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

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LAB CHRONICLE

OrderID:	Q3234	**OrderDate:**	9/29/2025 11:24:32 AM
Client:	ATG-GREENVILLE AEC	**Project:**	AEC-2025-0013- CSC 4028 Cumberland
Contact:	Staci Bruce	**Location:**	D31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3234-01	**DA-1**	**Water**			**09/29/25**			**09/29/25**
			Metals Group4	6010D		09/30/25	10/01/25	
Q3234-02	**DA-2**	**Water**			**09/29/25**			**09/29/25**
			Metals Group4	6010D		09/30/25	10/01/25	

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Hit Summary Sheet
SW-846

SDG No.: Q3234 **Order ID:** Q3234

Client: ATG-GREENVILLE AEC **Project ID:** AEC-2025-0013- CSC 4028 Cumberland

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID : DA-1								
Q3234-01	DA-1	Water	Copper	0.0093	J	0.0023	0.010	mg/L
Q3234-01	DA-1	Water	Lead	0.0014	J	0.0012	0.0060	mg/L
Client ID : DA-2								
Q3234-02	DA-2	Water	Copper	0.019		0.0023	0.010	mg/L
Q3234-02	DA-2	Water	Lead	0.017		0.0012	0.0060	mg/L



SAMPLE DATA

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Report of Analysis

Client:	ATG-GREENVILLE AEC	Date Collected:	09/29/25
Project:	AEC-2025-0013- CSC 4028 Cumberland	Date Received:	09/29/25
Client Sample ID:	DA-1	SDG No.:	Q3234
Lab Sample ID:	Q3234-01	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-43-9	Cadmium	0.00025	U	1	0.00025	0.0030	mg/L	09/30/25 10:35	10/01/25 17:46	6010D	SW3010
7440-50-8	Copper	0.0093	J	1	0.0023	0.010	mg/L	09/30/25 10:35	10/01/25 17:46	6010D	SW3010
7439-92-1	Lead	0.0014	J	1	0.0012	0.0060	mg/L	09/30/25 10:35	10/01/25 17:46	6010D	SW3010

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

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

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

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Report of Analysis

Client:	ATG-GREENVILLE AEC	Date Collected:	09/29/25
Project:	AEC-2025-0013- CSC 4028 Cumberland	Date Received:	09/29/25
Client Sample ID:	DA-2	SDG No.:	Q3234
Lab Sample ID:	Q3234-02	Matrix:	Water
Level (low/med):	low	% Solid:	0

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-43-9	Cadmium	0.00025	U	1	0.00025	0.0030	mg/L	09/30/25 10:35	10/01/25 17:50	6010D	SW3010
7440-50-8	Copper	0.019		1	0.0023	0.010	mg/L	09/30/25 10:35	10/01/25 17:50	6010D	SW3010
7439-92-1	Lead	0.017		1	0.0012	0.0060	mg/L	09/30/25 10:35	10/01/25 17:50	6010D	SW3010

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

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

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

METAL CALIBRATION DATA

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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	Cadmium	1970	2000	98	90 - 110	P	10/01/2025	12:33	LB137389
	Copper	1010	1000	101	90 - 110	P	10/01/2025	12:33	LB137389
	Lead	3860	4000	96	90 - 110	P	10/01/2025	12:33	LB137389

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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	Cadmium	5.97	6.0	99	80 - 120	P	10/01/2025	12:41	LB137389
	Copper	21.3	20.0	106	80 - 120	P	10/01/2025	12:41	LB137389
	Lead	11.1	12.0	93	80 - 120	P	10/01/2025	12:41	LB137389

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Metals

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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	Cadmium	2490	2500	100	90 - 110	P	10/01/2025	13:10	LB137389
	Copper	1260	1250	100	90 - 110	P	10/01/2025	13:10	LB137389
	Lead	4950	5000	99	90 - 110	P	10/01/2025	13:10	LB137389
CCV02	Cadmium	2500	2500	100	90 - 110	P	10/01/2025	14:02	LB137389
	Copper	1260	1250	100	90 - 110	P	10/01/2025	14:02	LB137389
	Lead	4960	5000	99	90 - 110	P	10/01/2025	14:02	LB137389
CCV03	Cadmium	2540	2500	102	90 - 110	P	10/01/2025	15:00	LB137389
	Copper	1280	1250	102	90 - 110	P	10/01/2025	15:00	LB137389
	Lead	5050	5000	101	90 - 110	P	10/01/2025	15:00	LB137389
CCV04	Cadmium	2520	2500	101	90 - 110	P	10/01/2025	15:51	LB137389
	Copper	1270	1250	101	90 - 110	P	10/01/2025	15:51	LB137389
	Lead	5000	5000	100	90 - 110	P	10/01/2025	15:51	LB137389
CCV05	Cadmium	2500	2500	100	90 - 110	P	10/01/2025	16:42	LB137389
	Copper	1260	1250	100	90 - 110	P	10/01/2025	16:42	LB137389
	Lead	4960	5000	99	90 - 110	P	10/01/2025	16:42	LB137389
CCV06	Cadmium	2530	2500	101	90 - 110	P	10/01/2025	17:32	LB137389
	Copper	1280	1250	102	90 - 110	P	10/01/2025	17:32	LB137389
	Lead	5030	5000	100	90 - 110	P	10/01/2025	17:32	LB137389
CCV07	Cadmium	2500	2500	100	90 - 110	P	10/01/2025	18:28	LB137389
	Copper	1260	1250	101	90 - 110	P	10/01/2025	18:28	LB137389
	Lead	4970	5000	99	90 - 110	P	10/01/2025	18:28	LB137389
CCV08	Cadmium	2450	2500	98	90 - 110	P	10/01/2025	19:19	LB137389
	Copper	1230	1250	99	90 - 110	P	10/01/2025	19:19	LB137389
	Lead	4860	5000	97	90 - 110	P	10/01/2025	19:19	LB137389

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Metals

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CRDL STANDARD FOR AA & ICP

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **Lab Code:** ACE

Initial Calibration Source:

Continuing Calibration Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CRI01	Cadmium	5.93	6.0	99	65 - 135	P	10/01/2025	12:49	LB137389
	Copper	21.3	20.0	106	65 - 135	P	10/01/2025	12:49	LB137389
	Lead	11.5	12.0	96	65 - 135	P	10/01/2025	12:49	LB137389

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Metals

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Cadmium	0.50	+/-3	U	6.00	P	10/01/2025	12:45	LB137389
	Copper	4.60	+/-10	U	20.0	P	10/01/2025	12:45	LB137389
	Lead	2.30	+/-6	U	12.0	P	10/01/2025	12:45	LB137389

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **Lab Code:** ACE

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Cadmium	0.50	+/-3	U	6.00	P	10/01/2025	13:14	LB137389
	Copper	4.60	+/-10	U	20.0	P	10/01/2025	13:14	LB137389
	Lead	2.30	+/-6	U	12.0	P	10/01/2025	13:14	LB137389
CCB02	Cadmium	0.50	+/-3	U	6.00	P	10/01/2025	14:06	LB137389
	Copper	4.60	+/-10	U	20.0	P	10/01/2025	14:06	LB137389
	Lead	2.30	+/-6	U	12.0	P	10/01/2025	14:06	LB137389
CCB03	Cadmium	0.50	+/-3	U	6.00	P	10/01/2025	15:04	LB137389
	Copper	4.60	+/-10	U	20.0	P	10/01/2025	15:04	LB137389
	Lead	2.30	+/-6	U	12.0	P	10/01/2025	15:04	LB137389
CCB04	Cadmium	0.50	+/-3	U	6.00	P	10/01/2025	15:55	LB137389
	Copper	4.60	+/-10	U	20.0	P	10/01/2025	15:55	LB137389
	Lead	2.30	+/-6	U	12.0	P	10/01/2025	15:55	LB137389
CCB05	Cadmium	0.50	+/-3	U	6.00	P	10/01/2025	16:46	LB137389
	Copper	4.60	+/-10	U	20.0	P	10/01/2025	16:46	LB137389
	Lead	2.30	+/-6	U	12.0	P	10/01/2025	16:46	LB137389
CCB06	Cadmium	0.50	+/-3	U	6.00	P	10/01/2025	17:41	LB137389
	Copper	4.60	+/-10	U	20.0	P	10/01/2025	17:41	LB137389
	Lead	2.30	+/-6	U	12.0	P	10/01/2025	17:41	LB137389
CCB07	Cadmium	0.50	+/-3	U	6.00	P	10/01/2025	18:32	LB137389
	Copper	4.60	+/-10	U	20.0	P	10/01/2025	18:32	LB137389
	Lead	2.30	+/-6	U	12.0	P	10/01/2025	18:32	LB137389
CCB08	Cadmium	0.50	+/-3	U	6.00	P	10/01/2025	19:23	LB137389
	Copper	4.60	+/-10	U	20.0	P	10/01/2025	19:23	LB137389
	Lead	2.30	+/-6	U	12.0	P	10/01/2025	19:23	LB137389

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Metals
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PREPARATION BLANK SUMMARY

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Instrument: P4

Sample ID	Analyte	Result (ug/L)	Acceptance Limit	Conc Qual	CRQL ug/L	M	Analysis Date	Analysis Time	Run
PB169912BL		**WATER**		**Batch Number:**	**PB169912**		**Prep Date:**	**09/30/2025**	
	Cadmium	0.25	<1.5	U	3.00	P	10/01/2025	15:25	LB137389
	Copper	2.30	<5	U	10.0	P	10/01/2025	15:25	LB137389
	Lead	1.15	<3	U	6.00	P	10/01/2025	15:25	LB137389

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INTERFERENCE CHECK SAMPLE

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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	Cadmium	0.61	1.0	61	-5	7	10/01/2025	12:53	LB137389
	Copper	10.9	2.0	543	-18	22	10/01/2025	12:53	LB137389
	Lead	0.44			-12	12	10/01/2025	12:53	LB137389
ICSAB01	Cadmium	1010	972	104	826	1120	10/01/2025	12:57	LB137389
	Copper	503	511	98	434	588	10/01/2025	12:57	LB137389
	Lead	48.5	49.0	99	37	61	10/01/2025	12:57	LB137389

METAL
QC
DATA

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metals
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MATRIX SPIKE SUMMARY

client: ATG-GREENVILLE AEC **level:** low **sdg no.:** Q3234

contract: ATGG01 **lab code:** ACE

matrix: Water **sample id:** Q3237-02 **client id:** RW8-SP303-20250926MS

Percent Solids for Sample: NA **Spiked ID:** Q3237-02MS **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cadmium	ug/L	88 - 113	95.0		3.00	U	100	95		P
Copper	ug/L	86 - 114	156		4.15	J	150	101		P
Lead	ug/L	86 - 113	470		6.00	U	500	94		P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: ATG-GREENVILLE AEC **level:** low **sdg no.:** Q3234

contract: ATGG01 **lab code:** ACE

matrix: Water **sample id:** Q3237-02 **client id:** RW8-SP303-20250926MSD

Percent Solids for Sample: NA **Spiked ID:** Q3237-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Cadmium	ug/L	88 - 113	93.4		3.00	U	100	93		P
Copper	ug/L	86 - 114	154		4.15	J	150	100		P
Lead	ug/L	86 - 113	464		6.00	U	500	93		P

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Metals
- 5b -

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **Lab Code:** ACE

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

Sample ID: **Spiked ID:**

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

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: ATG-GREENVILLE AEC **Level:** LOW **SDG No.:** Q3234

Contract: ATGG01 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3237-02 **Client ID:** RW8-SP303-20250926DUP

Percent Solids for Sample: NA **Duplicate ID** Q3237-02DUP **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cadmium	ug/L	20	3.00	U	3.00	U			P
Copper	ug/L	20	4.15	J	4.01	J	3		P
Lead	ug/L	20	6.00	U	6.00	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: ATG-GREENVILLE AEC **Level:** LOW **SDG No.:** Q3234

Contract: ATGG01 **Lab Code:** ACE

Matrix: Water **Sample ID:** Q3237-02MS **Client ID:** RW8-SP303-20250926MSD

Percent Solids for Sample: NA **Duplicate ID** Q3237-02MSD **Percent Solids for Spike Sample:** NA

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Cadmium	ug/L	20	95.0		93.4		2		P
Copper	ug/L	20	156		154		1		P
Lead	ug/L	20	470		464		1		P

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

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LABORATORY CONTROL SAMPLE SUMMARY

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **Lab Code:** ACE

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB169912BS							
Cadmium	ug/L	100	93.3		93	88 - 113	P
Copper	ug/L	150	149		99	86 - 114	P
Lead	ug/L	500	464		93	86 - 113	P

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

RW8-SP303-20250926L

Lab Name: Alliance **Contract:** ATGG01

Lab Code: ACE **Lb No.:** lb137389 **Lab Sample ID :** Q3237-02L **SDG No.:** Q3234

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Cadmium	3.00	U	15.0	U			P
Copper	4.15	J	50.0	U	100.0		P
Lead	6.00	U	30.0	U			P

METAL PREPARATION & INSTRUMENT DATA

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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
Cadmium	226.502	0.0000000	0.0000000	0.0000930	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0007850	0.0000000	0.0000000
Lead	220.353	-0.0000920	0.0000000	0.0000380	0.0000000	0.0000000

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0002870
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0000000	0.0009530
Lead	220.353	0.0000000	0.0003170	0.0000000	0.0000000	0.0000000

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0000000	0.0000000	0.0006510	0.0020500
Lead	220.353	0.0000000	0.0000000	0.0000000	0.0001400	-0.0008600

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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
Cadmium	226.502	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Copper	224.700	0.0000000	-0.0047000	0.0036100	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0006580	0.0000000	0.0000000	0.0001290

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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
Cadmium	226.502	0.0000000	0.0000630	0.0001280	0.0000000	0.0000000
Copper	224.700	0.0000000	0.0003840	0.0000000	0.0000000	0.0000000
Lead	220.353	0.0000000	-0.0003610	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

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Fax : 908 789 8922

Metals
- 13 -
SAMPLE PREPARATION SUMMARY

Client: ATG-GREENVILLE AEC **SDG No.:** Q3234

Contract: ATGG01 **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:	**PB169912**						
PB169912BL	PB169912BL	MB	WATER	09/30/2025	50.0	25.0	
PB169912BS	PB169912BS	LCS	WATER	09/30/2025	50.0	25.0	
Q3234-01	DA-1	SAM	WATER	09/30/2025	50.0	25.0	
Q3234-02	DA-2	SAM	WATER	09/30/2025	50.0	25.0	
Q3237-02DUP	RW8-SP303-20250926DUP	DUP	WATER	09/30/2025	50.0	25.0	
Q3237-02MS	RW8-SP303-20250926MS	MS	WATER	09/30/2025	50.0	25.0	
Q3237-02MSD	RW8-SP303-20250926MSD	MSD	WATER	09/30/2025	50.0	25.0	

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metals
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ANALYSIS RUN LOG

Client: ATG-GREENVILLE AEC **Contract:** ATGG01

Lab code: ACE **Sdg no.:** Q3234

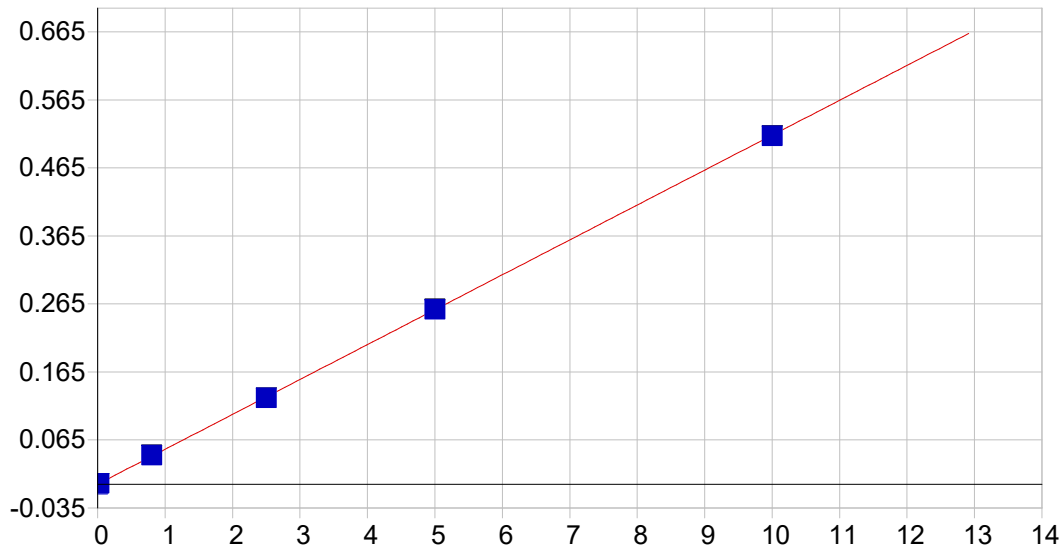
Instrument id number: **Method:** **Run number:** LB137389

Start date: 10/01/2025 **End date:** 10/01/2025

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1208	Cd,Cu,Pb
S1	S1	1	1212	Cd,Cu,Pb
S2	S2	1	1217	Cd,Cu,Pb
S3	S3	1	1221	Cd,Cu,Pb
S4	S4	1	1225	Cd,Cu,Pb
S5	S5	1	1229	Cd,Cu,Pb
ICV01	ICV01	1	1233	Cd,Cu,Pb
LLICV01	LLICV01	1	1241	Cd,Cu,Pb
ICB01	ICB01	1	1245	Cd,Cu,Pb
CRI01	CRI01	1	1249	Cd,Cu,Pb
ICSA01	ICSA01	1	1253	Cd,Cu,Pb
ICSAB01	ICSAB01	1	1257	Cd,Cu,Pb
CCV01	CCV01	1	1310	Cd,Cu,Pb
CCB01	CCB01	1	1314	Cd,Cu,Pb
CCV02	CCV02	1	1402	Cd,Cu,Pb
CCB02	CCB02	1	1406	Cd,Cu,Pb
CCV03	CCV03	1	1500	Cd,Cu,Pb
CCB03	CCB03	1	1504	Cd,Cu,Pb
PB169912BL	PB169912BL	1	1525	Cd,Cu,Pb
PB169912BS	PB169912BS	1	1530	Cd,Cu,Pb
CCV04	CCV04	1	1551	Cd,Cu,Pb
CCB04	CCB04	1	1555	Cd,Cu,Pb
CCV05	CCV05	1	1642	Cd,Cu,Pb
CCB05	CCB05	1	1646	Cd,Cu,Pb
CCV06	CCV06	1	1732	Cd,Cu,Pb
CCB06	CCB06	1	1741	Cd,Cu,Pb
Q3234-01	DA-1	1	1746	Cd,Cu,Pb
Q3234-02	DA-2	1	1750	Cd,Cu,Pb
Q3237-02DUP	RW8-SP303-20250926DUP	1	1803	Cd,Cu,Pb
Q3237-02L	RW8-SP303-20250926L	5	1807	Cd,Cu,Pb
Q3237-02MS	RW8-SP303-20250926MS	1	1811	Cd,Cu,Pb
Q3237-02MSD	RW8-SP303-20250926MSD	1	1815	Cd,Cu,Pb
CCV07	CCV07	1	1828	Cd,Cu,Pb
CCB07	CCB07	1	1832	Cd,Cu,Pb
CCV08	CCV08	1	1919	Cd,Cu,Pb
CCB08	CCB08	1	1923	Cd,Cu,Pb

METAL
RAW DATA

Reviewed By:
On:
Inst Id :P4
LB :LB137389



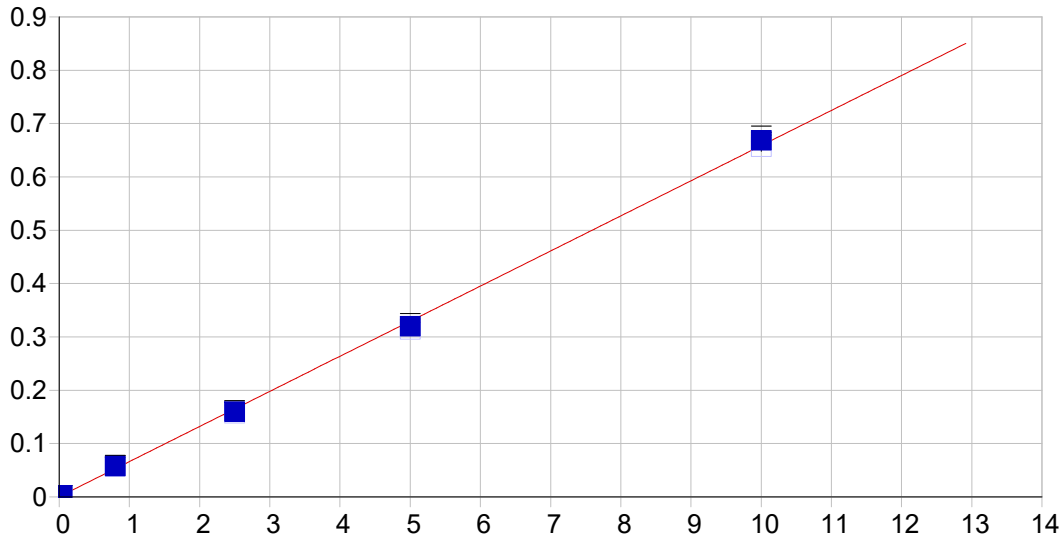
As 189.042 {479}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000025	Re-Slope:	1.000000
A1 (Gain):	0.051319	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.000012		
Predicted MDL:	0.002166		
Predicted MQL:	0.007219		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00003	.000	1
S1	.02000	.02280	.003	14.0	.00114	.000	1
S3	2.5000	2.4746	-.025	-1.02	.12684	.000	1
S4	5.0000	5.0084	.008	.168	.25673	.001	1
S5	10.000	9.9843	-.016	-.157	.51183	.000	1
S2	.80000	.82985	.030	3.73	.04252	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



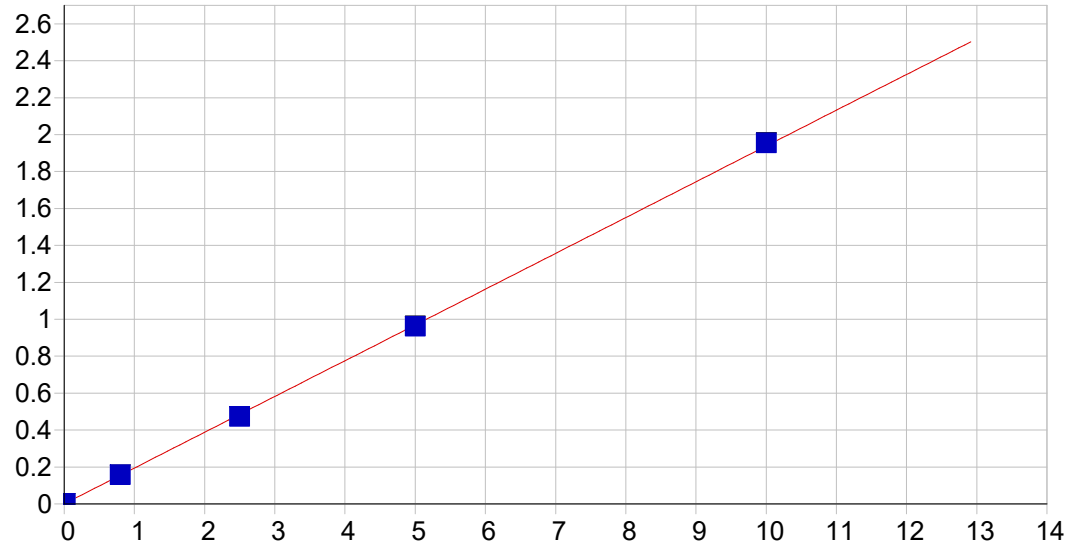
Tl 190.856 {477}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000421	Re-Slope:	1.000000
A1 (Gain):	0.065818	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999557	Status:	OK.
Std Error of Est:	0.000064		
Predicted MDL:	0.002440		
Predicted MQL:	0.008134		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00042	.000	1
S1	.04000	.04349	.003	8.74	.00312	.000	1
S3	2.5000	2.4183	-.082	-3.27	.15659	.003	1
S4	5.0000	4.8563	-.144	-2.87	.31405	.005	1
S5	10.000	10.151	.151	1.51	.65656	.008	1
S2	.80000	.87076	.071	8.85	.05677	.002	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



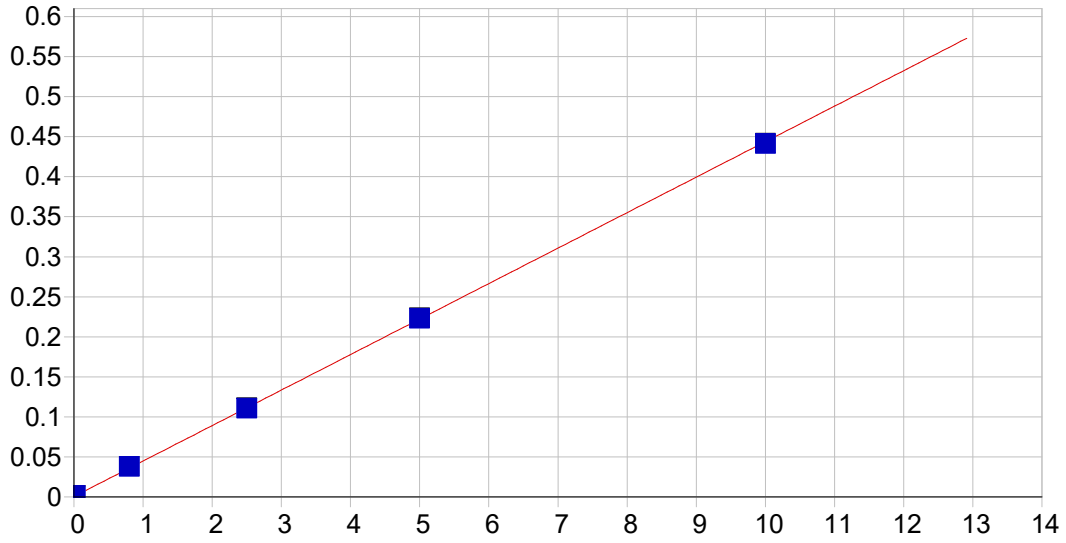
Pb 220.353 {453}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000349	Re-Slope:	1.000000
A1 (Gain):	0.193779	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999929	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.001365		
Predicted MQL:	0.004551		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00035	.000	1
S1	.01200	.01231	.000	2.62	.00269	.000	1
S3	2.5000	2.4398	-.060	-2.41	.47259	.000	1
S4	5.0000	4.9637	-.036	-.726	.96113	.001	1
S5	10.000	10.086	.086	.864	1.9527	.002	1
S2	.80000	.80979	.010	1.22	.15710	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



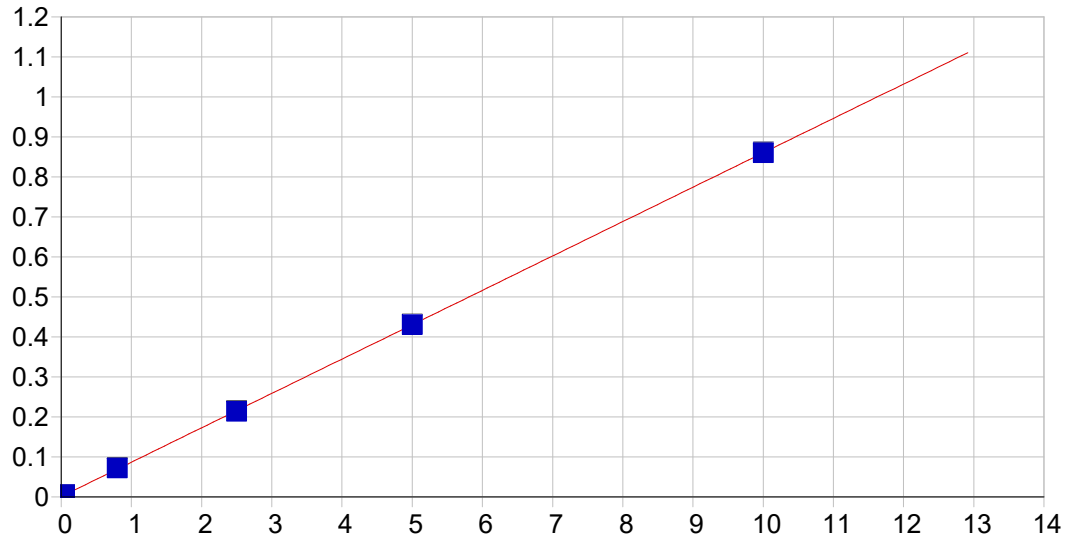
Se 196.090 {472}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000471	Re-Slope:	1.000000
A1 (Gain):	0.044329	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999909	Status:	OK.
Std Error of Est:	0.000014		
Predicted MDL:	0.003213		
Predicted MQL:	0.010709		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00047	.000	1
S1	.02000	.02170	.002	8.51	.00143	.000	1
S3	2.5000	2.4879	-.012	-.485	.11073	.000	1
S4	5.0000	5.0182	.018	.365	.22286	.000	1
S5	10.000	9.9452	-.055	-.548	.44121	.000	1
S2	.80000	.84699	.047	5.87	.03801	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



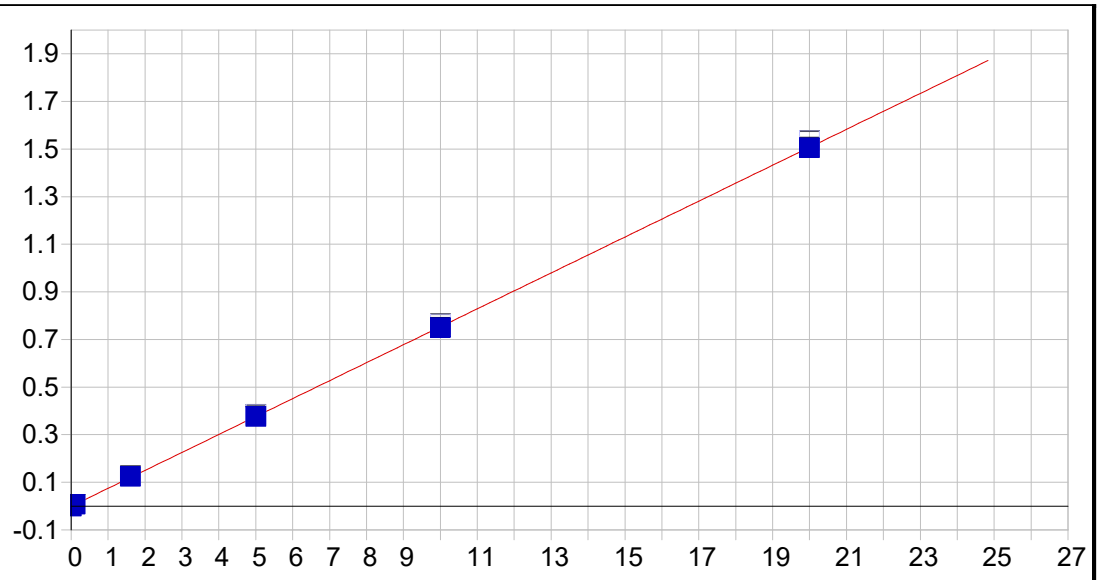
Sb 206.833 {463}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000827	Re-Slope:	1.000000
A1 (Gain):	0.085936	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999965	Status:	OK.
Std Error of Est:	0.000027		
Predicted MDL:	0.002094		
Predicted MQL:	0.006981		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00083	.000	1
S1	.05000	.05092	.001	1.85	.00521	.000	1
S3	2.5000	2.4765	-.023	-.939	.21424	.001	1
S4	5.0000	4.9978	-.002	-.043	.43149	.001	1
S5	10.000	9.9955	-.004	-.045	.86214	.000	1
S2	.80000	.82917	.029	3.65	.07227	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



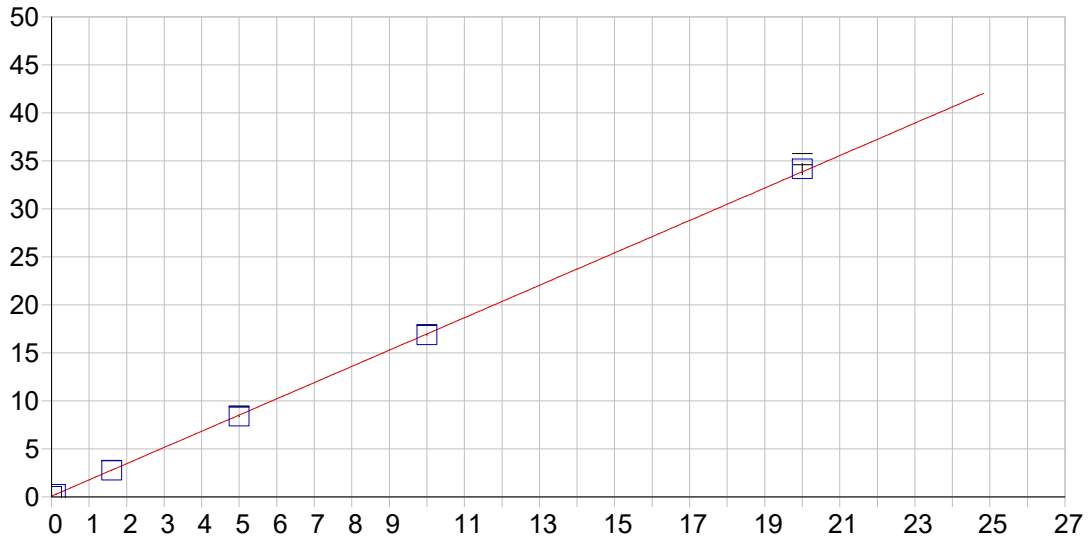
Al 396.152 { 85}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000805	Re-Slope:	1.000000
A1 (Gain):	0.075419	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999932	Status:	OK.
Std Error of Est:	0.000066		
Predicted MDL:	0.013981		
Predicted MQL:	0.046602		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	-.00081	.000	1
S1	.10000	.11698	.017	17.0	.00860	.000	1
S3	5.0000	5.0040	.004	.080	.38391	.001	1
S4	10.000	9.9533	-.047	-.467	.76450	.002	1
S5	20.000	19.968	-.032	-.160	1.5344	.002	1
S2	1.6000	1.6567	.057	3.54	.12648	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



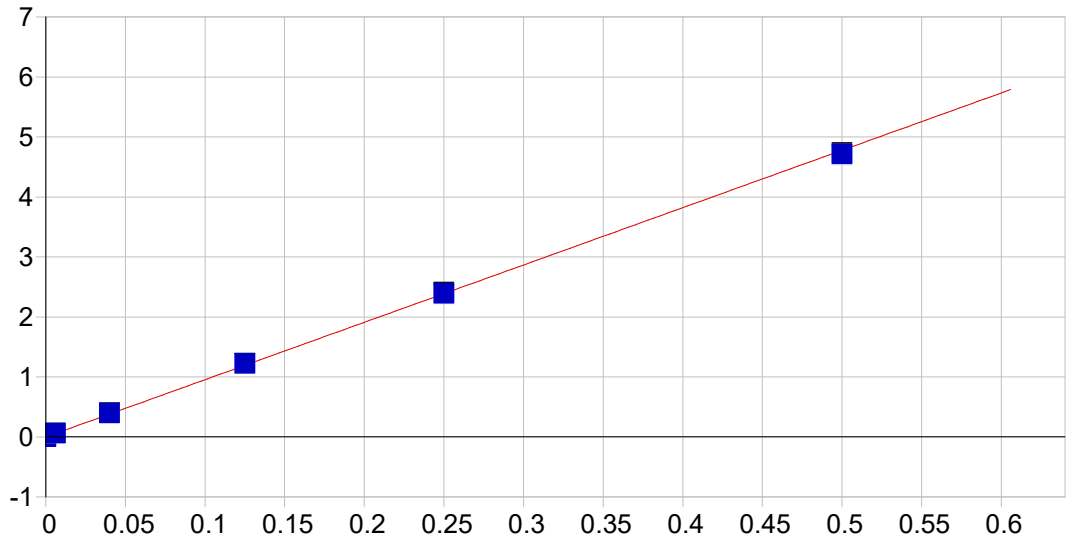
Ba 493.409 { 68}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.084582	Re-Slope:	1.000000
A1 (Gain):	1.689165	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999951	Status:	OK.
Std Error of Est:	0.001237		
Predicted MDL:	0.001601		
Predicted MQL:	0.005338		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.08459	.001	1
S1	.10000	.10022	.000	.220	.25387	.001	1
S3	5.0000	4.9145	-.085	-1.71	8.3860	.057	1
S4	10.000	9.9345	-.065	-.655	16.866	.043	1
S5	20.000	20.170	.170	.851	34.156	.573	1
S2	1.6000	1.5804	-.020	-1.22	2.7542	.012	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



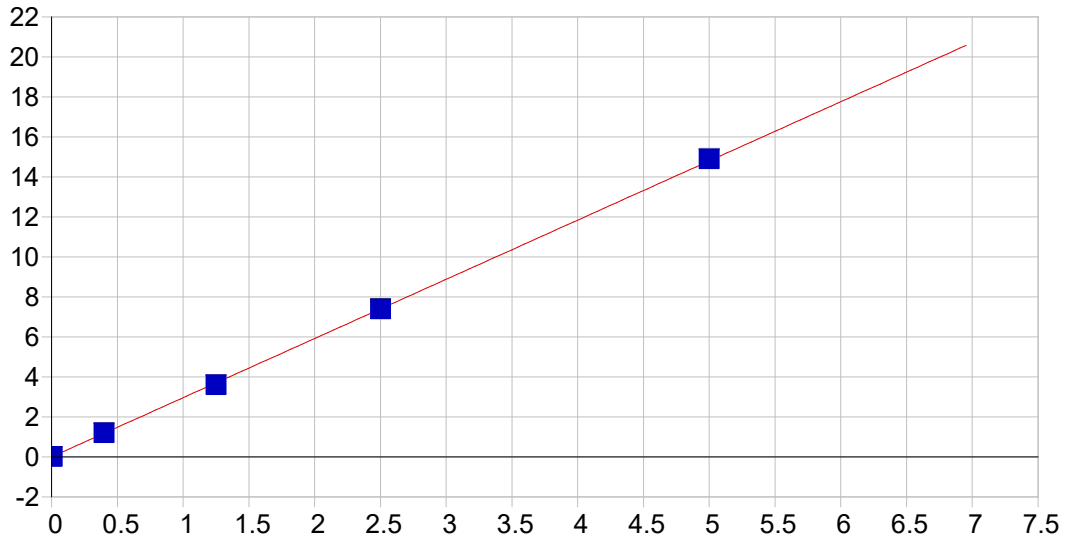
Be 234.861 {144}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001839	Re-Slope:	1.000000
A1 (Gain):	9.557618	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999834	Status:	OK.
Std Error of Est:	0.000499		
Predicted MDL:	0.000074		
Predicted MQL:	0.000247		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00185	.001	1
S1	.00600	.00644	.000	7.33	.05928	.001	1
S3	.12500	.12831	.003	2.65	1.2192	.004	1
S4	.25000	.25063	.001	.251	2.3828	.018	1
S5	.50000	.49362	-.006	-1.28	4.6946	.025	1
S2	.04000	.04200	.002	5.00	.39787	.003	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



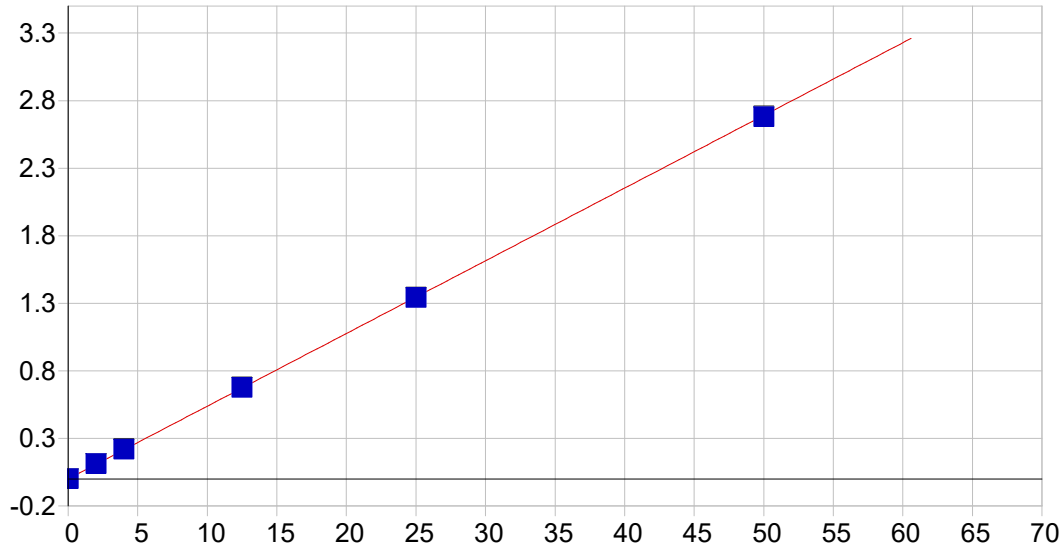
Cd 226.502 {449}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000353	Re-Slope:	1.000000
A1 (Gain):	2.960052	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999936	Status:	OK.
Std Error of Est:	0.000304		
Predicted MDL:	0.000076		
Predicted MQL:	0.000254		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00035	.000	1
S1	.00600	.00616	.000	2.74	.01795	.000	1
S3	1.2500	1.2161	-.034	-2.71	3.6018	.004	1
S4	2.5000	2.4973	-.003	-.107	7.3967	.009	1
S5	5.0000	5.0332	.033	.664	14.908	.020	1
S2	.40000	.40322	.003	.804	1.1940	.002	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



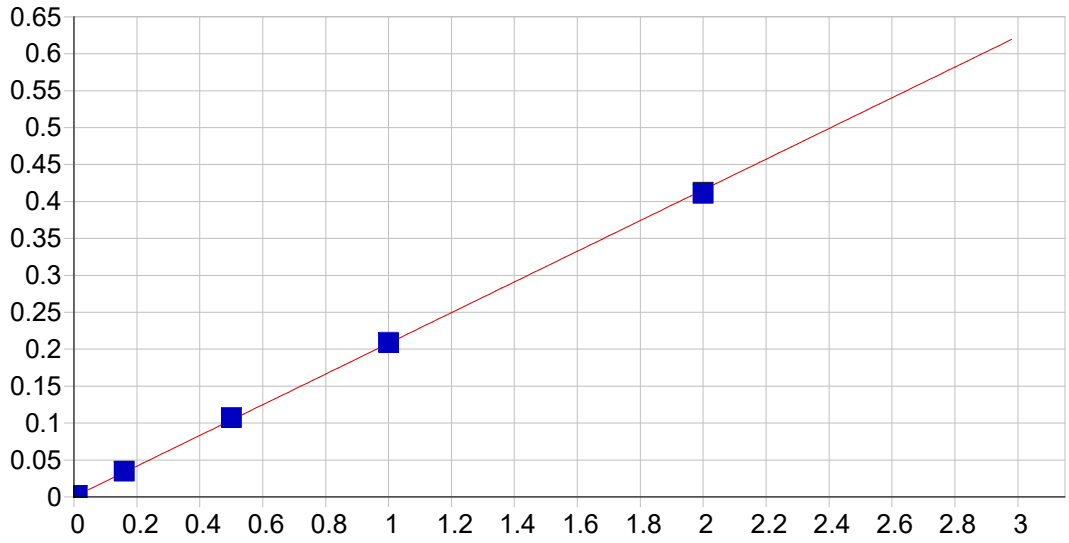
Ca 373.690 { 90}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000317	Re-Slope:	1.000000
A1 (Gain):	0.053804	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999966	Status:	OK.
Std Error of Est:	0.000234		
Predicted MDL:	0.015517		
Predicted MQL:	0.051724		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00012	-.000	.000	.00031	.001	1
S2	4.0000	4.0796	.080	1.99	.21982	.001	1
S3	12.500	12.582	.082	.653	.67726	.001	1
S4	25.000	24.940	-.060	-.240	1.3422	.003	1
S5	50.000	49.817	-.183	-.366	2.6807	.004	1
S1	2.0000	2.0820	.082	4.10	.11233	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



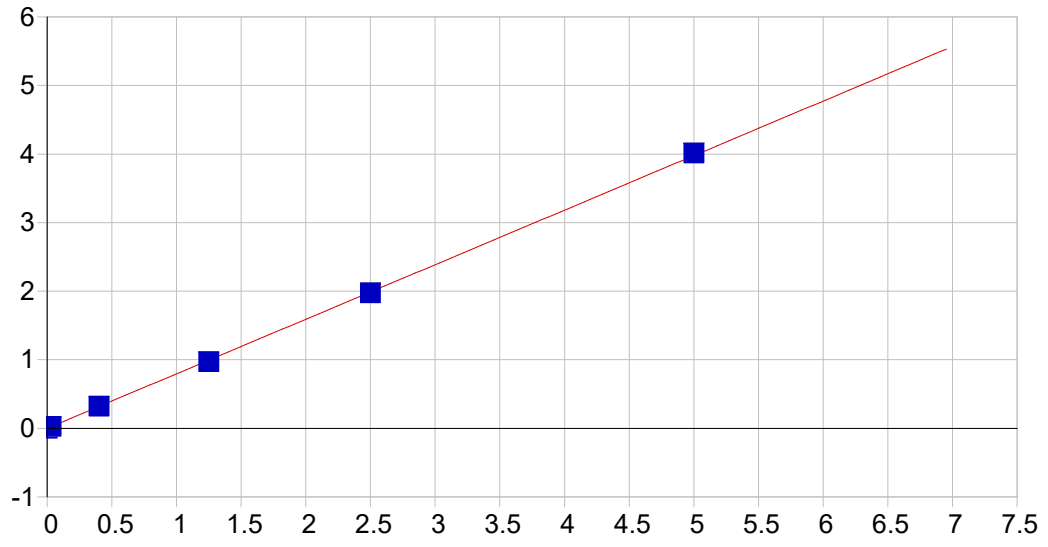
Cr 267.716 {126}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000160	Re-Slope:	1.000000
A1 (Gain):	0.207805	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999880	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.000379		
Predicted MQL:	0.001263		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00016	.000	1
S1	.01000	.01046	.000	4.58	.00234	.000	1
S3	.50000	.51366	.014	2.73	.10698	.000	1
S4	1.0000	1.0046	.005	.456	.20908	.000	1
S5	2.0000	1.9760	-.024	-1.20	.41112	.001	1
S2	.16000	.16531	.005	3.32	.03454	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



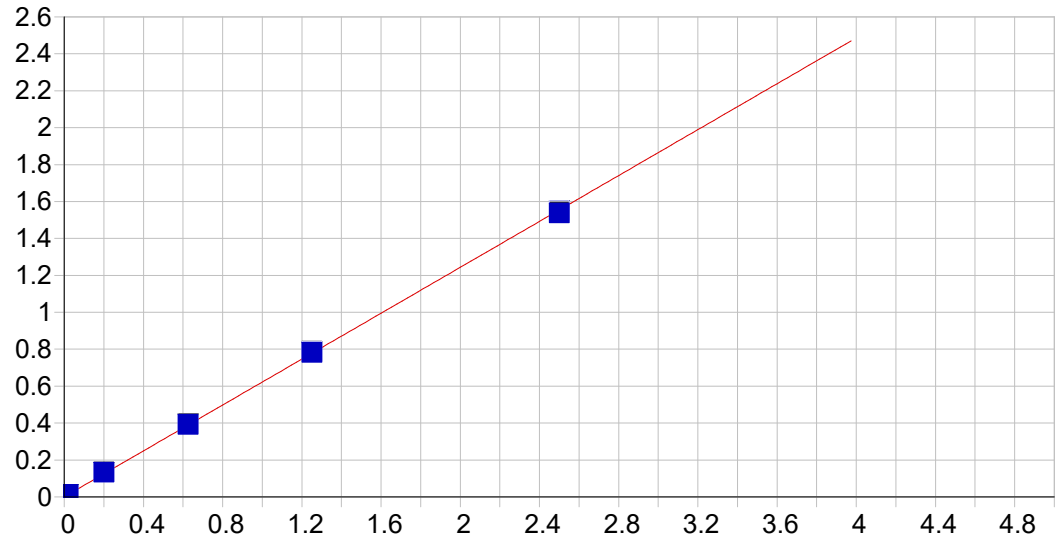
Co 228.616 {448}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000021	Re-Slope:	1.000000
A1 (Gain):	0.795429	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999921	Status:	OK.
Std Error of Est:	0.000203		
Predicted MDL:	0.000238		
Predicted MQL:	0.000794		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.03000	.03069	.001	2.32	.02434	.000	1
S3	1.2500	1.2171	-.033	-2.63	.96984	.002	1
S4	2.5000	2.4828	-.017	-.686	1.9783	.002	1
S5	5.0000	5.0453	.045	.907	4.0200	.003	1
S2	.40000	.40401	.004	1.00	.32192	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



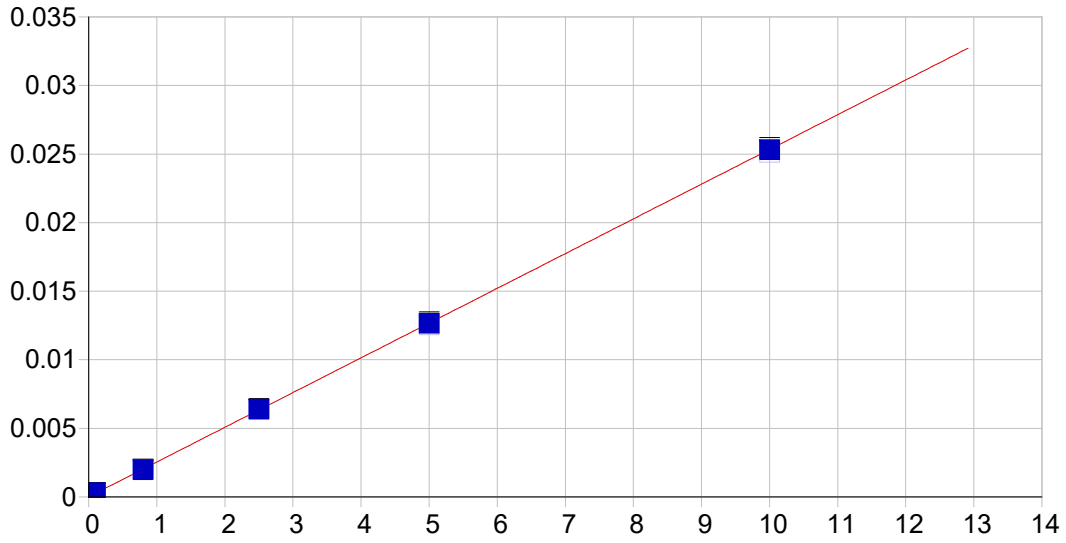
Cu 224.700 {450}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000788	Re-Slope:	1.000000
A1 (Gain):	0.621463	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999869	Status:	OK.
Std Error of Est:	0.000119		
Predicted MDL:	0.000436		
Predicted MQL:	0.001454		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00079	.000	1
S1	.02000	.02158	.002	7.92	.01434	.000	1
S3	.62500	.62978	.005	.765	.39541	.001	1
S4	1.2500	1.2576	.008	.608	.78881	.000	1
S5	2.5000	2.4738	-.026	-1.05	1.5511	.001	1
S2	.20000	.21218	.012	6.09	.13368	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



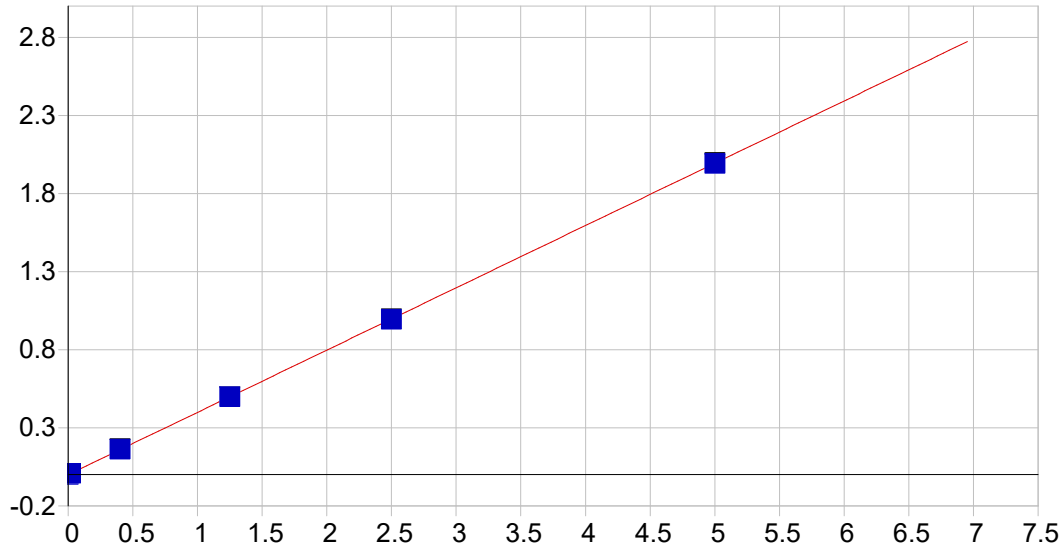
Fe 240.488 {140}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000010	Re-Slope:	1.000000
A1 (Gain):	0.002533	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999945	Status:	OK.
Std Error of Est:	0.000001		
Predicted MDL:	0.009093		
Predicted MQL:	0.030310		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00001	.000	1
S1	.10000	.11134	.011	11.3	.00029	.000	1
S3	2.5000	2.5231	.023	.923	.00635	.000	1
S4	5.0000	4.9890	-.011	-.219	.01254	.000	1
S5	10.000	9.9955	-.005	-.045	.02511	.000	1
S2	.80000	.78113	-.019	-2.36	.00197	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



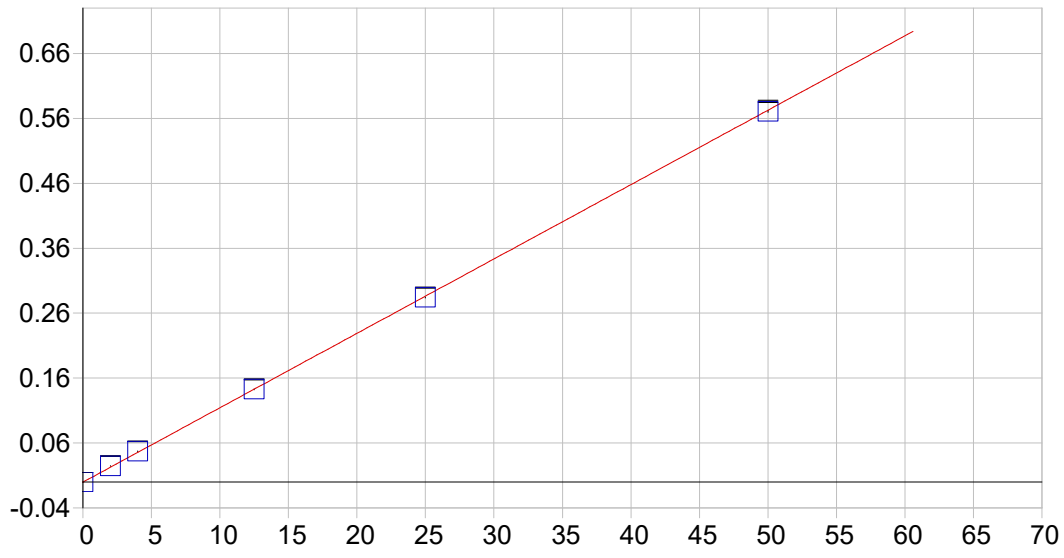
Mn 257.610 {131}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000028	Re-Slope:	1.000000
A1 (Gain):	0.398742	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999976	Status:	OK.
Std Error of Est:	0.000046		
Predicted MDL:	0.000780		
Predicted MQL:	0.002599		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00003	.000	1
S1	.02000	.02179	.002	8.93	.00866	.000	1
S3	1.2500	1.2499	-.000	-.005	.49847	.001	1
S4	2.5000	2.4924	-.008	-.306	.99398	.002	1
S5	5.0000	4.9957	-.004	-.086	1.9924	.004	1
S2	.40000	.41024	.010	2.56	.16358	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



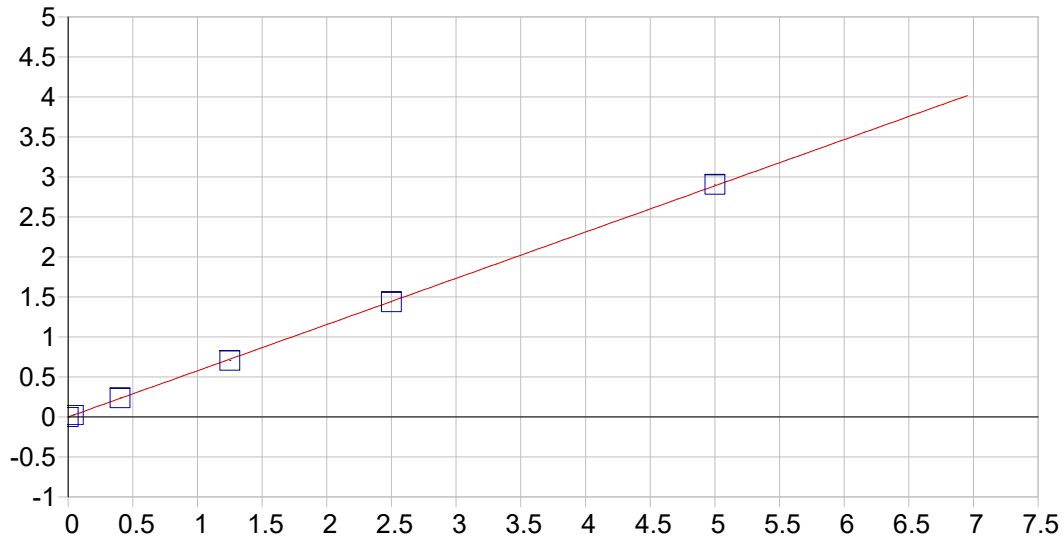
Mg 279.079 {121}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000289	Re-Slope:	1.000000
A1 (Gain):	0.011459	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999879	Status:	OK.
Std Error of Est:	0.000094		
Predicted MDL:	0.035007		
Predicted MQL:	0.116688		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00023	-.000	.000	-.00029	.000	1
S2	4.0000	4.1584	.158	3.96	.04736	.000	1
S3	12.500	12.484	-.016	-.124	.14277	.001	1
S4	25.000	24.835	-.165	-.662	.28428	.001	1
S5	50.000	49.851	-.149	-.299	.57093	.002	1
S1	2.0000	2.1721	.172	8.60	.02460	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



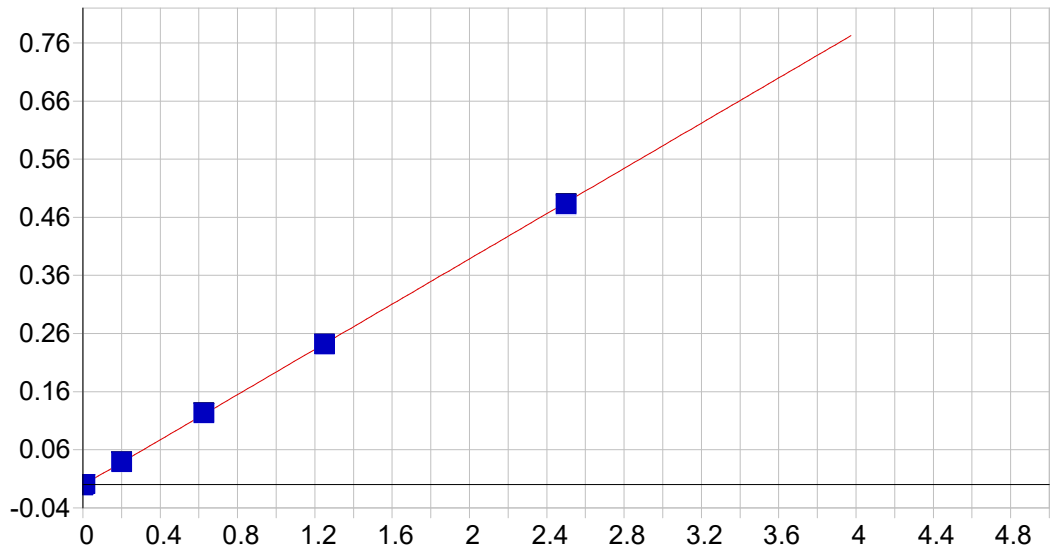
Ni 231.604 {446}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000492	Re-Slope:	1.000000
A1 (Gain):	0.577755	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999941	Status:	OK.
Std Error of Est:	0.000148		
Predicted MDL:	0.000367		
Predicted MQL:	0.001225		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00049	.000	1
S1	.04000	.04090	.001	2.25	.02314	.000	1
S3	1.2500	1.2218	-.028	-2.25	.70542	.001	1
S4	2.5000	2.4880	-.012	-.478	1.4370	.002	1
S5	5.0000	5.0305	.030	.609	2.9059	.002	1
S2	.40000	.40878	.009	2.20	.23568	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



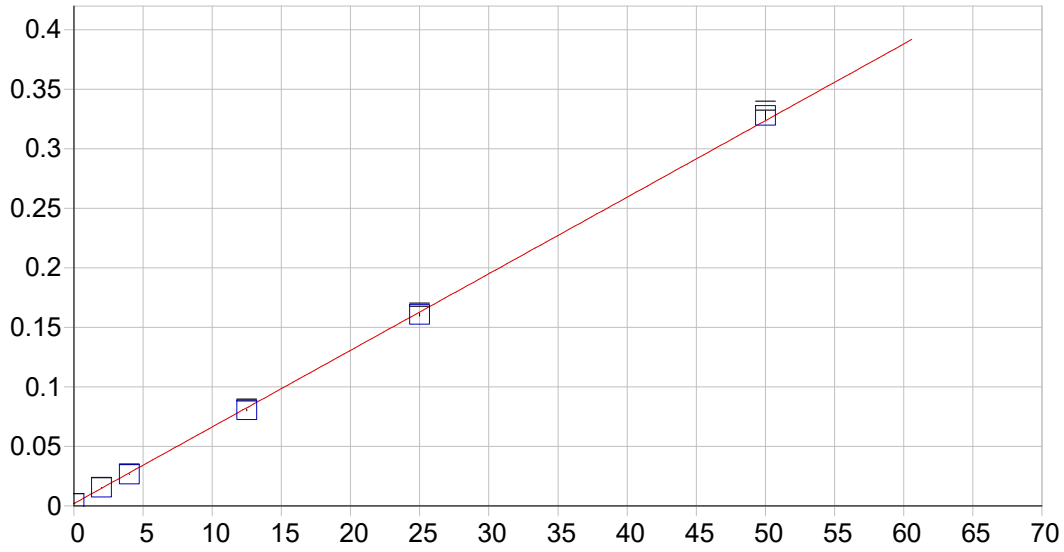
Ag 328.068 {103}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000756	Re-Slope:	1.000000
A1 (Gain):	0.194597	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999947	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.000630		
Predicted MQL:	0.002101		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00076	.000	1
S1	.01000	.01063	.001	6.29	.00130	.000	1
S3	.62500	.63722	.012	1.96	.12266	.000	1
S4	1.2500	1.2461	-.004	-.313	.24055	.000	1
S5	2.5000	2.4863	-.014	-.549	.48071	.001	1
S2	.20000	.20479	.005	2.39	.03891	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



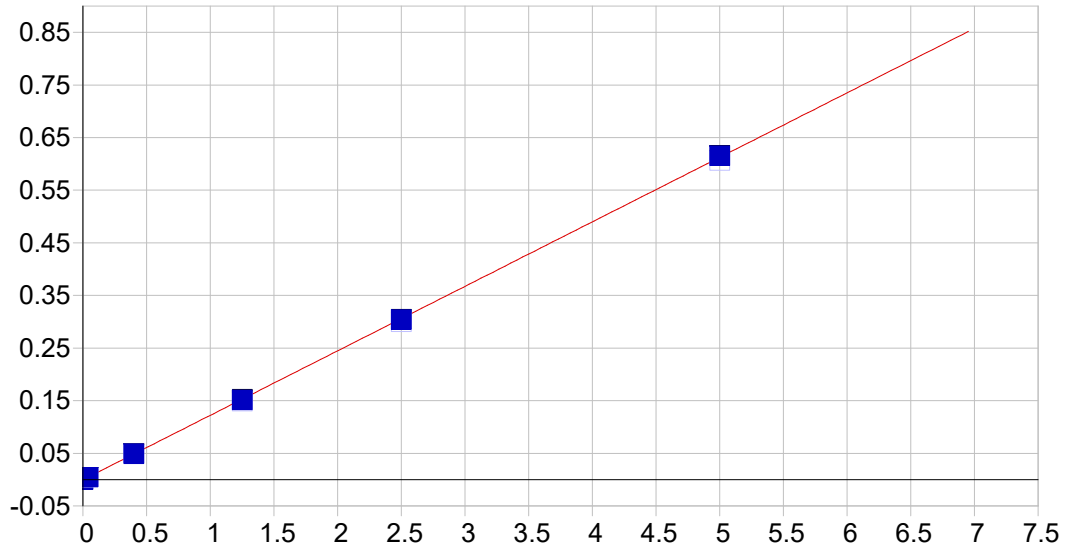
Na 589.592 { 57}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002037	Re-Slope:	1.000000
A1 (Gain):	0.006434	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999830	Status:	OK.
Std Error of Est:	0.000063		
Predicted MDL:	0.024179		
Predicted MQL:	0.080595		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00004	.000	.000	.00204	.000	1
S2	4.0000	3.8114	-.189	-4.71	.02656	.000	1
S3	12.500	12.238	-.262	-2.10	.08078	.001	1
S4	25.000	24.683	-.317	-1.27	.16085	.001	1
S5	50.000	50.675	.675	1.35	.32809	.004	1
S1	2.0000	2.0927	.093	4.64	.01550	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



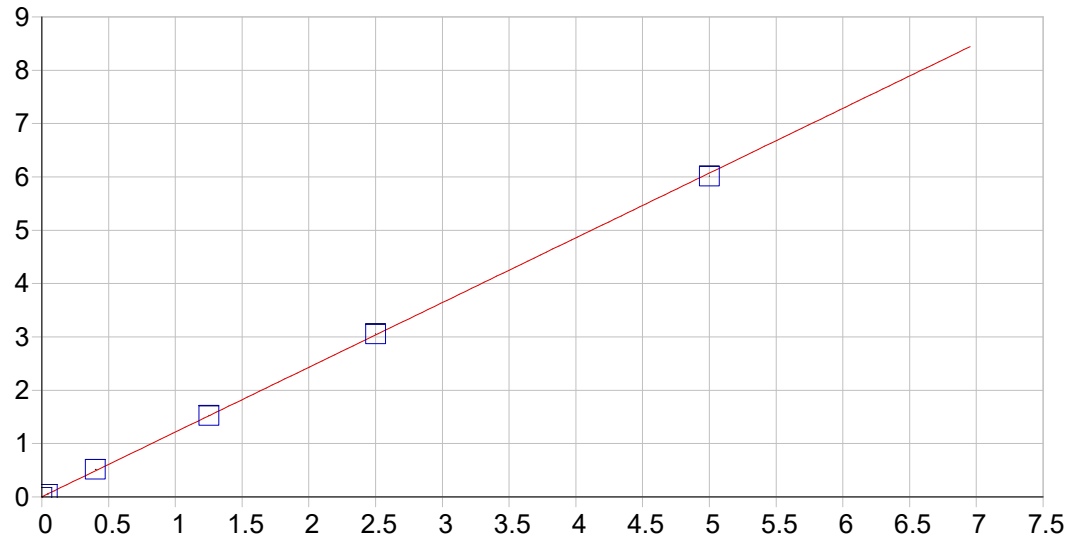
V 292.402 {115}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000407	Re-Slope:	1.000000
A1 (Gain):	0.122574	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999976	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.003825		
Predicted MQL:	0.012750		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00041	.000	1
S1	.04000	.04052	.001	1.29	.00438	.000	1
S3	1.2500	1.2361	-.014	-1.11	.14888	.001	1
S4	2.5000	2.4845	-.016	-.620	.29966	.001	1
S5	5.0000	5.0240	.024	.481	.60648	.000	1
S2	.40000	.40484	.005	1.21	.04850	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



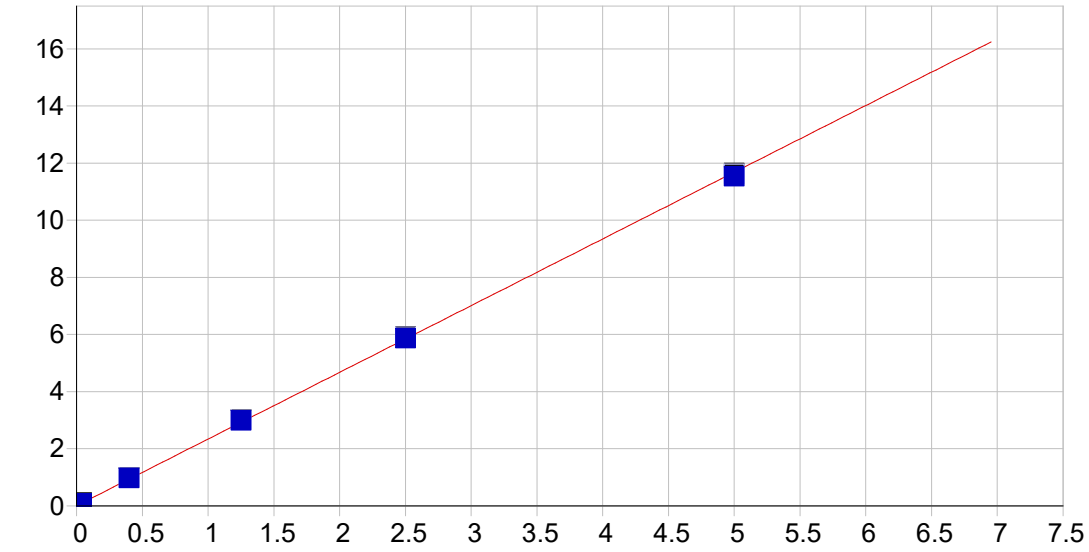
Zn 206.200 {464}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002197	Re-Slope:	1.000000
A1 (Gain):	1.213847	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999877	Status:	OK.
Std Error of Est:	0.000447		
Predicted MDL:	0.000136		
Predicted MQL:	0.000453		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00219	.000	1
S1	.04000	.04253	.003	6.33	.05382	.000	1
S3	1.2500	1.2546	.005	.366	1.5251	.003	1
S4	2.5000	2.5156	.016	.626	3.0558	.002	1
S5	5.0000	4.9525	-.048	-.950	6.0138	.002	1
S2	.40000	.42477	.025	6.19	.51780	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



