SDG COVER PAGE

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No.: SDG No.: MBHM98

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MBHM98	P5126-01	X			
MBHM99	P5126-02	X			
MBHMA0	P5126-03	X			
MBHMA0D	P5126-04	X			
MBHMA0S	P5126-05	X			
MBHMA1	P5126-06	X			
MBHMA2	P5126-07	X			
MBHMA3	P5126-08	X			
MBHMA4	P5126-09	X			
MBHMA5	P5126-10	X			
MBHMA6	P5126-11	X			
MBHMA7	P5126-12	X			
MBHMF2	P5126-13	X			
MBHMF3	P5126-14	X			
MBHMM8	P5126-15	X			
MBHMM9	P5126-16	X			

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the SDG Narrative. All edits and manual integrations have been peer-reviewed. Release of the data contained in this hardcopy Complete SDG File and in the electronic data submitted has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: Title:

68HERH20D0011

SDG # MBHM98

USEPA CLP COC (LAB COPY)

DateShipped: 12/4/2024

CarrierName: FedEx

AirbillNo: 7704 9476 4765

CHAIN OF CUSTODY RECORD

Case #: 51879

Cooler #: 3

No: 2-120424-124345-0048

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed

Lab Phone: 908-789-8900

2

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
P133-SB-11-Z00-02	MBHM98	Soil/		ICP-AES(35)	1955 (Wet ice < 6 C) (1)	P133-SB-11	11/26/2024 12:20	
P133-SB-11-Z02-06	MBHM99	Soil/		ICP-AES(35)	1956 (Wet ice < 6 C) (1)	P133-SB-11	11/26/2024 12:20	
P133-SB-11-Z06-12	MBHMA0	Soil/		ICP-AES(35)	1957 (Wet ice < 6 C) (1)	P133-SB-11	11/26/2024 12:20	✓
P133-SB-11-Z12-18	MBHMA1	Soil/		ICP-AES(35)	1958 (Wet ice < 6 C) (1)	P133-SB-11	11/26/2024 12:20	
P133-SB-11-Z18-24	MBHMA2	Soil/		ICP-AES(35)	1959 (Wet ice < 6 C) (1)	P133-SB-11	11/26/2024 12:20	
P142-SB-10-Z00-02	MBHMA3	Soil/		ICP-AES(35)	1491 (Wet ice < 6 C) (1)	P142-SB-10	11/19/2024 11:10	
P142-SB-10-Z02-06	MBHMA4	Soil/		ICP-AES(35)	1492 (Wet ice < 6 C) (1)	P142-SB-10	11/19/2024 11:10	
P133-SB-04-Z00-02	MBHMA5	Soil/		ICP-AES(35)	1866 (Wet ice < 6 C) (1)	P133-SB-04	11/26/2024 11:35	
P133-SB-04-Z02-06	MBHMA6	Soil/		ICP-AES(35)	1867 (Wet ice < 6 C) (1)	P133-SB-04	11/26/2024 11:35	
P133-SB-04-Z06-12	MBHMA7	Soil/		ICP-AES(35)	1868 (Wet ice < 6 C) (1)	P133-SB-04	11/26/2024 11:35	

Sample(s) to be used for Lab QC: P133-SB-11-Z06-12 Tag 1957 - Special Instructions: Samples MBHMA0 and MBHMB1 are MS/MSDs. Samples MBHMB9 and MBHMC3 have limited sample mass.	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: ICP-AES=CLP Routine - SFAM01.1/LSASD SOP C-109 Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
1 Cooler	WSP	12/04/24 16:10		1010 12-5-24	IR Gun # 1 2.0 °C
	N/A	12/04/24			Custody Seal Intact
					Temp Blank present

68HERH20D0011

SDG # MBHM98

USEPA CLP COC (LAB COPY)

DateShipped: 12/4/2024

CarrierName: FedEx

AirbillNo: 7704 9476 4765

CHAIN OF CUSTODY RECORD

Case #: 51879

Cooler #: 3

No: 2-120424-124345-0048

Lab: Alliance Technical Group LLC

Lab Contact: Mohammad Ahmed

Lab Phone: 908-789-8900

3

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
P142-SB-09-Z24-30	MBHMF2	Soil/		ICP-AES(35)	5552 (Wet ice < 6 C) (1)	P142-SB-09	11/19/2024 10:39	
P142-SB-09-Z30-36	MBHMF3	Soil/		ICP-AES(35)	5553 (Wet ice < 6 C) (1)	P142-SB-09	11/19/2024 10:39	
P133-SB-05-Z18-24-FD	MBHMM8	Soil/		ICP-AES(35)	5558 (Wet ice < 6 C) (1)	P133-SB-05	11/26/2024 11:40	
P142-SB-09-Z24-30-FD	MBHMM9	Soil/		ICP-AES(35)	5559 (Wet ice < 6 C) (1)	P142-SB-09	11/19/2024 10:39	

N/A

12/04/24

Special Instructions: Samples MBHMA0 and MBHMB1 are MS/MSDs. Samples MBHMB9 and MBHMC3 have limited sample mass.	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: ICP-AES=CLP Routine - SFAM01.1/LSASD SOP C-109 Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
1 Cooler	CLP	12/04/24 16:10		1010 12-5-24	IR-Gun #1 2.0° C
			N/A		Custody Seal Intact
			16:10		Temp Blank present

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 1
Received By (Print Name) Cassandra Peña		Log-in Date **12/5/2024**
Received By (Signature)		
Case Number 51879	SDG No. MBHM98	MA No. N/A

Remarks:	
1. Custody Seal (s)	Present, Intact
2. Custody Seal Nos.	n/a
3. Traffic Reports/Chain Of Custody Records	Present
4. Airbill	Present
5. Airbill No. and Shipping Container ID No.	770494764765 1
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	2.0 Degree C
8. Sample Condition	Intact
9. Sample Tags Sample Tag Numbers	Absent Listed on Traffic Report
10. Does information on Traffic Reports/Chain of Custody Records and Sample Tags agree ?	Yes
11. Date Received at Lab	12/05/2024
12.Time Received	10:10

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MBHM98	N/A	1955	P5126-01	Intact
2	MBHM99	N/A	1956	P5126-02	Intact
3	MBHMA0	N/A	1957	P5126-03	Intact
4	MBHMA0D	N/A	1957	P5126-04	Intact
5	MBHMA0S	N/A	1957	P5126-05	Intact
6	MBHMA1	N/A	1958	P5126-06	Intact
7	MBHMA2	N/A	1959	P5126-07	Intact
8	MBHMA3	N/A	1491	P5126-08	Intact
9	MBHMA4	N/A	1492	P5126-09	Intact
10	MBHMA5	N/A	1866	P5126-10	Intact
11	MBHMA6	N/A	1867	P5126-11	Intact
12	MBHMA7	N/A	1868	P5126-12	Intact
13	MBHMF2	N/A	5552	P5126-13	Intact
14	MBHMF3	N/A	5553	P5126-14	Intact
15	MBHMM8	N/A	5558	P5126-15	Intact
16	MBHMM9	N/A	5559	P5126-16	Intact
17	N/A	N/A	N/A	N/A	N/A
18	N/A	N/A	N/A	N/A	N/A
19	N/A	N/A	N/A	N/A	N/A
20	N/A	N/A	N/A	N/A	N/A
21	N/A	N/A	N/A	N/A	N/A
22	N/A	N/A	N/A	N/A	N/A
23	N/A	N/A	N/A	N/A	N/A

* Contact SMO and attach record of resolution

Reviewed By		Logbook No.	N/A
Date	12/5/24	Logbook Page No.	N/A

FORM DC-2
COMPLETE SDG FILE (CSF) INVENTORY SHEET

LAB NAME	**Alliance Technical Group, LLC**		
LAB CODE	**ACE**		
CONTRACT NO.	**68HERH20D0011**		
CASE NO.	**51879**	SDG NO.	**MBHM98**
MA NO.		SOW NO.	**SFAM01.1**

All documents delivered in the Complete SDG File must be original documents where possible. (Reference - Exhibit B Section 2.4)

	PAGE NOs: FROM	PAGE NOs: TO	CHECK LAB	CHECK REGION
1 . SDG Cover Page	1	1	✓	
2 . Traffic Report/Chain of Custody Record(s)	2	3	✓	
3 . Sample Log-In Sheet (DC-1)	4	4	✓	
4 . CSF Inventory Sheet (DC-2)	5	7	✓	
5 . SDG Narrative	8	10	✓	
6 . Communication Logs	NA	NA	✓	
7 . Percent Solids Log	11	12	✓	
Analysis Forms and Data (ICP-AES)				
8 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	13	26	✓	
9 . Instrument raw data by instrument in analysis order	27	285	✓	
Other Data				
10 . Standard and Reagent Preparation Logs	286	423	✓	
11 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	424	425	✓	
12 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	426	433	✓	
13 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
14 . Extraction Logs for TCLP and SPLP	NA	NA	✓	
15 . Raw GPC Data	NA	NA	✓	
16 . Raw Florisil Data	NA	NA	✓	
Analysis Forms and Data (ICP-MS)				
17 . Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
18 . Instrument raw data by instrument in analysis order	NA	NA	✓	
Other Data				
19 . Standard and Reagent Preparation Logs	NA	NA	✓	
20 . Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
21 . Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
22 . Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	

	PAGE NOs: FROM	TO	CHECK LAB	REGION
23. Extraction Logs for TCLP and SPLP	NA	NA	✓	
24. Raw GPC Data	NA	NA	✓	
25. Raw Florisil Data	NA	NA	✓	
Analysis Forms and Data (Mercury)				
26. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
27. Instrument raw data by instrument in analysis order	NA	NA	✓	
Other Data				
28. Standard and Reagent Preparation Logs	NA	NA	✓	
29. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
30. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
31. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
32. Extraction Logs for TCLP and SPLP	NA	NA	✓	
33. Raw GPC Data	NA	NA	✓	
34. Raw Florisil Data	NA	NA	✓	
Analysis Forms and Data (Cyanide)				
35. Sample Analysis Data Forms (1A-OR, 1B-OR, and 1-IN) for each sample or sample analysis, laboratory QC as applicable	NA	NA	✓	
36. Instrument raw data by instrument in analysis order	NA	NA	✓	
Other Data				
37. Standard and Reagent Preparation Logs	NA	NA	✓	
38. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	NA	NA	✓	
39. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	NA	NA	✓	
40. Performance Evaluation (PE)/Proficiency Testing (PT) Sample Instructions	NA	NA	✓	
41. Extraction Logs for TCLP and SPLP	NA	NA	✓	
42. Raw GPC Data	NA	NA	✓	
43. Raw Florisil Data	NA	NA	✓	

	PAGE NOs: FROM	TO	CHECK LAB	REGION
Additional				
44. EPA Shipping/Receiving Documents				
Airbill (No. of Shipments 1)	434	434	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	435	436	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	437	437	✓	
47. Other Records and related Communication Logs (describe or list)				
	NA	NA	✓	

48. Comments:

Completed by: (CLP Lab)		Nimisha Pandya, Document Control Officer	
	(Signature)	(Print Name & Title)	(Date)
Audited by: (EPA)			
	(Signature)	(Print Name & Title)	(Date)

284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # MBHM98
CASE # 51879
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # P5126

A. Number of Samples and Date of Receipt

14 Soil sample were delivered to the laboratory intact on 12/05/2024.

B. Parameters

Test requested for Metals CLP FULL = Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc.

C. Cooler Temp

Indicator Bottle**: Presence/**Absence

Cooler: 2.0^{o}C

D. Detail Documentation (related to Sample Handling Shipping, Analytical Problem, Temp of Cooler etc):

Issue: A "P" or "M" prefix was listed at the beginning of a CLP sample ID.

E. Corrective Action taken for above:

Resolution: To maintain COC integrity, ASB requests no changes to the Sample IDs. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

F. Analytical Techniques:

All analyses were based on CLP Methodology by method SFAM01.1.

Inter Element correction factors (IECs) are determined annually and correction factor are applied during ICP-AES analysis.

G. Calculation:

Calculation for ICP-AES Soil Sample:

Conversion of Results from mg/L or ppm to mg/kg (Dry Weight Basis):

$$\text{Concentration (mg/kg)} = C \times \frac{Vf}{W \times S} \times DF$$

Where,

C = Instrument value in ppm (The average of all replicate exposures)
Vf = Final digestion volume (mL)
W = Initial aliquot amount (g) (Sample amount taken in prep)
S = % Solids / 100 (Fraction of Percent Solids)
DF = Dilution Factor

Example Calculation For Sample MBHM98 For Antimony:

If C = 0.0398664 ppm
Vf = 100 ml
W = 1.10 g
S = 0.648(64.8/100)
DF = 1

$$\text{Concentration (mg/kg)} = 0.0398664 \times \frac{100}{1.10 \times 0.648} \times 1$$

= 5.59292 mg/kg

= 5.6 mg/kg (Reported Result with Signification

H. QA/ QC

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements except for Silver, Thallium. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for Cobalt.

Chemical or physical interference effect was suspected and the data for all affected analytes in the sample received and associated with this serial dilution were flagged.

284 Sheffield Street
Mountainside, NJ 07092

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 Director or his designee, as verified by the following signature.

Signature_____ Name: Nimisha Pandya

Date _____ Title: Document Control Officer

PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 12/9/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 13:55
In Date: 12/07/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 07:30
Out Date: 12/08/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB133813

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
P5126-01	MBHM98	1	1.14	8.81	9.95	6.85	64.8	
P5126-02	MBHM99	2	1.16	8.83	9.99	7.49	71.7	
P5126-03	MBHMA0	3	1.12	8.76	9.88	7.79	76.1	
P5126-04	MBHMA0D	4	1.12	8.76	9.88	7.79	76.1	
P5126-05	MBHMA0S	5	1.12	8.76	9.88	7.79	76.1	
P5126-06	MBHMA1	6	1.19	8.57	9.76	7.5	73.6	
P5126-07	MBHMA2	7	1.17	8.39	9.56	7.26	72.6	
P5126-08	MBHMA3	8	1.12	8.53	9.65	7.18	71.0	
P5126-09	MBHMA4	9	1.14	8.44	9.58	7.83	79.3	
P5126-10	MBHMA5	10	1.14	8.84	9.98	7.75	74.8	
P5126-11	MBHMA6	11	1.16	8.37	9.53	7.62	77.2	
P5126-12	MBHMA7	12	1.18	8.73	9.91	8.04	78.6	
P5126-13	MBHMF2	13	1.14	8.48	9.62	8.48	86.6	
P5126-14	MBHMF3	14	1.15	8.83	9.98	8.78	86.4	
P5126-15	MBHMM8	15	1.15	8.74	9.89	8.11	79.6	
P5126-16	MBHMM9	16	1.15	8.50	9.65	8.55	87.1	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

WorkList Name : %1-P5126 **WorkList ID :** 186094 **Department :** Wet-Chemistry **Date :** 12-07-2024 10:15:52

VM138813

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5126-01	MBHM98	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-02	MBHM99	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-03	MBHMA0	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-04	MBHMA0D	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-05	MBHMA0S	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-06	MBHMA1	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-07	MBHMA2	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-08	MBHMA3	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-09	MBHMA4	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/19/2024	Chemtech -SO
P5126-10	MBHMA5	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/19/2024	Chemtech -SO
P5126-11	MBHMA6	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-12	MBHMA7	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-13	MBHMF2	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/26/2024	Chemtech -SO
P5126-14	MBHMF3	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/19/2024	Chemtech -SO
P5126-15	MBHMM8	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/19/2024	Chemtech -SO
P5126-16	MBHMM9	Solid	Percent Solids	Cool 4 deg C	USEP01	C53	11/19/2024	Chemtech -SO

12

Date/Time 12/07/24 13:15

Raw Sample Received by: [signature]

Raw Sample Relinquished by: TD (SM)

Date/Time 12/07/24 14:00

Raw Sample Received by: TD (SM)

Raw Sample Relinquished by: [signature]

EPA SAMPLE NO.

MBHM98

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-01

% Solids: 64.8 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5700		01/05/2025	2042
7440-36-0	Antimony	5.6	J	01/05/2025	2042
7440-38-2	Arsenic	14		01/05/2025	2042
7440-39-3	Barium	170		01/05/2025	2042
7440-41-7	Beryllium	0.79		01/05/2025	2042
7440-43-9	Cadmium	0.95		01/05/2025	2042
7440-70-2	Calcium	32000		01/05/2025	2042
7440-47-3	Chromium	21		01/05/2025	2042
7440-48-4	Cobalt	13	*	01/05/2025	2042
7440-50-8	Copper	58		01/05/2025	2042
7439-89-6	Iron	20000		01/05/2025	2042
7439-92-1	Lead	490		01/05/2025	2042
7439-95-4	Magnesium	11000		01/05/2025	2042
7439-96-5	Manganese	620		01/05/2025	2042
7440-02-0	Nickel	24		01/05/2025	2042
7440-09-7	Potassium	930		01/05/2025	2042
7782-49-2	Selenium	6.6		01/05/2025	2042
7440-22-4	Silver	1.4	U*	01/05/2025	2042
7440-23-5	Sodium	700	U	01/05/2025	2042
7440-28-0	Thallium	3.5	U*	01/05/2025	2042
7440-62-2	Vanadium	20		01/05/2025	2042
7440-66-6	Zinc	390		01/05/2025	2042

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHM99

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-02

% Solids: 71.7 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5000		01/05/2025	2046
7440-36-0	Antimony	5.2	J	01/05/2025	2046
7440-38-2	Arsenic	14		01/05/2025	2046
7440-39-3	Barium	140		01/05/2025	2046
7440-41-7	Beryllium	0.76		01/05/2025	2046
7440-43-9	Cadmium	0.71		01/05/2025	2046
7440-70-2	Calcium	20000		01/05/2025	2046
7440-47-3	Chromium	18		01/05/2025	2046
7440-48-4	Cobalt	12	*	01/05/2025	2046
7440-50-8	Copper	48		01/05/2025	2046
7439-89-6	Iron	19000		01/05/2025	2046
7439-92-1	Lead	360		01/05/2025	2046
7439-95-4	Magnesium	6600		01/05/2025	2046
7439-96-5	Manganese	520		01/05/2025	2046
7440-02-0	Nickel	23		01/05/2025	2046
7440-09-7	Potassium	720		01/05/2025	2046
7782-49-2	Selenium	7.5		01/05/2025	2046
7440-22-4	Silver	1.2	U*	01/05/2025	2046
7440-23-5	Sodium	620	U	01/05/2025	2046
7440-28-0	Thallium	3.1	U*	01/05/2025	2046
7440-62-2	Vanadium	23		01/05/2025	2046
7440-66-6	Zinc	290		01/05/2025	2046

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMA0

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-03

% Solids: 76.1 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5900		01/05/2025	2050
7440-36-0	Antimony	5.3	J	01/05/2025	2050
7440-38-2	Arsenic	22		01/05/2025	2050
7440-39-3	Barium	170		01/05/2025	2050
7440-41-7	Beryllium	0.86		01/05/2025	2050
7440-43-9	Cadmium	0.90		01/05/2025	2050
7440-70-2	Calcium	20000		01/05/2025	2050
7440-47-3	Chromium	20		01/05/2025	2050
7440-48-4	Cobalt	12	*	01/05/2025	2050
7440-50-8	Copper	63		01/05/2025	2050
7439-89-6	Iron	20000		01/05/2025	2050
7439-92-1	Lead	480		01/05/2025	2050
7439-95-4	Magnesium	5400		01/05/2025	2050
7439-96-5	Manganese	670		01/05/2025	2050
7440-02-0	Nickel	23		01/05/2025	2050
7440-09-7	Potassium	660		01/05/2025	2050
7782-49-2	Selenium	7.9		01/05/2025	2050
7440-22-4	Silver	1.1	U*	01/05/2025	2050
7440-23-5	Sodium	110	J	01/05/2025	2050
7440-28-0	Thallium	2.8	U*	01/05/2025	2050
7440-62-2	Vanadium	21		01/05/2025	2050
7440-66-6	Zinc	370		01/05/2025	2050

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMA1

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-06

% Solids: 73.6 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	6400		01/06/2025	0111
7440-36-0	Antimony	6.1	J	01/06/2025	0111
7440-38-2	Arsenic	20		01/06/2025	0111
7440-39-3	Barium	210		01/06/2025	0111
7440-41-7	Beryllium	0.74		01/06/2025	0111
7440-43-9	Cadmium	0.89		01/06/2025	0111
7440-70-2	Calcium	21000		01/06/2025	0111
7440-47-3	Chromium	20		01/06/2025	0111
7440-48-4	Cobalt	13	*	01/06/2025	0111
7440-50-8	Copper	69		01/06/2025	0111
7439-89-6	Iron	21000		01/06/2025	0111
7439-92-1	Lead	530		01/06/2025	0111
7439-95-4	Magnesium	4900		01/06/2025	0111
7439-96-5	Manganese	1000		01/06/2025	0111
7440-02-0	Nickel	26		01/06/2025	0111
7440-09-7	Potassium	640		01/06/2025	0111
7782-49-2	Selenium	8.2		01/06/2025	0111
7440-22-4	Silver	1.2	U*	01/06/2025	0111
7440-23-5	Sodium	580	U	01/06/2025	0111
7440-28-0	Thallium	2.9	U*	01/06/2025	0111
7440-62-2	Vanadium	20		01/06/2025	0111
7440-66-6	Zinc	330		01/06/2025	0111

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMA2

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-07

% Solids: 72.6 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5300		01/06/2025	0115
7440-36-0	Antimony	10		01/06/2025	0115
7440-38-2	Arsenic	28		01/06/2025	0115
7440-39-3	Barium	240		01/06/2025	0115
7440-41-7	Beryllium	0.87		01/06/2025	0115
7440-43-9	Cadmium	1.2		01/06/2025	0115
7440-70-2	Calcium	29000		01/06/2025	0115
7440-47-3	Chromium	14		01/06/2025	0115
7440-48-4	Cobalt	13	*	01/06/2025	0115
7440-50-8	Copper	48		01/06/2025	0115
7439-89-6	Iron	42000		01/06/2025	0115
7439-92-1	Lead	250		01/06/2025	0115
7439-95-4	Magnesium	6200		01/06/2025	0115
7439-96-5	Manganese	1500		01/06/2025	0115
7440-02-0	Nickel	24		01/06/2025	0115
7440-09-7	Potassium	560		01/06/2025	0115
7782-49-2	Selenium	20		01/06/2025	0115
7440-22-4	Silver	1.1	U*	01/06/2025	0115
7440-23-5	Sodium	110	J	01/06/2025	0115
7440-28-0	Thallium	2.8	U*	01/06/2025	0115
7440-62-2	Vanadium	22		01/06/2025	0115
7440-66-6	Zinc	280		01/06/2025	0115

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMA3

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-08

% Solids: 71 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	6400		01/06/2025	0119
7440-36-0	Antimony	4.4	J	01/06/2025	0119
7440-38-2	Arsenic	30		01/06/2025	0119
7440-39-3	Barium	470		01/06/2025	0119
7440-41-7	Beryllium	0.69		01/06/2025	0119
7440-43-9	Cadmium	1.2		01/06/2025	0119
7440-70-2	Calcium	37000		01/06/2025	0119
7440-47-3	Chromium	18		01/06/2025	0119
7440-48-4	Cobalt	15	*	01/06/2025	0119
7440-50-8	Copper	79		01/06/2025	0119
7439-89-6	Iron	20000		01/06/2025	0119
7439-92-1	Lead	1100		01/06/2025	0119
7439-95-4	Magnesium	4300		01/06/2025	0119
7439-96-5	Manganese	1600		01/06/2025	0119
7440-02-0	Nickel	25		01/06/2025	0119
7440-09-7	Potassium	1200		01/06/2025	0119
7782-49-2	Selenium	8.5		01/06/2025	0119
7440-22-4	Silver	1.0	U*	01/06/2025	0119
7440-23-5	Sodium	510	U	01/06/2025	0119
7440-28-0	Thallium	2.5	U*	01/06/2025	0119
7440-62-2	Vanadium	21		01/06/2025	0119
7440-66-6	Zinc	510		01/06/2025	0119

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMA4

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-09

% Solids: 79.3 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	6300		01/06/2025	0122
7440-36-0	Antimony	4.3	J	01/06/2025	0122
7440-38-2	Arsenic	32		01/06/2025	0122
7440-39-3	Barium	430		01/06/2025	0122
7440-41-7	Beryllium	0.69		01/06/2025	0122
7440-43-9	Cadmium	1.2		01/06/2025	0122
7440-70-2	Calcium	40000		01/06/2025	0122
7440-47-3	Chromium	17		01/06/2025	0122
7440-48-4	Cobalt	15	*	01/06/2025	0122
7440-50-8	Copper	110		01/06/2025	0122
7439-89-6	Iron	20000		01/06/2025	0122
7439-92-1	Lead	750		01/06/2025	0122
7439-95-4	Magnesium	4200		01/06/2025	0122
7439-96-5	Manganese	1600		01/06/2025	0122
7440-02-0	Nickel	25		01/06/2025	0122
7440-09-7	Potassium	1000		01/06/2025	0122
7782-49-2	Selenium	8.1		01/06/2025	0122
7440-22-4	Silver	0.97	U*	01/06/2025	0122
7440-23-5	Sodium	490	U	01/06/2025	0122
7440-28-0	Thallium	2.4	U*	01/06/2025	0122
7440-62-2	Vanadium	22		01/06/2025	0122
7440-66-6	Zinc	470		01/06/2025	0122

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMA5

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-10

% Solids: 74.8 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	4100		01/06/2025	0126
7440-36-0	Antimony	3.2	J	01/06/2025	0126
7440-38-2	Arsenic	7.8		01/06/2025	0126
7440-39-3	Barium	65		01/06/2025	0126
7440-41-7	Beryllium	0.47	J	01/06/2025	0126
7440-43-9	Cadmium	1.8		01/06/2025	0126
7440-70-2	Calcium	76000		01/06/2025	0126
7440-47-3	Chromium	26		01/06/2025	0126
7440-48-4	Cobalt	9.8	*	01/06/2025	0126
7440-50-8	Copper	30		01/06/2025	0126
7439-89-6	Iron	13000		01/06/2025	0126
7439-92-1	Lead	220		01/06/2025	0126
7439-95-4	Magnesium	39000		01/06/2025	0126
7439-96-5	Manganese	590		01/06/2025	0126
7440-02-0	Nickel	18		01/06/2025	0126
7440-09-7	Potassium	470	J	01/06/2025	0126
7782-49-2	Selenium	2.2	J	01/06/2025	0126
7440-22-4	Silver	1.2	U*	01/06/2025	0126
7440-23-5	Sodium	180	J	01/06/2025	0126
7440-28-0	Thallium	2.9	U*	01/06/2025	0126
7440-62-2	Vanadium	15		01/06/2025	0126
7440-66-6	Zinc	320		01/06/2025	0126

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMA6

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-11

% Solids: 77.2 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5200		01/06/2025	0130
7440-36-0	Antimony	4.3	J	01/06/2025	0130
7440-38-2	Arsenic	10		01/06/2025	0130
7440-39-3	Barium	95		01/06/2025	0130
7440-41-7	Beryllium	0.55		01/06/2025	0130
7440-43-9	Cadmium	1.9		01/06/2025	0130
7440-70-2	Calcium	55000		01/06/2025	0130
7440-47-3	Chromium	39		01/06/2025	0130
7440-48-4	Cobalt	11	*	01/06/2025	0130
7440-50-8	Copper	34		01/06/2025	0130
7439-89-6	Iron	16000		01/06/2025	0130
7439-92-1	Lead	250		01/06/2025	0130
7439-95-4	Magnesium	29000		01/06/2025	0130
7439-96-5	Manganese	680		01/06/2025	0130
7440-02-0	Nickel	23		01/06/2025	0130
7440-09-7	Potassium	520	J	01/06/2025	0130
7782-49-2	Selenium	3.7		01/06/2025	0130
7440-22-4	Silver	1.1	U*	01/06/2025	0130
7440-23-5	Sodium	120	J	01/06/2025	0130
7440-28-0	Thallium	2.7	U*	01/06/2025	0130
7440-62-2	Vanadium	16		01/06/2025	0130
7440-66-6	Zinc	370		01/06/2025	0130

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMA7

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-12

% Solids: 78.6 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5000		01/06/2025	0134
7440-36-0	Antimony	4.5	J	01/06/2025	0134
7440-38-2	Arsenic	11		01/06/2025	0134
7440-39-3	Barium	88		01/06/2025	0134
7440-41-7	Beryllium	0.65		01/06/2025	0134
7440-43-9	Cadmium	1.8		01/06/2025	0134
7440-70-2	Calcium	47000		01/06/2025	0134
7440-47-3	Chromium	20		01/06/2025	0134
7440-48-4	Cobalt	10	*	01/06/2025	0134
7440-50-8	Copper	42		01/06/2025	0134
7439-89-6	Iron	17000		01/06/2025	0134
7439-92-1	Lead	300		01/06/2025	0134
7439-95-4	Magnesium	23000		01/06/2025	0134
7439-96-5	Manganese	640		01/06/2025	0134
7440-02-0	Nickel	25		01/06/2025	0134
7440-09-7	Potassium	550		01/06/2025	0134
7782-49-2	Selenium	4.8		01/06/2025	0134
7440-22-4	Silver	1.0	U*	01/06/2025	0134
7440-23-5	Sodium	120	J	01/06/2025	0134
7440-28-0	Thallium	2.6	U*	01/06/2025	0134
7440-62-2	Vanadium	16		01/06/2025	0134
7440-66-6	Zinc	430		01/06/2025	0134

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMF2

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-13

% Solids: 86.6 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	7200		01/06/2025	0137
7440-36-0	Antimony	4.5	J	01/06/2025	0137
7440-38-2	Arsenic	20		01/06/2025	0137
7440-39-3	Barium	160		01/06/2025	0137
7440-41-7	Beryllium	0.74		01/06/2025	0137
7440-43-9	Cadmium	0.74		01/06/2025	0137
7440-70-2	Calcium	22000		01/06/2025	0137
7440-47-3	Chromium	15		01/06/2025	0137
7440-48-4	Cobalt	15	*	01/06/2025	0137
7440-50-8	Copper	49		01/06/2025	0137
7439-89-6	Iron	21000		01/06/2025	0137
7439-92-1	Lead	210		01/06/2025	0137
7439-95-4	Magnesium	3100		01/06/2025	0137
7439-96-5	Manganese	2300		01/06/2025	0137
7440-02-0	Nickel	19		01/06/2025	0137
7440-09-7	Potassium	940		01/06/2025	0137
7782-49-2	Selenium	11		01/06/2025	0137
7440-22-4	Silver	1.0	U*	01/06/2025	0137
7440-23-5	Sodium	510	U	01/06/2025	0137
7440-28-0	Thallium	2.5	U*	01/06/2025	0137
7440-62-2	Vanadium	19		01/06/2025	0137
7440-66-6	Zinc	150		01/06/2025	0137

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMF3

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-14

% Solids: 86.4 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	6400		01/06/2025	0141
7440-36-0	Antimony	4.0	J	01/06/2025	0141
7440-38-2	Arsenic	18		01/06/2025	0141
7440-39-3	Barium	180		01/06/2025	0141
7440-41-7	Beryllium	0.66		01/06/2025	0141
7440-43-9	Cadmium	0.80		01/06/2025	0141
7440-70-2	Calcium	30000		01/06/2025	0141
7440-47-3	Chromium	17		01/06/2025	0141
7440-48-4	Cobalt	13	*	01/06/2025	0141
7440-50-8	Copper	52		01/06/2025	0141
7439-89-6	Iron	20000		01/06/2025	0141
7439-92-1	Lead	230		01/06/2025	0141
7439-95-4	Magnesium	3500		01/06/2025	0141
7439-96-5	Manganese	1900		01/06/2025	0141
7440-02-0	Nickel	20		01/06/2025	0141
7440-09-7	Potassium	870		01/06/2025	0141
7782-49-2	Selenium	9.1		01/06/2025	0141
7440-22-4	Silver	0.89	U*	01/06/2025	0141
7440-23-5	Sodium	450	U	01/06/2025	0141
7440-28-0	Thallium	2.2	U*	01/06/2025	0141
7440-62-2	Vanadium	17		01/06/2025	0141
7440-66-6	Zinc	180		01/06/2025	0141

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMM8

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-15

% Solids: 79.6 Date Received: 12/05/2024

Analytical Method: ICP_AES

Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5400		01/06/2025	0145
7440-36-0	Antimony	5.1	J	01/06/2025	0145
7440-38-2	Arsenic	16		01/06/2025	0145
7440-39-3	Barium	170		01/06/2025	0145
7440-41-7	Beryllium	0.78		01/06/2025	0145
7440-43-9	Cadmium	0.68		01/06/2025	0145
7440-70-2	Calcium	21000		01/06/2025	0145
7440-47-3	Chromium	15		01/06/2025	0145
7440-48-4	Cobalt	12	*	01/06/2025	0145
7440-50-8	Copper	61		01/06/2025	0145
7439-89-6	Iron	19000		01/06/2025	0145
7439-92-1	Lead	400		01/06/2025	0145
7439-95-4	Magnesium	5200		01/06/2025	0145
7439-96-5	Manganese	540		01/06/2025	0145
7440-02-0	Nickel	20		01/06/2025	0145
7440-09-7	Potassium	790		01/06/2025	0145
7782-49-2	Selenium	7.1		01/06/2025	0145
7440-22-4	Silver	1.1	U*	01/06/2025	0145
7440-23-5	Sodium	130	J	01/06/2025	0145
7440-28-0	Thallium	2.9	U*	01/06/2025	0145
7440-62-2	Vanadium	20		01/06/2025	0145
7440-66-6	Zinc	280		01/06/2025	0145

NOTE: Hardness (total) is reported in mg/L

Comments:

EPA SAMPLE NO.

MBHMM9

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011

Lab Code: ACE Case No.: 51879 MA No. : SDG No.: MBHM98

Matrix: SOIL Lab Sample ID: P5126-16

% Solids: 87.1 Date Received: 12/05/2024

Analytical Method: ICP_AES

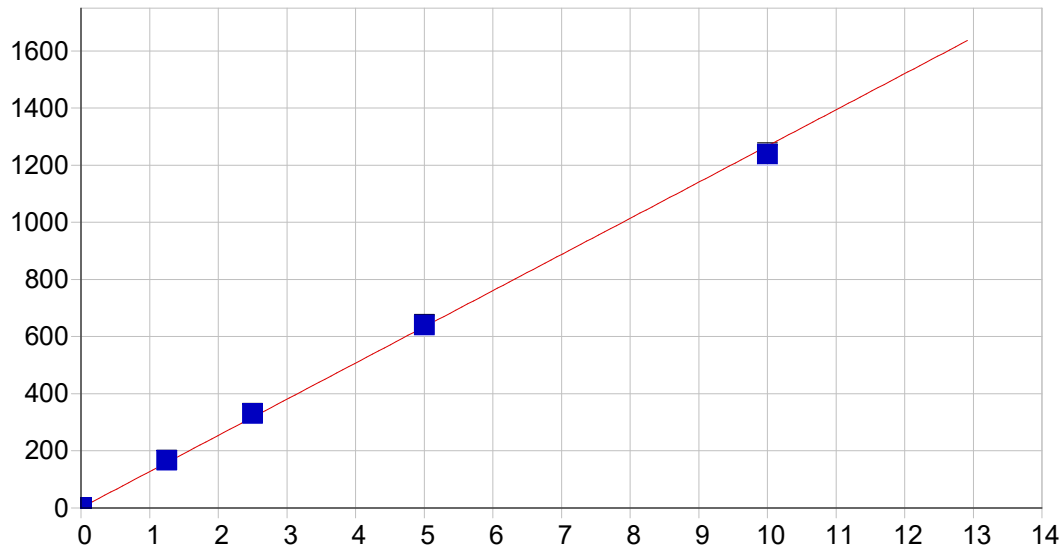
Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	6900		01/05/2025	2120
7440-36-0	Antimony	4.6	J	01/05/2025	2120
7440-38-2	Arsenic	20		01/05/2025	2120
7440-39-3	Barium	150		01/05/2025	2120
7440-41-7	Beryllium	0.75		01/05/2025	2120
7440-43-9	Cadmium	0.76		01/05/2025	2120
7440-70-2	Calcium	23000		01/05/2025	2120
7440-47-3	Chromium	15		01/05/2025	2120
7440-48-4	Cobalt	15	*	01/05/2025	2120
7440-50-8	Copper	52		01/05/2025	2120
7439-89-6	Iron	23000		01/05/2025	2120
7439-92-1	Lead	250		01/05/2025	2120
7439-95-4	Magnesium	3200		01/05/2025	2120
7439-96-5	Manganese	2000		01/05/2025	2120
7440-02-0	Nickel	19		01/05/2025	2120
7440-09-7	Potassium	950		01/05/2025	2120
7782-49-2	Selenium	11		01/05/2025	2120
7440-22-4	Silver	0.97	U*	01/05/2025	2120
7440-23-5	Sodium	490	U	01/05/2025	2120
7440-28-0	Thallium	2.4	U*	01/05/2025	2120
7440-62-2	Vanadium	18		01/05/2025	2120
7440-66-6	Zinc	150		01/05/2025	2120

NOTE: Hardness (total) is reported in mg/L

Comments:

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



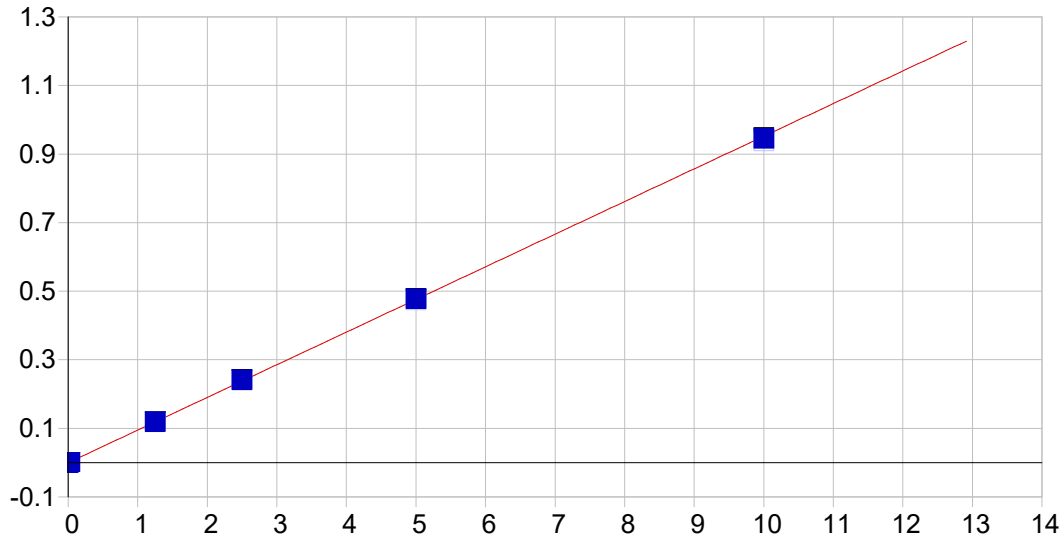
As 189.042 {478}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.718565	Re-Slope:	1.000000
A1 (Gain):	126.665284	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999638	Status:	OK.
Std Error of Est:	0.056946		
Predicted MDL:	0.006590		
Predicted MQL:	0.021967		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.71861	.555	1
S1	.01000	.00884	-.001	-11.6	1.8364	.323	1
S2	1.2500	1.3139	.064	5.11	166.48	.209	1
S3	2.5000	2.6079	.108	4.32	329.72	.716	1
S4	5.0000	5.0509	.051	1.02	637.83	2.66	1
S5	10.000	9.7784	-.222	-2.22	1234.0	4.33	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



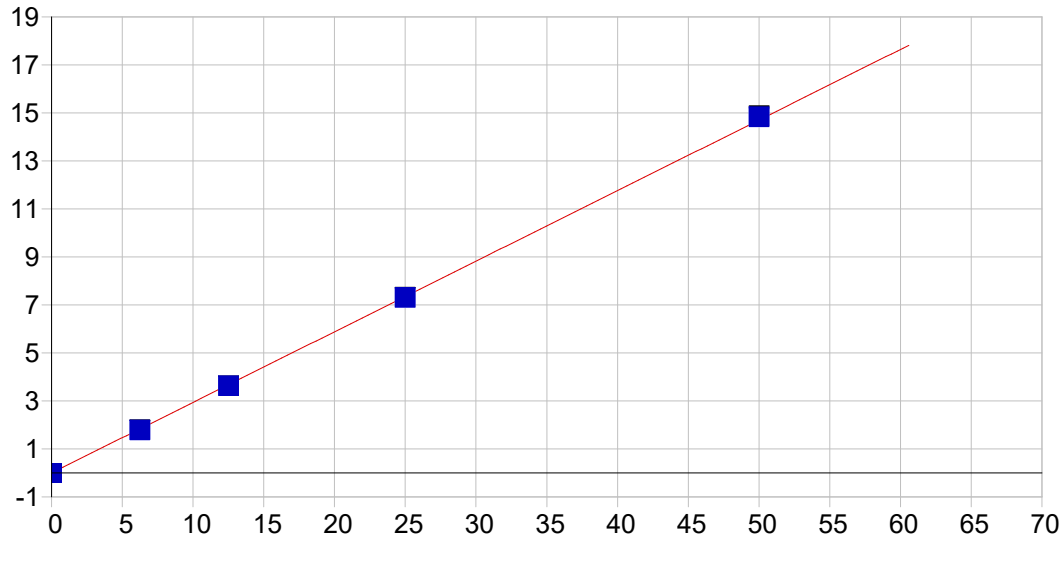
Tl 190.856 {477}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000240	Re-Slope:	1.000000
A1 (Gain):	0.095219	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.000021		
Predicted MDL:	0.003422		
Predicted MQL:	0.011405		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00024	.000	1
S1	.02500	.02399	-.001	-4.05	.00196	.000	1
S2	1.2500	1.2528	.003	.222	.11803	.000	1
S3	2.5000	2.5446	.045	1.79	.24002	.000	1
S4	5.0000	5.0196	.020	.392	.47364	.001	1
S5	10.000	9.9340	-.066	-.660	.93750	.002	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



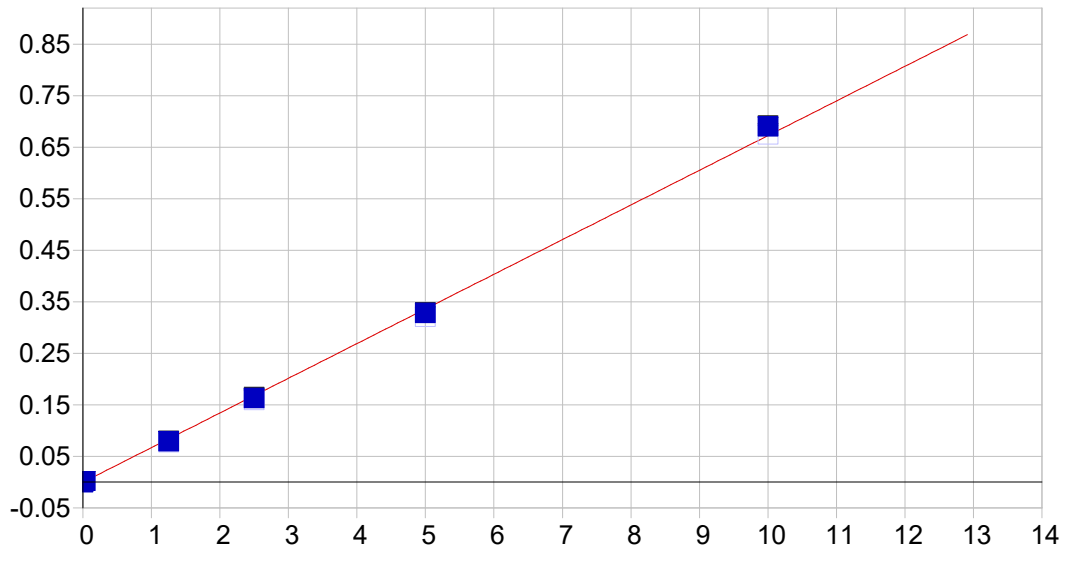
Pb 220.353 {453}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001433	Re-Slope:	1.000000
A1 (Gain):	0.294089	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999926	Status:	OK.
Std Error of Est:	0.000134		
Predicted MDL:	0.003009		
Predicted MQL:	0.010028		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00143	.001	1
S1	.01000	.01249	.002	24.9	.00222	.001	1
S2	6.2500	6.0576	-.192	-3.08	1.7765	.004	1
S3	12.500	12.349	-.151	-1.21	3.6232	.002	1
S4	25.000	24.858	-.142	-.568	7.2949	.011	1
S5	50.000	50.483	.483	.965	14.817	.031	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



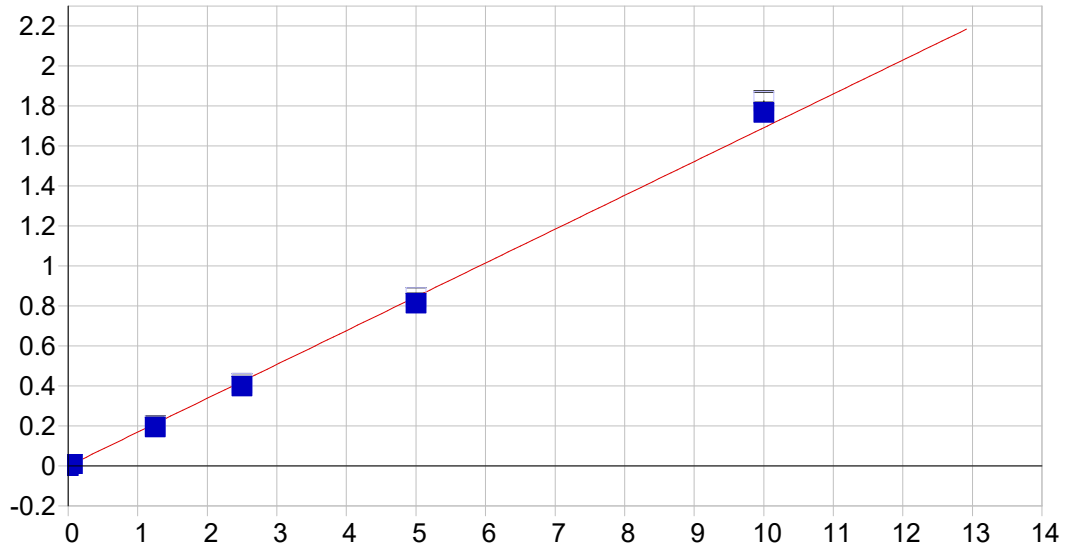
Se 196.090 {472}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000282	Re-Slope:	1.000000
A1 (Gain):	0.067274	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999564	Status:	OK.
Std Error of Est:	0.000061		
Predicted MDL:	0.006420		
Predicted MQL:	0.021401		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00028	.000	1
S1	.03500	.03405	-.001	-2.72	.00200	.000	1
S2	1.2500	1.1798	-.070	-5.62	.07720	.001	1
S3	2.5000	2.4281	-.072	-2.88	.15928	.001	1
S4	5.0000	4.8818	-.118	-2.36	.32057	.000	1
S5	10.000	10.261	.261	2.61	.67490	.002	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



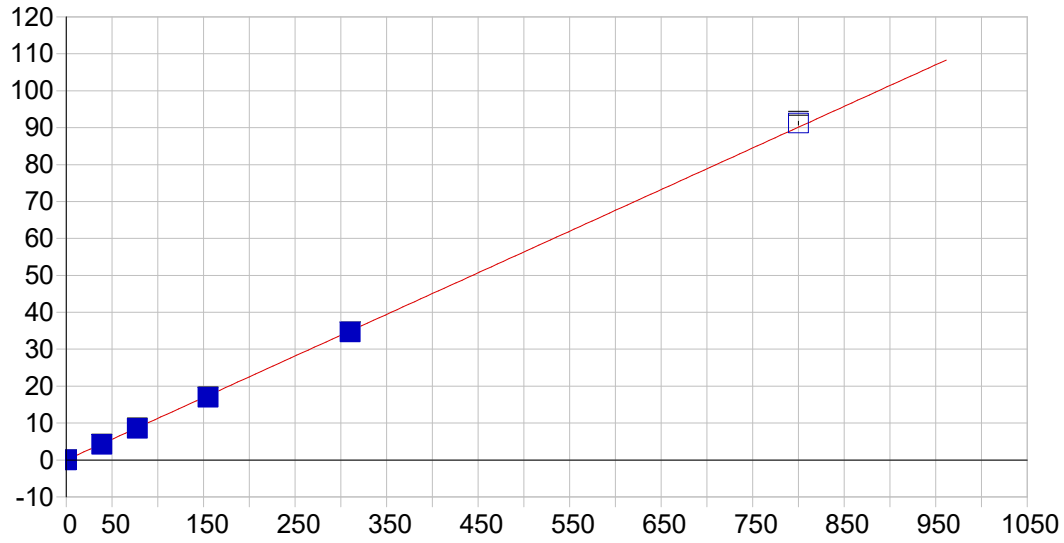
Sb 206.833 {463}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000032	Re-Slope:	1.000000
A1 (Gain):	0.169143	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998884	Status:	OK.
Std Error of Est:	0.000340		
Predicted MDL:	0.003569		
Predicted MQL:	0.011897		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00003	.000	1
S1	.06000	.05488	-.005	-8.54	.00925	.000	1
S2	1.2500	1.1440	-.106	-8.48	.20053	.001	1
S3	2.5000	2.3540	-.146	-5.84	.41226	.001	1
S4	5.0000	4.8116	-.188	-3.77	.84209	.000	1
S5	10.000	10.445	.445	4.45	1.8233	.003	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



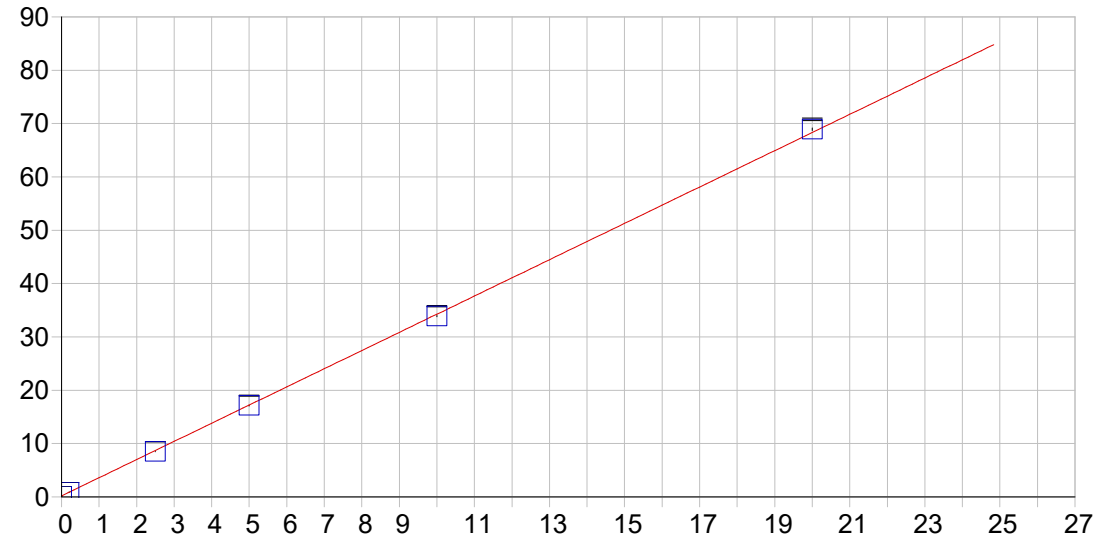
Al 396.152 { 85}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002640	Re-Slope:	1.000000
A1 (Gain):	0.112671	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999878	Status:	OK.
Std Error of Est:	0.001095		
Predicted MDL:	0.031330		
Predicted MQL:	0.104434		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00003	-.000	.000	-.00264	.004	1
S1	.20000	.24877	.049	24.4	.02543	.003	1
S2	38.750	37.472	-1.28	-3.30	4.2242	.034	1
S3	77.500	75.693	-1.81	-2.33	8.5352	.079	1
S4	155.00	150.86	-4.14	-2.67	17.014	.071	1
S5	310.00	307.66	-2.34	-.756	34.699	.104	1
S6	800.00	809.53	9.53	1.19	91.207	.538	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



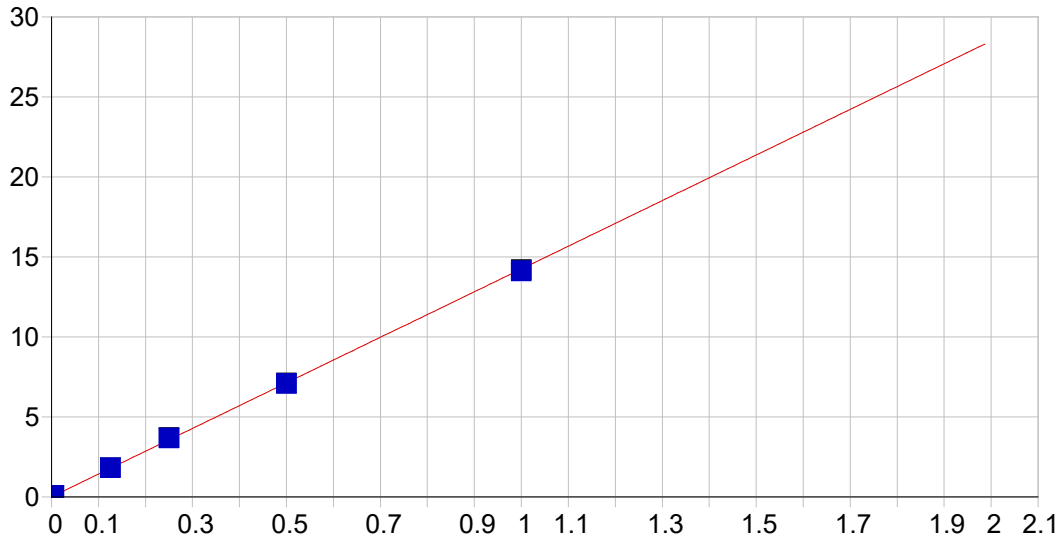
Ba 493.409 { 68}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.191444	Re-Slope:	1.000000
A1 (Gain):	3.406758	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999934	Status:	OK.
Std Error of Est:	0.004164		
Predicted MDL:	0.002685		
Predicted MQL:	0.008950		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.19143	.004	1
S1	.20000	.21147	.011	5.74	.91188	.004	1
S2	2.5000	2.4389	-.061	-2.45	8.5001	.022	1
S3	5.0000	4.9787	-.021	-.426	17.153	.085	1
S4	10.000	9.8927	-.107	-1.07	33.893	.137	1
S5	20.000	20.178	.178	.892	68.934	.229	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



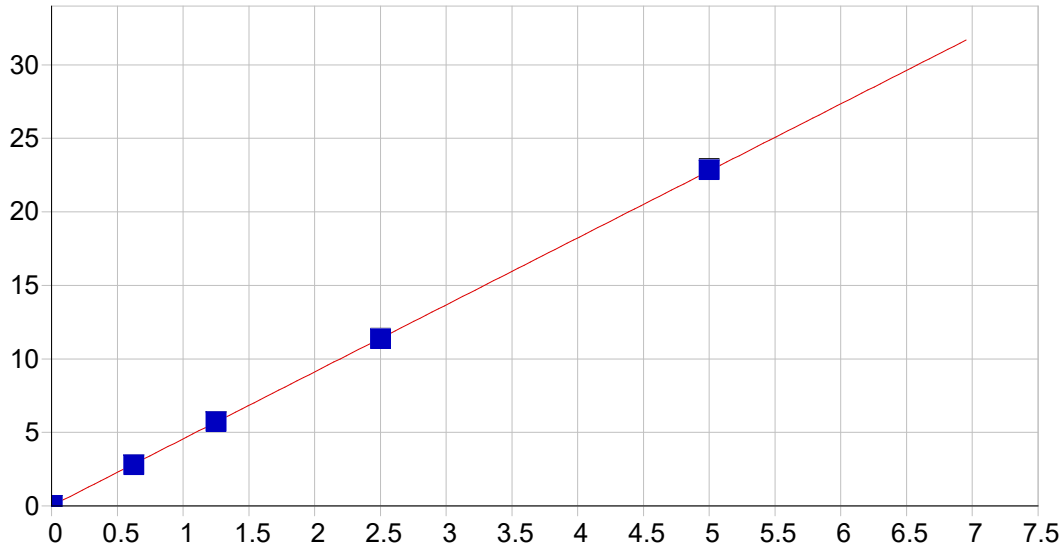
Be 234.861 {144}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003613	Re-Slope:	1.000000
A1 (Gain):	14.245073	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999878	Status:	OK.
Std Error of Est:	0.000832		
Predicted MDL:	0.000142		
Predicted MQL:	0.000474		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00360	.001	1
S1	.00500	.00557	.001	11.4	.08289	.005	1
S2	.12500	.12798	.003	2.39	1.8186	.022	1
S3	.25000	.25765	.008	3.06	3.6575	.030	1
S4	.50000	.49708	-.003	-.584	7.0519	.029	1
S5	1.0000	.99172	-.008	-.828	14.065	.078	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



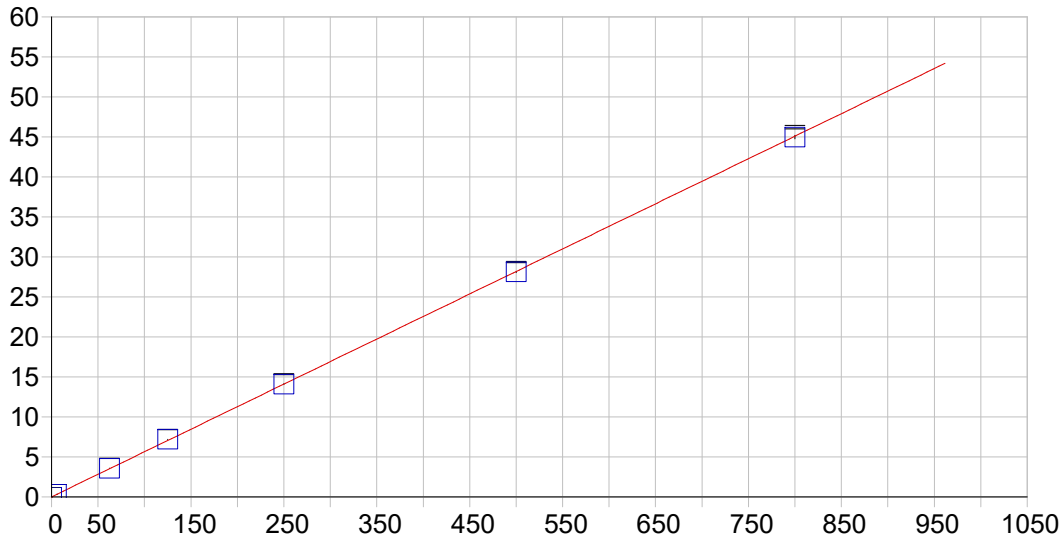
Cd 214.438 {457}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000530	Re-Slope:	1.000000
A1 (Gain):	4.557697	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999985	Status:	OK.
Std Error of Est:	0.000208		
Predicted MDL:	0.000106		
Predicted MQL:	0.000352		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00053	.000	1
S1	.00500	.00500	-.000	-.038	.02339	.000	1
S2	.62500	.61338	-.012	-1.86	2.8005	.006	1
S3	1.2500	1.2538	.004	.308	5.7239	.002	1
S4	2.5000	2.4943	-.006	-.230	11.386	.018	1
S5	5.0000	5.0135	.014	.270	22.886	.049	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



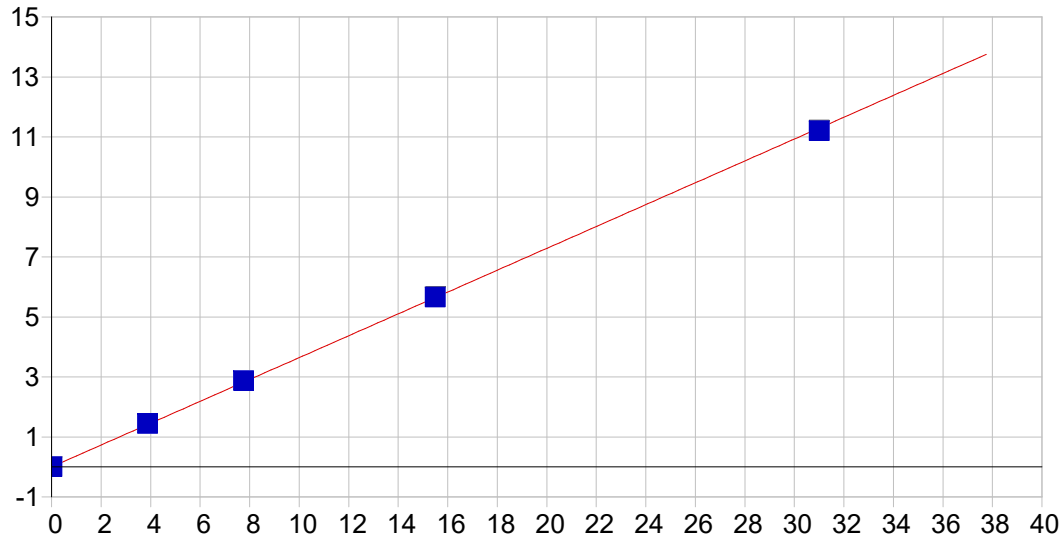
Ca 373.690 { 90}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008315	Re-Slope:	1.000000
A1 (Gain):	0.056353	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999972	Status:	OK.
Std Error of Est:	0.001471		
Predicted MDL:	0.043296		
Predicted MQL:	0.144321		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00052	-.001	.000	.00829	.002	1
S1	5.0000	5.3966	.397	7.93	.31243	.002	1
S2	62.500	63.192	.692	1.11	3.5694	.020	1
S3	125.00	127.47	2.47	1.97	7.1915	.021	1
S4	250.00	249.97	-.033	-.013	14.095	.057	1
S5	500.00	498.76	-1.24	-.248	28.115	.075	1
S6	800.00	797.72	-2.28	-.286	44.962	.221	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



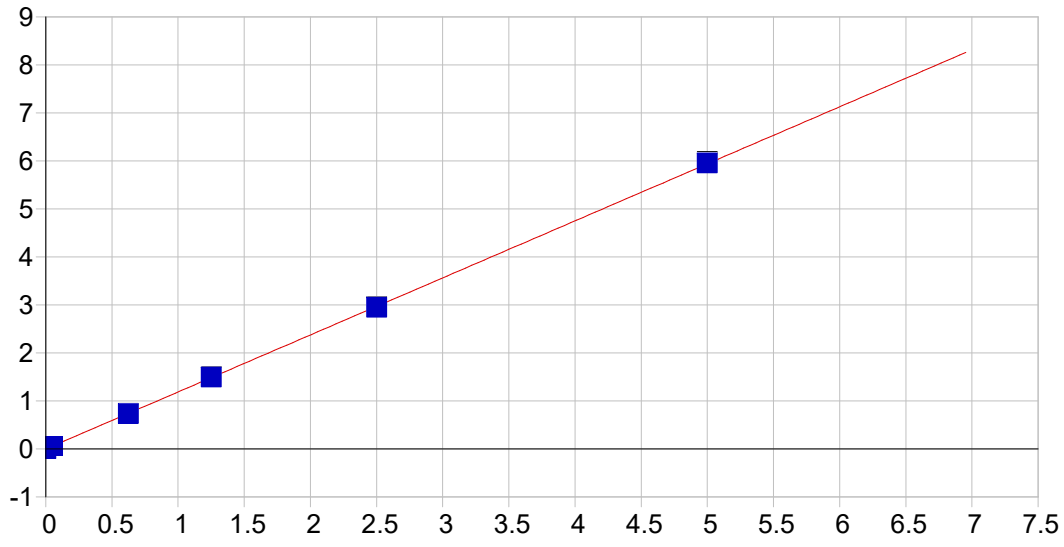
Cr 267.716 {126}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000055	Re-Slope:	1.000000
A1 (Gain):	0.364257	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999944	Status:	OK.
Std Error of Est:	0.000114		
Predicted MDL:	0.000896		
Predicted MQL:	0.002986		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00006	.000	1
S1	.01000	.01085	.001	8.51	.00390	.000	1
S2	3.8750	3.9476	.073	1.87	1.4390	.002	1
S3	7.7500	7.8981	.148	1.91	2.8791	.005	1
S4	15.500	15.537	.037	.241	5.6639	.017	1
S5	31.000	30.741	-.259	-.835	11.206	.015	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



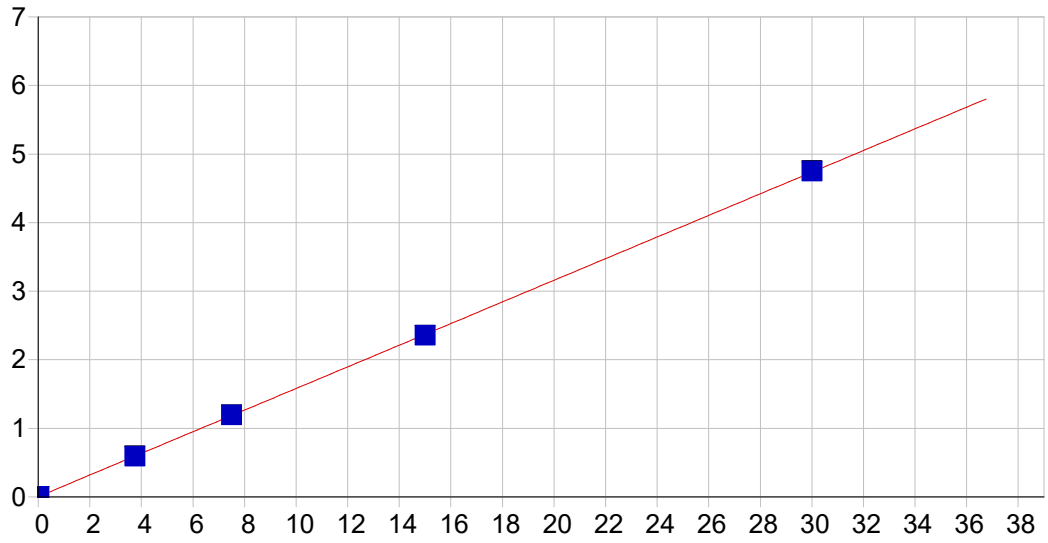
Co 228.616 {448}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001435	Re-Slope:	1.000000
A1 (Gain):	1.188113	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999984	Status:	OK.
Std Error of Est:	0.000177		
Predicted MDL:	0.000436		
Predicted MQL:	0.001453		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00144	.000	1
S1	.05000	.05220	.002	4.39	.06077	.000	1
S2	.62500	.62101	-.004	-.639	.73879	.001	1
S3	1.2500	1.2583	.008	.661	1.4983	.001	1
S4	2.5000	2.4840	-.016	-.641	2.9594	.007	1
S5	5.0000	5.0096	.010	.191	5.9696	.014	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



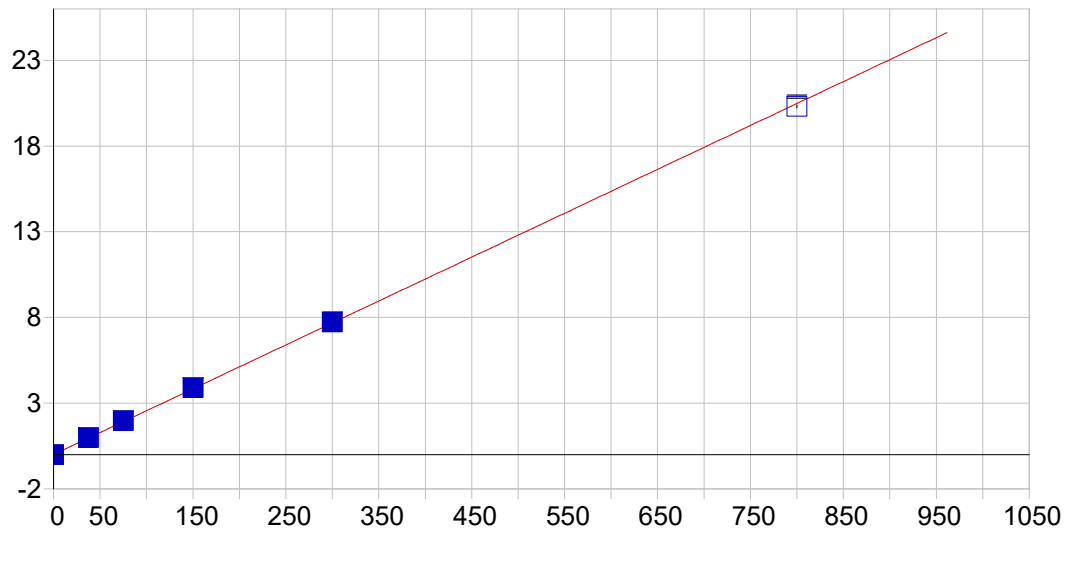
Cu 324.754 {104}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003711	Re-Slope:	1.000000
A1 (Gain):	0.157760	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.010012		
Predicted MQL:	0.033374		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00371	.001	1
S1	.02500	.02986	.005	19.5	.00842	.002	1
S2	3.7500	3.7226	-.027	-.732	.59092	.004	1
S3	7.5000	7.5379	.038	.505	1.1928	.007	1
S4	15.000	14.908	-.092	-.615	2.3553	.002	1
S5	30.000	30.077	.077	.256	4.7481	.009	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



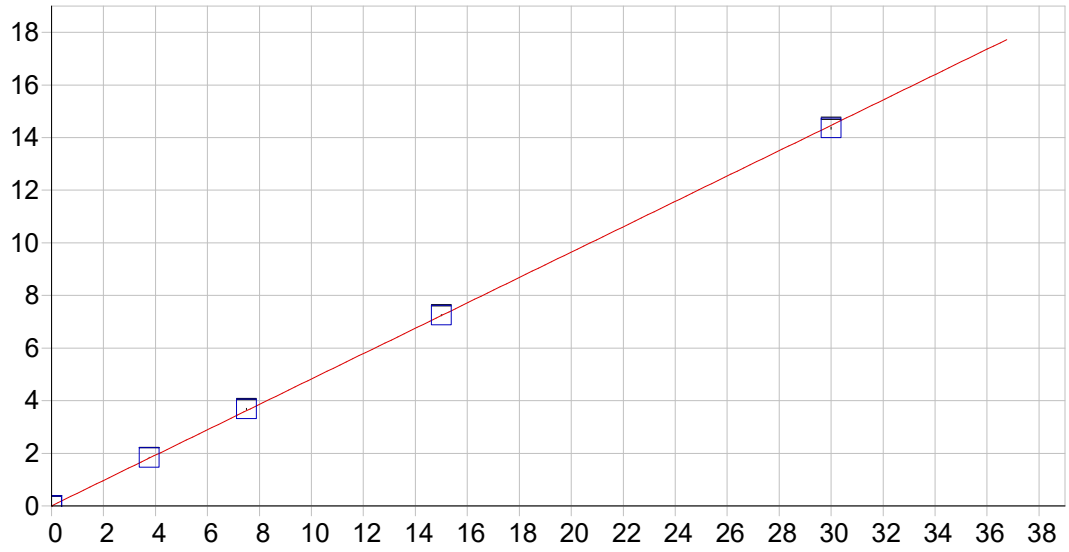
Fe 259.837 {130}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000019	Re-Slope:	1.000000
A1 (Gain):	0.025603	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999935	Status:	OK.
Std Error of Est:	0.000127		
Predicted MDL:	0.035846		
Predicted MQL:	0.119488		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00002	.001	1
S1	.10000	.08905	-.011	-11.0	.00230	.001	1
S2	37.500	38.426	.926	2.47	.98404	.006	1
S3	75.000	76.992	1.99	2.66	1.9716	.015	1
S4	150.00	151.94	1.94	1.29	3.8909	.010	1
S5	300.00	302.10	2.10	.698	7.7361	.013	1
S6	800.00	793.05	-6.95	-.868	20.304	.097	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



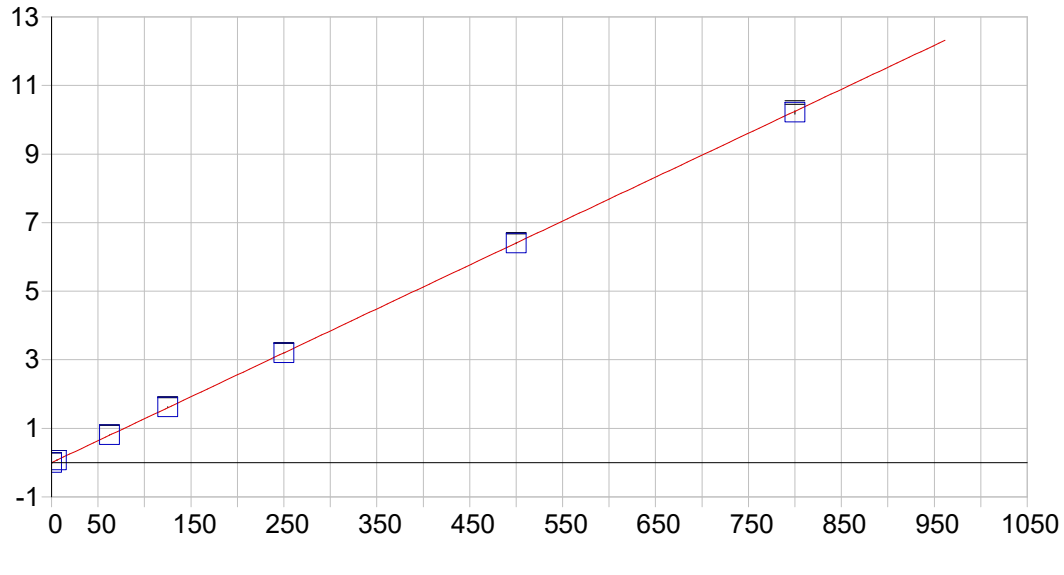
Mn 257.610 {131}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.003397	Re-Slope:	1.000000
A1 (Gain):	0.482121	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999955	Status:	OK.
Std Error of Est:	0.000163		
Predicted MDL:	0.001952		
Predicted MQL:	0.006506		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00340	.002	1
S1	.01500	.01502	.000	.136	.01064	.001	1
S2	3.7500	3.8050	.055	1.47	1.8379	.005	1
S3	7.5000	7.6398	.140	1.86	3.6867	.027	1
S4	15.000	15.027	.027	.183	7.2485	.025	1
S5	30.000	29.778	-.222	-.741	14.360	.041	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



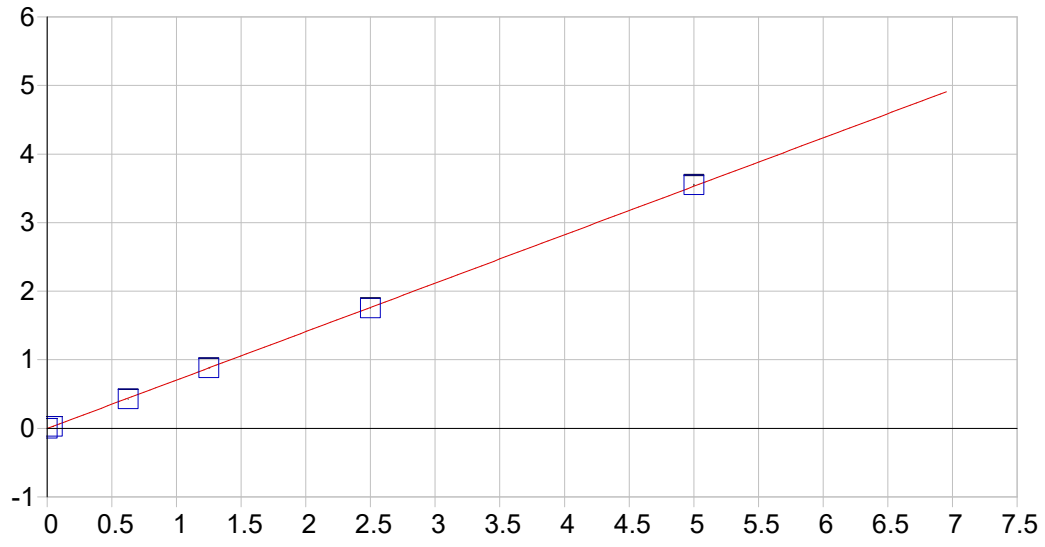
Mg 279.079 {121}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000913	Re-Slope:	1.000000
A1 (Gain):	0.012811	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999969	Status:	OK.
Std Error of Est:	0.000351		
Predicted MDL:	0.091055		
Predicted MQL:	0.303517		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00070	-.001	.000	-.00092	.001	1
S1	5.0000	5.6084	.608	12.2	.07093	.001	1
S2	62.500	63.009	.509	.814	.80627	.006	1
S3	125.00	126.61	1.61	1.29	1.6211	.013	1
S4	250.00	250.01	.014	.006	3.2019	.011	1
S5	500.00	499.86	-.143	-.029	6.4026	.020	1
S6	800.00	797.40	-2.60	-.325	10.214	.053	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



