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DATA PACKAGE

METALS

PROJECT NAME : FORMER SCHLUMBERGER SITE PRINCETON NJ

JACOBS ENGINEERING GROUP, INC.

412 Mt. Kemble Ave

Downtown Building

Morristown, NJ - 07960

Phone No: 9732670555

ORDER ID : P3475

ATTENTION : Mary I. Murphy

Laboratory Certification ID # 20012

Alliance TECHNICAL GROUP

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Cover Page

Order ID : P3475

Project ID : Former Schlumberger Site Princeton NJ

Client : JACOBS Engineering Group, Inc.

Lab Sample Number	Client Sample Number
P3475-01	S-866-N-SO-0-0.5-080524
P3475-02	S-866-N-SO-1.0-1.5-080524
P3475-03	S-866-N-SO-1.0-1.5-080524MS
P3475-04	S-866-N-SO-1.0-1.5-080524MSD
P3475-05	S-858-K1-SO-1.0-1.5-080524
P3475-06	S-858-K1-SO-1.0-1.5-080524MS
P3475-07	S-858-K1-SO-1.0-1.5-080524MSD

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

Signature : _____

Date: 6/3/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

JACOBS Engineering Group, Inc.
Project Name: Former Schlumberger Site Princeton NJ
Project # N/A
Order ID# P3475
Test Name: Metals Group5

A. Number of Samples and Date of Receipt:
7 Solid samples were received on 08/05/2024.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Metals Group5, PCB and SVOCMS Group5. This data package contains results for Metals Group5.

C. Analytical Techniques:
The analysis of Metals Group5 was based on method 6010D and digestion based on method 3050 (soils).

D. QA/ QC Samples:
The Holding Times were met for all analysis.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (S-858-K1-SO-1.0-1.5-080524MS) analysis met criteria for all samples except for Silver due to Chemical interference during Digestion Process.
The Matrix Spike Duplicate (S-858-K1-SO-1.0-1.5-080524MSD) analysis met criteria for all samples except for Silver due to Chemical interference during Digestion Process.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.
The Serial Dilution met the acceptable requirements.

E. Additional Comments:
This Data Package has been Revised due to Client ID Changed as per client Request.

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

Signature_____

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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

QA Control # A3040961

METALS CONFORMANCE/NON-CONFORMANCE SUMMARY

Order ID: P3475 MATRIX: Solid

METHOD: 6010D

		NA	NO	YES
1.	Calibration Summary met criteria.			✓
2.	ICP Interference Check Sample Results Summary Submitted.			✓
3.	Serial Dilution Summary (if applicable) Submitted.			✓
4.	Laboratory Control Sample Summary (if applicable) Submitted.			✓
5.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
6.	Matrix Spike/Matrix Spike Duplicate Recoveries Met Criteria		✓	
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
	The Matrix Spike (S-858-K1-SO-1.0-1.5-080524MS) analysis met criteria for all samples except for Silver due to Chemical interference during Digestion Process. The Matrix Spike Duplicate (S-858-K1-SO-1.0-1.5-080524MSD) analysis met criteria for all samples except for Silver due to Chemical interference During Digestion Process.			
7.	Sample Duplicate Analysis Met QC Criteria			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
8.	Digestion Holding Time Met			✓
	If not met, list number of days exceeded for each sample:			
9.	Analysis Holding Time Met			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			

ADDITIONAL COMMENTS:
This Data Package has been Revised due to Client ID changed as per client Request.

QA REVIEW Date

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: P3475

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

QA Review Signature: SOHIL JODHANI **Date:** 06/03/2025

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LAB CHRONICLE

OrderID:	P3475	**OrderDate:**	8/6/2024 10:01:00 AM
Client:	JACOBS Engineering Group, Inc.	**Project:**	Former Schlumberger Site Princeton NJ
Contact:	Mary I. Murphy	**Location:**	D31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P3475-05	**S-858-K1-SO-1.0-1.5-080524**	**SOIL**			**08/05/24**			**08/05/24**
			Metals Group5	6020B		08/07/24	08/08/24	

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Hit Summary Sheet
SW-846

SDG No.:	P3475	**Order ID:**	P3475
Client:	JACOBS Engineering Group, Inc.	**Project ID:**	Former Schlumberger Site Princeton NJ

Sample ID	Client ID	Matrix	Parameter	Concentration	C	MDL	RDL	Units
Client ID :	**S-858-K1-SO-1.0-1.5-080524**							
P3475-05	S-858-K1-SO-1.0-1.5-080524	SOIL	Silver	10.1		0.14	0.59	mg/Kg

SAMPLE DATA

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Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	08/05/24
Project:	Former Schlumberger Site Princeton NJ	Date Received:	08/05/24
Client Sample ID:	S-858-K1-SO-1.0-1.5-080524	SDG No.:	P3475
Lab Sample ID:	P3475-05	Matrix:	SOIL
Level (low/med):	low	% Solid:	73.7

Cas	Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.	Prep Met.
7440-22-4	Silver	10.1	N	1	0.14	0.59	mg/Kg	08/07/24 07:45	08/08/24 16:11	6010D	SW3050

Color Before:	Brown	Clarity Before:		Texture:	Medium
Color After:	YELLOW	Clarity After:		Artifacts:	N/A
Comments:	Metals Group5				

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

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

METAL CALIBRATION DATA

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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	Silver	255	250	102	90 - 110	P	08/08/2024	13:22	LB131909

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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	Silver	11.5	10.0	115	80 - 120	P	08/08/2024	13:32	LB131909

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Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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	Silver	1250	1250	100	90 - 110	P	08/08/2024	14:04	LB131909
CCV02	Silver	1200	1250	96	90 - 110	P	08/08/2024	14:53	LB131909
CCV03	Silver	1250	1250	100	90 - 110	P	08/08/2024	15:49	LB131909
CCV04	Silver	1190	1250	96	90 - 110	P	08/08/2024	16:41	LB131909
CCV05	Silver	1200	1250	96	90 - 110	P	08/08/2024	17:33	LB131909
CCV06	Silver	1240	1250	99	90 - 110	P	08/08/2024	18:26	LB131909

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Metals

- 2b -

CRDL STANDARD FOR AA & ICP

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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	Silver	12.0	10.0	120	40 - 160	P	08/08/2024	13:42	LB131909

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
ICB01	Silver	10.0	+/-10.0	U	10.0	P	08/08/2024	13:37	LB131909

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Metals

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	CRQL	M	Analysis Date	Analysis Time	Run Number
CCB01	Silver	10.0	+/-10.0	U	10.0	P	08/08/2024	14:08	LB131909
CCB02	Silver	10.0	+/-10.0	U	10.0	P	08/08/2024	14:59	LB131909
CCB03	Silver	10.0	+/-10.0	U	10.0	P	08/08/2024	15:54	LB131909
CCB04	Silver	10.0	+/-10.0	U	10.0	P	08/08/2024	16:45	LB131909
CCB05	Silver	10.0	+/-10.0	U	10.0	P	08/08/2024	17:37	LB131909
CCB06	Silver	10.0	+/-10.0	U	10.0	P	08/08/2024	18:30	LB131909

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Metals
- 3b -
PREPARATION BLANK SUMMARY

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Instrument: P4

Sample ID	Analyte	Result (mg/Kg)	Acceptance Limit	Conc Qual	CRQL mg/Kg	M	Analysis Date	Analysis Time	Run
PB162541BL		**SOLID**		**Batch Number:**	**PB162541**		**Prep Date:**	**08/07/2024**	
	Silver	0.50	<0.50	U	0.50	P	08/08/2024	17:06	LB131909

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Metals
- 4 -
INTERFERENCE CHECK SAMPLE

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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	Silver	1.87			-10	10	08/08/2024	13:46	LB131909
ICSAB01	Silver	220	201	110	170	232	08/08/2024	13:51	LB131909

METAL QC DATA

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metals
- 5a -
MATRIX SPIKE SUMMARY

client: JACOBS Engineering Group, Inc. **level:** low **sdg no.:** P3475

contract: JACO05 **lab code:** CHEM **case no.:** P3475 **sas no.:** P3475

matrix: Solid **sample id:** P3475-05 **client id:** S-858-K1-SO-1.0-1.5-080524MS

Percent Solids for Sample: 73.7 **Spiked ID:** P3475-06 **Percent Solids for Spike Sample:** 73.7

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Silver	mg/Kg	75 - 125	13.3		10.1		4.4	73	N	P

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metals
- 5a -
MATRIX SPIKE DUPLICATE SUMMARY

client: JACOBS Engineering Group, Inc. **level:** low **sdg no.:** P3475

contract: JACO05 **lab code:** CHEM **case no.:** P3475 **sas no.:** P3475

matrix: Solid **sample id:** P3475-05 **client id:** S-858-K1-SO-1.0-1.5-080524MSD

Percent Solids for Sample: 73.7 **Spiked ID:** P3475-07 **Percent Solids for Spike Sample:** 73.7

Analyte	Units	Acceptance Limit %R	MSD Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Silver	mg/Kg	75 - 125	12.2		10.1		4.3	49	N	P

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Metals
- 5b -
POST DIGEST SPIKE SUMMARY

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

Matrix: Solid **Level:** LOW **Client ID:** S-858-K1-SO-1.0-1.5-080524A

Sample ID: P3475-05 **Spiked ID:** P3475-05A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Silver	mg/Kg	75 - 125	11.2		10.1		4.40	26	N	P

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Metals

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DUPLICATE SAMPLE SUMMARY

Client: JACOBS Engineering Group, Inc. **Level:** LOW **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

Matrix: Solid **Sample ID:** P3475-05 **Client ID:** S-858-K1-SO-1.0-1.5-080524DUP

Percent Solids for Sample: 73.7 **Duplicate ID** P3475-05DUP **Percent Solids for Spike Sample:** 73.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Silver	mg/Kg	20	10.1		10.0		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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Metals

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DUPLICATE SAMPLE SUMMARY

Client: JACOBS Engineering Group, Inc. **Level:** LOW **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

Matrix: Solid **Sample ID:** P3475-06 **Client ID:** S-858-K1-SO-1.0-1.5-080524MSD

Percent Solids for Sample: 73.7 **Duplicate ID** P3475-07 **Percent Solids for Spike Sample:** 73.7

Analyte	Units	Acceptance Limit	Sample Result	C	Duplicate Result	C	RPD	Qual	M
Silver	mg/Kg	20	13.3		12.2		9		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: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

Analyte	Units	True Value	Result	C	% Recovery	Acceptance Limits	M
PB162541BS							
Silver	mg/Kg	3.8	3.63		96	80 - 120	P

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Metals

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ICP SERIAL DILUTIONS

SAMPLE NO.

S-858-K1-SO-1.0-1.5-080524L

Lab Name: Chemtech Consulting Group **Contract:** JACO05

Lab Code: CHEM **Lb No.:** lb131909 **Lab Sample ID :** P3475-05L **SDG No.:** P3475

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

Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Silver	10.1		10.1		0		P

METAL PREPARATION & INSTRUMENT DATA

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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
Silver	328.068	0.0000000	0.0000000	-0.0001490	0.0000000	0.0000000

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Metals
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ICP INTERELEMENT CORRECTION FACTORS

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	-0.0000120

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

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Metals
- 11 -
ICP INTERELEMENT CORRECTION FACTORS

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Case No.:** P3475 **SAS No.:** P3475

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
Silver	328.068	0.0000000	-0.0007420	0.0000000	0.0000000	0.0000000

METAL PREPARATION & ANALYICAL SUMMARY

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

Metals
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SAMPLE PREPARATION SUMMARY

Client: JACOBS Engineering Group, Inc. **SDG No.:** P3475

Contract: JACO05 **Lab Code:** CHEM **Method:**

Case No.: P3475 **SAS No.:** P3475

Sample ID	Client ID	Sample Type	Matrix	Prep Date	Initial Sample Size(g)	Final Sample Volume (mL)	Percent Solids
Batch Number:	**PB162541**						
P3475-05	S-858-K1-SO-1.0-1.5-080524	SAM	SOLID	08/07/2024	2.31	100.0	73.70
P3475-05DUP	S-858-K1-SO-1.0-1.5-080524	DUP	SOLID	08/07/2024	2.32	100.0	73.70
P3475-06	S-858-K1-SO-1.0-1.5-080524MS	MS	SOLID	08/07/2024	2.33	100.0	73.70
P3475-07	S-858-K1-SO-1.0-1.5-080524MSD	MSD	SOLID	08/07/2024	2.34	100.0	73.70
PB162541BL	PB162541BL	MB	SOLID	08/07/2024	2.00	100.0	100.00
PB162541BS	PB162541BS	LCS	SOLID	08/07/2024	2.00	100.0	100.00

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

metals
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ANALYSIS RUN LOG

Client: JACOBS Engineering Group, Inc. **Contract:** JACO05

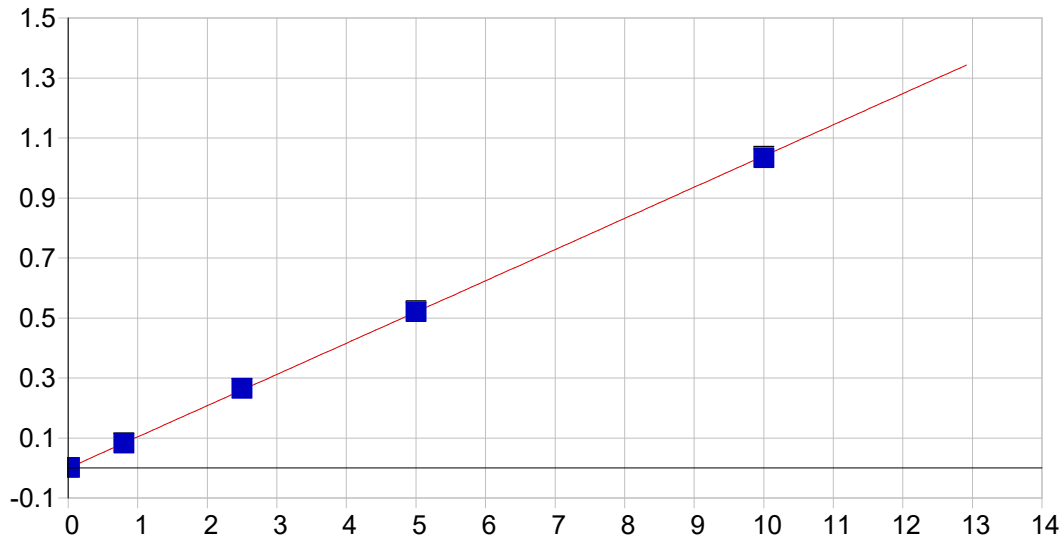
Lab code: CHEM **Case no.:** P3475 **Sas no.:** P3475 **Sdg no.:** P3475

Instrument id number: **Method:** **Run number:** LB131909

Start date: 08/08/2024 **End date:** 08/08/2024

Lab sample id.	Client Sample Id	d/f	Time	Parameter list
S0	S0	1	1251	Ag
S1	S1	1	1256	Ag
S2	S2	1	1300	Ag
S3	S3	1	1304	Ag
S4	S4	1	1309	Ag
S5	S5	1	1313	Ag
ICV01	ICV01	1	1322	Ag
LLICV01	LLICV01	1	1332	Ag
ICB01	ICB01	1	1337	Ag
CRI01	CRI01	1	1342	Ag
ICSA01	ICSA01	1	1346	Ag
ICSAB01	ICSAB01	1	1351	Ag
ICSA	ICSA	20	1355	Ag
ICSAB	ICSAB	20	1359	Ag
CCV01	CCV01	1	1404	Ag
CCB01	CCB01	1	1408	Ag
CCV02	CCV02	1	1453	Ag
CCB02	CCB02	1	1459	Ag
CCV03	CCV03	1	1549	Ag
CCB03	CCB03	1	1554	Ag
P3475-05	S-858-K1-SO-1.0-1.5-080524	1	1611	Ag
P3475-05DUP	S-858-K1-SO-1.0-1.5-080524	1	1615	Ag
P3475-05L	S-858-K1-SO-1.0-1.5-080524	5	1619	Ag
P3475-06	S-858-K1-SO-1.0-1.5-080524MS	1	1624	Ag
P3475-07	S-858-K1-SO-1.0-1.5-080524MS	1	1628	Ag
P3475-05A	S-858-K1-SO-1.0-1.5-080524	1	1632	Ag
CCV04	CCV04	1	1641	Ag
CCB04	CCB04	1	1645	Ag
PB162541BL	PB162541BL	1	1706	Ag
PB162541BS	PB162541BS	1	1711	Ag
CCV05	CCV05	1	1733	Ag
CCB05	CCB05	1	1737	Ag
CCV06	CCV06	1	1826	Ag
CCB06	CCB06	1	1830	Ag

METAL
RAW DATA

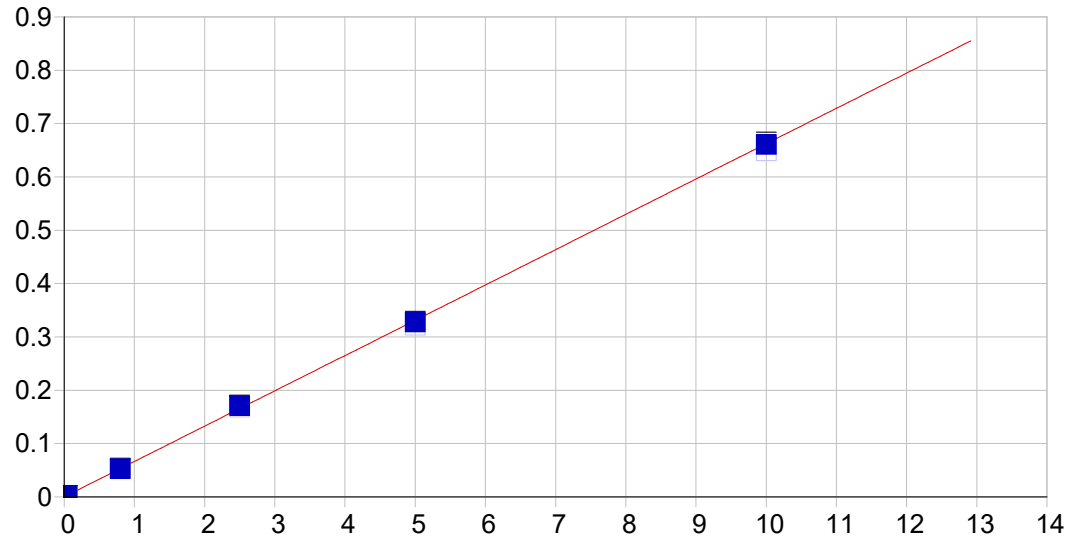


As 189.042 {479}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000207	Re-Slope:	1.000000
A1 (Gain):	0.104020	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999964	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.001686		
Predicted MQL:	0.005619		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00021	.000	1
S1	.02000	.01948	-.001	-2.62	.00181	.000	1
S3	2.5000	2.5483	.048	1.93	.26459	.001	1
S4	5.0000	5.0117	.012	.235	.52055	.002	1
S5	10.000	9.9442	-.056	-.558	1.0331	.005	1
S2	.80000	.79622	-.004	-.473	.08253	.001	1

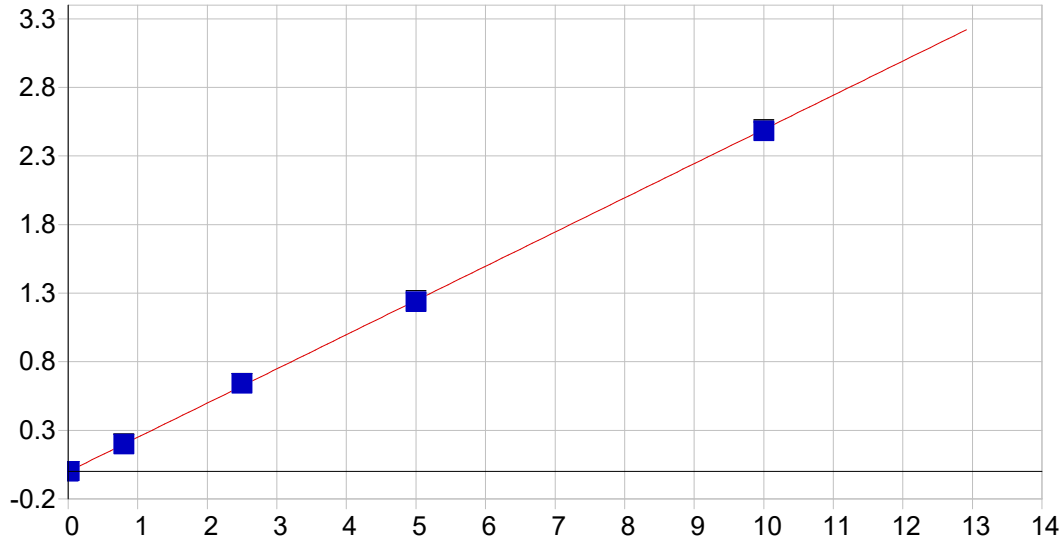


Tl 190.856 {477}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000207	Re-Slope:	1.000000
A1 (Gain):	0.066200	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999901	Status:	OK.
Std Error of Est:	0.000030		
Predicted MDL:	0.001495		
Predicted MQL:	0.004982		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00021	.000	1
S1	.04000	.03907	-.001	-2.33	.00262	.000	1
S3	2.5000	2.5840	.084	3.36	.16822	.001	1
S4	5.0000	4.9460	-.054	-1.08	.32153	.002	1
S5	10.000	9.9746	-.025	-.254	.64834	.005	1
S2	.80000	.79631	-.004	-.461	.05195	.001	1

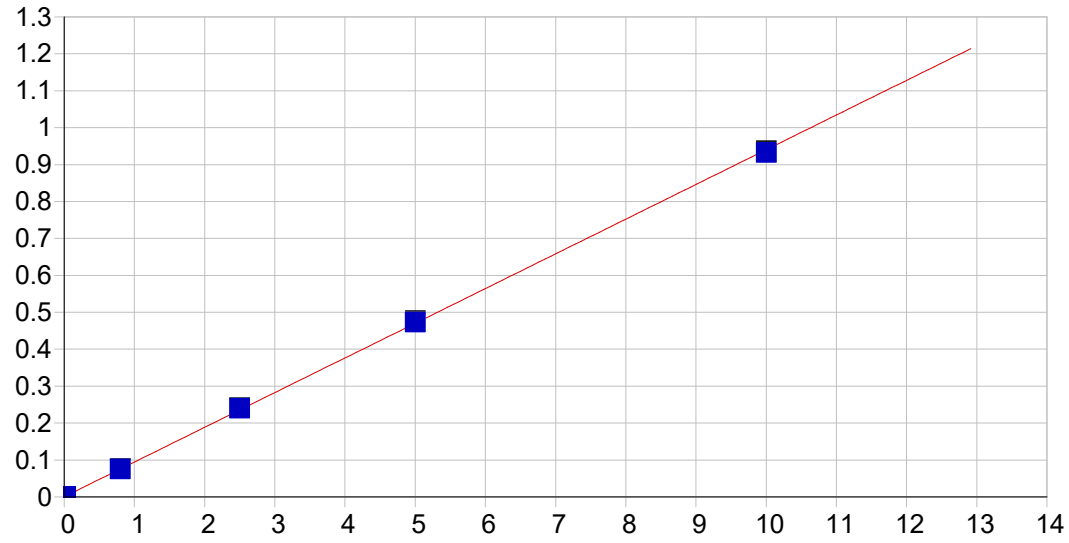


Pb 220.353 {453}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000183	Re-Slope:	1.000000
A1 (Gain):	0.249383	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999911	Status:	OK.
Std Error of Est:	0.000060		
Predicted MDL:	0.001072		
Predicted MQL:	0.003575		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00018	.000	1
S1	.01200	.01474	.003	22.8	.00343	.000	1
S3	2.5000	2.5740	.074	2.96	.64107	.000	1
S4	5.0000	4.9647	-.035	-.705	1.2366	.009	1
S5	10.000	9.9569	-.043	-.431	2.4803	.010	1
S2	.80000	.80168	.002	.210	.19953	.002	1

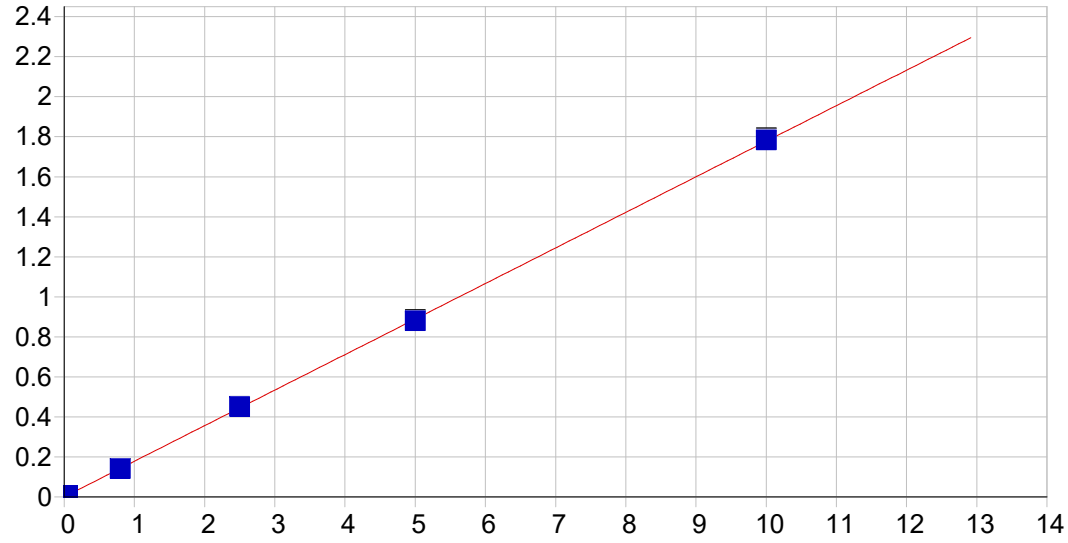


Se 196.090 {472}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000454	Re-Slope:	1.000000
A1 (Gain):	0.093974	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999948	Status:	OK.
Std Error of Est:	0.000023		
Predicted MDL:	0.002112		
Predicted MQL:	0.007041		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00045	.000	1
S1	.02000	.01982	-.000	-.882	.00232	.000	1
S3	2.5000	2.5508	.051	2.03	.24010	.001	1
S4	5.0000	5.0336	.034	.672	.47336	.003	1
S5	10.000	9.9206	-.079	-.794	.93249	.004	1
S2	.80000	.79520	-.005	-.601	.07516	.001	1

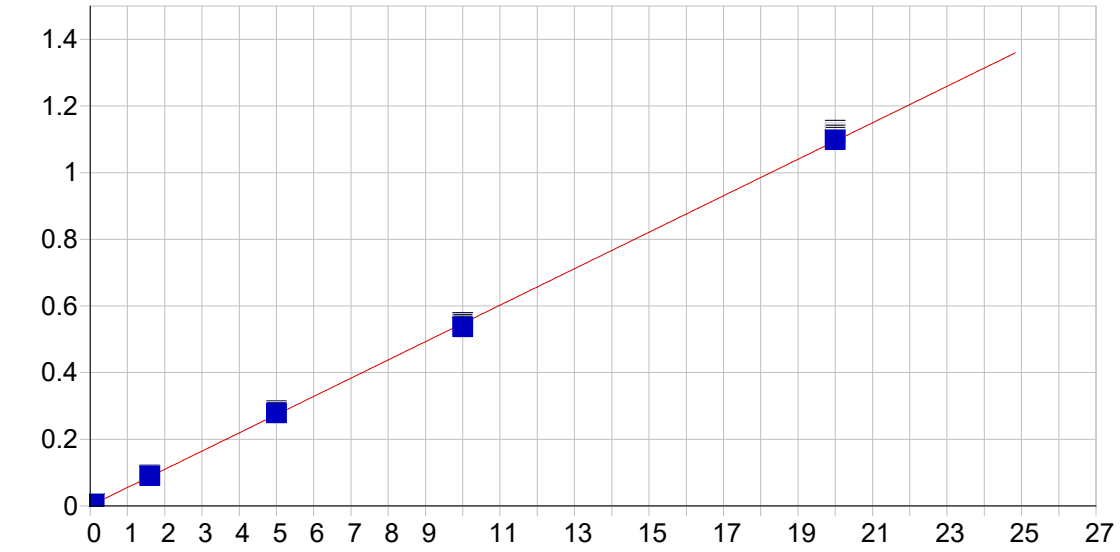


Sb 206.833 {463}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000566	Re-Slope:	1.000000
A1 (Gain):	0.177670	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999964	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	0.001364		
Predicted MQL:	0.004545		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00057	.000	1
S1	.05000	.04872	-.001	-2.57	.00924	.000	1
S3	2.5000	2.5334	.033	1.33	.45188	.000	1
S4	5.0000	4.9437	-.056	-1.13	.88133	.004	1
S5	10.000	10.033	.033	.328	1.7879	.007	1
S2	.80000	.79141	-.009	-1.07	.14156	.001	1

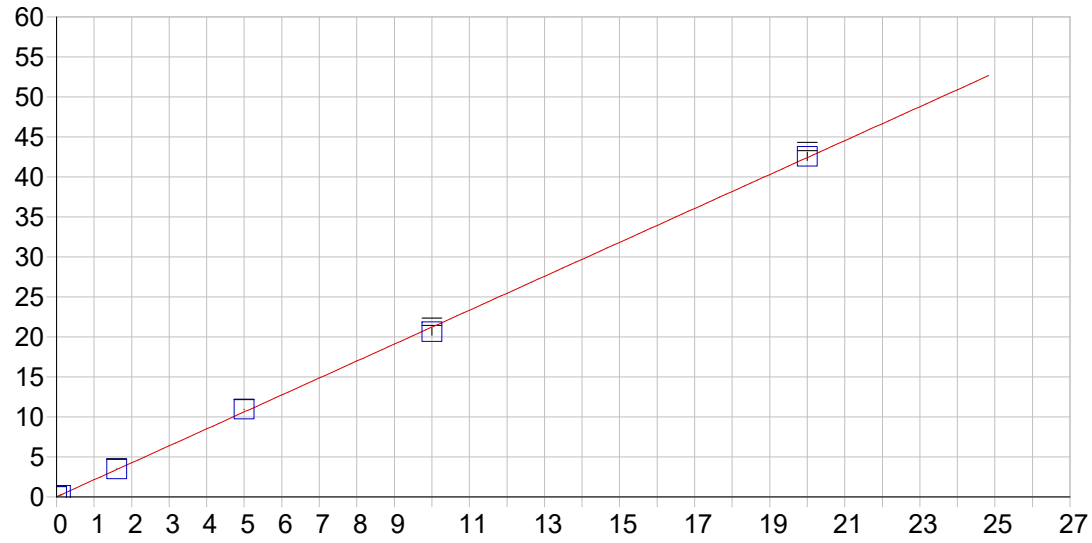


Al 396.152 { 85}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000502	Re-Slope:	1.000000
A1 (Gain):	0.054719	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999911	Status:	OK.
Std Error of Est:	0.000055		
Predicted MDL:	0.009279		
Predicted MQL:	0.030930		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00050	.000	1
S1	.10000	.10174	.002	1.74	.00649	.000	1
S3	5.0000	5.0795	.080	1.59	.28376	.001	1
S4	10.000	9.8017	-.198	-1.98	.54746	.003	1
S5	20.000	20.071	.071	.355	1.1200	.007	1
S2	1.6000	1.6459	.046	2.87	.09226	.000	1

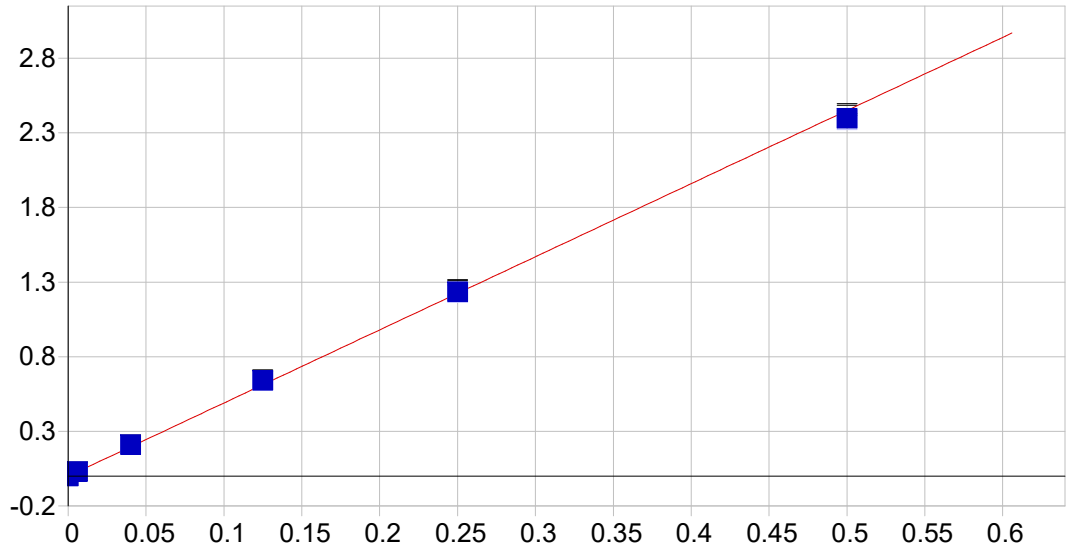


Ba 493.409 { 68}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.025068	Re-Slope:	1.000000
A1 (Gain):	2.119534	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999822	Status:	OK.
Std Error of Est:	0.002966		
Predicted MDL:	0.000794		
Predicted MQL:	0.002648		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.02506	.001	1
S1	.10000	.10141	.001	1.41	.24000	.002	1
S3	5.0000	5.1546	.155	3.09	10.951	.013	1
S4	10.000	9.7327	-.267	-2.67	20.654	.461	1
S5	20.000	20.075	.075	.373	42.574	.518	1
S2	1.6000	1.6366	.037	2.29	3.4940	.019	1

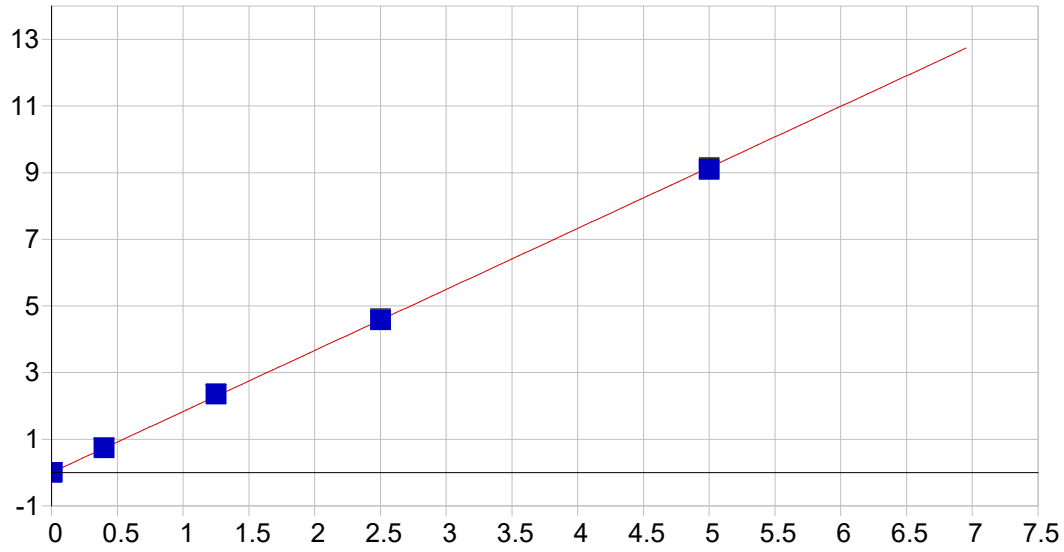


Be 234.861 {144}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000305	Re-Slope:	1.000000
A1 (Gain):	4.900576	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999589	Status:	OK.
Std Error of Est:	0.000403		
Predicted MDL:	0.000045		
Predicted MQL:	0.000149		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00031	.000	1
S1	.00600	.00627	.000	4.57	.03022	.000	1
S3	.12500	.13092	.006	4.74	.63853	.003	1
S4	.25000	.25185	.002	.741	1.2284	.015	1
S5	.50000	.48908	-.011	-2.18	2.3855	.034	1
S2	.04000	.04287	.003	7.18	.20892	.002	1

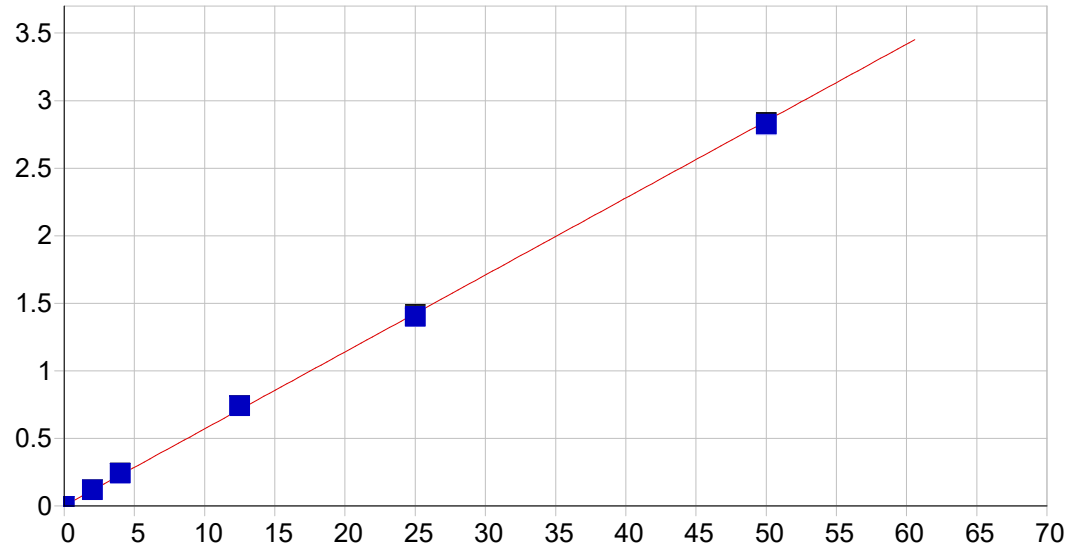


Cd 226.502 {449}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000143	Re-Slope:	1.000000
A1 (Gain):	1.831909	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999938	Status:	OK.
Std Error of Est:	0.000185		
Predicted MDL:	0.000096		
Predicted MQL:	0.000319		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00014	.000	1
S1	.00600	.00645	.000	7.43	.01170	.000	1
S3	1.2500	1.2829	.033	2.63	2.3516	.000	1
S4	2.5000	2.4998	-.000	-.009	4.5824	.029	1
S5	5.0000	4.9662	-.034	-.676	9.1037	.039	1
S2	.40000	.40066	.001	.164	.73432	.008	1

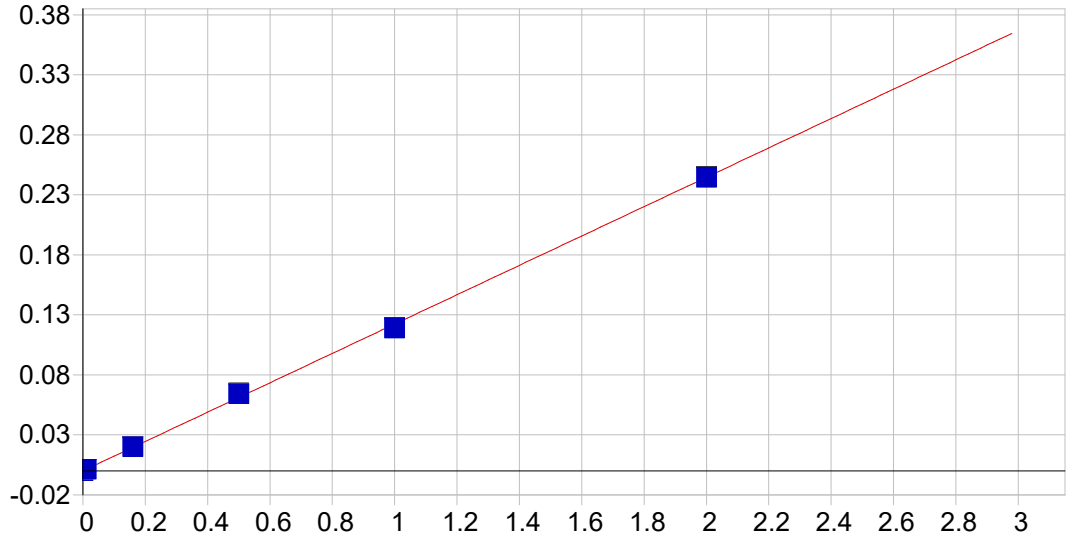


Ca 373.690 { 90}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000755	Re-Slope:	1.000000
A1 (Gain):	0.056955	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999771	Status:	OK.
Std Error of Est:	0.000643		
Predicted MDL:	0.008236		
Predicted MQL:	0.027453		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00021	-.000	.000	.00074	.000	1
S2	4.0000	4.2263	.226	5.66	.24082	.001	1
S3	12.500	12.986	.486	3.89	.73838	.003	1
S4	25.000	24.624	-.376	-1.50	1.3992	.012	1
S5	50.000	49.600	-.400	-.800	2.8177	.012	1
S1	2.0000	2.0633	.063	3.17	.11819	.000	1

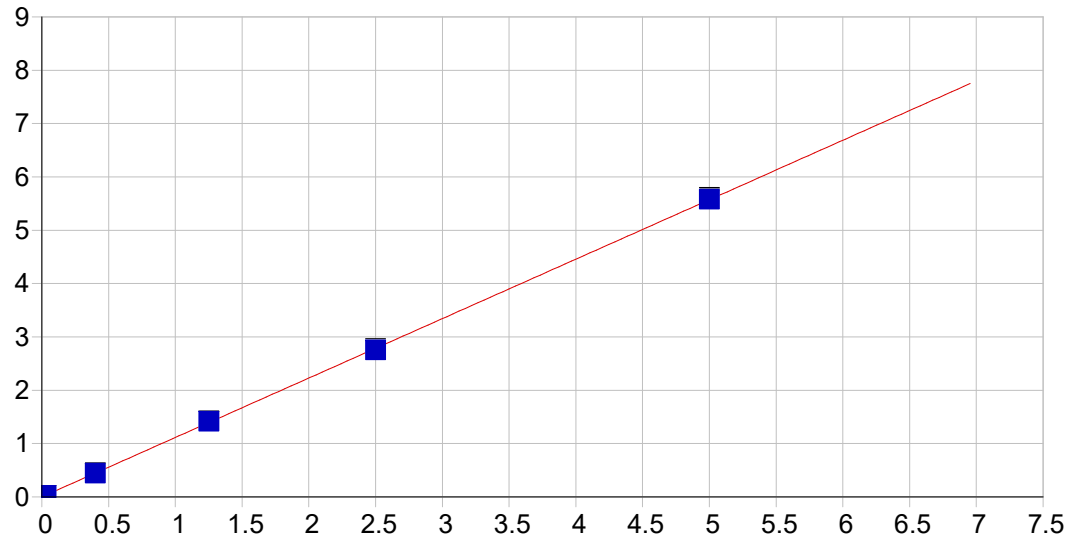


Cr 267.716 {126}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000025	Re-Slope:	1.000000
A1 (Gain):	0.122318	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999698	Status:	OK.
Std Error of Est:	0.000022		
Predicted MDL:	0.000321		
Predicted MQL:	0.001071		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00002	.000	1
S1	.01000	.00965	-.000	-3.48	.00121	.000	1
S3	.50000	.52550	.025	5.10	.06432	.000	1
S4	1.0000	.97164	-.028	-2.84	.11891	.001	1
S5	2.0000	1.9992	-.001	-.042	.24463	.001	1
S2	.16000	.16405	.004	2.53	.02010	.000	1

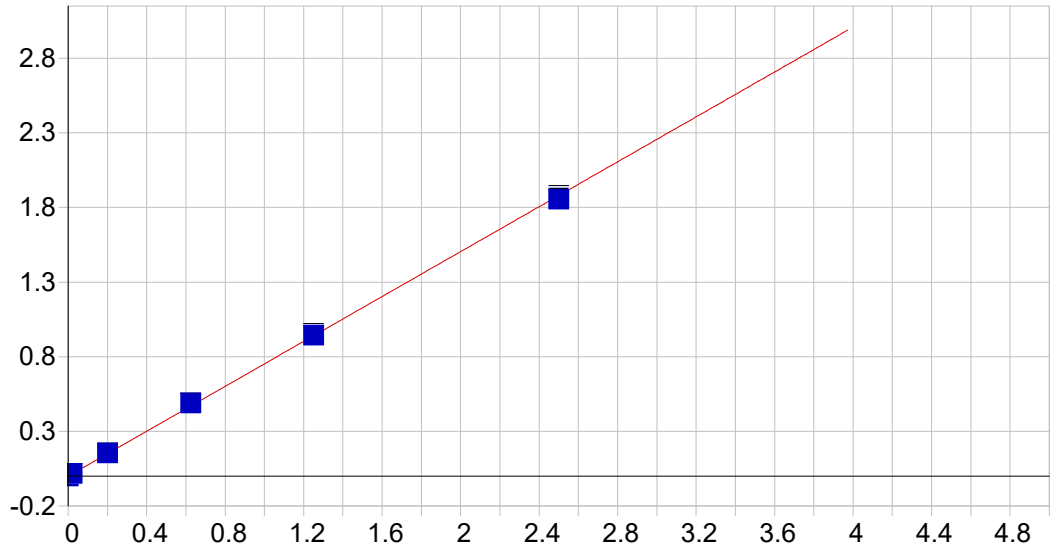


Co 228.616 {448}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000090	Re-Slope:	1.000000
A1 (Gain):	1.114452	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999958	Status:	OK.
Std Error of Est:	0.000207		
Predicted MDL:	0.000175		
Predicted MQL:	0.000582		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00009	.000	1
S1	.03000	.03062	.001	2.07	.03407	.000	1
S3	1.2500	1.2731	.023	1.85	1.4212	.001	1
S4	2.5000	2.4716	-.028	-1.14	2.7593	.018	1
S5	5.0000	5.0058	.006	.116	5.5883	.025	1
S2	.40000	.39890	-.001	-.276	.44540	.004	1

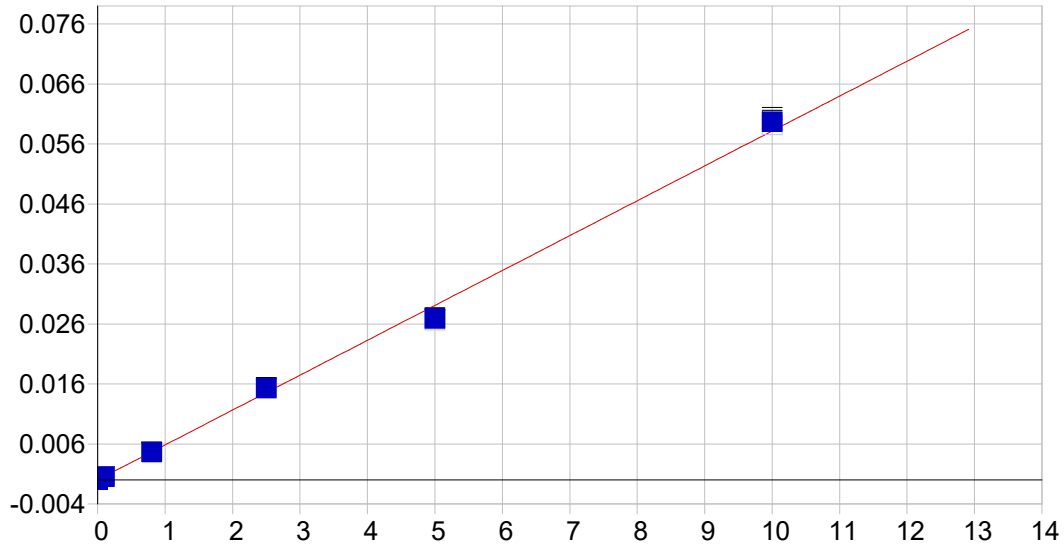


Cu 224.700 {450}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000558	Re-Slope:	1.000000
A1 (Gain):	0.752414	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999793	Status:	OK.
Std Error of Est:	0.000181		
Predicted MDL:	0.000417		
Predicted MQL:	0.001391		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00056	.000	1
S1	.02000	.02271	.003	13.6	.01671	.000	1
S3	.62500	.64867	.024	3.79	.49161	.001	1
S4	1.2500	1.2528	.003	.224	.95028	.005	1
S5	2.5000	2.4649	-.035	-1.40	1.8705	.009	1
S2	.20000	.20593	.006	2.97	.15570	.001	1

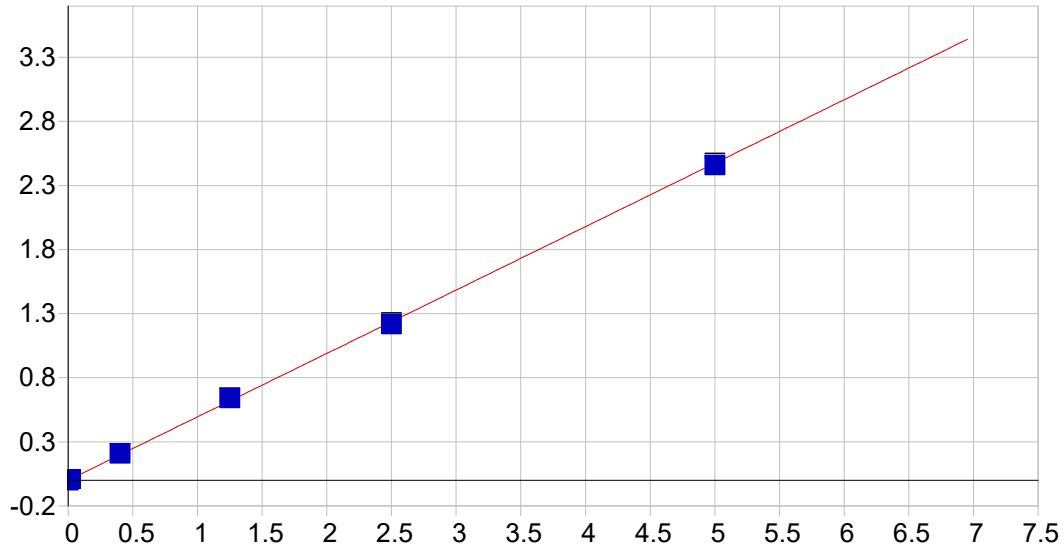


Fe 240.488 {140}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000012	Re-Slope:	1.000000
A1 (Gain):	0.005815	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998801	Status:	OK.
Std Error of Est:	0.000015		
Predicted MDL:	0.003612		
Predicted MQL:	0.012039		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00001	.000	1
S1	.10000	.09227	-.008	-7.73	.00054	.000	1
S3	2.5000	2.6340	.134	5.36	.01521	.000	1
S4	5.0000	4.6205	-.380	-7.59	.02663	.000	1
S5	10.000	10.261	.261	2.61	.05918	.001	1
S2	.80000	.79259	-.007	-.927	.00458	.000	1

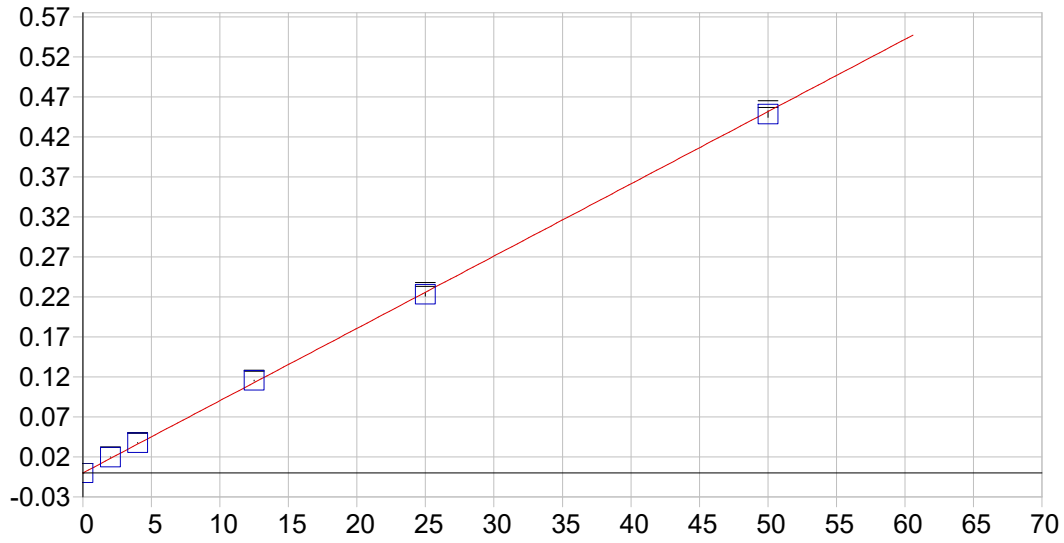


Mn 257.610 {131}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000103	Re-Slope:	1.000000
A1 (Gain):	0.494823	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999782	Status:	OK.
Std Error of Est:	0.000171		
Predicted MDL:	0.000324		
Predicted MQL:	0.001080		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00010	.000	1
S1	.02000	.02151	.002	7.56	.01054	.000	1
S3	1.2500	1.2974	.047	3.79	.64195	.000	1
S4	2.5000	2.4612	-.039	-1.55	1.2179	.011	1
S5	5.0000	4.9674	-.033	-.652	2.4581	.015	1
S2	.40000	.42250	.023	5.63	.20898	.001	1

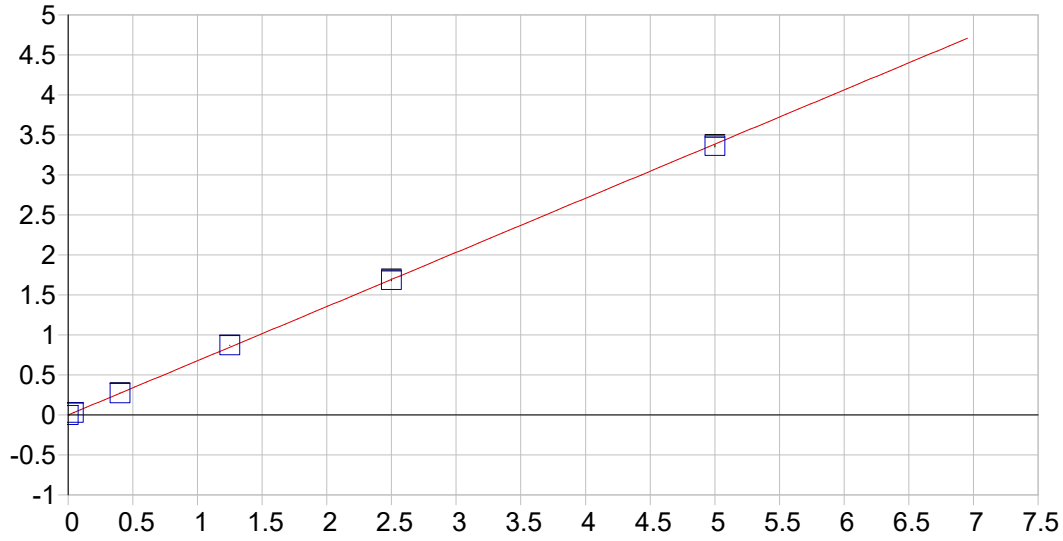


Mg 279.079 {121}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000036	Re-Slope:	1.000000
A1 (Gain):	0.009030	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999804	Status:	OK.
Std Error of Est:	0.000095		
Predicted MDL:	0.019331		
Predicted MQL:	0.064437		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00028	-.000	.000	-.00004	.000	1
S2	4.0000	4.1540	.154	3.85	.03748	.000	1
S3	12.500	12.793	.293	2.34	.11549	.001	1
S4	25.000	24.703	-.297	-1.19	.22304	.002	1
S5	50.000	49.660	-.340	-.680	.44841	.004	1
S1	2.0000	2.1900	.190	9.50	.01974	.000	1

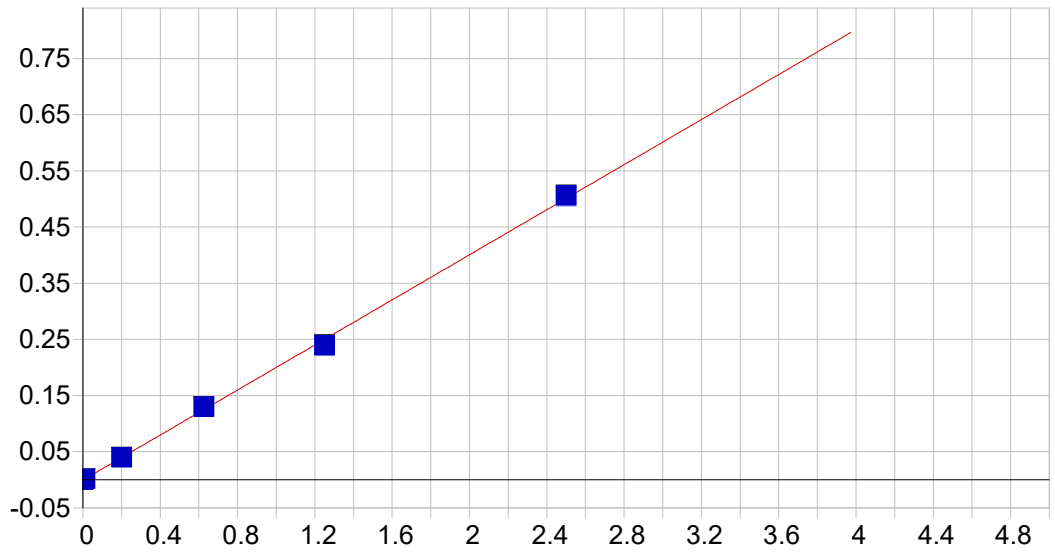


Ni 231.604 {446}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000005	Re-Slope:	1.000000
A1 (Gain):	0.677044	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999930	Status:	OK.
Std Error of Est:	0.000189		
Predicted MDL:	0.000283		
Predicted MQL:	0.000943		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00000	.000	1
S1	.04000	.04089	.001	2.22	.02769	.000	1
S3	1.2500	1.2852	.035	2.82	.87016	.001	1
S4	2.5000	2.4906	-.009	-.378	1.6862	.012	1
S5	5.0000	4.9688	-.031	-.624	3.3641	.015	1
S2	.40000	.40454	.005	1.13	.27389	.003	1

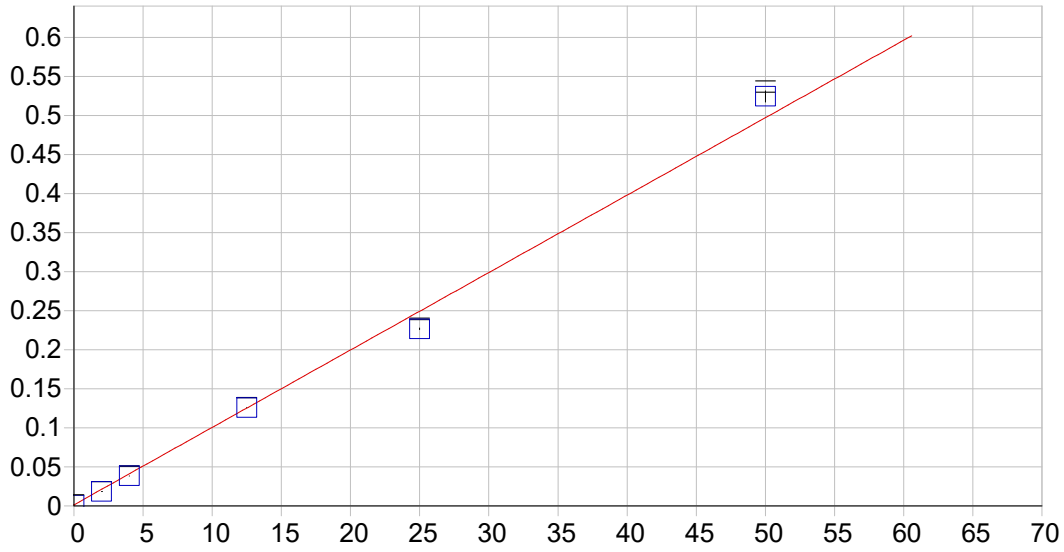


Ag 328.068 {103}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000604	Re-Slope:	1.000000
A1 (Gain):	0.200650	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999557	Status:	OK.
Std Error of Est:	0.000049		
Predicted MDL:	0.000337		
Predicted MQL:	0.001125		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00060	.000	1
S1	.01000	.01163	.002	16.3	.00172	.000	1
S3	.62500	.65128	.026	4.20	.12959	.000	1
S4	1.2500	1.1953	-.055	-4.38	.23827	.001	1
S5	2.5000	2.5240	.024	.959	.50390	.001	1
S2	.20000	.20284	.003	1.42	.03994	.000	1