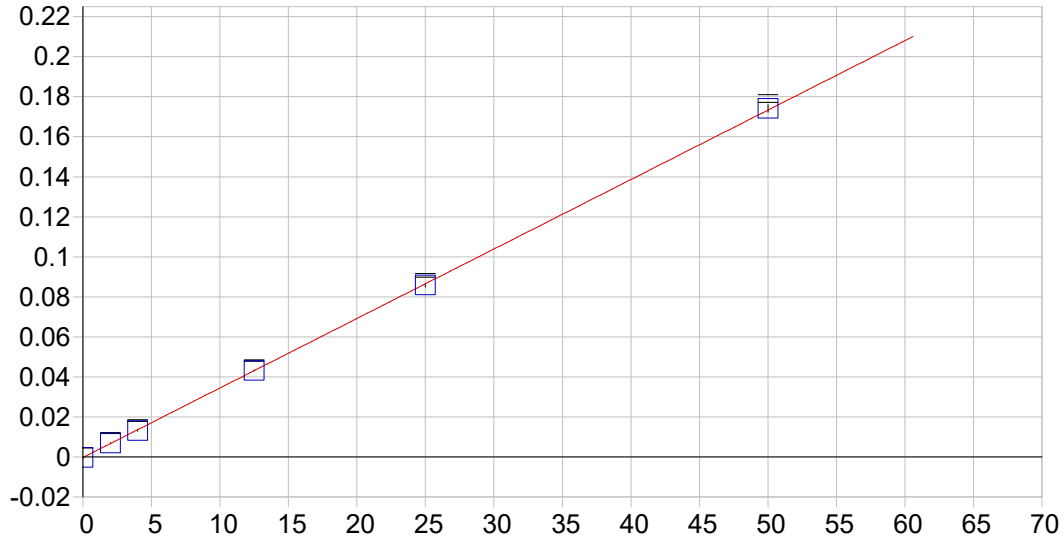
Zn 213.856 {158}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004821	Re-Slope:	1.000000
A1 (Gain):	2.335723	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999873	Status:	OK.
Std Error of Est:	0.000881		
Predicted MDL:	0.000253		
Predicted MQL:	0.000843		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00481	.001	1
S1	.04000	.04306	.003	7.65	.10605	.001	1
S3	1.2500	1.2801	.030	2.40	3.0150	.004	1
S4	2.5000	2.5119	.012	.478	5.9126	.009	1
S5	5.0000	4.9392	-.061	-1.22	11.623	.028	1
S2	.40000	.41576	.016	3.94	.98242	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



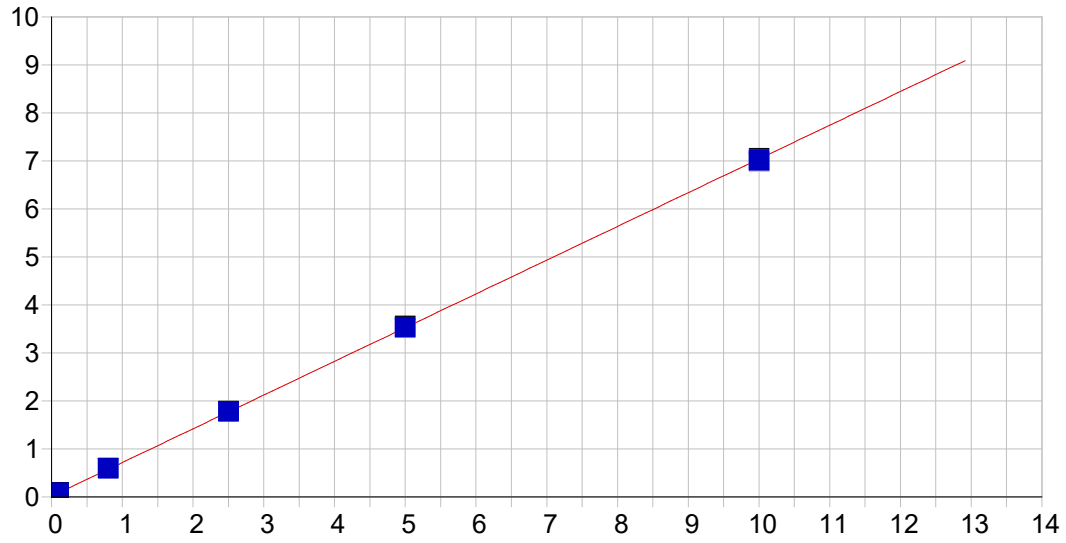
K 766.490 { 44}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000288	Re-Slope:	1.000000
A1 (Gain):	0.003472	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999949	Status:	OK.
Std Error of Est:	0.000018		
Predicted MDL:	0.053889		
Predicted MQL:	0.179629		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00029	.000	1
S2	4.0000	3.8730	-.127	-3.18	.01316	.000	1
S3	12.500	12.518	.018	.146	.04318	.000	1
S4	25.000	24.791	-.209	-.834	.08579	.001	1
S5	50.000	50.248	.248	.495	.17418	.002	1
S1	2.0000	2.0697	.070	3.48	.00690	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



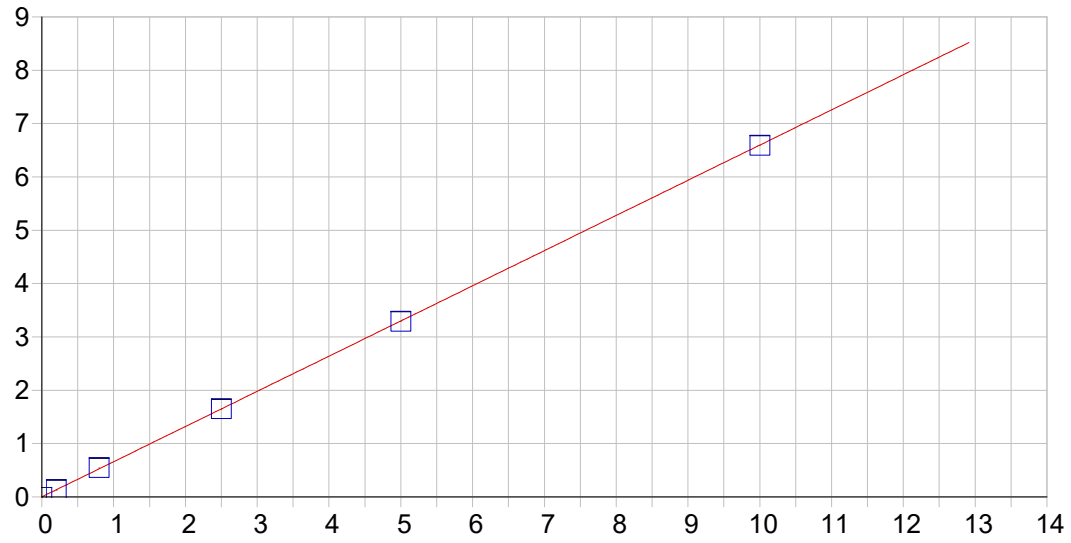
B 249.678 {135}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.013307	Re-Slope:	1.000000
A1 (Gain):	0.702736	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999970	Status:	OK.
Std Error of Est:	0.000283		
Predicted MDL:	0.001016		
Predicted MQL:	0.003386		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.01330	.001	1
S1	.10000	.09999	-.000	-.013	.08316	.000	1
S3	2.5000	2.5155	.015	.618	1.7747	.008	1
S4	5.0000	5.0058	.006	.116	3.5184	.026	1
S5	10.000	9.9540	-.046	-.460	6.9830	.046	1
S2	.80000	.82476	.025	3.09	.59087	.004	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



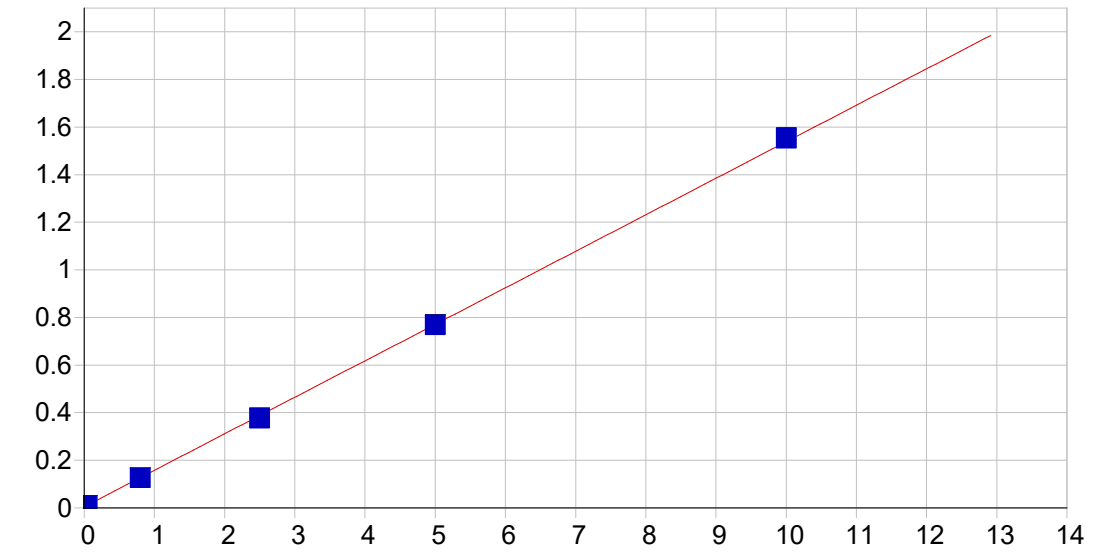
Mo 202.030 {467}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000434	Re-Slope:	1.000000
A1 (Gain):	0.659659	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999979	Status:	OK.
Std Error of Est:	0.000321		
Predicted MDL:	0.000264		
Predicted MQL:	0.000878		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00043	.000	1
S1	.20000	.20245	.002	1.22	.13398	.000	1
S3	2.5000	2.4980	-.002	-.078	1.6483	.004	1
S4	5.0000	4.9874	-.013	-.251	3.2904	.003	1
S5	10.000	9.9882	-.012	-.118	6.5892	.003	1
S2	.80000	.82385	.024	2.98	.54389	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



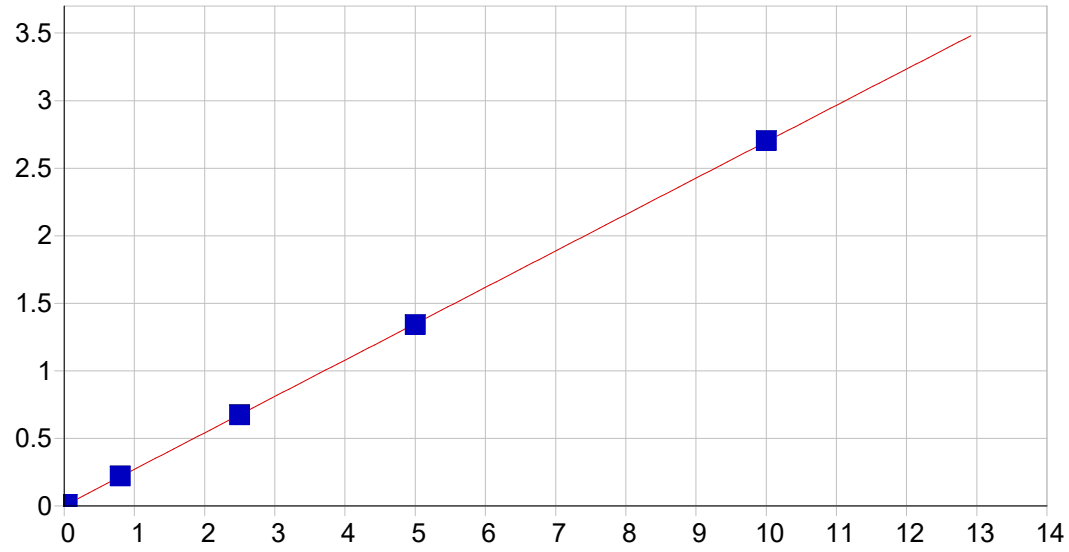
Sn 189.989 {478}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004608	Re-Slope:	1.000000
A1 (Gain):	0.153354	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999915	Status:	OK.
Std Error of Est:	0.000066		
Predicted MDL:	0.000617		
Predicted MQL:	0.002058		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00461	.000	1
S1	.04000	.04072	.001	1.79	.01085	.000	1
S3	2.5000	2.4273	-.073	-2.91	.37646	.001	1
S4	5.0000	4.9851	-.015	-.298	.76831	.001	1
S5	10.000	10.094	.094	.937	1.5510	.002	1
S2	.80000	.79315	-.007	-.857	.12611	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



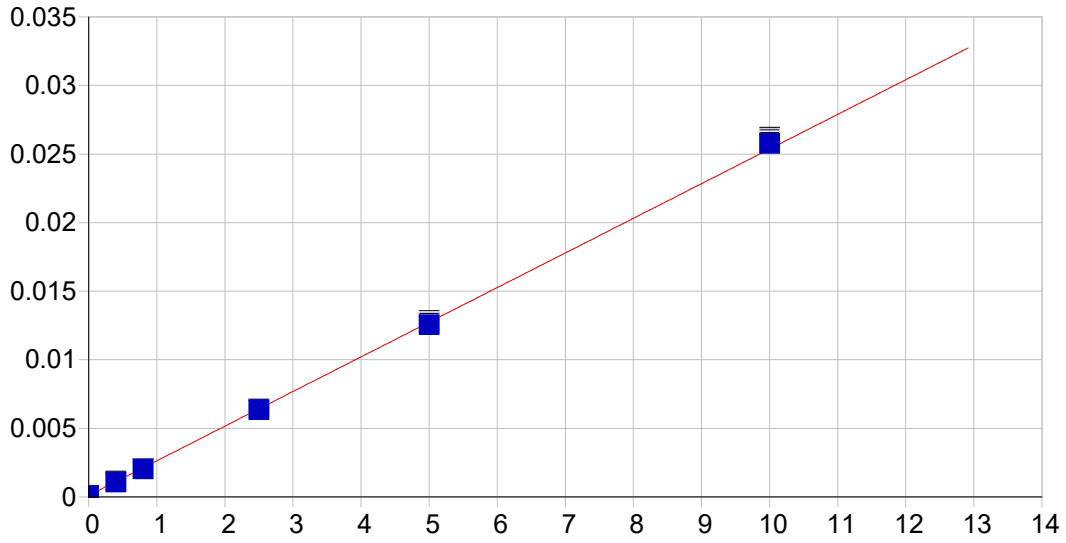
Ti 336.121 {100}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001674	Re-Slope:	1.000000
A1 (Gain):	0.269381	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.002244		
Predicted MQL:	0.007479		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00167	.001	1
S1	.04000	.04086	.001	2.14	.01267	.000	1
S3	2.5000	2.4904	-.010	-.386	.67229	.003	1
S4	5.0000	4.9711	-.029	-.578	1.3403	.003	1
S5	10.000	10.029	.029	.293	2.7024	.001	1
S2	.80000	.80840	.008	1.05	.21936	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



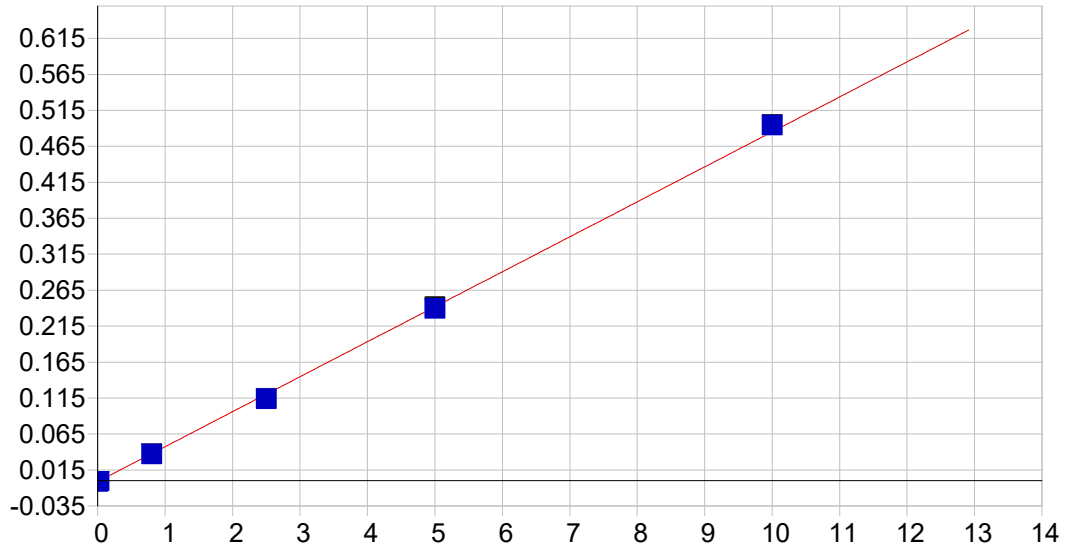
Si 288.158 {117}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000107	Re-Slope:	1.000000
A1 (Gain):	0.002526	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999832	Status:	OK.
Std Error of Est:	0.000005		
Predicted MDL:	0.016401		
Predicted MQL:	0.054670		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00004	.000	.000	.00011	.000	1
S1	.40000	.38516	-.015	-3.71	.00108	.000	1
S3	2.5000	2.4731	-.027	-1.08	.00645	.000	1
S4	5.0000	4.9283	-.072	-1.43	.01275	.000	1
S5	10.000	10.155	.155	1.55	.02614	.000	1
S2	.80000	.75802	-.042	-5.25	.00205	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



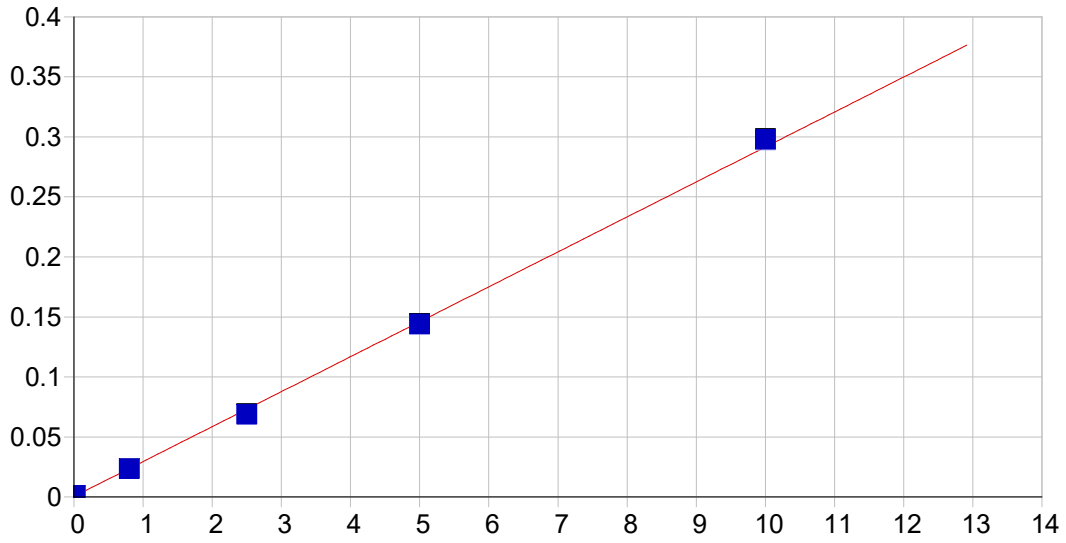
P 177.495 {490}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001271	Re-Slope:	1.000000
A1 (Gain):	0.048634	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999693	Status:	OK.
Std Error of Est:	0.000028		
Predicted MDL:	0.001598		
Predicted MQL:	0.005326		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00127	.000	1
S1	.02000	.01934	-.001	-3.31	-.00033	.000	1
S3	2.5000	2.3669	-.133	-5.32	.11382	.000	1
S4	5.0000	4.9549	-.045	-.902	.23967	.002	1
S5	10.000	10.190	.190	1.90	.49422	.000	1
S2	.80000	.78902	-.011	-1.37	.03710	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



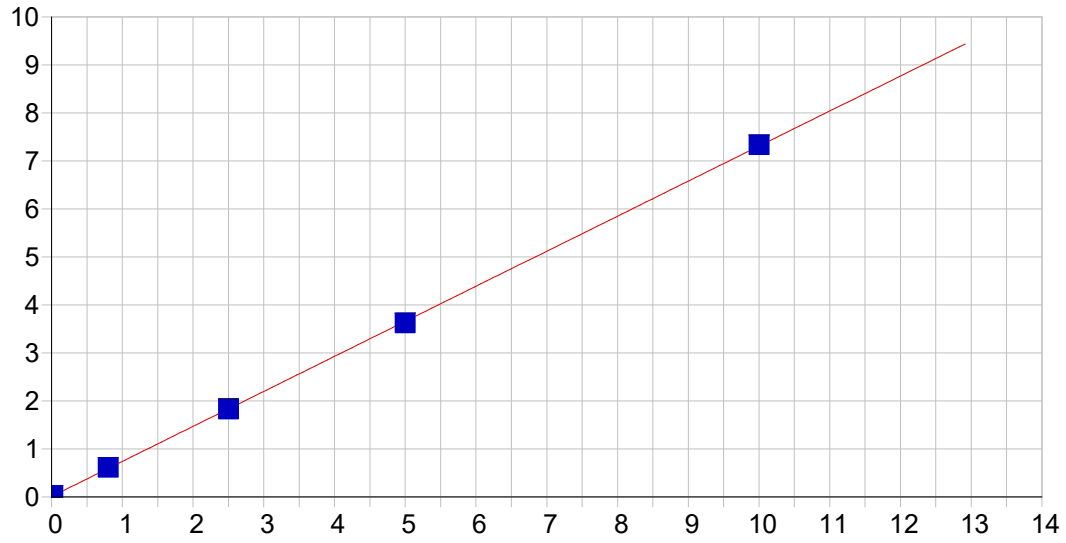
S 182.034 {485}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000327	Re-Slope:	1.000000
A1 (Gain):	0.029126	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999573	Status:	OK.
Std Error of Est:	0.000020		
Predicted MDL:	0.002903		
Predicted MQL:	0.009677		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00033	.000	1
S1	.02000	.02444	.004	22.2	.00101	.000	1
S3	2.5000	2.3519	-.148	-5.93	.06864	.000	1
S4	5.0000	4.9287	-.071	-1.43	.14350	.001	1
S5	10.000	10.219	.219	2.19	.29720	.001	1
S2	.80000	.79656	-.003	-.430	.02347	.000	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



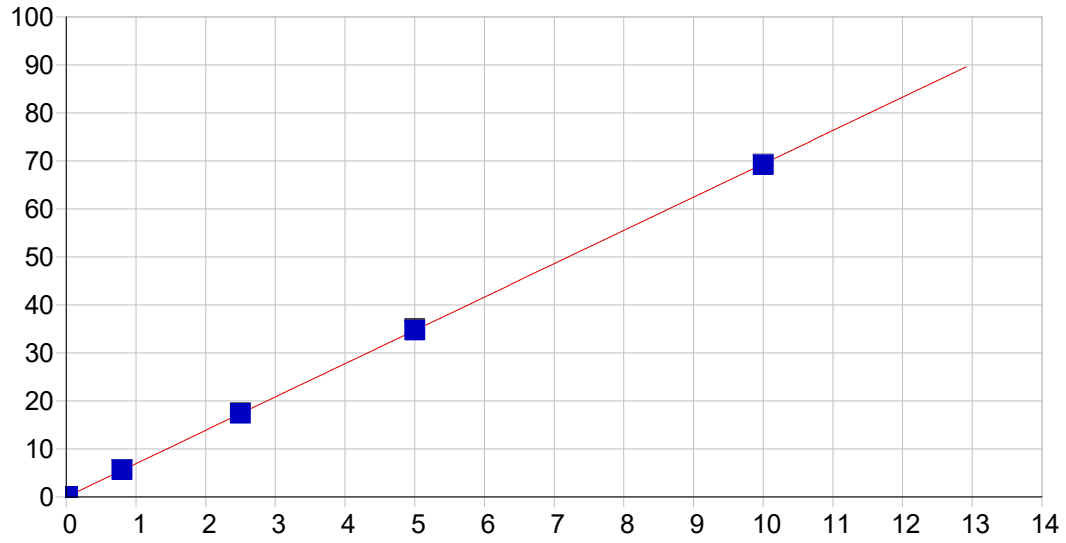
Li 670.784 { 50}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008363	Re-Slope:	1.000000
A1 (Gain):	0.730022	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999938	Status:	OK.
Std Error of Est:	0.000191		
Predicted MDL:	0.002609		
Predicted MQL:	0.008696		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00836	.002	1
S5	10.000	10.030	.030	.296	7.3360	.006	1
S4	5.0000	4.9487	-.051	-1.03	3.6239	.007	1
S3	2.5000	2.4904	-.010	-.384	1.8279	.011	1
S1	.02000	.02368	.004	18.4	.02590	.001	1
S2	.80000	.82754	.028	3.44	.61296	.001	1

Reviewed By:
On:
Inst Id :P4
LB :LB137389



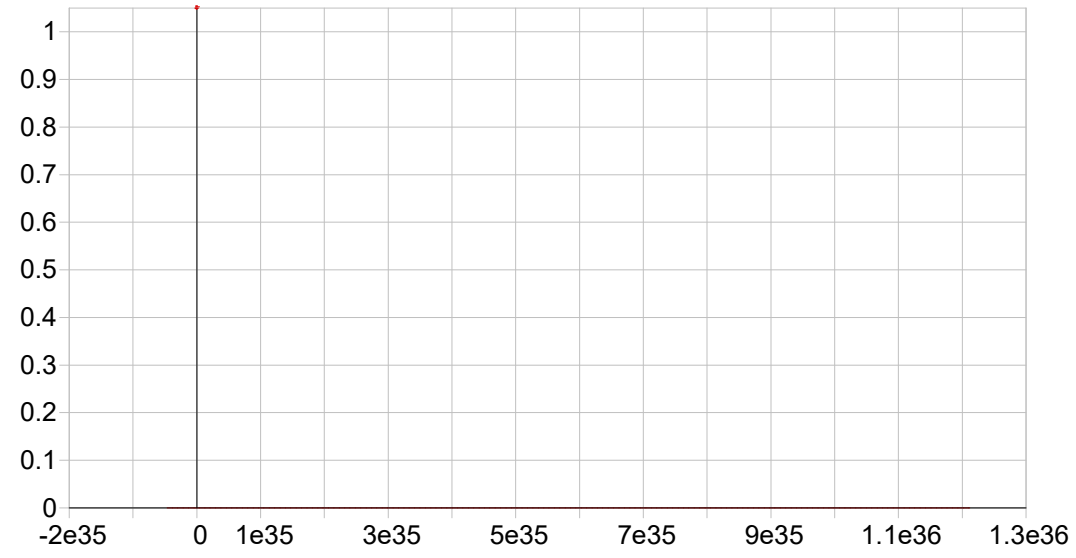
Sr 407.771 { 83}

Date of Fit:	10/1/2025 15:21:36	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001809	Re-Slope:	1.000000
A1 (Gain):	6.938517	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999988	Status:	OK.
Std Error of Est:	0.000793		
Predicted MDL:	0.000146		
Predicted MQL:	0.000488		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00180	.001	1
S1	.02000	.02164	.002	8.18	.15260	.001	1
S3	2.5000	2.5036	.004	.144	17.390	.105	1
S4	5.0000	5.0042	.004	.083	34.757	.260	1
S5	10.000	9.9768	-.023	-.232	69.292	.068	1
S2	.80000	.81382	.014	1.73	5.6539	.021	1

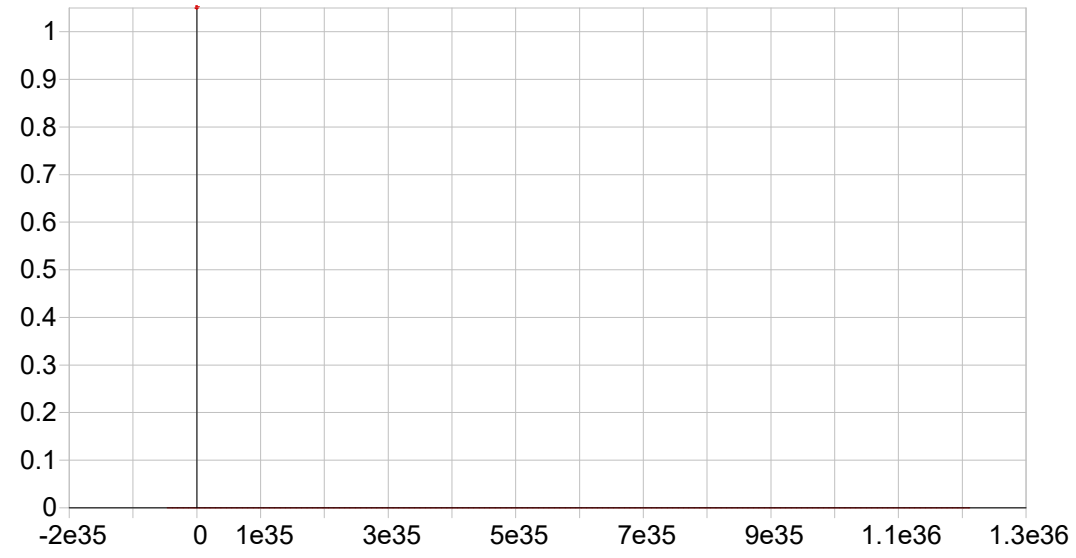
Reviewed By:
On:
Inst Id :P4
LB :LB137389



Y 224.306 {450}*

Date of Fit:	10/1/2025 15:21:36	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



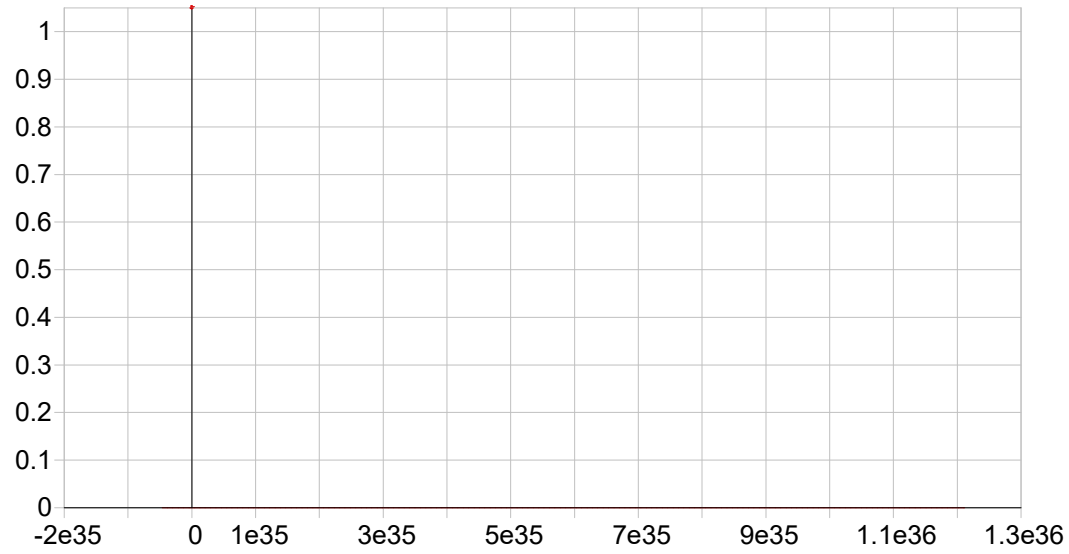
Y 360.073 { 94}*

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:
On:
Inst Id :P4
LB :LB137389

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

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

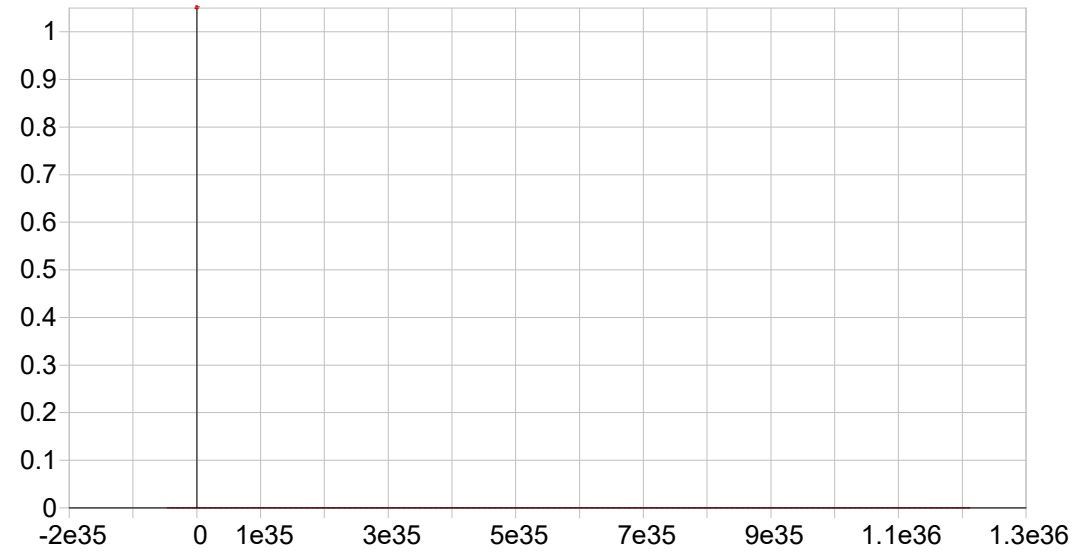


Y 371.030 { 91}*

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

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

Reviewed By:
On:
Inst Id :P4
LB :LB137389

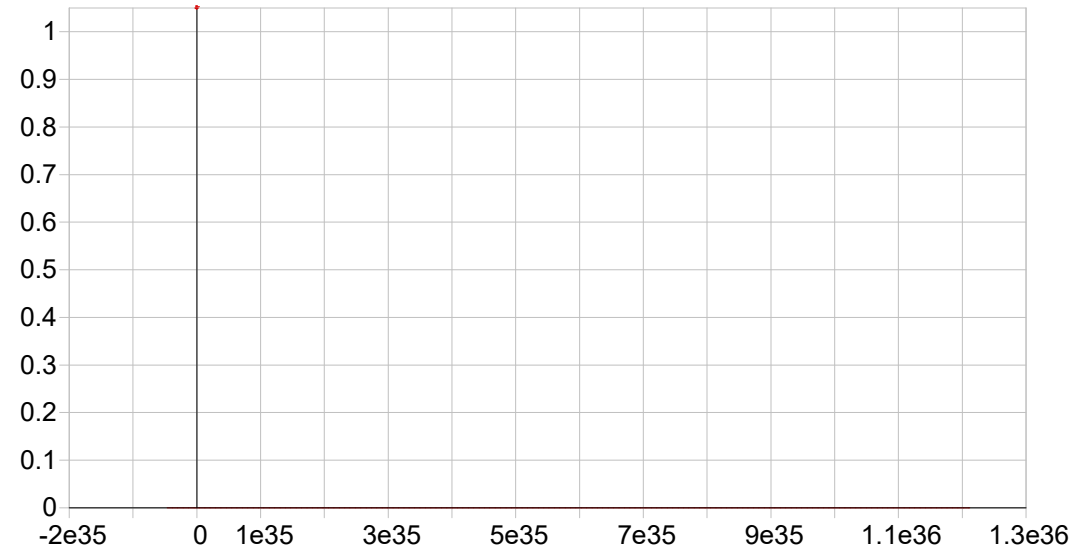


Y 224.306 {150}*

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

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

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



In 230.606 {446}*

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

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

Reviewed By:
On:
Inst Id :P4
LB :LB137389

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:
On:
Inst Id :P4
LB :LB137389

Sample Name: S0 Acquired: 10/1/2025 12:08:26 Type: Cal
Method: 6010-200.7 NEW(v240) 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	**-.00003**	**.00042**	**.00035**	**.00047**	**.00083**	**-.00081**	**.08459**	**-.00185**
Stddev	.00004	.00002	.00011	.00010	.00005	.00021	.00128	.00075
%RSD	167.10	5.5530	32.277	20.236	5.7322	25.788	1.5182	40.354
#1	.00002	.00043	.00047	.00043	.00083	-.00098	.08326	-.00237
#2	-.00005	.00039	.00033	.00040	.00087	-.00086	.08582	-.00217
#3	-.00005	.00043	.00025	.00058	.00078	-.00058	.08468	-.00099

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	**-.00035**	**.00031**	**.00016**	**.00002**	**.00079**	**.00001**	**-.00003**	**-.00029**
Stddev	.00011	.00051	.00003	.00016	.00023	.00001	.00014	.00012
%RSD	30.264	164.13	20.162	753.97	29.395	83.416	505.46	39.947
#1	-.00040	-.00027	.00016	.00017	.00067	.00001	.00011	-.00035
#2	-.00043	.00053	.00013	.00004	.00063	.00000	-.00018	-.00016
#3	-.00023	.00067	.00019	-.00014	.00105	.00002	-.00002	-.00037

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	**-.00049**	**-.00076**	**.00204**	**-.00041**	**.00481**	**-.00029**	**.01330**	**.00043**
Stddev	.00013	.00006	.00012	.00016	.00087	.00015	.00066	.00005
%RSD	26.871	7.4032	5.7428	40.473	18.043	50.919	4.9474	11.967
#1	-.00035	-.00078	.00198	-.00030	.00580	-.00021	.01349	.00037
#2	-.00052	-.00080	.00217	-.00032	.00440	-.00019	.01257	.00047
#3	-.00061	-.00069	.00196	-.00060	.00422	-.00046	.01385	.00044

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	**.00461**	**.00167**	**.00011**	**-.00127**	**.00033**	**.00836**	**.00180**
Stddev	.00005	.00101	.00003	.00004	.00007	.00186	.00078
%RSD	1.1935	60.062	26.976	3.0505	20.526	22.196	43.517
#1	.00454	.00056	.00011	-.00123	.00035	.00672	.00269
#2	.00464	.00250	.00008	-.00129	.00025	.00799	.00142
#3	.00464	.00196	.00014	-.00130	.00038	.01037	.00127

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S0 Acquired: 10/1/2025 12:08:26 Type: Cal
Method: 6010-200.7 NEW(v240) 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	6693.5	96538.	7727.2	5205.8	8303.4
Stddev	16.8	193.	38.6	16.6	12.0
%RSD	.25106	.19964	.49944	.31904	.14482
#1	6712.5	96761.	7682.6	5218.1	8317.3
#2	6687.8	96432.	7750.5	5212.5	8296.7
#3	6680.4	96422.	7748.4	5186.9	8296.3

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S1 Acquired: 10/1/2025 12:12:50 Type: Cal
Method: 6010-200.7 NEW(v240) 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	.00114	.00312	.00269	.00143	.00521	.00860	.25387	.05928
Stddev	.00006	.00001	.00036	.00008	.00009	.00039	.00084	.00062
%RSD	5.4098	.43861	13.335	5.3523	1.7694	4.4914	.33140	1.0474
#1	.00108	.00313	.00278	.00138	.00511	.00879	.25316	.05943
#2	.00120	.00311	.00229	.00139	.00526	.00886	.25365	.05982
#3	.00115	.00310	.00299	.00152	.00528	.00816	.25480	.05860

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	.01795	.11233	.00234	.02434	.01434	.00029	.00866	.02460
Stddev	.00017	.00040	.00011	.00002	.00006	.00002	.00024	.00048
%RSD	.92415	.35816	4.8088	.09654	.45231	5.3685	2.7884	1.9581
#1	.01776	.11205	.00242	.02436	.01441	.00030	.00868	.02503
#2	.01804	.11279	.00221	.02434	.01428	.00027	.00841	.02469
#3	.01806	.11216	.00238	.02431	.01433	.00029	.00889	.02408

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	.02314	.00130	.01550	.00438	.10605	.00690	.08316	.13398
Stddev	.00007	.00007	.00014	.00029	.00074	.00023	.00018	.00004
%RSD	.28445	5.0806	.92087	6.5783	.69807	3.3444	.21403	.03178
#1	.02311	.00125	.01539	.00464	.10624	.00666	.08331	.13401
#2	.02321	.00127	.01545	.00442	.10524	.00692	.08296	.13400
#3	.02309	.00137	.01566	.00407	.10668	.00712	.08320	.13393

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	.01085	.01267	.00108	-.00033	.00101	.02590	.15260
Stddev	.00010	.00039	.00006	.00005	.00006	.00080	.00096
%RSD	.92843	3.0996	5.1587	15.967	6.3819	3.1055	.62778
#1	.01084	.01280	.00111	-.00030	.00104	.02532	.15152
#2	.01095	.01299	.00111	-.00039	.00094	.02682	.15334
#3	.01075	.01223	.00102	-.00030	.00106	.02556	.15294

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S1 Acquired: 10/1/2025 12:12:50 Type: Cal
Method: 6010-200.7 NEW(v240) 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	**6617.0**	**90152.**	**7781.4**	**5024.5**	**8003.0**
Stddev	17.4	365.	52.4	17.8	15.6
%RSD	.26226	.40532	.67363	.35369	.19544
#1	6602.5	90551.	7722.2	5043.5	7990.8
#2	6612.2	90071.	7799.7	5021.8	7997.6
#3	6636.3	89834.	7822.1	5008.2	8020.6

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S2 Acquired: 10/1/2025 12:17:05 Type: Cal
Method: 6010-200.7 NEW(v240) 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	**.04252**	**.05677**	**.15710**	**.03801**	**.07227**	**.12648**	**2.7542**	**.39787**
Stddev	.00009	.00173	.00061	.00002	.00006	.00044	.0125	.00331
%RSD	.20862	3.0513	.38577	.06472	.08727	.34905	.45330	.83187
#1	.04262	.05554	.15703	.03801	.07234	.12699	2.7497	.40039
#2	.04250	.05602	.15653	.03798	.07222	.12617	2.7446	.39412
#3	.04244	.05875	.15773	.03803	.07225	.12629	2.7683	.39910

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	**1.1940**	**.21982**	**.03454**	**.32192**	**.13368**	**.00197**	**.16358**	**.04736**
Stddev	.0017	.00096	.00015	.00033	.00022	.00004	.00049	.00045
%RSD	.14299	.43668	.42669	.10348	.16801	1.7944	.30076	.94397
#1	1.1924	.21881	.03445	.32221	.13373	.00194	.16308	.04684
#2	1.1937	.21992	.03471	.32156	.13344	.00196	.16361	.04763
#3	1.1958	.22072	.03446	.32199	.13389	.00201	.16406	.04760

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	**.23568**	**.03891**	**.02656**	**.04850**	**.98242**	**.01316**	**.59087**	**.54389**
Stddev	.00032	.00013	.00025	.00010	.00067	.00040	.00432	.00120
%RSD	.13584	.34140	.93467	.20394	.06832	3.0266	.73120	.21994
#1	.23535	.03876	.02633	.04839	.98175	.01270	.59558	.54388
#2	.23599	.03903	.02652	.04857	.98241	.01340	.58708	.54271
#3	.23572	.03893	.02683	.04855	.98310	.01338	.58995	.54510

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	**.12611**	**.21936**	**.00205**	**.03710**	**.02347**	**.61296**	**5.6539**
Stddev	.00027	.00055	.00001	.00012	.00019	.00125	.0208
%RSD	.21199	.24998	.68021	.31287	.81595	.20398	.36791
#1	.12591	.21883	.00206	.03721	.02334	.61358	5.6501
#2	.12601	.21993	.00204	.03697	.02338	.61152	5.6352
#3	.12642	.21933	.00206	.03711	.02369	.61377	5.6763

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S2 Acquired: 10/1/2025 12:17:05 Type: Cal
Method: 6010-200.7 NEW(v240) 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	6584.6	96895.	7790.3	5121.6	7874.1
Stddev	10.8	631.	33.6	41.9	5.0
%RSD	.16393	.65149	.43175	.81898	.06361
#1	6574.1	97253.	7754.2	5166.8	7869.7
#2	6595.7	96166.	7795.7	5083.9	7879.5
#3	6584.1	97266.	7820.9	5114.2	7873.0

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S3 Acquired: 10/1/2025 12:21:06 Type: Cal
Method: 6010-200.7 NEW(v240) 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	**.12684**	**.15659**	**.47259**	**.11073**	**.21424**	**.38391**	**8.3860**	**1.2192**
Stddev	.00023	.00269	.00044	.00041	.00064	.00120	.0571	.0040
%RSD	.18393	1.7197	.09384	.36939	.29838	.31157	.68112	.32995
#1	.12706	.15528	.47295	.11082	.21487	.38253	8.4516	1.2163
#2	.12659	.15481	.47209	.11028	.21359	.38472	8.3593	1.2238
#3	.12686	.15969	.47273	.11108	.21425	.38447	8.3471	1.2175

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	**3.6018**	**.67726**	**.10698**	**.96984**	**.39541**	**.00635**	**.49847**	**.14277**
Stddev	.0045	.00068	.00047	.00153	.00087	.00004	.00142	.00065
%RSD	.12476	.10092	.43862	.15767	.22030	.61990	.28391	.45471
#1	3.6067	.67804	.10727	.97159	.39641	.00639	.49972	.14234
#2	3.5979	.67696	.10723	.96916	.39488	.00634	.49877	.14244
#3	3.6007	.67677	.10644	.96877	.39494	.00631	.49694	.14351

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	**.70542**	**.12266**	**.08078**	**.14888**	**3.0150**	**.04318**	**1.7747**	**1.6483**
Stddev	.00052	.00027	.00082	.00134	.0037	.00028	.0082	.0037
%RSD	.07320	.22184	1.0139	.89685	.12427	.65575	.46396	.22220
#1	.70592	.12267	.08169	.15035	3.0182	.04347	1.7668	1.6502
#2	.70545	.12292	.08053	.14854	3.0159	.04316	1.7833	1.6441
#3	.70489	.12238	.08011	.14774	3.0109	.04291	1.7739	1.6506

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	**.37646**	**.67229**	**.00645**	**.11382**	**.06864**	**1.8279**	**17.390**
Stddev	.00098	.00287	.00000	.00049	.00043	.0113	.105
%RSD	.25906	.42621	.01979	.43257	.62193	.61904	.60100
#1	.37716	.67539	.00645	.11372	.06862	1.8408	17.508
#2	.37534	.67171	.00645	.11339	.06822	1.8232	17.353
#3	.37686	.66975	.00645	.11436	.06907	1.8196	17.308

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S3 Acquired: 10/1/2025 12:21:06 Type: Cal
Method: 6010-200.7 NEW(v240) 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	6662.9	91470.	7727.8	5006.0	7915.5
Stddev	8.2	255.	32.9	22.1	10.8
%RSD	.12281	.27928	.42598	.44070	.13592
#1	6653.5	91443.	7754.9	4985.4	7904.2
#2	6666.9	91228.	7691.1	5003.4	7916.6
#3	6668.3	91737.	7737.3	5029.2	7925.7

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S4 Acquired: 10/1/2025 12:25:01 Type: Cal
Method: 6010-200.7 NEW(v240) 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	**.25673**	**.31405**	**.96113**	**.22286**	**.43149**	**.76450**	**16.866**	**2.3828**
Stddev	.00064	.00508	.00068	.00045	.00067	.00162	.043	.0175
%RSD	.25071	1.6182	.07080	.20078	.15466	.21134	.25686	.73497
#1	.25619	.30820	.96035	.22240	.43109	.76264	16.826	2.3992
#2	.25744	.31738	.96155	.22330	.43226	.76530	16.912	2.3643
#3	.25657	.31658	.96151	.22289	.43112	.76555	16.860	2.3851

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	**7.3967**	**1.3422**	**.20908**	**1.9783**	**.78881**	**.01254**	**.99398**	**.28428**
Stddev	.0088	.0031	.00036	.0024	.00027	.00012	.00235	.00077
%RSD	.11939	.22729	.17090	.12250	.03422	.93613	.23681	.27050
#1	7.3884	1.3433	.20875	1.9755	.78909	.01241	.99149	.28516
#2	7.3958	1.3446	.20946	1.9796	.78881	.01264	.99618	.28375
#3	7.4060	1.3387	.20903	1.9798	.78855	.01257	.99426	.28393

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	**1.4370**	**.24055**	**.16085**	**.29966**	**5.9126**	**.08579**	**3.5184**	**3.2904**
Stddev	.0015	.00023	.00135	.00055	.0089	.00085	.0260	.0029
%RSD	.10587	.09648	.83966	.18427	.15135	.99315	.73997	.08866
#1	1.4355	.24030	.15952	.29909	5.9026	.08506	3.5441	3.2871
#2	1.4385	.24075	.16222	.30019	5.9197	.08673	3.4920	3.2926
#3	1.4370	.24060	.16080	.29971	5.9157	.08560	3.5191	3.2916

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	**.76831**	**1.3403**	**.01275**	**.23967**	**.14350**	**3.6239**	**34.757**
Stddev	.00127	.0029	.00011	.00186	.00070	.0070	.260
%RSD	.16591	.21536	.86819	.77716	.48491	.19302	.74765
#1	.76730	1.3370	.01265	.23758	.14271	3.6165	34.965
#2	.76974	1.3423	.01287	.24115	.14399	3.6248	34.839
#3	.76789	1.3417	.01272	.24027	.14380	3.6304	34.466

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S4 Acquired: 10/1/2025 12:25:01 Type: Cal
Method: 6010-200.7 NEW(v240) 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	6482.6	92951.	7732.9	5005.2	7505.1
Stddev	4.6	531.	43.7	40.6	2.7
%RSD	.07071	.57146	.56481	.81053	.03609
#1	6477.3	93054.	7685.4	5039.7	7505.9
#2	6485.6	92376.	7742.1	4960.5	7507.4
#3	6484.9	93423.	7771.3	5015.4	7502.1

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S5 Acquired: 10/1/2025 12:29:04 Type: Cal
Method: 6010-200.7 NEW(v240) 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	**.51183**	**.65656**	**1.9527**	**.44121**	**.86214**	**1.5344**	**34.156**	**4.6946**
Stddev	.00018	.00843	.0022	.00036	.00032	.0024	.573	.0250
%RSD	.03562	1.2840	.11537	.08155	.03728	.15657	1.6762	.53352
#1	.51172	.66545	1.9519	.44097	.86177	1.5331	34.796	4.6793
#2	.51204	.64868	1.9510	.44103	.86230	1.5330	33.694	4.6810
#3	.51173	.65555	1.9553	.44162	.86235	1.5372	33.977	4.7235

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**14.908**	**2.6807**	**.41112**	**4.0200**	**1.5511**	**.02511**	**1.9924**	**.57093**
Stddev	.020	.0036	.00133	.0033	.0007	.00016	.0044	.00180
%RSD	.13215	.13388	.32404	.08304	.04281	.62540	.21874	.31508
#1	14.903	2.6778	.41239	4.0209	1.5505	.02526	1.9973	.56900
#2	14.891	2.6795	.41123	4.0163	1.5510	.02513	1.9905	.57121
#3	14.930	2.6847	.40973	4.0228	1.5519	.02494	1.9893	.57257

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	**2.9059**	**.48071**	**.32809**	**.60648**	**11.623**	**.17418**	**6.9830**	**6.5892**
Stddev	.0020	.00054	.00381	.00033	.028	.00189	.0461	.0031
%RSD	.06862	.11276	1.1626	.05483	.23821	1.0865	.65966	.04768
#1	2.9058	.48038	.33132	.60654	11.591	.17546	6.9447	6.5881
#2	2.9039	.48133	.32907	.60677	11.644	.17507	6.9702	6.5868
#3	2.9079	.48041	.32388	.60611	11.632	.17201	7.0341	6.5928

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	**1.5510**	**2.7024**	**.02614**	**.49422**	**.29720**	**7.3360**	**69.292**
Stddev	.0024	.0007	.00009	.00048	.00080	.0059	.068
%RSD	.15753	.02430	.35807	.09623	.26832	.08009	.09877
#1	1.5510	2.7025	.02612	.49401	.29764	7.3428	69.250
#2	1.5485	2.7017	.02624	.49389	.29628	7.3330	69.371
#3	1.5533	2.7030	.02605	.49477	.29767	7.3323	69.256

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: S5 Acquired: 10/1/2025 12:29:04 Type: Cal
Method: 6010-200.7 NEW(v240) 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	6404.4	92283.	7670.3	4939.6	7252.5
Stddev	14.2	534.	36.9	8.0	19.1
%RSD	.22128	.57890	.48169	.16109	.26282
#1	6415.2	91701.	7664.4	4934.5	7264.0
#2	6409.6	92399.	7709.9	4935.7	7263.1
#3	6388.3	92750.	7636.7	4948.8	7230.5

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICV01 Acquired: 10/1/2025 12:33:16 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**3.987510**	**3.946016**	**3.857369**	**4.037932**	**4.078088**	**7.801712**
Stddev	.009387	.053240	.003160	.005269	.013162	.027526
%RSD	.2354133	1.349212	.0819313	.1304812	.3227394	.3528251
#1	3.976678	3.988621	3.854086	4.043137	4.072120	7.790447
#2	3.993275	3.963095	3.857631	4.038057	4.068969	7.781606
#3	3.992577	3.886332	3.860390	4.032602	4.093177	7.833085

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.676462**	**.1983321**	**1.969638**	**19.41304**	**.7957866**	**1.962989**
Stddev	.060002	.0009940	.001214	.03652	.0028640	.003017
%RSD	.7816307	.5011801	.0616169	.1881326	.3598935	.1536719
#1	7.745745	.1990998	1.968404	19.44271	.7924796	1.959513
#2	7.641891	.1972094	1.970830	19.37225	.7974371	1.964931
#3	7.641748	.1986872	1.969682	19.42415	.7974432	1.964521

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.010585**	**3.858220**	**1.940340**	**19.50404**	**1.968257**	**.9450540**
Stddev	.001738	.012246	.015160	.10219	.002016	.0037730
%RSD	.1720035	.3174120	.7813104	.5239301	.1024421	.3992344
#1	1.009319	3.872115	1.957522	19.59674	1.965930	.9407239
#2	1.009870	3.853548	1.928849	19.39447	1.969357	.9468029
#3	1.012567	3.848998	1.934647	19.52093	1.969484	.9476352

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**18.88616**	**1.933570**	**1.965397**	**19.11538**	**3.952258**	**4.027044**
Stddev	.10417	.000382	.009437	.12762	.028332	.008540
%RSD	.5515584	.0197752	.4801375	.6676089	.7168619	.2120581
#1	18.99411	1.933704	1.958773	19.00071	3.979144	4.021421
#2	18.87813	1.933138	1.961218	19.25286	3.922673	4.022840
#3	18.78624	1.933867	1.976202	19.09256	3.954955	4.036870

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICV01 Acquired: 10/1/2025 12:33:16 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**4.011004**	**3.965928**	F **3.591720**	F **.0054704**	F **.0263439**	F **.0007038**
Stddev	.008482	.024654	.033861	.0007524	.0033061	.0023199
%RSD	.2114636	.6216417	.9427503	13.75362	12.54966	329.6107
#1	4.017938	3.994395	3.554524	.0055586	.0233009	.0005534
#2	4.013527	3.951593	3.599883	.0046778	.0298617	.0030953
#3	4.001547	3.951795	3.620754	.0061748	.0258691	-.001537

Elem	Sr4077
Units	ppm
Avg	F **-.002948**
Stddev	.000252
%RSD	8.536281
#1	-.002658
#2	-.003108
#3	-.003079

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6555.468**	**94494.18**	**7824.709**	**5078.157**	**7675.507**
Stddev	13.715	292.22	31.437	29.500	4.213
%RSD	.2092118	.3092435	.4017660	.5809153	.0548899
#1	6562.226	94831.60	7799.943	5108.847	7677.084
#2	6564.492	94325.87	7860.076	5075.612	7670.733
#3	6539.685	94325.06	7814.108	5050.012	7678.704

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: LLICV01 Acquired: 10/1/2025 12:41:07 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0211281**	**.0428084**	**.0111314**	**.0204582**	**.0494533**	**.1123373**	**.0988665**
Stddev	.0026624	.0016152	.0006906	.0019200	.0005098	.0143226	.0013372
%RSD	12.60114	3.773118	6.204320	9.384875	1.030875	12.74960	1.352491
#1	.0242019	.0444273	.0116394	.0226741	.0489923	.1215028	.0983894
#2	.0196348	.0411969	.0114098	.0194104	.0500008	.0958327	.0978334
#3	.0195475	.0428009	.0103450	.0192901	.0493668	.1196763	.1003768

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062870**	**.0059667**	**2.056529**	**.0098715**	**.0299909**	**.0212685**	**.1067113**
Stddev	.0000289	.0000204	.008117	.0003497	.0002194	.0000509	.0008489
%RSD	.4594725	.3419365	.3947159	3.542281	.7315192	.2391736	.7955104
#1	.0062980	.0059818	2.049414	.0100078	.0302442	.0212509	.1074671
#2	.0062542	.0059749	2.065371	.0101325	.0298585	.0212288	.1068740
#3	.0063086	.0059435	2.054802	.0094742	.0298701	.0213259	.1057929

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0208758**	**2.152783**	**.0399518**	**.0099428**	**1.872496**	**.0409192**	**.0414841**
Stddev	.0003692	.036954	.0001145	.0001635	.016554	.0014552	.0005939
%RSD	1.768422	1.716579	.2866901	1.644401	.8840443	3.556183	1.431530
#1	.0204933	2.184966	.0400807	.0097894	1.857215	.0405483	.0416215
#2	.0209042	2.112426	.0399130	.0101148	1.890081	.0425239	.0419973
#3	.0212300	2.160957	.0398617	.0099244	1.870193	.0396854	.0408336

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.879498**	**.1021335**	**.1995480**	**.0383289**	**.0400550**	**.3565633**	**.0190266**
Stddev	.017958	.0016530	.0009089	.0006281	.0015074	.0013573	.0011712
%RSD	.9554786	1.618436	.4554645	1.638602	3.763215	.3806579	6.155677
#1	1.877417	.1025200	.2004637	.0390486	.0416470	.3553305	.0183924
#2	1.898406	.1003215	.1986461	.0378922	.0398685	.3580178	.0203781
#3	1.862671	.1035590	.1995342	.0380458	.0386496	.3563417	.0183092

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: LLICV01 Acquired: 10/1/2025 12:41:07 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0218877	.0204224	.0210689
Stddev	.0024276	.0021377	.0002191
%RSD	11.09103	10.46726	1.040026
#1	.0212265	.0224029	.0212432
#2	.0245774	.0181563	.0211406
#3	.0198592	.0207079	.0208229

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6865.200	98078.66	8045.992	5213.966	8421.779
Stddev	17.350	639.21	50.844	48.128	34.193
%RSD	.2527296	.6517347	.6319170	.9230524	.4060021
#1	6857.123	97859.32	8017.820	5195.970	8398.790
#2	6885.116	97577.99	8104.686	5177.429	8461.072
#3	6853.360	98798.66	8015.470	5268.498	8405.475

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICB01 Acquired: 10/1/2025 12:45:19 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.001873**	**-.000853**	**.0014609**	**.0006875**	**-.000747**	**.0046491**
Stddev	.001195	.001390	.0009709	.0029488	.001078	.0096780
%RSD	63.78912	162.8869	66.46110	428.9058	144.2445	208.1685
#1	-.003198	-.002424	.0004401	.0015271	-.001361	-.004159
#2	-.001544	.000219	.0015699	.0031255	-.001379	.015009
#3	-.000878	-.000355	.0023727	-.002590	.000497	.003097

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025878**	**-.000085**	**.0000326**	**-.009691**	**.0003896**	**.0000589**
Stddev	.0030333	.000066	.0000391	.007164	.0003036	.0000381
%RSD	117.2176	77.99213	120.0184	73.92399	77.91978	64.70207
#1	.0001231	-.000013	-.000003	-.004255	.0002881	.0001012
#2	.0059754	-.000143	.000027	-.007009	.0007309	.0000273
#3	.0016648	-.000100	.000074	-.017810	.0001498	.0000482

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000441**	**.0095035**	**.0005787**	**-.008277**	**-.000005**	**-.000121**
Stddev	.000099	.0011880	.0008689	.015129	.000122	.000852
%RSD	22.54457	12.50081	150.1584	182.7705	2563.997	706.0537
#1	-.000456	.0081317	.0001007	.006949	.000072	-.000844
#2	-.000335	.0101872	.0015817	-.023306	.000059	-.000336
#3	-.000531	.0101916	.0000536	-.008475	-.000145	.000818

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.263900**	**.0011251**	**-.000316**	**-.341647**	**-.002596**	**.0003498**
Stddev	.023734	.0021962	.000188	.023940	.000279	.0000668
%RSD	8.993737	195.2097	59.39547	7.007205	10.75366	19.10142
#1	-.291175	-.000478	-.000337	-.358265	-.002918	.0004135
#2	-.247945	.003628	-.000492	-.352469	-.002446	.0002803
#3	-.252579	.000224	-.000119	-.314207	-.002424	.0003555

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICB01 Acquired: 10/1/2025 12:45:19 Type: Unk
Method: 6010-200.7 NEW(v240) 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	F -.028764	.0014422	.0053008	.0010514	-.001622	F -.011372
Stddev	.000323	.0022636	.0075888	.0004466	.000121	.000950
%RSD	1.122170	156.9540	143.1627	42.47732	7.440531	8.353575
#1	-.028819	-.000818	.0038510	.0011521	-.001602	-.011935
#2	-.028417	.003709	.0135100	.0014390	-.001512	-.011904
#3	-.029055	.001435	-.001458	.0005630	-.001751	-.010275

Elem	Sr4077
Units	ppm
Avg	.0000242
Stddev	.0000449
%RSD	185.2275
#1	.0000755
#2	-.000008
#3	.000005

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6980.737	97071.61	7965.323	5249.972	8819.917
Stddev	8.674	155.53	16.107	19.743	3.131
%RSD	.1242500	.1602220	.2022083	.3760587	.0354984
#1	6984.714	96919.56	7977.976	5234.638	8821.404
#2	6970.788	97064.88	7970.802	5243.030	8822.028
#3	6986.708	97230.40	7947.192	5272.249	8816.320

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CRI01 Acquired: 10/1/2025 12:49:37 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0219448	.0421545	.0115018	.0189698	.0501344	.1048325	.0978361
Stddev	.0029521	.0012852	.0008099	.0014139	.0013144	.0221621	.0003785
%RSD	13.45231	3.048801	7.041752	7.453426	2.621805	21.14045	.3869110
#1	.0253414	.0434602	.0107672	.0198492	.0514750	.1277209	.0978473
#2	.0204952	.0421124	.0113677	.0173388	.0488479	.1033006	.0974521
#3	.0199977	.0408908	.0123703	.0197214	.0500802	.0834762	.0982089

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0063568	.0059349	2.073447	.0104174	.0295811	.0212604	.1026406
Stddev	.0000573	.0000070	.008380	.0002408	.0002693	.0003488	.0072658
%RSD	.9010089	.1183432	.4041602	2.311934	.9104485	1.640395	7.078906
#1	.0064156	.0059318	2.068250	.0106390	.0294044	.0212553	.0978292
#2	.0063537	.0059430	2.083114	.0101611	.0298911	.0209143	.0990940
#3	.0063012	.0059300	2.068976	.0104521	.0294478	.0216117	.1109986

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0217446	2.146543	.0398430	.0101078	1.926855	.0406426	.0418215
Stddev	.0006822	.009958	.0000712	.0004774	.010994	.0041605	.0002169
%RSD	3.137259	.4639009	.1788150	4.723190	.5705830	10.23672	.5187511
#1	.0221433	2.147752	.0399142	.0095950	1.915355	.0372591	.0420344
#2	.0209569	2.136036	.0397717	.0105394	1.937262	.0393807	.0416007
#3	.0221336	2.155842	.0398431	.0101891	1.927946	.0452879	.0418294

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.913465	.0977077	.1993668	.0377733	.0400251	.3604042	.0193478
Stddev	.015516	.0018744	.0003540	.0001686	.0015252	.0103661	.0017942
%RSD	.8108918	1.918328	.1775441	.4463108	3.810727	2.876237	9.273141
#1	1.928738	.0971412	.1989593	.0375788	.0417818	.3503283	.0172765
#2	1.913941	.0998000	.1995430	.0378634	.0390379	.3710379	.0204190
#3	1.897717	.0961820	.1995981	.0378776	.0392557	.3598465	.0203479

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CRI01 Acquired: 10/1/2025 12:49:37 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0211472	.0189919	.0213220
Stddev	.0010804	.0022756	.0001488
%RSD	5.108837	11.98222	.6976322
#1	.0210242	.0187978	.0214755
#2	.0201336	.0213583	.0213120
#3	.0222838	.0168195	.0211785

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6847.682	95835.68	7973.646	5222.337	8413.050
Stddev	8.479	113.00	71.020	22.978	5.669
%RSD	.1238209	.1179079	.8906841	.4399943	.0673827
#1	6843.542	95710.37	7921.041	5215.663	8408.024
#2	6857.435	95866.87	7945.466	5203.435	8419.195
#3	6842.068	95929.81	8054.431	5247.913	8411.932

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICSA01 Acquired: 10/1/2025 12:53:49 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.0032651**	**.0030827**	**.0004392**	**.0063049**	**-.000714**	**247.4030**
Stddev	.0006112	.0036646	.0004096	.0015233	.000281	.1293
%RSD	18.71864	118.8764	93.25210	24.15966	39.31120	.0522582
#1	.0038735	.0022874	.0008624	.0045730	-.000398	247.3294
#2	.0026511	.0070797	.0000448	.0074364	-.000935	247.5523
#3	.0032708	-.000119	.0004104	.0069055	-.000808	247.3274

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046872**	**.0017253**	**.0006064**	**236.3443**	**.0476446**	**.0011643**
Stddev	.0019349	.0000973	.0000395	.1108	.0002203	.0003623
%RSD	41.28106	5.641269	6.518704	.0468995	.4623191	31.11758
#1	.0028075	.0017352	.0005608	236.3702	.0473909	.0012435
#2	.0066730	.0018172	.0006303	236.4399	.0477563	.0014805
#3	.0045812	.0016233	.0006282	236.2228	.0477867	.0007690

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0108638**	**97.37044**	**.0088891**	**249.4819**	**.0034550**	**.0004058**
Stddev	.0009065	.80404	.0008636	.4331	.0005766	.0009517
%RSD	8.344231	.8257494	9.715088	.1736047	16.68941	234.4979
#1	.0098310	98.24974	.0081326	249.0241	.0038008	.0013606
#2	.0115273	96.67272	.0087045	249.8852	.0027893	.0003996
#3	.0112332	97.18886	.0098300	249.5364	.0037748	-.000543

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0799359**	**.0065592**	**.0027845**	**.8145433**	**-.007280**	**.0007263**
Stddev	.0081587	.0011220	.0002186	.0322920	.005379	.0005532
%RSD	10.20659	17.10567	7.850122	3.964432	73.89017	76.16860
#1	.0809166	.0058863	.0025709	.7833913	-.001086	.0003638
#2	.0875599	.0078545	.0027749	.8123729	-.009971	.0004520
#3	.0713311	.0059369	.0030078	.8478658	-.010783	.0013630

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICSA01 Acquired: 10/1/2025 12:53:49 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.009065	-.003624	.0045799	F .2326561	-.002178	F -.026832
Stddev	.000156	.001736	.0208888	.0008710	.002001	.002368
%RSD	1.723055	47.91329	456.0991	.3743611	91.85998	8.825379
#1	-.008890	-.001824	.0017097	.2324365	-.004487	-.024267
#2	-.009116	-.003759	-.014725	.2336158	-.001091	-.027295
#3	-.009190	-.005289	.026755	.2319159	-.000956	-.028935

Elem	Sr4077
Units	ppm
Avg	.0063898
Stddev	.0007142
%RSD	11.17720
#1	.0058320
#2	.0071948
#3	.0061426

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6142.087	87919.35	7616.717	4730.770	6944.286
Stddev	17.932	81.87	58.588	9.009	27.395
%RSD	.2919489	.0931194	.7692059	.1904340	.3944977
#1	6132.960	88002.65	7667.575	4738.702	6941.301
#2	6162.746	87838.99	7552.653	4720.975	6973.052
#3	6130.555	87916.42	7629.923	4732.633	6918.506

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICSAB01 Acquired: 10/1/2025 12:57:58 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.1104115	.1183859	.0484674	.0545820	.6180040	246.9581
Stddev	.0014651	.0046338	.0017625	.0034159	.0011396	.5648
%RSD	1.326990	3.914152	3.636444	6.258213	.1844029	.2287004
#1	.1102010	.1152026	.0484111	.0543398	.6189333	247.4558
#2	.1090630	.1237021	.0502573	.0581126	.6167325	247.0742
#3	.1119705	.1162531	.0467337	.0512937	.6183462	246.3443

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4958198	.5051227	1.005751	236.3350	.5535208	.5019784
Stddev	.0028713	.0040511	.000398	.8646	.0007045	.0001229
%RSD	.5790919	.8020081	.0395723	.3658255	.1272679	.0244858
#1	.4987551	.5069179	1.006077	237.0795	.5543276	.5018645
#2	.4956873	.5079661	1.005869	236.5387	.5530278	.5019621
#3	.4930172	.5004842	1.005308	235.3867	.5532069	.5021087

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5032024	98.09332	.4968300	248.6325	1.000745	.2092488
Stddev	.0009855	.38899	.0032628	.8726	.000382	.0006422
%RSD	.1958513	.3965477	.6567231	.3509509	.0381727	.3069001
#1	.5026701	98.37056	.4996513	249.1940	1.001111	.2099522
#2	.5025974	97.64865	.4975819	249.0762	1.000776	.2091003
#3	.5043396	98.26074	.4932569	247.6272	1.000349	.2086938

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0268751	.4889786	1.037570	.0333872	.9599752	1.018554
Stddev	.0342345	.0023106	.004073	.0351321	.0074767	.001046
%RSD	127.3835	.4725336	.3925521	105.2264	.7788384	.1026569
#1	.0260672	.4875308	1.041897	-.005871	.9639514	1.018186
#2	-.006948	.4916433	1.033811	.061870	.9646237	1.017742
#3	.061506	.4877616	1.037003	.044162	.9513507	1.019734

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICSAB01 Acquired: 10/1/2025 12:57:58 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.015146	.9850970	.9713129	F .0071772	F .0059177	F -.029343
Stddev	.001387	.0070321	.0074843	.0021675	.0023864	.003057
%RSD	.1366253	.7138493	.7705395	30.19916	40.32663	10.41641
#1	1.016264	.9931684	.9719560	.0088264	.0079746	-.030166
#2	1.015581	.9818297	.9635277	.0079831	.0064774	-.031905
#3	1.013594	.9802930	.9784549	.0047223	.0033012	-.025960

Elem	Sr4077
Units	ppm
Avg	F .0057488
Stddev	.0008377
%RSD	14.57132
#1	.0059686
#2	.0064546
#3	.0048231

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6093.776	88257.99	7743.237	4714.371	6894.714
Stddev	6.265	193.12	74.391	7.217	10.910
%RSD	.1028087	.2188085	.9607187	.1530885	.1582379
#1	6095.324	88099.50	7715.218	4708.410	6889.089
#2	6086.882	88201.38	7686.925	4722.395	6887.764
#3	6099.122	88473.08	7827.569	4712.309	6907.288

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICSADLX20 Acquired: 10/1/2025 13:02:00 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000008**	**.0003525**	**.0001021**	**.0043275**	**-.001555**	**12.47537**	**.0007046**
Stddev	.002206	.0008997	.0008496	.0007737	.001090	.04812	.0003764
%RSD	26799.35	255.1943	832.2419	17.87934	70.07446	.3857156	53.42364
#1	-.001316	-.000634	.0005556	.0039573	-.000307	12.52127	.0007960
#2	-.001248	.000564	-.000878	.0052168	-.002037	12.42530	.0002909
#3	.002539	.001127	.000629	.0038085	-.002321	12.47953	.0010269