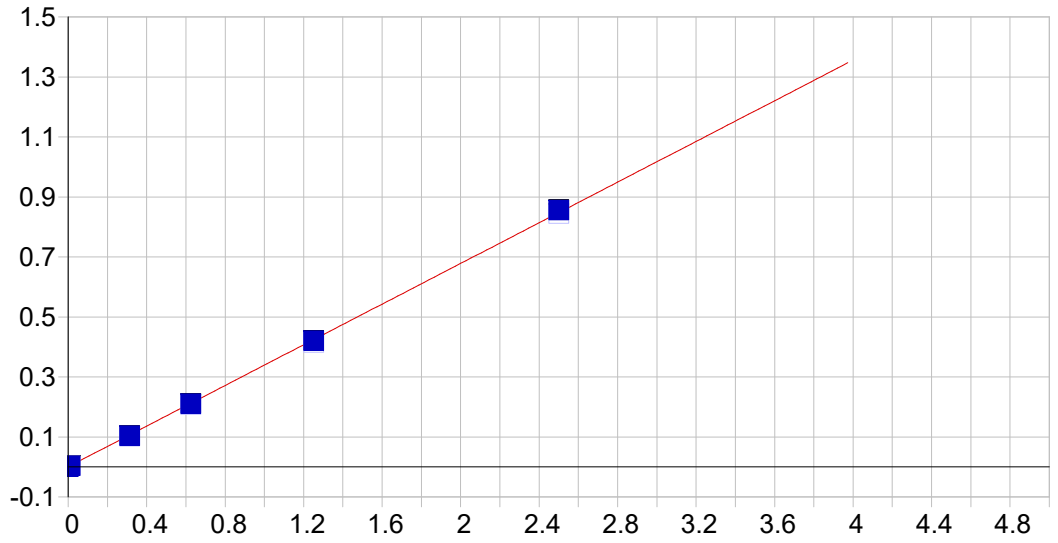
Ni 231.604 {446}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001851	Re-Slope:	1.000000
A1 (Gain):	0.706192	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999960	Status:	OK.
Std Error of Est:	0.000149		
Predicted MDL:	0.000929		
Predicted MQL:	0.003097		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00185	.000	1
S1	.04000	.03971	-.000	-.726	.02619	.000	1
S2	.62500	.60724	-.018	-2.84	.42698	.002	1
S3	1.2500	1.2491	-.001	-.069	.88028	.001	1
S4	2.5000	2.4886	-.011	-.457	1.7556	.003	1
S5	5.0000	5.0303	.030	.607	3.5505	.008	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



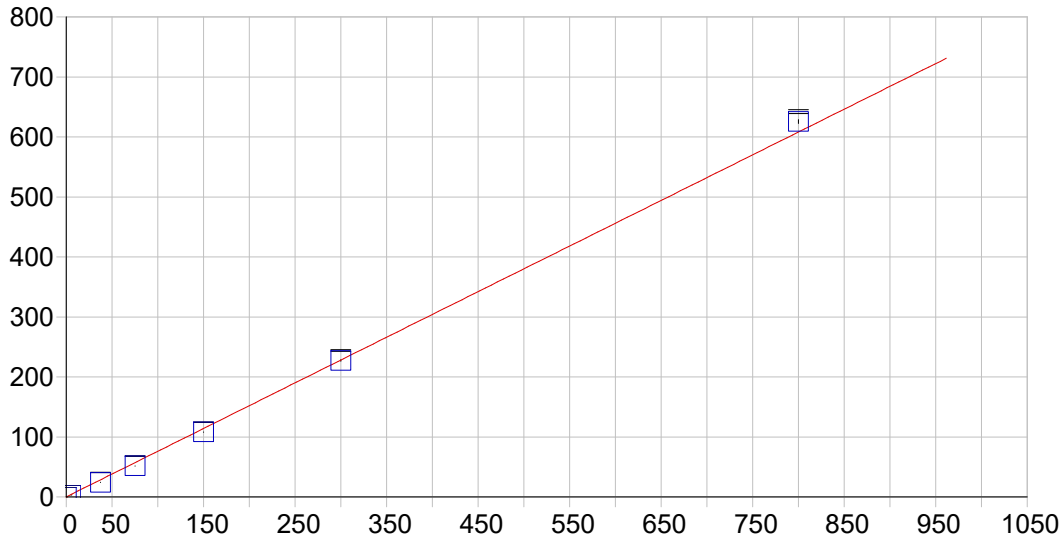
Ag 328.068 {103}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000452	Re-Slope:	1.000000
A1 (Gain):	0.338881	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999931	Status:	OK.
Std Error of Est:	0.000033		
Predicted MDL:	0.001634		
Predicted MQL:	0.005447		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00045	.001	1
S1	.01000	.01031	.000	3.05	.00394	.000	1
S2	.31250	.30376	-.009	-2.80	.10187	.000	1
S3	.62500	.61939	-.006	-.898	.20730	.000	1
S4	1.2500	1.2395	-.011	-.841	.41439	.001	1
S5	2.5000	2.5246	.025	.982	.84378	.001	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



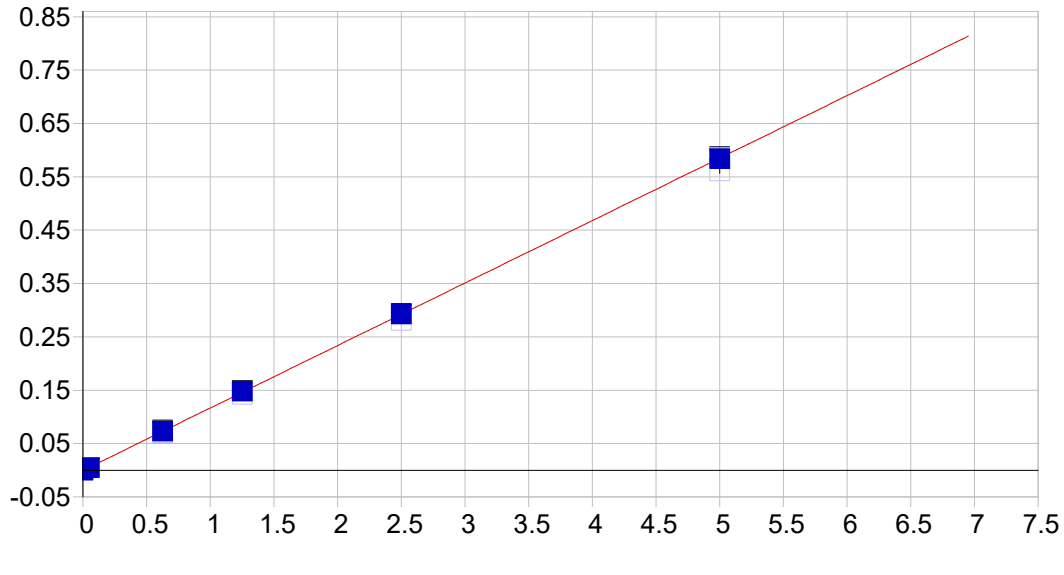
Na 818.326 { 41}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.067715	Re-Slope:	1.000000
A1 (Gain):	0.760094	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998957	Status:	OK.
Std Error of Est:	0.107438		
Predicted MDL:	0.019063		
Predicted MQL:	0.063543		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00236	.002	.000	.06951	.023	1
S1	5.0000	4.0331	-.967	-19.3	3.1333	.014	1
S2	37.500	31.589	-5.91	-15.8	24.078	.261	1
S3	75.000	67.943	-7.06	-9.41	51.711	.287	1
S4	150.00	142.03	-7.97	-5.32	108.02	.479	1
S5	300.00	299.15	-.852	-.284	227.45	1.53	1
S6	800.00	822.76	22.8	2.85	625.44	3.20	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



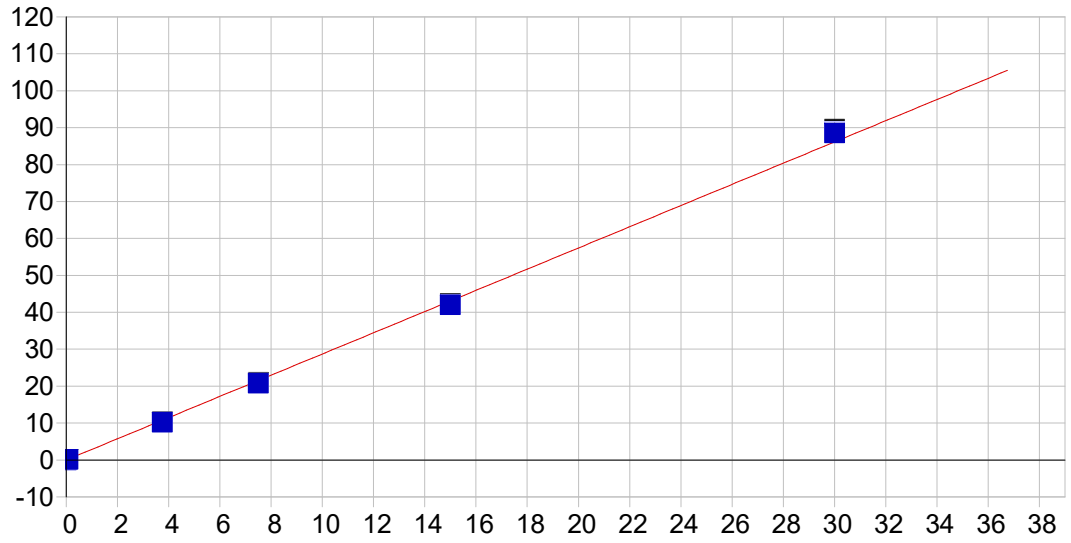
V 292.402 {115}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000405	Re-Slope:	1.000000
A1 (Gain):	0.117105	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999919	Status:	OK.
Std Error of Est:	0.000038		
Predicted MDL:	0.011973		
Predicted MQL:	0.039910		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00040	.001	1
S1	.05000	.04237	-.008	-15.3	.00454	.001	1
S2	.62500	.62509	.000	.014	.06986	.002	1
S3	1.2500	1.2670	.017	1.36	.14210	.001	1
S4	2.5000	2.5001	.000	.003	.28064	.001	1
S5	5.0000	4.9907	-.009	-.185	.56057	.004	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



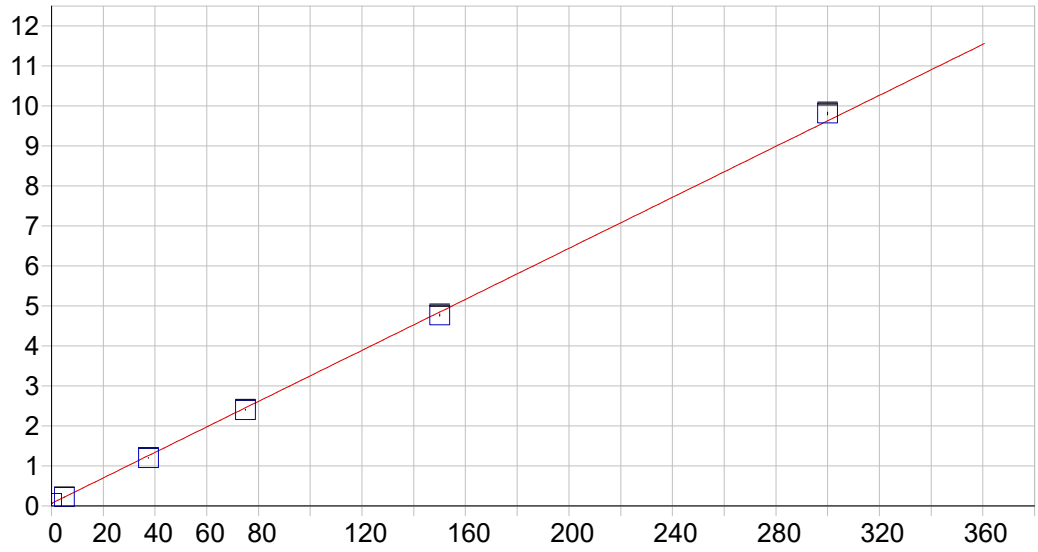
Zn 213.856 {158}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000830	Re-Slope:	1.000000
A1 (Gain):	2.871072	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999534	Status:	OK.
Std Error of Est:	0.006270		
Predicted MDL:	0.000629		
Predicted MQL:	0.002096		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00084	.002	1
S1	.06000	.06251	.003	4.18	.18083	.001	1
S2	3.7500	3.5589	-.191	-5.09	10.271	.046	1
S3	7.5000	7.2216	-.278	-3.71	20.840	.189	1
S4	15.000	14.626	-.374	-2.49	42.205	.172	1
S5	30.000	30.841	.841	2.80	88.968	.651	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



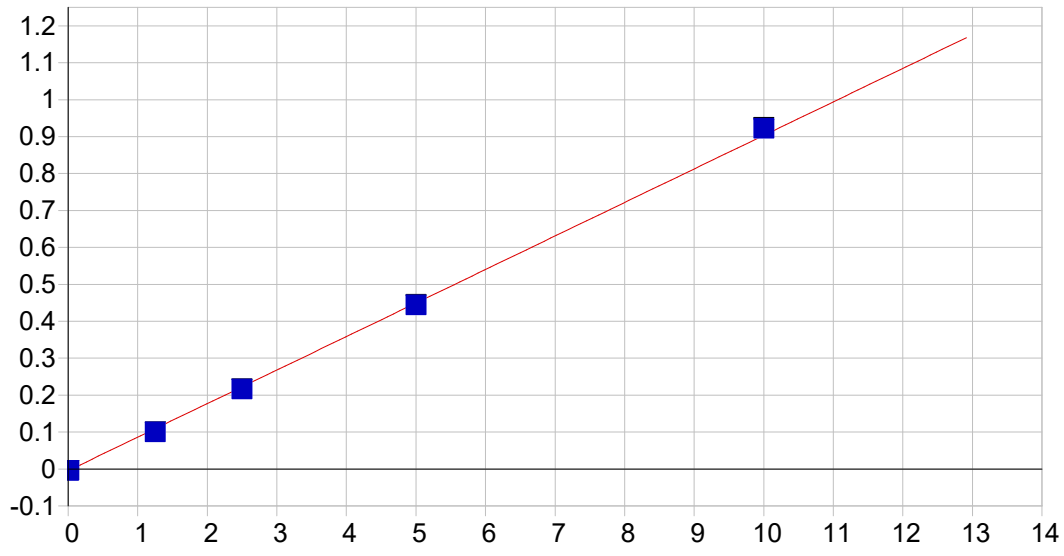
K 769.896 { 44}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.063339	Re-Slope:	1.000000
A1 (Gain):	0.031889	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999753	Status:	OK.
Std Error of Est:	0.001462		
Predicted MDL:	0.197341		
Predicted MQL:	0.657804		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00032	.000	.000	.06335	.003	1
S1	5.0000	5.0183	.018	.366	.22337	.004	1
S2	37.500	35.607	-1.89	-5.05	1.1988	.007	1
S3	75.000	73.406	-1.59	-2.13	2.4042	.011	1
S4	150.00	147.63	-2.37	-1.58	4.7712	.027	1
S5	300.00	305.84	5.84	1.95	9.8162	.038	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



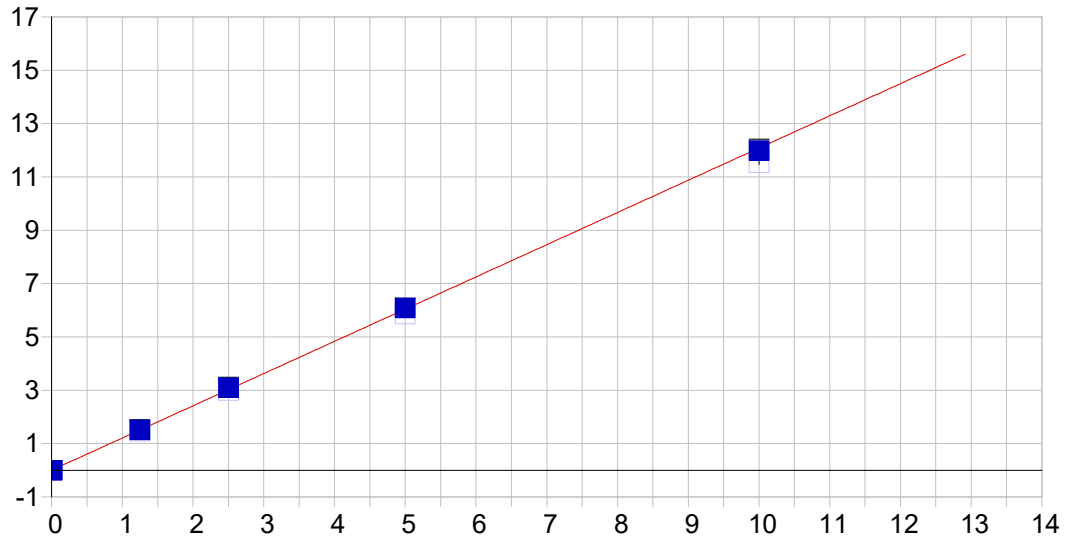
P 177.495 {490}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.004561	Re-Slope:	1.000000
A1 (Gain):	0.090781	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999618	Status:	OK.
Std Error of Est:	0.000042		
Predicted MDL:	0.003111		
Predicted MQL:	0.010370		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00456	.000	1
S1	.01000	.01146	.001	14.6	-.00352	.000	1
S2	1.2500	1.1556	-.094	-7.55	.10018	.000	1
S3	2.5000	2.4341	-.066	-2.64	.21608	.000	1
S4	5.0000	4.9444	-.056	-1.11	.44364	.002	1
S5	10.000	10.214	.214	2.14	.92139	.003	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



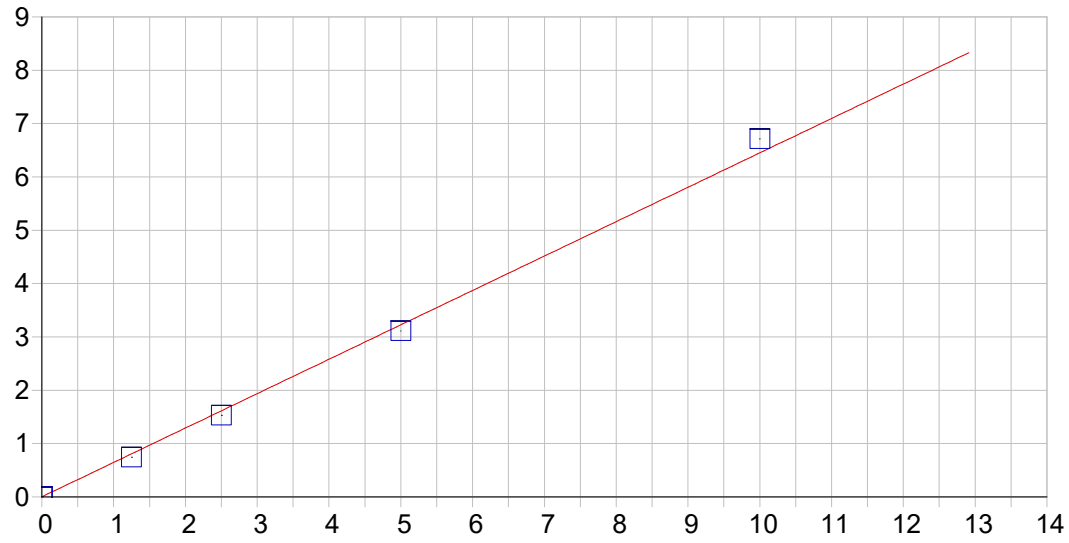
B 249.678 {135}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001076	Re-Slope:	1.000000
A1 (Gain):	1.208104	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999544	Status:	OK.
Std Error of Est:	0.000589		
Predicted MDL:	0.002066		
Predicted MQL:	0.006888		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00109	.003	1
S1	.01000	-.00162	-.012	-116.	-.00095	.000	1
S2	1.2500	1.2507	.001	.056	1.4546	.010	1
S3	2.5000	2.5619	.062	2.48	2.9813	.024	1
S4	5.0000	5.0295	.029	.589	5.8475	.005	1
S5	10.000	9.9200	-.080	-.800	11.526	.059	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



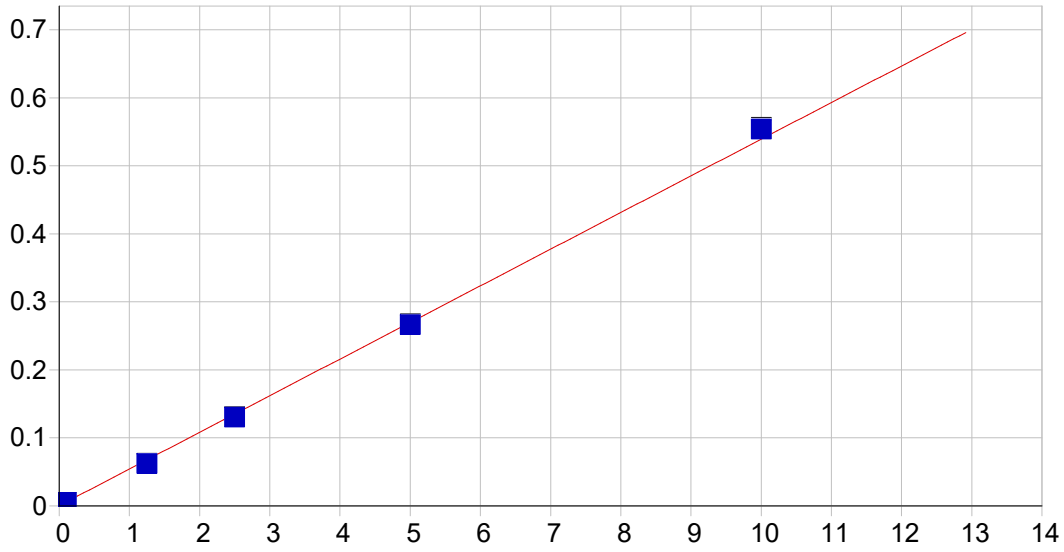
Mo 202.030 {467}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001600	Re-Slope:	1.000000
A1 (Gain):	0.644935	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998996	Status:	OK.
Std Error of Est:	0.000485		
Predicted MDL:	0.000753		
Predicted MQL:	0.002509		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00160	.000	1
S1	.01000	.00957	-.000	-4.34	.00777	.000	1
S2	1.2500	1.1502	-.100	-7.98	.74342	.001	1
S3	2.5000	2.3706	-.129	-5.18	1.5305	.002	1
S4	5.0000	4.8215	-.178	-3.57	3.1112	.002	1
S5	10.000	10.408	.408	4.08	6.7142	.004	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



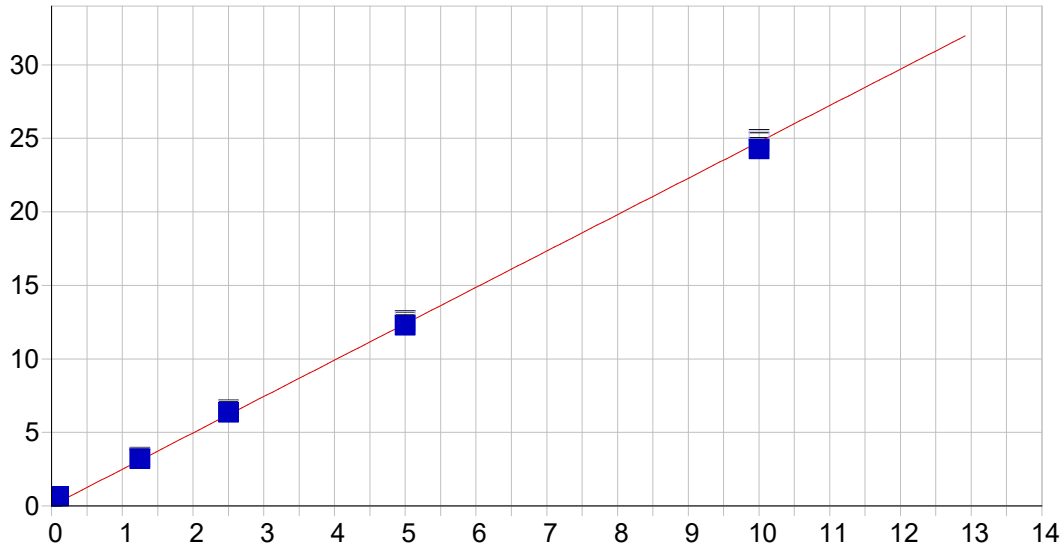
S 182.034 {485}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000395	Re-Slope:	1.000000
A1 (Gain):	0.053877	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999445	Status:	OK.
Std Error of Est:	0.000096		
Predicted MDL:	0.004701		
Predicted MQL:	0.015671		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00040	.000	1
S1	.10000	.08935	-.011	-10.6	.00521	.000	1
S2	1.2500	1.1468	-.103	-8.26	.06240	.000	1
S3	2.5000	2.4099	-.090	-3.60	.13067	.000	1
S4	5.0000	4.9337	-.066	-1.33	.26708	.001	1
S5	10.000	10.270	.270	2.70	.55546	.001	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



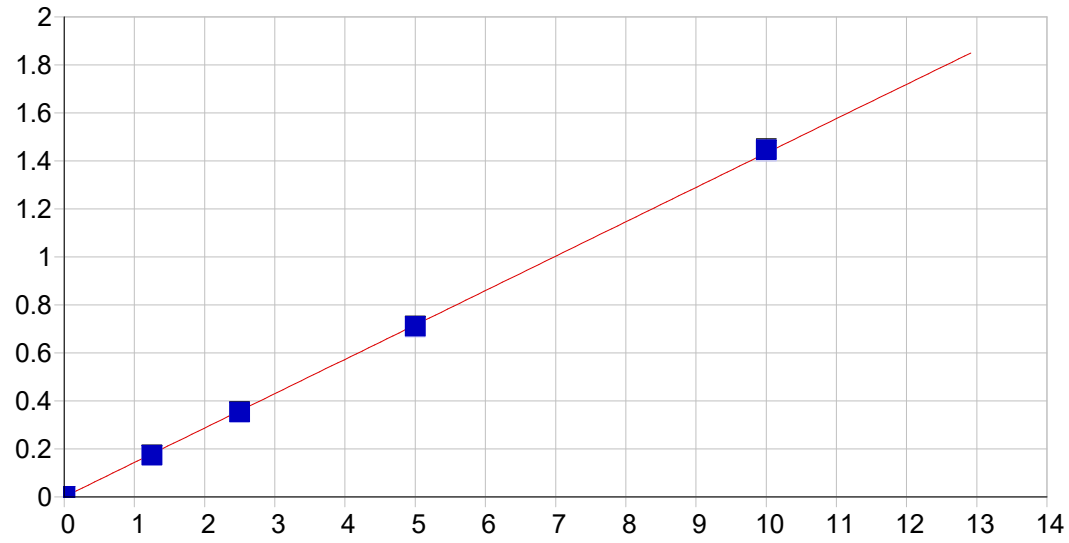
Si 251.611 {134}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.017318	Re-Slope:	1.000000
A1 (Gain):	2.474255	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.993623	Status:	OK.
Std Error of Est:	0.015259		
Predicted MDL:	0.001032		
Predicted MQL:	0.003441		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00016	-.000	.000	.01692	.002	1
S1	.10000	.25708	.157	157.	.65689	.004	1
S2	1.2500	1.2843	.034	2.74	3.2651	.040	1
S3	2.5000	2.5591	.059	2.37	6.4897	.047	1
S4	5.0000	4.9522	-.048	-.956	12.551	.043	1
S5	10.000	9.7986	-.201	-2.01	24.823	.110	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



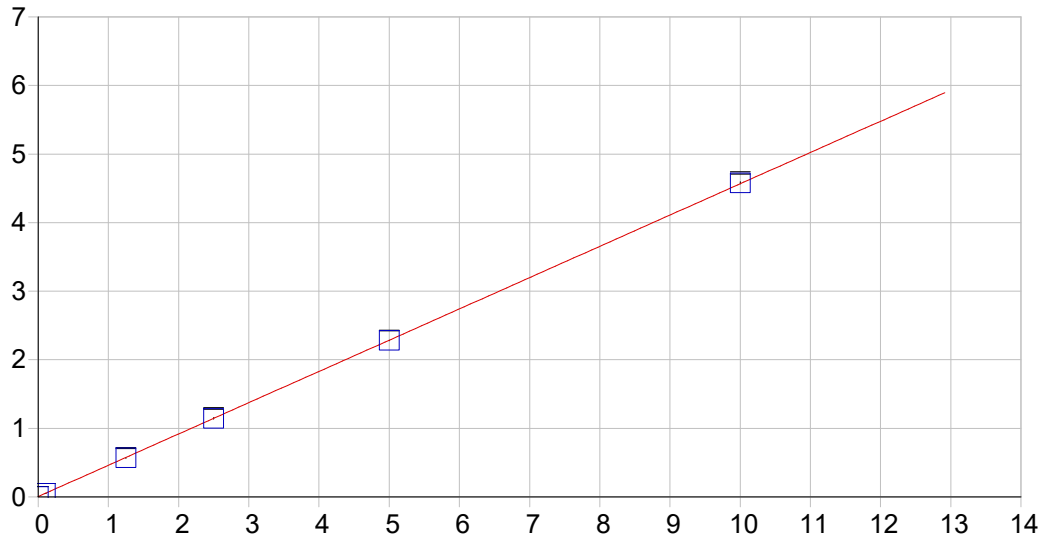
Sn 189.989 {478}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000332	Re-Slope:	1.000000
A1 (Gain):	0.143226	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998813	Status:	OK.
Std Error of Est:	0.000097		
Predicted MDL:	0.001584		
Predicted MQL:	0.005280		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00002	-.000	.000	.00033	.000	1
S1	.00700	.02397	.017	242.	.00372	.000	1
S2	1.2500	1.2104	-.040	-3.17	.17280	.000	1
S3	2.5000	2.4668	-.033	-1.33	.35184	.001	1
S4	5.0000	4.9590	-.041	-.820	.70700	.002	1
S5	10.000	10.097	.097	.975	1.4394	.005	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5



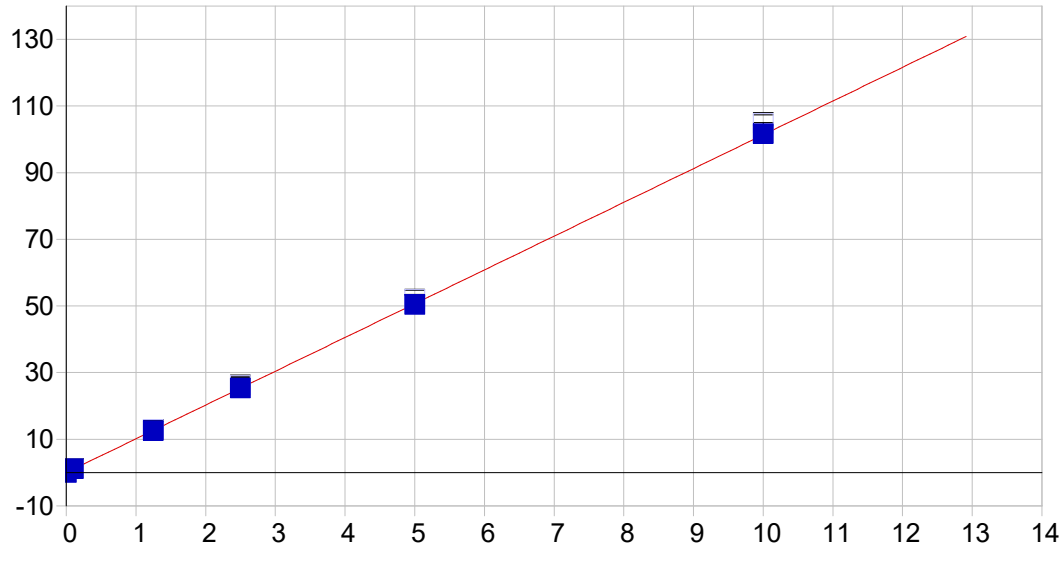
Ti 336.121 {100}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.005599	Re-Slope:	1.000000
A1 (Gain):	0.456054	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000112		
Predicted MDL:	0.004657		
Predicted MQL:	0.015524		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00560	.003	1
S1	.10000	.09775	-.002	-2.25	.05018	.001	1
S2	1.2500	1.2318	-.018	-1.45	.56739	.006	1
S3	2.5000	2.4994	-.001	-.024	1.1455	.011	1
S4	5.0000	4.9931	-.007	-.138	2.2827	.006	1
S5	10.000	10.028	.028	.279	4.5789	.016	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

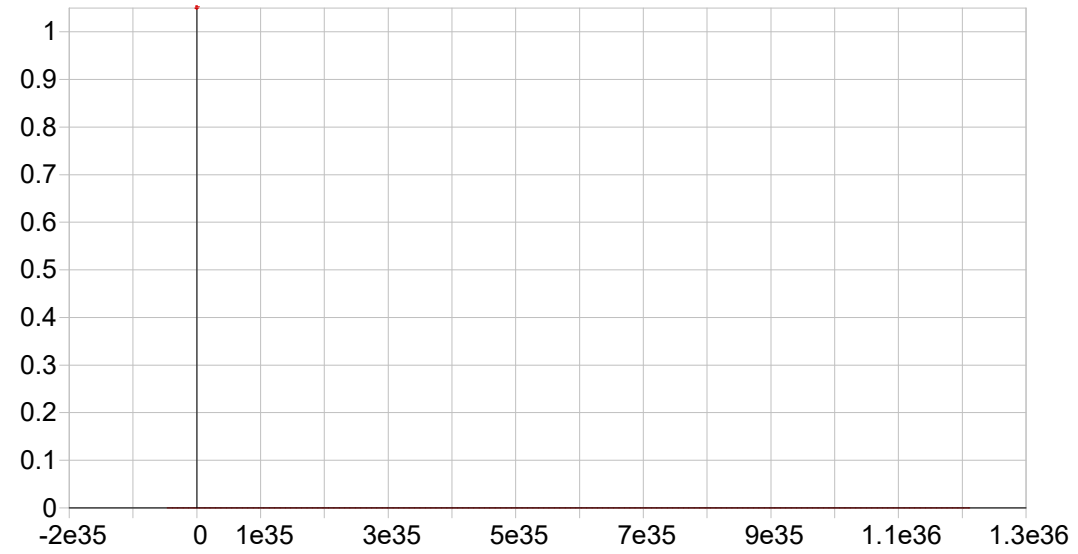


Sr 407.771 { 83}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.004070	Re-Slope:	1.000000
A1 (Gain):	10.135948	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999964	Status:	OK.
Std Error of Est:	0.004683		
Predicted MDL:	0.000286		
Predicted MQL:	0.000954		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00416	.003	1
S1	.10000	.11007	.010	10.1	1.1126	.013	1
S2	1.2500	1.2365	-.014	-1.08	12.909	.056	1
S3	2.5000	2.5013	.001	.054	26.110	.159	1
S4	5.0000	4.9712	-.029	-.576	51.904	.158	1
S5	10.000	10.031	.031	.312	104.71	.363	1

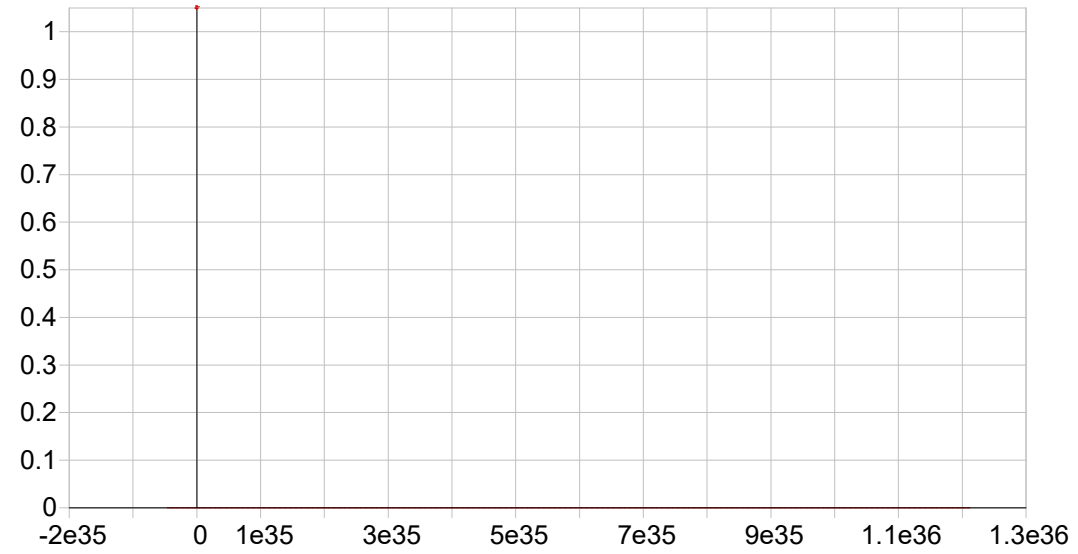


Y 224.306 {450}*

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 360.073 { 94}*

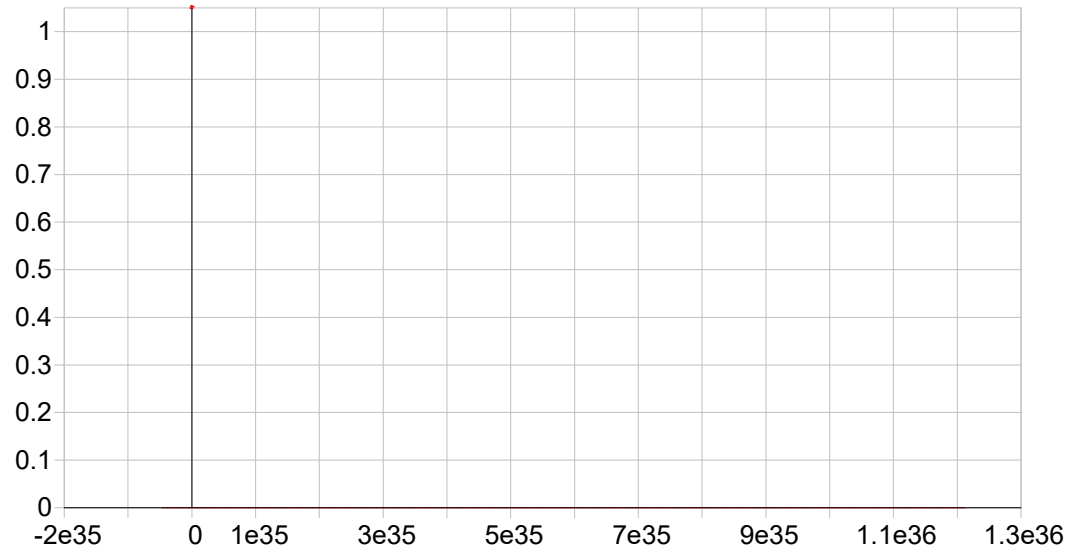
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

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

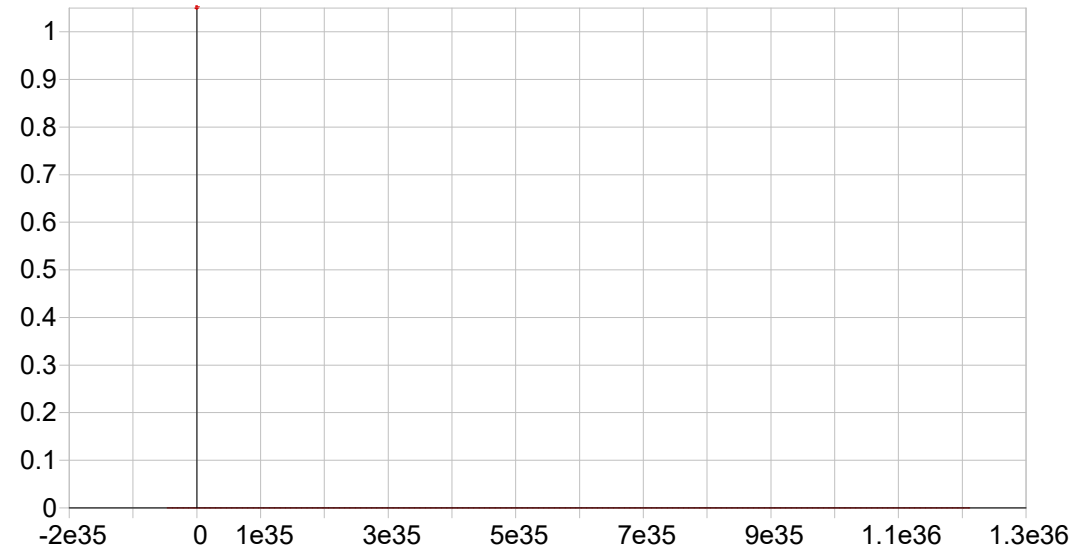


Y 371.030 { 91}*

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

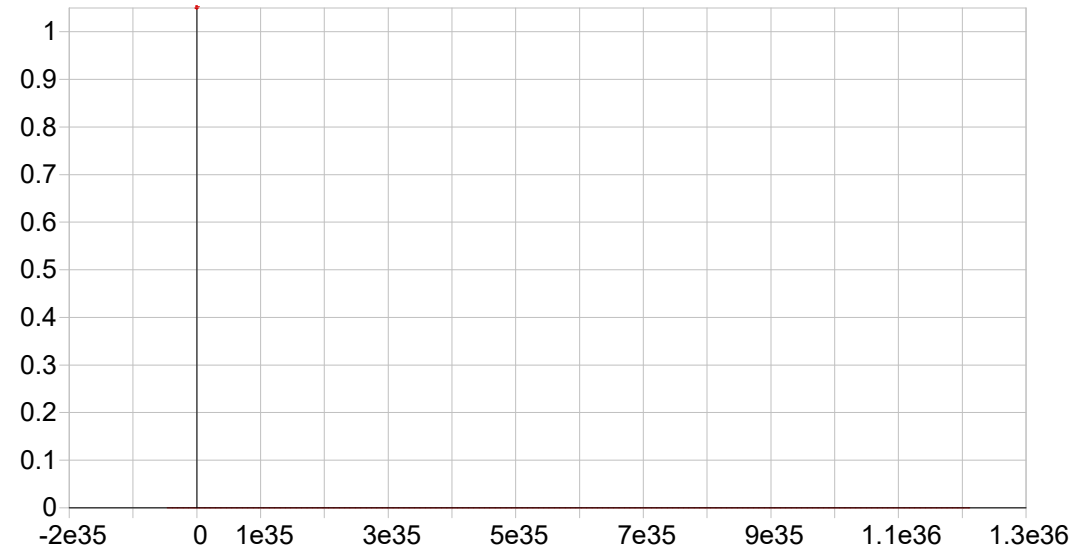


Y 224.306 {150}*

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}*

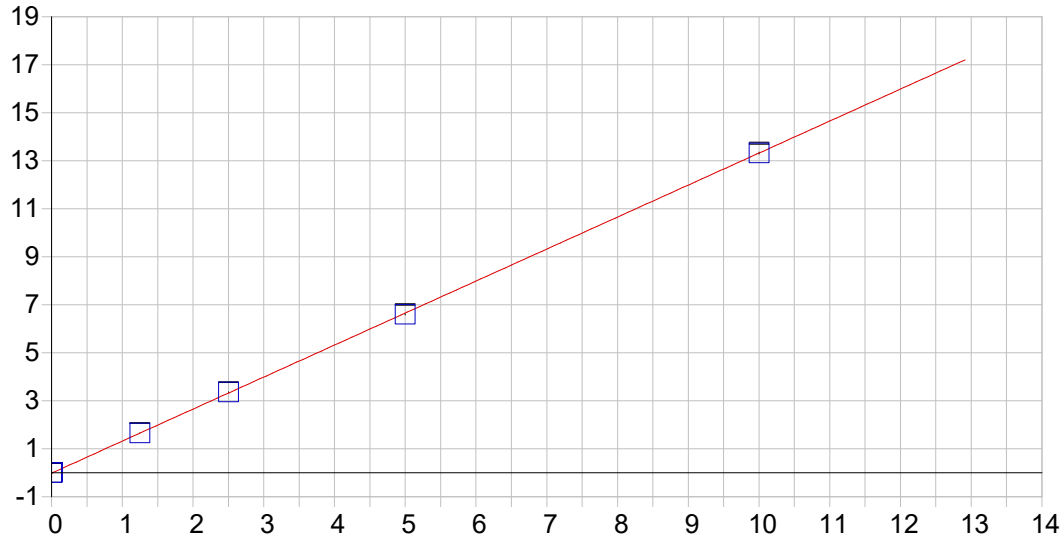
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

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



Li 670.784 { 50}

Date of Fit:	01/05/2025 18:00:22	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.015773	Re-Slope:	1.000000
A1 (Gain):	1.333630	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999932	Status:	OK.
Std Error of Est:	0.000319		
Predicted MDL:	0.004467		
Predicted MQL:	0.014891		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.01578	.006	1
S5	10.000	10.001	.001	.015	13.322	.036	1
S4	5.0000	4.9589	-.041	-.823	6.5975	.025	1
S3	2.5000	2.5300	.030	1.20	3.3583	.011	1
S2	1.2500	1.2545	.004	.358	1.6572	.003	1
S1	.01500	.02025	.005	35.0	.01123	.004	1

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S0 Acquired: 01/05/2025 16:31:03 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 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	.71861	-.00024	-.00143	-.00028	-.00003	-.00264	.19143	.00360
Stddev	.55451	.00005	.00081	.00022	.00024	.00444	.00390	.00099
%RSD	77.165	22.592	56.451	77.675	824.48	167.97	2.0351	27.578
#1	1.3170	-.00027	-.00131	-.00008	.00001	-.00385	.19571	.00392
#2	.61658	-.00027	-.00069	-.00025	.00019	-.00636	.19048	.00440
#3	.22219	-.00018	-.00230	-.00051	-.00029	.00228	.18809	.00249

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00053	.00829	-.00006	-.00144	.00371	.00002	.00340	-.00092
Stddev	.00020	.00232	.00030	.00003	.00098	.00108	.00167	.00073
%RSD	37.933	27.942	545.38	2.4250	26.331	5797.6	49.024	79.548
#1	.00051	.00669	.00011	-.00148	.00469	.00114	.00259	-.00009
#2	.00034	.00723	-.00041	-.00142	.00273	-.00102	.00229	-.00149
#3	.00074	.01094	.00013	-.00141	.00372	-.00007	.00531	-.00119

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00185	.00045	.06951	-.00040	.00084	.06335	-.00456	.00109
Stddev	.00007	.00055	.02348	.00119	.00240	.00264	.00023	.00312
%RSD	3.9467	120.56	33.773	294.74	285.95	4.1675	4.9870	286.41
#1	-.00187	.00106	.09443	.00001	.00227	.06155	-.00440	-.00173
#2	-.00177	.00028	.04781	-.00175	.00217	.06638	-.00482	.00444
#3	-.00191	.00002	.06629	.00052	-.00193	.06211	-.00447	.00055

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00160	.00040	.01692	.00033	.00560	-.00416	-.01578
Stddev	.00048	.00005	.00241	.00007	.00296	.00264	.00597
%RSD	30.228	13.599	14.239	21.037	52.841	63.487	37.821
#1	.00135	.00044	.01765	.00038	.00244	-.00635	-.02151
#2	.00216	.00034	.01423	.00025	.00831	-.00123	-.00960
#3	.00130	.00041	.01889	.00036	.00605	-.00490	-.01624

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S0 Acquired: 01/05/2025 16:31:03 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S0 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	1782.7	17676.	1658.1	1296.3	2000.4
Stddev	1.9	125.	5.5	8.6	1.8
%RSD	.10598	.70965	.33004	.66069	.09206
#1	1782.6	17709.	1664.4	1294.5	1999.4
#2	1784.6	17781.	1654.2	1305.7	2002.6
#3	1780.8	17537.	1655.7	1288.8	1999.3

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S1 Acquired: 01/05/2025 16:35:12 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 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	1.8364	.00196	.00222	.00200	.00925	.02543	.91188	.08289
Stddev	.3234	.00009	.00107	.00036	.00027	.00334	.00376	.00504
%RSD	17.612	4.4838	48.379	17.895	2.9620	13.139	.41233	6.0827
#1	2.1714	.00203	.00146	.00159	.00948	.02923	.90778	.07880
#2	1.5259	.00199	.00175	.00225	.00895	.02298	.91517	.08135
#3	1.8120	.00186	.00345	.00217	.00934	.02407	.91269	.08852

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.02339	.31243	.00390	.06077	.00842	.00230	.01064	.07093
Stddev	.00043	.00166	.00017	.00022	.00157	.00105	.00070	.00050
%RSD	1.8269	.53193	4.4843	.35635	18.614	45.705	6.6200	.70647
#1	.02388	.31397	.00406	.06057	.00845	.00237	.01143	.07134
#2	.02325	.31265	.00372	.06100	.00997	.00331	.01007	.07109
#3	.02306	.31067	.00392	.06075	.00683	.00122	.01042	.07037

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.02619	.00394	3.1333	.00454	.18083	.22337	-.00352	-.00095
Stddev	.00016	.00045	.0141	.00124	.00120	.00446	.00036	.00025
%RSD	.61029	11.434	.45036	27.204	.66531	1.9985	10.224	26.378
#1	.02612	.00359	3.1495	.00313	.17944	.21889	-.00371	-.00115
#2	.02608	.00445	3.1236	.00507	.18152	.22782	-.00310	-.00067
#3	.02637	.00378	3.1268	.00542	.18152	.22339	-.00374	-.00101

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00777	.00521	.65689	.00372	.05018	1.1126	.01123
Stddev	.00041	.00022	.00356	.00025	.00077	.0129	.00384
%RSD	5.2375	4.2648	.54138	6.5877	1.5256	1.1622	34.236
#1	.00730	.00527	.65777	.00394	.05105	1.1159	.01564
#2	.00806	.00496	.65298	.00377	.04985	1.1235	.00860
#3	.00795	.00540	.65993	.00345	.04963	1.0983	.00945

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S1 Acquired: 01/05/2025 16:35:12 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 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	1764.7	17568.	1631.3	1287.4	1985.7
Stddev	.5	119.	7.7	4.9	.7
%RSD	.02904	.67985	.46981	.37833	.03683
#1	1764.8	17615.	1623.6	1281.8	1985.5
#2	1764.1	17432.	1631.2	1290.6	1985.1
#3	1765.1	17656.	1638.9	1289.8	1986.5

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S2 Acquired: 01/05/2025 16:39:19 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 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	166.48	.11803	1.7765	.07720	.20053	4.2242	8.5001	1.8186
Stddev	.21	.00015	.0044	.00093	.00066	.0335	.0218	.0217
%RSD	.12566	.12427	.24892	1.1991	.33160	.79401	.25609	1.1955
#1	166.31	.11815	1.7770	.07644	.20106	4.2480	8.5154	1.8437
#2	166.72	.11786	1.7719	.07823	.19979	4.1858	8.4752	1.8055
#3	166.42	.11807	1.7807	.07693	.20075	4.2387	8.5096	1.8065

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.8005	3.5694	1.4390	.73879	.59092	.98404	1.8379	.80627
Stddev	.0063	.0201	.0016	.00096	.00426	.00635	.0053	.00646
%RSD	.22398	.56394	.10945	.13029	.72008	.64548	.28698	.80087
#1	2.7990	3.5882	1.4401	.73864	.59289	.99127	1.8424	.80928
#2	2.7951	3.5481	1.4372	.73790	.58604	.97935	1.8321	.79886
#3	2.8074	3.5719	1.4397	.73981	.59383	.98149	1.8391	.81067

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.42698	.10187	24.078	.06986	10.271	1.1988	.10018	1.4546
Stddev	.00153	.00037	.261	.00228	.046	.0071	.00036	.0105
%RSD	.35784	.35948	1.0829	3.2669	.44757	.59545	.35956	.72085
#1	.42732	.10145	24.379	.07163	10.219	1.1948	.10046	1.4666
#2	.42530	.10212	23.924	.07067	10.295	1.1946	.09978	1.4503
#3	.42830	.10203	23.931	.06729	10.301	1.2071	.10031	1.4470

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.74342	.06240	3.2651	.17280	.56739	12.909	1.6572
Stddev	.00094	.00036	.0403	.00043	.00632	.056	.0031
%RSD	.12660	.58466	1.2359	.25027	1.1133	.43080	.18494
#1	.74239	.06224	3.3117	.17237	.57440	12.945	1.6576
#2	.74364	.06282	3.2428	.17278	.56215	12.845	1.6540
#3	.74423	.06214	3.2409	.17323	.56561	12.937	1.6601

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S2 Acquired: 01/05/2025 16:39:19 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S02 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	1698.3	17063.	1615.8	1231.2	1817.1
Stddev	2.5	124.	18.4	9.7	3.4
%RSD	.14505	.72701	1.1376	.79029	.18905
#1	1700.8	17053.	1595.9	1236.5	1814.1
#2	1698.3	17192.	1632.2	1237.2	1820.8
#3	1695.9	16944.	1619.3	1220.0	1816.4

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S3 Acquired: 01/05/2025 16:43:09 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 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	329.72	.24002	3.6232	.15928	.41226	8.5352	17.153	3.6575
Stddev	.72	.00030	.0021	.00150	.00094	.0794	.085	.0302
%RSD	.21714	.12430	.05678	.93917	.22680	.92968	.49501	.82438
#1	329.15	.23969	3.6256	.15757	.41209	8.5443	17.055	3.6354
#2	329.48	.24010	3.6218	.15994	.41143	8.4517	17.211	3.6452
#3	330.52	.24027	3.6223	.16034	.41327	8.6096	17.191	3.6918

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.7239	7.1915	2.8791	1.4983	1.1928	1.9716	3.6867	1.6211
Stddev	.0021	.0214	.0046	.0008	.0068	.0152	.0273	.0134
%RSD	.03599	.29683	.15885	.05604	.57038	.77068	.74052	.82783
#1	5.7221	7.1800	2.8843	1.4991	1.1923	1.9667	3.6859	1.6194
#2	5.7235	7.1784	2.8762	1.4984	1.1862	1.9596	3.6598	1.6086
#3	5.7262	7.2161	2.8767	1.4974	1.1998	1.9887	3.7144	1.6353

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.88028	.20730	51.711	.14210	20.840	2.4042	.21608	2.9813
Stddev	.00096	.00043	.287	.00120	.189	.0108	.00038	.0237
%RSD	.10915	.20976	.55477	.84374	.90459	.45087	.17666	.79401
#1	.87927	.20779	51.433	.14310	21.054	2.3917	.21652	2.9562
#2	.88039	.20716	51.695	.14244	20.765	2.4107	.21585	2.9842
#3	.88118	.20696	52.006	.14077	20.700	2.4102	.21586	3.0033

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.5305	.13067	6.4897	.35184	1.1455	26.110	3.3583
Stddev	.0018	.00048	.0475	.00061	.0110	.159	.0106
%RSD	.11434	.36438	.73184	.17285	.96275	.61066	.31493
#1	1.5310	.13020	6.4480	.35218	1.1466	26.084	3.3465
#2	1.5319	.13115	6.4797	.35114	1.1339	25.965	3.3616
#3	1.5285	.13066	6.5414	.35221	1.1558	26.280	3.3668

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S3 Acquired: 01/05/2025 16:43:09 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S03 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	1628.7	16732.	1592.5	1188.5	1730.1
Stddev	2.1	75.	7.6	13.8	4.0
%RSD	.12792	.44604	.47987	1.1606	.23217
#1	1627.8	16654.	1597.1	1172.9	1729.3
#2	1631.0	16738.	1596.7	1193.9	1734.4
#3	1627.1	16803.	1583.7	1198.9	1726.5

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S4 Acquired: 01/05/2025 16:46:56 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 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	637.83	.47364	7.2949	.32057	.84209	17.014	33.893	7.0519
Stddev	2.66	.00097	.0107	.00041	.00043	.071	.137	.0294
%RSD	.41646	.20459	.14698	.12637	.05156	.41785	.40298	.41669
#1	636.58	.47318	7.2827	.32098	.84159	17.073	33.947	7.0815
#2	636.04	.47475	7.3028	.32055	.84226	16.935	33.995	7.0514
#3	640.88	.47298	7.2993	.32017	.84241	17.035	33.738	7.0227

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	11.386	14.095	5.6639	2.9594	2.3553	3.8909	7.2485	3.2019
Stddev	.018	.057	.0169	.0070	.0021	.0098	.0248	.0108
%RSD	.15861	.40603	.29874	.23683	.08728	.25139	.34253	.33672
#1	11.367	14.136	5.6822	2.9528	2.3551	3.9000	7.2769	3.2108
#2	11.403	14.119	5.6489	2.9667	2.3575	3.8806	7.2376	3.1899
#3	11.388	14.029	5.6606	2.9587	2.3534	3.8922	7.2309	3.2051

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.7556	.41439	108.02	.28064	42.205	4.7712	.44364	5.8475
Stddev	.0027	.00112	.48	.00109	.172	.0269	.00155	.0046
%RSD	.15251	.26954	.44378	.38776	.40746	.56391	.34869	.07881
#1	1.7542	.41538	108.57	.28145	42.029	4.8019	.44227	5.8522
#2	1.7587	.41318	107.71	.27940	42.373	4.7601	.44531	5.8430
#3	1.7539	.41461	107.78	.28106	42.212	4.7516	.44332	5.8472

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.1112	.26708	12.551	.70700	2.2827	51.904	6.5975
Stddev	.0018	.00068	.043	.00179	.0062	.158	.0250
%RSD	.05700	.25643	.34301	.25354	.27159	.30492	.37938
#1	3.1096	.26656	12.597	.70537	2.2898	52.064	6.6008
#2	3.1131	.26682	12.545	.70892	2.2781	51.747	6.6207
#3	3.1109	.26785	12.512	.70672	2.2803	51.901	6.5710

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S4 Acquired: 01/05/2025 16:46:56 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S04 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	1532.1	16122.	1572.6	1109.7	1643.3
Stddev	5.2	125.	13.8	4.6	6.2
%RSD	.33660	.77304	.88008	.41026	.37816
#1	1527.2	15978.	1556.7	1105.2	1640.0
#2	1531.8	16201.	1580.0	1109.4	1639.5
#3	1537.5	16186.	1581.2	1114.3	1650.5

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S5 Acquired: 01/05/2025 16:50:42 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 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	1234.0	.93750	14.817	.67490	1.8233	34.699	68.934	14.065
Stddev	4.3	.00239	.031	.00174	.0031	.104	.229	.078
%RSD	.35089	.25509	.20989	.25772	.17114	.29855	.33242	.55412
#1	1231.5	.93528	14.788	.67448	1.8265	34.689	68.831	13.996
#2	1231.5	.93718	14.812	.67341	1.8203	34.807	69.197	14.149
#3	1239.0	.94003	14.850	.67681	1.8230	34.601	68.775	14.051

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	22.886	28.115	11.206	5.9696	4.7481	7.7361	14.360	6.4026
Stddev	.049	.075	.015	.0137	.0089	.0131	.041	.0199
%RSD	.21379	.26673	.13508	.23020	.18804	.16952	.28485	.31104
#1	22.835	28.072	11.210	5.9559	4.7441	7.7272	14.340	6.4033
#2	22.889	28.202	11.190	5.9696	4.7584	7.7512	14.407	6.4222
#3	22.933	28.072	11.220	5.9834	4.7419	7.7300	14.332	6.3824

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.5505	.84378	227.45	.56057	88.968	9.8162	.92139	11.526
Stddev	.0076	.00145	1.53	.00387	.651	.0379	.00273	.059
%RSD	.21328	.17229	.67192	.69083	.73145	.38600	.29604	.51568
#1	3.5452	.84235	227.69	.56140	89.707	9.7943	.92005	11.503
#2	3.5472	.84373	225.81	.56396	88.479	9.8600	.91960	11.594
#3	3.5592	.84525	228.84	.55635	88.719	9.7943	.92453	11.482

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	6.7142	.55546	24.823	1.4394	4.5789	104.71	13.322
Stddev	.0038	.00120	.110	.0048	.0162	.36	.036
%RSD	.05636	.21581	.44288	.33153	.35319	.34689	.27027
#1	6.7181	.55410	24.761	1.4344	4.5735	104.68	13.301
#2	6.7105	.55588	24.950	1.4398	4.5970	105.09	13.364
#3	6.7139	.55639	24.759	1.4439	4.5660	104.36	13.302

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S5 Acquired: 01/05/2025 16:50:42 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S05 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	1365.2	15667.	1541.8	987.29	1538.7
Stddev	6.3	78.	4.0	10.97	4.5
%RSD	.45905	.49540	.26093	1.1106	.29437
#1	1359.5	15596.	1538.6	974.78	1535.4
#2	1364.2	15750.	1540.6	995.23	1536.8
#3	1371.9	15655.	1546.3	991.86	1543.9

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: S6 Acquired: 01/05/2025 16:54:37 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S06 Custom ID2: Custom ID3:
Comment:

Elem	Al3961	Ca3736	Fe2598	Mg2790	Na8183
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	91.207	44.962	20.304	10.214	625.44
Stddev	.538	.221	.097	.053	3.20
%RSD	.59028	.49168	.47866	.51742	.51120
#1	90.706	44.864	20.222	10.158	627.67
#2	91.776	45.215	20.412	10.263	621.78
#3	91.140	44.807	20.279	10.221	626.88

Int. Std.	Y_3710
Units	Cts/S
Avg	1497.5
Stddev	8.3
%RSD	.55098
#1	1503.0
#2	1488.0
#3	1501.5

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: ICV052 Acquired: 01/05/2025 17:52:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV052 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.070946	1.007561	.9865150	.9705225	.9141464	2.431814
Stddev	.003311	.008441	.0001173	.0123505	.0064915	.024274
%RSD	.3092110	.8377585	.0118854	1.272561	.7101177	.9981871
#1	1.067171	1.000772	.9864043	.9593759	.9081765	2.416212
#2	1.072308	1.017012	.9866379	.9683918	.9210569	2.419449
#3	1.073360	1.004898	.9865029	.9837997	.9132058	2.459780

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5121930	.5260172	.5002851	10.23665	.5498941	.5060056
Stddev	.0043946	.0032856	.0000662	.05443	.0008268	.0010060
%RSD	.8580042	.6246222	.0132420	.5316752	.1503618	.1988130
#1	.5081969	.5292277	.5002440	10.23293	.5508310	.5049455
#2	.5114825	.5226613	.5002498	10.18419	.5495849	.5069470
#3	.5168996	.5261626	.5003615	10.29285	.5492665	.5061244

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4864227	10.40808	.5278705	6.149313	.5152563	.2479003
Stddev	.0117038	.11248	.0038174	.074198	.0009489	.0029577
%RSD	2.406094	1.080678	.7231661	1.206600	.1841531	1.193094
#1	.4912547	10.49186	.5260877	6.064489	.5163418	.2446700
#2	.4730765	10.28024	.5252707	6.202159	.5148424	.2504756
#3	.4949367	10.45214	.5322531	6.181292	.5145846	.2485552

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.39340	.5084120	.9455580	9.281784	F .0000955	F -.024832
Stddev	.05644	.0199257	.0010821	.210543	.0015084	.000911
%RSD	.5430806	3.919209	.1144446	2.268347	1579.043	3.668179
#1	10.44400	.5192918	.9443611	9.170448	.0016415	-.025005
#2	10.33252	.4854149	.9458458	9.150285	-.001372	-.025645
#3	10.40368	.5205294	.9464672	9.524620	.000017	-.023848

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: ICV052 Acquired: 01/05/2025 17:52:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV052 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0005396	F .0061537	F .0004550	F -.000525	F -.004611	F -.009057
Stddev	.0004533	.0014465	.0005209	.000990	.001848	.000399
%RSD	84.00606	23.50654	114.4592	188.4194	40.08348	4.410720
#1	.0006965	.0052429	.0006683	-.000336	-.003037	-.009509
#2	.0000287	.0053965	.0008354	.000356	-.006646	-.008751
#3	.0008936	.0078216	-.000139	-.001597	-.004151	-.008911

Elem	Li6707
Units	ppm
Avg	F .0085874
Stddev	.0020996
%RSD	24.45000
#1	.0109958
#2	.0071418
#3	.0076246

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1772.213	17726.47	1661.076	1301.264	1960.586
Stddev	4.304	46.59	11.755	4.505	2.552
%RSD	.2428823	.2628466	.7076589	.3462133	.1301575
#1	1776.984	17723.15	1655.654	1303.425	1963.327
#2	1771.035	17774.63	1674.563	1304.282	1958.279
#3	1768.621	17681.62	1653.010	1296.085	1960.154

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: ICB052 Acquired: 01/05/2025 17:56:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB052 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001753	-.000465	-.000421	.0068852	-.000007	-.029009	-.004062
Stddev	.004185	.003784	.002502	.0029601	.002093	.041335	.002548
%RSD	238.6892	813.5228	593.7094	42.99134	30289.75	142.4876	62.72856
#1	-.006277	.002561	.000087	.0089763	-.002240	-.027877	-.001227
#2	-.000963	.000752	.001787	.0081812	.000311	-.070899	-.006162
#3	.001980	-.004708	-.003138	.0034982	.001909	.011747	-.004797

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001710	.0000497	.0588119	-.001178	.0002298	-.015339	.0452712
Stddev	.0001444	.0001050	.0125708	.000435	.0001488	.008657	.0746119
%RSD	84.43136	211.2264	21.37462	36.91284	64.75242	56.43840	164.8109
#1	.0001433	.0000599	.0550431	-.001626	.0000861	-.007150	.1314211
#2	.0003273	-.000060	.0485566	-.001152	.0003833	-.024398	.0014395
#3	.0000425	.000149	.0728360	-.000757	.0002201	-.014469	.0029529

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015288	.0772527	-.000450	.0017135	.0151006	-.011234	.0005803
Stddev	.0027921	.0718007	.001080	.0014854	.0102014	.003643	.0009389
%RSD	182.6326	92.94258	239.9697	86.68738	67.55627	32.42771	161.7846
#1	.0009536	.1297734	.000681	.0028555	.0062292	-.008693	.0014148
#2	-.000931	.1065489	-.001471	.0022509	.0128249	-.009601	-.000436
#3	.004564	-.004564	-.000561	.0000342	.0262476	-.015407	.000762

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0718891	-.000004	.0010680	-.000516	-.002261	-.000195	-.001684
Stddev	.0295797	.003665	.0021120	.000093	.001923	.001610	.001887
%RSD	41.14632	102079.3	197.7649	18.08885	85.05980	826.2090	112.0501
#1	.1012226	-.003002	.0027355	-.000408	-.000146	.001623	.000377
#2	.0723757	.004082	.0017754	-.000563	-.003904	-.001442	-.003326
#3	.0420691	-.001091	-.001307	-.000576	-.002732	-.000766	-.002102

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: ICB052 Acquired: 01/05/2025 17:56:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB052 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.004837	-.000233	.0053779
Stddev	.002211	.000145	.0064749
%RSD	45.71481	62.10375	120.3977
#1	-.002297	-.000241	.0011249
#2	-.005888	-.000085	.0021793
#3	-.006328	-.000375	.0128297

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1782.192	17797.95	1649.520	1302.669	1996.559
Stddev	2.695	81.37	17.051	5.340	4.125
%RSD	.1512226	.4571823	1.033715	.4099598	.2066161
#1	1784.392	17876.15	1637.267	1308.540	1997.801
#2	1779.186	17713.74	1642.299	1298.100	1991.956
#3	1782.999	17803.96	1668.993	1301.366	1999.921

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: ICSA052 Acquired: 01/05/2025 18:00:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA052 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001838	.0104546	.0039280	.0174211	.0198505	241.9091
Stddev	.002372	.0043426	.0070824	.0044395	.0055605	1.2244
%RSD	129.0945	41.53800	180.3068	25.48340	28.01195	.5061590
#1	-.003912	.0076742	.0121005	.0220017	.0176107	243.3226
#2	-.002349	.0082308	.0001028	.0131376	.0261816	241.2297
#3	.000749	.0154587	-.000419	.0171239	.0157592	241.1750

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015745	.0015331	.0007291	251.0699	.0516551	.0366801
Stddev	.0020674	.0001187	.0000780	1.1157	.0006495	.0004333
%RSD	131.3020	7.744635	10.70396	.4443918	1.257356	1.181380
#1	.0016303	.0016554	.0006429	252.2795	.0517249	.0364028
#2	-.000520	.0014183	.0007949	250.8493	.0522669	.0371794
#3	.003613	.0015256	.0007494	250.0810	.0509735	.0364580

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009240	100.8206	.0021529	260.8108	.0004605	-.006957
Stddev	.012002	.3009	.0012320	.9223	.0008538	.000241
%RSD	129.8927	.2984538	57.22556	.3536205	185.4247	3.470852
#1	.004438	101.1614	.0007977	261.6744	.0013283	-.007216
#2	-.014147	100.7086	.0032053	260.9186	.0004315	-.006738
#3	-.018011	100.5917	.0024558	259.8393	-.000379	-.006919

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1831499	.0038318	-.033244	-.109336	.0019774	F -.242978
Stddev	.0150872	.0010298	.000244	.246600	.0036011	.003330
%RSD	8.237600	26.87427	.7340022	225.5434	182.1122	1.370628
#1	.1679848	.0039563	-.033220	.153340	.0017049	-.246190
#2	.1833070	.0047937	-.033499	-.145476	-.001480	-.243203
#3	.1981579	.0027455	-.033013	-.335872	.005707	-.239540

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: ICSA052 Acquired: 01/05/2025 18:00:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA052 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073268	.0108564	-.002361	F .0140969	-.009137	.0065239
Stddev	.0006611	.0055986	.001324	.0022779	.002963	.0005515
%RSD	9.023101	51.56961	56.06009	16.15871	32.43161	8.453665
#1	.0075754	.0169223	-.002955	.0116560	-.010921	.0064779
#2	.0078276	.0097594	-.003284	.0161660	-.010773	.0059968
#3	.0065774	.0058875	-.000845	.0144687	-.005716	.0070969

Elem	Li6707
Units	ppm
Avg	.0103355
Stddev	.0015157
%RSD	14.66488
#1	.0091396
#2	.0120401
#3	.0098267

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1651.262	16459.76	1568.455	1212.534	1719.526
Stddev	2.907	91.55	12.436	5.006	4.741
%RSD	.1760563	.5561837	.7928885	.4128147	.2756933
#1	1651.180	16564.78	1554.260	1218.183	1721.031
#2	1654.209	16417.62	1573.675	1210.771	1723.332
#3	1648.397	16396.86	1577.430	1208.649	1714.216

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: ICSAB052 Acquired: 01/05/2025 18:04:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB052 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1019978	.1077039	.0478787	.0635296	.5686682	240.4877
Stddev	.0082512	.0042491	.0020008	.0044694	.0027387	1.5659
%RSD	8.089591	3.945206	4.178917	7.035163	.4815934	.6511260
#1	.1075747	.1068162	.0464758	.0585331	.5707484	242.1375
#2	.1058994	.1123268	.0501699	.0671468	.5696910	239.0221
#3	.0925194	.1039688	.0469904	.0649090	.5655654	240.3034

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5194744	.5245903	.9911821	248.7335	.5804513	.5136157
Stddev	.0019996	.0020424	.0005754	.4991	.0017461	.0011656
%RSD	.3849224	.3893324	.0580524	.2006479	.3008264	.2269475
#1	.5171672	.5268686	.9917336	248.6557	.5824144	.5140624
#2	.5207035	.5229236	.9905854	248.2778	.5790713	.5122927
#3	.5205526	.5239785	.9912273	249.2669	.5798682	.5144919

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4569959	100.2442	.5062977	259.2773	.9757948	.2007063
Stddev	.0070270	.4553	.0064494	1.7263	.0003750	.0028040
%RSD	1.537652	.4541833	1.273834	.6658212	.0384279	1.397063
#1	.4647204	100.5397	.5122883	260.8227	.9762277	.2002835
#2	.4509823	99.7199	.4994711	257.4142	.9755696	.1981378
#3	.4552851	100.4730	.5071336	259.5950	.9755871	.2036978

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1972840	.4966401	.9112735	-.308307	.0029374	F -.233950
Stddev	.0163315	.0090101	.0086609	.103083	.0013223	.003096
%RSD	8.278148	1.814214	.9504217	33.43513	45.01701	1.323242
#1	.2161417	.4989392	.9051257	-.418277	.0014173	-.231131
#2	.1877637	.4867032	.9075163	-.213876	.0035728	-.237263
#3	.1879468	.5042780	.9211786	-.292768	.0038221	-.233457

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: ICSAB052 Acquired: 01/05/2025 18:04:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB052 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070452	.0208475	-.001492	F .0127163	-.006551	.0068739
Stddev	.0002794	.0094232	.001354	.0014481	.003043	.0002790
%RSD	3.965393	45.20081	90.77277	11.38763	46.45428	4.059141
#1	.0073426	.0231093	-.002840	.0135576	-.009267	.0070574
#2	.0067883	.0289340	-.000131	.0110442	-.003262	.0065528
#3	.0070048	.0104992	-.001506	.0135471	-.007125	.0070116

Elem	Li6707
Units	ppm
Avg	.0077536
Stddev	.0023718
%RSD	30.58951
#1	.0050364
#2	.0094087
#3	.0088158

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1660.614	16562.08	1586.585	1218.532	1728.749
Stddev	5.390	54.04	7.343	10.602	3.190
%RSD	.3245726	.3262686	.4628085	.8700335	.1845283
#1	1663.378	16515.57	1578.741	1220.376	1730.203
#2	1654.403	16621.36	1593.295	1228.091	1725.092
#3	1664.062	16549.32	1587.720	1207.129	1730.954

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV112 Acquired: 01/05/2025 18:08:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV112 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.098118	4.963984	25.48627	5.063594	5.047541	415.5861	10.47188
Stddev	.017452	.020985	.07053	.008856	.016981	2.2671	.05459
%RSD	.3423285	.4227353	.2767390	.1749010	.3364222	.5455227	.5212552
#1	5.102355	4.962230	25.48104	5.069124	5.049833	416.5790	10.49622
#2	5.078937	4.943931	25.41849	5.053379	5.029531	412.9920	10.40936
#3	5.113061	4.985790	25.55926	5.068278	5.063260	417.1875	10.51007

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5230476	2.563179	420.7203	16.09447	2.575646	15.73459	420.6550
Stddev	.0058521	.008305	2.2261	.00343	.009045	.09430	2.0680
%RSD	1.118840	.3240101	.5291123	.0212818	.3511619	.5992981	.4916138
#1	.5293156	2.560775	421.6941	16.09706	2.573166	15.72758	422.0674
#2	.5177271	2.556342	418.1732	16.09577	2.568100	15.64399	418.2814
#3	.5221003	2.572421	422.2935	16.09059	2.585672	15.83219	421.6164

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.58254	418.1756	2.582738	1.301137	427.4420	2.592358	15.34937
Stddev	.08578	2.2749	.008048	.002046	5.5572	.021779	.12320
%RSD	.5505171	.5440069	.3116163	.1572274	1.300110	.8401405	.8026392
#1	15.64241	418.5085	2.579067	1.301478	433.6871	2.611753	15.39191
#2	15.48426	415.7526	2.577179	1.298942	423.0422	2.568796	15.44566
#3	15.62095	420.2657	2.591967	1.302991	425.5967	2.596526	15.21054