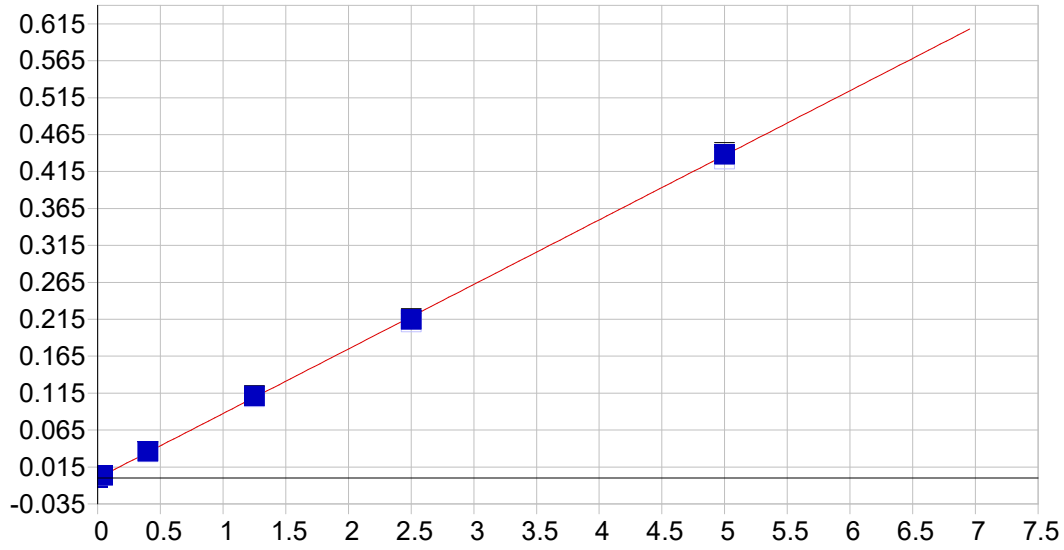


Na 589.592 { 57}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001411	Re-Slope:	1.000000
A1 (Gain):	0.009913	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997799	Status:	OK.
Std Error of Est:	0.000349		
Predicted MDL:	0.011901		
Predicted MQL:	0.039670		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00047	.000	.000	.00142	.000	1
S2	4.0000	3.7311	-.269	-6.72	.03840	.000	1
S3	12.500	12.560	.060	.484	.12592	.000	1
S4	25.000	22.731	-2.27	-9.08	.22674	.001	1
S5	50.000	52.750	2.75	5.50	.52430	.007	1
S1	2.0000	1.7274	-.273	-13.6	.01853	.000	1

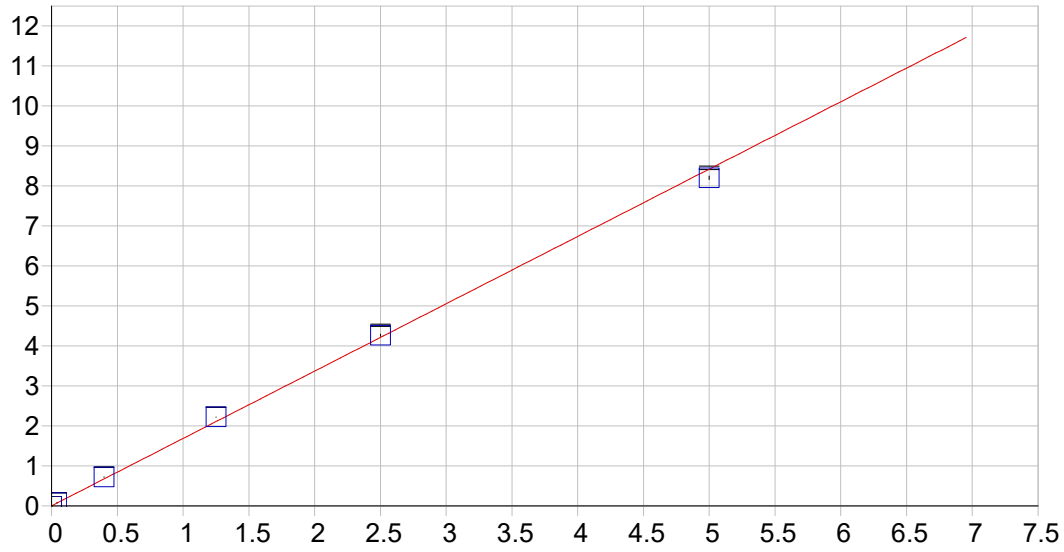


V 292.402 {115}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000106	Re-Slope:	1.000000
A1 (Gain):	0.087425	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999893	Status:	OK.
Std Error of Est:	0.000030		
Predicted MDL:	0.002319		
Predicted MQL:	0.007729		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00011	.000	1
S1	.04000	.04340	.003	8.51	.00356	.000	1
S3	1.2500	1.2725	.022	1.80	.10954	.000	1
S4	2.5000	2.4531	-.047	-1.88	.21117	.002	1
S5	5.0000	5.0100	.010	.201	.43152	.003	1
S2	.40000	.41113	.011	2.78	.03533	.000	1

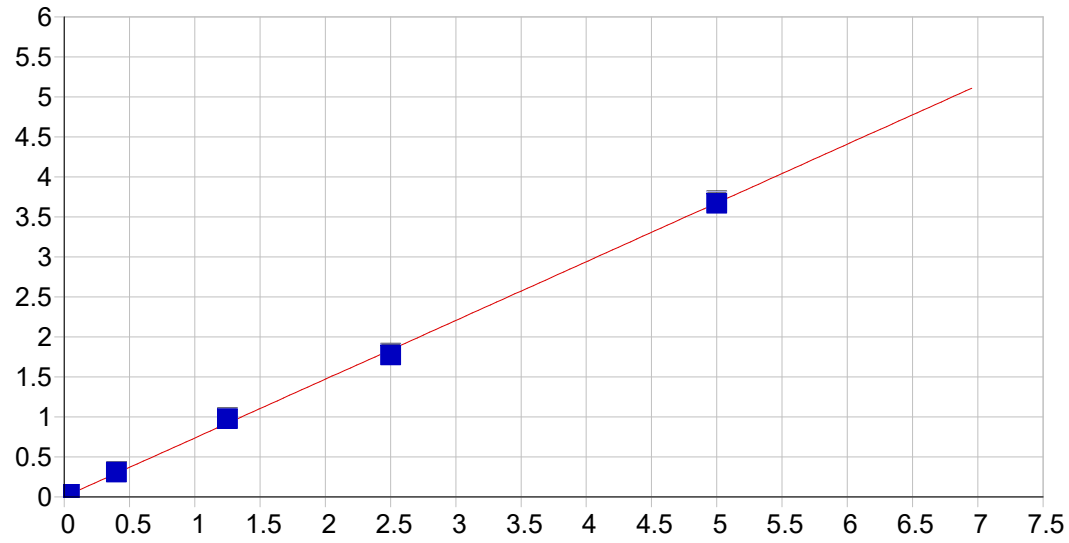


Zn 206.200 {464}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002841	Re-Slope:	1.000000
A1 (Gain):	1.684045	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999482	Status:	OK.
Std Error of Est:	0.001272		
Predicted MDL:	0.000142		
Predicted MQL:	0.000474		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00283	.000	1
S1	.04000	.04384	.004	9.61	.07667	.000	1
S3	1.2500	1.3188	.069	5.50	2.2237	.004	1
S4	2.5000	2.5319	.032	1.28	4.2667	.027	1
S5	5.0000	4.8702	-.130	-2.60	8.2045	.045	1
S2	.40000	.42522	.025	6.30	.71893	.007	1

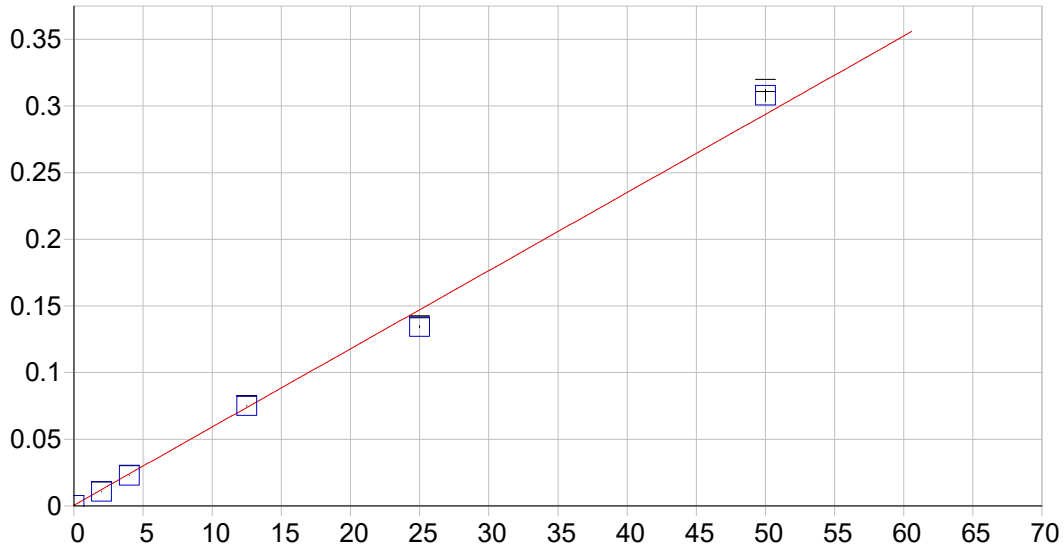


Zn 213.856 {158}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001721	Re-Slope:	1.000000
A1 (Gain):	0.734565	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999528	Status:	OK.
Std Error of Est:	0.000534		
Predicted MDL:	0.000523		
Predicted MQL:	0.001742		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00172	.000	1
S1	.04000	.04100	.001	2.50	.03204	.000	1
S3	1.2500	1.3272	.077	6.18	.98302	.004	1
S4	2.5000	2.4124	-.088	-3.50	1.7866	.011	1
S5	5.0000	4.9901	-.010	-.198	3.6928	.005	1
S2	.40000	.41930	.019	4.82	.31177	.001	1

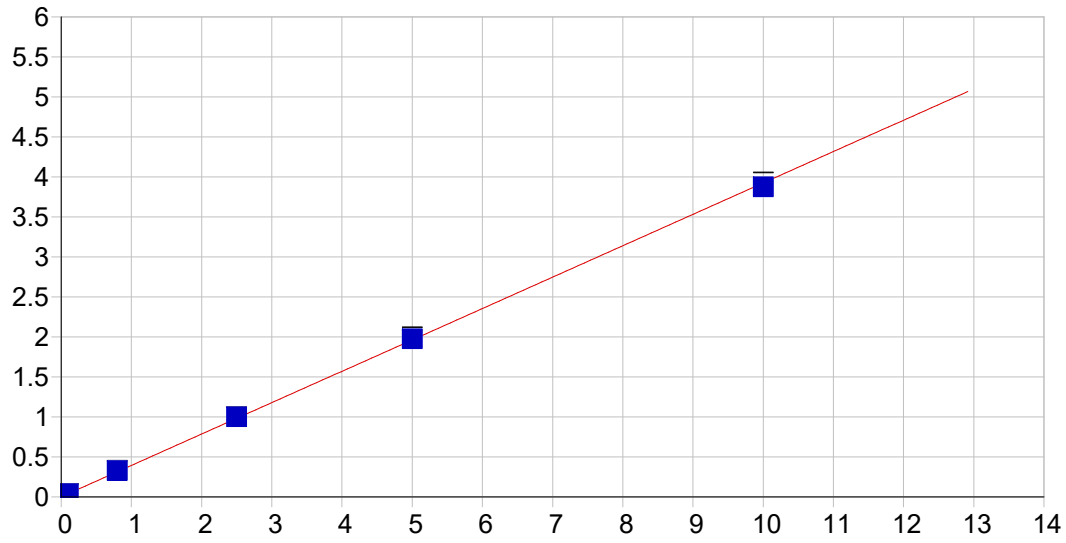


K 766.490 { 44}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000569	Re-Slope:	1.000000
A1 (Gain):	0.005865	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998093	Status:	OK.
Std Error of Est:	0.000192		
Predicted MDL:	0.027316		
Predicted MQL:	0.091052		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00042	.000	.000	.00057	.000	1
S2	4.0000	3.7967	-.203	-5.08	.02283	.000	1
S3	12.500	12.712	.212	1.70	.07512	.000	1
S4	25.000	22.830	-2.17	-8.68	.13445	.001	1
S5	50.000	52.432	2.43	4.86	.30806	.005	1
S1	2.0000	1.7288	-.271	-13.6	.01071	.000	1

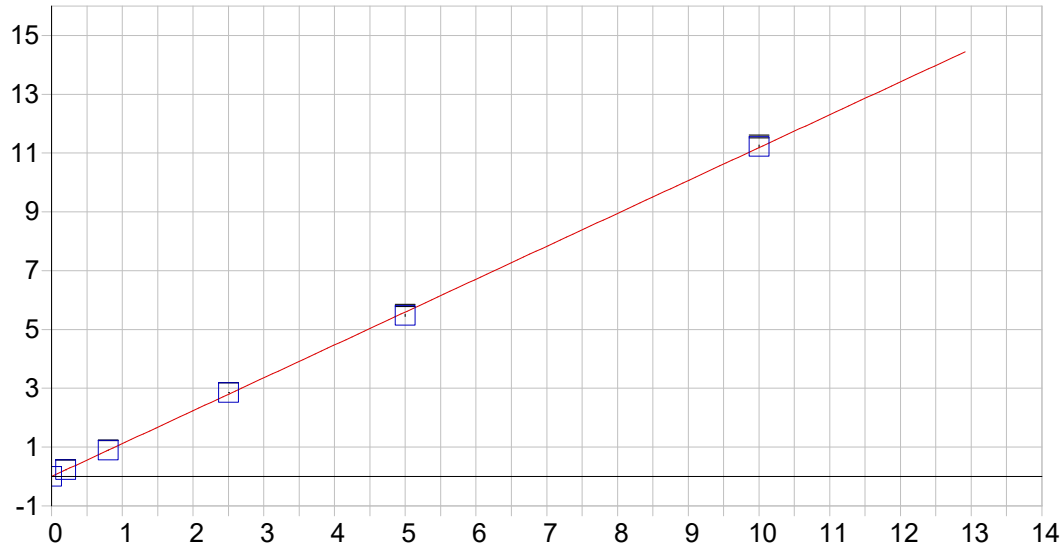


B 249.678 {135}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001054	Re-Slope:	1.000000
A1 (Gain):	0.392254	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999884	Status:	OK.
Std Error of Est:	0.000313		
Predicted MDL:	0.000655		
Predicted MQL:	0.002182		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00105	.000	1
S1	.10000	.10214	.002	2.14	.04095	.000	1
S3	2.5000	2.5468	.047	1.87	.99813	.001	1
S4	5.0000	5.0374	.037	.748	1.9732	.021	1
S5	10.000	9.8782	-.122	-1.22	3.8681	.062	1
S2	.80000	.83546	.035	4.43	.32815	.003	1

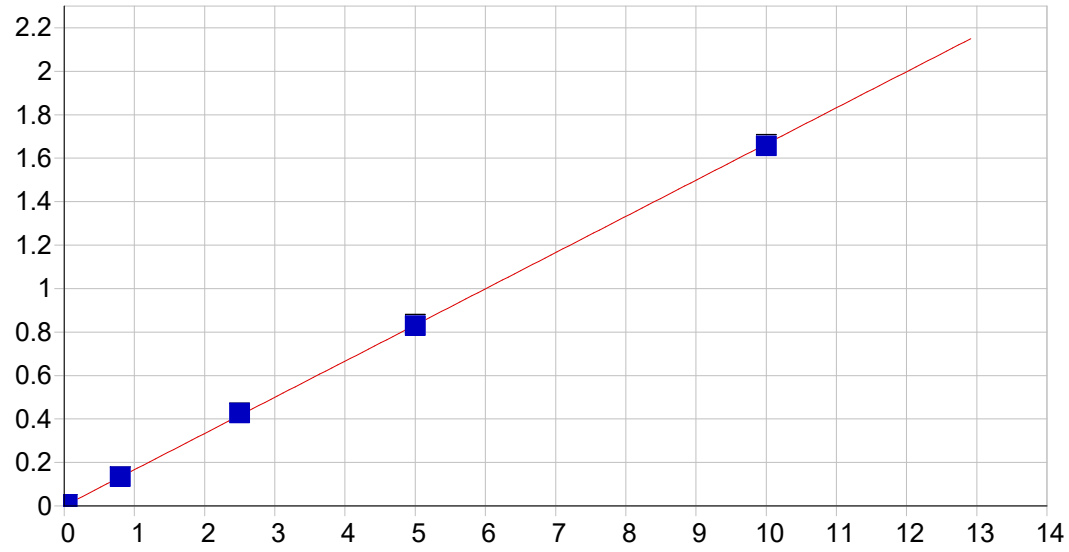


Mo 202.030 {467}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000290	Re-Slope:	1.000000
A1 (Gain):	1.118542	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999905	Status:	OK.
Std Error of Est:	0.001148		
Predicted MDL:	0.000219		
Predicted MQL:	0.000730		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00030	.000	1
S1	.20000	.20576	.006	2.88	.22986	.002	1
S3	2.5000	2.5551	.055	2.21	2.8577	.000	1
S4	5.0000	4.9001	-.100	-2.00	5.4807	.034	1
S5	10.000	10.037	.037	.369	11.226	.049	1
S2	.80000	.80205	.002	.256	.89684	.009	1

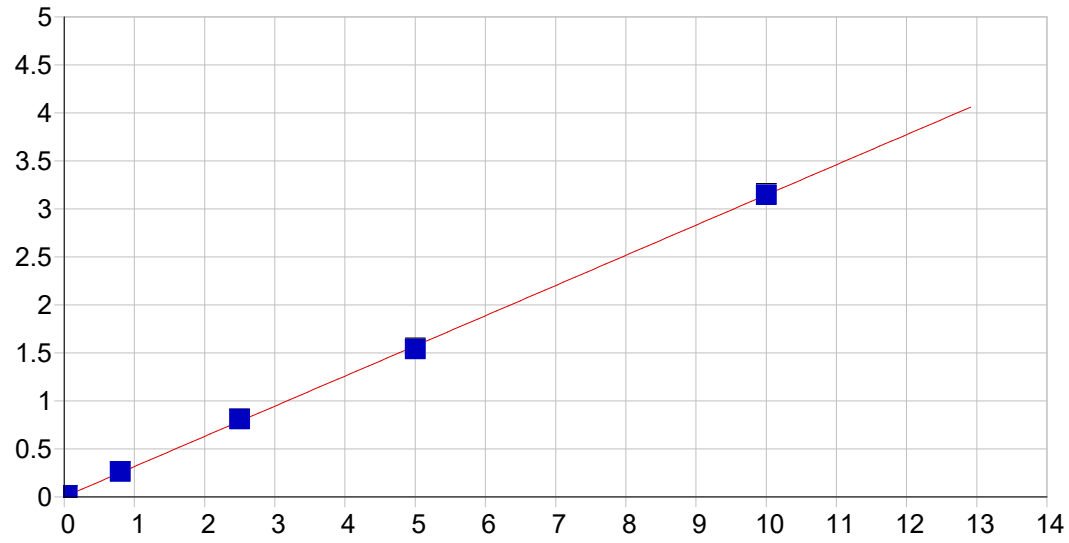


Sn 189.989 {478}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000105	Re-Slope:	1.000000
A1 (Gain):	0.166486	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999944	Status:	OK.
Std Error of Est:	0.000058		
Predicted MDL:	0.000598		
Predicted MQL:	0.001993		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00010	.000	1
S1	.04000	.04095	.001	2.37	.00691	.000	1
S3	2.5000	2.5643	.064	2.57	.42660	.001	1
S4	5.0000	4.9830	-.017	-.340	.82885	.006	1
S5	10.000	9.9473	-.053	-.527	1.6545	.007	1
S2	.80000	.80443	.004	.554	.13390	.001	1

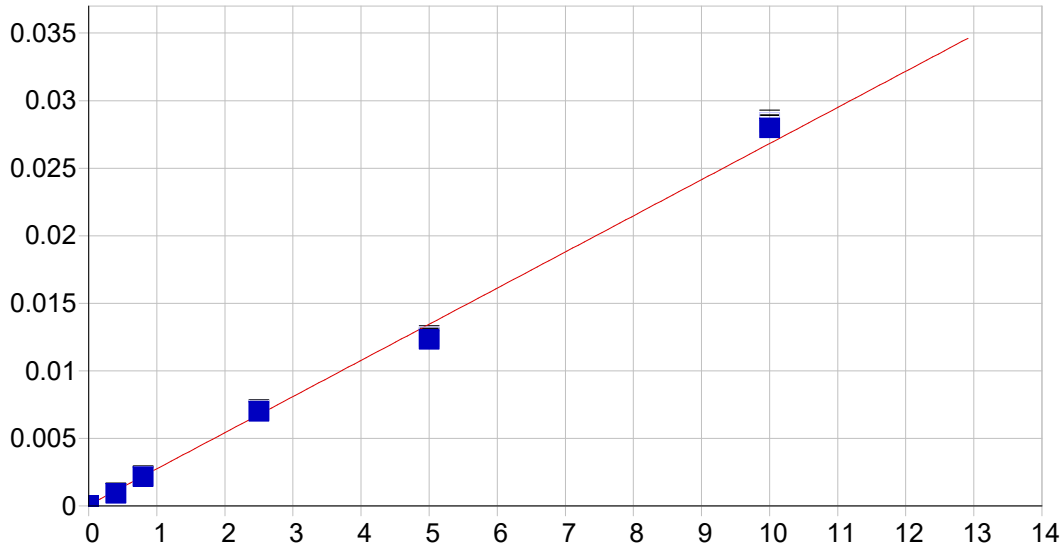


Ti 336.121 {100}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001414	Re-Slope:	1.000000
A1 (Gain):	0.314356	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999849	Status:	OK.
Std Error of Est:	0.000181		
Predicted MDL:	0.000968		
Predicted MQL:	0.003228		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00141	.000	1
S1	.04000	.04098	.001	2.44	.01429	.000	1
S3	2.5000	2.5720	.072	2.88	.80966	.001	1
S4	5.0000	4.8921	-.108	-2.16	1.5387	.010	1
S5	10.000	10.005	.005	.051	3.1455	.014	1
S2	.80000	.82971	.030	3.71	.26215	.001	1

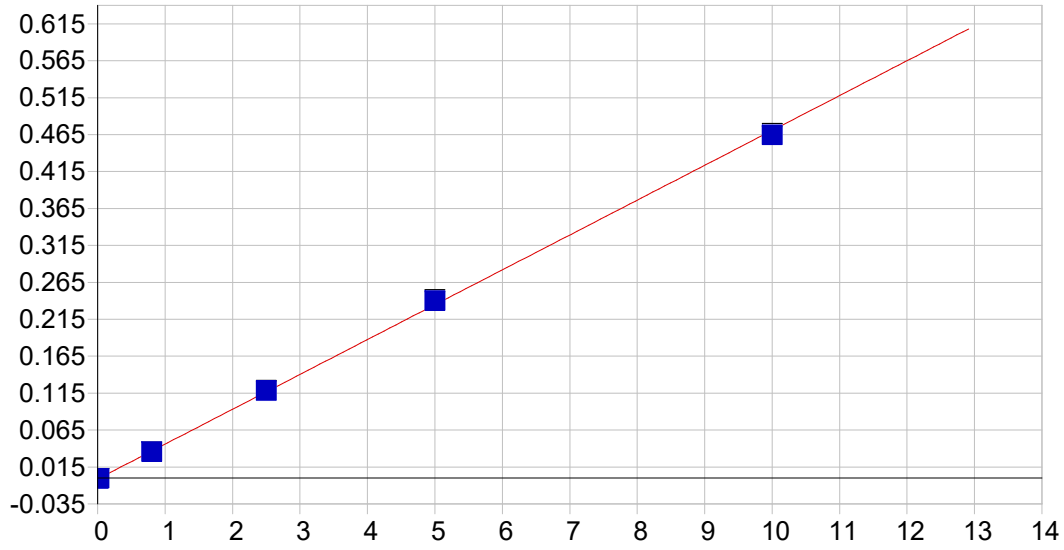


Si 288.158 {117}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000069	Re-Slope:	1.000000
A1 (Gain):	0.002675	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998100	Status:	OK.
Std Error of Est:	0.000018		
Predicted MDL:	0.009923		
Predicted MQL:	0.033076		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00009	.000	.000	.00007	.000	1
S1	.40000	.32142	-.079	-19.6	.00093	.000	1
S3	2.5000	2.5849	.085	3.39	.00708	.000	1
S4	5.0000	4.5785	-.422	-8.43	.01252	.000	1
S5	10.000	10.435	.435	4.35	.02839	.000	1
S2	.80000	.77910	-.021	-2.61	.00219	.000	1

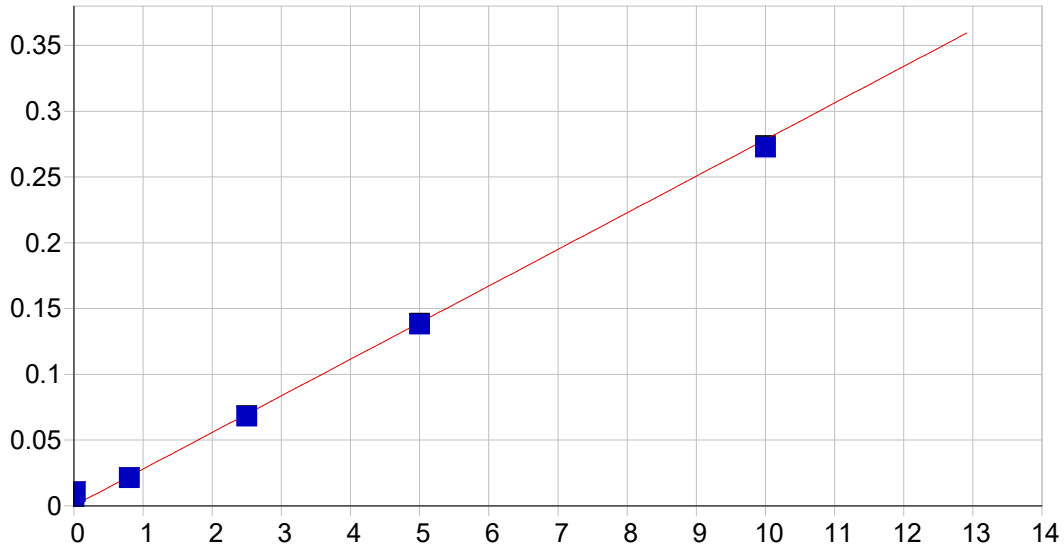


P 177.495 {490}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001280	Re-Slope:	1.000000
A1 (Gain):	0.047192	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999854	Status:	OK.
Std Error of Est:	0.000019		
Predicted MDL:	0.001905		
Predicted MQL:	0.006349		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00128	.000	1
S1	.02000	.02105	.001	5.27	-.00029	.000	1
S3	2.5000	2.5309	.031	1.24	.11814	.001	1
S4	5.0000	5.1170	.117	2.34	.24016	.001	1
S5	10.000	9.8711	-.129	-1.29	.46448	.002	1
S2	.80000	.77996	-.020	-2.51	.03552	.000	1

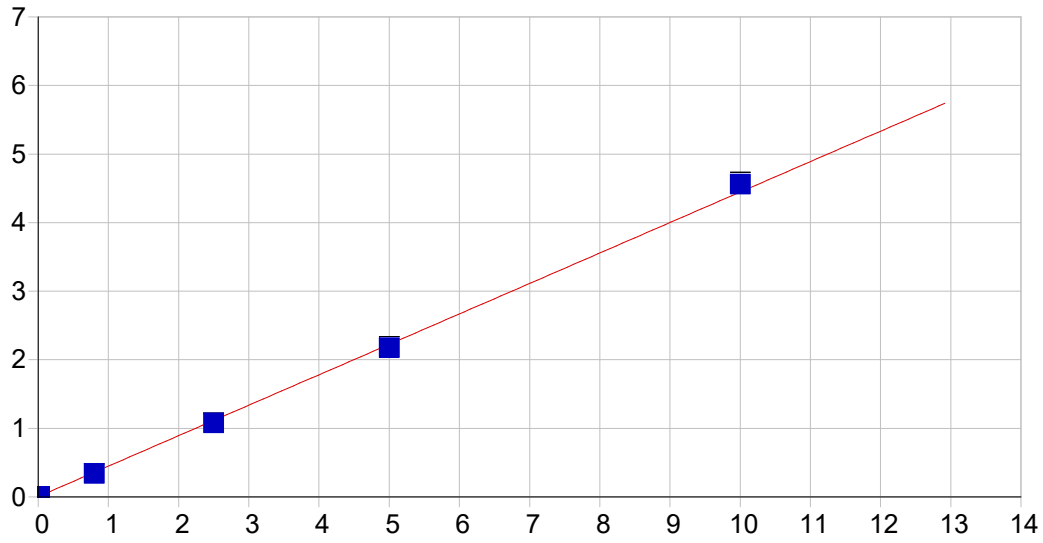


S 182.034 {485}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000204	Re-Slope:	1.000000
A1 (Gain):	0.027827	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.859303	Status:	OK.
Std Error of Est:	0.000387		
Predicted MDL:	0.002929		
Predicted MQL:	0.009763		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00036	-.000	.000	.00019	.000	1
S1	.02000	.37893	.359	1790.	.01072	.000	1
S3	2.5000	2.4447	-.055	-2.21	.06805	.000	1
S4	5.0000	4.9549	-.045	-.902	.13772	.001	1
S5	10.000	9.7970	-.203	-2.03	.27210	.001	1
S2	.80000	.75883	-.041	-5.15	.02126	.000	1

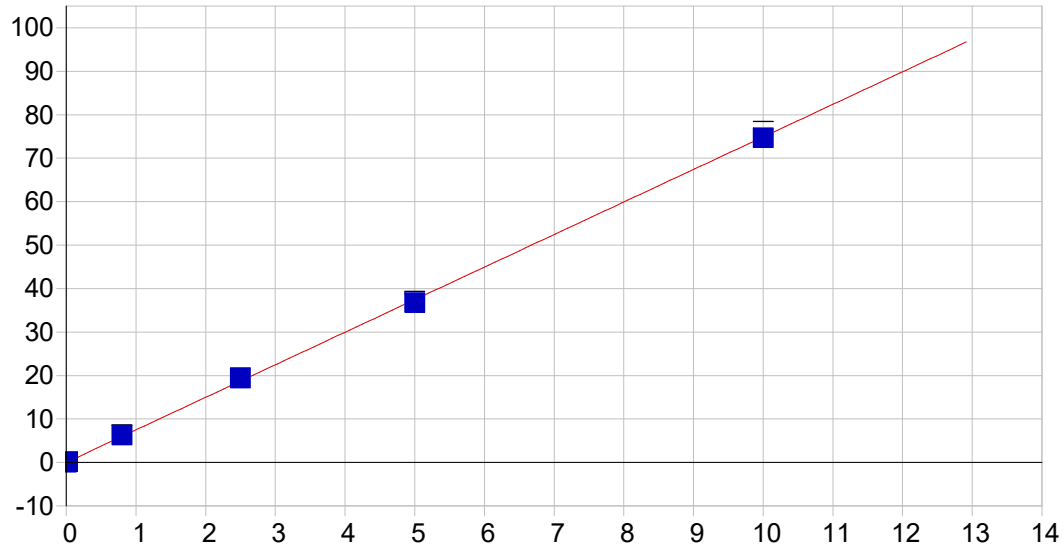


Li 670.784 { 50}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004643	Re-Slope:	1.000000
A1 (Gain):	0.444054	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998963	Status:	OK.
Std Error of Est:	0.000475		
Predicted MDL:	0.002454		
Predicted MQL:	0.008181		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00465	.001	1
S5	10.000	10.259	.259	2.59	4.5644	.028	1
S4	5.0000	4.8911	-.109	-2.18	2.1786	.015	1
S3	2.5000	2.4194	-.081	-3.22	1.0800	.003	1
S1	.02000	-.00170	-.022	-108.	.00405	.001	1
S2	.80000	.75210	-.048	-5.99	.33893	.002	1

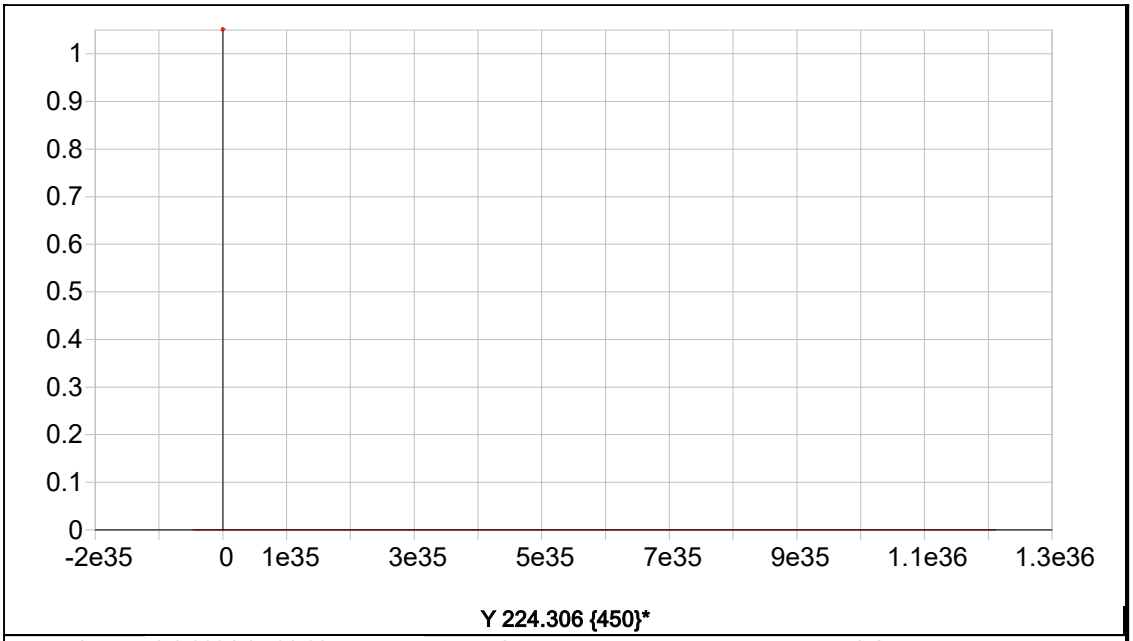


Sr 407.771 { 83}

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000590	Re-Slope:	1.000000
A1 (Gain):	7.489939	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999816	Status:	OK.
Std Error of Est:	0.003369		
Predicted MDL:	0.000068		
Predicted MQL:	0.000227		

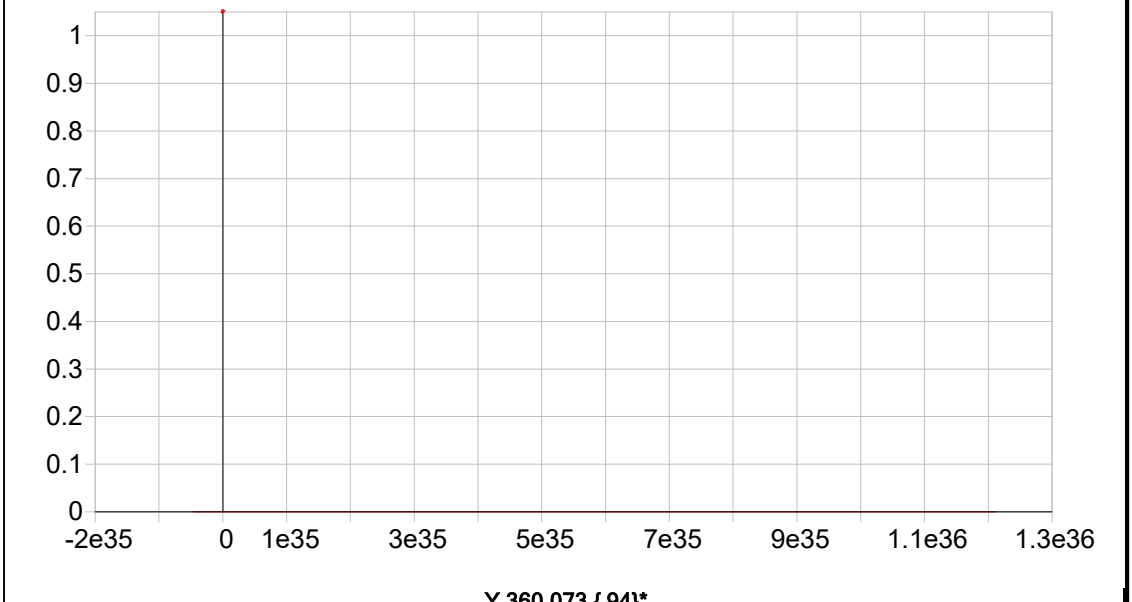
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00061	.001	1
S1	.02000	.02096	.001	4.82	.15718	.001	1
S3	2.5000	2.5864	.086	3.46	19.390	.086	1
S4	5.0000	4.9049	-.095	-1.90	36.774	.308	1
S5	10.000	9.9696	-.030	-.304	74.746	1.48	1
S2	.80000	.83812	.038	4.76	6.2828	.037	1



Y 224.306 {450}*

Date of Fit:	8/8/2024 15:06:03	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.000000		Status:	Warning	Zero Gain
Std Error of Est:	0.000000				
Predicted MDL:	n/a				
Predicted MQL:	n/a				

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

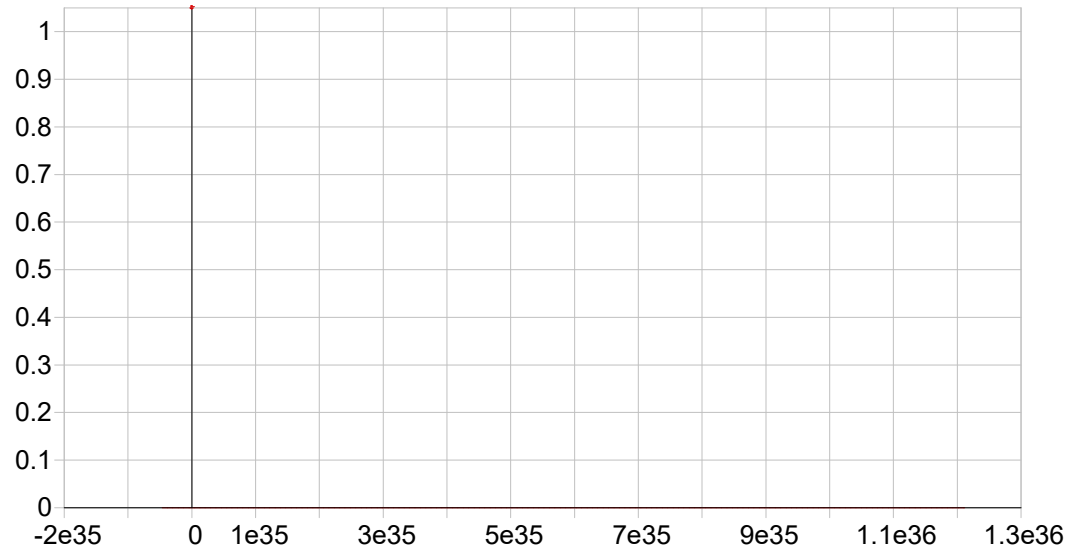


Y 360.073 { 94}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	

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

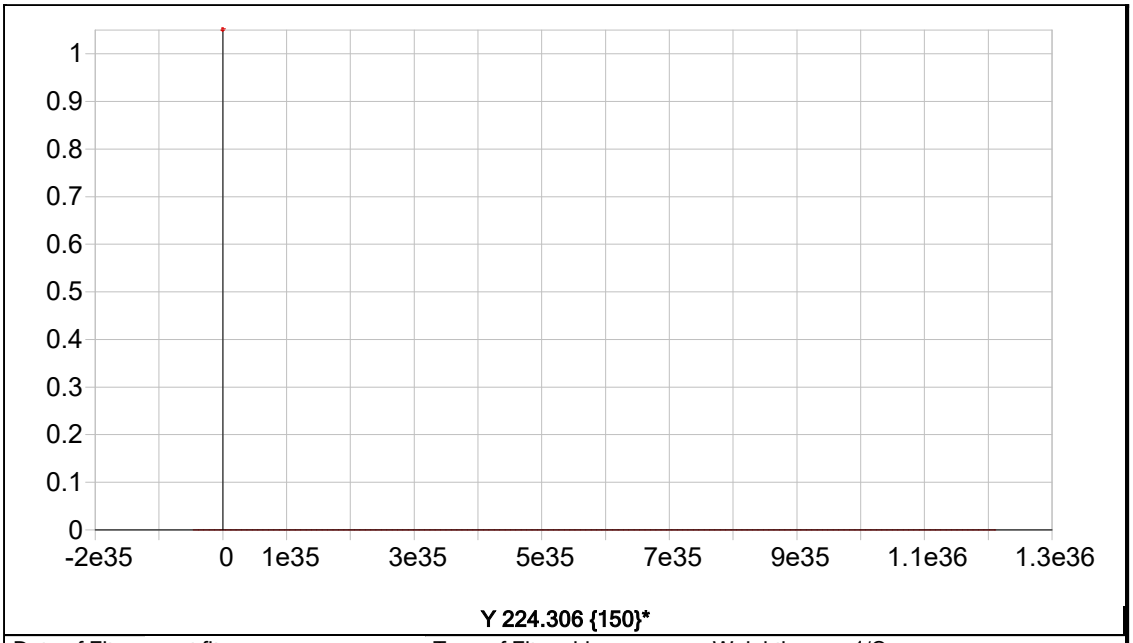
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 371.030 { 91}*

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

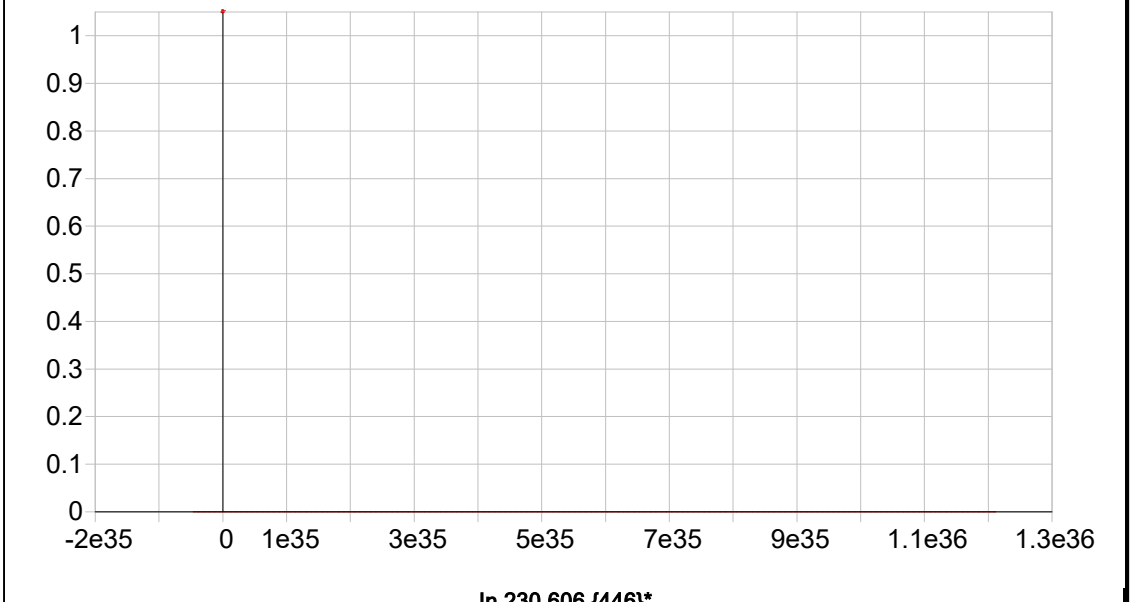
Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis



Y 224.306 {150}*

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

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



In 230.606 {446}*

Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.000000		Re-Slope:	1.000000	
A1 (Gain):	0.000000		Y-int:	0.000000	

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

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: S0 Acquired: 8/8/2024 12:51:56 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00021	.00021	-.00018	.00045	.00057	.00050	.02506	-.00031
Stddev	.00014	.00007	.00011	.00005	.00017	.00029	.00102	.00019
%RSD	68.654	33.763	62.281	10.835	29.762	57.678	4.0610	61.864
#1	-.00004	.00013	-.00013	.00051	.00054	.00075	.02484	-.00045
#2	-.00027	.00023	-.00010	.00045	.00041	.00018	.02417	-.00009
#3	-.00030	.00026	-.00032	.00041	.00075	.00058	.02617	-.00039

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	-.00014	.00074	.00002	.00009	-.00056	.00001	-.00010	-.00004
Stddev	.00016	.00035	.00003	.00009	.00015	.00001	.00012	.00015
%RSD	107.53	46.499	103.59	97.016	27.252	110.11	119.46	387.79
#1	-.00032	.00114	.00000	-.00001	-.00057	.00002	-.00011	.00006
#2	-.00006	.00051	.00002	.00015	-.00040	.00002	.00003	-.00021
#3	-.00005	.00058	.00005	.00012	-.00071	-.00000	-.00022	.00003

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	.00000	-.00060	.00142	-.00011	.00172	.00057	.00105	-.00030
Stddev	.00012	.00005	.00005	.00016	.00024	.00006	.00038	.00010
%RSD	3704.4	8.3184	3.7910	146.90	13.876	11.063	35.858	33.983
#1	.00014	-.00065	.00145	-.00004	.00185	.00050	.00117	-.00027
#2	-.00003	-.00055	.00144	.00001	.00186	.00060	.00135	-.00021
#3	-.00010	-.00062	.00135	-.00029	.00144	.00061	.00063	-.00041

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	.00010	.00141	.00007	-.00128	.00019	.00465	-.00061
Stddev	.00003	.00020	.00001	.00002	.00003	.00082	.00057
%RSD	24.069	14.148	12.051	1.8318	15.957	17.710	94.132
#1	.00012	.00145	.00008	-.00128	.00016	.00548	-.00007
#2	.00012	.00159	.00007	-.00130	.00022	.00466	-.00055
#3	.00008	.00120	.00006	-.00126	.00020	.00383	-.00120

Sample Name: S0 Acquired: 8/8/2024 12:51:56 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2942.1	104520.	13979.	4008.5	5473.7
Stddev	12.0	450.	131.	11.1	23.1
%RSD	.40812	.43030	.93382	.27611	.42212
#1	2951.1	104040.	13829.	3996.3	5488.8
#2	2946.7	104930.	14053.	4011.3	5485.2
#3	2928.5	104580.	14056.	4017.9	5447.1

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: S1 Acquired: 8/8/2024 12:56:23 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00181	.00262	.00343	.00232	.00924	.00649	.24000	.03022
Stddev	.00020	.00009	.00029	.00017	.00012	.00023	.00211	.00028
%RSD	11.254	3.5084	8.3961	7.3767	1.2836	3.5407	.88087	.94048
#1	.00163	.00260	.00335	.00226	.00923	.00625	.24132	.03023
#2	.00177	.00272	.00375	.00218	.00913	.00671	.24112	.02993
#3	.00203	.00254	.00319	.00251	.00936	.00652	.23756	.03050

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	.01170	.11819	.00121	.03407	.01671	.00054	.01054	.01974
Stddev	.00004	.00043	.00001	.00016	.00014	.00002	.00012	.00017
%RSD	.37223	.36634	.85846	.46004	.84951	3.0184	1.1426	.84855
#1	.01169	.11794	.00120	.03392	.01685	.00053	.01042	.01955
#2	.01175	.11869	.00122	.03408	.01670	.00056	.01056	.01980
#3	.01167	.11794	.00120	.03423	.01656	.00053	.01066	.01987

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	.02769	.00172	.01853	.00356	.03204	.01071	.04095	.22986
Stddev	.00015	.00003	.00008	.00015	.00047	.00016	.00010	.00165
%RSD	.54708	1.5609	.41480	4.0877	1.4703	1.4674	.24547	.71687
#1	.02752	.00174	.01859	.00349	.03251	.01055	.04105	.22881
#2	.02780	.00169	.01845	.00372	.03157	.01086	.04095	.23176
#3	.02776	.00172	.01856	.00345	.03205	.01071	.04085	.22901

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	.00691	.01429	.00093	-.00029	.01072	.00405	.15718
Stddev	.00002	.00011	.00001	.00001	.00012	.00063	.00137
%RSD	.34403	.76518	1.0820	3.4676	1.1334	15.672	.87215
#1	.00690	.01434	.00092	-.00030	.01061	.00350	.15561
#2	.00691	.01436	.00094	-.00028	.01085	.00390	.15812
#3	.00694	.01416	.00093	-.00028	.01070	.00474	.15781

Sample Name: S1 Acquired: 8/8/2024 12:56:23 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2895.3	111290.	14599.	4210.5	5310.2
Stddev	14.3	420.	2.	29.7	27.5
%RSD	.49271	.37756	.01118	.70582	.51870
#1	2908.4	110890.	14598.	4190.8	5333.2
#2	2880.1	111730.	14601.	4244.7	5279.7
#3	2897.4	111250.	14599.	4196.0	5317.6

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: S2 Acquired: 8/8/2024 13:00:46 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.08253	.05195	.19953	.07516	.14156	.09226	3.4940	.20892
Stddev	.00076	.00102	.00199	.00069	.00115	.00031	.0192	.00218
%RSD	.92308	1.9567	.99501	.92114	.81466	.33592	.54880	1.0451
#1	.08210	.05091	.19787	.07469	.14030	.09212	3.4996	.20962
#2	.08207	.05200	.19900	.07484	.14182	.09262	3.5097	.21067
#3	.08340	.05294	.20173	.07596	.14256	.09204	3.4726	.20647

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	.73432	.24082	.02010	.44540	.15570	.00458	.20898	.03748
Stddev	.00780	.00088	.00011	.00441	.00148	.00001	.00058	.00033
%RSD	1.0624	.36626	.55283	.98962	.95271	.22581	.27828	.86780
#1	.72799	.24167	.02012	.44174	.15436	.00457	.20905	.03732
#2	.73194	.24088	.02020	.44416	.15545	.00459	.20953	.03785
#3	.74304	.23991	.01998	.45029	.15730	.00458	.20837	.03726

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	.27389	.03994	.03840	.03533	.31177	.02283	.32815	.89684
Stddev	.00284	.00016	.00026	.00031	.00088	.00014	.00268	.00877
%RSD	1.0370	.39400	.68738	.89144	.28115	.62331	.81608	.97752
#1	.27141	.03999	.03817	.03540	.31110	.02270	.32928	.88825
#2	.27328	.04007	.03869	.03560	.31144	.02298	.33008	.89649
#3	.27699	.03976	.03833	.03498	.31276	.02283	.32510	.90578

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	.13390	.26215	.00219	.03552	.02126	.33893	6.2828
Stddev	.00122	.00129	.00004	.00049	.00020	.00187	.0372
%RSD	.90826	.49177	1.7112	1.3737	.93339	.55127	.59286
#1	.13267	.26315	.00223	.03502	.02106	.34021	6.3007
#2	.13392	.26260	.00215	.03556	.02127	.33980	6.3078
#3	.13510	.26069	.00218	.03599	.02146	.33679	6.2400

Sample Name: S2 Acquired: 8/8/2024 13:00:46 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2960.1	102970.	14014.	4029.5	5432.6
Stddev	19.7	197.	71.	11.2	44.7
%RSD	.66421	.19113	.50913	.27804	.82257
#1	2980.2	103150.	13987.	4038.8	5472.9
#2	2959.3	102760.	13960.	4032.8	5440.4
#3	2940.9	103000.	14095.	4017.1	5384.5

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: S3 Acquired: 8/8/2024 13:04:56 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.26459	.16822	.64107	.24010	.45188	.28376	10.951	.63853
Stddev	.00054	.00108	.00021	.00056	.00018	.00101	.013	.00280
%RSD	.20243	.64288	.03277	.23346	.03908	.35623	.11515	.43810
#1	.26418	.16701	.64099	.24046	.45192	.28270	10.964	.64028
#2	.26438	.16854	.64131	.24038	.45202	.28386	10.948	.63530
#3	.26520	.16910	.64092	.23945	.45168	.28471	10.939	.64001

Elem	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.3516	.73838	.06432	1.4212	.49161	.01521	.64195	.11549
Stddev	.0005	.00286	.00045	.0007	.00079	.00009	.00044	.00060
%RSD	.02096	.38678	.70680	.04621	.16056	.61403	.06906	.52008
#1	2.3511	.73527	.06466	1.4220	.49192	.01510	.64152	.11514
#2	2.3521	.73900	.06449	1.4208	.49072	.01528	.64193	.11618
#3	2.3516	.74087	.06381	1.4210	.49220	.01523	.64240	.11514

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	.87016	.12959	.12592	.10954	.98302	.07512	.99813	2.8577
Stddev	.00077	.00041	.00024	.00025	.00379	.00017	.00077	.0003
%RSD	.08862	.31309	.18838	.23133	.38593	.22323	.07715	.00873
#1	.87103	.12989	.12618	.10975	.98727	.07500	.99890	2.8575
#2	.86991	.12975	.12571	.10926	.98180	.07531	.99736	2.8578
#3	.86955	.12913	.12587	.10962	.97998	.07505	.99815	2.8579

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	.42660	.80966	.00708	.11814	.06805	1.0800	19.390
Stddev	.00065	.00143	.00004	.00061	.00027	.0034	.086
%RSD	.15289	.17644	.49767	.52049	.39989	.31442	.44418
#1	.42598	.80986	.00710	.11743	.06775	1.0827	19.306
#2	.42728	.80814	.00711	.11851	.06811	1.0811	19.478
#3	.42654	.81098	.00704	.11848	.06829	1.0762	19.387

Sample Name: S3 Acquired: 8/8/2024 13:04:56 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2868.5	97133.	14221.	3787.5	5209.3
Stddev	3.4	179.	47.	21.3	6.6
%RSD	.11877	.18478	.32945	.56226	.12680
#1	2866.9	97210.	14268.	3808.9	5206.4
#2	2872.4	96928.	14174.	3766.3	5216.8
#3	2866.1	97262.	14223.	3787.2	5204.6

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: S4 Acquired: 8/8/2024 13:09:08 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.52055	.32153	1.2366	.47336	.88133	.54746	20.654	1.2284
Stddev	.00243	.00193	.0087	.00298	.00445	.00285	.461	.0148
%RSD	.46599	.60171	.70219	.63034	.50541	.52036	2.2302	1.2073
#1	.51978	.32184	1.2351	.47182	.88097	.54798	20.603	1.2338
#2	.52327	.32330	1.2460	.47680	.88596	.55001	21.138	1.2398
#3	.51860	.31947	1.2288	.47146	.87707	.54438	20.221	1.2117

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	4.5824	1.3992	.11891	2.7593	.95028	.02663	1.2179	.22304
Stddev	.0294	.0121	.00063	.0181	.00533	.00015	.0110	.00248
%RSD	.64174	.86826	.53127	.65754	.56038	.54703	.90198	1.1115
#1	4.5746	1.4029	.11840	2.7544	.94818	.02647	1.2221	.22295
#2	4.6149	1.4091	.11962	2.7794	.95633	.02675	1.2261	.22557
#3	4.5576	1.3856	.11872	2.7442	.94632	.02668	1.2054	.22061

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	1.6862	.23827	.22674	.21117	1.7866	.13445	1.9732	5.4807
Stddev	.0121	.00126	.00114	.00156	.0110	.00062	.0213	.0339
%RSD	.71667	.52992	.50212	.74008	.61504	.46186	1.0816	.61779
#1	1.6831	.23742	.22547	.21127	1.7788	.13377	1.9787	5.4752
#2	1.6996	.23972	.22707	.21267	1.7991	.13462	1.9912	5.5170
#3	1.6760	.23766	.22767	.20955	1.7818	.13498	1.9496	5.4499

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	.82885	1.5387	.01252	.24016	.13772	2.1786	36.774
Stddev	.00594	.0097	.00009	.00137	.00088	.0148	.308
%RSD	.71631	.62930	.71842	.57149	.63571	.67869	.83842
#1	.82720	1.5433	.01242	.23977	.13720	2.1823	37.098
#2	.83544	1.5453	.01256	.24169	.13873	2.1911	36.741
#3	.82392	1.5276	.01258	.23903	.13723	2.1622	36.484

Sample Name: S4 Acquired: 8/8/2024 13:09:08 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2779.1	104380.	13989.	3955.8	4978.9
Stddev	11.2	311.	181.	23.2	23.4
%RSD	.40261	.29835	1.2967	.58653	.46955
#1	2781.9	104310.	13873.	3957.4	4983.8
#2	2766.8	104100.	13897.	3931.8	4953.5
#3	2788.7	104720.	14198.	3978.1	4999.4

Sample Name: S5 Acquired: 8/8/2024 13:13:28 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.0331	.64834	2.4803	.93249	1.7879	1.1200	42.574	2.3855
Stddev	.0053	.00515	.0097	.00431	.0069	.0072	.518	.0336
%RSD	.51494	.79453	.39176	.46188	.38318	.64075	1.2170	1.4087
#1	1.0364	.65079	2.4850	.93511	1.7920	1.1207	42.157	2.3586
#2	1.0269	.64242	2.4691	.92752	1.7800	1.1125	42.410	2.3748
#3	1.0358	.65181	2.4867	.93485	1.7917	1.1268	43.154	2.4232

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	9.1037	2.8177	.24463	5.5883	1.8705	.05918	2.4581	.44841
Stddev	.0388	.0120	.00076	.0251	.0094	.00077	.0152	.00430
%RSD	.42629	.42555	.31236	.44911	.50094	1.2960	.61913	.95914
#1	9.1206	2.8105	.24524	5.6001	1.8774	.05977	2.4502	.44562
#2	9.0593	2.8110	.24488	5.5594	1.8598	.05946	2.4486	.44625
#3	9.1312	2.8315	.24377	5.6053	1.8742	.05832	2.4757	.45336

Elem	Ni2316	Ag3280	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.3641	.50390	.52430	.43152	3.6928	.30806	3.8681	11.226
Stddev	.0146	.00121	.00704	.00287	.0053	.00457	.0617	.049
%RSD	.43484	.23914	1.3432	.66473	.14251	1.4835	1.5962	.43630
#1	3.3705	.50414	.53088	.43221	3.6986	.31182	3.8190	11.259
#2	3.3474	.50497	.52516	.42837	3.6916	.30938	3.8480	11.170
#3	3.3744	.50259	.51687	.43399	3.6883	.30297	3.9374	11.250

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	1.6545	3.1455	.02839	.46448	.27210	4.5644	74.746
Stddev	.0073	.0136	.00017	.00219	.00113	.0282	1.477
%RSD	.44317	.43187	.59479	.47176	.41562	.61774	1.9760
#1	1.6587	3.1424	.02852	.46670	.27295	4.5683	73.374
#2	1.6460	3.1336	.02845	.46232	.27081	4.5344	74.554
#3	1.6588	3.1603	.02820	.46442	.27253	4.5904	76.310

Sample Name: S5 Acquired: 8/8/2024 13:13:28 Type: Cal
Method: NON EPA-6010-200.7(v2343) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2794.2	96141.	14233.	3658.9	4981.1
Stddev	16.5	736.	157.	15.6	26.5
%RSD	.59046	.76535	1.1001	.42548	.53197
#1	2777.5	95643.	14363.	3646.6	4955.3
#2	2810.5	95794.	14277.	3653.6	5008.2
#3	2794.4	96986.	14059.	3676.4	4979.7

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: ICV01 Acquired: 8/8/2024 13:22:56 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9925129	1.021529	1.002879	1.021331	1.048681	F 2.692482
Stddev	.0012735	.006975	.002746	.009667	.001951	.010045
%RSD	.1283058	.6828422	.2738445	.9465326	.1860807	.3730785
#1	.9919335	1.019630	1.001271	1.021970	1.049739	2.694101
#2	.9916321	1.015700	1.001317	1.011360	1.046429	2.681726
#3	.9939730	1.029257	1.006050	1.030662	1.049876	2.701619