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001782**	**-.000007**	**12.32160**	**.0020973**	**.0003681**	**.0002515**	**4.941254**
Stddev	.0000863	.000048	.03374	.0000420	.0000759	.0002391	.051690
%RSD	48.43763	676.1340	.2738096	2.002162	20.60970	95.06367	1.046083
#1	.0000791	.000048	12.28264	.0020532	.0003634	-.000023	4.916164
#2	.0002373	-.000033	12.34110	.0021368	.0004462	.000414	5.000699
#3	.0002182	-.000036	12.34105	.0021018	.0002947	.000363	4.906898

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006580**	**12.81721**	**-.000055**	**.0001615**	**-.096824**	**.0037890**	**-.000251**
Stddev	.0002903	.05110	.000292	.0002719	.015561	.0030561	.000172
%RSD	44.11314	.3986793	528.4372	168.3477	16.07111	80.65617	68.66921
#1	.0003231	12.84183	.000280	.0001487	-.114064	.0073172	-.000087
#2	.0008146	12.75846	-.000192	.0004395	-.092588	.0020841	-.000236
#3	.0008364	12.85133	-.000254	-.000104	-.083820	.0019657	-.000430

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.179902**	**-.009105**	**.0000971**	**-.006789**	**.0020001**	**-.008892**	**.0115769**
Stddev	.022334	.000898	.0000625	.000534	.0008783	.011197	.0000549
%RSD	12.41437	9.867682	64.40808	7.863482	43.91175	125.9197	.4739305
#1	-.160058	-.008071	.0000276	-.007383	.0011293	-.014761	.0115269
#2	-.204088	-.009559	.0001148	-.006636	.0028857	.004019	.0115681
#3	-.175561	-.009687	.0001488	-.006349	.0019855	-.015935	.0116356

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICSADLX20 Acquired: 10/1/2025 13:02:00 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0001185	-.005801	.0004725
Stddev	.0013398	.000155	.0000572
%RSD	1130.473	2.671177	12.09955
#1	-.001013	-.005726	.0004124
#2	.001598	-.005979	.0004788
#3	-.000229	-.005697	.0005262

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6797.484	94705.62	7923.109	5147.308	8303.228
Stddev	13.595	261.90	42.827	8.576	13.376
%RSD	.1999953	.2765434	.5405355	.1666187	.1610972
#1	6790.272	94962.90	7889.807	5137.538	8290.445
#2	6813.165	94714.64	7971.421	5153.595	8317.127
#3	6789.016	94439.32	7908.099	5150.791	8302.112

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICSABDLX20 Acquired: 10/1/2025 13:06:14 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0053085	.0052400	.0032045	.0023098	.0290325	12.29810	.0261225
Stddev	.0017743	.0017682	.0006587	.0008050	.0021212	.04748	.0002743
%RSD	33.42386	33.74406	20.55555	34.84938	7.306311	.3860860	1.049913
#1	.0041010	.0033824	.0024729	.0022397	.0296453	12.27203	.0259485
#2	.0044787	.0054350	.0037505	.0031475	.0307799	12.35291	.0264387
#3	.0073456	.0069026	.0033900	.0015422	.0266724	12.26937	.0259804

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0259830	.0476031	12.14992	.0275328	.0237878	.0251175	4.794232
Stddev	.0002103	.0001598	.05591	.0002809	.0001449	.0002738	.023758
%RSD	.8095314	.3356070	.4601517	1.020152	.6092597	1.089900	.4955503
#1	.0257405	.0477004	12.13301	.0278312	.0239514	.0249826	4.813909
#2	.0261162	.0474187	12.21234	.0274935	.0237366	.0249373	4.800949
#3	.0260923	.0476901	12.10442	.0272735	.0236755	.0254325	4.767839

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0262101	12.71305	.0479349	.0098313	-.104677	.0265887	.0503197
Stddev	.0006866	.13947	.0000490	.0003568	.018516	.0031354	.0001827
%RSD	2.619503	1.097063	.1021857	3.629154	17.68889	11.79219	.3631233
#1	.0260705	12.57128	.0479112	.0100531	-.094732	.0250398	.0504851
#2	.0269557	12.85011	.0479024	.0094197	-.093259	.0245291	.0503504
#3	.0256040	12.71777	.0479913	.0100210	-.126041	.0301971	.0501235

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.233163	.0400952	.0499237	.0412557	.0493589	.0463617	.0004271
Stddev	.049788	.0002025	.0001159	.0003254	.0014690	.0073575	.0010923
%RSD	21.35330	.5051823	.2320489	.7886103	2.976155	15.86977	255.7522
#1	-.248019	.0402892	.0498290	.0416168	.0510512	.0458583	.0014077
#2	-.273832	.0401114	.0498892	.0411649	.0484130	.0392689	-.000750
#3	-.177638	.0398850	.0500529	.0409854	.0486123	.0539580	.000624

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: ICSABDLX20 Acquired: 10/1/2025 13:06:14 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0534256	.0399795	.0567472
Stddev	.0039030	.0033234	.0001878
%RSD	7.305552	8.312691	.3309677
#1	.0578176	.0372809	.0569595
#2	.0503539	.0436916	.0566029
#3	.0521055	.0389659	.0566791

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6770.306	95284.62	7790.280	5178.435	8254.832
Stddev	17.028	842.06	27.257	46.977	20.939
%RSD	.2515057	.8837351	.3498808	.9071626	.2536607
#1	6782.797	94386.92	7810.612	5124.199	8259.604
#2	6777.211	95409.94	7759.308	5204.754	8272.973
#3	6750.911	96057.00	7800.920	5206.352	8231.918

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV01 Acquired: 10/1/2025 13:10:24 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**5.018127**	**5.195234**	**4.952851**	**5.031872**	**4.994827**	**9.991250**	**10.03077**
Stddev	.007450	.071042	.007225	.004928	.004627	.009989	.07328
%RSD	.1484603	1.367440	.1458664	.0979274	.0926310	.0999810	.7305613
#1	5.022251	5.166636	4.946939	5.029208	4.991560	9.995057	10.11059
#2	5.022604	5.276118	4.950712	5.037558	4.992800	9.979917	9.96654
#3	5.009527	5.142949	4.960904	5.028849	5.000122	9.998776	10.01518

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2535712**	**2.494821**	**25.08822**	**1.001359**	**2.482914**	**1.255369**	**4.923695**
Stddev	.0010692	.001719	.07243	.000480	.001300	.001069	.027414
%RSD	.4216413	.0689163	.2887085	.0479507	.0523684	.0851606	.5567758
#1	.2547939	2.492960	25.16499	1.000926	2.482517	1.256555	4.950223
#2	.2528118	2.495153	25.02109	1.001875	2.481859	1.254479	4.895474
#3	.2531079	2.496351	25.07860	1.001275	2.484367	1.255072	4.925390

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.522121**	**24.93390**	**2.486019**	**1.245506**	**24.70175**	**2.501034**	**2.509820**
Stddev	.016476	.07339	.001634	.002064	.11909	.013714	.003411
%RSD	.6532773	.2943451	.0657245	.1656804	.4821061	.5483455	.1359236
#1	2.540296	25.00627	2.485009	1.243129	24.79710	2.510176	2.508347
#2	2.508162	24.85952	2.485145	1.246547	24.56827	2.485265	2.507393
#3	2.517905	24.93590	2.487905	1.246842	24.73990	2.507662	2.513721

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.46102**	**5.065833**	**5.006854**	**4.990257**	**5.011373**	**4.804138**	**5.005645**
Stddev	.04083	.009662	.001670	.009299	.029634	.043617	.006332
%RSD	.1669003	.1907236	.0333622	.1863402	.5913447	.9078973	.1265025
#1	24.41410	5.074617	5.005042	4.982887	5.041325	4.761363	5.005599
#2	24.48849	5.055484	5.008332	5.000705	4.982067	4.802502	5.011999
#3	24.48045	5.067398	5.007189	4.987181	5.010727	4.848551	4.999335

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV01 Acquired: 10/1/2025 13:10:24 Type: Unk
Method: 6010-200.7 NEW(v240) 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	4.960556	4.990852	5.106571
Stddev	.025215	.033661	.098202
%RSD	.5083192	.6744635	1.923058
#1	4.966722	5.026587	5.208536
#2	4.982117	4.959742	5.098554
#3	4.932829	4.986226	5.012623

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6514.722	93556.07	7651.823	5050.115	7545.968
Stddev	5.415	132.46	40.654	15.781	6.985
%RSD	.0831270	.1415838	.5312957	.3124897	.0925707
#1	6517.567	93472.84	7605.441	5032.624	7549.023
#2	6508.477	93708.82	7681.282	5054.435	7537.976
#3	6518.123	93486.55	7668.745	5063.287	7550.906

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB01 Acquired: 10/1/2025 13:14:26 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006057	.0021345	-.000081	-.000769	-.002044	.0063410	.0025835
Stddev	.0018062	.0008111	.000920	.003039	.001156	.0046346	.0016641
%RSD	298.1909	37.99807	1129.651	395.3603	56.56153	73.09061	64.41410
#1	-.000887	.0030178	.000904	.002712	-.000944	.0018130	.0026889
#2	.000091	.0014233	-.000230	-.002897	-.003249	.0110754	.0008691
#3	.002613	.0019623	-.000918	-.002121	-.001939	.0061344	.0041924

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000519	.0000598	.0052558	.0000422	.0001985	-.000551	.0093875
Stddev	.0000375	.0000342	.0108384	.0001855	.0000984	.000155	.0086431
%RSD	72.23724	57.21978	206.2186	439.7321	49.56803	28.22471	92.07063
#1	.0000641	.0000923	.0021221	-.000159	.0001712	-.000730	.0103122
#2	.0000098	.0000241	.0173157	.000078	.0001167	-.000473	.0175311
#3	.0000818	.0000628	-.003671	.000207	.0003077	-.000449	.0003192

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009824	.0166121	-.000184	.0001090	-.129142	.0009039	-.000282
Stddev	.0007899	.0076034	.000163	.0006330	.004611	.0041430	.000201
%RSD	80.40513	45.76993	88.53406	581.0159	3.570847	458.3305	71.43517
#1	.0010757	.0137473	-.000362	.0007711	-.128891	.0036677	-.000512
#2	.0001500	.0252318	-.000042	-.000490	-.133874	.0029038	-.000190
#3	.0017216	.0108574	-.000149	.000046	-.124661	-.003860	-.000142

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.241795	-.005439	.0002251	-.000312	.0003877	.0021280	.0004771
Stddev	.022661	.000318	.0000777	.000490	.0015423	.0055186	.0005741
%RSD	9.371813	5.844606	34.49710	157.3795	397.7835	259.3323	120.3462
#1	-.263950	-.005161	.0002928	-.000203	.0021585	.0060626	.0000569
#2	-.218661	-.005786	.0002421	-.000847	-.000662	-.004180	.0002430
#3	-.242773	-.005371	.0001403	.000115	-.000333	.004502	.0011313

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB01 Acquired: 10/1/2025 13:14:26 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0024649	-.003165	.0000881
Stddev	.0017047	.001024	.0000462
%RSD	69.15788	32.36661	52.44409
#1	.0033543	-.002450	.0001247
#2	.0035409	-.002705	.0000362
#3	.0004995	-.004338	.0001035

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6731.656	97690.40	7741.851	5196.729	8343.757
Stddev	8.242	411.27	30.162	10.240	5.650
%RSD	.1224344	.4209893	.3896032	.1970386	.0677133
#1	6728.766	97755.38	7771.914	5191.889	8341.589
#2	6725.249	98065.31	7742.050	5208.491	8339.511
#3	6740.954	97250.51	7711.590	5189.807	8350.169

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: LR-1 Acquired: 10/1/2025 13:18:45 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.002203**	**.0095786**	**.0198136**	**-.020313**	**.0185556**	**.2766841**	**.0164896**
Stddev	.000817	.0008309	.0029545	.005098	.0033817	.0038475	.0010804
%RSD	37.08661	8.674177	14.91134	25.09770	18.22451	1.390583	6.552264
#1	-.003064	.0105192	.0182434	-.018563	.0195330	.2728906	.0163116
#2	-.001440	.0089447	.0232216	-.026056	.0147929	.2805835	.0176480
#3	-.002103	.0092720	.0179758	-.016320	.0213409	.2765781	.0155093

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009015**	**.0006514**	**2456.477**	**.0338770**	**.0071699**	**.0069976**	**.6358563**
Stddev	.0000580	.0000501	30.525	.0002180	.0004164	.0002772	.0144833
%RSD	6.438553	7.690062	1.242618	.6433500	5.807172	3.962037	2.277770
#1	.0009635	.0006974	2471.913	.0337577	.0075789	.0068297	.6483497
#2	.0008484	.0005980	2421.318	.0341285	.0067465	.0073176	.6199814
#3	.0008927	.0006589	2476.201	.0337447	.0071844	.0068455	.6392379

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0273110**	**2256.207**	**.0273765**	**-.002078**	**2488.620**	**.0154701**	**.0722224**
Stddev	.0001722	5.556	.0003469	.001012	18.647	.0009412	.0008071
%RSD	.6305519	.2462403	1.266951	48.68243	.7493081	6.084199	1.117562
#1	.0273219	2258.394	.0274839	-.002234	2496.107	.0143839	.0730560
#2	.0271335	2249.891	.0276570	-.000998	2467.393	.0160438	.0721667
#3	.0274775	2260.336	.0269887	-.003004	2502.360	.0159827	.0714446

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.671044**	**.0018758**	**.0067769**	**-.023635**	**-.111462**	**-.013597**	**.0165585**
Stddev	.742610	.0011293	.0003636	.001359	.001350	.021881	.0007196
%RSD	11.13184	60.20128	5.365527	5.750456	1.211361	160.9238	4.345593
#1	5.888621	.0015241	.0063892	-.025136	-.112603	-.037178	.0163442
#2	6.758393	.0009643	.0071103	-.023284	-.109971	.006052	.0159705
#3	7.366116	.0031391	.0068311	-.022486	-.111810	-.009666	.0173609

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: LR-1 Acquired: 10/1/2025 13:18:45 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.2400129	-.348477	.0618659
Stddev	.0022304	.008305	.0003486
%RSD	.9292897	2.383319	.5635537
#1	.2402025	-.355751	.0622685
#2	.2421424	-.339428	.0616649
#3	.2376937	-.350253	.0616643

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4519.266	67155.06	7014.806	3461.334	4762.278
Stddev	22.278	362.38	72.990	26.482	18.916
%RSD	.4929605	.5396197	1.040517	.7650883	.3972047
#1	4494.442	66987.81	7044.275	3446.468	4741.423
#2	4537.522	67570.86	7068.454	3491.910	4778.328
#3	4525.833	66906.51	6931.688	3445.625	4767.083

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: LR-2 Acquired: 10/1/2025 13:23:10 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0960614	-.158369	.0881003	.0200471	-.151890	1823.606	.0214766
Stddev	.0047823	.013337	.0033842	.0112815	.002173	15.818	.0022148
%RSD	4.978335	8.421529	3.841257	56.27468	1.430357	.8674187	10.31261
#1	.1012699	-.147126	.0845188	.0330699	-.154332	1812.919	.0237789
#2	.0950456	-.154876	.0912446	.0138128	-.150171	1841.778	.0212898
#3	.0918686	-.173105	.0885375	.0132587	-.151168	1816.122	.0193611

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0437768	-.024852	10.62051	-.252375	.0401251	.2024102	2616.022
Stddev	.0005660	.002176	.22722	.002046	.0000791	.0152499	22.257
%RSD	1.292832	8.755327	2.139485	.8107112	.1971603	7.534143	.8507837
#1	.0438963	-.024655	10.39840	-.251014	.0400344	.2137079	2602.880
#2	.0442734	-.027120	10.61062	-.254728	.0401608	.1850639	2641.719
#3	.0431606	-.022781	10.85252	-.251383	.0401800	.2084588	2603.466

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.205762	1.962474	.0480062	^ *****	40.51056	.0504704	.0395973
Stddev	.001578	.022966	.0007200	-----	.33734	.0034006	.0021150
%RSD	.7667636	1.170276	1.499756	-----	.8327151	6.737765	5.341368
#1	-.207481	1.937226	.0481010	^ -----	40.72828	.0466731	.0405396
#2	-.205425	1.982123	.0472435	^ -----	40.12197	.0532347	.0371748
#3	-.204380	1.968073	.0486740	^ -----	40.68141	.0515034	.0410773

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1823.658	^ *****	-.014628	.0017291	.0046341	.4841808	.0812128
Stddev	17.449	-----	.000827	.0014984	.0002826	.0124822	.0020722
%RSD	.9568009	-----	5.651116	86.66042	6.098761	2.578009	2.551636
#1	1829.088	^ -----	-.014711	.0024522	.0049601	.4985234	.0789638
#2	1837.747	^ -----	-.015411	.0000062	.0044581	.4757752	.0816295
#3	1804.140	^ -----	-.013764	.0027288	.0044841	.4782439	.0830450

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: LR-2 Acquired: 10/1/2025 13:23:10 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.474396	.2717593	-2.50785
Stddev	.010422	.0005683	.02135
%RSD	2.196933	.2091200	.8512920
#1	-.462406	.2721721	-2.49517
#2	-.481288	.2719946	-2.53250
#3	-.479494	.2711111	-2.49587

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5656.348	77306.89	7474.386	4289.503	6048.115
Stddev	9.607	93.91	69.249	7.748	12.547
%RSD	.1698488	.1214759	.9264841	.1806252	.2074502
#1	5647.801	77312.21	7517.772	4286.481	6034.440
#2	5666.746	77398.03	7394.524	4298.307	6059.097
#3	5654.496	77210.44	7510.862	4283.722	6050.808

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: LR-3 Acquired: 10/1/2025 13:27:37 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0945678	.0265475	210.9141	.0056365	.1926998	.0558703	.0003331
Stddev	.0010098	.0064415	1.4606	.0027989	.0031266	.0064975	.0015815
%RSD	1.067773	24.26427	.6924997	49.65704	1.622537	11.62960	474.7452
#1	.0952392	.0337764	209.7220	.0078003	.1946289	.0594007	-.001481
#2	.0950576	.0214163	210.4770	.0024756	.1890924	.0598383	.001419
#3	.0934065	.0244497	212.5434	.0066337	.1943781	.0483719	.001062

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005721	-.001475	.2007777	24.02300	.0072930	47.66458	.0986225
Stddev	.000045	.000054	.0094201	.03643	.0002523	.04486	.0123982
%RSD	.7867836	3.638580	4.691800	.1516435	3.460094	.0941056	12.57135
#1	-.005763	-.001537	.2049502	24.06272	.0071060	47.68357	.1042590
#2	-.005674	-.001442	.2073910	24.01514	.0075800	47.61335	.1072011
#3	-.005726	-.001447	.1899920	23.99115	.0071930	47.69682	.0844074

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	54.65674	-.201884	23.94320	.0035338	.7148007	-.040714	29.84673
Stddev	.80287	.013606	.02490	.0006286	.0206426	.004883	.22595
%RSD	1.468924	6.739470	.1040149	17.78845	2.887882	11.99406	.7570507
#1	53.73126	-.198927	23.94117	.0041233	.7342052	-.035655	29.96939
#2	55.16655	-.216726	23.91937	.0028723	.7170867	-.045400	29.58597
#3	55.07240	-.190000	23.96905	.0036057	.6931103	-.041088	29.98482

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.659659	-.007721	-.015300	-.015790	-.045866	-.117029	.1596438
Stddev	.162820	.000274	.000052	.000608	.000381	.006016	.0015633
%RSD	9.810466	3.544095	.3404350	3.850032	.8316784	5.140825	.9792196
#1	1.824792	-.007477	-.015259	-.015904	-.045454	-.113609	.1582070
#2	1.654929	-.007669	-.015359	-.016333	-.046206	-.113502	.1613085
#3	1.499255	-.008017	-.015284	-.015133	-.045938	-.123976	.1594159

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: LR-3 Acquired: 10/1/2025 13:27:37 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.1004273	.0056048	.0005707
Stddev	.0039209	.0036500	.0001686
%RSD	3.904218	65.12346	29.53291
#1	.1049531	.0025957	.0007160
#2	.0982712	.0096650	.0003859
#3	.0980576	.0045535	.0006102

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6308.704	96000.57	7808.847	5015.510	7991.687
Stddev	20.639	253.79	52.541	30.117	30.629
%RSD	.3271556	.2643614	.6728437	.6004757	.3832649
#1	6332.110	95710.93	7868.415	4982.384	8026.867
#2	6293.117	96184.01	7769.095	5022.907	7970.941
#3	6300.885	96106.75	7789.032	5041.240	7977.253

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3233-01DLX5 Acquired: 10/1/2025 13:32:29 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.2139358	-.115685	7.598806	-.035604	-.064040	46.71284
Stddev	.0025689	.000938	.009563	.004752	.002737	.17894
%RSD	1.200795	.8109483	.1258519	13.34743	4.273338	.3830655
#1	.2127716	-.116765	7.607454	-.034939	-.063300	46.90305
#2	.2121551	-.115222	7.600430	-.031219	-.061749	46.68764
#3	.2168807	-.115069	7.588535	-.040653	-.067070	46.54784

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7844125	.0233849	.0218762	618.7724	2.692570	.5081917
Stddev	.0021417	.0002078	.0010941	9.0212	.005532	.0003077
%RSD	.2730307	.8887930	5.001478	1.457912	.2054410	.0605565
#1	.7847597	.0233608	.0231174	619.1472	2.698566	.5084661
#2	.7821185	.0236038	.0210516	627.6003	2.691478	.5078590
#3	.7863594	.0231902	.0214595	609.5697	2.687666	.5082502

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.344176	1348.676	10.62020	25.47665	1.906612	^ *****
Stddev	.016465	12.265	.01198	.03010	.000739	-----
%RSD	.4923396	.9094472	.1127922	.1181344	.0387789	-----
#1	3.361797	1335.260	10.62685	25.47940	1.907125	^ -----
#2	3.329184	1359.316	10.60637	25.50529	1.906948	^ -----
#3	3.341546	1351.452	10.62737	25.44528	1.905765	^ -----

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.58703	.2836782	27.23255	20.98722	^ *****	.1096262
Stddev	.05272	.0014191	.23503	.11903	-----	.0005936
%RSD	.3613929	.5002500	.8630653	.5671716	-----	.5414457
#1	14.55855	.2851104	27.47787	20.85680	^ -----	.1103098
#2	14.64786	.2822726	27.21043	21.01486	^ -----	.1092411
#3	14.55468	.2836516	27.00936	21.09001	^ -----	.1093278

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3233-01DLX5 Acquired: 10/1/2025 13:32:29 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.2317081**	**2.491918**	**1.895423**	**6.241288**	F **37.04095**	**.0973120**
Stddev	.0018452	.001211	.019288	.063264	.42463	.0024399
%RSD	.7963553	.0486138	1.017611	1.013642	1.146384	2.507298
#1	.2321937	2.491266	1.873359	6.286215	37.28523	.0964586
#2	.2332619	2.491172	1.903824	6.268709	37.28700	.0954135
#3	.2296686	2.493316	1.909086	6.168939	36.55063	.1000640

Elem	Sr4077
Units	ppm
Avg	**2.806454**
Stddev	.076251
%RSD	2.716983
#1	2.858035
#2	2.718867
#3	2.842460

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6015.245**	**88808.86**	**7933.734**	**4582.848**	**6888.291**
Stddev	10.004	306.70	21.515	14.810	7.830
%RSD	.1663185	.3453460	.2711865	.3231698	.1136660
#1	6021.380	88759.79	7913.584	4566.167	6897.313
#2	6020.654	88529.66	7931.223	4587.927	6883.276
#3	6003.700	89137.13	7956.394	4594.451	6884.283

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169866BL Acquired: 10/1/2025 13:37:11 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.000606	-.001311	.0025445	.0001391	.0011378	-.000905
Stddev	.001640	.002056	.0007723	.0011789	.0004778	.002500
%RSD	270.6233	156.8068	30.35293	847.7112	41.99456	276.2322
#1	.001013	.000775	.0032862	.0014954	.0016347	.001208
#2	-.002266	-.001373	.0026024	-.000440	.0006816	-.003666
#3	-.000565	-.003337	.0017448	-.000639	.0010972	-.000258

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030060	-.000055	.0000185	.0065881	.0005064	-.000037
Stddev	.0004957	.000059	.0000190	.0165327	.0002149	.000145
%RSD	16.49091	107.0947	102.5550	250.9478	42.44048	391.6668
#1	.0035641	-.000047	-.000003	.0239224	.0003907	-.000166
#2	.0028370	-.000000	.000030	.0048471	.0003742	-.000064
#3	.0026169	-.000117	.000029	-.009005	.0007544	.000120

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000328	.0197536	.0011555	.0382486	-.000036	-.000077
Stddev	.000286	.0033099	.0002678	.0114199	.000164	.000567
%RSD	87.28221	16.75599	23.17866	29.85709	451.3943	734.0060
#1	-.000510	.0233595	.0009915	.0268915	-.000221	.000308
#2	.000002	.0190478	.0010105	.0497302	.000018	.000188
#3	-.000475	.0168535	.0014646	.0381240	.000094	-.000728

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.221632	-.000670	.0002214	-.210716	-.011441	.0002783
Stddev	.013802	.003073	.0001657	.015432	.000413	.0001815
%RSD	6.227311	458.6299	74.86257	7.323394	3.611173	65.21434
#1	-.222386	-.003201	.0003902	-.192966	-.011918	.0004868
#2	-.235042	-.001559	.0000590	-.220947	-.011202	.0001559
#3	-.207469	.002750	.0002149	-.218235	-.011204	.0001922

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169866BL Acquired: 10/1/2025 13:37:11 Type: Unk
Method: 6010-200.7 NEW(v240) 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	F -.028749	.0008854	-.005815	.0008060	-.000996	F -.010073
Stddev	.000325	.0013613	.005255	.0013356	.001611	.001257
%RSD	1.129935	153.7460	90.37885	165.7166	161.7462	12.48326
#1	-.028849	.0021871	-.010871	.0008060	-.001943	-.010089
#2	-.028386	.0009977	-.006192	.0021415	-.001909	-.008807
#3	-.029012	-.000529	-.000381	-.000530	.000864	-.011321

Elem	Sr4077
Units	ppm
Avg	.0001058
Stddev	.0000232
%RSD	21.89129
#1	.0000794
#2	.0001149
#3	.0001229

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6965.861	101581.8	7901.919	5328.678	8739.205
Stddev	18.150	556.6	28.200	33.254	9.918
%RSD	.2605586	.5479298	.3568717	.6240574	.1134941
#1	6972.742	101311.5	7870.092	5322.478	8743.015
#2	6979.565	101212.0	7911.877	5298.961	8746.653
#3	6945.277	102221.9	7923.790	5364.596	8727.947

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169866BS Acquired: 10/1/2025 13:41:30 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7462557	1.900113	.8961623	1.867759	.7520195	1.913569
Stddev	.0004090	.019185	.0024454	.006913	.0008498	.013108
%RSD	.0548086	1.009689	.2728690	.3700986	.1130056	.6850135
#1	.7459478	1.879955	.8988895	1.870015	.7528311	1.923088
#2	.7467198	1.902235	.8941649	1.873261	.7520913	1.919001
#3	.7460995	1.918150	.8954325	1.860000	.7511360	1.898618

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1856383	.1884475	.1781681	.9690657	.3821053	.1818724
Stddev	.0012012	.0000569	.0002530	.0123440	.0018458	.0002861
%RSD	.6470462	.0302134	.1419885	1.273808	.4830490	.1572912
#1	.1854023	.1883996	.1784581	.9548121	.3800376	.1820628
#2	.1869399	.1885104	.1780538	.9762262	.3826916	.1820109
#3	.1845726	.1884323	.1779924	.9761589	.3835866	.1815434

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2870302	2.742603	.1926665	1.935541	.4548999	.0684506
Stddev	.0004426	.026068	.0006609	.023245	.0002337	.0002609
%RSD	.1542125	.9505004	.3430087	1.200941	.0513851	.3811545
#1	.2870079	2.715460	.1919142	1.918200	.4551068	.0682878
#2	.2874835	2.744904	.1929315	1.926468	.4549466	.0687515
#3	.2865991	2.767444	.1931537	1.961953	.4546463	.0683124

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.463669	.2829771	.1910024	8.710571	.2565170	.3981351
Stddev	.017564	.0009426	.0010366	.071525	.0005338	.0009880
%RSD	.7129118	.3331071	.5427049	.8211253	.2081037	.2481523
#1	2.445526	.2819101	.1898106	8.629704	.2571168	.3991977
#2	2.480589	.2833244	.1916942	8.765537	.2560943	.3979635
#3	2.464894	.2836968	.1915025	8.736473	.2563397	.3972442

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169866BS Acquired: 10/1/2025 13:41:30 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.6267170**	**.1850107**	**.7842663**	**5.079120**	F **-.008241**	**.1798293**
Stddev	.0020182	.0008898	.0078435	.021364	.000169	.0023883
%RSD	.3220212	.4809367	1.000111	.4206300	2.054961	1.328111
#1	.6274223	.1854945	.7777299	5.070489	-.008064	.1770877
#2	.6282879	.1855538	.7821052	5.103450	-.008256	.1809415
#3	.6244408	.1839839	.7929638	5.063423	-.008402	.1814587

Elem	Sr4077
Units	ppm
Avg	**.1848893**
Stddev	.0005458
%RSD	.2952011
#1	.1842676
#2	.1852898
#3	.1851105

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6859.728**	**98494.16**	**7860.640**	**5307.640**	**8410.814**
Stddev	11.851	316.84	15.828	38.032	13.156
%RSD	.1727576	.3216884	.2013593	.7165605	.1564149
#1	6846.056	98857.36	7845.236	5350.518	8397.024
#2	6867.062	98274.40	7876.861	5277.980	8412.190
#3	6866.067	98350.72	7859.822	5294.422	8423.227

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169870TB Acquired: 10/1/2025 13:45:31 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.003900**	**-.002985**	**.0006220**	**.0038330**	**.0022033**	**.0113510**	**-.000084**
Stddev	.001012	.001533	.0003456	.0010351	.0012574	.0045584	.002191
%RSD	25.94679	51.35179	55.55370	27.00420	57.06979	40.15839	2622.347
#1	-.003216	-.004514	.0006576	.0038520	.0024189	.0097037	-.000962
#2	-.005063	-.002992	.0002601	.0027885	.0033390	.0078452	.002410
#3	-.003423	-.001448	.0009485	.0048584	.0008520	.0165040	-.001699

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000127**	**-.000031**	**.0731903**	**.0017444**	**-.000142**	**-.000158**	**.0145678**
Stddev	.000058	.000040	.0171639	.0001889	.000120	.000159	.0117874
%RSD	46.14693	129.0649	23.45102	10.82649	84.71921	100.7491	80.91360
#1	-.000098	.000010	.0751789	.0018399	-.000007	-.000150	.0057814
#2	-.000088	-.000034	.0892732	.0015268	-.000181	-.000003	.0099587
#3	-.000194	-.000070	.0551187	.0018663	-.000238	-.000320	.0279633

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0095591**	**.0128300**	**.0010591**	**-.000937**	**339.3154**	**.0001215**	**.0021567**
Stddev	.0006397	.0336883	.0000599	.000369	1.4374	.0035739	.0001904
%RSD	6.691824	262.5754	5.651429	39.40741	.4236251	2941.115	8.828529
#1	.0102617	.0394656	.0009929	-.001353	340.4487	.0028916	.0019368
#2	.0090104	.0240642	.0011093	-.000648	339.7990	-.003913	.0022674
#3	.0094052	-.025040	.0010752	-.000809	337.6986	.001386	.0022658

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.090086**	**-.011728**	**.0008131**	**-.025947**	**.0028653**	**.0060951**	**.0096614**
Stddev	.024341	.001177	.0001178	.000206	.0009325	.0163745	.0006930
%RSD	27.02018	10.03444	14.48168	.7931223	32.54351	268.6489	7.172381
#1	-.084413	-.012776	.0008085	-.025864	.0031612	-.012812	.0096495
#2	-.069082	-.010455	.0009331	-.025795	.0018208	.015434	.0089744
#3	-.116763	-.011954	.0006977	-.026181	.0036139	.015663	.0103602

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169870TB Acquired: 10/1/2025 13:45:31 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.1362783	-.010678	.0003714
Stddev	.0007976	.002804	.0000836
%RSD	.5852977	26.26384	22.50404
#1	.1359288	-.013101	.0004228
#2	.1371911	-.007606	.0002750
#3	.1357151	-.011327	.0004164

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6502.027	89920.79	7482.963	4872.987	7588.565
Stddev	41.152	71.65	19.937	9.289	45.709
%RSD	.6329180	.0796798	.2664268	.1906219	.6023395
#1	6455.681	89941.03	7495.757	4872.630	7537.697
#2	6516.111	89841.19	7459.992	4863.882	7601.806
#3	6534.288	89980.14	7493.141	4882.449	7626.191

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3253-01 Acquired: 10/1/2025 13:49:59 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.5461633**	**-.006772**	**.3429870**	**.0073562**	**-.011317**	**422.9260**
Stddev	.0033251	.003859	.0011938	.0023811	.002289	7.4326
%RSD	.6088191	56.98231	.3480637	32.36912	20.22461	1.757427
#1	.5430865	-.010447	.3419985	.0084805	-.010022	426.5654
#2	.5496908	-.007114	.3443133	.0046211	-.009969	427.8376
#3	.5457127	-.002753	.3426490	.0089670	-.013960	414.3750

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.021411**	**.0257393**	**.0067534**	**113.3963**	**.6311923**	**.2587968**
Stddev	.007075	.0003268	.0006371	.2774	.0024700	.0007143
%RSD	.3499811	1.269760	9.433505	.2446296	.3913248	.2760025
#1	2.013252	.0259392	.0073812	113.4793	.6336934	.2594701
#2	2.025141	.0259166	.0067716	113.6226	.6287545	.2580476
#3	2.025841	.0253622	.0061074	113.0868	.6311292	.2588725

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6298543**	**468.4701**	**7.164945**	**206.5014**	**.5126646**	**.0081996**
Stddev	.0025081	4.8848	.015024	.7917	.0005002	.0017570
%RSD	.3982094	1.042705	.2096932	.3833934	.0975659	21.42825
#1	.6326853	464.0099	7.154605	207.3529	.5128898	.0065149
#2	.6279097	467.7100	7.182179	206.3637	.5120914	.0080629
#3	.6289678	473.6903	7.158052	205.7876	.5130127	.0100210

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**148.2399**	**.9060308**	**1.483825**	**216.9656**	**.3386802**	**.0075814**
Stddev	1.9596	.0047660	.005547	2.7318	.0208035	.0006300
%RSD	1.321891	.5260303	.3738412	1.259093	6.142504	8.309449
#1	146.2788	.9027733	1.488184	214.1223	.3195529	.0082827
#2	148.2430	.9038182	1.477581	217.2042	.3356585	.0073981
#3	150.1979	.9115010	1.485709	219.5702	.3608293	.0070635

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3253-01 Acquired: 10/1/2025 13:49:59 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0195074	F 19.34484	F 10.38957	7.749614	F 21.87324	.8729031
Stddev	.0002738	.03963	.14324	.011609	.07035	.0038412
%RSD	1.403661	.2048753	1.378721	.1498052	.3216430	.4400488
#1	.0192796	19.30945	10.32804	7.749346	21.83325	.8688342
#2	.0194315	19.38766	10.28737	7.761355	21.95447	.8764665
#3	.0198112	19.33740	10.55330	7.738141	21.83199	.8734086

Elem	Sr4077
Units	ppm
Avg	.3928957
Stddev	.0042335
%RSD	1.077508
#1	.3937401
#2	.3966433
#3	.3883037

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7227.607	104316.3	9364.385	5598.789	6650.724
Stddev	12.801	388.2	69.751	21.258	10.234
%RSD	.1771061	.3721755	.7448588	.3796910	.1538735
#1	7227.906	104706.3	9315.009	5575.978	6647.466
#2	7240.255	104312.6	9333.967	5618.047	6662.190
#3	7214.660	103929.8	9444.180	5602.342	6642.516

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3253-10 Acquired: 10/1/2025 13:54:07 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0006772	-.003023	.0035713	.0018892	-.001324	.5049676	.4050781
Stddev	.0001787	.000923	.0012827	.0024797	.001465	.0090286	.0017232
%RSD	26.39161	30.52235	35.91691	131.2587	110.6773	1.787963	.4254106
#1	.0005874	-.002558	.0044777	.0006868	-.000674	.5153714	.4065357
#2	.0005611	-.004085	.0021036	.0002399	-.000296	.5003457	.4055222
#3	.0008830	-.002425	.0041326	.0047408	-.003001	.4991856	.4031762

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002529	.0005826	70.31034	.0025082	.0095378	.0065583	.3823073
Stddev	.0000360	.0000410	.13720	.0001924	.0003149	.0000613	.0028928
%RSD	14.21536	7.043215	.1951352	7.670785	3.301610	.9349386	.7566636
#1	.0002281	.0005353	70.31054	.0022869	.0093172	.0064881	.3853493
#2	.0002365	.0006037	70.44744	.0026018	.0093977	.0066013	.3795915
#3	.0002941	.0006088	70.17304	.0026359	.0098984	.0065855	.3819811

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7351910	2.857682	.0044452	-.000222	462.5820	.0016088	.1573306
Stddev	.0036301	.025127	.0001833	.000822	9.0407	.0009832	.0008839
%RSD	.4937562	.8792940	4.124388	370.1124	1.954408	61.11179	.5617827
#1	.7375554	2.853607	.0045208	-.001112	472.8941	.0024007	.1581125
#2	.7370062	2.834842	.0042362	-.000063	458.8332	.0005084	.1575076
#3	.7310114	2.884598	.0045787	.000509	456.0187	.0019173	.1563716

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.651954	.0256705	.0005999	-.028112	-.001419	2.604854	.0280313
Stddev	.074684	.0007040	.0001370	.000357	.002065	.031877	.0014917
%RSD	.7737681	2.742393	22.83315	1.271615	145.4799	1.223751	5.321519
#1	9.732311	.0253680	.0007009	-.028310	-.003324	2.641661	.0285481
#2	9.584670	.0251684	.0004440	-.028326	-.001710	2.586766	.0263500
#3	9.638882	.0264752	.0006547	-.027699	.000775	2.586136	.0291959

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3253-10 Acquired: 10/1/2025 13:54:07 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.6452984	-.018793	.2831039
Stddev	.0054899	.001649	.0012225
%RSD	.8507553	8.776219	.4318298
#1	.6495002	-.020399	.2839479
#2	.6390869	-.018875	.2836620
#3	.6473083	-.017104	.2817020

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6453.615	90663.12	7781.264	4908.162	7253.687
Stddev	13.125	471.40	22.422	24.337	22.382
%RSD	.2033745	.5199423	.2881546	.4958526	.3085644
#1	6443.876	90188.41	7807.104	4889.002	7236.366
#2	6468.541	91131.13	7766.949	4935.546	7278.959
#3	6448.428	90669.82	7769.737	4899.938	7245.737

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3233-01DL2X25 Acquired: 10/1/2025 13:58:29 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.0405080**	**-.023290**	**1.614463**	**-.001034**	**-.016676**	**9.466500**	**.1565899**
Stddev	.0026548	.001774	.005962	.001456	.002419	.018060	.0025708
%RSD	6.553681	7.617436	.3693062	140.7757	14.50534	.1907786	1.641738
#1	.0434957	-.022303	1.617979	-.002036	-.017511	9.446161	.1593473
#2	.0384202	-.022229	1.617832	.000636	-.013950	9.480659	.1542591
#3	.0396080	-.025339	1.607579	-.001702	-.018566	9.472681	.1561634

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0050335**	**.0032729**	**129.0267**	**.5678389**	**.1052620**	**.7191566**	**284.0495**
Stddev	.0001427	.0002907	.1337	.0015163	.0003398	.0025011	1.9990
%RSD	2.835449	8.882683	.1036480	.2670301	.3227838	.3477876	.7037605
#1	.0051070	.0035828	129.0408	.5690217	.1050919	.7218801	282.4130
#2	.0051245	.0030062	128.8865	.5683654	.1056532	.7186271	286.2775
#3	.0048690	.0032296	129.1529	.5661295	.1050408	.7169626	283.4580

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.227183**	**5.434831**	**.4049834**	**.0049347**	**3.631583**	**.0586346**	**7.635563**
Stddev	.009033	.027728	.0015501	.0015644	.054265	.0003804	.019251
%RSD	.4055640	.5101818	.3827627	31.70126	1.494262	.6487557	.2521280
#1	2.226608	5.429762	.4058562	.0037996	3.665857	.0583198	7.651574
#2	2.218451	5.409987	.4059004	.0067192	3.659873	.0590573	7.640911
#3	2.236489	5.464743	.4031937	.0042854	3.569018	.0585266	7.614202

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.818350**	**.0715543**	**.0214960**	**.0470893**	**.5068381**	**.3680773**	**1.246489**
Stddev	.050606	.0156206	.0001729	.0006213	.0027785	.0034927	.006932
%RSD	1.050278	21.83044	.8041443	1.319410	.5482109	.9488920	.5561020
#1	4.837438	.0574222	.0215245	.0468228	.5098813	.3720853	1.253883
#2	4.856636	.0883269	.0213106	.0477994	.5044365	.3656851	1.245447
#3	4.760976	.0689138	.0216528	.0466458	.5061964	.3664615	1.240138

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3233-01DL2X25 Acquired: 10/1/2025 13:58:29 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**7.340943**	**.0337877**	**.5578647**
Stddev	.031583	.0025690	.0044716
%RSD	.4302294	7.603417	.8015521
#1	7.377051	.0308854	.5600375
#2	7.318457	.0357702	.5527219
#3	7.327321	.0347076	.5608347

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6518.161**	**95087.81**	**8142.478**	**5036.890**	**7635.517**
Stddev	3.119	536.56	22.758	19.957	10.853
%RSD	.0478523	.5642733	.2795003	.3962193	.1421340
#1	6515.441	95466.40	8140.414	5053.982	7643.059
#2	6517.475	94473.79	8166.198	5014.958	7623.079
#3	6521.565	95323.24	8120.822	5041.730	7640.413

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV02 Acquired: 10/1/2025 14:02:32 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**5.032790**	**5.109367**	**4.959211**	**5.066474**	**4.998699**	**9.993575**	**9.939765**
Stddev	.011358	.177662	.006094	.020758	.005657	.043919	.056184
%RSD	.2256824	3.477190	.1228891	.4097151	.1131667	.4394695	.5652451
#1	5.043637	5.303428	4.957927	5.089326	5.003500	10.01140	9.981124
#2	5.033750	5.069950	4.953862	5.061312	4.992463	10.02578	9.875799
#3	5.020982	4.954724	4.965845	5.048784	5.000133	9.94355	9.962373

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2504580**	**2.498736**	**25.01840**	**.9959047**	**2.481184**	**1.256127**	**4.909123**
Stddev	.0011952	.002098	.03471	.0009596	.001840	.001348	.005819
%RSD	.4771996	.0839518	.1387209	.0963502	.0741628	.1072881	.1185373
#1	.2494437	2.501053	25.02475	.9965002	2.482030	1.256995	4.915779
#2	.2517756	2.496967	25.04949	.9947977	2.479073	1.254574	4.906587
#3	.2501546	2.498186	24.98096	.9964161	2.482448	1.256811	4.905001

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.487144**	**24.79650**	**2.487266**	**1.236763**	**24.43765**	**2.490660**	**2.467837**
Stddev	.005212	.10233	.002076	.000932	.09571	.014870	.004905
%RSD	.2095472	.4126686	.0834745	.0753411	.3916446	.5970328	.1987578
#1	2.489885	24.77983	2.486665	1.235780	24.45798	2.488906	2.472083
#2	2.490413	24.90614	2.485556	1.237633	24.33341	2.506329	2.462467
#3	2.481134	24.70353	2.489576	1.236877	24.52155	2.476744	2.468959

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.10540**	**5.017057**	**4.999127**	**4.990393**	**4.969379**	**4.828888**	**4.971674**
Stddev	.11736	.023407	.007715	.009686	.009456	.030264	.028379
%RSD	.4674496	.4665397	.1543313	.1940951	.1902920	.6267365	.5708238
#1	25.16511	4.999734	5.007721	5.001304	4.977961	4.863655	5.004312
#2	24.97020	5.043685	4.996862	4.987066	4.970934	4.814572	4.957894
#3	25.18089	5.007752	4.992797	4.982809	4.959242	4.808438	4.952815

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV02 Acquired: 10/1/2025 14:02:32 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**4.996121**	**4.967282**	**4.942508**
Stddev	.050636	.004856	.057891
%RSD	1.013511	.0977525	1.171287
#1	5.048191	4.971093	4.891479
#2	4.993119	4.961815	5.005418
#3	4.947052	4.968939	4.930629

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6580.758**	**95126.64**	**7816.398**	**5079.889**	**7613.474**
Stddev	7.857	223.38	47.863	18.076	6.805
%RSD	.1193906	.2348256	.6123363	.3558276	.0893764
#1	6589.442	95384.58	7866.578	5098.722	7620.378
#2	6578.691	94995.99	7771.251	5078.265	7613.271
#3	6574.141	94999.37	7811.364	5062.680	7606.774

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB02 Acquired: 10/1/2025 14:06:47 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.0004124**	**-.000944**	**.0010158**	**.0050377**	**.0003676**	**.0118964**
Stddev	.0002600	.002054	.0007882	.0027322	.0008645	.0137473
%RSD	63.05005	217.5723	77.59775	54.23370	235.1928	115.5582
#1	.0004056	-.003082	.0012000	.0078692	.0010568	.0128977
#2	.0006758	.001015	.0001518	.0024171	-.000602	.0251157
#3	.0001559	-.000765	.0016955	.0048269	.000648	-.002324

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0027997**	**-.000091**	**.0000377**	**.0044965**	**.0001982**	**.0000989**
Stddev	.0005905	.000061	.0000508	.0106639	.0000938	.0002553
%RSD	21.09231	66.87120	134.8585	237.1592	47.35190	258.2614
#1	.0028271	-.000119	.0000058	.0016052	.0003060	.0003444
#2	.0021959	-.000021	.0000962	-.004424	.0001351	-.000165
#3	.0033760	-.000134	.0000110	.016308	.0001534	.000117

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000213**	**.0108081**	**.0009204**	**.0089769**	**.0001464**	**-.000528**
Stddev	.000399	.0045690	.0005698	.0380231	.0000844	.000227
%RSD	187.3907	42.27393	61.90700	423.5637	57.67537	43.07670
#1	-.000579	.0153780	.0009286	.0053917	.0001712	-.000324
#2	-.000273	.0062400	.0003466	.0486657	.0000523	-.000773
#3	.000213	.0108062	.0014861	-.027127	.0002157	-.000486

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.213186**	**.0008232**	**-.000203**	**-.298292**	**-.008818**	**.0005526**
Stddev	.020752	.0024511	.000178	.021971	.000463	.0001577
%RSD	9.734040	297.7502	87.87769	7.365654	5.248758	28.53150
#1	-.190607	-.001923	-.000067	-.323610	-.008942	.0007080
#2	-.217527	.001605	-.000137	-.287032	-.008306	.0003928
#3	-.231423	.002788	-.000405	-.284233	-.009207	.0005569

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB02 Acquired: 10/1/2025 14:06:47 Type: Unk
Method: 6010-200.7 NEW(v240) 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	F -.028626	.0000260	.0035755	.0015675	-.000698	-.009486
Stddev	.000322	.0020726	.0121624	.0004163	.000982	.001234
%RSD	1.124221	7980.994	340.1600	26.55683	140.7077	13.00727
#1	-.028543	.0012300	.0030925	.0011324	.000242	-.010355
#2	-.028981	-.002367	-.008338	.0016080	-.001717	-.008074
#3	-.028353	.001215	.015972	.0019620	-.000618	-.010030

Elem	Sr4077
Units	ppm
Avg	-.000092
Stddev	.000037
%RSD	40.55506
#1	-.000089
#2	-.000130
#3	-.000056

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6992.826	98136.03	7845.276	5289.046	8844.162
Stddev	19.228	327.31	38.824	5.991	24.044
%RSD	.2749680	.3335236	.4948712	.1132753	.2718600
#1	7014.182	98509.57	7806.178	5282.515	8871.723
#2	6987.409	97999.05	7883.820	5294.288	8833.277
#3	6976.888	97899.46	7845.828	5290.335	8827.485

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3245-01 Acquired: 10/1/2025 14:12:05 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.1777669	-.036564	.0958106	-.007051	-.036844	30.44623
Stddev	.0018127	.002360	.0008219	.003771	.001358	.01427
%RSD	1.019694	6.453076	.8578379	53.48450	3.686898	.0468647
#1	.1767562	-.034468	.0955958	-.002702	-.036000	30.42984
#2	.1766850	-.036106	.0951175	-.009408	-.036120	30.45290
#3	.1798596	-.039119	.0967186	-.009043	-.038411	30.45594

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1859672	.0150438	-.005115	5.379559	.1019620	.0457422
Stddev	.0028545	.0001300	.000194	.015677	.0001374	.0004221
%RSD	1.534923	.8638612	3.802209	.2914135	.1347908	.9227887
#1	.1888602	.0150406	-.005300	5.389922	.1019975	.0457299
#2	.1858886	.0151753	-.005133	5.387231	.1020782	.0453263
#3	.1831529	.0149155	-.004912	5.361524	.1018103	.0461703

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1512623	461.3859	.8885661	4.030487	.0777452	.0071281
Stddev	.0002641	2.2364	.0062528	.017505	.0009697	.0008685
%RSD	.1745691	.4847090	.7036932	.4343035	1.247250	12.18368
#1	.1510466	463.8883	.8938246	4.031596	.0767260	.0080376
#2	.1511836	460.6865	.8902215	4.012455	.0778534	.0070392
#3	.1515568	459.5827	.8816521	4.047411	.0786563	.0063075

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1931093	.1567865	.2425543	3.262471	-.008588	.0025115
Stddev	.0180245	.0023501	.0014453	.051734	.010527	.0002478
%RSD	9.333855	1.498895	.5958491	1.585723	122.5799	9.864930
#1	.2124387	.1540774	.2409606	3.213497	.003357	.0026448
#2	.1767615	.1580055	.2437800	3.257335	-.016513	.0026641
#3	.1901276	.1582766	.2429223	3.316582	-.012607	.0022257

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3245-01 Acquired: 10/1/2025 14:12:05 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.001067	.4453030	3.288655	F 10.28773	.5890697	.0565957
Stddev	.000586	.0018323	.013532	.01822	.0020386	.0007566
%RSD	54.96029	.4114673	.4114705	.1770765	.3460772	1.336763
#1	-.000725	.4456685	3.286140	10.30143	.5867710	.0566289
#2	-.000731	.4469249	3.276556	10.29472	.5906584	.0558231
#3	-.001744	.4433155	3.303267	10.26706	.5897798	.0573351

Elem	Sr4077
Units	ppm
Avg	-.412944
Stddev	.001878
%RSD	.4546701
#1	-.415056
#2	-.412312
#3	-.411464

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6909.464	98935.65	8241.660	5291.280	8083.244
Stddev	16.110	464.18	30.578	21.632	10.654
%RSD	.2331526	.4691688	.3710235	.4088182	.1318069
#1	6893.312	98485.29	8209.369	5305.964	8071.939
#2	6909.549	99412.51	8270.176	5301.436	8084.694
#3	6925.531	98909.15	8245.436	5266.439	8093.099

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3245-09 Acquired: 10/1/2025 14:16:10 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0777898	-.012285	.1725676	-.001661	-.012647	37.28608	.2127312
Stddev	.0014747	.001561	.0011258	.004458	.002732	.08512	.0017557
%RSD	1.895752	12.70843	.6523951	268.4074	21.60607	.2282775	.8253149
#1	.0762898	-.013523	.1721454	-.005716	-.014859	37.27137	.2142213
#2	.0778417	-.010531	.1717139	.003112	-.013488	37.37759	.2131767
#3	.0792378	-.012800	.1738435	-.002379	-.009592	37.20927	.2107957

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060360	-.000871	3.376704	.1070319	.0403261	.0887915	164.6332
Stddev	.0000159	.000051	.015214	.0003115	.0004911	.0014893	.4648
%RSD	.2635656	5.833962	.4505594	.2910034	1.217880	1.677304	.2823043
#1	.0060216	-.000904	3.377935	.1073848	.0401448	.0873391	164.2272
#2	.0060332	-.000898	3.391265	.1067955	.0399514	.0887202	165.1402
#3	.0060531	-.000813	3.360912	.1069153	.0408821	.0903151	164.5323

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.904459	4.866227	.0410330	.0037135	.1496947	.2662829	.3847568
Stddev	.011935	.035538	.0005909	.0003339	.0198698	.0038810	.0013237
%RSD	.6266971	.7303076	1.440138	8.990134	13.27353	1.457454	.3440291
#1	1.915186	4.828420	.0407345	.0038160	.1324635	.2699660	.3846165
#2	1.906590	4.871311	.0406509	.0033404	.1451909	.2666523	.3835089
#3	1.891602	4.898949	.0417136	.0039841	.1714298	.2622305	.3861450

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.783865	.0474643	.0031514	.0025405	.6778566	3.684619	3.265959
Stddev	.059105	.0049553	.0000851	.0008328	.0082730	.052782	.024749
%RSD	.7593286	10.44008	2.699158	32.78098	1.220466	1.432504	.7577773
#1	7.728796	.0425730	.0030539	.0034285	.6727768	3.630846	3.253238
#2	7.846313	.0524812	.0032102	.0024161	.6874029	3.736351	3.250159
#3	7.776485	.0473387	.0031901	.0017769	.6733900	3.686659	3.294481

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3245-09 Acquired: 10/1/2025 14:16:10 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.6029173	.0349103	-.135233
Stddev	.0065051	.0021577	.000501
%RSD	1.078935	6.180751	.3702653
#1	.6037427	.0343655	-.134690
#2	.5960389	.0372883	-.135677
#3	.6089703	.0330773	-.135332

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7019.037	99489.01	8511.812	5383.962	8080.495
Stddev	25.988	175.79	54.244	21.611	32.029
%RSD	.3702571	.1766882	.6372807	.4013955	.3963758
#1	7041.260	99600.65	8461.899	5398.166	8105.573
#2	7025.391	99286.38	8503.997	5359.091	8091.498
#3	6990.461	99579.99	8569.539	5394.628	8044.415

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3245-17 Acquired: 10/1/2025 14:20:17 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.1664238	-.020942	1.073436	.0008461	-.008552	71.22394	.4648319
Stddev	.0013054	.000771	.000359	.0005920	.000524	.05642	.0031343
%RSD	.7843641	3.683074	.0334317	69.96753	6.121471	.0792082	.6742964
#1	.1676967	-.020188	1.073045	.0014233	-.008264	71.27233	.4678658
#2	.1650882	-.020909	1.073513	.0008747	-.009157	71.23752	.4650239
#3	.1664864	-.021730	1.073750	.0002403	-.008237	71.16197	.4616060

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108572	.0006126	9.643147	.1739553	.0649823	.2330706	288.4070
Stddev	.0001122	.0000217	.013415	.0019306	.0002360	.0003780	.3547
%RSD	1.033646	3.539279	.1391108	1.109835	.3631350	.1621854	.1229963
#1	.0107424	.0006230	9.628987	.1718107	.0652485	.2331395	288.4556
#2	.0108626	.0005877	9.655665	.1755546	.0647990	.2334094	288.7349
#3	.0109666	.0006272	9.644789	.1745006	.0648993	.2326629	288.0305

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.985875	9.554524	.0965934	.0059521	.0587957	.3957739	1.259476
Stddev	.015748	.035811	.0006735	.0001260	.0188139	.0019368	.001861
%RSD	.5274246	.3748044	.6972261	2.117280	31.99881	.4893759	.1477334
#1	2.997105	9.521505	.0973052	.0060893	.0435171	.3962706	1.257811
#2	2.992646	9.592591	.0965090	.0058415	.0798099	.3936371	1.259132
#3	2.967873	9.549474	.0959662	.0059254	.0530602	.3974140	1.261485

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.87102	.0822330	.0100249	.0181090	1.080115	4.107381	7.418616
Stddev	.02713	.0064570	.0002975	.0003720	.004781	.019554	.008172
%RSD	.2285501	7.852053	2.967576	2.054280	.4426509	.4760615	.1101572
#1	11.83977	.0891587	.0102533	.0185183	1.085264	4.099303	7.411920
#2	11.88480	.0811618	.0096885	.0180173	1.079264	4.093160	7.416207
#3	11.88850	.0763787	.0101330	.0177915	1.075816	4.129679	7.427722

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3245-17 Acquired: 10/1/2025 14:20:17 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.482717**	**.0724354**	**-.230821**
Stddev	.010541	.0007520	.000405
%RSD	.4245921	1.038108	.1754595
#1	2.472047	.0726327	-.230449
#2	2.482980	.0716044	-.231253
#3	2.493125	.0730690	-.230760

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**7159.208**	**102729.8**	**8852.188**	**5458.051**	**8085.029**
Stddev	9.351	520.3	25.904	23.269	7.916
%RSD	.1306196	.5064885	.2926334	.4263251	.0979136
#1	7155.486	103292.8	8881.993	5482.313	8076.264
#2	7152.291	102629.8	8835.093	5455.920	8087.162
#3	7169.847	102266.7	8839.479	5435.921	8091.660

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01 Acquired: 10/1/2025 14:24:21 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0578920	-.020909	.2660092	-.001583	-.020146	155.3844
Stddev	.0015033	.002665	.0022316	.003270	.001511	.1477
%RSD	2.596775	12.74797	.8389324	206.5389	7.499956	.0950575
#1	.0590942	-.017833	.2641073	-.000279	-.020394	155.2317
#2	.0583754	-.022347	.2654543	.000833	-.018527	155.3950
#3	.0562065	-.022546	.2684659	-.005303	-.021518	155.5265

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5388021	.0107593	.0054789	60.23274	.3153490	.1919556
Stddev	.0016179	.0000334	.0003061	.07220	.0002718	.0008415
%RSD	.3002752	.3107413	5.586899	.1198656	.0861789	.4383811
#1	.5395993	.0107929	.0051778	60.22014	.3155452	.1914729
#2	.5369403	.0107588	.0054692	60.16767	.3154630	.1914665
#3	.5398667	.0107260	.0057898	60.31041	.3150388	.1929272

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7735895	328.8055	4.086375	74.62617	.3447297	.0034060
Stddev	.0033861	1.2343	.010490	.14808	.0018465	.0010494
%RSD	.4377166	.3753754	.2567021	.1984277	.5356274	30.81130
#1	.7700859	329.1849	4.092317	74.45974	.3429904	.0031736
#2	.7738382	327.4260	4.074263	74.67543	.3445313	.0024922
#3	.7768444	329.8054	4.092544	74.74334	.3466674	.0045521

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.395638	.6933500	.6087208	23.61058	.1792993	.0112384
Stddev	.066885	.0048995	.0026833	.11029	.0099769	.0001943
%RSD	.7118748	.7066457	.4408080	.4671284	5.564365	1.728676
#1	9.428056	.6892103	.6103569	23.61681	.1807444	.0114114
#2	9.318721	.6920802	.6101814	23.49731	.1686787	.0110282
#3	9.440136	.6987594	.6056241	23.71763	.1884749	.0112755

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01 Acquired: 10/1/2025 14:24:21 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0121849	9.923477	3.570029	F 12.91253	F 13.35712	.1861043
Stddev	.0007572	.023805	.009620	.09023	.10739	.0016806
%RSD	6.214577	.2398824	.2694538	.6987665	.8040220	.9030401
#1	.0113191	9.943666	3.559716	12.83959	13.32198	.1860728
#2	.0125119	9.897228	3.578759	12.88458	13.27170	.1878005
#3	.0127237	9.929536	3.571613	13.01343	13.47768	.1844397

Elem	Sr4077
Units	ppm
Avg	-.165860
Stddev	.000730
%RSD	.4401564
#1	-.165507
#2	-.165374
#3	-.166700

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7908.447	116566.3	9900.292	6165.777	7340.374
Stddev	26.063	336.2	36.955	20.586	31.223
%RSD	.3295582	.2884191	.3732755	.3338773	.4253639
#1	7937.009	116938.4	9937.019	6185.198	7371.201
#2	7902.378	116284.3	9863.112	6144.196	7341.153
#3	7885.954	116476.2	9900.743	6167.937	7308.769

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01DUP Acquired: 10/1/2025 14:28:23 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0624233	-.022538	.2061588	.0040234	-.019219	151.4364
Stddev	.0012121	.000362	.0013461	.0015337	.001111	2.0541
%RSD	1.941756	1.605933	.6529281	38.11968	5.780935	1.356383
#1	.0622527	-.022703	.2046647	.0035578	-.018387	152.4450
#2	.0613056	-.022787	.2072770	.0057360	-.018789	152.7911
#3	.0637117	-.022122	.2065346	.0027765	-.020481	149.0730

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5220933	.0100715	.0028519	62.75240	.2808507	.2158787
Stddev	.0062142	.0000889	.0003297	.76097	.0012105	.0006333
%RSD	1.190248	.8825731	11.56161	1.212648	.4310261	.2933820
#1	.5236496	.0100624	.0026167	63.06616	.2818375	.2165567
#2	.5273813	.0101646	.0027102	63.30633	.2812147	.2153023
#3	.5152488	.0099875	.0032288	61.88473	.2795000	.2157771

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8662906	361.1311	3.946988	76.39605	.3460443	.0066242
Stddev	.0022129	3.8605	.047996	.85461	.0017379	.0013987
%RSD	.2554403	1.069010	1.216021	1.118656	.5022153	21.11505
#1	.8668054	364.6142	3.965281	76.91478	.3477353	.0079788
#2	.8638658	361.7990	3.983149	76.86368	.3442631	.0067085
#3	.8682007	356.9802	3.892536	75.40967	.3461344	.0051852

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.530219	.6224229	.6170434	25.85658	.1850425	.0127033
Stddev	.083885	.0063918	.0007570	.25195	.0129199	.0003593
%RSD	.9833857	1.026920	.1226794	.9744140	6.982148	2.828514
#1	8.612876	.6262305	.6172108	26.01653	.1995020	.0130976
#2	8.532623	.6259946	.6162168	25.98705	.1809935	.0126182
#3	8.445158	.6150435	.6177027	25.56615	.1746321	.0123942

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01DUP Acquired: 10/1/2025 14:28:23 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0071899	9.961785	3.119917	F 11.30642	F 19.68499	.1914179
Stddev	.0004264	.126813	.024002	.01725	.06220	.0038671
%RSD	5.930631	1.272994	.7693224	.1525249	.3159846	2.020256
#1	.0076710	10.00596	3.144545	11.29345	19.75553	.1928281
#2	.0070396	10.06061	3.096594	11.29982	19.63801	.1943820
#3	.0068589	9.81879	3.118612	11.32599	19.66143	.1870436

Elem	Sr4077
Units	ppm
Avg	-.204890
Stddev	.002518
%RSD	1.229135
#1	-.207689
#2	-.204171
#3	-.202809

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7755.640	106957.0	9634.082	5826.601	7418.843
Stddev	10.538	456.4	57.531	45.117	6.082
%RSD	.1358796	.4266800	.5971642	.7743326	.0819866
#1	7763.648	106486.8	9626.401	5775.379	7417.295
#2	7759.572	106986.0	9580.778	5843.980	7425.550
#3	7743.702	107398.1	9695.069	5860.445	7413.684

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01LX5 Acquired: 10/1/2025 14:32:25 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0143586	-.004137	.0558520	.0006234	-.005999	38.67396	.1350704
Stddev	.0006833	.002368	.0018605	.0021731	.002144	.03528	.0020027
%RSD	4.759096	57.22937	3.331034	348.6005	35.74550	.0912210	1.482714
#1	.0151248	-.003314	.0573046	.0020270	-.007647	38.69116	.1332217
#2	.0138121	-.002290	.0564964	.0017228	-.003575	38.63338	.1347916
#3	.0141390	-.006806	.0537551	-.001880	-.006775	38.69734	.1371979

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027313	-.000315	15.38154	.0784387	.0377803	.1923151	81.46094
Stddev	.0000415	.000123	.04597	.0007654	.0001564	.0013729	.71567
%RSD	1.520448	38.87722	.2988903	.9757312	.4139666	.7138821	.8785410
#1	.0027677	-.000310	15.38882	.0792995	.0379583	.1938644	82.01221
#2	.0026860	-.000441	15.33236	.0778352	.0377176	.1918314	81.71848
#3	.0027401	-.000196	15.42344	.0781814	.0376649	.1912496	80.65215

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.057675	19.01967	.0701086	.0007535	2.286413	.1725714	.1478008
Stddev	.004483	.09303	.0004684	.0005054	.014220	.0018976	.0008279
%RSD	.4238634	.4891051	.6681609	67.07471	.6219314	1.099596	.5601459
#1	1.059073	18.92189	.0705896	.0001934	2.295143	.1741751	.1485207
#2	1.052659	19.03006	.0700826	.0011755	2.294091	.1704765	.1468961
#3	1.061292	19.10707	.0696538	.0008914	2.270004	.1730625	.1479855

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.640813	.0370418	.0026468	.0014701	2.510412	.9673315	2.618346
Stddev	.069117	.0036528	.0001738	.0007937	.005125	.0262937	.022434
%RSD	1.225310	9.861323	6.566162	53.98839	.2041626	2.718167	.8568112
#1	5.651412	.0408497	.0026647	.0022001	2.515612	.9962949	2.642162
#2	5.704018	.0367087	.0028110	.0015850	2.505365	.9607363	2.615265
#3	5.567008	.0335669	.0024648	.0006252	2.510260	.9449632	2.597612

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01LX5 Acquired: 10/1/2025 14:32:25 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.609875	.0440468	-.039961
Stddev	.016562	.0007701	.000834
%RSD	.6346063	1.748318	2.086358
#1	2.627810	.0446954	-.040374
#2	2.606659	.0442493	-.040508
#3	2.595157	.0431957	-.039002

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7040.379	101510.6	8275.879	5447.051	7992.479
Stddev	12.361	513.0	66.725	57.806	10.070
%RSD	.1755712	.5053285	.8062541	1.061240	.1259921
#1	7037.278	100959.2	8295.692	5386.926	7987.180
#2	7029.864	101598.8	8330.453	5502.219	7986.165
#3	7053.995	101973.7	8201.492	5452.007	8004.092

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01MS Acquired: 10/1/2025 14:36:29 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7240223	2.062971	1.194716	1.638571	.2588837	180.1562
Stddev	.0007600	.034175	.001459	.005237	.0020666	.4732
%RSD	.1049736	1.656586	.1220959	.3196335	.7982690	.2626830
#1	.7240856	2.024200	1.194097	1.644556	.2589826	180.4339
#2	.7247486	2.088724	1.193669	1.634831	.2608991	180.4249
#3	.7232325	2.075988	1.196382	1.636325	.2567695	179.6097

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7855415	.1721996	.2098124	78.38002	.6905691	.4442856
Stddev	.0053611	.0012304	.0002930	.28260	.0039802	.0006006
%RSD	.6824746	.7145514	.1396496	.3605459	.5763671	.1351759
#1	.7892855	.1735734	.2101503	78.55795	.6910393	.4436269
#2	.7879390	.1718266	.2096570	78.52795	.6942933	.4448028
#3	.7794000	.1711987	.2096297	78.05417	.6863747	.4444271

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.003670	374.1796	4.623220	88.99493	.9242168	.0672647
Stddev	.003175	3.1023	.026534	.25489	.0013228	.0004659
%RSD	.3163103	.8290853	.5739317	.2864063	.1431223	.6926642
#1	1.006196	371.8218	4.639801	89.23095	.9256486	.0667290
#2	1.000106	377.6940	4.637243	89.02919	.9230404	.0674891
#3	1.004707	373.0230	4.592617	88.72464	.9239613	.0675759

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.16620	.9769119	.8213828	41.61851	.3650189	.3764659
Stddev	.13812	.0042720	.0027198	.32070	.0107552	.0010130
%RSD	1.049052	.4372984	.3311295	.7705717	2.946488	.2690669
#1	13.06627	.9818378	.8230403	41.40799	.3558013	.3774333
#2	13.32381	.9746755	.8228641	41.98761	.3768355	.3754128
#3	13.10852	.9742223	.8182438	41.45994	.3624201	.3765515

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01MS Acquired: 10/1/2025 14:36:29 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7083070	F 12.26465	3.907194	F 20.77279	F 16.80295	.3863561
Stddev	.0021198	.06456	.034735	.01720	.01620	.0009247
%RSD	.2992808	.5264086	.8890029	.0827830	.0964400	.2393362
#1	.7106420	12.30450	3.871543	20.79253	16.78543	.3866042
#2	.7077754	12.29929	3.940935	20.76106	16.81741	.3871315
#3	.7065035	12.19016	3.909104	20.76479	16.80600	.3853327

Elem	Sr4077
Units	ppm
Avg	-.012634
Stddev	.003544
%RSD	28.05223
#1	-.008543
#2	-.014613
#3	-.014747

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7871.489	114786.7	9883.623	6126.443	7105.170
Stddev	6.676	451.3	46.383	38.039	4.720
%RSD	.0848112	.3931622	.4692939	.6209027	.0664266
#1	7863.796	115148.9	9834.893	6116.894	7100.687
#2	7875.758	114281.1	9888.742	6094.087	7104.728
#3	7874.912	114930.0	9927.235	6168.347	7110.095

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01MSD Acquired: 10/1/2025 14:40:24 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.6634992	1.814134	1.105333	1.499474	.2301309	171.5250
Stddev	.0024064	.047952	.005889	.003670	.0027811	.4294
%RSD	.3626807	2.643226	.5328019	.2447221	1.208487	.2503369
#1	.6611101	1.759214	1.102169	1.495833	.2331505	171.3407
#2	.6659225	1.835494	1.101702	1.499417	.2276744	172.0158
#3	.6634650	1.847694	1.112128	1.503171	.2295679	171.2185

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7296592	.1533766	.1867856	74.19235	.6240486	.3987113
Stddev	.0009913	.0009118	.0005652	.11496	.0025073	.0012064
%RSD	.1358606	.5944522	.3025722	.1549420	.4017767	.3025832
#1	.7291622	.1538030	.1866305	74.20642	.6223756	.3980352
#2	.7308007	.1539969	.1863143	74.29962	.6269314	.3979945
#3	.7290146	.1523297	.1874122	74.07100	.6228389	.4001042

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8267064	358.2837	4.730491	85.27706	.8205003	.0620155
Stddev	.0027580	2.7265	.017813	.27527	.0033062	.0009213
%RSD	.3336095	.7609915	.3765521	.3227898	.4029528	1.485660
#1	.8287135	355.1631	4.718470	85.32954	.8200192	.0609660
#2	.8235616	359.4831	4.750955	85.52232	.8174609	.0623896
#3	.8278442	360.2048	4.722047	84.97934	.8240206	.0626910

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.55597	.9305555	.7728911	34.61882	.3348685	.3505761
Stddev	.09438	.0086536	.0009108	.22580	.0092525	.0013126
%RSD	.7516378	.9299432	.1178378	.6522563	2.763010	.3744056
#1	12.44715	.9276782	.7721193	34.36355	.3246912	.3493323
#2	12.61540	.9402812	.7738957	34.70045	.3371421	.3504479
#3	12.60536	.9237070	.7726584	34.79246	.3427722	.3519481

