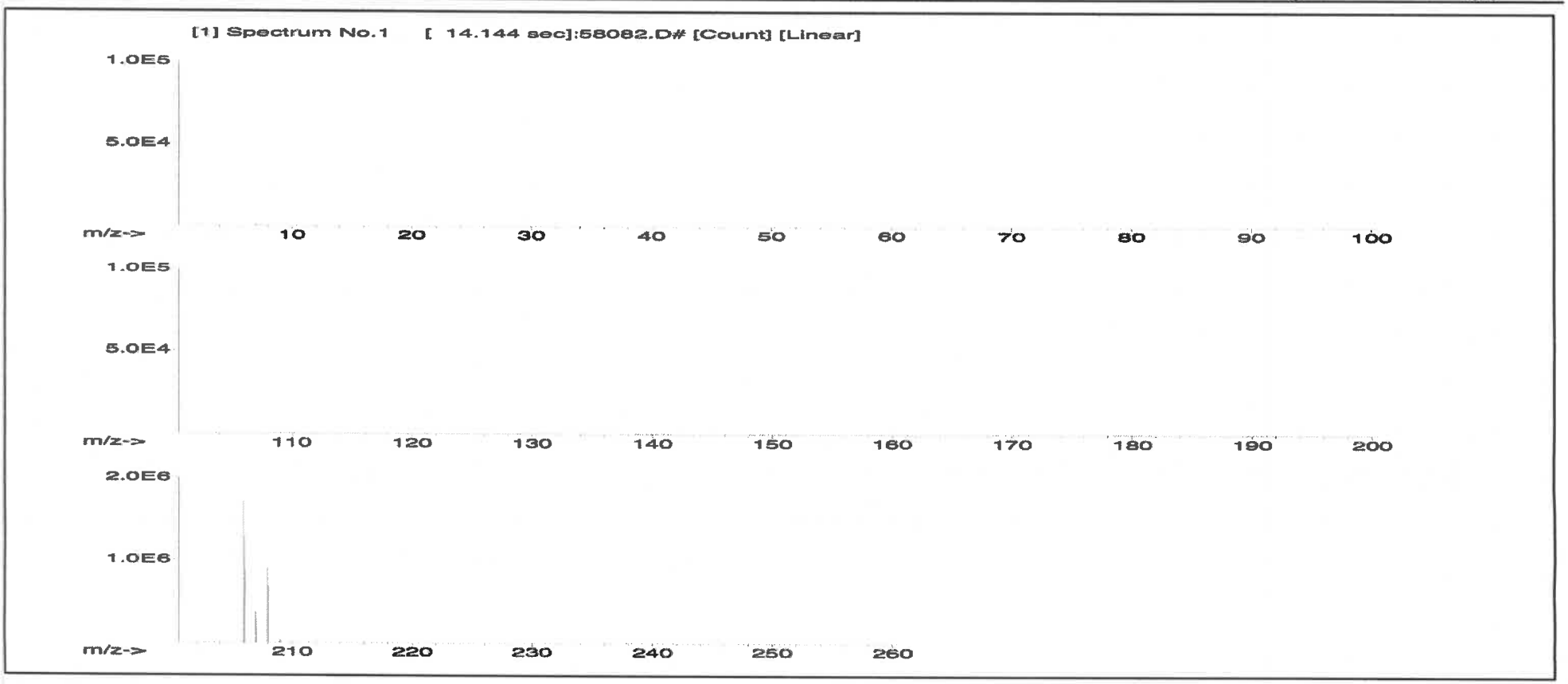
Weight shown below was diluted to (mL): 3000.41 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	100923
Reviewed By:	Pedro L. Rentas	100923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	4.80071	4.80077	**1000.0**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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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	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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Certified Reference Material CRM

R: 12/20/23 M5748

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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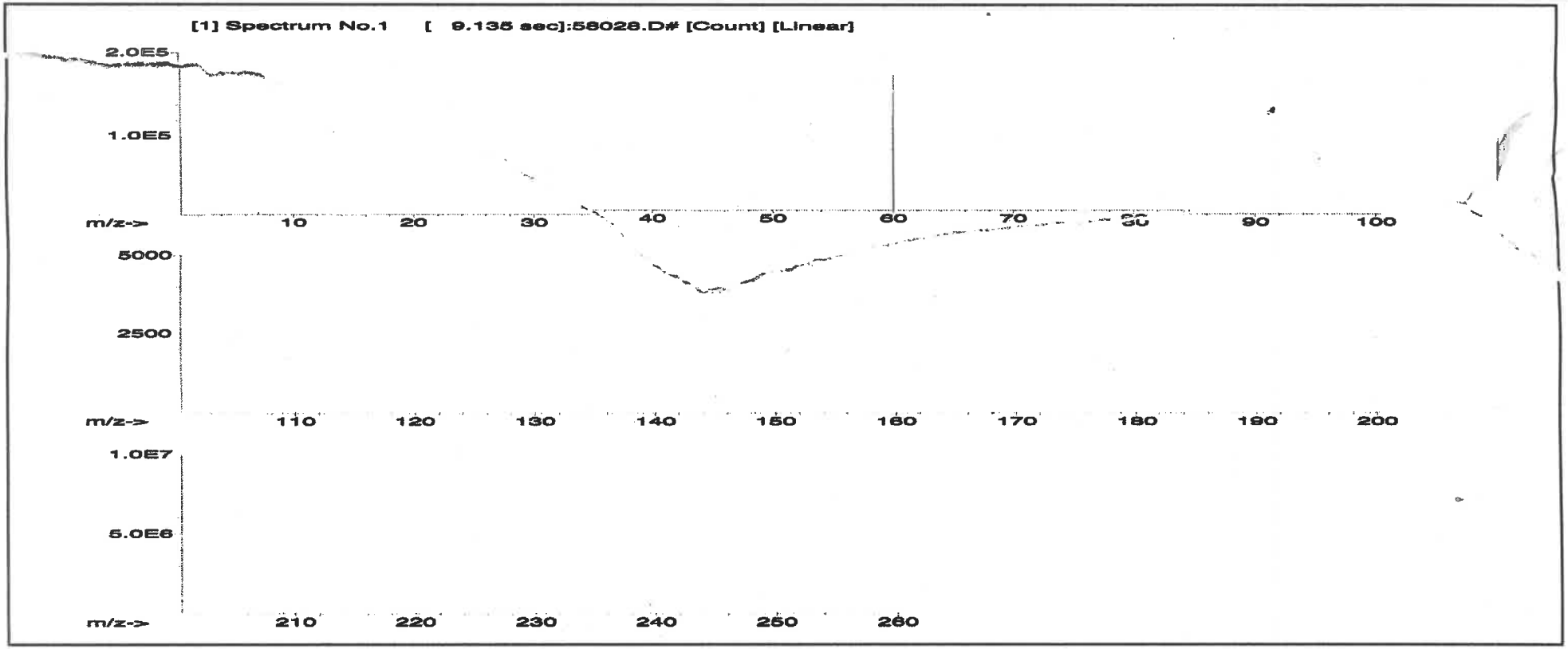
CERTIFIED WEIGHT REPORT:

		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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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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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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R: 8/25/23 M5751

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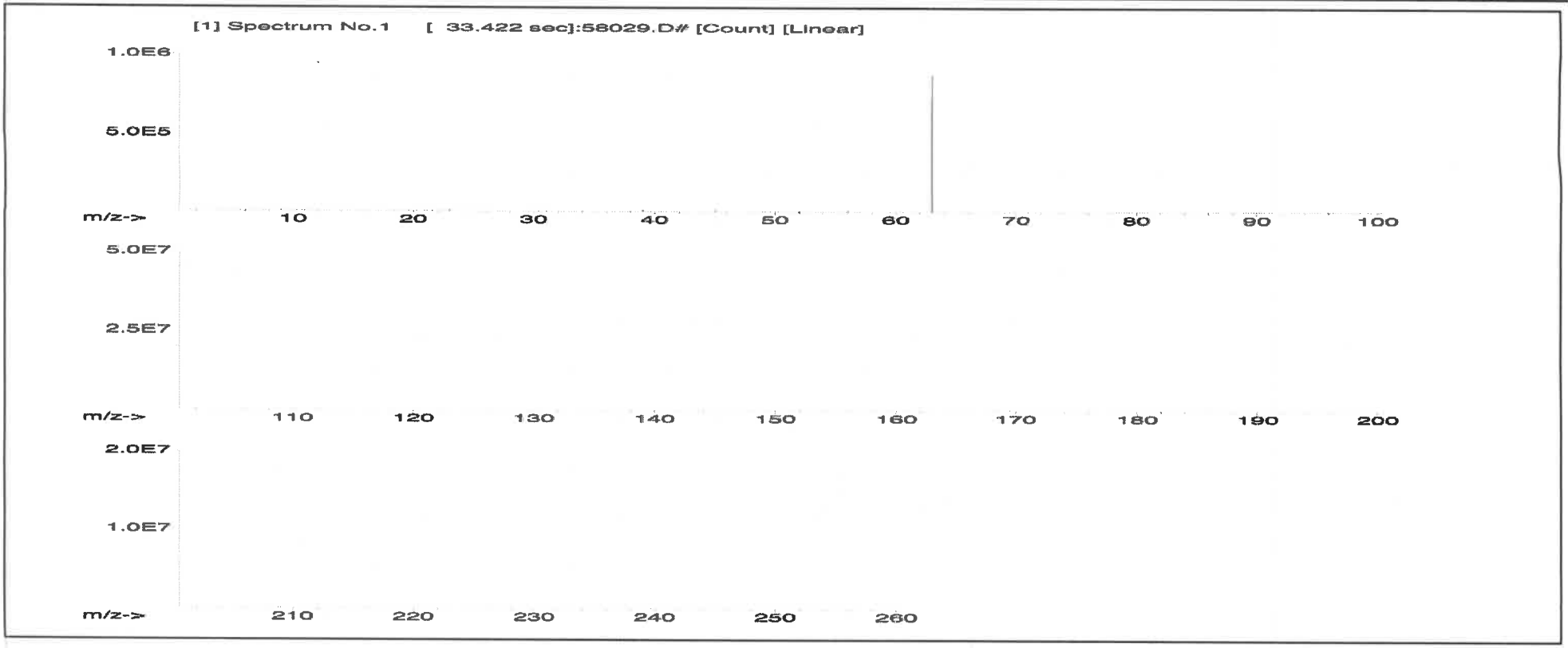
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	58029	21110221	Nitric Acid	
Lot Number:	071723			
Description:	Copper (Cu)	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	1000			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 M5798