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5377689	.5283530	.5021398	10.43354	.5386461	.5185398
Stddev	.0037876	.0026234	.0020239	.04271	.0023168	.0017980
%RSD	.7043204	.4965212	.4030493	.4093478	.4301089	.3467361
#1	.5407694	.5258473	.5017004	10.44281	.5396695	.5188795
#2	.5335130	.5310800	.5003717	10.38697	.5359938	.5165962
#3	.5390243	.5281318	.5043473	10.47086	.5402749	.5201437

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5327591	10.02876	.5445781	6.276579	.5240164	.2553170
Stddev	.0018841	.12197	.0006755	.024721	.0018848	.0016826
%RSD	.3536539	1.216236	.1240381	.3938642	.3596831	.6590032
#1	.5313106	10.10361	.5440527	6.301410	.5238930	.2549480
#2	.5320774	9.88801	.5443416	6.251970	.5221963	.2538496
#3	.5348891	10.09465	.5453400	6.276356	.5259598	.2571534

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.835239	F .5377191	1.049448	9.859661	F .0092397	F .0001673
Stddev	.100533	.0019937	.001191	.110761	.0008067	.0001922
%RSD	1.022168	.3707622	.1134970	1.123377	8.730372	114.8752
#1	9.904702	.5397684	1.048391	9.890294	.0096319	.0002928
#2	9.719959	.5357861	1.049215	9.736807	.0083120	-.000054
#3	9.881054	.5376028	1.050738	9.951881	.0097753	.000263

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: ICV01 Acquired: 8/8/2024 13:22:56 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000041	F -.000514	F -.008996	F .0014751	F -.002379	F .0019607
Stddev	.000774	.000188	.004040	.0021506	.001076	.0018320
%RSD	1882.484	36.68684	44.90754	145.7938	45.22624	93.43383
#1	.000789	-.000424	-.007368	.0035948	-.001136	.0020731
#2	-.000742	-.000387	-.013596	.0015355	-.002993	.0000752
#3	-.000170	-.000730	-.006025	-.000705	-.003006	.0037340

Elem	Sr4077
Units	ppm
Avg	F -.008621
Stddev	.000127
%RSD	1.471444
#1	-.008747
#2	-.008493
#3	-.008623

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2928.883	103394.6	14395.28	4007.046	5423.664
Stddev	4.969	439.7	59.87	6.091	12.450
%RSD	.1696557	.4252569	.4159063	.1520171	.2295440
#1	2926.809	103037.6	14427.71	4001.317	5419.481
#2	2934.554	103885.7	14326.18	4013.444	5437.666
#3	2925.288	103260.4	14431.93	4006.378	5413.844

Sample Name: LLICV01 Acquired: 8/8/2024 13:32:59 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0176398	.0372542	.0138141	.0183265	.0469482	.1091099
Stddev	.0008976	.0013558	.0009409	.0013168	.0006038	.0074194
%RSD	5.088734	3.639389	6.810864	7.185424	1.286133	6.799947
#1	.0174109	.0371645	.0146121	.0168060	.0476089	.1082878
#2	.0186297	.0359454	.0127767	.0190718	.0468107	.1169061
#3	.0168787	.0386526	.0140535	.0191016	.0464250	.1021358

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0980009	.0060371	.0061418	2.014640	.0094725	.0288902
Stddev	.0005580	.0000450	.0000626	.010863	.0001988	.0002092
%RSD	.5693821	.7457650	1.019591	.5392189	2.098232	.7241054
#1	.0974098	.0059969	.0060705	2.004626	.0096714	.0286541
#2	.0980744	.0060287	.0061878	2.013104	.0094722	.0289641
#3	.0985185	.0060857	.0061672	2.026190	.0092739	.0290524

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0219655	.0975076	.0206464	2.084461	.0385682	.0115203
Stddev	.0002068	.0006400	.0001469	.006425	.0003523	.0001173
%RSD	.9413925	.6564043	.7117604	.3082155	.9133854	1.018477
#1	.0219719	.0980205	.0204789	2.077264	.0386734	.0114179
#2	.0217556	.0967903	.0207067	2.086501	.0381754	.0114947
#3	.0221691	.0977119	.0207536	2.089618	.0388560	.0116483

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.791822	.0408356	.0445896	1.757767	.0986916	.1984549
Stddev	.008338	.0006164	.0005116	.010530	.0010028	.0002127
%RSD	.4653604	1.509517	1.147408	.5990657	1.016068	.1071769
#1	1.794559	.0413953	.0450468	1.759901	.0976081	.1982871
#2	1.782459	.0401749	.0446851	1.746332	.0988797	.1983835
#3	1.798448	.0409366	.0440370	1.767066	.0995870	.1986941

Sample Name: LLICV01 Acquired: 8/8/2024 13:32:59 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LLICV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0379046	.0394315	.3260376	.0194409	F .3536015	F -.000831
Stddev	.0006936	.0014784	.0018294	.0009580	.0028087	.002113
%RSD	1.829984	3.749260	.5611124	4.927796	.7943079	254.3604
#1	.0385316	.0378116	.3250445	.0188984	.3549873	-.003201
#2	.0371594	.0407078	.3281488	.0188773	.3503692	.000856
#3	.0380228	.0397750	.3249196	.0205471	.3554480	-.000148

Elem	Sr4077
Units	ppm
Avg	.0205230
Stddev	.0000419
%RSD	.2040551
#1	.0205518
#2	.0204750
#3	.0205423

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2932.601	106536.4	14816.65	4094.520	5465.520
Stddev	5.083	292.7	79.39	16.794	14.829
%RSD	.1733327	.2747508	.5358316	.4101693	.2713101
#1	2935.224	106448.6	14898.33	4088.924	5482.314
#2	2935.837	106297.6	14739.76	4081.238	5460.019
#3	2926.742	106862.9	14811.86	4113.398	5454.229

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: ICB01 Acquired: 8/8/2024 13:37:57 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001048	-.001594	-.000057	.0000534	-.001729	-.001732	-.002228
Stddev	.002891	.000319	.000818	.0003468	.000317	.012508	.000834
%RSD	275.7477	20.01775	1440.764	649.2143	18.35372	722.2790	37.44048
#1	-.000546	-.001848	-.000655	.0002149	-.001975	.000584	-.001917
#2	.001558	-.001236	-.000392	-.000345	-.001841	.009456	-.001594
#3	-.004157	-.001698	.000876	.000290	-.001371	-.015235	-.003173

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000015	.0000873	.0034857	-.000044	-.000039	-.000023	-.002286
Stddev	.000022	.0000315	.0026033	.000069	.000095	.000403	.001983
%RSD	142.9692	36.09528	74.68596	157.8768	245.4777	1734.882	86.77422
#1	.000010	.0001168	.0058660	-.000089	-.000118	-.000458	-.000079
#2	-.000025	.0000910	.0007056	.000036	-.000065	.000339	-.003920
#3	-.000030	.0000541	.0038854	-.000077	.000067	.000050	-.002858

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002786	.0082471	-.000021	.0001483	-.024406	.0005003	.0003014
Stddev	.0000942	.0082798	.000049	.0001478	.011646	.0027551	.0005926
%RSD	33.79475	100.3966	236.2006	99.65259	47.71726	550.7186	196.5789
#1	.0002890	.0002276	.000033	.0001145	-.035765	.0034757	.0001526
#2	.0003671	.0077489	-.000031	.0000203	-.024959	-.001963	.0009543
#3	.0001797	.0167646	-.000064	.0003100	-.012493	-.000012	-.000202

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.082296	.0006743	.0000834	.0003149	-.000292	.0020587	.0008094
Stddev	.040952	.0004776	.0000959	.0003796	.000504	.0043787	.0005148
%RSD	49.76179	70.82361	115.0439	120.5524	172.2826	212.6896	63.60192
#1	-.076308	.0001987	-.000008	.0007273	-.000783	.0070839	.0010353
#2	-.125911	.0011538	.000074	-.000020	-.000317	-.000937	.0002203
#3	-.044667	.0006703	.000184	.000237	.000223	.000030	.0011727

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: ICB01 Acquired: 8/8/2024 13:37:57 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0006511	-.000380	.0000066
Stddev	.0011299	.000886	.0000020
%RSD	173.5279	233.1922	30.65162
#1	.0014631	-.000458	.0000066
#2	-.000639	.000542	.0000086
#3	.001129	-.001224	.0000045

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3034.435	103325.6	15038.95	3998.359	5785.875
Stddev	2.514	645.9	47.89	21.523	2.621
%RSD	.0828567	.6251203	.3184253	.5383062	.0453018
#1	3033.905	104067.4	15022.60	4022.901	5782.875
#2	3032.229	103021.7	15001.37	3989.485	5787.724
#3	3037.173	102887.7	15092.87	3982.692	5787.026

Sample Name: CRI01 Acquired: 8/8/2024 13:42:25 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0193768	.0400010	.0146452	.0199078	.0500120	.1088259
Stddev	.0006075	.0008697	.0006427	.0009706	.0011152	.0057827
%RSD	3.135342	2.174154	4.388135	4.875724	2.229953	5.313732
#1	.0192682	.0390187	.0142457	.0210149	.0501790	.1135319
#2	.0188308	.0406731	.0153865	.0192028	.0510343	.1105754
#3	.0200312	.0403111	.0143034	.0195057	.0488227	.1023705

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1022829	.0063522	.0064171	2.085835	.0099472	.0304239
Stddev	.0002624	.0000298	.0000953	.009751	.0001944	.0002037
%RSD	.2565504	.4691738	1.484585	.4674835	1.954587	.6696691
#1	.1024993	.0063570	.0063680	2.084399	.0098428	.0306110
#2	.1023584	.0063793	.0063564	2.096224	.0098273	.0304538
#3	.1019910	.0063203	.0065269	2.076882	.0101715	.0302069

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0226593	.0982318	.0215901	2.215969	.0404374	.0119561
Stddev	.0002370	.0025395	.0002454	.007745	.0002515	.0003443
%RSD	1.045894	2.585264	1.136776	.3495198	.6219657	2.879501
#1	.0229242	.0969073	.0213285	2.224069	.0406275	.0115591
#2	.0224673	.0966284	.0218152	2.208636	.0405325	.0121373
#3	.0225863	.1011598	.0216267	2.215202	.0401522	.0121719

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.828538	.0434230	.0444161	1.777470	.1045433	.2089898
Stddev	.021571	.0010798	.0000935	.002159	.0004409	.0003302
%RSD	1.179695	2.486582	.2105155	.1214432	.4217296	.1579823
#1	1.811576	.0422433	.0443798	1.779098	.1050184	.2086429
#2	1.821223	.0443622	.0445223	1.775021	.1044643	.2090264
#3	1.852816	.0436635	.0443461	1.778290	.1041473	.2093002

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CRI01 Acquired: 8/8/2024 13:42:25 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CRI01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0400537	.0419010	.3294835	.0191077	F .3718027	F -.000973
Stddev	.0001306	.0005108	.0058979	.0003941	.0012182	.001095
%RSD	.3260498	1.219106	1.790057	2.062657	.3276335	112.5866
#1	.0399778	.0414781	.3315906	.0195414	.3728791	-.000456
#2	.0402045	.0417563	.3228214	.0190101	.3704804	-.002231
#3	.0399788	.0424685	.3340385	.0187715	.3720487	-.000232

Elem	Sr4077
Units	ppm
Avg	.0213043
Stddev	.0000391
%RSD	.1836609
#1	.0212938
#2	.0213476
#3	.0212715

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2928.623	107821.6	14470.76	4128.980	5447.066
Stddev	5.060	292.5	92.69	6.992	17.079
%RSD	.1727677	.2712899	.6405591	.1693406	.3135532
#1	2922.787	108135.9	14418.99	4131.235	5428.065
#2	2931.304	107771.4	14415.53	4134.567	5461.143
#3	2931.779	107557.4	14577.78	4121.139	5451.988

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: ICSA01 Acquired: 8/8/2024 13:46:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067439	.0023478	.0081474	-.009944	-.004026	265.6100
Stddev	.0003990	.0005944	.0024648	.001399	.000116	2.3428
%RSD	5.915796	25.31982	30.25297	14.06470	2.872650	.8820366
#1	.0069379	.0019277	.0109927	-.008336	-.004114	268.2951
#2	.0062850	.0030279	.0066667	-.010618	-.003895	263.9820
#3	.0070087	.0020877	.0067827	-.010877	-.004068	264.5530

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038378	.0008649	.0036357	239.6979	.0557051	.0024467
Stddev	.0006513	.0000411	.0001913	2.0402	.0006149	.0001434
%RSD	16.97117	4.750904	5.261874	.8511410	1.103839	5.859407
#1	.0032379	.0008216	.0036096	242.0527	.0559014	.0022819
#2	.0037449	.0008695	.0038387	238.4603	.0550160	.0025154
#3	.0045306	.0009034	.0034587	238.5808	.0561978	.0025427

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0100955	99.01616	.0159680	264.8733	.0030030	.0018726
Stddev	.0007196	.22445	.0004335	2.9565	.0001256	.0002331
%RSD	7.128246	.2266811	2.715001	1.116194	4.182610	12.44767
#1	.0102561	99.02210	.0163556	268.2301	.0030253	.0021231
#2	.0093091	99.23757	.0160486	262.6568	.0028678	.0016621
#3	.0107212	98.78879	.0154998	263.7329	.0031160	.0018324

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0378192	.0036894	.0036228	-.023897	.0128261	.0007310
Stddev	.0116952	.0008468	.0011214	.012983	.0014825	.0002746
%RSD	30.92410	22.95138	30.95269	54.33010	11.55826	37.56187
#1	.0512387	.0029678	.0033778	-.009136	.0111329	.0009628
#2	.0324193	.0034789	.0026442	-.029007	.0138907	.0008023
#3	.0297995	.0046216	.0048465	-.033547	.0134546	.0004278

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: ICSA01 Acquired: 8/8/2024 13:46:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	-.001281	-.003947	.0195240	.0044868	-.016558	F .0341273
Stddev	.000680	.000541	.0126952	.0023933	.006858	.0007439
%RSD	53.11570	13.69627	65.02349	53.34171	41.42127	2.179798
#1	-.001920	-.003461	.0155544	.0059962	-.018415	.0338906
#2	-.000565	-.004529	.0092879	.0057370	-.008962	.0349607
#3	-.001358	-.003852	.0337296	.0017273	-.022297	.0335305

Elem	Sr4077
Units	ppm
Avg	.0028541
Stddev	.0009759
%RSD	34.19060
#1	.0039694
#2	.0021573
#3	.0024357

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2691.575	90056.80	13573.47	3490.493	4744.837
Stddev	12.981	167.16	134.08	9.085	24.530
%RSD	.4822653	.1856166	.9877737	.2602856	.5169729
#1	2679.105	90105.66	13420.93	3488.255	4721.480
#2	2705.012	89870.65	13672.63	3482.737	4770.391
#3	2690.609	90194.08	13626.85	3500.489	4742.640

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: ICSAB01 Acquired: 8/8/2024 13:51:11 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1021488	.0974333	.0551625	.0361976	.6174211	263.9097
Stddev	.0040792	.0008221	.0010224	.0013584	.0025749	3.0990
%RSD	3.993407	.8437550	1.853481	3.752817	.4170390	1.174268
#1	.0974728	.0974848	.0550466	.0372923	.6203941	264.3001
#2	.1039954	.0982284	.0562379	.0366231	.6159593	260.6340
#3	.1049782	.0965866	.0542029	.0346773	.6159097	266.7951

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5296353	.5010147	.9548400	242.0836	.5634683	.4986360
Stddev	.0061531	.0025875	.0008171	1.8656	.0006455	.0001697
%RSD	1.161770	.5164494	.0855690	.7706546	.1145617	.0340230
#1	.5305809	.4998256	.9539113	241.1356	.5641331	.4984474
#2	.5230641	.4992356	.9554480	240.8824	.5628439	.4986847
#3	.5352610	.5039830	.9551608	244.2329	.5634280	.4987760

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4921693	100.5726	.5225992	262.5325	.9781278	.2199027
Stddev	.0012057	.7737	.0058997	2.3307	.0007086	.0010530
%RSD	.2449726	.7692665	1.128919	.8877817	.0724418	.4788594
#1	.4934531	100.2205	.5218016	262.1205	.9775590	.2194551
#2	.4919938	100.0377	.5171388	260.4353	.9779028	.2191475
#3	.4910609	101.4597	.5288571	265.0417	.9789215	.2211056

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0247556	.5027837	1.078364	-.085967	F .0159916	F .0004559
Stddev	.0039561	.0104388	.001967	.023479	.0008413	.0003760
%RSD	15.98074	2.076194	.1823646	27.31134	5.261076	82.48239
#1	.0203038	.5028969	1.078863	-.059857	.0152467	.0002996
#2	.0278688	.4922887	1.076196	-.105343	.0158240	.0008849
#3	.0260942	.5131653	1.080033	-.092701	.0169042	.0001832

Sample Name: ICSAB01 Acquired: 8/8/2024 13:51:11 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.001089	F -.004393	1.025619	F .0067543	F -.021928	F .0353902
Stddev	.000416	.000351	.004801	.0002680	.002969	.0007327
%RSD	38.16213	7.978616	.4681194	3.967831	13.54110	2.070445
#1	-.000678	-.004338	1.027907	.0070488	-.023348	.0354689
#2	-.001080	-.004768	1.020102	.0066893	-.023921	.0360803
#3	-.001509	-.004073	1.028849	.0065247	-.018515	.0346212

Elem	Sr4077
Units	ppm
Avg	F .0024733
Stddev	.0005185
%RSD	20.96435
#1	.0030022
#2	.0019658
#3	.0024518

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2729.904	92521.96	14176.84	3536.714	4833.715
Stddev	3.209	379.87	70.48	8.124	5.546
%RSD	.1175411	.4105749	.4971298	.2296923	.1147331
#1	2729.955	92648.71	14188.72	3536.146	4837.360
#2	2726.670	92822.25	14240.61	3545.107	4827.332
#3	2733.087	92094.92	14101.17	3528.890	4836.451

Sample Name: ICSADLX20 Acquired: 8/8/2024 13:55:30 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000859	-.001288	-.000131	-.001244	-.002453	13.04070	-.001171
Stddev	.000315	.001278	.000609	.000845	.000554	.16939	.000472
%RSD	36.72616	99.23147	464.2926	67.94945	22.56799	1.298960	40.26855
#1	-.000585	-.000759	-.000445	-.000277	-.002936	12.87488	-.001234
#2	-.000788	-.000359	.000571	-.001611	-.002576	13.03378	-.001609
#3	-.001204	-.002746	-.000519	-.001844	-.001849	13.21345	-.000671

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000945	.0003424	12.66116	.0026290	.0002179	.0011943	4.772855
Stddev	.0000302	.0000434	.14367	.0002279	.0000825	.0002526	.026831
%RSD	31.92973	12.66024	1.134749	8.670315	37.84437	21.14831	.5621637
#1	.0001019	.0003151	12.57663	.0024935	.0001639	.0010979	4.803651
#2	.0001204	.0003924	12.57980	.0028921	.0003128	.0010042	4.760394
#3	.0000614	.0003198	12.82705	.0025013	.0001770	.0014809	4.754520

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009823	13.23754	.0003003	.0001373	-.020942	.0009706	.0003563
Stddev	.0001832	.18964	.0002457	.0002623	.001469	.0017075	.0001470
%RSD	18.65287	1.432571	81.82203	191.0739	7.013955	175.9251	41.25491
#1	.0011570	13.06813	.0003957	.0002220	-.021461	-.000751	.0003248
#2	.0007916	13.20209	.0000212	.0003468	-.022081	.002663	.0002276
#3	.0009985	13.44240	.0004840	-.000157	-.019284	.001000	.0005164

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.095169	.0002458	.0002005	.0000053	-.000233	-.003393	.0004368
Stddev	.011443	.0003488	.0001473	.0003150	.000648	.005291	.0018543
%RSD	12.02418	141.8843	73.47852	5974.271	278.7309	155.9624	424.4984
#1	-.108045	-.000036	.0002087	.0001836	.000493	.002662	-.000095
#2	-.086161	.000137	.0000492	-.000358	-.000436	-.005713	-.001094
#3	-.091302	.000636	.0003435	.000191	-.000755	-.007127	.002499

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: ICSADLX20 Acquired: 8/8/2024 13:55:30 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000850	.0008256	.0004506
Stddev	.001794	.0018011	.0000761
%RSD	211.0746	218.1492	16.88374
#1	-.002008	-.001180	.0003796
#2	.001217	.002305	.0004413
#3	-.001759	.001351	.0005309

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2961.803	104337.7	14023.91	4004.599	5504.138
Stddev	25.975	645.3	153.42	35.753	56.315
%RSD	.8770058	.6184603	1.094023	.8927936	1.023143
#1	2936.359	103627.7	14146.52	3963.797	5451.271
#2	2988.279	104497.0	14073.36	4030.447	5563.362
#3	2960.771	104888.5	13851.86	4019.552	5497.780

Sample Name: ICSABDLX20 Acquired: 8/8/2024 13:59:55 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044087	.0033803	.0028519	.0023563	.0297620	12.90035	.0256341
Stddev	.0005239	.0009062	.0008195	.0003438	.0018175	.12196	.0006587
%RSD	11.88381	26.80928	28.73374	14.59115	6.106831	.9454255	2.569794
#1	.0050133	.0043842	.0037962	.0025685	.0285460	12.77123	.0248750
#2	.0041254	.0026225	.0023268	.0025407	.0318513	12.91623	.0259712
#3	.0040875	.0031342	.0024328	.0019596	.0288887	13.01360	.0260561

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0272429	.0499434	12.47321	.0282837	.0253855	.0272713	4.529540
Stddev	.0002322	.0002680	.11623	.0001853	.0001832	.0004469	.034999
%RSD	.8524681	.5366843	.9318761	.6550608	.7218258	1.638614	.7726773
#1	.0272324	.0498270	12.35068	.0283006	.0254444	.0269035	4.495555
#2	.0270162	.0502499	12.48702	.0284599	.0255320	.0277686	4.565471
#3	.0274803	.0497532	12.58192	.0280905	.0251800	.0271417	4.527593

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0276275	13.06497	.0513740	.0101578	-.032013	.0268082	.0517791
Stddev	.0003495	.13779	.0001188	.0000503	.004444	.0019720	.0003395
%RSD	1.264938	1.054652	.2312470	.4956815	13.88174	7.355926	.6557144
#1	.0272326	12.92111	.0514544	.0101699	-.036839	.0247357	.0513882
#2	.0278967	13.07802	.0512376	.0102011	-.031110	.0286613	.0520004
#3	.0277532	13.19576	.0514301	.0101026	-.028090	.0270277	.0519488

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.090496	-.000219	.0000275	.0001516	-.000617	-.002746	.0009997
Stddev	.017334	.000560	.0000922	.0005083	.000823	.002969	.0010628
%RSD	19.15456	255.3542	335.9007	335.3126	133.3502	108.1175	106.3144
#1	-.110038	.000332	-.000079	.0007383	.000210	-.005418	.0021737
#2	-.084475	-.000202	.000078	-.000129	-.001435	.000450	.0001033
#3	-.076975	-.000787	.000083	-.000155	-.000625	-.003270	.0007221

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: ICSABDLX20 Acquired: 8/8/2024 13:59:55 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0010642	.0002423	.0006425
Stddev	.0004670	.0003843	.0000389
%RSD	43.88343	158.6116	6.050895
#1	.0009526	-.000196	.0006220
#2	.0006630	.000404	.0006874
#3	.0015768	.000519	.0006183

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2894.420	108151.9	13975.25	4128.626	5327.299
Stddev	16.786	229.2	81.76	9.159	33.573
%RSD	.5799281	.2119403	.5850072	.2218297	.6302029
#1	2887.019	107943.3	13968.56	4129.501	5303.602
#2	2882.606	108115.2	14060.14	4137.316	5312.578
#3	2913.634	108397.3	13897.04	4119.061	5365.718

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCV01 Acquired: 8/8/2024 14:04:19 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.827626	4.992725	4.886420	4.805896	4.926799	10.01658
Stddev	.012166	.060042	.002715	.016754	.011008	.05016
%RSD	.2520025	1.202600	.0555568	.3486188	.2234246	.5007961
#1	4.833787	5.050617	4.885935	4.822879	4.927002	10.06340
#2	4.813612	4.930741	4.889345	4.789380	4.915691	9.96364
#3	4.835478	4.996817	4.883980	4.805428	4.937703	10.02271

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.14744	.2446578	2.437980	24.84690	1.004262	2.450777
Stddev	.08168	.0012497	.002993	.12187	.014444	.001866
%RSD	.8048976	.5107895	.1227604	.4904675	1.438305	.0761267
#1	10.23758	.2447640	2.438823	24.96453	.990604	2.452932
#2	10.07835	.2433584	2.440462	24.72120	1.019382	2.449707
#3	10.12638	.2458510	2.434656	24.85495	1.002800	2.449694

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.226455	5.106866	2.502641	24.82196	2.440416	1.245616
Stddev	.001797	.090578	.007437	.09608	.003323	.016454
%RSD	.1465385	1.773652	.2971819	.3870727	.1361758	1.320948
#1	1.225857	5.039428	2.509523	24.85848	2.443017	1.228509
#2	1.225033	5.209820	2.494751	24.71297	2.441558	1.261329
#3	1.228475	5.071350	2.503649	24.89442	2.436672	1.247011

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.36827	2.519392	2.519656	25.22665	4.881150	5.039546
Stddev	.44150	.006377	.029866	.39518	.035178	.010551
%RSD	1.740376	.2531037	1.185314	1.566502	.7206962	.2093624
#1	25.07674	2.526046	2.488789	24.96208	4.878581	5.049564
#2	25.87623	2.513335	2.548408	25.68091	4.847326	5.028533
#3	25.15186	2.518794	2.521772	25.03696	4.917542	5.040543

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCV01 Acquired: 8/8/2024 14:04:19 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV01 Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.908889	5.004894	5.052827	4.781645	F 4.574641	4.966050
Stddev	.012280	.019988	.109357	.009907	.016259	.024801
%RSD	.2501561	.3993653	2.164275	.2071941	.3554081	.4994078
#1	4.920845	5.026452	4.960682	4.792634	4.586178	4.994673
#2	4.896309	4.986977	5.173672	4.778903	4.556046	4.950938
#3	4.909513	5.001252	5.024128	4.773397	4.581698	4.952540

Elem	Sr4077
Units	ppm
Avg	5.081474
Stddev	.026162
%RSD	.5148430
#1	5.108873
#2	5.056757
#3	5.078791

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2960.062	100361.7	14736.29	3877.908	5394.777
Stddev	6.934	1401.6	90.72	37.680	6.296
%RSD	.2342615	1.396581	.6156512	.9716515	.1166992
#1	2959.607	101299.4	14646.53	3910.598	5390.795
#2	2967.213	98750.4	14827.95	3836.698	5402.035
#3	2953.367	101035.2	14734.38	3886.429	5391.501

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB01 Acquired: 8/8/2024 14:08:41 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000028	-.001032	-.000514	.0000300	-.001410	-.000690	.0001495
Stddev	.000105	.000909	.000492	.0005609	.000826	.011534	.0009236
%RSD	370.3683	88.02831	95.68137	1867.542	58.56708	1672.437	617.8167
#1	.000065	-.001106	-.000979	-.000610	-.002280	-.010086	.0010105
#2	-.000143	-.001902	.000000	.000437	-.000637	.012183	.0002641
#3	-.000008	-.000089	-.000563	.000263	-.001313	-.004165	-.000826

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000013	.0000497	.0141439	.0001045	.0001052	-.000127	.0004045
Stddev	.000042	.0001001	.0039857	.0002765	.0001174	.000309	.0015787
%RSD	335.5123	201.5812	28.17986	264.5569	111.5848	243.1774	390.2311
#1	-.000015	-.000003	.0097321	.0002051	.0000924	-.000483	.0022176
#2	.000031	-.000013	.0152150	-.000208	-.000005	.000074	-.000665
#3	-.000053	.000165	.0174847	.000317	.000228	.000027	-.000339

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005496	.0080920	.0000377	.0000687	-.023201	.0019457	.0007663
Stddev	.0001770	.0278520	.0001202	.0002142	.006552	.0014897	.0005474
%RSD	32.20746	344.1898	318.8501	311.9359	28.23851	76.56237	71.42809
#1	.0007000	.0145766	-.000100	.0000343	-.025263	.0034815	.0002419
#2	.0005944	.0321297	.000089	-.000126	-.028474	.0005068	.0013340
#3	.0003545	-.022430	.000124	.000298	-.015867	.0018490	.0007230

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.061337	.0093148	.0003277	.0005780	.0002928	.0002857	.0007413
Stddev	.027673	.0002915	.0001676	.0002853	.0006532	.0025409	.0010662
%RSD	45.11607	3.129044	51.14624	49.35074	223.1015	889.4722	143.8399
#1	-.093258	.0096489	.0002114	.0003539	.0001276	-.001156	.0007292
#2	-.046634	.0091826	.0002518	.0008991	.0010127	.003219	.0018135
#3	-.044120	.0091129	.0005198	.0004811	-.000262	-.001207	-.000319

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB01 Acquired: 8/8/2024 14:08:41 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB01 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000606	.0000921	.0010291
Stddev	.001558	.0009625	.0001889
%RSD	256.8376	1045.152	18.35451
#1	.000605	-.000895	.0012224
#2	-.002363	.001028	.0010202
#3	-.000061	.000144	.0008449

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3107.774	102758.1	14461.47	4014.717	5966.775
Stddev	23.240	673.6	88.00	20.417	45.884
%RSD	.7477939	.6555348	.6084836	.5085508	.7689940
#1	3081.315	102013.6	14394.05	3993.416	5913.836
#2	3124.878	103325.4	14429.35	4034.116	5995.087
#3	3117.130	102935.4	14561.02	4016.620	5991.403

Sample Name: LR1 Acquired: 8/8/2024 14:19:54 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0466467	-.009081	.0659943	-.118794	-.004996	2140.003
Stddev	.0032499	.001439	.0030793	.002371	.003395	26.471
%RSD	6.967060	15.84201	4.665987	1.995488	67.96996	1.236956
#1	.0432382	-.010742	.0625564	-.120789	-.003309	2146.514
#2	.0469913	-.008257	.0669274	-.119421	-.008904	2162.610
#3	.0497105	-.008243	.0684992	-.116173	-.002773	2110.884

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0153913	.0068246	.0696890	1664.485	.0255915	.0413376
Stddev	.0005684	.0000794	.0008368	5.860	.0004756	.0006592
%RSD	3.693063	1.163438	1.200793	.3520390	1.858442	1.594592
#1	.0159392	.0068061	.0698744	1668.827	.0250447	.0410993
#2	.0154304	.0069117	.0687750	1657.820	.0258214	.0420828
#3	.0148044	.0067562	.0704175	1666.808	.0259086	.0408307

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.019981	960.1344	.0112756	1801.272	.0420042	.0108228
Stddev	.004666	6.0576	.0008604	4.914	.0009662	.0003533
%RSD	23.35227	.6309116	7.630440	.2727916	2.300260	3.264142
#1	-.019409	961.3359	.0119417	1797.581	.0427131	.0111460
#2	-.024907	965.5013	.0115808	1806.849	.0409037	.0108768
#3	-.015628	953.5661	.0103042	1799.386	.0423959	.0104457

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1934.804	.0152480	.0621702	F 1624.654	.1514990	-.000203
Stddev	18.279	.0018848	.0013878	17.385	.0119425	.000661
%RSD	.9447429	12.36128	2.232282	1.070081	7.882899	324.9482
#1	1935.450	.0157552	.0625282	1640.243	.1583856	-.000388
#2	1952.752	.0168273	.0633439	1627.812	.1584023	.000530
#3	1916.211	.0131614	.0606385	1605.906	.1377090	-.000752

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: LR1 Acquired: 8/8/2024 14:19:54 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053300	-.054582	.1574149	.0628908	-.212546	.3726517
Stddev	.0024900	.000649	.0082232	.0026265	.008840	.0048335
%RSD	46.71693	1.189506	5.223926	4.176298	4.158907	1.297066
#1	.0067315	-.053961	.1501170	.0643726	-.204581	.3757575
#2	.0024551	-.055256	.1663247	.0598582	-.211000	.3670828
#3	.0068033	-.054528	.1558029	.0644415	-.222056	.3751149

Elem	Sr4077
Units	ppm
Avg	-.947576
Stddev	.006014
%RSD	.6346481
#1	-.948801
#2	-.952883
#3	-.941044

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1952.456	71183.16	12193.35	2592.839	3147.195
Stddev	3.619	146.50	71.43	5.106	6.897
%RSD	.1853479	.2058024	.5857812	.1969288	.2191596
#1	1948.760	71167.64	12274.70	2587.038	3142.760
#2	1952.616	71045.05	12164.45	2596.652	3143.682
#3	1955.993	71336.81	12140.90	2594.828	3155.141

Sample Name: LR2 Acquired: 8/8/2024 14:25:01 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0137057	-.013276	F 219.1687	.0023099	-.006223	.3081393
Stddev	.0010836	.000623	.8098	.0018864	.000546	.1152570
%RSD	7.906228	4.695625	.3694976	81.66682	8.769043	37.40417
#1	.0149466	-.012560	220.0914	.0034012	-.005973	.2437239
#2	.0132243	-.013699	218.8390	.0001317	-.005847	.2394899
#3	.0129462	-.013568	218.5758	.0033969	-.006849	.4412042

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	93.19695	-.001831	-.005727	.4337827	.0250217	-.026507
Stddev	.69125	.000052	.000029	.1261979	.0001820	.000141
%RSD	.7417085	2.822257	.5131694	29.09243	.7274733	.5318809
#1	92.42941	-.001796	-.005740	.3727753	.0249086	-.026584
#2	93.39100	-.001891	-.005693	.3496807	.0249249	-.026345
#3	93.77043	-.001807	-.005747	.5788923	.0252317	-.026594

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	258.0224	.2153699	43.18945	.1981846	F 43.45694	.0022530
Stddev	1.1704	.0551343	.30478	.1264293	.21222	.0001886
%RSD	.4535906	25.59982	.7056818	63.79372	.4883411	8.370500
#1	257.2397	.1881040	43.48052	.1473145	43.69780	.0020375
#2	257.4597	.1791809	43.21524	.1051141	43.37559	.0023876
#3	259.3679	.2788247	42.87260	.3421251	43.29743	.0023340

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.014927	-.004709	F 23.95792	1.035485	.0024858	.0032869
Stddev	.105153	.000255	.12362	.081711	.0004666	.0003302
%RSD	10.36069	5.412849	.5159768	7.891127	18.77067	10.04690
#1	.999823	-.004614	23.96395	1.039794	.0019837	.0029458
#2	.918142	-.004998	23.83139	.951704	.0029061	.0036051
#3	1.126816	-.004516	24.07841	1.114956	.0025677	.0033098

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: LR2 Acquired: 8/8/2024 14:25:01 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174620	-.047713	.0024175	-.270402	-.041015	.0023712
Stddev	.0002745	.000184	.0039508	.002765	.003313	.0019258
%RSD	1.572002	.3847188	163.4231	1.022609	8.077289	81.21487
#1	.0177377	-.047922	.0064995	-.267370	-.041017	.0016558
#2	.0174596	-.047576	.0021404	-.271052	-.037701	.0009055
#3	.0171887	-.047641	-.001387	-.272785	-.044327	.0045523

Elem	Sr4077
Units	ppm
Avg	.0019151
Stddev	.0000383
%RSD	1.998353
#1	.0019402
#2	.0019341
#3	.0018711

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2709.245	102698.6	14954.24	3805.945	5546.436
Stddev	4.725	170.4	182.32	17.692	14.711
%RSD	.1744130	.1658808	1.219178	.4648521	.2652293
#1	2709.066	102604.4	14746.48	3810.860	5533.495
#2	2704.613	102895.2	15087.58	3820.660	5543.377
#3	2714.058	102596.1	15028.65	3786.315	5562.435

Sample Name: P3505-01 Acquired: 8/8/2024 14:29:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0019167	-.002827	.0954722	-.001567	.0033272	4.976895
Stddev	.0004853	.000713	.0038890	.000860	.0004502	.043179
%RSD	25.31891	25.20409	4.073395	54.91143	13.52946	.8675829
#1	.0014312	-.002600	.0995996	-.001477	.0038075	4.994771
#2	.0019172	-.002256	.0949404	-.002469	.0029149	5.008265
#3	.0024018	-.003626	.0918764	-.000755	.0032593	4.927649

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1353490	.0002898	.0010359	61.56602	.0180915	.0048374
Stddev	.0048603	.0000153	.0000911	.44454	.0004868	.0000919
%RSD	3.590955	5.259798	8.789146	.7220614	2.691027	1.900411
#1	.1405828	.0002772	.0009313	61.80046	.0179981	.0049433
#2	.1344864	.0002855	.0010977	61.84426	.0186182	.0047905
#3	.1309777	.0003068	.0010786	61.05332	.0176581	.0047784

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1131086	19.67597	.3655788	9.071255	.0177260	.0013836
Stddev	.0035688	.05018	.0039474	.102383	.0005544	.0001465
%RSD	3.155236	.2550177	1.079757	1.128654	3.127647	10.58653
#1	.1163875	19.72535	.3686512	9.140460	.0182108	.0015229
#2	.1136308	19.62503	.3669584	9.119660	.0178456	.0012309
#3	.1093074	19.67753	.3611268	8.953644	.0171215	.0013970

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	22.19133	.0143142	.5852092	8.478322	.0473093	.0051928
Stddev	.05247	.0015436	.0030239	.025373	.0009552	.0000513
%RSD	.2364523	10.78337	.5167159	.2992669	2.019037	.9879731
#1	22.24418	.0126412	.5834877	8.451630	.0462125	.0051782
#2	22.13924	.0156830	.5834390	8.481208	.0477562	.0052498
#3	22.19057	.0146185	.5887007	8.502129	.0479590	.0051503

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3505-01 Acquired: 8/8/2024 14:29:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022259	.2430150	F 13.69974	2.666020	4.209030	.0216581
Stddev	.0006142	.0028569	.01799	.012067	.023438	.0014811
%RSD	27.59456	1.175589	.1312834	.4526384	.5568540	6.838628
#1	.0029351	.2454411	13.69508	2.671335	4.189331	.0217558
#2	.0018747	.2437377	13.68455	2.674518	4.234952	.0230879
#3	.0018679	.2398662	13.71960	2.652207	4.202809	.0201306

Elem	Sr4077
Units	ppm
Avg	.1878690
Stddev	.0013746
%RSD	.7317036
#1	.1885711
#2	.1887508
#3	.1862851

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2948.647	104703.9	15352.67	3925.323	5583.664
Stddev	19.597	188.5	88.44	14.556	28.652
%RSD	.6645969	.1800005	.5760642	.3708230	.5131318
#1	2966.379	104724.6	15323.09	3936.888	5605.302
#2	2927.607	104881.2	15282.80	3930.104	5551.171
#3	2951.956	104506.0	15452.11	3908.978	5594.517

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3505-02 Acquired: 8/8/2024 14:34:04 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008366	-.002018	.0688180	-.003105	.0005575	3.666028
Stddev	.0012624	.001926	.0033341	.001487	.0018352	.028617
%RSD	150.8938	95.40368	4.844806	47.89740	329.1798	.7806078
#1	.0018579	-.004242	.0724271	-.003476	-.001118	3.640396
#2	-.000575	-.000879	.0681739	-.001467	.002519	3.660784
#3	.001227	-.000934	.0658529	-.004371	.000271	3.696905

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1156258	.0002878	.0008673	59.72897	.0133066	.0041249
Stddev	.0004513	.0000358	.0001317	.22170	.0002887	.0000959
%RSD	.3902768	12.44411	15.18606	.3711809	2.169292	2.325832
#1	.1151081	.0002930	.0010181	59.73408	.0129986	.0040347
#2	.1158332	.0003208	.0008086	59.50476	.0133503	.0041143
#3	.1159361	.0002497	.0007751	59.94807	.0135709	.0042257

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0710428	17.62486	.3401402	8.542146	.0135273	.0006881
Stddev	.0041348	.22623	.0017171	.046596	.0005870	.0002292
%RSD	5.820136	1.283609	.5048332	.5454784	4.339040	33.30843
#1	.0756626	17.38193	.3381993	8.491305	.0141036	.0007678
#2	.0697764	17.82951	.3414617	8.582815	.0135482	.0004297
#3	.0676892	17.66314	.3407596	8.552319	.0129302	.0008667

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.24394	.0128317	.5418244	7.952470	.0457724	.0038170
Stddev	.36724	.0004724	.0060919	.124230	.0010164	.0001775
%RSD	1.728662	3.681428	1.124329	1.562152	2.220616	4.648927
#1	20.86095	.0122993	.5348004	7.837070	.0446415	.0037219
#2	21.59307	.0129948	.5450073	8.083961	.0466097	.0037074
#3	21.27781	.0132008	.5456656	7.936377	.0460661	.0040218

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3505-02 Acquired: 8/8/2024 14:34:04 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000177	.1605431	F 11.09812	2.362317	3.615941	.0194390
Stddev	.000542	.0008520	.13316	.019581	.026148	.0025080
%RSD	306.6797	.5307244	1.199844	.8288741	.7231351	12.90168
#1	-.000087	.1595856	10.95280	2.384854	3.645665	.0179283
#2	-.000757	.1608261	11.21428	2.349484	3.596486	.0180547
#3	.000315	.1612177	11.12729	2.352612	3.605672	.0223341

Elem	Sr4077
Units	ppm
Avg	.1830667
Stddev	.0005719
%RSD	.3124040
#1	.1824864
#2	.1830836
#3	.1836299

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3024.053	102711.6	14842.03	3894.650	5757.021
Stddev	16.815	1021.1	32.42	17.783	31.620
%RSD	.5560298	.9941495	.2184558	.4565971	.5492341
#1	3005.040	103707.5	14830.46	3914.062	5723.032
#2	3036.967	101667.0	14878.65	3879.146	5785.563
#3	3030.151	102760.4	14816.97	3890.742	5762.469

Sample Name: P3505-04 Acquired: 8/8/2024 14:38:22 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004757	-.002832	.0590515	-.001861	.0008761	3.697584
Stddev	.0005408	.000808	.0014250	.002629	.0011478	.013220
%RSD	113.6752	28.53038	2.413115	141.2637	131.0202	.3575377
#1	.0002367	-.003616	.0604191	-.001760	-.000280	3.706028
#2	.0000956	-.002878	.0591601	-.004539	.002015	3.704375
#3	.0010948	-.002002	.0575753	.000716	.000894	3.682348

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1084888	.0003260	.0008945	54.56083	.0129691	.0037796
Stddev	.0004977	.0000113	.0000543	.23011	.0002787	.0002067
%RSD	.4587585	3.454912	6.068666	.4217566	2.148567	5.469633
#1	.1079699	.0003390	.0009242	54.61555	.0126885	.0037952
#2	.1089622	.0003190	.0009275	54.75866	.0132458	.0035655
#3	.1085342	.0003200	.0008319	54.30830	.0129730	.0039781

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0659271	15.33308	.3353317	8.140381	.0128984	.0005480
Stddev	.0011640	.09438	.0008086	.049511	.0001366	.0000956
%RSD	1.765586	.6155032	.2411214	.6082108	1.059058	17.44157
#1	.0672698	15.22755	.3361252	8.095405	.0130545	.0006494
#2	.0652034	15.40938	.3353611	8.193433	.0128009	.0004595
#3	.0653081	15.36231	.3345089	8.132306	.0128398	.0005351

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.67218	.0128580	.4869503	7.117638	.0426495	.0035549
Stddev	.12117	.0015695	.0006211	.044544	.0004492	.0000923
%RSD	.6489494	12.20624	.1275538	.6258315	1.053272	2.594953
#1	18.54088	.0139309	.4876058	7.069675	.0424504	.0034762
#2	18.77969	.0110566	.4868745	7.157709	.0431639	.0035321
#3	18.69599	.0135863	.4863705	7.125530	.0423343	.0036564

Sample Name: P3505-04 Acquired: 8/8/2024 14:38:22 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006586	.1738907	F 11.13494	2.138204	3.954161	.0190511
Stddev	.0002092	.0019251	.05795	.018598	.049113	.0009572
%RSD	31.76668	1.107098	.5204747	.8697905	1.242049	5.024431
#1	.0007575	.1730812	11.08265	2.124534	4.010303	.0201288
#2	.0004183	.1760884	11.19725	2.130697	3.933023	.0182995
#3	.0008000	.1725024	11.12492	2.159382	3.919156	.0187251

Elem	Sr4077
Units	ppm
Avg	.1768197
Stddev	.0003714
%RSD	.2100146
#1	.1770242
#2	.1770437
#3	.1763910

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3033.048	105431.3	14501.79	3947.002	5807.712
Stddev	18.134	490.4	86.30	27.505	35.922
%RSD	.5978651	.4651660	.5950749	.6968642	.6185217
#1	3016.659	105751.0	14481.29	3970.058	5775.533
#2	3052.529	104866.7	14427.58	3916.557	5846.468
#3	3029.957	105676.2	14596.48	3954.390	5801.136

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3488-01 Acquired: 8/8/2024 14:42:41 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0536051	-.003582	.2074868	-.042086	.0030640	146.8238
Stddev	.0007826	.002977	.0007044	.000144	.0011096	1.1544
%RSD	1.459874	83.09626	.3395048	.3411783	36.21344	.7862371
#1	.0529106	-.006483	.2077602	-.042231	.0018131	145.5100
#2	.0544530	-.003729	.2080135	-.041944	.0039295	147.6755
#3	.0534516	-.000535	.2066866	-.042085	.0034495	147.2859

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9528321	.0091076	.0219949	96.42139	.1981593	.2058315
Stddev	.0069900	.0000632	.0003953	.56450	.0001050	.0018847
%RSD	.7336052	.6935307	1.797315	.5854542	.0529871	.9156666
#1	.9449277	.0090347	.0224259	95.83142	.1980423	.2070717
#2	.9581986	.0091462	.0219094	96.95640	.1982453	.2067600
#3	.9553701	.0091418	.0216493	96.47636	.1981904	.2036626

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7364842	317.6023	10.39480	85.02482	.3117631	.0109284
Stddev	.0062486	1.1851	.06647	.47281	.0022607	.0003129
%RSD	.8484394	.3731531	.6394558	.5560895	.7251325	2.862981
#1	.7408057	316.6551	10.32396	84.68145	.3136696	.0108405
#2	.7393273	318.9313	10.45580	85.56410	.3123542	.0112759
#3	.7293196	317.2206	10.40463	84.82891	.3092657	.0106689

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.883099	.5976711	.5564082	8.352615	1.737942	.0019642
Stddev	.058945	.0040155	.0019204	.035125	.010345	.0000955
%RSD	.8563710	.6718492	.3451469	.4205225	.5952290	4.860580
#1	6.815385	.5939858	.5561788	8.314039	1.727317	.0019711
#2	6.910985	.6019505	.5584330	8.382750	1.747982	.0018654
#3	6.922927	.5970769	.5546128	8.361055	1.738528	.0020560

Sample Name: P3488-01 Acquired: 8/8/2024 14:42:41 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105931	F 11.10699	6.259175	4.764137	1.319283	.2064277
Stddev	.0009097	.06781	.031090	.041758	.009181	.0039772
%RSD	8.588082	.6105592	.4967036	.8765169	.6959368	1.926684
#1	.0106932	11.03116	6.242093	4.808340	1.327155	.2018448
#2	.0096374	11.16181	6.295061	4.758719	1.321496	.2089762
#3	.0114486	11.12801	6.240372	4.725352	1.309197	.2084622

Elem	Sr4077
Units	ppm
Avg	-.009740
Stddev	.001496
%RSD	15.36191
#1	-.011300
#2	-.009603
#3	-.008317

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3219.066	114264.1	16084.41	4259.374	4992.658
Stddev	15.964	320.2	90.25	18.537	29.456
%RSD	.4959209	.2802113	.5611018	.4352043	.5899801
#1	3210.694	114565.0	16176.22	4275.820	4970.984
#2	3209.030	113927.6	15995.80	4239.286	4980.794
#3	3237.475	114299.8	16081.21	4263.017	5026.195

Sample Name: P3488-03 Acquired: 8/8/2024 14:48:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0320788	-.012309	.1296713	-.031785	.0001295	135.8833	.5125701
Stddev	.0018705	.000548	.0013907	.002625	.0004965	1.0735	.0041188
%RSD	5.830974	4.450231	1.072499	8.257192	383.5460	.7899931	.8035601
#1	.0342200	-.011736	.1310656	-.034752	-.000265	136.1688	.5128484
#2	.0307627	-.012828	.1296641	-.029766	.000687	136.7850	.5165428
#3	.0312536	-.012364	.1282842	-.030837	-.000034	134.6959	.5083193

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080260	.0203076	55.97837	.2113614	.1234208	.3319378	271.2990
Stddev	.0000736	.0004085	.28691	.0002885	.0009987	.0038517	2.2970
%RSD	.9164788	2.011347	.5125355	.1365086	.8092120	1.160363	.8466497
#1	.0081069	.0207695	55.80977	.2112508	.1244609	.3361130	268.7278
#2	.0080078	.0201593	56.30964	.2111445	.1233321	.3311774	273.1482
#3	.0079632	.0199940	55.81569	.2116889	.1224693	.3285231	272.0210

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.572817	47.61697	.1520483	.0081573	11.13411	.5632954	.4195002
Stddev	.022028	.54071	.0013031	.0001308	.08980	.0055185	.0020950
%RSD	.6165533	1.135537	.8570094	1.603470	.8065666	.9796851	.4993949
#1	3.573878	47.93013	.1531708	.0082550	11.07577	.5666699	.4190594
#2	3.594295	47.92817	.1523549	.0082082	11.23752	.5662894	.4217805
#3	3.550277	46.99262	.1506193	.0080087	11.08903	.5569270	.4176607

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.403585	.1899623	.0052943	.0218405	5.754613	7.184660	3.755198
Stddev	.070794	.0040711	.0001308	.0008965	.034515	.012277	.034218
%RSD	.8424272	2.143093	2.471151	4.104904	.5997790	.1708775	.9112206
#1	8.326301	.1853743	.0053960	.0228497	5.754301	7.173159	3.787656
#2	8.465297	.1931430	.0051467	.0215355	5.789283	7.183231	3.758483
#3	8.419156	.1913697	.0053402	.0211362	5.720255	7.197588	3.719457

Sample Name: P3488-03 Acquired: 8/8/2024 14:48:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.757143	.0825075	-.093844
Stddev	.033658	.0014856	.002591
%RSD	.7075237	1.800616	2.761445
#1	4.790851	.0826616	-.091041
#2	4.757041	.0839101	-.094338
#3	4.723535	.0809508	-.096153

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3508.392	124645.7	17360.21	4617.160	5154.070
Stddev	12.236	508.7	126.66	26.821	21.295
%RSD	.3487648	.4081334	.7296017	.5808960	.4131747
#1	3500.459	125142.9	17289.10	4643.769	5133.191
#2	3502.233	124126.2	17285.09	4590.132	5153.262
#3	3522.484	124668.1	17506.45	4617.579	5175.758

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCV02 Acquired: 8/8/2024 14:53:01 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem 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	5.026118	4.529793	4.945913	5.018652	5.013400	9.799833	10.21309
Stddev	.010613	.037369	.009277	.004453	.012089	.068069	.07754
%RSD	.2111548	.8249512	.1875787	.0887200	.2411282	.6945967	.7592257
#1	5.037909	4.501576	4.955511	5.020415	5.025568	9.862480	10.29048
#2	5.017332	4.515631	4.945234	5.013588	5.013239	9.809619	10.13540
#3	5.023113	4.572173	4.936993	5.021953	5.001393	9.727400	10.21338

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2388416	2.453285	24.31530	.9704633	2.427451	1.255680	4.896645
Stddev	.0014169	.003897	.06473	.0019212	.002628	.003577	.015747
%RSD	.5932157	.1588382	.2661914	.1979665	.1082596	.2848639	.3215886
#1	.2404143	2.456984	24.38169	.9723014	2.430199	1.259725	4.905885
#2	.2384458	2.453655	24.31185	.9684686	2.427191	1.254379	4.905586
#3	.2376648	2.449216	24.25237	.9706198	2.424962	1.252935	4.878462

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.462468	24.17545	2.456108	1.200532	24.12463	2.481085	2.423531
Stddev	.014067	.16502	.005047	.000429	.07766	.009690	.007626
%RSD	.5712439	.6825930	.2054857	.0357189	.3219119	.3905445	.3146482
#1	2.478696	24.26418	2.461044	1.200045	24.20225	2.490418	2.417155
#2	2.454955	24.27711	2.456322	1.200695	24.12470	2.481762	2.431978
#3	2.453754	23.98505	2.450957	1.200855	24.04693	2.471074	2.421458

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.25702	4.817125	4.878828	4.857996	4.931339	4.794399	5.182459
Stddev	.03054	.018667	.008731	.008128	.025639	.018247	.007128
%RSD	.1258820	.3875089	.1789480	.1673180	.5199272	.3805926	.1375407
#1	24.27646	4.838469	4.888704	4.866561	4.960797	4.774171	5.184070
#2	24.22182	4.809052	4.872140	4.857040	4.919174	4.809619	5.174663
#3	24.27276	4.803853	4.875639	4.850389	4.914047	4.799407	5.188644

Sample Name: CCV02 Acquired: 8/8/2024 14:53:01 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.827719	4.846574	5.086745
Stddev	.001802	.041794	.052265
%RSD	.0373188	.8623512	1.027468
#1	4.826036	4.894737	5.144109
#2	4.827501	4.825145	5.074302
#3	4.829619	4.819840	5.041825

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2759.437	104656.6	14811.22	3930.105	5004.502
Stddev	5.883	270.1	94.13	19.350	10.573
%RSD	.2131943	.2580911	.6355302	.4923456	.2112686
#1	2752.855	104375.3	14707.38	3938.275	4994.292
#2	2761.274	104680.7	14835.33	3908.010	5003.809
#3	2764.182	104913.9	14890.94	3944.029	5015.404

Sample Name: CCB02 Acquired: 8/8/2024 14:59:36 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007586	-.000039	.0002257	-.000795	-.001951	-.007621	-.005553
Stddev	.0016670	.000528	.0003281	.000308	.000605	.005115	.000746
%RSD	219.7475	1356.648	145.3684	38.75166	30.99695	67.12327	13.43823
#1	.0002645	.000442	.0005423	-.000481	-.002108	-.013050	-.006410
#2	.0026168	-.000603	.0002476	-.000807	-.002462	-.006922	-.005044
#3	-.000606	.000044	-.000113	-.001096	-.001283	-.002891	-.005205

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000075	.0001193	.0020820	-.000172	-.000061	-.000012	-.001669
Stddev	.000009	.0000175	.0012844	.000335	.000008	.000378	.001464
%RSD	12.46186	14.66035	61.69363	195.2742	12.91599	3273.855	87.70342
#1	-.000065	.0001388	.0013893	.000118	-.000053	.000328	-.001458
#2	-.000078	.0001049	.0035641	-.000539	-.000062	.000056	-.000322
#3	-.000082	.0001143	.0012926	-.000094	-.000068	-.000418	-.003227

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004148	-.005937	-.000096	.0002278	.0760574	.0007115	.0008983
Stddev	.0000705	.019307	.000175	.0001284	.0198463	.0008356	.0001457
%RSD	16.99875	325.2232	180.9802	56.35965	26.09380	117.4424	16.22425
#1	.0004028	-.027763	-.000098	.0003740	.0586330	.0009085	.0008178
#2	.0003510	.001041	-.000270	.0001333	.0718789	.0014311	.0008105
#3	.0004905	.008911	.000079	.0001762	.0976602	-.000205	.0010665

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2186568	.0036943	.0002525	.0007582	.0002603	.0055605	-.000040
Stddev	.0519555	.0001478	.0000718	.0000756	.0004540	.0061571	.000917
%RSD	23.76119	4.000835	28.44772	9.967524	174.4056	110.7300	2275.122
#1	.1724943	.0037325	.0001743	.0007360	.0005859	.0018473	.000221
#2	.2085546	.0038193	.0002677	.0008423	.0004533	.0126677	-.001059
#3	.2749215	.0035312	.0003156	.0006962	-.000258	.0021664	.000717

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB02 Acquired: 8/8/2024 14:59:36 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB02 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0024776	-.003930	.0001643
Stddev	.0015229	.001077	.0000130
%RSD	61.46617	27.39745	7.899081
#1	.0041216	-.004288	.0001506
#2	.0021960	-.002720	.0001764
#3	.0011151	-.004782	.0001658

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3003.113	101884.7	14689.22	3922.950	5716.573
Stddev	8.879	169.6	41.03	9.093	8.511
%RSD	.2956533	.1664853	.2792928	.2317790	.1488748
#1	2994.582	102078.1	14703.95	3917.323	5708.049
#2	3002.455	101761.4	14720.85	3933.440	5716.599
#3	3012.303	101814.6	14642.86	3918.087	5725.070

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3490-01 Acquired: 8/8/2024 15:07:08 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002646	-.002525	-.001309	.0012560	.0011662	.0951394
Stddev	.001072	.000907	.000691	.0013669	.0014468	.0040799
%RSD	40.50713	35.93545	52.76204	108.8319	124.0611	4.288389
#1	-.001607	-.003568	-.000530	.0021917	.0019851	.0904392
#2	-.003748	-.001920	-.001847	.0018890	.0020178	.0972119
#3	-.002584	-.002086	-.001550	-.000313	-.000504	.0977671

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0843405	-.000224	-.000020	82.91675	.0249153	-.000150
Stddev	.0006612	.000027	.000048	.08835	.0005252	.000161
%RSD	.7839614	11.88902	245.7040	.1065492	2.107981	107.6011
#1	.0835774	-.000215	-.000053	82.83091	.0253989	.000032
#2	.0847415	-.000202	-.000042	83.00741	.0249904	-.000205
#3	.0847027	-.000254	.000036	82.91192	.0243566	-.000276

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023626	.1144590	.0023668	19.89893	.0668233	.0000470
Stddev	.0002221	.0031691	.0002031	.06412	.0001196	.0004232
%RSD	9.401737	2.768791	8.582611	.3222303	.1790355	900.5320
#1	.0023139	.1109903	.0025964	19.93993	.0668394	.0004381
#2	.0021688	.1172030	.0022106	19.93182	.0669340	.0001051
#3	.0026050	.1151838	.0022933	19.82504	.0666964	-.000402

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	226.4212	.0455719	.0497116	16.40385	.2717843	.0129591
Stddev	.2191	.0014791	.0000894	.16223	.0002522	.0001511
%RSD	.0967629	3.245577	.1797989	.9889908	.0927976	1.165823
#1	226.2935	.0439305	.0496744	16.34275	.2715077	.0131336
#2	226.6742	.0459839	.0498136	16.58776	.2718438	.0128713
#3	226.2960	.0468013	.0496469	16.28103	.2720015	.0128725

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3490-01 Acquired: 8/8/2024 15:07:08 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001788	-.003272	F 11.99027	.1901395	F 27.96006	.0147506
Stddev	.000180	.001004	.13851	.0015339	.01459	.0020308
%RSD	10.04374	30.68441	1.155165	.8067456	.0521904	13.76767
#1	-.001580	-.004254	11.99034	.1891800	27.97650	.0155987
#2	-.001892	-.003316	12.12874	.1919087	27.95506	.0162199
#3	-.001890	-.002247	11.85173	.1893299	27.94863	.0124332

Elem	Sr4077
Units	ppm
Avg	.7229565
Stddev	.0020076
%RSD	.2776992
#1	.7238131
#2	.7243938
#3	.7206626

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2751.758	96089.14	14695.09	3592.005	5038.052
Stddev	4.276	451.67	40.05	24.459	11.016
%RSD	.1553821	.4700554	.2725347	.6809392	.2186535
#1	2747.087	96220.43	14673.76	3614.705	5025.384
#2	2752.706	95586.36	14741.29	3566.102	5043.392
#3	2755.479	96460.62	14670.21	3595.207	5045.381

