SDG COVER PAGE

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

Lab Code: ACE Case No.: 51879 MA No.: SDG No.: MBHHG2

SOW No. : SFAM01.1

EPA Sample No.	Lab Sample Id	Analysis Method ICP-AES	ICP-MS	Mercury	Cyanide
MBHHG2	P4913-01	X			
MBHHG3	P4913-02	X			
MBHHG4	P4913-03	X			
MBHHG5	P4913-04	X			
MBHHG6	P4913-05	X			
MBHHG7	P4913-06	X			
MBHHG8	P4913-07	X			
MBHHG9	P4913-08	X			
MBHHH0	P4913-09	X			
MBHHH1	P4913-10	X			
MBHHH2	P4913-11	X			
MBHHH3	P4913-12	X			
MBHHH4	P4913-13	X			
MBHHH5	P4913-14	X			
MBHHH6	P4913-15	X			
MBHHH6D	P4913-16	X			
MBHHH6S	P4913-17	X			
MBHHH7	P4913-18	X			
MBHHH8	P4913-19	X			
MBHHH9	P4913-20	X			
MBHHJ0	P4913-21	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 # MBHHG2

USEPA CLP COC (LAB COPY)
DateShipped: 11/18/2024
CarrierName: FedEx
AirbillNo: 7700 4046 1870

CHAIN OF CUSTODY RECORD

Case #: 51879
Cooler #: 2

No: 2-111824-131353-0006
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
P107-SB-13-Z00-02	MBHHG2	Soil/		ICP-AES(35)	1091 (Wet ice < 6 C) (1)	P107-SB-13	11/15/2024 11:45	
P107-SB-13-Z02-06	MBHHG3	Soil/		ICP-AES(35)	1092 (Wet ice < 6 C) (1)	P107-SB-13	11/15/2024 11:45	
P107-SB-13-Z06-12	MBHHG4	Soil/		ICP-AES(35)	1093 (Wet ice < 6 C) (1)	P107-SB-13	11/15/2024 11:45	
P107-SB-13-Z12-18	MBHHG5	Soil/		ICP-AES(35)	1094 (Wet ice < 6 C) (1)	P107-SB-13	11/15/2024 11:45	
P107-SB-13-Z18-24	MBHHG6	Soil/		ICP-AES(35)	1095 (Wet ice < 6 C) (1)	P107-SB-13	11/15/2024 11:45	
P107-SB-13-Z24-30	MBHHG7	Soil/		ICP-AES(35)	1096 (Wet ice < 6 C) (1)	P107-SB-13	11/15/2024 11:45	
P107-SB-13-Z30-36	MBHHG8	Soil/		ICP-AES(35)	1097 (Wet ice < 6 C) (1)	P107-SB-13	11/15/2024 11:45	
P121-SB-13-Z00-02	MBHHG9	Soil/		ICP-AES(35)	1224 (Wet ice < 6 C) (1)	P121-SB-13	11/15/2024 14:15	
P121-SB-13-Z02-06	MBHHH0	Soil/		ICP-AES(35)	1225 (Wet ice < 6 C) (1)	P121-SB-13	11/15/2024 14:15	
P121-SB-13-Z06-12	MBHHH1	Soil/		ICP-AES(35)	1226 (Wet ice < 6 C) (1)	P121-SB-13	11/15/2024 14:15	

Special Instructions: Additional sample volume provided for MBHHH6 is for MS/MSD.

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	[signature] CWSP	11/18/24 14:35	[signature]	11-19-24 0957	1.9°C IR Gun #1
					custody seals intact
					Temp BL present
			11/19/24		

68HERH20D0011

SDG # MBHHG2

USEPA CLP COC (LAB COPY)

DateShipped: 11/18/2024

CarrierName: FedEx

AirbillNo: 7700 4046 1870

CHAIN OF CUSTODY RECORD

Case #: 51879

Cooler #: 2

No: 2-111824-131353-0006

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
P121-SB-13-Z12-18	MBHHH2	Soil/		ICP-AES(35)	1227 (Wet ice < 6 C) (1)	P121-SB-13	11/15/2024 14:15	
P121-SB-13-Z18-24	MBHHH3	Soil/		ICP-AES(35)	1228 (Wet ice < 6 C) (1)	P121-SB-13	11/15/2024 14:15	
P121-SB-13-Z24-30	MBHHH4	Soil/		ICP-AES(35)	1229 (Wet ice < 6 C) (1)	P121-SB-13	11/15/2024 14:15	
P121-SB-13-Z30-36	MBHHH5	Soil/		ICP-AES(35)	1230 (Wet ice < 6 C) (1)	P121-SB-13	11/15/2024 14:15	
P121-SB-14-Z00-02	MBHHH6	Soil/		ICP-AES(35)	1231 (Wet ice < 6 C) (2)	P121-SB-14	11/15/2024 14:50	
P121-SB-14-Z02-06	MBHHH7	Soil/		ICP-AES(35)	1232 (Wet ice < 6 C) (1)	P121-SB-14	11/15/2024 14:50	
P121-SB-14-Z06-12	MBHHH8	Soil/		ICP-AES(35)	1233 (Wet ice < 6 C) (1)	P121-SB-14	11/15/2024 14:50	
P121-SB-14-Z12-18	MBHHH9	Soil/		ICP-AES(35)	1234 (Wet ice < 6 C) (1)	P121-SB-14	11/15/2024 14:50	
P121-SB-14-Z18-24	MBHHJ0	Soil/		ICP-AES(35)	1235 (Wet ice < 6 C) (1)	P121-SB-14	11/15/2024 14:50	