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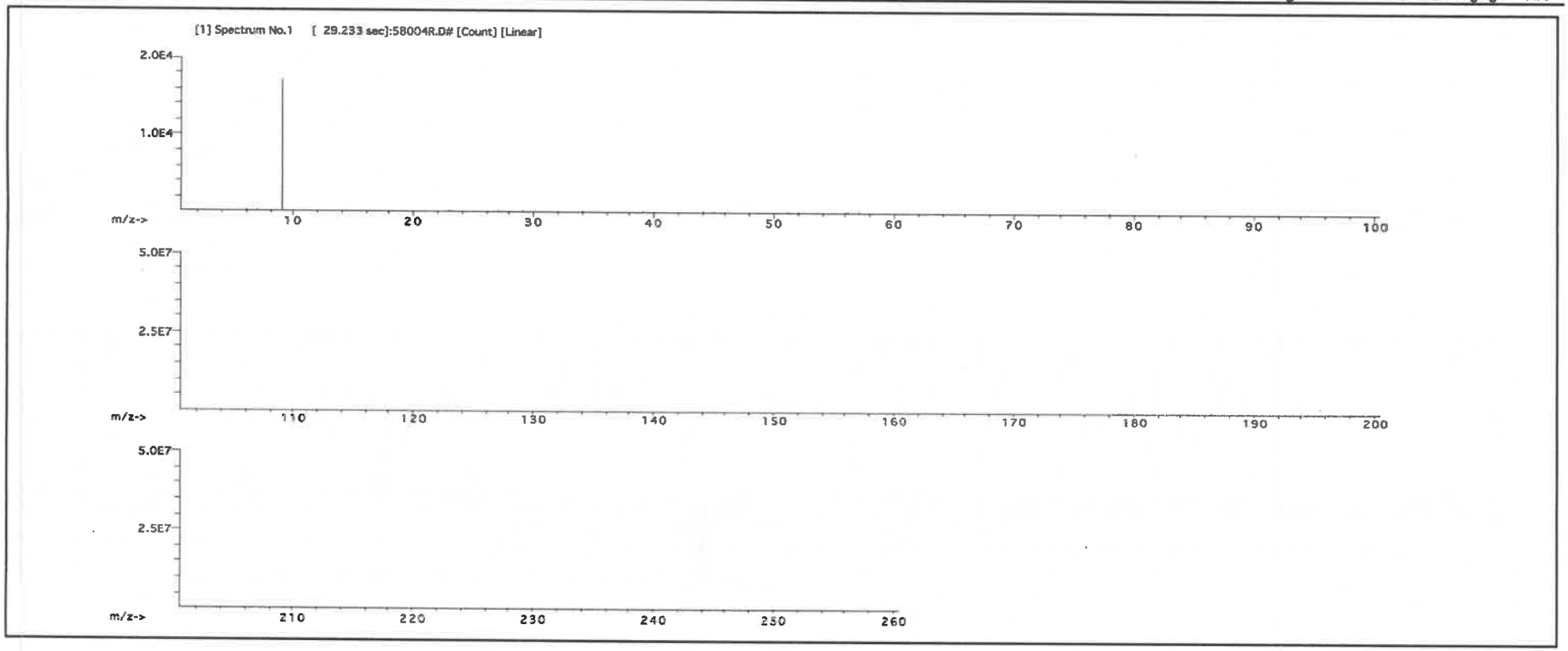
CERTIFIED WEIGHT REPORT:

		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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

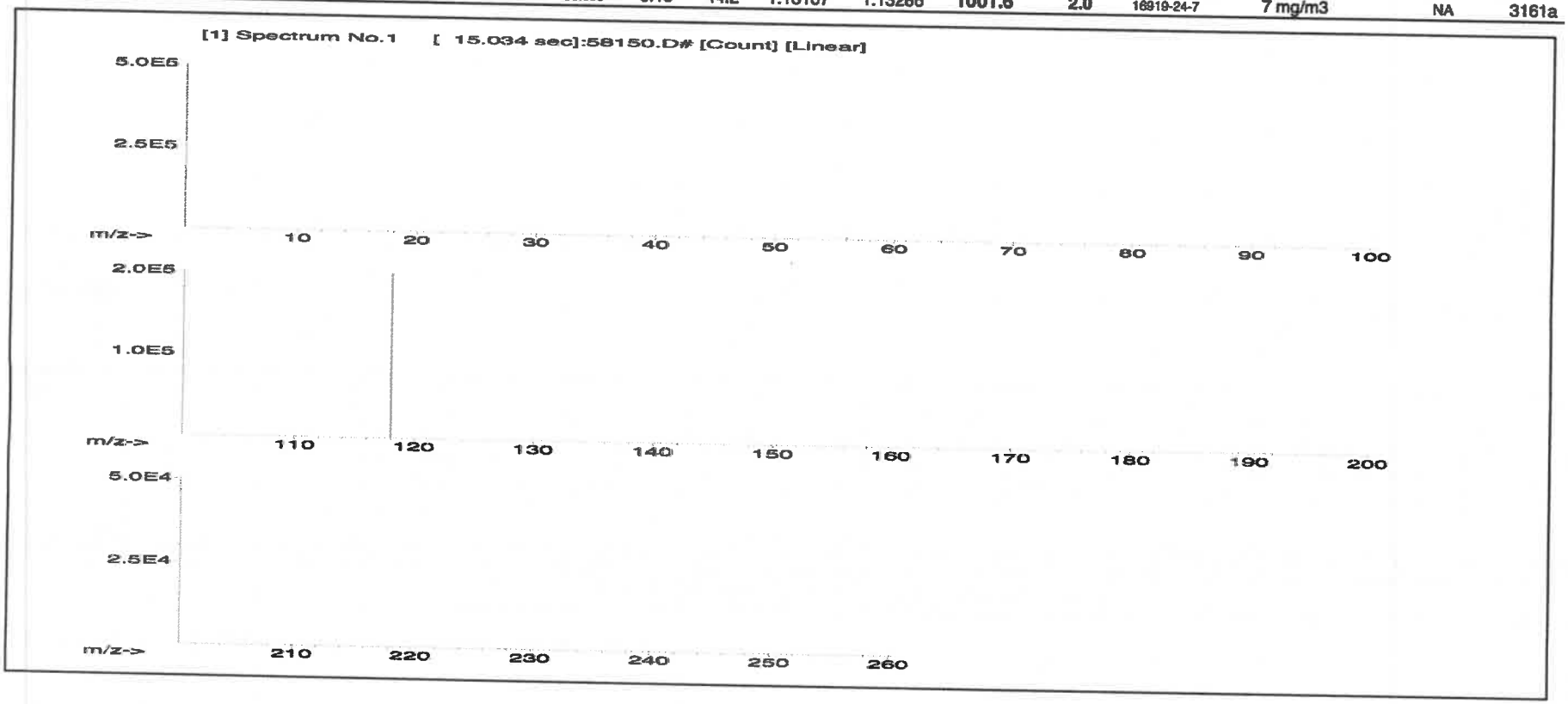
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

Solvents:	Lot #	
	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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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:

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Certified Reference Material CRM

R: 02/09/24 IM5800 BH

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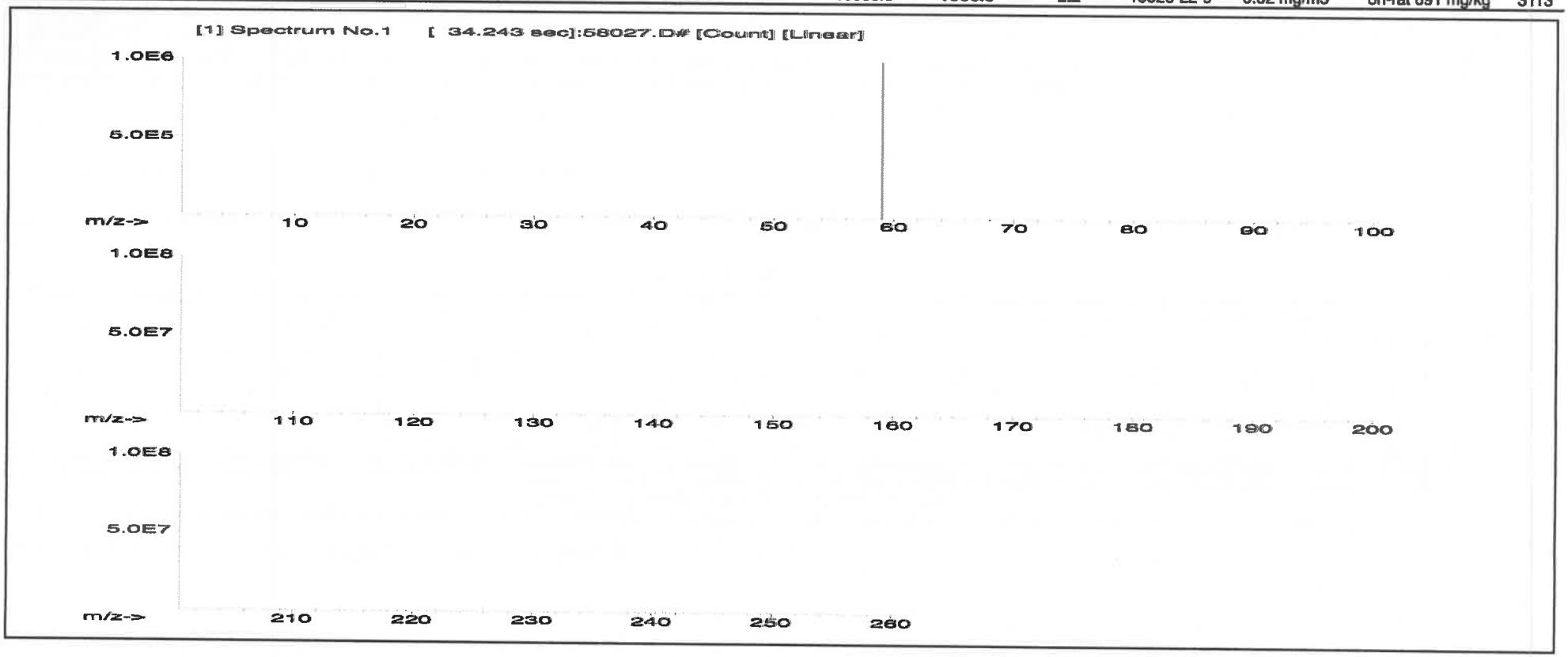
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