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3510-05 Acquired: 8/8/2024 15:11:39 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012179	-.001291	-.000666	.0035021	.0029071	.0741664
Stddev	.0010488	.001789	.000994	.0010081	.0008305	.0021550
%RSD	86.11107	138.5568	149.2407	28.78524	28.56899	2.905556
#1	.0024282	-.002480	.000072	.0046475	.0019529	.0748847
#2	.0005781	-.002159	-.001796	.0031096	.0034675	.0758704
#3	.0006473	.000766	-.000274	.0027493	.0033008	.0717440

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1591717	-.000221	-.000054	130.8990	.0038570	.0002039
Stddev	.0012992	.000024	.000144	.1741	.0002075	.0000819
%RSD	.8162200	10.71934	268.6020	.1329813	5.379411	40.18664
#1	.1600415	-.000193	.000005	130.7101	.0039744	.0002949
#2	.1597954	-.000236	-.000218	130.9337	.0039791	.0001359
#3	.1576783	-.000232	.000052	131.0530	.0036174	.0001808

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097002	.4261599	.3695477	41.26496	.0134368	.0001593
Stddev	.0000892	.0026760	.0002305	.15081	.0003385	.0000833
%RSD	.9194817	.6279354	.0623809	.3654580	2.519140	52.26214
#1	.0097654	.4271262	.3696444	41.21748	.0134961	.0000637
#2	.0097367	.4231350	.3692845	41.14360	.0130726	.0001985
#3	.0095986	.4282186	.3697141	41.43379	.0137417	.0002157

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	321.8861	.0064866	.1240069	27.18266	.4431624	.0108905
Stddev	2.5867	.0013891	.0006419	.11855	.0010560	.0001422
%RSD	.8036100	21.41481	.5176223	.4361150	.2382804	1.305552
#1	324.6267	.0048998	.1233695	27.31671	.4435363	.0107895
#2	319.4873	.0070774	.1239982	27.13961	.4419704	.0108288
#3	321.5443	.0074827	.1246532	27.09165	.4439805	.0110531

Sample Name: P3510-05 Acquired: 8/8/2024 15:11:39 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001129	.0025403	F 13.94114	6.916034	F 107.1085	.0285136
Stddev	.000391	.0002965	.03491	.008892	.5769	.0004781
%RSD	34.62427	11.67243	.2503786	.1285773	.5386080	1.676600
#1	-.000678	.0026407	13.98082	6.925591	107.7585	.0290022
#2	-.001352	.0027735	13.92740	6.908004	106.9099	.0280469
#3	-.001358	.0022066	13.91520	6.914505	106.6572	.0284917

Elem	Sr4077
Units	ppm
Avg	.7407563
Stddev	.0012394
%RSD	.1673087
#1	.7417076
#2	.7412065
#3	.7393547

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2749.306	96012.62	13900.47	3580.940	4965.116
Stddev	12.095	337.38	14.11	13.593	21.057
%RSD	.4399293	.3513929	.1015205	.3795991	.4240926
#1	2735.447	95631.56	13914.28	3573.887	4941.258
#2	2757.731	96133.00	13886.07	3572.323	4981.105
#3	2754.740	96273.30	13901.06	3596.610	4972.985

Sample Name: PB162568BL Acquired: 8/8/2024 15:16:08 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000088	-.000120	.0003109	-.000302	-.002082	-.005766	-.005908
Stddev	.001072	.000369	.0012614	.000459	.001096	.005027	.000453
%RSD	1215.661	306.2836	405.7454	152.1728	52.64783	87.18985	7.660843
#1	.000283	-.000546	-.001130	-.000722	-.000859	-.009675	-.006405
#2	.000749	.000087	.000849	-.000371	-.002412	-.000095	-.005800
#3	-.001296	.000098	.001214	.000188	-.002976	-.007528	-.005519

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000039	.0000524	.0111797	-.000173	-.000090	.0001776	.0000962
Stddev	.000028	.0000428	.0038677	.000179	.000046	.0002843	.0005209
%RSD	71.34004	81.68587	34.59579	103.5582	50.97587	160.0996	541.3478
#1	-.000023	.0000155	.0131764	.000009	-.000041	.0001999	-.000134
#2	-.000023	.0000423	.0067217	-.000349	-.000131	.0004501	.000692
#3	-.000071	.0000993	.0136410	-.000179	-.000097	-.000117	-.000270

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000023	.0121836	-.000024	.0001965	.2302644	.0002544	.0002052
Stddev	.000258	.0110156	.000140	.0003273	.0220540	.0008775	.0003257
%RSD	1113.484	90.41296	585.1518	166.5464	9.577699	344.9793	158.7198
#1	.000066	.0111515	-.000165	.0003191	.2536095	-.000628	.0003793
#2	-.000314	.0236789	-.000022	.0004447	.2274027	.000265	-.000171
#3	.000178	.0017204	.000115	-.000174	.2097809	.001127	.000407

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2917001	.0015218	.0000349	.0005874	-.000494	-.003404	-.000100
Stddev	.0179230	.0001368	.0002060	.0003123	.000312	.004732	.001215
%RSD	6.144313	8.988893	590.2751	53.17554	63.17644	139.0059	1209.475
#1	.2743006	.0016362	.0000469	.0002372	-.000670	.002044	-.000589
#2	.2906953	.0013703	-.000177	.0008371	-.000134	-.005770	.001283
#3	.3101043	.0015588	.000235	.0006878	-.000679	-.006488	-.000995

Sample Name: PB162568BL Acquired: 8/8/2024 15:16:08 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0034085	-.002819	.0000114
Stddev	.0017671	.001715	.0000207
%RSD	51.84258	60.82163	181.5181
#1	.0051263	-.001163	-.000002
#2	.0035031	-.004587	.000001
#3	.0015960	-.002707	.000035

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3114.276	105313.2	15394.42	4053.548	6028.416
Stddev	13.672	92.5	67.03	5.537	32.223
%RSD	.4390128	.0878411	.4354365	.1365911	.5345213
#1	3124.267	105226.5	15466.82	4053.581	6057.898
#2	3098.695	105410.6	15334.50	4059.068	5994.017
#3	3119.866	105302.5	15381.96	4047.995	6033.333

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: PB162568BS Acquired: 8/8/2024 15:20:35 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7341536	1.714591	.9208631	1.828169	.7696740	1.927468
Stddev	.0050774	.025953	.0018544	.011910	.0051604	.005624
%RSD	.6916036	1.513642	.2013770	.6514541	.6704660	.2917679
#1	.7329001	1.690772	.9227304	1.815935	.7651017	1.921057
#2	.7298203	1.710753	.9190219	1.828847	.7686509	1.931568
#3	.7397403	1.742250	.9208371	1.839725	.7752692	1.929779

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1909102	.1918651	.1815731	.9964258	.3739511	.1854726
Stddev	.0002846	.0006105	.0007099	.0034738	.0012546	.0008478
%RSD	.1490739	.3181731	.3909714	.3486242	.3354998	.4570938
#1	.1907329	.1911893	.1813450	.9948215	.3725032	.1855478
#2	.1912384	.1923765	.1810053	.9940442	.3747172	.1845897
#3	.1907592	.1920296	.1823690	1.000412	.3746329	.1862802

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2943830	2.654387	.1962457	1.883076	.4735238	.0681551
Stddev	.0010704	.010094	.0011389	.029792	.0011354	.0004388
%RSD	.3636165	.3802889	.5803577	1.582115	.2397745	.6437897
#1	.2942012	2.644378	.1949802	1.860362	.4736648	.0676636
#2	.2934152	2.654218	.1971885	1.916808	.4723244	.0685074
#3	.2955327	2.664565	.1965683	1.872059	.4745820	.0682943

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.607694	.2918257	.1925262	8.650584	.2871581	.3851375
Stddev	.016422	.0018269	.0012177	.054513	.0009289	.0013517
%RSD	.6297678	.6260094	.6325035	.6301630	.3234734	.3509646
#1	2.592898	.2915099	.1911752	8.593593	.2866432	.3846458
#2	2.604820	.2901773	.1928642	8.655936	.2866007	.3841005
#3	2.625363	.2937898	.1935393	8.702224	.2882304	.3866663

Sample Name: PB162568BS Acquired: 8/8/2024 15:20:35 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6584138	.1931977	F .6909579	5.687398	F -.005478	.1702684
Stddev	.0033173	.0008151	.0064342	.025659	.003098	.0027991
%RSD	.5038333	.4219068	.9312014	.4511594	56.55460	1.643924
#1	.6562285	.1922565	.6939376	5.671421	-.002115	.1684299
#2	.6567819	.1936744	.6835740	5.673778	-.008216	.1688855
#3	.6622309	.1936621	.6953622	5.716996	-.006105	.1734898

Elem	Sr4077
Units	ppm
Avg	.1929881
Stddev	.0006439
%RSD	.3336276
#1	.1924189
#2	.1928584
#3	.1936869

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2925.987	111617.2	14716.05	4194.668	5466.286
Stddev	9.563	385.7	55.38	18.474	18.703
%RSD	.3268295	.3455630	.3763037	.4404194	.3421452
#1	2933.038	112012.5	14773.60	4212.986	5473.356
#2	2929.822	111597.5	14663.14	4194.977	5480.423
#3	2915.102	111241.8	14711.40	4176.042	5445.079

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3505-04DUP Acquired: 8/8/2024 15:24:42 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015078	-.001669	.0600670	-.001608	.0020369	3.522841
Stddev	.0007465	.001233	.0015794	.000459	.0004585	.028193
%RSD	49.50897	73.88305	2.629337	28.55125	22.50677	.8003009
#1	.0022051	-.000696	.0589041	-.002130	.0024352	3.506988
#2	.0007203	-.003056	.0618651	-.001426	.0021398	3.555392
#3	.0015982	-.001256	.0594319	-.001267	.0015358	3.506143

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1066282	.0003091	.0008713	53.85104	.0126664	.0038705
Stddev	.0016285	.0000359	.0000291	.47415	.0001538	.0001221
%RSD	1.527307	11.60844	3.340361	.8804916	1.214062	3.155452
#1	.1048146	.0002981	.0008383	53.52644	.0128387	.0037912
#2	.1079653	.0002801	.0008819	54.39517	.0125431	.0040111
#3	.1071048	.0003492	.0008936	53.63150	.0126174	.0038091

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0634748	15.68593	.3096344	8.000095	.0120653	.0008829
Stddev	.0007180	.18044	.0037045	.096167	.0002051	.0002447
%RSD	1.131099	1.150305	1.196411	1.202076	1.699495	27.70841
#1	.0627371	15.62367	.3074298	7.961135	.0118297	.0006006
#2	.0635160	15.54488	.3139113	8.109629	.0122036	.0010147
#3	.0641712	15.88926	.3075621	7.929521	.0121627	.0010334

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.47166	.0128036	.4697614	6.926300	.0426549	.0035536
Stddev	.22610	.0008715	.0065610	.072322	.0006021	.0000957
%RSD	1.224037	6.806757	1.396655	1.044168	1.411585	2.692965
#1	18.41743	.0121866	.4640184	6.891723	.0419990	.0036181
#2	18.27761	.0138006	.4683539	6.877757	.0431826	.0034436
#3	18.71994	.0124236	.4769119	7.009420	.0427831	.0035990

Sample Name: P3505-04DUP Acquired: 8/8/2024 15:24:42 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000454	.1684310	F 10.98396	2.309024	3.876738	.0130077
Stddev	.000214	.0020026	.14223	.017450	.040031	.0009108
%RSD	47.16388	1.188955	1.294926	.7557341	1.032589	7.001780
#1	-.000210	.1680431	10.92783	2.292352	3.834216	.0122949
#2	-.000544	.1705991	10.87836	2.327160	3.913694	.0126945
#3	-.000610	.1666508	11.14570	2.307560	3.882306	.0140337

Elem	Sr4077
Units	ppm
Avg	.1756836
Stddev	.0014508
%RSD	.8258030
#1	.1752299
#2	.1773071
#3	.1745139

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2955.887	108034.4	15230.80	4054.867	5548.740
Stddev	24.802	1184.4	164.85	50.152	50.428
%RSD	.8390780	1.096285	1.082336	1.236834	.9088194
#1	2984.162	108770.8	15331.07	4091.951	5606.936
#2	2945.693	108664.2	15040.55	4074.845	5517.950
#3	2937.806	106668.2	15320.79	3997.805	5521.333

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3505-04LX5 Acquired: 8/8/2024 15:29:00 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001539	-.000973	.0118712	-.000524	-.001634	.7063181	.0166856
Stddev	.001423	.000673	.0005275	.001398	.000307	.0067509	.0005309
%RSD	92.46388	69.14953	4.443447	266.6785	18.78449	.9557910	3.181629
#1	-.003026	-.000282	.0112718	-.001595	-.001285	.7002393	.0172040
#2	-.001398	-.001012	.0122644	-.001035	-.001755	.7135837	.0167097
#3	-.000191	-.001626	.0120775	.001057	-.001862	.7051313	.0161431

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000285	.0000997	10.98902	.0024139	.0006704	.0130037	3.246419
Stddev	.0000379	.0000618	.07126	.0003851	.0000806	.0002779	.018983
%RSD	133.1301	61.95298	.6484807	15.95412	12.01754	2.136677	.5847236
#1	-.000009	.0000904	10.90847	.0022537	.0005797	.0127742	3.231353
#2	.000028	.0000432	11.04385	.0021347	.0006976	.0133126	3.240163
#3	.000067	.0001657	11.01474	.0028532	.0007338	.0129242	3.267740

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0630099	1.623907	.0023950	.0003025	3.727241	.0019603	.0943066
Stddev	.0002762	.012486	.0002483	.0003045	.035081	.0022303	.0001611
%RSD	.4383815	.7689124	10.36593	100.6334	.9412170	113.7743	.1708536
#1	.0628922	1.610476	.0024496	-.000023	3.704766	.0043393	.0942712
#2	.0633254	1.635163	.0026115	.000581	3.709291	.0016251	.0944825
#3	.0628119	1.626081	.0021240	.000349	3.767665	-.000083	.0941661

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.445274	.0099925	.0006565	.0004121	.0329514	2.254589	.4680719
Stddev	.041009	.0003901	.0001709	.0002218	.0015417	.025041	.0090555
%RSD	2.837486	3.904209	26.03679	53.82334	4.678612	1.110649	1.934645
#1	1.397934	.0095578	.0008405	.0004503	.0324899	2.255154	.4654493
#2	1.467963	.0103122	.0005028	.0006123	.0346711	2.229271	.4781493
#3	1.469925	.0101076	.0006260	.0001737	.0316932	2.279343	.4606171

Sample Name: P3505-04LX5 Acquired: 8/8/2024 15:29:00 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7800449	-.001052	.0354532
Stddev	.0172784	.000803	.0001245
%RSD	2.215051	76.27693	.3511399
#1	.7726362	-.000594	.0353198
#2	.7997922	-.000584	.0354735
#3	.7677062	-.001979	.0355663

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2992.097	103728.0	14933.78	3977.624	5665.422
Stddev	51.021	255.0	71.83	17.764	100.087
%RSD	1.705202	.2458276	.4809796	.4465939	1.766622
#1	3024.800	103839.8	14926.91	3997.676	5724.171
#2	2933.307	103908.0	14865.63	3963.857	5549.857
#3	3018.184	103436.2	15008.80	3971.339	5722.238

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3505-04MS Acquired: 8/8/2024 15:33:24 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7223609	1.800959	.9476417	1.715805	.7701572	5.535334
Stddev	.0017643	.008291	.0023458	.007045	.0041489	.076965
%RSD	.2442463	.4603385	.2475356	.4105968	.5387082	1.390429
#1	.7203707	1.798927	.9474729	1.708224	.7689149	5.530482
#2	.7229787	1.810077	.9453849	1.722150	.7667715	5.460910
#3	.7237332	1.793874	.9500673	1.717042	.7747854	5.614610

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3054112	.1952644	.1748019	54.11101	.3980502	.1860474
Stddev	.0042153	.0019174	.0001966	.62776	.0028405	.0004388
%RSD	1.380197	.9819693	.1124620	1.160140	.7136102	.2358507
#1	.3037687	.1950911	.1750267	53.97678	.3948975	.1863938
#2	.3022644	.1934394	.1747166	53.56122	.4004101	.1855540
#3	.3102005	.1972625	.1746623	54.79504	.3988430	.1861944

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3451619	18.23973	.5109452	9.881733	.4682285	.0722201
Stddev	.0008387	.21278	.0061261	.123797	.0003260	.0001904
%RSD	.2429754	1.166548	1.198973	1.252782	.0696259	.2637057
#1	.3442427	17.99578	.5084536	9.830356	.4686042	.0722979
#2	.3458854	18.38698	.5064576	9.791897	.4680601	.0720030
#3	.3453577	18.33644	.5179245	10.02295	.4680211	.0723593

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.26487	.3134582	.6684899	16.56793	.3182510	.4055442
Stddev	.25001	.0049743	.0054694	.13418	.0028387	.0010346
%RSD	1.175672	1.586920	.8181655	.8098634	.8919798	.2551121
#1	20.97692	.3144102	.6624299	16.41446	.3184044	.4044400
#2	21.39109	.3080766	.6730599	16.66309	.3153386	.4064912
#3	21.42660	.3178877	.6699798	16.62623	.3210099	.4057014

Sample Name: P3505-04MS Acquired: 8/8/2024 15:33:24 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6465281	.3688651	F 11.76091	7.328435	3.731812	.2013114
Stddev	.0018834	.0060149	.13339	.035104	.005918	.0045408
%RSD	.2913060	1.630649	1.134208	.4790094	.1585863	2.255591
#1	.6483671	.3690990	11.60689	7.356161	3.733957	.1996787
#2	.6446032	.3627367	11.83622	7.340179	3.725120	.1978128
#3	.6466140	.3747597	11.83962	7.288965	3.736358	.2064428

Elem	Sr4077
Units	ppm
Avg	.3707656
Stddev	.0055407
%RSD	1.494383
#1	.3693394
#2	.3660775
#3	.3768799

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3039.046	106038.3	14837.00	4010.154	5720.543
Stddev	11.078	548.4	181.40	19.436	15.546
%RSD	.3645232	.5171375	1.222624	.4846762	.2717519
#1	3050.876	106632.5	14794.58	4032.126	5728.065
#2	3037.348	105551.8	15035.86	4003.129	5730.897
#3	3028.916	105930.6	14680.58	3995.208	5702.667

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3505-04MSD Acquired: 8/8/2024 15:37:28 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7134732	1.787043	.9268830	1.703810	.7606149	5.550575
Stddev	.0070166	.009402	.0062915	.013564	.0049929	.078336
%RSD	.9834383	.5260992	.6787810	.7961255	.6564316	1.411313
#1	.7054541	1.777080	.9218957	1.688370	.7549074	5.467040
#2	.7164813	1.795759	.9248021	1.709253	.7627636	5.622392
#3	.7184841	1.788291	.9339514	1.713808	.7641738	5.562293

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3048172	.1981519	.1713723	54.69295	.3865900	.1837503
Stddev	.0048500	.0027056	.0010842	.89681	.0039158	.0012882
%RSD	1.591112	1.365431	.6326847	1.639719	1.012896	.7010498
#1	.2997503	.1951730	.1704073	53.76732	.3820702	.1824640
#2	.3094164	.2004567	.1711640	55.55786	.3887420	.1837466
#3	.3052851	.1988260	.1725456	54.75366	.3889579	.1850403

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3411601	17.66751	.5074174	9.903317	.4604072	.0708610
Stddev	.0028816	.16274	.0063801	.128401	.0036132	.0007189
%RSD	.8446525	.9211299	1.257371	1.296543	.7847827	1.014529
#1	.3383369	17.48488	.5006019	9.774885	.4571071	.0701394
#2	.3410467	17.79715	.5132475	10.03169	.4598464	.0708664
#3	.3440968	17.72051	.5084027	9.90338	.4642680	.0715771

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.78117	.3101025	.6546903	16.11115	.3231971	.4006255
Stddev	.15574	.0057505	.0071332	.14260	.0043809	.0032508
%RSD	.7494437	1.854398	1.089553	.8851269	1.355485	.8114302
#1	20.60876	.3034632	.6465363	15.97273	.3182920	.3976632
#2	20.91168	.3133320	.6597759	16.25760	.3267205	.4001102
#3	20.82305	.3135124	.6577586	16.10312	.3245789	.4041032

Sample Name: P3505-04MSD Acquired: 8/8/2024 15:37:28 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6359133	.3612661	F 11.22849	7.116887	3.617282	.2077992
Stddev	.0041656	.0063164	.09705	.039604	.024298	.0039962
%RSD	.6550532	1.748410	.8643590	.5564860	.6717171	1.923117
#1	.6320176	.3572018	11.11663	7.074922	3.593663	.2033276
#2	.6354178	.3685431	11.27850	7.122131	3.615975	.2110214
#3	.6403045	.3580535	11.29034	7.153608	3.642206	.2090487

Elem	Sr4077
Units	ppm
Avg	.3735325
Stddev	.0054694
%RSD	1.464239
#1	.3682291
#2	.3791540
#3	.3732145

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3069.704	107143.8	14463.09	4047.519	5815.179
Stddev	22.091	937.7	198.03	38.662	38.493
%RSD	.7196586	.8752083	1.369206	.9552027	.6619363
#1	3093.722	108225.4	14686.27	4090.824	5855.833
#2	3065.137	106560.2	14308.40	4016.471	5810.412
#3	3050.253	106645.6	14394.60	4035.264	5779.292

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3505-04A Acquired: 8/8/2024 15:41:32 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7657465	1.908682	.9860720	1.839287	.8209473	5.572972
Stddev	.0029399	.004248	.0021072	.003340	.0018141	.021523
%RSD	.3839253	.2225529	.2136945	.1815930	.2209790	.3861946
#1	.7629526	1.913224	.9884644	1.835508	.8197038	5.548196
#2	.7654734	1.908015	.9844915	1.840509	.8201091	5.587039
#3	.7688134	1.904808	.9852603	1.841844	.8230289	5.583682

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3136981	.2075486	.1831395	54.30001	.4218140	.1958458
Stddev	.0013146	.0007936	.0002185	.16182	.0075297	.0003660
%RSD	.4190707	.3823793	.1193198	.2980057	1.785067	.1868975
#1	.3123618	.2069091	.1833604	54.21305	.4147443	.1961274
#2	.3137427	.2073000	.1829235	54.20027	.4297318	.1954320
#3	.3149899	.2084368	.1831346	54.48671	.4209659	.1959779

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3628575	18.40209	.5128099	9.939031	.4922073	.0772267
Stddev	.0012776	.22305	.0031630	.034945	.0004123	.0010398
%RSD	.3520918	1.212103	.6168057	.3515958	.0837721	1.346434
#1	.3615857	18.23532	.5091659	9.909442	.4925591	.0763199
#2	.3628459	18.65546	.5144169	9.930066	.4917536	.0783616
#3	.3641408	18.31550	.5148468	9.977586	.4923091	.0769985

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	21.79499	.3255175	.6900921	17.23568	.3388110	.4275510
Stddev	.33074	.0034807	.0097688	.20006	.0016912	.0011190
%RSD	1.517519	1.069295	1.415583	1.160756	.4991652	.2617125
#1	21.55709	.3219447	.6801166	17.08407	.3371662	.4270632
#2	22.17267	.3288982	.6996402	17.46244	.3387217	.4267587
#3	21.65520	.3257098	.6905195	17.16054	.3405451	.4288310

Sample Name: P3505-04A Acquired: 8/8/2024 15:41:32 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6843489	.3625141	F 11.51801	7.570765	3.740385	.2182437
Stddev	.0027485	.0025031	.15129	.024204	.008065	.0013013
%RSD	.4016240	.6904920	1.313518	.3197085	.2156175	.5962528
#1	.6871747	.3596242	11.36650	7.597734	3.746426	.2169019
#2	.6816848	.3639166	11.66908	7.563635	3.731227	.2183288
#3	.6841871	.3640016	11.51847	7.550927	3.743503	.2195003

Elem	Sr4077
Units	ppm
Avg	.3800899
Stddev	.0009240
%RSD	.2431036
#1	.3792707
#2	.3799074
#3	.3810915

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3001.209	103022.1	14505.39	3902.034	5672.672
Stddev	12.442	1122.9	45.69	30.193	12.602
%RSD	.4145826	1.089941	.3149829	.7737750	.2221541
#1	3013.647	103803.8	14521.00	3923.836	5686.193
#2	3001.219	101735.4	14541.23	3867.572	5670.573
#3	2988.762	103527.2	14453.95	3914.694	5661.252

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3474-01 Acquired: 8/8/2024 15:45:37 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0442100	-.014016	.1983832	-.029929	.0014501	122.2632	.2994347
Stddev	.0029743	.000990	.0011832	.000854	.0009917	.2331	.0007977
%RSD	6.727572	7.059872	.5964312	2.855034	68.38726	.1906468	.2663922
#1	.0444125	-.015088	.1970231	-.030871	.0006583	122.0025	.2988914
#2	.0470779	-.013137	.1989511	-.029204	.0025623	122.3356	.3003504
#3	.0411397	-.013823	.1991755	-.029712	.0011296	122.4515	.2990622

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077424	.0157919	7.719540	.2082274	.0880872	.2086602	222.7203
Stddev	.0000050	.0002968	.016201	.0007664	.0002861	.0006487	.3655
%RSD	.0646391	1.879270	.2098711	.3680536	.3247936	.3108995	.1640981
#1	.0077443	.0156727	7.722262	.2090784	.0883844	.2079375	223.1359
#2	.0077368	.0161297	7.734207	.2075916	.0878136	.2088510	222.5761
#3	.0077463	.0155732	7.702150	.2080122	.0880636	.2091922	222.4490

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.866838	33.12817	.1888384	.0033792	.2064174	.1976167	.4971498
Stddev	.000953	.07150	.0003891	.0001460	.0133143	.0028599	.0018616
%RSD	.0510697	.2158283	.2060206	4.321801	6.450201	1.447196	.3744623
#1	1.865940	33.06888	.1885392	.0033406	.1943735	.1965080	.4950136
#2	1.866736	33.20757	.1892782	.0035407	.2207146	.2008650	.4984255
#3	1.867839	33.10805	.1886978	.0032564	.2041642	.1954771	.4980103

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.335928	-.010515	.0006608	.0296968	1.273221	5.143750	6.625729
Stddev	.014595	.000994	.0001917	.0003283	.000130	.015284	.003814
%RSD	.3365991	9.454893	29.00675	1.105609	.0102343	.2971447	.0575659
#1	4.352316	-.009371	.0008544	.0295937	1.273081	5.154554	6.628172
#2	4.331137	-.011004	.0004712	.0300643	1.273338	5.150434	6.627681
#3	4.324331	-.011169	.0006567	.0294324	1.273245	5.126262	6.621334

Sample Name: P3474-01 Acquired: 8/8/2024 15:45:37 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3728226	.1630325	-.171148
Stddev	.0067200	.0002325	.000470
%RSD	1.802463	.1426349	.2747076
#1	.3784518	.1628403	-.171664
#2	.3746332	.1632910	-.171038
#3	.3653828	.1629662	-.170743

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3418.077	130077.7	17177.22	4874.856	5109.143
Stddev	13.714	392.4	39.08	9.959	15.508
%RSD	.4012167	.3016741	.2275225	.2042905	.3035380
#1	3412.559	129672.1	17175.22	4877.328	5105.026
#2	3407.981	130105.8	17139.17	4863.894	5096.108
#3	3433.690	130455.4	17217.26	4883.347	5126.294

Sample Name: CCV03 Acquired: 8/8/2024 15:49:51 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.774959	4.863918	4.747963	4.790509	4.881637	10.14832	10.02025
Stddev	.006974	.033324	.009909	.008896	.005518	.00966	.14127
%RSD	.1460535	.6851206	.2087054	.1856928	.1130381	.0951861	1.409831
#1	4.779932	4.835238	4.757082	4.792691	4.887343	10.15947	10.10831
#2	4.766988	4.856042	4.749389	4.780726	4.876328	10.14259	9.85731
#3	4.777959	4.900474	4.737418	4.798111	4.881240	10.14289	10.09514

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2570198	2.368110	24.34508	.9923288	2.384274	1.206174	4.895618
Stddev	.0003056	.004779	.03961	.0040786	.005623	.002053	.022682
%RSD	.1188930	.2018026	.1626869	.4110149	.2358466	.1702200	.4633197
#1	.2569005	2.371607	24.33208	.9881238	2.390141	1.208486	4.907911
#2	.2567918	2.370060	24.31361	.9962681	2.383750	1.205474	4.909501
#3	.2573670	2.362665	24.38955	.9925945	2.378931	1.204563	4.869443

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.479358	24.95120	2.372331	1.245296	24.95476	2.503693	2.497939
Stddev	.004002	.08489	.005506	.002982	.08015	.009324	.011144
%RSD	.1614315	.3402151	.2321046	.2394785	.3211675	.3723912	.4461275
#1	2.480711	25.02917	2.377959	1.247111	24.92322	2.508948	2.507476
#2	2.482508	24.86077	2.372079	1.246922	25.04587	2.492928	2.500652
#3	2.474854	24.96364	2.366955	1.241854	24.89517	2.509202	2.485689

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.79816	5.143054	4.905480	4.768213	4.936092	4.921705	4.695761
Stddev	.05148	.003351	.003549	.001974	.013754	.016897	.012148
%RSD	.2075849	.0651642	.0723444	.0413993	.2786414	.3433191	.2587085
#1	24.76691	5.144892	4.909561	4.765937	4.930487	4.912651	4.708750
#2	24.85757	5.139186	4.903114	4.769452	4.926027	4.941200	4.684679
#3	24.76999	5.145085	4.903767	4.769251	4.951764	4.911265	4.693852

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCV03 Acquired: 8/8/2024 15:49:51 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.539283	5.218050	4.993653
Stddev	.006676	.004633	.052826
%RSD	.1470754	.0887934	1.057859
#1	4.544875	5.222695	4.977124
#2	4.531891	5.218027	4.951068
#3	4.541082	5.213428	5.052766

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2953.725	98688.92	13912.07	3820.268	5408.453
Stddev	4.077	225.13	35.87	19.876	5.767
%RSD	.1380261	.2281211	.2578334	.5202661	.1066270
#1	2949.041	98567.86	13885.20	3797.353	5401.901
#2	2956.478	98550.23	13952.80	3830.630	5410.699
#3	2955.655	98948.68	13898.20	3832.822	5412.759

Sample Name: CCB03 Acquired: 8/8/2024 15:54:11 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004057	-.000420	.0001358	-.000487	-.002727	.0049690	-.001952
Stddev	.0010134	.000465	.0009073	.000864	.001113	.0046838	.001470
%RSD	249.7747	110.5879	668.1840	177.3122	40.81453	94.26007	75.30802
#1	.0011629	-.000103	.0001590	-.000602	-.003770	.0004004	-.001582
#2	.0007999	-.000954	.0010313	.000428	-.001555	.0097601	-.000702
#3	-.000746	-.000205	-.000783	-.001288	-.002855	.0047466	-.003571

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000010	.0002142	.0095512	-.000119	-.000017	.0001822	.0011671
Stddev	.000018	.0000442	.0050099	.000345	.000043	.0001774	.0050929
%RSD	170.5283	20.62294	52.45318	290.0579	250.9792	97.35648	436.3896
#1	-.000011	.0002357	.0052842	-.000486	-.000010	.0002956	-.004214
#2	.000008	.0002435	.0083020	-.000069	-.000063	-.000022	.005912
#3	-.000027	.0001634	.0150676	.000198	.000022	.000273	.001803

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003542	-.006346	.0001371	.0003562	.0634596	.0002747	.0003892
Stddev	.0001331	.010540	.0001293	.0001023	.0084034	.0008970	.0002094
%RSD	37.58842	166.1023	94.26488	28.71117	13.24208	326.5227	53.79009
#1	.0005055	-.004069	.0001021	.0003977	.0550522	.0012836	.0004951
#2	.0002551	.002870	.0002803	.0004312	.0634677	-.000433	.0005245
#3	.0003019	-.017838	.0000289	.0002397	.0718589	-.000027	.0001481

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1295061	.0062379	.0006886	.0005737	.0009172	.0013666	.0018542
Stddev	.0167904	.0007446	.0002642	.0002395	.0002336	.0084165	.0007922
%RSD	12.96498	11.93659	38.36430	41.74146	25.46599	615.8754	42.72485
#1	.1400666	.0068611	.0009853	.0003498	.0011786	-.007427	.0010168
#2	.1101448	.0064393	.0006017	.0008262	.0007291	.002181	.0025917
#3	.1383069	.0054134	.0004788	.0005451	.0008437	.009346	.0019540

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB03 Acquired: 8/8/2024 15:54:11 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB03 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000016	.0013320	.0006654
Stddev	.000774	.0003370	.0002089
%RSD	4886.908	25.30275	31.39960
#1	-.000753	.0009459	.0009013
#2	.000791	.0014830	.0005912
#3	-.000086	.0015672	.0005037

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3203.301	106173.5	14106.16	4090.969	6297.457
Stddev	18.870	901.4	102.87	55.467	32.518
%RSD	.5890701	.8490201	.7292344	1.355834	.5163665
#1	3196.528	106444.0	14122.50	4091.161	6293.307
#2	3188.752	106908.6	13996.10	4146.339	6267.214
#3	3224.622	105167.7	14199.88	4035.406	6331.851

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3474-04 Acquired: 8/8/2024 15:58:39 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0688195	-.014429	.1642347	-.044907	.0018043	118.0605	.3158000
Stddev	.0005127	.000217	.0003091	.003088	.0004814	.5305	.0014217
%RSD	.7449234	1.504672	.1882082	6.875831	26.67840	.4493670	.4501934
#1	.0682785	-.014661	.1645279	-.048286	.0022839	118.5113	.3168449
#2	.0688819	-.014393	.1639118	-.042232	.0013212	118.1943	.3163740
#3	.0692981	-.014231	.1642645	-.044201	.0018079	117.4759	.3141810

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086412	.0205057	10.16144	.1542686	.1112182	.2118983	348.9591
Stddev	.0000600	.0001179	.02345	.0006212	.0001467	.0004254	.6548
%RSD	.6947869	.5748363	.2308111	.4026930	.1318721	.2007597	.1876347
#1	.0086072	.0204121	10.13449	.1535611	.1111377	.2122290	348.9006
#2	.0087106	.0204670	10.17269	.1547246	.1111294	.2114184	349.6412
#3	.0086060	.0206381	10.17716	.1545201	.1113875	.2120474	348.3356

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.220311	27.09815	.1742553	.0062229	.1983089	.1937232	.6182587
Stddev	.002041	.02314	.0007502	.0001912	.0034855	.0019819	.0012496
%RSD	.0633784	.0853868	.4305238	3.072002	1.757622	1.023058	.2021192
#1	3.222398	27.09016	.1735868	.0063807	.2010731	.1921844	.6192969
#2	3.220218	27.08006	.1741124	.0062775	.1943934	.1959596	.6168718
#3	3.218319	27.12422	.1750666	.0060103	.1994603	.1930258	.6186074

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.108233	.0257989	.0013617	.0084704	1.217527	5.655239	6.004218
Stddev	.003984	.0025720	.0003169	.0009229	.004093	.033830	.006010
%RSD	.0969643	9.969358	23.27000	10.89525	.3362017	.5982044	.1000948
#1	4.112675	.0241706	.0013960	.0077108	1.217531	5.681857	5.999547
#2	4.104976	.0287640	.0010291	.0082029	1.221618	5.666691	6.010998
#3	4.107049	.0244621	.0016600	.0094974	1.213431	5.617170	6.002109

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3474-04 Acquired: 8/8/2024 15:58:39 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.490732	.1399099	-.304425
Stddev	.002460	.0013475	.000520
%RSD	.1649956	.9631325	.1707330
#1	1.489344	.1408687	-.304235
#2	1.493572	.1404919	-.305013
#3	1.489280	.1383692	-.304027

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3373.459	125808.6	17723.11	4688.907	5201.408
Stddev	4.045	170.7	53.50	20.035	13.659
%RSD	.1199079	.1357218	.3018815	.4272954	.2626068
#1	3377.915	125911.4	17731.03	4703.757	5216.766
#2	3370.020	125902.8	17772.22	4696.844	5190.618
#3	3372.440	125611.5	17666.09	4666.118	5196.841

Sample Name: P3474-07 Acquired: 8/8/2024 16:02:52 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0159882	-.004342	.0774134	-.015225	-.001541	82.44235	.2217019
Stddev	.0011030	.001873	.0003558	.003699	.001145	.33115	.0009037
%RSD	6.898915	43.13095	.4596653	24.29389	74.27950	.4016693	.4076336
#1	.0156045	-.002727	.0775605	-.011025	-.001052	82.14127	.2210566
#2	.0172318	-.006395	.0770076	-.017997	-.000722	82.79702	.2227348
#3	.0151283	-.003905	.0776721	-.016654	-.002849	82.38876	.2213143

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037311	.0056871	13.17270	.1058826	.0545568	.1489360	126.7060
Stddev	.0000349	.0000631	.01554	.0005256	.0000477	.0006586	.3187
%RSD	.9349238	1.108605	.1179556	.4963795	.0874464	.4422171	.2515436
#1	.0037341	.0057277	13.15479	.1064119	.0546092	.1496886	126.3393
#2	.0036948	.0056145	13.18260	.1058750	.0545452	.1484649	126.9170
#3	.0037643	.0057192	13.18070	.1053609	.0545159	.1486545	126.8615

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.580077	29.81822	.1374212	.0027741	.2025238	.1477897	.3717646
Stddev	.005863	.06590	.0005204	.0001182	.0083056	.0019063	.0006859
%RSD	.3710484	.2210151	.3787112	4.259864	4.101046	1.289852	.1844868
#1	1.573308	29.74825	.1380220	.0027158	.1929632	.1463830	.3710058
#2	1.583352	29.87912	.1371319	.0029101	.2079593	.1470267	.3723403
#3	1.583571	29.82727	.1371098	.0026964	.2066488	.1499592	.3719476

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.205144	.0170826	.0003582	.0038724	1.034676	5.350494	4.293529
Stddev	.017643	.0018197	.0001560	.0002194	.003205	.018142	.019379
%RSD	.3389457	10.65246	43.55215	5.665171	.3097232	.3390691	.4513419
#1	5.186100	.0156733	.0001787	.0038195	1.031005	5.330156	4.315488
#2	5.220931	.0164375	.0004342	.0036843	1.036111	5.365012	4.278824
#3	5.208401	.0191369	.0004616	.0041134	1.036912	5.356314	4.286275

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3474-07 Acquired: 8/8/2024 16:02:52 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0995914	.1450454	-.060229
Stddev	.0030847	.0015711	.000159
%RSD	3.097319	1.083155	.2639931
#1	.1001402	.1464265	-.060059
#2	.1023648	.1433362	-.060252
#3	.0962692	.1453734	-.060374

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3249.484	116280.5	16372.08	4415.120	5417.313
Stddev	5.532	341.0	28.16	16.582	19.773
%RSD	.1702395	.2932556	.1719749	.3755803	.3649975
#1	3247.759	116160.6	16365.88	4433.573	5398.926
#2	3245.019	116015.6	16347.54	4401.468	5414.783
#3	3255.672	116665.2	16402.81	4410.318	5438.229

Sample Name: P3474-10 Acquired: 8/8/2024 16:07:05 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0311495	-.005171	.3562211	-.016297	-.002395	88.01257	.3357833
Stddev	.0001751	.000753	.0017199	.001115	.001647	1.09228	.0040125
%RSD	.5619811	14.55400	.4828217	6.842305	68.76868	1.241050	1.194957
#1	.0311469	-.005606	.3548791	-.016047	-.001471	87.73731	.3359138
#2	.0309757	-.004302	.3556244	-.017516	-.004297	87.08426	.3317072
#3	.0313258	-.005604	.3581599	-.015328	-.001418	89.21616	.3397289

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044390	.0062839	15.56768	.1166735	.0629269	.1765845	144.9899
Stddev	.0000778	.0001089	.14643	.0009058	.0002585	.0002881	.5182
%RSD	1.751536	1.732802	.9405893	.7763389	.4107929	.1631365	.3574072
#1	.0044883	.0061584	15.52258	.1157523	.0626291	.1763977	144.5909
#2	.0043494	.0063526	15.44910	.1175630	.0630585	.1764396	144.8032
#3	.0044794	.0063408	15.73135	.1167054	.0630931	.1769163	145.5756

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.082349	32.27620	.1517259	.0037315	.2512522	.1488418	.5347492
Stddev	.012191	.32725	.0003641	.0001067	.0026116	.0034788	.0013576
%RSD	1.126309	1.013892	.2399465	2.858689	1.039437	2.337263	.2538790
#1	1.079027	32.23325	.1521260	.0037852	.2492903	.1470507	.5332602
#2	1.072163	31.97255	.1516379	.0038006	.2502497	.1466235	.5359182
#3	1.095856	32.62280	.1514140	.0036086	.2542165	.1528512	.5350694

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.387338	.0301737	-.000285	.0088271	1.036876	6.001553	5.043339
Stddev	.065574	.0009443	.000216	.0003636	.014304	.033450	.023308
%RSD	1.217196	3.129639	75.87073	4.119597	1.379498	.5573571	.4621543
#1	5.320244	.0296644	-.000037	.0086536	1.031576	5.976307	5.016651
#2	5.390493	.0312633	-.000383	.0085827	1.025979	5.988860	5.053670
#3	5.451279	.0295933	-.000436	.0092450	1.053073	6.039492	5.059695

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3474-10 Acquired: 8/8/2024 16:07:05 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.1201707	.1529356	-.079074
Stddev	.0015620	.0042486	.000412
%RSD	1.299815	2.778020	.5207734
#1	.1217591	.1511517	-.078954
#2	.1201164	.1498697	-.079533
#3	.1186365	.1577852	-.078736

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3394.293	115927.2	17081.26	4444.355	5537.559
Stddev	2.128	374.1	180.51	4.252	6.897
%RSD	.0626980	.3226601	1.056764	.0956632	.1245581
#1	3396.045	116229.0	17121.78	4439.447	5545.479
#2	3391.925	116043.9	17238.06	4446.892	5534.334
#3	3394.911	115508.7	16883.93	4446.726	5532.865

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-05 Acquired: 8/8/2024 16:11:16 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046874	-.001958	.0891927	-.000339	-.002061	20.35000	.4481122
Stddev	.0008617	.000540	.0001737	.001304	.000295	.13909	.0035363
%RSD	18.38320	27.55544	.1947399	384.9790	14.29605	.6835034	.7891489
#1	.0049463	-.001715	.0893569	.000636	-.002348	20.24578	.4458467
#2	.0037260	-.001583	.0890109	.000168	-.001759	20.29627	.4463029
#3	.0053900	-.002577	.0892102	-.001820	-.002076	20.50794	.4521870

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011653	.0015370	9.883421	.0485277	.0035828	.0306176	9.130006
Stddev	.0000355	.0001126	.071083	.0004823	.0000236	.0003754	.027633
%RSD	3.042936	7.326259	.7192100	.9939554	.6592140	1.226034	.3026606
#1	.0011832	.0014355	9.809676	.0486761	.0035693	.0304388	9.125228
#2	.0011883	.0016581	9.889087	.0489184	.0035690	.0310489	9.105073
#3	.0011245	.0015174	9.951502	.0479886	.0036100	.0303650	9.159716

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3442670	2.689665	.0180973	.1715511	1.563397	.0272121	.1429620
Stddev	.0027044	.028581	.0002073	.0007389	.012180	.0015190	.0005694
%RSD	.7855472	1.062610	1.145507	.4307044	.7790721	5.582052	.3983209
#1	.3416395	2.668336	.0179942	.1717520	1.555617	.0254819	.1428853
#2	.3441194	2.678520	.0183359	.1721688	1.557140	.0278279	.1435660
#3	.3470422	2.722139	.0179618	.1707326	1.577434	.0283265	.1424349

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.168941	.0077107	.0008320	.0040476	.2405326	3.540338	.4430377
Stddev	.008672	.0006228	.0002466	.0006121	.0012634	.012339	.0018004
%RSD	.3998144	8.077798	29.64103	15.12269	.5252687	.3485387	.4063798
#1	2.159076	.0069941	.0010950	.0033447	.2400227	3.544651	.4429205
#2	2.175359	.0081224	.0007951	.0044630	.2396038	3.526421	.4448939
#3	2.172389	.0080155	.0006059	.0043352	.2419713	3.549943	.4412988

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-05 Acquired: 8/8/2024 16:11:16 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.073052	.0119784	.0806693
Stddev	.006277	.0019109	.0006216
%RSD	.5849565	15.95286	.7705623
#1	1.067792	.0099339	.0803294
#2	1.080000	.0122817	.0802917
#3	1.071365	.0137194	.0813867

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3173.893	110540.4	15765.93	4133.488	6025.623
Stddev	7.976	292.0	55.09	2.958	13.183
%RSD	.2512988	.2641213	.3494530	.0715704	.2187839
#1	3169.698	110337.2	15829.53	4135.028	6027.255
#2	3168.890	110409.0	15732.86	4135.360	6011.700
#3	3183.091	110875.0	15735.40	4130.078	6037.914

Sample Name: P3475-05DUP Acquired: 8/8/2024 16:15:35 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066980	-.002664	.0894832	.0009677	-.001393	20.39255	.4526663
Stddev	.0019105	.000149	.0002503	.0018282	.000135	.15567	.0026633
%RSD	28.52315	5.586077	.2796881	188.9297	9.694752	.7633560	.5883620
#1	.0045186	-.002714	.0894477	.0018328	-.001313	20.40239	.4524053
#2	.0080837	-.002496	.0897494	.0022027	-.001316	20.23220	.4501430
#3	.0074918	-.002781	.0892526	-.001133	-.001549	20.54307	.4554504

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011151	.0015600	9.911815	.0485657	.0036608	.0310572	9.166510
Stddev	.0000130	.0000931	.037709	.0003015	.0000870	.0001763	.036856
%RSD	1.160998	5.968534	.3804432	.6208048	2.375577	.5676605	.4020674
#1	.0011018	.0014634	9.916052	.0482367	.0037477	.0312603	9.131713
#2	.0011158	.0016491	9.872167	.0486316	.0036608	.0309441	9.205126
#3	.0011277	.0015674	9.947227	.0488288	.0035738	.0309671	9.162689

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3439974	2.691192	.0178304	.1710803	1.577404	.0280112	.1408191
Stddev	.0016599	.010324	.0002988	.0004888	.009171	.0008736	.0005825
%RSD	.4825351	.3836100	1.675842	.2857273	.5813871	3.118647	.4136398
#1	.3422987	2.692510	.0181545	.1705159	1.575859	.0270769	.1401471
#2	.3440780	2.680272	.0177708	.1713645	1.587249	.0288077	.1411303
#3	.3456156	2.700793	.0175659	.1713606	1.569103	.0281491	.1411798

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.193329	.0070334	.0008537	.0041380	.2418834	3.558982	.4512937
Stddev	.007030	.0005793	.0000715	.0004055	.0019027	.026846	.0015355
%RSD	.3205109	8.235961	8.376987	9.798186	.7865963	.7543120	.3402378
#1	2.186481	.0065082	.0009353	.0045588	.2440142	3.534006	.4503645
#2	2.192977	.0076547	.0008019	.0041055	.2403545	3.587371	.4530660
#3	2.200528	.0069373	.0008239	.0037499	.2412814	3.555568	.4504505

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-05DUP Acquired: 8/8/2024 16:15:35 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.094847	.0109742	.0811612
Stddev	.002025	.0003534	.0007625
%RSD	.1849756	3.219951	.9394453
#1	1.096481	.0106541	.0808889
#2	1.092582	.0109152	.0805722
#3	1.095479	.0113534	.0820224

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3124.098	110755.6	15862.76	4147.677	5906.636
Stddev	6.249	174.7	104.30	13.790	12.713
%RSD	.2000268	.1577133	.6575387	.3324821	.2152350
#1	3126.216	110578.2	15831.07	4136.826	5899.066
#2	3129.013	110761.1	15979.23	4163.195	5921.314
#3	3117.065	110927.4	15777.97	4143.010	5899.529

Sample Name: P3475-05LX5 Acquired: 8/8/2024 16:19:55 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000196	-.001668	.0181523	.0007918	-.001251	4.173394	.0874405
Stddev	.000292	.001691	.0009828	.0013123	.001104	.010511	.0005301
%RSD	148.8838	101.3809	5.413992	165.7398	88.23961	.2518691	.6062084
#1	-.000292	-.000605	.0184058	.0020632	-.002088	4.164744	.0872723
#2	-.000427	-.000781	.0170676	.0008699	-.001667	4.170345	.0870149
#3	.000132	-.003618	.0189834	-.000558	.000000	4.185093	.0880342

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002423	.0003286	2.032213	.0098119	.0006791	.0067872	1.717434
Stddev	.0000086	.0000548	.009265	.0004361	.0001015	.0002551	.022096
%RSD	3.552661	16.68150	.4559274	4.445029	14.94185	3.759185	1.286551
#1	.0002501	.0002901	2.024812	.0103075	.0006058	.0065175	1.742849
#2	.0002438	.0003044	2.029223	.0094866	.0007949	.0068194	1.702786
#3	.0002331	.0003914	2.042605	.0096417	.0006365	.0070248	1.706667

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0705494	.5500502	.0036998	.0342887	.2937365	.0058498	.0276051
Stddev	.0002816	.0170422	.0003387	.0007527	.0022224	.0005343	.0006698
%RSD	.3991005	3.098308	9.153798	2.195250	.7565817	9.133727	2.426296
#1	.0703166	.5332856	.0039123	.0351579	.2950737	.0055247	.0283201
#2	.0708624	.5495078	.0038779	.0338550	.2911711	.0064665	.0275031
#3	.0704693	.5673572	.0033092	.0338533	.2949647	.0055582	.0269922

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3948799	.0012540	.0002114	.0007698	.0486719	.6577320	.1010898
Stddev	.0147745	.0007035	.0000149	.0002088	.0004972	.0080227	.0010799
%RSD	3.741510	56.09870	7.028521	27.12101	1.021444	1.219749	1.068218
#1	.3870072	.0015122	.0001943	.0007402	.0492431	.6553362	.0999096
#2	.3857091	.0017918	.0002191	.0005775	.0484354	.6511801	.1013315
#3	.4119235	.0004579	.0002208	.0009919	.0483371	.6666796	.1020284

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-05LX5 Acquired: 8/8/2024 16:19:55 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2460299	.0018357	.0165197
Stddev	.0021823	.0008406	.0000777
%RSD	.8870128	45.79133	.4701485
#1	.2484167	.0027024	.0164774
#2	.2455366	.0017809	.0164722
#3	.2441365	.0010239	.0166093

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2934.528	113577.2	14936.74	4258.594	5493.446
Stddev	7.502	1315.0	22.21	50.660	2.669
%RSD	.2556562	1.157772	.1487015	1.189600	.0485908
#1	2943.153	112061.8	14953.03	4202.802	5495.518
#2	2929.514	114417.2	14911.44	4301.717	5490.434
#3	2930.917	114252.6	14945.76	4271.264	5494.386

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-06 Acquired: 8/8/2024 16:24:20 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7961317	1.869010	1.069379	1.892142	.3341600	27.27025	.7773759
Stddev	.0129921	.031266	.018575	.018983	.0187517	.10428	.0025860
%RSD	1.631902	1.672852	1.736955	1.003229	5.611594	.3824088	.3326517
#1	.8095798	1.844295	1.088058	1.913373	.3179585	27.23960	.7765778
#2	.7951656	1.858576	1.069169	1.886248	.3298206	27.18473	.7752831
#3	.7836496	1.904158	1.050910	1.876806	.3547010	27.38643	.7802668

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2142708	.1954215	12.91020	.5015338	.2092683	.3507259	11.09443
Stddev	.0025118	.0048255	.03455	.0049847	.0053360	.0080651	.08554
%RSD	1.172239	2.469286	.2675872	.9939017	2.549852	2.299548	.7709854
#1	.2170339	.2005136	12.89572	.5057589	.2147617	.3594796	10.99659
#2	.2136525	.1948349	12.88525	.5028063	.2089381	.3491014	11.13162
#3	.2121258	.1909162	12.94963	.4960361	.2041049	.3435967	11.15508

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5615731	4.999646	.5362733	.2283192	4.643236	.3840188	.3641155
Stddev	.0011850	.032208	.0134151	.0002844	.029347	.0033597	.0005672
%RSD	.2110128	.6442126	2.501547	.1245454	.6320312	.8748691	.1557820
#1	.5620857	5.036489	.5501543	.2279908	4.610618	.3857976	.3634643
#2	.5602181	4.985622	.5352870	.2284842	4.667498	.3861151	.3645019
#3	.5624155	4.976827	.5233785	.2284826	4.651593	.3801437	.3643804

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.67581	.2996431	.1753423	.3021129	.2988033	3.530545	6.358829
Stddev	.03797	.0023540	.0079726	.0118929	.0027279	.044900	.116462
%RSD	.3252061	.7856001	4.546855	3.936588	.9129269	1.271757	1.831507
#1	11.63257	.3023540	.1685206	.2926851	.3016429	3.488452	6.486277
#2	11.69117	.2984588	.1733995	.2981794	.2985641	3.525378	6.332272
#3	11.70370	.2981164	.1841066	.3154743	.2962029	3.577805	6.257939

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-06 Acquired: 8/8/2024 16:24:20 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.574301	.2181452	.3330815
Stddev	.006417	.0024107	.0014132
%RSD	.4076239	1.105101	.4242794
#1	1.581639	.2195166	.3347041
#2	1.571524	.2153617	.3321203
#3	1.569741	.2195575	.3324201

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2989.738	114924.8	15600.67	4253.015	5489.539
Stddev	9.893	869.8	66.27	24.898	9.637
%RSD	.3308839	.7568379	.4247678	.5854208	.1755433
#1	2996.305	115877.2	15577.80	4277.419	5494.945
#2	2994.548	114724.7	15675.35	4253.976	5495.260
#3	2978.360	114172.5	15548.88	4227.650	5478.414

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-07 Acquired: 8/8/2024 16:28:27 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6385698	1.494860	.8807402	1.482299	.4340339	23.09842	.5882797
Stddev	.0578157	.184813	.0787672	.168353	.0642813	.35456	.0096764
%RSD	9.053940	12.36323	8.943293	11.35759	14.81020	1.534978	1.644867
#1	.5809999	1.310443	.8022834	1.314083	.3694503	23.02633	.5844124
#2	.6380812	1.494072	.8801231	1.482024	.4346430	22.78545	.5811350
#3	.6966283	1.680066	.9598141	1.650789	.4980085	23.48348	.5992917

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1446656	.1597472	10.71913	.3567688	.1745604	.2931332	10.76182
Stddev	.0050066	.0140173	.12009	.0103164	.0141488	.0219673	.09400
%RSD	3.460846	8.774675	1.120349	2.891628	8.105405	7.493969	.8734263
#1	.1409930	.1455636	10.66534	.3469385	.1602378	.2705394	10.66790
#2	.1426353	.1600861	10.63534	.3558570	.1749145	.2944449	10.76166
#3	.1503684	.1735920	10.85671	.3675108	.1885289	.3144152	10.85590

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5082718	4.009992	.4463169	.2101758	3.167352	.2411743	.2883263
Stddev	.0077704	.058353	.0352958	.0031441	.019103	.0043201	.0061742
%RSD	1.528791	1.455189	7.908237	1.495918	.6031182	1.791260	2.141408
#1	.5068806	3.999142	.4109060	.2076647	3.154070	.2388608	.2834972
#2	.5012909	3.957826	.4465482	.2091609	3.158742	.2385037	.2861987
#3	.5166438	4.073009	.4814965	.2137020	3.189245	.2461584	.2952830

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.227431	.1884270	.2313906	.3819918	.3249032	3.553708	5.028023
Stddev	.017637	.0077699	.0316997	.0485073	.0031957	.010610	.412904
%RSD	.2440239	4.123562	13.69965	12.69851	.9835815	.2985498	8.212052
#1	7.243511	.1826429	.2005660	.3346610	.3250525	3.543947	4.608417
#2	7.208568	.1853794	.2297074	.3797189	.3216355	3.552177	5.041772
#3	7.230214	.1972587	.2638984	.4315956	.3280217	3.565000	5.433881

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-07 Acquired: 8/8/2024 16:28:27 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.258089	.1293124	.2185146
Stddev	.009820	.0029021	.0038960
%RSD	.7805562	2.244213	1.782943
#1	1.268767	.1291382	.2168749
#2	1.256054	.1265014	.2157064
#3	1.249445	.1322977	.2229624

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3110.129	111626.9	15186.38	4160.431	5819.894
Stddev	5.532	221.0	162.20	24.677	10.808
%RSD	.1778761	.1980001	1.068068	.5931278	.1857090
#1	3116.472	111802.1	15136.02	4166.517	5832.320
#2	3107.614	111700.1	15367.79	4181.494	5814.680
#3	3106.302	111378.6	15055.33	4133.280	5812.681

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-05A Acquired: 8/8/2024 16:32:36 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4052319	.8312653	.5802974	.8922847	.2332386	22.03642	.5262488
Stddev	.1103088	.2857519	.1415290	.2713807	.0608559	.08852	.0020941
%RSD	27.22115	34.37554	24.38904	30.41413	26.09167	.4016845	.3979380
#1	.3017401	.5679393	.4477926	.6402511	.1747769	21.93441	.5252251
#2	.3926729	.7907402	.5637110	.8570354	.2287040	22.09298	.5286579
#3	.5212827	1.135116	.7293888	1.179568	.2962350	22.08186	.5248635

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0741698	.1024748	11.94476	.2186596	.1134809	.2044912	10.45223
Stddev	.0009931	.0271879	.04323	.0018644	.0291205	.0448210	.00989
%RSD	1.338902	26.53130	.3619099	.8526524	25.66115	21.91832	.0946183
#1	.0737267	.0768951	11.91460	.2191011	.0860487	.1622866	10.46344
#2	.0734755	.0995026	11.92540	.2166140	.1103564	.1996511	10.44849
#3	.0753073	.1310267	11.99429	.2202636	.1440378	.2515359	10.44476

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4310713	3.713203	.2956492	.1908141	2.670674	.1536246	.2382371
Stddev	.0017864	.029885	.0721336	.0005100	.056509	.0045369	.0018087
%RSD	.4144167	.8048202	24.39837	.2672970	2.115914	2.953217	.7592203
#1	.4322198	3.721347	.2274357	.1910310	2.725533	.1585812	.2380080
#2	.4319808	3.738171	.2883623	.1902315	2.673842	.1526151	.2365538
#3	.4290131	3.680090	.3711497	.1911798	2.612648	.1496775	.2401495

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.339394	.0891565	.1255030	.2157686	.3198041	4.770407	3.414496
Stddev	.213717	.0006060	.0302313	.0474598	.0031101	.033110	.826210
%RSD	4.002641	.6797440	24.08807	21.99568	.9725000	.6940710	24.19712
#1	5.565511	.0884942	.0965361	.1706024	.3214573	4.805491	2.632042
#2	5.311942	.0892919	.1231160	.2114734	.3217385	4.739709	3.333021
#3	5.140730	.0896834	.1568571	.2652300	.3162166	4.766021	4.278424

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3475-05A Acquired: 8/8/2024 16:32:36 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.351337	.0758951	.1614279
Stddev	.011121	.0046442	.0025697
%RSD	.8229913	6.119240	1.591879
#1	1.345224	.0800080	.1634739
#2	1.344613	.0768189	.1622661
#3	1.364174	.0708584	.1585437

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3021.476	107786.3	15349.71	4087.747	5615.207
Stddev	26.268	490.1	40.35	24.802	54.313
%RSD	.8693831	.4546613	.2628771	.6067400	.9672547
#1	3047.014	107580.3	15362.22	4099.561	5661.977
#2	3022.878	108345.8	15382.32	4104.434	5628.009
#3	2994.534	107432.9	15304.58	4059.247	5555.637

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3483-01 Acquired: 8/8/2024 16:36:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0297104	-.004814	.2649972	-.017521	-.001383	87.53810	.5697686
Stddev	.0015156	.000537	.0003197	.002543	.000967	.14252	.0016019
%RSD	5.101369	11.15179	.1206605	14.51690	69.96376	.1628035	.2811435
#1	.0291753	-.004217	.2646446	-.018596	-.001392	87.41302	.5679816
#2	.0285348	-.004967	.2652685	-.019350	-.000410	87.50802	.5702487
#3	.0314210	-.005257	.2650784	-.014616	-.002345	87.69325	.5710755