WSP 11/15/24 N/A

Sample(s) to be used for Lab QC: P121-SB-14-Z00-02 Tag 1231 - Special Instructions: Additional sample volume provided for MBHHH6 is for MS/MSD.	**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	11/18/24 14:35		11-19-24 0957	1.9°C IR gun ID
			N/A		custody seals intact Temp blk-present
			WSP	11/15/24	

FORM DC-1

SAMPLE LOG-IN SHEET

Lab Name : Alliance Technical Group, LLC		Page 1 of 1
Received By (Print Name) George Negron		Log-in Date 11/19/2024
Received By (Signature)		
Case Number 51879	SDG No. MBHHG2	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.	770040461870 1
6. Shipping Container Temperature Indicator Bottle	Present
7. Shipping Container Temperature	1.9 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	11/19/2024
12.Time Received	09:57

	EPA Sample #	Aqueous/ Water Sample pH	Corresponding Sample Tag #	Corresponding Assigned Lab #	Remarks: Condition of Sample Shipment, etc.
1	MBHHG2	N/A	1091	P4913-01	Intact
2	MBHHG3	N/A	1092	P4913-02	Intact
3	MBHHG4	N/A	1093	P4913-03	Intact
4	MBHHG5	N/A	1094	P4913-04	Intact
5	MBHHG6	N/A	1095	P4913-05	Intact
6	MBHHG7	N/A	1096	P4913-06	Intact
7	MBHHG8	N/A	1097	P4913-07	Intact
8	MBHHG9	N/A	1224	P4913-08	Intact
9	MBHHH0	N/A	1225	P4913-09	Intact
10	MBHHH1	N/A	1226	P4913-10	Intact
11	MBHHH2	N/A	1227	P4913-11	Intact
12	MBHHH3	N/A	1228	P4913-12	Intact
13	MBHHH4	N/A	1229	P4913-13	Intact
14	MBHHH5	N/A	1230	P4913-14	Intact
15	MBHHH6	N/A	1231	P4913-15	Intact
16	MBHHH6D	N/A	1231	P4913-16	Intact
17	MBHHH6S	N/A	1231	P4913-17	Intact
18	MBHHH7	N/A	1232	P4913-18	Intact
19	MBHHH8	N/A	1233	P4913-19	Intact
20	MBHHH9	N/A	1234	P4913-20	Intact
21	MBHHJ0	N/A	1235	P4913-21	Intact
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 11/19/24	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.	**MBHHG2**
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	9	✓	
6. Communication Logs	NA	NA	✓	
7. Percent Solids Log	10	11	✓	
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	12	30	✓	
9. Instrument raw data by instrument in analysis order	31	313	✓	
Other Data				
10. Standard and Reagent Preparation Logs	314	463	✓	
11. Original Preparation and Cleanup forms or copies of Preparation and Cleanup Logbooks	464	465	✓	
12. Original Analysis or Instrument Run forms or copies of Analysis or Instrument Logbooks	466	472	✓	
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)	473	473	✓	
Sample Tags	NA	NA	✓	
Sample Log-In Sheet (Lab)	474	475	✓	
45. Misc. Shipping/Receiving Records (list all individual records)				
	NA	NA	✓	
46. Internal Lab Sample Transfer Records and Tracking Sheets (describe or list)				
	476	476	✓	
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 # MBHHG2
CASE # 51879
CONTRACT # 68HERH20D0011
SOW# SFAM01.1
LAB NAME: Alliance Technical Group, LLC
LAB CODE: ACE
LAB ORDER ID # P4913

A. Number of Samples and Date of Receipt

19 Soil samples were delivered to the laboratory intact on 11/19/2024.

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: 1.9^{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.

284 Sheffield Street
Mountainside, NJ 07092

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 MBHHG2 For Antimony:

If C = 0.0091395 ppm
Vf = 100 ml
W = 1.26 g
S = 0.689(68.9/100)
DF = 1

$$\text{Concentration (mg/kg)} = 0.0091395 \times \frac{100}{1.26 \times 0.689} \times 1$$

$$= 1.052767 \text{ mg/kg}$$

= 1.1 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 Antimony, Selenium, Silver. Duplicate sample did meet requirements. Serial Dilution did meet requirements.

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: 11/20/2024

OVENTEMP IN Celsius(°C): 107
Time IN: 13:50
In Date: 11/19/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:00
Out Date: 11/20/2024
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC: LB133511