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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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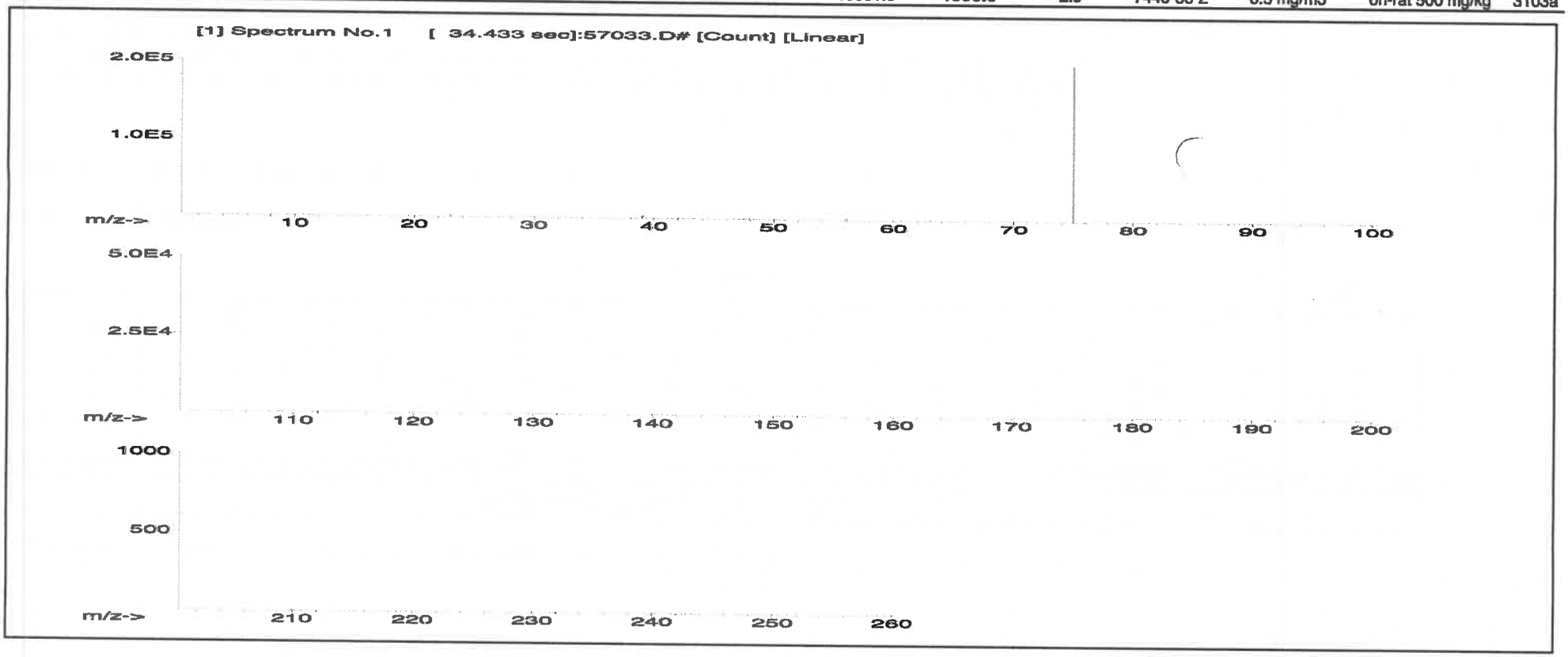
CERTIFIED **WEIGHT** REPORT:

		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:

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A: 02/09/24 M.5814

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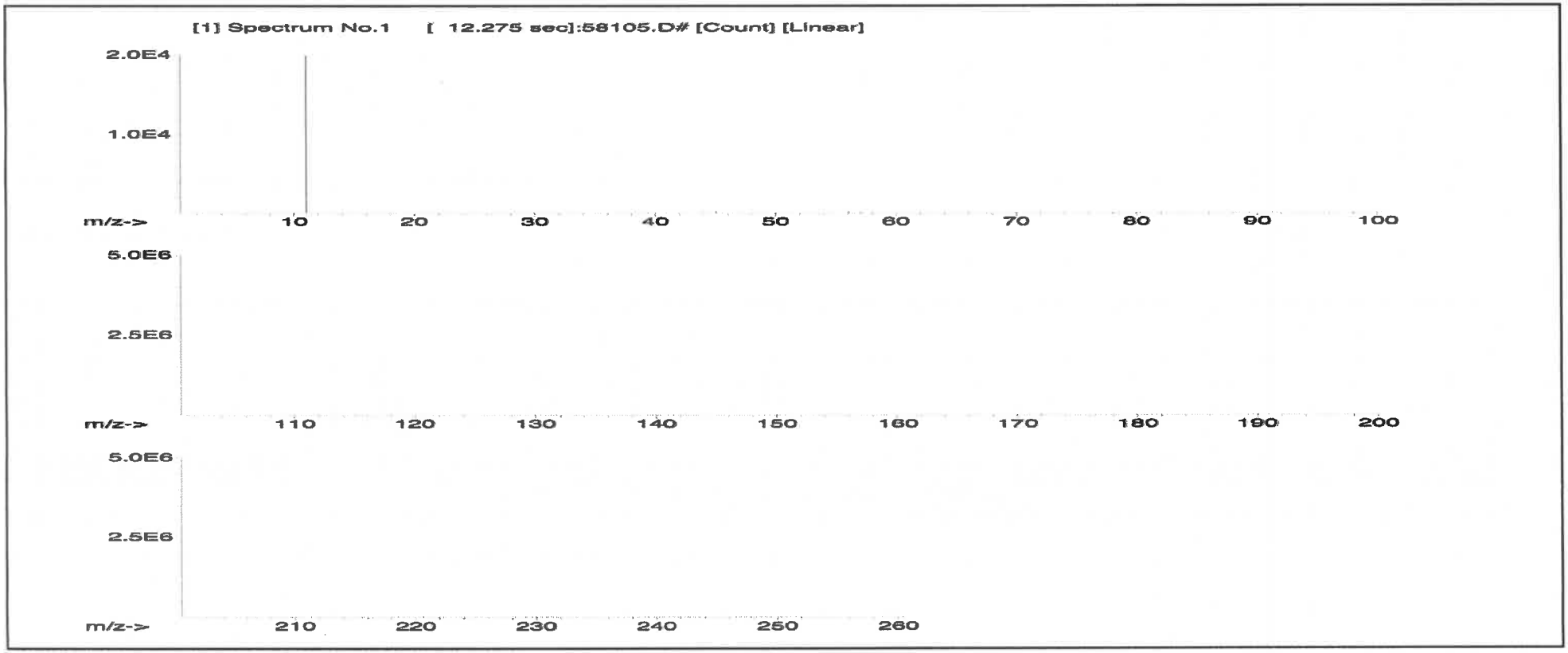
CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Lot #**		
Lot Number:	**071123**	**Solvent:**	MKBQ8597V	Ammonium hydroxide	
Description:	**Boron (B)**	2.0%	40.0 (mL)	Ammonium hydroxide	
Expiration Date:	071126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



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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.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5816

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

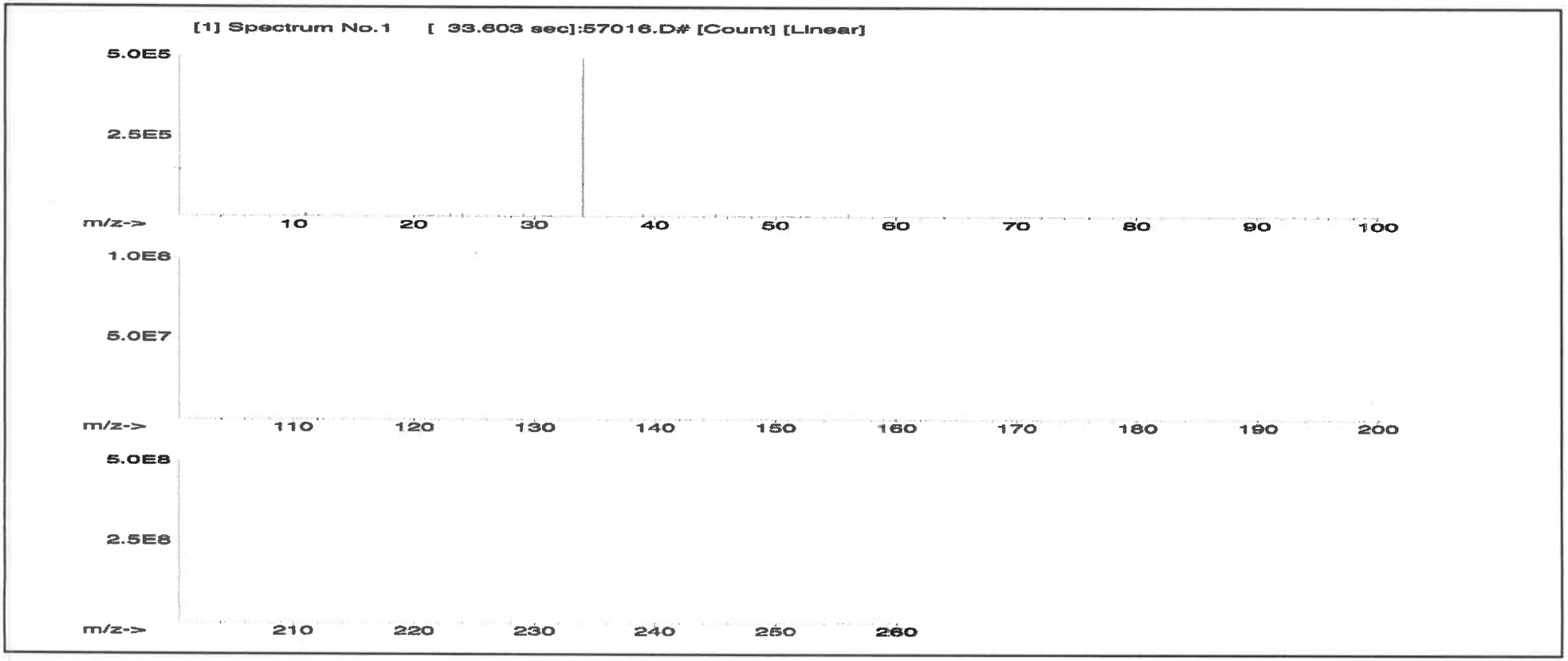
Part Number: 57016
Lot Number: 122923
Description: Sulfur (S)