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050826	.0091545	50.45257	.1546723	.0731369	.2339178	150.2537
Stddev	.0000618	.0001563	.12049	.0002906	.0004119	.0004011	.4936
%RSD	1.216493	1.706809	.2388126	.1878546	.5632420	.1714867	.3285172
#1	.0050859	.0090738	50.31896	.1546561	.0735414	.2338557	150.5033
#2	.0050191	.0090552	50.48580	.1549706	.0727180	.2335513	149.6851
#3	.0051426	.0093346	50.55296	.1543901	.0731512	.2343463	150.5727

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.558210	34.14384	.1357841	.0037364	3.123142	.2525282	.5005604
Stddev	.005804	.04196	.0004011	.0001206	.005709	.0012229	.0019013
%RSD	.1631171	.1228872	.2954251	3.227385	.1827815	.4842460	.3798314
#1	3.555574	34.19127	.1355143	.0038553	3.117625	.2527809	.5016768
#2	3.554191	34.11158	.1355928	.0036142	3.122776	.2536050	.4983651
#3	3.564864	34.12867	.1362450	.0037397	3.129024	.2511988	.5016393

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.50026	.0628434	.0029395	.0128639	3.454154	6.390632	4.910218
Stddev	.04484	.0016200	.0001580	.0006176	.010454	.011435	.004091
%RSD	.3899315	2.577779	5.376922	4.800660	.3026379	.1789313	.0833095
#1	11.54603	.0629988	.0030575	.0132230	3.442191	6.401064	4.907572
#2	11.45641	.0611514	.0027599	.0132179	3.458740	6.378406	4.908152
#3	11.49835	.0643801	.0030011	.0121508	3.461531	6.392427	4.914930

Sample Name: P3483-01 Acquired: 8/8/2024 16:36:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.842050	.0967830	.0363029
Stddev	.017835	.0021547	.0006718
%RSD	.6275245	2.226275	1.850680
#1	2.838839	.0952574	.0355658
#2	2.826039	.0958438	.0368809
#3	2.861272	.0992479	.0364621

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3256.673	115536.2	15931.05	4325.734	5406.158
Stddev	9.670	195.0	29.53	18.435	10.546
%RSD	.2969201	.1687604	.1853647	.4261793	.1950794
#1	3247.444	115548.7	15965.09	4315.303	5399.975
#2	3266.730	115724.6	15915.77	4347.020	5418.335
#3	3255.845	115335.3	15912.28	4314.879	5400.164

Sample Name: CCV04 Acquired: 8/8/2024 16:41:02 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.980391	4.958979	4.842780	5.037585	5.004623	9.885396	10.00845
Stddev	.032544	.055642	.031266	.047220	.038810	.036940	.04681
%RSD	.6534453	1.122038	.6456110	.9373603	.7754775	.3736791	.4677430
#1	4.964065	4.926337	4.827478	5.011921	4.988011	9.913127	10.05463
#2	4.959243	4.927374	4.822113	5.008755	4.976883	9.843463	10.00970
#3	5.017867	5.023226	4.878749	5.092080	5.048973	9.899597	9.96103

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2409850	2.417319	23.97505	.9607244	2.410897	1.239329	4.716072
Stddev	.0009675	.016678	.08511	.0063252	.017749	.007964	.031829
%RSD	.4014613	.6899406	.3549750	.6583805	.7362192	.6425683	.6749028
#1	.2408582	2.409130	23.88799	.9547730	2.404041	1.235069	4.685980
#2	.2420095	2.406319	23.97911	.9673667	2.397597	1.234403	4.712845
#3	.2400871	2.436509	24.05806	.9600336	2.431052	1.248517	4.749392

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.441945	24.16116	2.422186	1.193429	23.87487	2.466761	2.408024
Stddev	.003322	.07312	.016835	.002890	.12851	.010987	.009987
%RSD	.1360313	.3026260	.6950137	.2421173	.5382670	.4453966	.4147526
#1	2.439878	24.10404	2.412931	1.191333	23.82312	2.464535	2.405462
#2	2.440180	24.13589	2.412010	1.196725	23.78031	2.457057	2.419043
#3	2.445777	24.24357	2.441618	1.192228	24.02119	2.478690	2.399568

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.73037	4.907124	4.912003	4.845219	4.885404	4.724864	4.972499
Stddev	.12446	.019633	.032820	.039923	.014250	.053766	.037545
%RSD	.5244560	.4000935	.6681578	.8239572	.2916797	1.137928	.7550537
#1	23.63070	4.913533	4.897348	4.823217	4.887786	4.679806	4.939704
#2	23.69054	4.922751	4.889064	4.821139	4.870113	4.710407	4.964340
#3	23.86986	4.885087	4.949598	4.891302	4.898312	4.784381	5.013452

Sample Name: CCV04 Acquired: 8/8/2024 16:41:02 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.837473	5.014948	4.974888
Stddev	.048446	.020281	.041361
%RSD	1.001463	.4044034	.8313951
#1	4.806685	5.024281	4.975971
#2	4.812420	4.991681	5.015697
#3	4.893315	5.028882	4.932996

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2823.241	105500.0	14649.23	3979.633	5131.502
Stddev	19.610	296.8	56.93	12.487	37.687
%RSD	.6945792	.2813032	.3886274	.3137842	.7344281
#1	2837.491	105659.4	14635.57	3972.303	5154.816
#2	2831.355	105157.6	14600.37	3972.544	5151.667
#3	2800.876	105683.0	14711.75	3994.051	5088.022

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB04 Acquired: 8/8/2024 16:45:21 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007927	-.001356	-.000571	-.000503	-.001586	-.001314	-.003844
Stddev	.0007747	.000864	.000507	.000928	.000332	.003790	.000196
%RSD	97.73261	63.76350	88.88504	184.4742	20.91995	288.3911	5.087295
#1	.0014722	-.002343	-.000551	-.000469	-.001909	-.005634	-.004002
#2	.0009568	-.000989	-.001088	-.001448	-.001604	.000234	-.003625
#3	-.000051	-.000735	-.000074	.000408	-.001246	.001457	-.003904

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000056	.0001560	.0047189	-.000082	.0000585	-.000071	-.004178
Stddev	.000031	.0000564	.0076490	.000228	.0000499	.000078	.001141
%RSD	55.57100	36.15361	162.0926	276.6565	85.35594	109.9739	27.32030
#1	-.000029	.0001509	.0020670	-.000317	.0000269	-.000061	-.003048
#2	-.000090	.0001023	.0133409	-.000067	.0001161	.000002	-.005331
#3	-.000048	.0002148	-.001251	.000138	.0000325	-.000153	-.004155

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002320	.0036403	.0000929	.0001045	.0066653	-.000306	-.000059
Stddev	.0001552	.0181988	.0000520	.0002825	.0168981	.000135	.000058
%RSD	66.86695	499.9318	55.99987	270.2711	253.5225	43.97614	97.61249
#1	.0001099	.0037242	.0001525	.0003693	-.012409	-.000380	-.000053
#2	.0004066	.0217970	.0000564	-.000193	.019763	-.000387	-.000120
#3	.0001796	-.014600	.0000698	.000137	.012642	-.000151	-.000005

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0234404	.0058844	.0003881	.0004709	.0002914	-.001048	.0024232
Stddev	.0331974	.0004832	.0002010	.0003202	.0006199	.010328	.0008609
%RSD	141.6250	8.211415	51.79633	67.99989	212.7197	985.9971	35.52907
#1	-.014871	.0056004	.0004020	.0007872	.0005359	.006620	.0022815
#2	.043705	.0064423	.0005818	.0001468	-.000413	-.012792	.0033462
#3	.041487	.0056104	.0001805	.0004788	.000752	.003030	.0016419

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB04 Acquired: 8/8/2024 16:45:21 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB04 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0010749	-.001128	.0001141
Stddev	.0025101	.000450	.0000557
%RSD	233.5147	39.88593	48.85864
#1	-.001571	-.001641	.0001223
#2	.003423	-.000944	.0001652
#3	.001372	-.000799	.0000547

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3052.380	104822.4	14396.08	4015.552	5881.401
Stddev	14.269	237.5	32.19	13.282	28.582
%RSD	.4674553	.2265873	.2235752	.3307550	.4859710
#1	3040.459	104864.1	14432.54	4029.028	5868.941
#2	3068.190	104566.8	14384.09	4015.154	5914.097
#3	3048.491	105036.3	14371.61	4002.474	5861.164

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3484-01 Acquired: 8/8/2024 16:49:48 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0319439	-.005818	.2366807	-.022900	-.002269	84.21280	.5140452
Stddev	.0001994	.000765	.0012903	.001583	.001090	.49179	.0010788
%RSD	.6242525	13.15474	.5451487	6.912002	48.06048	.5839855	.2098684
#1	.0321615	-.006659	.2352068	-.021095	-.002365	84.72881	.5145758
#2	.0317697	-.005163	.2372290	-.023554	-.003307	83.74947	.5128039
#3	.0319007	-.005632	.2376062	-.024052	-.001133	84.16011	.5147560

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062327	.0107389	25.41486	.1754967	.0885796	.2258467	180.9159
Stddev	.0000743	.0001086	.08399	.0006029	.0003798	.0010821	.9235
%RSD	1.191771	1.011536	.3304758	.3435211	.4287297	.4791497	.5104742
#1	.0063170	.0108449	25.42990	.1758556	.0881416	.2252194	180.0991
#2	.0062041	.0106278	25.32437	.1758338	.0887802	.2252244	181.9180
#3	.0061770	.0107441	25.49031	.1748007	.0888170	.2270962	180.7306

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.988280	28.30094	.1370675	.0046969	1.763113	.3368710	.4493795
Stddev	.018770	.09643	.0004038	.0002851	.013617	.0046321	.0014211
%RSD	.4706177	.3407439	.2945751	6.070055	.7723549	1.375035	.3162346
#1	4.003921	28.41049	.1366349	.0045334	1.759267	.3417032	.4490019
#2	3.967467	28.22891	.1371334	.0045312	1.778239	.3324690	.4509512
#3	3.993452	28.26341	.1374343	.0050261	1.751832	.3364408	.4481853

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.003367	.0385817	.0024214	.0129584	3.586448	5.373473	4.421857
Stddev	.021732	.0027571	.0001257	.0003875	.022806	.044593	.015432
%RSD	.3619927	7.146178	5.192056	2.990589	.6358933	.8298763	.3490034
#1	6.023313	.0374070	.0022949	.0125671	3.605444	5.360197	4.406537
#2	6.006582	.0417316	.0025464	.0129661	3.561155	5.423196	4.437400
#3	5.980207	.0366064	.0024231	.0133420	3.592746	5.337025	4.421635

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3484-01 Acquired: 8/8/2024 16:49:48 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.319742	.0904792	-.070431
Stddev	.009284	.0004387	.001478
%RSD	.7034766	.4848315	2.098137
#1	1.311285	.0906938	-.069012
#2	1.329676	.0899746	-.071961
#3	1.318266	.0907693	-.070320

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3171.905	120602.2	16517.26	4481.762	5136.669
Stddev	2.496	699.2	122.68	13.951	5.703
%RSD	.0786994	.5797291	.7427360	.3112807	.1110280
#1	3170.451	120469.8	16376.95	4479.010	5138.286
#2	3170.476	119978.7	16604.28	4469.393	5130.332
#3	3174.787	121358.1	16570.56	4496.884	5141.390

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3485-01 Acquired: 8/8/2024 16:54:01 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0146665	-.002935	.1516000	-.009240	-.001629	34.76507	.2677002
Stddev	.0009237	.000746	.0022503	.001582	.000482	.08243	.0003779
%RSD	6.298231	25.41510	1.484366	17.12433	29.57503	.2371125	.1411812
#1	.0152198	-.002639	.1540810	-.010287	-.002161	34.69662	.2676223
#2	.0151795	-.002382	.1496907	-.007420	-.001506	34.85657	.2681110
#3	.0136001	-.003783	.1510282	-.010014	-.001221	34.74201	.2673673

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026179	.0032435	30.02945	.0660228	.0328096	.0881992	83.46330
Stddev	.0000467	.0000283	.09860	.0003251	.0002849	.0006030	.42355
%RSD	1.783425	.8713879	.3283338	.4924496	.8682767	.6836898	.5074740
#1	.0025761	.0032111	29.94198	.0663976	.0330759	.0885704	83.83473
#2	.0026093	.0032562	30.13630	.0658158	.0328436	.0885239	83.00203
#3	.0026682	.0032633	30.01008	.0658551	.0325092	.0875035	83.55313

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.157444	13.66739	.0652242	.0019740	.4721779	.0971450	.2588797
Stddev	.004838	.08993	.0007942	.0003152	.0134455	.0009516	.0016269
%RSD	.2242493	.6580139	1.217628	15.96809	2.847544	.9795108	.6284264
#1	2.152060	13.59033	.0661229	.0022964	.4790793	.0967021	.2596183
#2	2.161428	13.76621	.0649330	.0016666	.4566832	.0982373	.2600063
#3	2.158843	13.64564	.0646167	.0019590	.4807712	.0964957	.2570146

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.040910	.0133571	.0013438	.0065173	1.292781	3.743830	2.481550
Stddev	.054229	.0024856	.0002045	.0004895	.004180	.009218	.013337
%RSD	1.783306	18.60927	15.21843	7.509940	.3233531	.2462313	.5374602
#1	3.098017	.0156051	.0011078	.0068799	1.294941	3.741360	2.496664
#2	2.990111	.0106877	.0014686	.0067115	1.295440	3.754032	2.476557
#3	3.034603	.0137784	.0014551	.0059606	1.287963	3.736098	2.471430

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3485-01 Acquired: 8/8/2024 16:54:01 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5523496	.0408137	.0593134
Stddev	.0045700	.0011118	.0003454
%RSD	.8273730	2.724104	.5824012
#1	.5573911	.0398073	.0589506
#2	.5511784	.0420072	.0596384
#3	.5484791	.0406266	.0593513

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3181.556	109703.4	15043.91	4121.723	5722.957
Stddev	10.236	672.7	98.42	22.855	24.991
%RSD	.3217396	.6132278	.6542277	.5544984	.4366828
#1	3173.710	108980.8	15071.60	4102.340	5694.474
#2	3193.135	109817.6	14934.61	4115.905	5741.211
#3	3177.824	110311.6	15125.52	4146.925	5733.187

Sample Name: P3493-01 Acquired: 8/8/2024 16:58:17 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0075498	-.004350	.2598347	-.005416	.0017677	2.828910	1.832587
Stddev	.0002115	.001133	.0033800	.001314	.0008200	.020971	.005514
%RSD	2.801166	26.04207	1.300807	24.26236	46.38817	.7413069	.3008873
#1	.0077902	-.005456	.2573636	-.005872	.0008901	2.840881	1.828998
#2	.0073924	-.003192	.2584541	-.003935	.0025143	2.841152	1.838936
#3	.0074668	-.004401	.2636864	-.006442	.0018987	2.804695	1.829827

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006391	.1403230	6.433750	.1027476	.0192678	.8298590	62.98492
Stddev	.0000161	.0015838	.010822	.0005700	.0002839	.0081990	.43526
%RSD	2.512151	1.128686	.1682107	.5547617	1.473465	.9880027	.6910487
#1	.0006549	.1387752	6.445469	.1022546	.0189454	.8212137	62.51680
#2	.0006395	.1402534	6.431647	.1026166	.0193778	.8308398	63.06057
#3	.0006228	.1419405	6.424133	.1033718	.0194802	.8375235	63.37739

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4564762	1.034021	.5062178	.0118866	7.757374	.0126295	1.546744
Stddev	.0013877	.021805	.0055402	.0000343	.052688	.0017522	.005623
%RSD	.3040124	2.108802	1.094425	.2888939	.6792039	13.87400	.3635066
#1	.4565823	1.049446	.5004777	.0119252	7.700923	.0146338	1.541425
#2	.4578078	1.009074	.5066421	.0118594	7.765951	.0118668	1.546179
#3	.4550384	1.043543	.5115336	.0118752	7.805248	.0113879	1.552628

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1742616	.0383901	.0207574	.0925031	.7155099	.8628383	.1721284
Stddev	.0106818	.0012720	.0004114	.0008741	.0093789	.0032335	.0023012
%RSD	6.129753	3.313272	1.981725	.9449820	1.310803	.3747552	1.336905
#1	.1814731	.0374859	.0202828	.0915770	.7059137	.8593372	.1696555
#2	.1619901	.0378399	.0210117	.0926187	.7159608	.8657125	.1742070
#3	.1793217	.0398446	.0209777	.0933137	.7246553	.8634650	.1725225

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3493-01 Acquired: 8/8/2024 16:58:17 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.5698531	.0053426	-.003598
Stddev	.0038366	.0013130	.000441
%RSD	.6732617	24.57598	12.25789
#1	.5667976	.0044803	-.003138
#2	.5686028	.0068537	-.003639
#3	.5741589	.0046939	-.004018

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3016.623	108297.8	15523.48	4027.695	5813.417
Stddev	20.512	143.8	127.14	10.405	36.886
%RSD	.6799757	.1328185	.8189944	.2583470	.6345045
#1	3040.242	108347.3	15398.40	4025.702	5852.932
#2	3006.340	108410.4	15519.46	4038.952	5807.426
#3	3003.285	108135.8	15652.57	4018.429	5779.893

Sample Name: P3493-02 Acquired: 8/8/2024 17:02:33 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111552	-.003852	.2061855	-.008418	.0010980	4.058523	2.816881
Stddev	.0004407	.000226	.0027234	.000831	.0009979	.015671	.008321
%RSD	3.950287	5.873714	1.320859	9.877276	90.89141	.3861218	.2953837
#1	.0112758	-.003598	.2065754	-.007598	.0015679	4.076438	2.824711
#2	.0115230	-.003924	.2086930	-.009260	-.000048	4.051773	2.808144
#3	.0106668	-.004033	.2032882	-.008396	.001774	4.047358	2.817787

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008209	.0708019	7.460672	.1127713	.0199651	.7027971	76.84064
Stddev	.0000143	.0004017	.057983	.0010783	.0001289	.0024042	1.06464
%RSD	1.744126	.5673619	.7771881	.9562157	.6454607	.3420860	1.385521
#1	.0008367	.0705818	7.523804	.1138384	.0201021	.7013686	77.82081
#2	.0008088	.0712655	7.448416	.1127935	.0199470	.7055728	76.99314
#3	.0008171	.0705583	7.409797	.1116820	.0198463	.7014498	75.70797

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6047921	1.120643	.2826686	.0127263	8.340864	.0160043	1.904146
Stddev	.0018113	.027058	.0025989	.0002764	.101953	.0021337	.025577
%RSD	.2994847	2.414538	.9194149	2.171790	1.222332	13.33228	1.343242
#1	.6068349	1.143489	.2818272	.0130287	8.411400	.0179248	1.921769
#2	.6033823	1.090762	.2855839	.0124869	8.387223	.0137074	1.915860
#3	.6041591	1.127677	.2805946	.0126632	8.223969	.0163807	1.874810

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2549934	.0471597	.0250079	.1064502	.9268156	1.018430	.1967199
Stddev	.0166318	.0015950	.0004083	.0007033	.0068447	.023195	.0022805
%RSD	6.522445	3.382079	1.632811	.6606543	.7385199	2.277566	1.159262
#1	.2393726	.0489351	.0246803	.1059041	.9345756	1.031266	.1964056
#2	.2724791	.0466962	.0254654	.1072437	.9242343	1.032370	.1991412
#3	.2531286	.0458479	.0248779	.1062028	.9216368	.991654	.1946128

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3493-02 Acquired: 8/8/2024 17:02:33 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7234106	.0065154	.0071032
Stddev	.0040794	.0022562	.0009176
%RSD	.5639090	34.62919	12.91749
#1	.7257458	.0039544	.0065279
#2	.7257859	.0082100	.0066204
#3	.7187002	.0073818	.0081614

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2943.306	105721.0	14566.40	3922.292	5626.348
Stddev	14.007	1444.7	56.61	57.032	34.367
%RSD	.4758965	1.366483	.3886417	1.454058	.6108235
#1	2949.777	104570.7	14501.35	3895.627	5642.086
#2	2927.233	105250.0	14593.31	3883.476	5586.931
#3	2952.908	107342.4	14604.53	3987.772	5650.029

Sample Name: PB162541BL Acquired: 8/8/2024 17:06:50 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000508	-.001079	-.000334	.0004347	-.000675	-.003776	-.005075
Stddev	.001417	.000449	.001135	.0009186	.000496	.004913	.000520
%RSD	278.9933	41.62431	340.1486	211.3330	73.42309	130.1125	10.24713
#1	.000420	-.000584	.000953	-.000218	-.000429	-.009195	-.004793
#2	.000195	-.001459	-.000761	.001485	-.001246	.000387	-.004758
#3	-.002138	-.001193	-.001194	.000036	-.000351	-.002519	-.005676

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000012	.0000740	.0027857	-.000063	-.000035	-.000058	.0016856
Stddev	.000019	.0000402	.0032418	.000062	.000139	.000313	.0016114
%RSD	154.6779	54.31688	116.3729	98.29562	395.9522	544.4884	95.59614
#1	-.000030	.0001203	-.000951	-.000053	-.000077	.000216	.0030569
#2	-.000013	.0000547	.004465	-.000007	-.000148	-.000399	-.000089
#3	.000007	.0000471	.004844	-.000129	.000120	.000011	.002089

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002029	-.003782	.0000554	.0002673	-.024246	.0003544	.0001552
Stddev	.0001190	.020278	.0003323	.0000986	.007957	.0016318	.0001265
%RSD	58.63125	536.1492	599.8462	36.89614	32.81715	460.4172	81.53663
#1	.0000685	-.026945	.0001640	.0002578	-.030245	-.000119	.0002455
#2	.0002949	.004829	.0003198	.0001737	-.015220	-.000988	.0000106
#3	.0002452	.010769	-.000318	.0003703	-.027274	.002171	.0002094

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.025460	.0005808	.0001181	.0004187	-.000140	-.000590	.0024753
Stddev	.008742	.0003207	.0001055	.0005400	.000980	.012175	.0008771
%RSD	34.33428	55.22326	89.32504	128.9777	698.8248	2064.277	35.43257
#1	-.015554	.0005130	.0001226	.0007558	.000731	.013040	.0018518
#2	-.028737	.0009300	.0000104	-.000204	-.001200	-.004421	.0020959
#3	-.032090	.0002994	.0002212	.000704	.000048	-.010388	.0034782

Sample Name: PB162541BL Acquired: 8/8/2024 17:06:50 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000566	-.002198	.0000094
Stddev	.001860	.001741	.0000313
%RSD	328.5698	79.22102	331.5020
#1	.000276	-.004092	-.000023
#2	.000724	-.000667	.000040
#3	-.002699	-.001834	.000012

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2919.899	106479.1	14772.59	4078.391	5479.142
Stddev	22.641	867.3	81.20	37.639	36.149
%RSD	.7754111	.8144932	.5496460	.9228982	.6597637
#1	2918.269	105687.9	14741.46	4053.978	5485.566
#2	2943.311	107406.3	14864.75	4121.738	5511.649
#3	2898.117	106343.0	14711.57	4059.456	5440.212

Sample Name: PB162541BS Acquired: 8/8/2024 17:11:18 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7366768	1.875868	.9205332	1.855732	.7742112	2.050186
Stddev	.0039078	.029236	.0020611	.000507	.0024992	.013605
%RSD	.5304652	1.558552	.2239034	.0273360	.3228082	.6635795
#1	.7374711	1.877326	.9185516	1.856078	.7769578	2.063276
#2	.7324329	1.904348	.9226655	1.855149	.7720708	2.051162
#3	.7401264	1.845930	.9203826	1.855967	.7736051	2.036119

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1974542	.2066556	.1813105	1.029171	.3951572	.1870911
Stddev	.0003266	.0005507	.0006647	.011149	.0011221	.0005378
%RSD	.1654260	.2664804	.3666144	1.083332	.2839729	.2874294
#1	.1976904	.2060727	.1807605	1.018053	.3953844	.1865651
#2	.1975907	.2071671	.1820491	1.040352	.3961484	.1876399
#3	.1970814	.2067271	.1811218	1.029107	.3939389	.1870685

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2956520	2.821372	.2047024	1.966631	.4741634	.0725616
Stddev	.0007141	.025334	.0020382	.005213	.0010155	.0008563
%RSD	.2415381	.8979228	.9956936	.2650735	.2141647	1.180166
#1	.2958425	2.847440	.2050743	1.960616	.4731631	.0733660
#2	.2948619	2.819834	.2065290	1.969856	.4751935	.0726574
#3	.2962515	2.796842	.2025038	1.969420	.4741337	.0716614

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.757863	.3026471	.2042304	9.132087	.3078280	.3930041
Stddev	.028017	.0028759	.0006976	.077473	.0019680	.0001688
%RSD	1.015910	.9502667	.3415545	.8483578	.6393197	.0429407
#1	2.782249	.3050536	.2050008	9.190965	.3075647	.3930720
#2	2.764081	.3034257	.2040487	9.160976	.3060048	.3931283
#3	2.727259	.2994620	.2036416	9.044321	.3099143	.3928119

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: PB162541BS Acquired: 8/8/2024 17:11:18 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6594478	.2004892	F .7327661	5.420356	F -.006893	.1909666
Stddev	.0017070	.0001610	.0101485	.020064	.001527	.0024115
%RSD	.2588532	.0803016	1.384958	.3701600	22.15917	1.262805
#1	.6599377	.2003909	.7361866	5.398682	-.005129	.1892255
#2	.6608563	.2004017	.7407624	5.438281	-.007746	.1937192
#3	.6575494	.2006750	.7213493	5.424105	-.007802	.1899553

Elem	Sr4077
Units	ppm
Avg	.1999651
Stddev	.0012399
%RSD	.6200608
#1	.2006810
#2	.2006810
#3	.1985334

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3021.474	104688.0	14047.10	4042.301	5695.515
Stddev	8.221	396.5	39.03	22.111	2.468
%RSD	.2720858	.3787376	.2778292	.5469862	.0433239
#1	3014.069	104562.6	14078.38	4018.437	5698.155
#2	3030.320	104369.4	14003.37	4046.372	5693.267
#3	3020.034	105132.0	14059.55	4062.093	5695.122

Sample Name: P3491-01 Acquired: 8/8/2024 17:15:26 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005285	-.007031	.0062435	.0029327	.0001820	-.014584	.2768870
Stddev	.002010	.001624	.0009400	.0008485	.0008500	.009717	.0014925
%RSD	38.03781	23.10460	15.05591	28.93193	467.1104	66.62667	.5390365
#1	-.007606	-.008757	.0066473	.0032050	.0007449	-.014035	.2752670
#2	-.004104	-.005533	.0069141	.0019815	-.000796	-.005153	.2782062
#3	-.004146	-.006802	.0051690	.0036116	.000597	-.024564	.2771877

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000148	.0009471	197.1541	.0019646	.0049261	.0188461	.3852521
Stddev	.000057	.0000978	.8064	.0002275	.0002771	.0003306	.0046387
%RSD	38.13413	10.32128	.4090196	11.58026	5.626208	1.754383	1.204065
#1	-.000188	.0009091	196.3016	.0018403	.0051948	.0185496	.3813115
#2	-.000174	.0008740	197.9047	.0022272	.0046412	.0187862	.3840807
#3	-.000084	.0010581	197.2560	.0018263	.0049423	.0192027	.3903643

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6681874	9.544342	.0110311	-.000253	548.7714	.0011524	1.028685
Stddev	.0032152	.064589	.0003534	.000029	4.4436	.0007376	.006564
%RSD	.4811899	.6767234	3.203559	11.61223	.8097431	64.00593	.6380554
#1	.6651000	9.471049	.0112461	-.000221	546.4246	.0019854	1.025190
#2	.6715168	9.569040	.0106232	-.000278	545.9931	.0008902	1.024607
#3	.6679454	9.592938	.0112239	-.000260	553.8964	.0005818	1.036256

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.848077	.0850516	.0023162	-.001990	-.006404	9.439893	.0097877
Stddev	.027873	.0010932	.0001310	.000474	.000563	.060017	.0001636
%RSD	.4070157	1.285379	5.657512	23.80865	8.794172	.6357772	1.671153
#1	6.815893	.0847484	.0024674	-.002534	-.006711	9.403394	.0098436
#2	6.864329	.0862644	.0022356	-.001666	-.005754	9.407124	.0099161
#3	6.864009	.0841419	.0022456	-.001770	-.006747	9.509161	.0096036

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3491-01 Acquired: 8/8/2024 17:15:26 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	5.952213	.0356734	.7664341
Stddev	.031718	.0011775	.0042597
%RSD	.5328698	3.300654	.5557804
#1	5.923533	.0343213	.7633731
#2	5.946826	.0362256	.7712989
#3	5.986278	.0364733	.7646301

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2652.607	93602.97	13823.24	3454.944	4754.010
Stddev	5.349	428.41	56.44	30.820	15.221
%RSD	.2016451	.4576875	.4082878	.8920681	.3201716
#1	2654.144	93594.04	13877.10	3462.932	4761.456
#2	2657.018	94035.77	13764.53	3480.984	4764.074
#3	2646.657	93179.09	13828.08	3420.916	4736.499

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3491-02 Acquired: 8/8/2024 17:19:55 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004931	-.005246	.0053364	.0054102	.0028062	.2894091	.2794286
Stddev	.000581	.000940	.0014896	.0006235	.0002086	.0022015	.0015215
%RSD	11.78854	17.91857	27.91410	11.52522	7.434156	.7606801	.5445075
#1	-.004992	-.005470	.0036209	.0049198	.0027106	.2898976	.2811842
#2	-.005480	-.004215	.0063025	.0051989	.0030455	.2870044	.2786083
#3	-.004322	-.006054	.0060856	.0061119	.0026625	.2913252	.2784933

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000137	.0100597	15.70283	.0058005	.0008485	.0351290	.6745437
Stddev	.000036	.0001603	.02004	.0004713	.0000362	.0005084	.0020355
%RSD	26.11748	1.593412	.1276147	8.124387	4.270755	1.447192	.3017530
#1	-.000129	.0098850	15.72580	.0053614	.0008150	.0345807	.6735293
#2	-.000176	.0102000	15.69373	.0062984	.0008869	.0352215	.6768870
#3	-.000106	.0100940	15.68895	.0057417	.0008435	.0355847	.6732148

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1458355	2.545033	.0105320	.0005756	645.7016	.0032928	5.383974
Stddev	.0004671	.009917	.0002089	.0001629	4.7007	.0006679	.017830
%RSD	.3202805	.3896794	1.983806	28.30731	.7279957	20.28417	.3311655
#1	.1463565	2.556199	.0102910	.0004071	648.5778	.0040518	5.368192
#2	.1454544	2.537247	.0106611	.0005873	648.2499	.0027945	5.403315
#3	.1456955	2.541654	.0106440	.0007323	640.2770	.0030322	5.380413

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.525743	.1232001	.1638186	.0016948	.0020434	.4746891	1.129399
Stddev	.025468	.0009812	.0001626	.0002548	.0011067	.0071652	.012946
%RSD	1.008356	.7964633	.0992728	15.03372	54.15912	1.509451	1.146272
#1	2.542198	.1238628	.1636454	.0019693	.0020020	.4724633	1.119270
#2	2.496407	.1220728	.1638424	.0014657	.0009580	.4827030	1.124943
#3	2.538624	.1236646	.1639681	.0016496	.0031702	.4689009	1.143985

Sample Name: P3491-02 Acquired: 8/8/2024 17:19:55 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	3.567010	.0188915	.0500895
Stddev	.023952	.0006869	.0001410
%RSD	.6714995	3.635964	.2815346
#1	3.539545	.0196671	.0502445
#2	3.583564	.0186476	.0499687
#3	3.577922	.0183599	.0500554

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2535.647	97493.79	14403.98	3544.234	4548.688
Stddev	4.856	315.40	79.80	22.955	10.440
%RSD	.1914918	.3235089	.5540192	.6476677	.2295122
#1	2537.126	97366.10	14315.71	3530.425	4558.871
#2	2539.592	97262.25	14471.01	3531.544	4549.185
#3	2530.224	97853.01	14425.23	3570.732	4538.009

Sample Name: P3491-03 Acquired: 8/8/2024 17:24:26 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007279	-.006801	.0351571	.0069988	.0020333	.0214687	.4009096
Stddev	.001183	.001296	.0006409	.0010076	.0015762	.0024574	.0022995
%RSD	16.25038	19.05086	1.822931	14.39660	77.51964	11.44635	.5735575
#1	-.008641	-.008269	.0347995	.0060238	.0012415	.0209058	.3986605
#2	-.006505	-.006320	.0347748	.0080361	.0010100	.0193417	.4008120
#3	-.006692	-.005815	.0358970	.0069365	.0038484	.0241588	.4032563

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000223	.0005849	.8777629	.0042074	.0000122	.0104533	.0773335
Stddev	.000025	.0000893	.0052177	.0000967	.0001086	.0005575	.0022114
%RSD	11.24734	15.27532	.5944268	2.299172	891.2014	5.333471	2.859574
#1	-.000218	.0005352	.8727240	.0041829	-.000080	.0100147	.0750349
#2	-.000200	.0005315	.8831426	.0041253	-.000015	.0102644	.0775197
#3	-.000250	.0006880	.8774220	.0043141	.000132	.0110807	.0794460

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092922	.0804109	.0087942	.0003179	688.4180	-.000085	1.391221
Stddev	.0003821	.0209693	.0002058	.0000851	5.1654	.000159	.003885
%RSD	4.111884	26.07769	2.340311	26.77411	.7503240	186.3932	.2792535
#1	.0090566	.1039489	.0090156	.0003174	690.9932	-.000253	1.395245
#2	.0097330	.0735599	.0087584	.0002331	682.4713	.000064	1.390928
#3	.0090869	.0637240	.0086087	.0004033	691.7895	-.000067	1.387492

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8451678	.1142421	.0005809	.0014067	.0004032	.0762834	.1439034
Stddev	.0432228	.0010297	.0000928	.0003697	.0002525	.0058378	.0016945
%RSD	5.114104	.9013197	15.97983	26.28517	62.64013	7.652711	1.177506
#1	.8346773	.1153303	.0005970	.0018108	.0002864	.0754896	.1426295
#2	.8081559	.1141128	.0004811	.0010853	.0002302	.0824774	.1458265
#3	.8926703	.1132831	.0006646	.0013239	.0006930	.0708832	.1432541

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3491-03 Acquired: 8/8/2024 17:24:26 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.539540	-.003053	.0078651
Stddev	.008891	.002141	.0000482
%RSD	.5775163	70.13280	.6123706
#1	1.549806	-.004451	.0078229
#2	1.534271	-.000588	.0078548
#3	1.534545	-.004122	.0079175

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2528.280	97988.81	14678.31	3578.148	4532.110
Stddev	8.801	194.00	58.97	11.830	22.089
%RSD	.3480895	.1979850	.4017489	.3306055	.4873989
#1	2518.418	98080.66	14626.70	3566.797	4510.783
#2	2531.086	97765.94	14665.65	3577.245	4530.657
#3	2535.335	98119.83	14742.58	3590.404	4554.890

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3491-04 Acquired: 8/8/2024 17:29:00 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006853	-.005991	.0079541	.0046510	-.000417	.0183258	.2215509
Stddev	.002802	.000581	.0007735	.0027464	.000979	.0029792	.0001711
%RSD	40.88089	9.703891	9.724496	59.04947	234.8976	16.25694	.0772447
#1	-.008049	-.006198	.0070947	.0046966	-.001314	.0149323	.2216352
#2	-.003652	-.005334	.0081734	.0018821	-.000564	.0195342	.2213539
#3	-.008858	-.006441	.0085943	.0073742	.000628	.0205110	.2216635

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000225	.0002067	1.491266	.0047401	.0000231	.1975213	1.604445
Stddev	.000033	.0000651	.002858	.0001752	.0000472	.0005975	.011123
%RSD	14.84492	31.46824	.1916568	3.696724	204.8851	.3025237	.6932396
#1	-.000261	.0002215	1.493366	.0046321	.0000456	.1977510	1.591608
#2	-.000217	.0001356	1.492421	.0046460	.0000548	.1968430	1.610506
#3	-.000196	.0002631	1.488011	.0049423	-.000031	.1979700	1.611220

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0306433	.1420403	.0063641	.0001595	573.8902	.0008331	.4317979
Stddev	.0002600	.0085693	.0001536	.0001764	7.7078	.0021720	.0007979
%RSD	.8483508	6.032991	2.413632	110.5540	1.343074	260.7106	.1847728
#1	.0305964	.1492069	.0064172	-.000009	579.8383	.0006506	.4320532
#2	.0309235	.1443657	.0064842	.000343	576.6499	-.001242	.4309037
#3	.0304099	.1325483	.0061910	.000144	565.1825	.003091	.4324368

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.558140	.0845953	.0003304	.0014724	.0001534	.1821285	1.315829
Stddev	.019757	.0008961	.0001278	.0002116	.0001489	.0021391	.007026
%RSD	1.267967	1.059231	38.68727	14.37376	97.04715	1.174503	.5339277
#1	1.539074	.0854827	.0003865	.0015355	.0002591	.1819698	1.312363
#2	1.556825	.0846124	.0001841	.0016453	-.000017	.1800731	1.311210
#3	1.578522	.0836909	.0004206	.0012364	.000218	.1843425	1.323914

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3491-04 Acquired: 8/8/2024 17:29:00 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.257801	-.002238	.0084660
Stddev	.010320	.000747	.0000474
%RSD	.8204764	33.39862	.5603125
#1	1.254877	-.002503	.0085100
#2	1.249259	-.001394	.0084724
#3	1.269268	-.002817	.0084157

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2650.094	98747.00	14325.01	3599.496	4800.376
Stddev	13.432	276.08	77.55	10.864	9.301
%RSD	.5068342	.2795870	.5413511	.3018339	.1937657
#1	2634.643	98487.85	14248.01	3593.221	4789.636
#2	2656.659	98715.77	14323.92	3593.224	4805.839
#3	2658.981	99037.37	14403.09	3612.041	4805.653

Sample Name: CCV05 Acquired: 8/8/2024 17:33:31 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.790429	4.797933	4.786380	4.804461	4.865559	9.491667	9.842225
Stddev	.008856	.080396	.018465	.017072	.012848	.036228	.011458
%RSD	.1848700	1.675632	.3857859	.3553430	.2640655	.3816828	.1164215
#1	4.787237	4.757287	4.807625	4.788705	4.856228	9.487686	9.855456
#2	4.783612	4.745977	4.774193	4.802079	4.860236	9.457593	9.835645
#3	4.800439	4.890536	4.777322	4.822600	4.880213	9.529720	9.835574

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2357407	2.370792	23.93529	.9573681	2.376742	1.207543	4.894089
Stddev	.0012479	.009089	.02954	.0037751	.008771	.002211	.034239
%RSD	.5293607	.3833928	.1234054	.3943248	.3690396	.1831342	.6995962
#1	.2358329	2.381285	23.91019	.9532296	2.386731	1.210091	4.879055
#2	.2344492	2.365760	23.92783	.9582515	2.373193	1.206413	4.869939
#3	.2369400	2.365331	23.96784	.9606232	2.370301	1.206125	4.933273

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.402361	23.52667	2.380475	1.202397	24.61792	2.403267	2.429866
Stddev	.008879	.16473	.009037	.003101	.10992	.010178	.005767
%RSD	.3695886	.7001795	.3796422	.2578784	.4465094	.4235272	.2373384
#1	2.404401	23.57046	2.390908	1.202501	24.64858	2.398223	2.434333
#2	2.392640	23.34447	2.375080	1.199246	24.49593	2.396596	2.423355
#3	2.410043	23.66508	2.375437	1.205445	24.70926	2.414983	2.431908

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	24.63807	4.699521	4.893159	4.744146	4.821513	4.799939	4.717256
Stddev	.12809	.012829	.007609	.015218	.017199	.033055	.021748
%RSD	.5199040	.2729904	.1554941	.3207655	.3567152	.6886632	.4610411
#1	24.57799	4.706524	4.891961	4.758301	4.835591	4.780998	4.727981
#2	24.55105	4.684714	4.886220	4.728052	4.802343	4.780712	4.692229
#3	24.78516	4.707324	4.901295	4.746087	4.826606	4.838108	4.731559

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCV05 Acquired: 8/8/2024 17:33:31 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.513147	4.676333	4.932200
Stddev	.007783	.040577	.023435
%RSD	.1724623	.8677081	.4751472
#1	4.510214	4.667306	4.954921
#2	4.507257	4.641029	4.908111
#3	4.521971	4.720663	4.933567

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2930.154	103214.3	15077.29	3893.575	5365.615
Stddev	2.064	408.7	17.66	3.375	8.377
%RSD	.0704487	.3959321	.1171489	.0866786	.1561282
#1	2932.336	103595.4	15089.14	3889.820	5355.962
#2	2929.893	103264.6	15085.73	3896.356	5369.894
#3	2928.233	102782.8	15056.99	3894.549	5370.989

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB05 Acquired: 8/8/2024 17:37:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000258	.0042569	-.000168	.0000624	-.001471	-.003136	-.002674
Stddev	.001851	.0003215	.000087	.0015312	.000679	.000475	.000206
%RSD	716.6652	7.552455	51.89423	2453.233	46.14278	15.15959	7.698863
#1	.000878	.0044997	-.000075	.0018232	-.001974	-.003681	-.002822
#2	.000741	.0038923	-.000181	-.000957	-.001741	-.002807	-.002439
#3	-.002395	.0043788	-.000247	-.000679	-.000699	-.002920	-.002760

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000077	.0001262	-.000326	.0000202	.0000336	.0001718	-.001670
Stddev	.000029	.0000103	.004849	.0001494	.0000497	.0003641	.002951
%RSD	37.65321	8.175344	1486.547	738.8167	148.0996	211.8730	176.7441
#1	-.000060	.0001369	.003786	-.000081	-.000022	.0001609	-.002106
#2	-.000110	.0001163	.000909	-.000050	.000072	.0005413	-.004379
#3	-.000060	.0001255	-.005674	.000192	.000051	-.000187	.001475

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002148	-.009518	.0000325	.0000336	.1601584	.0017170	.0003289
Stddev	.0002431	.011685	.0000601	.0002218	.0066240	.0015223	.0002667
%RSD	113.1585	122.7589	184.7540	659.4796	4.135924	88.65738	81.09957
#1	.0004300	-.022940	.0000070	-.000164	.1560307	.0024730	.0005935
#2	-.000049	-.001612	-.000011	-.000009	.1566457	-.000035	.0000601
#3	.000263	-.004003	.000101	.000274	.1677990	.002713	.0003330

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2996957	.0053193	.0002376	.0003637	-.000136	.0040022	.0006055
Stddev	.0106805	.0002000	.0000963	.0002015	.001652	.0137493	.0002944
%RSD	3.563781	3.759087	40.52178	55.39416	1215.031	343.5408	48.62769
#1	.3035413	.0055501	.0002300	.0003914	-.000533	.0172341	.0009097
#2	.3079209	.0052116	.0001454	.0001499	-.001553	.0049845	.0005848
#3	.2876249	.0051964	.0003375	.0005500	.001679	-.010212	.0003219

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB05 Acquired: 8/8/2024 17:37:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB05 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0001411	.0023694	.0001760
Stddev	.0008189	.0015411	.0000319
%RSD	580.5187	65.03839	18.11478
#1	.0010064	.0006020	.0001560
#2	-.000622	.0034321	.0001592
#3	.000038	.0030742	.0002128

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3087.285	106696.9	14105.97	4059.875	5956.203
Stddev	13.494	694.3	18.77	13.762	21.955
%RSD	.4370933	.6507120	.1330775	.3389694	.3686068
#1	3077.349	107380.6	14096.49	4067.747	5947.271
#2	3102.648	105992.5	14093.83	4043.984	5981.216
#3	3081.857	106717.5	14127.59	4067.893	5940.121

Sample Name: P3491-05 Acquired: 8/8/2024 17:42:17 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005534	-.002879	.0018277	.0061063	-.000359	.0165318	.3230902
Stddev	.000245	.001873	.0014145	.0015711	.001116	.0061073	.0024678
%RSD	4.418409	65.07369	77.39182	25.72979	311.1094	36.94272	.7638203
#1	-.005373	-.000809	.0002700	.0074779	-.000224	.0162695	.3208402
#2	-.005415	-.003369	.0030319	.0043922	.000684	.0227660	.3257296
#3	-.005816	-.004458	.0021813	.0064487	-.001536	.0105599	.3227007

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000211	-.000041	1.567163	.0028510	-.000244	.0148777	.0729704
Stddev	.000029	.000074	.019397	.0001895	.000109	.0005427	.0011535
%RSD	13.82340	180.1681	1.237745	6.645361	44.63938	3.647651	1.580757
#1	-.000219	.000020	1.544780	.0026870	-.000142	.0151446	.0730452
#2	-.000179	-.000020	1.577654	.0028077	-.000359	.0152352	.0717813
#3	-.000236	-.000123	1.579057	.0030584	-.000231	.0142532	.0740846

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0197176	.1859671	.0028467	-.000087	790.1592	.0005676	1.487260
Stddev	.0002901	.0135686	.0002136	.000026	2.9140	.0018154	.004279
%RSD	1.471356	7.296255	7.504974	30.14570	.3687806	319.8076	.2877084
#1	.0195357	.2011803	.0030157	-.000058	788.2883	.0020822	1.482496
#2	.0200522	.1751161	.0029177	-.000108	793.5166	.0010654	1.490775
#3	.0195649	.1816049	.0026066	-.000097	788.6727	-.001445	1.488509

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.400449	.2265472	.0003839	.0022562	-.000046	.4922427	2.610485
Stddev	.008549	.0018446	.0003461	.0004901	.000300	.0013390	.005610
%RSD	.6104257	.8142305	90.14540	21.72300	652.8171	.2720261	.2149046
#1	1.396933	.2244937	.0000151	.0017306	-.000077	.4908148	2.616521
#2	1.394218	.2280637	.0004350	.0027007	.000268	.4924432	2.605431
#3	1.410195	.2270842	.0007017	.0023372	-.000329	.4934702	2.609501

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3491-05 Acquired: 8/8/2024 17:42:17 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	2.299679	-.000750	.0100073
Stddev	.006457	.001262	.0000490
%RSD	.2807622	168.3474	.4894720
#1	2.300335	-.002004	.0099508
#2	2.305783	.000520	.0100360
#3	2.292920	-.000765	.0100352

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2614.491	94122.12	14217.86	3459.794	4699.311
Stddev	15.175	141.65	78.97	4.031	24.162
%RSD	.5804132	.1504925	.5554165	.1165242	.5141663
#1	2597.230	94230.00	14308.48	3461.184	4671.914
#2	2625.734	93961.71	14163.79	3455.252	4717.575
#3	2620.508	94174.64	14181.29	3462.947	4708.446

Sample Name: P3506-02 Acquired: 8/8/2024 17:46:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008128	-.005638	.1391623	.0041113	.0011752	.1743309	.4247744
Stddev	.001645	.002235	.0015185	.0033188	.0008957	.0087572	.0022414
%RSD	20.24097	39.63845	1.091143	80.72378	76.21900	5.023351	.5276784
#1	-.009948	-.004289	.1403747	.0004018	.0015852	.1669631	.4254576
#2	-.007692	-.008218	.1396530	.0051328	.0017924	.1840128	.4222708
#3	-.006745	-.004407	.1374592	.0067994	.0001478	.1720168	.4265947

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000118	.0020159	132.5814	.0018746	.0069659	.0105845	.3310010
Stddev	.000040	.0000381	.6077	.0002046	.0001145	.0000778	.0021185
%RSD	34.04387	1.891444	.4583713	10.91613	1.644080	.7354190	.6400238
#1	-.000118	.0019821	133.2791	.0017403	.0068471	.0106730	.3294131
#2	-.000078	.0020572	132.2981	.0017734	.0069750	.0105270	.3334064
#3	-.000159	.0020083	132.1671	.0021101	.0070756	.0105533	.3301833

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8808500	5.392010	.0096638	-.000176	646.7588	.0016676	1.707122
Stddev	.0041836	.030350	.0002120	.000101	2.4903	.0011217	.004037
%RSD	.4749460	.5628756	2.193343	57.55442	.3850386	67.26709	.2364835
#1	.8855678	5.426979	.0094960	-.000252	649.1418	.0026544	1.704462
#2	.8775918	5.376525	.0095935	-.000061	646.9610	.0019007	1.705137
#3	.8793904	5.372525	.0099020	-.000214	644.1736	.0004476	1.711767

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.013678	.0870572	.0006907	-.001234	-.002879	1.966782	.0281255
Stddev	.034251	.0009451	.0000668	.000485	.000588	.027646	.0023904
%RSD	1.136525	1.085588	9.674067	39.32015	20.43732	1.405650	8.498969
#1	2.974345	.0880221	.0006908	-.000697	-.002780	1.936534	.0285203
#2	3.029766	.0870163	.0006239	-.001640	-.002346	1.973070	.0302939
#3	3.036923	.0861333	.0007575	-.001365	-.003510	1.990743	.0255623

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3506-02 Acquired: 8/8/2024 17:46:49 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.487932	.0190276	.6734112
Stddev	.016853	.0007155	.0023534
%RSD	.3755215	3.760194	.3494776
#1	4.480779	.0195715	.6753313
#2	4.507182	.0182171	.6707858
#3	4.475835	.0192943	.6741165

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2559.430	94349.69	15195.55	3458.584	4551.027
Stddev	13.372	141.86	167.05	7.884	25.871
%RSD	.5224627	.1503507	1.099319	.2279413	.5684735
#1	2551.592	94186.05	15005.89	3452.728	4538.583
#2	2551.828	94425.10	15259.93	3455.477	4533.729
#3	2574.870	94437.90	15320.82	3467.548	4580.769

Sample Name: P3506-02DUP Acquired: 8/8/2024 17:51:18 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006611	-.005721	.1386622	.0042383	.0021497	.1837675	.4182336
Stddev	.000274	.001300	.0016089	.0001743	.0011003	.0079945	.0056524
%RSD	4.142995	22.73105	1.160333	4.111270	51.18546	4.350343	1.351491
#1	-.006335	-.006975	.1370105	.0040515	.0032021	.1826614	.4246922
#2	-.006882	-.004379	.1402246	.0043964	.0010070	.1922575	.4158192
#3	-.006617	-.005809	.1387514	.0042672	.0022400	.1763837	.4141894

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000118	.0020387	134.5529	.0017402	.0068609	.0106019	.2906987
Stddev	.000008	.0000746	1.8477	.0001154	.0002408	.0005479	.0077426
%RSD	6.968979	3.658282	1.373222	6.629692	3.509492	5.168342	2.663444
#1	-.000117	.0020481	136.5393	.0017649	.0068223	.0104596	.2956099
#2	-.000110	.0021081	134.2339	.0018412	.0071186	.0112070	.2817733
#3	-.000126	.0019599	132.8854	.0016144	.0066417	.0101392	.2947128

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9067602	5.721656	.0097240	-.000215	587.8868	.0018394	1.648920
Stddev	.0105624	.061985	.0000543	.000266	9.2522	.0010319	.025484
%RSD	1.164856	1.083333	.5583652	123.8714	1.573811	56.09979	1.545526
#1	.9183940	5.788168	.0097381	.000053	589.4159	.0025569	1.661229
#2	.9041146	5.711297	.0096641	-.000480	577.9653	.0006568	1.619617
#3	.8977720	5.665505	.0097699	-.000219	596.2793	.0023044	1.665913

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.862786	.0983828	.0006040	-.001115	-.002941	1.765771	.0245965
Stddev	.053712	.0016869	.0001183	.000629	.000370	.039928	.0028373
%RSD	1.876199	1.714618	19.58207	56.45422	12.57722	2.261219	11.53546
#1	2.870682	.0991071	.0004894	-.001747	-.003321	1.778550	.0273587
#2	2.805563	.0995866	.0007256	-.001109	-.002918	1.721017	.0247412
#3	2.912112	.0964547	.0005971	-.000488	-.002582	1.797744	.0216896

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3506-02DUP Acquired: 8/8/2024 17:51:18 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.551840	.0214566	.6703910
Stddev	.015682	.0014442	.0073496
%RSD	.3445207	6.730718	1.096320
#1	4.536099	.0212905	.6788689
#2	4.551956	.0201027	.6664858
#3	4.567463	.0229767	.6658184

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2550.275	98607.32	13496.08	3579.102	4515.217
Stddev	2.816	1461.35	238.07	57.506	5.729
%RSD	.1104035	1.481986	1.763974	1.606727	.1268898
#1	2549.011	97574.02	13285.85	3548.022	4517.272
#2	2553.502	100279.3	13447.81	3645.461	4519.635
#3	2548.314	97968.7	13754.58	3543.825	4508.743

Sample Name: P3506-02LX5 Acquired: 8/8/2024 17:55:47 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002413	-.000756	.0274591	-.001301	-.000788	.0346293	.0830887
Stddev	.000381	.001182	.0004076	.001801	.000924	.0083307	.0011545
%RSD	15.78701	156.3270	1.484261	138.3487	117.2460	24.05666	1.389422
#1	-.001985	-.001880	.0273254	-.000775	-.000936	.0266814	.0837977
#2	-.002716	-.000864	.0279167	-.003306	-.001629	.0339104	.0837119
#3	-.002539	.000476	.0271352	.000177	.000201	.0432961	.0817566

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000063	.0004689	28.00736	-.000003	.0014230	.0023882	.0583793
Stddev	.000029	.0000459	.12778	.000225	.0001220	.0002174	.0030781
%RSD	46.48481	9.796109	.4562487	6845.713	8.574491	9.104512	5.272666
#1	-.000095	.0004537	27.93920	.000083	.0012824	.0021465	.0618682
#2	-.000038	.0004326	28.15477	-.000258	.0014855	.0024502	.0572225
#3	-.000055	.0005206	27.92810	.000166	.0015012	.0025679	.0560470

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1872041	1.200932	.0020117	.0001032	121.1582	-.000469	.3394431
Stddev	.0016141	.009829	.0002161	.0002630	.9610	.002277	.0043669
%RSD	.8621988	.8184175	10.74106	254.8762	.7931790	485.4717	1.286487
#1	.1867615	1.211857	.0022483	.0000455	120.5122	-.000689	.3344165
#2	.1889933	1.198129	.0019619	.0003903	120.6999	.001910	.3416099
#3	.1858575	1.192809	.0018248	-.000126	122.2626	-.002628	.3423028

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.093245	.0236402	.0003036	-.000702	-.000896	.3565349	.0031669
Stddev	.067190	.0006606	.0002413	.000338	.000587	.0014227	.0002913
%RSD	6.145930	2.794356	79.46390	48.24316	65.51264	.3990449	9.197647
#1	1.015711	.0228778	.0000253	-.001087	-.000833	.3574283	.0031467
#2	1.129578	.0240439	.0004533	-.000451	-.001512	.3572822	.0034678
#3	1.134445	.0239988	.0004323	-.000568	-.000343	.3548942	.0028863

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3506-02LX5 Acquired: 8/8/2024 17:55:47 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8625713	.0130967	.1350491
Stddev	.0074061	.0007564	.0003976
%RSD	.8586042	5.775593	.2944468
#1	.8687560	.0122336	.1354679
#2	.8543641	.0134128	.1350028
#3	.8645939	.0136439	.1346766

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2879.781	102138.4	13788.83	3823.105	5263.007
Stddev	9.542	809.9	82.76	29.419	19.913
%RSD	.3313516	.7929923	.6002063	.7695148	.3783572
#1	2869.061	103011.5	13787.38	3856.286	5242.752
#2	2882.932	101992.4	13706.80	3812.819	5263.709
#3	2887.349	101411.4	13872.30	3800.209	5282.559

Sample Name: P3506-02MS Acquired: 8/8/2024 18:00:10 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7757165	1.703319	1.027031	1.915633	.8068078	2.178599	.6189013
Stddev	.0033820	.010861	.003078	.011081	.0057651	.016833	.0028279
%RSD	.4359885	.6376631	.2997098	.5784604	.7145526	.7726466	.4569200
#1	.7740841	1.693208	1.023725	1.907109	.8012030	2.179297	.6187850
#2	.7734602	1.701948	1.027554	1.911630	.8064997	2.195071	.6217856
#3	.7796051	1.714800	1.029814	1.928159	.8127208	2.161427	.6161334

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1893813	.1864821	134.3134	.3814012	.1997368	.2903161	3.280468
Stddev	.0005074	.0010510	.3050	.0028977	.0011976	.0018107	.027274
%RSD	.2679427	.5636035	.2270762	.7597504	.5995696	.6237096	.8313995
#1	.1888217	.1853788	134.6606	.3836026	.1986038	.2895868	3.307865
#2	.1898115	.1865960	134.1910	.3781183	.1996168	.2889837	3.253319
#3	.1895107	.1874715	134.0886	.3824828	.2009898	.2923777	3.280220

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.085950	7.410493	.4860298	.0750236	617.3923	.3007552	1.862532
Stddev	.002536	.037921	.0031541	.0000566	1.6662	.0041879	.006170
%RSD	.2335652	.5117173	.6489525	.0754084	.2698707	1.392466	.3312831
#1	1.088806	7.405096	.4829523	.0750297	618.9341	.3045426	1.855647
#2	1.083961	7.375560	.4858816	.0750769	615.6248	.3014655	1.864386
#3	1.085084	7.450823	.4892553	.0749642	617.6179	.2962576	1.867562

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.43682	.3493493	.4180912	.6669485	.1993019	2.712779	6.074148
Stddev	.03467	.0002887	.0023064	.0049788	.0011117	.006141	.040029
%RSD	.2401818	.0826453	.5516573	.7465023	.5578071	.2263744	.6590014
#1	14.47223	.3495563	.4169495	.6612188	.1999223	2.719869	6.034738
#2	14.40293	.3490195	.4165782	.6694056	.1999650	2.709344	6.072939
#3	14.43531	.3494721	.4207458	.6702211	.1980184	2.709125	6.114768

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3506-02MS Acquired: 8/8/2024 18:00:10 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.200663	.2163779	.8717619
Stddev	.025268	.0014075	.0022790
%RSD	.6015228	.6504829	.2614280
#1	4.186360	.2178504	.8736445
#2	4.185792	.2162376	.8724131
#3	4.229838	.2150459	.8692282

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2648.972	95392.75	14173.35	3489.985	4734.835
Stddev	11.438	127.72	21.30	15.255	16.817
%RSD	.4317785	.1338836	.1502920	.4371056	.3551719
#1	2653.260	95320.22	14183.85	3505.795	4748.793
#2	2657.647	95540.22	14148.84	3475.354	4739.547
#3	2636.010	95317.82	14187.36	3488.805	4716.164

Sample Name: P3506-02MSD Acquired: 8/8/2024 18:04:25 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7799877	1.713042	1.038354	1.948752	.8022809	2.152993	.6169747
Stddev	.0015760	.007256	.001993	.005371	.0020611	.005022	.0025140
%RSD	.2020582	.4235589	.1919480	.2756325	.2569071	.2332552	.4074653
#1	.7815710	1.705415	1.036497	1.942580	.8041351	2.156155	.6147901
#2	.7784191	1.713854	1.040460	1.951313	.8000616	2.155622	.6164115
#3	.7799731	1.719858	1.038106	1.952364	.8026459	2.147202	.6197225

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1840770	.1875444	133.8734	.3783669	.2004332	.2945518	3.316976
Stddev	.0008080	.0004232	.7542	.0004515	.0007365	.0000304	.027102
%RSD	.4389500	.2256338	.5633476	.1193163	.3674647	.0103201	.8170636
#1	.1833597	.1870913	133.0056	.3785661	.1995877	.2945832	3.308200
#2	.1849524	.1876124	134.2448	.3778501	.2007761	.2945495	3.295350
#3	.1839188	.1879294	134.3699	.3786845	.2009357	.2945225	3.347379

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.075101	7.294898	.4900551	.0742696	616.8114	.2944559	1.852807
Stddev	.005125	.067264	.0003392	.0000536	1.6064	.0008676	.002037
%RSD	.4766773	.9220694	.0692177	.0722002	.2604286	.2946327	.1099169
#1	1.069655	7.219065	.4896635	.0743007	617.9052	.2954084	1.851444
#2	1.075818	7.347358	.4902458	.0743003	614.9671	.2942481	1.851829
#3	1.079829	7.318270	.4902561	.0742077	617.5617	.2937110	1.855148