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01MSD Acquired: 10/1/2025 14:40:24 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.6260449	F 11.19095	3.691525	F 18.32781	F 14.27865	.3497221
Stddev	.0022411	.02997	.027747	.10290	.10734	.0013859
%RSD	.3579844	.2677976	.7516326	.5614555	.7517741	.3962938
#1	.6243459	11.18010	3.661159	18.27900	14.16066	.3505813
#2	.6252040	11.22483	3.715556	18.25839	14.30476	.3504618
#3	.6285849	11.16791	3.697860	18.44603	14.37053	.3481233

Elem	Sr4077
Units	ppm
Avg	.0256227
Stddev	.0021588
%RSD	8.425368
#1	.0274575
#2	.0261667
#3	.0232439

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7787.301	114367.4	10054.31	6046.905	7206.940
Stddev	19.873	459.1	56.41	32.079	24.085
%RSD	.2552007	.4014676	.5610363	.5305009	.3341894
#1	7806.140	114875.7	10021.90	6079.064	7227.285
#2	7789.229	113982.8	10021.58	6014.906	7213.189
#3	7766.534	114243.5	10119.44	6046.745	7180.347

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01A Acquired: 10/1/2025 14:44:18 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.5157647**	**1.342848**	**.9290039**	**1.143902**	**.1351242**	**156.7725**
Stddev	.0912793	.239367	.1280420	.221039	.0703366	.6427
%RSD	17.69787	17.82533	13.78273	19.32325	52.05331	.4099464
#1	.4240744	1.105885	.7994421	.920042	.0684388	156.1573
#2	.5165922	1.338111	.9320996	1.149656	.1283168	157.4395
#3	.6066274	1.584549	1.055470	1.362008	.2086170	156.7207

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5992566**	**.0762797**	**.1412560**	**60.89258**	**.4550965**	**.3285306**
Stddev	.0058682	.0063267	.0262605	.28606	.0112042	.0265289
%RSD	.9792435	8.294076	18.59070	.4697803	2.461931	8.075019
#1	.5924930	.0700925	.1150846	60.61990	.4433662	.3019982
#2	.6029939	.0760093	.1410787	61.19037	.4562359	.3285377
#3	.6022828	.0827372	.1676046	60.86747	.4656875	.3550560

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9230041**	**342.8522**	**4.177697**	**75.50788**	**.6832544**	**.0313823**
Stddev	.0317046	3.2759	.039604	.32659	.0659991	.0037029
%RSD	3.434931	.9554708	.9479932	.4325298	9.659523	11.79940
#1	.8931593	339.7866	4.136344	75.20464	.6173340	.0272304
#2	.9195650	346.3040	4.215284	75.85366	.6830972	.0325737
#3	.9562880	342.4660	4.181463	75.46535	.7493320	.0343429

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.55253**	**.7826353**	**.6845393**	**26.97386**	**.3408746**	**.0870413**
Stddev	.15190	.0079717	.0059581	.31533	.0168779	.0351769
%RSD	1.439490	1.018565	.8703818	1.169030	4.951349	40.41398
#1	10.38972	.7734330	.6787254	26.61125	.3214875	.0542597
#2	10.69044	.7870501	.6842606	27.18381	.3488447	.0826611
#3	10.57744	.7874229	.6906318	27.12651	.3522914	.1242032

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3240-01A Acquired: 10/1/2025 14:44:18 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.1672142	F 10.04221	4.666792	F 16.58659	F 13.19312	.2382173
Stddev	.0729963	.07598	.033962	.66900	.08709	.0032098
%RSD	43.65434	.7566517	.7277326	4.033397	.6601294	1.347415
#1	.0995343	9.96957	4.660957	15.90448	13.26710	.2348479
#2	.1575453	10.12114	4.703294	16.61362	13.21513	.2385647
#3	.2445631	10.03592	4.636126	17.24167	13.09714	.2412392

Elem	Sr4077
Units	ppm
Avg	-.126457
Stddev	.003010
%RSD	2.380320
#1	-.127455
#2	-.128842
#3	-.123075

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7950.416	113772.1	9954.859	6092.211	7376.997
Stddev	12.896	322.9	15.030	17.949	7.964
%RSD	.1622009	.2837812	.1509790	.2946154	.1079535
#1	7951.466	113827.7	9949.956	6104.794	7380.306
#2	7962.755	113425.1	9942.892	6071.658	7382.773
#3	7937.028	114063.6	9971.727	6100.182	7367.912

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3238-01 Acquired: 10/1/2025 14:48:15 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0451292	-.003772	.1040842	-.012428	.0020677	286.1064
Stddev	.0023746	.003081	.0029060	.001307	.0031393	1.1063
%RSD	5.261891	81.67500	2.791962	10.51451	151.8273	.3866865
#1	.0477669	-.003561	.1062395	-.011267	-.000480	285.0704
#2	.0431617	-.006952	.1052337	-.012173	.005575	285.9770
#3	.0444591	-.000802	.1007792	-.013843	.001108	287.2717

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8148610	.0117615	.0084553	1894.010	.8108289	.2446280
Stddev	.0111298	.0000446	.0006151	18.139	.0024742	.0015758
%RSD	1.365850	.3789117	7.275289	.9576939	.3051456	.6441715
#1	.8035711	.0117102	.0090158	1914.511	.8129179	.2459059
#2	.8151883	.0117908	.0085530	1880.047	.8080966	.2451108
#3	.8258235	.0117835	.0077972	1887.470	.8114721	.2428672

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6873302	377.5056	6.373239	205.1340	.5944696	.0043539
Stddev	.0032463	3.5631	.086420	.6024	.0017946	.0021885
%RSD	.4723013	.9438416	1.355986	.2936557	.3018847	50.26571
#1	.6907429	375.7991	6.296416	204.6070	.5963091	.0030500
#2	.6869667	375.1169	6.356496	205.0043	.5943762	.0031312
#3	.6842809	381.6010	6.466806	205.7907	.5927235	.0068805

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.05319	.9046025	2.892397	23.79961	.8623935	.0266105
Stddev	.20686	.0026147	.008646	.09889	.0144896	.0004116
%RSD	1.288619	.2890481	.2989167	.4155308	1.680166	1.546681
#1	15.87078	.9051567	2.889685	23.70665	.8556945	.0270780
#2	16.01083	.9017551	2.902073	23.78867	.8524655	.0264509
#3	16.27795	.9068958	2.885432	23.90352	.8790205	.0263026

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3238-01 Acquired: 10/1/2025 14:48:15 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0246639	F 22.04139	3.596775	7.421844	F 80.73522	-.031187
Stddev	.0003587	.20410	.034907	.023324	.48886	.005784
%RSD	1.454380	.9259970	.9705201	.3142586	.6055066	18.54726
#1	.0250777	21.86200	3.635842	7.447515	81.29924	-.037598
#2	.0244728	21.99872	3.568647	7.416063	80.43332	-.029607
#3	.0244411	22.26346	3.585836	7.401955	80.47311	-.026357

Elem	Sr4077
Units	ppm
Avg	9.006636
Stddev	.049333
%RSD	.5477386
#1	9.045250
#2	8.951060
#3	9.023599

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6354.919	92210.91	8663.860	4975.361	5830.958
Stddev	8.665	514.65	21.305	7.172	6.301
%RSD	.1363474	.5581235	.2459092	.1441591	.1080621
#1	6363.796	91688.39	8671.864	4967.371	5825.088
#2	6354.478	92717.32	8680.004	4977.469	5830.171
#3	6346.483	92227.01	8639.711	4981.243	5837.616

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV03 Acquired: 10/1/2025 15:00:40 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**5.086072**	**5.032124**	**5.047272**	**5.083398**	**5.074714**	**10.07762**	**10.09200**
Stddev	.009883	.044781	.004914	.012182	.008141	.00464	.02718
%RSD	.1943057	.8899097	.0973637	.2396359	.1604273	.0460106	.2692930
#1	5.097014	5.050329	5.043998	5.096082	5.075965	10.07632	10.12014
#2	5.077796	5.064935	5.044895	5.071791	5.066020	10.07377	10.06590
#3	5.083406	4.981107	5.052923	5.082320	5.082157	10.08277	10.08996

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2544964**	**2.542688**	**25.31297**	**1.010402**	**2.529083**	**1.277683**	**4.984390**
Stddev	.0017250	.002409	.05111	.000945	.000603	.000672	.025845
%RSD	.6778145	.0947565	.2019000	.0935390	.0238388	.0525758	.5185284
#1	.2533423	2.544723	25.36744	1.010338	2.529759	1.278450	4.993551
#2	.2564794	2.540028	25.26606	1.011377	2.528603	1.277392	4.955212
#3	.2536676	2.543315	25.30543	1.009490	2.528886	1.277205	5.004407

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.541253**	**25.16051**	**2.538390**	**1.249428**	**24.42261**	**2.528119**	**2.525544**
Stddev	.001447	.04012	.001470	.001973	.12525	.011885	.000681
%RSD	.0569385	.1594473	.0579080	.1579152	.5128355	.4701120	.0269653
#1	2.541012	25.15321	2.540034	1.247469	24.54229	2.535588	2.524758
#2	2.542805	25.12455	2.537203	1.251414	24.29245	2.514414	2.525914
#3	2.539941	25.20378	2.537933	1.249401	24.43310	2.534356	2.525960

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.67744**	**5.088836**	**5.072205**	**5.066303**	**5.051382**	**4.880230**	**5.139187**
Stddev	.16092	.040209	.006667	.006046	.006431	.044536	.006901
%RSD	.6521004	.7901414	.1314484	.1193386	.1273091	.9125699	.1342864
#1	24.78974	5.059083	5.079590	5.072634	5.058422	4.886372	5.145293
#2	24.49308	5.134580	5.066628	5.060589	5.045818	4.832943	5.140567
#3	24.74950	5.072844	5.070398	5.065687	5.049905	4.921377	5.131699

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV03 Acquired: 10/1/2025 15:00:40 Type: Unk
Method: 6010-200.7 NEW(v240) 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	4.980182	4.969442	5.091782
Stddev	.020593	.011730	.051591
%RSD	.4135004	.2360398	1.013220
#1	5.003943	4.980998	5.086384
#2	4.969114	4.957546	5.145860
#3	4.967490	4.969783	5.043103

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6408.973	93885.40	7663.842	4991.253	7409.206
Stddev	7.785	139.71	37.825	18.764	8.130
%RSD	.1214779	.1488081	.4935484	.3759407	.1097289
#1	6412.712	93728.02	7681.612	4971.161	7412.581
#2	6400.024	93933.38	7620.404	4994.277	7399.932
#3	6414.185	93994.79	7689.509	5008.322	7415.105

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB03 Acquired: 10/1/2025 15:04:40 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007572	.0002109	.0007827	.0014952	.0009064	.0264280	.0031992
Stddev	.0016212	.0013779	.0010596	.0019829	.0003192	.0043028	.0004242
%RSD	214.1025	653.4431	135.3734	132.6192	35.21540	16.28132	13.26047
#1	.0011607	.0006316	.0010271	.0036797	.0009618	.0268388	.0027127
#2	.0021385	-.001328	-.000378	-.000191	.0011942	.0305108	.0033927
#3	-.001028	.001329	.001699	.000997	.0005631	.0219346	.0034921

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000023	.0000646	.0072121	.0000224	-.000065	-.000370	.0040604
Stddev	.0000972	.0000099	.0118320	.0003161	.000125	.000263	.0066511
%RSD	4312.984	15.30886	164.0582	1410.115	193.1894	71.07837	163.8034
#1	.0000658	.0000644	.0041917	-.000109	-.000142	-.000506	.0112462
#2	.0000506	.0000548	.0202616	-.000206	.000079	-.000067	-.001880
#3	-.000110	.0000746	-.002817	.000383	-.000131	-.000536	.002815

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010489	.0300040	-.000230	-.000534	-.168741	.0010231	.0000302
Stddev	.0001675	.0174504	.000196	.000200	.012343	.0012225	.0001298
%RSD	15.97328	58.16028	85.23321	37.47220	7.314673	119.4900	430.0109
#1	.0008567	.0330592	-.000245	-.000371	-.156484	.0001481	.0001672
#2	.0011638	.0112277	-.000027	-.000474	-.168573	.0005013	.0000143
#3	.0011262	.0457250	-.000418	-.000758	-.181168	.0024200	-.000091

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.267023	-.007083	.0004232	-.019088	.0011020	-.003123	.0010075
Stddev	.035022	.000495	.0003206	.000265	.0020158	.003779	.0006761
%RSD	13.11557	6.994933	75.74705	1.385822	182.9211	121.0086	67.10522
#1	-.226656	-.006674	.0004736	-.018942	-.001043	-.001224	.0017868
#2	-.289303	-.007634	.0000804	-.019394	.002957	-.000670	.0006584
#3	-.285110	-.006940	.0007156	-.018930	.001392	-.007476	.0005773

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB03 Acquired: 10/1/2025 15:04:40 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0042746	-.005955	.0001593
Stddev	.0010527	.001861	.0000624
%RSD	24.62675	31.25005	39.18246
#1	.0050771	-.004947	.0001117
#2	.0030827	-.008102	.0002300
#3	.0046639	-.004815	.0001363

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6877.371	96229.53	7763.378	5197.912	8655.599
Stddev	15.064	270.72	22.690	7.599	20.922
%RSD	.2190408	.2813284	.2922695	.1461958	.2417121
#1	6894.016	96489.53	7787.440	5197.045	8673.412
#2	6873.422	95949.23	7760.323	5190.783	8660.824
#3	6864.673	96249.82	7742.370	5205.907	8632.560

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169913BL Acquired: 10/1/2025 15:08:59 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000112**	**.0010287**	**-.000124**	**.0038385**	**.0002940**	**.0107894**	**.0011572**
Stddev	.002142	.0017196	.000752	.0016011	.0008210	.0045037	.0008167
%RSD	1917.692	167.1586	606.1678	41.71261	279.2196	41.74217	70.57532
#1	.001077	.0028653	-.000978	.0050946	.0000302	.0159793	.0019055
#2	-.002585	.0007642	.000439	.0043853	-.000363	.0084808	.0002860
#3	.001173	-.000543	.000167	.0020356	.001215	.0079081	.0012802

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000101**	**.0000416**	**.0086804**	**-.000012**	**.0000516**	**-.000750**	**.0012364**
Stddev	.0000172	.0000225	.0117472	.000353	.0003258	.000163	.0051033
%RSD	169.5830	54.05111	135.3304	3002.350	631.0542	21.76664	412.7554
#1	.0000295	.0000361	.0001159	.000307	-.000135	-.000905	-.001911
#2	.0000041	.0000664	.0038530	.000049	-.000138	-.000580	.007124
#3	-.000003	.0000224	.0220721	-.000391	.000428	-.000766	-.001504

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002471**	**.0394178**	**-.000429**	**-.000523**	**-.081482**	**.0001339**	**-.000235**
Stddev	.0003293	.0196750	.000175	.000314	.027800	.0036000	.000101
%RSD	133.2526	49.91405	40.74755	59.92197	34.11771	2689.523	42.86076
#1	.0000371	.0167617	-.000552	-.000727	-.073754	-.000804	-.000123
#2	.0000776	.0492855	-.000508	-.000680	-.112329	.004110	-.000266
#3	.0006266	.0522061	-.000229	-.000162	-.058364	-.002904	-.000317

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.119485**	**-.010495**	**.0001109**	**.0000218**	**.0008663**	**-.010155**	**.0015352**
Stddev	.039309	.000716	.0000874	.0005323	.0018709	.013448	.0003160
%RSD	32.89866	6.822536	78.81225	2442.948	215.9687	132.4240	20.58139
#1	-.141801	-.009700	.0000152	.0001753	-.001294	-.024265	.0013209
#2	-.142556	-.010694	.0001865	-.000570	.001979	.002516	.0013867
#3	-.074097	-.011090	.0001311	.000460	.001914	-.008718	.0018981

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169913BL Acquired: 10/1/2025 15:08:59 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0053545	-.003141	.0001574
Stddev	.0010264	.001828	.0000837
%RSD	19.16906	58.20513	53.14574
#1	.0063300	-.001969	.0000944
#2	.0054495	-.002207	.0002523
#3	.0042838	-.005248	.0001254

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6630.018	97199.48	7678.778	5215.471	8082.026
Stddev	3.055	470.56	77.606	11.950	6.586
%RSD	.0460759	.4841157	1.010661	.2291262	.0814889
#1	6631.061	97523.04	7710.628	5205.841	8089.223
#2	6626.579	96659.67	7590.314	5211.728	8076.299
#3	6632.415	97415.72	7735.393	5228.844	8080.556

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169913BS Acquired: 10/1/2025 15:13:18 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7433063	1.680687	.9107152	1.882089	.8391953	1.871053
Stddev	.0019086	.108051	.0020138	.010234	.0013498	.000454
%RSD	.2567663	6.428954	.2211257	.5437745	.1608400	.0242735
#1	.7440881	1.799842	.9126528	1.892281	.8399528	1.871326
#2	.7411310	1.653148	.9108599	1.882174	.8376369	1.871305
#3	.7446998	1.589071	.9086329	1.871813	.8399961	1.870529

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1859412	.1938514	.1829936	.9702084	.3754750	.1848238
Stddev	.0018405	.0016892	.0002759	.0142076	.0015808	.0001160
%RSD	.9898444	.8714002	.1507547	1.464383	.4210129	.0627562
#1	.1840775	.1932600	.1832965	.9544823	.3746157	.1848819
#2	.1859884	.1957568	.1827567	.9821176	.3745100	.1846902
#3	.1877577	.1925373	.1829277	.9740254	.3772993	.1848992

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2922654	2.805353	.1948241	1.925535	.4646949	.0713375
Stddev	.0000706	.014054	.0010678	.026785	.0013032	.0004794
%RSD	.0241448	.5009581	.5481001	1.391024	.2804368	.6720101
#1	.2923270	2.804811	.1938812	1.919385	.4659492	.0710204
#2	.2921884	2.791579	.1959837	1.902360	.4647877	.0711032
#3	.2922808	2.819670	.1946074	1.954860	.4633478	.0718890

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.718268	.2828692	.1928761	9.225714	.2807241	.4161031
Stddev	.033182	.0018570	.0002190	.071260	.0025484	.0015861
%RSD	1.220715	.6564735	.1135246	.7724042	.9077882	.3811760
#1	2.695544	.2837644	.1927374	9.209528	.2792321	.4168814
#2	2.702914	.2807342	.1927625	9.163940	.2836666	.4171496
#3	2.756347	.2841090	.1931285	9.303675	.2792735	.4142782

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169913BS Acquired: 10/1/2025 15:13:18 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7068478	.2060659	.8850257	5.436016	F 2.091538	.1915159
Stddev	.0023394	.0010534	.0276489	.046467	.029072	.0021447
%RSD	.3309657	.5111859	3.124082	.8547939	1.389961	1.119872
#1	.7094794	.2064546	.8668396	5.489483	2.121613	.1890918
#2	.7050038	.2048734	.8713941	5.413174	2.089416	.1931667
#3	.7060603	.2068696	.9168435	5.405392	2.063586	.1922893

Elem	Sr4077
Units	ppm
Avg	.1874330
Stddev	.0003724
%RSD	.1987068
#1	.1870106
#2	.1877142
#3	.1875743

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6712.185	95825.96	7758.897	5236.125	8134.693
Stddev	14.344	499.66	29.033	41.455	17.868
%RSD	.2136942	.5214256	.3741843	.7917106	.2196549
#1	6718.795	96185.66	7773.644	5256.357	8130.604
#2	6722.031	96036.77	7725.451	5263.578	8154.251
#3	6695.728	95255.44	7777.597	5188.439	8119.223

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169863BL Acquired: 10/1/2025 15:17:18 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0007917	.0027925	-.000364	.0043045	-.000909	.0052123	-.000532
Stddev	.0004551	.0007894	.000508	.0046191	.001477	.0028987	.000856
%RSD	57.48379	28.26681	139.6674	107.3079	162.5042	55.61344	160.9736
#1	.0011256	.0025766	-.000248	.0000671	-.001141	.0085572	-.000722
#2	.0009762	.0021336	.000076	.0036180	-.002256	.0036482	.000403
#3	.0002733	.0036674	-.000920	.0092284	.000671	.0034316	-.001276

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000115	.0000063	.0160150	-.000429	-.000013	-.000278	-.001537
Stddev	.000008	.0000512	.0127099	.000270	.000138	.000332	.004201
%RSD	6.799627	808.6544	79.36265	62.95352	1091.057	119.3306	273.2893
#1	-.000123	-.000002	.0028861	-.000118	.000082	.000047	-.003861
#2	-.000108	.000061	.0168990	-.000561	.000051	-.000616	.003312
#3	-.000115	-.000040	.0282598	-.000607	-.000171	-.000265	-.004062

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008016	.0356445	-.000410	-.000458	-.113329	.0018315	-.000203
Stddev	.0004068	.0224830	.000180	.000514	.008013	.0022920	.000169
%RSD	50.74632	63.07554	43.76500	112.2493	7.070787	125.1421	83.17695
#1	.0003448	.0353882	-.000572	-.001024	-.120166	.0010644	-.000321
#2	.0011247	.0582546	-.000217	-.000327	-.115310	.0044086	-.000010
#3	.0009353	.0132908	-.000441	-.000022	-.104511	.0000214	-.000279

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.206261	-.011310	.0001432	-.000423	.0021398	.0025733	.0009724
Stddev	.035996	.000316	.0000959	.000473	.0015322	.0142125	.0011486
%RSD	17.45151	2.796411	67.00052	111.8733	71.60707	552.3069	118.1225
#1	-.247517	-.011457	.0002536	-.000108	.0023663	.0186265	.0017411
#2	-.190010	-.010947	.0000806	-.000193	.0035462	-.008406	-.000348
#3	-.181257	-.011526	.0000953	-.000967	.0005069	-.002501	.001524

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169863BL Acquired: 10/1/2025 15:17:18 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0046444	-.002357	.0001365
Stddev	.0021785	.000634	.0001246
%RSD	46.90695	26.88071	91.25847
#1	.0024552	-.002837	.0000296
#2	.0046658	-.002595	.0001067
#3	.0068121	-.001639	.0002733

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6715.918	98415.66	7675.668	5288.418	8252.045
Stddev	6.338	396.30	48.756	14.296	4.144
%RSD	.0943738	.4026844	.6351976	.2703246	.0502155
#1	6719.607	98537.82	7731.884	5291.871	8248.826
#2	6719.548	97972.66	7650.202	5272.712	8250.589
#3	6708.600	98736.50	7644.919	5300.672	8256.720

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169863BS Acquired: 10/1/2025 15:21:38 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.7603741**	**1.770227**	**.9175026**	**1.879593**	**.7890414**	**1.973854**
Stddev	.0036050	.024687	.0019202	.012569	.0042858	.011284
%RSD	.4741064	1.394587	.2092801	.6686914	.5431719	.5716586
#1	.7581895	1.745442	.9157562	1.868130	.7862841	1.981376
#2	.7583977	1.770423	.9171928	1.877614	.7868610	1.979306
#3	.7645350	1.794816	.9195588	1.893033	.7939791	1.960880

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1915222**	**.1941850**	**.1825368**	**1.012107**	**.3907256**	**.1878144**
Stddev	.0017586	.0014716	.0002309	.004348	.0025527	.0005012
%RSD	.9181951	.7578321	.1264815	.4295706	.6533094	.2668728
#1	.1931568	.1958401	.1823063	1.015721	.3882204	.1873688
#2	.1896616	.1930241	.1825359	1.007282	.3933232	.1883570
#3	.1917483	.1936909	.1827681	1.013319	.3906332	.1877174

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2955830**	**2.820310**	**.2012767**	**2.020100**	**.4698925**	**.0697406**
Stddev	.0001161	.012971	.0022311	.048840	.0005266	.0007725
%RSD	.0392805	.4599108	1.108483	2.417692	.1120709	1.107710
#1	.2957103	2.810738	.2035086	2.069868	.4695772	.0690106
#2	.2955560	2.835072	.1990463	1.972245	.4695998	.0705496
#3	.2954829	2.815119	.2012751	2.018187	.4705005	.0696618

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.526268**	**.2911259**	**.1957388**	**8.807245**	**.2681153**	**.4163107**
Stddev	.016164	.0070771	.0010660	.085406	.0012101	.0016809
%RSD	.6398315	2.430952	.5445833	.9697240	.4513328	.4037580
#1	2.527297	.2977872	.1949237	8.713060	.2695122	.4153254
#2	2.541893	.2918949	.1969451	8.879657	.2674454	.4153551
#3	2.509614	.2836957	.1953476	8.829018	.2673883	.4182515

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169863BS Acquired: 10/1/2025 15:21:38 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.6536569**	**.1966765**	**.8130917**	**5.318888**	F **-.003560**	**.1884083**
Stddev	.0010748	.0015893	.0206860	.001983	.000549	.0015532
%RSD	.1644239	.8080633	2.544114	.0372809	15.41463	.8243804
#1	.6546196	.1973098	.7929630	5.320816	-.003182	.1884724
#2	.6524973	.1978515	.8342932	5.318993	-.003308	.1899285
#3	.6538539	.1948682	.8120190	5.316855	-.004190	.1868241

Elem	Sr4077
Units	ppm
Avg	**.1929169**
Stddev	.0009470
%RSD	.4908739
#1	.1939142
#2	.1920299
#3	.1928066

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6839.197**	**99149.70**	**7750.331**	**5341.431**	**8399.937**
Stddev	12.407	827.76	23.540	35.252	8.070
%RSD	.1814134	.8348578	.3037262	.6599771	.0960772
#1	6852.219	100009.5	7728.761	5368.962	8409.215
#2	6837.859	98358.2	7775.440	5301.699	8394.546
#3	6827.514	99081.4	7746.792	5353.632	8396.050

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169912BL Acquired: 10/1/2025 15:25:40 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0000653	.0032809	.0002653	.0017307	-.000580	.0047585	.0018682
Stddev	.0008411	.0016212	.0006886	.0013332	.001828	.0159851	.0010531
%RSD	1288.286	49.41306	259.5049	77.03027	315.4083	335.9247	56.36925
#1	.0000720	.0046934	.0009750	.0016926	.001500	.0206752	.0019113
#2	.0009031	.0036388	-.000400	.0004170	-.001309	.0048945	.0007942
#3	-.000779	.0015107	.000221	.0030825	-.001930	-.011294	.0028990

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000014	.0000217	.0189027	.0003581	.0000973	-.000263	.0201485
Stddev	.000057	.0000324	.0087285	.0002114	.0000383	.000154	.0072396
%RSD	409.2556	149.1287	46.17568	59.02298	39.31602	58.50861	35.93134
#1	-.000025	-.000014	.0289782	.0005856	.0000661	-.000423	.0122417
#2	-.000064	.000049	.0140890	.0003208	.0001400	-.000117	.0264522
#3	.000048	.000031	.0136411	.0001679	.0000858	-.000247	.0217515

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009852	.0282663	-.000020	-.000450	-.119871	.0039749	.0000567
Stddev	.0003532	.0211298	.000593	.000179	.019616	.0056094	.0001664
%RSD	35.85181	74.75263	2896.578	39.78811	16.36416	141.1219	293.7238
#1	.0010631	.0136096	.000164	-.000280	-.132497	-.001948	-.000103
#2	.0012930	.0524870	-.000683	-.000433	-.129844	.009207	.000043
#3	.0005996	.0187021	.000458	-.000637	-.097272	.004665	.000229

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.199013	-.012999	.0002599	-.000190	-.000695	-.004495	.0008331
Stddev	.046506	.000483	.0002301	.000316	.000597	.015206	.0009175
%RSD	23.36844	3.714840	88.51769	166.2492	85.93289	338.2753	110.1186
#1	-.252645	-.013075	.0000867	-.000546	-.000005	.012076	.0014035
#2	-.169843	-.012482	.0005209	.000057	-.001050	-.017807	-.000225
#3	-.174551	-.013439	.0001720	-.000081	-.001029	-.007754	.001321

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169912BL Acquired: 10/1/2025 15:25:40 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0028454	-.003137	.0001981
Stddev	.0005650	.000879	.0002010
%RSD	19.85659	28.02955	101.4559
#1	.0024509	-.003951	-.000017
#2	.0025926	-.002204	.000230
#3	.0034927	-.003255	.000381

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6725.815	97632.90	7674.060	5230.483	8268.102
Stddev	20.401	88.65	19.918	13.927	20.184
%RSD	.3033260	.0908015	.2595539	.2662570	.2441207
#1	6706.358	97646.82	7695.218	5214.759	8246.123
#2	6724.043	97538.11	7655.672	5235.426	8272.380
#3	6747.045	97713.76	7671.289	5241.264	8285.805

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169912BS Acquired: 10/1/2025 15:30:00 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7562799	F 1.629439	.9270525	1.904745	.8036404	1.907564
Stddev	.0018568	.077127	.0010873	.009585	.0040665	.013505
%RSD	.2455185	4.733350	.1172836	.5032203	.5060119	.7079682
#1	.7555310	1.660235	.9282997	1.907864	.8083268	1.896747
#2	.7583943	1.541671	.9263040	1.893989	.8015514	1.922700
#3	.7549146	1.686409	.9265538	1.912383	.8010430	1.903244

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1896387	.1992564	.1865748	.9851819	.3863368	.1890779
Stddev	.0014369	.0021179	.0003672	.0069331	.0007324	.0004583
%RSD	.7576853	1.062892	.1968058	.7037383	.1895754	.2423856
#1	.1903947	.2007676	.1866312	.9927646	.3864615	.1893455
#2	.1905397	.2001660	.1861827	.9791669	.3855500	.1885487
#3	.1879817	.1968357	.1869105	.9836141	.3869988	.1893395

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2977432	2.829464	.1981162	1.966805	.4739097	.0720060
Stddev	.0010664	.035957	.0015620	.045871	.0008150	.0006157
%RSD	.3581598	1.270805	.7884030	2.332271	.1719791	.8550905
#1	.2989735	2.799164	.1969614	1.940530	.4745664	.0719537
#2	.2971742	2.820030	.1998934	2.019772	.4729976	.0714180
#3	.2970820	2.869197	.1974939	1.940114	.4741653	.0726462

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.683348	.2902145	.1965178	9.162702	.2824699	.4014293
Stddev	.027042	.0026477	.0008033	.094733	.0026059	.0011318
%RSD	1.007756	.9123088	.4087391	1.033893	.9225453	.2819492
#1	2.658067	.2877411	.1972841	9.143691	.2837563	.4012778
#2	2.680118	.2930074	.1965872	9.078916	.2841823	.4003807
#3	2.711860	.2898949	.1956821	9.265498	.2794709	.4026291

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169912BS Acquired: 10/1/2025 15:30:00 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.6820059	.1973635	.8513297	5.464778	F -.000351	.1956556
Stddev	.0025589	.0016570	.0115632	.045002	.002714	.0031746
%RSD	.3752069	.8395819	1.358254	.8234898	773.1891	1.622552
#1	.6808580	.1980485	.8591346	5.453266	-.000457	.1982710
#2	.6802220	.1954738	.8380453	5.426650	.002415	.1921235
#3	.6849378	.1985682	.8568092	5.514418	-.003011	.1965722

Elem	Sr4077
Units	ppm
Avg	.1900742
Stddev	.0004124
%RSD	.2169438
#1	.1904493
#2	.1896327
#3	.1901406

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6741.186	96471.97	7765.465	5200.212	8188.108
Stddev	4.095	635.39	56.656	32.355	6.455
%RSD	.0607489	.6586244	.7295938	.6221922	.0788351
#1	6737.847	97108.45	7747.402	5225.182	8188.271
#2	6745.755	96469.79	7720.042	5211.794	8194.481
#3	6739.955	95837.68	7828.950	5163.659	8181.574

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-01 Acquired: 10/1/2025 15:34:00 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.002857**	**-.001873**	**.0034705**	**.0013200**	**.0012381**	**.1821788**
Stddev	.000744	.001497	.0005970	.0018264	.0011068	.0123215
%RSD	26.02697	79.89325	17.20244	138.3597	89.39681	6.763426
#1	-.003628	-.000301	.0041478	.0021127	.0018176	.1962336
#2	-.002799	-.002037	.0032434	.0026162	-.000038	.1770664
#3	-.002144	-.003281	.0030204	-.000769	.001935	.1732365

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1426573**	**.0000999**	**.0000240**	**56.74739**	**.0078873**	**.0004397**
Stddev	.0023799	.0001107	.0000679	.32078	.0002752	.0001846
%RSD	1.668238	110.7787	282.5417	.5652858	3.489542	41.98023
#1	.1453604	-.000006	-.000013	57.10764	.0075759	.0006198
#2	.1417345	.000091	.000102	56.64189	.0080977	.0002509
#3	.1408771	.000215	-.000017	56.49265	.0079884	.0004484

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0628078**	**15.97543**	**.0581360**	**21.46384**	**.0100664**	**-.000328**
Stddev	.0002946	.00888	.0004603	.12261	.0002870	.000051
%RSD	.4691297	.0555554	.7916878	.5712233	2.851204	15.58482
#1	.0628856	15.97033	.0586604	21.60541	.0097359	-.000355
#2	.0624821	15.97028	.0579482	21.39308	.0102104	-.000269
#3	.0630558	15.98568	.0577993	21.39302	.0102530	-.000360

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**15.97885**	**.0033126**	**2.521328**	**1.950962**	**.1186321**	**-.000042**
Stddev	.04047	.0024593	.001795	.029772	.0010260	.000186
%RSD	.2532469	74.23878	.0711909	1.525991	.8648688	447.0911
#1	16.02523	.0059980	2.523073	1.984300	.1180163	.000124
#2	15.96057	.0011702	2.519487	1.941557	.1180635	-.000242
#3	15.95075	.0027697	2.521425	1.927028	.1198165	-.000006

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-01 Acquired: 10/1/2025 15:34:00 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.028135	.0030451	7.070517	.0173455	F 15.12139	-.017851
Stddev	.000434	.0023708	.057035	.0002926	.10751	.003384
%RSD	1.541215	77.85877	.8066558	1.687007	.7109759	18.95887
#1	-.028304	.0051497	7.073105	.0170853	15.24553	-.021723
#2	-.027642	.0004766	7.126213	.0172890	15.05932	-.016377
#3	-.028459	.0035089	7.012232	.0176623	15.05931	-.015454

Elem	Sr4077
Units	ppm
Avg	.5312438
Stddev	.0037947
%RSD	.7143062
#1	.5354471
#2	.5280703
#3	.5302138

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6742.294	97443.28	7894.806	5241.598	8149.151
Stddev	5.935	452.60	17.452	3.161	3.602
%RSD	.0880215	.4644710	.2210522	.0603128	.0441959
#1	6749.146	97940.74	7912.737	5245.247	8145.437
#2	6738.781	97055.83	7893.803	5239.863	8149.388
#3	6738.955	97333.28	7877.877	5239.684	8152.628

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-02 Acquired: 10/1/2025 15:38:10 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.002091**	**-.000709**	**-.000306**	**.0021846**	**.0011622**	**.0407602**
Stddev	.002441	.001669	.000952	.0020151	.0007009	.0178717
%RSD	116.6996	235.4445	311.4208	92.23918	60.31406	43.84595
#1	-.002360	-.002486	.000163	.0042567	.0008206	.0216645
#2	-.004387	-.000464	.000322	.0020655	.0006975	.0570839
#3	.000472	.000824	-.001401	.0002318	.0019684	.0435321

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1513478**	**-.000168**	**.0000034**	**61.74821**	**.0007922**	**.0000918**
Stddev	.0007603	.000030	.0001024	.22524	.0002271	.0000166
%RSD	.5023802	17.69045	3057.266	.3647643	28.66168	18.08317
#1	.1519493	-.000151	.0001214	61.68303	.0006450	.0000729
#2	.1504932	-.000151	-.000050	61.56276	.0006780	.0001043
#3	.1516010	-.000203	-.000061	61.99885	.0010537	.0000981

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0039037**	**.1931731**	**.0267982**	**23.51814**	**.0089840**	**-.000559**
Stddev	.0002722	.0096872	.0005654	.13283	.0001727	.000848
%RSD	6.972730	5.014771	2.109642	.5647919	1.922487	151.6740
#1	.0042018	.1862143	.0262162	23.38163	.0088180	.000194
#2	.0038408	.1890681	.0268333	23.52585	.0089713	-.000393
#3	.0036684	.2042369	.0273452	23.64695	.0091627	-.001477

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.53147**	**-.000785**	**1.773889**	**2.157185**	**.1309871**	**.0001629**
Stddev	.20197	.001760	.005144	.026987	.0013144	.0000680
%RSD	1.034084	224.3078	.2899950	1.251016	1.003454	41.73561
#1	19.59647	-.002811	1.769869	2.185355	.1307687	.0002170
#2	19.69293	.000097	1.772112	2.154636	.1297956	.0001851
#3	19.30499	.000360	1.779686	2.131562	.1323970	.0000866

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-02 Acquired: 10/1/2025 15:38:10 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.027118	-.001763	7.123252	.0079076	F 16.27906	-.017909
Stddev	.000711	.001487	.048050	.0006935	.00052	.002893
%RSD	2.620198	84.39462	.6745484	8.769796	.0031781	16.15452
#1	-.027897	-.000805	7.133233	.0084609	16.27946	-.021245
#2	-.026953	-.003476	7.165528	.0081322	16.27925	-.016085
#3	-.026505	-.001007	7.070996	.0071296	16.27847	-.016397

Elem	Sr4077
Units	ppm
Avg	.5986044
Stddev	.0006875
%RSD	.1148552
#1	.5978900
#2	.5992614
#3	.5986619

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6678.235	94969.53	7801.425	5176.153	8057.704
Stddev	4.861	319.94	71.241	34.995	5.922
%RSD	.0727905	.3368843	.9131755	.6760776	.0734960
#1	6679.398	95128.79	7854.579	5215.436	8054.808
#2	6682.409	94601.22	7829.219	5148.311	8064.516
#3	6672.898	95178.58	7720.477	5164.712	8053.786

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-03 Acquired: 10/1/2025 15:42:22 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000356**	**-.000627**	**.0002304**	**.0028065**	**.0002016**	**.7168083**
Stddev	.001692	.002660	.0007127	.0011664	.0012658	.0138895
%RSD	474.9705	424.2733	309.3712	41.56032	627.8839	1.937681
#1	.000226	-.002643	.0007918	.0027165	-.000489	.7019497
#2	-.002262	.002388	.0004707	.0040152	-.000569	.7190095
#3	.000967	-.001626	-.000571	.0016877	.001662	.7294657

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1433364**	**.0083124**	**.0000497**	**56.31227**	**.0025220**	**.0107127**
Stddev	.0004358	.0000602	.0000456	.06673	.0003005	.0002349
%RSD	.3040347	.7243382	91.89187	.1184911	11.91570	2.193033
#1	.1428347	.0083704	.0000951	56.34271	.0021834	.0105746
#2	.1436210	.0082501	.0000038	56.23575	.0026258	.0109840
#3	.1435534	.0083166	.0000501	56.35834	.0027569	.0105795

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010547**	**.2229378**	**.0447419**	**11.78511**	**.0534312**	**-.001219**
Stddev	.0008285	.0068373	.0001011	.07558	.0001815	.000363
%RSD	78.55895	3.066929	.2258453	.6413293	.3396168	29.79031
#1	.0001134	.2290363	.0446631	11.69817	.0532316	-.001028
#2	.0016735	.2155463	.0448558	11.82198	.0535863	-.001638
#3	.0013771	.2242310	.0447068	11.83518	.0534757	-.000991

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**305.8450**	**.0017079**	**.0749981**	**6.349784**	**.0384304**	**.0007259**
Stddev	5.1015	.0013330	.0003852	.022833	.0005062	.0001693
%RSD	1.668013	78.04575	.5136272	.3595915	1.317177	23.32120
#1	310.0909	.0001744	.0748275	6.325382	.0389384	.0006058
#2	307.2582	.0025891	.0747278	6.353338	.0379260	.0006524
#3	300.1858	.0023603	.0754392	6.370631	.0384267	.0009195

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-03 Acquired: 10/1/2025 15:42:22 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.028273	-.001356	4.298990	.0065792	F 14.80310	-.015383
Stddev	.000264	.000915	.009378	.0014741	.09398	.001230
%RSD	.9334677	67.44555	.2181358	22.40579	.6348738	7.994038
#1	-.027974	-.000735	4.297791	.0070402	14.76564	-.014285
#2	-.028475	-.002406	4.290269	.0049297	14.73362	-.015153
#3	-.028368	-.000927	4.308909	.0077677	14.91003	-.016712

Elem	Sr4077
Units	ppm
Avg	.2915800
Stddev	.0016945
%RSD	.5811440
#1	.2934906
#2	.2902591
#3	.2909903

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6841.449	97153.85	7962.765	5315.890	7348.995
Stddev	6.273	89.95	22.825	11.075	3.887
%RSD	.0916849	.0925894	.2866445	.2083365	.0528947
#1	6840.541	97253.54	7947.258	5309.743	7350.359
#2	6835.680	97129.28	7952.063	5328.675	7352.017
#3	6848.127	97078.73	7988.975	5309.252	7344.610

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-04 Acquired: 10/1/2025 15:46:43 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000365**	**-.001454**	**.0005746**	**.0034636**	**-.001296**	**.5513704**
Stddev	.001864	.001588	.0015894	.0039322	.000919	.0054650
%RSD	510.1488	109.1864	276.6213	113.5292	70.86161	.9911743
#1	-.000348	-.000138	.0006551	-.000934	-.002208	.5573428
#2	.001490	-.001008	-.001054	.006641	-.001309	.5501489
#3	-.002238	-.003217	.002122	.004684	-.000372	.5466194

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1328658**	**.0082066**	**.0001980**	**52.68936**	**.0013256**	**.0105465**
Stddev	.0009733	.0000692	.0000930	.08489	.0002004	.0000943
%RSD	.7325736	.8436368	46.97335	.1611115	15.11728	.8944977
#1	.1320658	.0082865	.0001831	52.69983	.0012808	.0105190
#2	.1325822	.0081679	.0002976	52.59972	.0011514	.0104690
#3	.1339495	.0081654	.0001134	52.76852	.0015446	.0106515

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0029282**	**.0190133**	**.0443076**	**11.28370**	**.0527931**	**-.001175**
Stddev	.0002732	.0055534	.0004750	.04726	.0003854	.000244
%RSD	9.329848	29.20828	1.072031	.4188010	.7300119	20.78569
#1	.0031776	.0252862	.0447483	11.23175	.0524451	-.001444
#2	.0029708	.0147239	.0438045	11.32413	.0527268	-.001112
#3	.0026362	.0170298	.0443700	11.29524	.0532073	-.000968

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**277.6278**	**.0026136**	**.0974166**	**5.880283**	**.0315517**	**.0006690**
Stddev	2.8800	.0007462	.0001964	.101322	.0009982	.0000942
%RSD	1.037366	28.54986	.2016207	1.723080	3.163778	14.07982
#1	280.2550	.0020005	.0975312	5.765784	.0327032	.0007399
#2	278.0797	.0034444	.0971898	5.958354	.0310208	.0007050
#3	274.5485	.0023957	.0975288	5.916712	.0309311	.0005621

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-04 Acquired: 10/1/2025 15:46:43 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.024611	.0003116	3.889313	.0147360	F 14.24787	-.014915
Stddev	.000459	.0009408	.057244	.0020366	.05297	.000912
%RSD	1.864758	301.8950	1.471837	13.82033	.3717629	6.112615
#1	-.024872	.0013901	3.823327	.0144474	14.18721	-.014175
#2	-.024880	-.000115	3.925679	.0169015	14.27143	-.015934
#3	-.024081	-.000340	3.918931	.0128591	14.28496	-.014636

Elem	Sr4077
Units	ppm
Avg	.2755342
Stddev	.0005217
%RSD	.1893289
#1	.2755681
#2	.2749964
#3	.2760381

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6801.265	98043.96	8132.511	5273.043	7302.340
Stddev	16.432	454.62	53.568	18.784	14.113
%RSD	.2415986	.4636948	.6586853	.3562254	.1932634
#1	6783.473	98564.57	8077.296	5294.730	7288.449
#2	6815.870	97725.26	8135.974	5261.889	7316.665
#3	6804.452	97842.06	8184.264	5262.511	7301.905

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV04 Acquired: 10/1/2025 15:51:04 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.037522**	**4.964833**	**4.995725**	**5.053888**	**5.028205**	**10.07786**	**10.04875**
Stddev	.013831	.191934	.005034	.006591	.005272	.01007	.07648
%RSD	.2745531	3.865879	.1007673	.1304223	.1048436	.0999061	.7610920
#1	5.036658	4.753100	4.994172	5.046968	5.031395	10.06690	10.04464
#2	5.051764	5.127407	4.991650	5.060092	5.031100	10.08670	10.12721
#3	5.024143	5.013993	5.001352	5.054604	5.022120	10.07997	9.97441

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2571040**	**2.519385**	**25.19778**	**1.018316**	**2.506259**	**1.265842**	**4.963986**
Stddev	.0024565	.003092	.04348	.003229	.000250	.000192	.044020
%RSD	.9554388	.1227428	.1725393	.3171141	.0099936	.0151715	.8867863
#1	.2582163	2.518004	25.24727	1.015426	2.506059	1.265815	4.932542
#2	.2588076	2.517224	25.18032	1.021802	2.506540	1.265665	4.945123
#3	.2542881	2.522927	25.16575	1.017722	2.506178	1.266046	5.014295

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.523767**	**25.16419**	**2.508803**	**1.259784**	**24.88756**	**2.510189**	**2.536611**
Stddev	.012749	.04303	.000668	.002044	.17078	.004933	.004626
%RSD	.5051558	.1710018	.0266350	.1622794	.6862198	.1965147	.1823683
#1	2.538280	25.14307	2.509252	1.257424	25.05037	2.508894	2.531492
#2	2.518651	25.21370	2.508035	1.260959	24.70979	2.515640	2.540492
#3	2.514371	25.13580	2.509122	1.260970	24.90253	2.506033	2.537849

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**25.14716**	**5.122249**	**5.073142**	**5.023803**	**5.019619**	**4.870307**	**5.018418**
Stddev	.17200	.046474	.004438	.004045	.013279	.028570	.033526
%RSD	.6839650	.9073046	.0874800	.0805170	.2645340	.5866113	.6680554
#1	25.04448	5.145785	5.071733	5.022561	5.033149	4.842251	4.995954
#2	25.05128	5.152248	5.078114	5.028324	5.019100	4.869304	5.056954
#3	25.34573	5.068715	5.069580	5.020525	5.006607	4.899364	5.002346

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV04 Acquired: 10/1/2025 15:51:04 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.977207**	**4.992662**	**5.034771**
Stddev	.031775	.020260	.076482
%RSD	.6384140	.4057868	1.519075
#1	4.952457	5.014592	5.036680
#2	5.013039	4.988748	5.110280
#3	4.966124	4.974644	4.957352

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6528.862**	**93151.36**	**7635.648**	**5023.090**	**7577.489**
Stddev	3.325	333.74	51.889	19.689	6.395
%RSD	.0509210	.3582730	.6795619	.3919742	.0843956
#1	6532.630	93532.27	7619.472	5040.948	7583.304
#2	6526.340	92910.32	7593.774	5026.345	7578.522
#3	6527.617	93011.48	7693.698	5001.976	7570.640

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB04 Acquired: 10/1/2025 15:55:08 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.001174**	**.0007862**	**.0005435**	**.0040224**	**-.000486**	**.0029003**
Stddev	.001922	.0017229	.0011035	.0020848	.000720	.0038213
%RSD	163.7386	219.1517	203.0514	51.82880	148.0077	131.7528
#1	.000337	.0004791	.0008678	.0056832	.000340	.0070350
#2	-.003336	.0026419	.0014484	.0047012	-.000975	.0021672
#3	-.000521	-.000763	-.000686	.0016829	-.000825	-.000501

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0032151**	**-.000095**	**.0000070**	**.0022669**	**.0004055**	**.0000969**
Stddev	.0019756	.000021	.0000630	.0087383	.0003138	.0000810
%RSD	61.44918	22.47108	903.6184	385.4784	77.36948	83.58361
#1	.0043557	-.000071	.0000202	.0021773	.0001094	.0000847
#2	.0009338	-.000102	.0000623	.0110496	.0007344	.0000227
#3	.0043557	-.000112	-.000062	-.006426	.0003728	.0001834

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000132**	**.0067367**	**.0010940**	**.0349628**	**-.000222**	**-.000287**
Stddev	.000249	.0028064	.0004511	.0417587	.000146	.000336
%RSD	188.8770	41.65809	41.23913	119.4376	66.02455	117.3506
#1	.000115	.0099270	.0015565	.0722327	-.000255	-.000675
#2	-.000382	.0056333	.0006551	.0428234	-.000349	-.000112
#3	-.000127	.0046497	.0010703	-.010168	-.000062	-.000074

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.223601**	**.0021222**	**-.000211**	**-.286300**	**-.008997**	**.0005251**
Stddev	.022464	.0028540	.000103	.043414	.000195	.0002208
%RSD	10.04635	134.4834	48.67602	15.16385	2.167198	42.05503
#1	-.197666	.0020476	-.000203	-.289203	-.009175	.0004994
#2	-.236193	.0050127	-.000317	-.328190	-.009028	.0007576
#3	-.236944	-.000694	-.000112	-.241508	-.008789	.0003182

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB04 Acquired: 10/1/2025 15:55:08 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.028728	.0016041	.0099278	.0015658	-.000909	-.008514
Stddev	.000418	.0017116	.0132065	.0010346	.001766	.001167
%RSD	1.455070	106.6994	133.0258	66.07169	194.2400	13.70216
#1	-.028822	.0002128	-.004751	.0005756	-.001623	-.007226
#2	-.029091	.0035154	.013688	.0014822	-.002207	-.009499
#3	-.028271	.0010842	.020846	.0026396	.001102	-.008817

Elem	Sr4077
Units	ppm
Avg	.0000488
Stddev	.0000130
%RSD	26.55397
#1	.0000628
#2	.0000464
#3	.0000372

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6759.683	99919.06	7777.565	5316.276	8319.913
Stddev	13.084	578.99	23.231	28.207	7.344
%RSD	.1935663	.5794581	.2986980	.5305746	.0882710
#1	6774.327	99261.09	7796.971	5284.395	8328.349
#2	6749.142	100145.4	7783.900	5326.446	8314.950
#3	6755.580	100350.7	7751.822	5337.988	8316.440

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-05 Acquired: 10/1/2025 15:59:27 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0000845	.0012822	.0047393	.0038611	-.000784	1.236907	.1106007
Stddev	.0011089	.0019249	.0007303	.0021307	.001298	.012492	.0011467
%RSD	1312.753	150.1249	15.41023	55.18369	165.4514	1.009910	1.036776
#1	.0013516	.0009944	.0052598	.0062700	.000606	1.248838	.1119179
#2	-.000390	-.000483	.0039044	.0022229	-.000995	1.223922	.1100595
#3	-.000709	.003335	.0050537	.0030906	-.001964	1.237962	.1098249

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007210	-.000093	41.55721	.0064685	.0020218	.0078422	10.97333
Stddev	.0000262	.000034	.10032	.0002178	.0004355	.0003426	.06447
%RSD	3.627866	36.23108	.2414002	3.366447	21.54212	4.369203	.5874954
#1	.0006957	-.000064	41.54134	.0066560	.0018290	.0081172	10.92784
#2	.0007480	-.000084	41.46576	.0062297	.0017159	.0079510	11.04711
#3	.0007192	-.000130	41.66451	.0065198	.0025204	.0074584	10.94506

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8226034	7.826736	.0057302	-.000547	255.3485	.0019966	.0127635
Stddev	.0038905	.028220	.0002698	.000744	1.0755	.0016429	.0000968
%RSD	.4729433	.3605576	4.708594	136.0896	.4212082	82.28251	.7581123
#1	.8210247	7.794886	.0055727	-.001371	254.1385	.0034359	.0128750
#2	.8197504	7.848623	.0055762	-.000347	255.7108	.0023471	.0127132
#3	.8270350	7.836699	.0060418	.000077	256.1960	.0002068	.0127022

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.688843	.0767277	.0016223	-.021583	.0454044	7.983782	.1715948
Stddev	.054913	.0004048	.0002311	.000399	.0019325	.029377	.0011076
%RSD	.8209632	.5275975	14.24684	1.847878	4.256115	.3679588	.6454909
#1	6.627410	.0762671	.0014512	-.021191	.0468800	8.004790	.1712959
#2	6.733158	.0768890	.0018853	-.021988	.0461162	7.996343	.1706673
#3	6.705961	.0770270	.0015305	-.021570	.0432170	7.950213	.1728212

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-05 Acquired: 10/1/2025 15:59:27 Type: Unk
Method: 6010-200.7 NEW(v240) 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	7.920816	-.014403	.2179654
Stddev	.031068	.000841	.0006688
%RSD	.3922352	5.838020	.3068370
#1	7.888408	-.013690	.2181530
#2	7.950343	-.015330	.2172228
#3	7.923699	-.014190	.2185204

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6500.820	93649.14	7607.546	5079.711	7350.992
Stddev	8.694	207.31	34.917	6.234	6.488
%RSD	.1337394	.2213697	.4589788	.1227177	.0882614
#1	6502.155	93873.46	7618.550	5077.697	7348.900
#2	6491.535	93609.34	7635.635	5086.703	7345.808
#3	6508.768	93464.61	7568.452	5074.734	7358.268

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-06 Acquired: 10/1/2025 16:03:49 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.002059**	**.0013360**	**-.001683**	**.0050462**	**-.000497**	**.0165136**	**.0935087**
Stddev	.000866	.0010474	.001246	.0003291	.000401	.0163864	.0022570
%RSD	42.04368	78.39348	74.04362	6.522089	80.60129	99.22967	2.413696
#1	-.003042	.0016497	-.002467	.0053967	-.000915	.0346564	.0940486
#2	-.001411	.0021907	-.000246	.0047438	-.000460	.0120943	.0954468
#3	-.001723	.0001677	-.002336	.0049981	-.000116	.0027901	.0910307

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000098**	**.0000408**	**39.08058**	**.0008512**	**.0000398**	**.0052501**	**.0083844**
Stddev	.0001020	.0000103	.11614	.0004033	.0001202	.0001440	.0094946
%RSD	1041.002	25.18517	.2971906	47.37382	301.8163	2.743507	113.2410
#1	.0001105	.0000290	39.21468	.0004342	.0000970	.0053631	.0078824
#2	-.000093	.0000457	39.01188	.0008803	-.000098	.0050879	.0181201
#3	.000012	.0000478	39.01518	.0012392	.000121	.0052992	-.000849

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1547540**	**8.217994**	**.0014852**	**-.000834**	**269.0106**	**.0039736**	**.0122838**
Stddev	.0008031	.049570	.0003625	.000092	2.6730	.0020033	.0001327
%RSD	.5189868	.6031855	24.40522	11.08499	.9936500	50.41583	1.079842
#1	.1539943	8.270683	.0019021	-.000938	271.4822	.0033914	.0124282
#2	.1546732	8.172283	.0012439	-.000760	266.1737	.0023258	.0122558
#3	.1555945	8.211016	.0013098	-.000805	269.3758	.0062034	.0121674

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.777711**	**.0837652**	**.0008251**	**-.026994**	**.0012484**	**6.618483**	**.0187260**
Stddev	.066559	.0008699	.0001322	.000661	.0007393	.064925	.0014655
%RSD	.8557696	1.038554	16.02655	2.448982	59.22409	.9809687	7.825763
#1	7.802909	.0847616	.0007924	-.026931	.0017508	6.685093	.0182811
#2	7.702232	.0833770	.0007122	-.027685	.0015949	6.614970	.0175347
#3	7.827992	.0831569	.0009706	-.026367	.0003994	6.555385	.0203624

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-06 Acquired: 10/1/2025 16:03:49 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**6.986383**	**-.016987**	**.2402654**
Stddev	.015835	.002504	.0019589
%RSD	.2266570	14.74085	.8153100
#1	6.993422	-.015019	.2422086
#2	6.968248	-.016137	.2382911
#3	6.997477	-.019805	.2402964

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6504.175**	**91462.67**	**7657.439**	**5033.682**	**7495.400**
Stddev	15.428	385.88	12.102	30.515	17.653
%RSD	.2372053	.4218949	.1580375	.6062104	.2355167
#1	6490.810	91033.89	7646.821	4998.786	7480.448
#2	6521.059	91572.13	7670.615	5055.359	7514.874
#3	6500.656	91781.99	7654.882	5046.899	7490.877

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-07 Acquired: 10/1/2025 16:08:14 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0010495	.0008012	.0040246	.0032679	-.001204	1.164562	.1141386
Stddev	.0021829	.0027246	.0007470	.0012972	.001813	.006529	.0016462
%RSD	208.0022	340.0546	18.56125	39.69445	150.5884	.5606062	1.442318
#1	.0002188	.0011219	.0032599	.0041163	-.003149	1.168485	.1132444
#2	.0035258	-.002070	.0040615	.0039128	-.000904	1.168175	.1131329
#3	-.000596	.003351	.0047526	.0017747	.000440	1.157026	.1160384

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007376	-.000100	42.18890	.0063368	.0018323	.0069546	10.58702
Stddev	.0000720	.000016	.19844	.0003615	.0002279	.0003378	.04971
%RSD	9.764814	15.79037	.4703657	5.704374	12.43833	4.857249	.4695600
#1	.0006682	-.000087	42.20660	.0067540	.0020297	.0066167	10.58228
#2	.0007325	-.000118	41.98221	.0061398	.0015829	.0069549	10.53984
#3	.0008120	-.000095	42.37790	.0061166	.0018842	.0072923	10.63893

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7627658	8.350803	.0058367	-.000936	271.4254	.0027158	.0117528
Stddev	.0064214	.012899	.0000236	.000169	2.6669	.0027371	.0000804
%RSD	.8418560	.1544636	.4043669	18.04120	.9825551	100.7834	.6840856
#1	.7644111	8.353767	.0058097	-.000986	273.7230	.0024796	.0117269
#2	.7556818	8.336680	.0058534	-.001075	268.5009	.0001045	.0118430
#3	.7682044	8.361963	.0058472	-.000748	272.0523	.0055634	.0116885

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.704385	.0848794	.0015636	-.027391	.0439372	8.449314	.1549519
Stddev	.055620	.0014332	.0001501	.000196	.0009386	.032806	.0008037
%RSD	.7219226	1.688465	9.602414	.7139918	2.136323	.3882692	.5186972
#1	7.660856	.0849231	.0014385	-.027406	.0428745	8.428184	.1547547
#2	7.685253	.0834250	.0017301	-.027188	.0446531	8.432651	.1558359
#3	7.767045	.0862903	.0015222	-.027578	.0442839	8.487107	.1542651

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-07 Acquired: 10/1/2025 16:08:14 Type: Unk
Method: 6010-200.7 NEW(v240) 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	7.684267	-.012148	.2340306
Stddev	.036693	.002863	.0017898
%RSD	.4775110	23.56761	.7647797
#1	7.666481	-.010953	.2341971
#2	7.659856	-.015415	.2321634
#3	7.726464	-.010075	.2357314

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6481.975	91283.42	7664.284	4999.410	7366.907
Stddev	13.379	239.24	33.325	39.075	10.601
%RSD	.2064073	.2620866	.4348139	.7815838	.1438984
#1	6469.037	91522.73	7666.083	4972.580	7360.789
#2	6481.133	91283.29	7696.673	5044.240	7360.783
#3	6495.756	91044.25	7630.095	4981.409	7379.148

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-08 Acquired: 10/1/2025 16:12:36 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.001810**	**-.000821**	**.0004368**	**.0024867**	**-.000436**	**.0243919**	**.0918598**
Stddev	.001133	.001288	.0014750	.0015442	.000387	.0112559	.0014178
%RSD	62.56810	156.8711	337.7182	62.09748	88.82753	46.14607	1.543468
#1	-.002818	-.001415	.0021363	.0007039	.000002	.0122345	.0904354
#2	-.000584	.000657	-.000316	.0034062	-.000734	.0264903	.0918730
#3	-.002029	-.001706	-.000510	.0033501	-.000575	.0344510	.0932710

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000030**	**.0000137**	**39.42073**	**.0009970**	**.0000361**	**.0061213**	**.0227425**
Stddev	.000058	.0000373	.21109	.0001210	.0001479	.0004623	.0085113
%RSD	193.0544	273.4024	.5354755	12.13265	409.4873	7.551966	37.42460
#1	-.000089	.0000538	39.20225	.0008700	-.000015	.0061035	.0217008
#2	.000027	-.000020	39.62356	.0011108	-.000080	.0065922	.0317267
#3	-.000028	.000007	39.43638	.0010101	.000203	.0056682	.0148000

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1501655**	**8.266858**	**.0016274**	**-.000923**	**267.9466**	**.0010078**	**.0091807**
Stddev	.0018953	.014176	.0006685	.000258	5.8059	.0010641	.0000180
%RSD	1.262121	.1714818	41.07874	27.95318	2.166827	105.5879	.1965409
#1	.1510644	8.250855	.0008693	-.000696	274.2558	.0020002	.0091895
#2	.1514440	8.277843	.0018808	-.000870	262.8287	-.000116	.0091927
#3	.1479880	8.271874	.0021323	-.001203	266.7553	.001139	.0091600

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.748320**	**.0819426**	**.0010014**	**-.026562**	**.0018920**	**6.666213**	**.0231933**
Stddev	.052238	.0014917	.0000371	.000287	.0006112	.072091	.0004519
%RSD	.6741888	1.820421	3.702441	1.079344	32.30206	1.081442	1.948462
#1	7.787634	.0809145	.0010160	-.026232	.0012067	6.706527	.0226718
#2	7.689044	.0836535	.0010290	-.026713	.0023804	6.582983	.0234708
#3	7.768282	.0812598	.0009593	-.026742	.0020890	6.709130	.0234372

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-08 Acquired: 10/1/2025 16:12:36 Type: Unk
Method: 6010-200.7 NEW(v240) 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	7.346291	-.015500	.2420844
Stddev	.008968	.002511	.0011023
%RSD	.1220711	16.20009	.4553280
#1	7.351091	-.013575	.2416097
#2	7.351837	-.014584	.2433445
#3	7.335945	-.018340	.2412990

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6430.812	91068.10	7610.705	4983.896	7389.935
Stddev	13.855	290.81	63.906	7.006	16.004
%RSD	.2154398	.3193372	.8396857	.1405652	.2165581
#1	6443.852	90804.12	7667.367	4975.843	7407.496
#2	6432.317	91379.84	7541.435	4988.593	7386.138
#3	6416.266	91020.33	7623.313	4987.250	7376.172

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-09 Acquired: 10/1/2025 16:17:00 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000998**	**-.001257**	**.0024724**	**.0010283**	**.0011261**	**.0077439**	**.0027809**
Stddev	.000429	.001362	.0009659	.0017219	.0031497	.0089275	.0012498
%RSD	43.01053	108.3863	39.06830	167.4480	279.6879	115.2848	44.94154
#1	-.000515	.000063	.0028601	.0015295	.0000483	.0030867	.0036164
#2	-.001141	-.001176	.0031842	-.000889	.0046732	.0180369	.0013441
#3	-.001337	-.002658	.0013729	.002444	-.001343	.0021079	.0033821

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000090**	**-.000049**	**3.128562**	**.0018614**	**.0007425**	**.0000409**	**.7865452**
Stddev	.000047	.000054	.033607	.0003317	.0001668	.0002793	.0147396
%RSD	51.74866	111.6205	1.074214	17.82077	22.46368	682.3179	1.873966
#1	-.000036	.000008	3.102576	.0021990	.0005874	-.000247	.7713488
#2	-.000115	-.000101	3.166515	.0015359	.0009189	.000059	.7875058
#3	-.000119	-.000053	3.116596	.0018494	.0007213	.000311	.8007810

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0322046**	**1.382563**	**.0490770**	**-.000919**	**7.582150**	**.0051914**	**.0010777**
Stddev	.0002147	.018629	.0002392	.000342	.035288	.0005912	.0001630
%RSD	.6666296	1.347423	.4873066	37.24521	.4654112	11.38893	15.12677
#1	.0324295	1.369394	.0490678	-.000831	7.570805	.0045155	.0010667
#2	.0321826	1.374417	.0493206	-.001297	7.553930	.0056127	.0012459
#3	.0320018	1.403877	.0488426	-.000630	7.621715	.0054458	.0009204

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6645710**	**-.004491**	**.0005763**	**-.027129**	**.0010133**	**8.048022**	**.0437549**
Stddev	.0856851	.001259	.0002633	.000642	.0009250	.028911	.0001899
%RSD	12.89329	28.03829	45.68463	2.366008	91.28092	.3592373	.4339042
#1	.6361835	-.003894	.0003880	-.027500	.0017323	8.030551	.0435387
#2	.5966822	-.003642	.0004637	-.027499	.0013379	8.032121	.0438944
#3	.7608473	-.005938	.0008771	-.026388	-.000030	8.081394	.0438317

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-09 Acquired: 10/1/2025 16:17:00 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.2696310	-.008340	.0116331
Stddev	.0024947	.002284	.0001313
%RSD	.9252177	27.38456	1.128723
#1	.2709393	-.007777	.0114932
#2	.2711995	-.010853	.0117537
#3	.2667543	-.006391	.0116525

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6880.258	98110.27	8017.770	5236.272	8488.319
Stddev	20.456	234.79	51.443	3.071	17.616
%RSD	.2973085	.2393074	.6416069	.0586419	.2075289
#1	6867.146	97885.37	7976.455	5235.159	8469.832
#2	6869.800	98353.83	8001.466	5233.914	8490.215
#3	6903.828	98091.62	8075.389	5239.745	8504.910

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-10 Acquired: 10/1/2025 16:21:14 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000077**	**-.000024**	**.0155118**	**.0028625**	**.0005172**	**3.574372**	**.0038757**
Stddev	.001391	.001532	.0003562	.0038145	.0021255	.019259	.0017077
%RSD	1802.907	6290.522	2.296521	133.2577	410.9694	.5387971	44.06211
#1	.001245	-.000495	.0152304	.0021253	.0008808	3.592669	.0054139
#2	.000051	.001688	.0153925	-.000530	.0024374	3.554278	.0041752
#3	-.001528	-.001266	.0159123	.006992	-.001767	3.576171	.0020381

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000079**	**.0190524**	**3.604330**	**.0010248**	**.0011141**	**.1363173**	**1.270626**
Stddev	.000030	.0000431	.009621	.0002046	.0000372	.0003099	.009385
%RSD	37.77222	.2263233	.2669177	19.96375	3.342112	.2273386	.7385875
#1	-.000114	.0190960	3.611120	.0011423	.0010834	.1359680	1.265297
#2	-.000062	.0190516	3.608548	.0007886	.0011035	.1364248	1.265119
#3	-.000062	.0190097	3.593320	.0011435	.0011556	.1365591	1.281462

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0386390**	**1.511099**	**.0466922**	**-.000695**	**8.613434**	**.0010907**	**.1428801**
Stddev	.0004336	.039726	.0000777	.000346	.073903	.0015940	.0005117
%RSD	1.122287	2.628918	.1662925	49.76705	.8580021	146.1359	.3580961
#1	.0382045	1.556957	.0467516	-.001065	8.598521	.0001238	.1429759
#2	.0390718	1.487222	.0467208	-.000642	8.548124	.0002179	.1423272
#3	.0386409	1.489118	.0466044	-.000379	8.693656	.0029305	.1433370

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6865297**	**-.004036**	**.0005652**	**-.027452**	**.0007007**	**8.185564**	**.0298007**
Stddev	.0284935	.000279	.0001679	.000534	.0007132	.046755	.0012896
%RSD	4.150374	6.903293	29.70758	1.944606	101.7854	.5711882	4.327363
#1	.6774286	-.004339	.0004297	-.027758	.0010036	8.159828	.0312555
#2	.6636985	-.003791	.0007531	-.026836	.0012124	8.157333	.0293485
#3	.7184620	-.003979	.0005129	-.027763	-.000114	8.239533	.0287982

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-10 Acquired: 10/1/2025 16:21:14 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.6326689	-.010457	.0142221
Stddev	.0034456	.000920	.0000881
%RSD	.5446130	8.800340	.6193280
#1	.6347439	-.010202	.0142721
#2	.6345713	-.011479	.0141204
#3	.6286915	-.009692	.0142737

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6938.294	97899.22	8062.821	5276.349	8582.252
Stddev	6.021	350.96	52.851	22.445	22.492
%RSD	.0867836	.3584908	.6554883	.4253971	.2620768
#1	6931.707	97750.61	8003.472	5265.002	8556.280
#2	6939.659	98300.03	8104.803	5302.203	8595.105
#3	6943.515	97647.01	8080.189	5261.843	8595.369

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-17 Acquired: 10/1/2025 16:25:25 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.1557916	-.043837	.5849380	-.000689	-.048438	182.5607
Stddev	.0015512	.002064	.0007529	.000745	.000633	.7127
%RSD	.9957134	4.708204	.1287105	108.0412	1.307399	.3903934
#1	.1568356	-.041737	.5857958	-.001057	-.048529	181.7726
#2	.1565302	-.045863	.5843867	-.001178	-.049021	182.7497
#3	.1540091	-.043911	.5846315	.000168	-.047764	183.1599

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.214067	.0216525	.0213882	58.06201	.3590133	.2354195
Stddev	.006276	.0000414	.0007055	.25390	.0006318	.0009352
%RSD	.5169726	.1910660	3.298790	.4372980	.1759718	.3972464
#1	1.206929	.0216819	.0219663	57.77187	.3583384	.2346579
#2	1.216550	.0216704	.0206020	58.24357	.3595907	.2351373
#3	1.218722	.0216052	.0215962	58.17059	.3591107	.2364633

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5772625	585.9647	7.651895	25.25802	.2928883	.0095176
Stddev	.0019747	5.3178	.047317	.13686	.0008998	.0013748
%RSD	.3420863	.9075294	.6183714	.5418652	.3072117	14.44488
#1	.5793394	580.1390	7.599252	25.10374	.2920820	.0080566
#2	.5770392	587.1966	7.690883	25.36481	.2927239	.0097103
#3	.5754089	590.5584	7.665550	25.30552	.2938590	.0107858

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	221.0497	.7316227	.4257056	30.53803	^ *****	.0033751
Stddev	2.2443	.0032642	.0001278	.14540	-----	.0000745
%RSD	1.015272	.4461529	.0300201	.4761438	-----	2.207688
#1	221.0363	.7279945	.4257406	30.42574	^ -----	.0032960
#2	218.8122	.7325530	.4258122	30.48607	^ -----	.0034439
#3	223.3006	.7343208	.4255639	30.70228	^ -----	.0033855

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-17 Acquired: 10/1/2025 16:25:25 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.010131	1.725468	F 59.82817	8.374189	F 50.58574	.1448277
Stddev	.000804	.008259	.37143	.023730	.14461	.0008931
%RSD	7.936511	.4786399	.6208341	.2833724	.2858639	.6166371
#1	-.010086	1.715946	59.54398	8.359571	50.42513	.1439828
#2	-.010957	1.729769	59.69208	8.361426	50.62647	.1447381
#3	-.009350	1.730689	60.24846	8.401569	50.70560	.1457622

Elem	Sr4077
Units	ppm
Avg	.4285521
Stddev	.0016269
%RSD	.3796194
#1	.4291547
#2	.4297918
#3	.4267100