Expiration Date: 122926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 4000.0 0.06 Flask Uncertainty

	Lot #	
Solvent:	122923	ASTM Type 1 Water

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 02/09/24 M5820

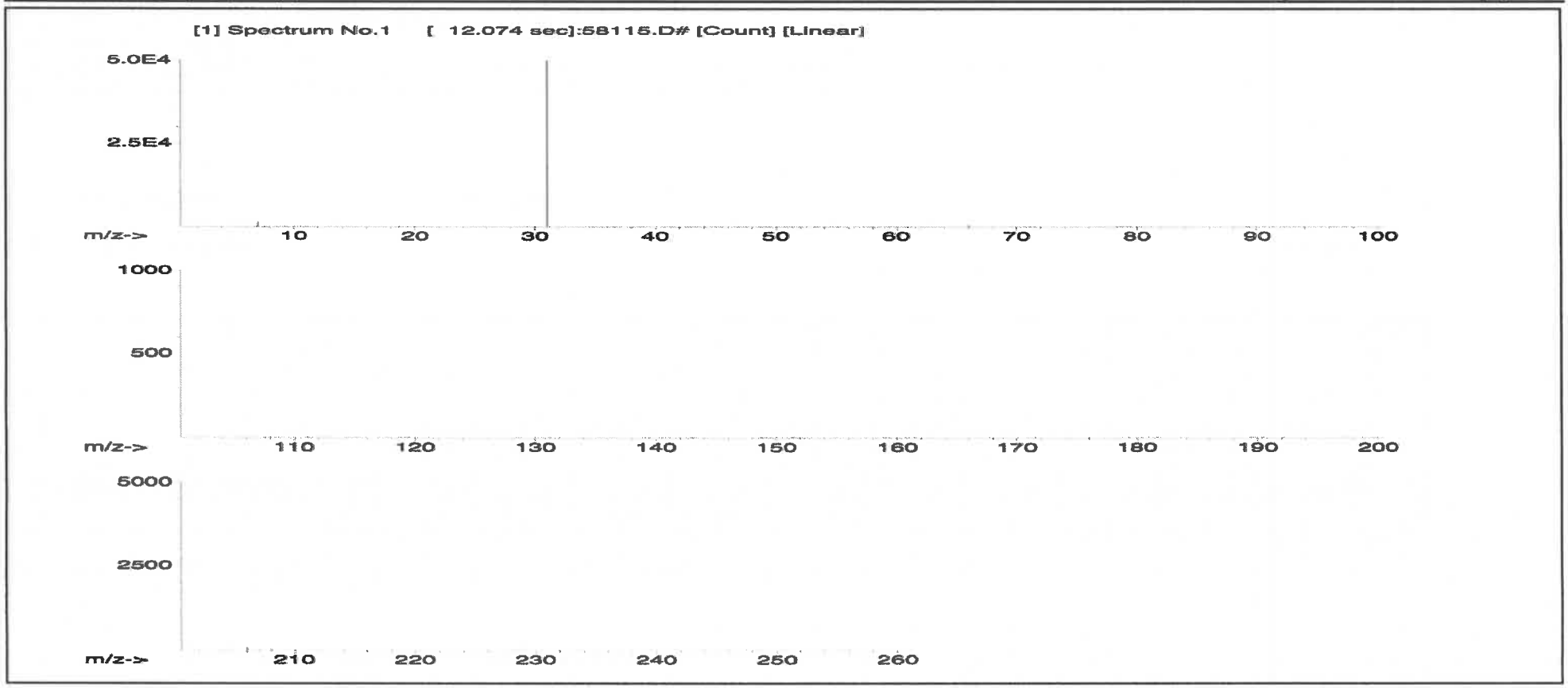
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**091123**				
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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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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Sodium Chloride, Crystal
BAKER ANALYZED® A.C.S. Reagent

MF884
MB

avantor™ | J.T.Baker®

Material No.: 3624-01
Batch No.: 0000281938
Manufactured Date: 2021-06-07
Retest Date: 2026-06-07
Revision No.: 1

Certificate of Analysis

Test	Specification	Result
Assay (NaCl) (by Ag titrn)	≥ 99.0 %	100.0 %
pH of 5% Solution at 25°C	5.0 - 9.0	6.3
Insoluble Matter	≤ 0.005 %	0.003 %
Iodide (I)	≤ 0.002 %	< 0.002 %
Bromide (Br)	≤ 0.01 %	< 0.01 %
Chlorate and Nitrate (as NO_3)	≤ 0.003 %	< 0.001 %
ACS - Phosphate (PO_4)	≤ 5 ppm	< 5 ppm
Sulfate (SO_4)	≤ 0.004 %	< 0.004 %
Barium (Ba)	Passes Test	Passes Test
ACS - Heavy Metals (as Pb)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Calcium (Ca)	≤ 0.002 %	< 0.001 %
Magnesium (Mg)	≤ 0.001 %	< 0.001 %
Potassium (K)	≤ 0.005 %	0.001 %

For Laboratory,Research,or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs
Country of Origin: USA
Packaging Site: Paris Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Mansford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 02/22/24 M5942

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:	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
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	< 0.000536	M	Eu	< 0.000268	O	Na	< 0.032670	M	Se	0.001204	O	Zn	< 0.003267			
O	Al	0.000872	O	Fe	0.003225	O	Nb	< 0.043560	O	Si	0.004735	O	Zr	< 0.043560			
M	As	< 0.008586	M	Ga	< 0.000268	M	Nd	< 0.000268	M	Sm	< 0.000268						
M	Au	< 0.004577	M	Gd	< 0.000268	O	Ni	< 0.010890	M	Sn	0.000096						
O	B	< 0.008929	M	Ge	< 0.002146	M	Os	< 0.000269	O	Sr	0.000096						
M	Ba	< 0.002683	M	Hf	0.002161	O	P	< 0.054450	M	Ta	0.010560						
M	Be	< 0.005366	M	Hg	< 0.003231	M	Pb	< 0.001073	M	Tb	< 0.000268						
M	Bi	< 0.001609	M	Ho	< 0.000268	M	Pd	< 0.000268	M	Te	< 0.001341						
O	Ca	0.000676	M	In	< 0.002683	M	Pr	< 0.000268	M	Th	< 0.053663						
M	Cd	< 0.000268	M	Ir	< 0.000269	M	Pt	< 0.000536	s	Ti	<						
M	Ce	< 0.000268	M	K	0.001172	M	Rb	< 0.000268	M	Tl	< 0.000268						
M	Co	< 0.004293	M	La	< 0.000268	M	Re	< 0.000268	M	Tm	< 0.000268						
M	Cr	0.000752	O	Li	< 0.027225	M	Rh	< 0.000268	M	U	< 0.000268						
M	Cs	< 0.000268	M	Lu	< 0.000268	M	Ru	< 0.000269	M	V	< 0.019855						
O	Cu	< 0.010890	O	Mg	< 0.005445	i	S	<	M	W	0.000473						
M	Dy	< 0.000268	O	Mn	< 0.003267	M	Sb	< 0.006976	M	Y	< 0.002146						
M	Er	< 0.000268	M	Mo	0.000774	O	Sc	< 0.004900	M	Yb	< 0.000536						