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
P4913-01	MBHHG2	1	1.15	8.68	9.83	7.13	68.9	
P4913-02	MBHHG3	2	1.15	8.81	9.96	8.39	82.2	
P4913-03	MBHHG4	3	1.11	8.76	9.87	8.48	84.1	
P4913-04	MBHHG5	4	1.19	8.58	9.77	8.59	86.2	
P4913-05	MBHHG6	5	1.19	8.52	9.71	8.39	84.5	
P4913-06	MBHHG7	6	1.16	8.51	9.67	8.54	86.7	
P4913-07	MBHHG8	7	1.16	8.77	9.93	8.99	89.3	
P4913-08	MBHHG9	8	1.15	8.81	9.96	7.44	71.4	
P4913-09	MBHHH0	9	1.17	8.55	9.72	7.7	76.4	
P4913-10	MBHHH1	10	1.19	8.63	9.82	8.43	83.9	
P4913-11	MBHHH2	11	1.16	8.48	9.64	8.28	84.0	
P4913-12	MBHHH3	12	1.17	8.54	9.71	8.36	84.2	
P4913-13	MBHHH4	13	1.16	8.81	9.97	8.98	88.8	
P4913-14	MBHHH5	14	1.15	8.72	9.87	8.78	87.5	
P4913-15	MBHHH6	15	1.16	8.80	9.96	8.05	78.3	
P4913-16	MBHHH6D	16	1.16	8.80	9.96	8.05	78.3	
P4913-17	MBHHH6S	17	1.16	8.80	9.96	8.05	78.3	
P4913-18	MBHHH7	18	1.13	8.68	9.81	8.82	88.6	
P4913-19	MBHHH8	19	1.15	8.50	9.65	8.94	91.6	
P4913-20	MBHHH9	20	1.15	8.83	9.98	9.08	89.8	
P4913-21	MBHHJ0	21	1.17	8.58	9.75	8.76	88.5	

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

WORKLIST(Hardcopy Internal Chain)

VB 133511

WorkList Name : %1-p4913 **WorkList ID :** 185580 **Department :** Wet-Chemistry **Date :** 11-19-2024 12:42:02

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4913-01	MBHHG2	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-02	MBHHG3	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-03	MBHHG4	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-04	MBHHG5	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-05	MBHHG6	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-06	MBHHG7	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-07	MBHHG8	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-08	MBHHG9	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-09	MBHHH0	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-10	MBHHH1	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-11	MBHHH2	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-12	MBHHH3	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-13	MBHHH4	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-14	MBHHH5	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-15	MBHHH6	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-16	MBHHH6D	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-17	MBHHH6S	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-18	MBHHH7	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-19	MBHHH8	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-20	MBHHH9	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO
P4913-21	MBHHJ0	Solid	Percent Solids	Cool 4 deg C	USEP01	C12	11/15/2024	Chemtech -SO

Date/Time 11-19-24 1312.0

Raw Sample Received by:

Raw Sample Relinquished by:

Date/Time 11-19-24 1412.00

Raw Sample Received by:

Raw Sample Relinquished by:

EPA SAMPLE NO.

MBHHG2

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-01

% Solids: 68.9 Date Received: 11/19/2024

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	7500		11/21/2024	1712
7440-36-0	Antimony	1.1	J*	11/21/2024	1712
7440-38-2	Arsenic	8.5		11/21/2024	1712
7440-39-3	Barium	350		11/21/2024	1712
7440-41-7	Beryllium	0.55	J	11/21/2024	1712
7440-43-9	Cadmium	1.8		11/21/2024	1712
7440-70-2	Calcium	10000		11/21/2024	1712
7440-47-3	Chromium	30		11/21/2024	1712
7440-48-4	Cobalt	7.8		11/21/2024	1712
7440-50-8	Copper	43		11/21/2024	1712
7439-89-6	Iron	28000		11/21/2024	1712
7439-92-1	Lead	260		11/21/2024	1712
7439-95-4	Magnesium	2900		11/21/2024	1712
7439-96-5	Manganese	1200		11/21/2024	1712
7440-02-0	Nickel	23		11/21/2024	1712
7440-09-7	Potassium	910		11/21/2024	1712
7782-49-2	Selenium	4.0	U*	11/21/2024	1712
7440-22-4	Silver	1.2	U*	11/21/2024	1712
7440-23-5	Sodium	150	J	11/21/2024	1712
7440-28-0	Thallium	2.9	U	11/21/2024	1712
7440-62-2	Vanadium	95		11/21/2024	1712
7440-66-6	Zinc	300		11/21/2024	1712

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

Comments:

EPA SAMPLE NO.

MBHHG3

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-02

% Solids: 82.2 Date Received: 11/19/2024

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	6600		11/21/2024	1716
7440-36-0	Antimony	0.84	J*	11/21/2024	1716
7440-38-2	Arsenic	12		11/21/2024	1716
7440-39-3	Barium	300		11/21/2024	1716
7440-41-7	Beryllium	0.43	J	11/21/2024	1716
7440-43-9	Cadmium	1.5		11/21/2024	1716
7440-70-2	Calcium	9700		11/21/2024	1716
7440-47-3	Chromium	27		11/21/2024	1716
7440-48-4	Cobalt	8.6		11/21/2024	1716
7440-50-8	Copper	54		11/21/2024	1716
7439-89-6	Iron	18000		11/21/2024	1716
7439-92-1	Lead	420		11/21/2024	1716
7439-95-4	Magnesium	2800		11/21/2024	1716
7439-96-5	Manganese	1200		11/21/2024	1716
7440-02-0	Nickel	26		11/21/2024	1716
7440-09-7	Potassium	810		11/21/2024	1716
7782-49-2	Selenium	3.5	U*	11/21/2024	1716
7440-22-4	Silver	0.99	U*	11/21/2024	1716
7440-23-5	Sodium	500	U	11/21/2024	1716
7440-28-0	Thallium	2.5	U	11/21/2024	1716
7440-62-2	Vanadium	18		11/21/2024	1716
7440-66-6	Zinc	300		11/21/2024	1716

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

Comments:

EPA SAMPLE NO.