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	10133.46	143153.8	12583.51	7681.148	6911.437
Stddev	30.82	160.2	35.53	23.488	29.789
%RSD	.3041580	.1119191	.2823660	.3057833	.4310097
#1	10161.67	143231.6	12599.10	7654.788	6938.177
#2	10138.15	143260.3	12542.85	7688.801	6916.807
#3	10100.57	142969.5	12608.58	7699.854	6879.329

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-18 Acquired: 10/1/2025 16:29:41 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0010337	.0016091	-.000917	.0023345	.0002384	.1241974
Stddev	.0008445	.0008048	.001428	.0005468	.0008098	.0161399
%RSD	81.69349	50.01794	155.6271	23.42001	339.6947	12.99538
#1	.0013106	.0025175	.000707	.0029337	.0009006	.1057127
#2	.0017049	.0009848	-.001975	.0018627	-.000664	.1313823
#3	.0000855	.0013252	-.001483	.0022071	.000479	.1354973

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1752342	-.000247	.0037070	60.99477	.0002880	.0048457
Stddev	.0010525	.000020	.0000259	.11151	.0002791	.0000112
%RSD	.6006084	7.989026	.6975159	.1828196	96.91901	.2306386
#1	.1753568	-.000249	.0036881	60.87142	.0000002	.0048493
#2	.1741258	-.000226	.0036965	61.08843	.0005576	.0048546
#3	.1762200	-.000265	.0037365	61.02447	.0003062	.0048331

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0335798	13.12513	4.283195	18.18143	.0092940	-.000213
Stddev	.0007247	.02134	.007235	.06194	.0001742	.000320
%RSD	2.158102	.1626099	.1689264	.3406784	1.874674	149.7688
#1	.0343421	13.11804	4.286039	18.11071	.0090937	-.000253
#2	.0328998	13.10823	4.288575	18.20757	.0093775	-.000511
#3	.0334974	13.14911	4.274969	18.22602	.0094107	.000124

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	332.6914	-.000003	.0243765	23.24571	.3005522	.0006827
Stddev	5.2078	.000836	.0002672	.07461	.0023442	.0000375
%RSD	1.565357	26111.70	1.095998	.3209681	.7799791	5.485764
#1	337.6543	.000627	.0241932	23.32983	.2988185	.0007145
#2	327.2691	.000315	.0242532	23.18752	.3032194	.0006414
#3	333.1507	-.000952	.0246830	23.21979	.2996187	.0006923

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-18 Acquired: 10/1/2025 16:29:41 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.022042	-.000175	7.259586	.0417500	F 13.33066	-.017464
Stddev	.000113	.000877	.023795	.0005634	.08284	.001705
%RSD	.5135040	502.7184	.3277769	1.349548	.6214218	9.763009
#1	-.021929	.000045	7.281239	.0413572	13.24761	-.018739
#2	-.022042	-.001141	7.234111	.0414974	13.33107	-.018126
#3	-.022155	.000572	7.263409	.0423956	13.41329	-.015527

Elem	Sr4077
Units	ppm
Avg	.5358959
Stddev	.0006932
%RSD	.1293478
#1	.5366917
#2	.5355724
#3	.5354237

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6407.056	92114.65	7653.266	4958.794	7326.469
Stddev	8.150	555.12	25.218	35.612	4.324
%RSD	.1272103	.6026445	.3295007	.7181555	.0590143
#1	6405.274	91772.61	7663.367	4931.849	7326.501
#2	6399.944	92755.16	7671.867	4999.167	7322.129
#3	6415.950	91816.19	7624.564	4945.365	7330.776

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-11 Acquired: 10/1/2025 16:34:01 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0378332	-.001658	.0008035	.0013755	-.003928	.0393447
Stddev	.0014658	.001427	.0010209	.0027079	.000660	.0094177
%RSD	3.874351	86.06466	127.0588	196.8661	16.79016	23.93629
#1	.0377898	-.000139	.0014815	-.001750	-.003237	.0325824
#2	.0393201	-.002970	.0012996	.002869	-.004551	.0501012
#3	.0363895	-.001865	-.000371	.003008	-.003997	.0353505

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4262824	.0005111	-.000848	91.04612	-.004232	.0419359
Stddev	.0016302	.0000362	.000118	.24376	.000017	.0003657
%RSD	.3824319	7.087760	13.93935	.2677310	.4091224	.8721236
#1	.4256515	.0005502	-.000984	91.31056	-.004249	.0423540
#2	.4250619	.0004787	-.000794	90.99740	-.004233	.0416757
#3	.4281338	.0005043	-.000767	90.83041	-.004214	.0417779

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045642	58.12444	4.110069	33.25121	.0053621	.0019435
Stddev	.0004893	.37857	.013536	.05420	.0003466	.0005863
%RSD	10.72141	.6513025	.3293295	.1629931	6.464012	30.16609
#1	.0048479	58.43783	4.124182	33.28820	.0049805	.0025461
#2	.0048455	58.23167	4.097196	33.27643	.0054483	.0019094
#3	.0039991	57.70383	4.108829	33.18900	.0056574	.0013750

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	838.1972	.0015376	.0030207	45.62360	.6048405	.0003351
Stddev	8.1772	.0011617	.0003147	.07786	.0022501	.0000131
%RSD	.9755660	75.55400	10.41746	.1706543	.3720080	3.907254
#1	841.9924	.0027654	.0026622	45.63104	.6070833	.0003206
#2	843.7871	.0004556	.0032513	45.69748	.6025833	.0003387
#3	828.8121	.0013919	.0031486	45.54229	.6048550	.0003460

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-11 Acquired: 10/1/2025 16:34:01 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.028775	-.003466	8.089401	.0080361	F 27.31073	-.017044
Stddev	.000452	.001605	.034939	.0010859	.08321	.001499
%RSD	1.569289	46.28918	.4319146	13.51307	.3046608	8.795653
#1	-.028428	-.005155	8.104415	.0068536	27.21469	-.017706
#2	-.029286	-.003283	8.114324	.0082659	27.35623	-.015328
#3	-.028613	-.001961	8.049465	.0089887	27.36126	-.018097

Elem	Sr4077
Units	ppm
Avg	.9617287
Stddev	.0020625
%RSD	.2144591
#1	.9640658
#2	.9609567
#3	.9601635

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6066.771	85245.71	7568.635	4698.631	6705.193
Stddev	14.381	463.75	21.132	24.269	13.830
%RSD	.2370472	.5440143	.2792079	.5165137	.2062510
#1	6071.327	85126.98	7553.324	4723.608	6714.035
#2	6050.664	84852.88	7559.836	4675.138	6689.256
#3	6078.322	85757.29	7592.745	4697.148	6712.290

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-11DUP Acquired: 10/1/2025 16:38:19 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0379811	-.004456	.0024261	.0033122	-.004955	.0238313
Stddev	.0031813	.002054	.0013168	.0024143	.000918	.0142632
%RSD	8.376088	46.10187	54.27481	72.89044	18.53186	59.85055
#1	.0351168	-.005600	.0027391	.0048362	-.005988	.0359796
#2	.0414052	-.005684	.0009811	.0005286	-.004232	.0081264
#3	.0374212	-.002084	.0035582	.0045716	-.004645	.0273878

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4426164	.0005527	-.000544	95.60041	-.004660	.0440575
Stddev	.0024796	.0000671	.000024	.33065	.000323	.0002082
%RSD	.5602213	12.14018	4.415359	.3458618	6.921656	.4725232
#1	.4454789	.0005071	-.000572	95.97505	-.005012	.0442830
#2	.4412409	.0005213	-.000531	95.47684	-.004589	.0440170
#3	.4411295	.0006298	-.000530	95.34935	-.004379	.0438726

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050145	59.49588	4.289949	35.05191	.0053581	.0015332
Stddev	.0005282	.34533	.022278	.05037	.0003132	.0002605
%RSD	10.53302	.5804296	.5192965	.1437142	5.845193	16.99011
#1	.0046282	59.80177	4.313034	35.09785	.0055526	.0017023
#2	.0047988	59.56446	4.288236	34.99804	.0049968	.0012332
#3	.0056163	59.12140	4.268578	35.05984	.0055249	.0016640

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	848.2537	.0018151	.0028286	47.11112	.6320291	.0003103
Stddev	6.7016	.0019655	.0002165	.19374	.0032992	.0001945
%RSD	.7900485	108.2851	7.652079	.4112370	.5220068	62.65393
#1	852.0920	.0034969	.0028969	47.26460	.6334217	.0002823
#2	852.1536	.0022939	.0030027	47.17533	.6282619	.0001315
#3	840.5154	-.000346	.0025863	46.89343	.6344036	.0005173

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-11DUP Acquired: 10/1/2025 16:38:19 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.029995	-.002821	8.373370	.0075494	F 28.84239	-.017607
Stddev	.000526	.000511	.027231	.0021962	.30171	.000622
%RSD	1.753501	18.12647	.3252120	29.09064	1.046069	3.535140
#1	-.029408	-.002717	8.404468	.0051426	29.19049	-.018029
#2	-.030151	-.002369	8.361854	.0094446	28.68062	-.016892
#3	-.030424	-.003376	8.353789	.0080610	28.65606	-.017900

Elem	Sr4077
Units	ppm
Avg	1.004156
Stddev	.006084
%RSD	.6058821
#1	1.010743
#2	1.002976
#3	.998748

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6021.082	85397.14	7445.266	4635.998	6669.026
Stddev	16.091	334.08	31.170	15.729	16.598
%RSD	.2672418	.3912068	.4186494	.3392788	.2488835
#1	6037.871	85052.43	7409.589	4619.898	6679.027
#2	6005.795	85419.52	7467.218	4636.768	6649.866
#3	6019.580	85719.46	7458.990	4651.328	6678.185

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV05 Acquired: 10/1/2025 16:42:36 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.992259**	**4.886038**	**4.964773**	**5.021631**	**5.001219**	**9.926303**	**9.953046**
Stddev	.015997	.130839	.003774	.012543	.006232	.025042	.028340
%RSD	.3204342	2.677811	.0760061	.2497822	.1246084	.2522783	.2847374
#1	5.006473	4.968416	4.961265	5.034661	5.004008	9.915174	9.965656
#2	4.974936	4.735171	4.964289	5.009639	5.005570	9.908754	9.972891
#3	4.995370	4.954526	4.968765	5.020593	4.994080	9.954980	9.920589

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2513614**	**2.498863**	**25.00467**	**1.012034**	**2.483788**	**1.256247**	**4.992422**
Stddev	.0003531	.001654	.03968	.002087	.000882	.000435	.019397
%RSD	.1404575	.0661946	.1587092	.2062586	.0355128	.0346537	.3885217
#1	.2510631	2.500037	24.96881	1.011195	2.483482	1.256532	5.009176
#2	.2512699	2.496971	25.04730	1.010496	2.484782	1.255746	4.996918
#3	.2517512	2.499579	24.99790	1.014410	2.483099	1.256463	4.971172

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.487488**	**24.89063**	**2.488290**	**1.253295**	**25.82262**	**2.489399**	**2.517280**
Stddev	.010813	.06423	.001465	.000736	.35086	.007341	.003014
%RSD	.4347020	.2580320	.0588602	.0587487	1.358732	.2948968	.1197176
#1	2.493137	24.87903	2.489819	1.253802	26.19016	2.482170	2.519516
#2	2.494307	24.83300	2.488149	1.252451	25.78648	2.489179	2.518471
#3	2.475020	24.95987	2.486900	1.253633	25.49124	2.496847	2.513853

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.14608**	**5.011688**	**5.019927**	**4.986079**	**4.961771**	**4.938291**	**4.982532**
Stddev	.05932	.004246	.007784	.010694	.004422	.008593	.028408
%RSD	.2185240	.0847152	.1550625	.2144788	.0891119	.1740165	.5701490
#1	27.15127	5.006799	5.026368	4.990631	4.960588	4.936563	4.992540
#2	27.20263	5.014457	5.011278	4.973862	4.966663	4.947618	4.950474
#3	27.08433	5.013806	5.022136	4.993744	4.958061	4.930694	5.004580

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV05 Acquired: 10/1/2025 16:42:36 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**4.952161**	**4.895715**	**5.017788**
Stddev	.041532	.012645	.077208
%RSD	.8386580	.2582881	1.538685
#1	4.981335	4.891657	4.928644
#2	4.904611	4.909891	5.061313
#3	4.970537	4.885597	5.063407

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6542.764**	**92874.39**	**7744.966**	**5032.677**	**7587.738**
Stddev	16.721	309.27	40.442	12.576	15.859
%RSD	.2555688	.3329976	.5221769	.2498917	.2090074
#1	6559.578	93205.90	7791.558	5046.562	7603.816
#2	6542.577	92823.64	7724.400	5029.419	7587.290
#3	6526.137	92593.64	7718.939	5022.050	7572.108

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB05 Acquired: 10/1/2025 16:46:37 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.001639**	**-.000263**	**.0006264**	**.0013934**	**-.000588**	**.0068379**
Stddev	.000294	.000576	.0004827	.0004252	.000567	.0045856
%RSD	17.94212	218.7228	77.06002	30.51618	96.32504	67.06215
#1	-.001844	-.000829	.0001506	.0011033	-.000212	.0119087
#2	-.001302	-.000284	.0006129	.0018815	-.001240	.0056228
#3	-.001772	.000323	.0011158	.0011953	-.000313	.0029822

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030065**	**-.000012**	**-.000007**	**.0023654**	**.0003146**	**.0001904**
Stddev	.0011778	.000023	.000056	.0058933	.0001615	.0000960
%RSD	39.17601	189.5594	773.9485	249.1510	51.32860	50.40550
#1	.0016856	.000015	.000053	-.003746	.0001292	.0001764
#2	.0039474	-.000025	-.000018	.008013	.0003902	.0001022
#3	.0033865	-.000026	-.000056	.002829	.0004244	.0002927

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000562**	**.0025378**	**.0002120**	**.0060293**	**-.000076**	**-.000725**
Stddev	.000195	.0080613	.0010099	.0037263	.000170	.000126
%RSD	34.65669	317.6487	476.3568	61.80376	225.3431	17.35557
#1	-.000391	.0025350	-.000704	.0020845	-.000249	-.000761
#2	-.000522	.0106005	.000045	.0065135	-.000070	-.000586
#3	-.000774	-.005522	.001295	.0094898	.000092	-.000830

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.070311**	**.0027315**	**-.000301**	**-.104868**	**-.008708**	**.0005928**
Stddev	.013327	.0009918	.000246	.034648	.000667	.0000679
%RSD	18.95494	36.30789	81.67876	33.03974	7.654394	11.45270
#1	-.060780	.0037909	-.000583	-.071074	-.007939	.0005162
#2	-.064613	.0018252	-.000132	-.140311	-.009066	.0006167
#3	-.085541	.0025785	-.000188	-.103219	-.009119	.0006455

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB05 Acquired: 10/1/2025 16:46:37 Type: Unk
Method: 6010-200.7 NEW(v240) 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	F -.029117	.0001360	.0051222	.0027348	.0035443	F -.010399
Stddev	.000456	.0010488	.0036781	.0008846	.0008843	.001968
%RSD	1.567657	771.3859	71.80688	32.34694	24.94928	18.92747
#1	-.029523	.0000927	.0065659	.0017488	.0029557	-.012611
#2	-.028623	.0012057	.0009413	.0029970	.0045611	-.009746
#3	-.029205	-.000890	.0078595	.0034587	.0031159	-.008841

Elem	Sr4077
Units	ppm
Avg	.0000636
Stddev	.0000142
%RSD	22.37710
#1	.0000765
#2	.0000660
#3	.0000483

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6938.061	98040.61	7598.894	5298.143	8725.787
Stddev	7.817	354.48	62.514	26.932	11.169
%RSD	.1126638	.3615625	.8226735	.5083346	.1280008
#1	6929.542	97753.27	7539.001	5269.078	8719.478
#2	6944.904	97931.83	7663.735	5303.097	8738.683
#3	6939.737	98436.74	7593.946	5322.255	8719.201

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-11LX5 Acquired: 10/1/2025 16:50:56 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0086519	.0024242	-.000143	.0019157	-.001481	.0168044	.0924904
Stddev	.0016998	.0013145	.001749	.0013861	.001295	.0087910	.0010187
%RSD	19.64683	54.22308	1225.154	72.35739	87.42405	52.31332	1.101360
#1	.0075264	.0015848	.001297	.0016630	-.000154	.0132602	.0935081
#2	.0078220	.0039391	.000363	.0006733	-.001549	.0103389	.0914708
#3	.0106072	.0017488	-.002088	.0034107	-.002740	.0268143	.0924924

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001015	-.000135	19.87457	-.000754	.0091101	.0008843	11.77661
Stddev	.0000502	.000040	.06499	.000099	.0001156	.0002154	.03107
%RSD	49.43900	29.49022	.3269813	13.18206	1.268826	24.35345	.2638036
#1	.0000808	-.000090	19.94482	-.000668	.0091034	.0010761	11.77956
#2	.0001587	-.000165	19.86228	-.000732	.0092289	.0009255	11.80610
#3	.0000650	-.000151	19.81661	-.000863	.0089980	.0006513	11.74418

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8934441	7.243852	.0007475	-.000449	164.8631	.0013797	.0005515
Stddev	.0033160	.021182	.0002023	.000337	1.3513	.0020286	.0003350
%RSD	.3711443	.2924162	27.06942	75.13076	.8196362	147.0309	60.75220
#1	.8971525	7.245151	.0009267	-.000828	166.0274	.0028934	.0003107
#2	.8907645	7.222050	.0007877	-.000183	165.1807	-.000925	.0004096
#3	.8924151	7.264354	.0005280	-.000335	163.3814	.002171	.0009341

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.952726	.1305010	.0001962	-.005932	.0015614	1.589596	.0005376
Stddev	.077300	.0017671	.0002932	.000139	.0013302	.033290	.0007121
%RSD	.7766692	1.354075	149.4212	2.344542	85.19190	2.094271	132.4547
#1	9.865086	.1325273	.0005045	-.006040	.0001070	1.569461	.0009360
#2	9.981893	.1296950	-.000079	-.005775	.0018610	1.628022	.0009613
#3	10.01120	.1292805	.000163	-.005981	.0027162	1.571306	-.000285

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-11LX5 Acquired: 10/1/2025 16:50:56 Type: Unk
Method: 6010-200.7 NEW(v240) 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	5.563689	.0111310	.2056958
Stddev	.071672	.0001393	.0013754
%RSD	1.288207	1.251455	.6686462
#1	5.599355	.0109720	.2072737
#2	5.610531	.0111893	.2050631
#3	5.481182	.0112316	.2047506

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6419.145	92496.98	7648.585	5008.944	7342.815
Stddev	1.579	612.89	33.174	31.918	8.076
%RSD	.0245939	.6626099	.4337328	.6372294	.1099884
#1	6417.563	93198.37	7670.883	5045.766	7349.772
#2	6419.152	92227.95	7664.410	4991.920	7333.958
#3	6420.720	92064.60	7610.461	4989.147	7344.714

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-13 Acquired: 10/1/2025 16:55:10 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.8699596**	**1.911450**	**.9671900**	**2.046923**	**.8138291**	**1.990078**
Stddev	.0023972	.006738	.0022088	.007909	.0026321	.023545
%RSD	.2755552	.3524912	.2283752	.3863727	.3234185	1.183129
#1	.8710891	1.919155	.9665336	2.055819	.8155969	1.969382
#2	.8715834	1.906662	.9653837	2.044261	.8108042	2.015695
#3	.8672063	1.908534	.9696526	2.040688	.8150863	1.985157

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6233521**	**.1947784**	**.2024158**	**94.54061**	**.4025132**	**.2467283**
Stddev	.0011060	.0008350	.0000681	.28981	.0021191	.0002511
%RSD	.1774230	.4286848	.0336362	.3065449	.5264777	.1017561
#1	.6221766	.1938722	.2024738	94.21162	.4008083	.2468699
#2	.6243720	.1955167	.2024327	94.65204	.4048858	.2468766
#3	.6235077	.1949464	.2023408	94.75817	.4018456	.2464385

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2938326**	**62.50430**	**4.388526**	**36.03866**	**.5122616**	**.0793465**
Stddev	.0005976	.11214	.014805	.16728	.0006867	.0002160
%RSD	.2033681	.1794116	.3373643	.4641552	.1340511	.2721843
#1	.2932472	62.48555	4.373483	35.84707	.5126944	.0795959
#2	.2944416	62.40272	4.389014	36.11321	.5126206	.0792225
#3	.2938089	62.62463	4.403082	36.15569	.5114698	.0792212

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**843.6631**	**.3012891**	**.2157353**	**57.83474**	**.8891332**	**.4218490**
Stddev	9.1479	.0054754	.0014296	.13686	.0045249	.0002981
%RSD	1.084308	1.817340	.6626827	.2366392	.5089072	.0706568
#1	852.9805	.3072633	.2173758	57.82737	.8843364	.4221931
#2	843.3140	.2965099	.2147554	57.70172	.8933253	.4216829
#3	834.6947	.3000940	.2150747	57.97514	.8897378	.4216710

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-13 Acquired: 10/1/2025 16:55:10 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7049846	.1963706	9.260217	6.547107	F 27.99551	.1837388
Stddev	.0004217	.0004680	.006210	.016321	.03483	.0025475
%RSD	.0598175	.2383309	.0670607	.2492888	.1244287	1.386490
#1	.7051956	.1965389	9.253839	6.564035	28.02765	.1847385
#2	.7052592	.1967313	9.266244	6.545819	28.00037	.1808430
#3	.7044991	.1958418	9.260569	6.531468	27.95849	.1856348

Elem	Sr4077
Units	ppm
Avg	1.180113
Stddev	.004465
%RSD	.3783276
#1	1.177716
#2	1.177359
#3	1.185264

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6020.509	84530.02	7551.102	4634.609	6657.708
Stddev	8.513	233.86	39.728	11.172	2.575
%RSD	.1414017	.2766603	.5261250	.2410453	.0386741
#1	6014.290	84660.84	7595.773	4643.049	6655.629
#2	6017.026	84260.02	7519.729	4621.941	6656.907
#3	6030.211	84669.20	7537.803	4638.838	6660.588

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-15 Acquired: 10/1/2025 16:59:15 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.8072088**	**1.780423**	**.9270145**	**1.980204**	**.7895669**	**1.907356**
Stddev	.0026195	.056283	.0032300	.012778	.0040890	.010854
%RSD	.3245093	3.161228	.3484346	.6453007	.5178789	.5690660
#1	.8042783	1.717835	.9232875	1.965662	.7880367	1.913094
#2	.8093228	1.826877	.9287548	1.985308	.7864637	1.914137
#3	.8080252	1.796557	.9290011	1.989641	.7942003	1.894837

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5470058**	**.1847852**	**.1953865**	**88.88176**	**.3875891**	**.2347211**
Stddev	.0011696	.0007401	.0004518	.00564	.0011979	.0008163
%RSD	.2138269	.4005053	.2312094	.0063418	.3090639	.3477884
#1	.5462013	.1856070	.1950496	88.87529	.3881843	.2338839
#2	.5483476	.1841713	.1952102	88.88558	.3862102	.2347646
#3	.5464686	.1845772	.1958999	88.88442	.3883729	.2355148

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2894301**	**24.91235**	**4.097632**	**34.05221**	**.4911264**	**.0737696**
Stddev	.0008739	.16487	.012977	.09544	.0024413	.0003176
%RSD	.3019541	.6618087	.3166874	.2802707	.4970906	.4304910
#1	.2886691	24.78885	4.083145	34.13575	.4884576	.0741336
#2	.2892366	25.09957	4.108193	33.94819	.4916744	.0735489
#3	.2903846	24.84862	4.101557	34.07269	.4932472	.0736264

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**789.8706**	**.2889630**	**.2091832**	**53.77770**	**.8183738**	**.4070445**
Stddev	1.3438	.0014980	.0008600	.40740	.0043323	.0006576
%RSD	.1701266	.5184172	.4111277	.7575582	.5293816	.1615538
#1	791.4118	.2888481	.2081901	53.30757	.8233756	.4063210
#2	788.9443	.2905151	.2096830	53.99841	.8159469	.4072067
#3	789.2557	.2875257	.2096763	54.02711	.8157989	.4076058

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-15 Acquired: 10/1/2025 16:59:15 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7081890	.1849827	8.062800	6.236612	F 26.72126	.1724035
Stddev	.0013276	.0010002	.010070	.008370	.11411	.0009504
%RSD	.1874630	.5407041	.1248998	.1342071	.4270312	.5512613
#1	.7088310	.1839570	8.051429	6.233481	26.58963	.1717366
#2	.7066624	.1859552	8.070591	6.230259	26.79208	.1719822
#3	.7090735	.1850360	8.066380	6.246096	26.78207	.1734917

Elem	Sr4077
Units	ppm
Avg	1.134758
Stddev	.002362
%RSD	.2081149
#1	1.132103
#2	1.136626
#3	1.135543

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6050.576	86539.42	7641.235	4694.756	6725.412
Stddev	6.652	82.98	22.969	27.798	11.638
%RSD	.1099389	.0958812	.3005983	.5920999	.1730384
#1	6052.226	86635.22	7615.534	4717.346	6726.672
#2	6056.248	86492.97	7659.759	4703.209	6736.368
#3	6043.255	86490.08	7648.412	4663.713	6713.196

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-11A Acquired: 10/1/2025 17:03:20 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.8832402	1.834045	.9804877	2.108017	.8429151	1.998121
Stddev	.0029008	.045254	.0035511	.009657	.0019270	.013854
%RSD	.3284300	2.467446	.3621722	.4581297	.2286140	.6933332
#1	.8799336	1.864576	.9800950	2.118991	.8448874	2.006236
#2	.8844303	1.782053	.9842188	2.100812	.8428211	2.006001
#3	.8853567	1.855505	.9771493	2.104248	.8410368	1.982124

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5989189	.1939894	.2046586	89.93792	.3961045	.2461966
Stddev	.0017537	.0017127	.0004716	.18655	.0001727	.0004660
%RSD	.2928088	.8828578	.2304403	.2074173	.0435928	.1892673
#1	.5972201	.1932656	.2052030	89.75305	.3961851	.2467347
#2	.5988139	.1927576	.2043745	89.93460	.3959062	.2459298
#3	.6007228	.1959452	.2043983	90.12610	.3962221	.2459254

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2973020	58.86014	4.154949	34.65184	.5159234	.0789984
Stddev	.0005625	.33773	.020157	.07693	.0012121	.0001971
%RSD	.1891838	.5737823	.4851426	.2219979	.2349320	.2494487
#1	.2973851	59.00877	4.131718	34.69404	.5171277	.0788239
#2	.2967026	59.09806	4.165322	34.56304	.5159389	.0792121
#3	.2978183	58.47358	4.167808	34.69842	.5147037	.0789591

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	777.3761	.3011824	.2130668	54.91954	.8529183	.4263976
Stddev	9.5114	.0018595	.0001394	.26480	.0057703	.0009313
%RSD	1.223526	.6173979	.0654309	.4821510	.6765411	.2184235
#1	767.6116	.3032985	.2130031	54.89521	.8496630	.4273833
#2	786.6123	.3004391	.2132267	55.19567	.8495112	.4255322
#3	777.9044	.2998094	.2129707	54.66775	.8595808	.4262773

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-11A Acquired: 10/1/2025 17:03:20 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7195065	.1941578	8.859208	6.512671	F 27.35140	.1833444
Stddev	.0018200	.0007802	.062793	.027660	.13820	.0013137
%RSD	.2529442	.4018414	.7087862	.4247068	.5052922	.7164954
#1	.7201037	.1936427	8.915298	6.542406	27.50490	.1848553
#2	.7174629	.1950555	8.870954	6.487707	27.23687	.1827049
#3	.7209527	.1937754	8.791371	6.507900	27.31242	.1824729

Elem	Sr4077
Units	ppm
Avg	1.124111
Stddev	.005998
%RSD	.5335990
#1	1.117326
#2	1.126303
#3	1.128706

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6032.526	86984.16	7695.805	4678.314	6672.809
Stddev	2.743	220.90	68.172	9.703	11.543
%RSD	.0454665	.2539571	.8858294	.2073989	.1729874
#1	6032.868	86772.40	7720.882	4689.346	6659.905
#2	6035.082	87213.19	7747.887	4674.497	6676.367
#3	6029.629	86966.88	7618.647	4671.101	6682.153

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-12 Acquired: 10/1/2025 17:07:25 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0002187	.0004543	.0000183	.0051314	-.001465	.0232841
Stddev	.0023442	.0027165	.0012136	.0036202	.000983	.0061136
%RSD	1072.085	597.9092	6647.722	70.54973	67.10733	26.25643
#1	.0024704	.0030922	.0003154	.0073217	-.001417	.0302552
#2	-.002208	.0006054	-.001316	.0071198	-.002470	.0188346
#3	.000394	-.002335	.001056	.0009528	-.000506	.0207627

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3638735	-.000221	.0078705	89.51406	-.000200	.0395482
Stddev	.0017521	.000074	.0001777	.14890	.000376	.0001322
%RSD	.4815064	33.29432	2.257460	.1663461	188.5517	.3342177
#1	.3618695	-.000270	.0076665	89.36101	-.000602	.0395607
#2	.3646356	-.000258	.0079916	89.52274	-.000141	.0394101
#3	.3651155	-.000136	.0079533	89.65843	.000144	.0396736

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0257466	16.06777	3.983738	32.94300	.0043213	-.000530
Stddev	.0005246	.03983	.024037	.05290	.0003250	.000085
%RSD	2.037747	.2478646	.6033896	.1605724	7.521249	16.11783
#1	.0263149	16.10152	3.963349	32.99303	.0039850	-.000431
#2	.0256445	16.07793	3.977622	32.88764	.0043454	-.000584
#3	.0252806	16.02384	4.010243	32.94832	.0046336	-.000574

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	780.3710	-.001769	.0074211	44.11545	.5776892	.0006115
Stddev	5.5362	.000715	.0000572	.05602	.0043133	.0002669
%RSD	.7094268	40.43188	.7708725	.1269842	.7466445	43.64270
#1	786.4998	-.001071	.0074156	44.17995	.5752490	.0008468
#2	778.8808	-.001734	.0074808	44.08747	.5751491	.0006661
#3	775.7325	-.002500	.0073668	44.07893	.5826694	.0003215

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-12 Acquired: 10/1/2025 17:07:25 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.028370	-.001321	7.143837	.0117944	F 26.95347	-.020628
Stddev	.000502	.001288	.035796	.0018668	.16586	.002086
%RSD	1.769746	97.48736	.5010801	15.82782	.6153511	10.11313
#1	-.028059	-.001738	7.154729	.0137401	26.96939	-.018739
#2	-.028103	-.002349	7.172922	.0116249	27.11080	-.022867
#3	-.028949	.000124	7.103860	.0100181	26.78023	-.020278

Elem	Sr4077
Units	ppm
Avg	.9721469
Stddev	.0042751
%RSD	.4397578
#1	.9677295
#2	.9724474
#3	.9762638

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6111.548	87465.23	7581.159	4747.163	6804.361
Stddev	4.933	257.92	32.793	12.682	12.894
%RSD	.0807121	.2948813	.4325592	.2671390	.1894910
#1	6108.958	87167.43	7589.472	4735.065	6810.391
#2	6117.236	87611.02	7608.996	4760.357	6813.134
#3	6108.449	87617.24	7545.010	4746.069	6789.557

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-12DUP Acquired: 10/1/2025 17:11:43 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.0001236**	**-.000782**	**-.000296**	**.0048647**	**.0003799**	**.0331227**
Stddev	.0018228	.004262	.000142	.0015400	.0013142	.0067193
%RSD	1474.849	545.1972	48.16270	31.65707	345.9637	20.28592
#1	-.001433	.002494	-.000214	.0034382	.0018001	.0283751
#2	-.000326	-.005600	-.000460	.0064975	.0001327	.0301820
#3	.002129	.000761	-.000213	.0046584	-.000793	.0408110

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3749298**	**-.000158**	**.0080991**	**91.92478**	**-.000383**	**.0408618**
Stddev	.0000873	.000018	.0000229	.33689	.000337	.0002122
%RSD	.0232912	11.38148	.2821211	.3664800	88.04058	.5192392
#1	.3750053	-.000160	.0081164	92.08509	-.000358	.0411021
#2	.3749499	-.000174	.0081078	91.53768	-.000732	.0407832
#3	.3748342	-.000139	.0080732	92.15158	-.000059	.0407002

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0258462**	**16.90071**	**4.117778**	**33.81137**	**.0044372**	**.0000131**
Stddev	.0005071	.12703	.021848	.10898	.0000824	.0005416
%RSD	1.961883	.7516344	.5305819	.3223220	1.856074	4140.115
#1	.0255514	16.82290	4.120547	33.81130	.0043455	.0002311
#2	.0255555	16.83194	4.094678	33.70242	.0045048	.0004117
#3	.0264317	17.04730	4.138110	33.92038	.0044615	-.000604

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**816.8006**	**-.000578**	**.0073629**	**46.41613**	**.5907610**	**.0005465**
Stddev	4.4795	.003245	.0002745	.29129	.0037291	.0002184
%RSD	.5484151	561.5889	3.728797	.6275515	.6312381	39.96745
#1	812.2486	-.004265	.0076451	46.39332	.5940585	.0005726
#2	821.2038	.000690	.0073469	46.13692	.5867141	.0007507
#3	816.9493	.001842	.0070967	46.71815	.5915105	.0003162

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-12DUP Acquired: 10/1/2025 17:11:43 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.028251	-.001710	7.425695	.0118106	F 27.83991	-.022123
Stddev	.000195	.001705	.053163	.0021804	.22174	.002926
%RSD	.6910035	99.70271	.7159305	18.46127	.7964907	13.22464
#1	-.028045	-.003678	7.446715	.0126129	27.81945	-.018818
#2	-.028273	-.000678	7.365236	.0134761	28.07118	-.023171
#3	-.028434	-.000774	7.465134	.0093427	27.62911	-.024380

Elem	Sr4077
Units	ppm
Avg	1.004327
Stddev	.004951
%RSD	.4929327
#1	1.007149
#2	.998610
#3	1.007221

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6058.791	86713.11	7635.520	4734.141	6729.791
Stddev	2.139	452.81	33.451	14.595	1.494
%RSD	.0353009	.5221951	.4380971	.3082825	.0221973
#1	6060.062	86648.69	7605.398	4734.886	6731.464
#2	6056.321	87194.68	7671.520	4748.348	6729.317
#3	6059.988	86295.96	7629.641	4719.188	6728.591

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-12LX5 Acquired: 10/1/2025 17:16:01 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000135**	**.0022841**	**.0001001**	**.0016776**	**-.001412**	**.0096032**	**.0787873**
Stddev	.001097	.0030326	.0012129	.0018912	.001710	.0086337	.0016472
%RSD	810.9150	132.7694	1211.990	112.7300	121.1080	89.90417	2.090721
#1	-.001370	.0006770	.0003944	.0030402	-.001650	.0110596	.0804757
#2	.000724	.0057821	-.001233	-.000482	.000405	.0174160	.0771846
#3	.000240	.0003933	.001139	.002474	-.002991	.0003339	.0787016

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000024**	**.0015961**	**19.54144**	**-.000342**	**.0084431**	**.0050230**	**3.358224**
Stddev	.000053	.0000597	.12926	.000121	.0001553	.0001514	.029516
%RSD	217.7017	3.742797	.6614541	35.32226	1.838988	3.013705	.8789076
#1	.000036	.0016453	19.68568	-.000473	.0083983	.0048843	3.332062
#2	-.000065	.0016135	19.43611	-.000234	.0083151	.0050001	3.390222
#3	-.000044	.0015296	19.50253	-.000319	.0086158	.0051845	3.352389

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8690132**	**7.116480**	**.0010576**	**-.000571**	**155.7311**	**.0042328**	**.0012312**
Stddev	.0061816	.016941	.0000641	.000317	1.0463	.0015092	.0001159
%RSD	.7113393	.2380556	6.064411	55.45611	.6718515	35.65521	9.410587
#1	.8757270	7.103429	.0011094	-.000935	156.5913	.0045470	.0011391
#2	.8635572	7.110387	.0009859	-.000425	156.0357	.0055601	.0013613
#3	.8677554	7.135625	.0010776	-.000354	154.5663	.0025912	.0011932

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**11.99109**	**.1214763**	**.0002901**	**-.005778**	**-.000839**	**1.465080**	**.0029280**
Stddev	.09000	.0003996	.0001340	.000526	.001347	.012971	.0010592
%RSD	.7505515	.3289355	46.19060	9.110842	160.4581	.8853776	36.17562
#1	12.04717	.1214533	.0003416	-.006006	-.001753	1.452649	.0029501
#2	12.03883	.1210888	.0001380	-.006151	-.001472	1.478531	.0039759
#3	11.88728	.1218869	.0003907	-.005176	.000707	1.464061	.0018579

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-12LX5 Acquired: 10/1/2025 17:16:01 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**5.581455**	**.0274357**	**.2083124**
Stddev	.012951	.0023752	.0010752
%RSD	.2320306	8.657244	.5161518
#1	5.585624	.0293477	.2095533
#2	5.591807	.0247769	.2077268
#3	5.566933	.0281825	.2076572

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6450.113**	**93066.31**	**7814.316**	**5004.434**	**7410.544**
Stddev	14.256	353.97	76.165	42.876	10.705
%RSD	.2210270	.3803390	.9746884	.8567539	.1444582
#1	6435.921	93075.38	7776.007	4981.224	7398.309
#2	6464.434	93415.65	7902.030	5053.911	7418.190
#3	6449.984	92707.89	7764.911	4978.167	7415.132

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-14 Acquired: 10/1/2025 17:20:15 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.8057776	1.824816	.9209134	1.982267	.7917677	1.919685
Stddev	.0017644	.077810	.0027783	.005805	.0005176	.019959
%RSD	.2189714	4.263968	.3016888	.2928512	.0653697	1.039683
#1	.8039587	1.877758	.9240213	1.980536	.7913507	1.923580
#2	.8074820	1.861212	.9200484	1.988740	.7916054	1.898066
#3	.8058921	1.735479	.9186706	1.977524	.7923469	1.937409

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5530771	.1856899	.1955712	91.51260	.3861239	.2353046
Stddev	.0029959	.0008052	.0001982	.19849	.0007336	.0001767
%RSD	.5416794	.4336125	.1013393	.2168982	.1899864	.0750891
#1	.5499768	.1848466	.1957949	91.57197	.3869603	.2354810
#2	.5532980	.1857726	.1955011	91.29120	.3855893	.2351276
#3	.5559564	.1864506	.1954176	91.67463	.3858223	.2353053

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2938590	20.58481	4.229888	34.91697	.4889193	.0734877
Stddev	.0006117	.04899	.013820	.04750	.0006162	.0005723
%RSD	.2081596	.2380005	.3267108	.1360330	.1260272	.7788192
#1	.2942226	20.63633	4.223077	34.87849	.4896020	.0740411
#2	.2931528	20.57926	4.220797	34.90237	.4887513	.0735240
#3	.2942016	20.53882	4.245791	34.97005	.4884045	.0728981

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	806.5720	.2880810	.2325073	55.35305	.8372124	.4061805
Stddev	9.6099	.0037324	.0006463	.15651	.0059484	.0007553
%RSD	1.191450	1.295614	.2779519	.2827577	.7104956	.1859474
#1	795.7979	.2901356	.2326467	55.50776	.8322822	.4063532
#2	814.2588	.2837727	.2318027	55.35660	.8355359	.4068344
#3	809.6593	.2903347	.2330725	55.19479	.8438191	.4053538

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-14 Acquired: 10/1/2025 17:20:15 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.6760592	.1876913	8.107903	6.251516	F 27.49908	.1737467
Stddev	.0018651	.0040954	.013220	.038637	.18444	.0026769
%RSD	.2758748	2.182002	.1630475	.6180372	.6707022	1.540689
#1	.6776957	.1917672	8.100237	6.295122	27.64923	.1724844
#2	.6764533	.1835767	8.123167	6.237883	27.55480	.1719344
#3	.6740286	.1877301	8.100303	6.221545	27.29321	.1768214

Elem	Sr4077
Units	ppm
Avg	1.174774
Stddev	.004585
%RSD	.3903141
#1	1.173046
#2	1.171303
#3	1.179972

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6094.164	87582.97	7636.085	4724.455	6769.653
Stddev	4.109	198.75	28.310	25.786	5.974
%RSD	.0674318	.2269266	.3707389	.5458051	.0882530
#1	6090.487	87445.32	7664.861	4694.683	6762.940
#2	6098.600	87492.76	7635.129	4739.722	6774.387
#3	6093.404	87810.82	7608.265	4738.960	6771.632

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-16 Acquired: 10/1/2025 17:24:22 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.8114748	1.802623	.9247733	1.997518	.7911937	1.923329
Stddev	.0030690	.045333	.0038012	.011356	.0017947	.026185
%RSD	.3781955	2.514860	.4110356	.5685266	.2268299	1.361454
#1	.8139803	1.765814	.9256764	1.984410	.7927646	1.899822
#2	.8080517	1.788794	.9280416	2.003738	.7915787	1.918613
#3	.8123925	1.853260	.9206020	2.004405	.7892377	1.951551

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5527283	.1870775	.1947312	89.37036	.3851993	.2343330
Stddev	.0014028	.0007169	.0002077	.16977	.0003418	.0005301
%RSD	.2537913	.3832075	.1066425	.1899635	.0887359	.2262052
#1	.5511173	.1864052	.1945302	89.17928	.3855938	.2338891
#2	.5536793	.1878319	.1947185	89.50382	.3850135	.2341901
#3	.5533884	.1869954	.1949450	89.42799	.3849907	.2349199

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2892555	24.96153	4.158178	34.28520	.4906163	.0745235
Stddev	.0006895	.10359	.022411	.10736	.0009314	.0007985
%RSD	.2383645	.4149860	.5389554	.3131326	.1898496	1.071463
#1	.2884781	24.85960	4.138988	34.16370	.4912129	.0742437
#2	.2894955	25.06670	4.182808	34.36726	.4895430	.0739024
#3	.2897929	24.95827	4.152737	34.32464	.4910929	.0754242

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	774.1062	.2896639	.2080705	54.33979	.8317628	.4063848
Stddev	4.4879	.0009306	.0002153	.22001	.0038468	.0014774
%RSD	.5797489	.3212827	.1034949	.4048779	.4624865	.3635432
#1	775.0305	.2906187	.2079710	54.09410	.8288707	.4054542
#2	769.2281	.2887595	.2079230	54.40665	.8361285	.4056119
#3	778.0599	.2896136	.2083176	54.51861	.8302891	.4080883

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-16 Acquired: 10/1/2025 17:24:22 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.6764185	.1897938	8.057064	6.255249	F 26.89134	.1763184
Stddev	.0002295	.0014329	.013165	.000563	.08332	.0031886
%RSD	.0339286	.7549798	.1633971	.0090071	.3098581	1.808444
#1	.6764368	.1884107	8.056995	6.254609	26.83037	.1765157
#2	.6766383	.1896991	8.070263	6.255672	26.85736	.1794038
#3	.6761803	.1912718	8.043933	6.255465	26.98628	.1730357

Elem	Sr4077
Units	ppm
Avg	1.147813
Stddev	.005585
%RSD	.4865720
#1	1.142619
#2	1.153720
#3	1.147100

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6113.775	86970.01	7596.522	4722.292	6799.307
Stddev	17.927	194.50	4.424	.689	9.265
%RSD	.2932164	.2236385	.0582335	.0145940	.1362607
#1	6121.231	86780.55	7599.860	4722.817	6795.452
#2	6126.770	87169.18	7591.504	4722.547	6809.877
#3	6093.323	86960.29	7598.202	4721.511	6792.592

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-12A Acquired: 10/1/2025 17:28:27 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.8445466	1.824997	.9686853	2.105453	.8438753	2.003438
Stddev	.0043442	.038378	.0018159	.009732	.0051448	.009550
%RSD	.5143860	2.102922	.1874601	.4622172	.6096619	.4766837
#1	.8412926	1.781695	.9688559	2.094218	.8436587	2.004340
#2	.8494799	1.854808	.9667902	2.111240	.8388422	1.993470
#3	.8428674	1.838487	.9704099	2.110901	.8491249	2.012506

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5468428	.1961517	.2112159	88.78408	.4067765	.2426993
Stddev	.0017276	.0011555	.0006608	.37256	.0009720	.0001987
%RSD	.3159144	.5890724	.3128728	.4196193	.2389526	.0818646
#1	.5448489	.1972310	.2107663	88.54598	.4072468	.2425548
#2	.5478935	.1949328	.2109068	88.59284	.4056588	.2426173
#3	.5477859	.1962913	.2119747	89.21342	.4074239	.2429259

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3160434	19.44051	4.081112	34.41736	.5128839	.0784670
Stddev	.0007952	.21722	.015069	.19846	.0015867	.0004647
%RSD	.2516012	1.117342	.3692495	.5766190	.3093684	.5922610
#1	.3155170	19.20583	4.066248	34.39243	.5113286	.0779358
#2	.3156551	19.63451	4.096379	34.23255	.5128228	.0786666
#3	.3169581	19.48119	4.080710	34.62711	.5145002	.0787986

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	774.5260	.3047363	.2216888	55.96776	.8436399	.4274612
Stddev	1.2702	.0043042	.0007605	.39162	.0002602	.0007813
%RSD	.1639964	1.412440	.3430553	.6997316	.0308432	.1827822
#1	773.1927	.3003217	.2223378	55.51789	.8433564	.4267254
#2	775.7219	.3049665	.2208520	56.23248	.8436955	.4273771
#3	774.6635	.3089209	.2218765	56.15291	.8438678	.4282812

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3202-12A Acquired: 10/1/2025 17:28:27 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7087351	.1965458	8.265125	6.436342	F 26.54014	.1849238
Stddev	.0020544	.0014067	.032567	.027709	.17733	.0020169
%RSD	.2898666	.7157109	.3940323	.4305070	.6681686	1.090649
#1	.7069701	.1959264	8.228372	6.412941	26.33708	.1854316
#2	.7109902	.1981559	8.276610	6.429145	26.61883	.1866383
#3	.7082449	.1955552	8.290394	6.466939	26.66451	.1827016

Elem	Sr4077
Units	ppm
Avg	1.146795
Stddev	.003355
%RSD	.2925400
#1	1.143281
#2	1.149964
#3	1.147141

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6145.732	85958.49	7723.826	4672.672	6862.108
Stddev	12.174	271.09	32.357	26.876	11.509
%RSD	.1980923	.3153726	.4189269	.5751654	.1677163
#1	6155.324	85975.02	7689.403	4641.867	6873.248
#2	6132.037	85679.52	7728.457	4684.820	6850.262
#3	6149.836	86220.94	7753.618	4691.329	6862.815

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV06 Acquired: 10/1/2025 17:32:32 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.126919**	**5.005440**	**5.026411**	**5.179157**	**5.114470**	**10.01161**	**9.916398**
Stddev	.012119	.125075	.006683	.012879	.003525	.02669	.016530
%RSD	.2363719	2.498781	.1329517	.2486740	.0689307	.2665562	.1666906
#1	5.139102	5.147475	5.032960	5.193920	5.117855	9.98627	9.930778
#2	5.114865	4.957080	5.019602	5.173326	5.110819	10.00910	9.920077
#3	5.126791	4.911766	5.026670	5.170225	5.114736	10.03946	9.898339

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2510076**	**2.534732**	**24.99974**	**1.006168**	**2.515572**	**1.277244**	**4.938532**
Stddev	.0014956	.002639	.04495	.003110	.002479	.002507	.046976
%RSD	.5958176	.1041178	.1797823	.3091401	.0985401	.1962540	.9512145
#1	.2494536	2.537285	24.96064	1.006676	2.517968	1.275940	4.974329
#2	.2511324	2.532014	25.04884	1.008993	2.513018	1.275659	4.955927
#3	.2524369	2.534897	24.98975	1.002835	2.515729	1.280134	4.885339

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.495160**	**24.95822**	**2.527096**	**1.242356**	**25.48228**	**2.507515**	**2.517849**
Stddev	.004563	.07883	.002340	.000884	.52914	.002840	.005744
%RSD	.1828569	.3158352	.0925923	.0711406	2.076487	.1132516	.2281226
#1	2.497423	24.86829	2.529637	1.241500	26.01359	2.506123	2.521277
#2	2.498149	24.99097	2.525030	1.243265	25.47790	2.505641	2.521052
#3	2.489908	25.01538	2.526620	1.242304	24.95535	2.510783	2.511218

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**27.13176**	**5.026197**	**5.049162**	**5.046759**	**4.981646**	**4.915389**	**5.151303**
Stddev	.27610	.035567	.011128	.009019	.003996	.010264	.014118
%RSD	1.017612	.7076367	.2203929	.1786999	.0802106	.2088073	.2740691
#1	27.39853	4.988722	5.059462	5.056274	4.979665	4.903941	5.166281
#2	27.14955	5.030384	5.037359	5.045664	4.986245	4.918461	5.149386
#3	26.84720	5.059486	5.050663	5.038337	4.979027	4.923766	5.138241

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV06 Acquired: 10/1/2025 17:32:32 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**5.143021**	**4.963099**	**5.018164**
Stddev	.018046	.006292	.037069
%RSD	.3508783	.1267831	.7386984
#1	5.163843	4.958884	4.981689
#2	5.133295	4.970332	5.055800
#3	5.131925	4.960081	5.017002

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6488.548**	**95309.13**	**7866.674**	**5025.487**	**7494.899**
Stddev	7.976	190.20	36.861	32.150	13.197
%RSD	.1229170	.1995566	.4685763	.6397422	.1760817
#1	6479.958	95156.77	7904.267	4999.855	7481.319
#2	6495.718	95248.34	7865.164	5015.046	7495.702
#3	6489.966	95522.30	7830.591	5061.560	7507.677

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB06 Acquired: 10/1/2025 17:41:57 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.002443**	**-.001273**	**.0006940**	**.0008383**	**.0000594**	**.0011175**
Stddev	.000977	.002193	.0008707	.0017198	.0019473	.0147316
%RSD	39.97054	172.2787	125.4597	205.1657	3279.862	1318.302
#1	-.002801	-.003140	.0015090	.0008415	-.001392	.0088358
#2	-.001338	.001142	.0007964	-.000883	.002272	.0103862
#3	-.003191	-.001821	-.000223	.002556	-.000703	-.015870

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000536**	**-.000089**	**-.000020**	**.0079410**	**.0003812**	**.0000818**
Stddev	.000321	.000078	.000011	.0024893	.0002997	.0001551
%RSD	59.98500	88.24494	55.87764	31.34749	78.63039	189.5668
#1	-.000316	-.000047	-.000019	.0107917	.0001199	-.000050
#2	-.000386	-.000040	-.000009	.0061967	.0007084	.000043
#3	-.000904	-.000179	-.000031	.0068346	.0003153	.000253

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000233**	**.0068595**	**.0003074**	**.0170870**	**-.000247**	**-.000097**
Stddev	.000420	.0087830	.0007727	.0053210	.000323	.000448
%RSD	179.8894	128.0414	251.3618	31.14055	130.4471	462.0317
#1	-.000607	.0020412	-.000210	.0225269	.000008	-.000045
#2	.000221	.0015402	.001196	.0118935	-.000610	.000323
#3	-.000313	.0169971	-.000063	.0168406	-.000140	-.000569

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.158700**	**.0002472**	**-.000070**	**-.235838**	**-.010917**	**.0003667**
Stddev	.026101	.0029341	.000043	.051014	.000735	.0000504
%RSD	16.44644	1186.759	60.31721	21.63113	6.732679	13.75573
#1	-.142877	-.001236	-.000030	-.235937	-.011650	.0003153
#2	-.188826	.003627	-.000066	-.184774	-.010922	.0003686
#3	-.144398	-.001649	-.000115	-.286802	-.010180	.0004161

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB06 Acquired: 10/1/2025 17:41:57 Type: Unk
Method: 6010-200.7 NEW(v240) 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	F -.029415	-.000250	-.000870	.0018012	.0009689	F -.010583
Stddev	.000254	.001599	.012336	.0006358	.0009248	.001111
%RSD	.8621012	638.9164	1418.082	35.30166	95.44819	10.50086
#1	-.029145	-.000724	.013257	.0022132	.0003199	-.009321
#2	-.029649	.001532	-.009517	.0021213	.0020278	-.011415
#3	-.029449	-.001558	-.006349	.0010689	.0005590	-.011013

Elem	Sr4077
Units	ppm
Avg	.0000057
Stddev	.0000681
%RSD	1203.122
#1	.0000576
#2	.0000308
#3	-.000071

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7003.152	101641.7	8026.256	5395.558	8716.076
Stddev	11.631	278.3	39.942	19.243	8.560
%RSD	.1660846	.2738388	.4976408	.3566521	.0982067
#1	6993.975	101439.5	8064.345	5373.458	8706.730
#2	6999.249	101959.1	7984.689	5408.606	8723.534
#3	7016.233	101526.5	8029.736	5404.610	8717.965

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3234-01 Acquired: 10/1/2025 17:46:23 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.001860**	**-.002738**	**.0028861**	**.0021098**	**.0047236**	**2.003745**	**.0444284**
Stddev	.001302	.000362	.0000736	.0033681	.0017040	.009577	.0000708
%RSD	69.99138	13.24065	2.548792	159.6419	36.07419	.4779308	.1593282
#1	-.000610	-.003026	.0029668	-.001668	.0064685	2.001383	.0444340
#2	-.001762	-.002856	.0028228	.004798	.0030637	1.995571	.0443549
#3	-.003207	-.002331	.0028686	.003200	.0046387	2.014282	.0444962

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000218**	**.0001444**	**5.032520**	**.0330850**	**.0012487**	**.0185868**	**2.620035**
Stddev	.0000343	.0000786	.024847	.0000804	.0000999	.0001943	.020135
%RSD	157.1465	54.46411	.4937300	.2429736	7.996494	1.045138	.7684885
#1	.0000271	.0000665	5.013762	.0331595	.0012512	.0186673	2.599616
#2	.0000531	.0001429	5.023098	.0329998	.0013473	.0187280	2.639873
#3	-.000015	.0002237	5.060700	.0330958	.0011476	.0183653	2.620616

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1048362**	**1.317502**	**.0045912**	**-.000737**	**3.380476**	**.0068474**	**.1956766**
Stddev	.0002625	.022674	.0002244	.000361	.004301	.0017094	.0003680
%RSD	.2503927	1.720959	4.886858	48.95206	.1272308	24.96384	.1880878
#1	.1051235	1.342191	.0043536	-.000425	3.376004	.0085420	.1955784
#2	.1046089	1.312703	.0047995	-.000654	3.380841	.0051236	.1953676
#3	.1047762	1.297612	.0046206	-.001132	3.384583	.0068767	.1960838

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.908405**	**.0002636**	**.0028111**	**-.026544**	**.1058098**	**3.751882**	**.2316400**
Stddev	.038272	.0001957	.0001628	.000539	.0017078	.022889	.0007833
%RSD	2.005461	74.24316	5.791993	2.029675	1.614037	.6100561	.3381520
#1	1.896696	.0003799	.0029430	-.027155	.1052369	3.726410	.2308548
#2	1.877355	.0003733	.0026291	-.026137	.1044620	3.758512	.2316438
#3	1.951164	.0000377	.0028612	-.026341	.1077304	3.770724	.2324213

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3234-01 Acquired: 10/1/2025 17:46:23 Type: Unk
Method: 6010-200.7 NEW(v240) 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	1.661252	-.005423	.0139534
Stddev	.009983	.002967	.0000361
%RSD	.6009403	54.71465	.2586840
#1	1.672166	-.002029	.0139129
#2	1.659010	-.006716	.0139651
#3	1.652581	-.007526	.0139823

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6961.642	102512.8	8097.835	5408.407	8577.367
Stddev	5.591	348.9	37.528	13.308	4.452
%RSD	.0803142	.3403617	.4634316	.2460613	.0519071
#1	6956.391	102316.6	8056.865	5401.428	8577.423
#2	6967.521	102306.1	8106.097	5400.041	8581.791
#3	6961.016	102915.6	8130.544	5423.753	8572.887

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3234-02 Acquired: 10/1/2025 17:50:36 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0053189	-.002180	.0332576	.0018025	.0059658	14.87337
Stddev	.0003510	.001231	.0005232	.0022235	.0018441	.04165
%RSD	6.599125	56.43629	1.573152	123.3537	30.91038	.2800250
#1	.0055411	-.003085	.0336697	-.000301	.0047239	14.82878
#2	.0049142	-.002677	.0334342	.004129	.0080847	14.88006
#3	.0055013	-.000779	.0326690	.001579	.0050888	14.91127

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1663253	.0008704	.0000854	7.673016	.0356622	.0077044
Stddev	.0014433	.0000515	.0000787	.015322	.0004007	.0002604
%RSD	.8677742	5.912315	92.19453	.1996821	1.123485	3.379753
#1	.1679420	.0008313	-.000005	7.668406	.0355410	.0079707
#2	.1658676	.0009287	.000129	7.660529	.0353361	.0074503
#3	.1651663	.0008512	.000133	7.690113	.0361094	.0076923

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0379855	18.66007	.4970937	5.625031	.0166927	.0000915
Stddev	.0001894	.11082	.0002996	.063000	.0003231	.0005709
%RSD	.4986353	.5938965	.0602656	1.119995	1.935788	623.8164
#1	.0377815	18.75794	.4973532	5.575920	.0164731	-.000561
#2	.0380193	18.53974	.4967658	5.603109	.0165413	.000337
#3	.0381558	18.68254	.4971620	5.696063	.0170638	.000498

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.134932	.0390696	.2118316	5.829030	-.001039	.0038493
Stddev	.055267	.0019647	.0010218	.053651	.001527	.0000270
%RSD	.7746041	5.028606	.4823580	.9204055	146.9662	.7000704
#1	7.198528	.0394120	.2117789	5.889297	.000560	.0038768
#2	7.098537	.0408405	.2108372	5.811316	-.001196	.0038481
#3	7.107730	.0369562	.2128787	5.786476	-.002482	.0038230

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3234-02 Acquired: 10/1/2025 17:50:36 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.023219	.8983836	F 19.85294	.6411703	1.825246	.0111298
Stddev	.000179	.0013121	.09420	.0034105	.008223	.0009614
%RSD	.7690926	.1460480	.4744813	.5319152	.4504959	8.638592
#1	-.023418	.8970290	19.92037	.6448242	1.834700	.0114144
#2	-.023165	.8996486	19.74531	.6380713	1.821279	.0100581
#3	-.023073	.8984732	19.89314	.6406154	1.819759	.0119167

Elem	Sr4077
Units	ppm
Avg	.0155916
Stddev	.0001427
%RSD	.9153758
#1	.0154433
#2	.0157281
#3	.0156034

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7002.524	101990.3	8318.066	5407.102	8468.061
Stddev	34.428	127.9	41.283	31.062	40.944
%RSD	.4916515	.1253578	.4963087	.5744721	.4835098
#1	6981.551	101842.7	8362.514	5371.381	8439.235
#2	7042.257	102064.0	8280.922	5422.159	8514.927
#3	6983.763	102064.2	8310.762	5427.767	8450.021

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-01 Acquired: 10/1/2025 17:54:44 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.001286**	**-.000215**	**.0030245**	**.0063351**	**-.001863**	**.0841642**	**.0020268**
Stddev	.001088	.000643	.0015733	.0026930	.000301	.0062950	.0012126
%RSD	84.59906	299.0340	52.01919	42.50905	16.15786	7.479418	59.82522
#1	-.002244	-.000673	.0046280	.0032385	-.001728	.0913569	.0024993
#2	-.001509	-.000492	.0029621	.0081290	-.001654	.0814764	.0029321
#3	-.000104	.000520	.0014833	.0076379	-.002208	.0796592	.0006492

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000044**	**.0000034**	**4.639912**	**.0005755**	**.0078180**	**.0055107**	**1.386241**
Stddev	.000087	.0000219	.008694	.0002013	.0001319	.0001716	.017547
%RSD	200.4438	642.2420	.1873637	34.97991	1.687547	3.114543	1.265831
#1	.000057	.0000078	4.629991	.0008072	.0076953	.0053817	1.405235
#2	-.000101	.0000228	4.646201	.0004767	.0079576	.0057055	1.370634
#3	-.000087	-.000020	4.643543	.0004428	.0078011	.0054448	1.382856

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0198250**	**1.847779**	**.0090961**	**-.000533**	**14.69652**	**.0008003**	**.0389504**
Stddev	.0003638	.021645	.0001848	.000285	.09462	.0021670	.0002025
%RSD	1.835305	1.171431	2.031300	53.44885	.6438046	270.7734	.5198485
#1	.0195863	1.827005	.0092917	-.000723	14.76899	.0006147	.0391274
#2	.0196449	1.870202	.0089246	-.000205	14.73110	.0030542	.0389942
#3	.0202438	1.846129	.0090719	-.000671	14.58948	-.001268	.0387296

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8415215**	**-.006163**	**.0006285**	**-.014364**	**.0007548**	**6.171810**	**.0095020**
Stddev	.0459577	.000269	.0000990	.000593	.0020649	.021783	.0001414
%RSD	5.461258	4.362333	15.74795	4.128467	273.5565	.3529357	1.488213
#1	.7889175	-.005860	.0005199	-.013683	-.000286	6.195076	.0093394
#2	.8617633	-.006256	.0007135	-.014767	-.000583	6.168454	.0095700
#3	.8738837	-.006374	.0006523	-.014643	.003133	6.151900	.0095965

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-01 Acquired: 10/1/2025 17:54:44 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**6.341995**	**-.009574**	**.0241473**
Stddev	.060733	.001111	.0000758
%RSD	.9576367	11.60511	.3139447
#1	6.271905	-.010855	.0240931
#2	6.379059	-.008874	.0242340
#3	6.375021	-.008994	.0241150

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6908.168**	**100617.6**	**8279.681**	**5339.972**	**8438.457**
Stddev	12.928	276.1	14.640	23.819	9.612
%RSD	.1871373	.2743628	.1768161	.4460573	.1139021
#1	6897.557	100518.9	8296.529	5358.779	8428.133
#2	6904.382	100404.5	8272.450	5347.949	8447.147
#3	6922.566	100929.5	8270.064	5313.188	8440.092

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02 Acquired: 10/1/2025 17:58:58 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000108**	**.0006179**	**.0020719**	**.0026859**	**-.000817**	**.0712971**	**.0017930**
Stddev	.000940	.0025063	.0014878	.0018027	.000560	.0113214	.0012257
%RSD	871.6956	405.6259	71.80749	67.11725	68.46482	15.87915	68.36160
#1	.000915	-.002274	.0035081	.0043901	-.000314	.0756654	.0027341
#2	-.000933	.002155	.0005375	.0007987	-.001420	.0584423	.0022378
#3	-.000306	.001973	.0021701	.0028689	-.000719	.0797835	.0004070

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000072**	**-.000009**	**4.633889**	**.0007022**	**.0077572**	**.0082926**	**.1026658**
Stddev	.000077	.000028	.006038	.0002042	.0000639	.0002153	.0058310
%RSD	107.9029	317.1568	.1303009	29.08364	.8238605	2.596724	5.679581
#1	-.000009	-.000039	4.626969	.0004909	.0076908	.0082925	.1083214
#2	-.000048	-.000004	4.636609	.0008986	.0078182	.0080773	.1030023
#3	-.000158	.000017	4.638088	.0007171	.0077627	.0085080	.0966739

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0230999**	**1.849438**	**.0090430**	**-.000422**	**15.15632**	**-.000536**	**.0346345**
Stddev	.0007706	.004174	.0001469	.000626	.13886	.001933	.0005871
%RSD	3.336055	.2256832	1.624529	148.3133	.9161546	360.3733	1.695056
#1	.0224806	1.844623	.0090767	-.001138	15.31666	-.002730	.0341110
#2	.0228561	1.851661	.0088822	-.000148	15.07639	.000202	.0352692
#3	.0239629	1.852030	.0091701	.000020	15.07592	.000918	.0345234

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8816631**	**-.006384**	**.0004695**	**-.027913**	**.0004878**	**6.234546**	**.0095929**
Stddev	.0259335	.000550	.0001838	.000556	.0004866	.037323	.0011186
%RSD	2.941427	8.615938	39.15033	1.990634	99.76135	.5986550	11.66105
#1	.8701460	-.006166	.0003587	-.028551	.0010493	6.225561	.0091497
#2	.9113603	-.007009	.0006817	-.027648	.0001887	6.275541	.0087638
#3	.8634828	-.005976	.0003682	-.027539	.0002254	6.202534	.0108652

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02 Acquired: 10/1/2025 17:58:58 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**6.117567**	**-.010784**	**.0257004**
Stddev	.025200	.001637	.0002471
%RSD	.4119259	15.18449	.9613134
#1	6.097026	-.011950	.0258945
#2	6.145686	-.011489	.0254223
#3	6.109988	-.008912	.0257842

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6989.176**	**98971.11**	**8292.154**	**5323.148**	**8616.172**
Stddev	8.623	236.99	38.489	11.974	12.729
%RSD	.1233776	.2394494	.4641664	.2249333	.1477328
#1	6984.921	98920.36	8295.273	5336.909	8607.026
#2	6999.100	98763.61	8328.990	5315.114	8630.709
#3	6983.508	99229.36	8252.201	5317.420	8610.780

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02DUP Acquired: 10/1/2025 18:03:14 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.001247**	**.0003478**	**.0013088**	**.0021403**	**-.001478**	**.0756248**	**.0022149**
Stddev	.001396	.0013684	.0018771	.0026075	.001893	.0112862	.0007857
%RSD	111.9261	393.4892	143.4262	121.8297	128.0471	14.92394	35.47060
#1	-.000117	.0015857	-.000695	.0051508	-.003482	.0879552	.0013955
#2	-.000817	-.001122	.001594	.0006719	.000281	.0658061	.0022875
#3	-.002807	.000579	.003027	.0005981	-.001234	.0731130	.0029618

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000102**	**.0000092**	**4.542840**	**.0005344**	**.0077116**	**.0080168**	**.0841973**
Stddev	.000040	.0000246	.019839	.0002533	.0002904	.0001414	.0064272
%RSD	39.51673	266.7389	.4367046	47.40225	3.766094	1.764274	7.633539
#1	-.000056	-.000012	4.558308	.0004927	.0077586	.0078849	.0913398
#2	-.000117	.000036	4.520473	.0003046	.0074006	.0079995	.0823717
#3	-.000132	.000004	4.549739	.0008060	.0079758	.0081661	.0788803

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0197140**	**1.843763**	**.0088265**	**-.000305**	**14.40923**	**.0021003**	**.0333505**
Stddev	.0002875	.037285	.0000722	.000589	.05044	.0027961	.0003657
%RSD	1.458183	2.022213	.8183917	193.0279	.3500230	133.1313	1.096526
#1	.0200373	1.854212	.0088795	-.000867	14.36679	.0033017	.0331415
#2	.0196171	1.874709	.0088557	.000308	14.39591	-.001096	.0331374
#3	.0194875	1.802369	.0087442	-.000357	14.46499	.004095	.0337728

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8001940**	**-.006561**	**.0004947**	**-.028627**	**.0003784**	**5.878866**	**.0119774**
Stddev	.0283221	.000612	.0001881	.000233	.0016478	.042500	.0007310
%RSD	3.539402	9.335005	38.03430	.8135463	435.4587	.7229306	6.102887
#1	.7733943	-.005872	.0006847	-.028843	.0018540	5.839399	.0111373
#2	.7973620	-.006769	.0004909	-.028380	.0006809	5.923859	.0124677
#3	.8298257	-.007042	.0003085	-.028658	-.001400	5.873341	.0123273

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02DUP Acquired: 10/1/2025 18:03:14 Type: Unk
Method: 6010-200.7 NEW(v240) 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	6.040437	-.011360	.0251747
Stddev	.037571	.000432	.0000848
%RSD	.6219843	3.799900	.3366378
#1	6.064922	-.010988	.0251872
#2	6.059211	-.011258	.0252525
#3	5.997180	-.011833	.0250844

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6887.673	100778.9	8074.460	5388.615	8413.846
Stddev	7.025	97.9	39.486	22.081	9.006
%RSD	.1019930	.0971263	.4890258	.4097773	.1070398
#1	6895.395	100876.0	8031.499	5375.263	8419.283
#2	6881.661	100680.2	8082.712	5376.481	8403.450
#3	6885.963	100780.5	8109.168	5414.103	8418.804

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02LX5 Acquired: 10/1/2025 18:07:29 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000428**	**-.001741**	**.0002285**	**.0006245**	**-.002490**	**.0260889**	**-.001918**
Stddev	.001982	.002754	.0008335	.0004629	.000906	.0046406	.000757
%RSD	463.2967	158.2265	364.8285	74.11390	36.40502	17.78773	39.44834
#1	-.000108	-.002039	-.000359	.0011205	-.002271	.0275785	-.001050
#2	.001375	-.004333	.001182	.0002041	-.001712	.0208863	-.002436
#3	-.002550	.001151	-.000138	.0005489	-.003485	.0298017	-.002269

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000031**	**.0000199**	**1.014512**	**-.000071**	**.0015377**	**.0013470**	**.0237795**
Stddev	.0000505	.0000312	.014352	.000099	.0001124	.0004991	.0020530
%RSD	1638.989	156.5895	1.414663	140.0089	7.312473	37.05273	8.633396
#1	.0000316	.0000543	1.021384	.000019	.0014984	.0019003	.0214210
#2	-.000055	-.000006	.998016	-.000054	.0016645	.0012101	.0247519
#3	.000033	.000012	1.024136	-.000177	.0014502	.0009307	.0251657

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0057390**	**.4399854**	**.0016386**	**-.000501**	**3.880079**	**.0012162**	**.0069870**
Stddev	.0003149	.0087684	.0005746	.000200	.023125	.0011997	.0000731
%RSD	5.487321	1.992878	35.06771	39.83234	.5959951	98.63698	1.046198
#1	.0061005	.4339288	.0017499	-.000423	3.856859	.0008635	.0069026
#2	.0055242	.4359871	.0010165	-.000352	3.903108	.0025527	.0070277
#3	.0055922	.4500402	.0021494	-.000728	3.880272	.0002325	.0070307

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8038346**	**-.012121**	**.0002936**	**-.006180**	**.0006013**	**1.300555**	**.0032230**
Stddev	.0193591	.001042	.0002660	.000472	.0014469	.016187	.0007183
%RSD	2.408346	8.594781	90.61950	7.642392	240.6349	1.244636	22.28773
#1	.7967391	-.010974	.0005817	-.005991	-.000533	1.303348	.0040500
#2	.8257403	-.013008	.0002415	-.006717	.000107	1.283154	.0028655
#3	.7890243	-.012381	.0000574	-.005831	.002231	1.315165	.0027536

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02LX5 Acquired: 10/1/2025 18:07:29 Type: Unk
Method: 6010-200.7 NEW(v240) 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	1.370018	.0068453	.0056246
Stddev	.015594	.0025328	.0000534
%RSD	1.138202	37.00032	.9491384
#1	1.386539	.0070057	.0056862
#2	1.367958	.0092940	.0055920
#3	1.355557	.0042361	.0055956

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6888.159	101587.0	8232.824	5396.006	8458.370
Stddev	9.828	397.6	23.619	50.162	7.761
%RSD	.1426756	.3913915	.2868933	.9296112	.0917524
#1	6894.300	101493.7	8237.494	5383.029	8457.935
#2	6876.824	102022.9	8207.218	5451.382	8450.836
#3	6893.353	101244.3	8253.759	5353.609	8466.339