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

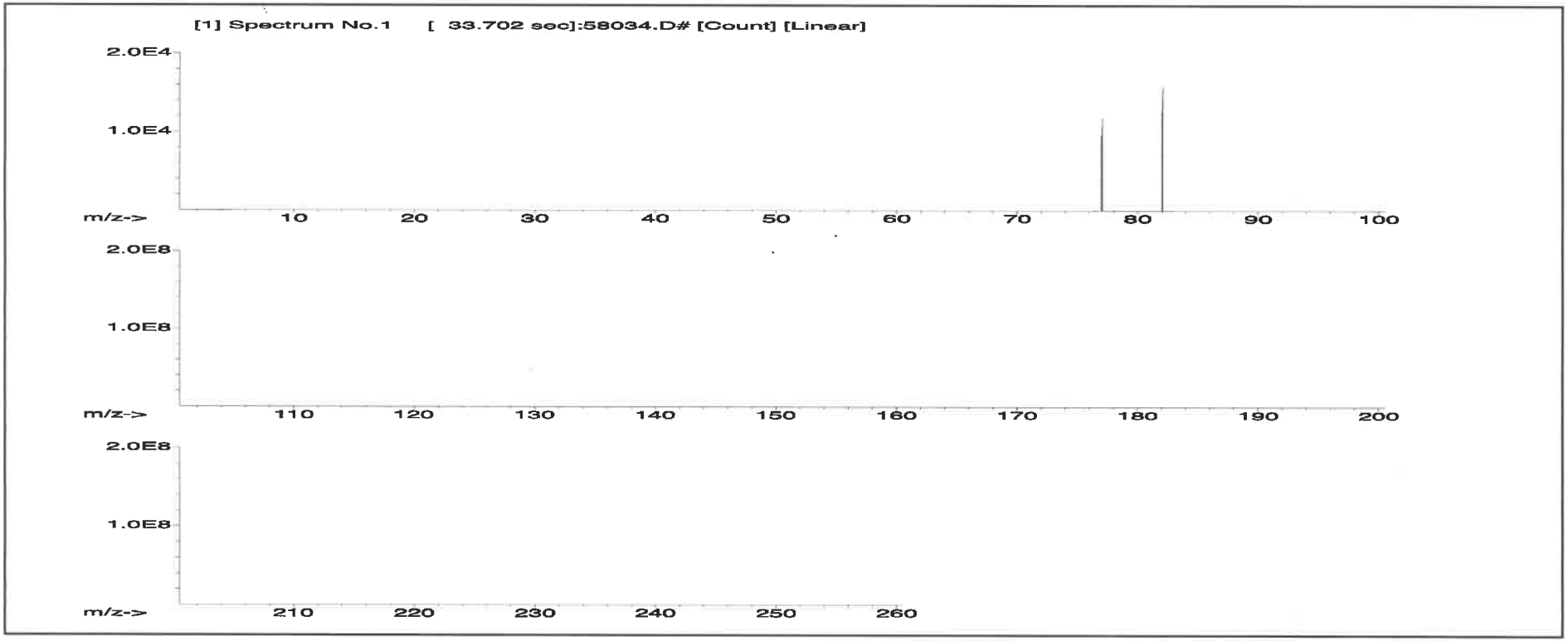
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11

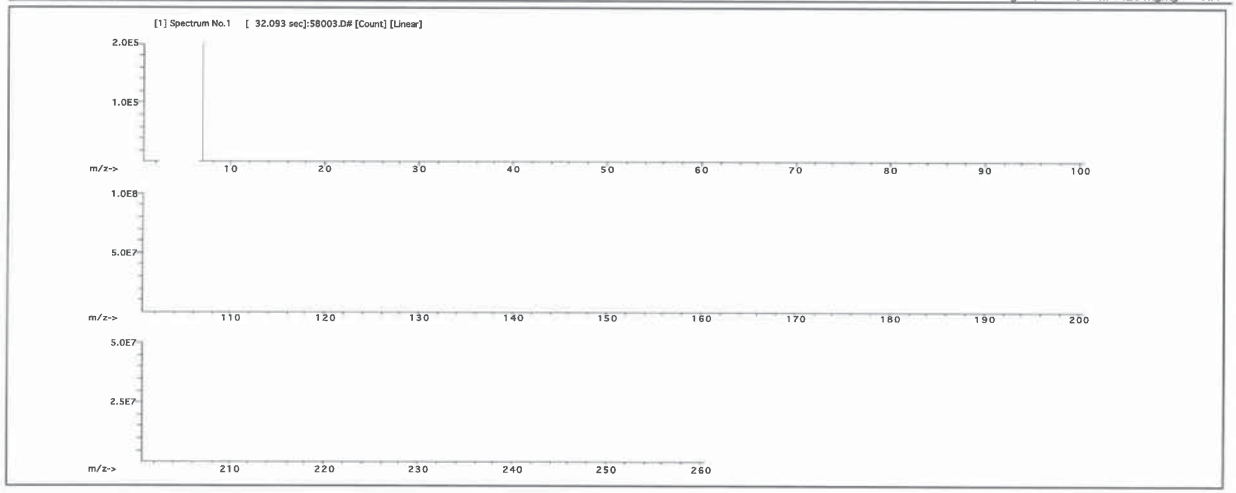
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

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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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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MS985
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ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Calcium, Ca	5 000 ± 22 µg/mL
Chromium, Cr	200.0 ± 1.0 µg/mL	Cobalt, Co	500.0 ± 2.4 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 20 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Vanadium, V	499.7 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.118 g/mL (measured at 20 ± 4 °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
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = (\Sigma((w_i)^2\,(u_{char\ i})^2))^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- January 27, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB727800
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	1 000 ± 7 µg/mL	Cadmium, Cd	500.0 ± 2.2 µg/mL
Lead, Pb	1 000 ± 4 µg/mL	Selenium, Se	1 000 ± 6 µg/mL
Thallium, Tl	1 000 ± 7 µg/mL		

Density: 1.042 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/(u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i}^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 21, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 21, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

M 6041-46
MS

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH_4)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO_3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO_4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™ | J.T.Baker®

Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities - Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities - Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory,Research,or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

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P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

R -> 1/13/25
M 6127

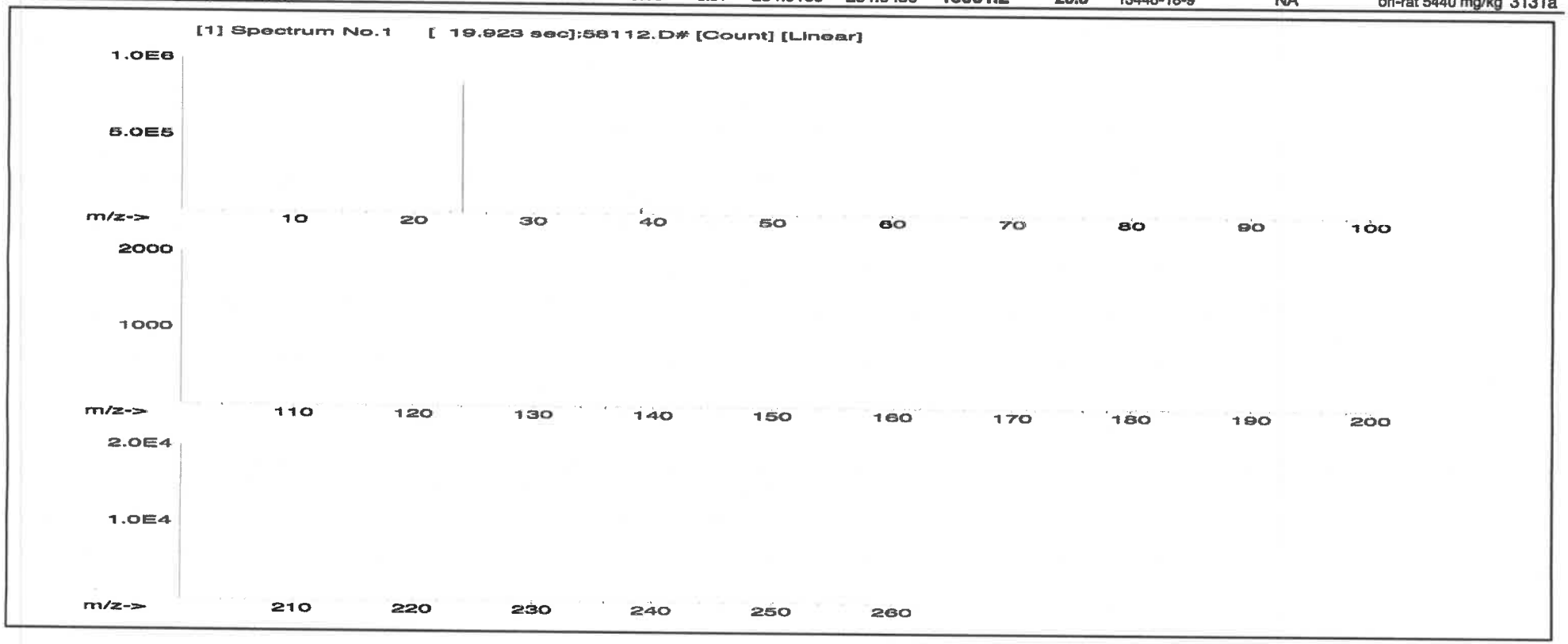
Part Number: 58112
Lot Number: 112124
Description: Magnesium (Mg)

Expiration Date: 112127
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		

Giovanni Esposito
Formulated By: Giovanni Esposito 112124
Reviewed By: Pedro L. Rentas 112124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9459	**10001.2**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
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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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Certified Reference Material CRM