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	160.5829	5.114659	4.552591	5.003975	5.137845	5.169159	5.169405
Stddev	1.3073	.013263	.043356	.018824	.018730	.063878	.020148
%RSD	.8140688	.2593122	.9523339	.3761791	.3645562	1.235750	.3897522
#1	161.8548	5.103746	4.602444	5.003229	5.119558	5.234864	5.162705
#2	159.2430	5.110811	4.523698	4.985536	5.136988	5.107280	5.153460
#3	160.6508	5.129421	4.531630	5.023161	5.156990	5.165333	5.192049

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV112 Acquired: 01/05/2025 18:08:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV112 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	5.214753	4.957212	5.265912
Stddev	.023837	.023647	.038041
%RSD	.4571049	.4770316	.7224100
#1	5.230875	4.968536	5.276182
#2	5.187373	4.930032	5.223790
#3	5.226013	4.973067	5.297764

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1473.185	15544.19	1533.501	1062.057	1579.445
Stddev	.958	39.26	18.837	9.680	1.623
%RSD	.0650587	.2525566	1.228344	.9114689	.1027427
#1	1472.567	15516.70	1511.984	1059.092	1579.357
#2	1472.698	15526.72	1547.012	1054.206	1577.868
#3	1474.289	15589.15	1541.507	1072.873	1581.110

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB112 Acquired: 01/05/2025 18:12:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB112 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001044	-.000878	.0050735	.0076588	-.001205	-.007936	-.004634
Stddev	.002219	.002895	.0012816	.0028758	.004579	.015973	.003133
%RSD	212.4898	329.6464	25.26048	37.54890	379.9292	201.2799	67.61434
#1	.001052	.000679	.0064040	.0109761	-.006491	-.020935	-.007507
#2	-.000816	.000905	.0049695	.0058706	.001529	-.012767	-.005102
#3	-.003369	-.004219	.0038471	.0061297	.001347	.009895	-.001293

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000922	.0000021	.0459628	.0005130	.0000271	-.002803	.0137446
Stddev	.0000380	.0000356	.0262018	.0006644	.0004923	.003000	.0290733
%RSD	41.23087	1682.816	57.00650	129.5265	1816.876	107.0224	211.5259
#1	.0001360	.0000422	.0261891	.0012334	-.000189	-.001878	.0136171
#2	.0000675	-.000026	.0360182	-.000076	.000591	-.006156	-.015265
#3	.0000731	-.000010	.0756810	.000381	-.000320	-.000374	.042881

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000536	-.041320	.0002083	-.001218	.1343192	-.007344	.0034507
Stddev	.000700	.086603	.0002679	.000224	.0182117	.021479	.0007220
%RSD	130.7672	209.5938	128.6004	18.35296	13.55850	292.4662	20.92396
#1	-.000462	.022638	.0004238	-.001064	.1174536	-.024794	.0034039
#2	-.001270	-.006724	.0002926	-.001116	.1318743	-.013884	.0041950
#3	.000125	-.139873	-.000092	-.001475	.1536299	.016645	.0027532

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1945411	-.000012	.0135540	.0001755	.0010787	.0004784	.0007822
Stddev	.3541825	.001016	.0025361	.0005107	.0029740	.0006795	.0002764
%RSD	182.0605	8227.796	18.71128	290.9364	275.6992	142.0296	35.33713
#1	-.158384	.000023	.0121249	-.000324	.0039822	.0002785	.0010355
#2	.192039	-.001046	.0164821	.000697	-.001961	.0012354	.0008238
#3	.549968	.000986	.0120549	.000153	.001215	-.000079	.0004874

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB112 Acquired: 01/05/2025 18:12:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB112 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.009220	.0001218	.0103126
Stddev	.001670	.0000671	.0052815
%RSD	18.11645	55.07710	51.21440
#1	-.011119	.0000554	.0160630
#2	-.008566	.0001205	.0091965
#3	-.007976	.0001895	.0056783

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1784.481	17747.90	1651.072	1296.956	1998.291
Stddev	5.209	56.60	7.504	3.513	3.748
%RSD	.2918885	.3189100	.4544963	.2708878	.1875845
#1	1788.172	17798.16	1658.942	1300.653	2001.550
#2	1786.748	17758.95	1643.997	1296.554	1999.127
#3	1778.523	17686.59	1650.278	1293.662	1994.194

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5058-03 Acquired: 01/05/2025 18:16:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL82 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0527344	.0080485	.1944734	.0246822	.0264418	40.28582	.3368792
Stddev	.0016722	.0026947	.0035458	.0092571	.0016641	.15279	.0040076
%RSD	3.170972	33.48041	1.823269	37.50512	6.293471	.3792598	1.189629
#1	.0520477	.0052980	.1974900	.0344756	.0245423	40.12748	.3352090
#2	.0546406	.0081639	.1905677	.0234951	.0276429	40.29761	.3339769
#3	.0515149	.0106837	.1953627	.0160759	.0271401	40.43238	.3414519

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039657	.0027479	739.5096	.0587360	.1097672	.2527829	124.6038
Stddev	.0001463	.0000643	4.4929	.0006486	.0002568	.0140828	.3683
%RSD	3.688960	2.340278	.6075466	1.104340	.2339665	5.571116	.2955598
#1	.0038962	.0027000	734.4789	.0594427	.1099961	.2448804	124.2303
#2	.0041338	.0027226	740.9271	.0581677	.1094895	.2444262	124.6144
#3	.0038672	.0028210	743.1227	.0585977	.1098160	.2690423	124.9666

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.195949	210.1574	.1151036	-.008684	1.269529	.1170650	.5188787
Stddev	.059966	.7277	.0004887	.000875	.011258	.0049613	.0011818
%RSD	.6520882	.3462448	.4245706	10.07485	.8867985	4.238037	.2277626
#1	9.129702	209.8628	.1155958	-.008548	1.262218	.1185218	.5201269
#2	9.211626	209.6232	.1146185	-.009619	1.263875	.1115384	.5187324
#3	9.246519	210.9861	.1150964	-.007885	1.282493	.1211347	.5177769

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.173324	4.485904	-.237245	.0043568	.9452192	11.20597	.0269885
Stddev	.150837	.012686	.006599	.0006123	.0030166	.05563	.0016795
%RSD	2.915671	.2827932	2.781391	14.05414	.3191391	.4964083	6.223098
#1	5.214033	4.497586	-.229752	.0045023	.9419978	11.16344	.0284554
#2	5.006310	4.487716	-.242192	.0036848	.9479773	11.26893	.0251564
#3	5.299629	4.472409	-.239790	.0048832	.9456826	11.18556	.0273536

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5058-03 Acquired: 01/05/2025 18:16:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL82 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7987521	.6705736	.1023663
Stddev	.0063783	.0019259	.0025117
%RSD	.7985385	.2872085	2.453679
#1	.8012777	.6690537	.1012924
#2	.7914977	.6699275	.1052364
#3	.8034809	.6727395	.1005700

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1902.959	19184.44	1838.671	1390.213	1652.225
Stddev	4.255	43.20	14.697	2.386	2.730
%RSD	.2236164	.2251791	.7993423	.1716277	.1652187
#1	1904.369	19229.06	1854.105	1391.761	1653.574
#2	1906.329	19142.81	1824.842	1387.465	1654.017
#3	1898.177	19181.46	1837.067	1391.412	1649.083

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5058-04 Acquired: 01/05/2025 18:20:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL82D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0548692	.0074637	.1951981	.0209442	.0235262	40.36964	.3444917
Stddev	.0027521	.0092421	.0047589	.0036905	.0045169	.26321	.0024379
%RSD	5.015805	123.8274	2.438010	17.62067	19.19966	.6520080	.7076682
#1	.0575783	-.000991	.1899194	.0234904	.0281138	40.15984	.3428150
#2	.0549533	.006051	.1965152	.0226305	.0233814	40.66498	.3472882
#3	.0520760	.017331	.1991599	.0167118	.0190834	40.28410	.3433717

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038309	.0027880	744.1726	.0597784	.1105006	.2624148	124.9313
Stddev	.0002544	.0000692	3.1887	.0002936	.0010575	.0057797	.3305
%RSD	6.641261	2.480740	.4284845	.4912158	.9570372	2.202512	.2645473
#1	.0040004	.0027667	741.1990	.0599089	.1092828	.2614627	124.7356
#2	.0039539	.0027319	747.5397	.0594422	.1111877	.2686115	125.3129
#3	.0035383	.0028653	743.7791	.0599842	.1110312	.2571703	124.7454

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.246988	210.9277	.1166312	-.008007	1.300398	.1015647	.5229773
Stddev	.057708	1.0257	.0013327	.001641	.017199	.0058010	.0020002
%RSD	.6240722	.4862976	1.142631	20.49805	1.322629	5.711638	.3824690
#1	9.203446	210.8581	.1173742	-.007599	1.319920	.1081086	.5228293
#2	9.312443	211.9864	.1150927	-.006609	1.293795	.0970539	.5250474
#3	9.225075	209.9385	.1174267	-.009814	1.287478	.0995316	.5210552

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.323300	4.513553	-.243401	.0037090	.9485327	11.25073	.0290451
Stddev	.035799	.007264	.003243	.0004789	.0083329	.09969	.0031851
%RSD	.6725012	.1609407	1.332367	12.91201	.8785053	.8860840	10.96622
#1	5.364564	4.516777	-.244703	.0039023	.9553486	11.24190	.0253937
#2	5.300537	4.505235	-.245790	.0040611	.9392430	11.35454	.0312520
#3	5.304798	4.518648	-.239709	.0031637	.9510066	11.15575	.0304898

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5058-04 Acquired: 01/05/2025 18:20:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL82D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7974672	.6725507	.1008702
Stddev	.0052977	.0049714	.0047336
%RSD	.6643205	.7391800	4.692770
#1	.7948037	.6693791	.1015929
#2	.8035682	.6782802	.0958168
#3	.7940298	.6699927	.1052008

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1900.241	19030.54	1825.458	1378.623	1647.261
Stddev	2.427	31.82	12.481	3.765	.694
%RSD	.1277312	.1671830	.6837060	.2730655	.0421521
#1	1900.113	19002.32	1824.987	1377.142	1647.629
#2	1897.880	19065.02	1813.219	1382.903	1646.460
#3	1902.730	19024.28	1838.167	1375.824	1647.694

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5058-03LX5 Acquired: 01/05/2025 18:23:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL82L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025007	.0189790	.0432860	-.013872	.0037637	8.524598	.0688780
Stddev	.0054813	.0040759	.0034791	.006115	.0044913	.058196	.0028364
%RSD	219.1883	21.47576	8.037577	44.08575	119.3344	.6826860	4.118059
#1	.0004145	.0195593	.0469707	-.020524	.0078003	8.494629	.0656313
#2	.0087188	.0227336	.0428298	-.008495	-.001074	8.487495	.0708749
#3	-.001631	.0146441	.0400575	-.012595	.004565	8.591671	.0701278

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009460	.0005183	161.2138	.0132509	.0438875	.0550316	27.19456
Stddev	.0001443	.0001175	.9963	.0003745	.0003833	.0156910	.20328
%RSD	15.25813	22.67543	.6180023	2.826379	.8732958	28.51270	.7474856
#1	.0010517	.0006373	161.1872	.0130953	.0434815	.0593373	27.28706
#2	.0007816	.0005151	160.2311	.0129792	.0439380	.0376373	26.96148
#3	.0010047	.0004024	162.2232	.0136781	.0442431	.0681203	27.33513

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.031157	46.43053	.0180797	-.003419	.3075230	.0218967	.1133983
Stddev	.009198	.34087	.0005650	.001983	.0133356	.0096369	.0004733
%RSD	.4528459	.7341538	3.125287	57.99080	4.336461	44.01099	.4174196
#1	2.029668	46.36717	.0180561	-.004905	.3147311	.0272670	.1128600
#2	2.022795	46.12579	.0175268	-.001168	.2921346	.0107711	.1137494
#3	2.041009	46.79864	.0186562	-.004186	.3157033	.0276520	.1135855

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.253929	.8181468	-.055059	.0047425	.1844565	2.443972	.0069104
Stddev	.320902	.0022035	.003388	.0004730	.0052426	.032242	.0016786
%RSD	25.59174	.2693275	6.154240	9.973063	2.842172	1.319242	24.29018
#1	1.223449	.8201816	-.051191	.0048399	.1784973	2.425138	.0087958
#2	.949354	.8184523	-.056483	.0042285	.1883583	2.425577	.0055786
#3	1.588984	.8158065	-.057504	.0051593	.1865139	2.481201	.0063568

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5058-03LX5 Acquired: 01/05/2025 18:23:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL82L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1663384	.1427160	.0249811
Stddev	.0031052	.0006751	.0048451
%RSD	1.866807	.4730295	19.39502
#1	.1692153	.1425708	.0220027
#2	.1667534	.1421253	.0223688
#3	.1630466	.1434518	.0305717

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1781.001	17765.15	1674.455	1307.210	1836.196
Stddev	5.127	132.12	13.489	6.267	3.584
%RSD	.2878848	.7436867	.8055467	.4794207	.1951936
#1	1777.086	17635.27	1676.440	1300.580	1835.503
#2	1779.113	17760.77	1686.841	1308.013	1833.009
#3	1786.805	17899.40	1660.084	1313.036	1840.076

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5058-05 Acquired: 01/05/2025 18:27:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL82S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1316691	.0886092	.2265981	.1676618	.1709653	42.46906	3.696338
Stddev	.0011788	.0017473	.0055271	.0045862	.0044692	.06610	.008233
%RSD	.8952631	1.971880	2.439156	2.735411	2.614112	.1556419	.2227275
#1	.1306880	.0904578	.2221902	.1706343	.1754697	42.44872	3.690354
#2	.1313426	.0883849	.2248050	.1699713	.1708942	42.54294	3.692933
#3	.1329767	.0869849	.2327991	.1623800	.1665321	42.41552	3.705727

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0886643	.0988211	730.5710	.4127544	1.068128	.6590056	123.5288
Stddev	.0005397	.0001259	1.2353	.0009320	.000659	.0097837	.2872
%RSD	.6087051	.1273566	.1690835	.2258105	.0616667	1.484615	.2324840
#1	.0881859	.0986781	731.9697	.4138228	1.067512	.6598157	123.8138
#2	.0892494	.0988699	729.6295	.4121085	1.068049	.6683590	123.2395
#3	.0885576	.0989152	730.1138	.4123318	1.068823	.6488420	123.5332

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.839688	205.6351	1.087113	.0547884	1.233257	.9582913	1.283195
Stddev	.016028	.3302	.002086	.0008190	.020382	.0196891	.006164
%RSD	.1628960	.1605834	.1918725	1.494746	1.652693	2.054607	.4803873
#1	9.844709	205.9205	1.084870	.0540701	1.225839	.9742721	1.276442
#2	9.821750	205.7115	1.087476	.0556802	1.217623	.9643053	1.284624
#3	9.852605	205.2734	1.088994	.0546149	1.256309	.9362966	1.288519

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.448511	4.453070	-.239721	.0045667	.9372858	10.98128	.0288716
Stddev	.206140	.006111	.004572	.0005067	.0035503	.03395	.0018007
%RSD	3.783427	.1372243	1.907337	11.09506	.3787878	.3091751	6.236820
#1	5.493718	4.449381	-.234954	.0040713	.9405390	10.94207	.0279749
#2	5.628297	4.449706	-.244070	.0045446	.9334988	11.00092	.0276954
#3	5.223519	4.460124	-.240140	.0050840	.9378196	11.00084	.0309446

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5058-05 Acquired: 01/05/2025 18:27:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL82S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7815711	.6553290	.0999107
Stddev	.0026525	.0013063	.0015855
%RSD	.3393853	.1993328	1.586910
#1	.7833906	.6547296	.1015783
#2	.7785276	.6544299	.0997312
#3	.7827952	.6568274	.0984226

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1904.515	19144.12	1847.352	1385.294	1657.763
Stddev	6.214	55.46	5.321	1.779	5.167
%RSD	.3262945	.2896968	.2880532	.1283987	.3116917
#1	1903.290	19080.93	1849.324	1384.790	1657.401
#2	1911.251	19166.71	1841.327	1383.822	1663.102
#3	1899.005	19184.73	1851.407	1387.270	1652.786

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5121-10 Acquired: 01/05/2025 18:31:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM51 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2061411	-.019969	5.166204	.0788753	.0451590	70.32736
Stddev	.0044475	.004673	.009510	.0035028	.0040424	.39693
%RSD	2.157482	23.39918	.1840724	4.440938	8.951382	.5643993
#1	.2013762	-.023668	5.156840	.0786381	.0491551	69.92341
#2	.2068646	-.014718	5.175853	.0824906	.0410720	70.71687
#3	.2101824	-.021522	5.165920	.0754971	.0452498	70.34181

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.564138	.0111494	.0198126	355.9293	.1898854	.1411590
Stddev	.003154	.0000892	.0001737	.4246	.0013583	.0005790
%RSD	.1230061	.8002273	.8768136	.1193056	.7153391	.4101511
#1	2.562165	.0110628	.0196324	355.4820	.1903291	.1417107
#2	2.562474	.0111444	.0199790	356.3269	.1909663	.1405562
#3	2.567776	.0112411	.0198264	355.9791	.1883607	.1412101

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8131962	193.7531	8.087653	107.2127	.2160335	-.010517
Stddev	.0109467	.6482	.025478	.4670	.0014960	.000842
%RSD	1.346138	.3345660	.3150290	.4355463	.6924664	8.009500
#1	.8163718	193.0095	8.058490	106.7185	.2174702	-.009555
#2	.8222040	194.0508	8.098879	107.6465	.2144846	-.011120
#3	.8010127	194.1990	8.105591	107.2733	.2161457	-.010878

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.972904	.2039471	4.188811	9.689596	F 19.52439	-.328978
Stddev	.012304	.0118755	.018033	.123353	.02309	.001015
%RSD	.6236477	5.822832	.4305021	1.273046	.1182729	.3086293
#1	1.958751	.1994773	4.192666	9.576390	19.53085	-.329437
#2	1.978900	.1949551	4.169163	9.671338	19.54356	-.329684
#3	1.981061	.2174089	4.204606	9.821061	19.49875	-.327815

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5121-10 Acquired: 01/05/2025 18:31:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM51 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0128323	5.831801	9.061545	.3476276	1.129005	.6581761
Stddev	.0006689	.006605	.052823	.0016030	.006791	.0034094
%RSD	5.212424	.1132664	.5829328	.4611347	.6015241	.5180115
#1	.0123804	5.838987	9.020075	.3489568	1.127701	.6561446
#2	.0125159	5.825993	9.121015	.3458474	1.136354	.6621122
#3	.0136007	5.830424	9.043544	.3480787	1.122961	.6562713

Elem	Li6707
Units	ppm
Avg	.1045434
Stddev	.0029265
%RSD	2.799351
#1	.1038009
#2	.1020596
#3	.1077697

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2038.980	20463.71	1958.021	1494.521	1772.366
Stddev	3.779	94.89	7.089	10.698	3.565
%RSD	.1853306	.4636945	.3620635	.7158327	.2011485
#1	2038.302	20355.55	1957.304	1486.750	1776.399
#2	2043.052	20502.64	1951.317	1506.723	1771.064
#3	2035.586	20532.95	1965.441	1490.091	1769.635

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5121-11 Acquired: 01/05/2025 18:35:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM51D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2070355	-.021006	5.169932	.0788791	.0430430	70.77303
Stddev	.0041543	.004055	.016645	.0066441	.0011062	.13443
%RSD	2.006546	19.30575	.3219576	8.423163	2.570060	.1899439
#1	.2110733	-.025047	5.150735	.0821845	.0420356	70.92822
#2	.2027738	-.016937	5.178729	.0832223	.0442269	70.69283
#3	.2072594	-.021034	5.180334	.0712306	.0428666	70.69802

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.563820	.0110677	.0196320	356.2623	.1902522	.1420599
Stddev	.002362	.0002143	.0001332	.5362	.0012804	.0005206
%RSD	.0921282	1.936603	.6782662	.1505077	.6730177	.3664281
#1	2.562673	.0112378	.0196813	356.8657	.1887807	.1426563
#2	2.566536	.0108269	.0197335	355.8405	.1908637	.1416969
#3	2.562249	.0111383	.0194813	356.0806	.1911123	.1418264

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8084071	194.5798	8.105444	107.8976	.2158962	-.009434
Stddev	.0150858	.2460	.014835	.1379	.0011596	.000851
%RSD	1.866119	.1264299	.1830262	.1278391	.5371068	9.019579
#1	.7915547	194.6149	8.091269	107.7862	.2170346	-.010338
#2	.8130150	194.8063	8.120861	107.8546	.2159374	-.008648
#3	.8206517	194.3181	8.104203	108.0519	.2147165	-.009317

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.982569	.1924440	4.227264	9.755619	F 19.55407	-.329837
Stddev	.006707	.0058444	.015597	.173483	.01286	.005169
%RSD	.3383093	3.036946	.3689605	1.778284	.0657714	1.567283
#1	1.974882	.1883893	4.211834	9.622744	19.55030	-.334612
#2	1.985594	.1897995	4.243023	9.951881	19.56839	-.330552
#3	1.987232	.1991433	4.226935	9.692232	19.54351	-.324348

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5121-11 Acquired: 01/05/2025 18:35:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM51D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123097	5.842954	9.098379	.3489958	1.127452	.6624588
Stddev	.0012870	.010002	.057669	.0028452	.001812	.0020431
%RSD	10.45500	.1711726	.6338392	.8152563	.1607004	.3084110
#1	.0132485	5.841908	9.163399	.3457302	1.125389	.6642775
#2	.0128380	5.853437	9.078323	.3509403	1.128784	.6628508
#3	.0108427	5.833516	9.053417	.3503169	1.128182	.6602482

Elem	Li6707
Units	ppm
Avg	.1071067
Stddev	.0021599
%RSD	2.016538
#1	.1071097
#2	.1092651
#3	.1049454

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2038.536	20352.67	1948.894	1478.371	1767.352
Stddev	3.174	76.24	10.135	8.383	2.677
%RSD	.1557140	.3745742	.5200279	.5670214	.1514628
#1	2034.900	20404.69	1938.713	1485.153	1768.405
#2	2040.751	20388.17	1958.982	1480.961	1764.308
#3	2039.959	20265.16	1948.987	1468.999	1769.341

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5121-10LX5 Acquired: 01/05/2025 18:39:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM51L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0372570	.0100170	.9971511	.0066706	.0055286	15.81716	.5691112
Stddev	.0070784	.0012216	.0053706	.0017692	.0036087	.06597	.0014322
%RSD	18.99877	12.19549	.5385978	26.52206	65.27246	.4170759	.2516614
#1	.0398051	.0086072	.9910298	.0075308	.0079434	15.86864	.5706402
#2	.0427086	.0106802	.9993509	.0078453	.0013803	15.84005	.5678008
#3	.0292574	.0107636	1.001073	.0046358	.0072622	15.74280	.5688926

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0025984	.0036202	80.74068	.0426810	.0444948	.1803130	44.12366
Stddev	.0000521	.0000534	.04748	.0009968	.0006380	.0043013	.20067
%RSD	2.004258	1.475392	.0588046	2.335552	1.433838	2.385484	.4547873
#1	.0026270	.0036561	80.74235	.0422919	.0439649	.1850312	44.35016
#2	.0026298	.0036456	80.78731	.0438137	.0452029	.1766104	43.96807
#3	.0025382	.0035588	80.69239	.0419374	.0443166	.1792973	44.05276

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.859455	24.55334	.0372164	-.002674	.4405767	.0414588	.9507775
Stddev	.003991	.16970	.0011327	.000641	.0238622	.0018494	.0062828
%RSD	.2146156	.6911293	3.043493	23.97175	5.416119	4.460814	.6608038
#1	1.861141	24.61006	.0365646	-.002009	.4304699	.0396762	.9579778
#2	1.862326	24.68741	.0385243	-.002725	.4678290	.0413318	.9479458
#3	1.854898	24.36255	.0365604	-.003288	.4234311	.0433684	.9464090

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.939186	3.631154	-.075968	.0064400	1.084654	2.071757	.0662902
Stddev	.205472	.002326	.002988	.0002876	.003808	.020195	.0023032
%RSD	10.59580	.0640498	3.933064	4.465786	.3511235	.9747898	3.474463
#1	1.867514	3.629133	-.074257	.0067457	1.080426	2.079322	.0639158
#2	2.170895	3.633696	-.079418	.0063996	1.087816	2.087078	.0664399
#3	1.779149	3.630633	-.074229	.0061748	1.085721	2.048872	.0685150

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5121-10LX5 Acquired: 01/05/2025 18:39:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM51L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2414349	.1473012	.0216796
Stddev	.0067876	.0011330	.0060932
%RSD	2.811373	.7691750	28.10560
#1	.2444329	.1484679	.0168157
#2	.2462073	.1462052	.0285142
#3	.2336644	.1472304	.0197089

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1880.152	18657.15	1737.194	1372.058	1951.233
Stddev	6.501	98.73	11.851	6.579	4.362
%RSD	.3457678	.5292044	.6821733	.4795310	.2235630
#1	1872.717	18546.84	1728.483	1364.902	1947.307
#2	1884.764	18737.24	1732.410	1377.845	1955.929
#3	1882.976	18687.38	1750.689	1373.428	1950.464

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5121-12 Acquired: 01/05/2025 18:43:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM51S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2905761	.0540002	5.140853	.2232766	.1928902	73.02306
Stddev	.0036787	.0022847	.010096	.0063254	.0037617	.66403
%RSD	1.266003	4.230952	.1963806	2.832981	1.950200	.9093372
#1	.2909439	.0566066	5.151634	.2177621	.1931647	72.30889
#2	.2867273	.0530502	5.139303	.2218862	.1965072	73.13848
#3	.2940571	.0523437	5.131622	.2301816	.1889988	73.62180

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.843506	.0945511	.1141688	352.8978	.5363401	1.098293
Stddev	.014931	.0002923	.0001285	1.3341	.0011891	.000110
%RSD	.2555169	.3091818	.1125715	.3780319	.2217109	.0099807
#1	5.826779	.0942919	.1140502	351.3790	.5361526	1.098273
#2	5.848248	.0948680	.1141508	353.4342	.5376118	1.098411
#3	5.855490	.0944934	.1143053	353.8802	.5352559	1.098195

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.188341	194.3296	8.868224	106.2704	1.183876	.0520783
Stddev	.012123	1.5545	.053909	1.1531	.001927	.0019839
%RSD	1.020182	.7999431	.6078905	1.085041	.1627694	3.809393
#1	1.183568	192.5358	8.810089	104.9503	1.185922	.0499386
#2	1.179330	195.1701	8.878017	106.7806	1.182096	.0538566
#3	1.202124	195.2830	8.916564	107.0804	1.183610	.0524396

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.945738	1.033751	4.896158	9.282864	F 19.26504	-.329700
Stddev	.015922	.013564	.019913	.016660	.02639	.008982
%RSD	.8183265	1.312086	.4066981	.1794693	.1369791	2.724281
#1	1.940672	1.019073	4.917211	9.287641	19.25942	-.340017
#2	1.932966	1.036359	4.877626	9.264338	19.29379	-.325465
#3	1.963578	1.045822	4.893636	9.296614	19.24191	-.323619

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5121-12 Acquired: 01/05/2025 18:43:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM51S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0120065	5.754813	8.989309	.3415726	1.107724	.6520649
Stddev	.0001301	.003884	.014471	.0026624	.017494	.0059943
%RSD	1.083220	.0674985	.1609778	.7794606	1.579241	.9192795
#1	.0121567	5.759247	8.978759	.3385845	1.089460	.6462926
#2	.0119288	5.753179	9.005806	.3424405	1.109383	.6516431
#3	.0119341	5.752012	8.983363	.3436927	1.124329	.6582589

Elem	Li6707
Units	ppm
Avg	.1083280
Stddev	.0032010
%RSD	2.954926
#1	.1116146
#2	.1052201
#3	.1081492

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2040.213	20405.92	1956.694	1492.310	1780.273
Stddev	1.609	127.33	10.708	2.112	2.935
%RSD	.0788697	.6240004	.5472388	.1415148	.1648584
#1	2039.023	20435.83	1962.706	1490.475	1783.331
#2	2042.044	20266.30	1944.331	1491.836	1777.479
#3	2039.573	20515.65	1963.044	1494.618	1780.009

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5055-15DLX4 Acquired: 01/05/2025 18:46:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKT6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170725	.0294406	.1015706	-.023523	.0025972	11.57284	.2466555
Stddev	.0077662	.0030069	.0032618	.003531	.0026554	.03156	.0030446
%RSD	45.48947	10.21332	3.211343	15.00993	102.2405	.2726876	1.234364
#1	.0237943	.0326573	.1036542	-.026436	.0040529	11.55994	.2480571
#2	.0188522	.0267005	.0978116	-.024538	.0042064	11.54977	.2487469
#3	.0085709	.0289640	.1032461	-.019596	-.000468	11.60880	.2431625

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014165	.0008853	422.9882	.0206941	.0578892	.0581420	39.76093
Stddev	.0002023	.0001870	.1598	.0005336	.0003885	.0150249	.09371
%RSD	14.28179	21.12268	.0377707	2.578337	.6710385	25.84169	.2356848
#1	.0015948	.0009550	423.1307	.0212956	.0579133	.0749376	39.80778
#2	.0011967	.0006734	422.8155	.0205086	.0582651	.0459789	39.65304
#3	.0014582	.0010274	423.0184	.0202780	.0574893	.0535094	39.82198

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.278475	66.99427	.0373291	-.001929	.4869329	.0267829	.1372992
Stddev	.005742	.13148	.0020421	.001256	.0167282	.0037643	.0003434
%RSD	.1751361	.1962597	5.470605	65.13491	3.435417	14.05501	.2501306
#1	3.280011	66.86543	.0350384	-.000479	.5060779	.0230635	.1373522
#2	3.272121	66.98913	.0379900	-.002685	.4795814	.0305906	.1376131
#3	3.283293	67.12825	.0389589	-.002622	.4751394	.0266945	.1369324

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.763921	3.180126	-.062273	.0054896	.5835257	2.992065	.0124370
Stddev	.159572	.002297	.001637	.0010175	.0035938	.017367	.0017561
%RSD	5.773377	.0722322	2.629206	18.53518	.6158777	.5804217	14.12007
#1	2.603980	3.179211	-.062431	.0044526	.5841178	2.998964	.0113063
#2	2.923120	3.182739	-.060562	.0055298	.5867867	2.972309	.0115445
#3	2.764665	3.178427	-.063825	.0064864	.5796726	3.004923	.0144601

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5055-15DLX4 Acquired: 01/05/2025 18:46:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKT6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1807044	.3143093	.0325288
Stddev	.0016849	.0004683	.0041275
%RSD	.9323966	.1490082	12.68876
#1	.1825983	.3137858	.0372882
#2	.1793718	.3144538	.0299322
#3	.1801432	.3146885	.0303659

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1772.585	17731.79	1699.552	1300.400	1753.600
Stddev	4.042	121.18	11.271	7.196	5.016
%RSD	.2280506	.6833928	.6631768	.5533373	.2860583
#1	1768.024	17660.47	1686.539	1296.763	1750.102
#2	1774.004	17663.19	1706.245	1295.749	1751.350
#3	1775.727	17871.70	1705.872	1308.688	1759.347

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5056-20DLX2 Acquired: 01/05/2025 18:50:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL47 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0243152	.0155708	.1574184	.0002878	.0139267	28.58364	.3249390
Stddev	.0023496	.0034558	.0027960	.0023720	.0031639	.07858	.0029722
%RSD	9.663118	22.19380	1.776162	824.1574	22.71795	.2749231	.9146889
#1	.0226148	.0148939	.1547571	-.000315	.0106363	28.52766	.3263938
#2	.0233345	.0193150	.1603320	.002903	.0141969	28.67348	.3269035
#3	.0269963	.0125037	.1571661	-.001725	.0169467	28.54978	.3215196

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026583	.0011509	436.6943	.0453044	.0732758	.0769904	78.69123
Stddev	.0002414	.0000363	.7051	.0001796	.0008813	.0040260	.20767
%RSD	9.082350	3.150382	.1614581	.3964927	1.202764	5.229182	.2638988
#1	.0023820	.0011797	436.1994	.0450971	.0737553	.0764647	78.82490
#2	.0028289	.0011102	437.5016	.0454136	.0738135	.0812533	78.79680
#3	.0027640	.0011629	436.3819	.0454024	.0722587	.0732531	78.45199

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.448733	101.9893	.0776604	-.005314	.7126013	.0695983	.2443428
Stddev	.005244	.5580	.0013306	.000658	.0046534	.0096977	.0023015
%RSD	.1178797	.5470816	1.713363	12.38042	.6530117	13.93385	.9418981
#1	4.454744	102.1368	.0777999	-.006011	.7146017	.0782740	.2466407
#2	4.445091	102.4586	.0762656	-.005228	.7159199	.0713919	.2443499
#3	4.446365	101.3724	.0789158	-.004703	.7072822	.0591289	.2420378

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.702522	2.288378	-.151793	.0056243	.6529270	7.156275	.0196927
Stddev	.081894	.006291	.002315	.0007978	.0042948	.053561	.0035927
%RSD	2.211851	.2749196	1.524988	14.18434	.6577695	.7484540	18.24402
#1	3.675984	2.295320	-.154122	.0065184	.6483644	7.202751	.0199528
#2	3.794395	2.286762	-.151766	.0053692	.6568912	7.168376	.0159770
#3	3.637188	2.283052	-.149493	.0049852	.6535253	7.097699	.0231483

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5056-20DLX2 Acquired: 01/05/2025 18:50:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL47 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3881530	.3465294	.0667398
Stddev	.0016230	.0013024	.0009784
%RSD	.4181384	.3758485	1.465988
#1	.3898754	.3464146	.0677492
#2	.3866522	.3478854	.0657957
#3	.3879314	.3452881	.0666744

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1800.306	18092.64	1720.391	1323.085	1749.665
Stddev	2.759	65.55	6.807	4.841	5.762
%RSD	.1532657	.3623208	.3956651	.3658837	.3293477
#1	1801.830	18159.79	1713.976	1317.538	1750.826
#2	1797.120	18089.31	1719.666	1325.260	1743.411
#3	1801.966	18028.81	1727.532	1326.457	1754.759

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5056-21DLX2 Acquired: 01/05/2025 18:54:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL47D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0243482	.0155845	.1601054	.0007409	.0152344	28.28191	.3266263
Stddev	.0047993	.0010132	.0020578	.0030356	.0041297	.16214	.0004589
%RSD	19.71107	6.501142	1.285283	409.7236	27.10767	.5733019	.1404852
#1	.0282722	.0145879	.1609046	-.001282	.0104707	28.30227	.3271404
#2	.0189973	.0166134	.1577679	-.000727	.0174311	28.11055	.3264804
#3	.0257752	.0155522	.1616437	.004232	.0178015	28.43291	.3262581

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026607	.0012480	436.2500	.0444496	.0730481	.0634451	78.09201
Stddev	.0001695	.0000545	.3715	.0007641	.0003686	.0057416	.48308
%RSD	6.370971	4.363294	.0851490	1.718990	.5045835	9.049741	.6186039
#1	.0025230	.0012805	435.8224	.0453112	.0726663	.0602903	78.16864
#2	.0028500	.0012783	436.4923	.0438544	.0730759	.0700724	77.57519
#3	.0026090	.0011851	436.4355	.0441831	.0734019	.0599726	78.53220

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.413707	101.1377	.0788556	-.006243	.7307118	.0476372	.2402846
Stddev	.013663	.5154	.0007505	.000646	.0053136	.0070787	.0015937
%RSD	.3095643	.5096361	.9517509	10.35117	.7271756	14.85962	.6632607
#1	4.416371	100.9515	.0786856	-.006987	.7246360	.0548358	.2416765
#2	4.398908	100.7413	.0782047	-.005824	.7330099	.0406848	.2385461
#3	4.425842	101.7204	.0796765	-.005918	.7344895	.0473912	.2406312

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.798632	2.278856	-.150819	.0060917	.6445430	7.092938	.0202458
Stddev	.081962	.009129	.001956	.0005788	.0079923	.066058	.0007191
%RSD	2.157674	.4006128	1.296839	9.501408	1.239999	.9313137	3.551785
#1	3.767109	2.279047	-.149473	.0067338	.6361294	7.039441	.0210757
#2	3.891676	2.269633	-.149922	.0059314	.6520340	7.072600	.0198566
#3	3.737112	2.287889	-.153063	.0056099	.6454657	7.166773	.0198053

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5056-21DLX2 Acquired: 01/05/2025 18:54:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL47D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3896218	.3434083	.0626492
Stddev	.0030163	.0021363	.0035346
%RSD	.7741678	.6220773	5.641957
#1	.3865652	.3423948	.0642509
#2	.3897039	.3419674	.0650994
#3	.3925962	.3458626	.0585972

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1804.468	18077.61	1726.789	1325.224	1753.362
Stddev	3.791	48.12	9.967	5.678	1.823
%RSD	.2100803	.2662090	.5771780	.4284331	.1039798
#1	1800.297	18036.96	1734.733	1318.947	1751.293
#2	1805.406	18065.11	1730.028	1330.002	1754.733
#3	1807.702	18130.74	1715.606	1326.723	1754.061

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5056-20LDLX10 Acquired: 01/05/2025 18:58:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL47L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000282	.0142251	.0361075	-.013807	.0025001	5.891246	.0664658
Stddev	.001854	.0032902	.0039904	.001496	.0030813	.064116	.0006305
%RSD	657.6574	23.12944	11.05139	10.83725	123.2483	1.088329	.9485802
#1	.000591	.0156585	.0404048	-.015030	.0017187	5.893594	.0659929
#2	-.002412	.0165555	.0353987	-.012139	-.000115	5.825989	.0662229
#3	.000975	.0104614	.0325190	-.014251	.005897	5.954156	.0671816

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007793	.0001712	91.31079	.0099922	.0328350	.0100392	16.44419
Stddev	.0000950	.0001081	.39067	.0000765	.0007796	.0085396	.02371
%RSD	12.19565	63.14478	.4278481	.7657307	2.374289	85.06238	.1441947
#1	.0008381	.0000617	91.28247	.0099096	.0333452	.0162729	16.42649
#2	.0008302	.0002778	90.93506	.0100607	.0319376	.0003057	16.43494
#3	.0006697	.0001741	91.71486	.0100062	.0332222	.0135391	16.47113

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9404885	21.74819	.0117032	-.001408	.1446390	.0059560	.0520332
Stddev	.0022774	.26565	.0009003	.001215	.0438352	.0154114	.0006243
%RSD	.2421456	1.221480	7.692766	86.30169	30.30662	258.7537	1.199721
#1	.9413171	21.76638	.0109464	-.002769	.1199515	.0111592	.0519283
#2	.9379129	21.47392	.0114644	-.001024	.1187150	.0180924	.0514680
#3	.9422356	22.00428	.0126988	-.000431	.1952505	-.011384	.0527033

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7881051	.4208719	-.032248	.0044046	.1309474	1.477636	.0035309
Stddev	.1614057	.0039049	.003063	.0008929	.0060116	.009649	.0009191
%RSD	20.48023	.9278165	9.498979	20.27062	4.590854	.6530220	26.03092
#1	.8506335	.4188783	-.035327	.0041017	.1287138	1.484962	.0042345
#2	.6047900	.4183661	-.029201	.0037027	.1263724	1.466703	.0024910
#3	.9088917	.4253712	-.032215	.0054095	.1377561	1.481242	.0038673

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5056-20LDLX10 Acquired: 01/05/2025 18:58:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL47L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0728288	.0713482	.0137761
Stddev	.0008705	.0014380	.0025237
%RSD	1.195248	2.015475	18.31971
#1	.0736034	.0713184	.0109303
#2	.0729962	.0699254	.0146555
#3	.0718868	.0728009	.0157424

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1774.298	17680.49	1661.834	1301.510	1897.530
Stddev	4.094	46.31	6.721	4.146	5.198
%RSD	.2307126	.2619074	.4044209	.3185769	.2739533
#1	1778.910	17635.10	1655.982	1304.555	1902.245
#2	1772.890	17678.71	1669.174	1303.187	1898.391
#3	1771.094	17727.66	1660.347	1296.788	1891.955

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5056-22DLX2 Acquired: 01/05/2025 19:02:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL47S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0634011	.0591974	.1832728	.0814331	.0982662	30.11000	2.257992
Stddev	.0020806	.0030630	.0043737	.0050409	.0025567	.20916	.008813
%RSD	3.281629	5.174219	2.386447	6.190198	2.601805	.6946500	.3903158
#1	.0616839	.0557583	.1797615	.0843747	.1002487	29.89280	2.254923
#2	.0657148	.0616320	.1818848	.0756125	.0991694	30.12713	2.251123
#3	.0628045	.0602019	.1881721	.0843120	.0953805	30.31006	2.267929

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0520990	.0517864	437.6709	.2491422	.5695813	.3079128	79.16121
Stddev	.0003270	.0001217	2.7282	.0009532	.0008062	.0099468	.51717
%RSD	.6276162	.2350710	.6233400	.3826107	.1415429	3.230392	.6533182
#1	.0517318	.0516690	435.1058	.2502403	.5686934	.2998345	78.56932
#2	.0522065	.0519120	437.3698	.2486579	.5702675	.3048813	79.38842
#3	.0523586	.0517781	440.5372	.2485283	.5697829	.3190226	79.52588

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.916075	101.4153	.5882627	.0306677	.7272112	.5527749	.6878634
Stddev	.031287	.5133	.0004428	.0019938	.0095940	.0050893	.0057045
%RSD	.6364210	.5061743	.0752672	6.501430	1.319286	.9206838	.8293107
#1	4.885127	100.8250	.5884980	.0303369	.7170883	.5511771	.6897877
#2	4.915407	101.6634	.5877520	.0328062	.7361701	.5584714	.6923569
#3	4.947690	101.7575	.5885383	.0288599	.7283753	.5486763	.6814455

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.604838	2.266321	-.156842	.0052291	.6473118	7.096906	.0202783
Stddev	.391456	.008086	.001288	.0006529	.0039692	.066813	.0021611
%RSD	10.85919	.3567874	.8211700	12.48642	.6131786	.9414323	10.65725
#1	3.305000	2.257575	-.155489	.0051880	.6461396	7.020270	.0183991
#2	4.047692	2.267864	-.156983	.0059015	.6440607	7.127538	.0226399
#3	3.461823	2.273525	-.158053	.0045976	.6517350	7.142911	.0197960

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5056-22DLX2 Acquired: 01/05/2025 19:02:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHL47S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3864270	.3434488	.0657787
Stddev	.0059372	.0013643	.0039583
%RSD	1.536430	.3972346	6.017630
#1	.3891222	.3418735	.0677473
#2	.3905386	.3442468	.0683668
#3	.3796203	.3442261	.0612221

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1793.820	17977.51	1710.788	1308.222	1745.302
Stddev	2.608	69.40	12.476	8.673	1.211
%RSD	.1453775	.3860616	.7292322	.6629434	.0693785
#1	1794.994	17899.67	1725.032	1299.405	1744.854
#2	1790.831	17999.95	1701.799	1308.518	1744.380
#3	1795.634	18032.92	1705.535	1316.743	1746.673

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5062-01DLX4 Acquired: 01/05/2025 19:06:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKZ7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003315	.0291052	.0463776	-.019746	.0067459	15.55503	.3109281
Stddev	.0012940	.0012754	.0022110	.004848	.0043279	.11796	.0024239
%RSD	390.3925	4.381870	4.767398	24.55151	64.15601	.7583345	.7795852
#1	-.001078	.0284685	.0461969	-.025120	.0068430	15.67029	.3098953
#2	.001466	.0305735	.0442626	-.015701	.0110243	15.56026	.3136973
#3	.000606	.0282735	.0486735	-.018417	.0023702	15.43454	.3091915

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018711	.0018835	444.8821	.0339225	.0581059	.0242028	46.59526
Stddev	.0001908	.0000535	1.2408	.0002798	.0005654	.0058646	.01807
%RSD	10.19638	2.841321	.2789031	.8246756	.9731058	24.23103	.0387775
#1	.0019588	.0018995	444.0737	.0336324	.0575865	.0259500	46.57464
#2	.0016522	.0019272	446.3107	.0341906	.0580231	.0289953	46.60834
#3	.0020022	.0018238	444.2619	.0339447	.0587082	.0176632	46.60278

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.210783	13.20337	.0461891	-.003045	.3389061	.0335232	.0888824
Stddev	.007846	.08437	.0013651	.000850	.0128500	.0063620	.0011834
%RSD	.1863335	.6389840	2.955440	27.91056	3.791606	18.97777	1.331472
#1	4.202946	13.25438	.0450147	-.002865	.3256598	.0371061	.0902348
#2	4.218639	13.24973	.0458658	-.003971	.3397392	.0261778	.0880364
#3	4.210765	13.10598	.0476869	-.002300	.3513193	.0372858	.0883760

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.351431	1.285183	-.080004	.0048706	.3317762	3.294230	.0109719
Stddev	.264107	.003928	.002443	.0004562	.0066370	.020203	.0006363
%RSD	7.880420	.3056419	3.054115	9.367211	2.000451	.6132699	5.799567
#1	3.623028	1.288113	-.082756	.0053924	.3378980	3.317557	.0114595
#2	3.095512	1.286717	-.079170	.0046725	.3327080	3.282793	.0102521
#3	3.335752	1.280720	-.078087	.0045470	.3247225	3.282341	.0112041

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5062-01DLX4 Acquired: 01/05/2025 19:06:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKZ7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2953142	.1941929	.0348947
Stddev	.0056356	.0008835	.0035785
%RSD	1.908329	.4549618	10.25516
#1	.2934641	.1936156	.0327698
#2	.3016423	.1952100	.0328880
#3	.2908363	.1937530	.0390262

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1797.665	18075.79	1715.109	1316.133	1806.600
Stddev	2.943	75.39	12.014	11.881	2.338
%RSD	.1637313	.4171049	.7004728	.9027490	.1293881
#1	1797.494	17989.75	1701.918	1305.503	1803.984
#2	1800.690	18130.35	1725.423	1328.959	1808.483
#3	1794.811	18107.25	1717.986	1313.937	1807.332

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5062-02DLX4 Acquired: 01/05/2025 19:10:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKZ8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004546	.0223774	.0432426	-.015307	.0047696	13.73040	.2887735
Stddev	.003999	.0027116	.0051443	.010345	.0015552	.05061	.0038552
%RSD	87.96984	12.11763	11.89639	67.58510	32.60627	.3685989	1.335022
#1	-.003278	.0194015	.0449324	-.005740	.0045052	13.78049	.2898100
#2	-.009026	.0247085	.0473294	-.013895	.0033635	13.73142	.2920045
#3	-.001335	.0230222	.0374659	-.026286	.0064401	13.67928	.2845060

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015512	.0014901	431.0490	.0292987	.0573946	.0222896	40.95967
Stddev	.0000789	.0001611	.5607	.0006369	.0008427	.0056998	.13487
%RSD	5.089271	10.81197	.1300860	2.173825	1.468212	25.57146	.3292722
#1	.0016068	.0016715	430.5648	.0286882	.0583061	.0157144	40.91561
#2	.0014608	.0013637	431.6634	.0292488	.0566439	.0253275	41.11106
#3	.0015859	.0014352	430.9189	.0299591	.0572339	.0258270	40.85235

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.105773	15.82855	.0403438	-.002950	.3195227	.0265008	.0763970
Stddev	.026458	.06429	.0006046	.000839	.0196625	.0100089	.0003299
%RSD	.6444130	.4061815	1.498569	28.44817	6.153715	37.76841	.4317583
#1	4.090676	15.82206	.0407737	-.002806	.3407231	.0376724	.0763869
#2	4.136323	15.89584	.0406051	-.003852	.3159594	.0183508	.0767318
#3	4.090320	15.76774	.0396525	-.002192	.3018854	.0234792	.0760723

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.088087	1.197867	-.066727	.0046073	.3492671	2.996857	.0121127
Stddev	.111158	.006198	.001926	.0003423	.0041096	.024044	.0009681
%RSD	3.599563	.5173902	2.886207	7.429297	1.176632	.8022977	7.992434
#1	3.066099	1.192764	-.064504	.0045473	.3445864	3.014953	.0131694
#2	2.989566	1.204764	-.067785	.0042990	.3509314	3.006044	.0119005
#3	3.208595	1.196074	-.067892	.0049757	.3522834	2.969574	.0112684

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5062-02DLX4 Acquired: 01/05/2025 19:10:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKZ8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2940982	.2158053	.0390654
Stddev	.0052313	.0011974	.0032967
%RSD	1.778764	.5548378	8.438820
#1	.2889041	.2161925	.0360087
#2	.2940246	.2167612	.0425585
#3	.2993659	.2144623	.0386290

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1789.114	17876.49	1703.778	1305.200	1807.385
Stddev	7.132	57.89	10.190	11.386	7.246
%RSD	.3986375	.3238526	.5980561	.8723683	.4009192
#1	1780.893	17933.73	1702.966	1318.098	1799.449
#2	1793.644	17817.96	1694.019	1296.541	1809.056
#3	1792.804	17877.79	1714.349	1300.963	1813.650

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5079-06DLX4 Acquired: 01/05/2025 19:14:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLF4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024623	.0288199	.2500227	-.030063	.0031683	8.725927	.0899963
Stddev	.0042385	.0073868	.0010355	.004242	.0032564	.079653	.0009368
%RSD	172.1405	25.63085	.4141496	14.10890	102.7819	.9128366	1.040941
#1	.0011852	.0213687	.2507989	-.026028	.0065966	8.709855	.0906358
#2	.0071925	.0289505	.2488470	-.029676	.0027916	8.655535	.0904320
#3	-.000991	.0361405	.2504221	-.034484	.0001166	8.812391	.0889209

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011765	.0020522	453.5804	.0327712	.0501650	.0340144	30.44908
Stddev	.0001570	.0001377	1.4344	.0008565	.0000563	.0124992	.16014
%RSD	13.34652	6.709473	.3162394	2.613582	.1122396	36.74670	.5259173
#1	.0011442	.0020660	453.2203	.0333471	.0501919	.0195816	30.59950
#2	.0013472	.0019080	452.3603	.0317869	.0501002	.0412159	30.28073
#3	.0010382	.0021824	455.1605	.0331795	.0502027	.0412457	30.46701

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.319341	181.2036	.0304574	.0003944	.5622147	.0113233	.3448288
Stddev	.014078	1.0591	.0005683	.0008479	.0143931	.0134290	.0012077
%RSD	.6069783	.5844572	1.866000	214.9784	2.560075	118.5957	.3502297
#1	2.318456	182.0370	.0298990	.0003119	.5628670	.0020050	.3448809
#2	2.305727	180.0119	.0304381	-.000409	.5475066	.0052487	.3460096
#3	2.333841	181.5620	.0310352	.001281	.5762707	.0267163	.3435959

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.574597	1.542485	-.038922	.0067168	4.728434	2.506208	.0174584
Stddev	.265632	.003151	.000935	.0012067	.013919	.029335	.0014703
%RSD	10.31740	.2042747	2.402411	17.96496	.2943733	1.170502	8.421959
#1	2.286210	1.542419	-.039750	.0053898	4.741086	2.535573	.0165548
#2	2.809259	1.539368	-.039110	.0077482	4.713524	2.476903	.0166653
#3	2.628322	1.545668	-.037908	.0070124	4.730691	2.506148	.0191550

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5079-06DLX4 Acquired: 01/05/2025 19:14:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLF4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0943864	.1849254	.0274041
Stddev	.0046885	.0009738	.0028837
%RSD	4.967312	.5265787	10.52276
#1	.0892961	.1849359	.0280543
#2	.0953354	.1839464	.0242508
#3	.0985279	.1858939	.0299071

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1700.864	17111.59	1634.974	1241.762	1698.308
Stddev	3.238	55.91	10.417	1.939	1.914
%RSD	.1903825	.3267567	.6371205	.1561844	.1127062
#1	1697.224	17173.79	1623.683	1243.755	1698.351
#2	1701.946	17065.49	1644.210	1239.881	1696.373
#3	1703.423	17095.51	1637.030	1241.648	1700.201

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-09 Acquired: 01/05/2025 19:18:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1685725	-.017830	3.179756	.0748254	.0411728	73.11459
Stddev	.0034272	.000912	.003003	.0024766	.0024173	.01125
%RSD	2.033063	5.114198	.0944471	3.309859	5.871008	.0153922
#1	.1719862	-.018024	3.176400	.0774953	.0427991	73.12000
#2	.1651320	-.016837	3.182190	.0743778	.0383951	73.10165
#3	.1685995	-.018629	3.180678	.0726031	.0423241	73.12211

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.033230	.0070767	.0121447	149.0253	.4382281	.1137628
Stddev	.002939	.0001804	.0001864	.1484	.0013810	.0003372
%RSD	.1445497	2.548769	1.535180	.0996095	.3151300	.2964257
#1	2.029837	.0072775	.0119469	149.1861	.4398162	.1135444
#2	2.034890	.0069285	.0123171	148.8935	.4373094	.1135928
#3	2.034963	.0070242	.0121702	148.9965	.4375586	.1141512

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4396311	168.2639	9.159190	31.92820	.2126438	-.006695
Stddev	.0104030	.2091	.024274	.30873	.0002944	.000985
%RSD	2.366293	.1242443	.2650269	.9669550	.1384727	14.71573
#1	.4510339	168.2167	9.175349	32.28461	.2129837	-.006587
#2	.4372013	168.4925	9.170945	31.74339	.2124654	-.005768
#3	.4306581	168.0825	9.131276	31.75661	.2124824	-.007730

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7977827	.1786651	2.436224	10.02317	F 19.88435	-.341293
Stddev	.0053980	.0215124	.015190	.10135	.01625	.003277
%RSD	.6766198	12.04063	.6235219	1.011162	.0817317	.9601980
#1	.8002717	.1956160	2.421376	10.14011	19.89715	-.343487
#2	.8014871	.1859148	2.435560	9.96880	19.86606	-.342867
#3	.7915893	.1544644	2.451735	9.96061	19.88982	-.337526

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-09 Acquired: 01/05/2025 19:18:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0114794	4.536048	11.34233	.1688308	.8972178	.1324775
Stddev	.0006503	.011114	.07302	.0010395	.0037980	.0009696
%RSD	5.665331	.2450056	.6437650	.6156976	.4233126	.7318734
#1	.0111200	4.541984	11.39550	.1677376	.8936150	.1324499
#2	.0122301	4.542934	11.37242	.1689481	.8968536	.1334606
#3	.0110881	4.523227	11.25908	.1698067	.9011849	.1315220

Elem	Li6707
Units	ppm
Avg	.1320848
Stddev	.0045040
%RSD	3.409961
#1	.1271831
#2	.1360411
#3	.1330301

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2112.951	21154.47	2000.322	1552.069	1879.382
Stddev	3.844	113.70	8.942	8.507	3.899
%RSD	.1819267	.5374913	.4470089	.5481104	.2074796
#1	2114.516	21206.82	1994.327	1560.110	1882.113
#2	2115.766	21232.57	1996.040	1552.937	1881.116
#3	2108.571	21024.02	2010.600	1543.162	1874.916

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-13 Acquired: 01/05/2025 19:21:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLH6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1180167	-.015823	2.415547	.0587247	.0277868	60.64276
Stddev	.0037961	.002383	.007510	.0051134	.0025068	.44577
%RSD	3.216593	15.05853	.3109148	8.707428	9.021432	.7350674
#1	.1220884	-.016804	2.408975	.0562821	.0249469	60.13467
#2	.1173866	-.013106	2.423733	.0646013	.0296914	60.96818
#3	.1145750	-.017558	2.413933	.0552906	.0287222	60.82542

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.222860	.0054817	.0059188	105.6305	.1883239	.0963206
Stddev	.008197	.0000828	.0000521	.8889	.0005586	.0010072
%RSD	.6702877	1.511048	.8804337	.8414864	.2966212	1.045696
#1	1.218940	.0054643	.0058822	104.7925	.1882811	.0963903
#2	1.217359	.0054089	.0059785	105.5364	.1889027	.0972911
#3	1.232281	.0055718	.0058959	106.5627	.1877880	.0952803

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3321228	129.6802	6.612234	34.07593	.1523894	-.005745
Stddev	.0019859	.8037	.052720	.37945	.0006147	.001326
%RSD	.5979530	.6197348	.7973132	1.113547	.4034026	23.07440
#1	.3336802	128.7590	6.556038	33.66171	.1526603	-.006640
#2	.3328017	130.0439	6.620061	34.15932	.1516858	-.004222
#3	.3298864	130.2377	6.660603	34.40674	.1528223	-.006374

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5689633	.1368751	1.453707	7.882866	F 10.07331	-.254499
Stddev	.0143434	.0119708	.000983	.182102	.01520	.002649
%RSD	2.520965	8.745748	.0675982	2.310097	.1508918	1.040911
#1	.5750125	.1234057	1.454048	7.715450	10.08235	-.255340
#2	.5792911	.1462986	1.452599	7.856391	10.08182	-.251532
#3	.5525862	.1409211	1.454474	8.076756	10.05576	-.256626

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-13 Acquired: 01/05/2025 19:21:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLH6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077181	2.589530	11.21604	.0843057	.7789526	.0499678
Stddev	.0017942	.009207	.04395	.0015295	.0018632	.0002431
%RSD	23.24655	.3555535	.3918750	1.814273	.2391980	.4864484
#1	.0062238	2.584482	11.24717	.0844885	.7770147	.0498515
#2	.0097080	2.583950	11.16576	.0857357	.7807309	.0502472
#3	.0072225	2.600157	11.23518	.0826931	.7791122	.0498047

Elem	Li6707
Units	ppm
Avg	.1016595
Stddev	.0053351
%RSD	5.248049
#1	.0975111
#2	.1076779
#3	.0997894

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2113.275	21150.02	1984.039	1554.786	1901.905
Stddev	9.517	79.31	2.896	4.492	7.408
%RSD	.4503310	.3749658	.1459891	.2889033	.3894973
#1	2105.438	21209.56	1980.953	1554.374	1897.194
#2	2110.524	21059.99	1984.466	1550.514	1898.077
#3	2123.865	21180.50	1986.698	1559.469	1910.443

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-14 Acquired: 01/05/2025 19:25:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLH7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0877025	-.008438	1.185715	.0524675	.0258619	62.03199
Stddev	.0031718	.002316	.005353	.0047769	.0035879	.17935
%RSD	3.616484	27.44090	.4514778	9.104575	13.87336	.2891237
#1	.0843968	-.010527	1.188141	.0562684	.0225753	61.96559
#2	.0907207	-.008839	1.179579	.0471053	.0253209	61.89531
#3	.0879900	-.005949	1.189426	.0540289	.0296896	62.23507

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9844941	.0052980	.0051887	134.0362	.1399359	.0966577
Stddev	.0035910	.0000706	.0000324	.1469	.0005871	.0007726
%RSD	.3647546	1.333403	.6249566	.1095709	.4195703	.7993046
#1	.9882812	.0052892	.0051946	134.0863	.1400299	.0958911
#2	.9811382	.0053726	.0051537	133.8708	.1393074	.0966458
#3	.9840629	.0052321	.0052178	134.1515	.1404703	.0974362

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2952080	124.9918	5.530241	33.81063	.1492004	-.007751
Stddev	.0040270	.4165	.011097	.10590	.0008653	.001003
%RSD	1.364116	.3332165	.2006658	.3132092	.5799802	12.94570
#1	.2909162	125.2925	5.541889	33.69329	.1498193	-.006594
#2	.2989037	124.5164	5.529040	33.89910	.1495702	-.008376
#3	.2958040	125.1665	5.519792	33.83951	.1482116	-.008283

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6866638	.1365708	.8878069	6.565967	F 14.93055	-.245852
Stddev	.0193932	.0058336	.0051376	.056557	.00667	.001325
%RSD	2.824260	4.271478	.5786827	.8613680	.0446513	.5388386
#1	.6978510	.1366849	.8897110	6.630102	14.93741	-.245602
#2	.6642704	.1306810	.8917207	6.523235	14.92409	-.244670
#3	.6978698	.1423465	.8819891	6.544564	14.93015	-.247284

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-14 Acquired: 01/05/2025 19:25:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLH7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071957	2.795418	10.88134	.0524656	.7434090	.1051919
Stddev	.0008388	.004176	.05271	.0018085	.0039526	.0004555
%RSD	11.65672	.1493763	.4844225	3.446925	.5316913	.4330324
#1	.0066137	2.797114	10.90297	.0545410	.7388729	.1052558
#2	.0068162	2.790661	10.82125	.0516275	.7461147	.1056122
#3	.0081571	2.798479	10.91979	.0512282	.7452393	.1047079

Elem	Li6707
Units	ppm
Avg	.1026692
Stddev	.0027586
%RSD	2.686841
#1	.1014519
#2	.1058270
#3	.1007286

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2290.333	22945.45	2155.477	1672.328	1922.784
Stddev	5.990	103.34	14.342	8.389	5.055
%RSD	.2615131	.4503587	.6653539	.5016518	.2629024
#1	2295.672	22828.90	2148.272	1662.677	1925.459
#2	2283.856	23025.88	2171.992	1676.431	1916.954
#3	2291.472	22981.58	2146.165	1677.877	1925.939

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-15 Acquired: 01/05/2025 19:29:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLH8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0508157	-.009388	.4156528	.0501725	.0288015	59.02992
Stddev	.0014309	.001080	.0062130	.0046669	.0052824	.35415
%RSD	2.815816	11.50699	1.494748	9.301759	18.34060	.5999498
#1	.0522859	-.010622	.4087849	.0553549	.0300125	58.68602
#2	.0507336	-.008614	.4172909	.0463017	.0230189	59.01025
#3	.0494276	-.008928	.4208825	.0488610	.0333733	59.39350

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6504747	.0050929	.0028159	189.2021	.0978274	.1003494
Stddev	.0024580	.0000811	.0000026	.8305	.0005300	.0009787
%RSD	.3778800	1.592204	.0904981	.4389667	.5418166	.9752627
#1	.6510055	.0051496	.0028167	188.2944	.0982669	.0996839
#2	.6477946	.0051289	.0028180	189.3879	.0972387	.1014732
#3	.6526239	.0050000	.0028130	189.9240	.0979765	.0998913

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2419606	133.1225	3.652735	54.99871	.1560826	-.010038
Stddev	.0078112	.9600	.015607	.41818	.0013751	.000474
%RSD	3.228293	.7211596	.4272759	.7603400	.8810009	4.719897
#1	.2509261	132.1461	3.638075	54.54544	.1560060	-.009971
#2	.2383319	133.1561	3.650988	55.08118	.1574944	-.009601
#3	.2366238	134.0653	3.669143	55.36951	.1547474	-.010542

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9278525	.1271796	.6025327	7.286968	F 10.53464	-.269580
Stddev	.0050256	.0105215	.0035742	.117064	.01805	.002524
%RSD	.5416374	8.272986	.5931931	1.606483	.1713169	.9362242
#1	.9335094	.1207822	.5984105	7.157714	10.51403	-.269496
#2	.9261452	.1393230	.6044192	7.317331	10.54762	-.272145
#3	.9239031	.1214335	.6047683	7.385859	10.54228	-.267100

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-15 Acquired: 01/05/2025 19:29:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLH8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060138	1.438516	10.39822	.0272830	.8225294	.1164339
Stddev	.0008215	.010355	.06670	.0028684	.0078562	.0005696
%RSD	13.65977	.7198297	.6414421	10.51345	.9551317	.4892022
#1	.0060318	1.432885	10.32140	.0302970	.8307145	.1160908
#2	.0051835	1.432196	10.43183	.0245867	.8150496	.1161194
#3	.0068262	1.450466	10.44142	.0269653	.8218240	.1170914

Elem	Li6707
Units	ppm
Avg	.1223972
Stddev	.0044502
%RSD	3.635849
#1	.1178073
#2	.1226913
#3	.1266931

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2151.386	21620.02	2041.261	1577.006	1846.225
Stddev	4.278	65.93	16.336	7.766	4.900
%RSD	.1988296	.3049662	.8002880	.4924256	.2654213
#1	2150.866	21692.99	2059.015	1585.958	1846.935
#2	2147.392	21602.35	2037.904	1572.979	1841.009
#3	2155.899	21564.72	2026.864	1572.081	1850.732

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV113 Acquired: 01/05/2025 19:33:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV113 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.043983	4.904029	25.09041	5.016699	4.973851	406.9729
Stddev	.020903	.011139	.02513	.005732	.009632	1.6929
%RSD	.4144160	.2271398	.1001740	.1142652	.1936607	.4159809
#1	5.052108	4.914816	25.11883	5.017343	4.967158	408.8997
#2	5.020238	4.904704	25.08127	5.022082	4.969505	406.2953
#3	5.059604	4.892568	25.07112	5.010672	4.984891	405.7238

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.35620	.5167023	2.525922	414.6199	15.82254	2.538429
Stddev	.02728	.0034610	.001266	.9736	.02274	.004811
%RSD	.2634443	.6698318	.0501132	.2348282	.1437283	.1895079
#1	10.38768	.5188428	2.527373	415.7345	15.84254	2.543894
#2	10.34152	.5127093	2.525042	414.1904	15.79780	2.534836
#3	10.33940	.5185548	2.525351	413.9349	15.82729	2.536556

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.46847	412.6360	15.25476	409.7293	2.546919	1.280254
Stddev	.07371	2.6654	.11564	1.9899	.003246	.002771
%RSD	.4765494	.6459415	.7580754	.4856597	.1274598	.2164322
#1	15.55226	415.6819	15.38322	412.0137	2.550660	1.277178
#2	15.43953	410.7308	15.15897	408.3725	2.544835	1.281031
#3	15.41362	411.4954	15.22208	408.8018	2.545264	1.282553

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	421.6764	2.542543	14.90985	157.2438	5.050001	F 4.475544
Stddev	4.4262	.003209	.03524	.8923	.005566	.030023
%RSD	1.049662	.1262148	.2363331	.5674432	.1102242	.6708177
#1	425.1566	2.539420	14.91354	158.1804	5.047867	4.493569
#2	416.6948	2.545832	14.94309	156.4037	5.045818	4.440886
#3	423.1778	2.542378	14.87291	157.1473	5.056319	4.492178

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV113 Acquired: 01/05/2025 19:33:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV113 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.923539	5.084866	5.077128	5.088413	5.120563	4.870689
Stddev	.003477	.011247	.043047	.005335	.041658	.024424
%RSD	.0706167	.2211915	.8478670	.1048524	.8135469	.5014393
#1	4.919660	5.097566	5.108988	5.093412	5.164305	4.898864
#2	4.924582	5.080873	5.028156	5.082795	5.116025	4.855542
#3	4.926375	5.076161	5.094241	5.089031	5.081360	4.857660

Elem	Li6707
Units	ppm
Avg	5.166556
Stddev	.017653
%RSD	.3416806
#1	5.186937
#2	5.156652
#3	5.156078

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1476.953	15642.05	1540.682	1078.422	1583.711
Stddev	3.837	41.02	10.422	3.653	2.464
%RSD	.2597794	.2622157	.6764739	.3387754	.1556016
#1	1480.870	15594.80	1532.427	1077.462	1584.918
#2	1473.202	15668.46	1552.394	1075.344	1580.875
#3	1476.786	15662.90	1537.226	1082.460	1585.339

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB113 Acquired: 01/05/2025 19:37:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB113 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.006269	-.003791	.0010329	.0087307	.0005054	-.003112	-.003252
Stddev	.002498	.003853	.0032536	.0029299	.0008309	.026241	.003819
%RSD	39.84205	101.6525	314.9821	33.55886	164.3786	843.1132	117.4374
#1	-.006723	-.007378	.0007918	.0053752	.0009605	-.020213	-.001408
#2	-.008507	-.004277	-.002093	.0100344	.0010094	.027100	-.000705
#3	-.003575	.000283	.004400	.0107825	-.000454	-.016224	-.007642

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000692	-.000093	.0549293	.0000471	.0000591	-.012459	.0056215
Stddev	.0002018	.000070	.0178161	.0003222	.0003259	.013952	.0474716
%RSD	291.7261	75.20318	32.43455	683.6338	551.4134	111.9796	844.4599
#1	.0000682	-.000014	.0752345	-.000315	.0004131	-.027310	-.047427
#2	-.000132	-.000116	.0419159	.000302	-.000228	.000373	.020190
#3	.000271	-.000148	.0476373	.000154	-.000007	-.010439	.044102

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009914	-.031582	.0000493	.0001282	.1692421	-.009088	.0037938
Stddev	.0009277	.188609	.0008099	.0004348	.0040028	.007399	.0009078
%RSD	93.57627	597.2038	1644.037	339.1981	2.365158	81.41708	23.92787
#1	.0020183	.141683	-.000629	-.000058	.1738620	-.001703	.0047393
#2	.0002138	-.232485	.000946	-.000182	.1668108	-.016502	.0037128
#3	.0007421	-.003944	-.000169	.000625	.1670533	-.009060	.0029292

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1961844	-.002124	.0116049	-.000231	-.000178	-.000635	-.001017
Stddev	.1693356	.001578	.0011486	.000315	.007186	.000598	.001238
%RSD	86.31449	74.29298	9.897835	136.5288	4035.677	94.23756	121.7557
#1	.3499806	-.001230	.0122035	-.000524	.000627	-.001314	.000305
#2	.2238550	-.001196	.0123306	.000103	.006571	-.000407	-.002150
#3	.0147177	-.003946	.0102806	-.000272	-.007732	-.000184	-.001205

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB113 Acquired: 01/05/2025 19:37:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB113 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.007286	.0002811	.0122884
Stddev	.003630	.0003826	.0023101
%RSD	49.81296	136.1123	18.79896
#1	-.011009	.0006588	.0096763
#2	-.007092	.0002908	.0140626
#3	-.003758	-.000106	.0131263

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1782.001	17886.28	1665.067	1313.986	1998.739
Stddev	2.384	54.53	5.880	1.809	3.092
%RSD	.1337635	.3048463	.3531634	.1376458	.1547030
#1	1779.249	17948.78	1662.688	1315.935	1997.336
#2	1783.425	17861.58	1671.764	1313.660	2002.284
#3	1783.329	17848.47	1660.748	1312.363	1996.597

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-16 Acquired: 01/05/2025 19:41:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLH9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0362453	-.002838	.2216179	.0441745	.0273468	52.03824
Stddev	.0009327	.000628	.0021776	.0067846	.0032444	.11721
%RSD	2.573319	22.11977	.9825859	15.35852	11.86390	.2252307
#1	.0351968	-.002732	.2204240	.0472149	.0236584	51.96097
#2	.0365562	-.003513	.2241313	.0489070	.0297591	51.98064
#3	.0369828	-.002270	.2202984	.0364015	.0286231	52.17310

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5817546	.0048349	.0023356	263.5380	.0829871	.0947378
Stddev	.0045905	.0001624	.0001996	.8421	.0002939	.0009637
%RSD	.7890717	3.360000	8.547248	.3195185	.3541134	1.017188
#1	.5820447	.0048889	.0021212	263.2841	.0827423	.0945548
#2	.5770260	.0049634	.0025161	262.8522	.0829061	.0957798
#3	.5861931	.0046523	.0023694	264.4778	.0833130	.0938787

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2192517	125.1354	3.245526	72.63265	.1346766	-.008514
Stddev	.0032272	.4422	.013089	.44540	.0012305	.000731
%RSD	1.471935	.3534079	.4032829	.6132277	.9136877	8.580993
#1	.2166810	124.9977	3.253665	73.10535	.1352322	-.008917
#2	.2182005	124.7784	3.230428	72.57180	.1332662	-.007671
#3	.2228734	125.6301	3.252485	72.22080	.1355313	-.008955

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8524644	.1274181	.4754976	7.921656	F 10.07767	-.241825
Stddev	.0007307	.0061770	.0041129	.213831	.01641	.004129
%RSD	.0857186	4.847810	.8649569	2.699323	.1627943	1.707621
#1	.8527598	.1207603	.4723915	8.162965	10.06344	-.245991
#2	.8530012	.1329630	.4739393	7.755713	10.09561	-.241751
#3	.8516322	.1285309	.4801618	7.846288	10.07396	-.237733

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-16 Acquired: 01/05/2025 19:41:06 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLH9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0053905	1.131511	8.922618	.0245433	1.175562	.1583717
Stddev	.0004120	.003614	.039167	.0028828	.010652	.0006674
%RSD	7.643408	.3193537	.4389583	11.74589	.9061098	.4214019
#1	.0049667	1.127393	8.966096	.0226463	1.170713	.1577143
#2	.0054151	1.132989	8.911661	.0278607	1.168197	.1583522
#3	.0057897	1.134152	8.890097	.0231229	1.187776	.1590486

Elem	Li6707
Units	ppm
Avg	.1039952
Stddev	.0029848
%RSD	2.870109
#1	.1016665
#2	.1029592
#3	.1073600

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2104.259	21165.60	1992.504	1541.792	1795.791
Stddev	8.290	74.24	14.371	4.296	7.235
%RSD	.3939837	.3507576	.7212765	.2786354	.4028971
#1	2094.689	21102.57	1978.601	1542.332	1788.207
#2	2108.836	21146.79	1991.609	1545.792	1796.551
#3	2109.252	21247.44	2007.302	1537.251	1802.617

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-17 Acquired: 01/05/2025 19:44:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLJ0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0680068	-.006726	.2443314	.0514299	.0323678	63.65709
Stddev	.0053029	.006055	.0019894	.0098306	.0006238	.04934
%RSD	7.797646	90.01996	.8142136	19.11452	1.927345	.0775114
#1	.0636475	-.012229	.2450673	.0627802	.0324389	63.60126
#2	.0664623	-.000239	.2458481	.0456186	.0317115	63.69482
#3	.0739105	-.007711	.2420790	.0458909	.0329530	63.67520

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7234072	.0056168	.0043424	589.5318	.0977429	.1270734
Stddev	.0054838	.0001502	.0000509	2.3850	.0009416	.0005466
%RSD	.7580559	2.674608	1.171904	.4045574	.9633739	.4301731
#1	.7176064	.0054583	.0043913	588.5272	.0988187	.1273935
#2	.7285065	.0057571	.0042897	592.2548	.0970682	.1273844
#3	.7241087	.0056351	.0043461	587.8135	.0973418	.1264422

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3168324	162.7648	7.551825	97.15179	.1836390	-.011482
Stddev	.0103716	.5125	.026405	.20684	.0006730	.001642
%RSD	3.273530	.3148554	.3496453	.2128999	.3664768	14.30445
#1	.3120613	162.7032	7.536390	96.95561	.1843678	-.011812
#2	.3287310	163.3052	7.582314	97.36784	.1830410	-.009699
#3	.3097049	162.2858	7.536772	97.13191	.1835083	-.012934

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.155092	.1662350	.5487890	10.69361	F 10.64884	-.309031
Stddev	.017751	.0064612	.0030221	.13461	.01248	.005611
%RSD	1.536748	3.886789	.5506820	1.258793	.1171551	1.815757
#1	1.134925	.1644835	.5453026	10.53818	10.63793	-.307377
#2	1.168345	.1608301	.5504028	10.77006	10.64616	-.315283
#3	1.162007	.1733914	.5506616	10.77258	10.66244	-.304433

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-17 Acquired: 01/05/2025 19:44:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLJ0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039039	1.636630	8.856941	.0296377	1.208914	.4036606
Stddev	.0002152	.002542	.076972	.0019759	.004576	.0014480
%RSD	5.513145	.1553307	.8690613	6.666845	.3785066	.3587225
#1	.0036897	1.638509	8.786929	.0312966	1.203797	.4044054
#2	.0041202	1.633737	8.939365	.0274517	1.210335	.4045846
#3	.0039018	1.637642	8.844527	.0301648	1.212612	.4019918

Elem	Li6707
Units	ppm
Avg	.1316900
Stddev	.0009886
%RSD	.7506900
#1	.1311547
#2	.1328307
#3	.1310844

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2166.642	21764.59	2102.579	1585.072	1692.751
Stddev	8.978	96.16	15.307	3.772	6.189
%RSD	.4143961	.4418092	.7280217	.2379571	.3656140
#1	2171.213	21668.39	2116.118	1585.308	1697.626
#2	2172.416	21860.71	2085.969	1588.720	1694.838
#3	2156.298	21764.67	2105.651	1581.188	1685.788