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02MS Acquired: 10/1/2025 18:11:48 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.8030453**	**1.928811**	**.9403116**	**1.987378**	**.8021767**	**2.019705**	**.1961358**
Stddev	.0013543	.057276	.0014229	.009441	.0034501	.015175	.0026862
%RSD	.1686445	2.969478	.1513239	.4750579	.4300935	.7513380	1.369551
#1	.8014815	1.973044	.9387354	1.981463	.8020941	2.004144	.1991963
#2	.8038361	1.864114	.9406981	1.982405	.7987687	2.034462	.1950421
#3	.8038184	1.949274	.9415013	1.998266	.8056674	2.020510	.1941689

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1915057**	**.1900201**	**5.684903**	**.4005188**	**.2034152**	**.3124493**	**2.999279**
Stddev	.0011140	.0004054	.022672	.0004383	.0004653	.0007251	.035887
%RSD	.5817022	.2133326	.3988039	.1094261	.2287500	.2320781	1.196521
#1	.1920549	.1895619	5.675586	.4005771	.2029230	.3117114	3.039236
#2	.1902237	.1903323	5.668374	.4000544	.2034746	.3124756	2.988810
#3	.1922384	.1901661	5.710748	.4009251	.2038479	.3131609	2.969791

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2249337**	**3.805360**	**.4965319**	**.0702428**	**17.58172**	**.3015092**	**.2346998**
Stddev	.0026447	.033112	.0009631	.0004450	.19410	.0044775	.0004037
%RSD	1.175756	.8701450	.1939666	.6335076	1.103983	1.485012	.1720214
#1	.2279799	3.843278	.4955138	.0707227	17.77055	.3013350	.2343882
#2	.2235968	3.782142	.4974285	.0701618	17.59188	.2971214	.2345554
#3	.2232244	3.790662	.4966535	.0698438	17.38275	.3060712	.2351559

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.28933**	**.2647636**	**.4274400**	**.6812464**	**.1980865**	**6.893245**	**5.600560**
Stddev	.07616	.0012175	.0017515	.0005364	.0016350	.024392	.027183
%RSD	.7402179	.4598440	.4097767	.0787347	.8254117	.3538550	.4853595
#1	10.37609	.2649953	.4260785	.6812799	.1999734	6.893007	5.622685
#2	10.25839	.2634469	.4268256	.6806940	.1970862	6.917755	5.570216
#3	10.23351	.2658486	.4294160	.6817652	.1972001	6.868973	5.608778

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02MS Acquired: 10/1/2025 18:11:48 Type: Unk
Method: 6010-200.7 NEW(v240) 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	6.638824	.1856832	.2185451
Stddev	.027983	.0014904	.0025822
%RSD	.4215046	.8026451	1.181522
#1	6.659831	.1873402	.2214148
#2	6.607058	.1852569	.2164094
#3	6.649583	.1844523	.2178111

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6762.177	101203.8	8143.666	5310.217	8151.051
Stddev	8.149	562.7	34.831	20.794	15.916
%RSD	.1205091	.5560417	.4277087	.3915804	.1952672
#1	6769.656	101008.4	8103.907	5321.320	8155.307
#2	6753.492	100764.7	8158.293	5286.228	8133.440
#3	6763.382	101838.1	8168.800	5323.102	8164.407

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02MSD Acquired: 10/1/2025 18:15:46 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.7896765**	**1.770948**	**.9275159**	**1.956025**	**.7978276**	**2.038118**	**.1915351**
Stddev	.0014910	.040899	.0012143	.001550	.0014428	.014361	.0001116
%RSD	.1888109	2.309468	.1309235	.0792370	.1808416	.7046404	.0582609
#1	.7912244	1.818157	.9269458	1.957389	.7990093	2.054654	.1914063
#2	.7895555	1.746215	.9266916	1.956347	.7982537	2.030932	.1915985
#3	.7882498	1.748473	.9289104	1.954339	.7962197	2.028768	.1916006

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1887033**	**.1868919**	**5.527247**	**.4023649**	**.2006648**	**.3080073**	**3.014542**
Stddev	.0013783	.0002630	.010591	.0016308	.0002619	.0004492	.038478
%RSD	.7304145	.1407197	.1916215	.4053146	.1305033	.1458349	1.276412
#1	.1879127	.1867261	5.527045	.4042279	.2004248	.3080584	3.056571
#2	.1879025	.1867544	5.516758	.4016713	.2006256	.3084288	3.006004
#3	.1902949	.1871951	5.537938	.4011956	.2009441	.3075348	2.981050

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2170890**	**3.801943**	**.4884025**	**.0697109**	**17.04213**	**.2992845**	**.2341042**
Stddev	.0001681	.007946	.0004956	.0004168	.09965	.0007825	.0016148
%RSD	.0774134	.2090004	.1014767	.5978513	.5847362	.2614686	.6897800
#1	.2172732	3.792970	.4886648	.0701813	17.13617	.2999319	.2334639
#2	.2169440	3.804771	.4878308	.0693879	17.05255	.2984149	.2359410
#3	.2170497	3.808088	.4887118	.0695634	16.93768	.2995069	.2329078

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.29438**	**.2597966**	**.4267338**	**.6870466**	**.1949563**	**6.904257**	**5.394663**
Stddev	.05205	.0020581	.0000827	.0016082	.0010775	.060283	.009856
%RSD	.5056594	.7921758	.0193785	.2340741	.5526860	.8731223	.1826965
#1	10.35080	.2598047	.4267425	.6887709	.1943822	6.969947	5.406009
#2	10.24822	.2577345	.4266471	.6867816	.1961993	6.891353	5.389765
#3	10.28412	.2618505	.4268118	.6855874	.1942874	6.851472	5.388216

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02MSD Acquired: 10/1/2025 18:15:46 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**6.181564**	**.1815745**	**.2144013**
Stddev	.009687	.0008185	.0004168
%RSD	.1567032	.4507970	.1944137
#1	6.191928	.1824547	.2139327
#2	6.180024	.1814326	.2147306
#3	6.172739	.1808362	.2145406

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6895.341**	**100944.2**	**8305.765**	**5303.706**	**8376.392**
Stddev	12.240	612.3	29.185	39.450	14.493
%RSD	.1775152	.6066224	.3513793	.7438159	.1730226
#1	6906.123	100269.8	8311.394	5292.098	8379.737
#2	6897.864	101097.2	8331.725	5271.361	8388.920
#3	6882.035	101465.5	8274.175	5347.657	8360.519

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02A Acquired: 10/1/2025 18:19:44 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7863157	1.663628	.9350114	1.928918	.3552962	.7778725	.0760369
Stddev	.1230484	.152696	.1445514	.283643	.0971650	.1827664	.0156178
%RSD	15.64872	9.178503	15.45985	14.70477	27.34759	23.49568	20.53979
#1	.6601837	1.489518	.7843001	1.634910	.2567089	.5940120	.0603686
#2	.7927340	1.726592	.9482407	1.950931	.3582061	.7800805	.0761384
#3	.9060293	1.774774	1.072493	2.200914	.4509735	.9595249	.0916038

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1207018	.1898891	4.996885	.2514259	.2034813	.3139075	1.143201
Stddev	.0131241	.0293783	.093137	.0288087	.0303425	.0474240	.285266
%RSD	10.87314	15.47129	1.863904	11.45814	14.91169	15.10764	24.95324
#1	.1075039	.1591495	4.907134	.2214155	.1718907	.2644507	.855262
#2	.1208506	.1928336	4.990448	.2540025	.2061542	.3182751	1.148624
#3	.1337508	.2176843	5.093074	.2788599	.2323989	.3589966	1.425716

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0959451	2.563188	.4950123	.0438122	15.58344	.1134456	.1580029
Stddev	.0176981	.174781	.0748292	.0049036	.28342	.0296271	.0136945
%RSD	18.44607	6.818905	15.11664	11.19227	1.818741	26.11565	8.667241
#1	.0789219	2.387299	.4168907	.0386438	15.29903	.0850231	.1436293
#2	.0946649	2.565425	.5021017	.0443939	15.58544	.1111681	.1594809
#3	.1142485	2.736840	.5660445	.0483991	15.86586	.1441457	.1708984

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.665458	.1627564	.1848902	.2680843	.0186717	6.153359	5.413382
Stddev	.779589	.0173860	.0506603	.0836382	.0069981	.051533	.795696
%RSD	16.70981	10.68219	27.40020	31.19847	37.48002	.8374700	14.69868
#1	3.911127	.1456042	.1331318	.1826193	.0120011	6.096195	4.576587
#2	4.617184	.1622981	.1871629	.2718662	.0180570	6.196251	5.503204
#3	5.468062	.1803670	.2343759	.3497674	.0259568	6.167632	6.160355

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3237-02A Acquired: 10/1/2025 18:19:44 Type: Unk
Method: 6010-200.7 NEW(v240) 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	6.127671	.0623288	.0969774
Stddev	.063142	.0170528	.0171604
%RSD	1.030446	27.35942	17.69525
#1	6.174272	.0458321	.0802077
#2	6.152932	.0612663	.0962211
#3	6.055809	.0798880	.1145035

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6879.803	101380.2	8189.650	5336.954	8391.700
Stddev	16.356	395.4	43.261	23.551	20.748
%RSD	.2377364	.3900600	.5282431	.4412855	.2472498
#1	6898.271	101762.2	8139.865	5362.183	8414.412
#2	6867.149	100972.6	8210.987	5315.549	8373.738
#3	6873.988	101405.7	8218.098	5333.130	8386.951

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169925TB Acquired: 10/1/2025 18:23:44 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.000529**	**-.001046**	**-.000993**	**.0069993**	**-.000124**	**.0077223**	**-.002664**
Stddev	.001476	.003592	.001023	.0011820	.001620	.0069481	.002022
%RSD	279.0825	343.2287	103.0767	16.88809	1307.700	89.97438	75.89663
#1	.000912	-.002233	.000157	.0081335	-.001917	.0055816	-.002021
#2	-.002037	.002988	-.001805	.0070898	.001235	.0154888	-.004929
#3	-.000461	-.003895	-.001331	.0057746	.000310	.0020965	-.001042

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000074**	**-.000012**	**.0445757**	**.0008953**	**-.000094**	**-.000163**	**.0131636**
Stddev	.000020	.000076	.0138039	.0000811	.000319	.000237	.0129318
%RSD	27.42691	607.6629	30.96729	9.062704	339.4181	145.9479	98.23916
#1	-.000059	.000018	.0475956	.0008248	-.000376	-.000413	.0124417
#2	-.000098	-.000098	.0566196	.0009840	.000253	-.000134	.0264412
#3	-.000066	.000044	.0295118	.0008770	-.000159	.000059	.0006079

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037996**	**.0040973**	**.0008504**	**-.000897**	**363.2422**	**.0003066**	**.0015710**
Stddev	.0005542	.0195776	.0005832	.000083	5.2703	.0037702	.0002300
%RSD	14.58652	477.8129	68.56957	9.304948	1.450908	1229.553	14.63922
#1	.0031598	.0257763	.0013868	-.000822	368.4446	.0017548	.0014470
#2	.0041321	-.001192	.0002297	-.000883	357.9065	-.003973	.0018364
#3	.0041069	-.012292	.0009349	-.000987	363.3756	.003138	.0014296

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.126586**	**-.009079**	**.0004643**	**-.027712**	**.0018180**	**.0206119**	**.0067737**
Stddev	.049369	.000811	.0001242	.000093	.0008814	.0110508	.0007177
%RSD	39.00044	8.932439	26.74482	.3357759	48.48331	53.61391	10.59520
#1	-.107330	-.008500	.0003988	-.027637	.0016068	.0326434	.0068949
#2	-.182682	-.008731	.0006076	-.027683	.0010614	.0109147	.0074230
#3	-.089747	-.010006	.0003866	-.027817	.0027858	.0182775	.0060031

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169925TB Acquired: 10/1/2025 18:23:44 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0624854	-.011233	.0001833
Stddev	.0002609	.000483	.0000868
%RSD	.4175403	4.296338	47.36845
#1	.0626048	-.011713	.0002830
#2	.0621861	-.010748	.0001244
#3	.0626652	-.011239	.0001425

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6526.590	95248.19	7990.777	5096.881	7460.732
Stddev	4.544	352.14	35.523	16.016	6.453
%RSD	.0696166	.3697056	.4445487	.3142277	.0864864
#1	6522.035	94857.95	8013.479	5079.178	7461.643
#2	6531.122	95344.42	8009.012	5110.365	7466.681
#3	6526.614	95542.22	7949.840	5101.101	7453.872

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV07 Acquired: 10/1/2025 18:28:12 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV07 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.038934**	**4.945348**	**4.965848**	**5.051668**	**5.044479**	**9.922547**	**10.01490**
Stddev	.010257	.134797	.011232	.004905	.002646	.035689	.07649
%RSD	.2035502	2.725728	.2261753	.0970940	.0524559	.3596739	.7637577
#1	5.027145	4.807318	4.958658	5.046005	5.047432	9.901018	10.02493
#2	5.045811	4.952067	4.960095	5.054456	5.042324	9.963743	10.08588
#3	5.043845	5.076660	4.978790	5.054543	5.043681	9.902879	9.93390

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2460722**	**2.502923**	**24.94987**	**1.004758**	**2.496454**	**1.261309**	**5.105331**
Stddev	.0007476	.004285	.03210	.003634	.002893	.000853	.015570
%RSD	.3038022	.1711951	.1286541	.3616829	.1159004	.0676245	.3049792
#1	.2454957	2.501618	24.91287	1.004976	2.495325	1.260788	5.117155
#2	.2469169	2.499442	24.96646	1.008278	2.494295	1.260845	5.087689
#3	.2458040	2.507708	24.97027	1.001019	2.499741	1.262293	5.111147

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.507819**	**24.79152**	**2.502507**	**1.252919**	**25.06404**	**2.510539**	**2.524328**
Stddev	.006890	.10183	.002117	.001550	.32473	.004871	.003298
%RSD	.2747219	.4107454	.0846108	.1236932	1.295618	.1940303	.1306385
#1	2.512240	24.69736	2.502203	1.254684	25.43886	2.511919	2.528072
#2	2.499881	24.89959	2.500558	1.251780	24.88579	2.514571	2.523059
#3	2.511335	24.77762	2.504760	1.252294	24.86747	2.505126	2.521854

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**26.08441**	**4.921952**	**5.032696**	**5.011422**	**5.002420**	**5.002752**	**5.101320**
Stddev	.10445	.022454	.006337	.010663	.011766	.014433	.007331
%RSD	.4004203	.4562098	.1259103	.2127809	.2352115	.2884940	.1437118
#1	26.17597	4.896547	5.029513	4.999689	5.004717	4.988408	5.093302
#2	25.97065	4.939145	5.028583	5.014057	4.989674	5.002575	5.107680
#3	26.10662	4.930163	5.039994	5.020521	5.012868	5.017272	5.102979

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV07 Acquired: 10/1/2025 18:28:12 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**4.991960**	**4.903129**	**5.018728**
Stddev	.021735	.014740	.012523
%RSD	.4354095	.3006232	.2495166
#1	4.969712	4.908103	5.005396
#2	4.993024	4.886545	5.020547
#3	5.013144	4.914738	5.030242

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6599.970**	**95228.05**	**8074.867**	**5132.147**	**7635.798**
Stddev	14.328	166.99	38.120	29.255	17.282
%RSD	.2170951	.1753534	.4720789	.5700394	.2263237
#1	6609.416	95360.78	8115.370	5110.803	7644.736
#2	6607.010	95040.56	8039.691	5120.143	7646.780
#3	6583.484	95282.80	8069.540	5165.495	7615.878

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB07 Acquired: 10/1/2025 18:32:23 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.002214**	**.0013004**	**.0002759**	**.0009143**	**-.000191**	**.0114125**
Stddev	.002563	.0016625	.0009447	.0024609	.000871	.0072264
%RSD	115.7619	127.8449	342.3668	269.1454	454.9721	63.31971
#1	-.000091	.0031529	.0013571	.0037466	.000769	.0087814
#2	-.005061	.0008100	-.000391	-.000302	-.000413	.0195858
#3	-.001490	-.000062	-.000139	-.000702	-.000930	.0058703

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017716**	**-.000055**	**.0000350**	**-.003964**	**.0000833**	**-.000130**
Stddev	.0012441	.000043	.0000536	.008927	.0000352	.000109
%RSD	70.22391	78.65869	152.8354	225.1900	42.23963	83.46184
#1	.0018295	-.000090	-.000005	.005665	.0001222	-.000006
#2	.0004996	-.000007	.000096	-.011965	.0000539	-.000206
#3	.0029858	-.000069	.000014	-.005593	.0000736	-.000179

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000426**	**.0080202**	**.0007424**	**.0087095**	**.0001363**	**-.000788**
Stddev	.000328	.0052071	.0004828	.0117439	.0002662	.000514
%RSD	77.13172	64.92484	65.03182	134.8406	195.3613	65.21356
#1	-.000056	.0066940	.0008796	.0143417	.0000375	-.000768
#2	-.000683	.0137622	.0002058	.0165765	-.000066	-.000285
#3	-.000537	.0036044	.0011418	-.004790	.000438	-.001312

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.199756**	**.0002394**	**-.000299**	**-.300885**	**-.009102**	**.0004813**
Stddev	.023289	.0026785	.000144	.013087	.000871	.0003516
%RSD	11.65875	1118.871	48.02745	4.349551	9.571654	73.05695
#1	-.181344	.0011628	-.000340	-.313574	-.008491	.0008605
#2	-.191987	.0023340	-.000418	-.287433	-.008714	.0001660
#3	-.225936	-.002779	-.000139	-.301648	-.010099	.0004174

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB07 Acquired: 10/1/2025 18:32:23 Type: Unk
Method: 6010-200.7 NEW(v240) 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	F -.028787	.0024410	.0065233	.0000962	.0000398	-.009933
Stddev	.000226	.0008901	.0077898	.0013026	.0010244	.000152
%RSD	.7849848	36.46313	119.4146	1354.107	2571.065	1.529190
#1	-.028538	.0015679	.0137311	.0012300	-.001015	-.009766
#2	-.028979	.0024079	-.001741	-.001327	.001031	-.009970
#3	-.028843	.0033471	.007580	.000385	.000104	-.010063

Elem	Sr4077
Units	ppm
Avg	.0000171
Stddev	.0000415
%RSD	243.2230
#1	-.000031
#2	.000044
#3	.000037

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6859.783	96839.05	7786.252	5276.020	8473.592
Stddev	7.413	220.63	24.936	11.074	15.452
%RSD	.1080708	.2278308	.3202551	.2098863	.1823572
#1	6851.223	96645.54	7811.923	5283.850	8457.275
#2	6864.106	97079.31	7784.712	5280.859	8475.499
#3	6864.019	96792.30	7762.122	5263.350	8488.002

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3255-02 Acquired: 10/1/2025 18:36:43 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0007236	-.003505	-.000311	-.006366	-.006305	.0069544	-.036299
Stddev	.0003230	.000784	.000184	.000488	.000536	.0014467	.000070
%RSD	44.63999	22.36838	59.30033	7.662330	8.494527	20.80233	.1931708
#1	.0004060	-.003362	-.000271	-.006778	-.006872	.0078828	-.036313
#2	.0007130	-.002802	-.000511	-.006493	-.005807	.0052875	-.036223
#3	.0010518	-.004351	-.000149	-.005828	-.006237	.0076928	-.036361

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001009	.0001760	.0018997	-.000531	.0000832	-.000987	-.000946
Stddev	.0000339	.0000270	.0067805	.000149	.0000435	.000026	.000755
%RSD	33.59176	15.31711	356.9300	28.08200	52.27199	2.647534	79.84677
#1	.0001294	.0002053	-.002000	-.000616	.0000358	-.000963	-.000130
#2	.0001100	.0001703	.009729	-.000618	.0000926	-.001015	-.001088
#3	.0000634	.0001523	-.002030	-.000359	.0001213	-.000984	-.001620

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004828	.0358406	.0005782	-.000302	-.291776	.0020994	-.000950
Stddev	.0002843	.0100122	.0001215	.000627	.008265	.0007242	.000092
%RSD	58.88964	27.93531	21.01049	207.7330	2.832666	34.49414	9.735049
#1	.0007853	.0346831	.0005982	.000259	-.286019	.0027072	-.000853
#2	.0002211	.0264575	.0006886	-.000979	-.288062	.0012982	-.001038
#3	.0004421	.0463813	.0004480	-.000186	-.301246	.0022929	-.000957

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.104254	-.014577	-.000144	-.029499	-.000738	-.032674	-.003146
Stddev	.011156	.000266	.000072	.000084	.001336	.004700	.000193
%RSD	10.70086	1.825150	50.00105	.2864035	181.0125	14.38311	6.130926
#1	-.102645	-.014879	-.000173	-.029466	-.001431	-.031441	-.003225
#2	-.116127	-.014471	-.000062	-.029595	-.001584	-.028714	-.002926
#3	-.093989	-.014380	-.000197	-.029436	.000802	-.037867	-.003287

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3255-02 Acquired: 10/1/2025 18:36:43 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.008258**	**-.011250**	**.0000497**
Stddev	.000220	.000684	.0000450
%RSD	2.658406	6.080884	90.68530
#1	-.008452	-.011324	.0000540
#2	-.008301	-.010532	.0000924
#3	-.008020	-.011894	.0000026

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**22054.75**	**292952.3**	**18840.36**	**15904.97**	**29414.39**
Stddev	316.20	13183.1	942.35	1451.12	374.71
%RSD	1.433696	4.500080	5.001754	9.123684	1.273912
#1	21725.02	306006.1	19574.78	14427.68	29014.56
#2	22083.83	279643.6	17777.81	17328.42	29471.08
#3	22355.41	293207.3	19168.50	15958.82	29757.53

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-04 Acquired: 10/1/2025 18:41:07 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.0005604	-.003570	-.000054	-.005982	-.005926	.0071644	-.035439
Stddev	.0005138	.000137	.000330	.000241	.000199	.0039219	.000749
%RSD	91.68086	3.849768	606.4788	4.031559	3.366455	54.74183	2.112169
#1	.0003531	-.003697	.000109	-.006087	-.005848	.0114012	-.035674
#2	.0011454	-.003587	.000162	-.005706	-.006153	.0036610	-.036041
#3	.0001826	-.003424	-.000434	-.006153	-.005777	.0064309	-.034601

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000785	.0001675	-.002849	-.000484	.0000648	-.001022	-.001651
Stddev	.0000173	.0000093	.010126	.000134	.0000711	.000088	.002602
%RSD	22.03024	5.545005	355.4629	27.73167	109.6298	8.637521	157.6546
#1	.0000709	.0001571	.004076	-.000584	.0001424	-.000931	-.004648
#2	.0000983	.0001750	.001848	-.000331	.0000492	-.001026	.000034
#3	.0000663	.0001704	-.014471	-.000536	.0000029	-.001107	-.000338

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006417	.0297695	.0006207	-.000700	-.299575	.0036234	-.000956
Stddev	.0000650	.0137849	.0000453	.000612	.003941	.0004973	.000045
%RSD	10.13756	46.30545	7.302148	87.43126	1.315411	13.72580	4.751227
#1	.0007021	.0169611	.0006178	-.000839	-.296180	.0041967	-.000971
#2	.0005728	.0279894	.0005768	-.001230	-.298649	.0033086	-.000905
#3	.0006502	.0443580	.0006673	-.000030	-.303896	.0033648	-.000991

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.108075	-.013736	-.000213	-.029600	.0001726	-.036130	-.002569
Stddev	.039044	.000236	.000059	.000025	.0005111	.004678	.000269
%RSD	36.12657	1.717444	27.80302	.0861278	296.1206	12.94860	10.45209
#1	-.150024	-.013526	-.000200	-.029628	-.000047	-.032355	-.002281
#2	-.101408	-.013691	-.000278	-.029578	.000757	-.034671	-.002614
#3	-.072794	-.013991	-.000161	-.029594	-.000192	-.041364	-.002813

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-04 Acquired: 10/1/2025 18:41:07 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.008048**	**-.011403**	**.0000060**
Stddev	.000969	.001440	.0000550
%RSD	12.04587	12.62589	916.4324
#1	-.008283	-.009901	-.000046
#2	-.008879	-.012772	.000063
#3	-.006983	-.011536	.000001

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**21038.86**	**287376.5**	**16075.42**	**16516.31**	**28198.02**
Stddev	892.83	19962.3	278.92	855.53	1025.78
%RSD	4.243727	6.946395	1.735057	5.179931	3.637778
#1	20019.92	284055.0	16316.25	17476.54	27024.70
#2	21684.22	269283.3	15769.82	16237.17	28925.11
#3	21412.43	308791.2	16140.20	15835.20	28644.24

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08 Acquired: 10/1/2025 18:45:31 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.001918**	**.0017838**	**.1080340**	**.0058565**	**.0021243**	**.0881727**	**.1218010**
Stddev	.000604	.0007542	.0026173	.0025296	.0015531	.0064501	.0015341
%RSD	31.47304	42.28355	2.422644	43.19312	73.11458	7.315351	1.259531
#1	-.002216	.0021736	.1050510	.0034848	.0004596	.0831685	.1212538
#2	-.002315	.0022633	.1091053	.0085189	.0023786	.0954521	.1235337
#3	-.001223	.0009144	.1099456	.0055659	.0035345	.0858975	.1206155

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000055**	**.0010954**	**59.89200**	**.0024410**	**.0008035**	**.0113909**	**.0194784**
Stddev	.000081	.0000091	.08482	.0002417	.0001581	.0002585	.0072379
%RSD	146.7464	.8291267	.1416249	9.902961	19.67233	2.269209	37.15869
#1	-.000103	.0010967	59.93182	.0026916	.0007281	.0116812	.0111898
#2	.000038	.0010857	59.79459	.0024221	.0009851	.0113061	.0245510
#3	-.000100	.0011037	59.94958	.0022093	.0006973	.0111856	.0226944

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0823123**	**1.364444**	**.0022703**	**-.000475**	**288.5526**	**.0039461**	**.2145777**
Stddev	.0006485	.044736	.0002880	.000336	2.9327	.0038021	.0009922
%RSD	.7878619	3.278695	12.68742	70.77935	1.016355	96.35098	.4623730
#1	.0816529	1.332584	.0019827	-.000245	290.1675	.0041219	.2148705
#2	.0823346	1.345160	.0025587	-.000861	290.3230	.0076572	.2134720
#3	.0829493	1.415588	.0022693	-.000319	285.1674	.0000591	.2153904

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.700825**	**-.002009**	**.0005416**	**-.028855**	**-.000918**	**1.059851**	**.0377041**
Stddev	.073266	.000955	.0003264	.000426	.000503	.001125	.0006335
%RSD	4.307700	47.55598	60.27050	1.476760	54.82873	.1061290	1.680199
#1	1.678885	-.001586	.0007707	-.028386	-.000355	1.059813	.0382867
#2	1.782554	-.001338	.0006864	-.029218	-.001072	1.058745	.0370297
#3	1.641035	-.003102	.0001678	-.028960	-.001326	1.060994	.0377958

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08 Acquired: 10/1/2025 18:45:31 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.8161081	-.017293	.3058214
Stddev	.0071931	.001396	.0007092
%RSD	.8813919	8.074455	.2319137
#1	.8078733	-.015891	.3053450
#2	.8192860	-.018683	.3054827
#3	.8211649	-.017306	.3066365

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6369.830	93220.21	7808.356	5035.937	7248.224
Stddev	5.434	291.29	53.742	19.506	3.949
%RSD	.0853057	.3124805	.6882613	.3873432	.0544831
#1	6367.349	93049.74	7794.294	5020.549	7251.365
#2	6366.080	93054.34	7867.731	5029.386	7243.791
#3	6376.062	93556.56	7763.044	5057.875	7249.516

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08DUP Acquired: 10/1/2025 18:49:54 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.002458**	**-.000244**	**.1348336**	**.0023926**	**.0020697**	**.1052288**	**.1516550**
Stddev	.002520	.000744	.0008236	.0008607	.0029677	.0136355	.0022457
%RSD	102.4903	304.6295	.6108348	35.97473	143.3893	12.95799	1.480817
#1	-.005366	.000273	.1343465	.0032697	.0037350	.1174896	.1519068
#2	-.000910	.000091	.1343698	.0015492	-.001357	.0905437	.1492939
#3	-.001100	-.001097	.1357845	.0023589	.003831	.1076531	.1537642

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000074**	**.0013990**	**75.53328**	**.0031372**	**.0007899**	**.0144342**	**.0194542**
Stddev	.000074	.0000434	.29953	.0002746	.0002214	.0000969	.0027059
%RSD	99.70284	3.104988	.3965551	8.754827	28.02296	.6711466	13.90919
#1	-.000047	.0014435	75.81986	.0033807	.0008730	.0145059	.0223579
#2	-.000158	.0013970	75.22229	.0028395	.0009576	.0144727	.0170031
#3	-.000018	.0013567	75.55768	.0031913	.0005390	.0143240	.0190017

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1034375**	**1.695889**	**.0026993**	**-.000510**	**367.4537**	**.0026047**	**.2721139**
Stddev	.0004047	.016866	.0001209	.000670	2.1737	.0025757	.0005156
%RSD	.3912896	.9945390	4.478696	131.1657	.5915564	98.88476	.1894994
#1	.1031384	1.698482	.0027247	-.001284	367.2939	.0008861	.2723621
#2	.1032761	1.711310	.0028055	-.000129	369.7028	.0055662	.2724586
#3	.1038981	1.677877	.0025678	-.000119	365.3643	.0013620	.2715211

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.310614**	**.0011884**	**.0005809**	**-.028959**	**-.000755**	**1.348983**	**.0452561**
Stddev	.040494	.0002602	.0003512	.000008	.001563	.017369	.0016074
%RSD	1.752502	21.89350	60.44476	.0288570	207.0347	1.287551	3.551876
#1	2.329366	.0009003	.0009826	-.028949	-.000925	1.329982	.0452413
#2	2.264143	.0012586	.0003319	-.028965	.000886	1.352927	.0468709
#3	2.338332	.0014063	.0004283	-.028962	-.002225	1.364041	.0436562

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08DUP Acquired: 10/1/2025 18:49:54 Type: Unk
Method: 6010-200.7 NEW(v240) 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	1.011795	-.017298	.3853723
Stddev	.002466	.002352	.0028960
%RSD	.2437233	13.59746	.7514676
#1	1.014611	-.014662	.3879189
#2	1.010018	-.019182	.3822221
#3	1.010757	-.018049	.3859759

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6393.607	91281.14	7710.220	4987.487	7248.275
Stddev	24.744	176.45	45.654	12.634	15.080
%RSD	.3870126	.1932988	.5921261	.2533159	.2080493
#1	6421.951	91482.61	7683.173	5001.707	7265.402
#2	6382.558	91154.13	7762.931	4983.200	7242.430
#3	6376.313	91206.69	7684.556	4977.554	7236.991

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08LX5 Acquired: 10/1/2025 18:54:18 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**-.001184**	**.0001413**	**.0223133**	**-.000514**	**-.001254**	**.0265295**	**.0255471**
Stddev	.001533	.0011573	.0006866	.002311	.001791	.0131316	.0009875
%RSD	129.5442	818.7780	3.077245	449.8325	142.8730	49.49802	3.865527
#1	-.000352	-.000143	.0230266	.001339	-.000134	.0400684	.0265897
#2	-.000246	.001414	.0216568	-.003104	-.000308	.0256729	.0254254
#3	-.002953	-.000847	.0222565	.000223	-.003319	.0138472	.0246260

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000026**	**.0001962**	**13.12777**	**.0002883**	**.0002803**	**.0020256**	**.0090413**
Stddev	.000044	.0000529	.07993	.0003105	.0001251	.0002858	.0089230
%RSD	168.5024	26.98509	.6088411	107.7230	44.64958	14.10997	98.69140
#1	-.000004	.0001354	13.15341	.0000920	.0004238	.0022924	.0052483
#2	-.000077	.0002323	13.19173	.0006463	.0001941	.0020605	.0026414
#3	.000002	.0002208	13.03817	.0001266	.0002230	.0017240	.0192341

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0189415**	**.3206159**	**.0004123**	**-.000626**	**59.34234**	**.0018158**	**.0448477**
Stddev	.0005215	.0096667	.0002541	.000267	.74780	.0060303	.0002317
%RSD	2.753501	3.015024	61.63332	42.61072	1.260145	332.1087	.5166840
#1	.0189406	.3316702	.0001423	-.000318	59.99383	.0035303	.0448415
#2	.0194634	.3164296	.0004478	-.000777	59.50737	-.004886	.0450824
#3	.0184203	.3137481	.0006468	-.000783	58.52581	.006803	.0446191

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.360945**	**-.011438**	**.0000131**	**-.006274**	**-.000063**	**.2260899**	**.0073214**
Stddev	.024839	.000353	.0000876	.000249	.002496	.0211390	.0011071
%RSD	1.825098	3.086419	669.8981	3.960929	3935.821	9.349797	15.12141
#1	1.380606	-.011833	.0000829	-.006359	-.002934	.2367751	.0066861
#2	1.369200	-.011153	.0000416	-.006470	.001604	.2017414	.0066783
#3	1.333031	-.011328	-.000085	-.005995	.001140	.2397533	.0085997

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08LX5 Acquired: 10/1/2025 18:54:18 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.1657598	.0164516	.0667144
Stddev	.0036127	.0024653	.0005868
%RSD	2.179465	14.98549	.8794970
#1	.1680865	.0192162	.0671823
#2	.1675950	.0144812	.0669048
#3	.1615979	.0156574	.0660561

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6689.877	95894.38	7859.813	5163.986	7937.507
Stddev	17.616	153.25	18.943	30.659	31.429
%RSD	.2633250	.1598160	.2410168	.5937141	.3959606
#1	6676.285	95728.24	7880.131	5129.457	7915.463
#2	6683.567	96030.22	7842.637	5174.483	7923.562
#3	6709.779	95924.68	7856.671	5188.017	7973.496

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08MS Acquired: 10/1/2025 18:58:34 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7919719	1.706621	1.093699	1.999276	.7826245	1.988198	.3813059
Stddev	.0018136	.028078	.004648	.002483	.0023810	.022698	.0015211
%RSD	.2289927	1.645235	.4249931	.1242012	.3042317	1.141659	.3989209
#1	.7901909	1.678860	1.092766	1.997069	.7846578	1.970080	.3807819
#2	.7938163	1.735005	1.089588	2.001965	.7832105	2.013659	.3830197
#3	.7919086	1.705997	1.098743	1.998795	.7800053	1.980854	.3801160

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1833446	.1937095	99.93220	.3904147	.1932360	.2961396	2.952927
Stddev	.0005389	.0005097	.39227	.0014235	.0004134	.0002128	.027217
%RSD	.2939156	.2631189	.3925348	.3646078	.2139582	.0718615	.9216935
#1	.1827225	.1942055	99.91841	.3888690	.1931280	.2963505	2.959896
#2	.1836424	.1931872	100.3312	.3907035	.1928873	.2959249	2.975982
#3	.1836688	.1937358	99.5470	.3916717	.1936927	.2961434	2.922903

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3168237	4.039010	.4820992	.0706433	482.5582	.2863858	.5571812
Stddev	.0030323	.019956	.0009903	.0005939	1.5730	.0033138	.0020652
%RSD	.9570984	.4940907	.2054063	.8406838	.3259672	1.157119	.3706546
#1	.3162144	4.061803	.4832426	.0700166	484.2081	.2839503	.5587384
#2	.3201143	4.024677	.4815179	.0711977	481.0755	.2901594	.5548385
#3	.3141422	4.030551	.4815371	.0707158	482.3911	.2850475	.5579668

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.35255	.2573256	.4082834	.6675770	.1861771	2.677354	6.064645
Stddev	.05754	.0003147	.0003001	.0005377	.0023620	.022581	.015779
%RSD	.4309057	.1222806	.0734982	.0805448	1.268674	.8434142	.2601834
#1	13.31062	.2569716	.4083046	.6681956	.1836008	2.687993	6.066929
#2	13.41815	.2575734	.4079733	.6673136	.1882404	2.692650	6.079158
#3	13.32890	.2574318	.4085724	.6672217	.1866902	2.651418	6.047848

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08MS Acquired: 10/1/2025 18:58:34 Type: Unk
Method: 6010-200.7 NEW(v240) 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	1.384556	.1610063	.6873300
Stddev	.004548	.0015507	.0036232
%RSD	.3284586	.9631267	.5271355
#1	1.384865	.1608203	.6867710
#2	1.388941	.1595570	.6912002
#3	1.379861	.1626416	.6840188

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6298.343	90353.91	7857.215	4838.473	7096.540
Stddev	16.187	288.71	39.400	11.274	19.403
%RSD	.2569990	.3195305	.5014469	.2330174	.2734096
#1	6299.007	90673.14	7901.801	4851.401	7089.050
#2	6314.187	90111.10	7827.085	4830.686	7118.572
#3	6281.834	90277.48	7842.760	4833.330	7081.999

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08MSD Acquired: 10/1/2025 19:02:42 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.7901437**	**1.687207**	**1.126519**	**2.004537**	**.7805962**	**2.025528**	**.4246518**
Stddev	.0033690	.024025	.003566	.007273	.0015921	.013868	.0011407
%RSD	.4263834	1.423972	.3165706	.3628515	.2039564	.6846597	.2686219
#1	.7862630	1.675398	1.130367	1.998305	.7793665	2.011044	.4255520
#2	.7918492	1.714852	1.123326	2.012529	.7800276	2.038684	.4233689
#3	.7923191	1.671372	1.125863	2.002777	.7823945	2.026855	.4250344

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1876989**	**.1940879**	**119.2588**	**.3885560**	**.1928781**	**.2986131**	**2.940622**
Stddev	.0005411	.0003266	.2516	.0010326	.0006410	.0006341	.009079
%RSD	.2882800	.1682589	.2109619	.2657559	.3323349	.2123551	.3087334
#1	.1882218	.1944424	119.5493	.3887826	.1936146	.2988152	2.933712
#2	.1877334	.1937993	119.1172	.3874289	.1924458	.2979026	2.937248
#3	.1871413	.1940220	119.1100	.3894565	.1925740	.2991216	2.950904

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3484655**	**4.443842**	**.4840192**	**.0712454**	**581.5678**	**.2906497**	**.6242572**
Stddev	.0005031	.029816	.0008018	.0001522	.9492	.0035549	.0015998
%RSD	.1443655	.6709582	.1656477	.2136844	.1632200	1.223077	.2562791
#1	.3485638	4.417878	.4845193	.0711372	582.6384	.2942077	.6229840
#2	.3489122	4.437241	.4830944	.0714195	581.2364	.2906434	.6237346
#3	.3479205	4.476405	.4844439	.0711796	580.8288	.2870979	.6260530

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.17633**	**.2650326**	**.4058002**	**.6674008**	**.1884596**	**2.987514**	**6.164410**
Stddev	.04610	.0025408	.0007683	.0017861	.0020264	.020597	.031580
%RSD	.3252165	.9586827	.1893196	.2676237	1.075225	.6894317	.5122940
#1	14.19397	.2679657	.4063565	.6682850	.1906505	3.011297	6.163362
#2	14.12401	.2635058	.4049236	.6685724	.1880756	2.975498	6.196500
#3	14.21101	.2636264	.4061205	.6653451	.1866527	2.975746	6.133367

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08MSD Acquired: 10/1/2025 19:02:42 Type: Unk
Method: 6010-200.7 NEW(v240) 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	1.646436	.1665473	.7922340
Stddev	.005172	.0013725	.0016211
%RSD	.3141116	.8240791	.2046228
#1	1.650485	.1678866	.7927422
#2	1.648214	.1651439	.7904197
#3	1.640610	.1666116	.7935401

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6237.646	88968.82	7604.227	4830.136	6976.027
Stddev	18.733	28.47	23.992	20.004	22.612
%RSD	.3003207	.0319950	.3155135	.4141474	.3241322
#1	6218.271	88961.39	7584.288	4848.088	6950.095
#2	6255.664	88944.81	7597.539	4833.747	6991.627
#3	6239.003	89000.27	7630.854	4808.572	6986.359

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08A Acquired: 10/1/2025 19:06:51 Type: Unk
Method: 6010-200.7 NEW(v240) 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	**.7136966**	**1.558948**	**.9446317**	**1.771261**	**.4589466**	**.5631350**	**.1692328**
Stddev	.1378076	.295607	.1589872	.337141	.1264803	.1536800	.0134586
%RSD	19.30898	18.96195	16.83060	19.03396	27.55882	27.29008	7.952708
#1	.5731427	1.266443	.7806813	1.428467	.3351080	.4202926	.1573425
#2	.7193640	1.552840	.9550729	1.782867	.4538191	.5433719	.1665119
#3	.8485830	1.857562	1.098141	2.102449	.5879127	.7257404	.1838439

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0966521**	**.1772609**	**59.70929**	**.1954615**	**.1782201**	**.2712350**	**.7363649**
Stddev	.0138523	.0337375	.27194	.0293736	.0343363	.0504705	.2363110
%RSD	14.33213	19.03267	.4554317	15.02781	19.26622	18.60768	32.09156
#1	.0832675	.1424664	59.98368	.1663044	.1429565	.2197938	.5143424
#2	.0957599	.1794849	59.43988	.1950333	.1801566	.2732358	.7099992
#3	.1109289	.2098313	59.70432	.2250469	.2115471	.3206754	.9847530

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1316818**	**1.857525**	**.4435282**	**.0365555**	**285.7014**	**.0779511**	**.3100561**
Stddev	.0138611	.144742	.0849817	.0047684	1.1526	.0254139	.0135587
%RSD	10.52623	7.792174	19.16039	13.04427	.4034158	32.60240	4.372977
#1	.1191397	1.748946	.3558380	.0317323	285.5447	.0519303	.2967276
#2	.1293417	1.801777	.4492327	.0366672	286.9244	.0792116	.3096069
#3	.1465640	2.021851	.5255140	.0412671	284.6353	.1027113	.3238338

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.952508**	**.1318214**	**.2374998**	**.3707041**	**.0218122**	**1.168465**	**5.459053**
Stddev	.718110	.0173601	.0670719	.1152970	.0061023	.036922	1.037672
%RSD	14.49992	13.16940	28.24082	31.10218	27.97632	3.159907	19.00827
#1	4.263365	.1153610	.1712583	.2572025	.0162440	1.126094	4.391297
#2	4.897715	.1301437	.2358688	.3671933	.0208570	1.185551	5.522094
#3	5.696445	.1499594	.3053724	.4877164	.0283358	1.193749	6.463766

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: Q3256-08A Acquired: 10/1/2025 19:06:51 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7745593	.0357598	.3496391
Stddev	.0042405	.0137637	.0132353
%RSD	.5474676	38.48913	3.785422
#1	.7794538	.0233833	.3384936
#2	.7719942	.0333136	.3461560
#3	.7722298	.0505826	.3642676

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6539.907	91888.37	7673.188	5048.301	7488.723
Stddev	15.132	126.79	53.862	7.248	18.161
%RSD	.2313832	.1379798	.7019518	.1435655	.2425062
#1	6537.304	91998.37	7626.214	5046.793	7482.134
#2	6526.244	91749.70	7731.977	5056.184	7474.777
#3	6556.171	91917.04	7661.372	5041.926	7509.259

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169934BL Acquired: 10/1/2025 19:11:01 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.000184	-.000419	-.000621	-.001039	-.001537	.0086355
Stddev	.000787	.002562	.000437	.000618	.002028	.0059014
%RSD	428.4450	611.5310	70.31334	59.46441	131.9477	68.33864
#1	-.000338	.002309	-.001081	-.001718	-.003795	.0030599
#2	.000669	-.000791	-.000572	-.000886	-.000940	.0080306
#3	-.000881	-.002775	-.000212	-.000512	.000126	.0148161

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002016	.0000349	-.000006	.0122002	.0001710	.0001056
Stddev	.000473	.0001038	.000037	.0095153	.0003691	.0002269
%RSD	23.45246	297.6397	642.2004	77.99308	215.8607	214.8136
#1	-.001839	.0000531	-.000019	.0201923	-.000105	-.000073
#2	-.001657	-.000077	-.000035	.0016745	.000590	.000030
#3	-.002552	.000128	.000036	.0147339	.000027	.000361

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000458	.0085808	.0001948	.0183571	-.000160	-.000694
Stddev	.000280	.0045595	.0007266	.0212368	.000010	.000767
%RSD	61.08564	53.13619	373.0528	115.6874	6.160366	110.6025
#1	-.000577	.0034713	-.000643	-.005006	-.000164	-.001567
#2	-.000139	.0122351	.000653	.036491	-.000167	-.000388
#3	-.000660	.0100360	.000574	.023586	-.000149	-.000127

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F 2.575835	.0009190	-.000394	F 1.612828	-.013853	.0000416
Stddev	.104220	.0038847	.000212	.010333	.000817	.0000355
%RSD	4.046067	422.7061	53.88955	.6406599	5.901079	85.43591
#1	2.663120	.0043487	-.000273	1.616462	-.013787	.0000253
#2	2.603940	-.003300	-.000638	1.601170	-.013071	.0000171
#3	2.460444	.001708	-.000269	1.620854	-.014702	.0000824

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169934BL Acquired: 10/1/2025 19:11:01 Type: Unk
Method: 6010-200.7 NEW(v240) 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	-.000569	.0007186	-.003175	-.000388	.0065653	F .0296098
Stddev	.000656	.0001425	.012764	.000381	.0019593	.0022121
%RSD	115.2455	19.82972	401.9931	98.14563	29.84408	7.470988
#1	-.000228	.0006448	.011560	-.000762	.0045849	.0318275
#2	-.001325	.0006281	-.010806	-.000401	.0085029	.0295985
#3	-.000154	.0008828	-.010280	-.000001	.0066080	.0274033

Elem	Sr4077
Units	ppm
Avg	.0000545
Stddev	.0001426
%RSD	261.3421
#1	.0000089
#2	-.000060
#3	.000214

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6849.219	98367.64	7952.305	5313.213	8493.045
Stddev	5.361	93.07	32.886	32.227	8.443
%RSD	.0782724	.0946132	.4135359	.6065371	.0994124
#1	6853.172	98441.49	7988.403	5308.420	8494.316
#2	6851.369	98263.10	7924.049	5283.651	8500.781
#3	6843.117	98398.33	7944.465	5347.568	8484.039

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169934BS Acquired: 10/1/2025 19:15:21 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.7722361	1.799336	.9394530	1.963576	.8145163	1.936190
Stddev	.0029559	.060966	.0021909	.005695	.0025339	.012288
%RSD	.3827730	3.388271	.2332143	.2900086	.3110956	.6346582
#1	.7704570	1.868093	.9376748	1.965987	.8121438	1.942472
#2	.7706030	1.751869	.9387837	1.957073	.8171855	1.944067
#3	.7756483	1.778047	.9419005	1.967670	.8142197	1.922031

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1871095	.1962763	.1899811	.9850983	.3877453	.1921578
Stddev	.0022060	.0009153	.0001955	.0056514	.0019176	.0004126
%RSD	1.179003	.4663430	.1029281	.5736925	.4945532	.2146960
#1	.1895425	.1967333	.1901753	.9907582	.3862102	.1925773
#2	.1852396	.1952224	.1899838	.9794554	.3898948	.1917526
#3	.1865464	.1968730	.1897843	.9850814	.3871308	.1921434

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3013910	2.874515	.1971442	1.941302	.4812135	.0726599
Stddev	.0001546	.035387	.0012355	.005584	.0003132	.0004933
%RSD	.0513130	1.231057	.6266934	.2876384	.0650788	.6788918
#1	.3013761	2.880431	.1974924	1.945927	.4815019	.0720991
#2	.3012444	2.906571	.1981682	1.935098	.4808804	.0730269
#3	.3015526	2.836543	.1957720	1.942879	.4812584	.0728536

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.467639	.2907762	.1991071	9.996267	.2778986	.4057079
Stddev	.059381	.0033383	.0003088	.145568	.0037686	.0000378
%RSD	1.712446	1.148048	.1550686	1.456224	1.356091	.0093232
#1	3.452825	.2946273	.1994076	9.909883	.2802514	.4057151
#2	3.533025	.2887055	.1991230	10.16433	.2735520	.4056670
#3	3.417067	.2889960	.1987907	9.91459	.2798924	.4057416

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: PB169934BS Acquired: 10/1/2025 19:15:21 Type: Unk
Method: 6010-200.7 NEW(v240) 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	.6902831	.1958387	.8508335	5.630510	F .0008908	.2020811
Stddev	.0034751	.0008367	.0218072	.039853	.0006406	.0017450
%RSD	.5034358	.4272239	2.563034	.7078113	71.90816	.8634998
#1	.6940931	.1952185	.8564565	5.672033	.0004915	.2034319
#2	.6872874	.1967903	.8692785	5.592568	.0016297	.2027003
#3	.6894688	.1955071	.8267655	5.626930	.0005513	.2001109

Elem	Sr4077
Units	ppm
Avg	.1896474
Stddev	.0009280
%RSD	.4893387
#1	.1907051
#2	.1892674
#3	.1889697

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6770.975	98241.33	8069.695	5218.549	8194.629
Stddev	5.478	476.53	42.097	28.257	15.932
%RSD	.0809094	.4850583	.5216735	.5414779	.1944256
#1	6777.041	98523.16	8046.829	5225.594	8176.235
#2	6769.496	97691.14	8118.277	5187.436	8203.524
#3	6766.388	98509.71	8043.979	5242.618	8204.129

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV08 Acquired: 10/1/2025 19:19:23 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.929421**	**4.621366**	**4.856902**	**4.959056**	**4.935732**	**9.843121**	**9.707388**
Stddev	.005275	.107744	.011736	.007539	.003341	.020950	.032885
%RSD	.1070159	2.331432	.2416389	.1520179	.0676989	.2128361	.3387624
#1	4.927062	4.739491	4.852983	4.965015	4.939530	9.840687	9.685347
#2	4.925736	4.596122	4.847628	4.950582	4.933241	9.865182	9.745186
#3	4.935464	4.528486	4.870097	4.961572	4.934426	9.823495	9.691629

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2476654**	**2.448608**	**24.56115**	**.9922140**	**2.441671**	**1.234000**	**4.867098**
Stddev	.0027561	.002927	.09203	.0042237	.004432	.001835	.048287
%RSD	1.112831	.1195517	.3746913	.4256848	.1815300	.1486652	.9921189
#1	.2489881	2.449125	24.58169	.9946306	2.441308	1.234182	4.852784
#2	.2495109	2.445457	24.64117	.9946745	2.437431	1.232082	4.827587
#3	.2444973	2.451243	24.46059	.9873370	2.446273	1.235737	4.920924

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.450664**	**24.48041**	**2.443409**	**1.232678**	**23.75984**	**2.473529**	**2.496997**
Stddev	.007469	.18897	.005462	.003781	.09194	.013862	.008582
%RSD	.3047680	.7719038	.2235256	.3067155	.3869595	.5604254	.3436859
#1	2.449747	24.47688	2.442413	1.232576	23.65479	2.459864	2.502308
#2	2.458549	24.67111	2.438514	1.236509	23.82566	2.487581	2.501587
#3	2.443696	24.29323	2.449300	1.228950	23.79907	2.473142	2.487096

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**24.74938**	**4.940977**	**4.936459**	**4.857610**	**4.899073**	**4.873139**	**4.877008**
Stddev	.17249	.042424	.002808	.013065	.022156	.036085	.016708
%RSD	.6969301	.8586220	.0568829	.2689633	.4522488	.7404800	.3425853
#1	24.55854	4.956911	4.939521	4.859591	4.899435	4.835281	4.893879
#2	24.79542	4.973128	4.934004	4.843668	4.921046	4.876995	4.860468
#3	24.89417	4.892893	4.935851	4.869573	4.876738	4.907141	4.876679

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCV08 Acquired: 10/1/2025 19:19:23 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCV08 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**4.813672**	**4.834296**	**4.879319**
Stddev	.017205	.019984	.050914
%RSD	.3574215	.4133753	1.043464
#1	4.830391	4.824311	4.924884
#2	4.796019	4.857304	4.888708
#3	4.814605	4.821272	4.824363

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**6649.010**	**94799.85**	**7872.878**	**5053.416**	**7737.320**
Stddev	18.582	219.06	68.215	20.228	20.923
%RSD	.2794714	.2310724	.8664518	.4002849	.2704108
#1	6670.420	94986.19	7854.064	5040.658	7759.783
#2	6637.084	94558.54	7816.045	5042.851	7733.790
#3	6639.525	94854.81	7948.525	5076.739	7718.387

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB08 Acquired: 10/1/2025 19:23:24 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000309**	**.0010024**	**.0002887**	**.0023659**	**-.001388**	**.0093025**
Stddev	.001892	.0022771	.0002827	.0023239	.001916	.0020629
%RSD	613.1839	227.1703	97.93959	98.22284	138.0445	22.17544
#1	-.001372	.0012794	.0004048	.0021218	-.002512	.0094739
#2	.001876	-.001401	.0004949	.0048021	-.002478	.0071592
#3	-.001429	.003128	-.000034	.0001737	.000825	.0112742

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008760**	**-.000085**	**-.000004**	**-.006711**	**.0003321**	**-.000135**
Stddev	.0018080	.000038	.000028	.004266	.0003004	.000061
%RSD	206.3778	44.41057	684.5237	63.56210	90.45981	45.05861
#1	.0002192	-.000125	-.000025	-.003349	.0005932	-.000185
#2	-.000512	-.000051	.000027	-.005275	.0003994	-.000154
#3	.002921	-.000078	-.000015	-.011509	.0000038	-.000067

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.000523**	**.0071733**	**.0010611**	**-.000608**	**-.000021**	**-.000321**
Stddev	.000318	.0047092	.0002768	.033068	.000319	.000522
%RSD	60.87716	65.64905	26.08786	5438.466	1526.753	162.7947
#1	-.000811	.0067085	.0009840	-.022772	.000035	.000227
#2	-.000181	.0120977	.0013682	-.016452	.000266	-.000813
#3	-.000576	.0027137	.0008310	.037400	-.000364	-.000377

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.201238**	**.0035830**	**-.000020**	**-.233610**	**-.010285**	**.0007922**
Stddev	.011809	.0028566	.000109	.017300	.000948	.0001702
%RSD	5.868415	79.72638	536.6933	7.405334	9.220919	21.48253
#1	-.189927	.0044259	.000093	-.251965	-.011281	.0007775
#2	-.200296	.0059233	-.000028	-.231258	-.009393	.0009693
#3	-.213490	.0003998	-.000126	-.217606	-.010180	.0006299

Reviewed By:
On:
Inst Id :P4
LB :LB137389

Sample Name: CCB08 Acquired: 10/1/2025 19:23:24 Type: Unk
Method: 6010-200.7 NEW(v240) Mode: CONC Corr. Factor: 1.000000
User: Jaswal Custom ID1: CCB08 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.028747	.0002143	.0019336	.0013158	-.000142	-.008070
Stddev	.000563	.0010181	.0164222	.0011786	.001731	.001545
%RSD	1.957235	475.0353	849.2951	89.56797	1219.724	19.14689
#1	-.028846	-.000651	.0079676	.0021407	-.001957	-.008553
#2	-.029254	.001336	.0144852	-.000034	.001490	-.009316
#3	-.028142	-.000042	-.016652	.001841	.000042	-.006341

Elem	Sr4077
Units	ppm
Avg	.0001030
Stddev	.0000614
%RSD	59.60448
#1	.0001122
#2	.0000375
#3	.0001592

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	7025.286	102929.2	8052.009	5440.963	8764.446
Stddev	17.199	210.3	18.064	15.780	6.513
%RSD	.2448174	.2042715	.2243453	.2900182	.0743126
#1	7005.771	103142.5	8072.314	5454.720	8757.516
#2	7031.854	102923.1	8045.993	5444.431	8765.380
#3	7038.233	102722.1	8037.720	5423.738	8770.442

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB169912

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 : #1

Block ID: 1. HG HOT BLOCK #3 2. N/A

Start Digest Date: 09/30/2025 **Time :** 10:35 **Temp :** 96 °C

End Digest Date: 09/30/2025 **Time :** 13:40 **Temp :** 96 °C

Digestion tube ID: M5595

Block thermometer ID: HG MET-DIG. #3

Dig Technician Signature: SB

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	0.25	M6180
LFS-2	0.25	M6181
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
Conc. HNO3	3.00	M6158
1:1 HCL	5.00	MP87148
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK#1 CELL#50 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
09/30/25 14:40	SB metals	(Metals Lab)
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Metals Preparation Sheet

PB169912

Lab Sample ID	Client Sample ID	pH	Initial Vol (ml)	Final Vol (ml)	Color Before	Color After	Clarity Before	Clarity After	Comment	Prep Pos
PB169912BL	PBW912	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	9
PB169912BS	LCS912	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	10
Q3234-01	DA-1	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	11
Q3234-02	DA-2	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	12
Q3237-01	RW8-SP100-20250926	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	13
Q3237-02	RW8-SP303-20250926	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	14
Q3237-02MS	RW8-SP303-20250926MS	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	16
Q3237-02MSD	RW8-SP303-20250926MSD	<2	50	25	Colorless	Colorless	Clear	Clear	M6180,M6181	17
Q3237-02DUP	RW8-SP303-20250926DUP	<2	50	25	Colorless	Colorless	Clear	Clear	N/A	15

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB169912 **WorkList ID :** 192174 **Department :** Digestion **Date :** 09-30-2025 09:49:26

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3234-01	DA-1	Water	Metals Group4	1:1 HNO3 to pH < 2	ATGG01	D31	09/29/2025	6010D
Q3234-02	DA-2	Water	Metals Group4	1:1 HNO3 to pH < 2	ATGG01	D31	09/29/2025	6010D
Q3237-01	RW8-SP100-20250926	Water	Metals Group4	1:1 HNO3 to pH < 2	TETR06	D31	09/26/2025	6010D
Q3237-02	RW8-SP303-20250926	Water	Metals Group4	1:1 HNO3 to pH < 2	TETR06	D31	09/26/2025	6010D

Date/Time 09/30/25 10:05
Raw Sample Received by: S Hsmct div
Raw Sample Relinquished by: CP CSM)

Date/Time 09/30/25 11:05
Raw Sample Received by: CP CSM)
Raw Sample Relinquished by: S Hs mct div

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137389

Review By	Janvi	Review On	10/3/2025 1:56:25 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87404,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87405
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	10/01/25 12:08		Jaswal	OK
2	S1	S1	CAL2	10/01/25 12:12		Jaswal	OK
3	S2	S2	CAL3	10/01/25 12:17		Jaswal	OK
4	S3	S3	CAL4	10/01/25 12:21		Jaswal	OK
5	S4	S4	CAL5	10/01/25 12:25		Jaswal	OK
6	S5	S5	CAL6	10/01/25 12:29		Jaswal	OK
7	ICV01	ICV01	ICV	10/01/25 12:33		Jaswal	OK
8	LLICV01	LLICV01	LLICV	10/01/25 12:41		Jaswal	OK
9	ICB01	ICB01	ICB	10/01/25 12:45		Jaswal	OK
10	CRI01	CRI01	CRDL	10/01/25 12:49		Jaswal	OK
11	ICSA01	ICSA01	ICSA	10/01/25 12:53		Jaswal	OK
12	ICSAB01	ICSAB01	ICSAB	10/01/25 12:57		Jaswal	OK
13	ICSADL	ICSADL	ICSA	10/01/25 13:02		Jaswal	OK
14	ICSABDL	ICSABDL	ICSAB	10/01/25 13:06		Jaswal	OK
15	CCV01	CCV01	CCV	10/01/25 13:10		Jaswal	OK
16	CCB01	CCB01	CCB	10/01/25 13:14		Jaswal	OK
17	LR-1	LR-1	HIGH STD	10/01/25 13:18		Jaswal	OK
18	LR-2	LR-2	HIGH STD	10/01/25 13:23		Jaswal	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137389

Review By	Janvi	Review On	10/3/2025 1:56:25 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87404,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87405
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

19	LR-3	LR-3	HIGH STD	10/01/25 13:27		Jaswal	OK
20	Q3233-01DL	0926-01DL	SAM	10/01/25 13:32	Ag oversaturated	Jaswal	Dilution
21	PB169866BL	PB169866BL	MB	10/01/25 13:37		Jaswal	OK
22	PB169866BS	PB169866BS	LCS	10/01/25 13:41		Jaswal	OK
23	PB169870TB	PB169870TB	MB	10/01/25 13:45		Jaswal	ReRun
24	Q3253-01	ARS20-0009	SAM	10/01/25 13:49		Jaswal	OK
25	Q3253-10	ARS20-0009	SAM	10/01/25 13:54		Jaswal	OK
26	Q3233-01DL2	0926-01DL2	SAM	10/01/25 13:58	25x for Ag	Jaswal	Confirms
27	CCV02	CCV02	CCV	10/01/25 14:02		Jaswal	OK
28	CCB02	CCB02	CCB	10/01/25 14:06		Jaswal	OK
29	Q3245-01	13-1	SAM	10/01/25 14:12		Jaswal	OK
30	Q3245-09	12-8	SAM	10/01/25 14:16		Jaswal	OK
31	Q3245-17	12-1	SAM	10/01/25 14:20		Jaswal	OK
32	Q3240-01	OK-02-092925	SAM	10/01/25 14:24		Jaswal	OK
33	Q3240-01DUP	OK-02-092925DUP	DUP	10/01/25 14:28		Jaswal	OK
34	Q3240-01L	OK-02-092925L	SD	10/01/25 14:32		Jaswal	OK
35	Q3240-01MS	OK-02-092925MS	MS	10/01/25 14:36		Jaswal	OK
36	Q3240-01MSD	OK-02-092925MSD	MSD	10/01/25 14:40		Jaswal	OK
37	Q3240-01A	OK-02-092925A	PS	10/01/25 14:44		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137389

Review By	Janvi	Review On	10/3/2025 1:56:25 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87404,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87405
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

38	Q3238-01	RCA	SAM	10/01/25 14:48	0.1ML OF EACH M6008 AND M6017 IN 10ML SAMPLE.	Jaswal	OK
39	CCV03	CCV03	CCV	10/01/25 15:00		Jaswal	OK
40	CCB03	CCB03	CCB	10/01/25 15:04		Jaswal	OK
41	PB169913BL	PB169913BL	MB	10/01/25 15:08		Jaswal	OK
42	PB169913BS	PB169913BS	LCS	10/01/25 15:13		Jaswal	OK
43	PB169863BL	PB169863BL	MB	10/01/25 15:17		Jaswal	OK
44	PB169863BS	PB169863BS	LCS	10/01/25 15:21		Jaswal	OK
45	PB169912BL	PB169912BL	MB	10/01/25 15:25		Jaswal	OK
46	PB169912BS	PB169912BS	LCS	10/01/25 15:30		Jaswal	OK
47	Q3202-01	SY-6	SAM	10/01/25 15:34		Jaswal	OK
48	Q3202-02	SY-6	SAM	10/01/25 15:38		Jaswal	OK
49	Q3202-03	SY-2R	SAM	10/01/25 15:42		Jaswal	OK
50	Q3202-04	SY-2R	SAM	10/01/25 15:46		Jaswal	OK
51	CCV04	CCV04	CCV	10/01/25 15:51		Jaswal	OK
52	CCB04	CCB04	CCB	10/01/25 15:55		Jaswal	OK
53	Q3202-05	SY-2D	SAM	10/01/25 15:59		Jaswal	OK
54	Q3202-06	SY-2D	SAM	10/01/25 16:03		Jaswal	OK
55	Q3202-07	SY-5	SAM	10/01/25 16:08		Jaswal	OK
56	Q3202-08	SY-5	SAM	10/01/25 16:12		Jaswal	OK

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Review By	Janvi	Review On	10/3/2025 1:56:25 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87404,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87405
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

57	Q3202-09	SY-3DD	SAM	10/01/25 16:17		Jaswal	OK
58	Q3202-10	SY-3DD	SAM	10/01/25 16:21		Jaswal	OK
59	Q3202-17	SY-3	SAM	10/01/25 16:25		Jaswal	OK
60	Q3202-18	SY3	SAM	10/01/25 16:29		Jaswal	OK
61	Q3202-11	SY-3D	SAM	10/01/25 16:34		Jaswal	OK
62	Q3202-11DUP	SY-3DDUP	DUP	10/01/25 16:38		Jaswal	OK
63	CCV05	CCV05	CCV	10/01/25 16:42		Jaswal	OK
64	CCB05	CCB05	CCB	10/01/25 16:46		Jaswal	OK
65	Q3202-11L	SY-3DL	SD	10/01/25 16:50		Jaswal	OK
66	Q3202-13	SY-3D	MS	10/01/25 16:55		Jaswal	OK
67	Q3202-15	SY-3D	MSD	10/01/25 16:59		Jaswal	OK
68	Q3202-11A	SY-3DA	PS	10/01/25 17:03	0.1ML OF EACH M6008 AND M6017 IN 10ML SAMPLE.	Jaswal	OK
69	Q3202-12	SY-3D	SAM	10/01/25 17:07		Jaswal	OK
70	Q3202-12DUP	SY-3DDUP	DUP	10/01/25 17:11		Jaswal	OK
71	Q3202-12L	SY-3DL	SD	10/01/25 17:16		Jaswal	OK
72	Q3202-14	SY-3D	MS	10/01/25 17:20		Jaswal	OK
73	Q3202-16	SY-3D	MSD	10/01/25 17:24		Jaswal	OK
74	Q3202-12A	SY-3DA	PS	10/01/25 17:28	0.1ML OF EACH M6008 AND M6017 IN 10ML SAMPLE.	Jaswal	OK

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Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87404,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87405
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

75	CCV06	CCV06	CCV	10/01/25 17:32		Jaswal	OK
76	CCB06	CCB06	CCB	10/01/25 17:41		Jaswal	OK
77	Q3234-01	DA-1	SAM	10/01/25 17:46		Jaswal	OK
78	Q3234-02	DA-2	SAM	10/01/25 17:50		Jaswal	OK
79	Q3237-01	RW8-SP100-2025092	SAM	10/01/25 17:54		Jaswal	OK
80	Q3237-02	RW8-SP303-2025092	SAM	10/01/25 17:58		Jaswal	OK
81	Q3237-02DUP	RW8-SP303-2025092	DUP	10/01/25 18:03		Jaswal	OK
82	Q3237-02L	RW8-SP303-2025092	SD	10/01/25 18:07		Jaswal	OK
83	Q3237-02MS	RW8-SP303-2025092	MS	10/01/25 18:11		Jaswal	OK
84	Q3237-02MSD	RW8-SP303-2025092	MSD	10/01/25 18:15		Jaswal	OK
85	Q3237-02A	RW8-SP303-2025092	PS	10/01/25 18:19	0.1ML OF EACH M6008 AND M6017 IN 10ML SAMPLE.	Jaswal	OK
86	PB169925TB	PB169925TB	MB	10/01/25 18:23		Jaswal	OK
87	CCV07	CCV07	CCV	10/01/25 18:28		Jaswal	OK
88	CCB07	CCB07	CCB	10/01/25 18:32		Jaswal	OK
89	Q3255-02	CONCRETE-1-WC	SAM	10/01/25 18:36		Jaswal	OK
90	Q3256-04	SOIL-PILE-1-WC	SAM	10/01/25 18:41		Jaswal	OK
91	Q3256-08	SOIL-PILE-2-WC	SAM	10/01/25 18:45		Jaswal	OK
92	Q3256-08DUP	SOIL-PILE-2-WCDUP	DUP	10/01/25 18:49		Jaswal	OK
93	Q3256-08L	SOIL-PILE-2-WCL	SD	10/01/25 18:54		Jaswal	OK

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Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB137389

Review By	Janvi	Review On	10/3/2025 1:56:25 PM
Supervise By		Supervise On	

STD. NAME	STD REF.#
ICAL Standard	MP87031,MP87038,MP87035,MP87034,MP87033,MP87032
ICV Standard	MP87404,MP87038
CCV Standard	MP87042
ICSA Standard	MP87040,MP87405
CRI Standard	MP87038
LCS Standard	
Chk Standard	MP87043,MP87044,MP87045,MP87046,MP87049

94	Q3256-08MS	SOIL-PILE-2-WCMS	MS	10/01/25 18:58		Jaswal	OK
95	Q3256-08MSD	SOIL-PILE-2-WCMSD	MSD	10/01/25 19:02		Jaswal	OK
96	Q3256-08A	SOIL-PILE-2-WCA	PS	10/01/25 19:06	0.1ML OF EACH M6008 AND M6017 IN 10ML SAMPLE.	Jaswal	OK
97	PB169934BL	PB169934BL	MB	10/01/25 19:11		Jaswal	OK
98	PB169934BS	PB169934BS	LCS	10/01/25 19:15		Jaswal	OK
99	CCV08	CCV08	CCV	10/01/25 19:19		Jaswal	OK
100	CCB08	CCB08	CCB	10/01/25 19:23		Jaswal	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q3234

Test : Metals Group4

Prepbatch ID : PB169912,

Sequence ID/Qc Batch ID: LB137389,

Standard ID :
MP87031,MP87032,MP87033,MP87034,MP87035,MP87036,MP87038,MP87040,MP87042,MP87043,MP87044,MP87045,MP87046,MP87049,MP87148,MP87404,MP87405,

Chemical ID :
M5467,M5658,M5748,M5751,M5798,M5799,M5800,M5801,M5814,M5817,M5820,M5923,M5962,M5969,M5970,M5971,M5979,M5985,M5998,M6019,M6021,M6023,M6026,M6027,M6028,M6030,M6032,M6058,M6077,M6128,M6137,M6138,M6140,M6142,M6144,M6145,M6151,M6158,M6159,M6160,M6163,M6164,M6165,M6171,M6174,M6176,M6177,M6178,M6179,M6180,M6181,M6182,M6184,M6187,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP87031	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 125.00000ml of M6151 + 2350.00000ml of W3112 + 25.00000ml of M6187 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
907	ICP AES STD S (S5)	MP87032	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 5.00000ml of M5467 + 5.00000ml of M5820 + 5.00000ml of M5969 + 5.00000ml of M5971 + 5.00000ml of M5998 + 5.00000ml of M6077 + 5.00000ml of M6160 + 5.00000ml of M6174 + 5.00000ml of M6176 + 455.00000ml of MP87031 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
910	ICP AES STD S4	MP87033	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
909	ICP AES STD S3	MP87034	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 25.00000ml of MP87032 + 75.00000ml of MP87031 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3913	ICP AES STD S2	MP87035	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 16.00000ml of MP87032 + 184.00000ml of MP87031 = Final Quantity: 200.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2950	ICP AES S1/CRI STOCK STD	MP87036	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 0.03000ml of M5798 + 0.03000ml of M6028 + 0.04000ml of M6137 + 0.05000ml of M5658 + 0.05000ml of M6030 + 0.05000ml of M6140 + 0.05000ml of M6159 + 0.06000ml of M6177 + 0.10000ml of M5751 + 0.10000ml of M5801 + 0.10000ml of M5820 + 0.10000ml of M5962 + 0.10000ml of M5971 + 0.10000ml of M6128 + 0.10000ml of M6176 + 0.15000ml of M5800 + 0.20000ml of M5799 + 0.20000ml of M6021 + 0.20000ml of M6023 + 0.20000ml of M6027 + 0.20000ml of M6145 + 0.25000ml of M5467 + 0.25000ml of M6160 + 0.50000ml of M5814 + 0.50000ml of M6032 + 1.00000ml of M5979 + 1.00000ml of M6138 + 1.00000ml of M6142 + 1.00000ml of M6144 + 1.00000ml of M6171 + 1.00000ml of M6178 + 2.00000ml of M5969 + 88.29000ml of MP87031 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2951	ICP AES S1/CRI WORK STD	MP87038	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 2.00000ml of MP87036 + 98.00000ml of MP87031 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP87040	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 25.00000ml of M6182 + 225.00000ml of MP87031 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
911	ICP AES CCV SOLN	MP87042	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 50.00000ml of MP87031 + 50.00000ml of MP87032 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP87043	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 1.00000ml of M6179 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6187 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP87044	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 200.00000ml of M6187 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4225	LR-1	MP87045	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 11.50000ml of M6138 + 11.50000ml of M6144 + 11.50000ml of M6171 + 15.50000ml of MP87031 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4226	LR-2	MP87046	09/02/2025	10/03/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Janvi Patel 09/04/2025