MBHHG4

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-03

% Solids: 84.1 Date Received: 11/19/2024

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		11/21/2024	1721
7440-36-0	Antimony	0.86	J*	11/21/2024	1721
7440-38-2	Arsenic	15		11/21/2024	1721
7440-39-3	Barium	310		11/21/2024	1721
7440-41-7	Beryllium	0.49		11/21/2024	1721
7440-43-9	Cadmium	1.5		11/21/2024	1721
7440-70-2	Calcium	8400		11/21/2024	1721
7440-47-3	Chromium	27		11/21/2024	1721
7440-48-4	Cobalt	11		11/21/2024	1721
7440-50-8	Copper	65		11/21/2024	1721
7439-89-6	Iron	17000		11/21/2024	1721
7439-92-1	Lead	520		11/21/2024	1721
7439-95-4	Magnesium	2700		11/21/2024	1721
7439-96-5	Manganese	1600		11/21/2024	1721
7440-02-0	Nickel	29		11/21/2024	1721
7440-09-7	Potassium	990		11/21/2024	1721
7782-49-2	Selenium	3.4	U*	11/21/2024	1721
7440-22-4	Silver	0.98	U*	11/21/2024	1721
7440-23-5	Sodium	490	U	11/21/2024	1721
7440-28-0	Thallium	2.4	U	11/21/2024	1721
7440-62-2	Vanadium	19		11/21/2024	1721
7440-66-6	Zinc	280		11/21/2024	1721

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

Comments:

EPA SAMPLE NO.

MBHHG5

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-04

% Solids: 86.2 Date Received: 11/19/2024

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	7600		11/21/2024	1725
7440-36-0	Antimony	6.2	U*	11/21/2024	1725
7440-38-2	Arsenic	14		11/21/2024	1725
7440-39-3	Barium	120		11/21/2024	1725
7440-41-7	Beryllium	0.48	J	11/21/2024	1725
7440-43-9	Cadmium	1.1		11/21/2024	1725
7440-70-2	Calcium	4800		11/21/2024	1725
7440-47-3	Chromium	12		11/21/2024	1725
7440-48-4	Cobalt	10		11/21/2024	1725
7440-50-8	Copper	34		11/21/2024	1725
7439-89-6	Iron	17000		11/21/2024	1725
7439-92-1	Lead	150		11/21/2024	1725
7439-95-4	Magnesium	2000		11/21/2024	1725
7439-96-5	Manganese	1600		11/21/2024	1725
7440-02-0	Nickel	18		11/21/2024	1725
7440-09-7	Potassium	800		11/21/2024	1725
7782-49-2	Selenium	3.6	U*	11/21/2024	1725
7440-22-4	Silver	1.0	U*	11/21/2024	1725
7440-23-5	Sodium	510	U	11/21/2024	1725
7440-28-0	Thallium	2.6	U	11/21/2024	1725
7440-62-2	Vanadium	18		11/21/2024	1725
7440-66-6	Zinc	130		11/21/2024	1725

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

Comments:

EPA SAMPLE NO.

MBHHG6

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-05

% Solids: 84.5 Date Received: 11/19/2024

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	7400		11/21/2024	1730
7440-36-0	Antimony	0.63	J*	11/21/2024	1730
7440-38-2	Arsenic	9.9		11/21/2024	1730
7440-39-3	Barium	110		11/21/2024	1730
7440-41-7	Beryllium	0.45	J	11/21/2024	1730
7440-43-9	Cadmium	0.99		11/21/2024	1730
7440-70-2	Calcium	4200		11/21/2024	1730
7440-47-3	Chromium	11		11/21/2024	1730
7440-48-4	Cobalt	9.5		11/21/2024	1730
7440-50-8	Copper	25		11/21/2024	1730
7439-89-6	Iron	16000		11/21/2024	1730
7439-92-1	Lead	110		11/21/2024	1730
7439-95-4	Magnesium	1800		11/21/2024	1730
7439-96-5	Manganese	1600		11/21/2024	1730
7440-02-0	Nickel	16		11/21/2024	1730
7440-09-7	Potassium	640		11/21/2024	1730
7782-49-2	Selenium	3.2	U*	11/21/2024	1730
7440-22-4	Silver	0.92	U*	11/21/2024	1730
7440-23-5	Sodium	460	U	11/21/2024	1730
7440-28-0	Thallium	2.3	U	11/21/2024	1730
7440-62-2	Vanadium	17		11/21/2024	1730
7440-66-6	Zinc	96		11/21/2024	1730

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

Comments:

EPA SAMPLE NO.

MBHHG7

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-06

% Solids: 86.7 Date Received: 11/19/2024

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	6100		11/21/2024	1734
7440-36-0	Antimony	0.40	J*	11/21/2024	1734
7440-38-2	Arsenic	5.5		11/21/2024	1734
7440-39-3	Barium	65		11/21/2024	1734
7440-41-7	Beryllium	0.37	J	11/21/2024	1734
7440-43-9	Cadmium	0.77		11/21/2024	1734
7440-70-2	Calcium	1800		11/21/2024	1734
7440-47-3	Chromium	8.6		11/21/2024	1734
7440-48-4	Cobalt	7.6		11/21/2024	1734
7440-50-8	Copper	16		11/21/2024	1734
7439-89-6	Iron	14000		11/21/2024	1734
7439-92-1	Lead	53		11/21/2024	1734
7439-95-4	Magnesium	1700		11/21/2024	1734
7439-96-5	Manganese	800		11/21/2024	1734
7440-02-0	Nickel	16		11/21/2024	1734
7440-09-7	Potassium	550		11/21/2024	1734
7782-49-2	Selenium	3.0	U*	11/21/2024	1734
7440-22-4	Silver	0.84	U*	11/21/2024	1734
7440-23-5	Sodium	420	U	11/21/2024	1734
7440-28-0	Thallium	2.1	U	11/21/2024	1734
7440-62-2	Vanadium	14		11/21/2024	1734
7440-66-6	Zinc	66		11/21/2024	1734

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

Comments:

EPA SAMPLE NO.