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-18 Acquired: 01/05/2025 19:48:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM29 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0460901	-.006273	.4523898	.0307736	.0257952	54.92249	.5991899
Stddev	.0030647	.000942	.0039245	.0053878	.0030403	.24158	.0049207
%RSD	6.649376	15.01427	.8674988	17.50787	11.78651	.4398485	.8212321
#1	.0477440	-.007045	.4537749	.0363234	.0222993	54.94327	.6047713
#2	.0479726	-.005223	.4554339	.0255639	.0272638	54.67120	.5954776
#3	.0425538	-.006551	.4479606	.0304336	.0278224	55.15301	.5973207

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047684	.0024626	291.3497	.1096888	.0848976	.0953911	126.9276
Stddev	.0000647	.0000512	.7412	.0002616	.0002754	.0061435	.1988
%RSD	1.356994	2.078443	.2544122	.2385277	.3244117	6.440285	.1565935
#1	.0048431	.0024080	291.9870	.1093867	.0852137	.0986616	127.1085
#2	.0047310	.0025095	290.5363	.1098425	.0847090	.0883042	126.7148
#3	.0047310	.0024704	291.5258	.1098371	.0847701	.0992074	126.9593

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.781126	99.74632	.1086274	-.008439	.9065260	.1125533	.8228170
Stddev	.012059	.17172	.0021606	.002224	.0245965	.0071801	.0023313
%RSD	.3189349	.1721617	1.989040	26.35637	2.713268	6.379312	.2833361
#1	3.790288	99.93471	.1063906	-.010683	.9228994	.1208290	.8203498
#2	3.767464	99.59853	.1087886	-.008398	.9184371	.1079799	.8231180
#3	3.785627	99.70573	.1107028	-.006235	.8782416	.1088512	.8249833

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.466695	9.068009	-.242534	.0063338	1.127480	10.05670	.0460531
Stddev	.153134	.024573	.005425	.0004474	.002858	.11163	.0011565
%RSD	1.617605	.2709808	2.236801	7.063301	.2535229	1.110038	2.511278
#1	9.414871	9.056066	-.247888	.0058482	1.124180	10.18060	.0455759
#2	9.346197	9.051691	-.242672	.0064239	1.129061	10.02555	.0473719
#3	9.639016	9.096270	-.237041	.0067292	1.129199	9.96395	.0452115

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-18 Acquired: 01/05/2025 19:48:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM29 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.7371708	.2118479	.1075754
Stddev	.0039664	.0018502	.0034736
%RSD	.5380516	.8733650	3.228983
#1	.7361554	.2118421	.1094687
#2	.7415462	.2100006	.1096910
#3	.7338109	.2137010	.1035665

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1999.318	20131.83	1906.319	1460.426	1774.233
Stddev	1.120	87.44	16.886	4.737	1.499
%RSD	.0560144	.4343562	.8858112	.3243532	.0845089
#1	2000.536	20192.61	1886.822	1464.546	1774.900
#2	1998.334	20171.26	1915.850	1461.481	1772.516
#3	1999.084	20031.61	1916.285	1455.250	1775.283

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-19 Acquired: 01/05/2025 19:52:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM30 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1001660	-.021315	1.694688	.0731845	.0288984	66.70648
Stddev	.0034377	.004187	.005274	.0046595	.0038076	.79720
%RSD	3.432001	19.64262	.3111991	6.366744	13.17592	1.195088
#1	.0972699	-.016508	1.690587	.0739539	.0246130	65.92035
#2	.0992631	-.023271	1.692841	.0774114	.0301899	66.68478
#3	.1039651	-.024165	1.700637	.0681882	.0318922	67.51430

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.187401	.0057161	.0067630	60.03218	.1812744	.0845838
Stddev	.007327	.0000664	.0000901	.24624	.0005623	.0004548
%RSD	.6171002	1.161392	1.331701	.4101855	.3101909	.5377141
#1	1.178941	.0057886	.0068264	59.76503	.1819116	.0846069
#2	1.191532	.0056583	.0066599	60.08145	.1810638	.0850267
#3	1.191730	.0057015	.0068027	60.25007	.1808479	.0841179

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3114330	134.5610	6.693811	25.16761	.1662094	-.007284
Stddev	.0077367	1.0014	.055393	.20939	.0012966	.002401
%RSD	2.484239	.7441627	.8275311	.8319654	.7800972	32.95918
#1	.3060158	133.7577	6.648069	24.93233	.1665025	-.009127
#2	.3079895	134.2424	6.677965	25.23702	.1673343	-.004569
#3	.3202937	135.6828	6.755401	25.33347	.1647913	-.008155

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5301732	.1484259	1.441086	9.295220	F 13.12111	-.263084
Stddev	.0122433	.0053627	.007752	.111158	.00079	.007438
%RSD	2.309299	3.613077	.5379279	1.195862	.0060586	2.827126
#1	.5390103	.1532000	1.432577	9.349352	13.12083	-.261319
#2	.5161981	.1426235	1.442932	9.368944	13.12201	-.256688
#3	.5353112	.1494543	1.447748	9.167366	13.12049	-.271246

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-19 Acquired: 01/05/2025 19:52:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM30 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086230	4.375317	10.72553	.0890955	.8642608	.0222554
Stddev	.0002794	.010355	.08468	.0004573	.0059909	.0007895
%RSD	3.239835	.2366595	.7895132	.5132381	.6931856	3.547293
#1	.0085609	4.379088	10.65448	.0890052	.8582776	.0214389
#2	.0089282	4.383258	10.70288	.0886901	.8642455	.0230147
#3	.0083799	4.363606	10.81923	.0895912	.8702594	.0223127

Elem	Li6707
Units	ppm
Avg	.1014614
Stddev	.0017809
%RSD	1.755235
#1	.1014547
#2	.1032456
#3	.0996838

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2094.313	20916.09	1960.214	1534.599	1901.613
Stddev	6.604	65.89	20.800	10.912	1.680
%RSD	.3153071	.3150363	1.061130	.7110741	.0883622
#1	2086.697	20941.93	1975.546	1543.464	1901.299
#2	2098.441	20965.15	1968.560	1537.922	1903.428
#3	2097.802	20841.20	1936.537	1522.412	1900.112

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5083-03A Acquired: 01/05/2025 19:56:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLK0A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1403113	.0363505	2.503814	.2014123	.0384582	74.14622
Stddev	.0025801	.0025913	.007298	.0034260	.0027113	.33124
%RSD	1.838803	7.128777	.2914580	1.700980	7.050117	.4467342
#1	.1376682	.0333588	2.499630	.1978435	.0355073	74.23630
#2	.1404426	.0378957	2.512241	.2046749	.0390276	74.42310
#3	.1428233	.0377969	2.499572	.2017186	.0408395	73.77926

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.480481	.0069813	.0077514	80.26817	.2247977	.1016438
Stddev	.006341	.0001851	.0000338	.47056	.0002458	.0003278
%RSD	.4283221	2.651639	.4356971	.5862368	.1093567	.3224912
#1	1.478244	.0071378	.0077875	80.12488	.2250781	.1016571
#2	1.487637	.0070292	.0077461	80.79372	.2246192	.1013095
#3	1.475561	.0067769	.0077206	79.88591	.2246957	.1019647

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2985256	172.1517	6.432127	33.26930	.1955344	.0062374
Stddev	.0116541	.6614	.034191	.07017	.0008115	.0011557
%RSD	3.903871	.3842202	.5315617	.2109024	.4150103	18.52794
#1	.3098452	171.8901	6.420954	33.28043	.1955586	.0049787
#2	.2991681	172.9039	6.470506	33.33323	.1963335	.0072505
#3	.2865637	171.6611	6.404920	33.19423	.1947111	.0064829

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7015818	.1924457	2.199036	8.868347	F 13.21424	-.358981
Stddev	.0025138	.0002249	.024188	.066203	.01609	.006816
%RSD	.3583104	.1168487	1.099928	.7465128	.1217579	1.898597
#1	.7043598	.1922095	2.187891	8.941330	13.20650	-.366732
#2	.6994639	.1924702	2.182430	8.851551	13.23274	-.353922
#3	.7009216	.1926573	2.226787	8.812159	13.20349	-.356290

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5083-03A Acquired: 01/05/2025 19:56:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLK0A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0090753	2.327934	12.39366	.1347890	.9291877	.0422773
Stddev	.0010830	.011991	.11294	.0022226	.0052631	.0004847
%RSD	11.93341	.5151083	.9112691	1.648975	.5664180	1.146430
#1	.0081576	2.332525	12.51940	.1361351	.9296221	.0427297
#2	.0102698	2.336952	12.36072	.1360084	.9342201	.0423365
#3	.0087984	2.314326	12.30084	.1322236	.9237208	.0417657

Elem	Li6707
Units	ppm
Avg	.1230130
Stddev	.0032023
%RSD	2.603231
#1	.1237018
#2	.1258149
#3	.1195224

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2190.759	21855.73	2036.978	1597.829	1923.830
Stddev	5.741	152.85	20.411	5.801	2.997
%RSD	.2620605	.6993528	1.002001	.3630816	.1557612
#1	2193.795	21958.72	2022.092	1604.424	1926.975
#2	2194.344	21680.11	2028.597	1595.552	1923.507
#3	2184.137	21928.35	2060.245	1593.513	1921.008

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5086-16DLX4 Acquired: 01/05/2025 20:00:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLN9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072599	.0215323	.0967892	-.027293	.0077807	9.663614	.1329681
Stddev	.0018975	.0026194	.0036886	.003834	.0047102	.054902	.0014379
%RSD	26.13669	12.16487	3.811003	14.04930	60.53663	.5681291	1.081389
#1	.0062225	.0186142	.1008785	-.024595	.0117192	9.606385	.1343533
#2	.0061073	.0223024	.0957763	-.031683	.0025631	9.715847	.1330681
#3	.0094500	.0236803	.0937129	-.025602	.0090599	9.668609	.1314828

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016426	.0006801	474.6928	.0169782	.0527266	.0305495	41.19332
Stddev	.0001612	.0000930	1.9966	.0004020	.0009562	.0132694	.25076
%RSD	9.812877	13.67066	.4206053	2.368005	1.813417	43.43583	.6087497
#1	.0016217	.0007856	472.3979	.0174134	.0531646	.0454981	41.01904
#2	.0014929	.0006445	476.0308	.0166208	.0533853	.0201630	41.48072
#3	.0018133	.0006102	475.6498	.0169002	.0516299	.0259873	41.08022

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.799878	85.29568	.0352835	-.002481	.5302946	.0297883	.0659131
Stddev	.003724	.54202	.0005961	.002603	.0129893	.0017889	.0005052
%RSD	.2069235	.6354545	1.689554	104.9168	2.449457	6.005497	.7663918
#1	1.797776	84.67011	.0356491	-.005430	.5206025	.0277423	.0664850
#2	1.804178	85.59190	.0356059	-.000499	.5450538	.0310578	.0655277
#3	1.797679	85.62504	.0345956	-.001515	.5252275	.0305647	.0657264

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.378243	1.103640	-.058731	.0047242	.8820703	2.634993	.0113400
Stddev	.157089	.003463	.001336	.0010434	.0062989	.004063	.0020774
%RSD	6.605239	.3137456	2.275495	22.08661	.7141088	.1542051	18.31950
#1	2.231889	1.101799	-.058806	.0048812	.8748778	2.631303	.0099538
#2	2.358617	1.101487	-.057359	.0056802	.8866033	2.634329	.0137286
#3	2.544222	1.107635	-.060028	.0036112	.8847298	2.639347	.0103378

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5086-16DLX4 Acquired: 01/05/2025 20:00:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLN9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0311197	.3499563	.0322089
Stddev	.0071160	.0017267	.0067775
%RSD	22.86637	.4933929	21.04232
#1	.0320589	.3481934	.0253933
#2	.0235808	.3516443	.0322857
#3	.0377194	.3500313	.0389477

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1743.764	17567.71	1672.112	1276.423	1736.896
Stddev	1.803	55.79	2.432	8.213	3.834
%RSD	.1033732	.3175713	.1454446	.6434433	.2207235
#1	1744.731	17554.37	1672.474	1285.265	1740.487
#2	1744.877	17519.81	1669.520	1269.033	1737.343
#3	1741.684	17628.97	1674.343	1274.970	1732.859

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5122-12A Acquired: 01/05/2025 20:04:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMC9A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1382048	.0400480	5.031657	.0808342	.0570222	58.02783
Stddev	.0078562	.0025963	.005496	.0008220	.0032950	.42172
%RSD	5.684448	6.483070	.1092289	1.016848	5.778540	.7267578
#1	.1472763	.0408106	5.031218	.0817130	.0584682	58.14931
#2	.1336635	.0371558	5.026394	.0800842	.0593470	57.55870
#3	.1336745	.0421776	5.037360	.0807055	.0532514	58.37548

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.881177	.0075336	.0073198	439.6925	.1658945	.1257456
Stddev	.008228	.0001165	.0001252	1.1697	.0009576	.0001726
%RSD	.4373887	1.546337	1.709712	.2660238	.5772280	.1372398
#1	1.872029	.0076199	.0072477	438.5498	.1647982	.1255633
#2	1.883529	.0075798	.0072473	439.6402	.1665671	.1257672
#3	1.887973	.0074011	.0074643	440.8875	.1663183	.1259064

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3893341	214.3634	6.734400	69.30185	.2376540	-.014279
Stddev	.0035157	.8168	.026215	.18757	.0017416	.001143
%RSD	.9029923	.3810362	.3892747	.2706622	.7328392	8.003109
#1	.3932583	214.1846	6.705131	69.28166	.2370526	-.014827
#2	.3864718	213.6509	6.742348	69.12519	.2362928	-.012965
#3	.3882722	215.2549	6.755722	69.49870	.2396167	-.015044

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.435437	.2375943	3.078132	10.91828	F 15.44669	-.401187
Stddev	.030397	.0084329	.031252	.18463	.04853	.004073
%RSD	2.117589	3.549274	1.015283	1.691010	.3142081	1.015238
#1	1.424866	.2417833	3.042397	10.96932	15.44033	-.398105
#2	1.411737	.2278872	3.091652	10.71349	15.40164	-.405805
#3	1.469708	.2431125	3.100347	11.07201	15.49809	-.399651

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5122-12A Acquired: 01/05/2025 20:04:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMC9A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0097285	4.391326	9.648822	.2277534	1.264643	.9102519
Stddev	.0003915	.010908	.043064	.0016917	.004060	.0026386
%RSD	4.024273	.2483981	.4463101	.7427765	.3210300	.2898786
#1	.0098864	4.386449	9.696783	.2297010	1.267844	.9114584
#2	.0100163	4.403822	9.613471	.2266489	1.260077	.9072257
#3	.0092827	4.383707	9.636211	.2269103	1.266009	.9120715

Elem	Li6707
Units	ppm
Avg	.1125156
Stddev	.0075650
%RSD	6.723485
#1	.1150662
#2	.1184756
#3	.1040050

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1947.106	19525.24	1880.270	1429.763	1777.431
Stddev	3.058	136.34	6.754	14.979	5.500
%RSD	.1570713	.6982536	.3592236	1.047681	.3094183
#1	1945.905	19681.33	1878.164	1445.718	1775.093
#2	1950.583	19464.93	1887.827	1427.567	1783.714
#3	1944.831	19429.46	1874.820	1416.002	1773.487

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5124-19A Acquired: 01/05/2025 20:07:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM88A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1250493	.0495304	.7960382	.0436152	.0233767	51.86135	.6472521
Stddev	.0011140	.0080423	.0081913	.0046544	.0013967	.37105	.0047497
%RSD	.8908458	16.23719	1.029011	10.67158	5.974914	.7154692	.7338316
#1	.1251793	.0587055	.7901249	.0396848	.0235417	51.74315	.6423165
#2	.1238760	.0437012	.7926018	.0424058	.0219048	52.27711	.6517911
#3	.1260926	.0461844	.8053880	.0487549	.0246837	51.56380	.6476486

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074982	.0024210	77.09306	.0760185	.0765905	.1452162	108.1002
Stddev	.0001845	.0000418	.39996	.0001220	.0004095	.0081280	.6052
%RSD	2.459948	1.726446	.5187964	.1604372	.5346010	5.597144	.5598129
#1	.0076845	.0023851	76.81959	.0759399	.0766185	.1538138	107.6295
#2	.0073157	.0024109	77.55209	.0761590	.0761678	.1441770	108.7828
#3	.0074944	.0024669	76.90750	.0759565	.0769853	.1376578	107.8883

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.893495	22.36111	.1293143	-.007798	.8887547	.1439623	.5249480
Stddev	.041984	.18067	.0016334	.001328	.0268602	.0064033	.0021326
%RSD	.7123854	.8079790	1.263083	17.03098	3.022229	4.447928	.4062547
#1	5.857512	22.33661	.1303466	-.008965	.9144271	.1427232	.5229692
#2	5.939622	22.55278	.1274312	-.006353	.8909905	.1508947	.5246679
#3	5.883352	22.19394	.1301651	-.008077	.8608465	.1382691	.5272068

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.912860	4.392175	-.156680	.0115444	4.918115	7.682892	.0413679
Stddev	.353574	.017708	.003162	.0005908	.032254	.083554	.0029609
%RSD	9.036198	.4031759	2.018326	5.117989	.6558217	1.087538	7.157530
#1	4.086229	4.381803	-.159124	.0121973	4.906885	7.693513	.0381123
#2	4.146287	4.382099	-.157807	.0110467	4.892978	7.760629	.0439001
#3	3.506063	4.412621	-.153108	.0113891	4.954483	7.594535	.0420914

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5124-19A Acquired: 01/05/2025 20:07:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM88A Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.403995	.3366435	.0689657
Stddev	.009159	.0015276	.0022557
%RSD	.6523473	.4537828	3.270754
#1	1.395689	.3363441	.0694974
#2	1.413818	.3382987	.0664916
#3	1.402479	.3352878	.0709080

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1941.164	19371.76	1820.967	1429.671	1954.082
Stddev	4.622	69.84	11.880	9.697	5.893
%RSD	.2380801	.3605429	.6523872	.6782949	.3015975
#1	1945.421	19351.86	1818.526	1428.757	1960.353
#2	1936.248	19449.39	1810.497	1439.794	1948.658
#3	1941.824	19314.02	1833.877	1420.464	1953.236

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-03A Acquired: 01/05/2025 20:11:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1850887	.0378470	4.262377	.0732929	.0492941	52.49515
Stddev	.0031249	.0041724	.020356	.0011412	.0038380	.61779
%RSD	1.688315	11.02445	.4775746	1.557112	7.785871	1.176843
#1	.1855097	.0413078	4.275041	.0746086	.0499991	52.89088
#2	.1817747	.0332138	4.238896	.0726997	.0527307	52.81129
#3	.1879818	.0390195	4.273194	.0725704	.0451525	51.78327

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.531359	.0075233	.0081395	177.7024	.1751167	.1059076
Stddev	.016825	.0000938	.0001118	1.9346	.0013861	.0005258
%RSD	1.098728	1.246880	1.373632	1.088692	.7915534	.4964374
#1	1.537760	.0076215	.0081300	178.8329	.1746254	.1062087
#2	1.544045	.0075139	.0080327	178.8058	.1740431	.1053005
#3	1.512273	.0074346	.0082557	175.4685	.1766816	.1062136

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5643709	178.2638	6.018474	48.47369	.2075607	-.008177
Stddev	.0047460	2.1214	.070918	.57543	.0013642	.001039
%RSD	.8409442	1.190058	1.178336	1.187100	.6572396	12.70845
#1	.5694208	179.7045	6.069948	49.00482	.2088886	-.007313
#2	.5636896	179.2592	6.047894	48.55390	.2076305	-.007889
#3	.5600024	175.8277	5.937581	47.86237	.2061630	-.009330

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9830315	.1836444	3.331514	6.016317	F 14.20923	-.363870
Stddev	.0193666	.0080763	.025787	.294123	.07180	.010405
%RSD	1.970094	4.397820	.7740264	4.888748	.5053171	2.859481
#1	.9857347	.1756989	3.361265	6.097739	14.25229	-.371265
#2	1.000904	.1833886	3.317683	6.261151	14.12634	-.368373
#3	.962455	.1918456	3.315593	5.690061	14.24906	-.351972

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-03A Acquired: 01/05/2025 20:11:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131584	3.934782	9.291042	.3933277	1.055015	.2628794
Stddev	.0005145	.005074	.183228	.0045253	.008744	.0021736
%RSD	3.909784	.1289425	1.972093	1.150510	.8288207	.8268383
#1	.0128479	3.939284	9.441178	.3985470	1.059507	.2644250
#2	.0128751	3.929284	9.345074	.3905015	1.060599	.2638190
#3	.0137523	3.935776	9.086873	.3909345	1.044937	.2603940

Elem	Li6707
Units	ppm
Avg	.0882476
Stddev	.0055319
%RSD	6.268660
#1	.0933327
#2	.0890530
#3	.0823571

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1994.281	19838.79	1897.820	1448.510	1896.724
Stddev	6.849	28.52	28.670	5.054	10.048
%RSD	.3434361	.1437388	1.510703	.3489202	.5297319
#1	1993.392	19831.93	1876.705	1446.293	1892.504
#2	2001.531	19870.11	1886.294	1454.294	1908.194
#3	1987.920	19814.33	1930.459	1444.943	1889.475

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-19A Acquired: 01/05/2025 20:15:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK9A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7378207	.0496381	5.220231	.0979513	.0408061	66.23314
Stddev	.0075691	.0035362	.031387	.0162705	.0022192	4.41370
%RSD	1.025869	7.123941	.6012639	16.61080	5.438287	6.663886
#1	.7458704	.0474163	5.249755	.1133835	.0423743	71.32190
#2	.7308475	.0477821	5.187265	.0809554	.0417769	63.44553
#3	.7367441	.0537159	5.223674	.0995149	.0382669	63.93198

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.145726	.0072271	.0154378	119.9035	.1700628	.1391444
Stddev	.133619	.0004805	.0001423	7.3918	.0004045	.0013437
%RSD	6.227234	6.648285	.9216926	6.164797	.2378739	.9657236
#1	2.298764	.0077044	.0153084	128.4045	.1696382	.1402298
#2	2.052218	.0067435	.0155902	114.9904	.1704437	.1376414
#3	2.086195	.0072335	.0154149	116.3157	.1701067	.1395619

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7765469	189.8336	16.19669	32.56204	.2320667	-.001928
Stddev	.0312385	12.0793	1.01204	2.12717	.0017129	.002608
%RSD	4.022746	6.363106	6.248452	6.532669	.7380898	135.2260
#1	.8123321	203.7600	17.36446	35.01645	.2335560	.000942
#2	.7547289	182.1985	15.57439	31.41711	.2301949	-.004151
#3	.7625797	183.5424	15.65123	31.25256	.2324492	-.002576

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.198329	.1704235	3.323244	9.315643	F 11.77566	-.395087
Stddev	.069497	.0038275	.006770	.687982	.08167	.018606
%RSD	5.799532	2.245850	.2037041	7.385236	.6935785	4.709254
#1	1.278442	.1746341	3.323489	10.10962	11.84801	-.415728
#2	1.154239	.1694813	3.316355	8.94153	11.68710	-.379606
#3	1.162304	.1671551	3.329887	8.89579	11.79187	-.389928

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-19A Acquired: 01/05/2025 20:15:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK9A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0129597	3.176945	9.973848	.2364317	.7445053	.0643268
Stddev	.0004202	.022887	.533885	.0024085	.0532839	.0050842
%RSD	3.242119	.7204066	5.352850	1.018677	7.156953	7.903764
#1	.0130931	3.201778	10.58829	.2391829	.8047313	.0700671
#2	.0132969	3.156699	9.62332	.2347045	.7034931	.0603907
#3	.0124890	3.172357	9.70993	.2354076	.7252914	.0625226

Elem	Li6707
Units	ppm
Avg	.0950764
Stddev	.0077791
%RSD	8.181922
#1	.1039080
#2	.0892403
#3	.0920810

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2176.280	21626.90	2003.087	1584.306	1933.702
Stddev	12.342	75.00	103.812	1.330	9.876
%RSD	.5671235	.3468064	5.182611	.0839252	.5107236
#1	2176.366	21669.58	1883.512	1583.092	1928.398
#2	2188.578	21540.30	2070.176	1585.727	1945.097
#3	2163.894	21670.82	2055.574	1584.100	1927.612

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5129-01A Acquired: 01/05/2025 20:19:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK3A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1900623	.0395317	2.393224	.2507695	.0358880	69.15522
Stddev	.0042347	.0058803	.021404	.0053243	.0032631	2.89960
%RSD	2.228057	14.87478	.8943577	2.123165	9.092496	4.192881
#1	.1851792	.0463209	2.375608	.2492346	.0386745	65.84008
#2	.1927261	.0360564	2.417045	.2566926	.0366911	70.40656
#3	.1922816	.0362176	2.387018	.2463814	.0322983	71.21903

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.457638	.0072263	.0077153	60.75031	.1415283	.1368691
Stddev	.066896	.0002181	.0001646	2.79709	.0007141	.0007741
%RSD	4.589322	3.018883	2.133766	4.604234	.5045999	.5655912
#1	1.380406	.0069867	.0078880	57.52275	.1418634	.1359788
#2	1.497431	.0072788	.0075602	62.25991	.1407082	.1373840
#3	1.495079	.0074134	.0076977	62.46826	.1420132	.1372444

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.189234	168.8884	16.87737	18.94768	.2137594	-.007009
Stddev	.058113	7.0992	.71380	.90666	.0014459	.000916
%RSD	4.886589	4.203514	4.229337	4.785086	.6764112	13.06538
#1	1.122134	160.7160	16.05448	17.90419	.2123004	-.007725
#2	1.222186	172.4194	17.24817	19.39611	.2151918	-.005977
#3	1.223381	173.5299	17.32945	19.54275	.2137858	-.007324

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4963230	.1863838	3.732113	10.35301	F 11.45540	-.353229
Stddev	.0316239	.0166510	.026241	.44605	.07644	.006702
%RSD	6.371643	8.933718	.7031181	4.308431	.6673060	1.897292
#1	.4682177	.1705572	3.762214	9.84028	11.41061	-.345557
#2	.4901854	.2037520	3.714060	10.65174	11.54367	-.357939
#3	.5305658	.1848423	3.720064	10.56701	11.41193	-.356192

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5129-01A Acquired: 01/05/2025 20:19:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK3A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118345	3.472626	9.986254	.1852000	.7528422	.0793442
Stddev	.0006894	.018704	.329223	.0024600	.0335720	.0032486
%RSD	5.825450	.5385984	3.296761	1.328277	4.459363	4.094316
#1	.0111842	3.468510	9.606107	.1826584	.7145767	.0756258
#2	.0125573	3.493045	10.17832	.1875692	.7773501	.0807747
#3	.0117620	3.456323	10.17434	.1853724	.7665999	.0816320

Elem	Li6707
Units	ppm
Avg	.0956528
Stddev	.0036922
%RSD	3.859985
#1	.0918042
#2	.0991656
#3	.0959888

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2186.558	21924.97	2098.049	1610.190	1930.600
Stddev	6.644	51.46	68.060	11.619	6.909
%RSD	.3038403	.2346997	3.243971	.7215802	.3578819
#1	2193.176	21881.52	2176.477	1598.721	1936.477
#2	2179.889	21981.79	2063.193	1621.953	1922.989
#3	2186.608	21911.59	2054.478	1609.895	1932.333

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5130-15A Acquired: 01/05/2025 20:23:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMH5A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4430422	.0376727	4.885795	.2834623	.0503076	60.09485
Stddev	.0058990	.0025330	.020530	.0094954	.0012180	.78695
%RSD	1.331479	6.723577	.4201901	3.349807	2.421165	1.309518
#1	.4401943	.0371707	4.908156	.2851959	.0514292	59.73517
#2	.4498249	.0354283	4.881430	.2732194	.0504817	60.99737
#3	.4391075	.0404190	4.867799	.2919714	.0490119	59.55201

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.293765	.0059406	.0159490	134.9033	.1493282	.1297611
Stddev	.052702	.0002507	.0002345	2.1440	.0003803	.0002181
%RSD	1.600041	4.219531	1.470447	1.589256	.2547007	.1681098
#1	3.255018	.0059297	.0162038	133.4822	.1497362	.1295689
#2	3.353776	.0061965	.0157422	137.3694	.1489835	.1297163
#3	3.272500	.0056955	.0159009	133.8583	.1492648	.1299982

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.944797	221.4554	15.78798	39.67328	.1714419	-.011601
Stddev	.021276	2.9664	.22287	.53945	.0008759	.001172
%RSD	1.094005	1.339505	1.411665	1.359735	.5108965	10.10635
#1	1.924690	220.3997	15.65071	39.56340	.1724501	-.011278
#2	1.967076	224.8053	16.04513	40.25921	.1710064	-.010623
#3	1.942625	219.1613	15.66809	39.19722	.1708690	-.012901

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8951436	.1490950	5.423755	7.412450	F 27.29308	-.471584
Stddev	.0152378	.0086219	.014058	.156578	.07959	.009012
%RSD	1.702273	5.782801	.2591850	2.112360	.2915969	1.911073
#1	.8934173	.1392430	5.436710	7.262501	27.38004	-.462935
#2	.9111710	.1552619	5.425747	7.574906	27.27531	-.480920
#3	.8808425	.1527800	5.408808	7.399943	27.22388	-.470895

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5130-15A Acquired: 01/05/2025 20:23:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMH5A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149724	7.061507	9.831607	.7190368	.9400064	.2359625
Stddev	.0005475	.034992	.163286	.0025916	.0152879	.0036943
%RSD	3.656431	.4955303	1.660826	.3604307	1.626365	1.565626
#1	.0143594	7.101784	9.769164	.7208950	.9275187	.2332082
#2	.0154127	7.044156	10.01690	.7201391	.9570560	.2401606
#3	.0151452	7.038581	9.70876	.7160762	.9354445	.2345186

Elem	Li6707
Units	ppm
Avg	.0875624
Stddev	.0009604
%RSD	1.096871
#1	.0870538
#2	.0886702
#3	.0869632

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2086.055	20914.93	1972.208	1525.923	1849.153
Stddev	2.584	86.95	26.076	6.558	.877
%RSD	.1238562	.4157413	1.322159	.4298047	.0474283
#1	2088.889	20863.96	1979.199	1519.221	1848.451
#2	2085.445	21015.33	1943.349	1532.328	1850.136
#3	2083.831	20865.50	1994.075	1526.221	1848.874

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5201-19A Acquired: 01/05/2025 20:26:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNE7A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1033664	-.006273	.3684040	.3554620	.0605938	108.8875	.7432541
Stddev	.0042293	.002393	.0019113	.0023369	.0019753	.6464	.0024368
%RSD	4.091556	38.15192	.5187999	.6574108	3.259941	.5936337	.3278505
#1	.1043556	-.009036	.3662050	.3570914	.0622549	108.1419	.7424751
#2	.1070134	-.004921	.3693418	.3527846	.0584095	109.2320	.7459851
#3	.0987301	-.004862	.3696653	.3565101	.0611170	109.2887	.7413021

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0093050	.0033281	29.81348	.1393501	.1502864	.1813369	273.7324
Stddev	.0000799	.0001313	.01294	.0008940	.0009574	.0081602	1.1311
%RSD	.8586871	3.944851	.0434088	.6415502	.6370312	4.500014	.4132122
#1	.0092976	.0034563	29.81446	.1392103	.1509569	.1867985	272.4425
#2	.0093883	.0031940	29.82591	.1403058	.1507122	.1852558	274.1998
#3	.0092291	.0033340	29.80008	.1385343	.1491899	.1719565	274.5549

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.39219	32.65462	.2070940	-.019524	.5310472	.2701668	.7352968
Stddev	.05344	.20569	.0008503	.001035	.0070778	.0170732	.0018663
%RSD	.3471879	.6298988	.4105727	5.303172	1.332806	6.319503	.2538191
#1	15.33064	32.42710	.2061924	-.018337	.5330207	.2825040	.7334924
#2	15.42675	32.70936	.2072081	-.019993	.5231921	.2773150	.7372194
#3	15.41920	32.82740	.2078815	-.020242	.5369288	.2506813	.7351787

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.610248	3.537924	-.625042	.0066990	.5541326	6.798337	.0331275
Stddev	.281867	.009618	.006043	.0003134	.0062917	.026590	.0022061
%RSD	3.703777	.2718578	.9668648	4.677988	1.135406	.3911298	6.659433
#1	7.291429	3.547582	-.628855	.0068398	.5553073	6.828997	.0307445
#2	7.712964	3.537846	-.628198	.0069173	.5597541	6.781592	.0350986
#3	7.826353	3.528346	-.618075	.0063400	.5473364	6.784421	.0335396

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5201-19A Acquired: 01/05/2025 20:26:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNE7A Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.205898	-.165912	.1193270
Stddev	.013104	.000493	.0053283
%RSD	1.086694	.2971940	4.465307
#1	1.194835	-.165364	.1188483
#2	1.220370	-.166318	.1142542
#3	1.202489	-.166055	.1248785

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2313.940	23039.65	2161.973	1683.929	1896.231
Stddev	2.877	103.92	11.159	3.274	1.728
%RSD	.1243290	.4510420	.5161263	.1944203	.0911240
#1	2311.729	22981.44	2149.333	1680.860	1894.442
#2	2317.193	22977.88	2166.132	1683.551	1897.890
#3	2312.899	23159.62	2170.455	1687.375	1896.361

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5212-05A Acquired: 01/05/2025 20:30:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNF3A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1108983	-.008235	1.739211	.1584848	.0340800	62.54046
Stddev	.0064614	.003223	.006002	.0062783	.0048221	.27006
%RSD	5.826423	39.14384	.3451230	3.961451	14.14943	.4318098
#1	.1078179	-.011747	1.738424	.1513362	.0285229	62.66476
#2	.1065535	-.005413	1.733641	.1610150	.0371617	62.23063
#3	.1183235	-.007544	1.745569	.1631033	.0365553	62.72598

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.772757	.0056487	.0053830	274.2276	.1557645	.1278986
Stddev	.011887	.0001386	.0000213	.9382	.0007173	.0005722
%RSD	.6705341	2.453745	.3948859	.3421188	.4604924	.4473520
#1	1.759250	.0055523	.0053995	273.2711	.1549380	.1280354
#2	1.777395	.0055862	.0053590	274.2654	.1561317	.1272704
#3	1.781626	.0058075	.0053904	275.1463	.1562239	.1283899

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3752486	155.5286	12.66560	39.12284	.1484832	-.007725
Stddev	.0068517	.2722	.03840	.18816	.0007288	.001560
%RSD	1.825917	.1750046	.3031628	.4809588	.4908504	20.19021
#1	.3674693	155.4510	12.65650	39.30114	.1480791	-.006519
#2	.3778901	155.3036	12.63258	38.92616	.1480459	-.009487
#3	.3803863	155.8311	12.70774	39.14122	.1493245	-.007170

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7075833	.1560318	1.043240	7.363163	F 13.80707	-.310288
Stddev	.0151433	.0081728	.006310	.193058	.01948	.000452
%RSD	2.140140	5.237919	.6048353	2.621949	.1410821	.1456306
#1	.7092506	.1636631	1.049650	7.143067	13.79242	-.310389
#2	.7218240	.1570243	1.043035	7.503866	13.79963	-.309793
#3	.6916754	.1474081	1.037035	7.442556	13.82918	-.310680

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5212-05A Acquired: 01/05/2025 20:30:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHNF3A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124110	2.962862	12.20760	.0889542	.7105796	.1919485
Stddev	.0010244	.006018	.01156	.0017078	.0032273	.0012895
%RSD	8.253993	.2031111	.0947316	1.919817	.4541782	.6717892
#1	.0122105	2.956226	12.20459	.0888358	.7113060	.1905015
#2	.0115017	2.967966	12.22037	.0873087	.7070510	.1923682
#3	.0135208	2.964396	12.19784	.0907180	.7133818	.1929759

Elem	Li6707
Units	ppm
Avg	.1040767
Stddev	.0017256
%RSD	1.657962
#1	.1029158
#2	.1060596
#3	.1032547

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2164.725	21808.25	2069.094	1594.377	1849.360
Stddev	3.540	61.12	4.727	3.104	2.410
%RSD	.1635227	.2802797	.2284500	.1946817	.1303372
#1	2166.892	21877.60	2074.371	1590.795	1851.532
#2	2160.640	21784.93	2067.663	1596.056	1846.767
#3	2166.642	21762.22	2065.249	1596.280	1849.782

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165852BL Acquired: 01/05/2025 20:34:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS852 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002595	-.000957	-.001572	.0063280	.0036743	-.006260	-.003797
Stddev	.005214	.003213	.002139	.0018018	.0063678	.010957	.002264
%RSD	200.9592	335.5695	136.0832	28.47373	173.3075	175.0300	59.62660
#1	.001594	.000215	-.003879	.0074798	.0076425	.006074	-.001251
#2	-.000944	.001505	.000346	.0042516	.0070510	-.014870	-.004558
#3	-.008434	-.004591	-.001184	.0072527	-.003671	-.009984	-.005583

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001889	-.000030	.0027087	.0002015	.0003315	-.004443	-.001901
Stddev	.0001380	.000034	.0692882	.0013303	.0002918	.010221	.015857
%RSD	73.06253	113.2855	2557.944	660.3390	88.03578	230.0344	834.3452
#1	.0003478	.000002	-.010981	.0004873	.0001439	.007213	.004380
#2	.0000997	-.000066	-.058713	.0013656	.0001828	-.011876	-.019936
#3	.0001191	-.000027	.077820	-.001249	.0006677	-.008667	.009855

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002047	.0262738	.0006066	-.001154	.0076574	-.008295	.0030676
Stddev	.002265	.0500384	.0001031	.001793	.0147147	.012257	.0006815
%RSD	110.6672	190.4497	16.99837	155.3672	192.1635	147.7655	22.21480
#1	-.002799	.0685342	.0005671	-.003181	.0074285	-.009833	.0034927
#2	.000499	.0392669	.0007236	.000226	-.006942	-.019710	.0034287
#3	-.003841	-.028980	.0005291	-.000508	.022485	.004659	.0022816

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.035086	-.001764	.0003417	-.001469	.0006695	-.000178	-.001461
Stddev	.177605	.001133	.0018669	.000673	.0032312	.000790	.001519
%RSD	506.1954	64.24401	546.2788	45.82067	482.6253	442.6339	104.0205
#1	-.114890	-.001872	-.001488	-.000726	-.001889	.000733	-.000236
#2	.168422	-.002839	.000269	-.002039	-.000403	-.000619	-.003161
#3	-.158791	-.000580	.002244	-.001642	.004301	-.000650	-.000986

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165852BL Acquired: 01/05/2025 20:34:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS852 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.003942	-.000132	.0026241
Stddev	.002320	.000176	.0051248
%RSD	58.84983	133.1469	195.2968
#1	-.005238	-.000289	.0035160
#2	-.005326	-.000167	.0072444
#3	-.001264	.000058	-.002888

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1779.352	17822.90	1660.046	1309.885	1994.734
Stddev	1.318	167.56	10.488	12.908	5.034
%RSD	.0740818	.9401461	.6317942	.9854534	.2523804
#1	1779.149	17763.94	1648.263	1306.952	1998.665
#2	1780.759	17692.78	1663.516	1298.696	1996.478
#3	1778.146	18011.97	1668.359	1324.008	1989.060

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165852BS Acquired: 01/05/2025 20:38:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS852 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0241411	.0447997	.0185299	.0680009	.1049930	.3995630
Stddev	.0057281	.0040646	.0012600	.0084598	.0020165	.0069568
%RSD	23.72747	9.072842	6.799725	12.44077	1.920643	1.741116
#1	.0298405	.0465263	.0177170	.0733944	.1068008	.3935540
#2	.0241979	.0401568	.0199813	.0582507	.1028181	.4071845
#3	.0183848	.0477160	.0178913	.0723575	.1053600	.3979506

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3943494	.0105824	.0095616	10.01067	.0203826	.0979843
Stddev	.0035231	.0003798	.0001038	.09294	.0011912	.0004026
%RSD	.8933872	3.588742	1.085968	.9283748	5.844195	.4108525
#1	.3966141	.0103217	.0095348	9.95580	.0190784	.0983772
#2	.3902904	.0104073	.0094737	9.95825	.0214132	.0975727
#3	.3961438	.0110181	.0096762	10.11798	.0206562	.0980029

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0490378	.1956979	.0313141	10.19936	.0760770	.0191700
Stddev	.0143649	.0454340	.0006448	.04583	.0008403	.0007670
%RSD	29.29356	23.21639	2.059110	.4493592	1.104499	4.001218
#1	.0456033	.2469009	.0317024	10.20598	.0758336	.0185183
#2	.0648086	.1799926	.0305698	10.15058	.0770121	.0189763
#3	.0367014	.1602001	.0316702	10.24152	.0753853	.0200153

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.683206	.0988431	.1178237	9.359477	.0188710	F .0011132
Stddev	.025646	.0127806	.0003764	.082591	.0036727	.0035584
%RSD	.3337900	12.93024	.3194438	.8824282	19.46189	319.6498
#1	7.654568	.0983711	.1175286	9.264265	.0165427	-.001717
#2	7.704054	.1118532	.1182475	9.411800	.0169655	-.000051
#3	7.690995	.0863050	.1176948	9.402365	.0231047	.005108

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165852BS Acquired: 01/05/2025 20:38:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS852 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0194053	.1735523	F .4829502	F .0097447	.1857922	.2061574
Stddev	.0008670	.0020256	.0020595	.0011441	.0020111	.0012779
%RSD	4.467968	1.167122	.4264385	11.74044	1.082448	.6198472
#1	.0200535	.1730571	.4805780	.0110581	.1839976	.2047756
#2	.0197420	.1718203	.4839908	.0092106	.1879659	.2064001
#3	.0184205	.1757796	.4842817	.0089653	.1854130	.2072964

Elem	Li6707
Units	ppm
Avg	.0318231
Stddev	.0053648
%RSD	16.85831
#1	.0256288
#2	.0348589
#3	.0349817

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1764.879	17609.84	1642.789	1288.446	1968.151
Stddev	4.894	51.19	3.437	10.656	5.140
%RSD	.2773172	.2907123	.2092049	.8270144	.2611393
#1	1769.524	17560.32	1646.484	1290.852	1972.797
#2	1759.769	17606.65	1639.688	1276.793	1962.630
#3	1765.345	17662.56	1642.194	1297.693	1969.025

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-01 Acquired: 01/05/2025 20:42:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM98 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1006016	-.008049	3.515977	.0472783	.0398664	40.67094
Stddev	.0031878	.002195	.004477	.0041849	.0021481	.29964
%RSD	3.168751	27.26974	.1273215	8.851682	5.388128	.7367533
#1	.1002983	-.007038	3.518211	.0437112	.0417442	40.34807
#2	.1039302	-.006541	3.510823	.0518850	.0375241	40.94008
#3	.0975762	-.010567	3.518898	.0462386	.0403311	40.72468

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.191476	.0056042	.0067689	224.4808	.1489069	.0899676
Stddev	.004471	.0000623	.0001357	.7074	.0007711	.0005848
%RSD	.3752163	1.111209	2.004316	.3151136	.5178751	.6500554
#1	1.187641	.0056645	.0069053	223.9279	.1497968	.0906351
#2	1.196386	.0055401	.0067676	225.2780	.1484900	.0895451
#3	1.190401	.0056082	.0066339	224.2367	.1484340	.0897226

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4142123	138.9004	4.395918	80.55075	.1741677	-.007145
Stddev	.0015060	.9691	.036099	.51277	.0008758	.000061
%RSD	.3635902	.6977240	.8211835	.6365759	.5028293	.8513006
#1	.4140832	137.8840	4.354660	79.96621	.1731687	-.007111
#2	.4157787	139.8141	4.421690	80.92462	.1745314	-.007215
#3	.4127750	139.0031	4.411403	80.76144	.1748030	-.007108

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7267489	.1410460	2.781359	6.654577	F 11.55261	-.273386
Stddev	.0156169	.0060942	.006970	.216141	.01548	.005128
%RSD	2.148879	4.320707	.2505873	3.248002	.1340140	1.875766
#1	.7285850	.1387918	2.773336	6.408568	11.54600	-.279259
#2	.7102951	.1479462	2.784832	6.741161	11.54153	-.271103
#3	.7413667	.1364001	2.785911	6.814003	11.57030	-.269796

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-01 Acquired: 01/05/2025 20:42:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM98 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0120124	4.664450	8.028091	.2842880	.8568123	.2215914
Stddev	.0009609	.013151	.073073	.0006429	.0090097	.0016048
%RSD	7.999213	.2819304	.9102218	.2261630	1.051537	.7241945
#1	.0112898	4.659521	8.082939	.2849241	.8464787	.2197600
#2	.0116445	4.654476	8.056197	.2836384	.8609365	.2227513
#3	.0131028	4.679353	7.945138	.2843016	.8630216	.2222630

Elem	Li6707
Units	ppm
Avg	.0692810
Stddev	.0021361
%RSD	3.083230
#1	.0669166
#2	.0710716
#3	.0698547

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1885.807	19024.27	1791.868	1384.917	1827.323
Stddev	3.796	147.51	11.209	7.612	2.833
%RSD	.2012680	.7753666	.6255362	.5496200	.1550462
#1	1889.483	19185.23	1786.134	1393.560	1828.409
#2	1886.037	18895.54	1784.686	1379.212	1829.452
#3	1881.903	18992.05	1804.784	1381.979	1824.107

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-02 Acquired: 01/05/2025 20:46:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM99 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1126400	-.016211	2.904243	.0609961	.0419901	40.82390
Stddev	.0030537	.001672	.009594	.0027872	.0036845	.31631
%RSD	2.711040	10.31226	.3303403	4.569535	8.774591	.7748167
#1	.1149302	-.018112	2.897513	.0586994	.0407583	41.17331
#2	.1091730	-.014971	2.899988	.0640970	.0390794	40.74130
#3	.1138170	-.015549	2.915229	.0601918	.0461327	40.55708

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.156025	.0061351	.0057661	165.1772	.1419746	.0975532
Stddev	.012045	.0001192	.0000347	1.1985	.0013659	.0002607
%RSD	1.041904	1.942978	.6025736	.7255551	.9620617	.2672267
#1	1.166026	.0061855	.0057911	166.3052	.1412340	.0976417
#2	1.159394	.0059990	.0057264	165.3075	.1435509	.0977581
#3	1.142654	.0062210	.0057807	163.9189	.1411390	.0972598

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3854689	154.8589	4.170640	53.30368	.1862162	-.010610
Stddev	.0117557	1.2004	.037835	.51165	.0012174	.000946
%RSD	3.049704	.7751587	.9071778	.9598697	.6537576	8.912091
#1	.3872909	156.1645	4.210923	53.67717	.1851983	-.010237
#2	.3962071	154.6095	4.165143	53.51338	.1858856	-.011686
#3	.3729086	153.8028	4.135854	52.72050	.1875648	-.009909

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7041615	.1825088	2.336503	5.834861	F 10.65749	-.310653
Stddev	.0255658	.0078802	.013936	.251642	.04105	.001943
%RSD	3.630676	4.317709	.5964356	4.312739	.3851851	.6253376
#1	.7285066	.1798529	2.326003	5.946247	10.64153	-.311058
#2	.6775287	.1913738	2.331193	6.011587	10.62681	-.308540
#3	.7064493	.1762996	2.352313	5.546749	10.70412	-.312361

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-02 Acquired: 01/05/2025 20:46:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHM99 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0110922	4.811403	7.826071	.2328358	.9246078	.1822063
Stddev	.0002023	.002737	.068527	.0017339	.0073619	.0022093
%RSD	1.824156	.0568960	.8756287	.7446947	.7962150	1.212532
#1	.0113251	4.814511	7.905024	.2313266	.9329090	.1841809
#2	.0109592	4.810348	7.782026	.2324510	.9220428	.1826179
#3	.0109924	4.809350	7.791164	.2347298	.9188715	.1798202

Elem	Li6707
Units	ppm
Avg	.0771542
Stddev	.0053083
%RSD	6.880119
#1	.0716861
#2	.0822867
#3	.0774899

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1923.635	19247.09	1810.547	1407.701	1874.012
Stddev	.860	6.97	14.246	10.001	3.309
%RSD	.0447137	.0362203	.7868608	.7104714	.1765484
#1	1922.643	19239.96	1794.130	1418.815	1877.790
#2	1924.180	19247.43	1819.669	1404.860	1871.634
#3	1924.080	19253.89	1817.841	1399.427	1872.611

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-03 Acquired: 01/05/2025 20:50:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1957995	-.018716	4.306509	.0719168	.0482203	52.95583
Stddev	.0033970	.007634	.002217	.0075640	.0041497	1.72498
%RSD	1.734933	40.78907	.0514860	10.51771	8.605729	3.257386
#1	.1924276	-.012222	4.308921	.0732081	.0522762	54.06074
#2	.1957498	-.016800	4.306048	.0637902	.0484018	50.96813
#3	.1992210	-.027125	4.304558	.0787519	.0439828	53.83862

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.540708	.0077395	.0081006	178.3043	.1762091	.1070068
Stddev	.052343	.0000642	.0001478	5.3704	.0008246	.0007749
%RSD	3.397336	.8288718	1.824614	3.011908	.4679680	.7241571
#1	1.560068	.0077854	.0082319	180.9979	.1762947	.1061967
#2	1.481443	.0077668	.0081294	172.1202	.1769876	.1077409
#3	1.580614	.0076662	.0079405	181.7948	.1753450	.1070828

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5666403	179.0129	6.022239	48.42027	.2075707	-.007849
Stddev	.0173123	5.9596	.186835	1.69581	.0016674	.001752
%RSD	3.055257	3.329137	3.102416	3.502269	.8032997	22.31602
#1	.5726104	182.2694	6.098814	49.30979	.2078670	-.006164
#2	.5471330	172.1346	5.809282	46.46477	.2057750	-.007722
#3	.5801774	182.6347	6.158621	49.48625	.2090701	-.009660

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.004888	.1891473	3.308402	5.934223	F 14.36850	-.364317
Stddev	.030752	.0225385	.001800	.131468	.01419	.007752
%RSD	3.060219	11.91582	.0543935	2.215422	.0987388	2.127686
#1	1.025658	.2074053	3.309736	5.914282	14.36648	-.367270
#2	.969561	.1639570	3.306355	5.813864	14.35543	-.355523
#3	1.019446	.1960798	3.309115	6.074522	14.38359	-.370158

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-03 Acquired: 01/05/2025 20:50:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131430	3.986134	9.764036	.3977135	1.093471	.2637126
Stddev	.0009459	.017001	.248793	.0029549	.036060	.0078872
%RSD	7.197379	.4265084	2.548050	.7429748	3.297770	2.990822
#1	.0121986	3.967494	9.891587	.3995558	1.116427	.2686461
#2	.0131398	3.990121	9.477335	.3943052	1.051908	.2546162
#3	.0140905	4.000788	9.923186	.3992795	1.112077	.2678757

Elem	Li6707
Units	ppm
Avg	.0912348
Stddev	.0039729
%RSD	4.354528
#1	.0911888
#2	.0872852
#3	.0952304

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1986.205	19861.09	1892.416	1458.370	1881.425
Stddev	4.022	80.76	52.955	6.048	1.673
%RSD	.2024897	.4066469	2.798282	.4146895	.0889146
#1	1981.565	19850.99	1867.950	1458.076	1879.847
#2	1988.371	19946.43	1953.180	1464.560	1883.179
#3	1988.680	19785.85	1856.117	1452.475	1881.248

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-04 Acquired: 01/05/2025 20:53:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1851227	-.019966	4.291024	.0773718	.0509089	53.84159
Stddev	.0081204	.003024	.008168	.0071055	.0012645	.26592
%RSD	4.386470	15.14501	.1903431	9.183545	2.483810	.4938877
#1	.1908234	-.016499	4.283792	.0787594	.0514773	53.75076
#2	.1887196	-.022060	4.289397	.0696748	.0517895	54.14102
#3	.1758251	-.021339	4.299882	.0836811	.0494600	53.63299

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.560473	.0078350	.0080933	180.4805	.1767969	.1068920
Stddev	.008290	.0000827	.0001111	1.1660	.0005482	.0002304
%RSD	.5312791	1.055289	1.372101	.6460488	.3100786	.2155237
#1	1.552295	.0078748	.0080093	179.6962	.1773603	.1067268
#2	1.568872	.0078902	.0080515	181.8204	.1762652	.1071551
#3	1.560252	.0077399	.0082192	179.9250	.1767653	.1067940

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5673692	181.4330	6.110677	49.19926	.2088049	-.008035
Stddev	.0060152	.7739	.028691	.36665	.0004673	.000957
%RSD	1.060190	.4265695	.4695159	.7452314	.2238167	11.91672
#1	.5643954	180.9880	6.090025	49.16243	.2086139	-.008336
#2	.5742921	182.3267	6.143437	49.58294	.2084632	-.008806
#3	.5634202	180.9844	6.098568	48.85242	.2093375	-.006963

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.000337	.2046353	3.322898	6.073125	F 14.35562	-.363308
Stddev	.018798	.0146143	.023188	.041689	.02278	.008404
%RSD	1.879217	7.141623	.6978136	.6864569	.1587009	2.313182
#1	.984117	.2143157	3.312250	6.085305	14.35238	-.359323
#2	1.020940	.1878245	3.306947	6.107368	14.33463	-.372963
#3	.995954	.2117657	3.349497	6.026702	14.37985	-.357637

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-04 Acquired: 01/05/2025 20:53:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0124422	3.970972	9.866085	.3969144	1.120636	.2679745
Stddev	.0005332	.011041	.152280	.0007989	.008711	.0016256
%RSD	4.285705	.2780363	1.543470	.2012860	.7773012	.6066245
#1	.0129749	3.983287	9.839059	.3973377	1.128025	.2664749
#2	.0124433	3.961961	10.03007	.3959929	1.122853	.2697020
#3	.0119084	3.967667	9.72913	.3974127	1.111031	.2677466

Elem	Li6707
Units	ppm
Avg	.0922788
Stddev	.0034732
%RSD	3.763843
#1	.0885010
#2	.0930019
#3	.0953337

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1989.232	19849.10	1876.918	1450.579	1884.380
Stddev	3.807	75.24	19.507	11.667	6.375
%RSD	.1913926	.3790661	1.039326	.8042835	.3383257
#1	1990.869	19818.08	1878.248	1454.079	1885.907
#2	1991.946	19934.90	1856.780	1460.095	1889.853
#3	1984.880	19794.33	1895.727	1437.562	1877.379

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV114 Acquired: 01/05/2025 21:05:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV114 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.025887	4.869220	24.84085	4.974018	4.935332	402.7613
Stddev	.020531	.059477	.26903	.047971	.061351	1.3313
%RSD	.4085042	1.221479	1.083029	.9644362	1.243092	.3305389
#1	5.018807	4.920892	25.03237	5.002408	4.969467	401.2299
#2	5.009832	4.804205	24.53326	4.918631	4.864505	403.4113
#3	5.049021	4.882562	24.95691	5.001014	4.972023	403.6428

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.28685	.5132531	2.500441	410.8777	15.56660	2.517866
Stddev	.07073	.0025092	.028910	1.3871	.40024	.027222
%RSD	.6875642	.4888787	1.156177	.3376063	2.571127	1.081159
#1	10.22209	.5158354	2.520109	409.6997	15.88535	2.535583
#2	10.36232	.5130998	2.467248	412.4066	15.69705	2.486521
#3	10.27613	.5108240	2.513965	410.5270	15.11742	2.531494

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.35873	409.0821	15.12102	405.7071	2.520541	1.257643
Stddev	.07606	2.2439	.09480	1.3640	.027749	.025894
%RSD	.4952316	.5485286	.6269167	.3362081	1.100918	2.058914
#1	15.32404	406.9129	15.02157	404.5445	2.544130	1.277207
#2	15.44596	411.3939	15.21035	407.2086	2.489967	1.267443
#3	15.30621	408.9395	15.13114	405.3683	2.527527	1.228280

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	415.7232	2.526949	14.68841	156.8479	5.020650	F 4.448876
Stddev	3.4717	.017718	.38758	.6505	.050121	.005896
%RSD	.8350916	.7011547	2.638694	.4147210	.9982919	.1325197
#1	415.0974	2.510061	14.92887	156.1278	5.049937	4.449224
#2	419.4653	2.525394	14.89507	157.3928	4.962777	4.442813
#3	412.6071	2.545394	14.24130	157.0232	5.049235	4.454589

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV114 Acquired: 01/05/2025 21:05:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV114 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.883294	5.036695	5.032757	5.040549	5.054789	4.825063
Stddev	.056217	.050068	.014653	.049276	.021257	.016795
%RSD	1.151208	.9940679	.2911531	.9776013	.4205290	.3480866
#1	4.924728	5.062972	5.039109	5.066203	5.045347	4.807982
#2	4.819302	4.978959	5.043163	4.983738	5.079132	4.841558
#3	4.905854	5.068155	5.016000	5.071705	5.039889	4.825648

Elem	Li6707
Units	ppm
Avg	5.141782
Stddev	.023546
%RSD	.4579430
#1	5.121250
#2	5.167484
#3	5.136613

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1488.634	15946.90	1557.788	1095.170	1598.401
Stddev	15.152	355.32	.669	25.756	16.495
%RSD	1.017841	2.228169	.0429710	2.351810	1.031938
#1	1474.768	15673.13	1558.511	1079.613	1583.044
#2	1504.807	15819.12	1557.661	1080.997	1615.836
#3	1486.325	16348.44	1557.190	1124.900	1596.324

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB114 Acquired: 01/05/2025 21:09:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB114 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003532	.0004339	.0025050	.0015477	.0007267	.0088871
Stddev	.001418	.0036613	.0023953	.0044077	.0010020	.0417258
%RSD	40.13611	843.7818	95.62146	284.7837	137.8739	469.5093
#1	-.004783	.0045625	.0010275	-.001645	.0003348	.0004700
#2	-.001992	-.000843	.0052687	-.000289	-.000020	-.027989
#3	-.003820	-.002418	.0012189	.006577	.001865	.054180

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005825	.0001125	-.000006	-.015922	.0010361	.0004307
Stddev	.003907	.0001377	.000031	.049804	.0006410	.0003248
%RSD	67.07715	122.4291	554.3038	312.8101	61.86290	75.41368
#1	-.007558	.0000707	.000016	-.009016	.0003059	.0000594
#2	-.008566	.0000005	-.000041	-.068818	.0015060	.0006621
#3	-.001351	.0002662	.000009	.030070	.0012965	.0005707

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.008514	.0073572	.0013320	.0131505	-.000502	.0002797
Stddev	.003525	.0201188	.0021564	.1019998	.000557	.0011287
%RSD	41.39470	273.4578	161.8877	775.6363	110.9840	403.5131
#1	-.005070	.0270675	-.000602	-.080866	-.000278	.0005204
#2	-.012114	.0081507	.000941	-.001280	-.001136	-.000950
#3	-.008359	-.013147	.003657	.121597	-.000092	.001269

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2056901	.0035042	.0051065	.4405045	-.001284	.0150946
Stddev	.0251712	.0172731	.0006798	.2021908	.001463	.0023186
%RSD	12.23742	492.9301	13.31151	45.89983	113.8953	15.36037
#1	.2321117	.0204266	.0058544	.5990947	-.002898	.0175014
#2	.2029679	-.014099	.0049387	.5095941	-.000910	.0128757
#3	.1819907	.004185	.0045264	.2128248	-.000045	.0149066

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB114 Acquired: 01/05/2025 21:09:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB114 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000745	.0046732	.0008177	-.000754	-.006360	-.000021
Stddev	.000604	.0030226	.0004120	.000990	.004996	.000169
%RSD	81.06569	64.67929	50.38629	131.3467	78.54270	791.9847
#1	-.000057	.0059260	.0012647	-.001620	-.006866	-.000216
#2	-.001190	.0068679	.0007351	-.000966	-.001131	.000056
#3	-.000988	.0012256	.0004532	.000325	-.011084	.000095

Elem	Li6707
Units	ppm
Avg	F .0150210
Stddev	.0031569
%RSD	21.01636
#1	.0141408
#2	.0185245
#3	.0123976

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1775.540	17711.86	1650.089	1302.703	1988.583
Stddev	4.332	146.41	2.256	7.451	5.355
%RSD	.2439637	.8266154	.1367490	.5719394	.2692886
#1	1776.720	17571.23	1648.214	1303.023	1987.657
#2	1779.159	17700.90	1652.593	1295.098	1994.341
#3	1770.741	17863.43	1649.458	1309.989	1983.752

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-03LX5 Acquired: 01/05/2025 21:13:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0321028	.0001300	.8588086	.0163909	.0108624	11.75409	.3351026
Stddev	.0025467	.0003934	.0028798	.0069158	.0012740	.11046	.0020141
%RSD	7.933047	302.5781	.3353221	42.19315	11.72890	.9397155	.6010415
#1	.0349910	-.000038	.8580274	.0161187	.0115402	11.66760	.3372913
#2	.0311378	.000580	.8619984	.0234388	.0116543	11.71617	.3346893
#3	.0301796	-.000151	.8564000	.0096151	.0093928	11.87851	.3333272

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0017723	.0016147	39.58803	.0389493	.0329881	.1173736	39.74847
Stddev	.0001202	.0000920	.20238	.0010838	.0005050	.0065466	.36551
%RSD	6.781068	5.699713	.5112253	2.782640	1.530929	5.577545	.9195558
#1	.0017154	.0016434	39.55903	.0401268	.0330384	.1217807	39.51637
#2	.0019104	.0015117	39.40171	.0379934	.0334660	.1098511	39.55925
#3	.0016912	.0016889	39.80335	.0387276	.0324598	.1204889	40.16980

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.345597	10.96348	.0385548	-.002264	.2954889	.0336627	.7365591
Stddev	.006590	.16651	.0008277	.001193	.0157685	.0081621	.0026112
%RSD	.4897670	1.518779	2.146830	52.69626	5.336404	24.24666	.3545064
#1	1.340729	10.92807	.0390427	-.000925	.2941511	.0276603	.7379809
#2	1.342965	10.81752	.0375991	-.003215	.2804319	.0303712	.7381507
#3	1.353096	11.14485	.0390225	-.002652	.3118836	.0429566	.7335456

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.313229	2.818293	-.072566	.0051198	.7787642	2.131859	.0778322
Stddev	.033640	.009942	.003056	.0008581	.0025102	.007206	.0007745
%RSD	2.561609	.3527682	4.210803	16.76090	.3223307	.3380133	.9951425
#1	1.276887	2.828922	-.069824	.0056211	.7781641	2.135326	.0778994
#2	1.319523	2.809222	-.072015	.0041290	.7815201	2.123575	.0785709
#3	1.343277	2.816736	-.075860	.0056094	.7766085	2.136677	.0770262

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-03LX5 Acquired: 01/05/2025 21:13:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2358025	.0585915	.0252214
Stddev	.0027759	.0005933	.0019013
%RSD	1.177216	1.012600	7.538462
#1	.2347095	.0580520	.0249342
#2	.2389585	.0584954	.0272500
#3	.2337394	.0592269	.0234801

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1828.971	18243.10	1705.362	1335.568	1951.157
Stddev	6.326	41.24	5.967	5.645	7.220
%RSD	.3458987	.2260756	.3498857	.4226831	.3700233
#1	1826.540	18214.96	1704.654	1334.753	1946.384
#2	1824.220	18223.90	1711.651	1330.375	1947.623
#3	1836.152	18290.44	1699.781	1341.577	1959.462

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-05 Acquired: 01/05/2025 21:17:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2671989	.0570167	4.287206	.2240629	.2069475	55.89507
Stddev	.0042828	.0053809	.004898	.0056061	.0017369	.54683
%RSD	1.602846	9.437377	.1142442	2.502019	.8392971	.9783182
#1	.2670157	.0611151	4.284645	.2188554	.2051027	55.30609
#2	.2715704	.0590118	4.292854	.2233364	.2071883	55.99245
#3	.2630107	.0509232	4.284120	.2299968	.2085514	56.38667

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.015520	.0947941	.1010316	177.7197	.5423132	1.053201
Stddev	.018925	.0005585	.0001480	.9790	.0010897	.001282
%RSD	.3773340	.5891437	.1465153	.5508623	.2009375	.1217584
#1	5.003745	.0945027	.1011254	176.7341	.5434912	1.053861
#2	5.005464	.0954379	.1011085	177.7331	.5421071	1.054018
#3	5.037350	.0944415	.1008610	178.6920	.5413413	1.051723

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9806795	180.1940	6.889234	48.68380	1.171866	.0543640
Stddev	.0088982	1.4935	.038861	.35534	.000697	.0012605
%RSD	.9073472	.8288096	.5640832	.7298853	.0594483	2.318579
#1	.9802485	178.5432	6.851127	48.35431	1.172664	.0532818
#2	.9897853	180.5874	6.887768	48.63678	1.171378	.0557480
#3	.9720046	181.4514	6.928807	49.06030	1.171557	.0540621

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.021754	1.070783	4.044890	5.836373	F 14.18971	-.355738
Stddev	.023361	.006111	.012219	.116201	.01413	.003997
%RSD	2.286398	.5706834	.3020795	1.990983	.0996041	1.123715
#1	1.048511	1.064739	4.056202	5.766138	14.19172	-.357438
#2	1.005409	1.076959	4.046536	5.970501	14.20272	-.358603
#3	1.011343	1.070649	4.031932	5.772480	14.17467	-.351171

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-05 Acquired: 01/05/2025 21:17:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA0S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0134977	3.933711	9.440211	.3922743	1.064621	.2608858
Stddev	.0006247	.005232	.045263	.0021837	.011364	.0026407
%RSD	4.627884	.1330055	.4794658	.5566716	1.067450	1.012215
#1	.0135027	3.929248	9.426277	.3922549	1.053903	.2580666
#2	.0128706	3.932417	9.490802	.3901004	1.063422	.2612892
#3	.0141199	3.939469	9.403553	.3944676	1.076537	.2633016

Elem	Li6707
Units	ppm
Avg	.0948516
Stddev	.0052503
%RSD	5.535284
#1	.0992451
#2	.0890370
#3	.0962726

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1987.444	19953.45	1891.044	1458.934	1886.547
Stddev	7.696	75.21	5.949	3.465	4.091
%RSD	.3872307	.3769426	.3146061	.2375231	.2168468
#1	1986.646	19995.60	1897.838	1460.758	1886.346
#2	1995.508	19998.13	1886.766	1461.107	1890.735
#3	1980.178	19866.61	1888.527	1454.938	1882.560

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-16 Acquired: 01/05/2025 21:20:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMM9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2002917	-.019760	2.572258	.1107464	.0467966	70.83065
Stddev	.0049488	.002615	.006375	.0051521	.0019731	.26644
%RSD	2.470784	13.23534	.2478525	4.652162	4.216326	.3761656
#1	.1991306	-.018451	2.578142	.1056922	.0485908	71.13828
#2	.2057178	-.018057	2.573149	.1159911	.0446835	70.67317
#3	.1960267	-.022771	2.565485	.1105559	.0471154	70.68051

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.512132	.0076536	.0078007	235.5152	.1534611	.1557735
Stddev	.005501	.0000940	.0000587	.7847	.0006857	.0004817
%RSD	.3638034	1.228689	.7524758	.3331967	.4468284	.3092334
#1	1.513175	.0076721	.0078608	236.4074	.1541476	.1563006
#2	1.517037	.0077370	.0077435	235.2060	.1527762	.1553561
#3	1.506184	.0075517	.0077977	234.9322	.1534595	.1556640

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5322415	232.4399	20.21855	32.90153	.1947583	-.013007
Stddev	.0021048	.2222	.01129	.12170	.0002808	.000752
%RSD	.3954668	.0955918	.0558341	.3698800	.1441653	5.784623
#1	.5324716	232.3160	20.21440	33.04204	.1944341	-.012384
#2	.5300310	232.6964	20.23132	32.83251	.1949191	-.012795
#3	.5342218	232.3072	20.20992	32.83003	.1949216	-.013843

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7585484	.1874655	1.524290	9.756200	F 12.83238	-.478970
Stddev	.0381753	.0108672	.000438	.125477	.01778	.004296
%RSD	5.032684	5.796919	.0287049	1.286123	.1385283	.8968691
#1	.7566945	.1993715	1.524009	9.860154	12.84967	-.483860
#2	.7213338	.1780799	1.524794	9.791628	12.83334	-.475804
#3	.7976169	.1849453	1.524066	9.616818	12.81415	-.477246

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-16 Acquired: 01/05/2025 21:20:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMM9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0133781	3.636754	7.472050	.1732643	.8875737	.1841857
Stddev	.0003885	.010191	.050350	.0026206	.0015998	.0007445
%RSD	2.904129	.2802158	.6738460	1.512495	.1802412	.4042115
#1	.0129495	3.628706	7.515313	.1724655	.8890543	.1839788
#2	.0134777	3.648212	7.416783	.1711361	.8877901	.1850118
#3	.0137071	3.633343	7.484056	.1761914	.8858768	.1835665

Elem	Li6707
Units	ppm
Avg	.0926066
Stddev	.0028033
%RSD	3.027113
#1	.0909323
#2	.0958429
#3	.0910447

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2212.387	22059.43	2113.919	1610.595	1861.194
Stddev	1.213	84.54	19.239	7.122	1.483
%RSD	.0548106	.3832369	.9100944	.4421952	.0797029
#1	2211.119	21970.98	2093.085	1602.613	1860.604
#2	2212.508	22067.89	2131.013	1612.871	1862.881
#3	2213.536	22139.42	2117.659	1616.300	1860.096

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165860BL Acquired: 01/05/2025 21:24:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS860 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000407	-.001705	.0016248	.0037334	-.002405	.0130793	-.006165
Stddev	.001199	.002580	.0033470	.0001889	.003519	.0290982	.003449
%RSD	294.4054	151.3586	205.9980	5.059244	146.3388	222.4763	55.94306
#1	.000923	.001264	.0054881	.0037468	-.001925	-.004092	-.006295
#2	-.001407	-.003407	-.000398	.0035382	-.006140	.046676	-.009546
#3	-.000738	-.002972	-.000216	.0039152	.000850	-.003347	-.002652

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000777	.0000342	.0643931	.0000676	.0004932	-.014400	.0443742
Stddev	.0001616	.0000223	.0379835	.0011292	.0002770	.004150	.0370663
%RSD	207.9064	65.32040	58.98691	1671.274	56.17446	28.82035	83.53130
#1	.0000877	.0000595	.0258792	-.000381	.0002964	-.009737	.0729606
#2	-.000089	.0000173	.0654772	.001352	.0008100	-.015774	.0576675
#3	.000234	.0000257	.1018230	-.000768	.0003731	-.017688	.0024943

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022279	-.030558	.0000065	.0008786	.0334355	.0064183	.0049731
Stddev	.0009972	.111869	.0002163	.0011852	.0085389	.0058241	.0009664
%RSD	44.75841	366.0851	3312.140	134.8975	25.53848	90.74254	19.43179
#1	.0019586	-.066707	.0001075	-.000031	.0429940	.0123837	.0057336
#2	.0013930	.094915	-.000242	.000447	.0265611	.0007466	.0053001
#3	.0033321	-.119883	.000154	.002219	.0307515	.0061245	.0038857

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.103750	-.001529	.0023539	-.001039	-.001106	.0008685	-.001032
Stddev	.098416	.004676	.0009823	.000346	.004231	.0013200	.000227
%RSD	94.85827	305.8707	41.72966	33.29210	382.4086	151.9770	22.03342
#1	-.141440	-.004589	.0015473	-.000913	.002809	.0023785	-.001294
#2	.007940	-.003850	.0020665	-.001431	-.005594	-.000066	-.000911
#3	-.177751	.003853	.0034478	-.000774	-.000534	.000293	-.000891

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165860BL Acquired: 01/05/2025 21:24:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS860 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.003471	.0000836	.0057376
Stddev	.005882	.0001266	.0025668
%RSD	169.4575	151.3534	44.73638
#1	.002281	.0001825	.0044082
#2	-.009474	-.000059	.0041082
#3	-.003220	.000127	.0086964

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1798.725	17938.66	1654.545	1318.116	2013.473
Stddev	25.588	214.82	4.827	14.014	30.615
%RSD	1.422577	1.197544	.2917315	1.063151	1.520531
#1	1806.796	18186.59	1652.771	1333.433	2026.505
#2	1819.304	17807.86	1660.007	1314.978	2035.417
#3	1770.074	17821.53	1650.856	1305.938	1978.498

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165860BS Acquired: 01/05/2025 21:28:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS860 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0229350	.0464780	.0207753	.0694003	.1047495	.3854518
Stddev	.0033112	.0034693	.0013782	.0047982	.0010719	.0527671
%RSD	14.43739	7.464346	6.633976	6.913793	1.023260	13.68967
#1	.0249422	.0460537	.0193292	.0679897	.1059615	.3646867
#2	.0247497	.0501400	.0220737	.0654656	.1039263	.4454426
#3	.0191132	.0432404	.0209231	.0747457	.1043606	.3462262

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3901129	.0102548	.0095021	9.944437	.0200507	.0978974
Stddev	.0005886	.0001130	.0000457	.035541	.0008028	.0007586
%RSD	.1508794	1.101755	.4808731	.3573957	4.003840	.7748726
#1	.3895708	.0103804	.0094841	9.903841	.0199855	.0986332
#2	.3900289	.0102225	.0095541	9.969945	.0192825	.0979411
#3	.3907389	.0101614	.0094682	9.959524	.0208841	.0971179

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0368542	.2321984	.0312334	10.20162	.0763596	.0194919
Stddev	.0124343	.0216806	.0019242	.11591	.0006377	.0012273
%RSD	33.73904	9.337106	6.160631	1.136143	.8350634	6.296252
#1	.0440485	.2226818	.0295436	10.11671	.0768655	.0182849
#2	.0440178	.2570097	.0308289	10.15449	.0765699	.0194524
#3	.0224964	.2169036	.0333276	10.33367	.0756433	.0207385

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.657237	.0933198	.1170796	9.423630	.0203320	F .0027584
Stddev	.065915	.0063990	.0010430	.125426	.0052033	.0015470
%RSD	.8608257	6.857114	.8908512	1.330977	25.59187	56.08165
#1	7.724089	.0964544	.1158834	9.560325	.0246087	.0009725
#2	7.655322	.0975472	.1175565	9.396730	.0145389	.0036205
#3	7.592300	.0859578	.1177988	9.313837	.0218485	.0036823

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165860BS Acquired: 01/05/2025 21:28:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS860 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189887	.1761243	F .4748599	.0104363	.1834529	.2044077
Stddev	.0003483	.0038085	.0021585	.0009060	.0031297	.0009305
%RSD	1.834420	2.162392	.4545556	8.680948	1.706015	.4552347
#1	.0191844	.1777803	.4765048	.0111621	.1800190	.2037047
#2	.0185866	.1788245	.4756591	.0107259	.1861452	.2040554
#3	.0191953	.1717682	.4724158	.0094210	.1841946	.2054629

Elem	Li6707
Units	ppm
Avg	.0341241
Stddev	.0023649
%RSD	6.930351
#1	.0336263
#2	.0366982
#3	.0320476

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1773.113	17529.08	1653.232	1283.937	1974.907
Stddev	2.100	14.75	10.671	6.420	2.919
%RSD	.1184225	.0841525	.6454727	.5000593	.1478126
#1	1771.601	17545.14	1641.724	1291.051	1974.699
#2	1775.510	17516.14	1655.173	1282.186	1977.924
#3	1772.227	17525.95	1662.800	1278.574	1972.097

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-04 Acquired: 01/05/2025 21:32:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0577844	.0145040	.3667111	.0003200	.0162891	37.50039
Stddev	.0079834	.0063452	.0028669	.0086255	.0025516	.16589
%RSD	13.81586	43.74791	.7817821	2695.860	15.66428	.4423642
#1	.0518047	.0211552	.3642495	-.005962	.0192209	37.30953
#2	.0546984	.0138398	.3660251	-.003233	.0145704	37.58173
#3	.0668502	.0085171	.3698588	.010154	.0150760	37.60991