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.40237	.3383711	.4106720	.6664145	.1945630	2.718695	6.221661
Stddev	.07559	.0031800	.0004681	.0018276	.0001801	.030484	.019579
%RSD	.5248256	.9398020	.1139845	.2742460	.0925522	1.121291	.3146855
#1	14.40019	.3360091	.4104704	.6648350	.1944517	2.714703	6.199813
#2	14.32789	.3419869	.4112071	.6659922	.1944665	2.690403	6.237615
#3	14.47902	.3371172	.4103384	.6684163	.1947707	2.750978	6.227556

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3506-02MSD Acquired: 8/8/2024 18:04:25 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.359029	.2064004	.8654896
Stddev	.014687	.0003180	.0019140
%RSD	.3369437	.1540722	.2211485
#1	4.342071	.2066926	.8636116
#2	4.367285	.2060617	.8654194
#3	4.367730	.2064468	.8674377

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2590.140	95420.96	14512.07	3513.270	4607.776
Stddev	5.154	396.07	59.06	10.152	8.513
%RSD	.1989895	.4150752	.4069450	.2889532	.1847563
#1	2592.037	95209.34	14550.50	3512.445	4612.489
#2	2584.306	95877.89	14444.07	3523.810	4597.948
#3	2594.077	95175.66	14541.65	3503.557	4612.890

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3506-02A Acquired: 8/8/2024 18:08:38 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8117005	1.730098	1.052811	2.022267	.8358996	2.191983	.6125701
Stddev	.0002081	.012358	.002841	.003680	.0048379	.014644	.0044138
%RSD	.0256414	.7142970	.2698375	.1819834	.5787593	.6680932	.7205363
#1	.8116705	1.717313	1.050347	2.018111	.8312044	2.183006	.6102311
#2	.8119220	1.741979	1.055918	2.025112	.8356258	2.184061	.6098181
#3	.8115090	1.731001	1.052167	2.023578	.8408685	2.208882	.6176611

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1941215	.1909706	133.9692	.3801916	.2028767	.3025385	3.203944
Stddev	.0010486	.0000663	.1208	.0019436	.0001320	.0001921	.003124
%RSD	.5402041	.0347316	.0901772	.5112184	.0650603	.0635013	.0975017
#1	.1944231	.1909423	133.9263	.3791657	.2028495	.3025212	3.201655
#2	.1929551	.1910464	133.8757	.3824332	.2030202	.3027387	3.202673
#3	.1949863	.1909232	134.1056	.3789760	.2027604	.3023556	3.207503

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.084490	7.433166	.4990167	.0750685	604.6205	.2988293	1.851974
Stddev	.002133	.048951	.0003418	.0001795	7.5339	.0048128	.003315
%RSD	.1966557	.6585477	.0684942	.2390829	1.246046	1.610560	.1789712
#1	1.084755	7.425303	.4987330	.0749607	613.0692	.3038397	1.855715
#2	1.082237	7.388623	.4989208	.0752757	598.6009	.2942419	1.849406
#3	1.086478	7.485573	.4993961	.0749693	602.1913	.2984062	1.850800

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.38658	.3563960	.4186481	.6858938	.1984910	2.650322	6.466930
Stddev	.02801	.0019687	.0010852	.0030448	.0005630	.005234	.003204
%RSD	.1946723	.5523951	.2592142	.4439109	.2836628	.1974970	.0495370
#1	14.37717	.3577803	.4175303	.6823988	.1983046	2.650498	6.463598
#2	14.41808	.3541423	.4187167	.6873109	.1980447	2.655466	6.469988
#3	14.36448	.3572655	.4196974	.6879718	.1991236	2.645002	6.467204

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: P3506-02A Acquired: 8/8/2024 18:08:38 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.496963	.2205519	.8647544
Stddev	.008272	.0004104	.0037152
%RSD	.1839524	.1860833	.4296228
#1	4.499493	.2205326	.8622638
#2	4.503676	.2201515	.8629748
#3	4.487722	.2209716	.8690246

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2531.956	96198.35	13911.68	3512.467	4508.021
Stddev	6.191	165.61	60.43	11.123	7.275
%RSD	.2445336	.1721576	.4343879	.3166628	.1613694
#1	2538.446	96139.99	13864.73	3499.660	4513.206
#2	2531.307	96069.82	13979.86	3519.709	4511.153
#3	2526.115	96385.24	13890.44	3518.032	4499.706

Sample Name: PB162562TB Acquired: 8/8/2024 18:12:53 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003405	-.003739	-.000494	.0048388	-.000404	.0013764	-.005582
Stddev	.001894	.000823	.000362	.0019779	.000800	.0047596	.000377
%RSD	55.63540	22.01372	73.26618	40.87670	197.8169	345.8042	6.761542
#1	-.001648	-.004391	-.000082	.0025832	-.000080	.0065327	-.005910
#2	-.005411	-.004012	-.000641	.0062770	-.001315	.0004454	-.005665
#3	-.003156	-.002814	-.000760	.0056562	.000182	-.002849	-.005169

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000141	-.000008	.0037243	.0017195	-.000119	.0003622	.0094265
Stddev	.000031	.000055	.0032429	.0001434	.000033	.0001555	.0029022
%RSD	22.16797	680.8434	87.07348	8.342359	27.72884	42.92267	30.78757
#1	-.000168	-.000008	.0004244	.0018736	-.000100	.0003337	.0073110
#2	-.000150	.000047	.0038416	.0015898	-.000100	.0002230	.0127351
#3	-.000107	-.000063	.0069069	.0016952	-.000157	.0005300	.0082334

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031420	-.009629	.0026274	.0000020	645.4465	.0003840	.0021341
Stddev	.0000905	.002115	.0001060	.0001647	8.1432	.0013595	.0001852
%RSD	2.880054	21.96476	4.033138	8306.700	1.261631	354.0607	8.678578
#1	.0032175	-.009278	.0027413	.0001920	653.7321	-.000882	.0023267
#2	.0030417	-.011898	.0025317	-.000085	645.1538	.001821	.0021184
#3	.0031669	-.007712	.0026092	-.000101	637.4537	.000213	.0019572

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4366791	-.000159	.0002526	.0008126	-.000544	.0046556	.0042091
Stddev	.0247473	.000368	.0001377	.0005102	.000217	.0043215	.0022922
%RSD	5.667149	231.1305	54.53192	62.78009	39.95746	92.82344	54.45755
#1	.4152843	-.000371	.0002894	.0002254	-.000548	.0078181	.0058134
#2	.4637815	-.000372	.0003681	.0010654	-.000324	.0064171	.0052300
#3	.4309715	.000266	.0001002	.0011470	-.000759	-.000268	.0015838

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: PB162562TB Acquired: 8/8/2024 18:12:53 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0316389	-.002245	-.000031
Stddev	.0039223	.000884	.000044
%RSD	12.39725	39.36137	140.5257
#1	.0281065	-.002773	.000002
#2	.0309502	-.001225	-.000080
#3	.0358599	-.002737	-.000015

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2654.645	94582.68	14439.60	3528.744	4732.345
Stddev	18.524	305.32	321.70	11.420	37.279
%RSD	.6977881	.3228126	2.227934	.3236158	.7877532
#1	2667.395	94588.69	14791.91	3524.940	4758.985
#2	2663.142	94274.39	14365.43	3519.712	4748.308
#3	2633.397	94884.95	14161.45	3541.580	4689.743

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: PB162580BL Acquired: 8/8/2024 18:17:30 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000332	-.001209	.0000079	-.000112	-.001077	-.003985	-.002602
Stddev	.001163	.000891	.0010428	.000405	.000734	.009484	.000968
%RSD	350.1060	73.75363	13209.98	360.7900	68.19005	237.9762	37.19278
#1	.000837	-.000448	-.000465	.000294	-.000597	-.006918	-.001591
#2	-.000344	-.000989	.001203	-.000115	-.000711	.006619	-.003520
#3	-.001489	-.002189	-.000715	-.000516	-.001922	-.011656	-.002695

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000027	.0001245	.0130158	-.000095	-.000030	.0000608	-.001241
Stddev	.0000309	.0001043	.0115656	.000112	.000176	.0002755	.003303
%RSD	1156.075	83.76910	88.85857	118.4172	582.6774	453.3006	266.0656
#1	-.000033	.0000386	.0029171	-.000015	-.000067	-.000069	.002510
#2	.000019	.0002406	.0104970	-.000223	.000162	.000377	-.003712
#3	.000022	.0000945	.0256332	-.000046	-.000185	-.000126	-.002523

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002483	.0043080	-.000104	.0002233	.9751523	-.000133	.0000760
Stddev	.0001738	.0079127	.000218	.0001302	.0368093	.001274	.0000965
%RSD	69.98335	183.6730	208.5277	58.34060	3.774724	958.5818	127.0525
#1	.0000587	.0107373	-.000110	.0001645	1.012967	-.000997	.0001778
#2	.0004000	.0067157	.000116	.0001327	.973050	.001330	-.000014
#3	.0002862	-.004529	-.000319	.0003725	.939439	-.000732	.000064

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7309160	-.000146	.0000643	.0007660	.0001285	.0055936	.0005290
Stddev	.0412667	.000034	.0001529	.0004533	.0008267	.0091821	.0015012
%RSD	5.645883	23.19638	237.7814	59.16923	643.6128	164.1550	283.7642
#1	.6840390	-.000175	-.000071	.0003461	.0007635	.0103516	.0022562
#2	.7469488	-.000154	.000034	.0012465	.0004282	-.004991	-.000207
#3	.7617603	-.000109	.000230	.0007055	-.000806	.011420	-.000462

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: PB162580BL Acquired: 8/8/2024 18:17:30 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011405	.0065588	.0000772
Stddev	.0016828	.0008702	.0000665
%RSD	147.5529	13.26769	86.12399
#1	.0009928	.0067910	.0000034
#2	-.000464	.0072894	.0000958
#3	.002892	.0055961	.0001324

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2963.592	107148.5	15038.90	4039.216	5588.658
Stddev	11.258	248.8	90.20	5.844	32.961
%RSD	.3798830	.2322162	.5997958	.1446797	.5897887
#1	2957.778	106975.6	14935.53	4038.558	5574.160
#2	2956.429	107433.7	15101.65	4033.729	5565.431
#3	2976.568	107036.4	15079.52	4045.361	5626.383

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: PB162580BS Acquired: 8/8/2024 18:21:57 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7561654	1.878094	.9399990	1.928444	.7878261	1.973585
Stddev	.0026077	.013079	.0006278	.007693	.0004964	.004864
%RSD	.3448514	.6963982	.0667913	.3989416	.0630090	.2464668
#1	.7582649	1.887858	.9406991	1.933780	.7883990	1.969176
#2	.7532464	1.863234	.9394858	1.919625	.7875219	1.978803
#3	.7569848	1.883191	.9398123	1.931927	.7875575	1.972775

Elem	Ba4934	Be2348	Cd2265	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1903431	.2085997	.1879666	1.037221	.3828314	.1935456
Stddev	.0016466	.0017004	.0002495	.008041	.0027610	.0000996
%RSD	.8650449	.8151283	.1327368	.7752369	.7212108	.0514775
#1	.1891881	.2084460	.1877670	1.028260	.3805969	.1936523
#2	.1922285	.2103717	.1882463	1.043807	.3859180	.1935294
#3	.1896127	.2069814	.1878864	1.039596	.3819791	.1934550

Elem	Cu2247	Fe2404	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3035785	2.696366	.2005090	1.947874	.4913739	.0711707
Stddev	.0003965	.020892	.0011460	.020654	.0009297	.0002729
%RSD	.1306218	.7748121	.5715186	1.060358	.1891997	.3834012
#1	.3039985	2.678130	.2014168	1.929244	.4923966	.0713314
#2	.3035262	2.719161	.2008888	1.970085	.4911452	.0713250
#3	.3032107	2.691808	.1992213	1.944291	.4905800	.0708556

Elem	Na5895	V_2924	Zn2138	K_7664	B_2496	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.898373	.2914320	.1994048	9.125386	.3070878	.3946899
Stddev	.014475	.0005609	.0003301	.020744	.0010071	.0007809
%RSD	.4994322	.1924796	.1655188	.2273176	.3279569	.1978592
#1	2.882646	.2907943	.1990332	9.137740	.3066975	.3954776
#2	2.911139	.2916521	.1995174	9.101437	.3082317	.3946762
#3	2.901333	.2918494	.1996638	9.136980	.3063343	.3939159

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: PB162580BS Acquired: 8/8/2024 18:21:57 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: Custom ID2: Custom ID3:
Comment:

Elem	Sn1899	Ti3361	Si2881	P_1774	S_1820	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6792379	.1962231	F .7019201	5.807700	F -.008237	.1852862
Stddev	.0011944	.0005529	.0045932	.013192	.000376	.0009821
%RSD	.1758450	.2817734	.6543825	.2271428	4.566814	.5300493
#1	.6782343	.1959466	.7006349	5.822830	-.008665	.1863062
#2	.6789204	.1968597	.6981063	5.798607	-.008086	.1843470
#3	.6805589	.1958630	.7070190	5.801663	-.007960	.1852055

Elem	Sr4077
Units	ppm
Avg	.1924581
Stddev	.0005009
%RSD	.2602742
#1	.1924368
#2	.1929693
#3	.1919682

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2855.438	105058.7	13754.84	3989.859	5292.770
Stddev	8.603	264.6	73.97	7.077	14.457
%RSD	.3012740	.2518526	.5377646	.1773696	.2731498
#1	2845.528	105195.3	13784.80	3984.752	5276.114
#2	2859.805	104753.7	13670.59	3997.937	5302.060
#3	2860.981	105227.1	13809.13	3986.888	5300.137

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCV06 Acquired: 8/8/2024 18:26:05 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.863626	4.889739	4.843313	4.877027	4.924072	9.707024	9.792091
Stddev	.034968	.073609	.039280	.032931	.032746	.073204	.043940
%RSD	.7189714	1.505368	.8110123	.6752323	.6650167	.7541362	.4487258
#1	4.823875	4.813267	4.798891	4.839253	4.886705	9.625530	9.744509
#2	4.877363	4.960103	4.857591	4.892128	4.937751	9.728330	9.800629
#3	4.889639	4.895846	4.873456	4.899700	4.947761	9.767211	9.831135

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2454190	2.420252	24.64447	.9834856	2.433437	1.231623	4.999329
Stddev	.0023931	.017028	.20498	.0053047	.017897	.008582	.010202
%RSD	.9750981	.7035814	.8317457	.5393811	.7354805	.6968400	.2040589
#1	.2429825	2.401727	24.41823	.9847473	2.414109	1.222529	5.011101
#2	.2455084	2.423806	24.69737	.9776638	2.436766	1.232761	4.993055
#3	.2477661	2.435223	24.81782	.9880458	2.449437	1.239580	4.993832

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.454113	24.05273	2.428311	1.242526	24.75610	2.445715	2.496411
Stddev	.020467	.25606	.017430	.006851	.12888	.026375	.012418
%RSD	.8339946	1.064587	.7177998	.5513957	.5205966	1.078399	.4974528
#1	2.431172	23.75799	2.409334	1.249633	24.90376	2.419594	2.504748
#2	2.460665	24.17973	2.431993	1.235963	24.66620	2.445216	2.482139
#3	2.470501	24.22046	2.443607	1.241983	24.69835	2.472336	2.502347

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	25.12084	4.868731	4.974592	4.849411	4.953230	4.929924	4.843120
Stddev	.13220	.038193	.037494	.036149	.032701	.016573	.027359
%RSD	.5262553	.7844629	.7537137	.7454211	.6602015	.3361806	.5649137
#1	25.27240	4.832474	4.932818	4.808787	4.915578	4.947738	4.812064
#2	25.02930	4.865115	4.985627	4.861418	4.969577	4.914962	4.853629
#3	25.06082	4.908603	5.005330	4.878029	4.974534	4.927072	4.863667

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCV06 Acquired: 8/8/2024 18:26:05 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.647513	4.776674	5.023897
Stddev	.039385	.033911	.040354
%RSD	.8474479	.7099380	.8032377
#1	4.603109	4.741245	5.019287
#2	4.678226	4.779945	4.986046
#3	4.661204	4.808831	5.066358

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2934.244	100386.7	14744.37	3819.165	5359.063
Stddev	16.662	473.8	128.61	23.319	34.357
%RSD	.5678305	.4719680	.8722461	.6105802	.6410979
#1	2952.283	99927.7	14880.29	3796.640	5397.654
#2	2931.020	100874.0	14728.22	3843.204	5347.735
#3	2919.431	100358.3	14624.60	3817.652	5331.801

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB06 Acquired: 8/8/2024 18:30:23 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000090	.0009555	.0000247	.0016422	-.001613	-.007177	-.000707
Stddev	.000461	.0016713	.0002891	.0013762	.001424	.004040	.001656
%RSD	513.5760	174.9230	1171.140	83.80204	88.28351	56.28203	234.1216
#1	-.000370	-.000973	-.000173	.0018356	-.002909	-.011568	-.002619
#2	-.000341	.001857	.000356	.0029114	-.001840	-.006347	.000247
#3	.000442	.001983	-.000110	.0001795	-.000089	-.003618	.000250

Elem	Be2348	Cd2265	Ca3736	Cr2677	Co2286	Cu2247	Fe2404
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000103	.0001774	.0024316	.0001033	.0000601	-.000181	-.003232
Stddev	.0000268	.0000612	.0114129	.0003154	.0001155	.000047	.002581
%RSD	261.1320	34.53028	469.3670	305.2650	192.2252	25.92628	79.85398
#1	.0000372	.0001365	.0091173	.0000385	.0000327	-.000236	-.005952
#2	.0000100	.0001479	.0089238	.0004460	-.000039	-.000156	-.002927
#3	-.000016	.0002478	-.010746	-.000175	.000187	-.000152	-.000817

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na5895	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003271	-.004898	.0000068	-.000158	.1393454	.0011660	.0003741
Stddev	.0002751	.009390	.0001688	.000164	.0142795	.0011692	.0003331
%RSD	84.09646	191.7086	2492.612	103.4050	10.24755	100.2797	89.05216
#1	.0000317	-.015477	.0001991	-.000321	.1240146	.0009039	.0006467
#2	.0003736	.002452	-.000062	-.000161	.1522671	.0024440	.0004727
#3	.0005759	-.001669	-.000117	.000007	.1417546	.0001500	.0000028

Elem	K_7664	B_2496	Mo2020	Sn1899	Ti3361	Si2881	P_1774
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1956545	.0065946	.0004003	.0006216	-.000313	.0008341	.0008442
Stddev	.0141552	.0003786	.0001045	.0004035	.000674	.0082203	.0011467
%RSD	7.234810	5.741220	26.11235	64.91596	215.5317	985.5670	135.8301
#1	.1843846	.0063844	.0005190	.0003012	.000363	.0103255	.0018983
#2	.1910371	.0070317	.0003222	.0004887	-.000316	-.003817	-.000377
#3	.2115419	.0063678	.0003597	.0010747	-.000985	-.004006	.001011

Reviewed By:mohan
On:8/22/2024 2:32:35 AM
Inst Id :P4
LB :LB131909

Sample Name: CCB06 Acquired: 8/8/2024 18:30:23 Type: Unk
Method: NON EPA-6010-200.7(v2343) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB06 Custom ID2: Custom ID3:
Comment:

Elem	S_1820	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000713	.0010600	.0002600
Stddev	.002538	.0015766	.0000494
%RSD	356.0231	148.7298	18.99742
#1	.001480	.0003836	.0003006
#2	-.003494	-.000065	.0002050
#3	-.000126	.002862	.0002743

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3019.533	103215.9	14114.98	3970.328	5687.810
Stddev	27.184	375.0	485.92	13.699	36.580
%RSD	.9002746	.3633147	3.442553	.3450291	.6431361
#1	2988.483	103283.7	14401.79	3965.233	5646.932
#2	3039.046	102811.6	13553.94	3959.906	5717.459
#3	3031.070	103552.4	14389.21	3985.844	5699.040

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB162541

SOP ID : M3050B-Digestion-20

SDG No : N/A

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #3 2. N/A

Start Digest Date: 08/07/2024 **Time :** 07:45 **Temp :** 96 °C

End Digest Date: 08/07/2024 **Time :** 10:00 **Temp :** 97 °C

Digestion tube ID: M5586

Block thermometer ID: MET-DIG. #3

Dig Technician Signature: [signature]

Supervisor Signature: [signature]

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LFS-1	1.00	M5643
LFS-2	1.00	M5633
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
1:1 HNO3	10.00	MP81119
Conc. HNO3	5.00	M5965
30% H2O2	3.00	M5633
CONC: HCL	10.00	M5952
PTFE Boiling Stones	N/A	M5585
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:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
08/07/24 10:20	[signature] IML DJ'G	[signature] metals Cab
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB162541

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P3474-01	WC-A1-COMP	N/A	2.21	100	Brown	YELLOW	Medium	N/A	N/A	10
P3474-04	WC-B1-COMP	N/A	2.25	100	Brown	YELLOW	Medium	N/A	N/A	11
P3474-07	WC-A2-COMP	N/A	2.30	100	Brown	YELLOW	Medium	N/A	N/A	12
P3474-10	WC-B2-COMP	N/A	2.31	100	Brown	YELLOW	Medium	N/A	N/A	13
P3475-05	S-858-N-SO-1.0-1.5-080524	N/A	2.31	100	Brown	YELLOW	Medium	N/A	N/A	14
P3475-05DUP	S-858-N-SO-1.0-1.5-080524DUP	N/A	2.32	100	Brown	YELLOW	Medium	N/A	N/A	15
P3475-06	P3475-05MS	N/A	2.33	100	Brown	YELLOW	Medium	N/A	M5643,M5649	16
P3475-07	P3475-05MSD	N/A	2.34	100	Brown	YELLOW	Medium	N/A	M5643,M5649	17
P3483-01	A	N/A	2.33	100	Brown	YELLOW	Medium	N/A	N/A	18
P3484-01	B	N/A	2.40	100	Brown	YELLOW	Medium	N/A	N/A	19
P3485-01	C	N/A	2.42	100	Brown	YELLOW	Medium	N/A	N/A	20
P3488-01	HD-01-080624	N/A	2.41	100	Brown	YELLOW	Medium	N/A	N/A	21
P3488-03	HD-02-080624	N/A	2.40	100	Brown	YELLOW	Medium	N/A	N/A	22
P3493-01	628-A	N/A	2.36	100	Brown	YELLOW	Medium	N/A	N/A	23
P3493-02	628-B	N/A	2.39	100	Brown	YELLOW	Medium	N/A	N/A	24
PB162541BL	PBS541	N/A	2.00	100	Colorless	Colorless	FINE	N/A	N/A	25
PB162541BS	LCS541	N/A	2.00	100	Colorless	Colorless	FINE	N/A	M5643,M5649	26

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB162541 **WorkList ID :** 182409 **Department :** Digestion **Date :** 08-07-2024 07:33:43

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P3474-01	WC-A1-COMP	Solid	Metals ICP-TAL	Cool 4 deg C	EART12	D21	08/05/2024	6010D
P3474-04	WC-B1-COMP	Solid	Metals ICP-TAL	Cool 4 deg C	EART12	D21	08/05/2024	6010D
P3474-07	WC-A2-COMP	Solid	Metals ICP-TAL	Cool 4 deg C	EART12	D21	08/05/2024	6010D
P3474-10	WC-B2-COMP	Solid	Metals ICP-TAL	Cool 4 deg C	EART12	D21	08/05/2024	6010D
P3475-05	S-858-N-SO-1.0-1.5-080524	Solid	Metals Group5	Cool 4 deg C	JACO05	D31	08/05/2024	6010D
P3475-06	P3475-05MS	Solid	Metals Group5	Cool 4 deg C	JACO05	D31	08/05/2024	6010D
P3475-07	P3475-05MSD	Solid	Metals Group5	Cool 4 deg C	JACO05	D31	08/05/2024	6010D
P3483-01	A	Solid	Metals ICP-Group1	Cool 4 deg C	BROO04	D31	08/06/2024	6010D
P3484-01	B	Solid	Metals ICP-Group1	Cool 4 deg C	BROO04	D31	08/06/2024	6010D
P3485-01	C	Solid	Metals ICP-Group1	Cool 4 deg C	BROO04	D21	08/06/2024	6010D
P3488-01	HD-01-080624	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG05	D21	08/06/2024	6010D
P3488-03	HD-02-080624	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG05	D21	08/06/2024	6010D
P3493-01	628-A	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D31	08/06/2024	6010D
P3493-02	628-B	Solid	Metals ICP-TAL	Cool 4 deg C	PSEG03	D31	08/06/2024	6010D

Date/Time 08/07/24 ~~07:40~~ 07:35

Raw Sample Received by:

Raw Sample Relinquished by:

Date/Time 08/07/24 10:00

Raw Sample Received by:

Raw Sample Relinquished by:

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 8/7/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 08/06/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:11
Out Date: 08/07/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB131878

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
P3474-01	WC-A1-COMP	1	1.18	8.64	9.82	8.8	88.2	
P3474-03	WC-A1-GRAB	2	1.15	8.38	9.53	8.78	91.1	
P3474-04	WC-B1-COMP	3	1.16	8.59	9.75	8.56	86.1	
P3474-06	WC-B1-GRAB	4	1.18	8.43	9.61	8.18	83.0	
P3474-07	WC-A2-COMP	5	1.19	8.65	9.84	8.25	81.6	
P3474-09	WC-A2-GRAB	6	1.16	8.69	9.85	8.12	80.1	
P3474-10	WC-B2-COMP	7	1.16	8.67	9.83	8.25	81.8	
P3474-12	WC-B2-GRAB	8	1.16	8.69	9.85	8.09	79.7	
P3475-01	S-866-N-SO-0-0.5-080524	9	1.14	8.83	9.97	8.49	83.2	
P3475-02	S-866-N-SO-1.0-1.5-080524	10	1.15	8.66	9.81	8.57	85.7	
P3475-03	P3475-02MS	11	1.15	8.66	9.81	8.57	85.7	
P3475-04	P3475-02MSD	12	1.15	8.66	9.81	8.57	85.7	
P3475-05	S-858-N-SO-1.0-1.5-080524	13	1.12	8.74	9.86	7.56	73.7	sludge sample
P3475-06	P3475-05MS	14	1.12	8.74	9.86	7.56	73.7	sludge sample
P3475-07	P3475-05MSD	15	1.12	8.74	9.86	7.56	73.7	sludge sample
P3476-02	MUL04	16	1.15	8.50	9.65	5.16	47.2	
P3476-04	MUL05	17	1.16	8.81	9.97	4.97	43.2	
P3476-06	MUL06	18	1.15	8.75	9.9	4.98	43.8	
P3476-08	MUL07	19	1.14	8.60	9.74	5.07	45.7	
P3478-04	TS04	20	1.18	8.57	9.75	8.17	81.6	
P3478-06	TS05	21	1.16	8.61	9.77	8.59	86.3	
P3478-08	TS06	22	1.15	8.83	9.98	8.45	82.7	
P3478-10	TS07	23	1.14	8.83	9.97	8.52	83.6	
P3479-02	TS08	24	1.14	8.42	9.56	7.99	81.4	
P3479-04	TS09	25	1.14	8.71	9.85	7.98	78.5	
P3479-06	TS10	26	1.14	8.58	9.72	8.15	81.7	
P3479-08	TS11	27	1.15	8.49	9.64	8.79	90.0	

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 8/7/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 08/06/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:11
Out Date: 08/07/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB131878

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
P3483-01	A	28	1.12	8.46	9.58	9.11	94.4	
P3484-01	B	29	1.18	8.72	9.9	9.22	92.2	
P3485-01	C	30	1.11	8.88	9.99	8.64	84.8	
P3487-01	0726-A	31	1.00	1.00	2.00	2.00	100.0	oil sample
P3487-02	0726-B	32	1.00	1.00	2.00	2.00	100.0	oil sample
P3487-03	0726-C	33	1.00	1.00	2.00	2.00	100.0	oil sample
P3487-05	0723-B	34	1.00	1.00	2.00	2.00	100.0	oil sample
P3488-01	HD-01-080624	35	1.14	8.58	9.72	8.88	90.2	
P3488-02	HD-01-080624-E2	36	1.15	8.80	9.95	8.96	88.8	
P3488-03	HD-02-080624	37	1.14	8.40	9.54	8.76	90.7	
P3488-04	HD-02-080624-E2	38	1.15	8.81	9.96	9.34	93.0	
P3489-01	WASTE	39	1.15	8.62	9.77	5.9	55.1	
P3489-02	VOC	40	1.19	8.52	9.71	5.72	53.2	
P3489-03	1	41	1.16	8.81	9.97	6.32	58.6	
P3489-04	2	42	1.16	8.81	9.97	5.57	50.1	
P3489-05	3	43	1.15	8.38	9.53	5.38	50.5	
P3489-06	4	44	1.19	8.42	9.61	6.12	58.6	
P3489-07	5	45	1.15	8.80	9.95	6.02	55.3	
P3491-01	72-11936	46	1.18	8.54	9.72	9.47	97.1	
P3491-02	SOM-24-00087	47	1.00	1.00	2.00	2.00	100.0	debris
P3491-03	COMP-1	48	1.00	1.00	2.00	2.00	100.0	debris
P3491-04	COMP-2	49	1.00	1.00	2.00	2.00	100.0	debris
P3491-05	SOM-24-00094	50	1.00	1.00	2.00	2.00	100.0	oily-debris
P3492-01	Y2309-0098-1-1	51	1.00	1.00	2.00	2.00	100.0	pilc
P3492-02	Y2309-0098-1-2	52	1.00	1.00	2.00	2.00	100.0	pilc
P3493-01	628-A	53	1.17	8.41	9.58	9.54	99.5	
P3493-02	628-B	54	1.16	8.42	9.58	9.51	99.2	
P3494-01	ORA-1899	55	1.00	1.00	2.00	2.00	100.0	wipe sample

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 8/7/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 17:00
In Date: 08/06/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:11
Out Date: 08/07/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB131878

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
P3494-02	ORA-1900	56	1.00	1.00	2.00	2.00	100.0	wipe sample

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

WB131878

WorkList Name : %1-08062024 **WorkList ID :** 182379 **Department :** Wet-Chemistry **Date :** 08-06-2024 09:09:15

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P3474-01	WC-A1-COMP	Solid	Percent Solids	Cool 4 deg C	EART12	D21	08/05/2024	Chemtech -SO
P3474-03	WC-A1-GRAB	Solid	Percent Solids	Cool 4 deg C	EART12	D21	08/05/2024	Chemtech -SO
P3474-04	WC-B1-COMP	Solid	Percent Solids	Cool 4 deg C	EART12	D21	08/05/2024	Chemtech -SO
P3474-06	WC-B1-GRAB	Solid	Percent Solids	Cool 4 deg C	EART12	D21	08/05/2024	Chemtech -SO
P3474-07	WC-A2-COMP	Solid	Percent Solids	Cool 4 deg C	EART12	D21	08/05/2024	Chemtech -SO
P3474-09	WC-A2-GRAB	Solid	Percent Solids	Cool 4 deg C	EART12	D21	08/05/2024	Chemtech -SO
P3474-10	WC-B2-COMP	Solid	Percent Solids	Cool 4 deg C	EART12	D21	08/05/2024	Chemtech -SO
P3474-12	WC-B2-GRAB	Solid	Percent Solids	Cool 4 deg C	EART12	D21	08/05/2024	Chemtech -SO
P3475-01	S-866-N-SO-0-0.5-080524	Solid	Percent Solids	Cool 4 deg C	JACO05	D31	08/05/2024	Chemtech -SO
P3475-02	S-866-N-SO-1.0-1.5-080524	Solid	Percent Solids	Cool 4 deg C	JACO05	D31	08/05/2024	Chemtech -SO
P3475-03	P3475-02MS	Solid	Percent Solids	Cool 4 deg C	JACO05	D31	08/05/2024	Chemtech -SO
P3475-04	P3475-02MSD	Solid	Percent Solids	Cool 4 deg C	JACO05	D31	08/05/2024	Chemtech -SO
P3475-05	S-858-N-SO-1.0-1.5-080524	Solid	Percent Solids	Cool 4 deg C	JACO05	D31	08/05/2024	Chemtech -SO
P3475-06	P3475-05MS	Solid	Percent Solids	Cool 4 deg C	JACO05	D31	08/05/2024	Chemtech -SO
P3475-07	P3475-05MSD	Solid	Percent Solids	Cool 4 deg C	JACO05	D31	08/05/2024	Chemtech -SO
P3476-02	MUL04	Solid	Percent Solids	Cool 4 deg C	JACO05	D31	08/05/2024	Chemtech -SO
P3476-04	MUL05	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3476-06	MUL06	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3476-08	MUL07	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3478-04	TS04	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3478-06	TS05	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO

Date/Time 08/06/24 15:20

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Date/Time 08/06/24 17:10

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

WORKLIST(Hardcopy Internal Chain)

VB 131878

WorkList Name : %1-08062024 **WorkList ID :** 182379 **Department :** Wet-Chemistry **Date :** 08-06-2024 09:09:15

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P3478-08	TS06	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3478-10	TS07	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3479-02	TS08	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3479-04	TS09	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3479-06	TS10	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3479-08	TS11	Solid	Percent Solids	Cool 4 deg C	ROYF02	D21	08/05/2024	Chemtech -SO
P3483-01	A	Solid	Percent Solids	Cool 4 deg C	BROO04	D31	08/06/2024	Chemtech -SO
P3484-01	B	Solid	Percent Solids	Cool 4 deg C	BROO04	D31	08/06/2024	Chemtech -SO
P3485-01	C	Solid	Percent Solids	Cool 4 deg C	BROO04	D21	08/06/2024	Chemtech -SO
P3487-01	0726-A	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3487-02	0726-B	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3487-03	0726-C	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3487-05	0723-B	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3488-01	HD-01-080624	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/06/2024	Chemtech -SO
P3488-02	HD-01-080624-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/06/2024	Chemtech -SO
P3488-03	HD-02-080624	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/06/2024	Chemtech -SO
P3488-04	HD-02-080624-E2	Solid	Percent Solids	Cool 4 deg C	PSEG05	D21	08/06/2024	Chemtech -SO
P3489-01	WASTE	Solid	Percent Solids	Cool 4 deg C	SCIA01	K11	08/06/2024	Chemtech -SO
P3489-02	VOC	Solid	Percent Solids	Cool 4 deg C	SCIA01	K11	08/06/2024	Chemtech -SO
P3489-03	1	Solid	Percent Solids	Cool 4 deg C	SCIA01	K11	08/06/2024	Chemtech -SO
P3489-04	2	Solid	Percent Solids	Cool 4 deg C	SCIA01	K11	08/06/2024	Chemtech -SO

Date/Time 08/06/24 15:20

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

Date/Time 08/06/24 17:10

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature]

WORKLIST(Hardcopy Internal Chain)

VB 131878

WorkList Name : %1-08062024 **WorkList ID :** 182379 **Department :** Wet-Chemistry **Date :** 08-06-2024 09:09:15

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P3489-05	3	Solid	Percent Solids	Cool 4 deg C	SCIA01	K11	08/06/2024	Chemtech -SO
P3489-06	4	Solid	Percent Solids	Cool 4 deg C	SCIA01	K11	08/06/2024	Chemtech -SO
P3489-07	5	Solid	Percent Solids	Cool 4 deg C	SCIA01	K11	08/06/2024	Chemtech -SO
P3491-01	72-11936	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3491-02	SOM-24-00087	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3491-03	COMP-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3491-04	COMP-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3491-05	SOM-24-00094	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3492-01	Y2309-0098-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3492-02	Y2309-0098-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3493-01	628-A	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO
P3493-02	628-B	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	08/06/2024	Chemtech -SO
P3494-01	ORA-1899	Solid	Percent Solids	Cool 4 deg C	PSEG03	D31	08/06/2024	Chemtech -SO
P3494-02	ORA-1900	Solid	Percent Solids	Cool 4 deg C	PSEG03	D21	08/06/2024	Chemtech -SO

Date/Time 08/06/24 1520

Raw Sample Received by: BD WC

Raw Sample Relinquished by: CP

Date/Time 08/06/24 17:10

Raw Sample Received by: CP

Raw Sample Relinquished by: BD WC

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 # LB131909

Review By	jaswal	Review On	8/22/2024 2:32:03 AM
Supervise By	mohan	Supervise On	8/22/2024 2:32:35 AM

STD. NAME	STD REF.#
ICAL Standard	MP81838,MP81845,MP81843,MP81842,MP81840,MP81839,MP81851
ICV Standard	MP81846
CCV Standard	MP81849
ICSA Standard	MP81847,MP81848
CRI Standard	
LCS Standard	
Chk Standard	MP81852,MP81853

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	08/08/24 12:51		Kareem	OK
2	S1	S1	CAL2	08/08/24 12:56		Kareem	OK
3	S2	S2	CAL3	08/08/24 13:00		Kareem	OK
4	S3	S3	CAL4	08/08/24 13:04		Kareem	OK
5	S4	S4	CAL5	08/08/24 13:09		Kareem	OK
6	S5	S5	CAL6	08/08/24 13:13		Kareem	OK
7	ICV01	ICV01	ICV	08/08/24 13:22	ICV fail for Al,V (200.7) (95-105)	Kareem	OK
8	LLICV01	LLICV01	LLICV	08/08/24 13:32		Kareem	OK
9	ICB01	ICB01	ICB	08/08/24 13:37		Kareem	OK
10	CRI01	CRI01	CRDL	08/08/24 13:42		Kareem	OK
11	ICSA01	ICSA01	ICSA	08/08/24 13:46		Kareem	OK
12	ICSAB01	ICSAB01	ICSAB	08/08/24 13:51		Kareem	OK
13	ICSADL	ICSADL	ICSA	08/08/24 13:55		Kareem	OK
14	ICSABDL	ICSABDL	ICSAB	08/08/24 13:59		Kareem	OK
15	CCV01	CCV01	CCV	08/08/24 14:04		Kareem	OK
16	CCB01	CCB01	CCB	08/08/24 14:08		Kareem	OK
17	LR1	LR1	HIGH STD	08/08/24 14:19		Kareem	OK
18	LR2	LR2	HIGH STD	08/08/24 14:25		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB131909

Review By	jaswal	Review On	8/22/2024 2:32:03 AM
Supervise By	mohan	Supervise On	8/22/2024 2:32:35 AM

STD. NAME	STD REF.#
ICAL Standard	MP81838,MP81845,MP81843,MP81842,MP81840,MP81839,MP81851
ICV Standard	MP81846
CCV Standard	MP81849
ICSA Standard	MP81847,MP81848
CRI Standard	
LCS Standard	
Chk Standard	MP81852,MP81853

19	P3505-01	001-WILLETS-PT-BL	SAM	08/08/24 14:29		Kareem	OK
20	P3505-02	002-35TH-AVE(JUNE	SAM	08/08/24 14:34		Kareem	OK
21	P3505-04	002-35TH-AVE(JULY)	SAM	08/08/24 14:38		Kareem	OK
22	P3488-01	HD-01-080624	SAM	08/08/24 14:42		Kareem	OK
23	P3488-03	HD-02-080624	SAM	08/08/24 14:48		Kareem	OK
24	CCV02	CCV02	CCV	08/08/24 14:53		Kareem	OK
25	CCB02	CCB02	CCB	08/08/24 14:59		Kareem	OK
26	P3490-01	402	SAM	08/08/24 15:07		Kareem	OK
27	P3510-05	DSN003	SAM	08/08/24 15:11		Kareem	OK
28	PB162568BL	PB162568BL	MB	08/08/24 15:16		Kareem	OK
29	PB162568BS	PB162568BS	LCS	08/08/24 15:20		Kareem	OK
30	P3505-04DUP	002-35TH-AVE(JULY)	DUP	08/08/24 15:24		Kareem	OK
31	P3505-04L	002-35TH-AVE(JULY)	SD	08/08/24 15:29		Kareem	OK
32	P3505-04MS	002-35TH-AVE(JULY)	MS	08/08/24 15:33		Kareem	OK
33	P3505-04MSD	002-35TH-AVE(JULY)	MSD	08/08/24 15:37		Kareem	OK
34	P3505-04A	002-35TH-AVE(JULY)	PS	08/08/24 15:41		Kareem	OK
35	P3474-01	WC-A1-COMP	SAM	08/08/24 15:45		Kareem	OK
36	CCV03	CCV03	CCV	08/08/24 15:49		Kareem	OK
37	CCB03	CCB03	CCB	08/08/24 15:54		Kareem	OK
38	P3474-04	WC-B1-COMP	SAM	08/08/24 15:58		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB131909

Review By	jaswal	Review On	8/22/2024 2:32:03 AM
Supervise By	mohan	Supervise On	8/22/2024 2:32:35 AM

STD. NAME	STD REF.#
ICAL Standard	MP81838,MP81845,MP81843,MP81842,MP81840,MP81839,MP81851
ICV Standard	MP81846
CCV Standard	MP81849
ICSA Standard	MP81847,MP81848
CRI Standard	
LCS Standard	
Chk Standard	MP81852,MP81853

39	P3474-07	WC-A2-COMP	SAM	08/08/24 16:02		Kareem	OK
40	P3474-10	WC-B2-COMP	SAM	08/08/24 16:07		Kareem	OK
41	P3475-05	S-858-K1-SO-1.0-1.5-	SAM	08/08/24 16:11		Kareem	OK
42	P3475-05DUP	S-858-K1-SO-1.0-1.5-	DUP	08/08/24 16:15		Kareem	OK
43	P3475-05L	S-858-K1-SO-1.0-1.5-	SD	08/08/24 16:19		Kareem	OK
44	P3475-06	S-858-K1-SO-1.0-1.5-	MS	08/08/24 16:24		Kareem	OK
45	P3475-07	S-858-K1-SO-1.0-1.5-	MSD	08/08/24 16:28		Kareem	OK
46	P3475-05A	S-858-K1-SO-1.0-1.5-	PS	08/08/24 16:32		Kareem	OK
47	P3483-01	A-TOPSOIL	SAM	08/08/24 16:36		Kareem	OK
48	CCV04	CCV04	CCV	08/08/24 16:41		Kareem	OK
49	CCB04	CCB04	CCB	08/08/24 16:45		Kareem	OK
50	P3484-01	B-STOCKPILE	SAM	08/08/24 16:49		Kareem	OK
51	P3485-01	C-SOIL	SAM	08/08/24 16:54		Kareem	OK
52	P3493-01	628-A	SAM	08/08/24 16:58		Kareem	OK
53	P3493-02	628-B	SAM	08/08/24 17:02		Kareem	OK
54	PB162541BL	PB162541BL	MB	08/08/24 17:06		Kareem	OK
55	PB162541BS	PB162541BS	LCS	08/08/24 17:11		Kareem	OK
56	P3491-01	72-11936	SAM	08/08/24 17:15		Kareem	OK
57	P3491-02	SOM-24-00087	SAM	08/08/24 17:19		Kareem	OK
58	P3491-03	COMP-1	SAM	08/08/24 17:24		Kareem	OK

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

Instrument ID: P4

Daily Analysis Runlog For Sequence/QCBatch ID # LB131909

Review By	jaswal	Review On	8/22/2024 2:32:03 AM
Supervise By	mohan	Supervise On	8/22/2024 2:32:35 AM

STD. NAME	STD REF.#
ICAL Standard	MP81838,MP81845,MP81843,MP81842,MP81840,MP81839,MP81851
ICV Standard	MP81846
CCV Standard	MP81849
ICSA Standard	MP81847,MP81848
CRI Standard	
LCS Standard	
Chk Standard	MP81852,MP81853

59	P3491-04	COMP-2	SAM	08/08/24 17:29		Kareem	OK
60	CCV05	CCV05	CCV	08/08/24 17:33		Kareem	OK
61	CCB05	CCB05	CCB	08/08/24 17:37		Kareem	OK
62	P3491-05	SOM-24-00094	SAM	08/08/24 17:42		Kareem	OK
63	P3506-02	RT4534	SAM	08/08/24 17:46		Kareem	OK
64	P3506-02DUP	RT4534DUP	DUP	08/08/24 17:51		Kareem	OK
65	P3506-02L	RT4534L	SD	08/08/24 17:55		Kareem	OK
66	P3506-02MS	RT4534MS	MS	08/08/24 18:00		Kareem	OK
67	P3506-02MSD	RT4534MSD	MSD	08/08/24 18:04		Kareem	OK
68	P3506-02A	RT4534A	PS	08/08/24 18:08		Kareem	OK
69	PB162562TB	PB162562TB	MB	08/08/24 18:12		Kareem	OK
70	PB162580BL	PB162580BL	MB	08/08/24 18:17		Kareem	OK
71	PB162580BS	PB162580BS	LCS	08/08/24 18:21		Kareem	OK
72	CCV06	CCV06	CCV	08/08/24 18:26		Kareem	OK
73	CCB06	CCB06	CCB	08/08/24 18:30		Kareem	OK

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Prep Standard - Chemical Standard Summary

Order ID : P3475

Test : Metals Group5

Prepbatch ID : PB162541,

Sequence ID/Qc Batch ID: LB131909,LB131909,LB131909,

Standard ID :
MP81119,MP81838,MP81839,MP81840,MP81842,MP81843,MP81844,MP81845,MP81846,MP81847,MP81848,MP81849,
MP81851,MP81852,MP81853,

Chemical ID :
M4960,M5130,M5223,M5227,M5289,M5295,M5296,M5390,M5395,M5429,M5473,M5476,M5498,M5513,M5515,M5519,M5585,M5633,M5643,M5658,M5697,M5698,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5817,M5818,M5819,M5875,M5935,M5942,M5951,M5952,M5961,M5962,M5963,M5965,M5976,M5984,M6023,M6025,M6028,M6030,M6033,W2606,W3112,

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP81119	06/21/2024	10/24/2024	Al-Terek Isaac	METALS_SCALE_2 (M SC-2)	METALS_PIPETTE_1 (ICP A)	Sarabjit Jaswal 06/21/2024

FROM 1250.00000ml of M5935 + 1250.00000ml of W2606 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP81838	08/05/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 125.00000ml of M5951 + 2350.00000ml of W3112 + 25.00000ml of M5963 = Final Quantity: 2500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1004	ICPAES ISM01.2 (S5)	MP81839	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 0.25000ml of M5798 + 0.50000ml of M5429 + 0.50000ml of M5476 + 0.50000ml of M5815 + 0.50000ml of M5817 + 12.50000ml of M5519 + 12.50000ml of M5698 + 12.50000ml of M5806 + 12.50000ml of M5819 + 13.75000ml of M5697 + 14.50000ml of M5515 + 14.50000ml of M5658 + 14.50000ml of M6033 + 2.00000ml of M5513 + 22.50000ml of M5498 + 22.50000ml of M5769 + 5.00000ml of M5296 + 5.00000ml of M5395 + 5.00000ml of M5802 + 5.00000ml of M5818 + 5.00000ml of M5875 + 303.50000ml of MP81838 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1005	ICPAES ISM01.2(S4)	MP81840	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 250.00000ml of MP81838 + 250.00000ml of MP81839 = 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
1007	ICPAES ISM01.2(S3)	MP81842	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 25.00000ml of MP81839 + 75.00000ml of MP81838 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1008	ICPAES ISM01.2(S2)	MP81843	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 12.50000ml of MP81839 + 87.50000ml of MP81838 = 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
994	ICPAES ISM01.2 S1 (CONC.)	MP81844	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5473 + 0.20000ml of M5515 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5976 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M5698 + 0.40000ml of M6033 + 0.50000ml of M5697 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5961 + 1.00000ml of M5227 + 1.00000ml of M5800 + 1.20000ml of M5802 + 1.20000ml of M5819 + 10.00000ml of M5498 + 10.00000ml of M5519 + 10.00000ml of M5769 + 10.00000ml of M5806 + 10.00000ml of M5818 + 2.00000ml of M5942 + 4.00000ml of M5390 + 34.24000ml of MP81838 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1003	ICPAES ISM01.2 S1	MP81845	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 0.50000ml of MP81844 + 99.50000ml of MP81838 = 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
1222	ICV ICPAES	MP81846	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 0.25000ml of M5976 + 5.00000ml of M5295 + 447.75000ml of MP81838 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP81847	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 25.00000ml of M5130 + 225.00000ml of MP81838 = 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
905	ICP AES ICSAB SOLN	MP81848	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 25.00000ml of M5130 + 25.00000ml of M5223 + 200.00000ml of MP81838 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1119	ICPAES ISM01.2(CCV)	MP81849	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 0.75000ml of M5498 + 0.75000ml of M5769 + 1.22500ml of M6033 + 1.25000ml of M5515 + 1.25000ml of M5806 + 19.77500ml of MP81838 + 25.00000ml of MP81839 = 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
2480	ICP AES STD 6 ISM01.3	MP81851	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 4.00000ml of M5289 + 4.00000ml of M5498 + 4.00000ml of M5515 + 4.00000ml of M5769 + 4.00000ml of M5806 + 30.00000ml of MP81838 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP81852	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 1.00000ml of M5984 + 10.00000ml of M4960 + 1969.00000ml of W3112 + 20.00000ml of M5963 = 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	MP81853	08/07/2024	08/31/2024	Kareem Khairalla	None	None	Sarabjit Jaswal 08/13/2024

FROM 200.00000ml of M5963 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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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	100721	10/07/2024	10/09/2021 / jaswal	10/08/2021 / jaswal	M4960

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	11/19/2024	05/20/2024 / bin	04/20/2021 / bin	M5130

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	11/19/2024	05/20/2024 / bin	04/20/2021 / bin	M5223

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	100121	10/01/2024	07/01/2022 / bin	10/18/2021 / bin	M5227

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Aluminum (Al) 10,000PPM	070622	07/06/2025	09/02/2022 / jaswal	07/12/2022 / jaswal	M5289

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	ICV-1 / ICV (ICP/ICPMS) STOCK SOLN	ICV-1014	02/05/2025	08/07/2024 / jaswal	02/20/2020 / bin	M5295

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	S2-MEB711673	11/02/2026	09/19/2022 / jaswal	08/20/2022 / jaswal	M5296

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	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	01/13/2027	01/30/2024 / bin	09/19/2022 / bin	M5395

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57138 / Sr, 10000 PPM, 125 ml	082922	08/29/2025	03/16/2023 / jaswal	03/16/2023 / jaswal	M5473

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57138 / Sr, 10000 PPM, 125 ml	082922	08/09/2025	07/29/2024 / jaswal	03/16/2023 / jaswal	M5476

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5498

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	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

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	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57119 / Potassium (K) 10,000PPM	120822	12/08/2025	01/08/2024 / bin	03/17/2023 / bin	M5519

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	26397-103 / PTFE BOILING STONES	W126678	08/30/2024	06/14/2023 / jaswal	06/12/2023 / jaswal	M5585

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	08/31/2024	08/04/2022 / jaswal	08/03/2022 / Al-Terek	M5633

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	WW-LFS-1 / Laboratory Fortified Stock Solution 1, 125 ml	T2-MEB723367	08/17/2024	08/18/2023 / bin	04/16/2023 / bin	M5643

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

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	091823	09/18/2026	05/24/2024 / Jaswal	01/03/2024 / bin	M5769

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

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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.	57014 / Si, 1000 PPM, 125 ml	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	04/19/2024 / jaswal	02/22/2024 / jaswal	M5875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	12/08/2024	06/21/2024 / Al-Terek	06/07/2024 / Al-Terek	M5935

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	06/18/2024 / Jaswal	02/22/2024 / Jaswal	M5942

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	22G2862015	12/27/2024	07/04/2024 / Jaswal	06/23/2024 / Al-Terek	M5951

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	12/27/2024	06/24/2024/ jaswal	06/23/2024 / Al-Terek	M5952

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	041124	04/11/2027	07/02/2024 / Jaswal	06/11/2024 / Jaswal	M5961

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 #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	01/04/2025	07/09/2024 / Al-Terek	07/03/2024 / Al-Terek	M5963

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)	24B1362001	01/04/2025	07/05/2024 / Jaswal	07/03/2024 / Al-Terek	M5965

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	08/05/2024 / kareem	06/14/2024 / Jaswal	M5984

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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.	57082 / Pb, 1000 PPM, 125 ml	061224	06/12/2027	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

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	01/25/2019 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M6028

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R 8/5/24

CERTIFIED WEIGHT REPORT:

Part Number: 57048
Lot Number: 070124
Description: Cadmium (Cd)

Expiration Date: 070127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 2000.07 0.100 Flask Uncertainty

		Lot #	
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

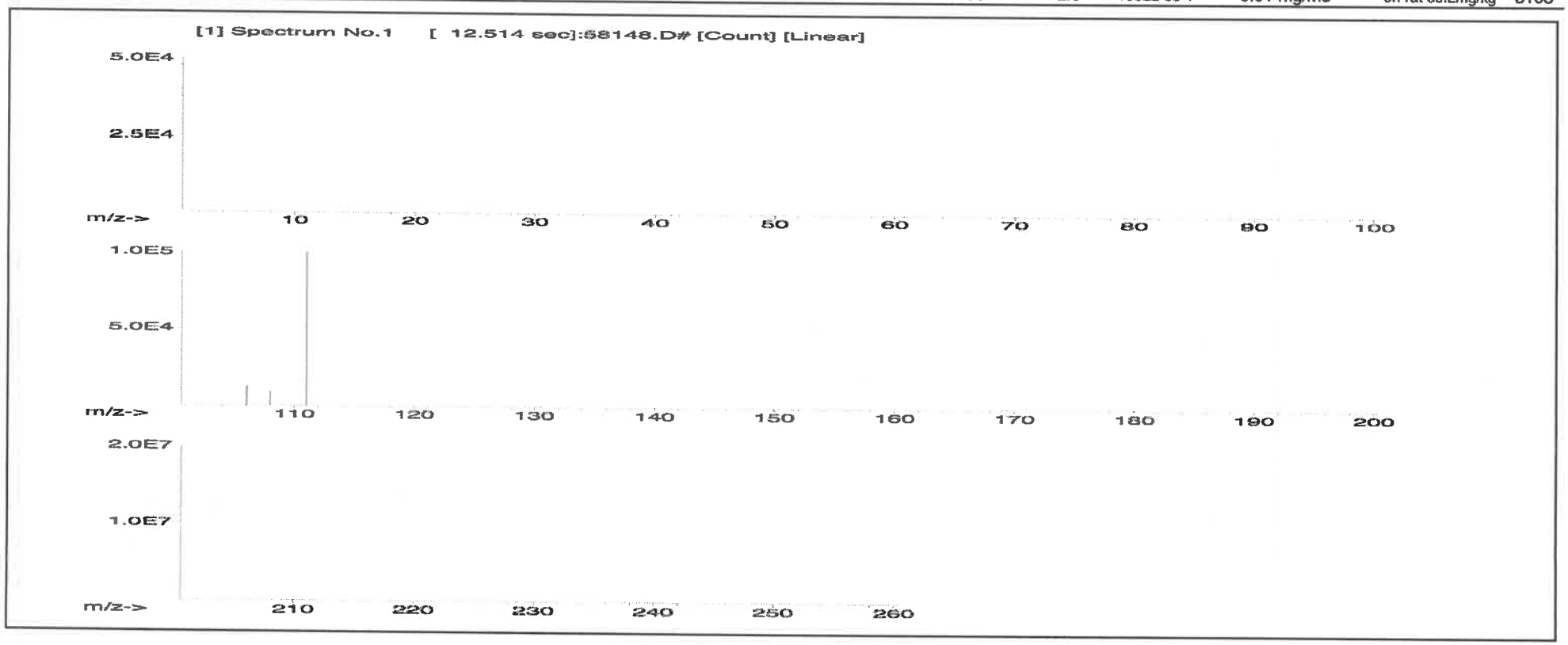
5E-05 Balance Uncertainty

Aleah O'Brady

Formulated By: Aleah O'Brady 070124

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



Revised
253 of 367
P3475-METALS

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

INORGANIC VENTURES™
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Certificate of Analysis

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	S2-MEB711673
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 ± 6 µg/mL**	**Molybdenum, Mo**	**1 000 ± 6 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 6 µg/mL**
Titanium, Ti	**1 000 ± 7 µg/mL**		

Density: 1.030 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	110830
Mo	ICP Assay	3134	130418
Si	ICP Assay	3150	130912
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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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:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Calcium, Ca	5 000 ± 22 µg/mL
Chromium, Cr	200.0 ± 1.0 µg/mL	Cobalt, Co	500.0 ± 2.4 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	1 000 ± 4 µg/mL
Magnesium, Mg	5 000 ± 20 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Potassium, K	5 000 ± 19 µg/mL
Silver, Ag	250.0 ± 1.1 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Vanadium, V	499.7 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

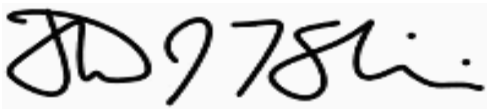
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

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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:	CLPP-CAL-3
Lot Number:	T2-MEB714159
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	1 000 µg/mL ea: Arsenic, Lead, Selenium, Thallium, 500 µg/mL ea: Cadmium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Arsenic, As	**1 000 ± 8 µg/mL**	**Cadmium, Cd**	**500.0 ± 2.1 µg/mL**
Lead, Pb	**1 000 ± 5 µg/mL**	**Selenium, Se**	**1 000 ± 8 µg/mL**
Thallium, Tl	**1 000 ± 7 µg/mL**		

Density: 1.043 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Tl	ICP Assay	3158	151215

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

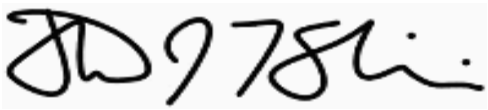
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R: 8/15/24

CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

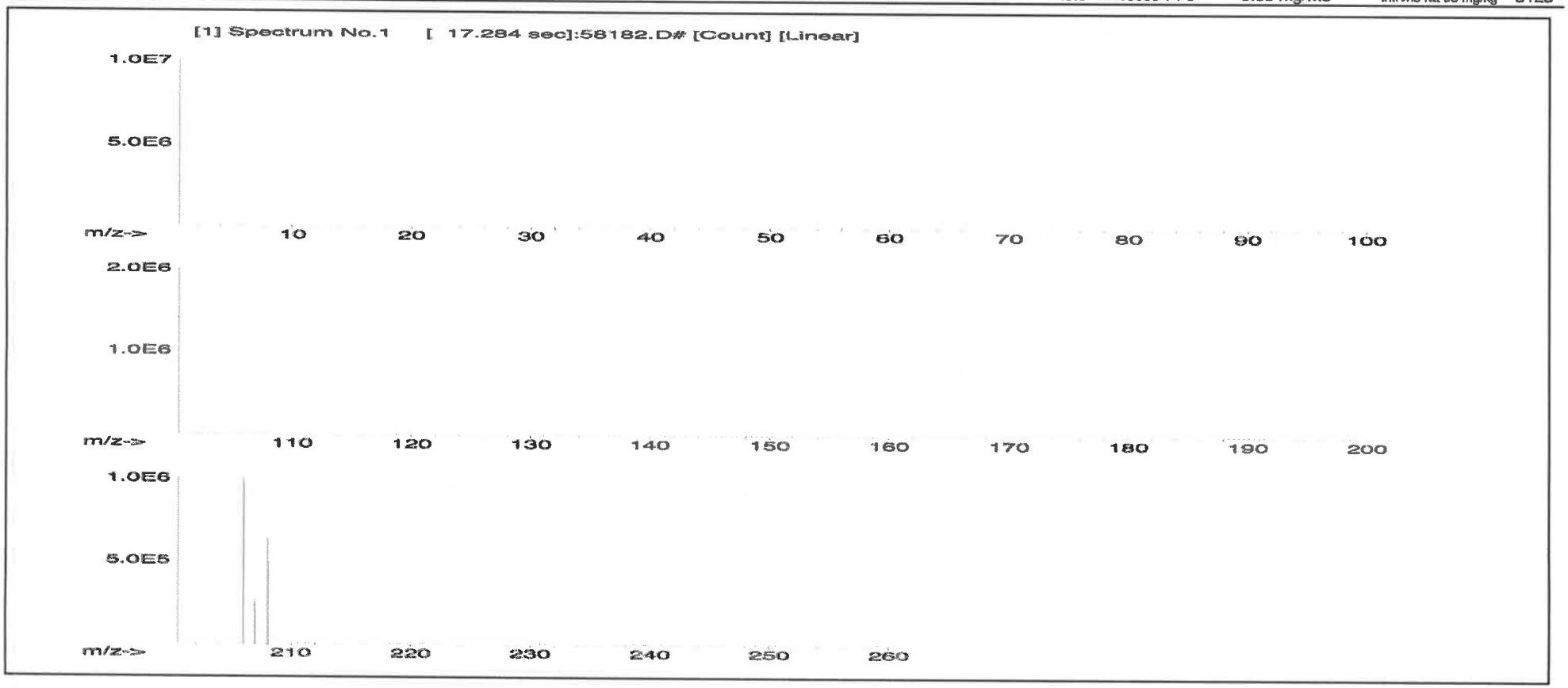
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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