FROM 13.50000ml of M6140 + 9.00000ml of M6142 + 9.50000ml of M6159 + 18.00000ml of MP87031 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4227	LR-3	MP87049	09/02/2025	10/03/2025	Sarabjit Jaswal	None	None	Janvi Patel 09/04/2025

FROM 1.15000ml of M6026 + 1.25000ml of M5658 + 1.25000ml of M5748 + 1.50000ml of M6145 + 2.50000ml of M5751 + 2.50000ml of M6128 + 39.85000ml of MP87031 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
170	1:1HCL	MP87148	09/09/2025	02/17/2026	Sagar Kanani	None	None	Sarabjit Jaswal 09/10/2025

FROM 1250.00000ml of M6151 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4163	NEW ICV-060925	MP87404	09/22/2025	10/03/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICPA)	Sarabjit Jaswal 10/02/2025

FROM 0.02000ml of M5817 + 0.20000ml of M5923 + 0.20000ml of M6019 + 0.20000ml of M6058 + 0.40000ml of M6163 + 0.40000ml of M6164 + 0.40000ml of M6165 + 48.18000ml of MP87031 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3494	ICP AES ICSAB SOLN-1	MP87405	09/22/2025	10/03/2025	Janvi Patel	None	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 10/02/2025

FROM 0.01000ml of M5817 + 0.10000ml of M5970 + 0.10000ml of M6077 + 0.10000ml of M6176 + 10.00000ml of M6182 + 10.00000ml of M6184 + 79.69000ml of MP87031 = Final Quantity: 100.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57058 / Cerium, 1000PPM, 100ML	020623	02/06/2026	03/06/2023 / bin	03/01/2023 / bin	M5467

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Nickel (Ni) 1000PPM	091223	09/12/2026	01/02/2024 / bin	12/20/2023 / jaswal	M5748

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57005 / B, 1000 PPM, 125 ml	071123	07/11/2026	03/26/2024 / Sohil	01/03/2024 / jaswal	M5814

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Lithium, Li, 100 ml, 1000 PPM	102423	10/24/2026	02/20/2024 / Jaswal	01/10/2024 / Jaswal	M5923

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	03/31/2026	03/31/2025 / kareem	06/11/2024 / Jaswal	M5969

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 #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	06/06/2025 / Janvi	07/01/2024 / Jaswal	M5971

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	08/05/2026	08/06/2025 / Janvi	02/22/2024 / Jaswal	M5979

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB727800	07/30/2026	07/30/2025 / Janvi	02/22/2024 / kareem	M5998

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSR1-1 / Strontium, 125 ml, 1000 PPM	U2-SR730227	03/03/2028	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6019

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.	57182 / Pb, 10000 PPM, 125 ml	110923	11/09/2026	12/05/2024 / janvi	08/05/2024 / Jaswal	M6026

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	062024	06/20/2027	06/04/2025 / Janvi	08/05/2024 / Jaswal	M6027

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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.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	010924	01/09/2027	01/14/2025 / Jaswal	08/05/2024 / Jaswal	M6032

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	V2-MEB746173	01/29/2026	01/29/2025 / JANVI	08/22/2024 / Jaswal	M6058

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	V2-MEB746762	09/06/2029	01/23/2025 / kareem	09/19/2024 / kareem	M6077

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	101124	10/11/2027	01/13/2025 / kareem	01/13/2025 / kareem	M6128

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGSI1-1 / SILICON 125mL 1000ug/mL	V2-SI744713	07/10/2029	01/14/2025 / Jaswal	10/03/2024 / Jaswal	M6137

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	121824	12/18/2027	04/17/2025 / Janvi	01/13/2025 / Jaswal	M6138

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	011025	01/10/2028	06/25/2025 / Janvi	01/13/2025 / Jaswal	M6140

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	103024	10/30/2027	05/06/2025 / JANVI	01/13/2025 / Jaswal	M6142

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	072424	07/24/2027	01/23/2025 / kareem	01/13/2025 / Jaswal	M6144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	121724	12/17/2027	02/04/2025 /	01/13/2025 / Jaswal	M6145

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	02/17/2026	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	10/09/2025	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011325	03/18/2026	03/18/2025 / kareem	02/09/2025 / kareem	M6159

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	071724	07/17/2027	03/24/2025 / kareem	10/18/2024 / kareem	M6160

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-1-125ML / EPA CLP ICP Verification Standard1	V2-MEB744107	06/08/2026	06/09/2025 / jaswal	06/06/2025 / jaswal	M6163

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-2-125ML / EPA CLP ICP Verification Standard2	U2-MEB733713	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6164

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	QCP-CICV-3-125ML / EPA CLP ICP Verification Standard3	V2-MEB749572	06/08/2026	06/09/2025 / jaswal	06/09/2025 / jaswal	M6165

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	011525	01/15/2028	07/15/2025 /	02/13/2025 / Janvi	M6171

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	V2-MEB742428	07/31/2026	07/31/2025 / Janvi	05/05/2025 / Janvi	M6174

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	092724	09/27/2027	08/06/2025 / Janvi	08/06/2025 / Janvi	M6176

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	/ Lead (Pb) 1000PPM	031525	03/15/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6177

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57042 / Mo, 1000 PPM, 125 ml	080528	08/05/2028	08/06/2025 / Janvi	08/06/2025 / Janvi	M6178

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	08/05/2026	08/06/2025 / Janvi	06/02/2024 / Janvi	M6179

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	W2-MEB752149	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6180

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-2 / Laboratory Fortified Stock Solution 2, 125 ml	V2-MEB7433480	02/05/2026	08/06/2025 / Janvi	07/22/2025 / Janvi	M6181

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART A / ICSA (ICP) STOCK SOLN	ICSA-1211	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6182

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSAB (ICP) STOCK SOLN	ICSB-0710	02/05/2026	08/06/2025 / Janvi	03/06/2024 / Janvi	M6184

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24H0162012	01/28/2026	08/29/2025 / Sagar	08/08/2025 / Sagar	M6187

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

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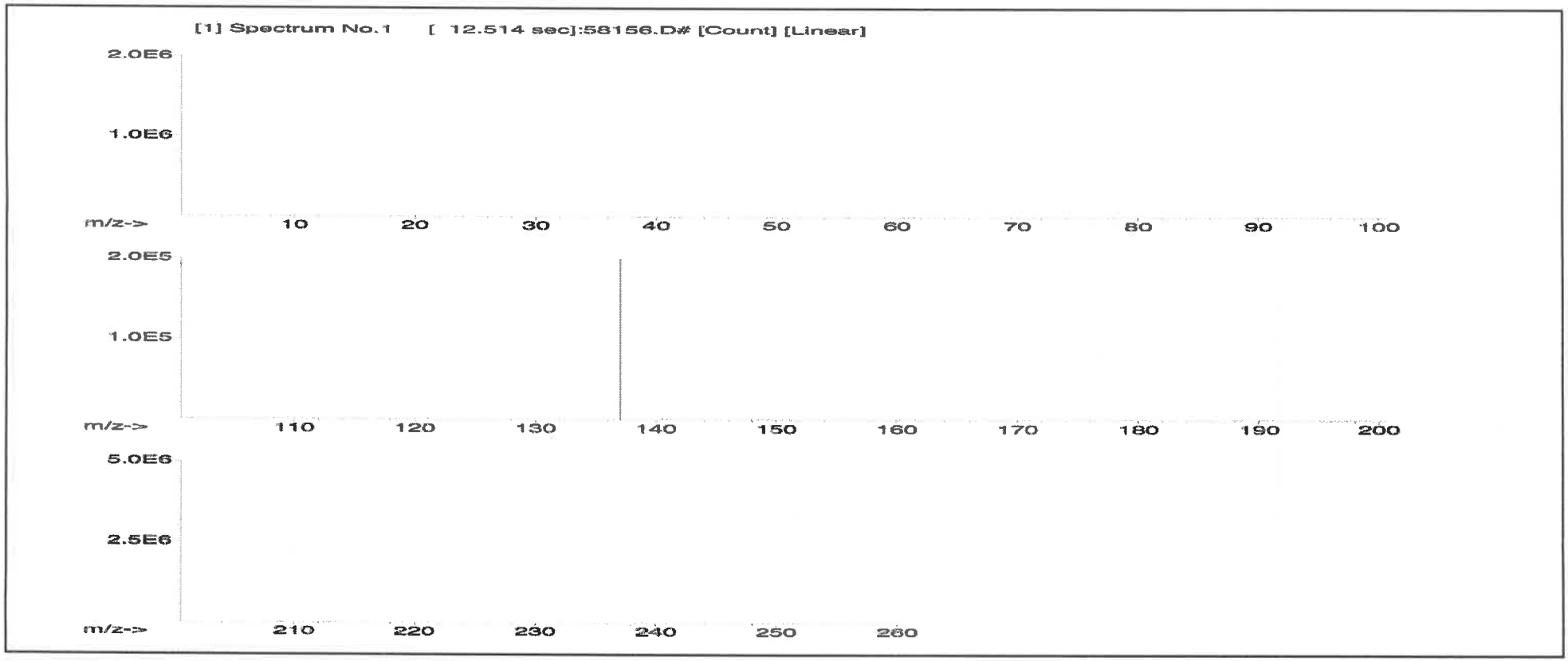
CERTIFIED WEIGHT REPORT:

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
Reviewed By:	Pedro L. Rentas	010924

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82441	**1000.1**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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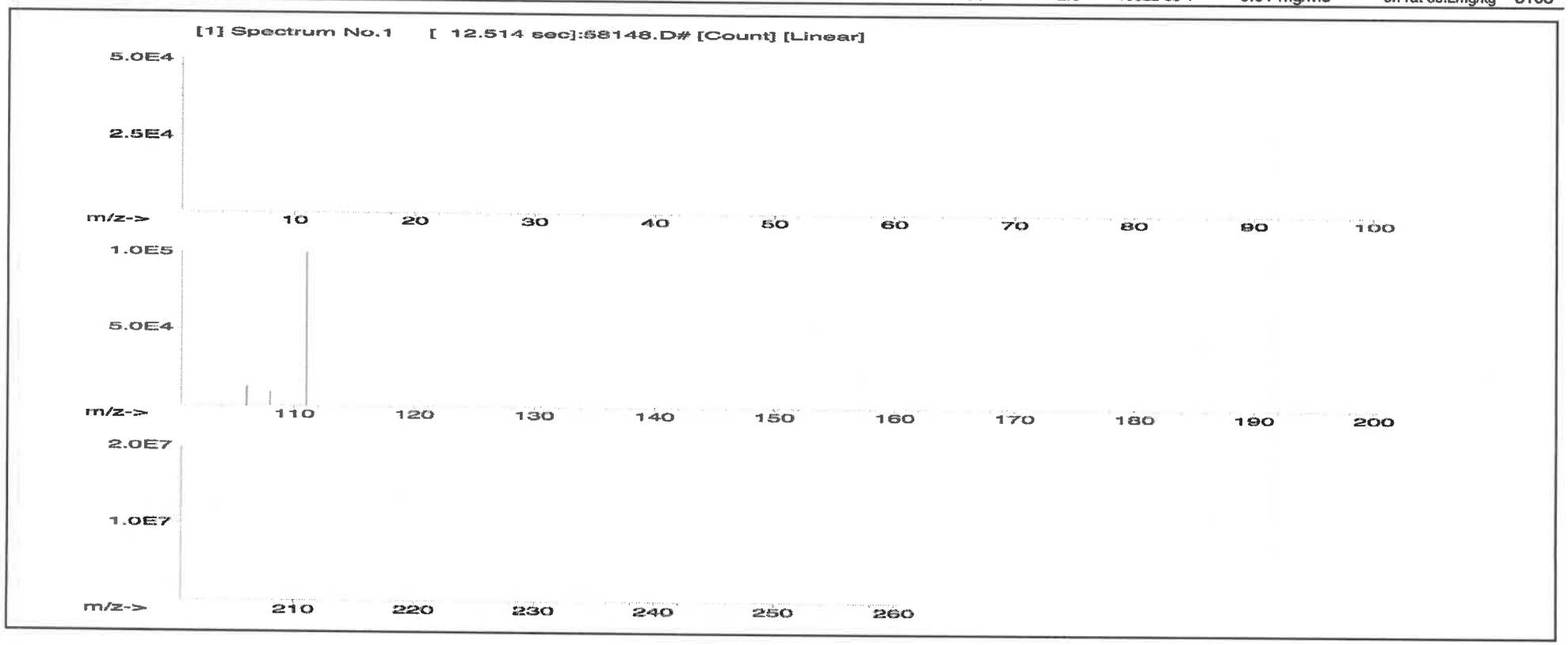
CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	070124
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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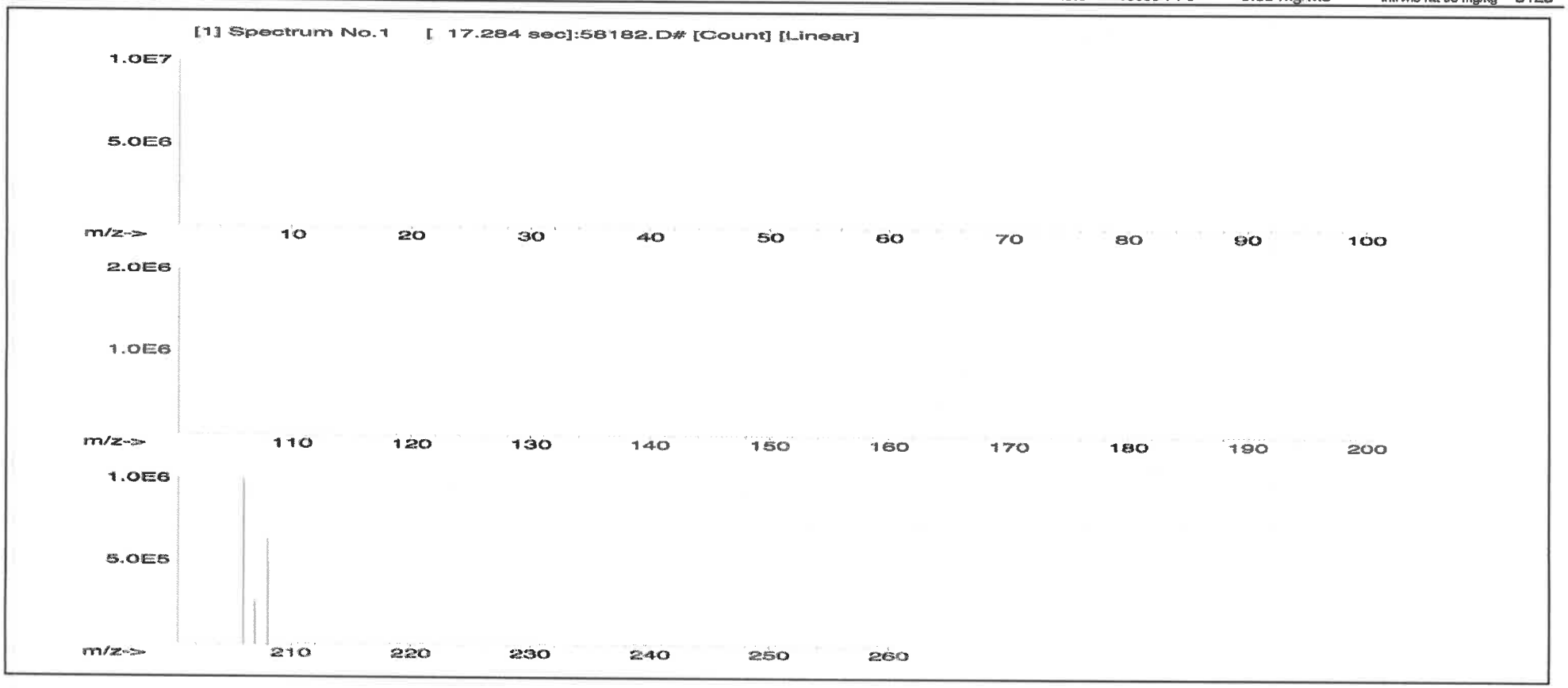
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CERTIFIED WEIGHT REPORT:

Part Number:	**57182**			**Lot #**	
Lot Number:	**110923**	**Solvent:**	24002546	Nitric Acid	
Description:	**Lead (Pb)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	110926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are 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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M5467 R: 03/01/23 (LA)

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CERTIFIED WEIGHT REPORT:

Part Number: 57058
Lot Number: 020623
Description: Cerium (Ce)

Expiration Date: 020626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

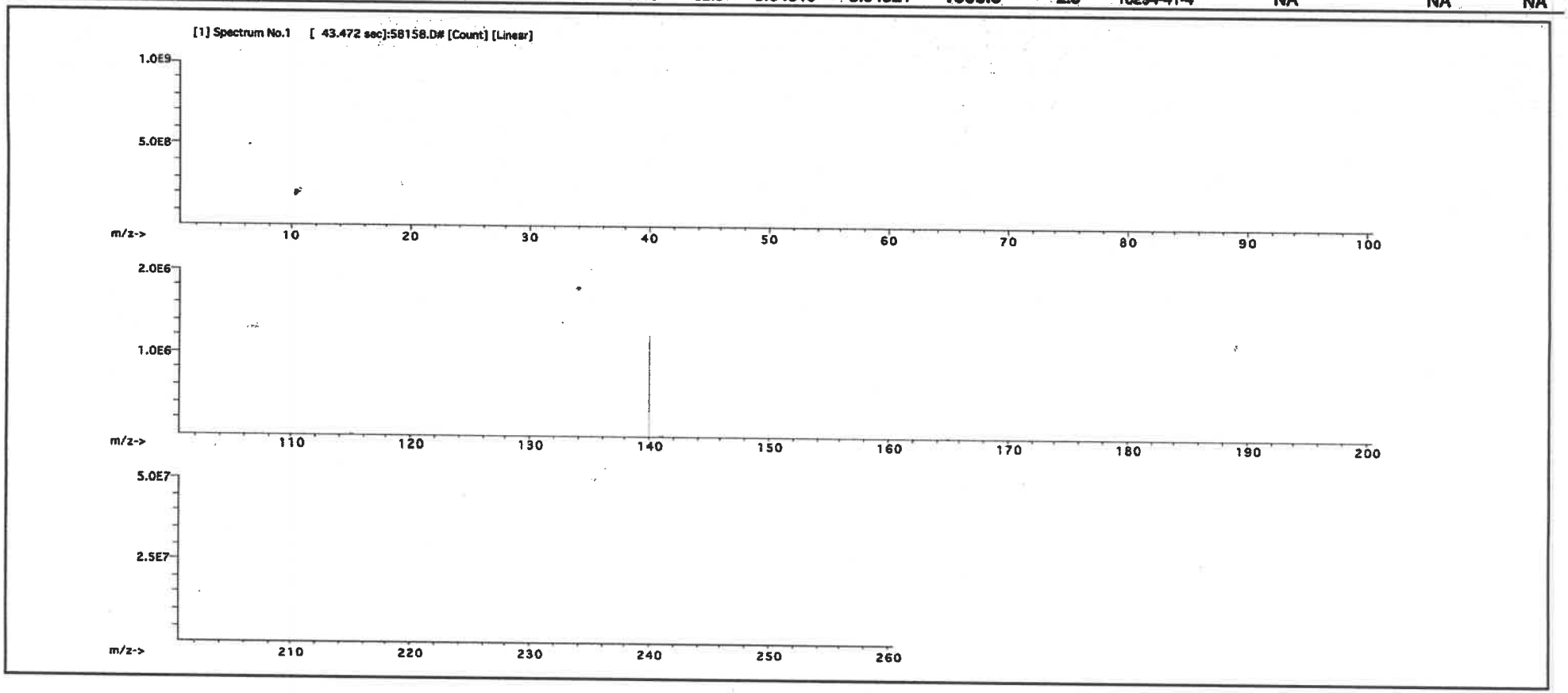
Weight shown below was diluted to (mL): 1000.12 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawrence Barry	020623
Reviewed By:	Pedro L. Rentas	020623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cerium nitrate hexahydrate (Ce)	IN146	Z512CEB1	1000	99.999	0.10	32.8	3.04919	3.04921	**1000.0**	**2.0**	10294-41-4	NA	NA	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	T	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5658 R ! 8/25/23

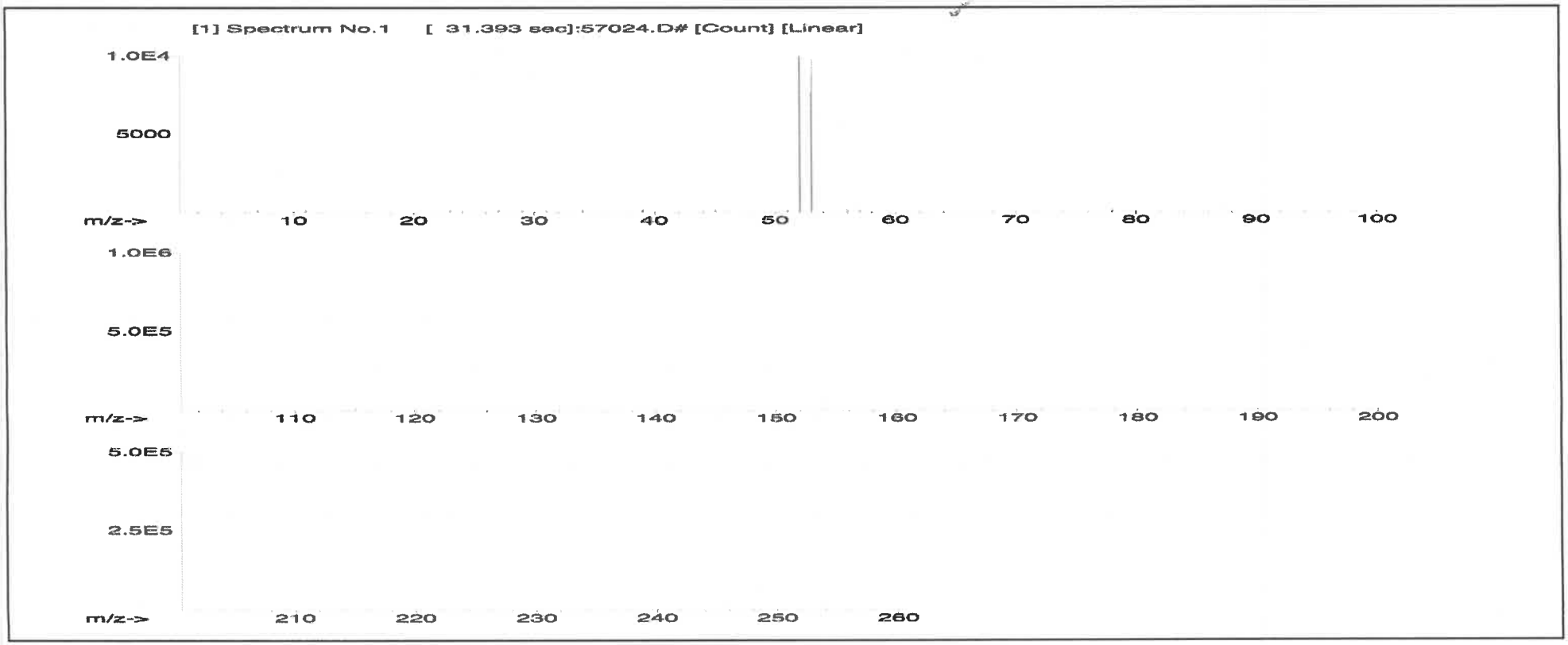
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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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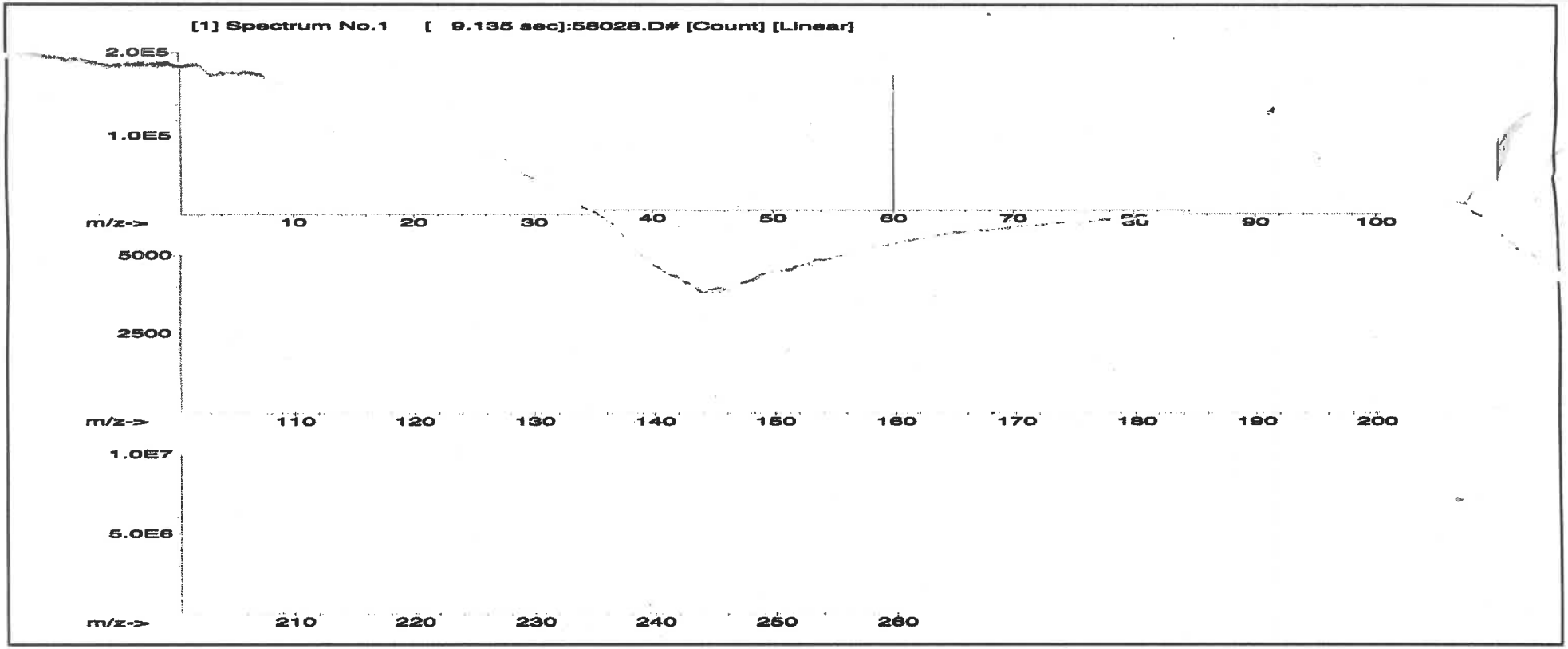
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**	24002546	Nitric Acid	
Lot Number:	**091223**			
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	091226			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	091223
Reviewed By:	Pedro L. Rentas	091223

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	**2.2**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 8/25/23 M5751

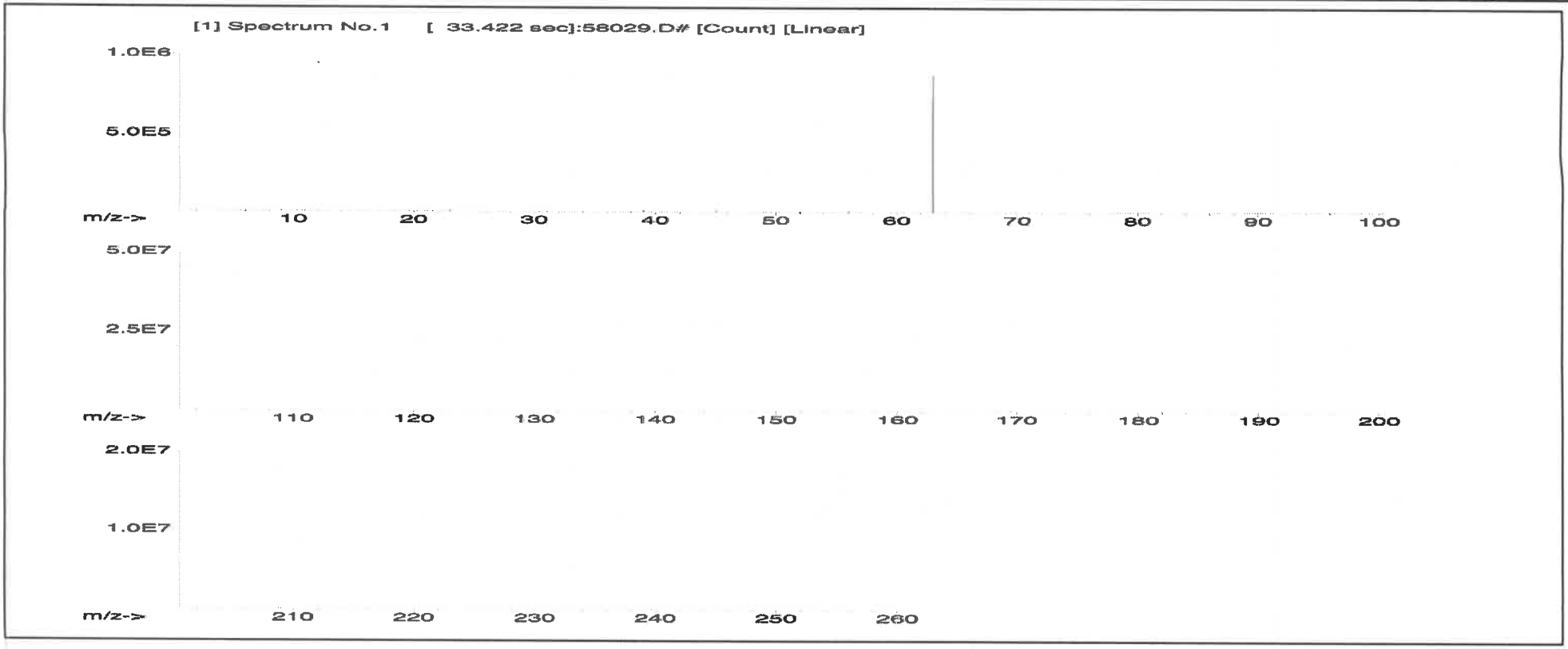
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CERTIFIED WEIGHT REPORT:

		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



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:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R: 02/09/24 M5798

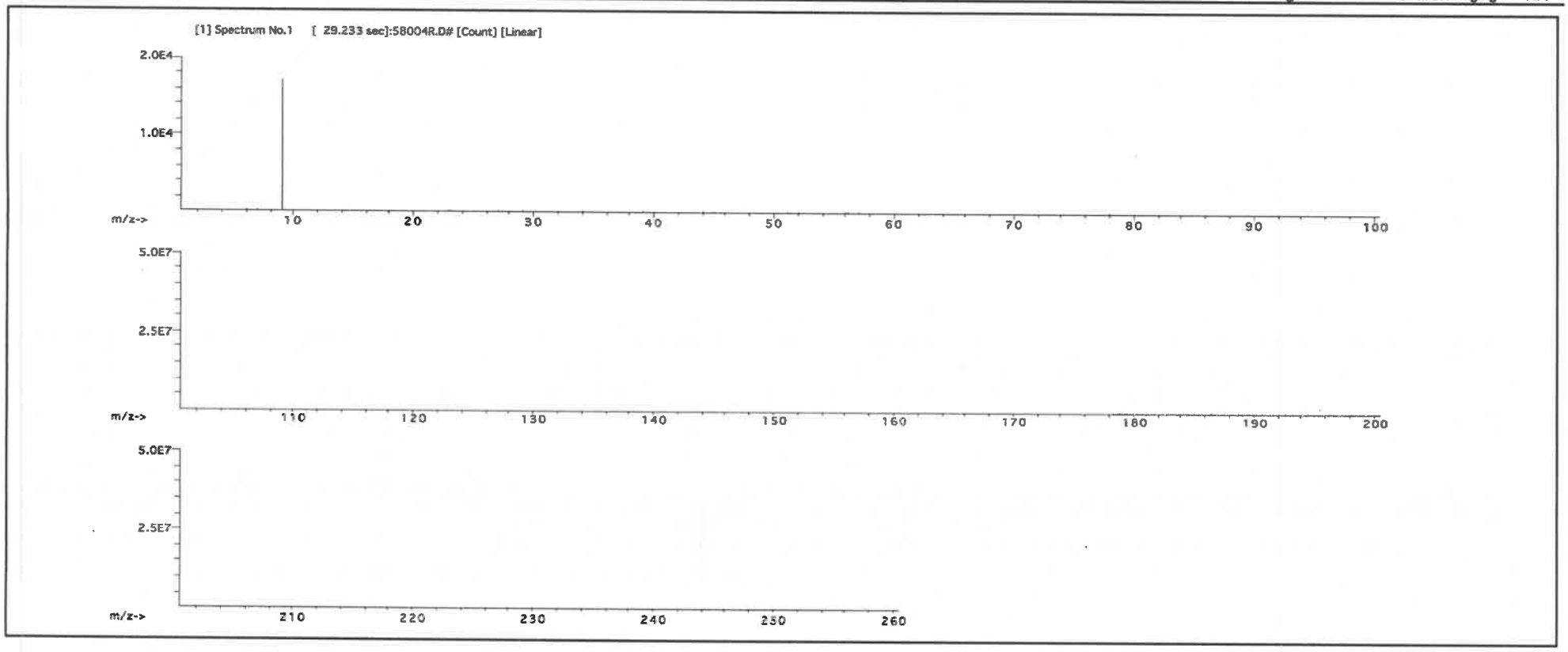
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



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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R? 02/09/24 IV15799

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

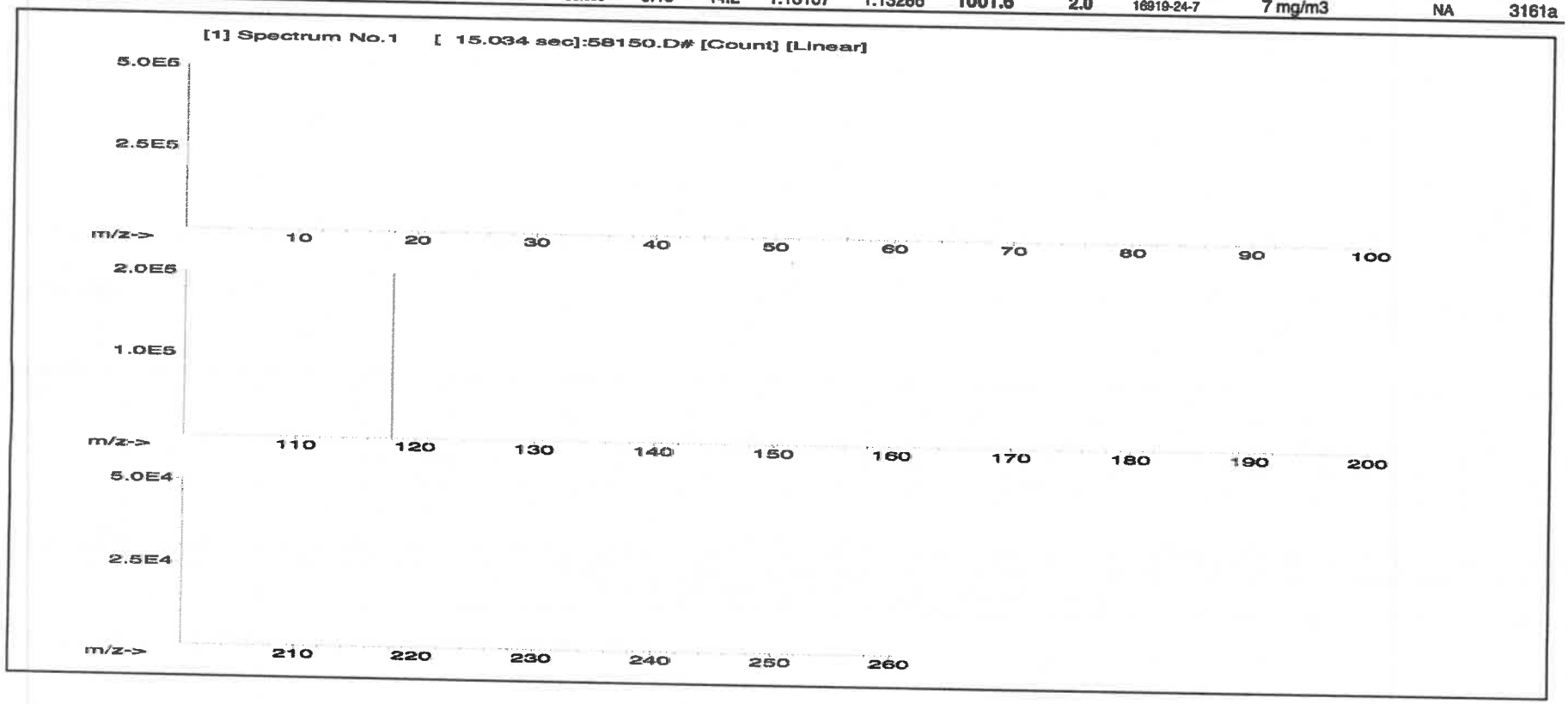
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* 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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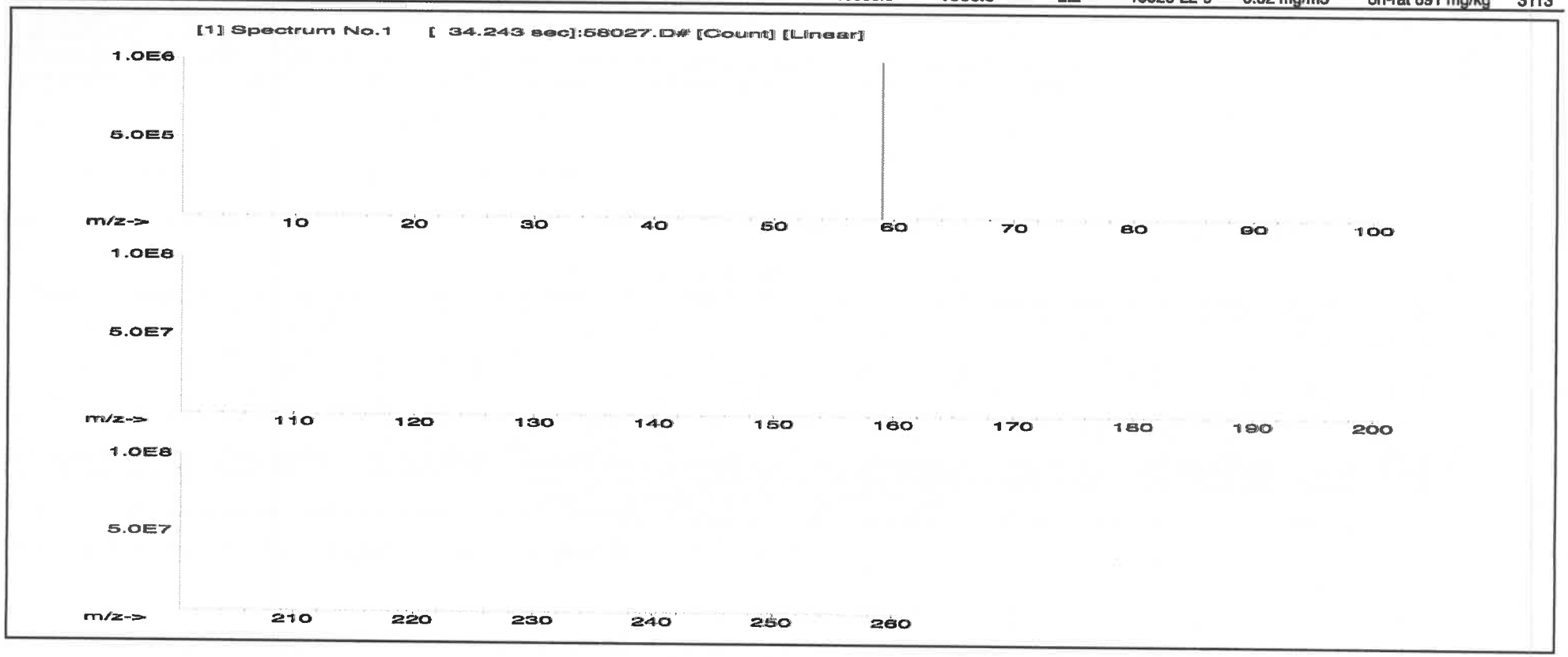
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* 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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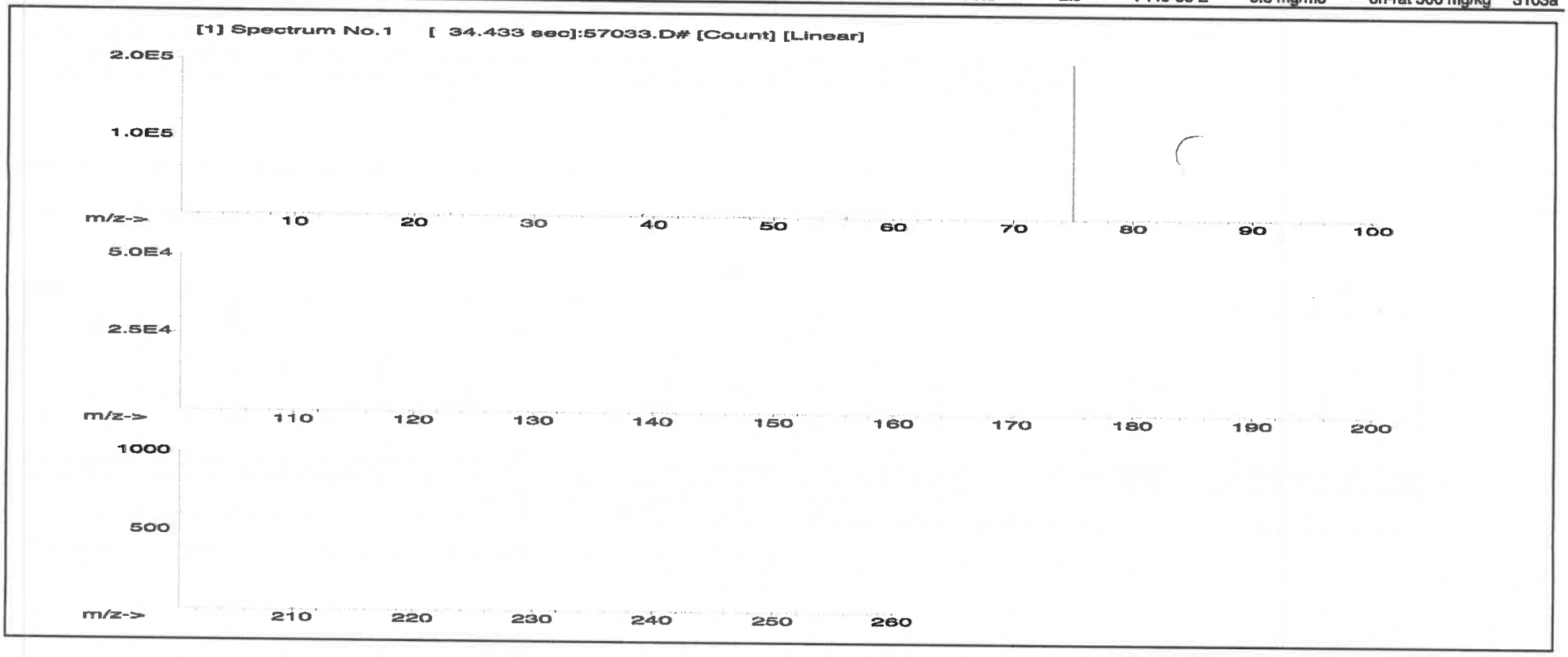
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CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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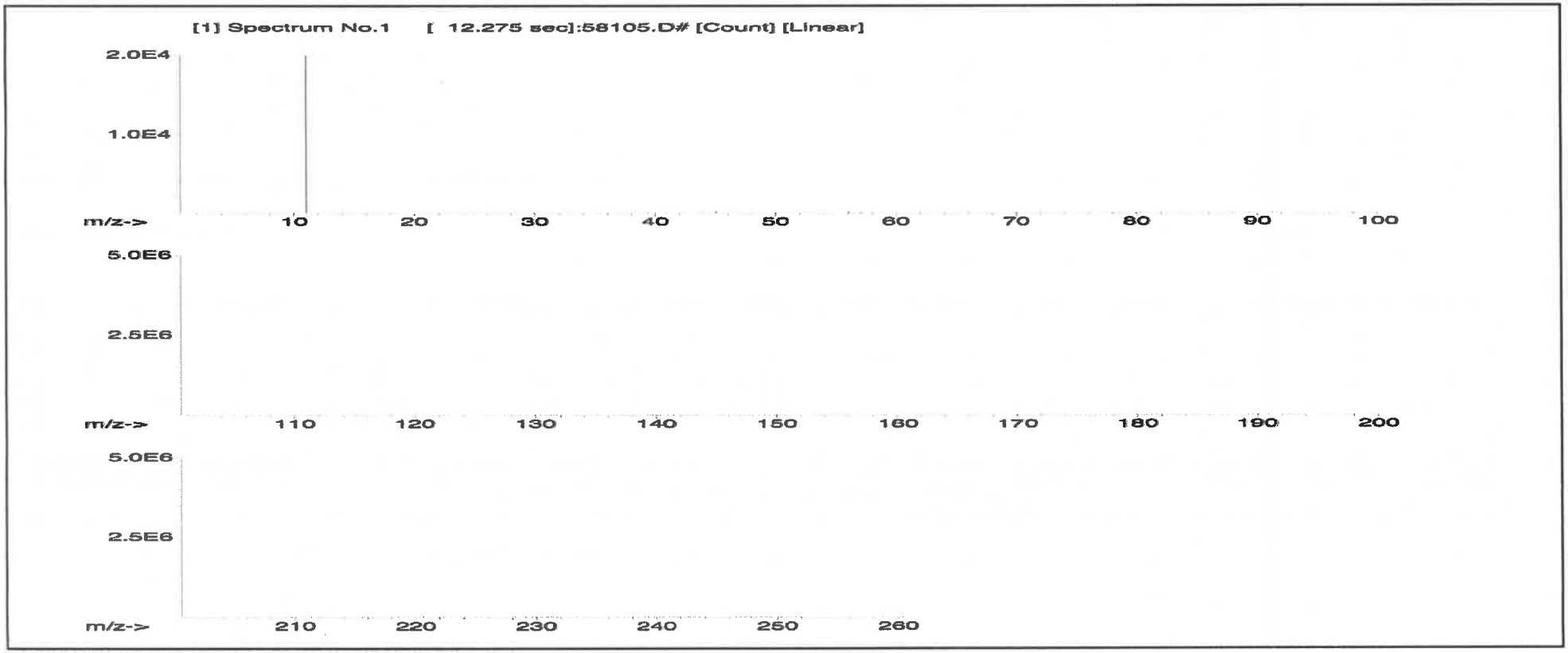
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CERTIFIED WEIGHT REPORT:

Part Number:	**57005**		**Solvent:**	MKBQ8597V	Ammonium hydroxide
Lot Number:	**071123**				
Description:	**Boron (B)**		2.0%	40.0 (mL)	Ammonium hydroxide
Expiration Date:	071126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	1999.48	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Boric acid (B)	IN018	BV092016A1	1000	99.9999	0.10	17.3	11.55772	11.56201	**1000.4**	**2.0**	10043-35-3	2 mg/m3	orl-rat 2660 mg/kg	3107



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	T	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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CERTIFIED WEIGHT REPORT:

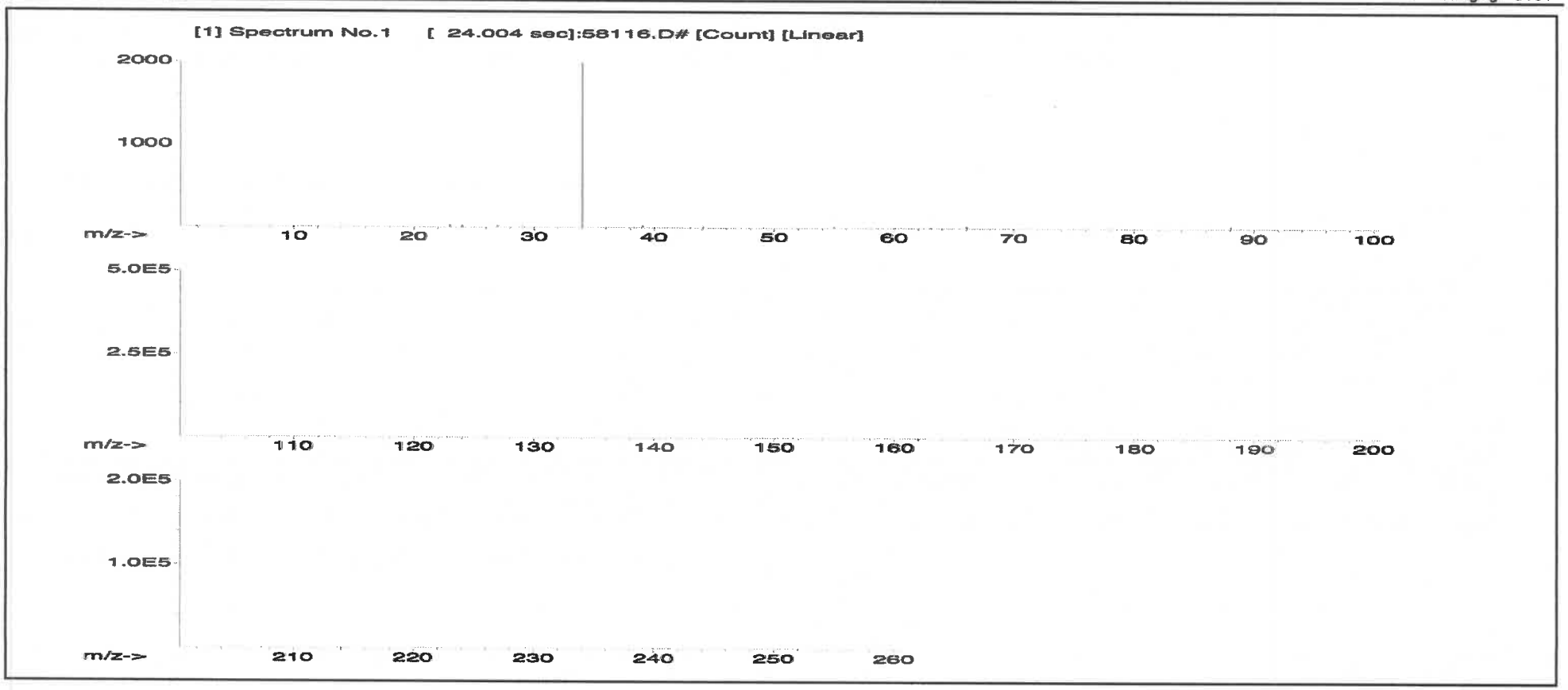
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



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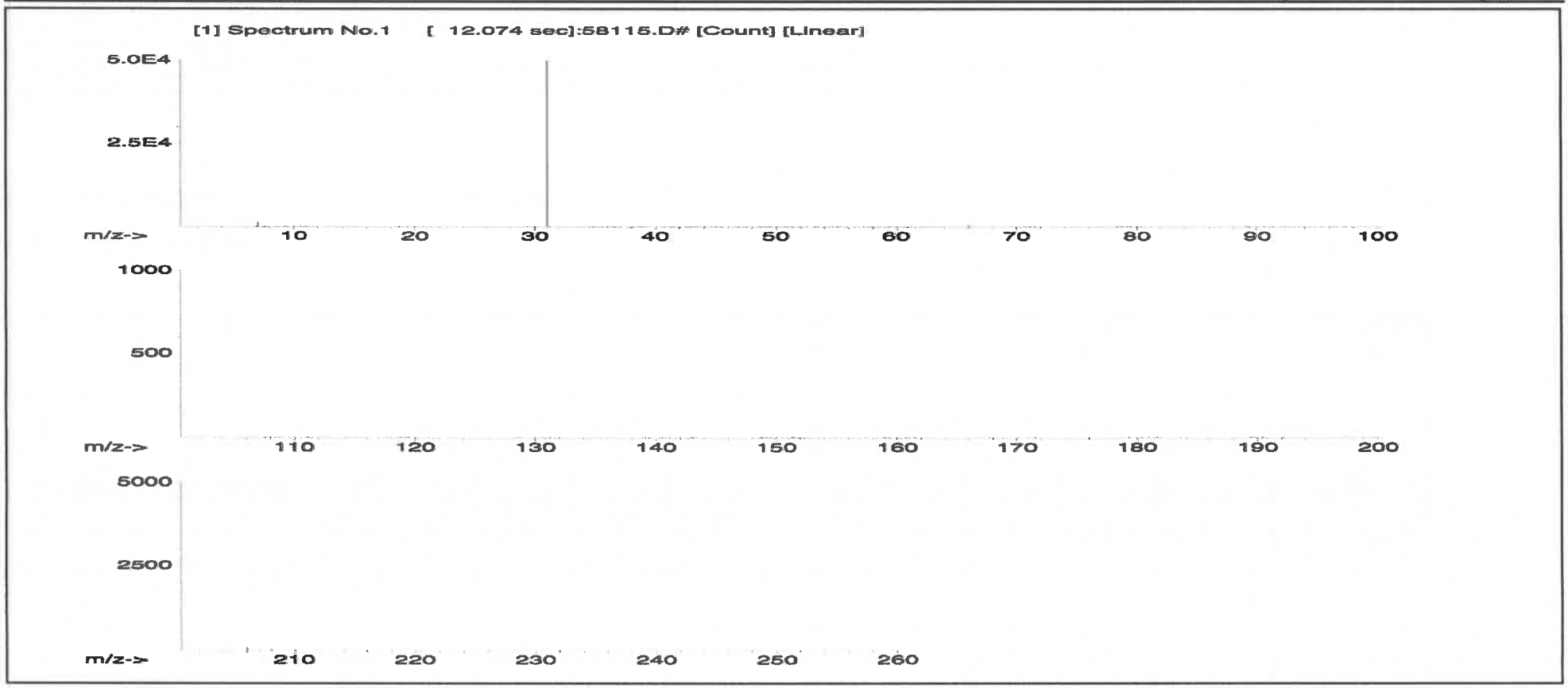
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CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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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* 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

M5923 R: 01/10/24

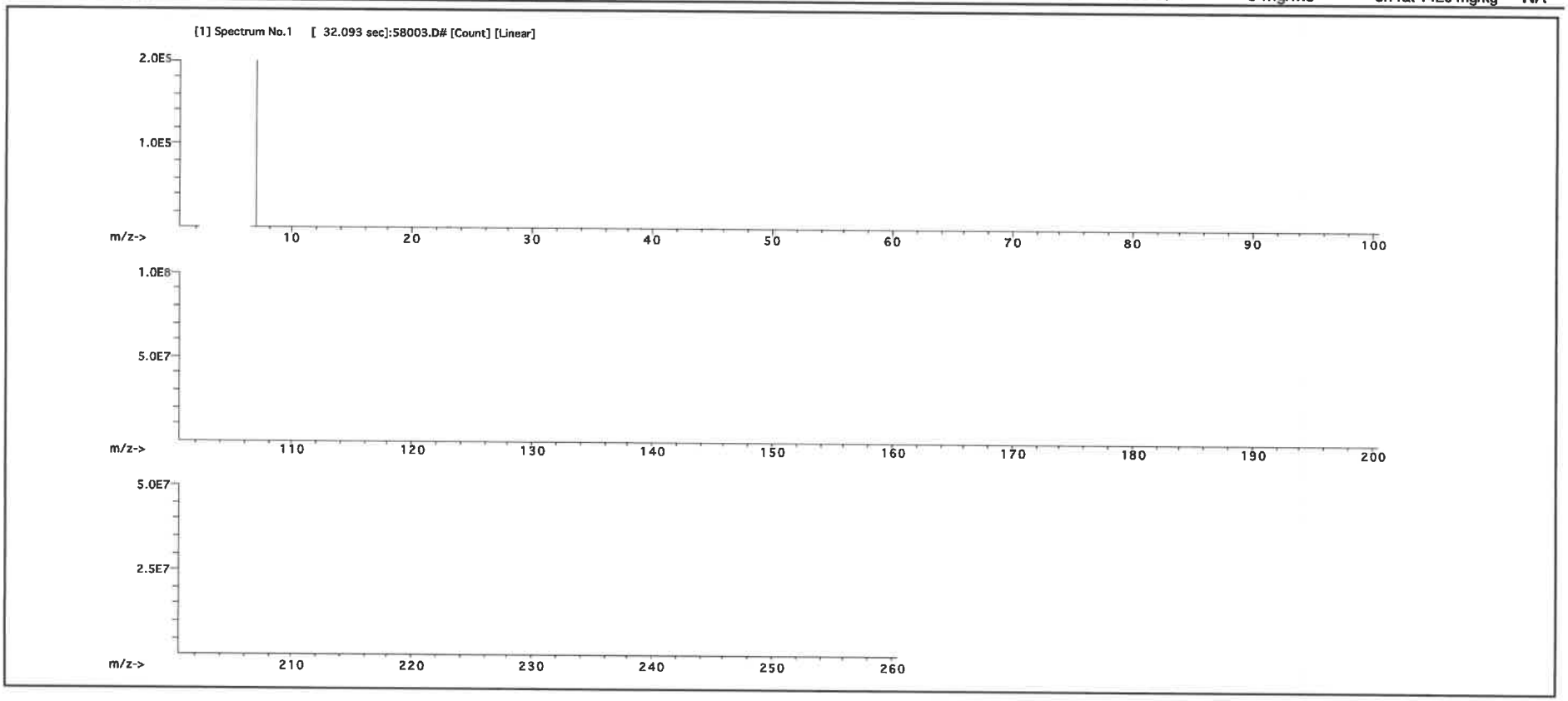
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CERTIFIED WEIGHT REPORT:

Part Number:	**57003**		**Lot #**		
Lot Number:	**102423**	**Solvent:**	24002546	Nitric Acid	
Description:	**Lithium (Li)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	102426				
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	102423
Reviewed By:	Pedro L. Rentas	102423

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	1000	99.999	0.10	10.0	20.0004	20.0006	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5962 R! 06/14/24.

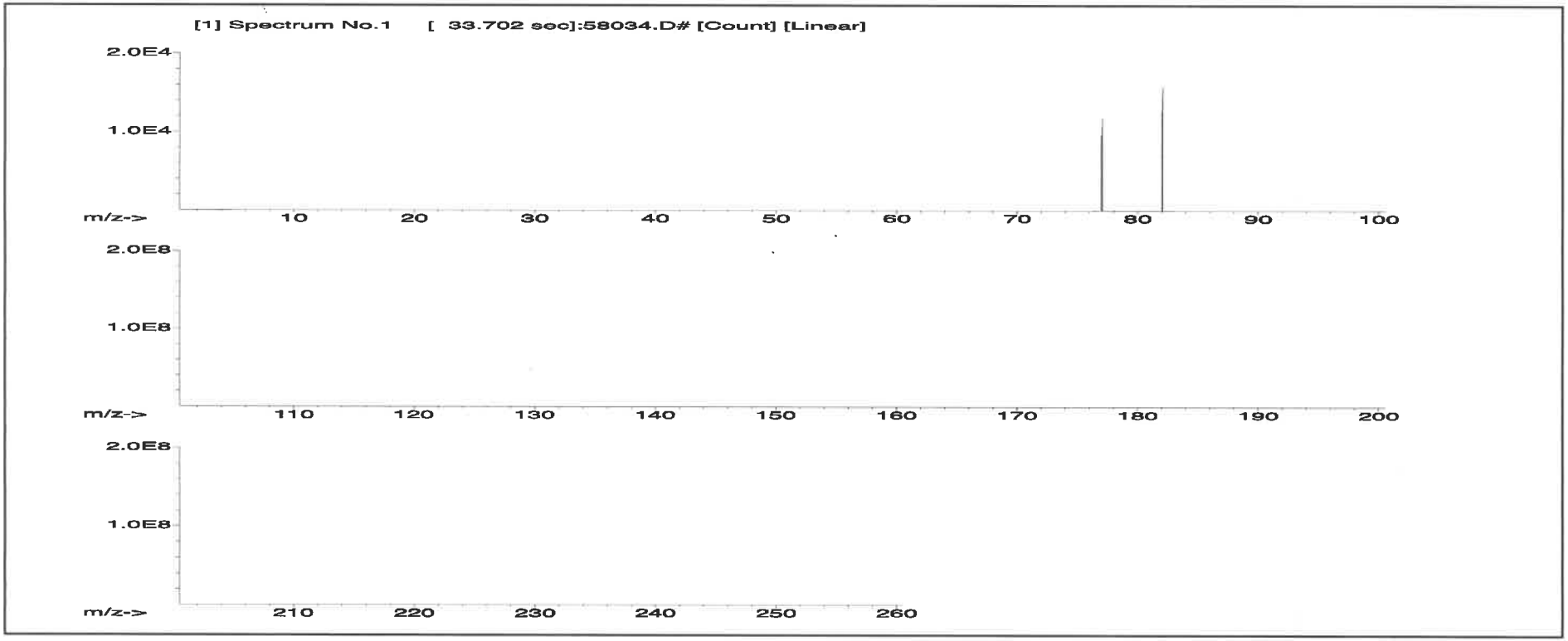
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



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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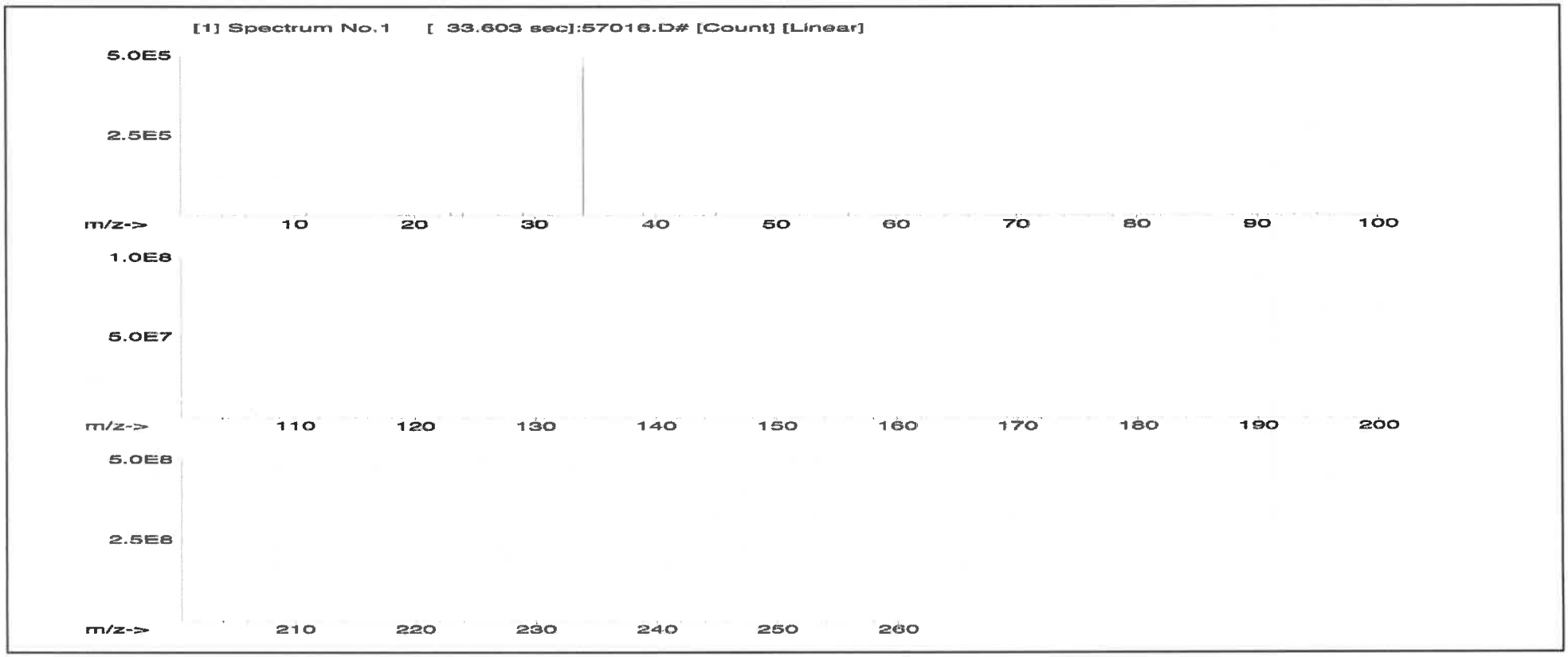
CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	122923	ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Lot #

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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M5970, M5971 R: 7/01/24

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https://Absolutestandards.com

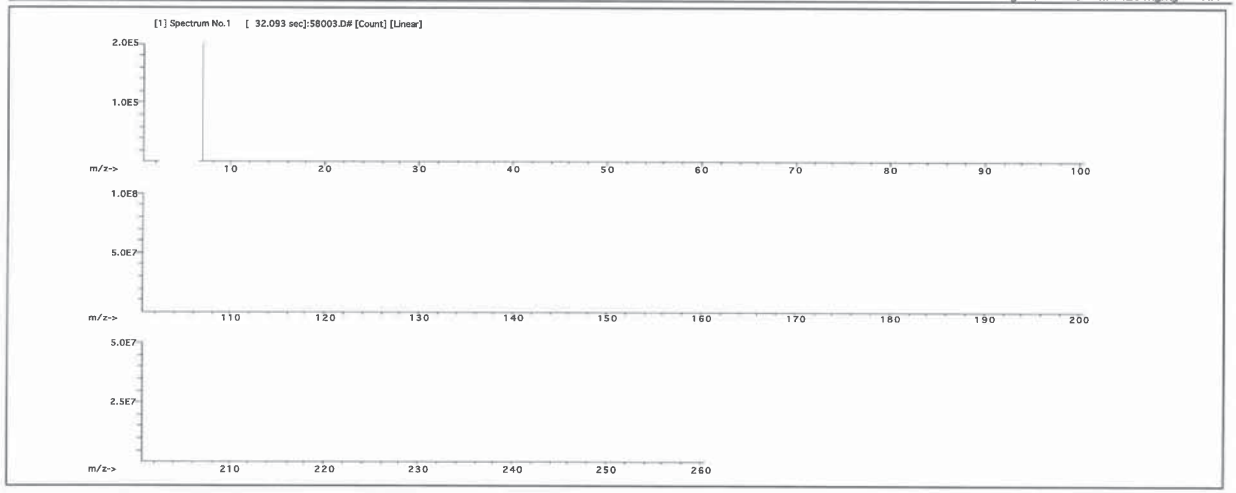
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016 Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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:

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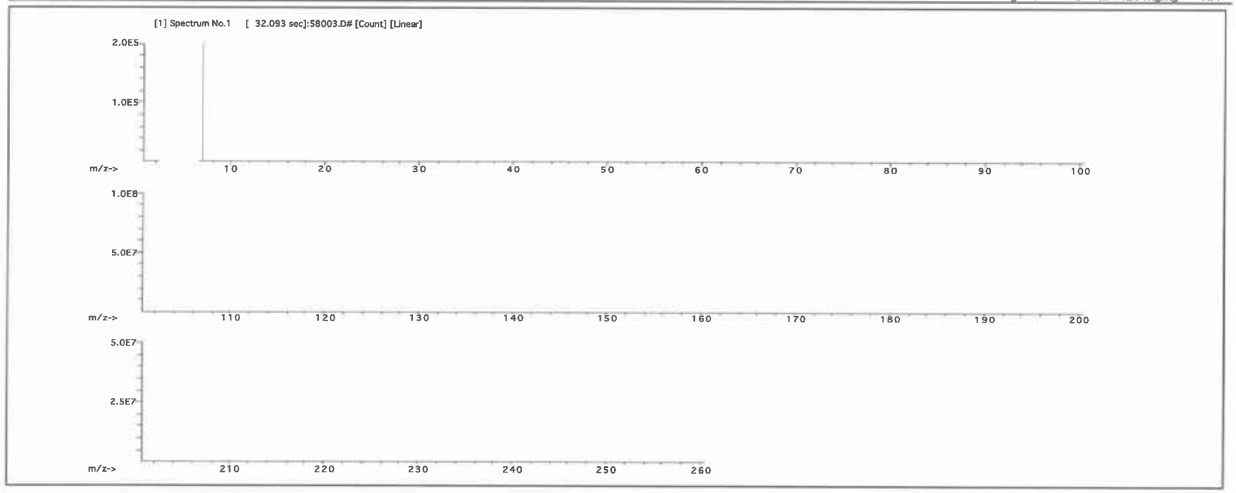
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016 Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

M5978, M5979

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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:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

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

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certificate of Analysis

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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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MS-997

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-3
Lot Number:	T2-MEB727800
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 7 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.2 µg/mL**
Lead, Pb	**1 000 ± 4 µg/mL**	**Selenium, Se**	**1 000 ± 6 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.042 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
As	Calculated		See Sec. 4.2
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/(u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i}^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 21, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- December 21, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

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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:	CHEM-CLP-4
Lot Number:	V2-MEB746172
Matrix:	3% (v/v) HNO_3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	1 000 ± 5 µg/mL	Molybdenum, Mo	1 000 ± 5 µg/mL
Silicon, Si	1 000 ± 7 µg/mL	Tin, Sn	1 000 ± 5 µg/mL
Titanium, Ti	1 000 ± 6 µg/mL		

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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 12, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- August 12, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certificate of Analysis

M6074
M6075
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M6077

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F: 540-585-3012
info@inorganicventures.com

EXP.: 9/6/2029

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	V2-MEB746762
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 5 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 000 ± 6 µg/mL**		

Density: 1.033 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Mo	ICP Assay	traceable to 3134	U2-MO739068
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 06, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- September 06, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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->1/13/28

M6128

Part Number:	**58025**	**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**101124**			
Description:	**Manganese (Mn)**	2%	80.0 (mL)	Nitric Acid
Expiration Date:	101127			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty	

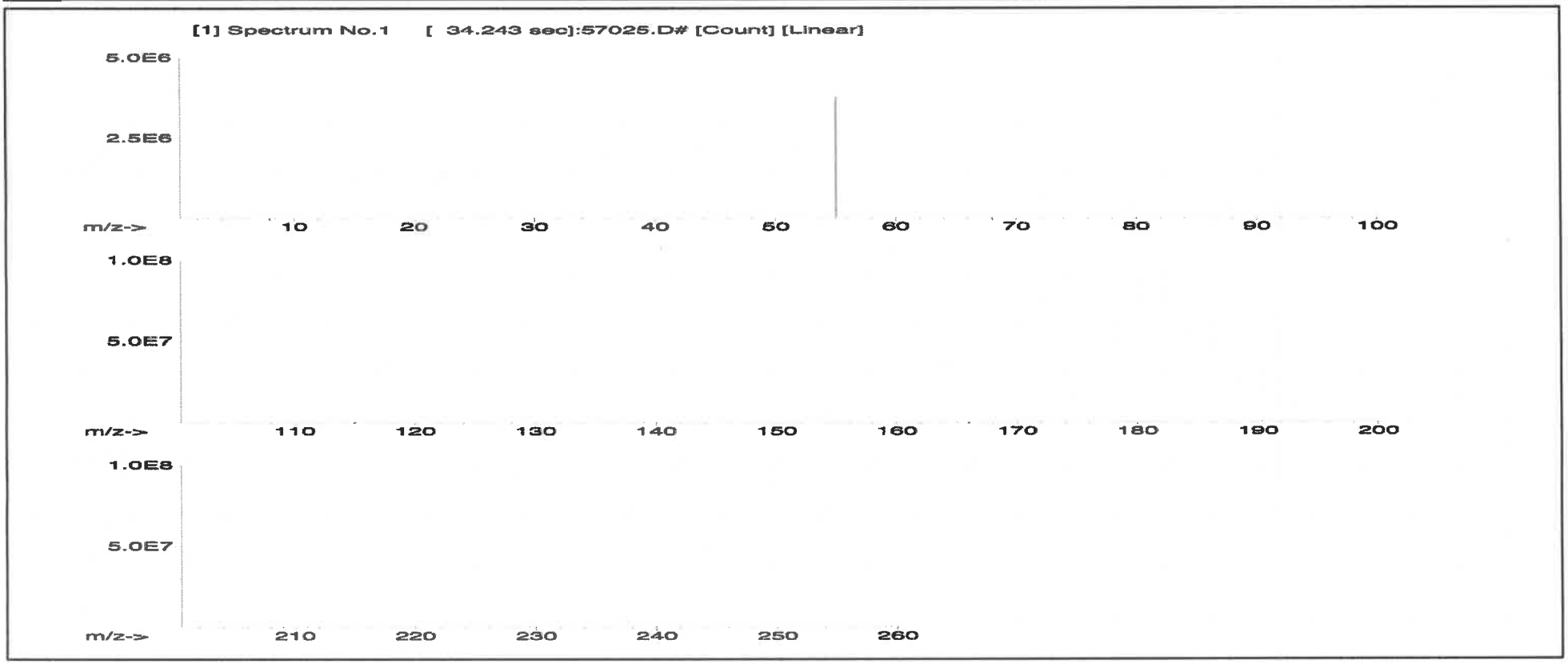
Giovanni Esposito

Formulated By:	Giovanni Esposito	101124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	101124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	**SDS Information** (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate hydrate (Mn)	IN031	MNM092020A1	1000	99.999	0.10	20.8	19.2322	19.2344	**1000.1**	**2.0**	15710-66-4	5 mg/m3	orl-rat >300mg/kg	3132



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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M6137 R→10/3/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSI1
Lot Number:	V2-SI744713
Matrix:	tr. HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Silicon
Starting Material:	Silica
Starting Material Lot#:	1771
Starting Material Purity:	99.9981%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 999 ± 6 µg/mL

Density: 1.003 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**999 ± 5 µg/mL** ICP Assay NIST SRM Traceable to 3150 Lot Number: S2-SI702546
Assay Method #2	**1000 ± 7 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000310	M	Eu	<	0.000310	O	Na		0.001656	M	Se	<	0.022000	M	Zn	<	0.002500
M	Al		0.010787	M	Fe	<	0.027000	M	Nb	<	0.001300	s	Si	<		O	Zr	<	0.001900
M	As	<	0.001900	M	Ga	<	0.001300	M	Nd	<	0.000310	M	Sm	<	0.000310				
M	Au	<	0.000910	M	Gd	<	0.000310	M	Ni	<	0.005500	M	Sn		0.000096				
M	B		0.016180	M	Ge	<	0.001900	M	Os	<	0.000610	O	Sr		0.000092				
M	Ba		0.000096	M	Hf		0.000423	i	P	<		M	Ta		0.002542				
O	Be	<	0.000570	M	Hg	<	0.000610	M	Pb	<	0.000310	M	Tb	<	0.000310				
M	Bi	<	0.000310	M	Ho	<	0.000610	M	Pd	<	0.000610	M	Te	<	0.000910				
O	Ca		0.011557	M	In	<	0.000310	M	Pr	<	0.000310	M	Th	<	0.001900				
M	Cd	<	0.000310	M	Ir	<	0.000310	M	Pt	<	0.000310	M	Ti		0.001078				
M	Ce	<	0.000610	O	K		0.000577	M	Rb	<	0.009100	M	Tl	<	0.000310				
M	Co	<	0.001600	M	La	<	0.000310	M	Re	<	0.000310	M	Tm	<	0.000310				
M	Cr	<	0.010000	O	Li	<	0.000460	M	Rh	<	0.000310	M	U	<	0.000310				
M	Cs	<	0.000310	M	Lu	<	0.000310	M	Ru	<	0.000310	O	V	<	0.001300				
M	Cu	<	0.002500	O	Mg		0.001348	O	S	<	0.570000	M	W	<	0.001900				
M	Dy	<	0.000310	M	Mn	<	0.002500	M	Sb	<	0.000310	M	Y	<	0.000310				
M	Er	<	0.000310	M	Mo	<	0.000310	O	Sc	<	0.000590	M	Yb	<	0.000310				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 28.09 +4 6 Si(OH)x(F)y2-

Chemical Compatibility -Soluble in HCl, HF, H3PO4 H2SO4 and HNO3 as the Si(OH)x(F)y2-. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths, or high levels of transition elements unless they are fluorinated. Stable with most inorganic anions with a tendency to hydrolyze forming silicic acid (silicic acid is soluble up to ∼100 ppm in water) in all dilute acids except HF.