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3649943	.0048970	.0028178	F 1757.221	.0569033	.1182126
Stddev	.0026318	.0001071	.0000342	3.833	.0005196	.0004579
%RSD	.7210418	2.187129	1.212930	.2181468	.9131357	.3873857
#1	.3630692	.0047849	.0028385	1755.966	.0572759	.1177474
#2	.3679932	.0049079	.0027784	1754.172	.0571242	.1182275
#3	.3639206	.0049983	.0028365	1761.524	.0563097	.1186630

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1766926	116.5183	7.019045	187.4296	.1358454	-.007319
Stddev	.0083856	.3968	.034737	.5297	.0006449	.000985
%RSD	4.745861	.3405516	.4948947	.2826081	.4746999	13.45187
#1	.1672035	116.2608	6.990528	187.1181	.1365010	-.006722
#2	.1797678	116.3188	7.008875	187.1295	.1358235	-.006780
#3	.1831064	116.9752	7.057732	188.0412	.1352119	-.008455

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.588546	.0643603	.5996261	14.17311	3.393193	-.144078
Stddev	.007387	.0057757	.0035942	.12739	.004417	.002085
%RSD	.4650166	8.973999	.5994038	.8988109	.1301641	1.447187
#1	1.596584	.0681603	.6036437	14.18380	3.388774	-.143762
#2	1.582054	.0577139	.5985186	14.04071	3.397607	-.146303
#3	1.587002	.0672068	.5967160	14.29481	3.393198	-.142169

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-04 Acquired: 01/05/2025 21:32:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000830	2.749905	8.301037	.0304543	.0643679	1.606378
Stddev	.001124	.006915	.060297	.0037457	.0041458	.003223
%RSD	135.4185	.2514468	.7263740	12.29956	6.440801	.2006231
#1	-.001730	2.754325	8.363055	.0332977	.0688293	1.603257
#2	-.001190	2.741936	8.297430	.0262100	.0606340	1.606183
#3	.000430	2.753452	8.242624	.0318551	.0636403	1.609694

Elem	Li6707
Units	ppm
Avg	.1230873
Stddev	.0019460
%RSD	1.581018
#1	.1245370
#2	.1208756
#3	.1238493

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1813.320	18195.40	1792.380	1325.129	1565.931
Stddev	4.263	15.76	11.791	4.990	2.142
%RSD	.2350698	.0866047	.6578619	.3765379	.1367642
#1	1816.188	18206.98	1779.009	1320.098	1568.092
#2	1808.422	18201.76	1796.840	1330.076	1563.809
#3	1815.351	18177.45	1801.290	1325.214	1565.893

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-05 Acquired: 01/05/2025 21:36:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB1D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0564768	.0118960	.3666830	-.003063	.0119230	37.67968
Stddev	.0036579	.0071136	.0049289	.006118	.0023639	.12433
%RSD	6.476818	59.79875	1.344181	199.7024	19.82656	.3299590
#1	.0554255	.0053333	.3638106	-.006572	.0146072	37.57961
#2	.0605453	.0108992	.3723743	-.006619	.0101514	37.81886
#3	.0534597	.0194555	.3638641	.004001	.0110105	37.64057

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3640737	.0048299	.0027781	F 1750.787	.0567778	.1192688
Stddev	.0022883	.0000721	.0000243	9.989	.0004262	.0001769
%RSD	.6285221	1.492518	.8764108	.5705181	.7506673	.1483192
#1	.3615977	.0049039	.0027980	1752.200	.0569942	.1192783
#2	.3661107	.0048256	.0027853	1759.994	.0570524	.1194407
#3	.3645128	.0047600	.0027510	1740.167	.0562868	.1190873

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1865330	117.3483	7.037525	188.0366	.1371366	-.007469
Stddev	.0048084	.6539	.032239	.7848	.0019351	.000706
%RSD	2.577763	.5572557	.4581033	.4173697	1.411079	9.449110
#1	.1868897	116.6884	7.000480	187.1778	.1364202	-.007667
#2	.1815562	117.3603	7.059231	188.7166	.1356619	-.006686
#3	.1911531	117.9961	7.052862	188.2155	.1393278	-.008055

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.586923	.0679653	.6026721	14.31510	3.386499	-.142422
Stddev	.008336	.0047538	.0031142	.11109	.002155	.003104
%RSD	.5253045	6.994435	.5167383	.7760497	.0636432	2.179720
#1	1.587692	.0734284	.6048132	14.44078	3.384011	-.142890
#2	1.578228	.0656967	.5990995	14.27447	3.387716	-.145266
#3	1.594847	.0647708	.6041038	14.23003	3.387771	-.139111

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-05 Acquired: 01/05/2025 21:36:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB1D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000664	2.744208	8.361487	.0359055	.0773595	1.609506
Stddev	.000596	.007306	.021205	.0018107	.0073214	.006338
%RSD	89.84210	.2662159	.2536077	5.042978	9.464151	.3937840
#1	-.000157	2.745317	8.381068	.0375965	.0706539	1.602383
#2	-.001321	2.736411	8.364429	.0339951	.0851710	1.614521
#3	-.000513	2.750895	8.338965	.0361249	.0762537	1.611615

Elem	Li6707
Units	ppm
Avg	.1281165
Stddev	.0041641
%RSD	3.250263
#1	.1278628
#2	.1324016
#3	.1240850

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1812.841	18166.01	1797.555	1320.772	1565.073
Stddev	7.336	57.72	4.307	5.256	2.850
%RSD	.4046573	.3177374	.2396225	.3979557	.1821144
#1	1813.285	18222.22	1794.653	1317.891	1565.653
#2	1819.944	18106.89	1795.507	1326.838	1567.588
#3	1805.293	18168.93	1802.504	1317.586	1561.977

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-04LX5 Acquired: 01/05/2025 21:40:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB1L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024284	.0286146	.0804637	-.027196	.0010359	8.138148	.0757071
Stddev	.0050452	.0036315	.0021377	.005447	.0010610	.056325	.0036907
%RSD	207.7616	12.69111	2.656669	20.02845	102.4242	.6921161	4.875018
#1	.0018374	.0299294	.0809626	-.033094	.0008067	8.073127	.0729025
#2	.0077431	.0314057	.0781208	-.026140	.0021928	8.169316	.0798883
#3	-.002295	.0245089	.0823078	-.022355	.0001082	8.172000	.0743305

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014389	.0004774	391.5655	.0133341	.0503048	.0326533	26.37501
Stddev	.0000993	.0000993	2.3471	.0002638	.0003761	.0113144	.17423
%RSD	6.899867	20.79237	.5994142	1.978084	.7476656	34.65016	.6605822
#1	.0014565	.0004031	389.8365	.0133062	.0505000	.0411181	26.17383
#2	.0015283	.0005901	390.6226	.0136107	.0498712	.0198025	26.47617
#3	.0013321	.0004389	394.2374	.0130854	.0505432	.0370393	26.47503

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.591213	42.76066	.0250248	-.001633	.3805433	.0050323	.1351439
Stddev	.008780	.30951	.0009226	.002159	.0239435	.0156031	.0018308
%RSD	.5517633	.7238203	3.686884	132.2538	6.291929	310.0579	1.354694
#1	1.581076	42.48679	.0249794	.000394	.3550743	.0029943	.1372440
#2	1.596228	42.69875	.0241257	-.001388	.3839617	.0215543	.1343035
#3	1.596337	43.09645	.0259693	-.003904	.4025939	-.009452	.1338841

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.920666	.6301714	-.031947	.0048347	.5082253	1.871299	.0083595
Stddev	.205834	.0022649	.001014	.0010091	.0027260	.008032	.0008570
%RSD	7.047497	.3594121	3.173890	20.87193	.5363773	.4292073	10.25196
#1	2.774760	.6317926	-.032529	.0058521	.5099065	1.879046	.0078278
#2	2.831134	.6275835	-.032537	.0048179	.5096894	1.863010	.0079025
#3	3.156103	.6311380	-.030777	.0038341	.5050801	1.871840	.0093481

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-04LX5 Acquired: 01/05/2025 21:40:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB1L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0109412	.3521507	.0296375
Stddev	.0015619	.0022919	.0026120
%RSD	14.27576	.6508326	8.813326
#1	.0098502	.3495654	.0322115
#2	.0102429	.3529534	.0297120
#3	.0127304	.3539333	.0269890

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1740.691	17395.48	1653.405	1273.345	1780.186
Stddev	4.224	41.66	4.122	5.684	3.169
%RSD	.2426791	.2395073	.2492928	.4463980	.1779965
#1	1736.069	17435.24	1652.480	1271.196	1778.275
#2	1744.351	17352.14	1657.910	1269.049	1783.844
#3	1741.654	17399.05	1649.823	1279.790	1778.440

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-06 Acquired: 01/05/2025 21:44:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB1S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1280657	.0917203	.3999255	.1499808	.1689778	40.44561
Stddev	.0009728	.0005891	.0038064	.0046120	.0029953	.39731
%RSD	.7595970	.6422809	.9517848	3.075030	1.772584	.9823365
#1	.1290693	.0920843	.4023450	.1511983	.1669499	40.16463
#2	.1280010	.0910407	.3955379	.1448822	.1675652	40.27201
#3	.1271269	.0920360	.4018935	.1538618	.1724181	40.90017

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.788232	.0915826	.0993632	F 1740.106	.4137796	1.088855
Stddev	.019904	.0002605	.0003146	9.732	.0001203	.004606
%RSD	.5254065	.2844249	.3166328	.5592639	.0290710	.4229986
#1	3.771168	.0914583	.0996710	1734.031	.4137678	1.092894
#2	3.783430	.0914077	.0990422	1734.956	.4136656	1.083839
#3	3.810097	.0918820	.0993765	1751.330	.4139053	1.089832

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5813942	117.9157	7.803823	186.6904	1.115841	.0559200
Stddev	.0043308	.4812	.054918	1.3280	.003377	.0004770
%RSD	.7448917	.4081026	.7037360	.7113257	.3026313	.8529889
#1	.5785880	117.5658	7.763316	185.8028	1.119208	.0563994
#2	.5792126	117.7169	7.781823	186.0513	1.112454	.0554454
#3	.5863819	118.4645	7.866331	188.2171	1.115862	.0559151

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.552100	.9369503	1.392844	13.96416	3.338923	-.141868
Stddev	.025251	.0169112	.004384	.04120	.011938	.003671
%RSD	1.626899	1.804921	.3147236	.2950379	.3575537	2.587693
#1	1.537808	.9225262	1.396098	14.00910	3.352303	-.145066
#2	1.537237	.9327630	1.387859	13.95521	3.329359	-.142677
#3	1.581256	.9555619	1.394575	13.92817	3.335108	-.137859

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-06 Acquired: 01/05/2025 21:44:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB1S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000337	2.712578	8.194624	.0353494	.0673246	1.594160
Stddev	.000665	.006146	.015870	.0014956	.0019357	.012213
%RSD	197.4352	.2265780	.1936652	4.230759	2.875117	.7661341
#1	.000430	2.717370	8.199953	.0338828	.0673045	1.585977
#2	-.000688	2.705649	8.176776	.0368723	.0653991	1.588304
#3	-.000752	2.714715	8.207144	.0352929	.0692703	1.608199

Elem	Li6707
Units	ppm
Avg	.1285716
Stddev	.0025394
%RSD	1.975118
#1	.1266957
#2	.1314613
#3	.1275577

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1802.210	18217.49	1799.035	1317.115	1562.314
Stddev	4.985	27.58	6.886	6.305	1.697
%RSD	.2765815	.1513686	.3827398	.4787089	.1086225
#1	1807.928	18185.81	1792.177	1309.984	1561.967
#2	1798.784	18236.03	1805.948	1321.952	1564.158
#3	1799.917	18230.65	1798.981	1319.408	1560.818

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-03DLX2 Acquired: 01/05/2025 21:48:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0316888	.0167697	.5334495	.0161109	.0149191	28.38844	.4887613
Stddev	.0061011	.0075808	.0052980	.0038243	.0021340	.16399	.0019842
%RSD	19.25306	45.20552	.9931547	23.73702	14.30366	.5776482	.4059636
#1	.0381244	.0080168	.5343335	.0124726	.0139557	28.21412	.4877162
#2	.0309527	.0212416	.5277652	.0200973	.0134367	28.53963	.4910497
#3	.0259891	.0210507	.5382499	.0157630	.0173649	28.41157	.4875182

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031485	.0018022	439.4316	.0479427	.0809304	.0773435	90.04254
Stddev	.0000491	.0001273	2.3360	.0007024	.0006678	.0009032	.67802
%RSD	1.558162	7.062843	.5316008	1.465084	.8251476	1.167754	.7529971
#1	.0032051	.0017718	436.8737	.0486534	.0803359	.0773274	89.30699
#2	.0031186	.0016929	439.9692	.0479257	.0808025	.0764484	90.64256
#3	.0031217	.0019420	441.4520	.0472489	.0816530	.0782546	90.17807

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.326756	67.62397	.0802268	-.005707	.6297911	.0671917	.4181691
Stddev	.054528	.47693	.0004188	.001229	.0260801	.0085864	.0021568
%RSD	.6548506	.7052653	.5219681	21.53102	4.141074	12.77898	.5157700
#1	8.270111	67.09058	.0797668	-.004295	.6097078	.0579673	.4206544
#2	8.378886	68.00932	.0803276	-.006532	.6203990	.0686559	.4167878
#3	8.331270	67.77202	.0805859	-.006295	.6592664	.0749518	.4170652

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.355922	2.676541	-.161903	.0069283	1.279588	4.503725	.0308462
Stddev	.201501	.000831	.005441	.0004915	.006223	.010571	.0020771
%RSD	3.762208	.0310444	3.360475	7.094740	.4863393	.2347264	6.733829
#1	5.194985	2.676771	-.164452	.0068365	1.286492	4.495837	.0331360
#2	5.290867	2.677234	-.155656	.0074592	1.274410	4.499601	.0303196
#3	5.581914	2.675620	-.165601	.0064891	1.277862	4.515737	.0290831

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5127-03DLX2 Acquired: 01/05/2025 21:48:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMB0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1943072	.3107822	.0722595
Stddev	.0067717	.0024157	.0027811
%RSD	3.485060	.7772907	3.848786
#1	.1920438	.3081041	.0739713
#2	.1889572	.3127968	.0690505
#3	.2019208	.3114458	.0737566

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1827.961	18246.61	1757.048	1333.151	1751.041
Stddev	3.481	29.39	5.045	5.762	7.370
%RSD	.1904457	.1610543	.2871113	.4321858	.4208859
#1	1831.429	18219.28	1762.862	1333.450	1757.325
#2	1827.986	18242.86	1753.830	1327.246	1752.869
#3	1824.467	18277.69	1754.453	1338.757	1742.929

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5131-10DLX2 Acquired: 01/05/2025 21:51:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMM7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0889610	-.000062	.6876116	.0628619	.0235174	39.01522	.8185956
Stddev	.0053874	.000411	.0029159	.0071027	.0004656	.17191	.0037331
%RSD	6.055860	660.8737	.4240635	11.29884	1.979769	.4406290	.4560368
#1	.0857970	-.000509	.6898640	.0633266	.0233289	38.98383	.8150781
#2	.0951814	.000300	.6886528	.0697208	.0231756	38.86117	.8181966
#3	.0859045	.000023	.6843180	.0555383	.0240477	39.20067	.8225122

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035156	.0054277	77.95675	.0784368	.0892222	.2866920	116.4445
Stddev	.0001854	.0000639	.26046	.0003383	.0002921	.0017424	.8232
%RSD	5.274647	1.177255	.3341039	.4312381	.3273279	.6077569	.7069750
#1	.0033789	.0053953	77.66150	.0785015	.0895414	.2850393	115.5827
#2	.0037267	.0053865	78.05480	.0787381	.0889683	.2885120	116.5281
#3	.0034412	.0055013	78.15395	.0780709	.0891570	.2865246	117.2228

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.87053	12.15721	.1095833	-.004225	.9460864	.0915011	1.235102
Stddev	.10299	.10066	.0006558	.001376	.0243574	.0096112	.006374
%RSD	.6105008	.8280215	.5984272	32.56258	2.574541	10.50392	.5160521
#1	16.75960	12.05254	.1103393	-.004345	.9472690	.0807619	1.242215
#2	16.88885	12.16577	.1091680	-.005536	.9698309	.0992950	1.233183
#3	16.96313	12.25332	.1092426	-.002793	.9211592	.0944464	1.229908

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.331911	5.079420	-.259558	.0151364	.8675821	6.464588	.0400627
Stddev	.048897	.005077	.001609	.0004291	.0086789	.022691	.0025573
%RSD	1.467531	.0999432	.6198307	2.835114	1.000349	.3510064	6.383347
#1	3.321832	5.081405	-.260325	.0148251	.8617983	6.453042	.0404216
#2	3.288839	5.073650	-.260639	.0156260	.8775615	6.490730	.0424217
#3	3.385062	5.083203	-.257709	.0149582	.8633865	6.449991	.0373449

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5131-10DLX2 Acquired: 01/05/2025 21:51:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMM7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3821167	.0181004	.0486788
Stddev	.0041874	.0005765	.0008496
%RSD	1.095837	3.185174	1.745227
#1	.3869440	.0187310	.0492414
#2	.3799418	.0179699	.0490936
#3	.3794643	.0176004	.0477016

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1968.223	19791.42	1854.343	1459.116	1911.950
Stddev	4.807	16.33	4.541	4.661	2.648
%RSD	.2442496	.0825029	.2448651	.3194515	.1384806
#1	1967.998	19809.72	1856.528	1453.802	1914.257
#2	1973.138	19786.22	1849.123	1462.510	1912.534
#3	1963.532	19778.33	1857.378	1461.037	1909.059

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV115 Acquired: 01/05/2025 21:55:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV115 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.058314	4.943648	25.27700	5.051425	5.022053	400.6280
Stddev	.014950	.044919	.27094	.035508	.057047	2.3983
%RSD	.2955530	.9086286	1.071885	.7029384	1.135922	.5986325
#1	5.049060	4.891921	24.96487	5.012224	4.957426	397.9376
#2	5.050320	4.972827	25.41473	5.081434	5.065401	402.5417
#3	5.075561	4.966197	25.45141	5.060616	5.043334	401.4048

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.22025	.5114868	2.543315	407.7110	15.69504	2.557293
Stddev	.04942	.0030373	.027298	1.5287	.01690	.026677
%RSD	.4835587	.5938203	1.073336	.3749585	.1076527	1.043172
#1	10.16338	.5149098	2.511843	405.9654	15.69639	2.526512
#2	10.24464	.5104371	2.557528	408.8109	15.71123	2.571653
#3	10.25273	.5091136	2.560574	408.3568	15.67752	2.573713

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.27041	406.9761	15.04563	404.7486	2.562952	1.270553
Stddev	.06965	2.3112	.08596	2.1406	.028330	.002591
%RSD	.4560965	.5678858	.5713153	.5288827	1.105362	.2039196
#1	15.19919	404.3321	14.95458	402.5250	2.530271	1.271757
#2	15.27368	408.6117	15.12537	406.7953	2.578044	1.272323
#3	15.33837	407.9845	15.05695	404.9257	2.580540	1.267579

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	415.4865	2.511045	14.89689	155.1022	5.077464	F 4.437268
Stddev	3.3271	.003731	.07026	.6366	.056294	.008570
%RSD	.8007653	.1485984	.4716208	.4104387	1.108699	.1931257
#1	413.9465	2.508987	14.86812	154.3687	5.015446	4.446465
#2	419.3046	2.508795	14.84559	155.4266	5.091613	4.435831
#3	413.2084	2.515352	14.97697	155.5113	5.125334	4.429508

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV115 Acquired: 01/05/2025 21:55:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV115 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.967982	5.135469	5.020247	5.131953	5.039216	4.805102
Stddev	.058650	.053674	.019255	.050293	.025745	.029351
%RSD	1.180568	1.045167	.3835562	.9800026	.5108900	.6108267
#1	4.900264	5.074891	5.036433	5.074619	5.011559	4.771503
#2	5.001098	5.154418	5.025355	5.152617	5.062485	4.825744
#3	5.002585	5.177099	4.998952	5.168622	5.043604	4.818060

Elem	Li6707
Units	ppm
Avg	5.095394
Stddev	.027867
%RSD	.5469036
#1	5.063482
#2	5.107771
#3	5.114928

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1470.745	15838.94	1566.599	1085.833	1579.496
Stddev	16.999	92.69	9.102	5.966	17.472
%RSD	1.155801	.5852009	.5809909	.5494113	1.106170
#1	1490.325	15912.95	1567.344	1092.660	1599.669
#2	1459.764	15734.98	1557.147	1083.217	1569.167
#3	1462.145	15868.90	1575.305	1081.622	1569.652

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB115 Acquired: 01/05/2025 21:59:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB115 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024084	.0005198	.0009759	-.003522	.0011338	.0224739	-.000930
Stddev	.0018760	.0031146	.0016729	.002289	.0027290	.0347970	.003632
%RSD	77.89386	599.1426	171.4154	64.98475	240.6935	154.8331	390.3289
#1	.0038086	.0038965	-.000526	-.002793	-.001655	.0182273	.003126
#2	.0031397	-.002241	.002779	-.006087	.001258	-.010005	-.002039
#3	.0002769	-.000096	.000675	-.001687	.003799	.059199	-.003878

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000716	.0000209	.0271391	.0004869	.0006059	-.005640	.0243803
Stddev	.0001171	.0000803	.0480509	.0011277	.0005250	.011427	.0230709
%RSD	163.6993	384.1562	177.0542	231.5929	86.65400	202.6002	94.62921
#1	-.000040	.0000806	-.026226	.0003092	.0004367	.007305	.0021217
#2	.000193	.0000525	.066976	.0016930	.0001863	-.014323	.0481857
#3	.000062	-.000070	.040667	-.000541	.0011947	-.009903	.0228337

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009669	-.047628	.0006830	-.000279	.1654591	-.005363	.0030406
Stddev	.0017558	.027959	.0007324	.000535	.0097579	.009642	.0007277
%RSD	181.5961	58.70355	107.2386	191.9710	5.897438	179.7891	23.93296
#1	.0029941	-.076127	.0000099	-.000888	.1543592	-.015611	.0035155
#2	-.000073	-.020242	.0005760	-.000057	.1693326	.003531	.0034034
#3	-.000021	-.046515	.0014631	.000110	.1726854	-.004010	.0022028

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2666207	.0001611	.0140490	-.000899	.0035335	.0010866	-.001170
Stddev	.0628094	.0015761	.0027192	.000143	.0039047	.0005496	.000766
%RSD	23.55759	978.2943	19.35503	15.90289	110.5067	50.57299	65.44439
#1	.2000038	.0012773	.0123831	-.001042	.0077114	.0004811	-.000399
#2	.2750964	-.001642	.0171869	-.000756	.0029125	.0012251	-.001181
#3	.3247619	.000848	.0125771	-.000901	-.000024	.0015537	-.001930

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB115 Acquired: 01/05/2025 21:59:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB115 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.004186	-.000014	.0078068
Stddev	.001690	.000048	.0053603
%RSD	40.37389	333.9734	68.66138
#1	-.003091	-.000056	.0080778
#2	-.006132	.000038	.0130264
#3	-.003334	-.000025	.0023162

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1790.909	17772.02	1650.145	1307.642	2000.749
Stddev	5.512	95.63	19.285	5.083	6.641
%RSD	.3077543	.5380970	1.168711	.3887294	.3319041
#1	1784.772	17677.44	1659.479	1301.790	1993.188
#2	1792.518	17769.95	1627.968	1310.169	2003.425
#3	1795.437	17868.67	1662.987	1310.967	2005.635

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV116 Acquired: 01/05/2025 23:09:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV116 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.057726	4.900860	25.03393	5.056374	4.982840	407.7607
Stddev	.021942	.013152	.03155	.020683	.015332	7.0945
%RSD	.4338276	.2683660	.1260126	.4090462	.3076912	1.739875
#1	5.073123	4.887951	25.04972	5.078581	4.996616	415.9316
#2	5.067453	4.900385	24.99761	5.037660	4.966323	404.1851
#3	5.032602	4.914243	25.05446	5.052882	4.985582	403.1655

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.43185	.5182059	2.519317	416.7371	15.76532	2.523240
Stddev	.11369	.0066693	.003657	5.0745	.03777	.003798
%RSD	1.089789	1.287006	.1451620	1.217676	.2395490	.1505187
#1	10.55553	.5259062	2.522304	422.4783	15.73324	2.525561
#2	10.40811	.5142574	2.515239	414.8810	15.75580	2.518857
#3	10.33191	.5144542	2.520408	412.8519	15.80694	2.525303

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.59201	412.8619	15.33730	409.4638	2.540922	1.283748
Stddev	.19798	6.5312	.22049	6.1749	.004340	.003104
%RSD	1.269770	1.581940	1.437620	1.508051	.1707870	.2417854
#1	15.81772	420.4008	15.59167	416.4889	2.545275	1.282442
#2	15.51064	408.9164	15.21957	407.0077	2.536596	1.281510
#3	15.44769	409.2686	15.20066	404.8948	2.540895	1.287291

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	419.6107	2.548423	14.89384	157.1225	5.003570	F 4.484012
Stddev	9.4892	.027732	.15930	2.2630	.018081	.051519
%RSD	2.261426	1.088215	1.069548	1.440274	.3613544	1.148940
#1	429.6971	2.580380	14.75489	159.6182	4.984608	4.539616
#2	410.8603	2.530671	14.85893	156.5453	5.005486	4.437898
#3	418.2747	2.534218	15.06769	155.2040	5.020616	4.474523

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV116 Acquired: 01/05/2025 23:09:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV116 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.945719	5.089426	5.101395	5.083920	5.138222	4.893399
Stddev	.016039	.008796	.049878	.005394	.080807	.077930
%RSD	.3243006	.1728254	.9777236	.1060930	1.572657	1.592564
#1	4.958829	5.096468	5.157073	5.080919	5.230658	4.982657
#2	4.927835	5.079567	5.060798	5.080695	5.103021	4.858661
#3	4.950494	5.092244	5.086315	5.090147	5.080987	4.838877

Elem	Li6707
Units	ppm
Avg	5.129858
Stddev	.058863
%RSD	1.147458
#1	5.197635
#2	5.100396
#3	5.091543

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1474.537	15721.75	1538.625	1084.106	1588.093
Stddev	6.315	85.40	28.347	5.367	5.257
%RSD	.4282533	.5431777	1.842375	.4950566	.3310497
#1	1472.053	15628.39	1506.018	1082.495	1589.615
#2	1481.716	15795.92	1557.410	1090.094	1592.421
#3	1469.842	15740.93	1552.447	1079.729	1582.243

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB116 Acquired: 01/05/2025 23:13:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB116 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038757	-.001022	.0033734	.0085347	-.000102	.0089171
Stddev	.0030807	.000925	.0020033	.0053094	.002747	.0164628
%RSD	79.48824	90.50730	59.38477	62.21007	2688.884	184.6213
#1	.0023284	-.000454	.0036397	.0125003	.002807	-.009920
#2	.0074234	-.000523	.0052302	.0025027	-.000463	.020548
#3	.0018754	-.002090	.0012503	.0106011	-.002651	.016123

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004605	.0000556	.0000109	.0648015	.0003042	.0004749
Stddev	.001923	.0002034	.0000396	.0282629	.0003971	.0001952
%RSD	41.75274	365.8198	362.7217	43.61456	130.5388	41.10559
#1	-.005883	.0001794	-.000034	.0626406	-.000013	.0002977
#2	-.002394	.0001665	.000040	.0940829	.000749	.0006842
#3	-.005539	-.000179	.000027	.0376811	.000176	.0004430

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.015145	-.009563	.0012503	-.046064	.0000403	-.000704
Stddev	.004888	.031890	.0031392	.130565	.0009734	.000892
%RSD	32.27699	333.4615	251.0852	283.4443	2413.404	126.6478
#1	-.015597	-.046332	.0046773	-.180222	-.000301	-.000196
#2	-.019791	.010554	.0005594	.080585	-.000716	-.000183
#3	-.010046	.007088	-.001486	-.038554	.001139	-.001735

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1679560	-.000005	.0039002	.3630781	-.004226	.0130306
Stddev	.0338426	.013022	.0004784	.2708658	.001772	.0007506
%RSD	20.14966	243616.0	12.26613	74.60264	41.92719	5.760677
#1	.1627531	-.009358	.0041645	.3830872	-.002473	.0124372
#2	.1370162	-.005525	.0041882	.6233845	-.006016	.0138745
#3	.2040987	.014867	.0033480	.0827625	-.004190	.0127803

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB116 Acquired: 01/05/2025 23:13:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB116 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001051	-.000636	.0009334	.0003273	-.003499	.0004958
Stddev	.0002393	.001986	.0010363	.0007610	.001313	.0003504
%RSD	227.8005	312.1829	111.0241	232.5122	37.50716	70.67143
#1	-.000038	-.002470	.0017964	.0009301	-.004557	.0008069
#2	-.000028	-.000911	.0012198	-.000528	-.002031	.0005641
#3	.000381	.001473	-.000216	.000579	-.003911	.0001163

Elem	Li6707
Units	ppm
Avg	F .0152577
Stddev	.0052098
%RSD	34.14516
#1	.0096524
#2	.0199516
#3	.0161691

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1797.893	17945.50	1680.428	1319.740	2019.542
Stddev	8.467	44.63	17.144	3.127	8.785
%RSD	.4709326	.2486906	1.020242	.2369309	.4349910
#1	1802.196	17919.23	1674.268	1316.224	2025.377
#2	1803.343	17920.23	1699.802	1320.791	2023.811
#3	1788.138	17997.03	1667.215	1322.207	2009.439

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-04 Acquired: 01/05/2025 23:17:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0943375	-.025526	.3254068	.1024884	.0402320	80.57376	1.770878
Stddev	.0035503	.001962	.0034728	.0057822	.0021230	1.02455	.007942
%RSD	3.763365	7.684784	1.067218	5.641818	5.276846	1.271568	.4484720
#1	.0938763	-.026274	.3228646	.1030154	.0378443	80.33624	1.765348
#2	.0980959	-.027004	.3239921	.0964608	.0419067	79.68882	1.767308
#3	.0910404	-.023301	.3293636	.1079892	.0409449	81.69620	1.779979

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061692	.0064151	62.72116	.1655858	.1170932	.1894207	185.1637
Stddev	.0002832	.0001272	.33489	.0000596	.0000642	.0186377	1.6967
%RSD	4.589963	1.982818	.5339396	.0359778	.0548461	9.839324	.9163239
#1	.0059890	.0062880	62.69836	.1655256	.1170981	.1896910	184.5553
#2	.0060230	.0065424	62.39825	.1655870	.1171548	.1706493	183.8550
#3	.0064956	.0064149	63.06687	.1656448	.1170266	.2079218	187.0807

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.57957	38.49555	.1766493	-.009806	.8040288	.1678713	.9058113
Stddev	.12880	.40515	.0020277	.001678	.0186587	.0206337	.0035696
%RSD	.9485119	1.052467	1.147888	17.10925	2.320653	12.29139	.3940818
#1	13.55155	38.40483	.1789899	-.010707	.8005710	.1683733	.9032525
#2	13.46708	38.14345	.1754253	-.010841	.7873408	.1469912	.9042921
#3	13.72008	38.93838	.1755327	-.007870	.8241745	.1882495	.9098892

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.632995	8.502195	-.389965	.0063474	1.720016	9.571509	.0307084
Stddev	.044901	.016448	.008933	.0003129	.004214	.135554	.0013416
%RSD	.5201106	.1934510	2.290786	4.929048	.2449960	1.416223	4.368972
#1	8.605306	8.484423	-.398317	.0060158	1.716213	9.656227	.0313375
#2	8.684801	8.516882	-.380546	.0066373	1.724546	9.415168	.0316198
#3	8.608877	8.505279	-.391031	.0063891	1.719287	9.643133	.0291678

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-04 Acquired: 01/05/2025 23:17:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.9915090	-.045957	.1219803
Stddev	.0156345	.000239	.0016040
%RSD	1.576839	.5208601	1.314992
#1	.9737482	-.045961	.1234891
#2	1.003192	-.045716	.1221563
#3	.997587	-.046194	.1202956

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2159.472	21728.81	2027.765	1584.892	1872.193
Stddev	8.159	12.39	27.956	11.409	7.090
%RSD	.3778248	.0570052	1.378685	.7198573	.3786814
#1	2150.320	21718.77	2007.708	1594.293	1865.924
#2	2162.111	21742.65	2059.699	1588.182	1870.768
#3	2165.985	21725.01	2015.888	1572.199	1879.887

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-05 Acquired: 01/05/2025 23:21:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0604809	-.016677	.2113196	.0655090	.0316546	66.90818
Stddev	.0042857	.005317	.0018400	.0020632	.0019462	.39463
%RSD	7.085994	31.88292	.8707023	3.149504	6.148288	.5898095
#1	.0642560	-.013520	.2124919	.0658684	.0300825	66.89135
#2	.0613643	-.013695	.2091989	.0673690	.0310499	66.52223
#3	.0558224	-.022816	.2122680	.0632898	.0338314	67.31095

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9214174	.0054081	.0023499	137.0412	.1187862	.1069270
Stddev	.0040625	.0001248	.0000207	.7378	.0028760	.0007437
%RSD	.4408991	2.307514	.8793554	.5383528	2.421136	.6955045
#1	.9167876	.0053958	.0023731	136.9929	.1195428	.1077855
#2	.9243863	.0052898	.0023334	136.3287	.1156076	.1064815
#3	.9230782	.0055385	.0023432	137.8019	.1212082	.1065139

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2196500	146.0982	6.595877	53.38999	.1558643	-.009170
Stddev	.0098114	.8461	.035394	.22563	.0003177	.001559
%RSD	4.466834	.5791246	.5366025	.4226027	.2038255	16.99731
#1	.2103790	146.2317	6.592556	53.32401	.1557930	-.010670
#2	.2299247	145.1932	6.562261	53.20471	.1562115	-.007559
#3	.2186462	146.8695	6.632814	53.64125	.1555883	-.009283

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.162366	.1478517	.4290790	6.530357	F 10.50784	-.313809
Stddev	.017417	.0141673	.0124456	.245896	.01987	.002336
%RSD	1.498438	9.582080	2.900529	3.765423	.1891171	.7442988
#1	1.154065	.1369194	.4329539	6.724215	10.52674	-.311841
#2	1.150652	.1427787	.4151569	6.253764	10.50965	-.313196
#3	1.182381	.1638571	.4391260	6.613090	10.48712	-.316390

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-05 Acquired: 01/05/2025 23:21:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0060265	.9205777	11.56841	.0242007	1.109359	.0465385
Stddev	.0008241	.0076686	.10943	.0010713	.009921	.0010175
%RSD	13.67431	.8330171	.9459378	4.426641	.8943436	2.186257
#1	.0062901	.9266979	11.49240	.0238829	1.104852	.0455227
#2	.0066866	.9119756	11.51900	.0253949	1.102492	.0465352
#3	.0051029	.9230598	11.69383	.0233243	1.120734	.0475576

Elem	Li6707
Units	ppm
Avg	.1346093
Stddev	.0033959
%RSD	2.522785
#1	.1325929
#2	.1327051
#3	.1385300

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2059.470	20778.07	1935.512	1523.627	1854.315
Stddev	3.316	416.66	5.465	36.060	1.503
%RSD	.1610150	2.005307	.2823315	2.366738	.0810313
#1	2056.337	20653.51	1940.954	1506.161	1852.892
#2	2062.943	21242.81	1935.558	1565.095	1855.886
#3	2059.132	20437.90	1930.025	1499.626	1854.167

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-06 Acquired: 01/05/2025 23:24:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0989599	-.022971	.4945734	.0726761	.0437804	56.40419
Stddev	.0004538	.007674	.0022777	.0058293	.0023978	.15481
%RSD	.4585414	33.40637	.4605382	8.020876	5.476914	.2744659
#1	.0984682	-.031812	.4958472	.0749957	.0459126	56.55931
#2	.0990488	-.018037	.4959293	.0769885	.0442441	56.40357
#3	.0993626	-.019064	.4919438	.0660441	.0411847	56.24969

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.104364	.0060864	.0053398	712.8347	.2048736	.1335374
Stddev	.004753	.0001433	.0001618	.8310	.0079367	.0006160
%RSD	.4303828	2.354366	3.030261	.1165837	3.873965	.4612736
#1	1.105759	.0062201	.0054224	713.2879	.2083222	.1341343
#2	1.099069	.0059352	.0054436	711.8756	.1957959	.1335740
#3	1.108263	.0061038	.0051533	713.3407	.2105026	.1329040

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3843394	220.3651	10.27566	126.3873	.1802618	-.012053
Stddev	.0009286	.3477	.01800	.1741	.0004553	.002212
%RSD	.2416134	.1577756	.1751656	.1377258	.2526076	18.35224
#1	.3854087	220.7549	10.27612	126.1917	.1807365	-.014416
#2	.3838741	220.2532	10.25744	126.4450	.1798287	-.010032
#3	.3837355	220.0871	10.29343	126.5252	.1802202	-.011711

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.368118	.2096504	.5093382	9.111078	F 12.26292	-.432696
Stddev	.061910	.0146153	.0197176	.087735	.02456	.004948
%RSD	2.614332	6.971262	3.871222	.9629526	.2002665	1.143587
#1	2.430482	.2085877	.5105501	9.187326	12.25494	-.437398
#2	2.306671	.2247680	.4890426	9.130723	12.24334	-.427534
#3	2.367201	.1955954	.5284219	9.015186	12.29047	-.433157

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-06 Acquired: 01/05/2025 23:24:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086755	2.809920	7.255417	.0372359	1.430471	.5239589
Stddev	.0007544	.016443	.066574	.0019485	.002438	.0009245
%RSD	8.695851	.5851715	.9175758	5.232808	.1704330	.1764505
#1	.0091825	2.827227	7.327117	.0390602	1.427708	.5245886
#2	.0078085	2.808029	7.195557	.0374643	1.431384	.5228975
#3	.0090354	2.794505	7.243577	.0351834	1.432320	.5243905

Elem	Li6707
Units	ppm
Avg	.1308921
Stddev	.0053530
%RSD	4.089586
#1	.1267329
#2	.1290120
#3	.1369315

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2039.911	20857.52	1980.014	1511.858	1652.072
Stddev	6.746	602.80	12.434	44.432	7.391
%RSD	.3307051	2.890091	.6279738	2.938893	.4473887
#1	2035.684	20701.57	1965.683	1500.424	1648.267
#2	2047.691	21522.97	1986.426	1560.890	1660.590
#3	2036.359	20348.01	1987.933	1474.261	1647.358

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-07 Acquired: 01/05/2025 23:28:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0421347	-.009496	.1270164	.0417815	.0286596	57.02521
Stddev	.0052497	.003368	.0023664	.0070050	.0028505	.25913
%RSD	12.45932	35.46476	1.863065	16.76577	9.946093	.4544160
#1	.0416192	-.013271	.1288316	.0340209	.0276446	57.01421
#2	.0476232	-.008418	.1278777	.0476366	.0264556	57.28966
#3	.0371618	-.006800	.1243400	.0436871	.0318787	56.77175

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5415182	.0054246	.0033003	F 848.8326	.1335339	.1143930
Stddev	.0010698	.0001311	.0001304	3.9417	.0006515	.0004151
%RSD	.1975576	2.417501	3.951822	.4643722	.4878756	.3628627
#1	.5407564	.0053552	.0032718	844.3234	.1329307	.1147529
#2	.5410570	.0055758	.0031865	851.6235	.1342248	.1144871
#3	.5427413	.0053426	.0034427	850.5508	.1334463	.1139389

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3269076	163.5288	6.426202	77.99127	.1517663	-.010982
Stddev	.0026229	.4717	.023959	.22131	.0011108	.001171
%RSD	.8023494	.2884591	.3728308	.2837617	.7319357	10.66461
#1	.3284437	163.4173	6.410307	77.93658	.1508773	-.011466
#2	.3284002	164.0463	6.453759	78.23480	.1514100	-.009646
#3	.3238790	163.1229	6.414540	77.80244	.1530116	-.011833

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.222795	.1551329	.3067356	10.60067	4.577755	-.290563
Stddev	.002578	.0188262	.0020556	.13029	.003186	.006700
%RSD	.1159784	12.13552	.6701542	1.229108	.0695958	2.305781
#1	2.221458	.1345785	.3043818	10.47393	4.576133	-.294765
#2	2.225767	.1715389	.3081770	10.73425	4.581425	-.282837
#3	2.221161	.1592814	.3076481	10.59383	4.575705	-.294087

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-07 Acquired: 01/05/2025 23:28:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030513	1.885181	9.935512	.0339591	2.190905	.6681224
Stddev	.0008341	.005334	.067178	.0022176	.011725	.0015298
%RSD	27.33564	.2829186	.6761393	6.530113	.5351866	.2289709
#1	.0024393	1.879853	10.00413	.0339064	2.177406	.6692741
#2	.0040014	1.885170	9.86988	.0362025	2.196746	.6687064
#3	.0027133	1.890520	9.93253	.0317683	2.198563	.6663866

Elem	Li6707
Units	ppm
Avg	.1452583
Stddev	.0035008
%RSD	2.410016
#1	.1412168
#2	.1472088
#3	.1473494

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1883.518	18903.51	1825.617	1377.014	1672.050
Stddev	7.192	43.84	5.585	4.523	4.218
%RSD	.3818184	.2319337	.3059188	.3284419	.2522528
#1	1883.899	18951.09	1819.289	1382.215	1673.927
#2	1876.143	18864.75	1829.857	1374.003	1667.220
#3	1890.511	18894.67	1827.705	1374.825	1675.004

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-08 Acquired: 01/05/2025 23:32:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1137272	-.014966	2.528710	.0673515	.0277975	56.37093
Stddev	.0027482	.004800	.005667	.0017635	.0021057	.19126
%RSD	2.416450	32.07496	.2241232	2.618299	7.575268	.3392899
#1	.1168424	-.010865	2.533481	.0653164	.0271807	56.26592
#2	.1116463	-.020246	2.522445	.0683092	.0260691	56.59169
#3	.1126927	-.013787	2.530204	.0684288	.0301428	56.25518

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.547516	.0057200	.0080409	57.86409	.3351345	.0803786
Stddev	.007044	.0002155	.0000651	.17435	.0010458	.0005479
%RSD	.4551737	3.767936	.8091523	.3013101	.3120566	.6816712
#1	1.551677	.0056372	.0079965	57.93767	.3354865	.0809480
#2	1.539384	.0055581	.0080106	57.66501	.3359588	.0803327
#3	1.551489	.0059647	.0081156	57.98959	.3339581	.0798551

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3332119	130.3320	6.429906	19.70358	.1592979	-.006491
Stddev	.0047292	.0709	.019885	.04664	.0010412	.000876
%RSD	1.419272	.0544126	.3092551	.2367201	.6535883	13.49312
#1	.3332661	130.4111	6.450579	19.74740	.1604946	-.006648
#2	.3284559	130.2742	6.410916	19.70879	.1585997	-.005548
#3	.3379138	130.3106	6.428224	19.65455	.1587995	-.007279

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6092352	.1277049	1.999861	9.621081	F 16.33163	-.258943
Stddev	.0123667	.0024297	.006003	.163506	.05725	.002224
%RSD	2.029882	1.902611	.3001955	1.699457	.3505296	.8588108
#1	.6211118	.1295244	2.003232	9.634072	16.38948	-.256735
#2	.6101631	.1286447	2.003421	9.451466	16.27500	-.261183
#3	.5964306	.1249457	1.992929	9.777703	16.33040	-.258912

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-08 Acquired: 01/05/2025 23:32:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0101287	4.362532	10.22838	.2719334	.7683774	.0467904
Stddev	.0003921	.010039	.06601	.0020758	.0064510	.0006023
%RSD	3.870837	.2301184	.6453215	.7633521	.8395556	1.287254
#1	.0097000	4.373584	10.28873	.2734388	.7718283	.0474073
#2	.0104690	4.360036	10.15789	.2695654	.7723689	.0467599
#3	.0102171	4.353977	10.23852	.2727960	.7609350	.0462038

Elem	Li6707
Units	ppm
Avg	.0974616
Stddev	.0018873
%RSD	1.936414
#1	.0978210
#2	.0954205
#3	.0991433

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2081.324	20779.70	1937.407	1516.920	1941.133
Stddev	7.885	157.62	17.681	9.574	7.695
%RSD	.3788519	.7585382	.9126192	.6311155	.3964005
#1	2082.094	20656.99	1917.107	1508.445	1938.193
#2	2073.082	20724.64	1945.677	1515.011	1935.343
#3	2088.796	20957.46	1949.438	1527.304	1949.865

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-08 Acquired: 01/05/2025 23:36:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMJ7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2005197	-.028280	5.453227	.0973963	.0620484	53.73382	2.244773
Stddev	.0060220	.001676	.018221	.0075167	.0036923	.46819	.014013
%RSD	3.003198	5.925469	.3341292	7.717619	5.950742	.8713059	.6242444
#1	.2038013	-.027888	5.435618	.1018199	.0605690	53.26204	2.229940
#2	.1935697	-.026835	5.452061	.1016516	.0662510	54.19833	2.257789
#3	.2041880	-.030117	5.472004	.0887173	.0593251	53.74109	2.246589

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086639	.0133788	190.3893	.1348312	.1310161	.4517079	210.0206
Stddev	.0000169	.0002455	1.1581	.0011347	.0007946	.0035138	1.6979
%RSD	.1946010	1.835320	.6082981	.8415977	.6064984	.7778836	.8084665
#1	.0086744	.0132794	189.0622	.1348338	.1314015	.4502490	208.4217
#2	.0086444	.0131986	191.1956	.1336952	.1301023	.4557161	211.8028
#3	.0086728	.0136585	190.9100	.1359646	.1315446	.4491586	209.8374

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.25773	58.95912	.2417058	-.013837	1.470182	.1940558	4.531642
Stddev	.07252	.48250	.0011180	.000058	.002862	.0065927	.020134
%RSD	.7069966	.8183603	.4625566	.4197845	.1946380	3.397332	.4442968
#1	10.18207	58.51724	.2404768	-.013821	1.473037	.1864702	4.516369
#2	10.32664	59.47393	.2419779	-.013902	1.467314	.1972937	4.524099
#3	10.26449	58.88618	.2426627	-.013789	1.470196	.1984034	4.554459

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.381184	8.921427	-.436896	.0173178	5.695117	7.800229	.2631276
Stddev	.070924	.027596	.010360	.0005702	.018113	.083198	.0037789
%RSD	1.318004	.3093212	2.371250	3.292378	.3180484	1.066614	1.436146
#1	5.404679	8.890620	-.425852	.0179647	5.700406	7.707934	.2617768
#2	5.437379	8.929778	-.438436	.0168884	5.674948	7.869467	.2602097
#3	5.301493	8.943882	-.446400	.0171003	5.709997	7.823286	.2673963

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-08 Acquired: 01/05/2025 23:36:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMJ7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.345772	.2224658	.0892007
Stddev	.009867	.0018234	.0011559
%RSD	.7332208	.8196530	1.295866
#1	1.337344	.2207737	.0880187
#2	1.356626	.2243970	.0892549
#3	1.343345	.2222267	.0903286

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2042.851	20674.87	1938.553	1506.961	1880.249
Stddev	6.142	108.62	19.393	3.879	6.200
%RSD	.3006508	.5253514	1.000367	.2574037	.3297203
#1	2040.264	20592.10	1955.459	1506.520	1880.859
#2	2049.863	20634.64	1917.383	1503.322	1886.120
#3	2038.426	20797.86	1942.817	1511.042	1873.766

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-09 Acquired: 01/05/2025 23:40:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMJ8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1608804	-.017329	5.459280	.0718841	.0446950	52.94250	1.898884
Stddev	.0026979	.006449	.018391	.0017547	.0020372	1.73336	.053326
%RSD	1.676969	37.21454	.3368699	2.441025	4.557935	3.274036	2.808260
#1	.1596483	-.016881	5.478563	.0732147	.0465803	52.82286	1.887177
#2	.1639744	-.011115	5.441935	.0698955	.0425341	51.27206	1.852385
#3	.1590186	-.023990	5.457341	.0725422	.0449707	54.73258	1.957091

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071911	.0145075	207.8072	.1327902	.1182470	.3998472	177.6760
Stddev	.0001172	.0001520	6.1607	.0008979	.0006796	.0103472	5.8452
%RSD	1.629830	1.047613	2.964631	.6762085	.5746983	2.587784	3.289801
#1	.0071823	.0146794	207.1673	.1329440	.1189815	.3949220	177.4537
#2	.0070785	.0144522	201.9914	.1336013	.1181190	.3928826	171.9452
#3	.0073124	.0143909	214.2629	.1318253	.1176406	.4117369	183.6292

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.590125	63.66652	.2357306	-.010349	1.105253	.1610157	4.811587
Stddev	.264821	1.83731	.0006203	.000659	.027899	.0055435	.004068
%RSD	3.082849	2.885842	.2631612	6.364633	2.524186	3.442842	.0845491
#1	8.560836	63.53105	.2363662	-.009595	1.110552	.1635073	4.813777
#2	8.341167	61.90069	.2356989	-.010813	1.075085	.1546636	4.806893
#3	8.868373	65.56782	.2351268	-.010639	1.130122	.1648763	4.814091

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.216009	8.032926	-.358463	.0160764	4.649266	6.797013	.1826604
Stddev	.267973	.016762	.007732	.0008732	.014492	.176693	.0004717
%RSD	6.356089	.2086699	2.156892	5.431714	.3117068	2.599567	.2582351
#1	3.965265	8.049507	-.359216	.0156063	4.665707	6.771304	.1825183
#2	4.184361	8.015988	-.350382	.0155389	4.638347	6.634583	.1822761
#3	4.498401	8.033283	-.365790	.0170839	4.643743	6.985152	.1831868

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-09 Acquired: 01/05/2025 23:40:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMJ8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.082134	.3602398	.0866842
Stddev	.031271	.0109941	.0040552
%RSD	2.889774	3.051872	4.678086
#1	1.081842	.3605875	.0875556
#2	1.051010	.3490760	.0902328
#3	1.113550	.3710559	.0822641

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1994.608	20032.62	1900.083	1462.299	1870.681
Stddev	1.448	61.39	44.893	4.143	5.863
%RSD	.0725750	.3064700	2.362703	.2832989	.3134302
#1	1993.408	19967.43	1903.522	1458.009	1864.133
#2	1994.201	20041.10	1943.158	1462.612	1875.445
#3	1996.216	20089.33	1853.569	1466.276	1872.465

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-10 Acquired: 01/05/2025 23:43:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMJ9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1516706	-.009668	6.850415	.0647804	.0343186	51.73270	2.053016
Stddev	.0048484	.005640	.008177	.0014045	.0018182	.18543	.004740
%RSD	3.196653	58.33697	.1193631	2.168126	5.298053	.3584313	.2308776
#1	.1572264	-.007278	6.842729	.0631736	.0323166	51.84673	2.055146
#2	.1482954	-.005616	6.849509	.0653927	.0347718	51.83263	2.056318
#3	.1494901	-.016109	6.859007	.0657748	.0358673	51.51874	2.047585

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070690	.0226290	469.8222	.1573691	.1238589	.4374286	171.2267
Stddev	.0000657	.0001836	.9606	.0003095	.0004260	.0032559	.6320
%RSD	.9299191	.8115283	.2044529	.1966721	.3439834	.7443272	.3691190
#1	.0071426	.0227795	470.8816	.1572178	.1242726	.4363147	171.4437
#2	.0070481	.0226832	469.5769	.1571643	.1238828	.4410952	171.7216
#3	.0070162	.0224244	469.0080	.1577251	.1234215	.4348758	170.5147

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.249577	248.5434	.3004878	-.010368	1.420291	.1820944	7.498492
Stddev	.030169	1.0645	.0008011	.000324	.032867	.0111254	.030476
%RSD	.3261715	.4282834	.2666093	3.128254	2.314115	6.109689	.4064240
#1	9.270119	248.9215	.3014017	-.010563	1.456608	.1897851	7.528645
#2	9.263671	249.3672	.2999067	-.009994	1.411674	.1693376	7.467703
#3	9.214939	247.3414	.3001550	-.010548	1.392590	.1871606	7.499127

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.633772	9.626072	-.336588	.0172660	9.115488	7.895176	.1450841
Stddev	.234267	.007578	.005000	.0006718	.023047	.014548	.0006945
%RSD	5.055641	.0787275	1.485569	3.890703	.2528338	.1842587	.4786709
#1	4.841198	9.619859	-.336931	.0172375	9.094057	7.905940	.1447625
#2	4.379687	9.623842	-.331425	.0179516	9.112540	7.900964	.1446087
#3	4.680430	9.634516	-.341408	.0166089	9.139867	7.878626	.1458811

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-10 Acquired: 01/05/2025 23:43:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMJ9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.685303	.2230765	.0863642
Stddev	.016602	.0008248	.0013301
%RSD	.9851345	.3697247	1.540058
#1	1.669787	.2230623	.0878896
#2	1.702812	.2239082	.0854465
#3	1.683310	.2222589	.0857565

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1925.557	19364.16	1857.543	1408.846	1707.550
Stddev	3.253	50.29	5.126	8.637	3.823
%RSD	.1689358	.2597315	.2759538	.6130576	.2238602
#1	1921.973	19409.73	1852.027	1401.800	1704.588
#2	1926.376	19372.55	1862.160	1418.482	1711.865
#3	1928.322	19310.19	1858.441	1406.256	1706.196

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-11 Acquired: 01/05/2025 23:47:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1341218	-.017476	7.053952	.0792790	.0426645	60.06223
Stddev	.0082064	.008597	.012012	.0041164	.0039224	.86270
%RSD	6.118589	49.19232	.1702855	5.192343	9.193540	1.436338
#1	.1433511	-.027394	7.052886	.0756054	.0462506	61.04243
#2	.1313671	-.012859	7.042509	.0785037	.0432672	59.72597
#3	.1276472	-.012173	7.066462	.0837280	.0384757	59.41831

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.873127	.0075149	.0223201	233.0945	.2260283	.1203965
Stddev	.024263	.0001138	.0002903	2.6900	.0034699	.0002761
%RSD	1.295338	1.513724	1.300657	1.154036	1.535157	.2292945
#1	1.896774	.0075553	.0221378	235.9788	.2224832	.1202897
#2	1.874317	.0073865	.0221676	232.6507	.2294177	.1207100
#3	1.848291	.0076029	.0226549	230.6540	.2261840	.1201898

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4997411	178.6511	8.638737	109.5995	.4093463	-.011552
Stddev	.0092177	2.3570	.120471	1.4960	.0011493	.000779
%RSD	1.844488	1.319340	1.394540	1.364943	.2807627	6.746740
#1	.5094114	181.3323	8.773557	111.2518	.4080192	-.011016
#2	.4910552	177.7154	8.601007	109.2097	.4100193	-.012446
#3	.4987566	176.9056	8.541647	108.3370	.4100003	-.011194

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.029148	.1975265	5.904458	4.149349	F 10.06190	-.359602
Stddev	.003462	.0079469	.092119	.199614	.00391	.008561
%RSD	.3363999	4.023184	1.560160	4.810730	.0388802	2.380658
#1	1.031393	.1891924	5.822527	4.350044	10.06641	-.369038
#2	1.030890	.2050192	6.004172	3.950834	10.05980	-.357436
#3	1.025161	.1983680	5.886674	4.147170	10.05949	-.352333

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-11 Acquired: 01/05/2025 23:47:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0233855	6.735225	8.546099	.1338057	1.162001	.1602326
Stddev	.0003873	.020095	.079617	.0009471	.017158	.0018943
%RSD	1.656088	.2983524	.9316131	.7078387	1.476618	1.182204
#1	.0229539	6.731763	8.637087	.1331843	1.179811	.1624199
#2	.0237028	6.717087	8.511987	.1333369	1.160613	.1591415
#3	.0234998	6.756827	8.489222	.1348958	1.145578	.1591363

Elem	Li6707
Units	ppm
Avg	.0821162
Stddev	.0019136
%RSD	2.330407
#1	.0813160
#2	.0843000
#3	.0807325

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1990.821	20023.93	1897.050	1462.356	1830.082
Stddev	3.969	336.75	18.270	24.422	2.863
%RSD	.1993541	1.681760	.9630658	1.670056	.1564357
#1	1989.945	20312.30	1876.562	1484.200	1832.694
#2	1987.363	19653.83	1902.935	1435.988	1827.021
#3	1995.155	20105.65	1911.651	1466.880	1830.533

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-12 Acquired: 01/05/2025 23:51:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1116662	-.010475	6.481285	.0650679	.0375931	49.89738	1.641538
Stddev	.0012165	.004680	.008485	.0007463	.0013033	.10663	.009023
%RSD	1.089404	44.67345	.1309131	1.146893	3.466765	.2136897	.5496964
#1	.1125643	-.008375	6.490846	.0652487	.0390152	49.87312	1.631217
#2	.1102818	-.015837	6.474651	.0642478	.0373080	49.80497	1.647934
#3	.1121526	-.007213	6.478359	.0657071	.0364559	50.01404	1.645463

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0061437	.0195714	226.3429	.2153258	.1062826	.5351260	161.9398
Stddev	.0002305	.0001362	1.0327	.0014396	.0003052	.0046130	.7963
%RSD	3.752087	.6957199	.4562716	.6685632	.2871961	.8620402	.4917490
#1	.0058775	.0195157	225.1573	.2167988	.1065932	.5400133	161.5925
#2	.0062793	.0197266	226.8248	.2152564	.1062717	.5345171	161.3761
#3	.0062743	.0194720	227.0467	.2139221	.1059830	.5308478	162.8508

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.032391	107.5504	.3365849	-.009551	.8431626	.1805775	5.201638
Stddev	.032038	.4788	.0005622	.000778	.0140911	.0104048	.024405
%RSD	.3988612	.4451463	.1670332	8.141291	1.671222	5.761960	.4691837
#1	8.013793	107.2192	.3371612	-.010229	.8515813	.1910910	5.173556
#2	8.013995	107.3327	.3365554	-.008702	.8268949	.1702849	5.217719
#3	8.069385	108.0993	.3360380	-.009723	.8510115	.1803568	5.213640

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.690195	8.684973	-.325103	.0235973	7.329578	8.116498	.1891933
Stddev	.110506	.004974	.003993	.0005380	.017693	.019645	.0022451
%RSD	2.994577	.0572756	1.228178	2.279753	.2413878	.2420369	1.186672
#1	3.636827	8.684675	-.321143	.0240921	7.315181	8.094381	.1914143
#2	3.817255	8.680155	-.329128	.0230247	7.324223	8.131923	.1869248
#3	3.616503	8.690090	-.325036	.0236751	7.349329	8.123190	.1892408

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-12 Acquired: 01/05/2025 23:51:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.207365	.1154125	.0732473
Stddev	.004973	.0003954	.0022617
%RSD	.4119150	.3426259	3.087827
#1	1.210962	.1150716	.0751634
#2	1.201690	.1153199	.0707524
#3	1.209444	.1158460	.0738261

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1938.348	19529.02	1825.073	1427.259	1825.993
Stddev	6.000	44.35	.519	.504	7.069
%RSD	.3095470	.2271094	.0284609	.0353086	.3871502
#1	1937.686	19495.84	1824.476	1427.511	1824.238
#2	1944.651	19511.82	1825.319	1427.588	1833.774
#3	1932.706	19579.39	1825.423	1426.679	1819.966

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-13 Acquired: 01/05/2025 23:55:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1774691	-.021907	2.099803	.0949373	.0354723	63.46230
Stddev	.0060423	.004926	.002975	.0020389	.0018071	.37366
%RSD	3.404703	22.48690	.1416756	2.147599	5.094371	.5887864
#1	.1825661	-.021730	2.101354	.0943629	.0356786	63.86871
#2	.1707945	-.026919	2.101682	.0932472	.0371674	63.38455
#3	.1790466	-.017072	2.096373	.0972018	.0335709	63.13363

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.327048	.0067300	.0065417	53.06781	.1245874	.1235423
Stddev	.001869	.0001398	.0001047	.14206	.0007123	.0004245
%RSD	.1408119	2.076793	1.600398	.2676940	.5717295	.3435925
#1	1.327556	.0068458	.0066399	53.05921	.1237650	.1230581
#2	1.328611	.0067696	.0065537	53.21397	.1249923	.1238503
#3	1.324978	.0065747	.0064315	52.93024	.1250050	.1237186

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3916566	161.9004	15.80197	16.42673	.1914934	-.005480
Stddev	.0063940	.8975	.08678	.09918	.0013218	.000745
%RSD	1.632558	.5543266	.5491554	.6037495	.6902702	13.58607
#1	.3990170	162.6378	15.88122	16.53216	.1929522	-.005232
#2	.3874742	162.1622	15.81544	16.33529	.1903752	-.004891
#3	.3884786	160.9011	15.70925	16.41274	.1911529	-.006317

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4145007	.1690404	1.400884	11.29143	F 10.91842	-.338559
Stddev	.0094345	.0070655	.008400	.23771	.01352	.001132
%RSD	2.276103	4.179794	.5996046	2.105264	.1238410	.3344173
#1	.4202541	.1680964	1.391597	11.50907	10.93264	-.338030
#2	.4196353	.1765305	1.407950	11.32747	10.90573	-.337789
#3	.4036125	.1624944	1.403106	11.03776	10.91691	-.339859

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-13 Acquired: 01/05/2025 23:55:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0130823	4.303993	8.709629	.1616736	.7284493	.0487442
Stddev	.0009442	.003130	.041153	.0019273	.0016197	.0005431
%RSD	7.217320	.0727135	.4725037	1.192075	.2223474	1.114197
#1	.0119944	4.307050	8.747389	.1608148	.7275801	.0482896
#2	.0136880	4.300796	8.715735	.1638810	.7274497	.0493456
#3	.0135646	4.304134	8.665764	.1603251	.7303180	.0485975

Elem	Li6707
Units	ppm
Avg	.0845704
Stddev	.0014831
%RSD	1.753680
#1	.0828727
#2	.0856139
#3	.0852247

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2171.839	21907.82	2030.945	1602.365	1940.687
Stddev	3.917	28.78	13.631	4.307	4.557
%RSD	.1803527	.1313623	.6711427	.2688080	.2348164
#1	2169.780	21874.70	2017.853	1606.686	1945.224
#2	2176.356	21922.06	2029.927	1598.072	1940.726
#3	2169.381	21926.70	2045.057	1602.339	1936.110

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-14 Acquired: 01/05/2025 23:58:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2093700	-.018504	2.114958	.1096705	.0527945	86.64543
Stddev	.0037756	.005533	.004858	.0082690	.0008072	.30156
%RSD	1.803318	29.90115	.2296754	7.539833	1.529017	.3480426
#1	.2137195	-.013800	2.115674	.1037773	.0519522	86.83733
#2	.2069369	-.017112	2.109782	.1061111	.0528699	86.80112
#3	.2074536	-.024600	2.119418	.1191232	.0535614	86.29784

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.647519	.0078422	.0075686	95.95054	.1443239	.1604182
Stddev	.009620	.0000750	.0001867	.44275	.0005522	.0001496
%RSD	.5838948	.9557348	2.467113	.4614334	.3826415	.0932548
#1	1.640004	.0078233	.0076482	95.59264	.1437803	.1602520
#2	1.658360	.0079248	.0073552	96.44565	.1443070	.1604607
#3	1.644193	.0077785	.0077022	95.81333	.1448844	.1605420

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3707483	206.7437	21.77686	24.10085	.2013413	-.008397
Stddev	.0106872	.3296	.07456	.10206	.0007895	.000696
%RSD	2.882598	.1594201	.3423613	.4234653	.3921474	8.284314
#1	.3828814	206.4090	21.75858	23.99155	.2011730	-.008374
#2	.3627306	207.0679	21.85885	24.19366	.2006495	-.009104
#3	.3666328	206.7542	21.71314	24.11734	.2022015	-.007714

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6328829	.2107310	1.331021	10.59263	F 12.18779	-.442108
Stddev	.0288271	.0129181	.007244	.14886	.04700	.006430
%RSD	4.554884	6.130131	.5442332	1.405338	.3855947	1.454460
#1	.6505682	.2252185	1.322716	10.44065	12.16748	-.447987
#2	.6484620	.2065629	1.336036	10.59907	12.15437	-.443097
#3	.5996184	.2004115	1.334311	10.73817	12.24153	-.435241

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-14 Acquired: 01/05/2025 23:58:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111893	2.391043	9.024970	.2319411	.7305525	.1320650
Stddev	.0004889	.008695	.048886	.0015395	.0020459	.0011290
%RSD	4.369129	.3636654	.5416704	.6637652	.2800520	.8549201
#1	.0114470	2.394553	9.057422	.2306435	.7282107	.1324348
#2	.0106255	2.381141	9.048744	.2315377	.7319934	.1329628
#3	.0114955	2.397435	8.968744	.2336423	.7314533	.1307975

Elem	Li6707
Units	ppm
Avg	.1101201
Stddev	.0008302
%RSD	.7538764
#1	.1099314
#2	.1094005
#3	.1110284

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2242.977	22432.29	2109.613	1649.476	1929.215
Stddev	5.441	114.58	6.125	9.206	5.901
%RSD	.2425857	.5107856	.2903545	.5581298	.3058717
#1	2236.887	22514.34	2106.149	1658.787	1923.038
#2	2247.360	22481.15	2106.005	1649.261	1934.795
#3	2244.683	22301.38	2116.686	1640.379	1929.812

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-15 Acquired: 01/06/2025 0:02:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1901782	-.027179	.9752527	.1224839	.0447164	71.42100	1.052885
Stddev	.0061867	.004516	.0077717	.0062384	.0023280	.37858	.000974
%RSD	3.253101	16.61690	.7968919	5.093275	5.206058	.5300644	.0924925
#1	.1848754	-.027160	.9815126	.1296299	.0433405	71.63714	1.052905
#2	.1886841	-.022673	.9665541	.1181240	.0474043	70.98387	1.051901
#3	.1969751	-.031706	.9776913	.1196977	.0434045	71.64200	1.053849

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062477	.0054252	48.17259	.1063459	.1492506	.2599814	201.7498
Stddev	.0002117	.0000285	.11772	.0028358	.0012928	.0139450	.8583
%RSD	3.388875	.5261265	.2443674	2.666533	.8662061	5.363862	.4254444
#1	.0062772	.0054275	48.23683	.1042336	.1498162	.2717482	202.1100
#2	.0064431	.0054524	48.03673	.1095689	.1477714	.2445785	200.7700
#3	.0060228	.0053955	48.24420	.1052352	.1501642	.2636176	202.3693

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	23.37338	16.77361	.1564802	-.010938	.4580092	.1730453	.6839362
Stddev	.07100	.04318	.0016633	.002830	.0254312	.0041890	.0121426
%RSD	.3037610	.2574436	1.062959	25.87441	5.552552	2.420783	1.775398
#1	23.38855	16.72561	.1552153	-.009401	.4497081	.1694412	.6789855
#2	23.29603	16.78591	.1558609	-.014204	.4865537	.1720535	.6977720
#3	23.43557	16.80930	.1583643	-.009208	.4377658	.1776413	.6750510

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.469929	6.954838	-.458011	.0125651	1.429365	8.519602	.0713508
Stddev	.141456	.042908	.004977	.0005869	.017292	.047608	.0007118
%RSD	2.186364	.6169480	1.086615	4.671225	1.209750	.5588038	.9976461
#1	6.307878	6.957383	-.458952	.0131064	1.433945	8.479065	.0721726
#2	6.568687	6.910715	-.462451	.0119413	1.410244	8.572028	.0709248
#3	6.533222	6.996417	-.452632	.0126476	1.443905	8.507714	.0709550

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-15 Acquired: 01/06/2025 0:02:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6170898	-.009369	.0734875
Stddev	.0039488	.000378	.0031109
%RSD	.6399097	4.032745	4.233171
#1	.6216017	-.009803	.0737226
#2	.6142634	-.009119	.0702657
#3	.6154043	-.009183	.0764741

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2214.413	21911.48	2067.184	1612.905	1957.787
Stddev	5.209	408.16	6.555	21.729	3.689
%RSD	.2352530	1.862766	.3170897	1.347180	.1884106
#1	2209.655	22172.47	2072.829	1625.300	1956.008
#2	2219.979	21441.12	2059.995	1587.815	1962.028
#3	2213.605	22120.86	2068.728	1625.599	1955.325

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-16 Acquired: 01/06/2025 0:06:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2077002	-.030282	.7458151	.1197010	.0470933	75.50839	.8440869
Stddev	.0037092	.006092	.0025085	.0058735	.0033275	.60903	.0063833
%RSD	1.785856	20.11587	.3363414	4.906821	7.065863	.8065762	.7562337
#1	.2104780	-.023639	.7482529	.1130025	.0436090	74.88009	.8370773
#2	.2034880	-.035605	.7432414	.1239698	.0474328	75.54897	.8456181
#3	.2091347	-.031603	.7459510	.1221308	.0502380	76.09612	.8495653

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0070207	.0048921	51.79612	.1109271	.1658801	.3036410	221.6569
Stddev	.0000673	.0000343	.30641	.0007539	.0007972	.0013606	1.9030
%RSD	.9582418	.7017267	.5915624	.6795870	.4805948	.4481129	.8585140
#1	.0070253	.0049246	51.47334	.1116929	.1667603	.3025117	219.6752
#2	.0069512	.0048562	51.83204	.1101858	.1656734	.3051516	221.8258
#3	.0070855	.0048956	52.08298	.1109024	.1652066	.3032595	223.4699

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.72523	20.10544	.1863159	-.013000	.4053677	.1691670	.5336180
Stddev	.17622	.01908	.0011346	.000341	.0094184	.0053230	.0004259
%RSD	.8502919	.0949152	.6089370	2.620343	2.323432	3.146606	.0798116
#1	20.56611	20.12327	.1850125	-.013300	.3959555	.1697110	.5331769
#2	20.69493	20.08531	.1870815	-.012630	.4053554	.1741971	.5340268
#3	20.91464	20.10774	.1868538	-.013070	.4147924	.1635929	.5336505

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.962089	4.906809	-.498001	.0101377	1.052989	8.213860	.0697148
Stddev	.163231	.007891	.002976	.0004683	.005197	.039605	.0010936
%RSD	2.050098	.1608081	.5975390	4.619153	.4935263	.4821678	1.568680
#1	7.773741	4.905091	-.496282	.0100034	1.054054	8.173818	.0707533
#2	8.050088	4.899919	-.496283	.0097512	1.057571	8.214750	.0698177
#3	8.062437	4.915417	-.501437	.0106584	1.047342	8.253012	.0685734

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-16 Acquired: 01/06/2025 0:06:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4207468	-.042726	.0918843
Stddev	.0023969	.000714	.0014808
%RSD	.5696735	1.670773	1.611551
#1	.4192197	-.041951	.0902024
#2	.4195113	-.043357	.0924586
#3	.4235093	-.042871	.0929919

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2351.925	23617.74	2210.460	1735.802	1965.765
Stddev	7.761	101.51	6.582	5.891	2.197
%RSD	.3300020	.4297956	.2977501	.3393620	.1117635
#1	2355.121	23520.37	2217.199	1730.454	1966.993
#2	2343.075	23722.93	2210.135	1734.836	1963.229
#3	2357.577	23609.90	2204.048	1742.116	1967.073

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-17 Acquired: 01/06/2025 0:10:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2292344	-.021288	.6840041	.1131057	.0403012	68.64062
Stddev	.0040549	.002352	.0034978	.0021529	.0008358	.13683
%RSD	1.768871	11.04892	.5113790	1.903475	2.074018	.1993454
#1	.2330818	-.023865	.6799799	.1143397	.0408905	68.52022
#2	.2249999	-.019256	.6863152	.1106198	.0393446	68.61220
#3	.2296215	-.020744	.6857172	.1143578	.0406685	68.78943

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7185907	.0065434	.0055865	48.79855	.1020403	.1809011
Stddev	.0016960	.0002129	.0001672	.11553	.0003855	.0011010
%RSD	.2360107	3.254101	2.992724	.2367479	.3777707	.6086182
#1	.7204389	.0066365	.0054325	48.92320	.1024852	.1802736
#2	.7171060	.0066939	.0057643	48.77738	.1018274	.1821724
#3	.7182270	.0062998	.0055627	48.69507	.1018082	.1802574

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3046271	202.0776	20.57796	21.12108	.2186293	-.012032
Stddev	.0023884	.2175	.01674	.10259	.0005359	.000570
%RSD	.7840580	.1076261	.0813389	.4857332	.2451111	4.734287
#1	.3073842	202.1888	20.59673	21.09802	.2180985	-.011387
#2	.3033081	201.8270	20.57259	21.03197	.2191701	-.012243
#3	.3031890	202.2171	20.56457	21.23324	.2186192	-.012465

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4741414	.1387965	.4950885	7.717425	F 11.42105	-.441722
Stddev	.0213330	.0076512	.0070614	.170219	.03402	.007829
%RSD	4.499290	5.512543	1.426289	2.205649	.2979067	1.772321
#1	.4974639	.1435168	.4990006	7.552584	11.40952	-.444490
#2	.4556141	.1429040	.4993281	7.707134	11.45934	-.447791
#3	.4693461	.1299687	.4869369	7.892556	11.39429	-.432886

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-17 Acquired: 01/06/2025 0:10:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105368	1.112300	7.618356	.0400993	.3394012	-.019084
Stddev	.0004920	.006319	.088569	.0011921	.0019261	.000145
%RSD	4.669700	.5681352	1.162577	2.972749	.5674896	.7574669
#1	.0104477	1.107514	7.653269	.0411776	.3376016	-.019127
#2	.0110673	1.119463	7.684149	.0388192	.3391692	-.018923
#3	.0100954	1.109922	7.517651	.0403013	.3414328	-.019202

Elem	Li6707
Units	ppm
Avg	.0975503
Stddev	.0009513
%RSD	.9751738
#1	.0971594
#2	.0968568
#3	.0986348

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2593.672	26036.94	2436.376	1907.929	1936.861
Stddev	7.080	59.64	18.162	10.783	6.180
%RSD	.2729542	.2290778	.7454707	.5651416	.3190697
#1	2599.804	26007.46	2425.611	1898.823	1938.596
#2	2585.924	25997.78	2426.170	1905.129	1929.999
#3	2595.289	26105.59	2457.345	1919.835	1941.989

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-18 Acquired: 01/06/2025 0:14:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1941219	-.021327	5.244601	.0806534	.0353178	50.61974
Stddev	.0062752	.003760	.006541	.0123732	.0023459	.70869
%RSD	3.232625	17.62955	.1247139	15.34114	6.642327	1.400017
#1	.1905723	-.017242	5.239835	.0729814	.0353328	49.92077
#2	.2013675	-.024644	5.241910	.0949273	.0376562	51.33776
#3	.1904261	-.022094	5.252058	.0740515	.0329645	50.60068

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.576751	.0057686	.0129999	67.09502	.1429123	.1294648
Stddev	.023136	.0000760	.0001585	1.08421	.0008340	.0004533
%RSD	1.467303	1.318105	1.218956	1.615926	.5835541	.3501707
#1	1.555346	.0058366	.0131785	66.01781	.1420355	.1289467
#2	1.601296	.0056865	.0128762	68.18609	.1430059	.1296588
#3	1.573609	.0057829	.0129450	67.08114	.1436955	.1297888

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7747408	153.2295	11.73042	23.12834	.1790899	-.004879
Stddev	.0075203	2.0517	.15471	.38856	.0015575	.001179
%RSD	.9706836	1.338969	1.318858	1.680012	.8696592	24.16689
#1	.7682423	151.2158	11.59156	22.69710	.1802712	-.006238
#2	.7829782	155.3172	11.89718	23.45121	.1773249	-.004270
#3	.7730019	153.1554	11.70252	23.23671	.1796737	-.004129

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6669579	.1440816	4.071359	8.151234	F 10.31823	-.315846
Stddev	.0197271	.0094714	.017135	.176130	.01871	.001171
%RSD	2.957767	6.573620	.4208683	2.160781	.1813131	.3706639
#1	.6891331	.1526309	4.054533	7.988547	10.32435	-.315083
#2	.6603818	.1339003	4.070756	8.126883	10.29723	-.317194
#3	.6513589	.1457137	4.088787	8.338273	10.33312	-.315261