M4960 R: 10/08/21 BH

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AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58149
Lot Number: 100721
Description: Indium (In)

Expiration Date: 100724
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 500.06 0.058 Flask Uncertainty

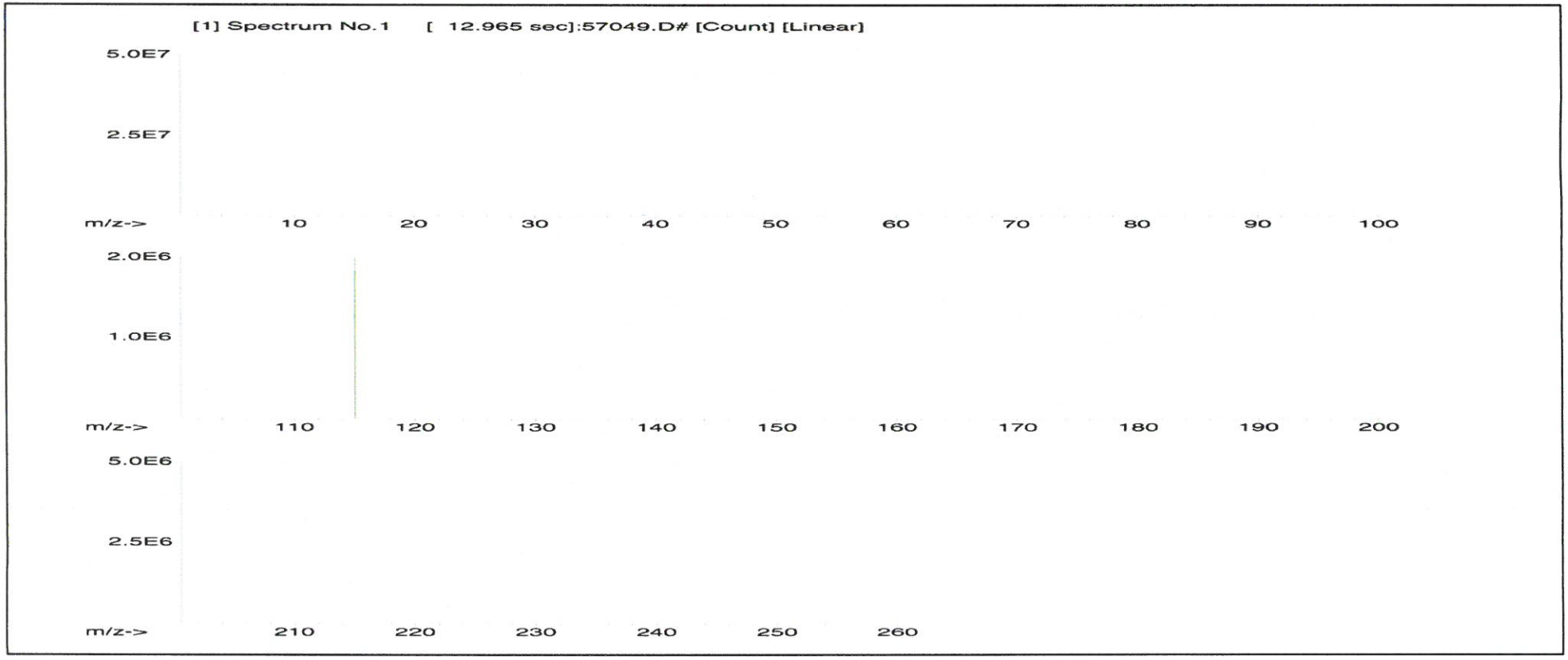
	Lot #		
Solvent:	20370011	Nitric Acid	
5%	25.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	100721
Reviewed By:	Pedro L. Rentas	100721

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. Indium Oxide (In)	IN086	W1096A	10000	99.999	0.10	82.6	6.05408	6.05441	**10000.6**	**20.1**	1312-43-2	NA	NA	3124a



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<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	T	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

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APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
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(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

M5227 R: 10/18/2021

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**	20370011	Nitric Acid	
Lot Number:	**100121**			
Description:	**Vanadium (V)**	2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	100124			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.4	0.06	Flask Uncertainty	

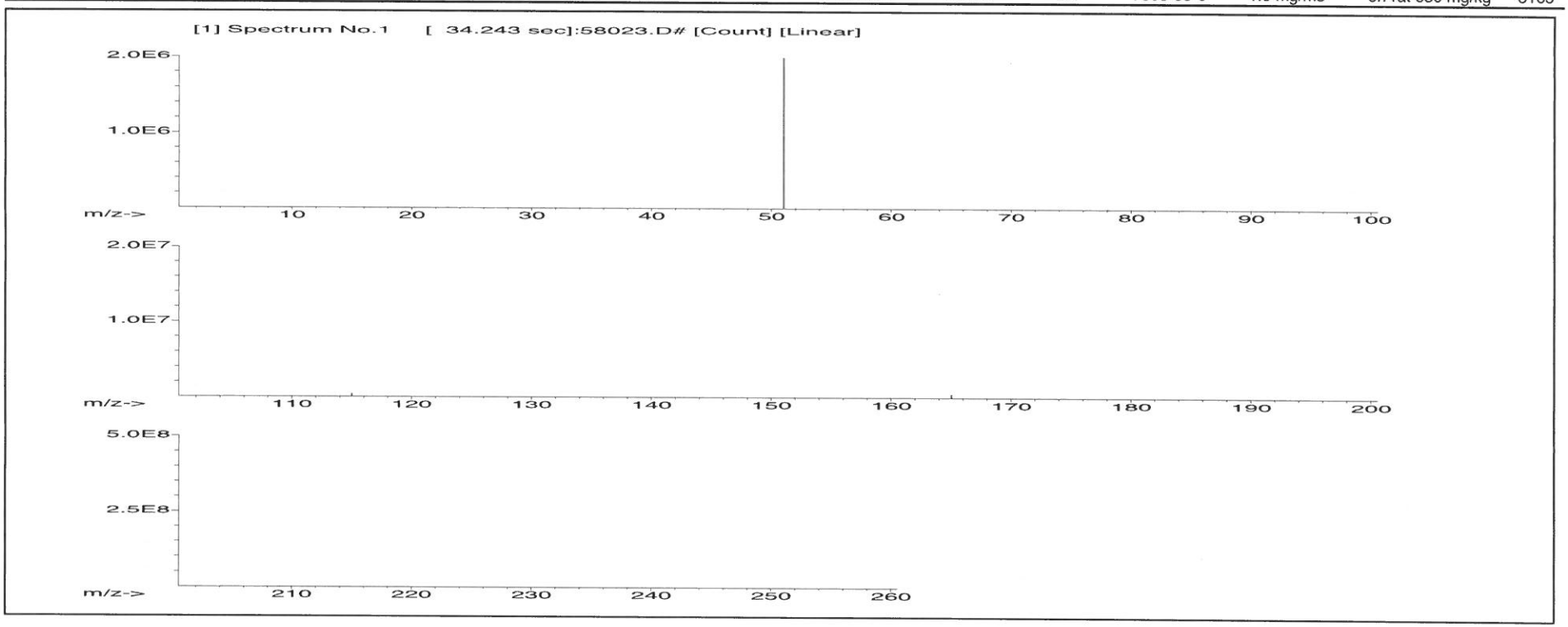
Giovanni Esposito

Formulated By:	Giovanni Esposito	100121

Pedro Rentas

Reviewed By:	Pedro L. Rentas	100121

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	070721	0.1000	300.0	0.084	1000	10000.4	**1000.0**	**2.1**	7803-55-6	1.0 mg/m3	orl-rat 630 mg/kg	3165



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5289 R: 07/12/22 BH

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CERTIFIED WEIGHT REPORT:

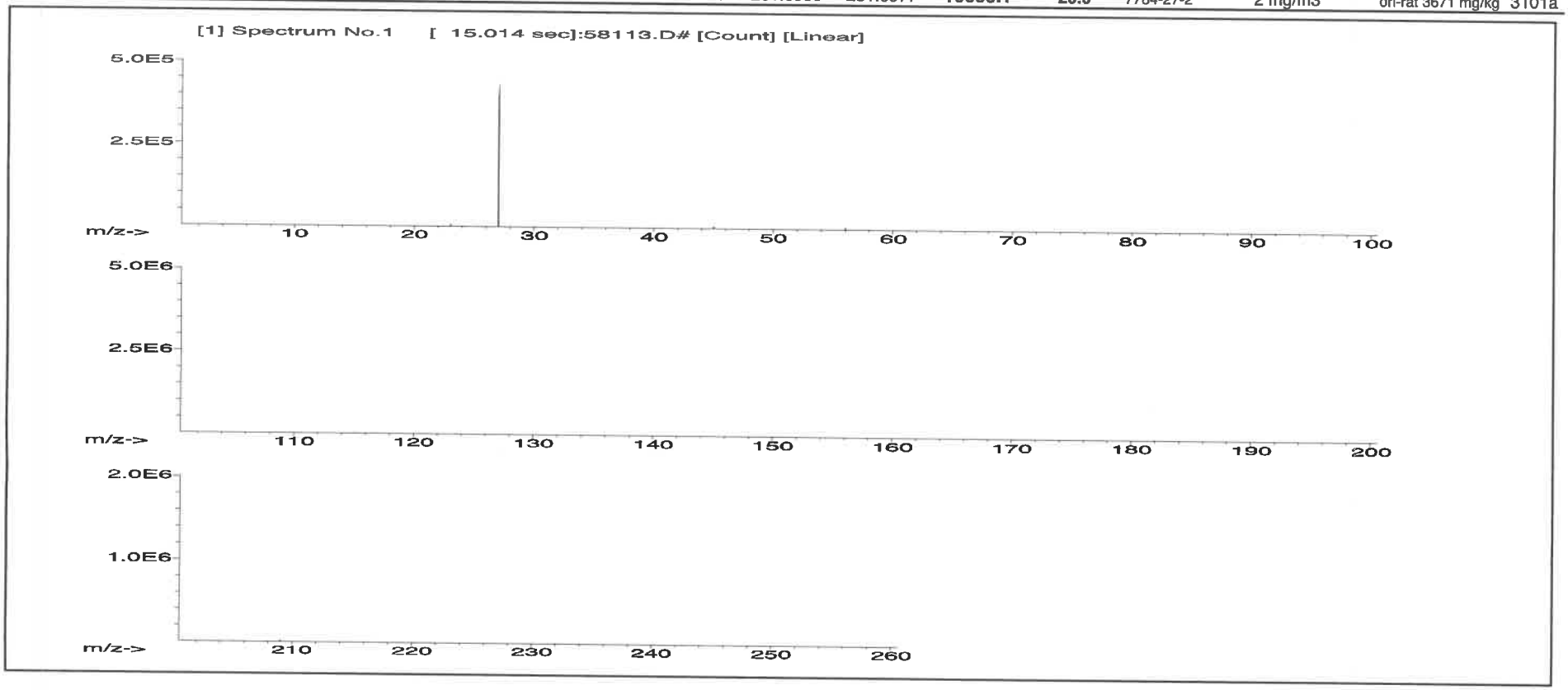
Part Number: 58113
Lot Number: 070622
Description: Aluminum (Al)

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

		Lot #	
Solvent:	20370011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	070622
Reviewed By:	Pedro L. Rentas	070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALD012021A1	10000	99.999	0.10	7.10	281.6956	281.6977	**10000.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	T	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	<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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P3475-METALS

R : 4/20/21

QATS LABORATORY INORGANIC REFERENCE MATERIAL
INITIAL CALIBRATION VERIFICATION SOLUTIONS
(ICV1, ICV5, AND ICV6)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Metals in Dilute Acidic or
Cyanide in Basic Aqueous Solutions
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

M5291
M5292
M5293
M5294
M5295

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more Aqueous Inorganic Reference Materials containing various analyte concentrations. ICV1 and ICV5 are in a matrix of dilute nitric acid. ICV6 is in a matrix of dilute basic solution. **For the reference material source in reporting ICVs use "USEPA". For the reference material lot number for the ICV1, ICV5, and ICV6 solutions use "ICV1-1014", "ICV5-0415", and "ICV6-0400", respectively.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The Initial Calibration Verification Solutions (ICVs) are to be used to evaluate the accuracy of the initial calibrations of ICP, AA, and Cyanide colorimetric instruments, and are to be used with the CLP SOWs and revisions. The values for each element in the ICVs are listed below in µg/L (ppb) for the resulting solution(s) after the dilution of the concentrate(s) according to the following instructions. Use Class 'A' glassware to prepare the solution(s).

ICV1-1014 For ICP-AES analysis, use a 10-fold dilution by pipetting 10 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid.

ICV1-1014 For ICP-MS analysis, use a 50-fold dilution by pipetting 2 mL of the ICV1 concentrate into a 100 mL volumetric flask and dilute to volume with 1% (v/v) nitric acid.

ICV5-0415 For the cold vapor analysis of mercury by AA, use a 100-fold dilution by pipetting 1 mL of the ICV5 concentrate into a 100 mL volumetric flask and dilute to volume with 2% (v/v) nitric acid. The ICV5 concentrate is prepared in 0.05% (w/v) $K_2Cr_2O_7$ and 5% (v/v) nitric acid.

ICV6-0400 For the analysis of cyanide, use a 100-fold dilution by pipetting 1 mL of the ICV6 concentrate into a 100 mL volumetric flask and dilute to volume with Type II water. Distill this solution along with the samples before analysis. The cyanide concentrate is prepared from $K_3Fe(CN)_6$, Type II water, and 0.1 % sodium hydroxide, and will decompose rapidly if exposed to light.

NOTE: USE TYPE II WATER AND HIGH-PURITY ACIDS FOR ALL DILUTIONS.

(D) *CERTIFIED CONCENTRATIONS OF QATS ICV1, ICV5, AND ICV6 SOLUTIONS*

ICV1-1014		
Element	**Concentration (µg/L) (after 10-fold dilution)**	**Concentration (µg/L) (after 50-fold dilution)**
Al	2500	500
Sb	1000	200
As	1000	200
Ba	520	100
Be	510	100
Cd	510	100
Ca	10000	2000
Cr	520	100
Co	520	100
Cu	510	100
Fe	10000	2000
Pb	1000	200
Mg	6000	1200
Mn	520	100
Ni	530	110
K	9900	2000
Se	1000	200
Ag	250	50
Na	10000	2000
Tl	1000	210
V	500	100
Zn	1000	200

ICV5-0415		ICV6-0400	
Element	**Concentration (µg/L) (after 100-fold dilution)**	**Analyte**	**Concentration (µg/L) (after 100-fold dilution)**
Hg	4.0	**CN^-**	99

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R: 09/08/22 (BA)

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M5387 . M5389 . M5390 . M5391 . M5392

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Revised

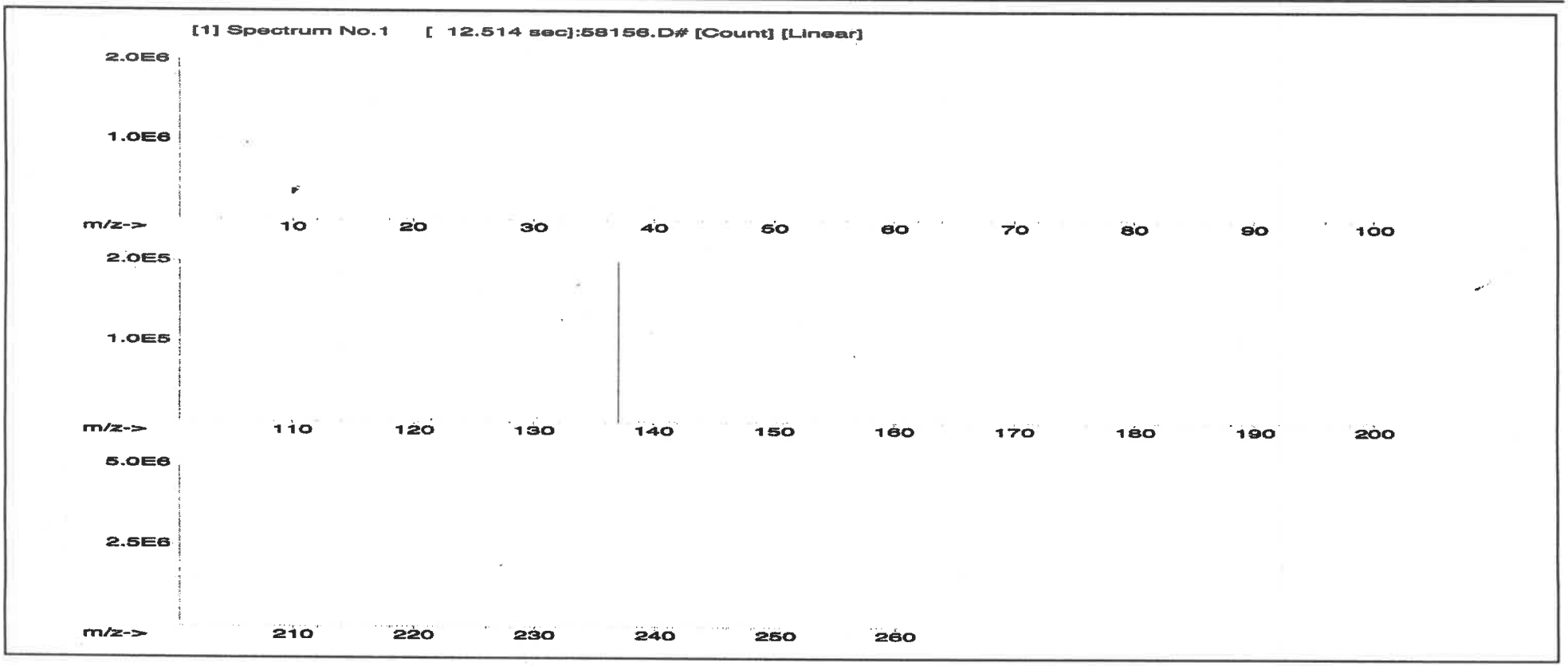
CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**072122**	**Solvent:**	20510011	Nitric Acid	
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	072125				
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	072122
Reviewed By:	Pedro L. Rentas	072122

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	3.82426	**1000.0**	**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:

Certified by:



Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

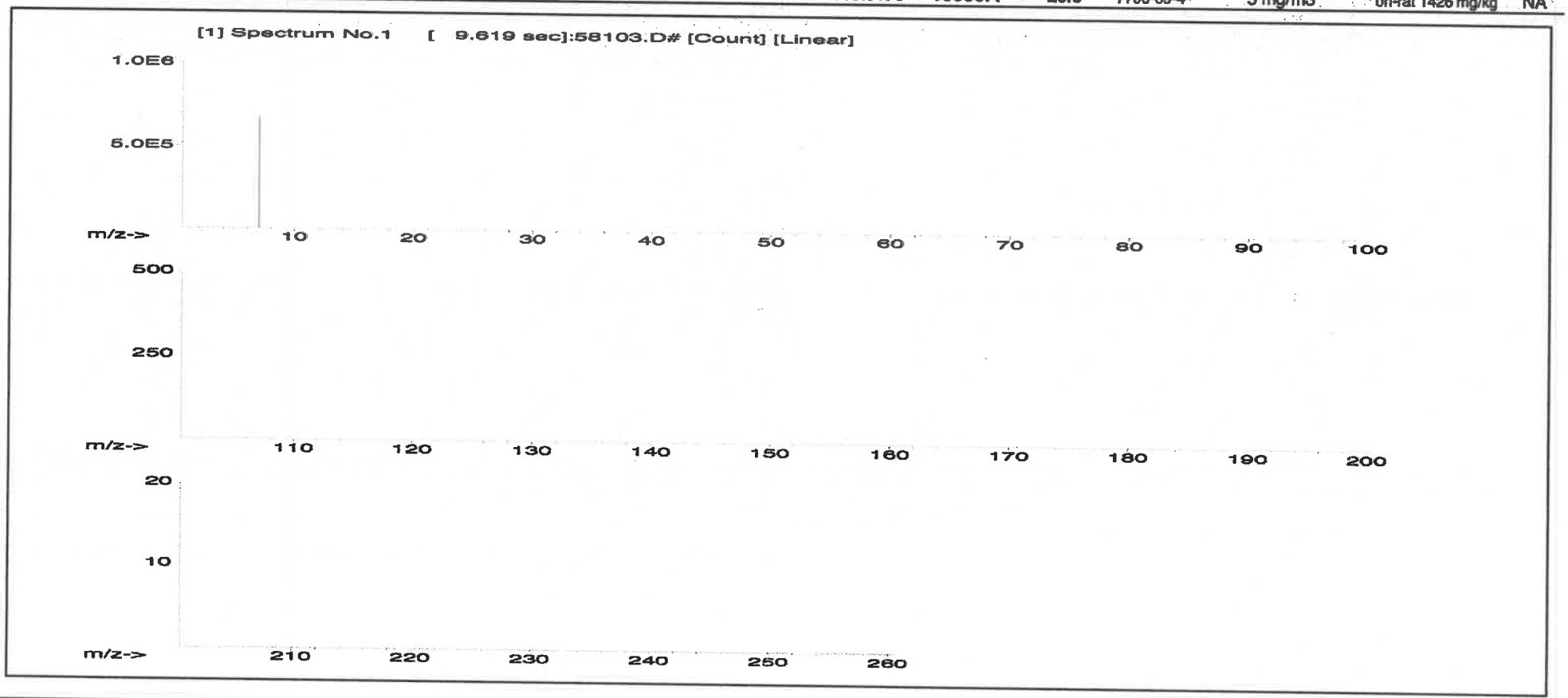
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #			
Solvent:	20510011	Nitric Acid		
2%	20.0 (mL)	Nitric Acid		

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	070622
Reviewed By:	Pedro L. Rentas	070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



8/3-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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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M5497 - M5498 R: 03/17/23 (BP)

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

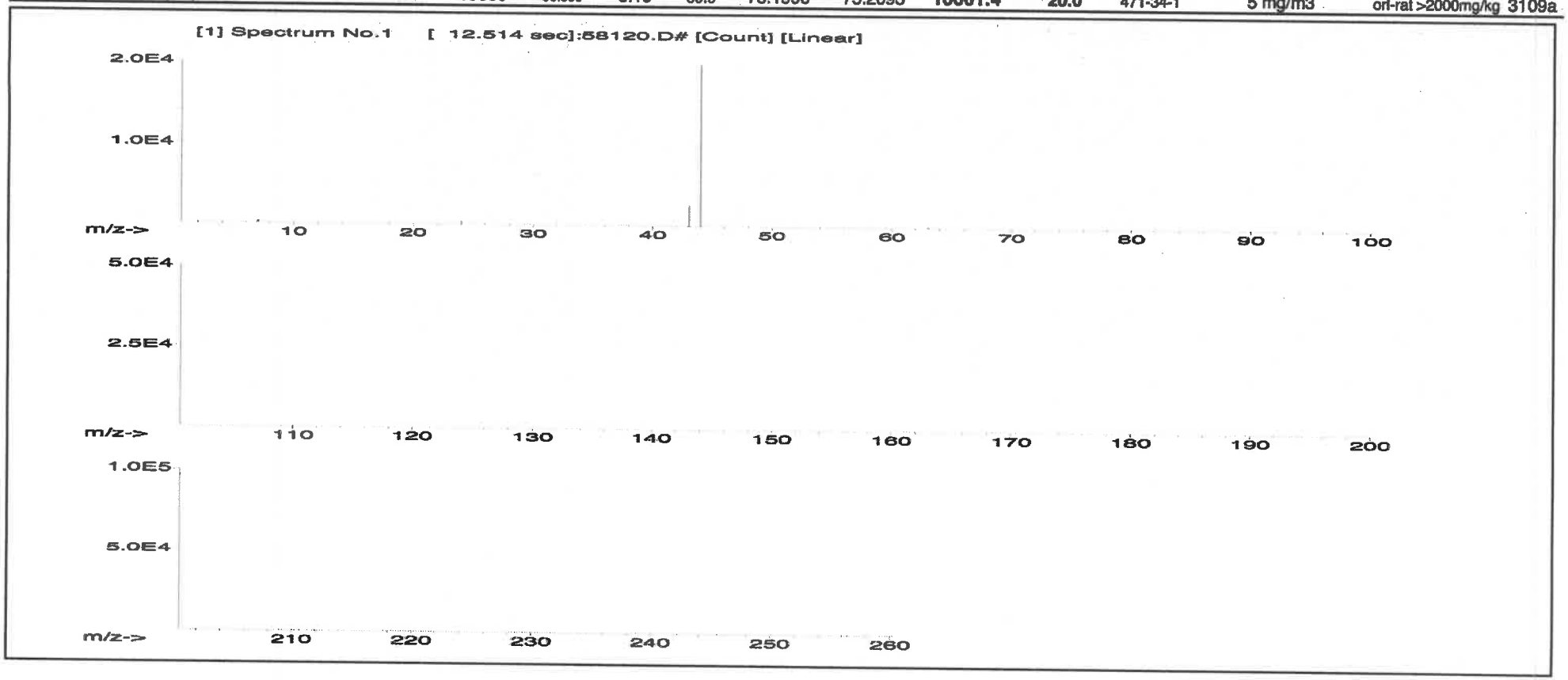
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 031523

Pedro Rentas
Reviewed By: Pedro L. Rentas 031523

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Calcium carbonate (Ca)	IN014	CAD072022A1	10000	99.999	0.10	39.9	75.1990	75.2093	**10001.4**	**20.0**	471-34-1	5 mg/m3	orl-rat >2000mg/kg	3109a



TRACE METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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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M 5513 R: 03/17/23 BE

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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

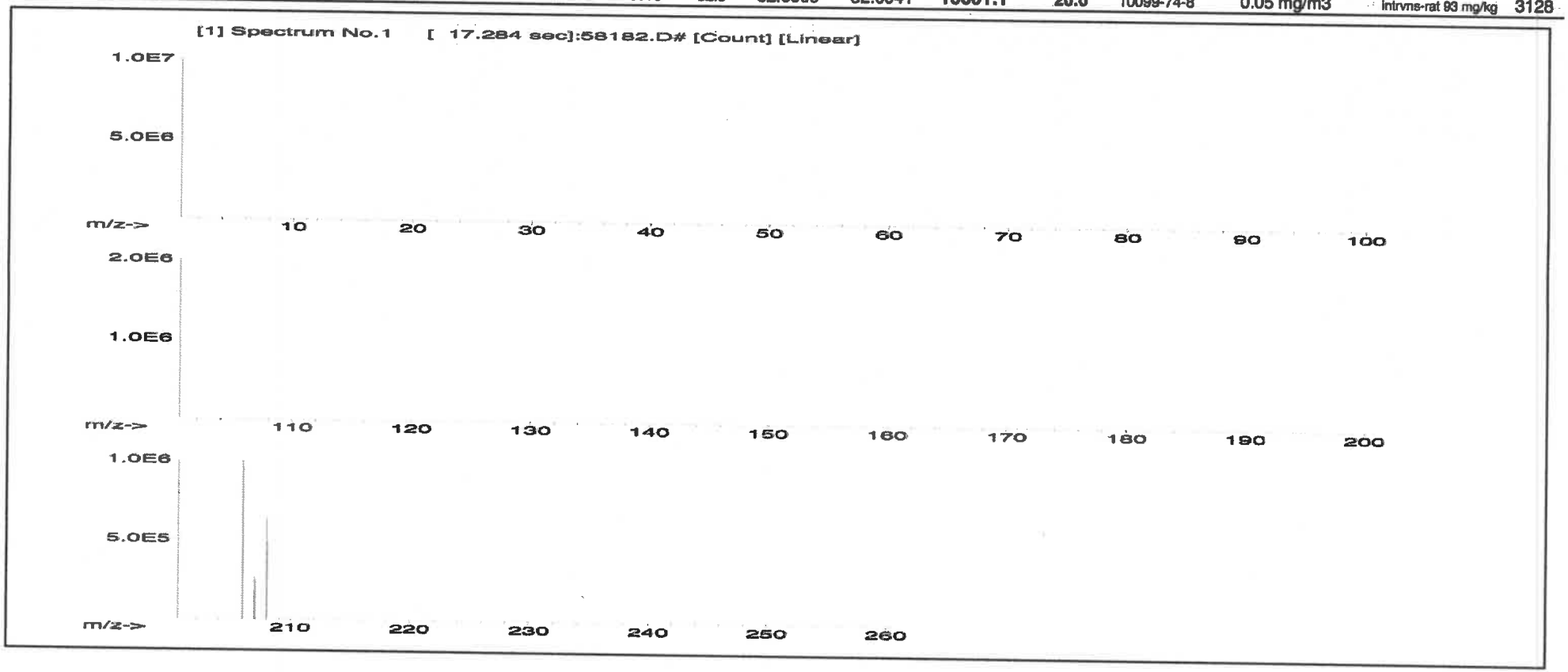
Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	061522
Reviewed By:	Pedro L. Rentas	061522

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	32.0041	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	Intrvns-rat 93 mg/kg	3128



3673-METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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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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MS514 - MS515 R: 03/17/22

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P3475-METALS

CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 092122
Description: Iron (Fe)

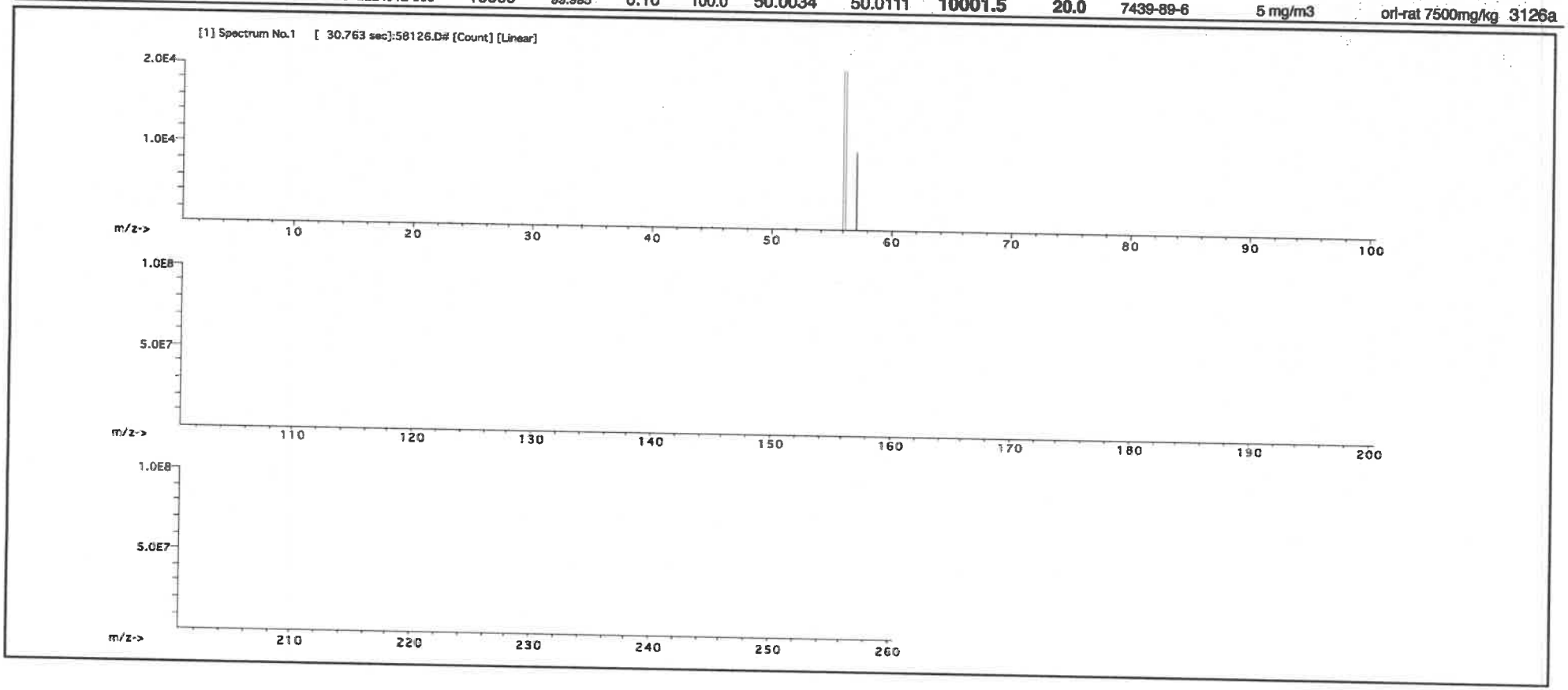
Expiration Date: 092125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1 ± 0.12 (5E-05 Balance Uncertainty; Flask Uncertainty)

	Lot #		
Solvent:	20510011	Nitric Acid	
7.0%	350.0 (mL)	Nitric Acid	

Giovanni Esposito
Formulated By: Giovanni Esposito 092122

Pedro Rentas
Reviewed By: Pedro L. Rentas 092122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2224912-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



R435 METALS

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.05
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

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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M5519. M5520 BH R:03/17/23

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CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4 ± 0.06 Flask Uncertainty

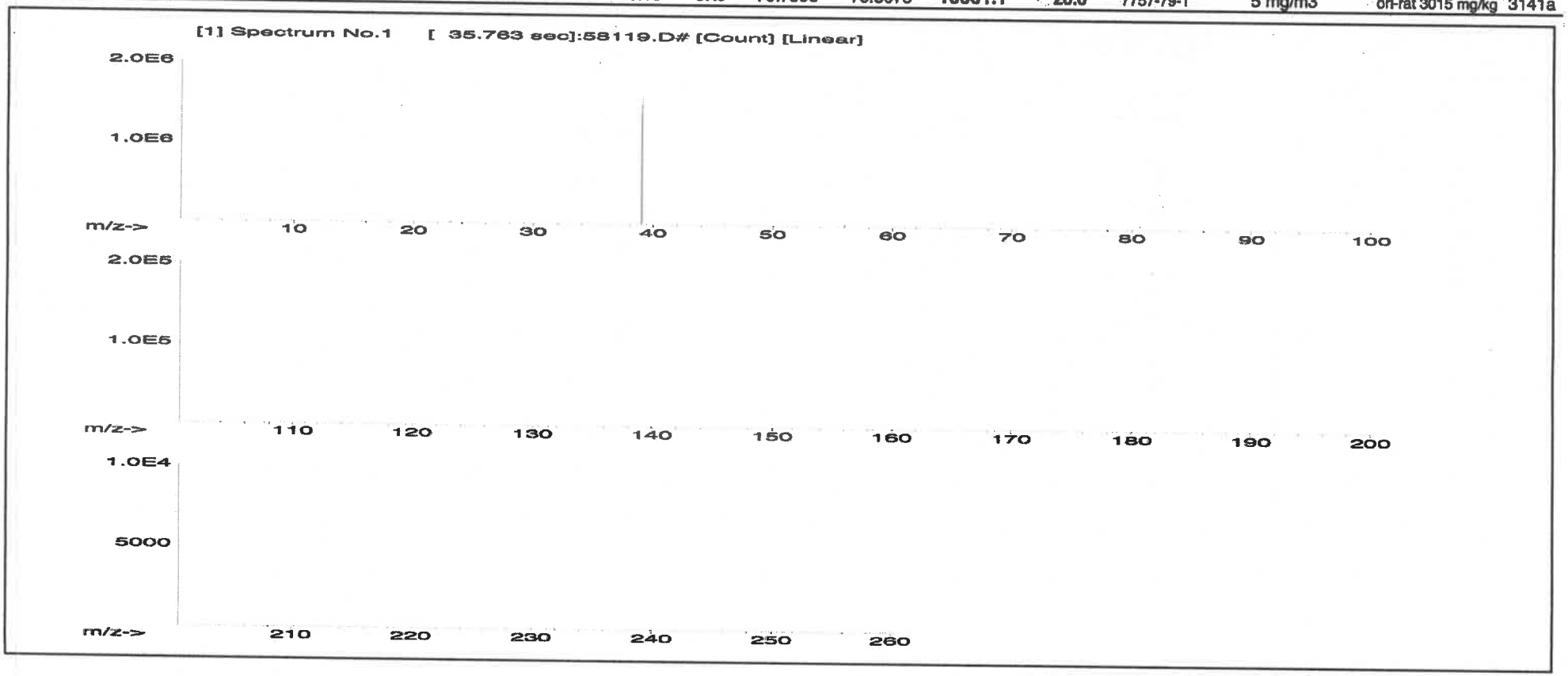
		Lot #	
Solvent:	20510011		Nitric Acid
	2%	60.0 (mL)	Nitric Acid

± 5E-05 Balance Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	120822
Reviewed By:	Pedro L. Rentas	120822

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Potassium nitrate (K)	IN034	KD022021A1	10000	99.999	0.10	37.6	79.7990	79.8075	**10001.1**	**20.0**	7757-79-1	5 mg/m3	orl-rat 3015 mg/kg	3141a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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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).

JENSEN INERT PRODUCTS

MATERIAL CERTIFICATE OF COMPLIANCE

DATE: JUNE 12, 2023

CUSTOMER:	PCI SCIENTIFIC SUPPLY, INC
PURCHASE ORDER NO.	6054931
CATALOG NO.	BOI5021-450L
PRODUCT DESCRIPTION:	BOILING STONES, TFE, 454GMS
QUANTITY:	10 EACH
LOT NO.	W126678
SPECIFICATION (S):	Made from Virgin PTFE Resin

We certify that we have complied with the terms and conditions of the above Purchase Order and the Part Specifications in the manufacturing of the above product.

Laura Valencia

Laura Valencia
Quality Assurance Inspector

F:U:J:CF:PCISCI:COC-55114-BOI5021-061223

3773 NW 126th Avenue • Coral Springs, Florida 33065 • Fax (954) 344-2008 • 1-800 446-3781
Email: jensen@jenseninert.com Visit our Web Site at www.jenseninert.com

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

CERTIFICATE OF ANALYSIS

Date: 8/3/2022 MS631 MS632 MS633 MS634 **Lot No 820803**

Hydrogen Peroxide, ACS
Reagent Grade

TEST	MAXIMUM LIMITS	RESULT
Appearance	Colorless and free from suspended matter or sediment	Pass
Assay	29-32%	31.4%
Color (APHA)	10	5
Residue after Evaporation	0.002%	.0001%
Titratable Acid	0.0006 meq/g	< .0006 meq/g
Chloride (Cl)	2 ppm	< 1 ppm
Nitrate (NO_3)	2 ppm	< 1 ppm
Phosphate	2 ppm	< 1 ppm
Sulfate (SO_4)	5 ppm	< .5 ppm
Ammonium (NH_4)	5 ppm	< 1 ppm
Heavy Metals (as Pb)	1 ppm	< .1 ppm
Iron (Fe)	0.5 ppm	< .1 ppm
Sodium Stannate	200 – 300 ppb	Pass

***Our Hydrogen Peroxide is considered un-stabilized because it is very slightly stabilized with Sodium Stannate, 500 ppb maximum, just for safety purposes.

Date of MFG: 8/2022
Retest date: 8/2024

Gina M. Rambo
Office Manager

CORCO CHEMICAL CORPORATION. 299 CEDAR LANE. FAIRLESS HILLS, PA 19030. 215-295-5006. FAX 215-295-0781

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M5658 R ! 8/25/23

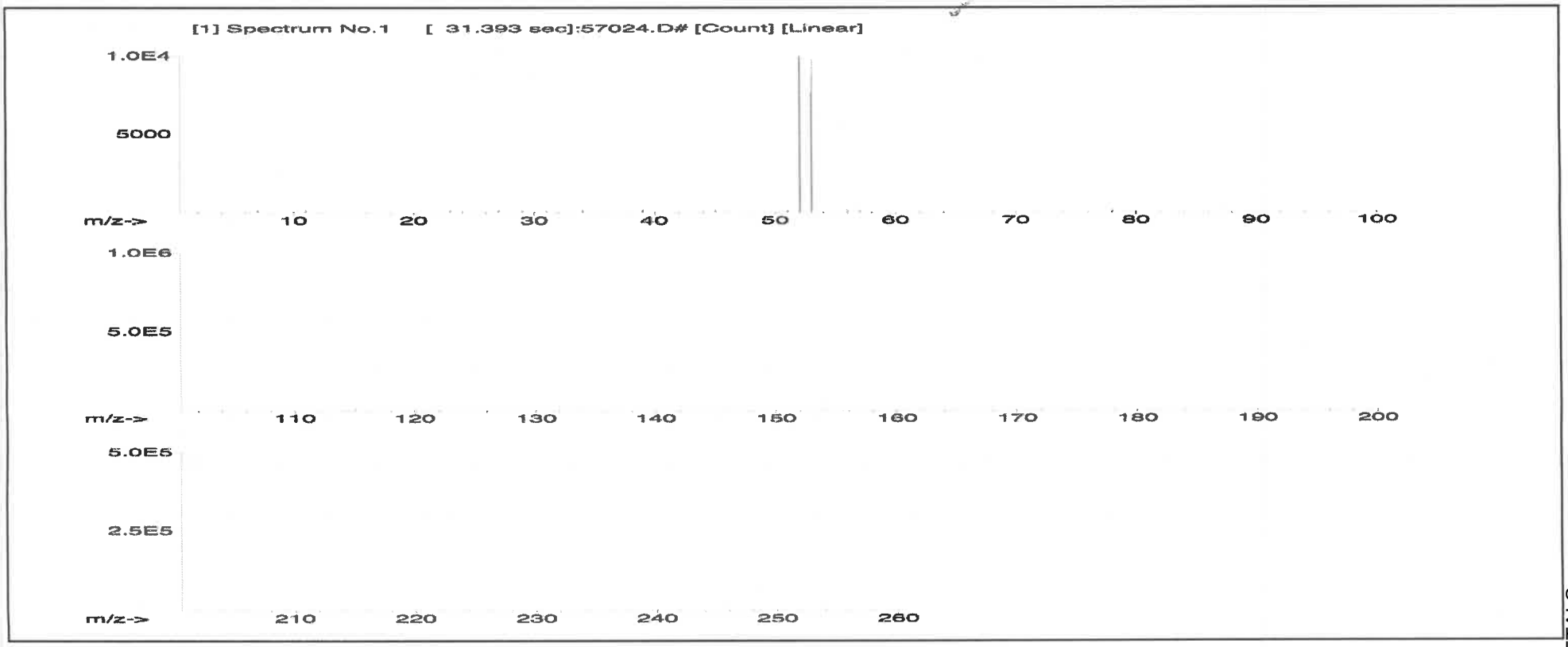
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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M5697 R: 10/27/23

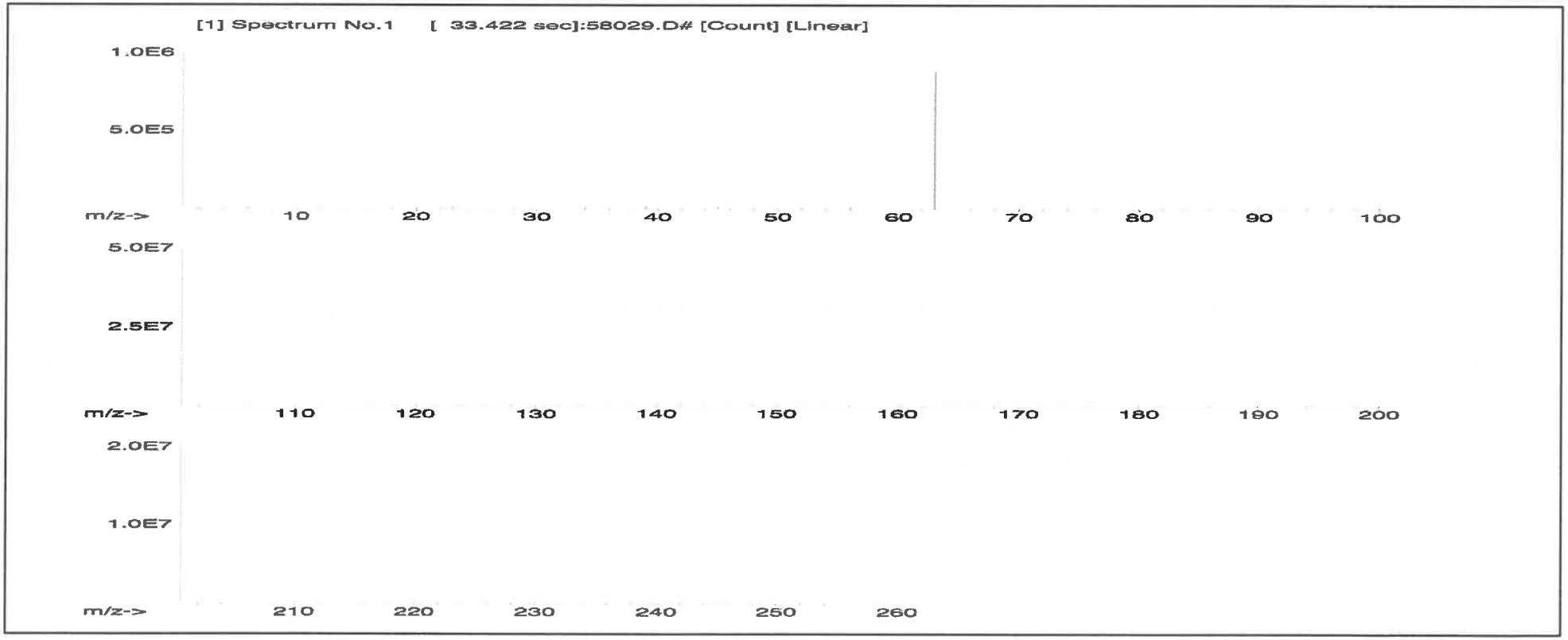
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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M5648 R: 10/27/23

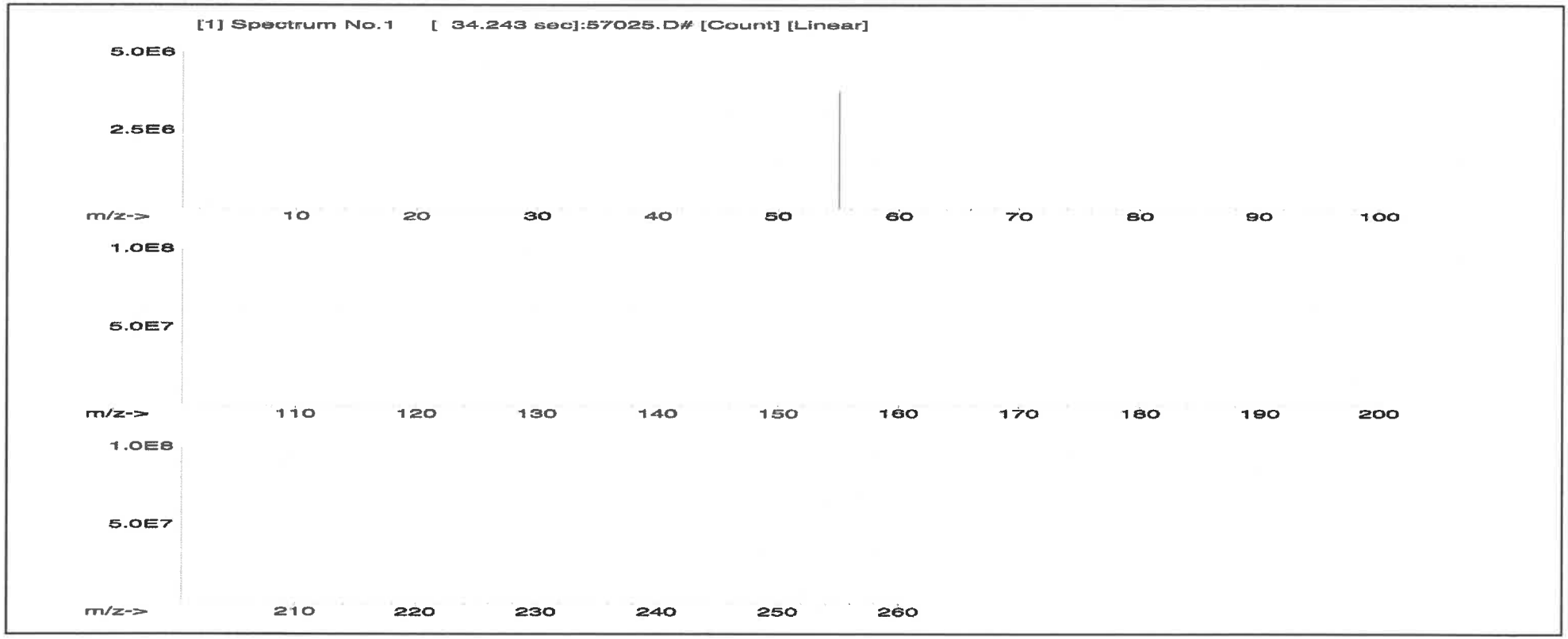
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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58025**	24002546	Nitric Acid	
Lot Number:	**102623**			
Description:	**Manganese (Mn)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	102626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102623
Reviewed By:	Pedro L. Rentas	102623

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. Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	20694-39-7	5 mg/m3	orl-rat >300mg/kg	3132



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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 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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M5768 M5769 (BP) R:1/3/24

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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02 ± 0.058 Flask Uncertainty

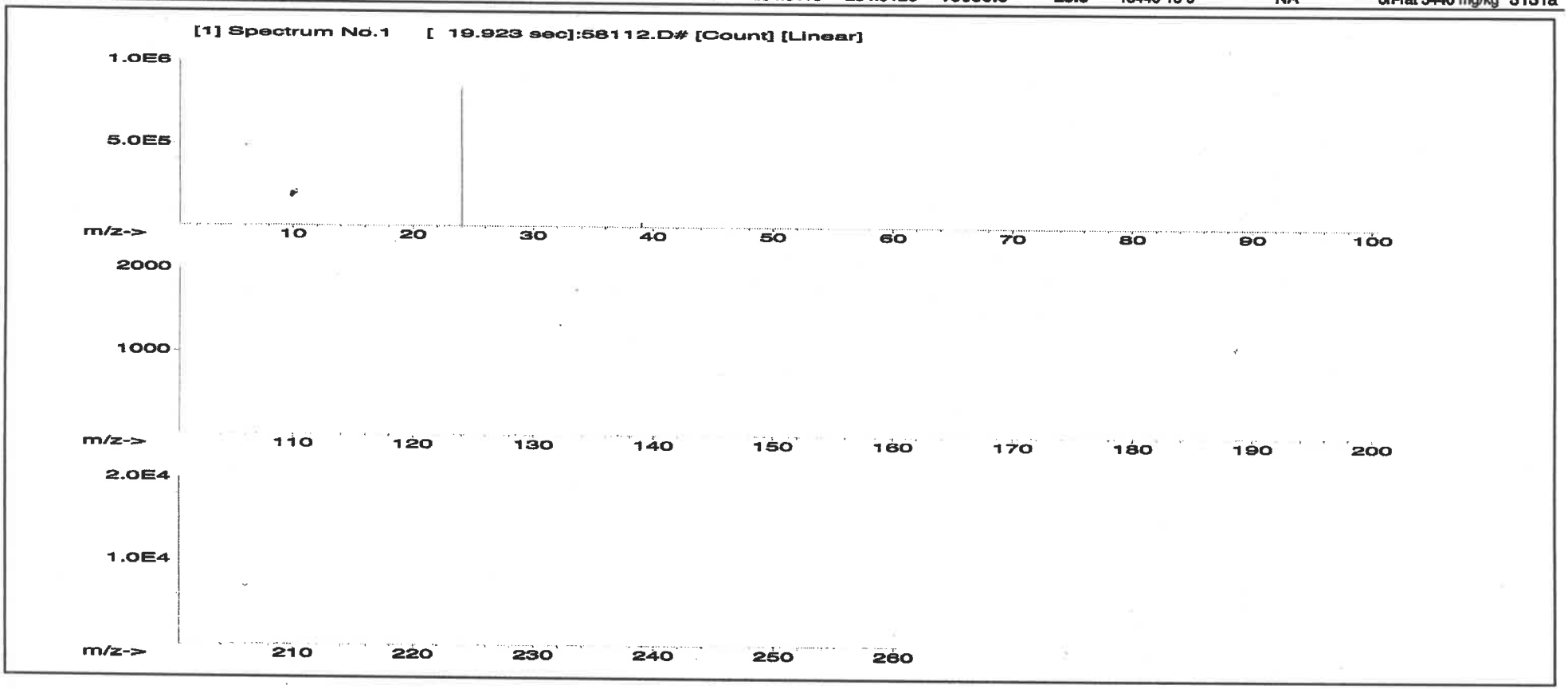
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

M5768, M5769 (BP) R: 1/3/24

Formulated By:	Lawrence Barry	091823
Reviewed By:	Pedro L. Rentas	091823

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	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	ori-rat 5440 mg/kg	3131a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M5798

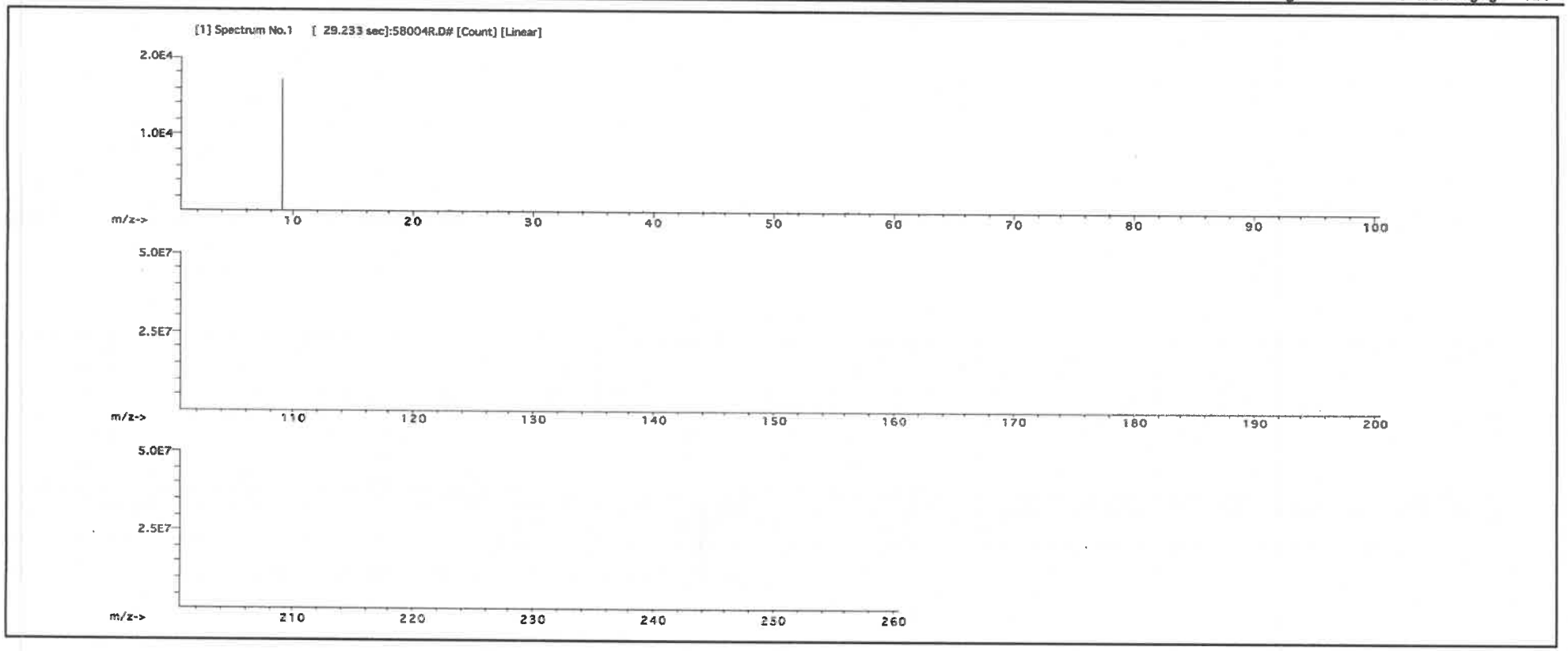
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CERTIFIED WEIGHT REPORT:

		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.