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

R->1/13/25
M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

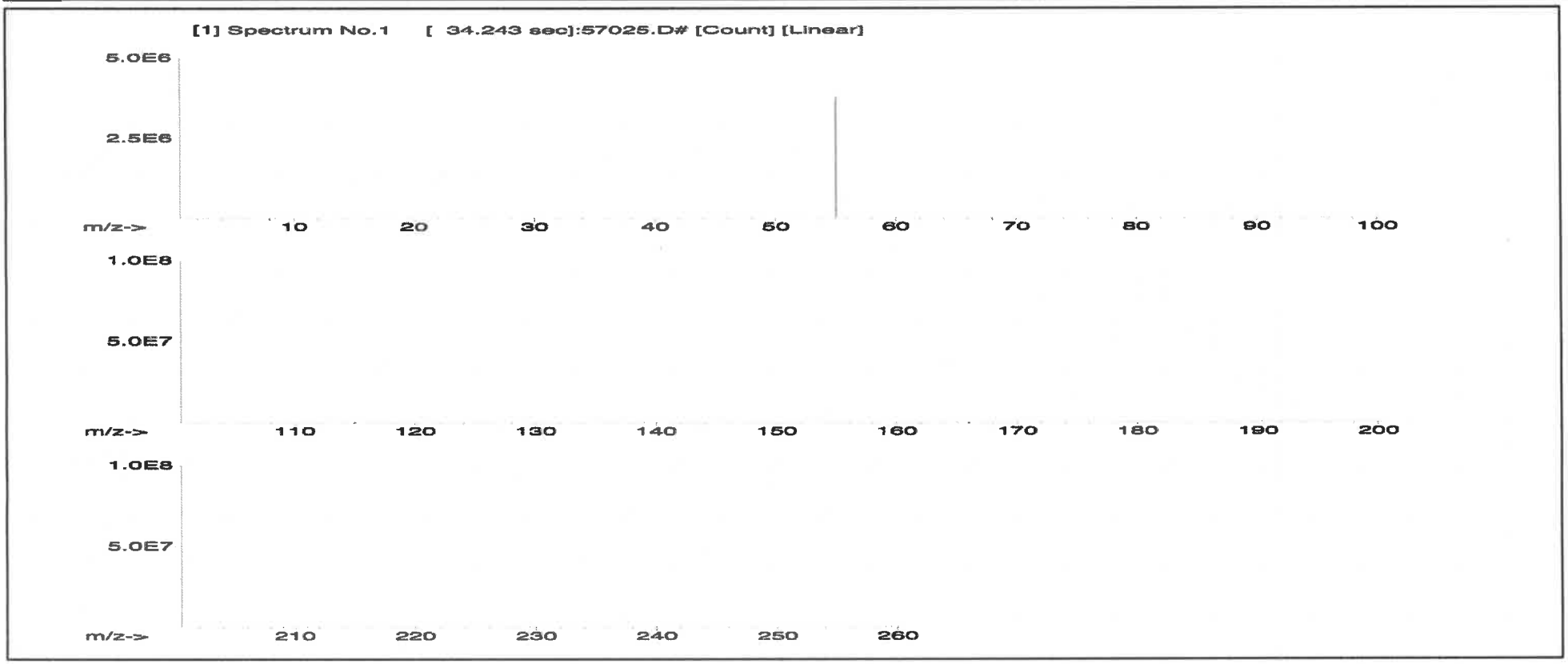
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

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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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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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).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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M6137 R→10/3/24

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	V2-SI744713
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon
Starting Material:	Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL

Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **999 ± 5 µg/mL**
ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546

Assay Method #2 **1000 ± 7 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 10, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor

Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

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CERTIFIED WEIGHT REPORT:

R-> 1/13/25

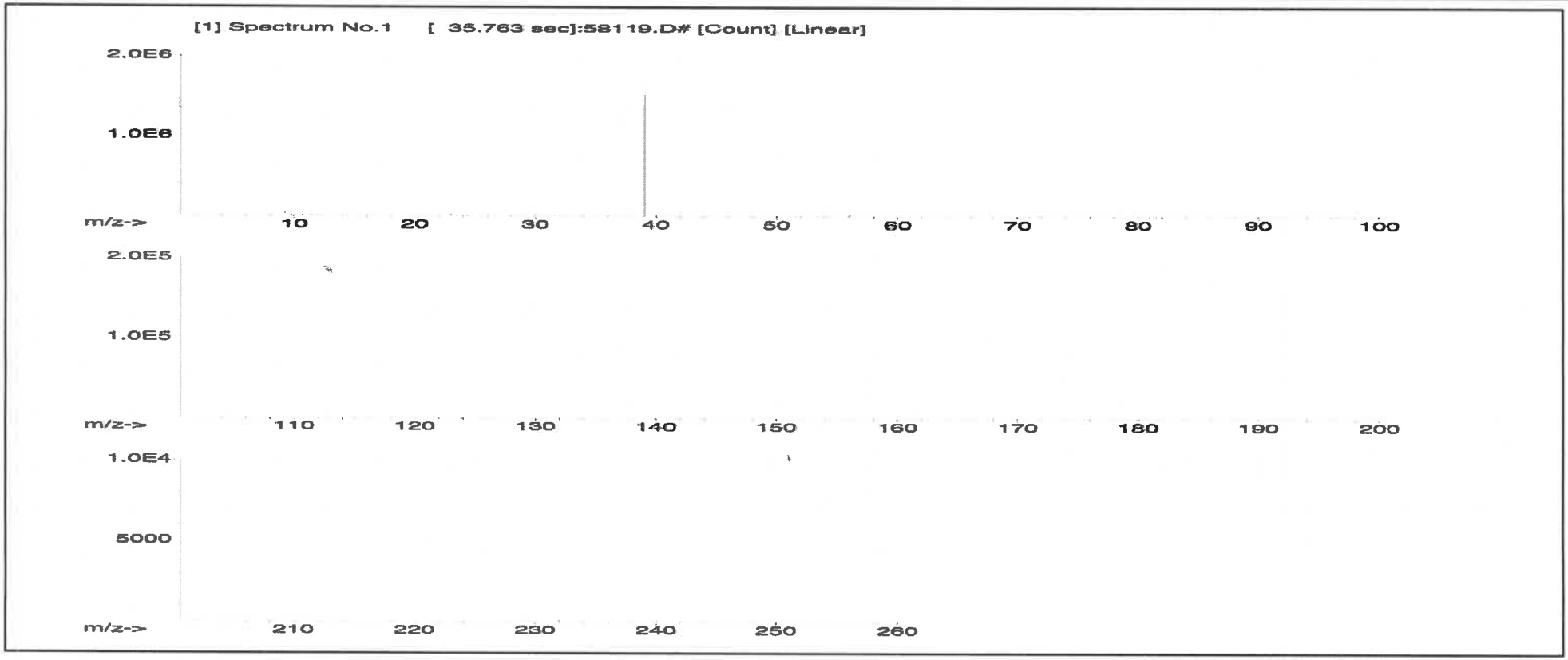
Part Number:	**57119**		**Lot #**		
Lot Number:	**103024**	**Solvent:**	24002546	Nitric Acid	
Description:	**Potassium (K)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	103027				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance 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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

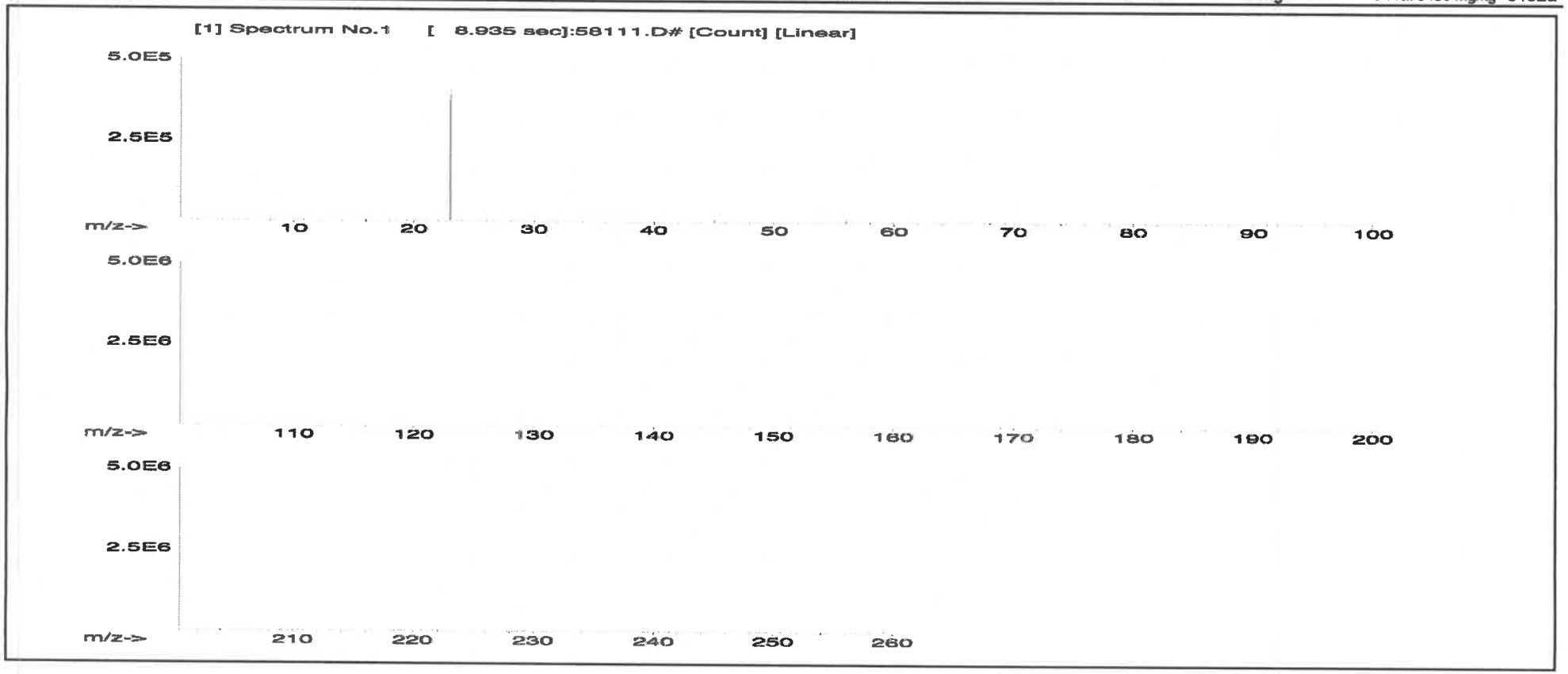
R->1/13/25

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 Reference Material CRM

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AR-1539 Certificate Number
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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