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5128-18 Acquired: 01/06/2025 0:14:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMK8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189195	3.772260	8.568851	.2526425	.6837869	.0162051
Stddev	.0006376	.010447	.112716	.0032974	.0156888	.0002994
%RSD	3.370286	.2769426	1.315410	1.305178	2.294401	1.847340
#1	.0196003	3.777255	8.462268	.2536409	.6691991	.0163540
#2	.0188221	3.779272	8.686833	.2553254	.7003833	.0164008
#3	.0183362	3.760253	8.557453	.2489613	.6817782	.0158605

Elem	Li6707
Units	ppm
Avg	.0753285
Stddev	.0027843
%RSD	3.696241
#1	.0728227
#2	.0748370
#3	.0783259

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2089.731	21053.00	1962.228	1542.375	1949.504
Stddev	6.695	114.10	16.430	7.536	6.120
%RSD	.3203957	.5419455	.8372920	.4886041	.3139508
#1	2096.518	20924.36	1973.068	1535.251	1956.352
#2	2083.131	21141.95	1943.324	1550.265	1944.568
#3	2089.545	21092.70	1970.291	1541.609	1947.591

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-07DLX2 Acquired: 01/06/2025 0:18:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0240447	.0118366	.0664839	.0042674	.0178049	32.25986	.2925241
Stddev	.0064754	.0026508	.0060189	.0086321	.0045440	.16403	.0028484
%RSD	26.93088	22.39453	9.053126	202.2823	25.52095	.5084759	.9737284
#1	.0275500	.0129892	.0665484	.0085615	.0230389	32.17338	.2901604
#2	.0280119	.0137160	.0604330	-.005670	.0148680	32.15716	.2956866
#3	.0165723	.0088047	.0724702	.009910	.0155080	32.44904	.2917253

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031024	.0014584	456.6846	.0729539	.0731632	.1714366	89.40388
Stddev	.0002279	.0000580	1.7895	.0032712	.0012922	.0055820	.55378
%RSD	7.344747	3.976238	.3918393	4.483995	1.766169	3.256029	.6194098
#1	.0032651	.0014528	457.1561	.0691838	.0731969	.1692678	89.61153
#2	.0028420	.0015190	454.7066	.0750410	.0718545	.1777775	88.77629
#3	.0032001	.0014035	458.1911	.0746369	.0744382	.1672644	89.82382

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.498901	43.13528	.0724256	-.007212	1.199473	.0780294	.1742541
Stddev	.024389	.45676	.0000589	.001723	.030667	.0023009	.0043932
%RSD	.6970414	1.058897	.0813373	23.88918	2.556679	2.948735	2.521168
#1	3.507222	43.36103	.0723831	-.005233	1.183658	.0758218	.1696268
#2	3.471441	42.60961	.0724928	-.008377	1.179943	.0778531	.1783682
#3	3.518041	43.43521	.0724008	-.008026	1.234819	.0804134	.1747673

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.275929	2.267813	-.146695	.0053945	.9362382	7.099269	.0190128
Stddev	.208819	.012345	.001715	.0008410	.0047111	.120490	.0016291
%RSD	3.327298	.5443505	1.168782	15.59042	.5031956	1.697222	8.568514
#1	6.036777	2.265634	-.145823	.0059891	.9415461	6.974358	.0203388
#2	6.368856	2.256703	-.148670	.0057623	.9325528	7.108657	.0171943
#3	6.422153	2.281102	-.145592	.0044323	.9346158	7.214790	.0195055

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5080-07DLX2 Acquired: 01/06/2025 0:18:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHLE5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.272570	.3592114	.0772851
Stddev	.015522	.0025254	.0029272
%RSD	1.219705	.7030404	3.787554
#1	1.263074	.3580557	.0759051
#2	1.264154	.3574707	.0806473
#3	1.290482	.3621079	.0753030

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1813.022	18244.75	1739.885	1328.772	1765.216
Stddev	4.749	356.78	18.085	24.230	7.291
%RSD	.2619260	1.955548	1.039453	1.823454	.4130164
#1	1807.539	18586.56	1732.999	1352.484	1759.895
#2	1815.845	17874.68	1760.401	1304.056	1773.526
#3	1815.681	18273.00	1726.253	1329.775	1762.226

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165861BL Acquired: 01/06/2025 0:22:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS861 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005659	.0021709	.0009265	.0036477	.0023973	-.025271	-.001376
Stddev	.003837	.0036446	.0046095	.0054926	.0021282	.040913	.002702
%RSD	67.81170	167.8806	497.5247	150.5750	88.77510	161.8989	196.3425
#1	-.009078	.0056050	.0041524	.0088947	.0016000	.009643	-.004464
#2	-.001509	.0025606	-.004353	.0041098	.0007829	-.015166	-.000217
#3	-.006389	-.001653	.002980	-.002061	.0048090	-.070290	.000553

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000732	-.000090	.0048696	-.000487	.0004582	-.004367	.0296829
Stddev	.0001122	.000110	.0116643	.000751	.0001994	.008685	.0476991
%RSD	153.2603	122.6329	239.5320	154.2752	43.52599	198.8650	160.6952
#1	.0000445	-.000018	-.002506	-.000256	.0002383	.004523	-.014729
#2	-.000022	-.000035	.018317	.000122	.0005088	-.012831	.080100
#3	.000197	-.000216	-.001203	-.001327	.0006274	-.004794	.023677

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011988	.0848460	.0006940	-.000552	-.008407	-.013211	.0041395
Stddev	.0021855	.0301266	.0006448	.002415	.026932	.004020	.0001306
%RSD	182.3060	35.50739	92.92043	437.3334	320.3599	30.42649	3.155180
#1	.0021050	.0800742	-.000050	-.001853	-.010249	-.013045	.0041582
#2	.0027855	.1170738	.001092	.002234	.019399	-.017312	.0040005
#3	-.001294	.0573901	.001040	-.002037	-.034370	-.009277	.0042597

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050978	-.003904	.0009439	-.000704	-.000489	.0011406	-.002025
Stddev	.1885675	.001611	.0026641	.000448	.001253	.0007281	.000789
%RSD	3698.970	41.25220	282.2399	63.69020	255.9944	63.83527	38.96501
#1	-.122843	-.004038	-.002131	-.000187	-.001848	.0012794	-.002784
#2	-.083513	-.002231	.002547	-.000984	.000621	.0003531	-.001209
#3	.221650	-.005443	.002417	-.000939	-.000241	.0017893	-.002082

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165861BL Acquired: 01/06/2025 0:22:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS861 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.005478	.0001493	.0016805
Stddev	.002054	.0003399	.0085265
%RSD	37.48727	227.6093	507.3844
#1	-.005608	.0004543	.0051298
#2	-.003363	-.000217	-.008030
#3	-.007464	.000211	.007942

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1790.892	17955.54	1674.381	1318.945	2012.495
Stddev	1.811	144.65	18.629	11.696	1.997
%RSD	.1011207	.8055789	1.112618	.8867834	.0992101
#1	1792.908	17791.48	1690.893	1307.836	2013.508
#2	1790.368	18010.45	1678.066	1317.849	2010.195
#3	1789.401	18064.69	1654.185	1331.151	2013.782

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165861BS Acquired: 01/06/2025 0:26:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS861 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0193909	.0489720	.0183471	.0638646	.1048023	.3997212
Stddev	.0037112	.0015561	.0026523	.0043370	.0011274	.0317769
%RSD	19.13876	3.177535	14.45653	6.790861	1.075784	7.949769
#1	.0151410	.0489763	.0156961	.0643116	.1056451	.4346641
#2	.0210402	.0474137	.0210008	.0679608	.1035216	.3725535
#3	.0219916	.0505259	.0183442	.0593215	.1052403	.3919459

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3868300	.0103200	.0093122	9.802809	.0199097	.0971908
Stddev	.0016373	.0001453	.0000782	.004994	.0010723	.0005911
%RSD	.4232483	1.407917	.8399753	.0509458	5.385546	.6081778
#1	.3874329	.0104873	.0092266	9.807330	.0200289	.0965535
#2	.3880803	.0102253	.0093302	9.803648	.0187829	.0977210
#3	.3849768	.0102474	.0093799	9.797448	.0209174	.0972979

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0415037	.1961100	.0311254	10.14772	.0758517	.0184295
Stddev	.0029761	.0343135	.0034137	.07275	.0002535	.0006939
%RSD	7.170587	17.49710	10.96761	.7169184	.3342228	3.765128
#1	.0411076	.1613960	.0272144	10.08697	.0759370	.0183974
#2	.0387456	.2300086	.0335069	10.12785	.0755665	.0177522
#3	.0446580	.1969253	.0326548	10.22834	.0760516	.0191388

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.620052	.1047147	.1163513	9.370269	.0159427	F -.001212
Stddev	.043228	.0020892	.0013164	.252322	.0031974	.003865
%RSD	.5672911	1.995168	1.131420	2.692789	20.05573	318.9744
#1	7.633690	.1024359	.1178590	9.207723	.0135746	.000426
#2	7.654816	.1065399	.1157651	9.242137	.0195798	.001565
#3	7.571650	.1051682	.1154298	9.660946	.0146737	-.005625

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165861BS Acquired: 01/06/2025 0:26:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS861 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0183926	.1733043	F .4761981	.0113764	.1828354	.2035061
Stddev	.0008831	.0051011	.0064628	.0031629	.0032308	.0012789
%RSD	4.801199	2.943417	1.357164	27.80257	1.767030	.6284545
#1	.0194122	.1677471	.4757307	.0143649	.1837586	.2020352
#2	.0178939	.1743921	.4828819	.0117003	.1792435	.2043550
#3	.0178716	.1777738	.4699817	.0080640	.1855040	.2041283

Elem	Li6707
Units	ppm
Avg	.0351507
Stddev	.0028593
%RSD	8.134440
#1	.0319964
#2	.0358832
#3	.0375725

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1778.421	17750.95	1663.929	1302.884	1981.755
Stddev	.563	60.43	5.276	11.108	1.438
%RSD	.0316471	.3404492	.3170914	.8525493	.0725441
#1	1778.186	17782.14	1660.420	1299.386	1983.018
#2	1778.013	17789.42	1661.370	1315.319	1980.190
#3	1779.063	17681.30	1669.997	1293.946	1982.057

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV117 Acquired: 01/06/2025 0:30:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV117 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.070023	4.930349	25.14236	5.022478	4.984169	408.7015	10.30319
Stddev	.009279	.009922	.04946	.009627	.004686	1.6907	.03415
%RSD	.1830156	.2012401	.1967112	.1916795	.0940170	.4136878	.3314688
#1	5.069499	4.919740	25.08639	5.032989	4.989225	409.6773	10.28017
#2	5.079552	4.939399	25.18017	5.014089	4.983311	406.7492	10.28698
#3	5.061016	4.931908	25.16052	5.020356	4.979971	409.6781	10.34243

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5218963	2.526224	413.5034	15.78613	2.544067	15.43129	412.7731
Stddev	.0047328	.005380	1.3124	.01905	.002117	.04466	2.1121
%RSD	.9068478	.2129819	.3173811	.1206528	.0832175	.2893890	.5116759
#1	.5261441	2.520128	413.4358	15.76475	2.541760	15.47069	413.1936
#2	.5227500	2.530309	412.2262	15.79238	2.545921	15.38278	410.4824
#3	.5167947	2.528235	414.8483	15.80127	2.544521	15.44040	414.6432

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.21878	411.8498	2.547854	1.276341	424.4735	2.535372	15.09905
Stddev	.08813	.7513	.003258	.005219	2.9571	.011060	.02198
%RSD	.5790671	.1824215	.1278853	.4089411	.6966509	.4362159	.1455572
#1	15.23661	411.8075	2.544571	1.280455	424.5893	2.541715	15.07786
#2	15.12310	411.1205	2.551087	1.278099	421.4602	2.522602	15.09757
#3	15.29663	412.6213	2.547905	1.270470	427.3710	2.541799	15.12174

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	156.7577	5.068894	4.515943	4.938434	5.085912	5.125645	5.104806
Stddev	.2052	.019712	.032572	.004626	.018410	.038502	.006474
%RSD	.1308823	.3888843	.7212686	.0936732	.3619879	.7511680	.1268201
#1	156.6678	5.053196	4.548948	4.936400	5.065996	5.168823	5.098052
#2	156.6128	5.091017	4.515058	4.943729	5.089431	5.113231	5.110958
#3	156.9924	5.062469	4.483822	4.935174	5.102309	5.094882	5.105406

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV117 Acquired: 01/06/2025 0:30:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV117 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	5.086582	4.868402	5.142289
Stddev	.015386	.017728	.012558
%RSD	.3024775	.3641525	.2442155
#1	5.093501	4.875683	5.133741
#2	5.068951	4.848192	5.136420
#3	5.097293	4.881331	5.156708

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1483.342	15854.23	1546.056	1081.479	1590.425
Stddev	.702	69.18	8.422	5.442	4.037
%RSD	.0473440	.4363432	.5447096	.5031641	.2538228
#1	1483.338	15889.88	1536.612	1085.555	1595.038
#2	1484.046	15898.32	1552.785	1083.583	1588.695
#3	1482.642	15774.50	1548.772	1075.300	1587.541

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB117 Acquired: 01/06/2025 0:34:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB117 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003824	-.001396	.0020116	.0122444	.0022861	.0140938	-.002775
Stddev	.003924	.001034	.0014676	.0047681	.0019942	.0428635	.000556
%RSD	102.6027	74.03160	72.95827	38.94148	87.22794	304.1293	20.02297
#1	-.005236	-.001908	.0036987	.0153656	.0045767	.0625210	-.003001
#2	.000610	-.000207	.0013064	.0146117	.0009371	-.018973	-.002142
#3	-.006848	-.002075	.0010296	.0067558	.0013446	-.001267	-.003182

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000257	.0000488	.0177518	.0000713	.0003065	.0058890	.0368929
Stddev	.0001319	.0000201	.0172692	.0003663	.0002046	.0109845	.0417340
%RSD	512.4974	41.20322	97.28103	513.4247	66.75083	186.5256	113.1221
#1	.0001772	.0000285	.0104383	-.000344	.0004272	.0177140	.0223157
#2	-.000037	.0000492	.0053428	.000349	.0004219	-.003997	.0839603
#3	-.000063	.0000687	.0374743	.000209	.0000703	.003950	.0044026

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023127	-.019011	-.000751	.0002717	.1838031	-.015378	.0045955
Stddev	.0008999	.084259	.000485	.0018913	.0234696	.009646	.0005886
%RSD	38.90951	443.2070	64.53246	696.1837	12.76889	62.72142	12.80924
#1	.0023571	.034952	-.000195	.0023554	.1704524	-.026281	.0050342
#2	.0031896	.024118	-.001087	-.001336	.2109025	-.011901	.0048258
#3	.0013915	-.116104	-.000970	-.000204	.1700543	-.007954	.0039265

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1326485	-.002680	.0111859	-.000509	-.000268	.0005213	-.000426
Stddev	.2182391	.001295	.0052624	.000561	.001311	.0005898	.001925
%RSD	164.5244	48.31397	47.04478	110.1788	489.6760	113.1379	451.5675
#1	-.109148	-.003690	.0086557	.000138	-.000756	.0003883	.001705
#2	.315021	-.003130	.0172355	-.000855	.001218	.0011663	-.000945
#3	.192072	-.001220	.0076666	-.000809	-.001265	.0000094	-.002039

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB117 Acquired: 01/06/2025 0:34:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB117 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.009171	.0000963	.0096658
Stddev	.001981	.0001890	.0025102
%RSD	21.60034	196.2377	25.96976
#1	-.007145	-.000118	.0113736
#2	-.011103	.000165	.0108402
#3	-.009266	.000241	.0067837

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1784.602	17868.78	1672.980	1305.052	1994.367
Stddev	1.356	82.17	7.221	6.778	2.407
%RSD	.0759692	.4598511	.4315981	.5193902	.1206955
#1	1784.059	17785.81	1674.304	1300.703	1992.695
#2	1783.602	17870.39	1665.189	1301.591	1997.126
#3	1786.145	17950.13	1679.447	1312.862	1993.280

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165842BL Acquired: 01/06/2025 0:39:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS842 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005372	-.001854	.0004400	.0095627	.0016355	-.000280	-.001816
Stddev	.002038	.003221	.0024154	.0031595	.0036506	.017156	.004418
%RSD	37.94079	173.6691	548.9970	33.03950	223.2148	6133.267	243.3077
#1	-.007715	-.000374	-.002165	.0121108	-.000278	-.005298	-.002147
#2	-.004005	.000360	.000880	.0105498	-.000660	-.014367	-.006059
#3	-.004397	-.005549	.002605	.0060275	.005845	.018826	.002759

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001600	-.000066	.0514583	-.000519	.0002855	-.010659	-.004140
Stddev	.0001209	.000060	.0449966	.000184	.0004043	.005217	.016660
%RSD	75.57703	89.73193	87.44285	35.50754	141.6104	48.94847	402.4388
#1	.0000346	.000002	.1006314	-.000602	.0007522	-.010310	-.021033
#2	.0002758	-.000107	.0123390	-.000646	.0000434	-.016042	.012277
#3	.0001696	-.000094	.0414045	-.000308	.0000609	-.005625	-.003664

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022180	.0385774	.0005727	.0000596	.0692320	-.010756	.0011850
Stddev	.0015615	.1054833	.0004574	.0016447	.0148360	.014985	.0004693
%RSD	70.39896	273.4327	79.86053	2761.551	21.42940	139.3168	39.60122
#1	.0013858	.0135344	.0009737	.0016016	.0548963	-.010990	.0006444
#2	.0040193	.1543286	.0006699	.0002484	.0682776	.004344	.0014882
#3	.0012489	-.052131	.0000745	-.001671	.0845222	-.025622	.0014223

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0944460	-.000006	.0057556	-.000363	-.000492	-.000528	-.000576
Stddev	.0435900	.001164	.0020069	.000648	.003206	.001541	.002152
%RSD	46.15333	19439.61	34.86777	178.8188	651.3608	291.8756	373.8152
#1	.1363116	-.000429	.0038942	.000049	.003125	-.001678	-.000392
#2	.0493153	.001310	.0078817	-.000027	-.002980	-.001128	.001479
#3	.0977110	-.000900	.0054911	-.001110	-.001621	.001223	-.002814

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165842BL Acquired: 01/06/2025 0:39:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS842 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.002929	.0001724	.0044850
Stddev	.005516	.0001577	.0013881
%RSD	188.2945	91.47994	30.95002
#1	.003261	.0001087	.0028908
#2	-.004727	.0000565	.0051379
#3	-.007322	.0003519	.0054263

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1789.501	17854.20	1663.625	1307.224	2001.919
Stddev	2.795	60.94	16.793	9.009	3.163
%RSD	.1561951	.3413247	1.009417	.6891608	.1579776
#1	1792.231	17790.45	1655.463	1296.847	2003.655
#2	1786.645	17860.26	1682.939	1313.037	1998.268
#3	1789.628	17911.88	1652.474	1311.789	2003.833

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165842BS Acquired: 01/06/2025 0:43:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS842 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0210859	.0478009	.0205930	.0617574	.1040069	.3951399
Stddev	.0070060	.0047280	.0028031	.0039647	.0032276	.0242095
%RSD	33.22633	9.891040	13.61193	6.419734	3.103209	6.126819
#1	.0291656	.0424849	.0221707	.0574568	.1076935	.4148160
#2	.0173971	.0515357	.0222518	.0652668	.1016905	.4024988
#3	.0166949	.0493820	.0173566	.0625487	.1026367	.3681048

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3788973	.0102303	.0091902	9.644046	.0197001	.0961305
Stddev	.0016985	.0001650	.0000881	.087030	.0007385	.0005281
%RSD	.4482699	1.613279	.9583140	.9024209	3.748700	.5493805
#1	.3806551	.0104208	.0091126	9.712771	.0204087	.0958152
#2	.3772651	.0101375	.0092859	9.546187	.0189349	.0958361
#3	.3787716	.0101326	.0091722	9.673181	.0197567	.0967402

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0459446	.1972975	.0318355	9.876763	.0746608	.0184599
Stddev	.0192307	.0166786	.0030725	.129969	.0013008	.0008523
%RSD	41.85623	8.453530	9.651056	1.315909	1.742315	4.617145
#1	.0506368	.2099659	.0334040	9.962037	.0743670	.0181080
#2	.0623949	.1784011	.0282954	9.727176	.0735320	.0194319
#3	.0248020	.2035256	.0338072	9.941077	.0760834	.0178399

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.457447	.1008357	.1135866	9.142892	.0170954	F .0023718
Stddev	.060740	.0089705	.0004026	.112297	.0022300	.0025468
%RSD	.8144814	8.896189	.3543994	1.228245	13.04422	107.3785
#1	7.492062	.0937518	.1132337	9.234087	.0145566	.0051075
#2	7.387314	.0978330	.1135011	9.017462	.0179924	.0000695
#3	7.492967	.1109224	.1140251	9.177127	.0187371	.0019384

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165842BS Acquired: 01/06/2025 0:43:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS842 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0189107	.1736810	F .4654717	.0125427	.1804667	.1988623
Stddev	.0009702	.0061878	.0054429	.0002500	.0043478	.0014998
%RSD	5.130397	3.562756	1.169337	1.993402	2.409180	.7541850
#1	.0199531	.1783200	.4716193	.0126713	.1824237	.2005159
#2	.0187450	.1760677	.4635296	.0127021	.1754843	.1984812
#3	.0180341	.1666552	.4612661	.0122545	.1834920	.1975899

Elem	Li6707
Units	ppm
Avg	.0341131
Stddev	.0052295
%RSD	15.33000
#1	.0286683
#2	.0390968
#3	.0345741

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1782.966	17890.49	1680.853	1315.228	1986.269
Stddev	2.956	105.68	10.408	6.204	3.446
%RSD	.1658043	.5907214	.6191805	.4716954	.1735094
#1	1786.052	18008.97	1669.008	1321.603	1989.916
#2	1782.686	17805.93	1688.536	1314.872	1985.823
#3	1780.159	17856.56	1685.014	1309.211	1983.067

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165841BL Acquired: 01/06/2025 0:47:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS841 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000974	-.000776	.0039394	.0075205	.0021202	.0163478	-.003186
Stddev	.0030704	.001552	.0018371	.0006216	.0033761	.0197420	.002996
%RSD	3150.893	200.0495	46.63413	8.265394	159.2330	120.7624	94.01667
#1	.0015710	-.002143	.0034557	.0072567	.0014075	.0257325	-.003694
#2	.0021533	.000911	.0059700	.0082305	.0057958	.0296470	.000031
#3	-.003432	-.001096	.0023926	.0070744	-.000843	-.006336	-.005896

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002393	.0000847	-.039518	-.000115	.0001656	-.000118	.0253822
Stddev	.0000962	.0000777	.048490	.000500	.0006613	.008050	.0541055
%RSD	40.19504	91.76099	122.7030	434.6220	399.3757	6804.935	213.1632
#1	.0003066	.0001536	-.084424	.000318	.0001943	-.008620	-.036705
#2	.0002822	.0000005	.011898	-.000002	.0008120	.007386	.050401
#3	.0001291	.0000999	-.046028	-.000662	-.000510	.000879	.062450

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018588	.0762098	-.000462	-.000456	.0559410	-.017994	.0006654
Stddev	.0007765	.0625665	.000788	.001474	.0105000	.011958	.0009308
%RSD	41.77307	82.09773	170.6474	322.8982	18.76981	66.45530	139.8796
#1	.0009831	.0789132	.000447	.000261	.0463286	-.030442	-.000035
#2	.0021301	.0123354	-.000966	.000521	.0543479	-.006595	.000310
#3	.0024633	.1373808	-.000867	-.002152	.0671465	-.016946	.001722

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0821645	-.000534	.0001257	-.000830	-.003644	.0011275	-.000603
Stddev	.1585933	.000930	.0017547	.000738	.004444	.0008225	.000278
%RSD	193.0194	174.1134	1395.652	88.99634	121.9434	72.95015	46.02142
#1	.2513470	-.000028	.0006545	-.001674	-.008255	.0017650	-.000390
#2	.0582758	.000033	.0015553	-.000303	-.003289	.0001991	-.000502
#3	-.063129	-.001607	-.001833	-.000512	.000612	.0014184	-.000917

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165841BL Acquired: 01/06/2025 0:47:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS841 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0007597	.0001479	.0054483
Stddev	.0074638	.0003328	.0063009
%RSD	982.4358	224.9868	115.6500
#1	.0088059	.0003473	.0076121
#2	-.005938	-.000236	.0103821
#3	-.000589	.000333	-.001649

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1770.408	17703.99	1649.236	1301.285	1983.041
Stddev	1.346	40.26	12.952	.554	2.726
%RSD	.0760333	.2273890	.7853542	.0425391	.1374646
#1	1770.341	17698.11	1638.303	1301.869	1980.659
#2	1769.098	17666.99	1645.863	1301.217	1986.014
#3	1771.787	17746.86	1663.541	1300.768	1982.450

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165841BS Acquired: 01/06/2025 0:51:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS841 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0174040	.0486135	.0232761	.0682278	.1038257	.4017339
Stddev	.0021378	.0005100	.0003971	.0083927	.0023986	.0225342
%RSD	12.28332	1.049192	1.706097	12.30094	2.310188	5.609238
#1	.0149531	.0484076	.0234864	.0706547	.1028351	.3943998
#2	.0183741	.0491943	.0228180	.0751395	.1020811	.4270215
#3	.0188847	.0482385	.0235237	.0588891	.1065609	.3837803

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3830362	.0102551	.0092219	9.633760	.0199162	.0959364
Stddev	.0037784	.0002790	.0000989	.055197	.0005796	.0004808
%RSD	.9864390	2.720815	1.072100	.5729575	2.910335	.5011254
#1	.3826953	.0104085	.0093300	9.571824	.0192535	.0953949
#2	.3869735	.0104237	.0091360	9.651699	.0203287	.0961013
#3	.3794398	.0099330	.0091997	9.677756	.0201664	.0963130

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0415006	.2458110	.0324736	10.02992	.0757081	.0183521
Stddev	.0176723	.0144772	.0013693	.09146	.0008239	.0011159
%RSD	42.58321	5.889549	4.216626	.9119134	1.088250	6.080323
#1	.0311389	.2606530	.0337121	10.04078	.0766524	.0176085
#2	.0619060	.2317286	.0327057	9.93351	.0751361	.0178126
#3	.0314569	.2450515	.0310031	10.11547	.0753357	.0196352

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.547352	.0910576	.1129203	9.340504	.0180660	F -.001854
Stddev	.072713	.0102335	.0008352	.170377	.0019123	.001737
%RSD	.9634178	11.23849	.7396027	1.824071	10.58527	93.69854
#1	7.555911	.1027852	.1136416	9.170264	.0194207	-.001852
#2	7.615406	.0839400	.1131140	9.511019	.0158785	-.003593
#3	7.470738	.0864476	.1120053	9.340228	.0188988	-.000118

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165841BS Acquired: 01/06/2025 0:51:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS841 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0182618	.1691134	F .4705146	.0113036	.1793004	.2012278
Stddev	.0005621	.0062820	.0047559	.0012745	.0031345	.0010016
%RSD	3.077796	3.714643	1.010779	11.27510	1.748201	.4977324
#1	.0185651	.1619107	.4723893	.0099719	.1760822	.2010298
#2	.0186070	.1734591	.4740474	.0125119	.1794752	.2023136
#3	.0176132	.1719705	.4651071	.0114269	.1823440	.2003400

Elem	Li6707
Units	ppm
Avg	.0367533
Stddev	.0056865
%RSD	15.47200
#1	.0320298
#2	.0430651
#3	.0351650

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1776.625	17730.08	1654.603	1303.283	1976.002
Stddev	6.871	51.00	15.157	4.110	7.765
%RSD	.3867702	.2876516	.9160380	.3153205	.3929521
#1	1769.014	17709.67	1651.157	1298.563	1967.280
#2	1778.490	17788.13	1641.465	1305.225	1978.562
#3	1782.372	17692.44	1671.186	1306.062	1982.163

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165850BL Acquired: 01/06/2025 0:55:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS850 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0052879	-.001504	.0016601	.0098946	.0000740	-.009760	-.006799
Stddev	.0028320	.004379	.0022685	.0023442	.0016221	.020749	.003313
%RSD	53.55604	291.1561	136.6518	23.69206	2191.166	212.5892	48.73136
#1	.0068212	-.006463	.0001005	.0104892	-.001194	-.022535	-.005860
#2	.0020199	.000120	.0006172	.0073103	-.000486	-.020927	-.004057
#3	.0070227	.001831	.0042625	.0118843	.001902	.014181	-.010481

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000075	-.000035	.0275887	-.000449	.0002112	-.016342	-.002181
Stddev	.0001505	.000118	.0709542	.000725	.0003162	.010604	.023012
%RSD	2019.365	333.7465	257.1859	161.3150	149.6665	64.88765	1055.120
#1	-.000164	-.000161	.0662324	.000315	.0002480	-.004782	-.013671
#2	.000118	-.000017	.0708327	-.000535	.0005074	-.018626	-.017185
#3	.000069	.000072	-.054299	-.001128	-.000122	-.025617	.024314

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020420	.0296222	.0001551	-.000304	.0333725	-.011089	-.000473
Stddev	.0016129	.0637859	.0008361	.002414	.0157105	.011829	.000241
%RSD	78.98499	215.3316	539.2590	794.1574	47.07621	106.6756	51.05040
#1	.0035903	-.038815	-.000592	.002175	.0310043	.000492	-.000416
#2	.0003715	.087418	.001058	-.000440	.0189805	-.010607	-.000737
#3	.0021643	.040264	-.000000	-.002647	.0501326	-.023152	-.000265

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.024234	-.000434	.0016294	-.000536	-.002833	.0003799	-.001895
Stddev	.178924	.002718	.0022147	.000910	.005135	.0007933	.001415
%RSD	738.3133	626.2314	135.9207	169.5835	181.2649	208.8089	74.64276
#1	.002278	.002227	.0015402	.000361	-.004318	.0002048	-.000618
#2	-.214935	-.000324	.0038874	-.001458	.002881	.0012461	-.003416
#3	.139954	-.003205	-.000539	-.000513	-.007062	-.000311	-.001652

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165850BL Acquired: 01/06/2025 0:55:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS850 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.003241	.0002584	.0015343
Stddev	.007055	.0001246	.0038451
%RSD	217.7014	48.22715	250.6129
#1	-.001785	.0001190	.0022246
#2	-.010910	.0003590	.0049875
#3	.002973	.0002972	-.002609

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1783.483	17866.29	1654.243	1316.117	1998.244
Stddev	10.667	49.91	25.764	6.950	8.214
%RSD	.5981120	.2793524	1.557469	.5280887	.4110801
#1	1776.173	17894.19	1674.005	1321.207	1992.870
#2	1795.724	17808.67	1625.103	1308.199	2007.700
#3	1778.553	17896.02	1663.621	1318.946	1994.163

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165850BS Acquired: 01/06/2025 0:59:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS850 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0164064	.0483793	.0204172	.0625179	.1081170	.3973163
Stddev	.0050165	.0015211	.0027542	.0042249	.0022789	.0364905
%RSD	30.57651	3.144035	13.48953	6.757915	2.107804	9.184233
#1	.0217789	.0496697	.0201058	.0658964	.1054880	.4123271
#2	.0155956	.0467022	.0233139	.0577808	.1093331	.3557146
#3	.0118447	.0487660	.0178320	.0638765	.1095300	.4239073

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3885063	.0104221	.0094379	9.855508	.0199786	.0980007
Stddev	.0017484	.0001524	.0001162	.054076	.0007149	.0005012
%RSD	.4500395	1.462348	1.230928	.5486913	3.578311	.5113973
#1	.3904634	.0105432	.0093304	9.914983	.0193910	.0977813
#2	.3870982	.0104723	.0094222	9.842242	.0207745	.0985742
#3	.3879574	.0102510	.0095612	9.809299	.0197702	.0976467

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0459613	.1890516	.0326416	10.14572	.0759598	.0185909
Stddev	.0063050	.0342802	.0033074	.14204	.0008124	.0014390
%RSD	13.71798	18.13271	10.13251	1.400046	1.069493	7.740557
#1	.0469047	.1498742	.0315122	10.25700	.0758177	.0188487
#2	.0392378	.2135375	.0300469	9.98573	.0752278	.0198836
#3	.0517414	.2037429	.0363658	10.19443	.0768338	.0170403

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.638446	.1038537	.1158847	9.240291	.0177506	F .0011886
Stddev	.097004	.0137500	.0005730	.339155	.0006912	.0025858
%RSD	1.269950	13.23975	.4944345	3.670392	3.893854	217.5439
#1	7.747201	.1194619	.1153537	8.861387	.0169744	.0035736
#2	7.607286	.0935295	.1158085	9.344012	.0179779	.0015520
#3	7.560851	.0985699	.1164920	9.515474	.0182995	-.001560

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165850BS Acquired: 01/06/2025 0:59:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS850 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0186121	.1733951	F .4757886	.0116749	.1849255	.2044280
Stddev	.0005263	.0009206	.0037774	.0005778	.0006614	.0006291
%RSD	2.827438	.5309073	.7939191	4.948914	.3576774	.3077408
#1	.0187665	.1725861	.4800833	.0121443	.1843398	.2046572
#2	.0180259	.1732025	.4743005	.0118509	.1847938	.2037164
#3	.0190439	.1743968	.4729818	.0110296	.1856429	.2049103

Elem	Li6707
Units	ppm
Avg	.0337985
Stddev	.0069895
%RSD	20.67976
#1	.0307099
#2	.0418002
#3	.0288855

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1804.919	17999.65	1691.272	1322.109	2008.486
Stddev	1.908	2.58	15.960	2.485	1.799
%RSD	.1057214	.0143201	.9436754	.1879907	.0895597
#1	1806.839	18000.75	1675.498	1324.716	2008.631
#2	1804.896	17996.70	1690.905	1319.766	2006.619
#3	1803.023	18001.49	1707.412	1321.845	2010.208

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165840BL Acquired: 01/06/2025 1:03:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS840 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001736	-.002203	-.000354	.0046703	-.001071	.0118751	-.003330
Stddev	.004933	.002494	.001349	.0028145	.002534	.0259686	.001579
%RSD	284.1463	113.2030	380.8151	60.26289	236.6597	218.6816	47.40894
#1	-.006159	-.000005	.000375	.0054747	-.000800	-.015424	-.004621
#2	.003584	-.001691	-.001911	.0015412	.001317	.036269	-.001570
#3	-.002634	-.004913	.000473	.0069950	-.003729	.014779	-.003800

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000396	-.000011	.0293457	-.000739	.0000910	-.015694	-.009662
Stddev	.0000874	.000094	.0474429	.000672	.0003832	.007517	.013080
%RSD	220.3941	883.7476	161.6690	91.00757	421.2985	47.89640	135.3758
#1	-.000011	-.000060	-.015278	-.000123	-.000349	-.024121	-.024763
#2	.000141	.000097	.024137	-.001456	.000355	-.013277	-.001936
#3	-.000010	-.000069	.079178	-.000638	.000267	-.009683	-.002286

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039092	.0111311	-.000186	-.000571	.0204829	-.013654	.0000510
Stddev	.0015349	.0287964	.000461	.001463	.0172539	.012355	.0004648
%RSD	39.26284	258.7022	247.7985	256.1308	84.23569	90.48807	910.7395
#1	.0022697	.0129671	-.000624	.001116	.0309203	-.027919	-.000296
#2	.0053120	.0389655	.000295	-.001330	.0005675	-.006695	.000579
#3	.0041460	-.018539	-.000228	-.001500	.0299607	-.006348	-.000129

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1442580	-.003995	.0018313	-.000151	.0000175	.0011596	-.003715
Stddev	.2275537	.001448	.0015810	.001136	.0037847	.0004418	.001322
%RSD	157.7408	36.23363	86.33420	751.5727	21668.35	38.09843	35.57325
#1	-.028494	-.005361	.0036151	.001156	.0000191	.0011644	-.002789
#2	.059175	-.002478	.0006032	-.000903	-.003768	.0015990	-.005229
#3	.402093	-.004148	.0012755	-.000707	.003801	.0007154	-.003128

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165840BL Acquired: 01/06/2025 1:03:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS840 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.005888	.0000851	.0006511
Stddev	.007714	.0002484	.0032221
%RSD	131.0188	292.0650	494.8767
#1	-.001514	.0001062	-.002765
#2	-.001354	-.000173	.001082
#3	-.014795	.000322	.003636

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1782.116	17805.97	1670.059	1312.147	1997.501
Stddev	5.237	42.37	9.118	1.058	2.872
%RSD	.2938870	.2379314	.5459834	.0806542	.1438009
#1	1777.173	17759.73	1659.642	1311.415	1994.401
#2	1787.605	17842.91	1673.941	1311.665	2000.073
#3	1781.569	17815.28	1676.593	1313.360	1998.029

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165840BS Acquired: 01/06/2025 1:07:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS840 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0178617	.0492141	.0191766	.0635239	.1014685	.3969288
Stddev	.0022461	.0020522	.0050624	.0031265	.0017705	.0442607
%RSD	12.57521	4.169845	26.39892	4.921797	1.744894	11.15080
#1	.0157085	.0473873	.0212717	.0600716	.1007982	.3609631
#2	.0176860	.0488204	.0228552	.0643357	.1034763	.4463578
#3	.0201905	.0514345	.0134030	.0661645	.1001310	.3834654

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3893299	.0104725	.0095396	9.903017	.0197032	.0983614
Stddev	.0078810	.0002774	.0000624	.023762	.0005095	.0004953
%RSD	2.024252	2.648497	.6536957	.2399496	2.585748	.5035806
#1	.3818521	.0107855	.0094860	9.891543	.0196759	.0987844
#2	.3975602	.0103746	.0096080	9.887168	.0202258	.0978165
#3	.3885773	.0102573	.0095247	9.930338	.0192079	.0984833

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0399955	.2468658	.0317921	10.10700	.0756143	.0183940
Stddev	.0036981	.0489938	.0033361	.12172	.0005070	.0015348
%RSD	9.246367	19.84633	10.49335	1.204319	.6705320	8.344203
#1	.0358192	.2998327	.0354923	10.01822	.0750872	.0183204
#2	.0428551	.2031698	.0308701	10.24575	.0756571	.0199643
#3	.0413122	.2375950	.0290141	10.05702	.0760985	.0168972

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.712564	.1015154	.1155965	9.400872	.0186351	F -.000742
Stddev	.096608	.0093372	.0010844	.210548	.0014645	.003141
%RSD	1.252606	9.197847	.9380686	2.239663	7.858922	423.3151
#1	7.824107	.1122346	.1146785	9.442642	.0175339	-.001563
#2	7.658109	.0951517	.1153181	9.587404	.0202971	-.003391
#3	7.655475	.0971599	.1167930	9.172570	.0180742	.002728

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: PB165840BS Acquired: 01/06/2025 1:07:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS840 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0186145	.1724228	F .4800997	.0107643	.1906087	.2051435
Stddev	.0006690	.0014310	.0021263	.0018040	.0030747	.0002657
%RSD	3.593798	.8299057	.4428847	16.75922	1.613101	.1295171
#1	.0178946	.1735464	.4823077	.0121269	.1897671	.2049560
#2	.0192170	.1729100	.4780659	.0114476	.1940166	.2054475
#3	.0187318	.1708118	.4799255	.0087185	.1880424	.2050268

Elem	Li6707
Units	ppm
Avg	.0306263
Stddev	.0048499
%RSD	15.83586
#1	.0284161
#2	.0361876
#3	.0272751

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1786.959	17849.61	1660.532	1313.687	1989.147
Stddev	3.252	13.66	11.640	2.250	3.018
%RSD	.1819609	.0765497	.7009734	.1712790	.1517192
#1	1787.412	17859.53	1647.405	1315.357	1988.114
#2	1789.961	17855.28	1669.593	1314.575	1992.546
#3	1783.506	17834.02	1664.599	1311.128	1986.781

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-06 Acquired: 01/06/2025 1:11:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1714420	-.021827	4.572160	.0707270	.0522155	54.82293
Stddev	.0031193	.004640	.007527	.0049120	.0003817	.43578
%RSD	1.819444	21.25799	.1646253	6.944951	.7311095	.7948892
#1	.1749588	-.017096	4.564137	.0656220	.0522919	54.32026
#2	.1703573	-.026370	4.573276	.0711390	.0518013	55.09430
#3	.1690098	-.022015	4.579067	.0754199	.0525532	55.05423

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.843571	.0064073	.0077011	184.3173	.1753174	.1079632
Stddev	.014041	.0001156	.0001105	1.3420	.0015114	.0008755
%RSD	.7616155	1.804109	1.434362	.7280733	.8621059	.8108891
#1	1.837660	.0064032	.0078123	183.0363	.1749328	.1081480
#2	1.833452	.0062939	.0076996	184.2028	.1769840	.1087315
#3	1.859601	.0065250	.0075914	185.7129	.1740355	.1070101

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5959312	176.7499	8.744666	42.24924	.2247129	-.008961
Stddev	.0057439	1.5863	.093427	.36991	.0011034	.001320
%RSD	.9638438	.8974821	1.068389	.8755392	.4910249	14.72984
#1	.5938987	174.9917	8.652303	41.83972	.2259868	-.009820
#2	.5914799	177.1842	8.742574	42.34888	.2240969	-.009621
#3	.6024149	178.0738	8.839122	42.55913	.2240551	-.007441

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8972567	.1716351	2.832456	5.472926	F 13.93654	-.350048
Stddev	.0193058	.0038740	.017435	.187133	.02911	.004117
%RSD	2.151650	2.257090	.6155558	3.419253	.2089077	1.176230
#1	.8883010	.1738058	2.828809	5.330253	13.91457	-.354286
#2	.8840552	.1671624	2.851427	5.403720	13.92550	-.346063
#3	.9194140	.1739369	2.817133	5.684805	13.96956	-.349795

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-06 Acquired: 01/06/2025 1:11:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0126178	3.714601	8.692311	.6260838	.9729802	.3025628
Stddev	.0011487	.009063	.052369	.0043543	.0070489	.0029664
%RSD	9.103629	.2439855	.6024755	.6954824	.7244618	.9804150
#1	.0122921	3.710065	8.676503	.6215170	.9651498	.2991378
#2	.0116671	3.725036	8.649667	.6301887	.9749718	.3043067
#3	.0138941	3.708701	8.750763	.6265457	.9788190	.3042440

Elem	Li6707
Units	ppm
Avg	.1002634
Stddev	.0020030
%RSD	1.997719
#1	.0979592
#2	.1012419
#3	.1015890

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2036.839	20362.01	1936.851	1491.863	1914.052
Stddev	4.608	97.73	7.286	9.731	2.646
%RSD	.2262130	.4799522	.3761861	.6522858	.1382529
#1	2041.351	20375.58	1942.222	1494.679	1915.970
#2	2032.141	20258.21	1939.773	1481.034	1911.033
#3	2037.026	20452.25	1928.557	1499.875	1915.152

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-07 Acquired: 01/06/2025 1:15:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2524332	-.066787	2.198426	.1804444	.0893139	47.36591
Stddev	.0046365	.002405	.004352	.0063167	.0036150	1.01651
%RSD	1.836737	3.601397	.1979642	3.500638	4.047561	2.146082
#1	.2471318	-.069502	2.199289	.1769565	.0893813	46.70771
#2	.2557308	-.064921	2.202282	.1877360	.0928948	48.53666
#3	.2544371	-.065939	2.193707	.1766407	.0856656	46.85336

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.139222	.0077583	.0104828	260.9940	.1209500	.1149763
Stddev	.044400	.0001050	.0001363	5.5612	.0042876	.0003309
%RSD	2.075499	1.352895	1.299705	2.130779	3.544899	.2877631
#1	2.114283	.0076942	.0106373	257.3878	.1245674	.1146282
#2	2.190484	.0078795	.0103797	267.3986	.1220687	.1152867
#3	2.112899	.0077014	.0104315	258.1956	.1162140	.1150141

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4325266	374.4957	13.45378	55.46930	.2123220	-.023138
Stddev	.0161210	7.9639	.31696	1.01560	.0006600	.001719
%RSD	3.727173	2.126570	2.355895	1.830931	.3108513	7.429419
#1	.4161361	368.3998	13.23767	54.97479	.2115718	-.024279
#2	.4483639	383.5064	13.81763	56.63745	.2125809	-.023975
#3	.4330798	371.5809	13.30602	54.79566	.2128133	-.021161

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.018342	.1968134	2.489922	4.967502	F 14.82795	-.804206
Stddev	.018473	.0142435	.062784	.293743	.01179	.012035
%RSD	1.813995	7.237073	2.521537	5.913298	.0795433	1.496564
#1	.997013	.1943238	2.537386	4.990293	14.82121	-.800930
#2	1.028811	.2121377	2.513649	5.249186	14.82106	-.817541
#3	1.029203	.1839789	2.418732	4.663028	14.84156	-.794149

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-07 Acquired: 01/06/2025 1:15:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0198426	2.781728	7.612681	.2244119	.6916166	.0608858
Stddev	.0002850	.007091	.147825	.0018266	.0144995	.0014785
%RSD	1.436473	.2548964	1.941829	.8139479	2.096468	2.428249
#1	.0195151	2.774801	7.533429	.2223055	.6819587	.0608246
#2	.0200346	2.788971	7.783233	.2255595	.7082896	.0623939
#3	.0199781	2.781411	7.521381	.2253706	.6846016	.0594389

Elem	Li6707
Units	ppm
Avg	.0896571
Stddev	.0035487
%RSD	3.958099
#1	.0868835
#2	.0884316
#3	.0936561

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2066.816	20927.95	1957.268	1527.927	1904.894
Stddev	11.378	536.88	26.825	33.787	9.451
%RSD	.5504956	2.565351	1.370520	2.211313	.4961492
#1	2079.538	20504.59	1974.603	1499.875	1915.600
#2	2063.293	20747.46	1926.370	1518.470	1901.377
#3	2057.616	21531.82	1970.832	1565.435	1897.706

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-08 Acquired: 01/06/2025 1:19:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2981398	-.008889	10.58275	.0835171	.0431559	62.86892
Stddev	.0017338	.000417	.00689	.0071683	.0046167	.52653
%RSD	.5815282	4.685665	.0650838	8.583062	10.69777	.8375057
#1	.3001253	-.008930	10.57864	.0913789	.0400305	63.31756
#2	.2969251	-.008454	10.57890	.0773437	.0409786	62.28925
#3	.2973691	-.009284	10.59070	.0818286	.0484587	62.99995

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.620058	.0068176	.0119647	365.5483	.1790397	.1498047
Stddev	.029892	.0001249	.0001498	2.4171	.0006890	.0010899
%RSD	.6470092	1.831836	1.252208	.6612386	.3848604	.7275714
#1	4.642989	.0069299	.0118778	367.2267	.1796608	.1510456
#2	4.586250	.0066831	.0121377	362.7778	.1791598	.1490022
#3	4.630935	.0068396	.0118786	366.6404	.1782985	.1493663

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7820597	192.9023	16.05347	42.67925	.2455330	-.008968
Stddev	.0073898	1.4494	.10260	.26520	.0011652	.000038
%RSD	.9449115	.7513431	.6391417	.6213776	.4745574	.4275963
#1	.7899640	194.0483	16.13871	42.86377	.2463439	-.008924
#2	.7808913	191.2731	15.93959	42.37534	.2441977	-.008986
#3	.7753236	193.3856	16.08212	42.79864	.2460573	-.008994

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8557122	.2042636	4.983470	11.47888	F 16.30629	-.373065
Stddev	.0099792	.0085274	.018919	.15887	.00753	.009402
%RSD	1.166183	4.174696	.3796325	1.384041	.0462000	2.520287
#1	.8487485	.2140460	4.998801	11.59617	16.31480	-.362330
#2	.8512433	.2003438	4.989282	11.29808	16.30047	-.379837
#3	.8671447	.1984009	4.962327	11.54240	16.30360	-.377029

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-08 Acquired: 01/06/2025 1:19:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0135527	5.104354	8.012938	.3384279	.9086154	.3186509
Stddev	.0005802	.007070	.084069	.0010575	.0038616	.0030557
%RSD	4.281274	.1385143	1.049171	.3124857	.4249924	.9589398
#1	.0135560	5.107656	7.945388	.3372532	.9128091	.3216056
#2	.0129708	5.096237	7.986335	.3393041	.9052066	.3155034
#3	.0141312	5.109169	8.107090	.3387263	.9078304	.3188438

Elem	Li6707
Units	ppm
Avg	.0959075
Stddev	.0049049
%RSD	5.114164
#1	.0934741
#2	.0926952
#3	.1015533

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2119.237	21116.28	2040.490	1546.879	1853.037
Stddev	1.371	141.64	16.264	13.293	.813
%RSD	.0647083	.6707421	.7970648	.8593536	.0438672
#1	2119.186	20959.27	2043.514	1532.500	1852.101
#2	2117.892	21155.14	2055.030	1549.415	1853.444
#3	2120.633	21234.43	2022.927	1558.721	1853.565

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-09 Acquired: 01/06/2025 1:22:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3340442	-.010437	7.699211	.0836668	.0445978	65.12012
Stddev	.0069109	.005103	.021461	.0028432	.0016400	.46552
%RSD	2.068863	48.89665	.2787443	3.398279	3.677292	.7148692
#1	.3261700	-.016236	7.687646	.0866837	.0463657	65.43291
#2	.3391032	-.006633	7.686014	.0832796	.0431261	65.34232
#3	.3368595	-.008441	7.723975	.0810369	.0443017	64.58513

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.467474	.0071030	.0127177	409.1060	.1786283	.1557444
Stddev	.015682	.0001940	.0002754	2.1364	.0001340	.0003757
%RSD	.3510368	2.731608	2.165687	.5222126	.0750254	.2412306
#1	4.466240	.0069163	.0125631	410.3300	.1786528	.1556744
#2	4.483737	.0073037	.0125543	410.3489	.1784837	.1554085
#3	4.452444	.0070890	.0130357	406.6392	.1787484	.1561501

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.130612	205.0284	16.05748	43.51608	.2535492	-.011613
Stddev	.011317	1.1807	.07798	.14048	.0002891	.000504
%RSD	1.000922	.5758670	.4856197	.3228196	.1140274	4.344193
#1	1.120311	205.9492	16.12183	43.64744	.2538558	-.012070
#2	1.128800	205.4387	16.07983	43.53282	.2535103	-.011072
#3	1.142726	203.6973	15.97076	43.36798	.2532815	-.011697

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9271653	.2271743	4.861595	10.58750	F 13.60801	-.405195
Stddev	.0308453	.0112751	.005203	.12916	.02245	.010205
%RSD	3.326839	4.963210	.1070180	1.219907	.1650129	2.518506
#1	.9156597	.2395302	4.867339	10.73285	13.62398	-.403300
#2	.9621097	.2245498	4.860248	10.54371	13.58234	-.416214
#3	.9037266	.2174428	4.857199	10.48592	13.61772	-.396070

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-09 Acquired: 01/06/2025 1:22:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0127886	3.914456	8.914602	.2168953	.8692231	.3636638
Stddev	.0008390	.013177	.161811	.0006926	.0014135	.0019485
%RSD	6.560368	.3366182	1.815123	.3193277	.1626166	.5357830
#1	.0137380	3.928192	8.916484	.2176102	.8705251	.3637956
#2	.0121472	3.913256	9.075464	.2162273	.8694243	.3655430
#3	.0124804	3.901921	8.751858	.2168486	.8677197	.3616528

Elem	Li6707
Units	ppm
Avg	.1011386
Stddev	.0024922
%RSD	2.464168
#1	.1039686
#2	.0992713
#3	.1001760

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2076.572	20843.43	2001.005	1520.232	1823.110
Stddev	1.353	201.50	36.681	13.903	1.939
%RSD	.0651760	.9667211	1.833116	.9145186	.1063321
#1	2076.647	20621.51	1983.765	1504.185	1820.960
#2	2075.183	21014.94	1976.120	1527.853	1823.644
#3	2077.887	20893.84	2043.129	1528.658	1824.726

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-10 Acquired: 01/06/2025 1:26:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0662060	.0043354	1.866512	.0183886	.0270705	34.71942	.5575583
Stddev	.0044398	.0009302	.006561	.0072952	.0042889	.30049	.0042872
%RSD	6.706064	21.45697	.3515096	39.67245	15.84348	.8654880	.7689223
#1	.0672592	.0041506	1.860425	.0253590	.0238051	35.00945	.5616130
#2	.0613343	.0035114	1.865648	.0189998	.0319277	34.40946	.5530713
#3	.0700245	.0053442	1.873462	.0108070	.0254786	34.73937	.5579905

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039887	.0153740	643.5863	.2182731	.0836266	.2573856	113.1187
Stddev	.0000059	.0002050	4.2198	.0001852	.0007460	.0097603	.9142
%RSD	.1483352	1.333219	.6556692	.0848260	.8921194	3.792086	.8081732
#1	.0039940	.0155934	647.3172	.2180607	.0839700	.2567483	113.9680
#2	.0039898	.0153411	639.0067	.2183578	.0827707	.2479595	112.1511
#3	.0039823	.0151874	644.4351	.2184007	.0841391	.2674488	113.2369

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.046186	334.0111	.1532813	-.008311	1.532028	.1273671	2.754179
Stddev	.040136	2.9501	.0018552	.001329	.026243	.0135853	.009646
%RSD	.7953682	.8832282	1.210290	15.99042	1.712984	10.66622	.3502392
#1	5.085861	337.0035	.1516458	-.009564	1.555190	.1396212	2.753566
#2	5.005605	331.1052	.1552971	-.008452	1.503525	.1127585	2.744854
#3	5.047092	333.9246	.1529009	-.006917	1.537370	.1297215	2.764118

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.003460	8.977081	-.195395	.0115355	8.878097	6.519078	.0677115
Stddev	.125531	.021574	.004881	.0003651	.016811	.040272	.0010337
%RSD	3.135561	.2403240	2.497850	3.164975	.1893533	.6177522	1.526650
#1	3.875719	8.985690	-.200841	.0112686	8.896973	6.531428	.0683953
#2	4.008005	8.952532	-.191417	.0119516	8.872578	6.474077	.0682169
#3	4.126657	8.993022	-.193926	.0113864	8.864739	6.551728	.0665223

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-10 Acquired: 01/06/2025 1:26:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5600634	.2241353	.0628474
Stddev	.0010665	.0015722	.0018432
%RSD	.1904217	.7014598	2.932819
#1	.5588940	.2257309	.0621541
#2	.5603139	.2225875	.0649367
#3	.5609823	.2240876	.0614513

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1772.820	17867.06	1737.072	1295.713	1656.683
Stddev	.845	133.51	16.314	9.800	2.661
%RSD	.0476578	.7472546	.9391385	.7563195	.1606141
#1	1773.760	17720.81	1719.663	1284.600	1659.713
#2	1772.576	17897.96	1752.007	1299.420	1655.610
#3	1772.124	17982.41	1739.547	1303.118	1654.727

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-11 Acquired: 01/06/2025 1:30:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0938586	-.000519	2.307339	.0351440	.0402616	49.16334
Stddev	.0076358	.003723	.001063	.0035143	.0025196	.21155
%RSD	8.135485	716.9872	.0460506	9.999759	6.257932	.4302909
#1	.0859108	.002776	2.308123	.0328995	.0375362	49.27399
#2	.1011387	-.004558	2.306130	.0391941	.0407429	49.29661
#3	.0945262	.000224	2.307765	.0333384	.0425058	48.91942

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8928674	.0051408	.0178156	515.8413	.3649664	.0993674
Stddev	.0082906	.0001122	.0002138	1.1765	.0019425	.0016497
%RSD	.9285377	2.182610	1.200155	.2280717	.5322542	1.660215
#1	.9016716	.0052334	.0176852	517.1635	.3648655	.1008648
#2	.8852097	.0051729	.0176993	515.4503	.3669575	.0975990
#3	.8917207	.0050160	.0180624	514.9101	.3630763	.0996385

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3201683	151.9644	6.407372	272.0272	.2146339	-.010075
Stddev	.0129321	.6991	.021582	.7471	.0011605	.000741
%RSD	4.039156	.4600573	.3368377	.2746251	.5406969	7.350637
#1	.3262940	152.6921	6.420303	272.4600	.2141641	-.009276
#2	.3288993	151.9030	6.419356	272.4569	.2159557	-.010738
#3	.3053115	151.2979	6.382456	271.1646	.2137820	-.010212

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.143993	.1494647	3.522880	4.929546	F 11.36802	-.279441
Stddev	.019164	.0164499	.022296	.142690	.02560	.005528
%RSD	1.675187	11.00587	.6328895	2.894578	.2251579	1.978320
#1	1.165899	.1314782	3.516025	4.962137	11.35396	-.283911
#2	1.135757	.1637461	3.504816	5.053121	11.35254	-.281152
#3	1.130324	.1531698	3.547798	4.773381	11.39756	-.273260

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-11 Acquired: 01/06/2025 1:30:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0137487	9.643130	8.081279	.0959594	.7678330	.1767302
Stddev	.0003706	.010623	.040597	.0021887	.0018639	.0009905
%RSD	2.695451	.1101585	.5023524	2.280900	.2427462	.5604431
#1	.0141422	9.633258	8.126760	.0956248	.7694859	.1777390
#2	.0134063	9.654371	8.068371	.0939572	.7682001	.1766925
#3	.0136975	9.641761	8.048706	.0982962	.7658128	.1757591

Elem	Li6707
Units	ppm
Avg	.0829792
Stddev	.0051020
%RSD	6.148529
#1	.0822154
#2	.0884200
#3	.0783021

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1838.080	18496.97	1781.791	1340.951	1698.541
Stddev	2.530	51.63	6.630	16.818	3.351
%RSD	.1376504	.2791097	.3720765	1.254150	.1972930
#1	1839.610	18549.77	1777.450	1348.720	1702.174
#2	1839.469	18494.54	1789.422	1352.479	1697.876
#3	1835.159	18446.60	1778.501	1321.653	1695.572

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-12 Acquired: 01/06/2025 1:34:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1102256	-.008759	2.863545	.0463338	.0433413	47.83548
Stddev	.0051405	.003480	.006733	.0041696	.0050668	.40805
%RSD	4.663614	39.72333	.2351448	8.999109	11.69050	.8530286
#1	.1144057	-.008125	2.869353	.0422621	.0434218	47.86269
#2	.1117852	-.005641	2.856165	.0505950	.0483674	47.41450
#3	.1044859	-.012513	2.865119	.0461443	.0382347	48.22924

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8485275	.0062672	.0172644	454.4332	.1941230	.0990750
Stddev	.0041663	.0001343	.0001697	1.9924	.0016270	.0009056
%RSD	.4909983	2.142060	.9827049	.4384298	.8381517	.9140654
#1	.8477001	.0062233	.0173911	454.7781	.1923345	.1001163
#2	.8448371	.0064179	.0170717	452.2909	.1955155	.0986375
#3	.8530454	.0061604	.0173305	456.2306	.1945190	.0984713

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4057454	168.6661	6.220986	220.7536	.2370533	-.011799
Stddev	.0059896	1.3550	.046976	1.8670	.0008829	.001310
%RSD	1.476199	.8033669	.7551242	.8457537	.3724686	11.10022
#1	.4060726	168.3660	6.233428	220.3409	.2368997	-.012656
#2	.3995989	167.4863	6.169042	219.1275	.2380030	-.012451
#3	.4115647	170.1460	6.260489	222.7925	.2362573	-.010292

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.185447	.1559377	4.109104	5.334820	F 10.11200	-.307817
Stddev	.010870	.0036901	.016769	.109286	.01901	.007144
%RSD	.9169192	2.366393	.4080918	2.048545	.1879793	2.320822
#1	1.176469	.1592142	4.128392	5.265479	10.13028	-.299739
#2	1.182340	.1566586	4.097984	5.460800	10.11337	-.310409
#3	1.197532	.1519404	4.100935	5.278181	10.09234	-.313303

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-12 Acquired: 01/06/2025 1:34:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMA7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0143384	8.482224	7.691711	.1095151	.7559735	.2153949
Stddev	.0006348	.021144	.086412	.0022247	.0079256	.0021454
%RSD	4.427428	.2492752	1.123442	2.031377	1.048395	.9960370
#1	.0147089	8.502400	7.627221	.1076063	.7643005	.2161557
#2	.0136054	8.484042	7.658019	.1119583	.7485220	.2129727
#3	.0147010	8.460230	7.789894	.1089807	.7550982	.2170562

Elem	Li6707
Units	ppm
Avg	.0834002
Stddev	.0063989
%RSD	7.672458
#1	.0760253
#2	.0866961
#3	.0874793

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1848.420	18534.33	1788.158	1352.292	1715.700
Stddev	7.119	35.00	14.807	4.425	3.416
%RSD	.3851402	.1888415	.8280616	.3272116	.1991107
#1	1851.488	18568.08	1799.272	1347.377	1715.273
#2	1853.490	18536.69	1793.853	1353.539	1719.309
#3	1840.281	18498.20	1771.349	1355.959	1712.517

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-13 Acquired: 01/06/2025 1:37:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMF2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2005999	-.011684	2.113810	.1037298	.0443035	70.73908
Stddev	.0042602	.002156	.001662	.0076526	.0027667	.36859
%RSD	2.123735	18.45523	.0786253	7.377456	6.244865	.5210546
#1	.2017239	-.010784	2.112480	.1106108	.0474044	71.00268
#2	.2041855	-.014144	2.115673	.1050904	.0420874	70.89667
#3	.1958904	-.010123	2.113276	.0954881	.0434187	70.31789

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.590855	.0072876	.0073406	212.4870	.1497146	.1444483
Stddev	.001898	.0001693	.0000872	.4464	.0009148	.0001963
%RSD	.1192815	2.323601	1.187393	.2100725	.6110500	.1358940
#1	1.591894	.0074804	.0072916	212.8660	.1491261	.1442828
#2	1.592006	.0072190	.0072890	212.6001	.1507686	.1446652
#3	1.588665	.0071633	.0074413	211.9950	.1492492	.1443968

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4809855	210.6437	22.43644	30.32362	.1853704	-.011778
Stddev	.0062251	1.2808	.08134	.10644	.0006071	.000176
%RSD	1.294233	.6080208	.3625400	.3510096	.3275228	1.491442
#1	.4828769	211.2576	22.47402	30.39928	.1846816	-.011580
#2	.4860456	211.5018	22.49220	30.36966	.1856020	-.011914
#3	.4740341	209.1715	22.34311	30.20191	.1858276	-.011840

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6768461	.1892274	1.451923	9.268372	F 11.94264	-.439694
Stddev	.0256957	.0019940	.002891	.145048	.01327	.007385
%RSD	3.796379	1.053758	.1990883	1.564975	.1111463	1.679501
#1	.7025824	.1879705	1.453355	9.196967	11.95345	-.447235
#2	.6767646	.1881851	1.453818	9.172869	11.92783	-.439370
#3	.6511913	.1915265	1.448596	9.435280	11.94665	-.432476

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-13 Acquired: 01/06/2025 1:37:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMF2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0123192	3.206600	8.801613	.1966534	.8347637	.1413239
Stddev	.0010625	.008218	.094403	.0016443	.0016114	.0005963
%RSD	8.624628	.2562813	1.072570	.8361638	.1930419	.4219547
#1	.0112522	3.210015	8.894514	.1949930	.8360043	.1418367
#2	.0133771	3.212559	8.804550	.1966859	.8329424	.1414654
#3	.0123282	3.197225	8.705775	.1982812	.8353443	.1406696

Elem	Li6707
Units	ppm
Avg	.0908339
Stddev	.0032242
%RSD	3.549589
#1	.0885258
#2	.0945178
#3	.0894580

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2198.967	22026.13	2084.720	1614.083	1862.356
Stddev	2.631	43.11	17.757	5.406	1.545
%RSD	.1196307	.1957039	.8517497	.3349409	.0829370
#1	2196.082	22075.08	2068.411	1619.278	1862.910
#2	2199.587	22009.44	2082.113	1608.488	1860.611
#3	2201.232	21993.86	2103.636	1614.483	1863.547

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-14 Acquired: 01/06/2025 1:41:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMF3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2032146	-.014758	2.608081	.1019806	.0453591	72.16678
Stddev	.0076283	.005186	.008306	.0083325	.0033820	1.27622
%RSD	3.753813	35.14402	.3184732	8.170717	7.456011	1.768427
#1	.2111723	-.015312	2.600702	.1052685	.0414580	70.69776
#2	.1959651	-.009316	2.606464	.1081676	.0471557	72.80027
#3	.2025063	-.019644	2.617076	.0925057	.0474636	73.00231

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.981799	.0073873	.0089442	334.8535	.1883986	.1505100
Stddev	.040016	.0001679	.0001481	6.3026	.0003284	.0001873
%RSD	2.019157	2.272467	1.655773	1.882199	.1743065	.1244476
#1	1.935723	.0072819	.0090724	327.5761	.1886949	.1505351
#2	2.007841	.0075809	.0089781	338.5299	.1884554	.1506835
#3	2.001833	.0072991	.0087821	338.4547	.1880455	.1503115

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5785619	220.1929	21.35669	39.54827	.2189237	-.012581
Stddev	.0134121	4.0814	.34837	.71966	.0008592	.003231
%RSD	2.318183	1.853548	1.631180	1.819709	.3924639	25.68186
#1	.5644447	215.4815	20.95680	38.71729	.2180012	-.014936
#2	.5911353	222.4488	21.51888	39.95857	.2197011	-.013908
#3	.5801056	222.6483	21.59439	39.96894	.2190689	-.008897

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8317370	.1894203	1.960869	9.730127	F 12.28691	-.450526
Stddev	.0216685	.0111247	.003603	.393429	.01792	.005283
%RSD	2.605208	5.873032	.1837474	4.043411	.1458692	1.172690
#1	.8126945	.1811500	1.956756	9.281403	12.26625	-.445971
#2	.8272026	.1850430	1.963469	10.01590	12.29829	-.449288
#3	.8553139	.2020679	1.962381	9.89308	12.29620	-.456318

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-14 Acquired: 01/06/2025 1:41:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMF3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0120559	4.005976	8.761349	.1796304	.8411709	.3025177
Stddev	.0002383	.003825	.122663	.0022621	.0225856	.0054723
%RSD	1.976709	.0954818	1.400049	1.259301	2.685016	1.808909
#1	.0117818	4.008519	8.622927	.1799766	.8151097	.2963821
#2	.0122141	4.001577	8.804563	.1772151	.8533524	.3042771
#3	.0121718	4.007833	8.856556	.1816994	.8550505	.3068938

Elem	Li6707
Units	ppm
Avg	.1008673
Stddev	.0029697
%RSD	2.944190
#1	.0993055
#2	.1042921
#3	.0990045

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2197.516	22030.45	2127.355	1609.539	1823.582
Stddev	6.660	53.03	35.971	8.667	7.029
%RSD	.3030723	.2407074	1.690874	.5384516	.3854655
#1	2193.385	22085.79	2167.762	1618.922	1821.290
#2	2193.964	22025.49	2115.480	1607.860	1817.986
#3	2205.199	21980.08	2098.823	1601.834	1831.472

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-15 Acquired: 01/06/2025 1:45:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMM8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1422999	-.017991	3.515420	.0623352	.0443319	47.08180
Stddev	.0073089	.000413	.002291	.0096815	.0003547	.07499
%RSD	5.136265	2.294919	.0651650	15.53135	.8001957	.1592853
#1	.1483959	-.017564	3.518056	.0703037	.0445079	47.04677
#2	.1443064	-.018023	3.514296	.0651414	.0445642	47.03074
#3	.1341973	-.018388	3.513909	.0515606	.0439235	47.16790

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.493866	.0068432	.0059310	185.0594	.1328705	.1010413
Stddev	.013734	.0001733	.0001278	.7724	.0012935	.0004112
%RSD	.9193924	2.532032	2.154170	.4173876	.9734847	.4069543
#1	1.509180	.0067572	.0060642	185.5452	.1343307	.1013916
#2	1.482638	.0067297	.0058095	184.1687	.1324122	.1005886
#3	1.489781	.0070427	.0059194	185.4643	.1318685	.1011438

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5300756	162.6061	4.744244	45.82035	.1704287	-.009371
Stddev	.0139147	.2359	.010167	.15943	.0019059	.001171
%RSD	2.625040	.1450542	.2142961	.3479529	1.118309	12.49071
#1	.5442359	162.7597	4.737947	45.64816	.1725562	-.008483
#2	.5164202	162.3345	4.738813	45.96284	.1698527	-.010698
#3	.5295707	162.7241	4.755973	45.85006	.1688772	-.008933

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.101813	.1713142	2.429087	6.901615	F 10.00853	-.312839
Stddev	.028977	.0047631	.005891	.151787	.01905	.002305
%RSD	2.629942	2.780356	.2425327	2.199296	.1903740	.7367408
#1	1.129405	.1661398	2.435853	6.875742	10.01048	-.312595
#2	1.071625	.1722869	2.426316	7.064675	10.02652	-.310665
#3	1.104409	.1755159	2.425092	6.764427	9.98857	-.315256

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: P5126-15 Acquired: 01/06/2025 1:45:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHMM8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0115874	3.616575	8.288208	.2304899	1.113691	.2540916
Stddev	.0003866	.006428	.054888	.0020644	.004491	.0004161
%RSD	3.336329	.1777404	.6622363	.8956374	.4032101	.1637563
#1	.0120227	3.618390	8.314694	.2281542	1.115775	.2541767
#2	.0112840	3.609435	8.225100	.2312454	1.108538	.2536396
#3	.0114555	3.621901	8.324830	.2320700	1.116762	.2544586

Elem	Li6707
Units	ppm
Avg	.0920918
Stddev	.0016893
%RSD	1.834324
#1	.0933151
#2	.0927960
#3	.0901644

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1986.722	19855.65	1891.619	1454.024	1889.001
Stddev	8.029	73.46	5.596	5.929	5.296
%RSD	.4041446	.3699757	.2958285	.4077960	.2803538
#1	1984.603	19775.73	1888.653	1453.156	1886.378
#2	1979.965	19870.98	1898.073	1448.576	1885.529
#3	1995.599	19920.23	1888.130	1460.340	1895.097

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV118 Acquired: 01/06/2025 1:53:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV118 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.073605	4.938050	25.09039	5.023895	4.990862	408.4959
Stddev	.020052	.044944	.17632	.030679	.045363	8.4182
%RSD	.3952254	.9101597	.7027524	.6106610	.9089231	2.060772
#1	5.051290	4.886153	24.88729	4.988678	4.938713	413.5175
#2	5.090113	4.963801	25.17949	5.044823	5.012666	398.7772
#3	5.079412	4.964194	25.20437	5.038185	5.021205	413.1929

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.36181	.5178840	2.521851	414.5460	15.74931	2.543380
Stddev	.23501	.0083810	.017957	9.9406	.36383	.017812
%RSD	2.268003	1.618312	.7120495	2.397944	2.310138	.7003217
#1	10.45422	.5250619	2.501141	419.5766	15.32939	2.522826
#2	10.09464	.5086737	2.531330	403.0957	15.97037	2.553014
#3	10.53656	.5199163	2.533083	420.9658	15.94818	2.554301

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.39674	413.2069	15.24865	410.7524	2.541900	1.273585
Stddev	.38150	9.8005	.31864	10.0209	.017729	.025609
%RSD	2.477793	2.371824	2.089627	2.439653	.6974767	2.010768
#1	15.61152	418.9746	15.42746	415.8271	2.521482	1.244115
#2	14.95627	401.8909	14.88077	399.2092	2.550831	1.286213
#3	15.62244	418.7552	15.43774	417.2208	2.553388	1.290427

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	420.8243	2.528885	14.98098	156.4482	5.082210	F 4.490699
Stddev	14.7679	.058805	.21234	3.6231	.041388	.088989
%RSD	3.509270	2.325324	1.417370	2.315834	.8143606	1.981631
#1	429.5417	2.572003	14.73763	158.5767	5.036107	4.571350
#2	403.7732	2.461898	15.07668	152.2648	5.094360	4.395232
#3	429.1578	2.552753	15.12862	158.5030	5.116162	4.505514

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCV118 Acquired: 01/06/2025 1:53:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV118 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.930410	5.083267	5.083160	5.096355	5.091502	4.873105
Stddev	.049477	.042346	.085638	.039347	.122214	.104920
%RSD	1.003501	.8330457	1.684740	.7720637	2.400353	2.153048
#1	4.873332	5.035975	5.161597	5.050974	5.158170	4.930036
#2	4.956823	5.117672	4.991792	5.117154	4.950452	4.752025
#3	4.961075	5.096155	5.096091	5.120939	5.165884	4.937254

Elem	Li6707
Units	ppm
Avg	5.153241
Stddev	.119299
%RSD	2.315026
#1	5.203980
#2	5.016960
#3	5.238783

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1481.382	15778.59	1547.049	1081.789	1590.921
Stddev	10.650	332.29	28.115	14.309	8.594
%RSD	.7189148	2.105928	1.817333	1.322738	.5401957
#1	1493.511	16162.27	1521.060	1098.092	1600.679
#2	1477.075	15588.23	1576.892	1075.969	1587.604
#3	1473.560	15585.26	1543.194	1071.308	1584.480

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB118 Acquired: 01/06/2025 1:57:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB118 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0059943	.0023627	.0014638	.0073705	-.000852	.0141832	-.003426
Stddev	.0026224	.0009574	.0021619	.0014826	.003351	.0148393	.001053
%RSD	43.74826	40.51977	147.6899	20.11536	393.0777	104.6265	30.73495
#1	.0082121	.0030993	-.000876	.0066051	.000680	.0165992	-.004501
#2	.0066707	.0012805	.001879	.0064270	.001458	.0276662	-.002396
#3	.0030999	.0027083	.003388	.0090794	-.004696	-.001716	-.003382

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000508	.0000357	.0526543	.0006795	.0003416	-.009750	.0140433
Stddev	.0001999	.0001209	.0612485	.0006567	.0006042	.015572	.0254597
%RSD	393.3765	338.2557	116.3219	96.63696	176.8488	159.7031	181.2940
#1	-.000002	.0001747	.1181730	-.000045	-.000285	-.001295	-.005512
#2	-.000117	-.000045	.0429569	.001235	.000920	-.000236	.004811
#3	.000272	-.000023	-.003167	.000849	.000390	-.027720	.042831

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0016706	-.068977	-.000213	.0001496	.1752039	-.000709	.0064922
Stddev	.0018570	.064438	.000204	.0016004	.0407005	.011837	.0008477
%RSD	111.1558	93.42000	96.09235	1069.963	23.23037	1670.723	13.05644
#1	.0018545	-.121726	.000022	.0019970	.2013147	.012166	.0072581
#2	-.000271	-.088048	-.000354	-.000813	.1959893	-.003171	.0066372
#3	.003429	.002844	-.000306	-.000735	.1283077	-.011121	.0055815

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.128597	-.002071	.0108447	-.000275	.0035633	.0013619	-.001981
Stddev	.222028	.001463	.0013990	.000513	.0020943	.0007689	.001855
%RSD	172.6535	70.63883	12.90036	186.7842	58.77263	56.45657	93.65838
#1	-.184107	-.000383	.0111384	-.000252	.0011467	.0019386	-.002104
#2	.115918	-.002848	.0093221	.000227	.0048478	.0016582	-.003771
#3	-.317603	-.002981	.0120735	-.000800	.0046955	.0004890	-.000067

Reviewed By:Mohan
On:1/6/2025 10:45:56 AM
Inst Id :P5

Sample Name: CCB118 Acquired: 01/06/2025 1:57:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v72) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB118 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.008021	.0004494	.0121801
Stddev	.002953	.0000950	.0035332
%RSD	36.81071	21.14290	29.00764
#1	-.007057	.0004865	.0099668
#2	-.005670	.0003414	.0162547
#3	-.011335	.0005202	.0103186

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1787.965	17842.24	1678.635	1313.318	2001.540
Stddev	1.881	70.07	30.499	13.543	4.285
%RSD	.1052090	.3927061	1.816878	1.031236	.2140940
#1	1785.802	17910.71	1707.404	1318.248	1997.586
#2	1789.218	17845.34	1646.660	1323.706	2006.093
#3	1788.875	17770.67	1681.841	1298.000	2000.940

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

Prep Standard - Chemical Standard Summary

Order ID : P5126

Test : Metals CLP Full

Prepbatch ID : PB165852,

Sequence ID/Qc Batch ID: LB134162,

Standard ID :
MP83498,MP83500,MP83501,MP83502,MP83503,MP83504,MP83505,MP83506,MP83507,MP83508,MP83509,MP835
10,MP83511,MP83512,MP83513,MP83514,MP83619,MP83745,

Chemical ID :
M5130,M5218,M5223,M5289,M5295,M5296,M5390,M5393,M5429,M5473,M5496,M5497,M5498,M5513,M5515,M5519
,M5658,M5697,M5698,M5768,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5818,M581
9,M5820,M5875,M5959,M5960,M5962,M5970,M5976,M5978,M5982,M5985,M5990,M5999,M6021,M6023,M6025,M60
28,M6030,M6121,M6125,M6126,W3112,

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Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP83498	12/09/2024	01/31/2025	Janvi Patel	None	None	Sarabjit Jaswal 12/09/2024

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83500	12/06/2024	01/14/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

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Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2480	ICP AES STD 6 ISM01.3	MP83501	12/06/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 4.00000ml of M5289 + 4.00000ml of M5498 + 4.00000ml of M5515 + 4.00000ml of M5768 + 4.00000ml of M5806 + 30.00000ml of MP83500 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1004	ICPAES ISM01.2 (S5)	MP83502	12/06/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.25000ml of M5798 + 0.50000ml of M5429 + 0.50000ml of M5473 + 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 M5496 + 14.50000ml of M5515 + 14.50000ml of M5658 + 2.00000ml of M5513 + 22.50000ml of M5497 + 22.50000ml of M5768 + 5.00000ml of M5296 + 5.00000ml of M5393 + 5.00000ml of M5802 + 5.00000ml of M5818 + 5.00000ml of M5875 + 303.50000ml of MP83500 = Final Quantity: 500.000 ml

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Fax : 908 789 8922

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1005	ICPAES ISM01.2(S4)	MP83503	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 250.00000ml of MP83500 + 250.00000ml of MP83502 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1007	ICPAES ISM01.2(S3)	MP83504	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 25.00000ml of MP83502 + 75.00000ml of MP83500 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1008	ICPAES ISM01.2(S2)	MP83505	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 12.50000ml of MP83502 + 87.50000ml of MP83500 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
994	ICPAES ISM01.2 S1 (CONC.)	MP83506	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

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 M5496 + 0.50000ml of M5697 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5960 + 1.00000ml of M5800 + 1.00000ml of M6021 + 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 M5978 + 4.00000ml of M5390 + 99.50000ml of MP83500 = Final Quantity: 100.000 ml

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

Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1003	ICPAES ISM01.2 S1	MP83507	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.50000ml of MP83506 + 99.50000ml of MP83500 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2054	ICV-ICPAES	MP83508	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.50000ml of M5218 + 0.50000ml of M5816 + 0.50000ml of M5820 + 0.50000ml of M5970 + 0.50000ml of M5982 + 10.00000ml of M5295 + 87.50000ml of MP83500 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP83509	12/09/2024	01/13/2025	Kareem Khairalla	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 12/09/2024

FROM 10.00000ml of M5130 + 90.00000ml of MP83500 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
905	ICP AES ICSAB SOLN	MP83510	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 10.00000ml of M5130 + 10.00000ml of M5223 + 80.00000ml of MP83500 = 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
1119	ICPAES ISM01.2(CCV)	MP83511	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.75000ml of M5497 + 0.75000ml of M5769 + 1.22500ml of M5496 + 1.25000ml of M5515 + 1.25000ml of M5806 + 19.77500ml of MP83500 + 25.00000ml of MP83502 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
921	ICPAES SPIKE SOL#6	MP83512	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 2.50000ml of M5962 + 50.00000ml of M5990 + 50.00000ml of M5999 + 147.50000ml of MP83500 = 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
919	ICP AES INTERNAL STD	MP83513	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6126 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
513	RINSE SOLN	MP83514	12/09/2024	01/13/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 200.00000ml of M6126 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83619	12/13/2024	01/10/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 25.00000ml of M6121 + 4925.00000ml of W3112 + 50.00000ml of M6126 = Final Quantity: 5000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1905	TL 10PPM	MP83745	12/15/2024	01/07/2025	Sarabjit Jaswal	None	None	Mohan Bera 12/23/2024

FROM 0.10000ml of M6023 + 9.90000ml of MP83619 = Final Quantity: 10.000 ml

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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	01/31/2025	05/20/2024 / jaswal	04/20/2021 / bin	M5130

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CHEM-QC-4 / CHEM-QC-4, Second Source, 1000 ug/ml, B, Mo, Si, Sn, Ti	S2-MEB711674	11/02/2026	07/01/2022 / bin	09/10/2021 / bin	M5218

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	01/31/2025	05/20/2024 / jaswal	04/20/2021 / bin	M5223

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	04/20/2021 / bin	M5295

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

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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	10/12/2022 / bin	09/19/2022 / bin	M5393

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.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

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	03/18/2023 / bin	03/17/2023 / bin	M5497

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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 #
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

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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	01/08/2024 / bin	01/03/2024 / bin	M5768

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

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

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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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

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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 #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	07/01/2024 / Jaswal	06/14/2024 / Jaswal	M5959

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	07/03/2024 / kareem	06/11/2024 / kareem	M5960

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	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	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-5 / CLP Spike Standard 5	V2-MEB742037	03/12/2029	10/04/2024 / Jaswal	02/22/2024 / Jaswal	M5990

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-1 / SOIL/WATER SPIKE SOLN 1, 125mL	T2-MEB721963	07/27/2027	09/04/2024 / Jaswal	02/22/2024 / kareem	M5999

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	11/09/2026	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	08/05/2024 / Jaswal	M6028

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

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	05/25/2025	11/26/2024 / Eman	11/22/2024 / Eman	M6125

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	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

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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-SPK-5
Lot Number:	V2-MEB742037
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	100 µg/mL ea: Antimony,
	50 µg/mL ea: Selenium, Cadmium, Thallium,
	40 µg/mL ea: Arsenic,
	20 µg/mL ea: Lead

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	100.0 ± 0.7 µg/mL	Arsenic, As	40.00 ± 0.26 µg/mL
Cadmium, Cd	49.99 ± 0.22 µg/mL	Lead, Pb	19.99 ± 0.09 µg/mL
Selenium, Se	50.00 ± 0.23 µg/mL	Thallium, Tl	50.00 ± 0.22 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102a	140911
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 12, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 12, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Joseph Burns
Custom VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R 8/15/24

M6028

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

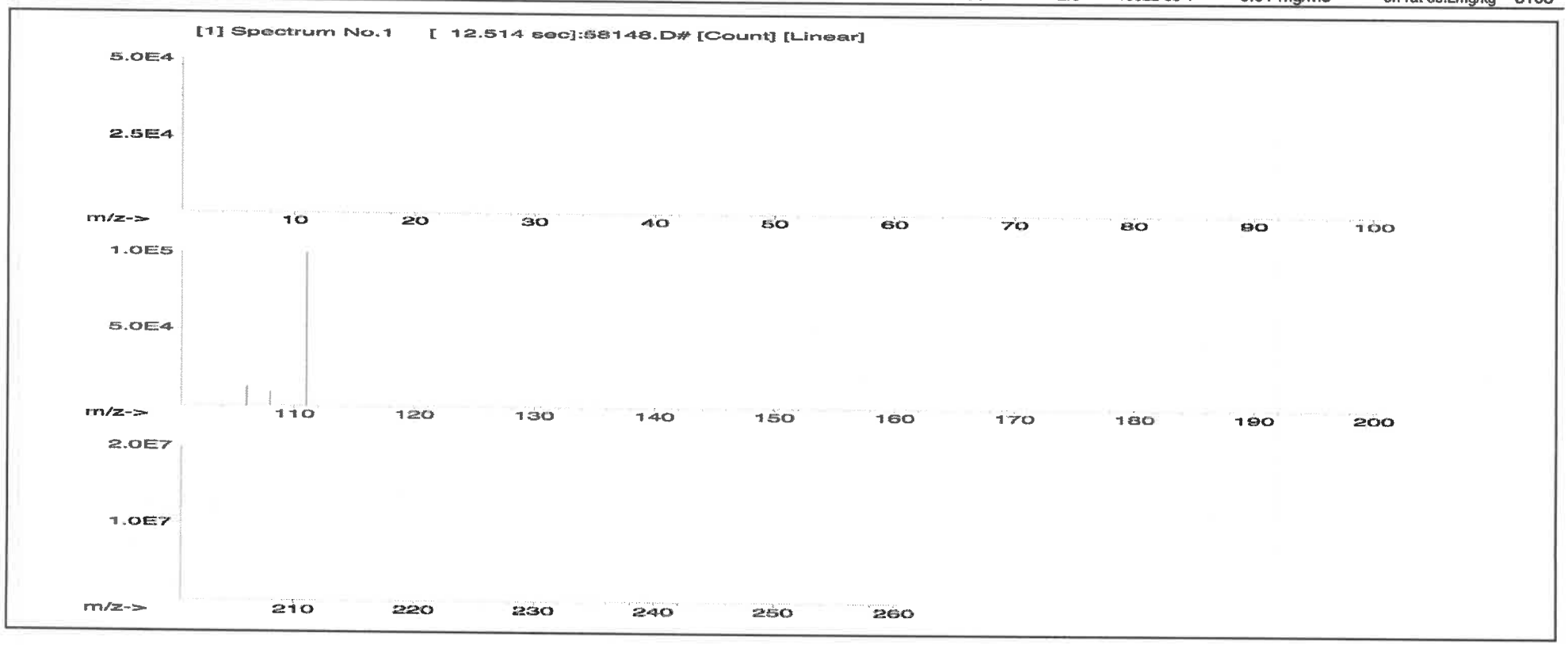
Aleah O'Brady

Formulated By:	Aleah O'Brady	070124

Pedro Rentas

Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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).