MBHHG8

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-07

% Solids: 89.3 Date Received: 11/19/2024

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	5500		11/21/2024	1738
7440-36-0	Antimony	0.49	J*	11/21/2024	1738
7440-38-2	Arsenic	4.0		11/21/2024	1738
7440-39-3	Barium	38		11/21/2024	1738
7440-41-7	Beryllium	0.34	J	11/21/2024	1738
7440-43-9	Cadmium	0.57		11/21/2024	1738
7440-70-2	Calcium	1400		11/21/2024	1738
7440-47-3	Chromium	6.7		11/21/2024	1738
7440-48-4	Cobalt	5.9		11/21/2024	1738
7440-50-8	Copper	13		11/21/2024	1738
7439-89-6	Iron	11000		11/21/2024	1738
7439-92-1	Lead	15		11/21/2024	1738
7439-95-4	Magnesium	1600		11/21/2024	1738
7439-96-5	Manganese	860		11/21/2024	1738
7440-02-0	Nickel	14		11/21/2024	1738
7440-09-7	Potassium	860		11/21/2024	1738
7782-49-2	Selenium	3.1	U*	11/21/2024	1738
7440-22-4	Silver	0.88	U*	11/21/2024	1738
7440-23-5	Sodium	440	U	11/21/2024	1738
7440-28-0	Thallium	2.2	U	11/21/2024	1738
7440-62-2	Vanadium	10		11/21/2024	1738
7440-66-6	Zinc	41		11/21/2024	1738

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

Comments:

EPA SAMPLE NO.

MBHHG9

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-08

% Solids: 71.4 Date Received: 11/19/2024

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		11/21/2024	1743
7440-36-0	Antimony	0.66	J*	11/21/2024	1743
7440-38-2	Arsenic	13		11/21/2024	1743
7440-39-3	Barium	130		11/21/2024	1743
7440-41-7	Beryllium	0.37	J	11/21/2024	1743
7440-43-9	Cadmium	1.4		11/21/2024	1743
7440-70-2	Calcium	21000		11/21/2024	1743
7440-47-3	Chromium	14		11/21/2024	1743
7440-48-4	Cobalt	6.5		11/21/2024	1743
7440-50-8	Copper	33		11/21/2024	1743
7439-89-6	Iron	15000		11/21/2024	1743
7439-92-1	Lead	230		11/21/2024	1743
7439-95-4	Magnesium	7500		11/21/2024	1743
7439-96-5	Manganese	870		11/21/2024	1743
7440-02-0	Nickel	19		11/21/2024	1743
7440-09-7	Potassium	670		11/21/2024	1743
7782-49-2	Selenium	4.0	U*	11/21/2024	1743
7440-22-4	Silver	1.2	U*	11/21/2024	1743
7440-23-5	Sodium	570	U	11/21/2024	1743
7440-28-0	Thallium	2.9	U	11/21/2024	1743
7440-62-2	Vanadium	16		11/21/2024	1743
7440-66-6	Zinc	300		11/21/2024	1743

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

Comments:

EPA SAMPLE NO.

MBHHH0

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-09

% Solids: 76.4 Date Received: 11/19/2024

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		11/21/2024	1752
7440-36-0	Antimony	0.64	J*	11/21/2024	1752
7440-38-2	Arsenic	11		11/21/2024	1752
7440-39-3	Barium	110		11/21/2024	1752
7440-41-7	Beryllium	0.28	J	11/21/2024	1752
7440-43-9	Cadmium	1.3		11/21/2024	1752
7440-70-2	Calcium	23000		11/21/2024	1752
7440-47-3	Chromium	12		11/21/2024	1752
7440-48-4	Cobalt	5.7		11/21/2024	1752
7440-50-8	Copper	30		11/21/2024	1752
7439-89-6	Iron	13000		11/21/2024	1752
7439-92-1	Lead	200		11/21/2024	1752
7439-95-4	Magnesium	7900		11/21/2024	1752
7439-96-5	Manganese	910		11/21/2024	1752
7440-02-0	Nickel	17		11/21/2024	1752
7440-09-7	Potassium	560		11/21/2024	1752
7782-49-2	Selenium	3.1	U*	11/21/2024	1752
7440-22-4	Silver	0.89	U*	11/21/2024	1752
7440-23-5	Sodium	97	J	11/21/2024	1752
7440-28-0	Thallium	2.2	U	11/21/2024	1752
7440-62-2	Vanadium	14		11/21/2024	1752
7440-66-6	Zinc	250		11/21/2024	1752

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

Comments:

EPA SAMPLE NO.