Stability - 2-100 ppb levels - stability unknown - (alone or mixed with all other metals) as the Si(OH)x(F)y2-. 1-10,000 ppm single element solutions as the Si(OH)x(F)y2- chemically stable for years in 2-5 % HNO3 / trace HF in a LDPE container.

Si Containing Samples (Preparation and Solution) -Metal (Soluble in 1:1:1 H2O / HF / HNO3); Oxide - SiO2, amorphic (dissolve by heating in 1:1:1 H2O / HF / HNO3); Oxide - quartz (fuse in Pt0 with Na2CO3); Geological Samples(fuse in Pt0with Na2CO3 followed by HCl solution of the fuseate); Organic Matrices containing silicates and non volatile silicon compounds (dry ash at 4500C in Pt0 and dissolve by gently warming with 1:1:1 H2O / HF / H2SO4 or fuse / ash with Na2CO3 and dissolve fuseate with HCl / H2O); Silicone Oils - dimethyl silicones depolymerize to form volatile monomer units when heated (Measure directly in alcoholic KOH / xylene mixture where sample is treated first with the KOH at 60-1000C to "unzip" the Si- O-Si polymeric structure or digest with conc. H2SO4 / H2O2 followed by cooling and dissolution of the dehydrated silica with HF.) Note that the direct analysis of silicone oils in an organic solvent will result in false high results due to high vapor pressure of volatile monomer units like hexamethylcyclotrisiloxane. The KOH forms the K2+Si(CH3)2O= salt which is not volatile at room temperature.

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 28 amu	4000 - 8000 ppt	N/A	N2, 12C16O
ICP-OES 212.412 nm	0.02/0.01 µg/mL	1	Hf, Os, Mo, Ta
ICP-OES 251.611 nm	0.012/0.003 µg/mL	1	Ta, U, Zn, Th
ICP-OES 288.158 nm	0.03/0.004 µg/mL	1	Ta, Ce, Cr, Cd, Th

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 10, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **July 10, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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AR-1539 Certificate Number
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M6138
R->1/13/25

CERTIFIED WEIGHT REPORT:

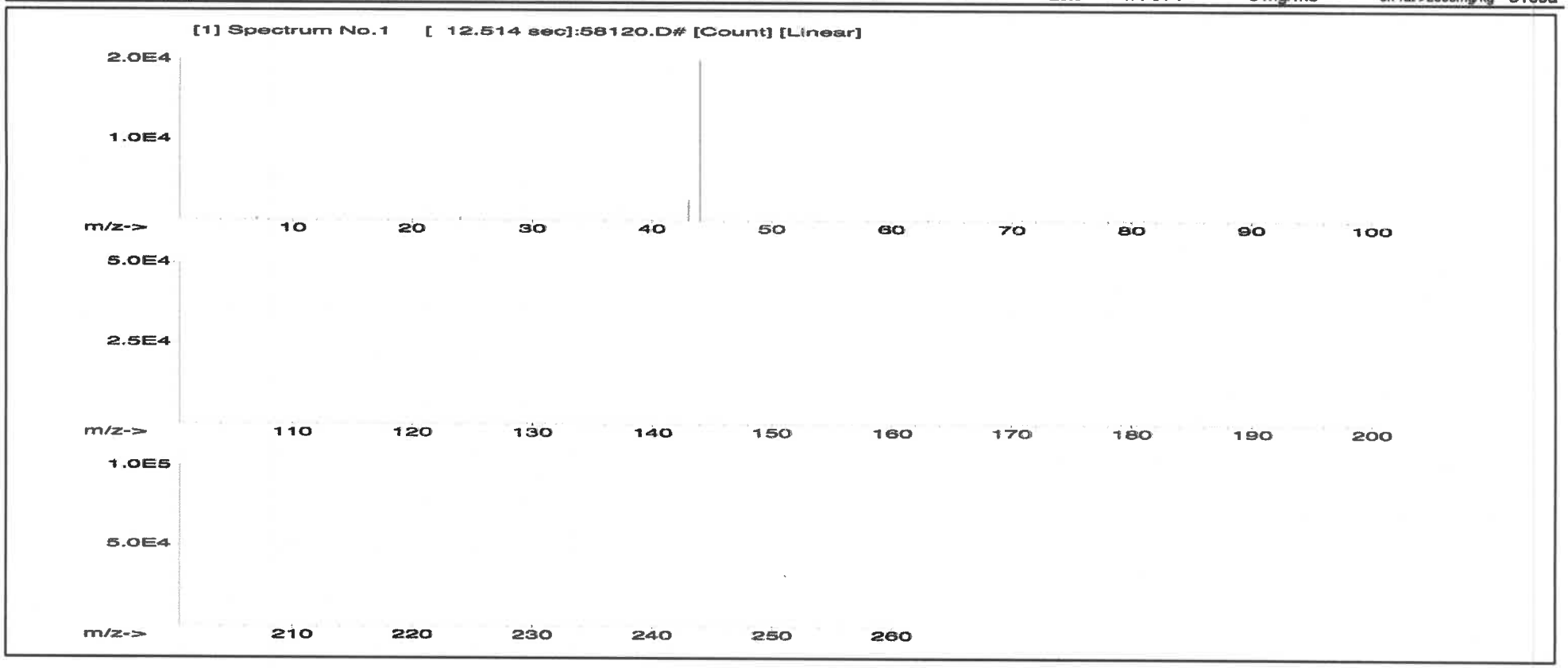
Part Number: 58120
Lot Number: 121824
Description: Calcium (Ca)
Expiration Date: 121827
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.1

	Lot #		
Solvent:	24012496	Nitric Acid	
2%	80.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.15	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	121824
Reviewed By:	Pedro L. Rentas	121824

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD03203B3	10000	99.999	0.10	39.9	100.2537	100.2677	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	30	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

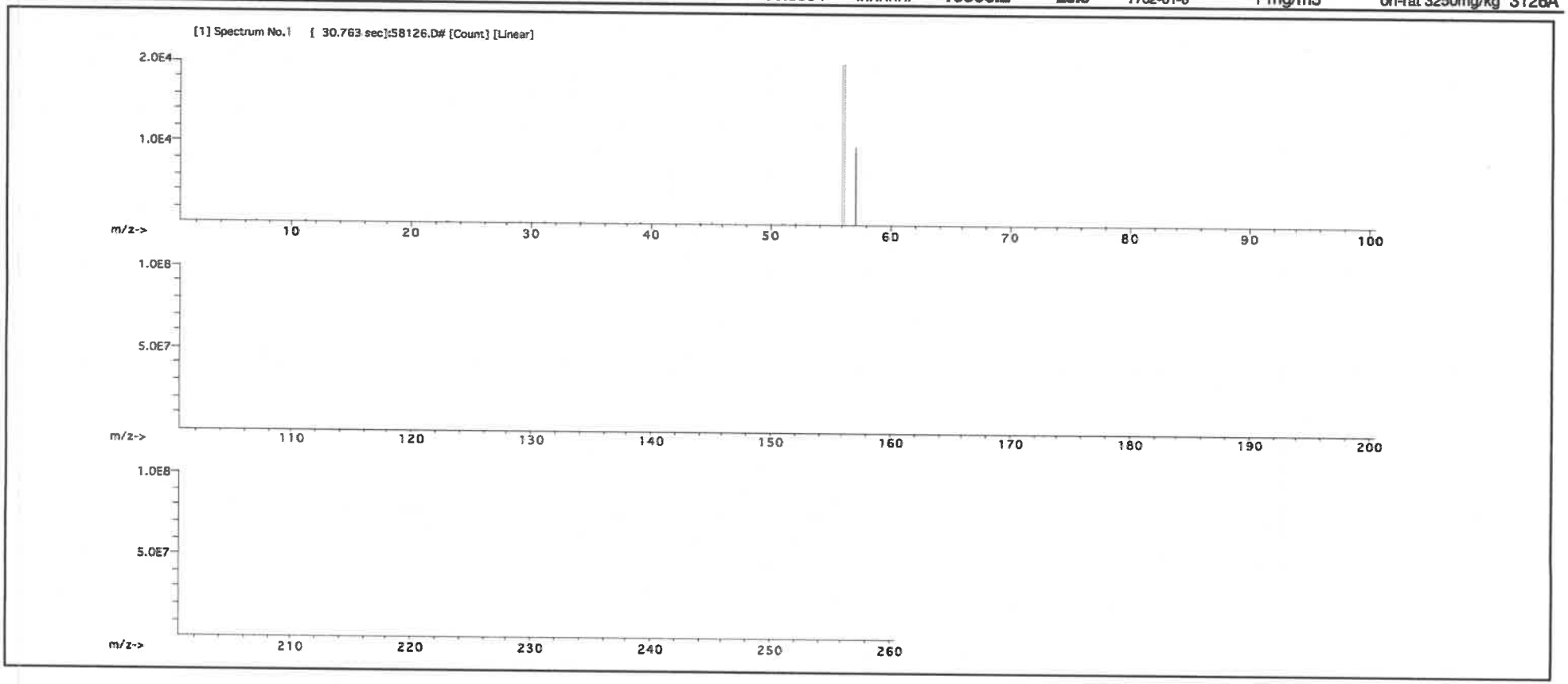
Part Number: 58126 R->1|B|2S
Lot Number: 011025
Description: Iron (Fe) M6140
Expiration Date: 011028
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07 ± 0.100 Flask Uncertainty

		Lot #	
Solvent:	24012496	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	011025
Reviewed By:	Pedro L. Rentas	011025

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron(III) nitrate nonahydrate (Fe)	IN028	FED082023A1	10000	99.999	0.10	13.0	153.8534	######	**10000.2**	**20.0**	7782-61-8	1 mg/m3	orl-rat 3250mg/kg	3126A



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	T	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

R-> 1/13/25

Part Number: 57119
Lot Number: 103024
Description: Potassium (K)

M6141
M6142
M6143

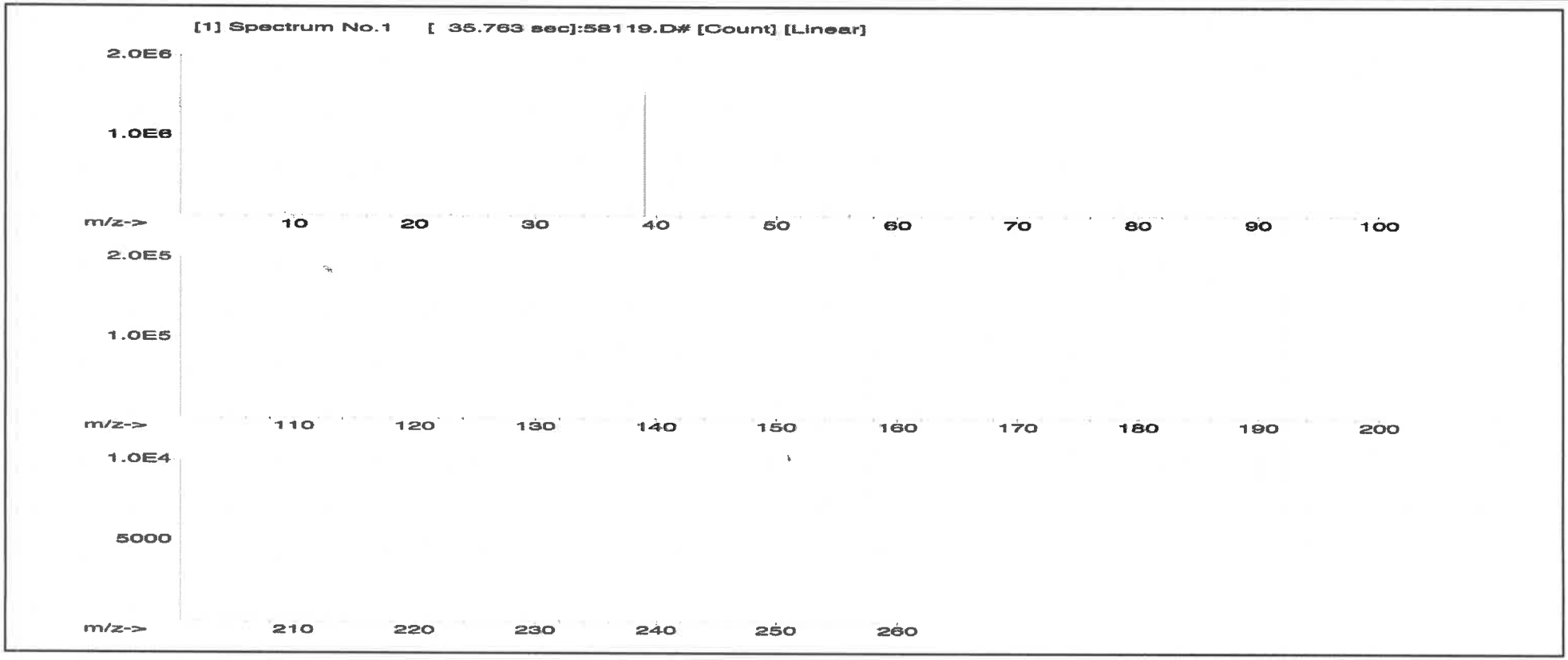
Expiration Date: 103027
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

	Lot #		
Solvent:	24002546	Nitric Acid	
	2%	80.0 (mL)	Nitric Acid
	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.1	0.15	Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	103024
Reviewed By:	Pedro L. Rentas	103024

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD062022A1	10000	99.999	0.10	37.7	106.1040	######	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3750 mg/kg	3141a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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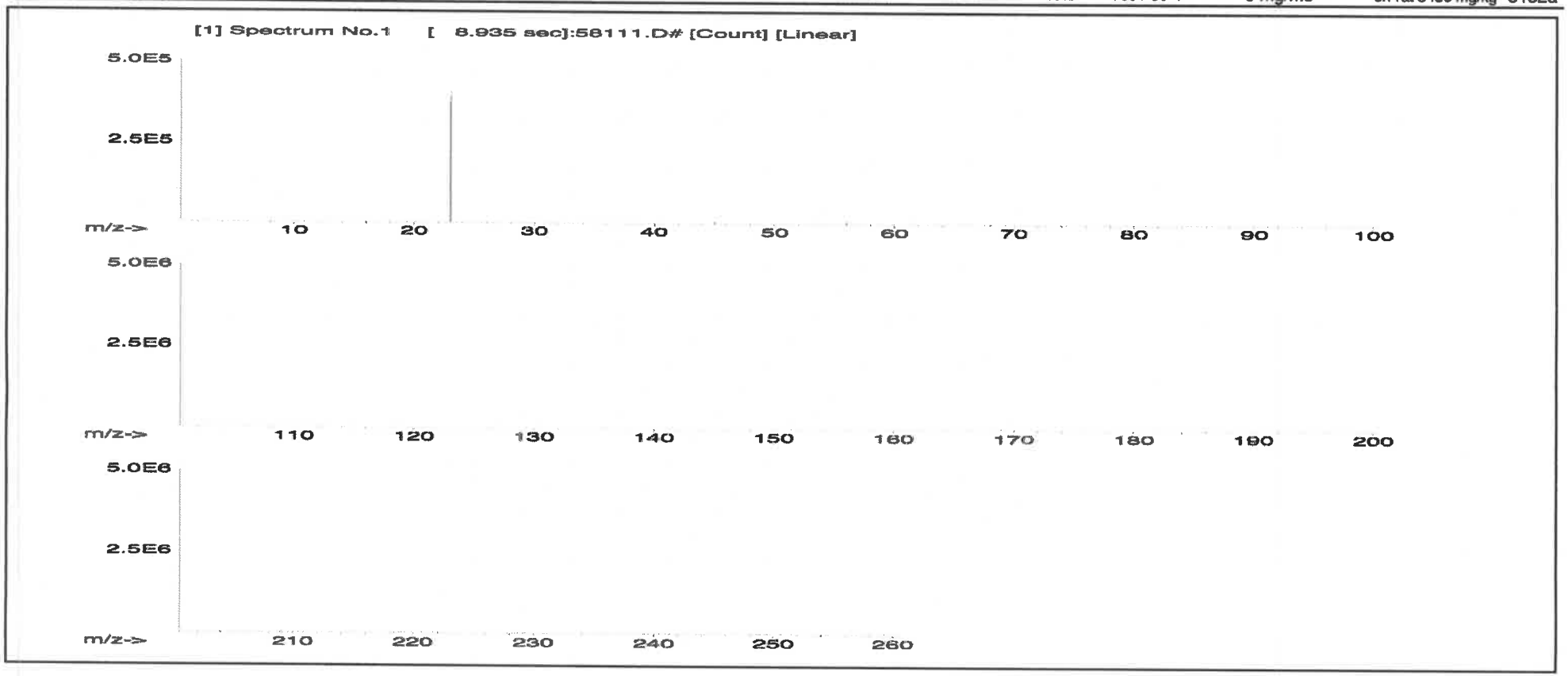
CERTIFIED WEIGHT REPORT:

R->1/13/25

Part Number:	**58111**		**Lot #**		
Lot Number:	**072424**	**Solvent:**	24002546	Nitric Acid	
Description:	**Sodium (Na)**				
		MG144 2%	80.0 (mL)	Nitric Acid	
Expiration Date:	072427				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.2	0.10	Flask Uncertainty		

Formulated By:	Benson Chan 072424
Reviewed By:	Pedro L. Rentas 072424

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	148.7096	######	**10000.0**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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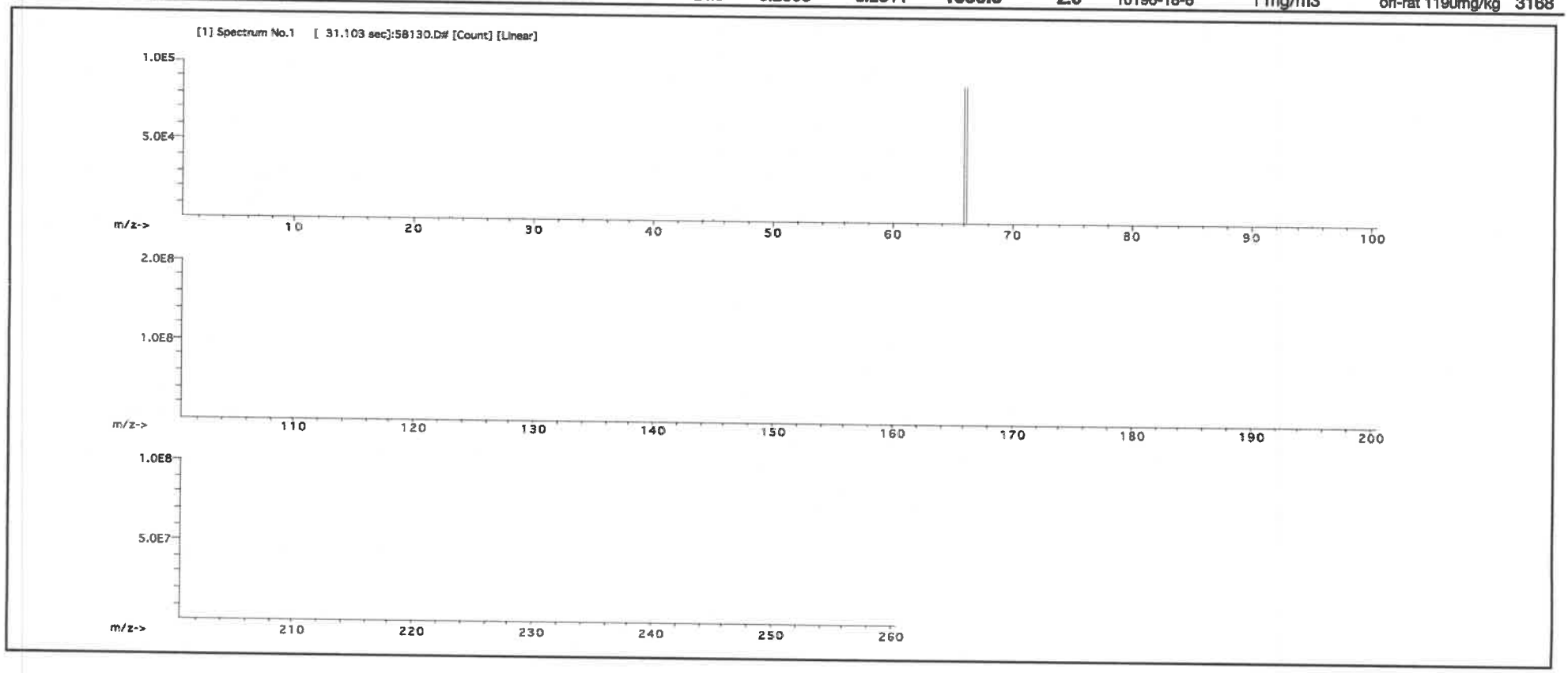
CERTIFIED WEIGHT REPORT:

Part Number:	**58030**	R → 1/13/25	**Solvent:**	**Lot #** 24012496	Nitric Acid
Lot Number:	**121724**				
Description:	**Zinc (Zn)**	M6145	2%	40.0 (mL)	Nitric Acid
Expiration Date:	121727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05 Balance Uncertainty			
Weight shown below was diluted to (mL):	2000.1	0.10 Flask Uncertainty			

Aleah O'Brady

Formulated By:	Aleah O'Brady	121724
Reviewed By:	Pedro L. Rentas	121724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	8.2308	8.2311	**1000.0**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6151

R-> 1/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R-02102/2025

M-6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities - Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities - Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities - Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities - Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities - Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count - 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count - 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

INORGANIC VENTURES™
Refine your results. Redefine your industry.

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:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-1
Lot Number:	V2-MEB744107
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 1 000 µg/mL ea: Aluminum, Barium, 500 µg/mL ea: Iron, 250 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 125 µg/mL ea: Silver, Copper, 100 µg/mL ea: Chromium, 25 µg/mL ea: Beryllium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**1 000 ± 4 µg/mL**	**Barium, Ba**	**1 000 ± 6 µg/mL**
Beryllium, Be	**24.98 ± 0.12 µg/mL**	**Calcium, Ca**	**2 500 ± 8 µg/mL**
Chromium, Cr	**99.9 ± 0.6 µg/mL**	**Cobalt, Co**	**250.2 ± 1.2 µg/mL**
Copper, Cu	**125.0 ± 0.5 µg/mL**	**Iron, Fe**	**500.0 ± 2.2 µg/mL**
Magnesium, Mg	**2 500 ± 11 µg/mL**	**Manganese, Mn**	**249.9 ± 1.1 µg/mL**
Nickel, Ni	**250.0 ± 1.2 µg/mL**	**Potassium, K**	**2 500 ± 11 µg/mL**
Silver, Ag	**125.0 ± 0.6 µg/mL**	**Sodium, Na**	**2 500 ± 11 µg/mL**
Vanadium, V	**250.0 ± 1.1 µg/mL**	**Zinc, Zn**	**249.9 ± 1.1 µg/mL**

Density: 1.081 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 22, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **May 22, 2029**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

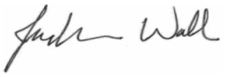
Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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:	Multi Analyte Custom Grade Solution
Catalog Number:	QCP-CICV-2
Lot Number:	U2-MEB733713
Matrix:	3% (w/v) Tartaric acid 1% (v/v) HNO3
Value / Analyte(s):	500 µg/mL ea: Antimony

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**500.0 ± 2.8 µg/mL**		

Density: 1.017 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Sb	ICP Assay	3102a	140911

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance:
$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2
$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2
$u_{char\ a}$ = the errors from characterization
u_{bb} = bottle to bottle homogeneity standard uncertainty
u_{lts} = long term stability standard uncertainty (storage)
u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 01, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 01, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

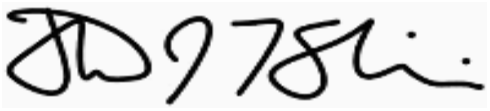
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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.

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7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 02, 2025

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 02, 2030**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

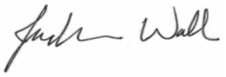
Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



R -> 2/13/25

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 011525
Description: Magnesium (Mg)

M 6171

	Lot #	
Solvent:	24012496	Nitric Acid
2%	40.0 (mL)	Nitric Acid

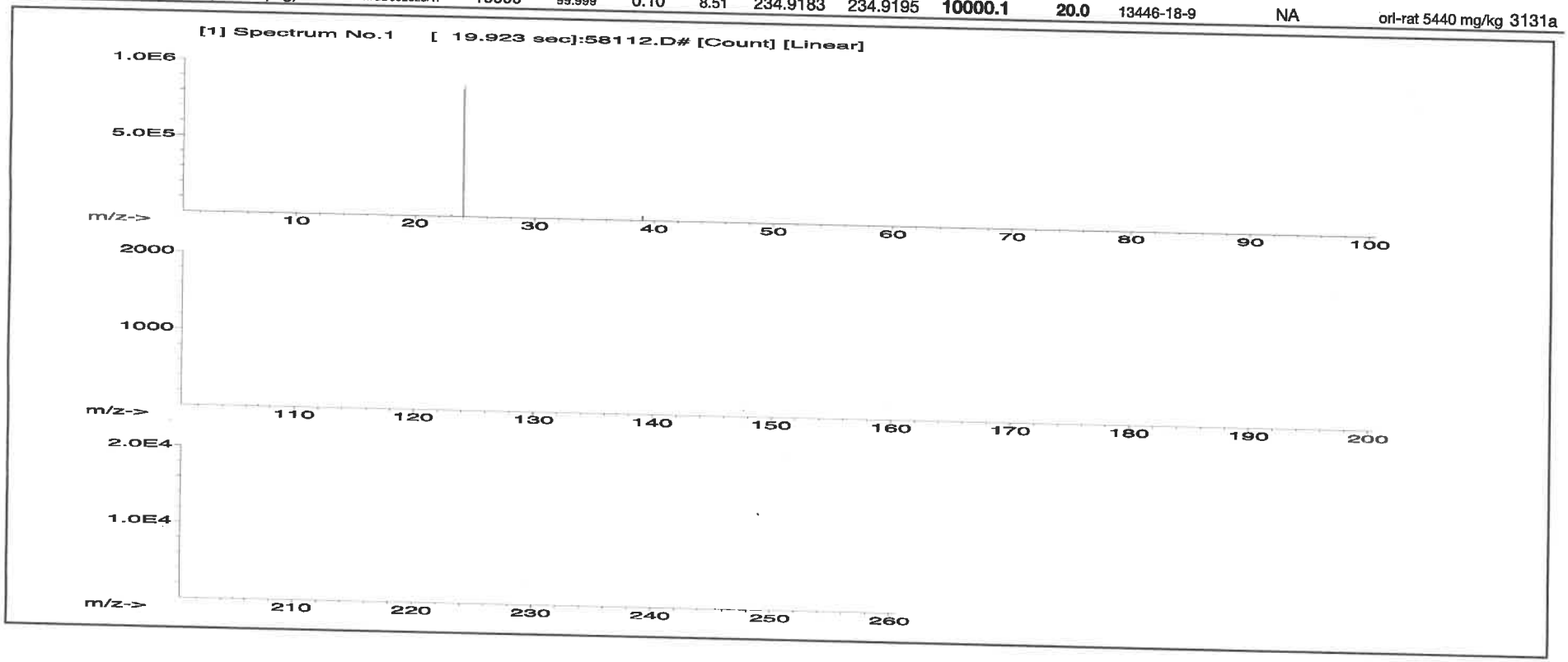
Expiration Date: 011528
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

5E-05	Balance Uncertainty	
0.100	Flask Uncertainty	

Weight shown below was diluted to (mL): 2000.07

Formulated By:	Benson Chan	011525
Reviewed By:	Pedro L. Rentas	011525

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9183	234.9195	**10000.1**	**20.0**	13446-18-9	NA	orl-rat 5440 mg/kg	3131a



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).

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	V2-MEB742428
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:
	Calcium, Potassium,
	Magnesium, Sodium,
	2 000 µg/mL ea:
	Aluminum, Barium,
	1 000 µg/mL ea:
	Iron,
	500 µg/mL ea:
	Nickel, Vanadium,
	Zinc, Cobalt,
	Manganese,
	250 µg/mL ea:
	Silver, Copper,
	200 µg/mL ea:
	Chromium,
	50 µg/mL ea:
	Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.03 ± 0.30 µg/mL	Calcium, Ca	5 000 ± 16 µg/mL
Chromium, Cr	200.0 ± 1.1 µg/mL	Cobalt, Co	500.0 ± 2.3 µg/mL
Copper, Cu	250.0 ± 1.1 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 22 µg/mL	Manganese, Mn	499.9 ± 2.2 µg/mL
Nickel, Ni	500.1 ± 2.3 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.117 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 22, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 22, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

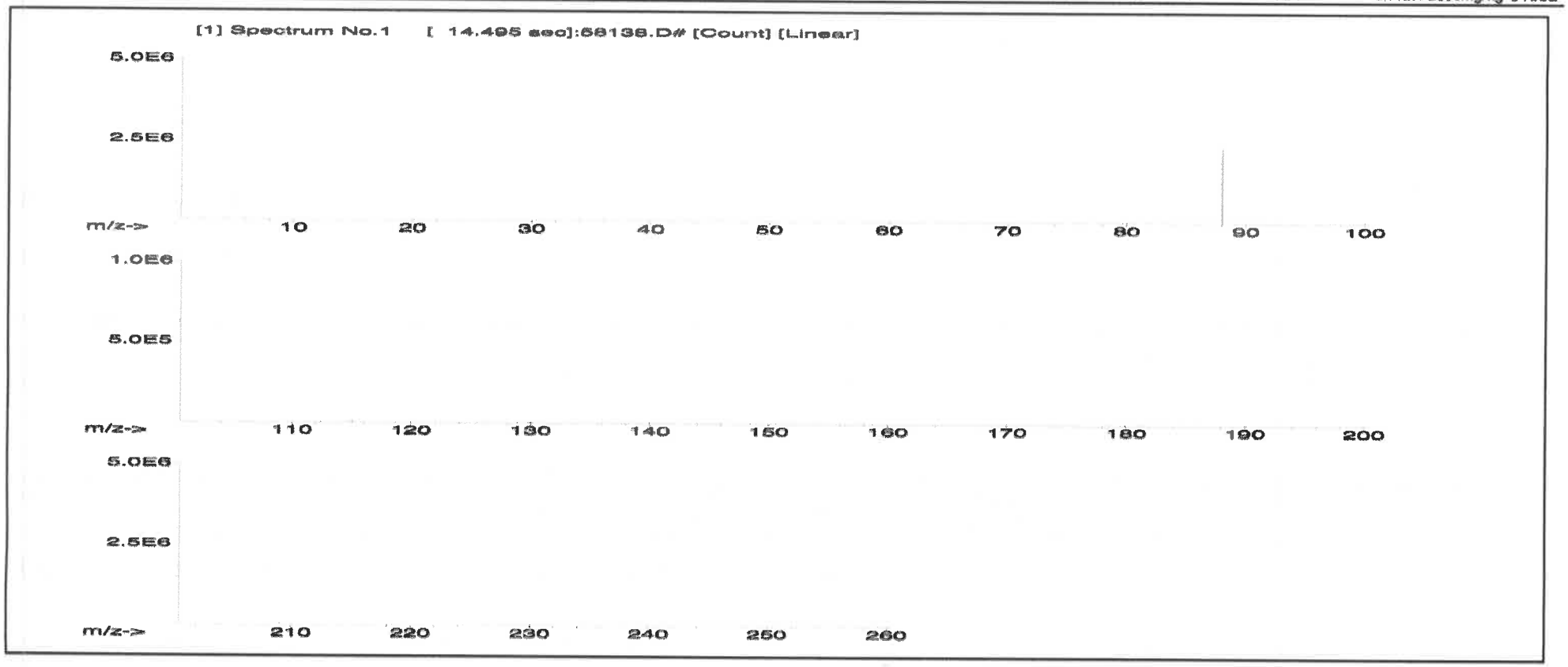
CERTIFIED WEIGHT REPORT:

R->8/6/29

Part Number:	57038		**Lot #**		
Lot Number:	092724	**Solvent:**	24002546	Nitric Acid	
Description:	Strontium (Sr)				
		M6176 2%	40.0 (mL)	Nitric Acid	
Expiration Date:	092727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	1000				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Formulated By:	Benson Chan	092724
Reviewed By:	Pedro L. Rentas	092724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85481	**1000.0**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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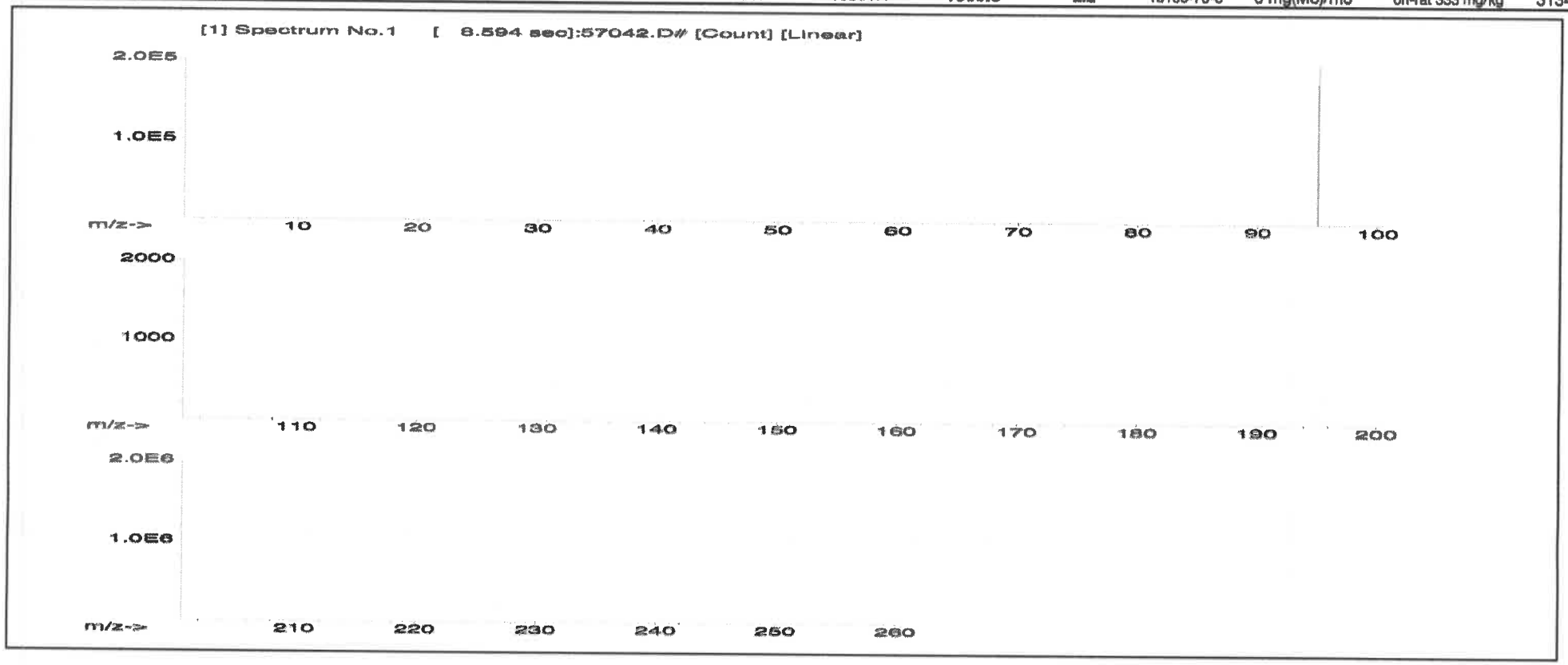
CERTIFIED WEIGHT REPORT:

R→ 8/6/25
M6177

		Lot #	Solvent:		
Part Number:	57042	MKBQ8597V	Ammonium hydroxide		
Lot Number:	080525	080525	ASTM Type 1 Water		
Description:	Molybdenum (Mo)	0.5%	10.0 (mL)	Ammonium hydroxide	
Expiration Date:	080528				
Recommended Storage:	Ambient (15 - 30 °C)				
Nominal Concentration (µg/mL):	1000				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	1999.41	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	080525
Reviewed By:	Pedro L. Rentas	080525

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium molybdate (Mo)	58142	112322	0.1000	200.0	0.084	1000	10001.4	**1000.5**	**2.2**	13106-76-8	5 mg(Mo)/m3	orl-rat 333 mg/kg	3134



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	T	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware, and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated by an ISO17025 certified organization with weights traceable through NIST to the SI kilogram (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).
Rev 1.0, 2/25/2025

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CERTIFIED WEIGHT REPORT:

R>8/6/28
M6178

Part Number:	**57082**		**Lot #**		
Lot Number:	**031525**	**Solvent:**	24014457	Nitric Acid	
Description:	**Lead (Pb)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	031528				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.10	Flask Uncertainty		

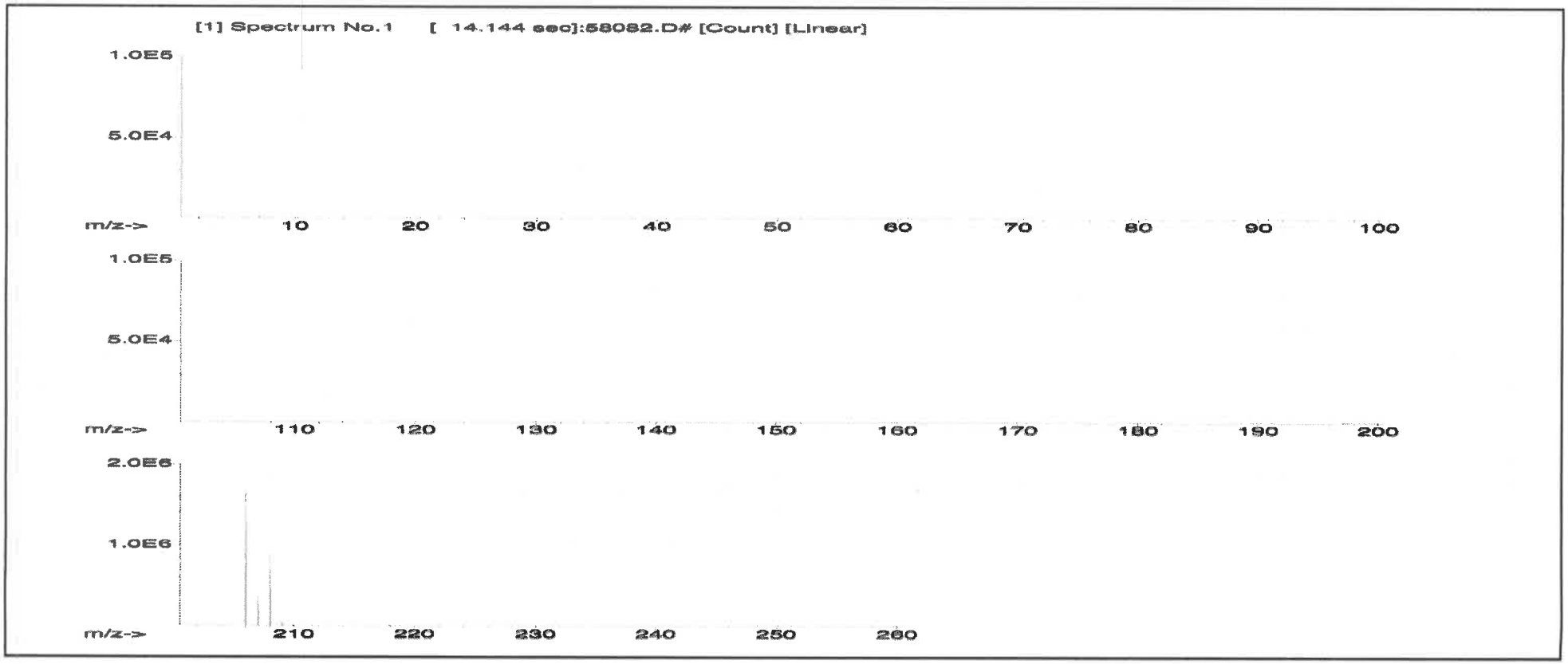
Giovanni Esposito

Formulated By:	Giovanni Esposito	031525

Pedro Rentas

Reviewed By:	Pedro L. Rentas	031525

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	1000	99.999	0.10	62.5	3.20015	3.20067	**1000.2**	**2.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

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Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.



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M6179
R -> 6/2/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	W2-MEB752149
Matrix:	5% (v/v) HNO3

M6180
R-7/22/23

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.2 ± 0.7 µg/mL	Arsenic, As	80.1 ± 0.5 µg/mL
Barium, Ba	20.02 ± 0.12 µg/mL	Beryllium, Be	20.02 ± 0.11 µg/mL
Boron, B	30.02 ± 0.15 µg/mL	Cadmium, Cd	20.04 ± 0.09 µg/mL
Calcium, Ca	100.1 ± 0.3 µg/mL	Cerium, Ce	200.2 ± 1.0 µg/mL
Chromium, Cr	40.02 ± 0.26 µg/mL	Cobalt, Co	20.03 ± 0.09 µg/mL
Copper, Cu	30.03 ± 0.13 µg/mL	Iron, Fe	300.3 ± 1.3 µg/mL
Lead, Pb	100.1 ± 0.5 µg/mL	Lithium, Li	20.03 ± 0.09 µg/mL
Magnesium, Mg	200.2 ± 0.9 µg/mL	Manganese, Mn	19.99 ± 0.09 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.05 ± 0.22 µg/mL
Phosphorus, P	600.5 ± 2.9 µg/mL	Potassium, K	1 001 ± 4 µg/mL
Selenium, Se	200.2 ± 1.1 µg/mL	Silver, Ag	7.52 ± 0.03 µg/mL
Sodium, Na	300.3 ± 1.3 µg/mL	Strontium, Sr	20.02 ± 0.10 µg/mL
Thallium, Tl	200.2 ± 1.0 µg/mL	Vanadium, V	30.02 ± 0.13 µg/mL
Zinc, Zn	20.05 ± 0.09 µg/mL		

Density: 1.037 g/mL (measured at 20 ± 5 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
B	Calculated		See Sec. 4.2
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	160830
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	120618
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	200413
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 25° C to minimize the effects of transpiration. Use at 20° ± 5° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information (https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver)

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 08, 2025

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- April 08, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Jodie Wall
Stock VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

M6181
R -> 7/22/28

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-2
Lot Number:	V2-MEB743480
Matrix:	5% (v/v) HNO3 tr. HF
Value / Analyte(s):	200 µg/mL ea: Silica, 80 µg/mL ea: Antimony, 70 µg/mL ea: Tin, 40 µg/mL ea: Molybdenum, 20 µg/mL ea: Titanium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	80.1 ± 0.5 µg/mL	Molybdenum, Mo	40.05 ± 0.22 µg/mL
Silica, SiO2	200.3 ± 1.4 µg/mL	Tin, Sn	70.1 ± 0.4 µg/mL
Titanium, Ti	20.03 ± 0.12 µg/mL		

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
SiO2	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	traceable to 3162a	T2-TI725816

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method I with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma\{1/(u_{char\ i})^2\})$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

May 07, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- May 07, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Thomas Kozikowski
Stock VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



R→03/06/24

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

M6182

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

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.

R→03/06/24

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

M6184

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

Nitric Acid 69%
CMOS

M6187
R.D :- 08/08/25

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Material No.: 9606-03
Batch No.: 24H0162012
Manufactured Date: 2024-06-28
Retest Date: 2029-06-27
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	0.1 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	0.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	0.1 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 1 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 1 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 1.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

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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www.absolutestandards.com

Certified Reference Material CRM

R 8/05/24

M6027

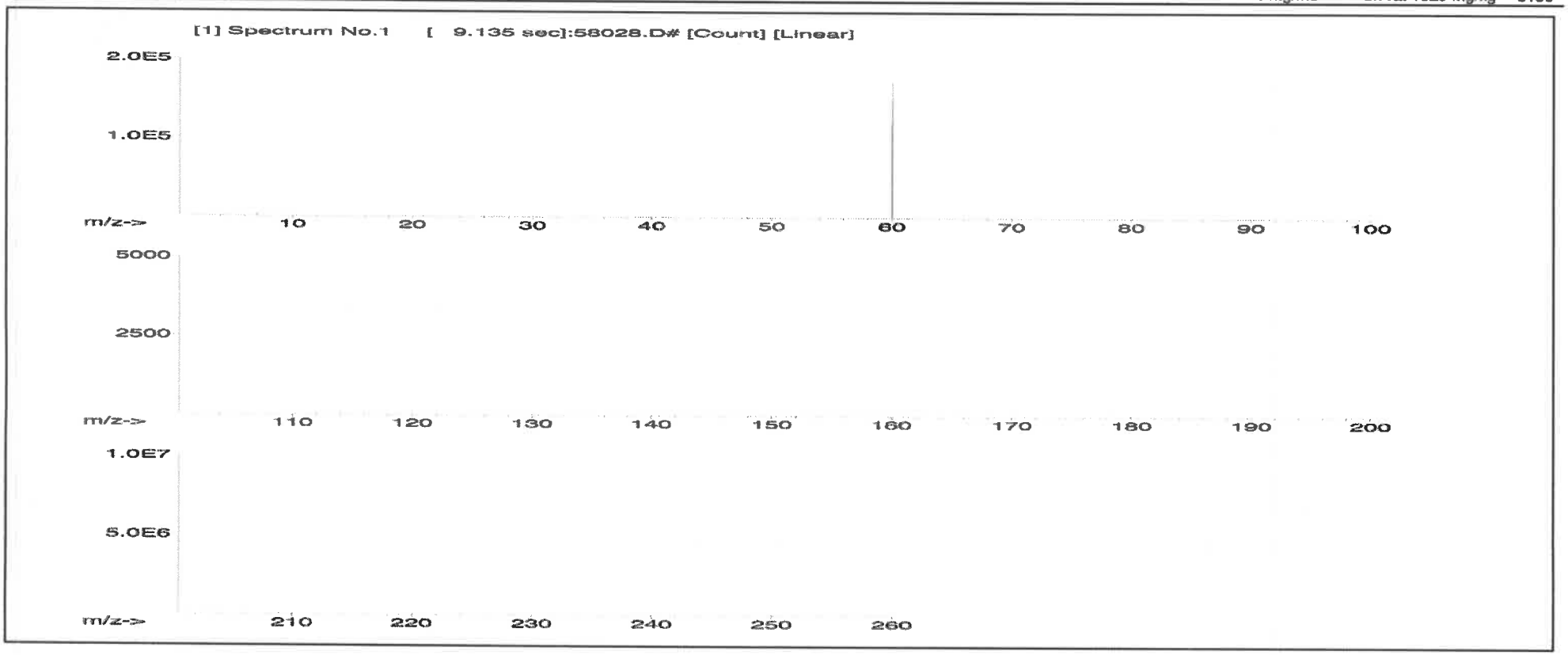
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57028**			
Lot Number:	**062024**	24002546	Nitric Acid	
Description:	**Nickel (Ni)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062027			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated **By:**	Benson Chan	062024
Reviewed By:	Pedro L. Rentas	062024

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	58128	062023	0.1000	200.0	0.084	1000	10000.4	**1000.0**	2.2	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M6030

R: 8/5/24

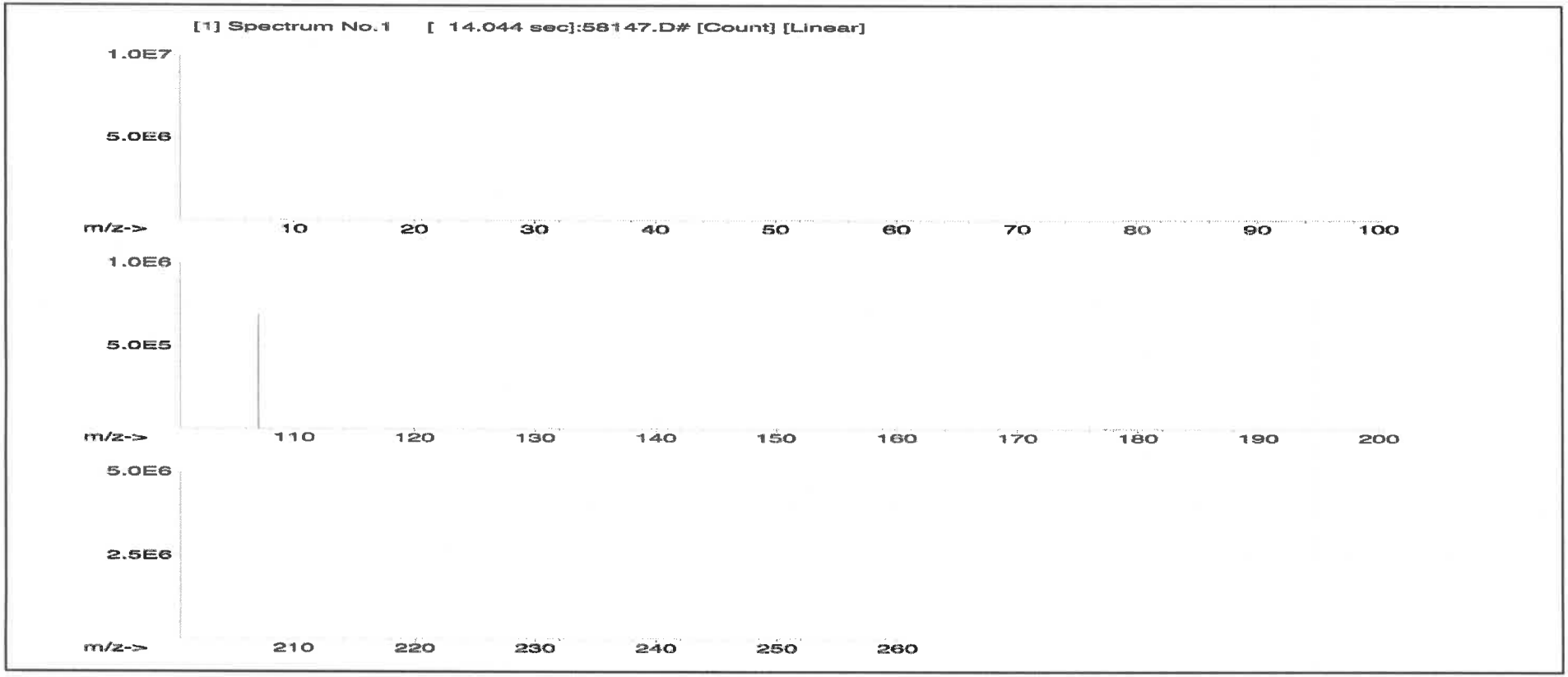
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CERTIFIED WEIGHT REPORT:

Part Number:	**57047**		**Lot #**		
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

opened : 3/24/25

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Certified Reference Material CRM

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CERTIFIED WEIGHT REPORT:

M6160

Part Number: 57051
Lot Number: 071724
Description: Antimony (Sb)
Expiration Date: 071727
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.26

Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

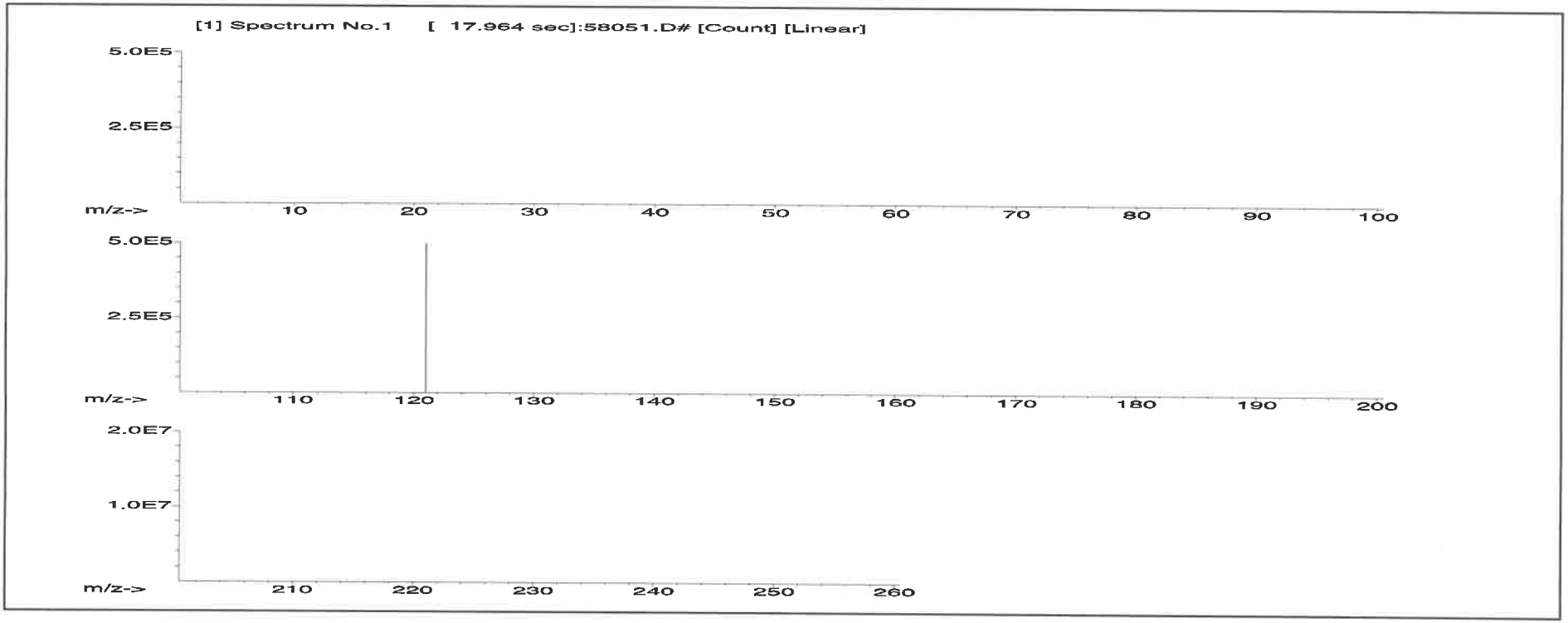
Giovanni Esposito

Formulated By:	Giovanni Esposito	071724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	071724

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	060324	0.1000	200.0	0.084	1000	10001.4	**1000.0**	**2.2**	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* 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™
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Certificate of Analysis

R: 8/5/24 M6019

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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 888.01
ACCREDITED Reference Material Producer Certificate 888.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGSR1
Lot Number:	U2-SR730227
Matrix:	0.1% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Strontium
Starting Material:	SrCO3
Starting Material Lot#:	M2-2192
Starting Material Purity:	99.9993%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1001 ± 3 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM Traceable to 3153a Lot Number: K2-SR650985

Assay Method #2 **1001 ± 3 µg/mL**
EDTA NIST SRM 928 Lot Number: 928

Assay Method #3 **1001 ± 2 µg/mL**
Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.001980	M	Eu	<	0.000495	O	Na		0.000200	M	Se	<	0.013862	O	Zn		0.000143
O	Al		0.000370	O	Fe		0.000410	M	Nb	<	0.000495	i	Si	<		M	Zr	<	0.000495
M	As	<	0.000495	M	Ga	<	0.000495	M	Nd	<	0.000495	M	Sm	<	0.000495				
M	Au	<	0.000989	M	Gd	<	0.000495	O	Ni	<	0.007631	M	Sn	<	0.000990				
M	B	<	0.039606	M	Ge	<	0.000495	M	Os	<	0.000494	s	Sr	<					
M	Ba		0.006486	M	Hf	<	0.000495	i	P	<		M	Ta	<	0.000495				
M	Be	<	0.000990	M	Hg	<	0.000989	M	Pb	<	0.002970	M	Tb	<	0.000495				
M	Bi	<	0.000495	M	Ho	<	0.000495	M	Pd	<	0.003957	M	Te	<	0.027724				
O	Ca		0.004255	M	In	<	0.000495	M	Pr	<	0.000495	M	Th	<	0.000990				
M	Cd		0.001339	M	Ir	<	0.000494	M	Pt	<	0.002970	M	Ti	<	0.005940				
M	Ce	<	0.004950	O	K	<	0.008184	M	Rb	<	0.002970	M	Tl	<	0.000495				
M	Co	<	0.000495	M	La	<	0.000495	M	Re	<	0.000495	M	Tm	<	0.000495				
O	Cr	<	0.003207	O	Li	<	0.000884	O	Rh	<	0.012829	M	U	<	0.001485				
M	Cs	<	0.000990	M	Lu	<	0.002970	M	Ru	<	0.000989	M	V	<	0.001980				
M	Cu		0.000099	O	Mg		0.000064	i	S	<		M	W	<	0.003960				
M	Dy	<	0.000495	O	Mn		0.000066	M	Sb	<	0.014852	O	Y	<	0.000995				
M	Er	<	0.000495	M	Mo	<	0.001980	M	Sc	<	0.001980	M	Yb	<	0.000495				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 87.62 +2 6 $Sr(H_2O)_6^{+2}$

Chemical Compatibility - Soluble in HCl, and HNO_3. Avoid H_2SO_4, HF and neutral to basic media. Stable with most metals and inorganic anions forming insoluble silicate, carbonate, hydroxide, oxide, fluoride, sulfate, oxalate, chromate, arsenate and tungstate in neutral aqueous media.

Stability - 2-100 ppb levels stable for months in 1% HNO_3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 1 - 3.5% HNO_3 / LDPE container.

Sr Containing Samples (Preparation and Solution) -Metal (Best dissolved in diluted HNO_3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 88 amu	1200 ppt	N/A	72Ge16O, 176Yb+2, 176Lu+2 , 176Hf+2
ICP-OES 407.771 nm	0.0004 / 0.00006 µg/mL	1	U, Ce
ICP-OES 421.552 nm	0.0008 / 0.00004 µg/mL	1	Rb
ICP-OES 460.733 nm	0.07 / 0.003 µg/mL	1	Ce

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 03, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 03, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R ! 8/5/24

M6023

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

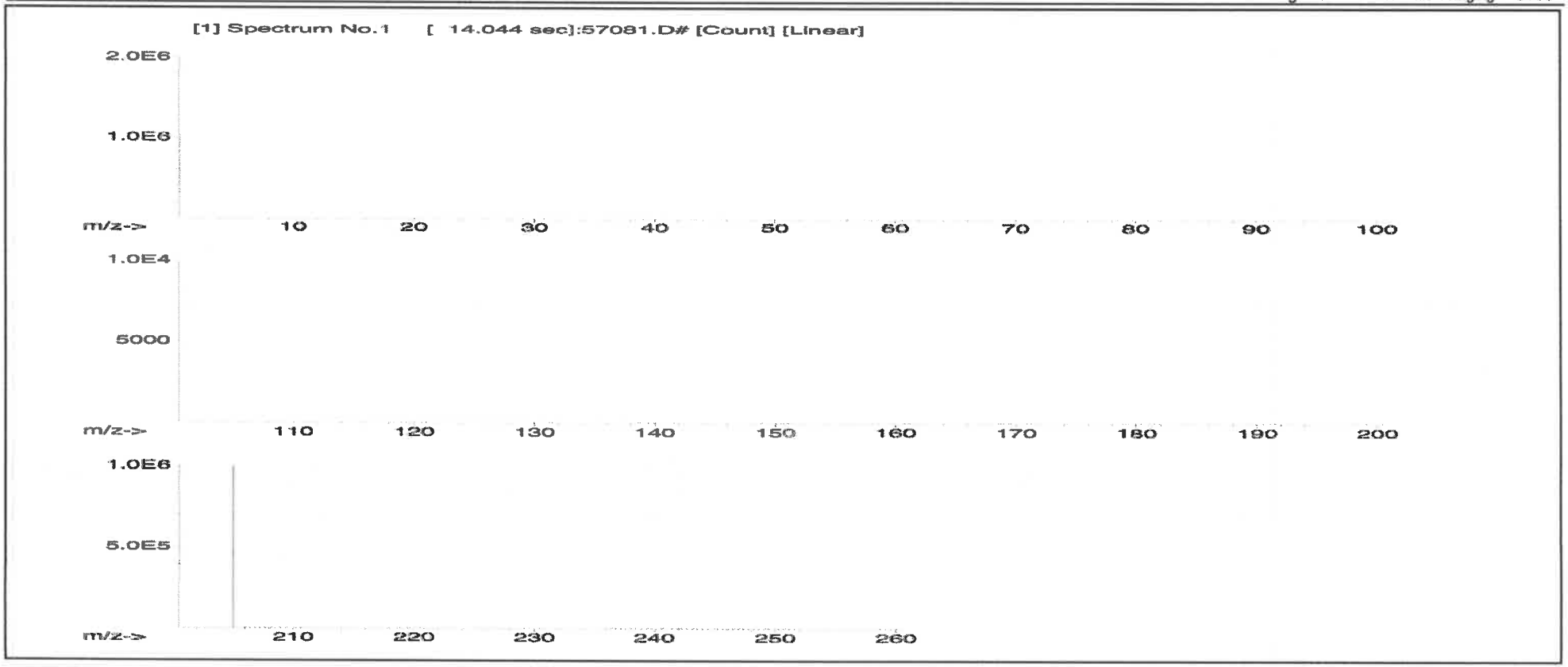
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Bc. 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	

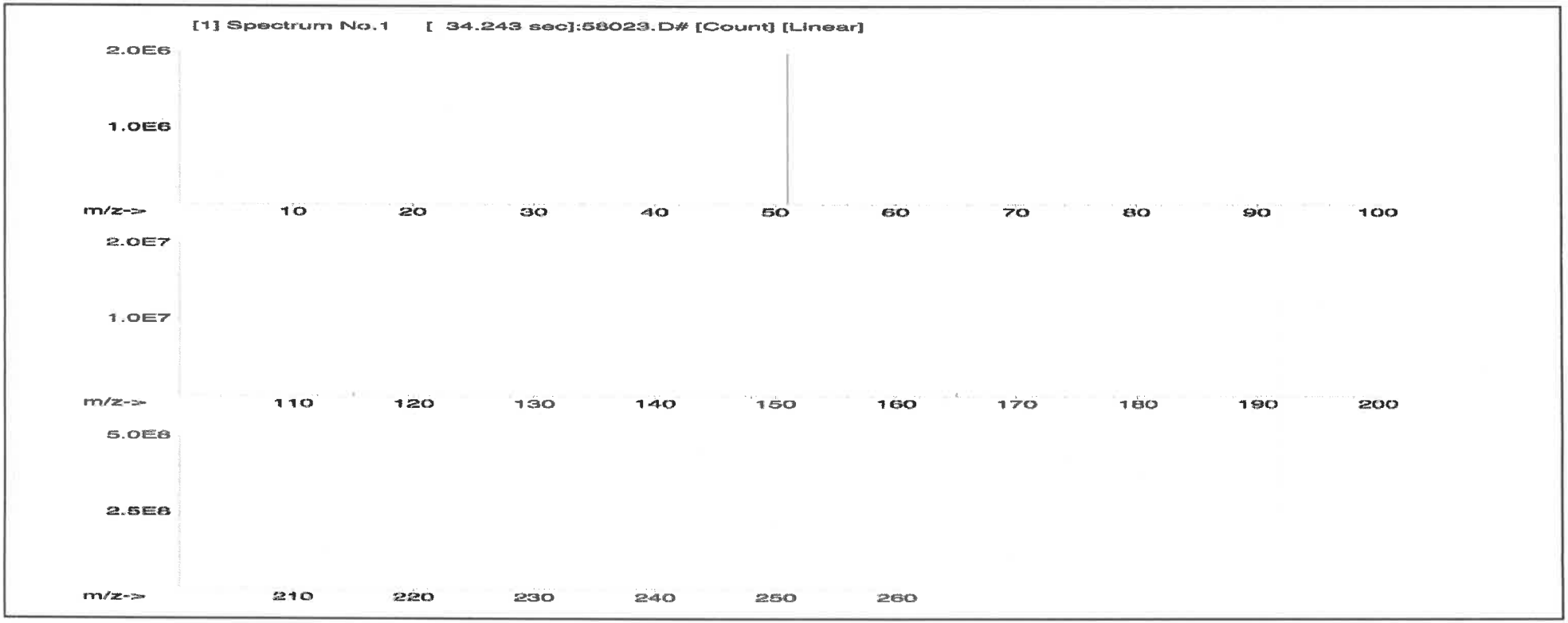
Aleah O'Brady

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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).



SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 · Fax (908) 789-8922
www.chemtech.net

ALLIANCE PROJECT NO. AEC-2025-0013
QUOTE NO. Q3234
COC Number 2045069

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Durham School Services
ADDRESS: 1 John C Dean Memorial Boulevard
CITY Cumberland STATE: RI ZIP:
ATTENTION: accuracystormwater@alliancetg.com
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: CSC 4028 Cumberland
PROJECT NO.: AEC-2025-0013 LOCATION: Cumberland
PROJECT MANAGER:
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: candice.cavinessr@alliancetg.com PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

- ❑ Level 1 (Results Only)
- ❑ Level 2 (Results + QC)
- ❑ Level 3 (Results + QC + Raw Data)
- ❑ Level 4 (QC + Full Raw Data)
- ❑ NJ Reduced ❑ US EPA CLP
- ❑ NYS ASP A ❑ NYS ASP B
- ❑ Other _____
- ❑ EDD FORMAT _____

ANALYSIS

1	2	3	4	5	6	7	8	9
Cadmium	Copper	Lead	Oil & Grease	TSS	Total Phosphorus			

PRESERVATIVES

1	2	3	4	5	6	7	8	9

COMMENTS

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9
1.	DA-1	SW		X				1	1	1	1	1	1			1
2.	DA-2	SW		X				1	1	1	1	1	1			
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.	9/29/25 9:10	1. CR
2.		2.
3.		3.

Conditions of bottles or coolers at receipt: ❑ COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP 19.4 °C
Comments: 4 Ambers RCVD Broken Jr Cont #1
Two - DA-1 and Two DA-2

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.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312

QA Control Code: A2070148