* 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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* 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: 57050
Lot Number: 071123
Description: Tin (Sn)

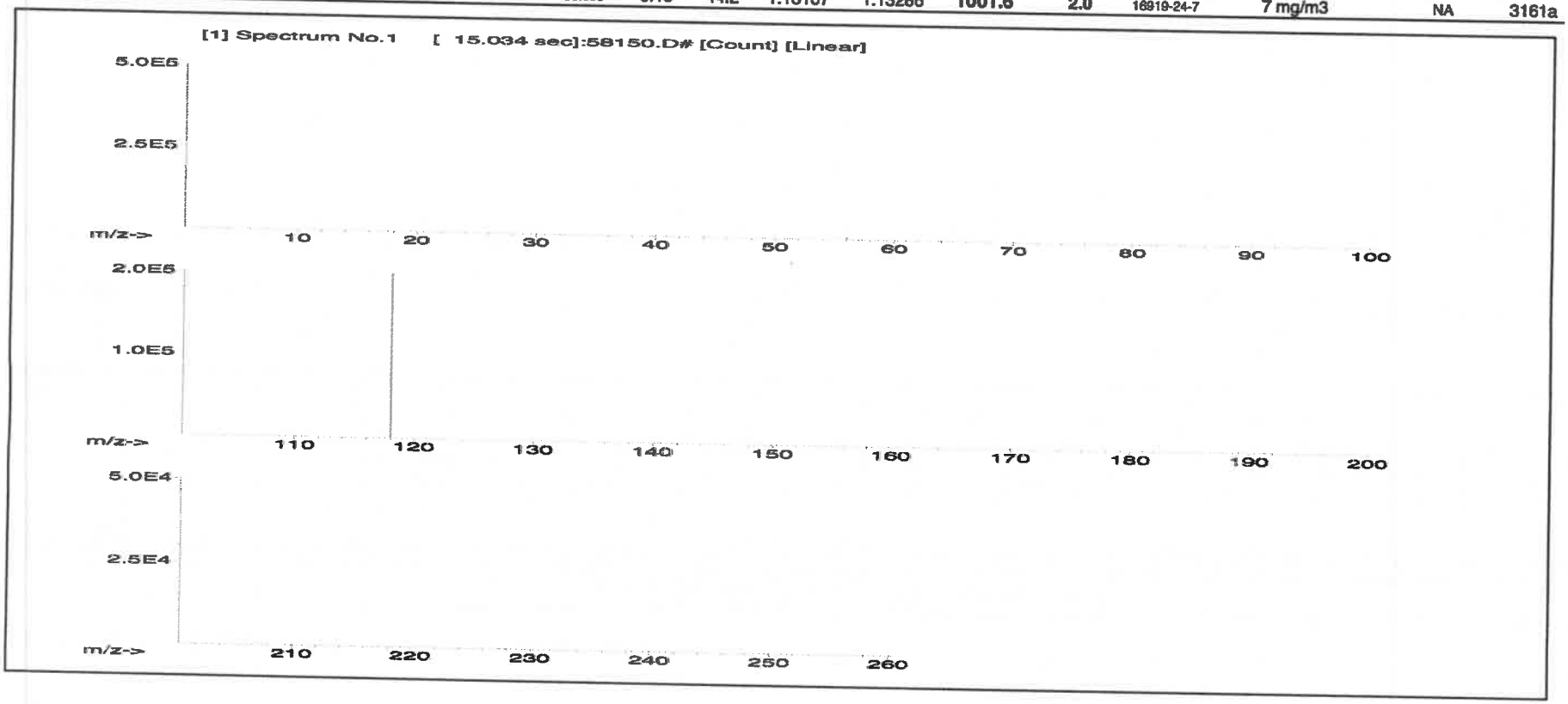
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
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* 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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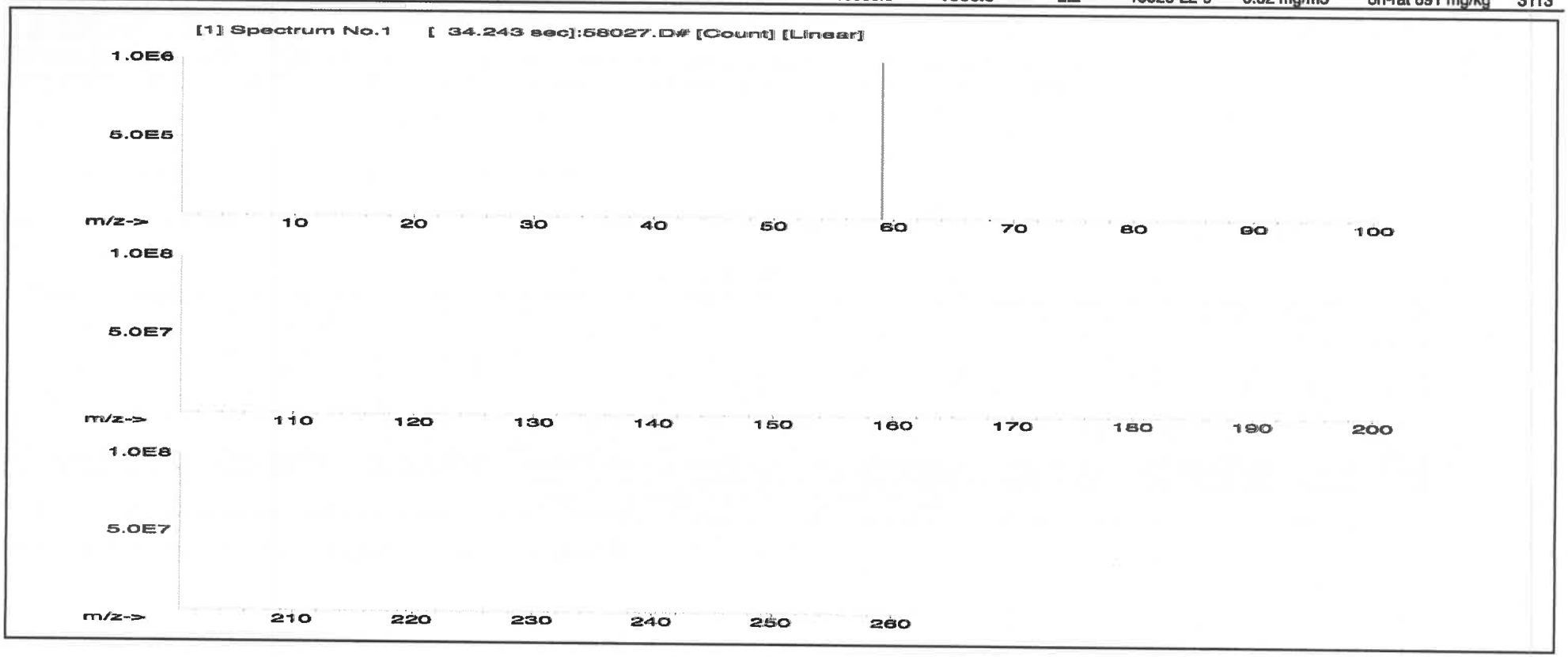
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CERTIFIED WEIGHT REPORT:

		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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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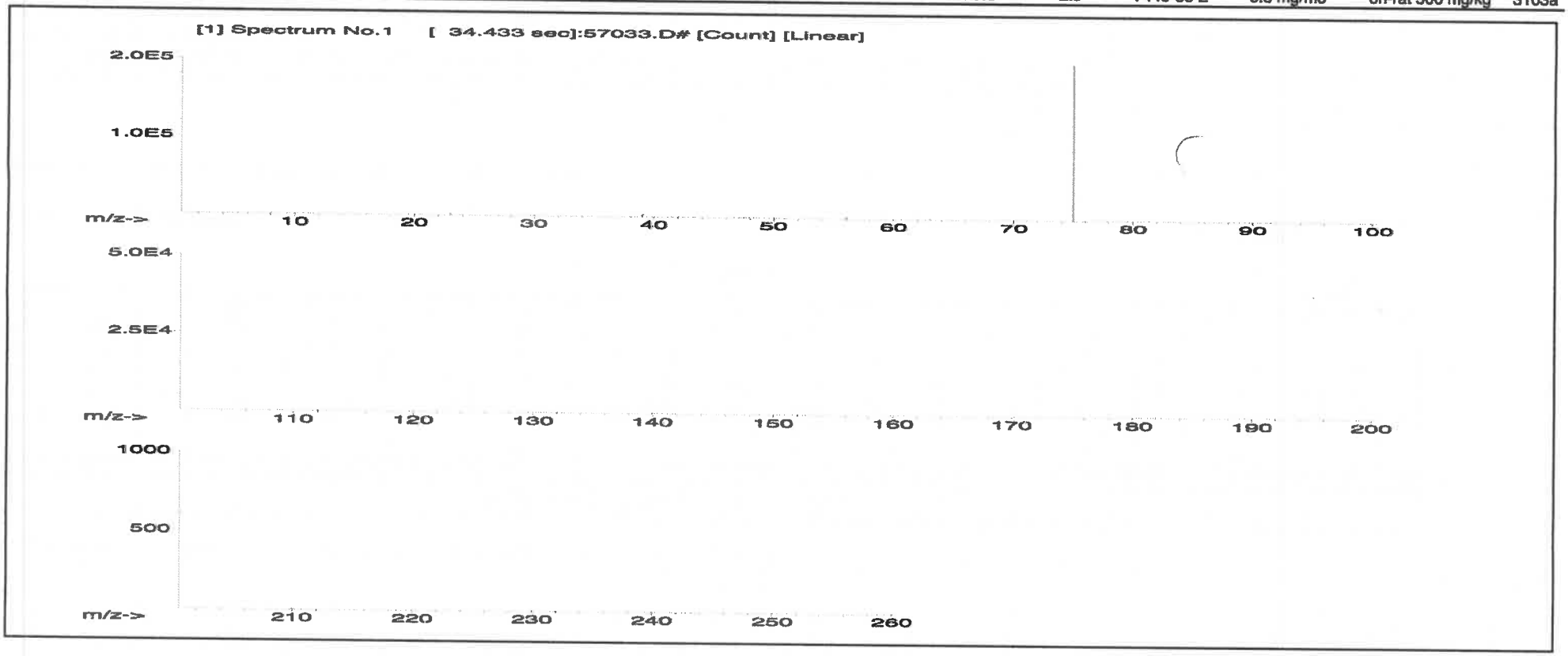
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CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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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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R1 02/09/24. M58165

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CERTIFIED WEIGHT REPORT:

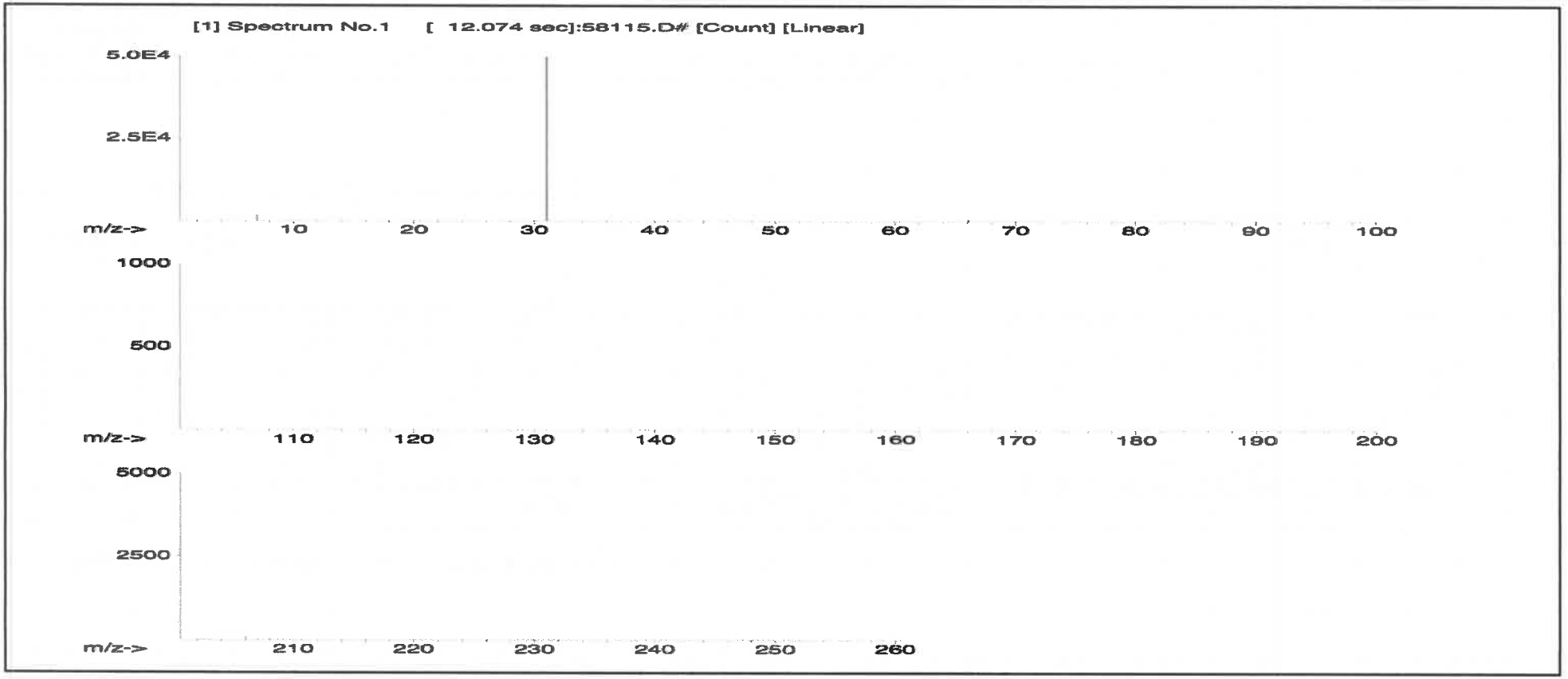
Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

Expiration Date: 041726
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	

Formulated By:	Lawrence Barry	041723
Reviewed By:	Pedro L. Rentas	041723

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	10000	99.999	0.10	27.5	72.7287	72.7289	**10000.0**	**20.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/kg	3186



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	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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Certified Reference Material CRM

R: 02/09/24 M5817

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CERTIFIED WEIGHT REPORT:

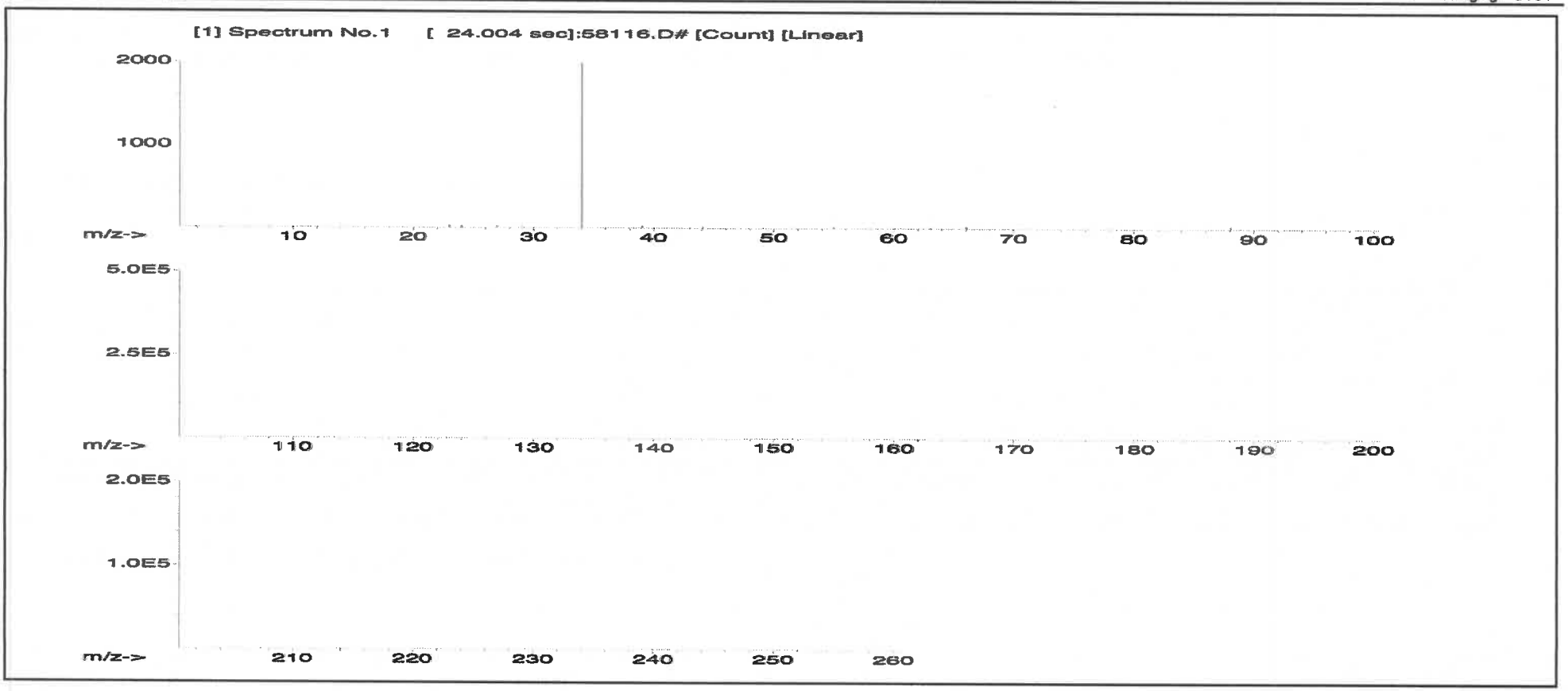
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

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	ori-rat 4250mg/kg	3181



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	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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R: 02/09/24 M.5818

CERTIFIED WEIGHT REPORT:

Part Number: 57014
Lot Number: 122023
Description: Silicon (Si)

Expiration Date: 122026
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1999.48 ± 0.058 Flask Uncertainty

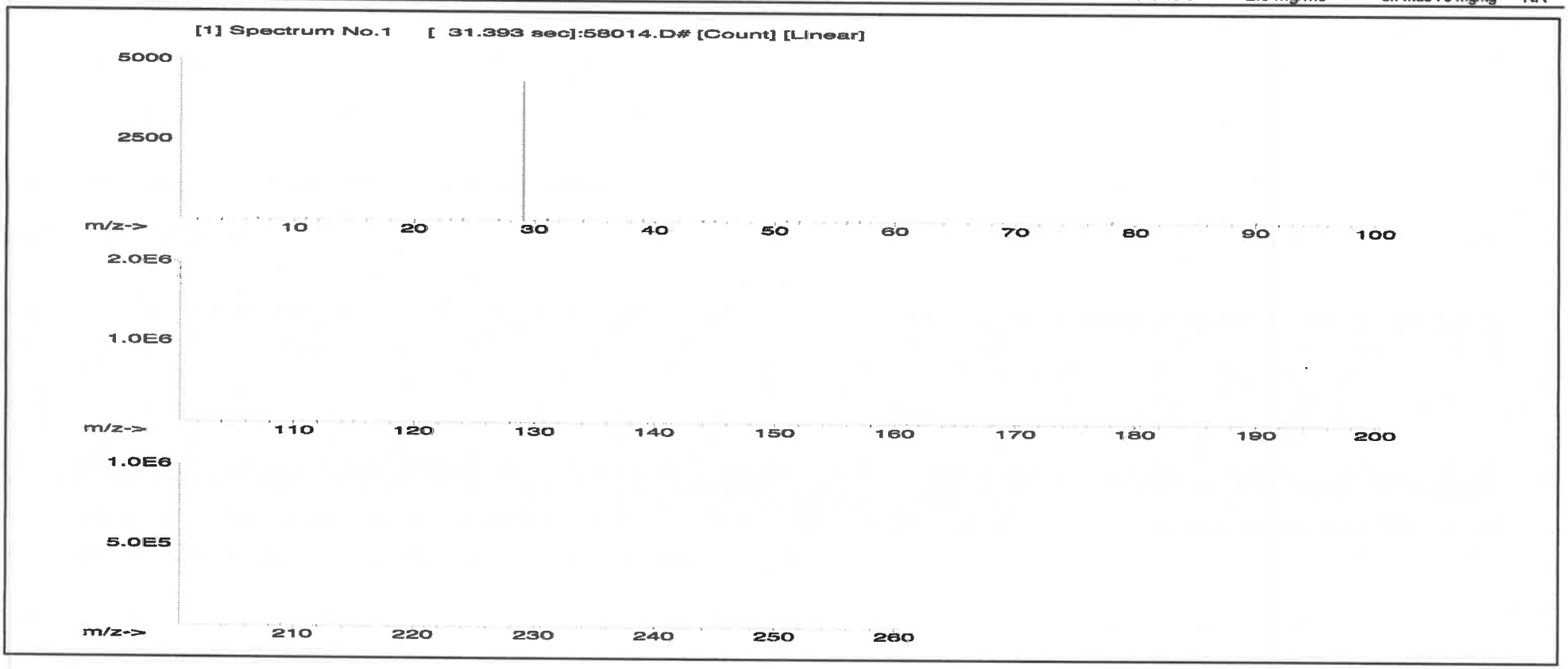
Solvent: 24002546 Nitric Acid
2% 40.0 (mL) Nitric Acid

5E-05 Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 122023

Pedro Rentas
Reviewed By: Pedro L. Rentas 122023

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 hexafluorosilicate (Si)	IN009	SID082022A1	1000	99.999	0.10	14.4	13.8854	13.8855	**1000.0**	**2.0**	16919-19-0	2.5 mg/m3	orl-mus 70 mg/kg	NA



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	T	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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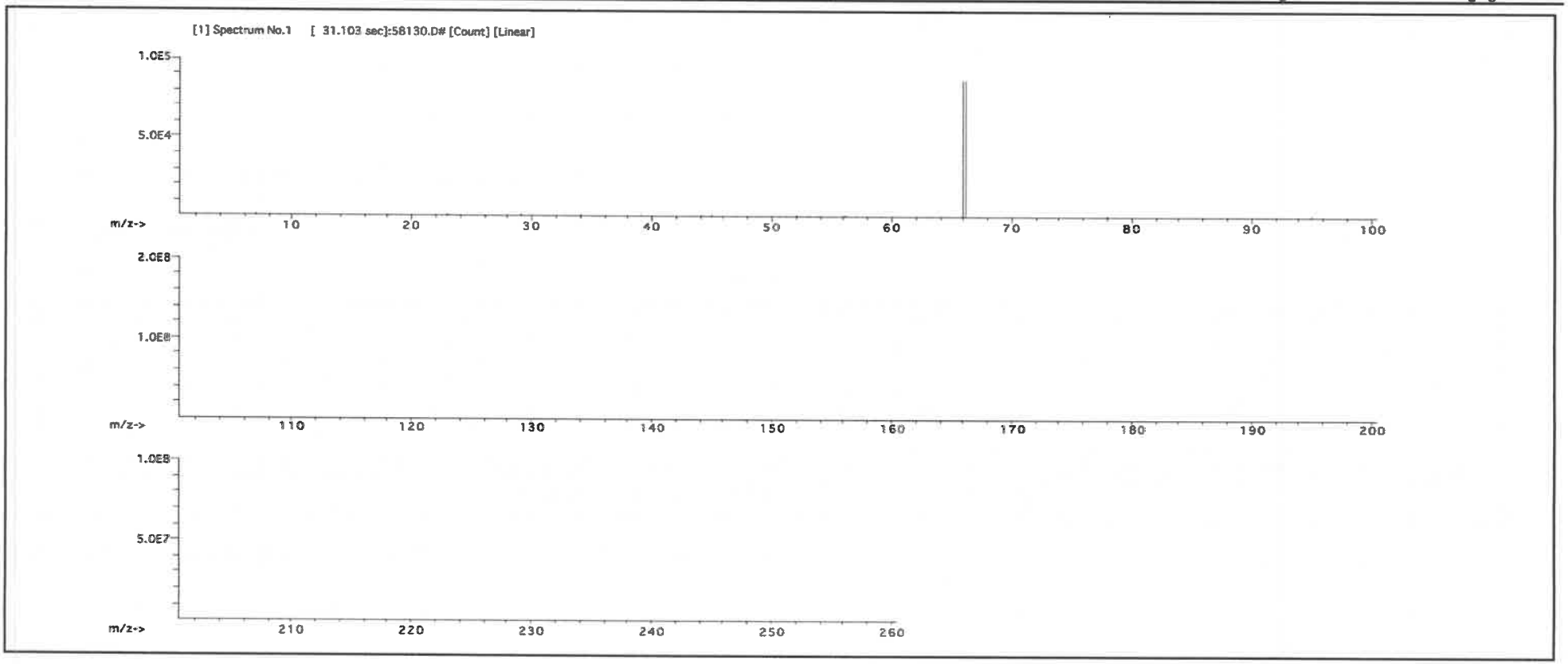
R: 02/09/24 M5819

CERTIFIED WEIGHT REPORT:

Part Number:	**58030**				
Lot Number:	**111623**				
Description:	**Zinc (Zn)**				
				Lot #	
			Solvent:	24002546	Nitric Acid
			2%	60.0 (mL)	Nitric Acid
Expiration Date:	111626				
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):	3000.4	0.06	Flask Uncertainty		

Formulated By:	Benson Chan	111623
Reviewed By:	Pedro L. Rentas	111623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zinc nitrate hexahydrate (Zn)	IN016	ZNE032021A1	1000	99.999	0.10	24.3	12.3475	12.3502	**1000.2**	**2.0**	10196-18-6	1 mg/m3	orl-rat 1190mg/kg	3168



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/22/24 M5942

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 17, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

MS947 MS948 MS949
MS950 MS951 MS952

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

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

MS947 MS948 MS949
MS950 MS951 MS952

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

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5961 R: 6/11/24

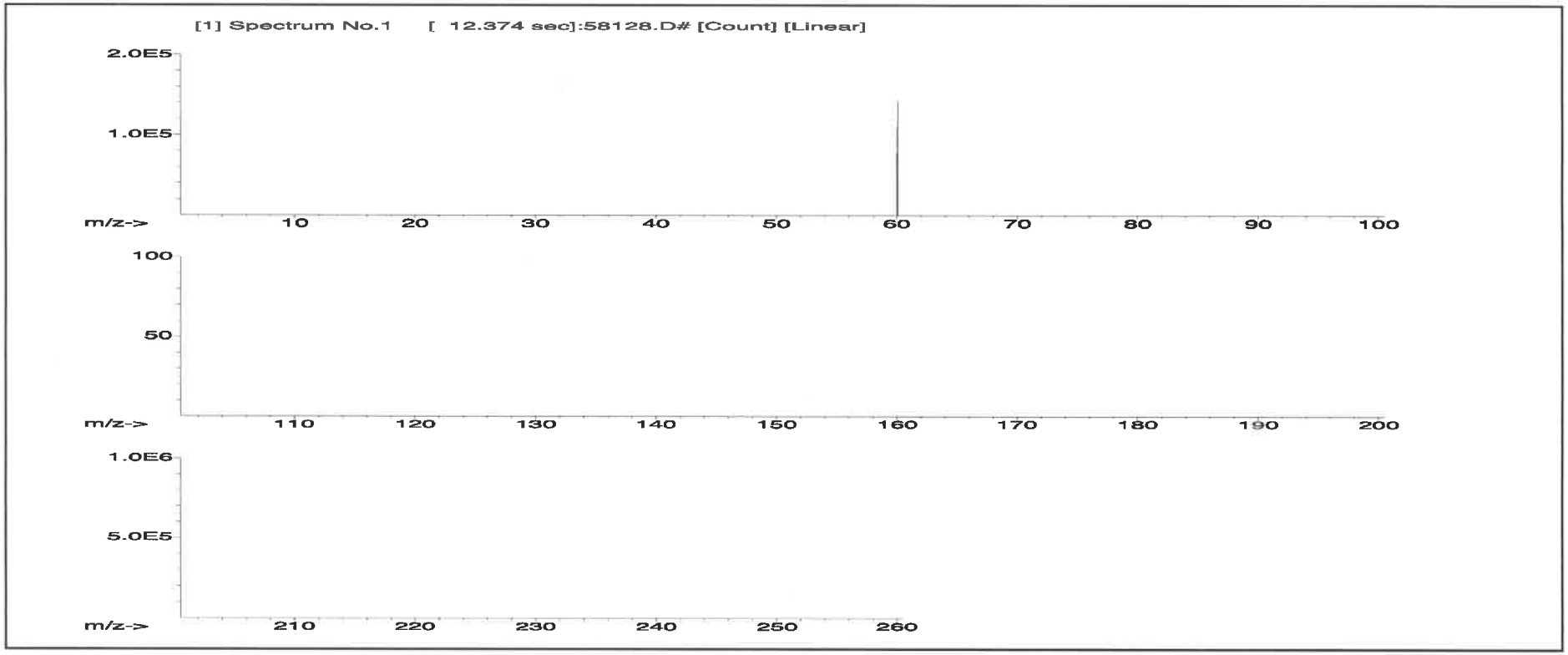
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57028**		**Lot #**		
Lot Number:	**041124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Nickel (Ni)**				
		2%	5.0 (mL)	Nitric Acid	
Expiration Date:	041127				
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):	249.85	0.002	Flask Uncertainty		

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

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. Nickel(II) nitrate hexahydrate (Ni)	IN033	NIM052023A1	1000	99.999	0.10	20.2	1.2369	1.2369	**1000.0**	**2.0**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass 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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

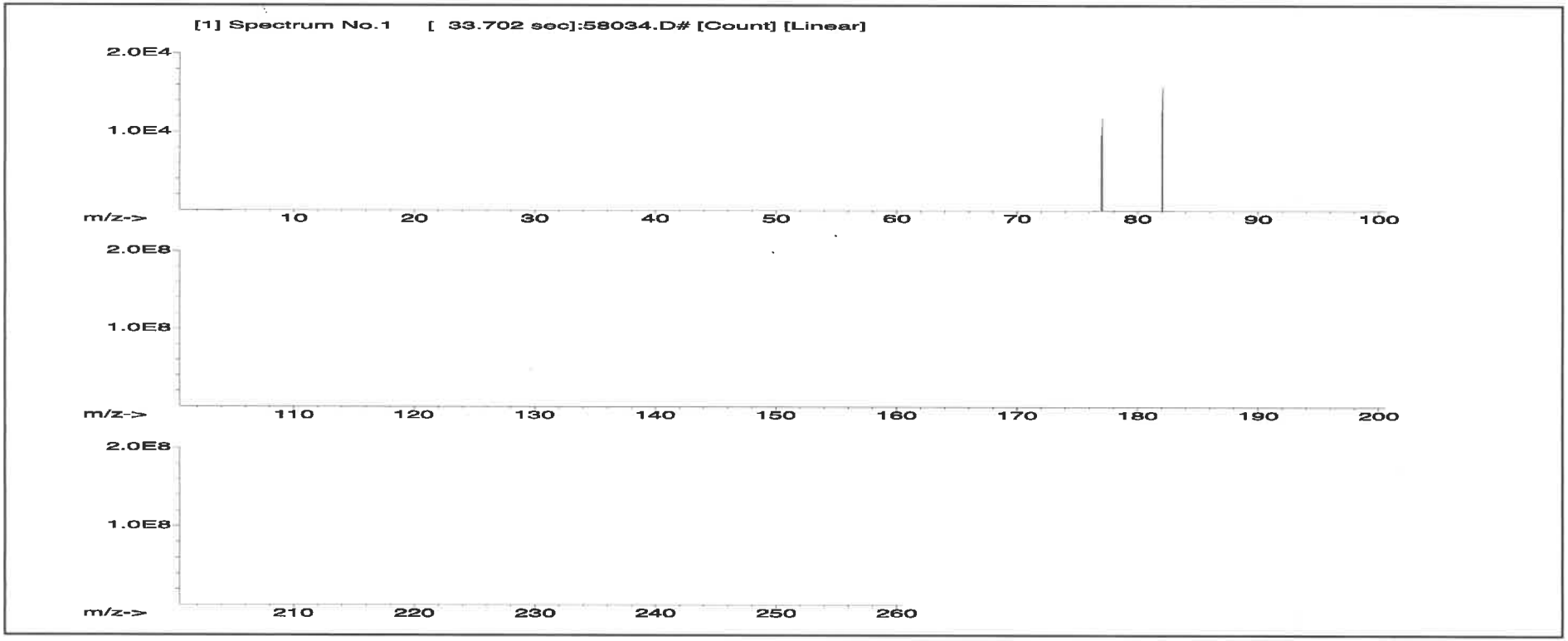
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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).

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

MS963 MS964 MS965
MS966 MS967 MS968

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
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	< 0.2 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	< 50 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.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 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	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

MS963 MS964 MS965
MS966 MS967 MS968

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
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	< 0.2 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	< 50 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.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 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	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

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Certificate of Analysis

M5976, M5977
R: 02/22/24

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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:	CGMO1
Lot Number:	T2-MO720876
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	1 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 7 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 3134 Lot Number: 130418

- 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	<	0.000590	M	Eu	<	0.000300	M	Na		0.000879	M	Se	<	0.008000	M	Zn		0.000598
M	Al		0.000563	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.000175				
M	Ba		0.001689	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.006334	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Tl	<	0.032000				
M	Ce	<	0.008300	M	K		0.130213	M	Rb		0.004575	M	Tl		0.001266				
M	Co		0.000598	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.000527	O	Li		0.000059	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.000527	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.002252	M	Mg		0.000563	i	S	<		M	W		0.087982				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.001513	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

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 - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or 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 95 amu	3 ppt	n/a	40Ar39K16O,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

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 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

- July 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 Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Technical



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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R: 01/03/24 M6033

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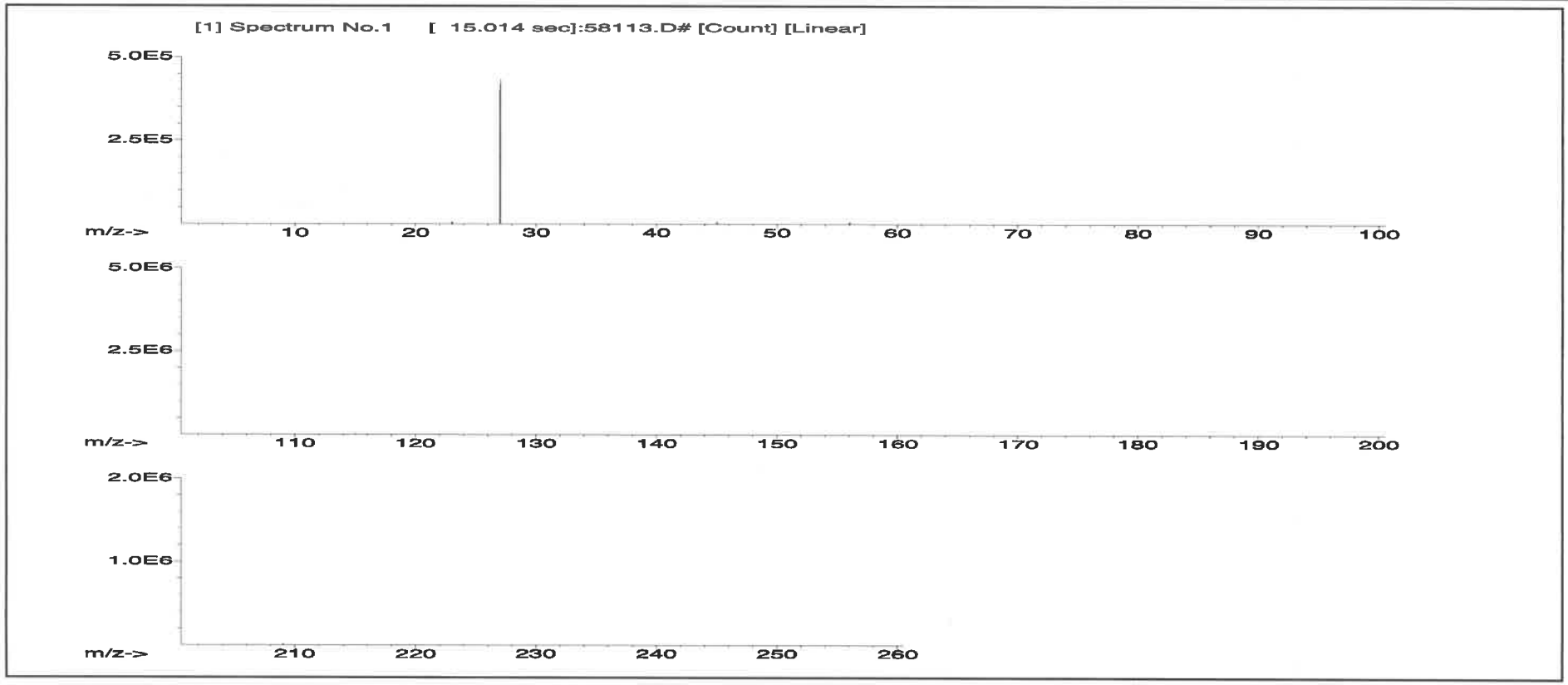
CERTIFIED WEIGHT REPORT:

Part Number:	**58113**		**Solvent:**	20510011	Nitric Acid
Lot Number:	**011623**				
Description:	**Aluminum (Al)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	011626				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	011623
Reviewed By:	Pedro L. Rentas	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



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R: 01/03/24 M5806, M5807

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Expiration Date: 122226
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

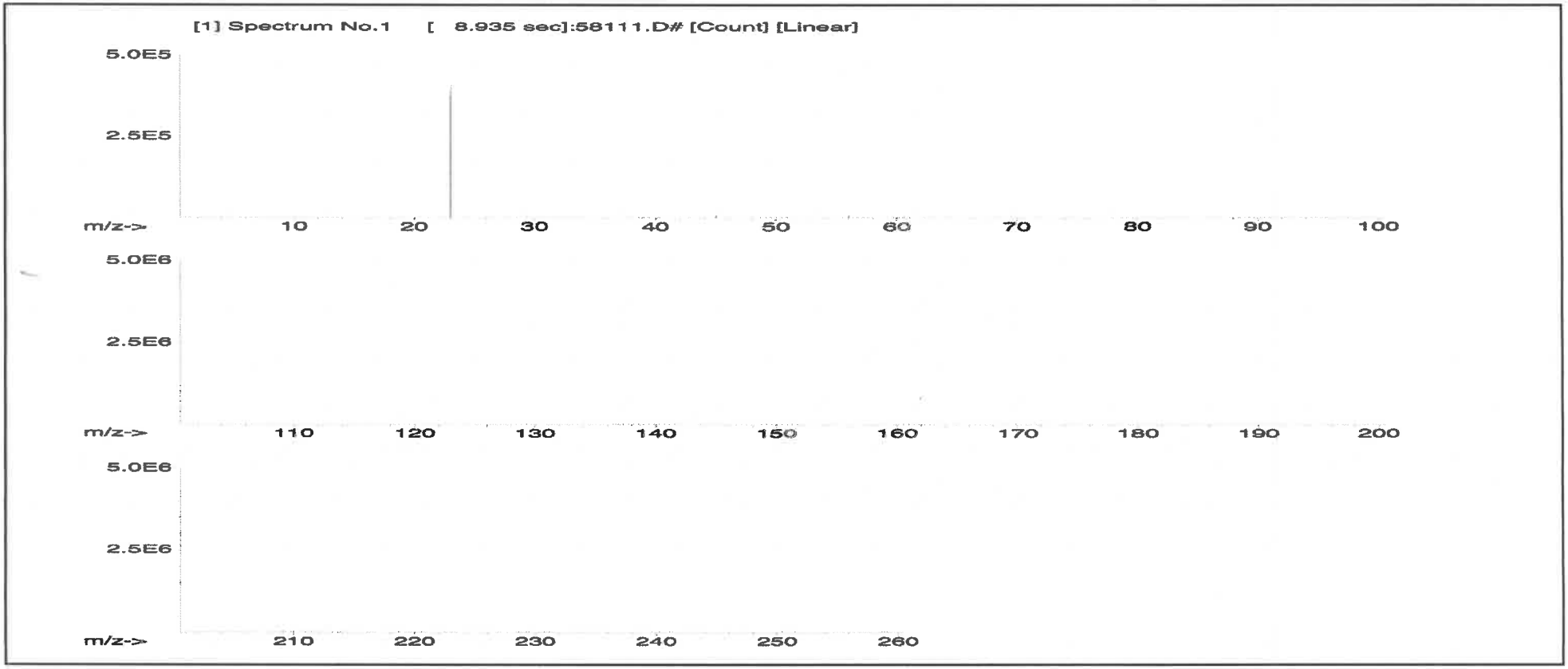
Weight shown below was diluted to (mL): 3000.4 | 0.06 Flask Uncertainty

	Lot #	
Solvent:	24002546	Nitric Acid
2%	60.0 (mL)	Nitric Acid
	5E-05	Balance Uncertainty

Aleah O'Brady
Formulated By: Aleah O'Brady 122223

Reviewed By: Pedro L. Rentas 122223

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	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



P3475-METALS Revised

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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	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:

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).
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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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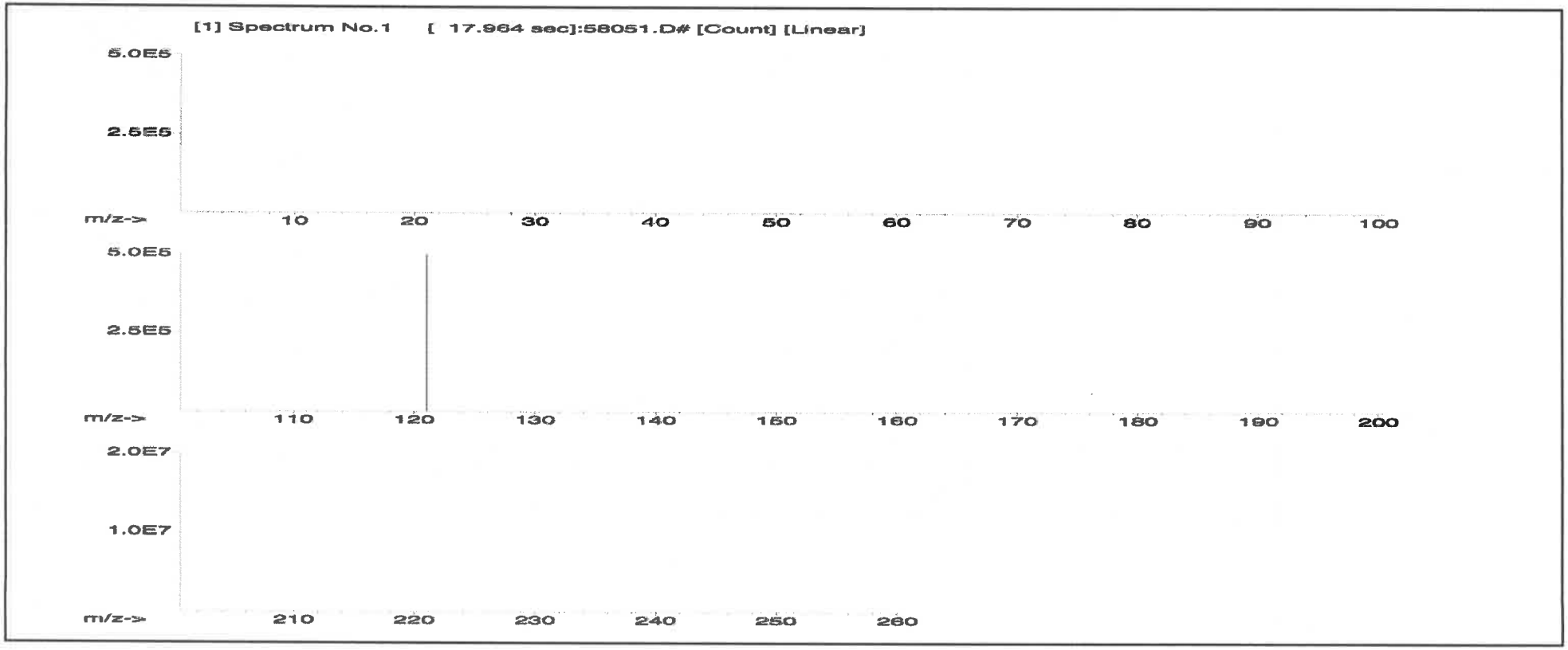
R: 01/03/24 M5802, M5803

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M6030

R: 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57047
Lot Number: 122823
Description: Silver (Ag)

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

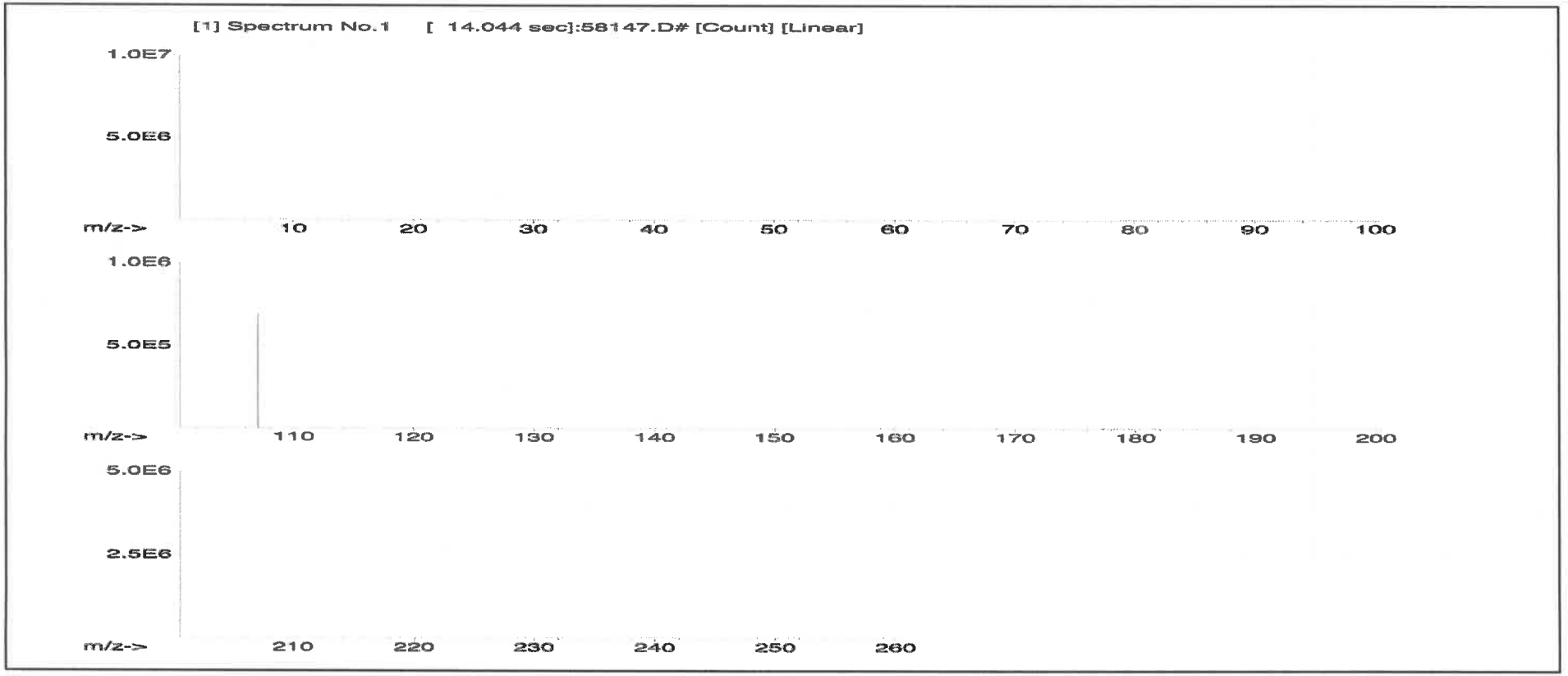
Weight shown below was diluted to (mL): 4000.30 0.058 Flask Uncertainty

	Lot #	
Solvent:	24002546	Nitric Acid
2%	80.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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Certified Reference Material CRM

R: 03/16/23 M5473, M5474, M5475, M5476

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CERTIFIED WEIGHT REPORT:

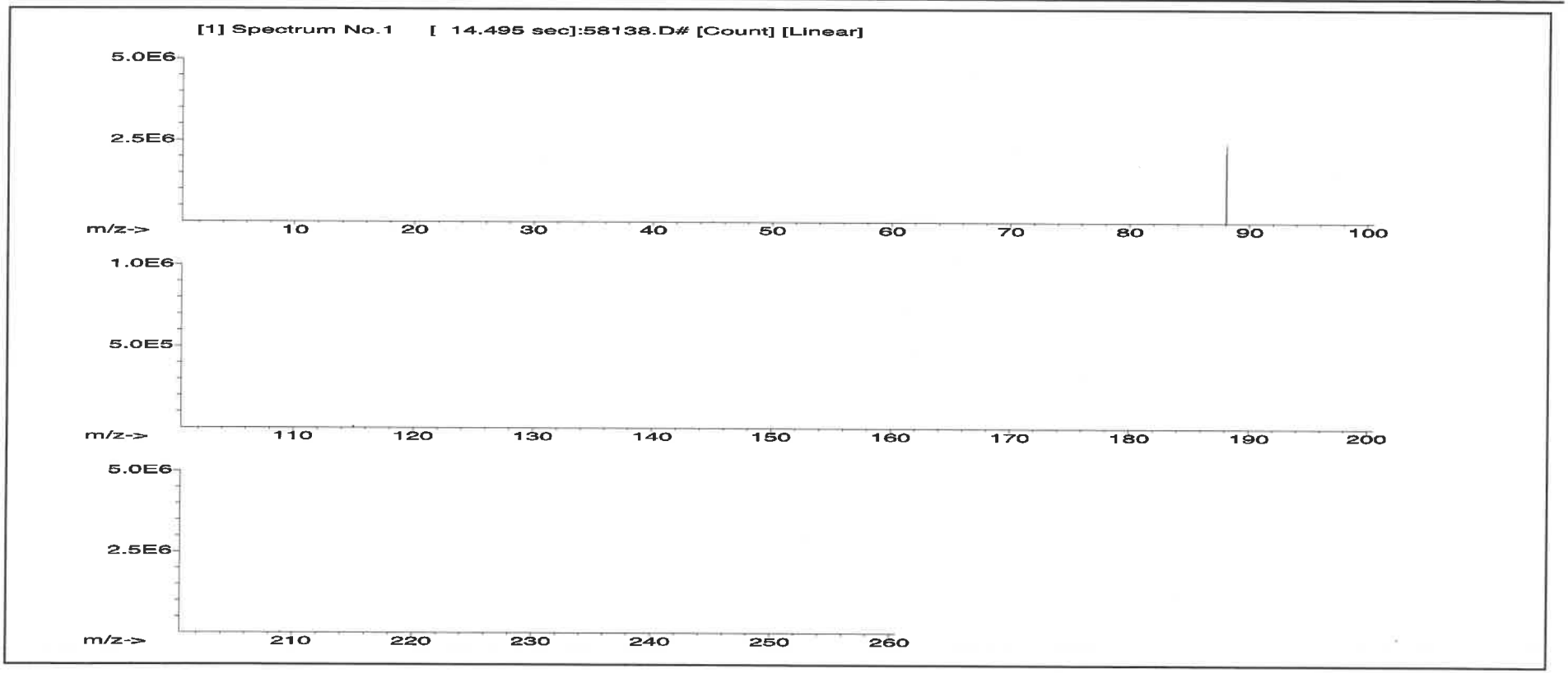
Part Number: 56138
Lot Number: 082922
Description: Strontium (Sr)
Expiration Date: 082925
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 082922

Reviewed By: Pedro L. Rentas 082922

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	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
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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.

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R: 03/16/23 M5473, M5474, M5475, M5476

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AR-1539 Certificate Number
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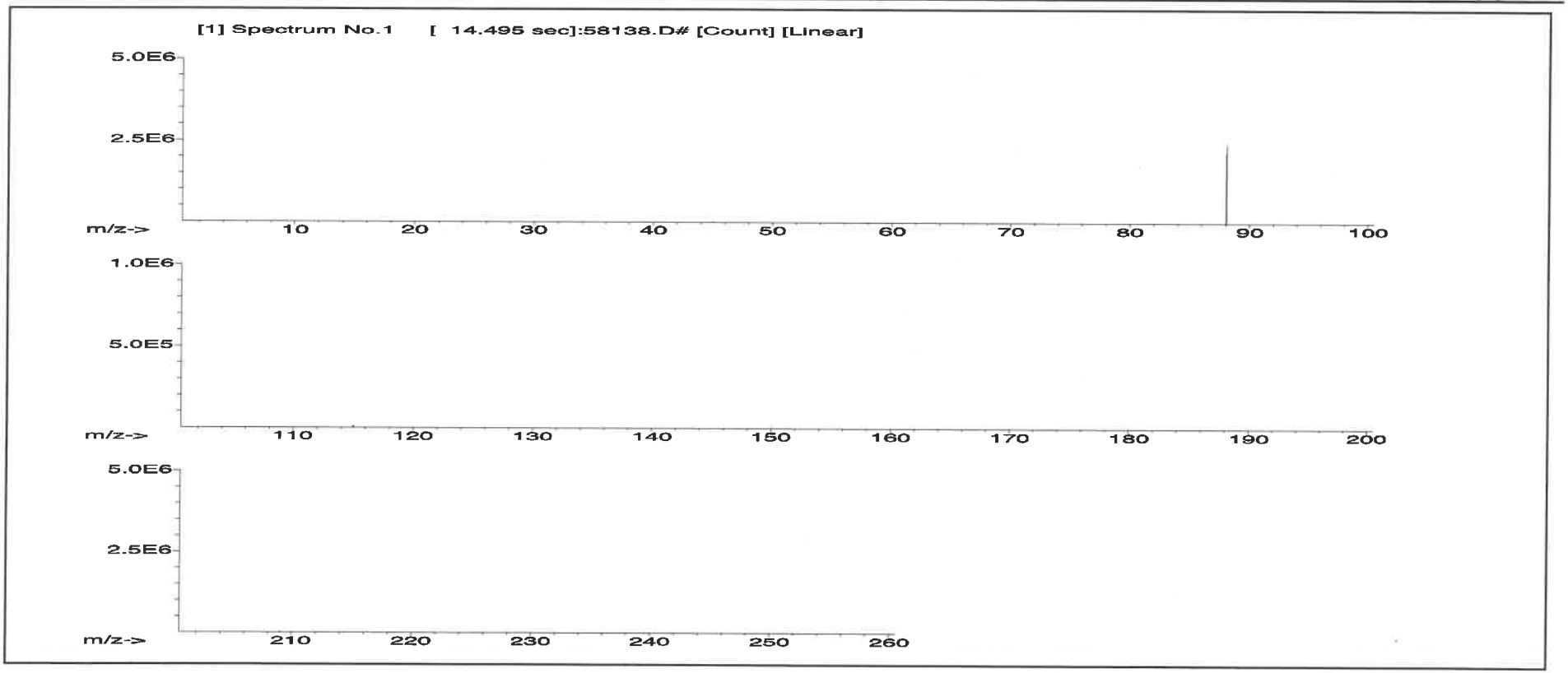
CERTIFIED WEIGHT REPORT:

Part Number: 56138
Lot Number: 082922
Description: Strontium (Sr)
Expiration Date: 082925
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	
	0.058	Flask Uncertainty	

Formulated By: Lawrence Barry 082922
Reviewed By: Pedro L. Rentas 082922

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	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass 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	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).

Absolute Standards, Inc.
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Certified Reference Material CRM

M6023

R ! 8/5/24

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AR-1539 Certificate Number
https://Absolutestandards.com

Revised

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CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

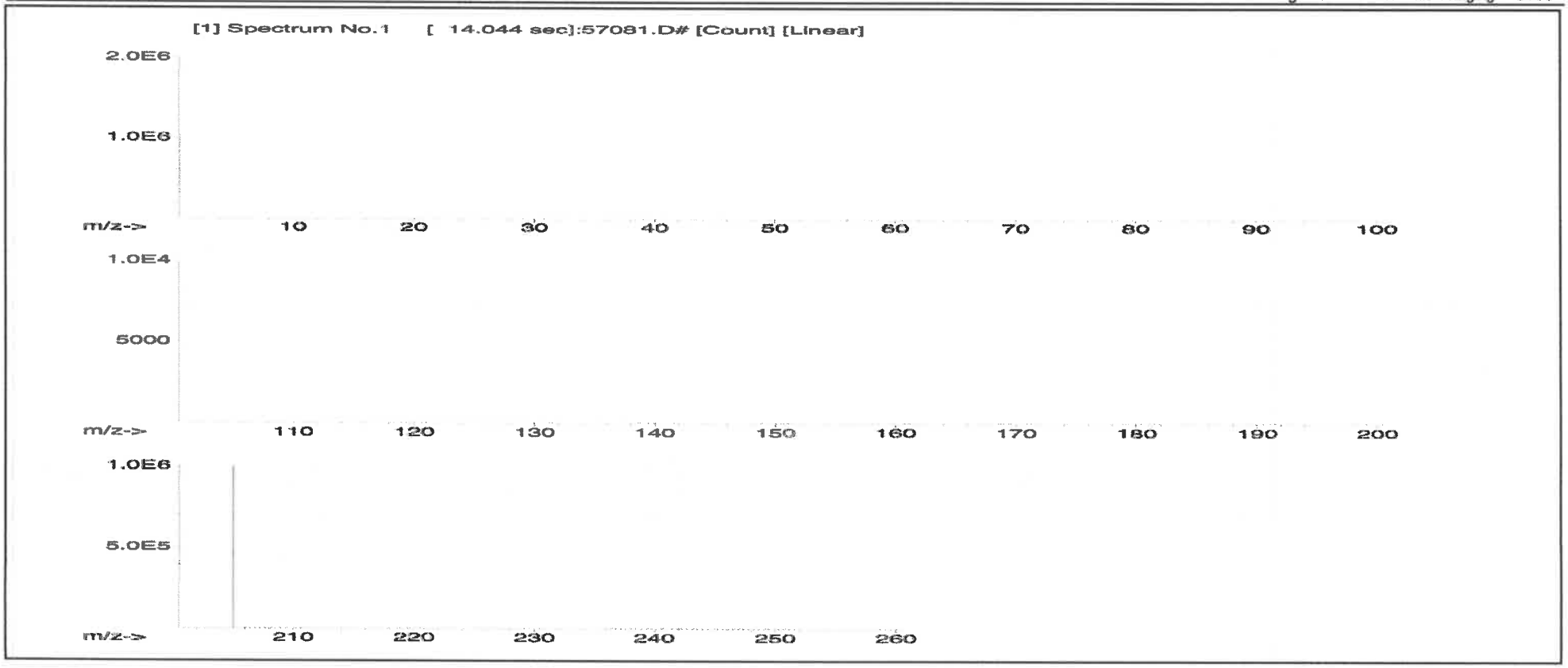
Aleah O'Brady

Formulated By:	Aleah O'Brady	062724

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



P3475-METALS

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	WW-LFS-1
Lot Number:	T2-MEB723367
Matrix:	5% (v/v) HNO3

Value / Analyte(s):	1 000 µg/mL ea: Potassium,	
	600 µg/mL ea: Phosphorus,	
	300 µg/mL ea: Sodium,	Iron,
	200 µg/mL ea: Magnesium, Cerium, Thallium,	Aluminum, Selenium,
	100 µg/mL ea: Lead,	Calcium,
	80 µg/mL ea: Arsenic,	
	70 µg/mL ea: Mercury,	
	50 µg/mL ea: Nickel,	
	40 µg/mL ea: Chromium,	
	30 µg/mL ea: Copper, Vanadium,	Boron,
	20 µg/mL ea: Zinc, Barium, Cadmium, Manganese,	Strontium, Beryllium, Cobalt, Lithium,
	7.5 µg/mL ea: Silver	

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	200.0 ± 0.7 µg/mL	Arsenic, As	80.0 ± 0.7 µg/mL
Barium, Ba	20.00 ± 0.09 µg/mL	Beryllium, Be	20.00 ± 0.13 µg/mL
Boron, B	30.00 ± 0.18 µg/mL	Cadmium, Cd	20.00 ± 0.09 µg/mL
Calcium, Ca	100.0 ± 0.4 µg/mL	Cerium, Ce	200.0 ± 0.8 µg/mL
Chromium, Cr	40.00 ± 0.30 µg/mL	Cobalt, Co	20.00 ± 0.10 µg/mL
Copper, Cu	30.00 ± 0.13 µg/mL	Iron, Fe	300.0 ± 1.3 µg/mL
Lead, Pb	100.0 ± 0.4 µg/mL	Lithium, Li	20.00 ± 0.08 µg/mL
Magnesium, Mg	200.0 ± 0.8 µg/mL	Manganese, Mn	20.00 ± 0.08 µg/mL
Mercury, Hg	70.0 ± 0.3 µg/mL	Nickel, Ni	50.00 ± 0.22 µg/mL
Phosphorus, P	600.0 ± 2.7 µg/mL	Potassium, K	1 000 ± 4 µg/mL
Selenium, Se	200.0 ± 1.3 µg/mL	Silver, Ag	7.50 ± 0.03 µg/mL
Sodium, Na	300.0 ± 1.4 µg/mL	Strontium, Sr	20.01 ± 0.08 µg/mL
Thallium, Tl	200.0 ± 1.4 µg/mL	Vanadium, V	30.00 ± 0.13 µg/mL
Zinc, Zn	20.00 ± 0.09 µg/mL		

Density: 1.034 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Ce	ICP Assay	3110	090504
Ce	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Hg	ICP Assay	3133	160921
Hg	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Tl	ICP Assay	3158	151215
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

August 30, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **August 30, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

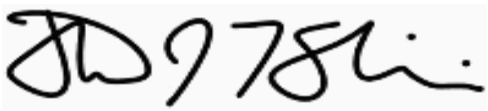
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO.
QUOTE NO. P3475
COC Number 2041338

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Jacobs
ADDRESS: 412 Mt Kemble Ave Suite 1t 100
CITY Morristown STATE: NJ ZIP: 07960
ATTENTION: John Yntema
PHONE: (201) 414-1719 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: STC PTC
PROJECT NO.: D3779472 LOCATION: Princeton Junction
PROJECT MANAGER: Mary Murphy
e-mail: Mary.Murphy@Jacobs.com
PHONE: (201) 936-0556 FAX:

CLIENT BILLING INFORMATION

BILL TO: Mary Murphy PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) Standard TAT DAYS*
HARDCOPY (DATA PACKAGE): DAYS*
EDD: DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☐ Level 2 (Results + QC)
- ☒ Level 3 (Results + QC + Raw Data)
- ☐ EDD FORMAT
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☐ NYS ASP A ☐ NYS ASP B
- ☐ Other

ANALYSIS

1 PAHs 2 PCBs 3 Ag 4 5 6 7 8 9

PRESERVATIVES

COMMENTS

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

	CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
									E	E	E							
1.		S-866-N-SO-0-0.5-080524	SO	X		8/5/24	0910	1	1									
2.		S-866-N-SO-1.0-1.5-080524	SO	X		8/5/24	0930	6	3	3								MS/MSD
3.		S-858-KI-SO-1.0-1.5-080524	SO	X		8/5/24	1130	3			3							MS/MSD
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.		8/5/24 1615	1. 1615
2.			2.
3.		8-5-2024 1740	3.

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 3.0 °C
Comments: The following PAHs are to be reported only: benzo(a)anthracene, benzo(a)pyrene, and dibenzo(a)anthracene

Page 1 of 1

CLIENT: ☐ Hand Delivered ☐ Other
CHEMTECH: ☐ Picked Up ☐ Field Sampling

Shipment Complete ☐ YES ☐ NO

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WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

From: Ynfante, John <John.Ynfante@jacobs.com>
Sent: Friday, May 30, 2025 7:57 PM
To: Yazmeen Gomez
Subject: another sample ID correction - in P3475 and P3573

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Yazmeen,

It was also pointed out to me that SDGs P3475 and P3573 logged in soil samples with “S0” (number zero) in the ID instead of “SO” (letter O). Can you resubmit those files with the “SO” in the sample IDs which indicates that they are soil samples in our database. Thanks.

John Ynfante
Jacobs
Chemist
281-414-1719 mobile
John.Ynfante@jacobs.com
www.jacobs.com

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Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488