MBHHH1

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-10

% Solids: 83.9 Date Received: 11/19/2024

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	5500		11/21/2024	1756
7440-36-0	Antimony	6.4	U*	11/21/2024	1756
7440-38-2	Arsenic	15		11/21/2024	1756
7440-39-3	Barium	84		11/21/2024	1756
7440-41-7	Beryllium	0.26	J	11/21/2024	1756
7440-43-9	Cadmium	0.95		11/21/2024	1756
7440-70-2	Calcium	24000		11/21/2024	1756
7440-47-3	Chromium	8.9		11/21/2024	1756
7440-48-4	Cobalt	5.6		11/21/2024	1756
7440-50-8	Copper	30		11/21/2024	1756
7439-89-6	Iron	14000		11/21/2024	1756
7439-92-1	Lead	110		11/21/2024	1756
7439-95-4	Magnesium	4600		11/21/2024	1756
7439-96-5	Manganese	1000		11/21/2024	1756
7440-02-0	Nickel	15		11/21/2024	1756
7440-09-7	Potassium	420	J	11/21/2024	1756
7782-49-2	Selenium	3.7	U*	11/21/2024	1756
7440-22-4	Silver	1.1	U*	11/21/2024	1756
7440-23-5	Sodium	530	U	11/21/2024	1756
7440-28-0	Thallium	2.7	U	11/21/2024	1756
7440-62-2	Vanadium	14		11/21/2024	1756
7440-66-6	Zinc	120		11/21/2024	1756

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

Comments:

EPA SAMPLE NO.

MBHHH2

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-11

% Solids: 84 Date Received: 11/19/2024

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	6100		11/21/2024	1805
7440-36-0	Antimony	0.66	J*	11/21/2024	1805
7440-38-2	Arsenic	14		11/21/2024	1805
7440-39-3	Barium	110		11/21/2024	1805
7440-41-7	Beryllium	0.37	J	11/21/2024	1805
7440-43-9	Cadmium	1.0		11/21/2024	1805
7440-70-2	Calcium	5400		11/21/2024	1805
7440-47-3	Chromium	8.9		11/21/2024	1805
7440-48-4	Cobalt	6.8		11/21/2024	1805
7440-50-8	Copper	26		11/21/2024	1805
7439-89-6	Iron	14000		11/21/2024	1805
7439-92-1	Lead	290		11/21/2024	1805
7439-95-4	Magnesium	3200		11/21/2024	1805
7439-96-5	Manganese	930		11/21/2024	1805
7440-02-0	Nickel	14		11/21/2024	1805
7440-09-7	Potassium	570		11/21/2024	1805
7782-49-2	Selenium	3.5	U*	11/21/2024	1805
7440-22-4	Silver	1.0	U*	11/21/2024	1805
7440-23-5	Sodium	500	U	11/21/2024	1805
7440-28-0	Thallium	2.5	U	11/21/2024	1805
7440-62-2	Vanadium	15		11/21/2024	1805
7440-66-6	Zinc	140		11/21/2024	1805

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

Comments:

EPA SAMPLE NO.

MBHHH3

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-12

% Solids: 84.2 Date Received: 11/19/2024

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	6500		11/21/2024	1809
7440-36-0	Antimony	0.45	J*	11/21/2024	1809
7440-38-2	Arsenic	12		11/21/2024	1809
7440-39-3	Barium	120		11/21/2024	1809
7440-41-7	Beryllium	0.43	J	11/21/2024	1809
7440-43-9	Cadmium	0.96		11/21/2024	1809
7440-70-2	Calcium	3500		11/21/2024	1809
7440-47-3	Chromium	9.3		11/21/2024	1809
7440-48-4	Cobalt	6.6		11/21/2024	1809
7440-50-8	Copper	23		11/21/2024	1809
7439-89-6	Iron	14000		11/21/2024	1809
7439-92-1	Lead	390		11/21/2024	1809
7439-95-4	Magnesium	1900		11/21/2024	1809
7439-96-5	Manganese	990		11/21/2024	1809
7440-02-0	Nickel	13		11/21/2024	1809
7440-09-7	Potassium	650		11/21/2024	1809
7782-49-2	Selenium	3.3	U*	11/21/2024	1809
7440-22-4	Silver	0.94	U*	11/21/2024	1809
7440-23-5	Sodium	470	U	11/21/2024	1809
7440-28-0	Thallium	2.4	U	11/21/2024	1809
7440-62-2	Vanadium	16		11/21/2024	1809
7440-66-6	Zinc	130		11/21/2024	1809

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

Comments:

EPA SAMPLE NO.

MBHHH4

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-13

% Solids: 88.8 Date Received: 11/19/2024

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	6700		11/21/2024	1814
7440-36-0	Antimony	0.47	J*	11/21/2024	1814
7440-38-2	Arsenic	6.4		11/21/2024	1814
7440-39-3	Barium	54		11/21/2024	1814
7440-41-7	Beryllium	0.42	J	11/21/2024	1814
7440-43-9	Cadmium	0.74		11/21/2024	1814
7440-70-2	Calcium	1300		11/21/2024	1814
7440-47-3	Chromium	7.1		11/21/2024	1814
7440-48-4	Cobalt	6.9		11/21/2024	1814
7440-50-8	Copper	14		11/21/2024	1814
7439-89-6	Iron	14000		11/21/2024	1814
7439-92-1	Lead	40		11/21/2024	1814
7439-95-4	Magnesium	1500		11/21/2024	1814
7439-96-5	Manganese	980		11/21/2024	1814
7440-02-0	Nickel	12		11/21/2024	1814
7440-09-7	Potassium	430	J	11/21/2024	1814
7782-49-2	Selenium	3.1	U*	11/21/2024	1814
7440-22-4	Silver	0.88	U*	11/21/2024	1814
7440-23-5	Sodium	440	U	11/21/2024	1814
7440-28-0	Thallium	2.2	U	11/21/2024	1814
7440-62-2	Vanadium	15		11/21/2024	1814
7440-66-6	Zinc	41		11/21/2024	1814

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

Comments:

EPA SAMPLE NO.