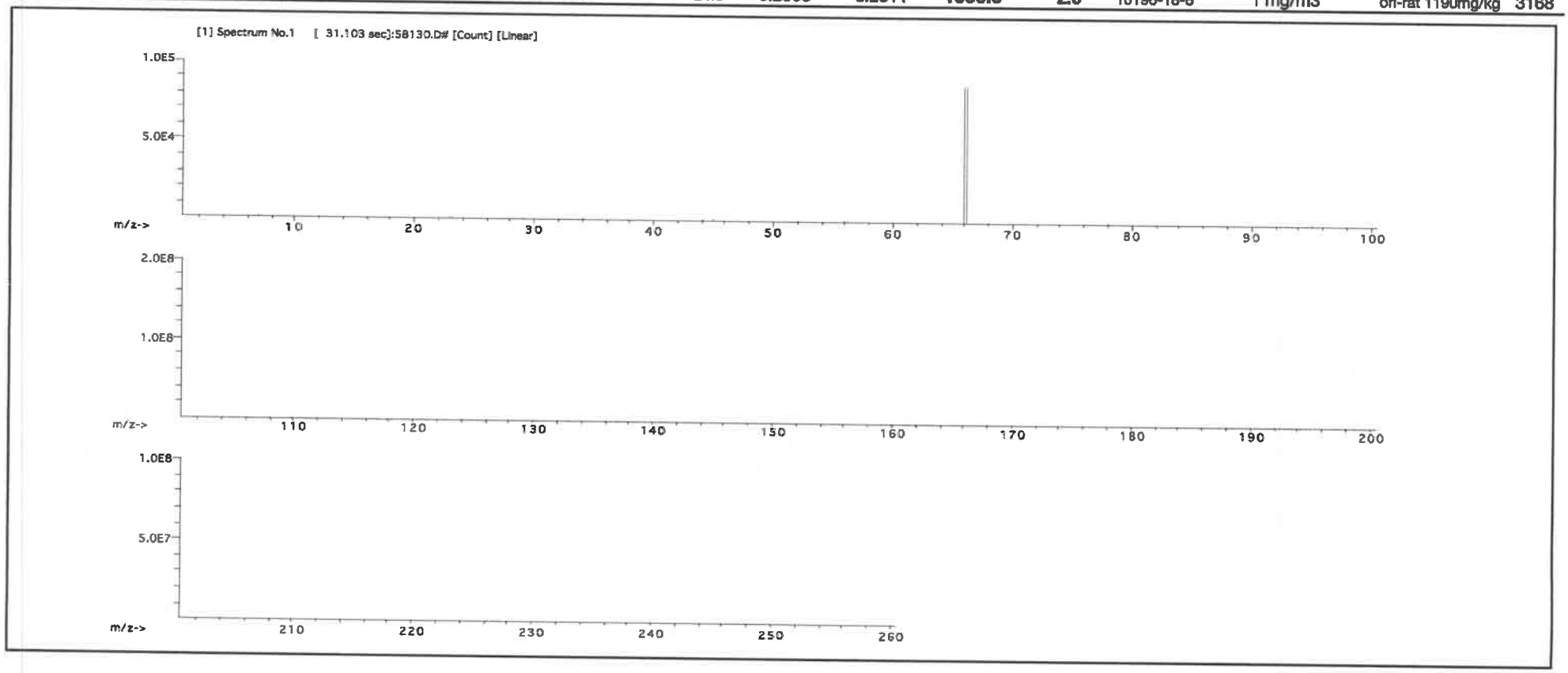
		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

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	ori-rat 1190mg/kg	3168



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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	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R→ 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

R-02102/2025

M-6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

M-5162

R. Date :- 04/27/2025

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

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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

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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.

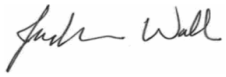
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

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

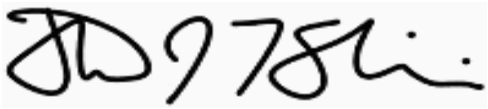
- Sealed TCT Bag Open Date: _____

- 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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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-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

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 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.

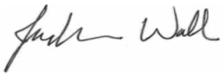
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor

Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6030

R: 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

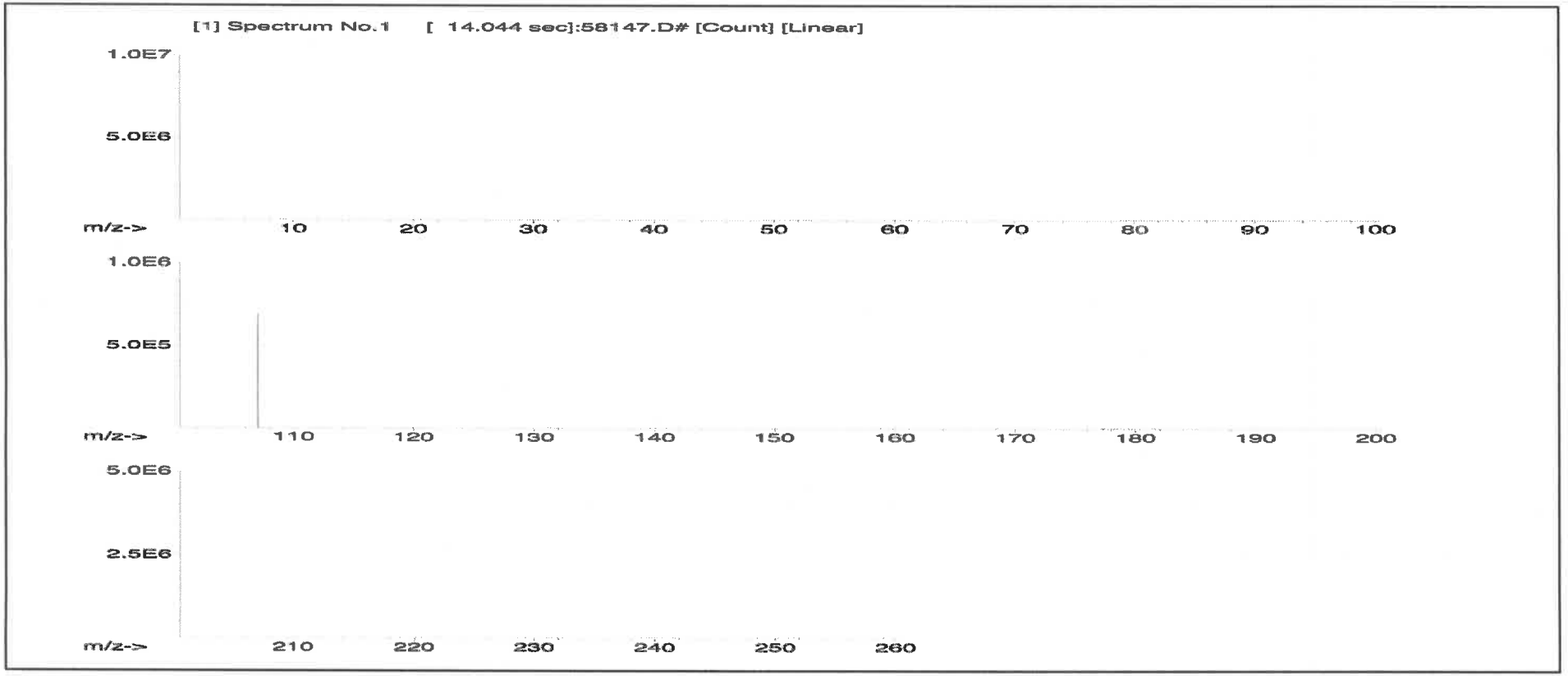
Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.30

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 10/18/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

MG146

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

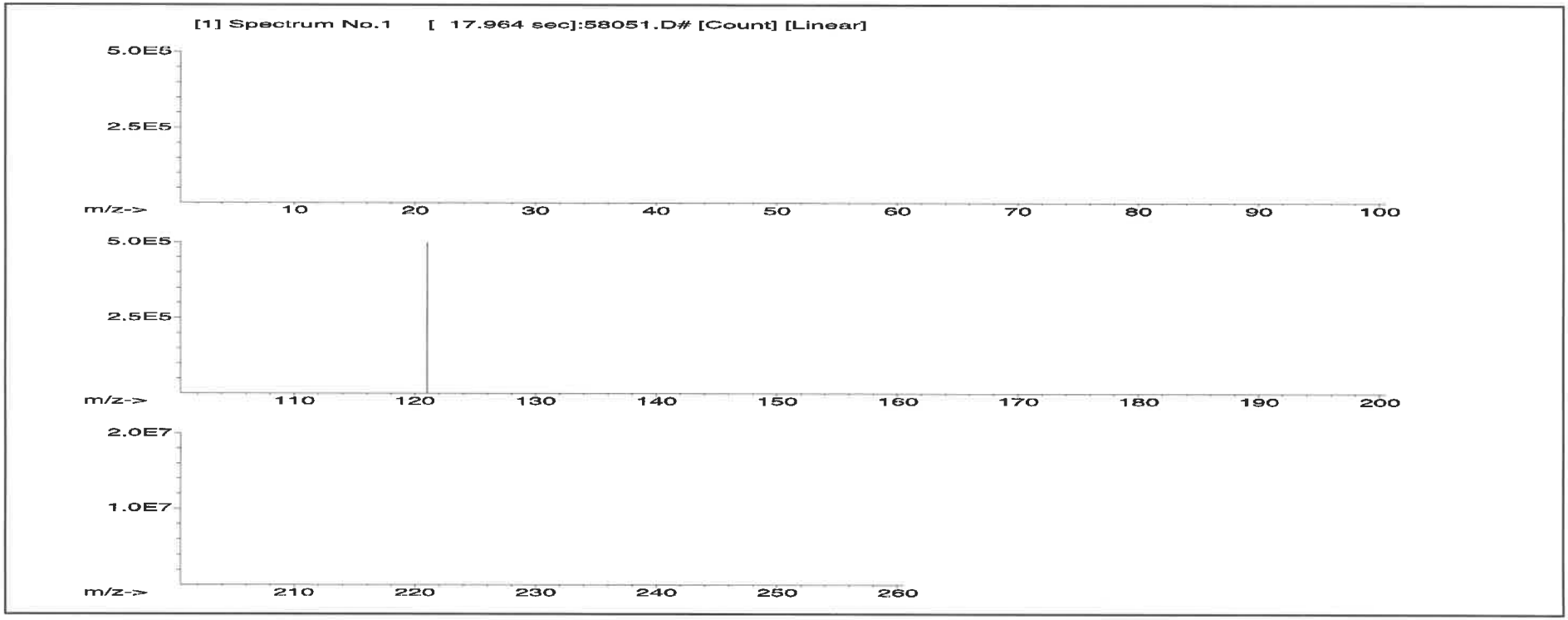
Giovanni Esposito

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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M6152

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

APTIM

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M6155

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

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.