M5296 OP: 09/19/2022 BH

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	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

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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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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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F: 540-585-3012
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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

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u_{ts} = transport stability standard uncertainty

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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

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k = coverage factor = 2

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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"

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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

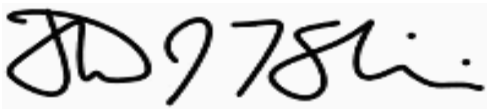
- Sealed TCT Bag Open Date: _____

- 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



INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	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

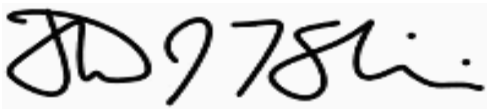
- Sealed TCT Bag Open Date: _____

- 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

R: 8/5/24 M6025

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

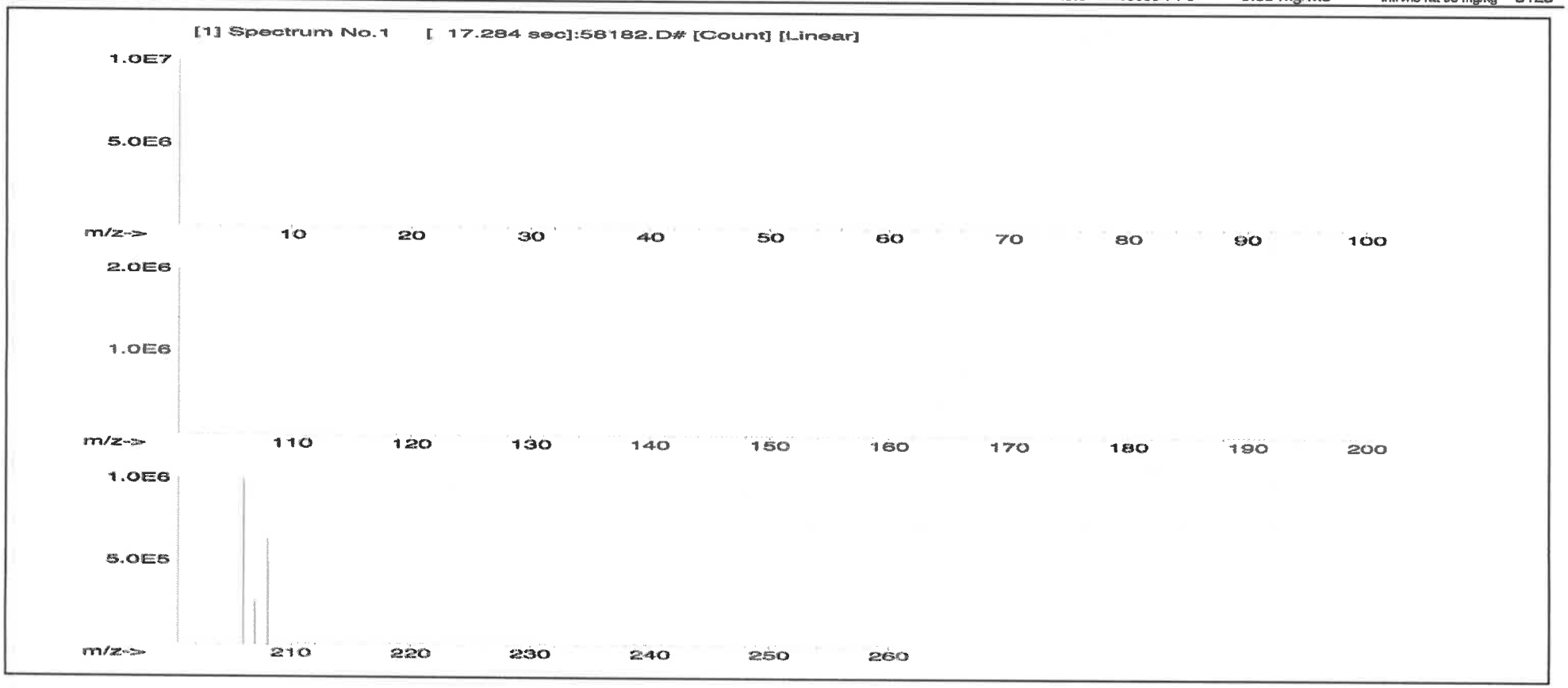
Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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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).

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.

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-QC-4
Lot Number:	S2-MEB711674
Matrix:	3% (v/v) HNO3 3% (v/v) HF
Value / Analyte(s):	1 000 µg/mL ea: Boron, Molybdenum, Silicon, Tin, Titanium

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Boron, B	**1 000 ± 7 µg/mL**	**Molybdenum, Mo**	**1 000 ± 5 µg/mL**
Silicon, Si	**1 000 ± 7 µg/mL**	**Tin, Sn**	**1 000 ± 5 µg/mL**
Titanium, Ti	**1 001 ± 6 µg/mL**		

Density: 1.032 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

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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



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.

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M5289 R: 07/12/22 (BH)

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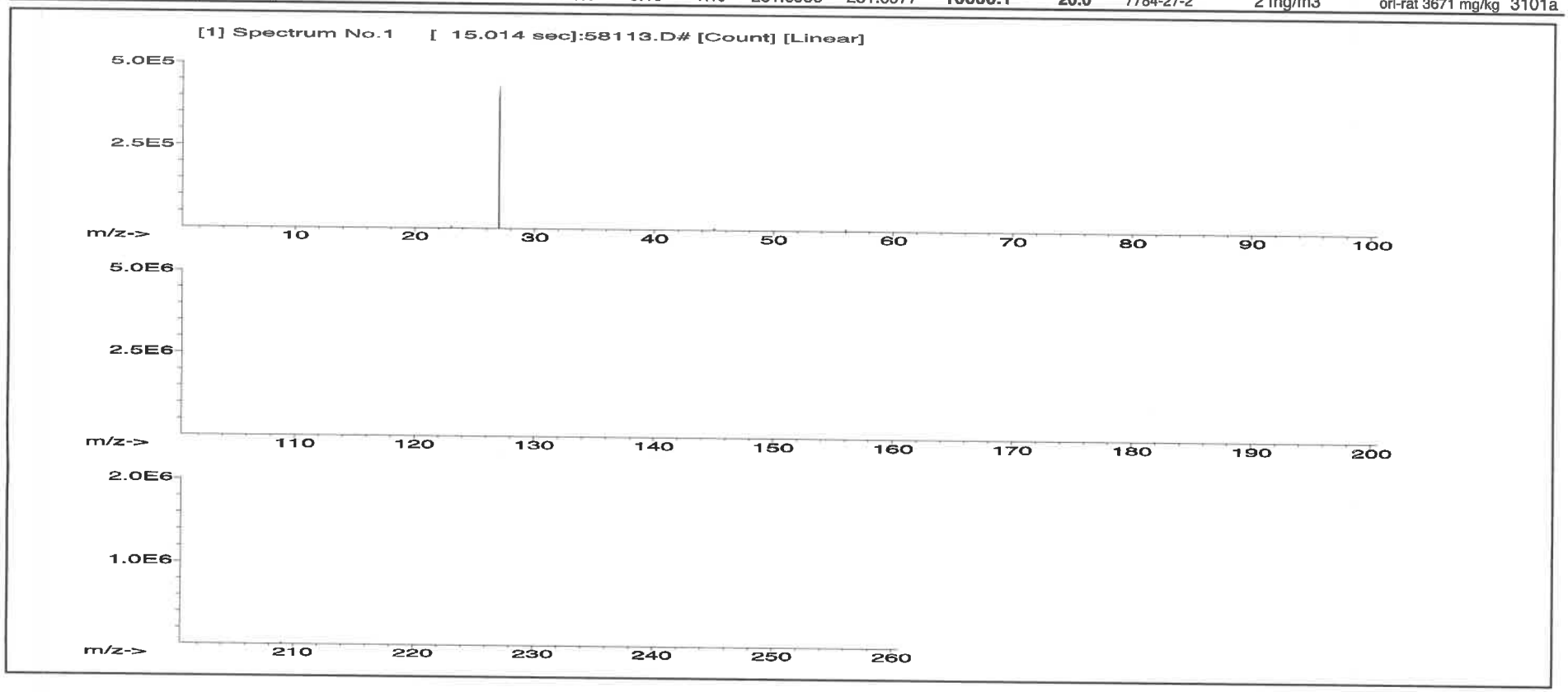
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CERTIFIED WEIGHT REPORT:

Part Number:	**58113**			**Lot #**	
Lot Number:	**070622**		**Solvent:**	20370011	Nitric Acid
Description:	**Aluminum (Al)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	070625				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05 Balance Uncertainty			
Weight shown below was diluted to (mL):	2000.02	0.058 Flask Uncertainty			

Formulated By:	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



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).

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 (BH)

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M5387 . M5389 . M5390 . M5391 . M5392

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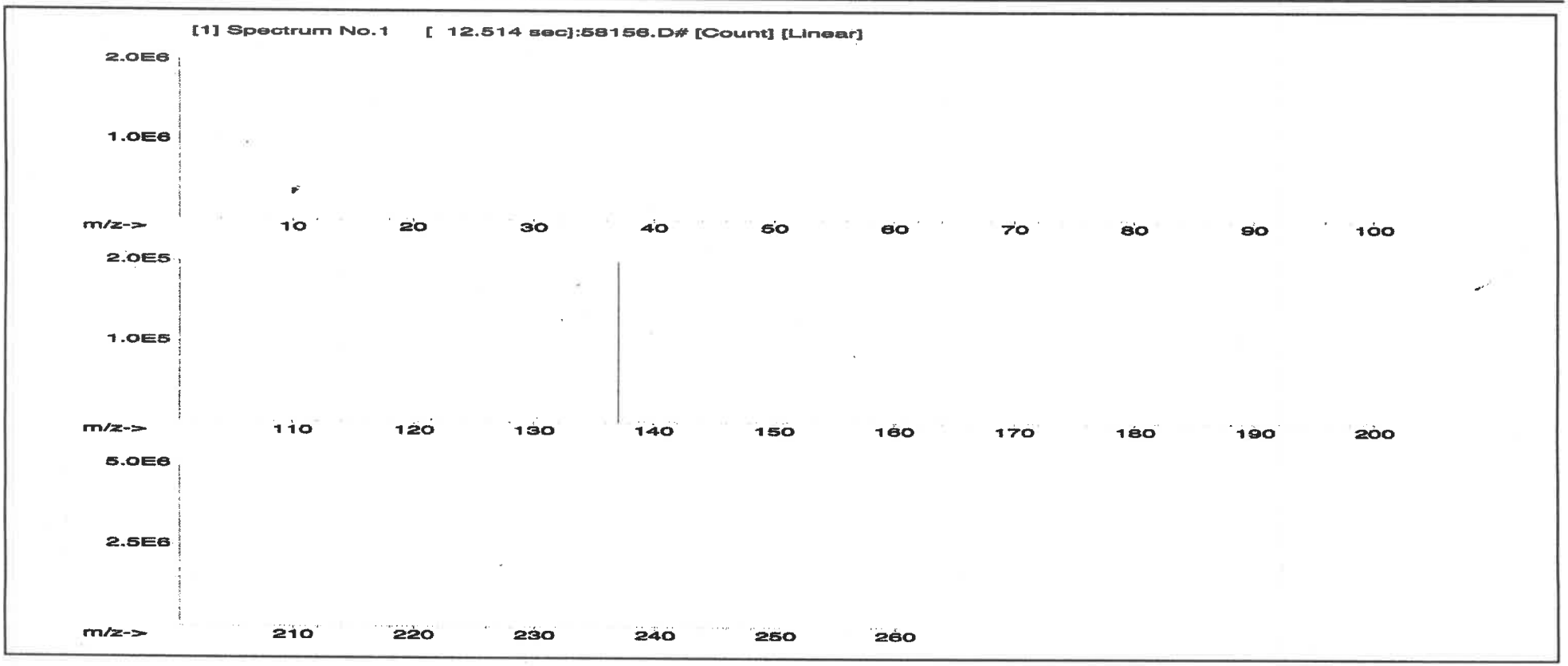
CERTIFIED WEIGHT REPORT:

		Lot #		
Part Number:	**57056**	**Solvent:**	20510011	Nitric Acid
Lot Number:	**072122**			
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.
* 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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M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

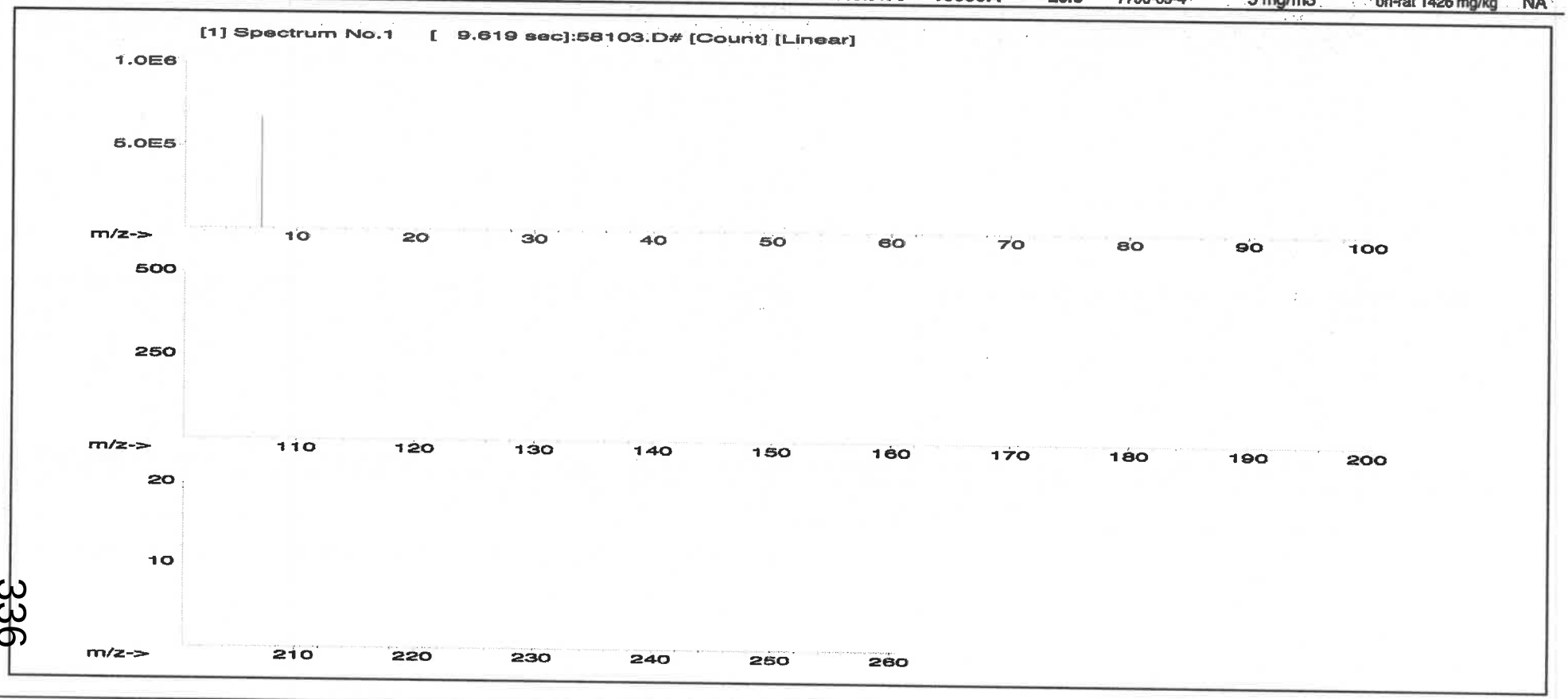
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12 | 0.058 Flask Uncertainty

		Lot #	
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance 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



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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	T	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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IN5497 - IN5498 R: 03/17/23 BH

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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 ± 0.058 Flask Uncertainty

		Lot #	
Solvent:	2%	21110221	Nitric Acid
		60.0 (mL)	Nitric Acid

5E-05 Balance Uncertainty

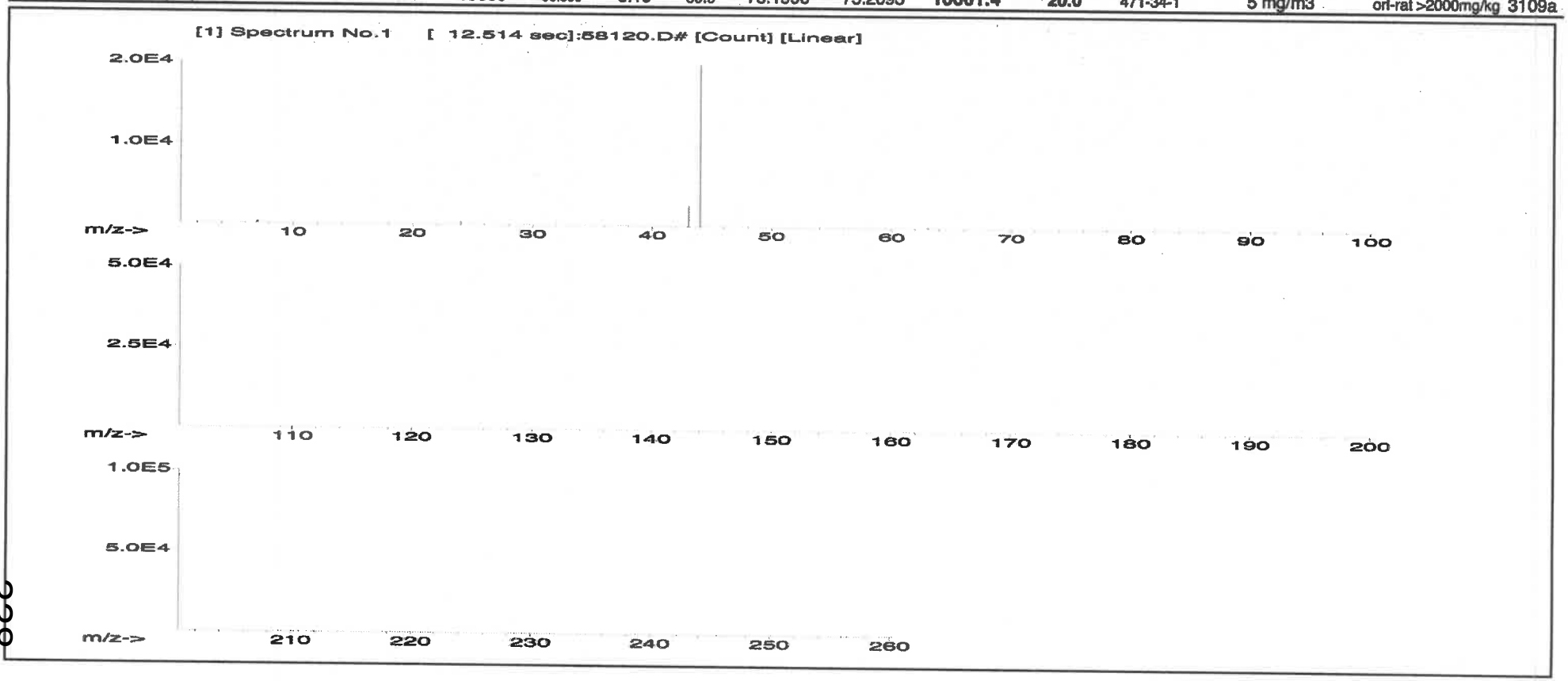
Giovanni Esposito

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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<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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M5497 - M5498 R: 03/17/23 BH

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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

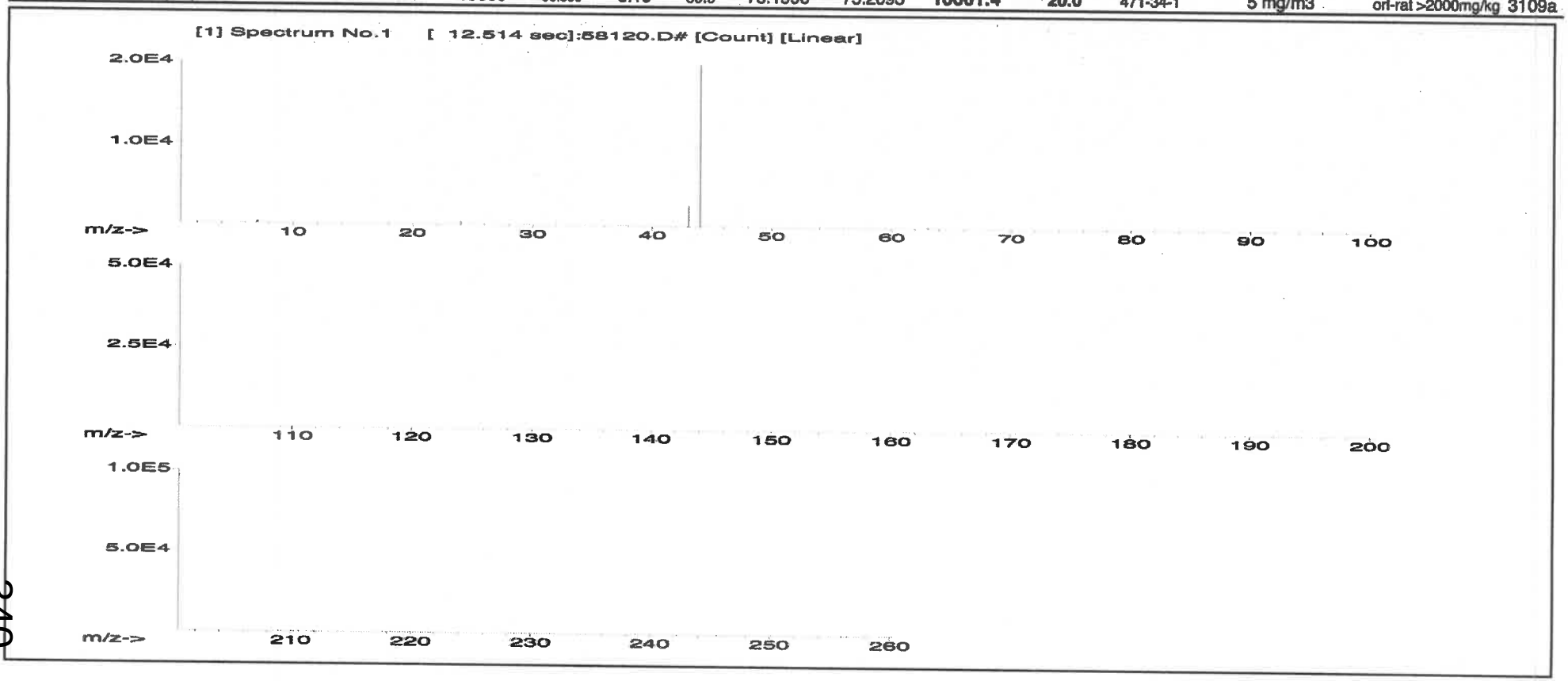
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41

	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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	T	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* 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: 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

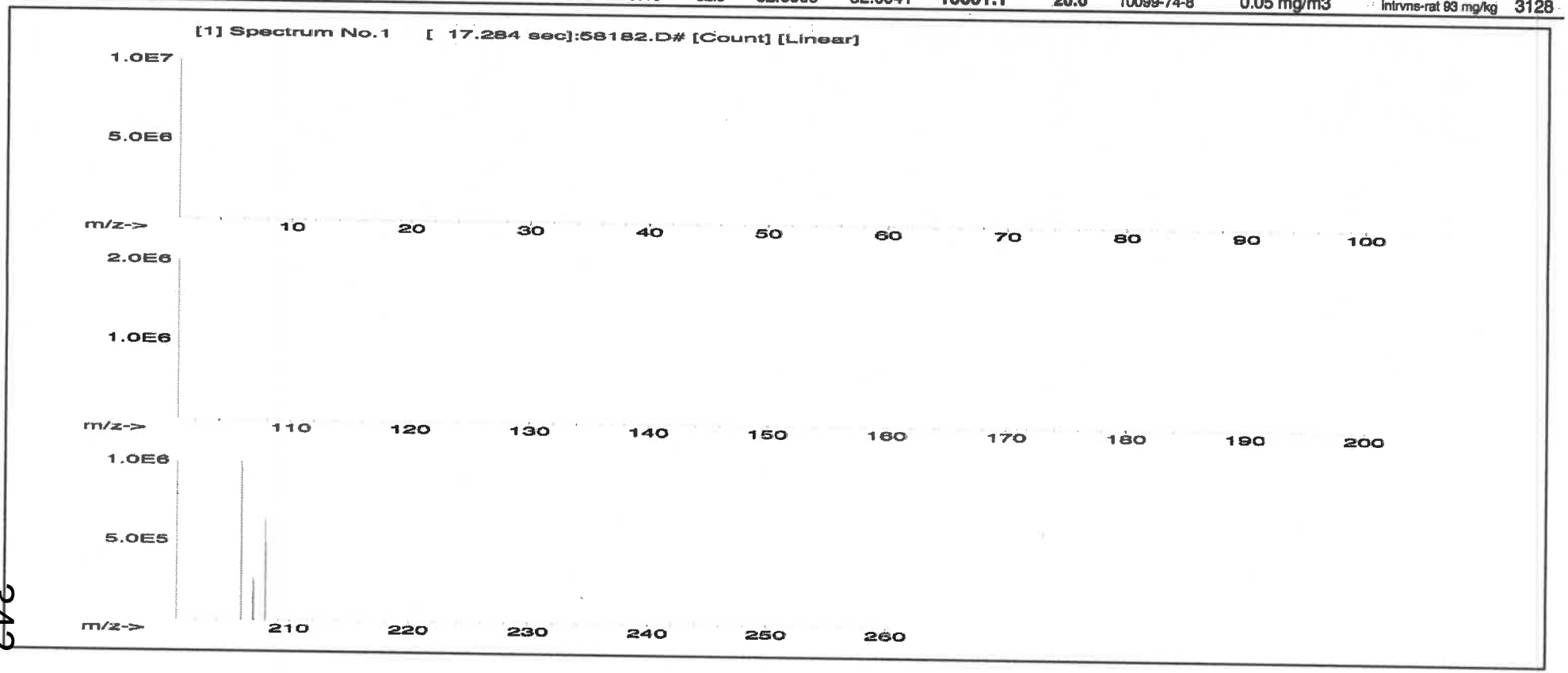
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

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



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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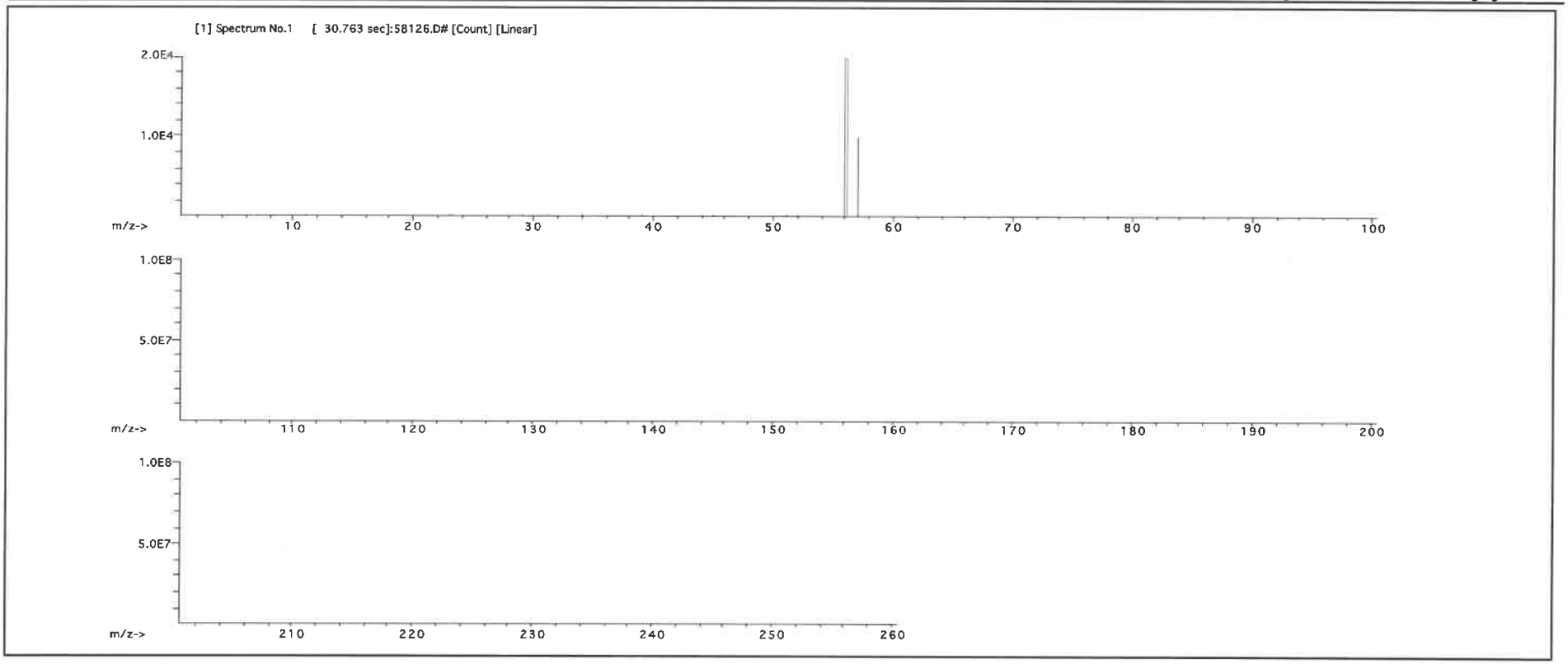
CERTIFIED WEIGHT REPORT:

Part Number:	**58126**		**Lot #**		
Lot Number:	**092122**	**Solvent:**	20510011	Nitric Acid	
Description:	**Iron (Fe)**	7.0%	350.0 (mL)	Nitric Acid	
Expiration Date:	092125				
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):	5000.1	0.12	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	092122
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



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.

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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: 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

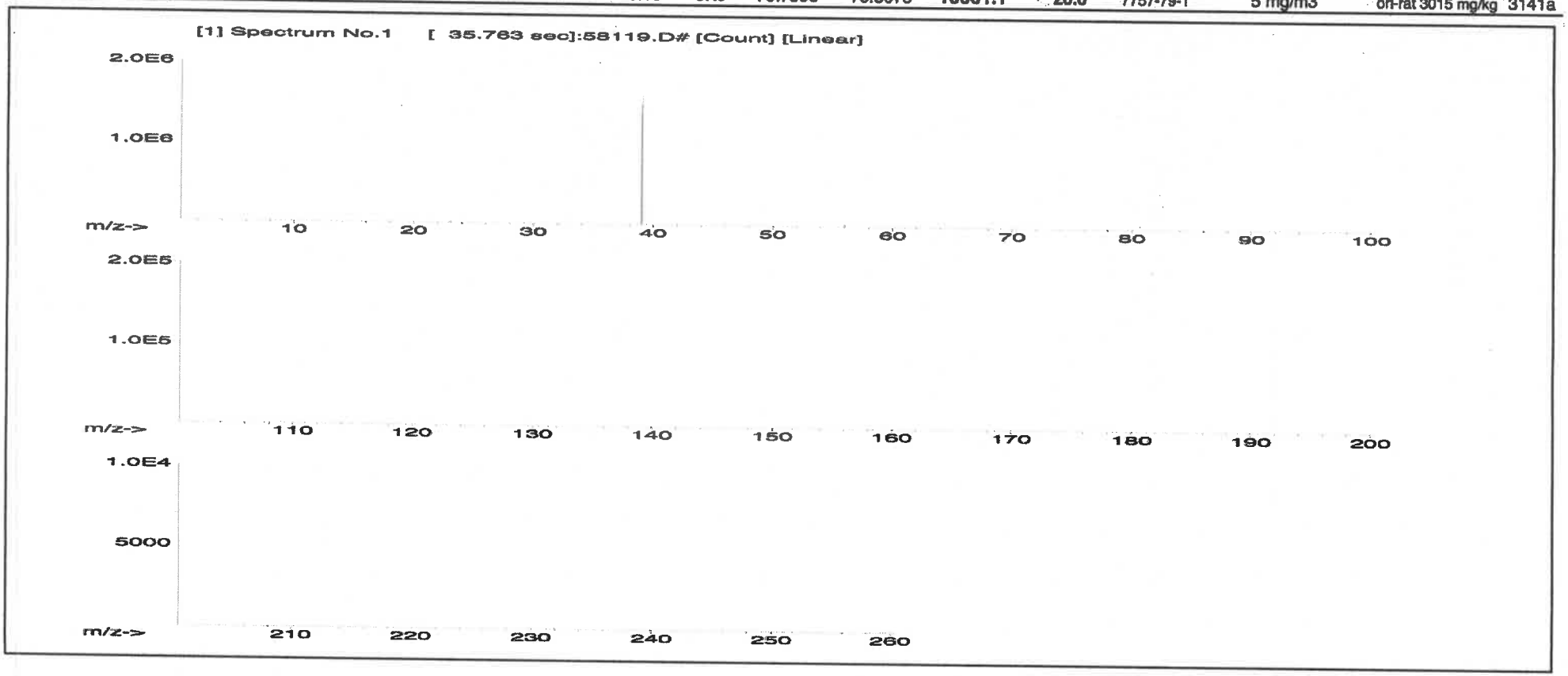
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.06 Flask 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:

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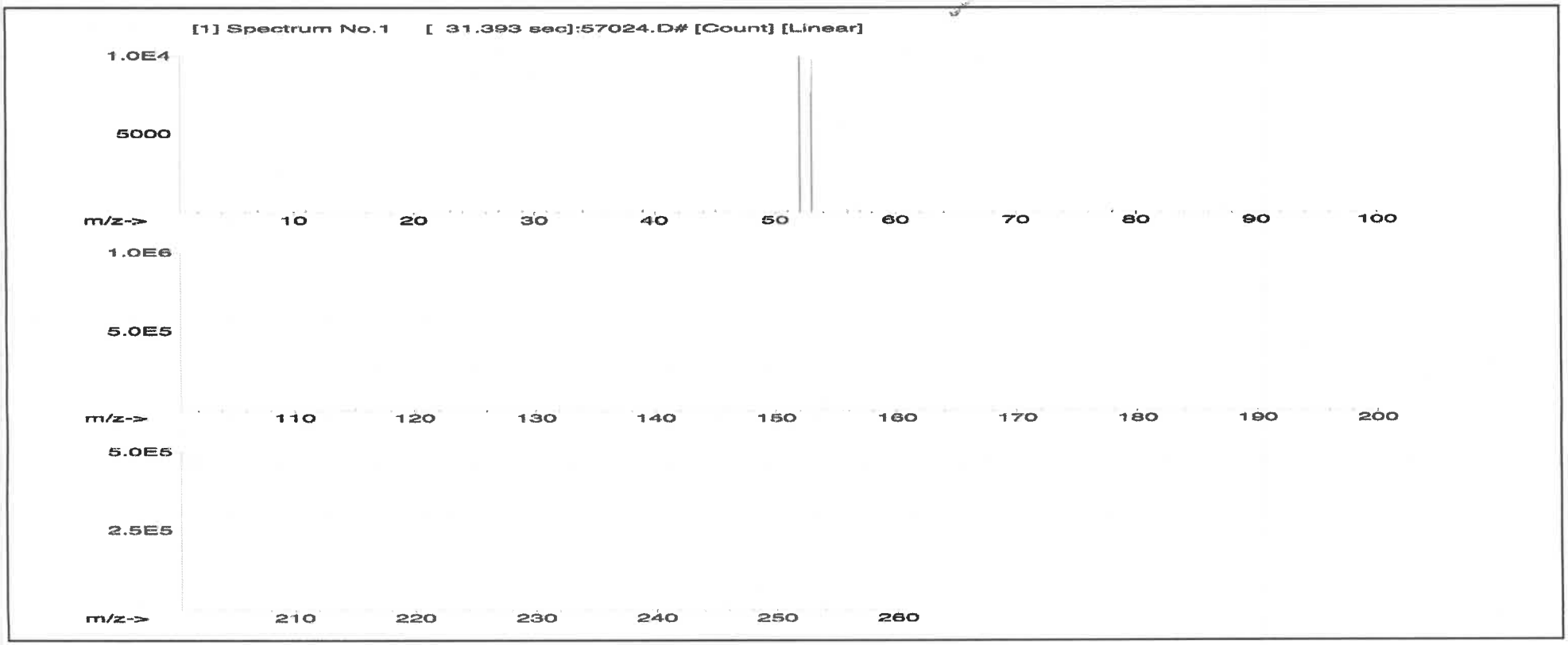
348

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

	Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1.	Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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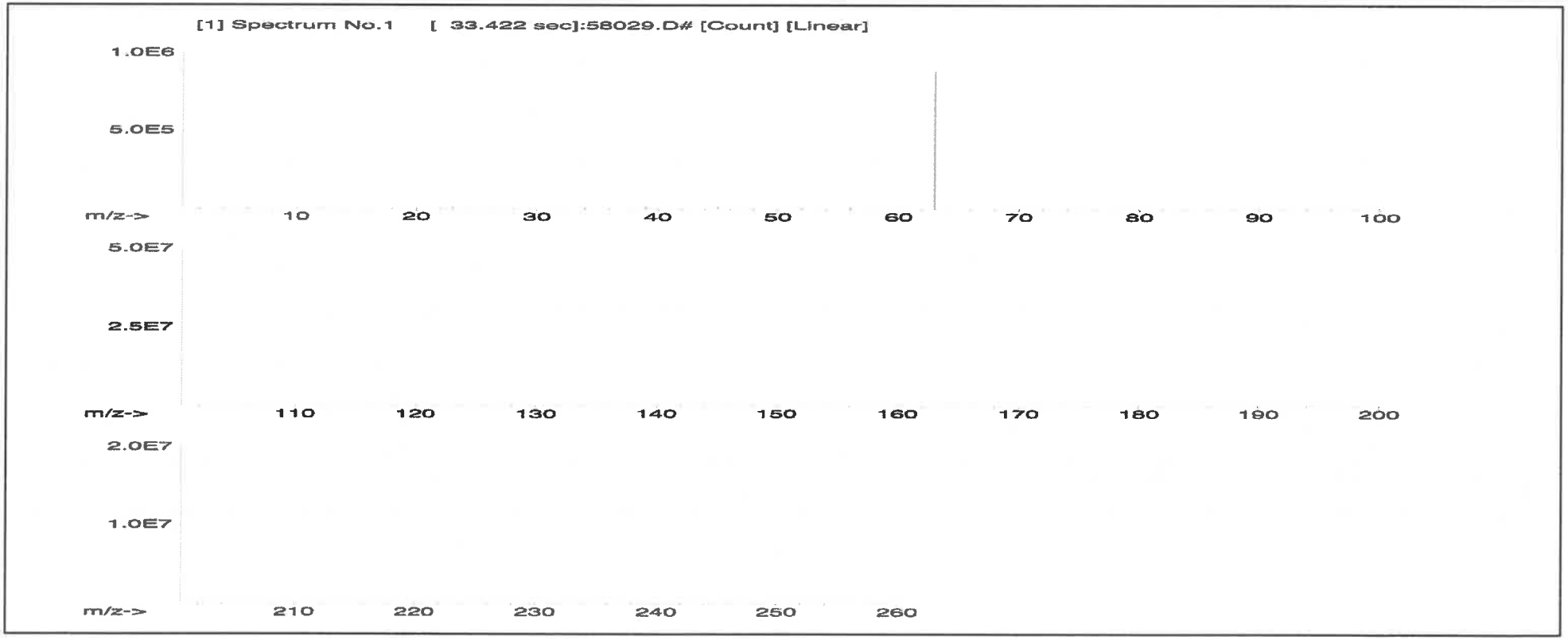
350

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:

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* 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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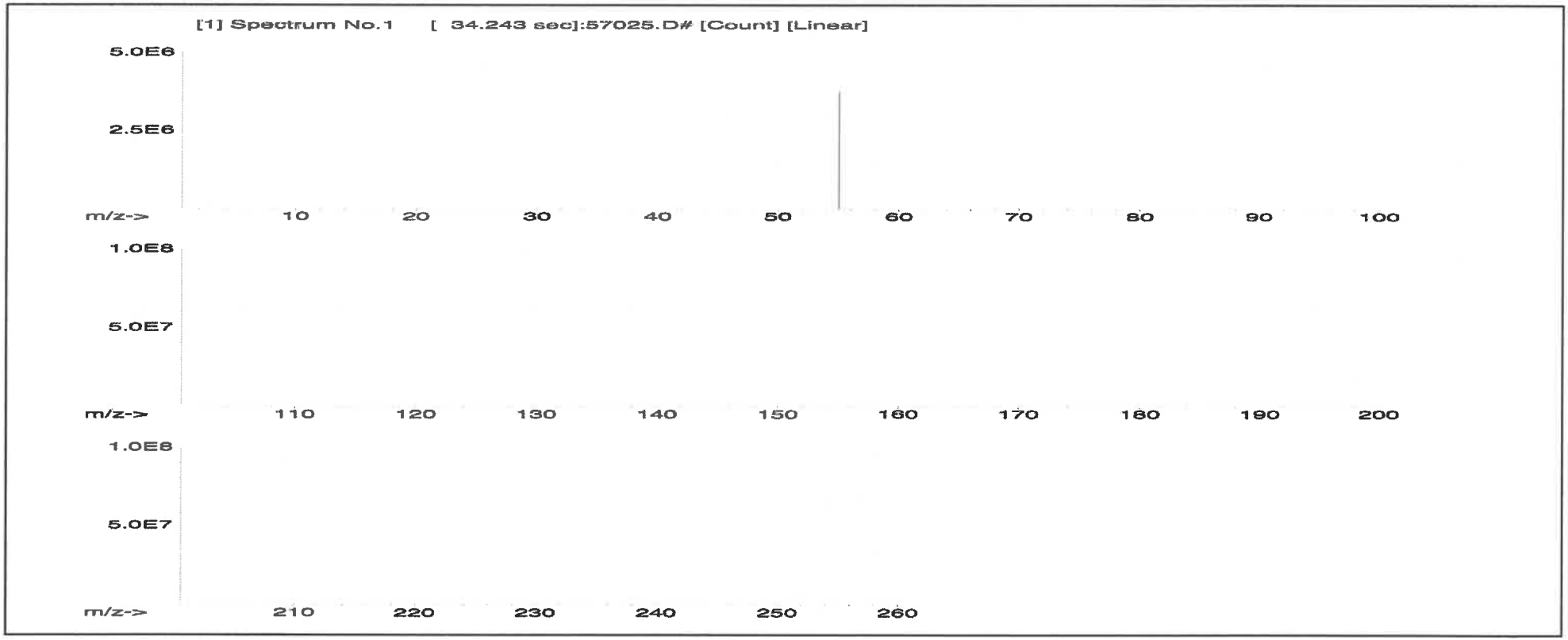
352

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



353

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).
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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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M5768 M5769 (BP) R:1/3/24

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354

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	

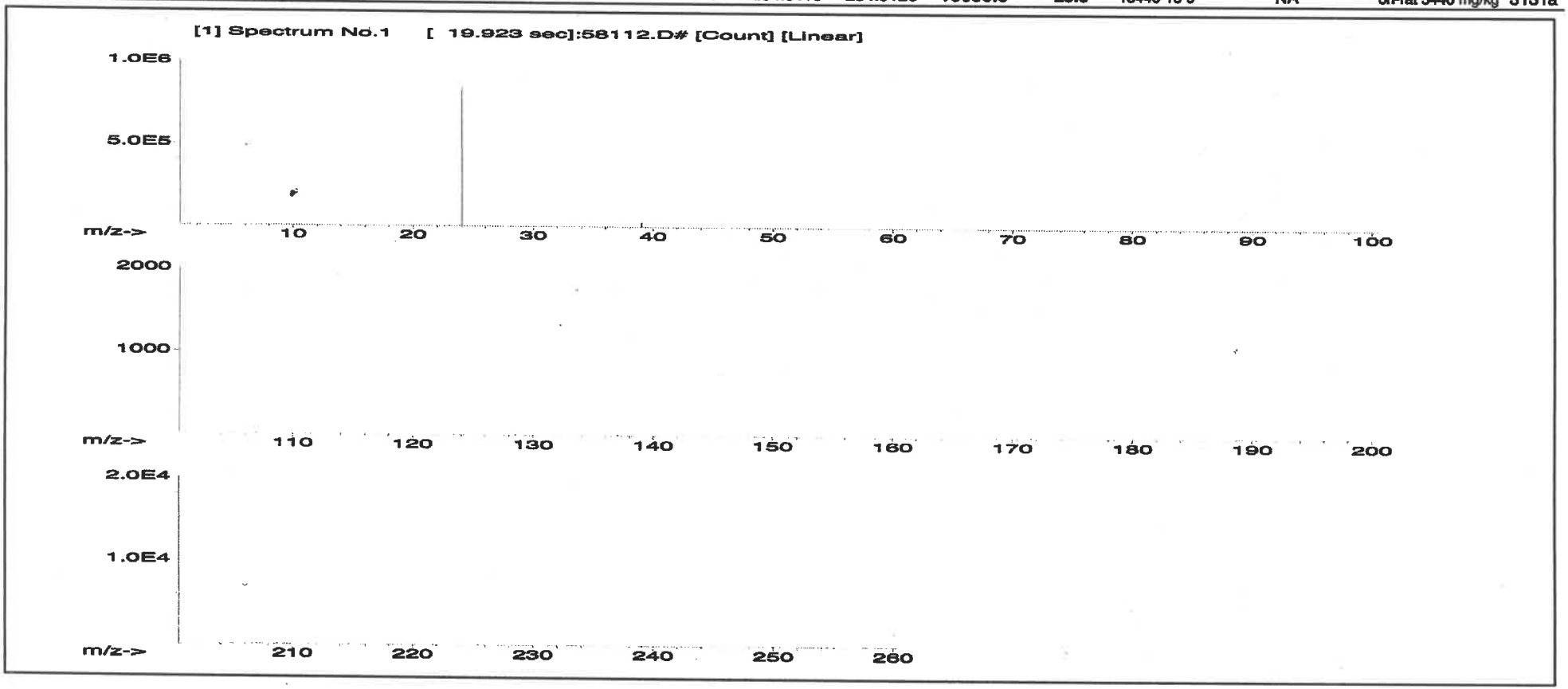
5E-05 Balance Uncertainty

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



355

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.

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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

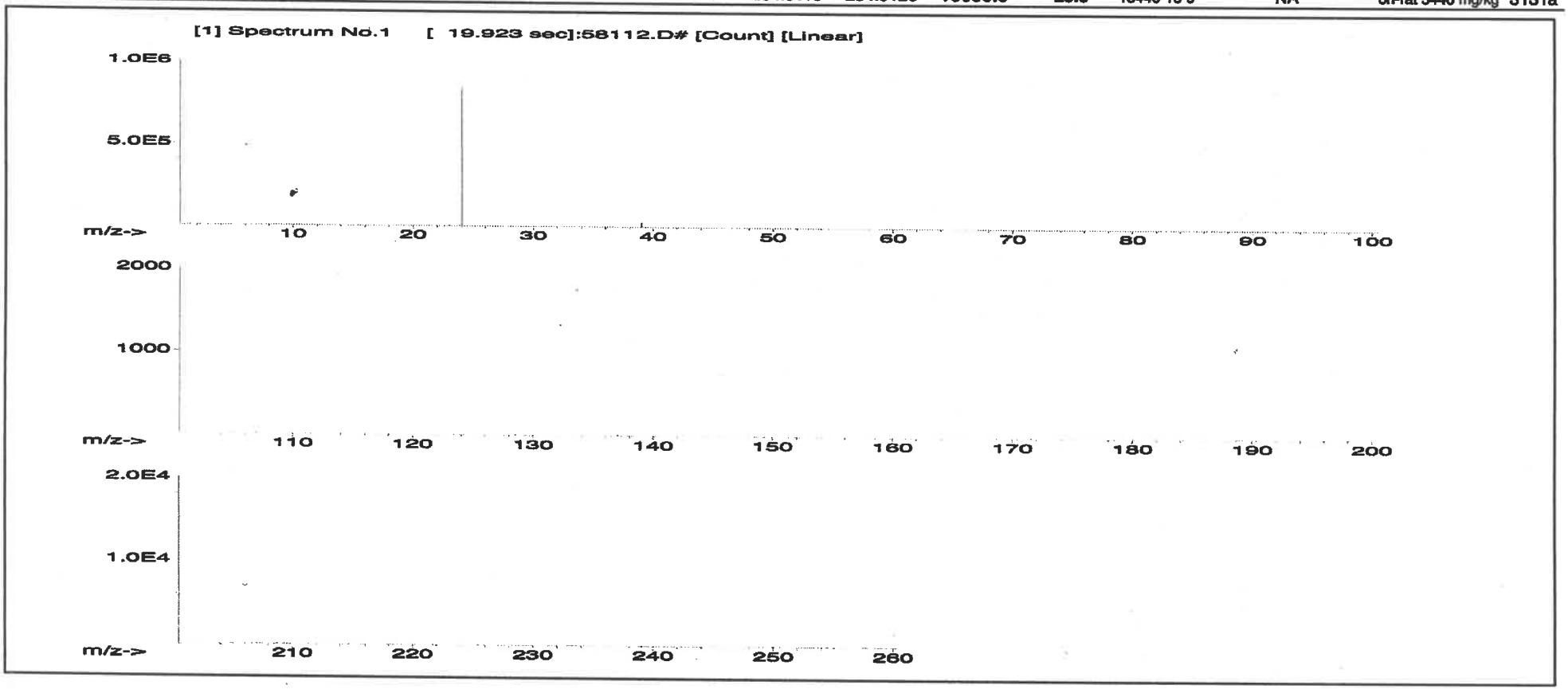
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

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	orl-rat 5440 mg/kg	3131a



357

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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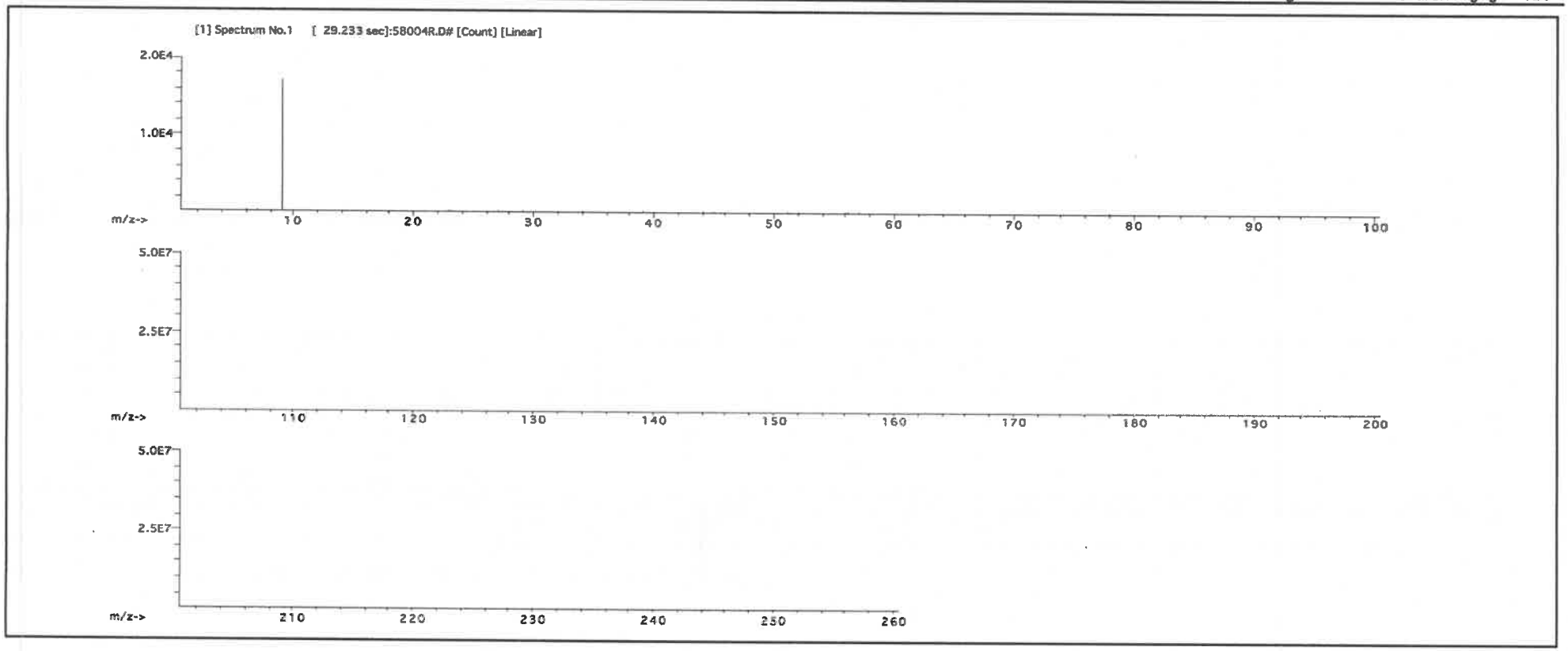
358

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan 102523
Reviewed By:	Pedro L. Rentas 102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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360

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

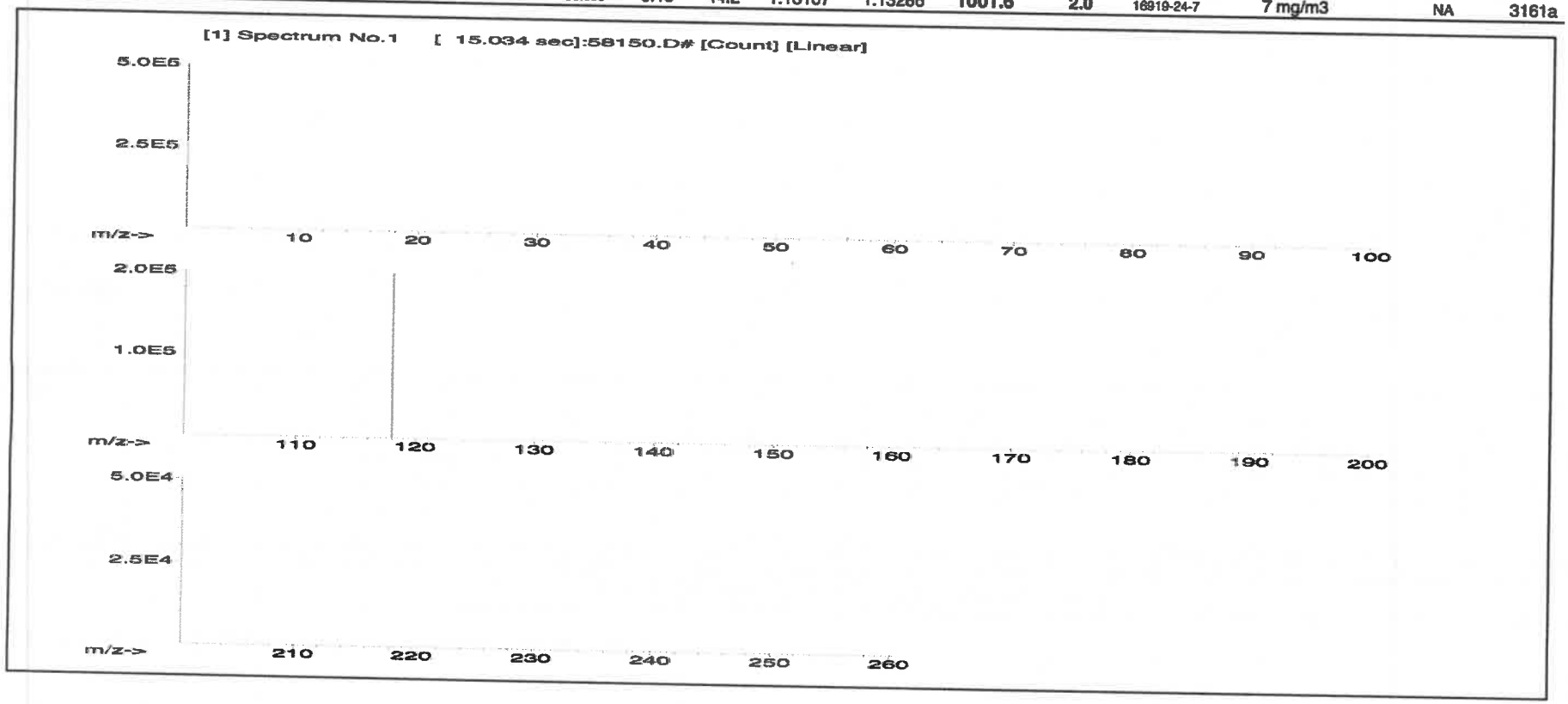
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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:

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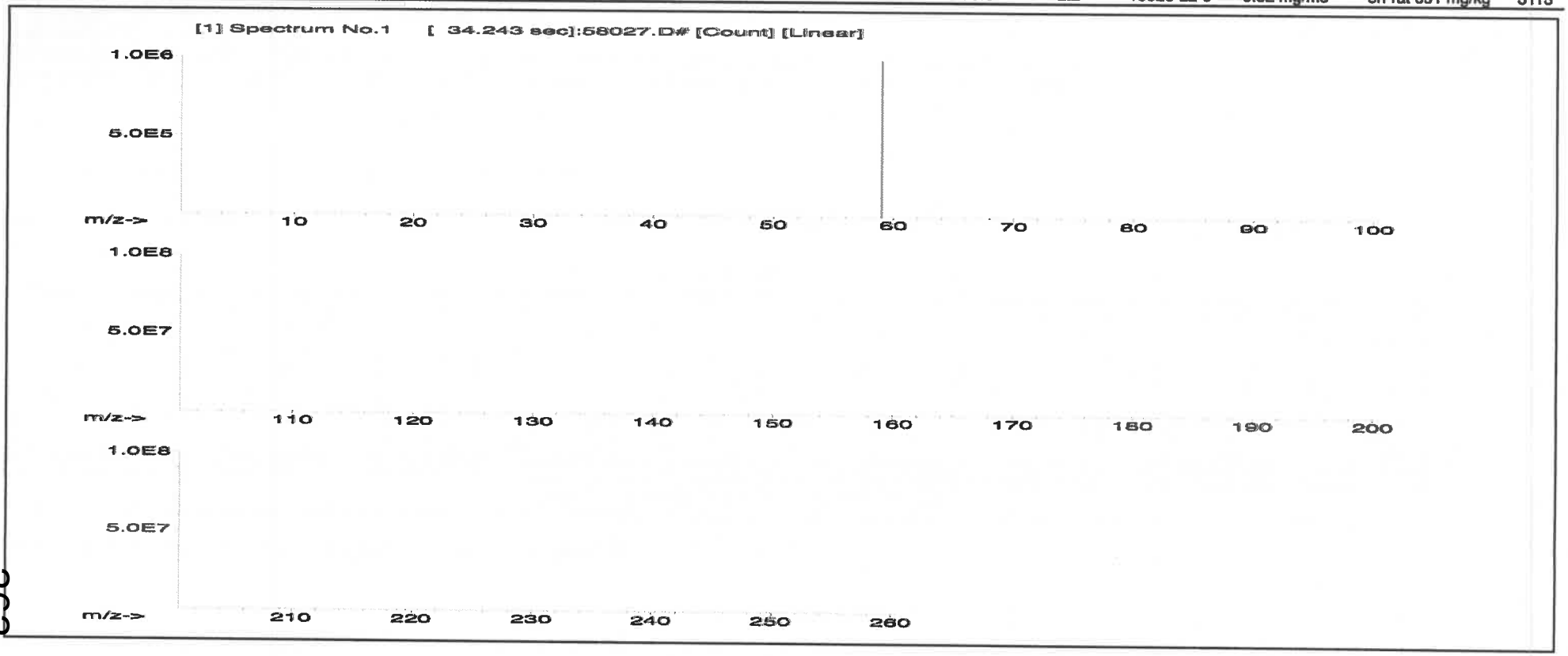
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CERTIFIED WEIGHT REPORT:

		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.
* 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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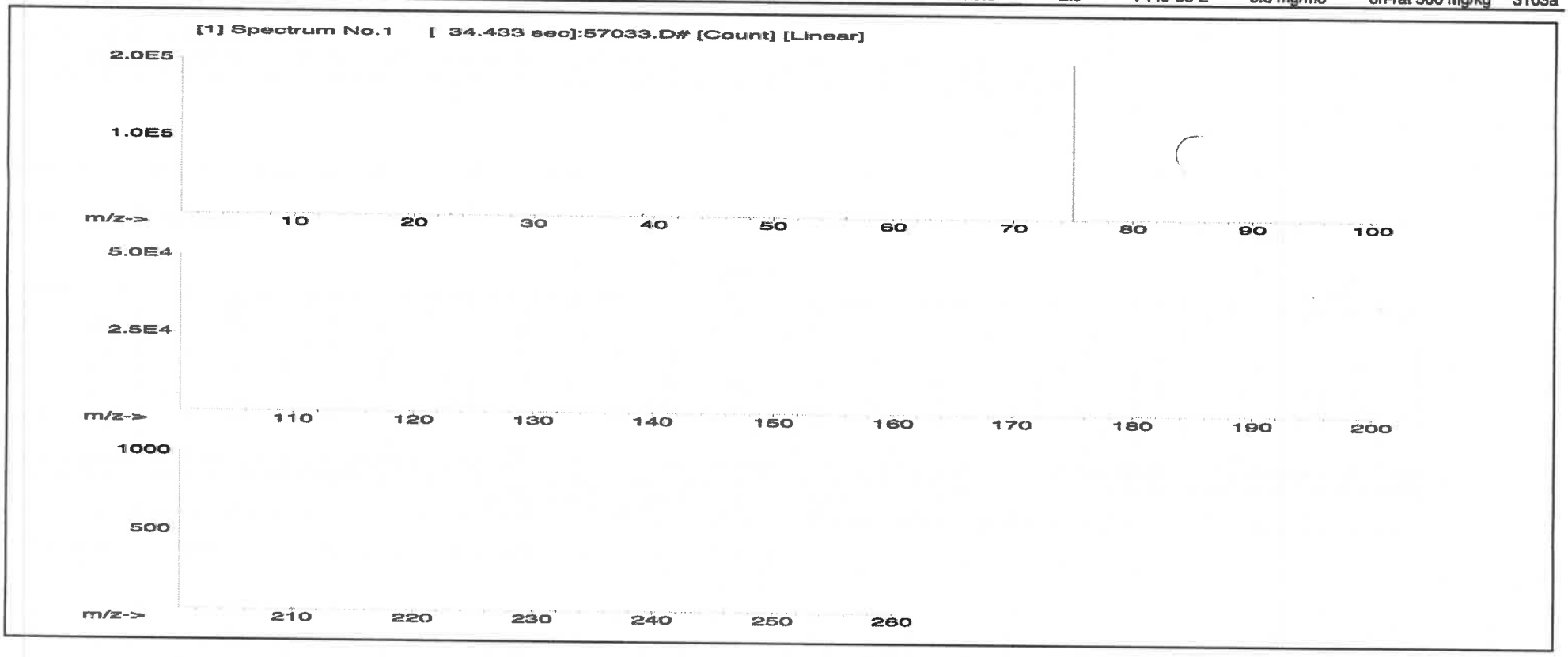
364

CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**				
Lot Number:	**111323**	24002546	Nitric Acid		
Description:	**Arsenic (As)**				
		2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



365

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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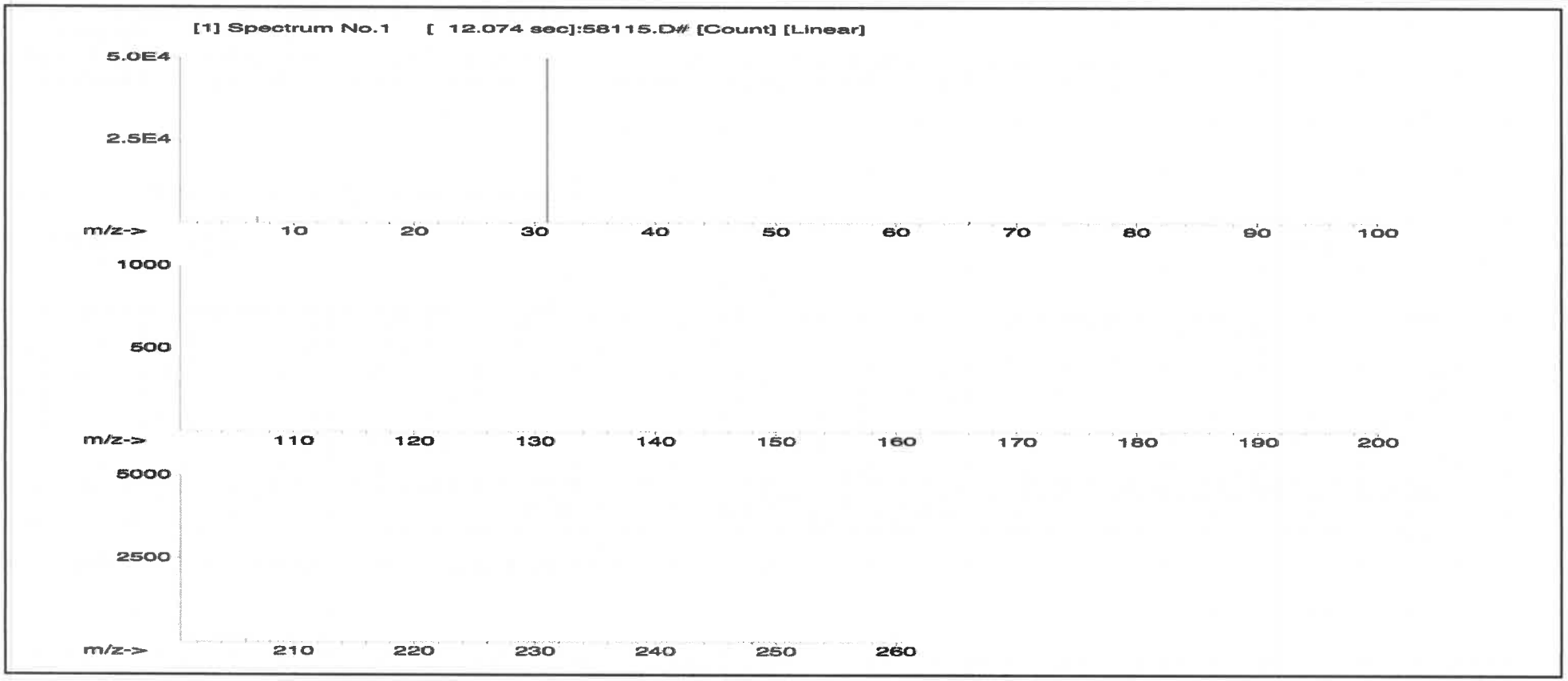
366

CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**57115**	**Solvent:**	21110221	Nitric Acid
Lot Number:	**041723**			
Description:	**Phosphorous (P)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	041726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**10000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	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



367

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.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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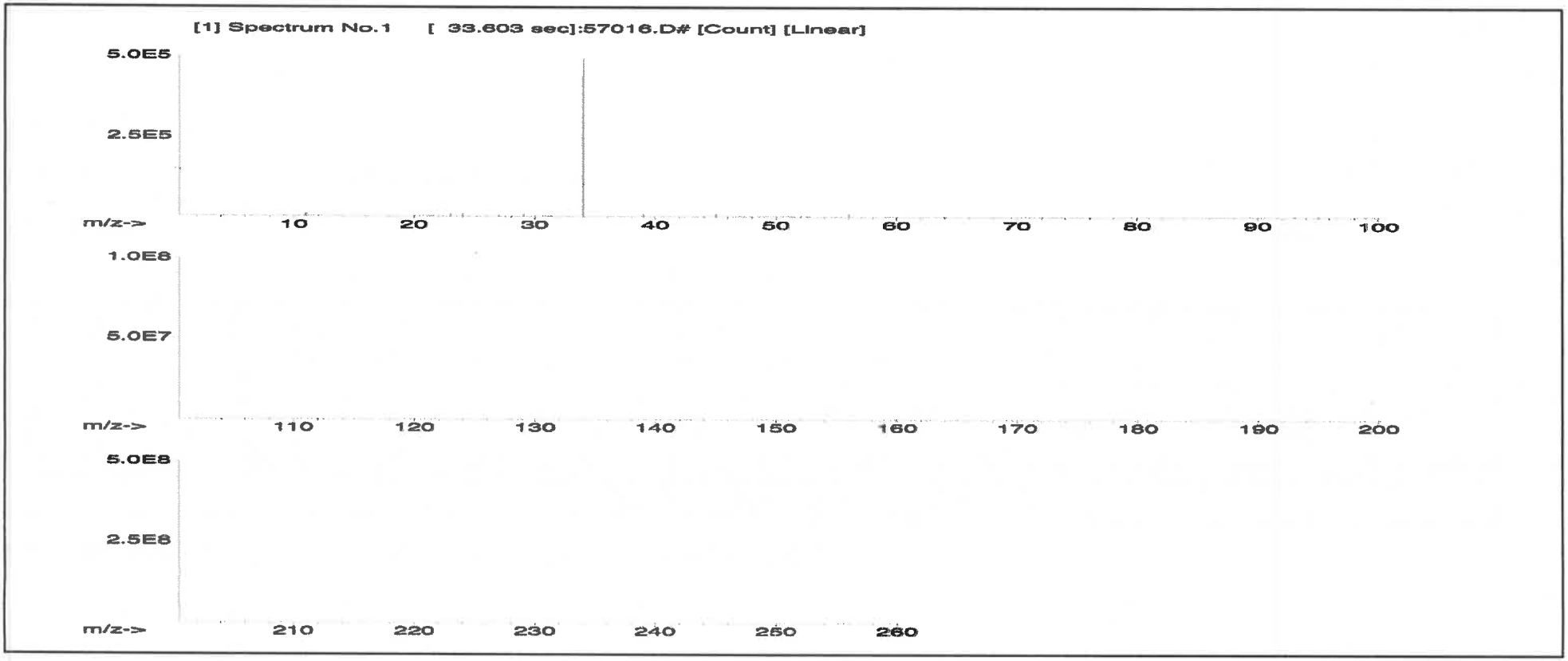
368

CERTIFIED WEIGHT REPORT:

Part Number:	**57016**	**Solvent:**	**Lot #** 122923	ASTM Type 1 Water
Lot Number:	**122923**			
Description:	**Sulfur (S)**			
Expiration Date:	122926			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty	

Formulated By:	Benson Chan	122923
Reviewed By:	Pedro L. Rentas	122923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	1000	99.9	0.10	24.3	16.4979	16.4980	**1000.0**	**2.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



369

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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* 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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370

CERTIFIED WEIGHT REPORT:

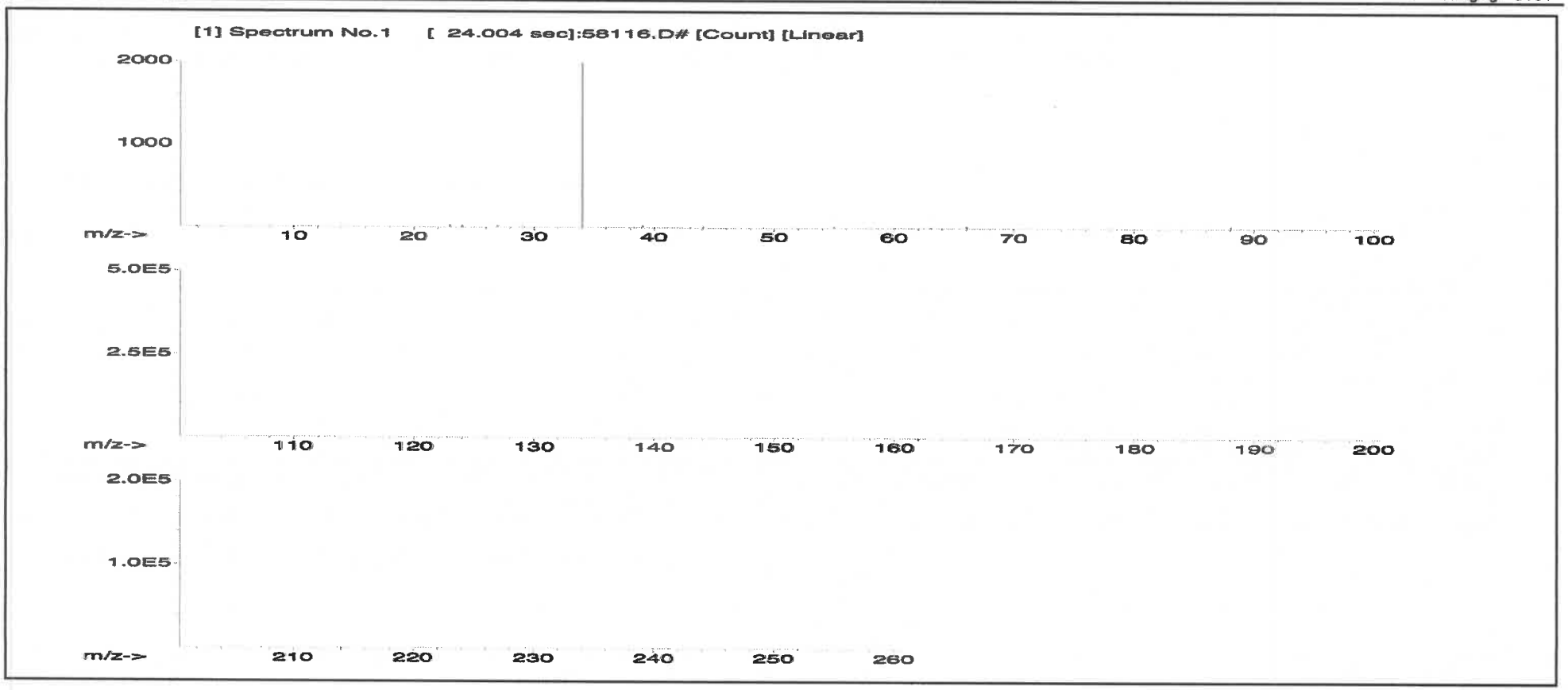
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



371

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

Lot #

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372

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

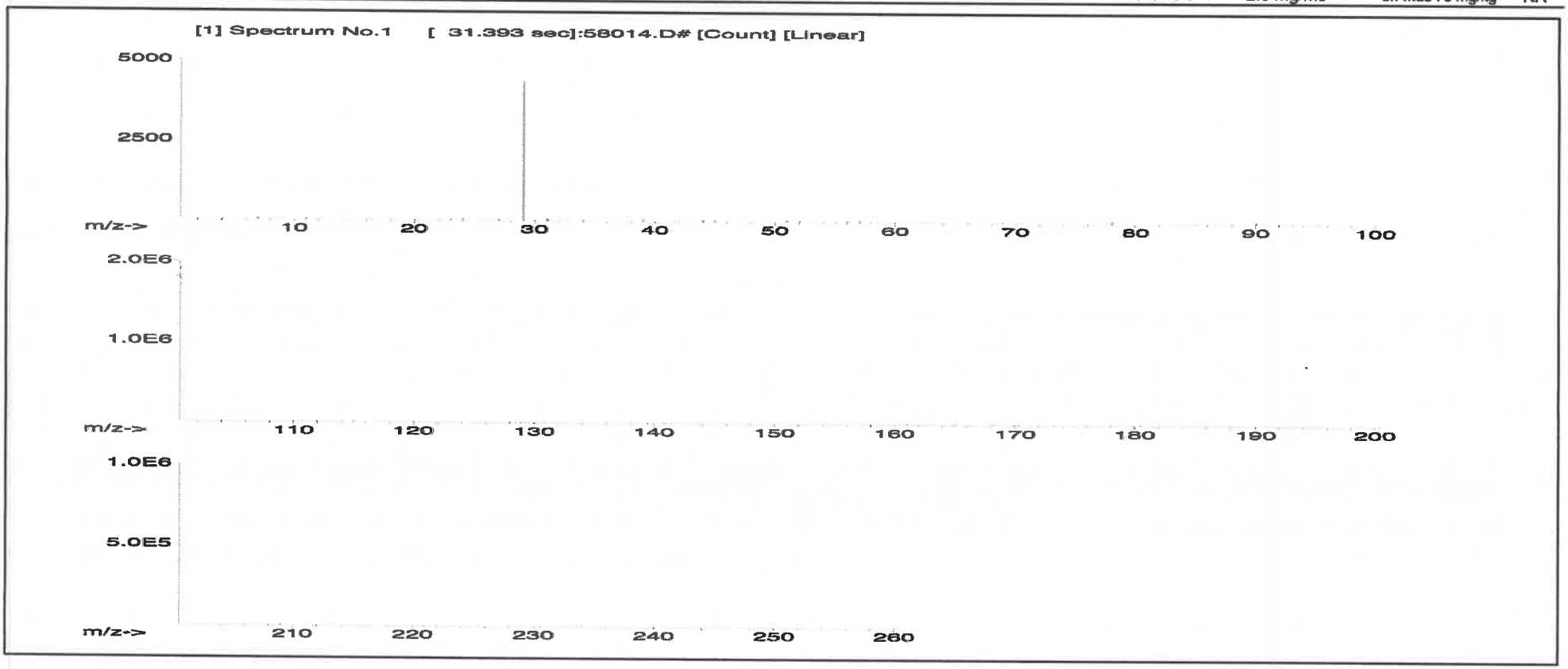
Aleah O'Brady

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



373

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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* 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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374

CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

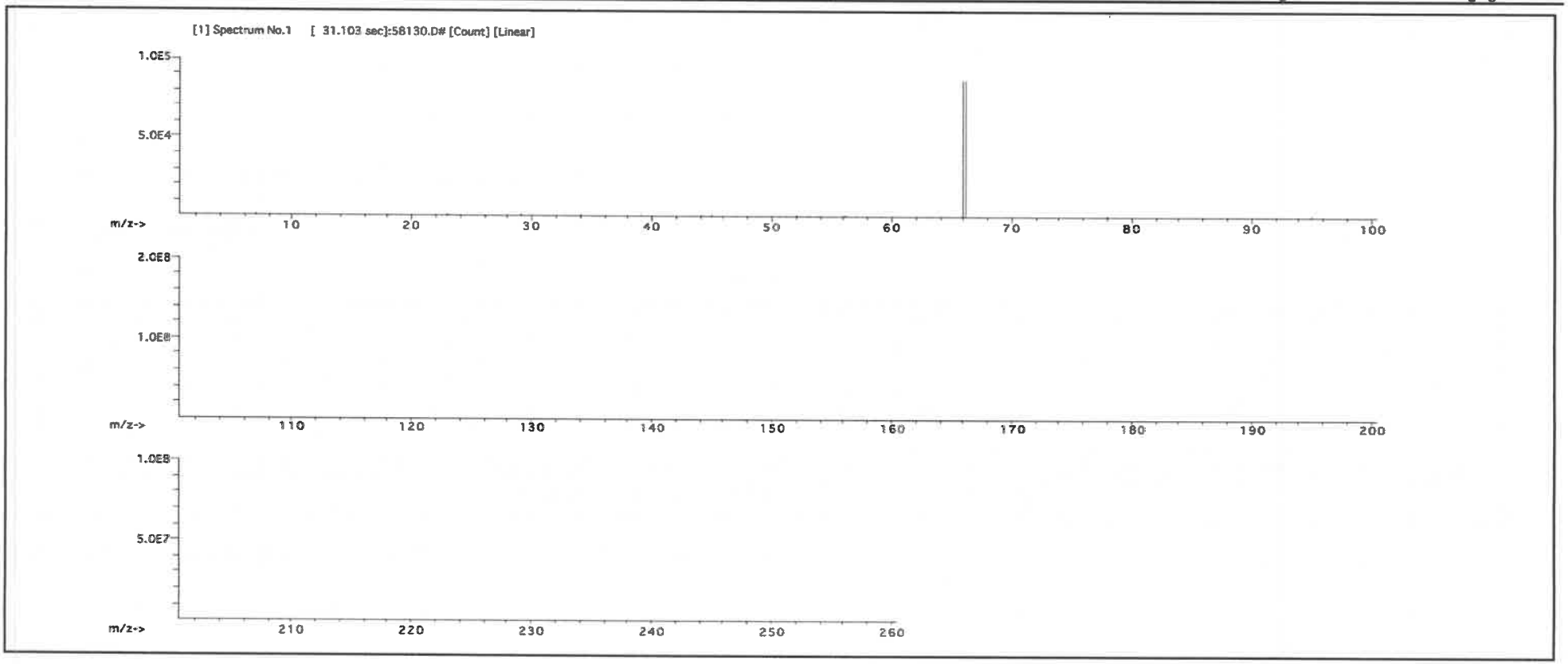
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

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



375

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:

* 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 M5820

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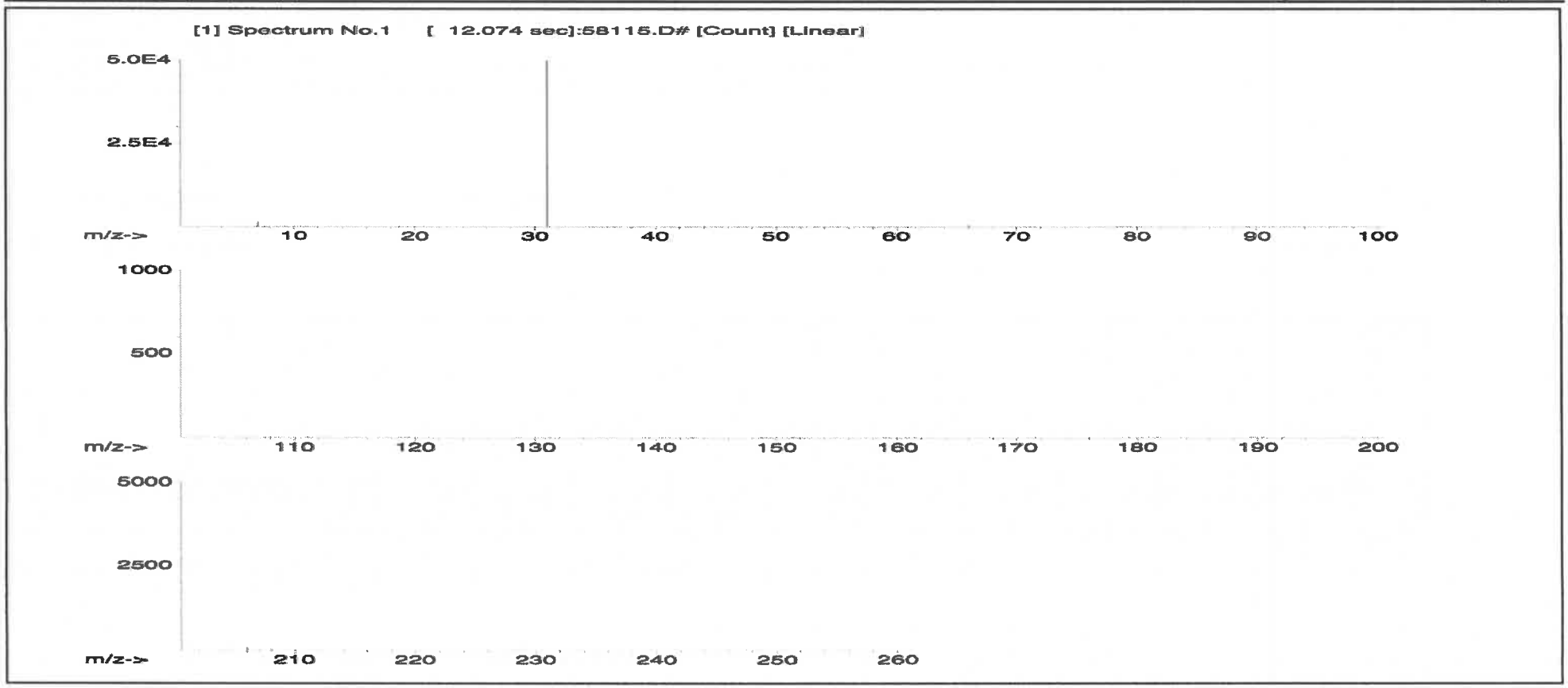
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CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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

M5959 R: 6/14/24.

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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 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certified Reference Material CRM

M5960 KK R. 6/11/24

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CERTIFIED WEIGHT REPORT:

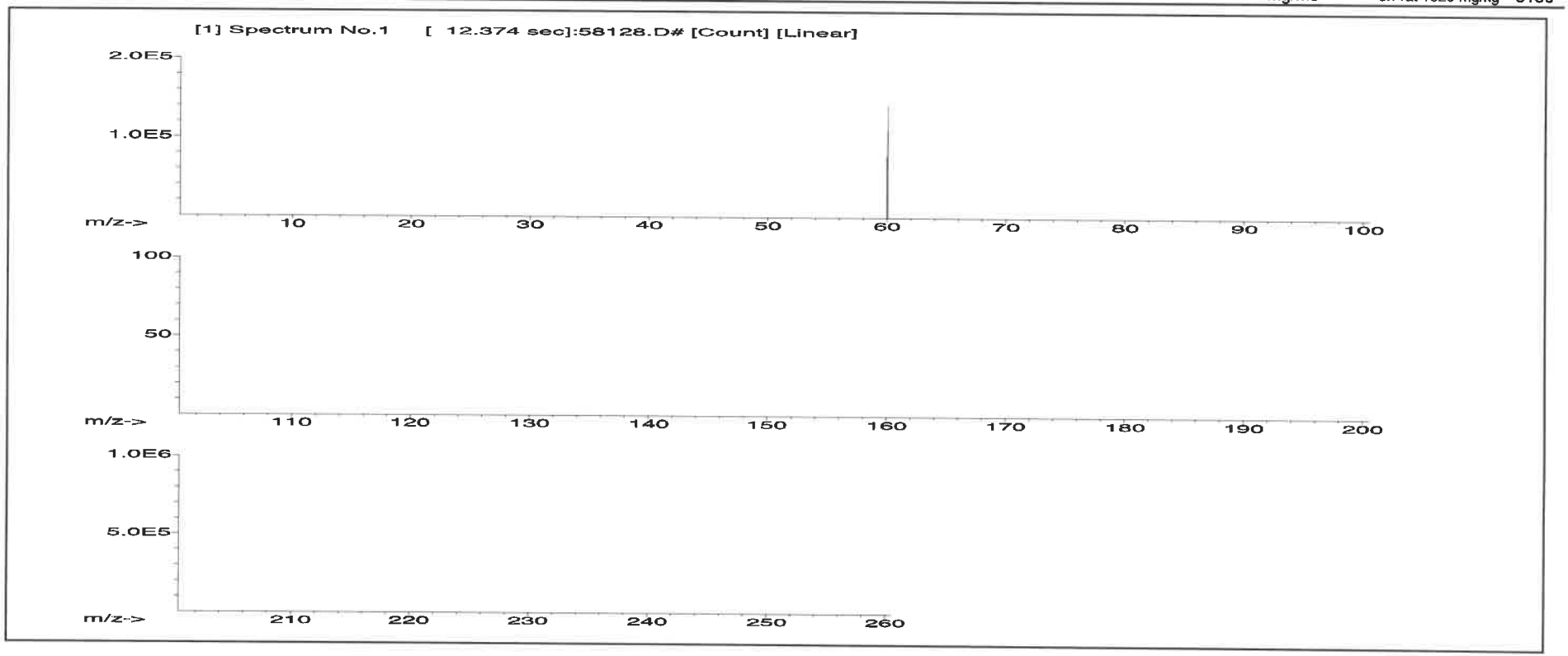
Part Number: 57028
Lot Number: 041124
Description: Nickel (Ni)
Expiration Date: 041127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 249.85

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
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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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	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

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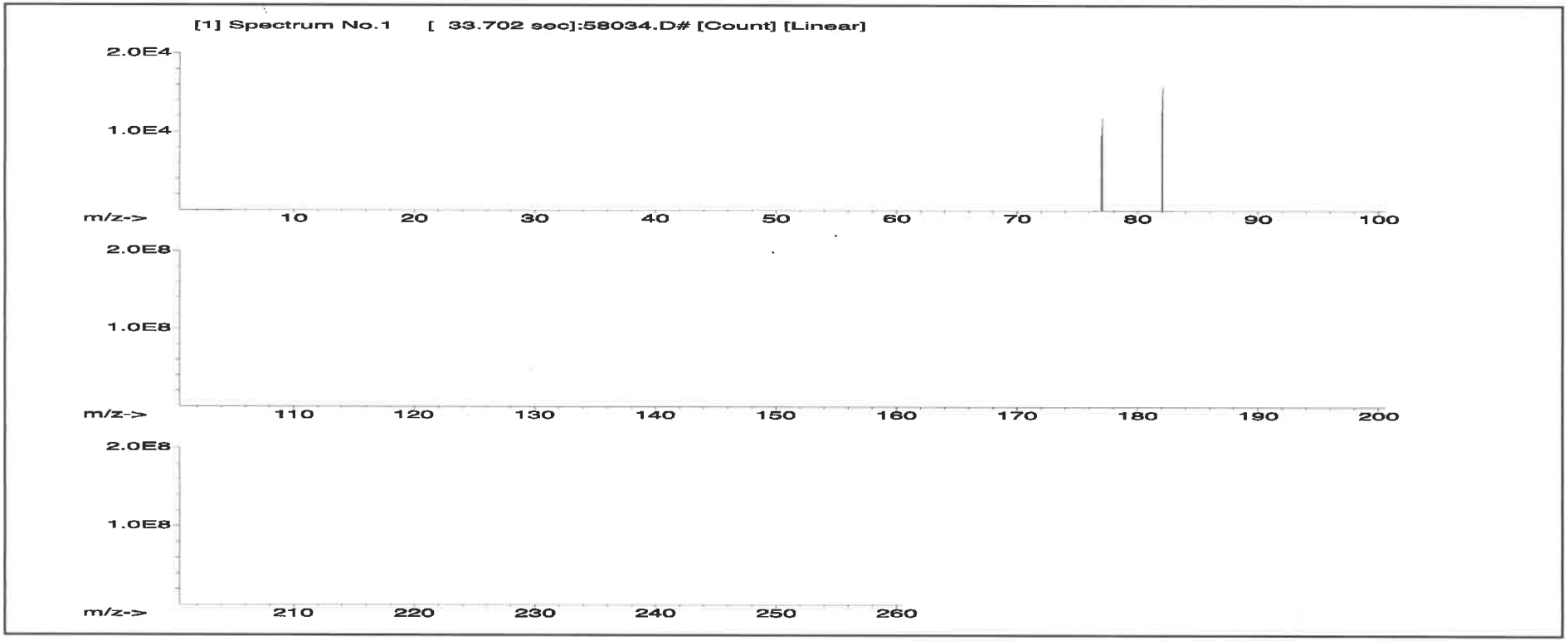
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11

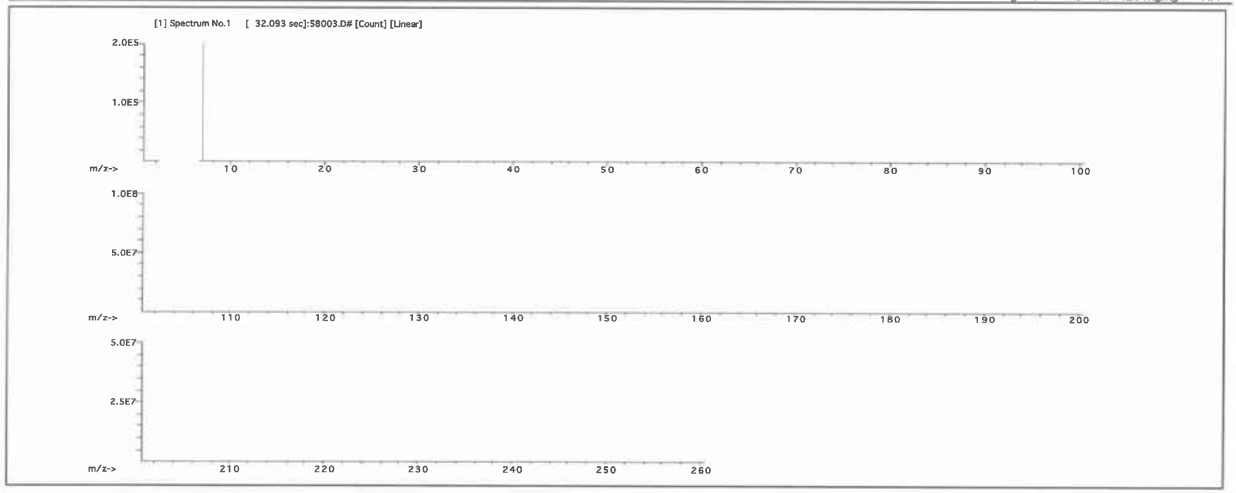
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.016 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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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	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	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

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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M5978, M5979

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$
w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma(w_i)^2\ (u_{char\ i})^2]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with
$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

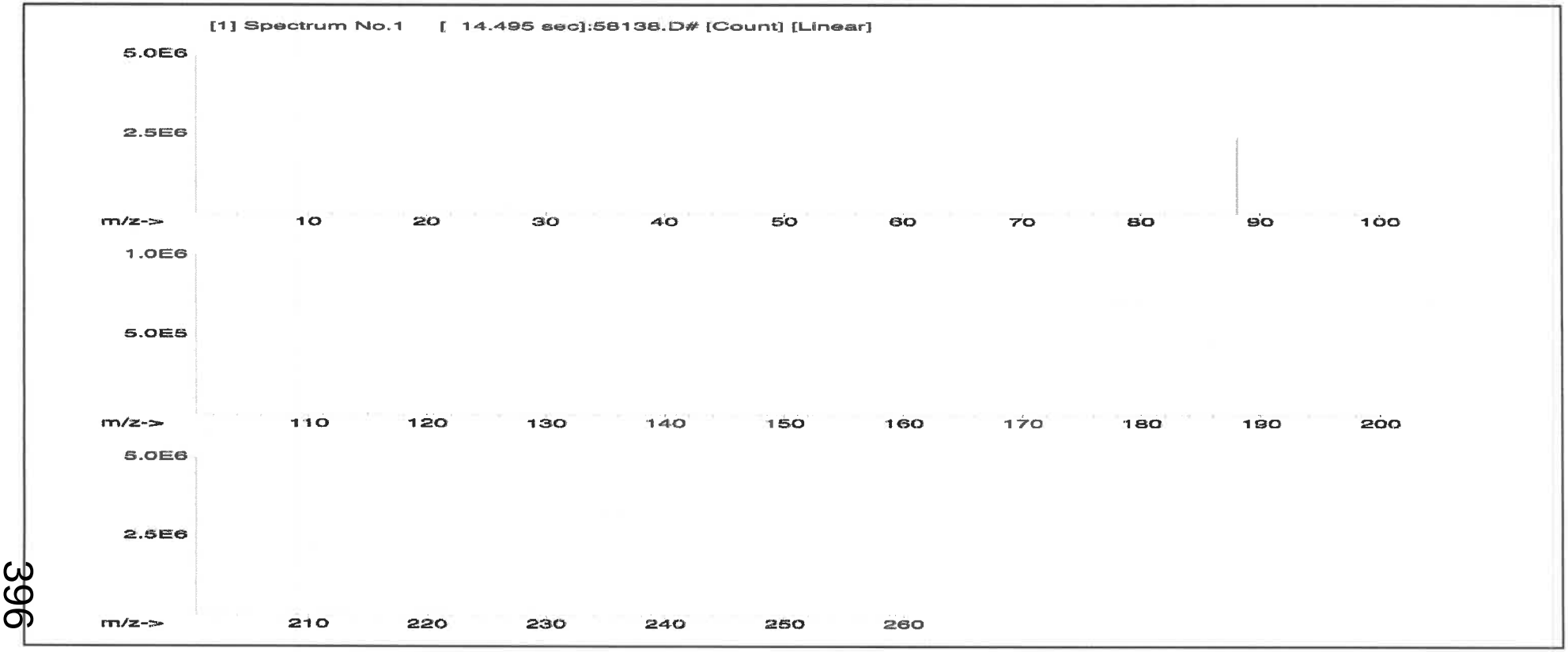
45982 R: 6/11/24

CERTIFIED WEIGHT REPORT:

Part Number:	**57038**			**Lot #**	
Lot Number:	**031524**	**Solvent:**	24002546	Nitric Acid	
Description:	**Strontium (Sr)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	031527				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85502	**1000.1**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	T	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certificate of Analysis

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-SPK-1
Lot Number:	T2-MEB721963
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Manganese, Nickel, Vanadium, Zinc, Cobalt, 250 µg/mL ea: Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium, Silver

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	Chromium, Cr	200.0 ± 1.1 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	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Silver, Ag	50.00 ± 0.22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.070 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
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
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- 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

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 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

- July 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



Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6
ACS – Color (APHA)	<= 10	5
ACS – Residue after Ignition	<= 3 ppm	1
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	<= 0.005 %	< 0.005
ACS – Extractable Organic Substances	<= 5 ppm	1
ACS – Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities – Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities – Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities – Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities – Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities – Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities – Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities – Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities – Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities – Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities – Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

406

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

James Ethier
Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

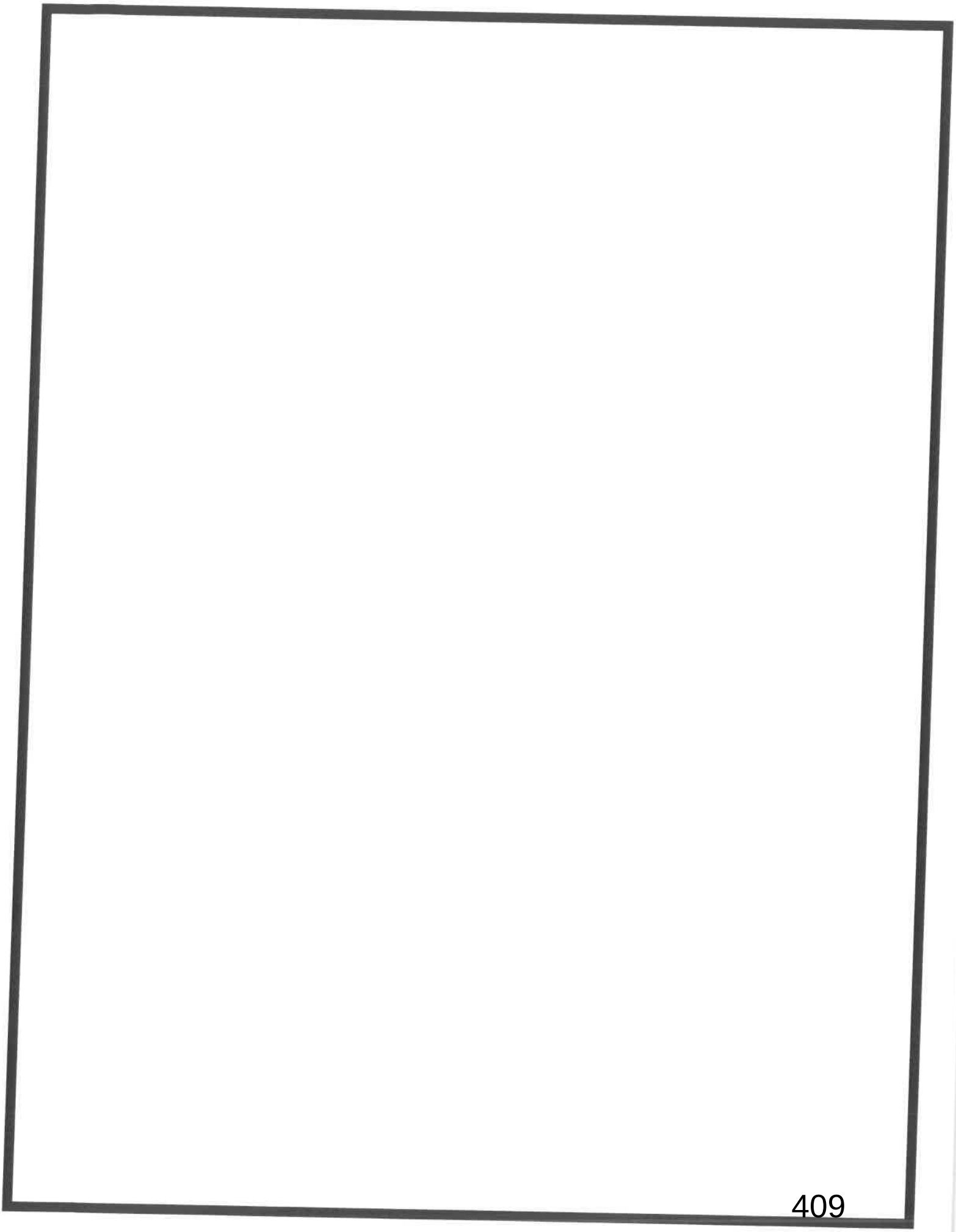
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

Phone: 215-295-5006
Fax: 215-295-0781

Hydrogen Peroxide 30%, ACS

Reagent Grade

SPECIFICATION	MAXIMUM LIMITS
Appearance	Colorless and free from suspended matter or sediment
Assay	29-32%
Color (APHA)	10
Residue after Evaporation	0.002%
Titratable Acid	0.0006 meq/g
Chloride (Cl)	3 ppm
Nitrate (NO_3)	2 ppm
Phosphate	2 ppm
Sulfate (SO_4)	5 ppm
Ammonium (NH_4)	5 ppm
Heavy Metals (as Pb)	1 ppm
Iron (Fe)	0.5 ppm



Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
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www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

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AR-1539 Certificate Number
https://Absolutestandards.com

412

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 5E-05 Balance Uncertainty 0.06 Flask Uncertainty

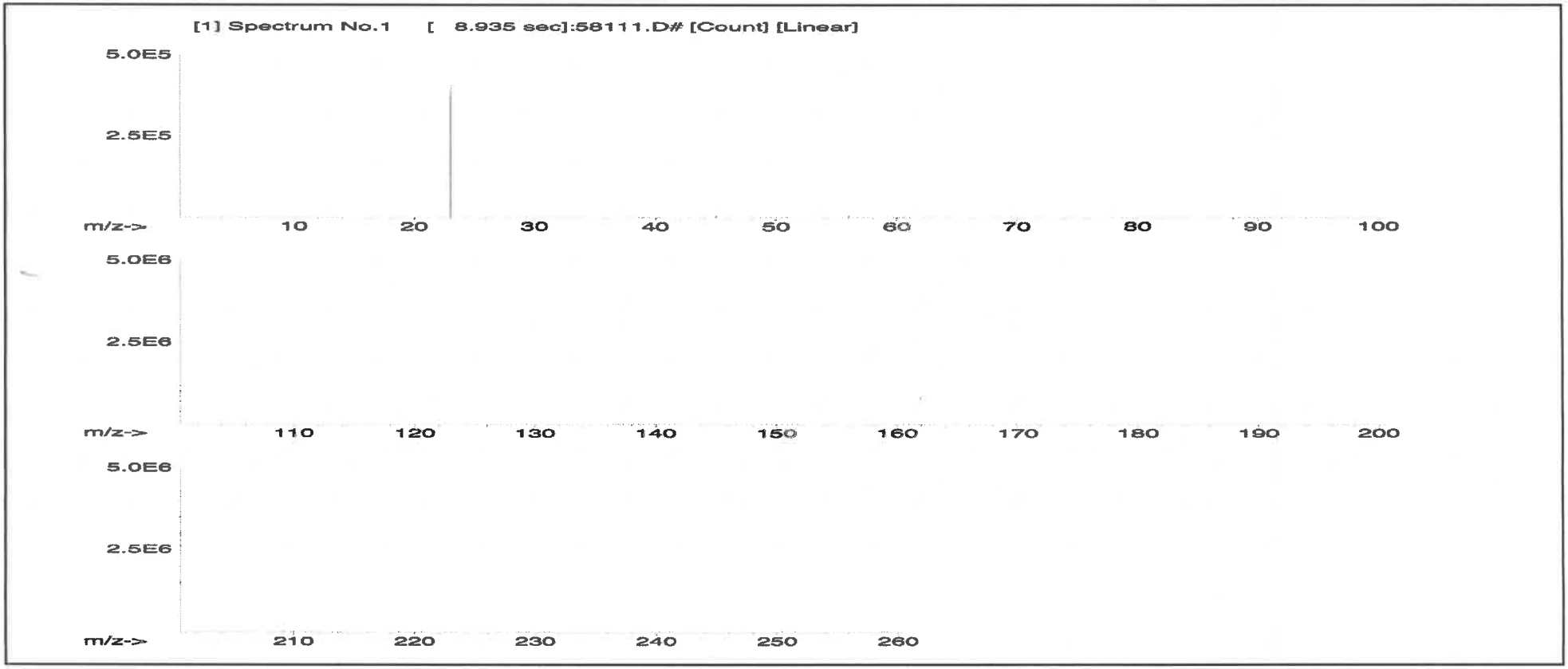
	Lot #	
Solvent:	24002546	Nitric Acid
2%	60.0 (mL)	Nitric Acid

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



413

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).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 01/03/24 M5802, M5803

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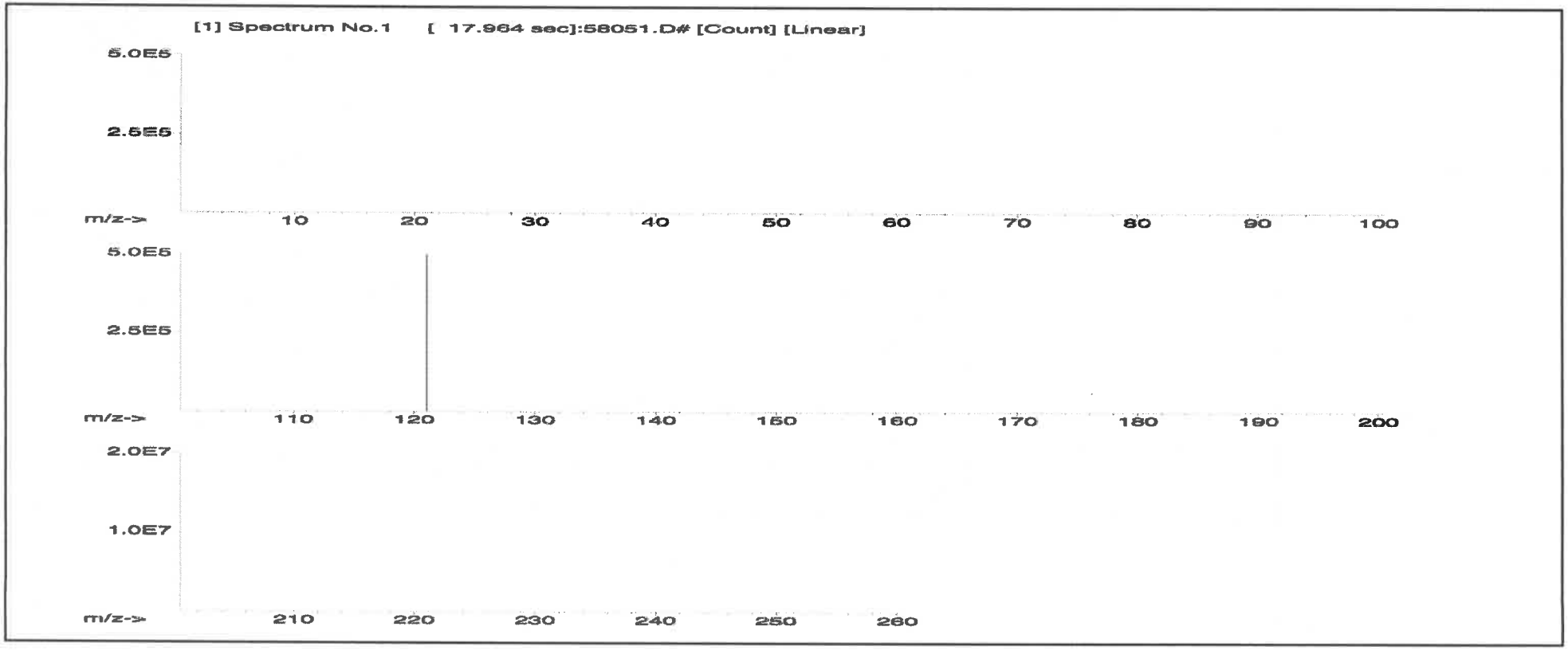
414

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



415

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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Certified Reference Material CRM

M6030

R: 8/5/24

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https://Absolutestandards.com

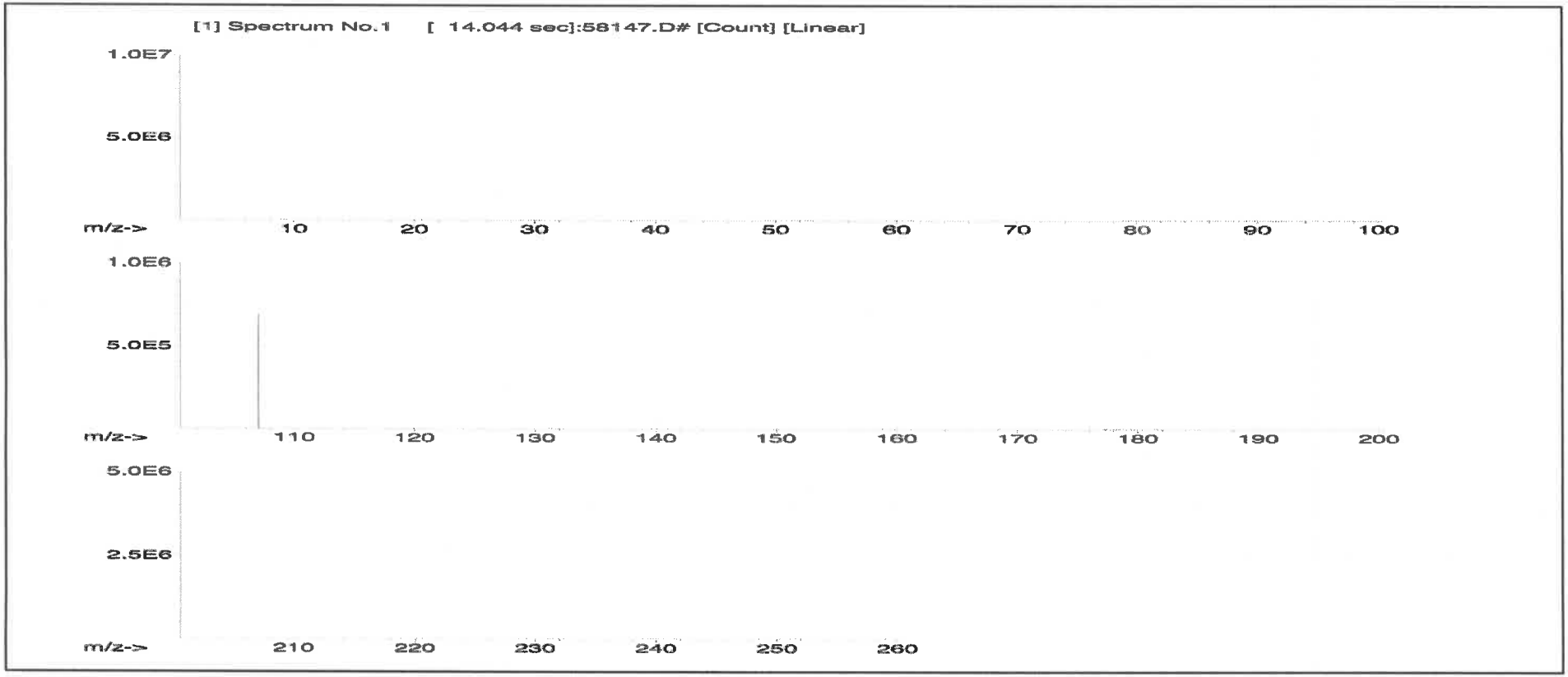
416

CERTIFIED WEIGHT REPORT:

Part Number:	**57047**		**Lot #**		
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**				
		2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



417

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 03/16/23 M5473, M5474, M5475, M5476

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AR-1539 Certificate Number
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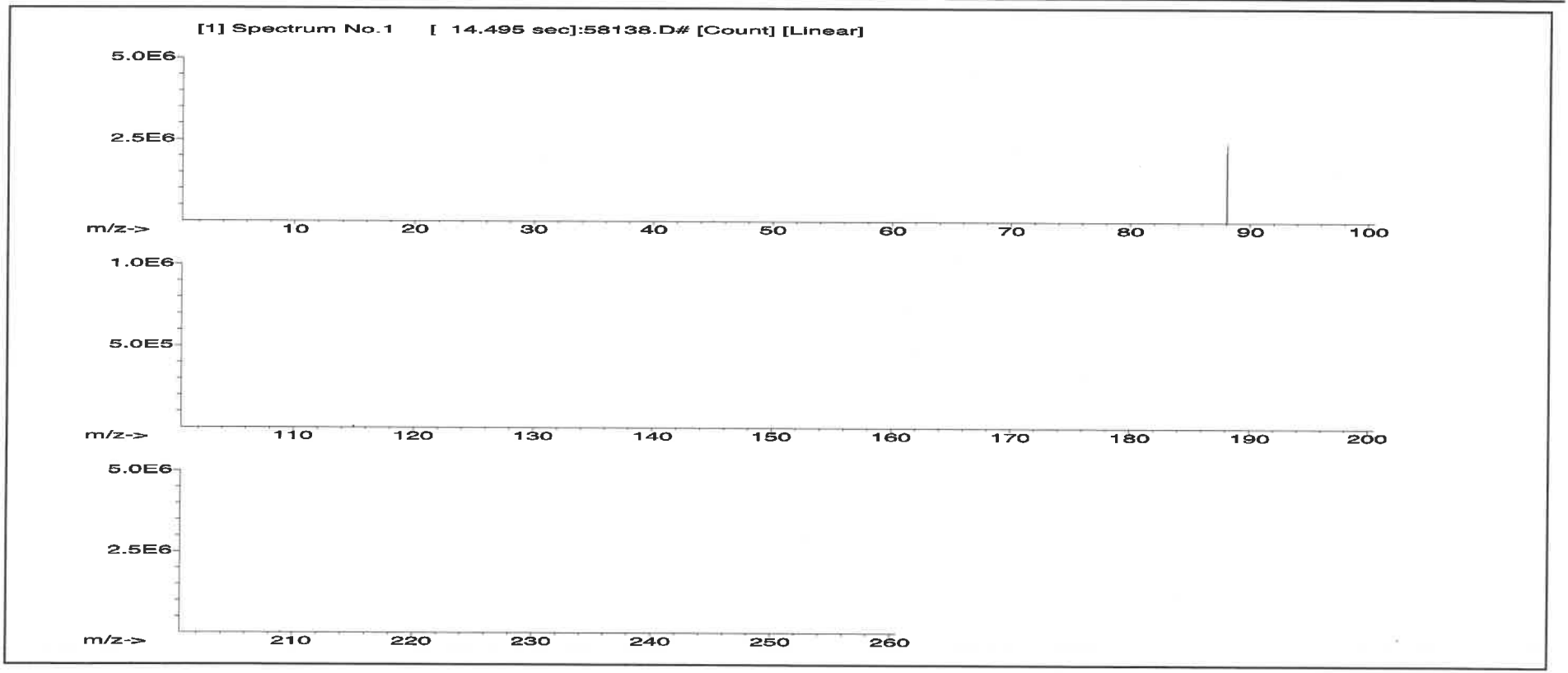
418

CERTIFIED WEIGHT REPORT:

Part Number:	**56138**		**Lot #**		
Lot Number:	**082922**	**Solvent:**	20510011	Nitric Acid	
Description:	**Strontium (Sr)**				
		2%	20.0 (mL)	Nitric Acid	
Expiration Date:	082925				
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):	1000.12	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



419

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).

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Certified Reference Material CRM

R ! 8/5/24

M6023

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AR-1539 Certificate Number
https://Absolutestandards.com

420

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		

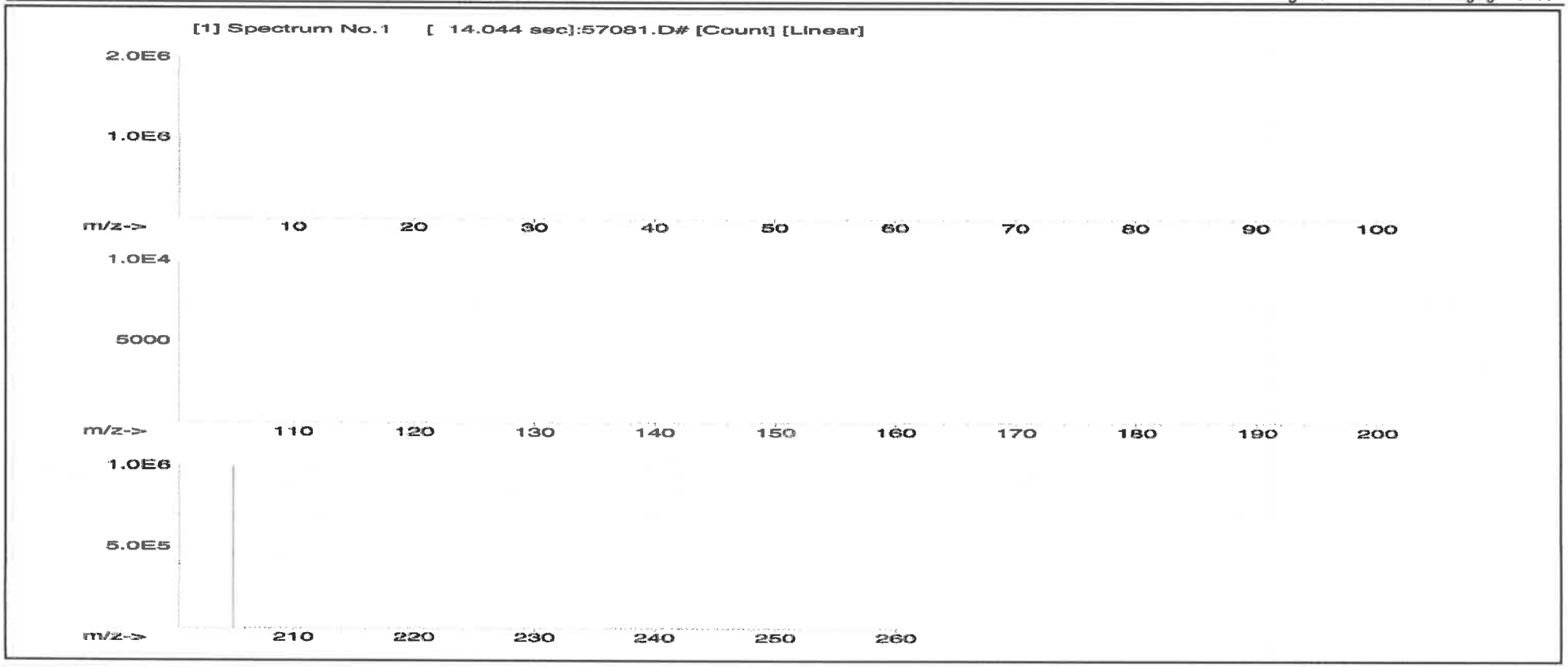
Aleah O'Brady

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



421

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.
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* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M6021

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

Rc. 8/5/24

422

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**	24002546	Nitric Acid	
Lot Number:	**062424**			
Description:	**Vanadium (V)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

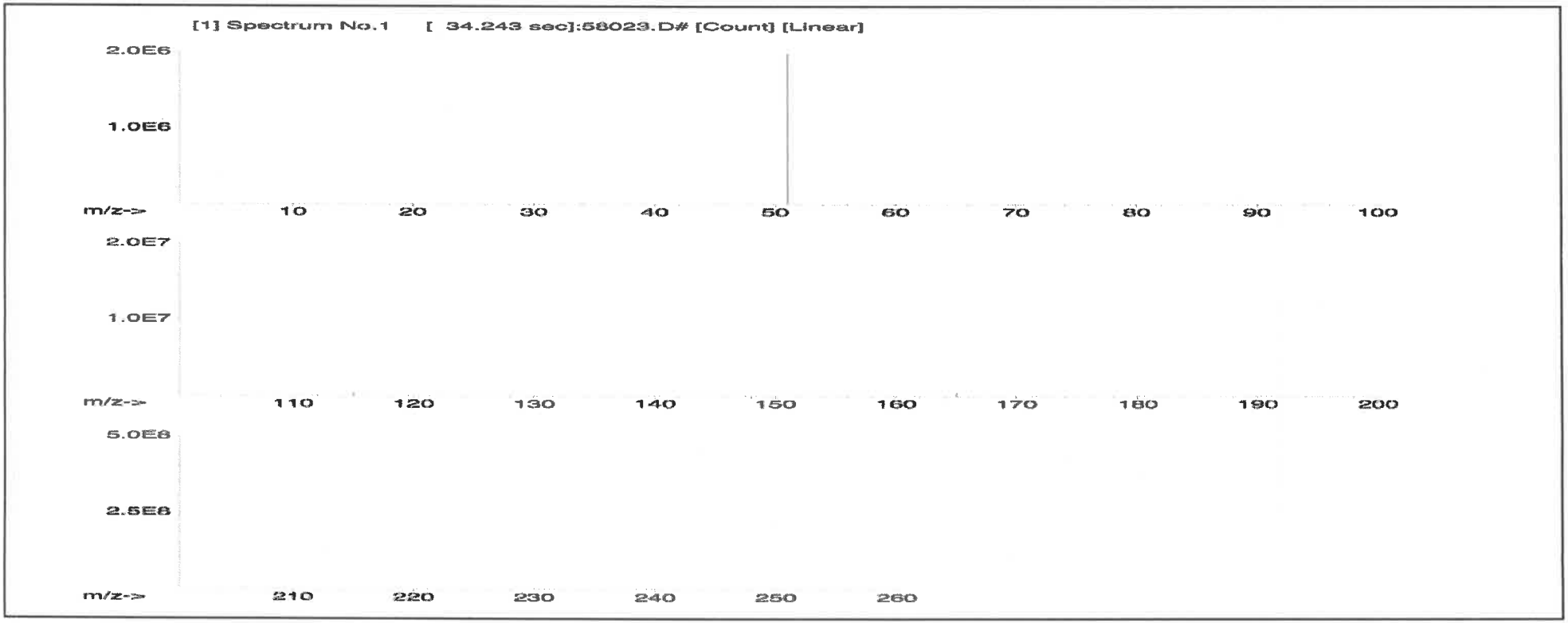
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



423

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
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Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165852

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : MBHM98

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 #2 2. N/A

Start Digest Date: 12/26/2024 **Time :** 11:20 **Temp :** 96 °C

End Digest Date: 12/26/2024 **Time :** 13:25 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. # 2

Dig Technician Signature: SJD.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP83506
Spike Sol 6	1.00	MP83512
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	MP83498
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
Conc. HCL	10.00	M6121
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK #2 CELL #35 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/26/24 14:25	SJD. met digestion	[signature]
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165852

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5126-01	MBHM98	N/A	1.10	100	Brown	Yellow	Medium	N/A	N/A	1
P5126-02	MBHM99	N/A	1.13	100	Brown	Yellow	Medium	N/A	N/A	2
P5126-03	MBHMA0	N/A	1.19	100	Brown	Yellow	Medium	N/A	N/A	3
P5126-04	MBHMA0D	N/A	1.13	100	Brown	Yellow	Medium	N/A	N/A	4
P5126-05	MBHMA0S	N/A	1.11	100	Brown	Yellow	Medium	N/A	MP83512	5
P5126-06	MBHMA1	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	6
P5126-07	MBHMA2	N/A	1.23	100	Brown	Yellow	Medium	N/A	N/A	7
P5126-08	MBHMA3	N/A	1.39	100	Brown	Yellow	Medium	N/A	N/A	8
P5126-09	MBHMA4	N/A	1.30	100	Brown	Yellow	Medium	N/A	N/A	9
P5126-10	MBHMA5	N/A	1.14	100	Brown	Yellow	Medium	N/A	N/A	10
P5126-11	MBHMA6	N/A	1.22	100	Brown	Yellow	Medium	N/A	N/A	11
P5126-12	MBHMA7	N/A	1.23	100	Brown	Yellow	Medium	N/A	N/A	12
P5126-13	MBHMF2	N/A	1.14	100	Brown	Yellow	Medium	N/A	N/A	13
P5126-14	MBHMF3	N/A	1.30	100	Brown	Yellow	Medium	N/A	N/A	14
P5126-15	MBHMM8	N/A	1.10	100	Brown	Yellow	Medium	N/A	N/A	15
P5126-16	MBHMM9	N/A	1.18	100	Brown	Yellow	Medium	N/A	N/A	16
PB165852BL	PBS852	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	17
PB165852BS	LCS852	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83506	18

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134162

Review By	Sarabjit Jaswal	Review On	1/6/2025 10:45:01 AM
Supervise By	Mohan Bera	Supervise On	1/6/2025 10:45:56 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83745
LCS Standard	
Chk Standard	MP83513,MP83514

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	01/05/25 16:31		Kareem	OK
2	S1	S01	CAL2	01/05/25 16:35		Kareem	OK
3	S2	S02	CAL3	01/05/25 16:39		Kareem	OK
4	S3	S03	CAL4	01/05/25 16:43		Kareem	OK
5	S4	S04	CAL5	01/05/25 16:46		Kareem	OK
6	S5	S05	CAL6	01/05/25 16:50		Kareem	OK
7	S6	S06	CAL7	01/05/25 16:54		Kareem	OK
8	ICV052	ICV052	ICV	01/05/25 17:52	Inst. paused for calibration review	Kareem	OK
9	ICB052	ICB052	ICB	01/05/25 17:56		Kareem	OK
10	ICSA052	ICSA052	ICSA	01/05/25 18:00		Kareem	OK
11	ICSAB052	ICSAB052	ICSAB	01/05/25 18:04		Kareem	OK
12	CCV112	CCV112	CCV	01/05/25 18:08		Kareem	OK
13	CCB112	CCB112	CCB	01/05/25 18:12		Kareem	OK
14	P5058-03	MBHL82	SAM	01/05/25 18:16	NOT USE	Kareem	Not Ok
15	P5058-04	MBHL82D	DUP	01/05/25 18:20	NOT USE	Kareem	Not Ok
16	P5058-03L	MBHL82L	SD	01/05/25 18:23	NOT USE	Kareem	Not Ok
17	P5058-05	MBHL82S	MS	01/05/25 18:27	NOT USE	Kareem	Not Ok
18	P5121-10	MBHM51	SAM	01/05/25 18:31		Kareem	OK

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134162

Review By	Sarabjit Jaswal	Review On	1/6/2025 10:45:01 AM
Supervise By	Mohan Bera	Supervise On	1/6/2025 10:45:56 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83745
LCS Standard	
Chk Standard	MP83513,MP83514

19	P5121-11	MBHM51D	DUP	01/05/25 18:35		Kareem	OK
20	P5121-10L	MBHM51L	SD	01/05/25 18:39		Kareem	OK
21	P5121-12	MBHM51S	MS	01/05/25 18:43	MS fail for Se (ppb) & Sb,Ag,Tl (Below RL)	Kareem	OK
22	P5055-15DL	MBHKT6	SAM	01/05/25 18:46	4x for Ca	Kareem	Confirms
23	P5056-20DL	MBHL47	SAM	01/05/25 18:50	2x for Ca	Kareem	Confirms
24	P5056-21DL	MBHL47D	DUP	01/05/25 18:54	2x for Ca	Kareem	Confirms
25	P5056-20LDL	MBHL47L	SD	01/05/25 18:58	10x for Ca	Kareem	Confirms
26	P5056-22DL	MBHL47S	MS	01/05/25 19:02	Not Required	Kareem	Not Ok
27	P5062-01DL	MBHKZ7	SAM	01/05/25 19:06	4x for Ca	Kareem	Confirms
28	P5062-02DL	MBHKZ8	SAM	01/05/25 19:10	4x for Ca	Kareem	Confirms
29	P5079-06DL	MBHLF4	SAM	01/05/25 19:14	4x for Ca	Kareem	Confirms
30	P5080-09	MBHLE7	SAM	01/05/25 19:18		Kareem	OK
31	P5080-13	MBHLH6	SAM	01/05/25 19:21		Kareem	OK
32	P5080-14	MBHLH7	SAM	01/05/25 19:25		Kareem	OK
33	P5080-15	MBHLH8	SAM	01/05/25 19:29		Kareem	OK
34	CCV113	CCV113	CCV	01/05/25 19:33		Kareem	OK
35	CCB113	CCB113	CCB	01/05/25 19:37		Kareem	OK
36	P5080-16	MBHLH9	SAM	01/05/25 19:41		Kareem	OK
37	P5080-17	MBHLJ0	SAM	01/05/25 19:44		Kareem	OK

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134162

Review By	Sarabjit Jaswal	Review On	1/6/2025 10:45:01 AM
Supervise By	Mohan Bera	Supervise On	1/6/2025 10:45:56 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83745
LCS Standard	
Chk Standard	MP83513,MP83514

38	P5080-18	MBHM29	SAM	01/05/25 19:48		Kareem	OK
39	P5080-19	MBHM30	SAM	01/05/25 19:52		Kareem	OK
40	P5083-03A	MBHLK0A	PS	01/05/25 19:56	PS for Se,Tl,Zn(0.015ml mp83726,0.05ml mp83745,0.036ml m5819)	Kareem	OK
41	P5086-16DL	MBHLN9	SAM	01/05/25 20:00	4x for Ca	Kareem	Confirms
42	P5122-12A	MBHMC9A	PS	01/05/25 20:04	PS for Tl(0.05ml mp83745-10ml sample)	Kareem	OK
43	P5124-19A	MBHM88A	PS	01/05/25 20:07	Not use	Kareem	Not Ok
44	P5126-03A	MBHMA0A	PS	01/05/25 20:11	PS for Tl(0.05ml mp83745-10ml sample)	Kareem	OK
45	P5128-19A	MBHMK9A	PS	01/05/25 20:15	Not use	Kareem	Not Ok
46	P5129-01A	MBHMK3A	PS	01/05/25 20:19	PS for Cu,Se,Tl,Zn(0.0095ml m5697,0.02ml mp83726,0.05ml mp83745,0.031ml m5819-10ml sample)	Kareem	OK
47	P5130-15A	MBHMH5A	PS	01/05/25 20:23	PS for As,Cu,Se,Tl(0.028ml mp83728,0.016ml m5697,0.023ml mp83726,0.05ml mp83745-10ml sample)	Kareem	OK
48	P5201-19A	MBHNE7A	PS	01/05/25 20:26	PS for Se,Tl,Zn(0.032ml mp83726,0.05ml mp83745,0.006ml m5819)	Kareem	OK
49	P5212-05A	MBHNF3A	PS	01/05/25 20:30	PS for Se(0.012ml mp83726-10ml sample)	Kareem	OK
50	PB165852BL	PBS852	MB	01/05/25 20:34		Kareem	OK

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134162

Review By	Sarabjit Jaswal	Review On	1/6/2025 10:45:01 AM
Supervise By	Mohan Bera	Supervise On	1/6/2025 10:45:56 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83745
LCS Standard	
Chk Standard	MP83513,MP83514

51	PB165852BS	LCS852	LCS	01/05/25 20:38		Kareem	OK
52	P5126-01	MBHM98	SAM	01/05/25 20:42		Kareem	OK
53	P5126-02	MBHM99	SAM	01/05/25 20:46		Kareem	OK
54	P5126-03	MBHMA0	SAM	01/05/25 20:50		Kareem	OK
55	P5126-04	MBHMA0D	DUP	01/05/25 20:53		Kareem	OK
56	CCV114	CCV114	CCV	01/05/25 21:05		Kareem	OK
57	CCB114	CCB114	CCB	01/05/25 21:09		Kareem	OK
58	P5126-03L	MBHMA0L	SD	01/05/25 21:13		Kareem	OK
59	P5126-05	MBHMA0S	MS	01/05/25 21:17	MS fail for Ag,Tl (Below RL)	Kareem	OK
60	P5126-16	MBHMM9	SAM	01/05/25 21:20		Kareem	OK
61	PB165860BL	PBS860	MB	01/05/25 21:24		Kareem	OK
62	PB165860BS	LCS860	LCS	01/05/25 21:28		Kareem	OK
63	P5127-04	MBHMB1	SAM	01/05/25 21:32	Ca high	Kareem	Dilution
64	P5127-05	MBHMB1D	DUP	01/05/25 21:36	Ca high	Kareem	Dilution
65	P5127-04L	MBHMB1L	SD	01/05/25 21:40	Ca High	Kareem	Dilution
66	P5127-06	MBHMB1S	MS	01/05/25 21:44	MS fail for Se,Ag (Below RL)	Kareem	OK
67	P5127-03DL	MBHMB0	SAM	01/05/25 21:48	2x for Ca	Kareem	Confirms
68	P5131-10DL	MBHMM7	SAM	01/05/25 21:51	2x for Mn	Kareem	Confirms
69	CCV115	CCV115	CCV	01/05/25 21:55		Kareem	OK

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

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134162

Review By	Sarabjit Jaswal	Review On	1/6/2025 10:45:01 AM
Supervise By	Mohan Bera	Supervise On	1/6/2025 10:45:56 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83745
LCS Standard	
Chk Standard	MP83513,MP83514

70	CCB115	CCB115	CCB	01/05/25 21:59		Kareem	OK
71	CCV116	CCV116	CCV	01/05/25 23:09	Instrument paused for review	Kareem	OK
72	CCB116	CCB116	CCB	01/05/25 23:13		Kareem	OK
73	P5080-04	MBHLE2	SAM	01/05/25 23:17		Kareem	OK
74	P5080-05	MBHLE3	SAM	01/05/25 23:21		Kareem	OK
75	P5080-06	MBHLE4	SAM	01/05/25 23:24		Kareem	OK
76	P5080-07	MBHLE5	SAM	01/05/25 23:28	Ca high	Kareem	Dilution
77	P5080-08	MBHLE6	SAM	01/05/25 23:32		Kareem	OK
78	P5128-08	MBHMJ7	SAM	01/05/25 23:36		Kareem	OK
79	P5128-09	MBHMJ8	SAM	01/05/25 23:40		Kareem	OK
80	P5128-10	MBHMJ9	SAM	01/05/25 23:43		Kareem	OK
81	P5128-11	MBHMK0	SAM	01/05/25 23:47		Kareem	OK
82	P5128-12	MBHMK1	SAM	01/05/25 23:51		Kareem	OK
83	P5128-13	MBHMK2	SAM	01/05/25 23:55		Kareem	OK
84	P5128-14	MBHMK4	SAM	01/05/25 23:58		Kareem	OK
85	P5128-15	MBHMK5	SAM	01/06/25 00:02		Kareem	OK
86	P5128-16	MBHMK6	SAM	01/06/25 00:06		Kareem	OK
87	P5128-17	MBHMK7	SAM	01/06/25 00:10		Kareem	OK
88	P5128-18	MBHMK8	SAM	01/06/25 00:14		Kareem	OK

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ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83745
LCS Standard	
Chk Standard	MP83513,MP83514

89	P5080-07DL	MBHLE5	SAM	01/06/25 00:18	2x for Ca	Kareem	Confirms
90	PB165861BL	PBS861	MB	01/06/25 00:22		Kareem	OK
91	PB165861BS	LCS861	LCS	01/06/25 00:26		Kareem	OK
92	CCV117	CCV117	CCV	01/06/25 00:30		Kareem	OK
93	CCB117	CCB117	CCB	01/06/25 00:34		Kareem	OK
94	PB165842BL	PBS842	MB	01/06/25 00:39		Kareem	OK
95	PB165842BS	LCS842	LCS	01/06/25 00:43		Kareem	OK
96	PB165841BL	PBS841	MB	01/06/25 00:47		Kareem	OK
97	PB165841BS	LCS841	LCS	01/06/25 00:51		Kareem	OK
98	PB165850BL	PBS850	MB	01/06/25 00:55		Kareem	OK
99	PB165850BS	LCS850	LCS	01/06/25 00:59		Kareem	OK
100	PB165840BL	PBS840	MB	01/06/25 01:03		Kareem	OK
101	PB165840BS	LCS840	LCS	01/06/25 01:07		Kareem	OK
102	P5126-06	MBHMA1	SAM	01/06/25 01:11		Kareem	OK
103	P5126-07	MBHMA2	SAM	01/06/25 01:15		Kareem	OK
104	P5126-08	MBHMA3	SAM	01/06/25 01:19		Kareem	OK
105	P5126-09	MBHMA4	SAM	01/06/25 01:22		Kareem	OK
106	P5126-10	MBHMA5	SAM	01/06/25 01:26		Kareem	OK
107	P5126-11	MBHMA6	SAM	01/06/25 01:30		Kareem	OK
108	P5126-12	MBHMA7	SAM	01/06/25 01:34		Kareem	OK

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Supervise By	Mohan Bera	Supervise On	1/6/2025 10:45:56 AM

STD. NAME	STD REF.#
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ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83745
LCS Standard	
Chk Standard	MP83513,MP83514

109	P5126-13	MBHMF2	SAM	01/06/25 01:37		Kareem	OK
110	P5126-14	MBHMF3	SAM	01/06/25 01:41		Kareem	OK
111	P5126-15	MBHMM8	SAM	01/06/25 01:45		Kareem	OK
112	CCV118	CCV118	CCV	01/06/25 01:53		Kareem	OK
113	CCB118	CCB118	CCB	01/06/25 01:57		Kareem	OK
114	P5128-19	MBHMK9	SAM	01/06/25 02:01		Kareem	OK
115	P5128-20	MBHMK9D	DUP	01/06/25 02:04		Kareem	OK
116	P5128-19L	MBHMK9L	SD	01/06/25 02:08		Kareem	OK
117	P5128-21	MBHMK9S	MS	01/06/25 02:12	MS fail for Se (ppb) & Sb,Ag,Tl (Below RL)	Kareem	OK
118	P5122-12	MBHMC9	SAM	01/06/25 02:16		Kareem	OK
119	P5122-13	MBHMC9D	DUP	01/06/25 02:20		Kareem	OK
120	P5122-12L	MBHMC9L	SD	01/06/25 02:23		Kareem	OK
121	P5122-14	MBHMC9S	MS	01/06/25 02:27	MS fail for Ag,Tl (Below RL)	Kareem	OK
122	P5124-19	MBHM88	SAM	01/06/25 02:31		Kareem	OK
123	P5124-20	MBHM88D	DUP	01/06/25 02:35		Kareem	OK
124	P5124-19L	MBHM88L	SD	01/06/25 02:39		Kareem	OK
125	P5124-21	MBHM88S	MS	01/06/25 02:43	MS fail for Mn (ppb), Se (ppb), Zn (ppb) & Ag,Tl (Below RL)	Kareem	OK
126	P5129-01	MBHMK3	SAM	01/06/25 02:46		Kareem	OK
127	P5129-02	MBHMK3D	DUP	01/06/25 02:50		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134162

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Supervise By	Mohan Bera	Supervise On	1/6/2025 10:45:56 AM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	MP83745
LCS Standard	
Chk Standard	MP83513,MP83514

128	P5129-01L	MBHMK3L	SD	01/06/25 02:54		Kareem	OK
129	P5129-03	MBHMK3S	MS	01/06/25 02:58	MS fail for Cu (ppb), Se (ppb), Zn (ppb) & Sb,Ag,Tl (Below RL)	Kareem	OK
130	CCV119	CCV119	CCV	01/06/25 03:02		Kareem	OK
131	CCB119	CCB119	CCB	01/06/25 03:05		Kareem	OK

ORIGIN ID:BUFA (716) 853-1220
EMMANUEL GARCIAVILLAR
WSP USA INC.
50 LAKEFRONT BLVD

BUFFALO, NY 14202
UNITED STATES US

SHIP DATE: 04DEC24
ACTWGT: 40.00 LB
CAD: 108450087/INET4760
DIMS: 19x14x12 IN

BILL SENDER

TO MOHAMMAD AHMED
ALLIANCE TECHNICAL GROUP LLC
284 SHEFFIELD STREET

MOUNTAINSIDE NJ 07092
(908) 789-8900
INV: 03.02.02.EXP
PO: 31800192.009A

REF: US000650
DEPT: EMMANUEL GARCIA

12-5-24
10:10
2-0

58CJ4/EB78/C6C4

FedEx Express

THU - 05 DEC 12:00P
PRIORITY OVERNIGHT

3 of 6
MPS# 0263 7704 9476 4765
Mstr# 7704 9476 2339

0201

07092
NJ-US EWR

NF KBCA

FedEx Ship Manager - Print Your Label(s)

12/4/24, 3:13 PM

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

Login Summary Report

Order ID :	P5126	Order Date :	12/5/2024 10:10:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51879	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	12/5/2024 10:10:00 AM	EDD Type :	EPA CLP
Date Sign Off :	12/7/2024 11:10:51 AM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
P5126-01	MBHM98	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-02	MBHM99	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-03	MBHMA0	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-04	MBHMA0D	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-05	MBHMA0S	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-06	MBHMA1	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-07	MBHMA2	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-08	MBHMA3	Solid	11/19/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-09	MBHMA4	Solid	11/19/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-10	MBHMA5	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025

P5126-11	MBHMA6	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-12	MBHMA7	Solid	11/26/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-13	MBHMF2	Solid	11/19/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-14	MBHMF3	Solid	11/19/2024						
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-15	MBHMM8	Solid	11/26/2024		FD				
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025
P5126-16	MBHMM9	Solid	11/19/2024		FD				
				Metals CLP Full		SFAM_AES	15	01/09/2025	01/09/2025
				Percent Solids		Chemtech -SOP	15	01/09/2025	01/09/2025

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165852 **WorkList ID :** 186619 **Department :** Digestion **Date :** 12-26-2024 09:21:44

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P5126-01	MBHM98	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-02	MBHM99	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-03	MBHMA0	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-04	MBHMA0D	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-05	MBHMA0S	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-06	MBHMA1	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-07	MBHMA2	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-08	MBHMA3	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-09	MBHMA4	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/19/2024	SFAM_AES
P5126-10	MBHMA5	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/19/2024	SFAM_AES
P5126-11	MBHMA6	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-12	MBHMA7	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-13	MBHMF2	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES
P5126-14	MBHMF3	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/19/2024	SFAM_AES
P5126-15	MBHMM8	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/19/2024	SFAM_AES
P5126-16	MBHMM9	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C53	11/26/2024	SFAM_AES

Date/Time 12/26/24 9:45

Raw Sample Received by: SLD. mct. digestion

Raw Sample Relinquished by:

Date/Time 12/26/24 10:45

Raw Sample Received by:

Raw Sample Relinquished by: SLD. mct. digestion