MBHHH5

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-14

% Solids: 87.5 Date Received: 11/19/2024

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		11/21/2024	1818
7440-36-0	Antimony	5.6	U*	11/21/2024	1818
7440-38-2	Arsenic	5.5		11/21/2024	1818
7440-39-3	Barium	54		11/21/2024	1818
7440-41-7	Beryllium	0.42	J	11/21/2024	1818
7440-43-9	Cadmium	0.72		11/21/2024	1818
7440-70-2	Calcium	1300		11/21/2024	1818
7440-47-3	Chromium	7.4		11/21/2024	1818
7440-48-4	Cobalt	6.9		11/21/2024	1818
7440-50-8	Copper	12		11/21/2024	1818
7439-89-6	Iron	15000		11/21/2024	1818
7439-92-1	Lead	40		11/21/2024	1818
7439-95-4	Magnesium	1500		11/21/2024	1818
7439-96-5	Manganese	1000		11/21/2024	1818
7440-02-0	Nickel	11		11/21/2024	1818
7440-09-7	Potassium	390	J	11/21/2024	1818
7782-49-2	Selenium	3.3	U*	11/21/2024	1818
7440-22-4	Silver	0.93	U*	11/21/2024	1818
7440-23-5	Sodium	470	U	11/21/2024	1818
7440-28-0	Thallium	2.3	U	11/21/2024	1818
7440-62-2	Vanadium	16		11/21/2024	1818
7440-66-6	Zinc	40		11/21/2024	1818

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

Comments:

EPA SAMPLE NO.

MBHHH6

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-15

% Solids: 78.3 Date Received: 11/19/2024

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	5800		11/21/2024	1823
7440-36-0	Antimony	0.67	J*	11/21/2024	1823
7440-38-2	Arsenic	19		11/21/2024	1823
7440-39-3	Barium	180		11/21/2024	1823
7440-41-7	Beryllium	0.33	J	11/21/2024	1823
7440-43-9	Cadmium	1.3		11/21/2024	1823
7440-70-2	Calcium	9100		11/21/2024	1823
7440-47-3	Chromium	18		11/21/2024	1823
7440-48-4	Cobalt	6.0		11/21/2024	1823
7440-50-8	Copper	45		11/21/2024	1823
7439-89-6	Iron	12000		11/21/2024	1823
7439-92-1	Lead	440		11/21/2024	1823
7439-95-4	Magnesium	3600		11/21/2024	1823
7439-96-5	Manganese	890		11/21/2024	1823
7440-02-0	Nickel	16		11/21/2024	1823
7440-09-7	Potassium	470	J	11/21/2024	1823
7782-49-2	Selenium	3.6	U*	11/21/2024	1823
7440-22-4	Silver	1.0	U*	11/21/2024	1823
7440-23-5	Sodium	520	U	11/21/2024	1823
7440-28-0	Thallium	2.6	U	11/21/2024	1823
7440-62-2	Vanadium	14		11/21/2024	1823
7440-66-6	Zinc	270		11/21/2024	1823

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

Comments:

EPA SAMPLE NO.

MBHHH7

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-18

% Solids: 88.6 Date Received: 11/19/2024

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	5500		11/21/2024	1929
7440-36-0	Antimony	0.52	J*	11/21/2024	1929
7440-38-2	Arsenic	12		11/21/2024	1929
7440-39-3	Barium	120		11/21/2024	1929
7440-41-7	Beryllium	0.26	J	11/21/2024	1929
7440-43-9	Cadmium	1.2		11/21/2024	1929
7440-70-2	Calcium	20000		11/21/2024	1929
7440-47-3	Chromium	12		11/21/2024	1929
7440-48-4	Cobalt	6.1		11/21/2024	1929
7440-50-8	Copper	36		11/21/2024	1929
7439-89-6	Iron	15000		11/21/2024	1929
7439-92-1	Lead	240		11/21/2024	1929
7439-95-4	Magnesium	4500		11/21/2024	1929
7439-96-5	Manganese	930		11/21/2024	1929
7440-02-0	Nickel	16		11/21/2024	1929
7440-09-7	Potassium	440		11/21/2024	1929
7782-49-2	Selenium	3.1	U*	11/21/2024	1929
7440-22-4	Silver	0.88	U*	11/21/2024	1929
7440-23-5	Sodium	94	J	11/21/2024	1929
7440-28-0	Thallium	2.2	U	11/21/2024	1929
7440-62-2	Vanadium	14		11/21/2024	1929
7440-66-6	Zinc	180		11/21/2024	1929

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

Comments:

EPA SAMPLE NO.