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 8/5/24 M6019

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 888.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_{6}^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

R: 8/5/24 M6019

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 888.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_{6}^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6023

R ! 8/5/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (Tl)

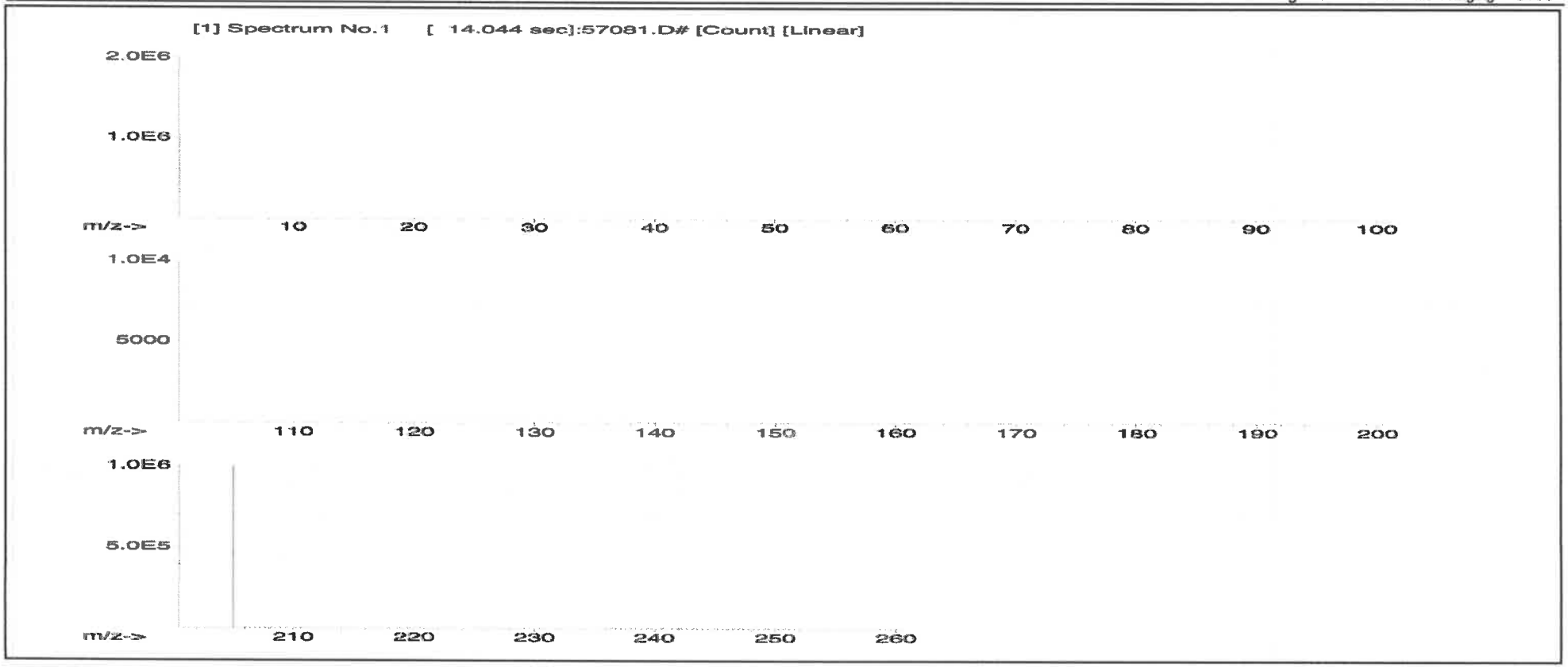
Expiration Date: 062727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.1

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.10	Flask Uncertainty	

Aleah O'Brady
Formulated By: Aleah O'Brady 062724

Pedro Rentas
Reviewed By: Pedro L. Rentas 062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

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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	

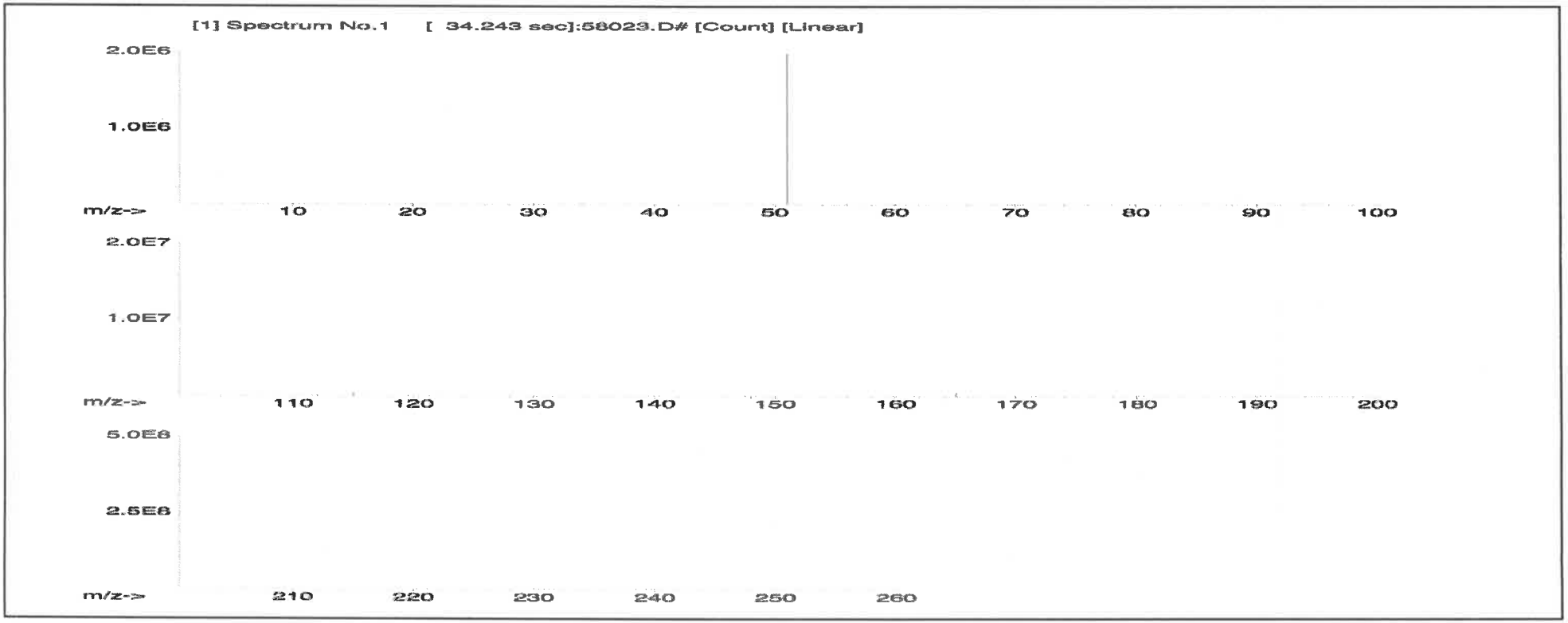
Aleah O'Brady

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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AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

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SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO. Q 2592
QUOTE NO.
COC Number 2047546

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Parsons
ADDRESS: 301 Plainfield Road
CITY Syracuse STATE: NY ZIP: 13212
ATTENTION: Zohar Lavy
PHONE: (732)796-5536 FAX: —

CLIENT PROJECT INFORMATION

PROJECT NAME: ConEd East River S1
PROJECT NO.: 454534 LOCATION: Manhattan
PROJECT MANAGER: Zohar Lavy
e-mail: Zohar.lavy@parsons.com
PHONE: (732)-796-5536 FAX: —

CLIENT BILLING INFORMATION

BILL TO: Parsons PO#: 454534
ADDRESS: 301 Plainfield Road
CITY Syracuse STATE: NY ZIP: 13212
ATTENTION: Zohar Lavy PHONE: (732)-796-5536

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 5-day rush DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☐ Level 3 (Results + QC + Raw Data) ☐ NYS ASP A ☐ NYS ASP B
☐ Other _____
☐ EDD FORMAT _____

ANALYSIS

1. VOCs, SVOCs
2. TAL metals
3. PCBs, TPH
4. TCLP VOCs, TCLP SVOCs
5. TCLP metals
6. TCLP pest, TCLP herb
7. Ignitability, reactivity
8. corrosivity, pH
9.

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	PRESERVATIVES 1	2	3	4	5	6	7	8	9	COMMENTS
								E	E	E	E	E	E	E	E		← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
1.	WC-Soil-20250711	S	X		7/11/25	1230	9	X	X	X	X	X	X	X	X		
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. Emma Sauer	7/11/25 1440	1. 7-11-25 1440
2.		2.
3.	7-11-25 1637	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.1 °C
Comments: Include Zohar.lavy@parsons.com and Kirsten.valentini@parsons.com on all data

Page ____ of

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete ☐ YES ☐ NO

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WHITE - ALLIANCE COPY FOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2592 PARS02
Client Name : PARSONS Engineering of N
Client Contact : Zohar Lavy
Invoice Name : PARSONS Engineering of N
Invoice Contact : Zohar Lavy

Order Date : 7/11/2025 3:05:25 PM
Project Name : Con Edison - East River Sit
Receive DateTime : 7/11/2025 ~~12:00:00 AM~~ 04:39:00 PM
Purchase Order :

Project Mgr :
Report Type : NYS ASP B
EDD Type : NYSDEC EDD V-3
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2592-01	WC-SOIL-20250711	Solid	07/11/2025	12:30					
					VOCMS Group1		8260D		5 Bus. Days

DP 07/15/2025

Relinguished By :
Date / Time : 7/14/25 0725

Received By : Sam
Date / Time : 07/14/25 1010

SAMPLES RECEIVED ON 7/11/25 @ N40
SAMPLES PLACED IN SM-REF-2

Storage Area : VOA Refridgerator Room

ngH 6
FZ2