MBHHH8

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-19

% Solids: 91.6 Date Received: 11/19/2024

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		11/21/2024	1933
7440-36-0	Antimony	5.6	U*	11/21/2024	1933
7440-38-2	Arsenic	7.2		11/21/2024	1933
7440-39-3	Barium	95		11/21/2024	1933
7440-41-7	Beryllium	0.27	J	11/21/2024	1933
7440-43-9	Cadmium	1.1		11/21/2024	1933
7440-70-2	Calcium	14000		11/21/2024	1933
7440-47-3	Chromium	8.7		11/21/2024	1933
7440-48-4	Cobalt	6.5		11/21/2024	1933
7440-50-8	Copper	30		11/21/2024	1933
7439-89-6	Iron	14000		11/21/2024	1933
7439-92-1	Lead	220		11/21/2024	1933
7439-95-4	Magnesium	3700		11/21/2024	1933
7439-96-5	Manganese	1200		11/21/2024	1933
7440-02-0	Nickel	14		11/21/2024	1933
7440-09-7	Potassium	420	J	11/21/2024	1933
7782-49-2	Selenium	3.3	U*	11/21/2024	1933
7440-22-4	Silver	0.93	U*	11/21/2024	1933
7440-23-5	Sodium	97	J	11/21/2024	1933
7440-28-0	Thallium	2.3	U	11/21/2024	1933
7440-62-2	Vanadium	15		11/21/2024	1933
7440-66-6	Zinc	120		11/21/2024	1933

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

Comments:

EPA SAMPLE NO.

MBHHH9

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-20

% Solids: 89.8 Date Received: 11/19/2024

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		11/21/2024	1938
7440-36-0	Antimony	0.68	J*	11/21/2024	1938
7440-38-2	Arsenic	10		11/21/2024	1938
7440-39-3	Barium	190		11/21/2024	1938
7440-41-7	Beryllium	0.44	J	11/21/2024	1938
7440-43-9	Cadmium	1.5		11/21/2024	1938
7440-70-2	Calcium	3800		11/21/2024	1938
7440-47-3	Chromium	11		11/21/2024	1938
7440-48-4	Cobalt	7.4		11/21/2024	1938
7440-50-8	Copper	27		11/21/2024	1938
7439-89-6	Iron	16000		11/21/2024	1938
7439-92-1	Lead	670		11/21/2024	1938
7439-95-4	Magnesium	1700		11/21/2024	1938
7439-96-5	Manganese	1100		11/21/2024	1938
7440-02-0	Nickel	15		11/21/2024	1938
7440-09-7	Potassium	760		11/21/2024	1938
7782-49-2	Selenium	3.3	U*	11/21/2024	1938
7440-22-4	Silver	0.93	U*	11/21/2024	1938
7440-23-5	Sodium	100	J	11/21/2024	1938
7440-28-0	Thallium	2.3	U	11/21/2024	1938
7440-62-2	Vanadium	18		11/21/2024	1938
7440-66-6	Zinc	260		11/21/2024	1938

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

Comments:

EPA SAMPLE NO.

MBHHJ0

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.: MBHHG2

Matrix: SOIL Lab Sample ID: P4913-21

% Solids: 88.5 Date Received: 11/19/2024

Analytical Method: ICP_AES

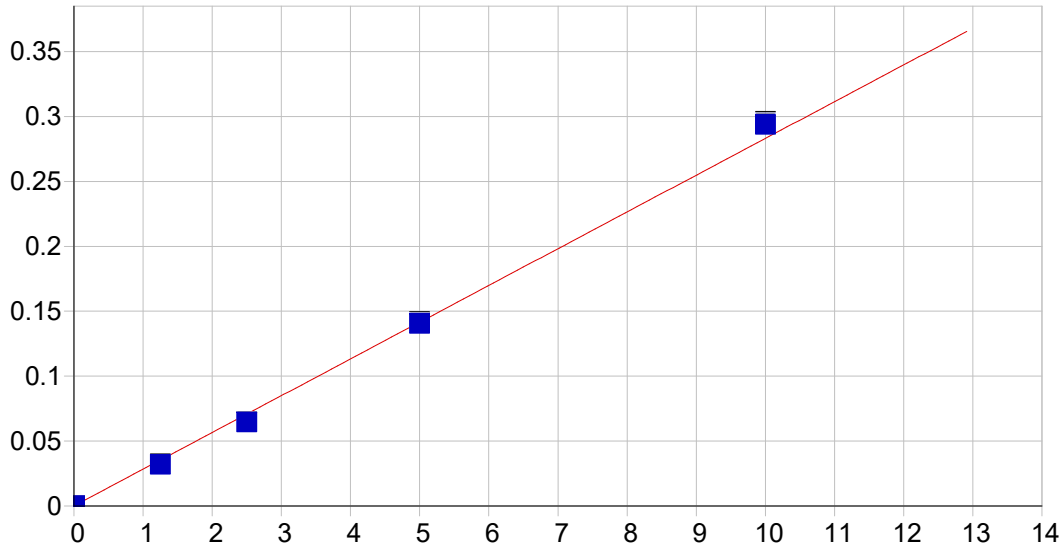
Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	6300		11/21/2024	1942
7440-36-0	Antimony	0.58	J*	11/21/2024	1942
7440-38-2	Arsenic	10		11/21/2024	1942
7440-39-3	Barium	150		11/21/2024	1942
7440-41-7	Beryllium	0.38	J	11/21/2024	1942
7440-43-9	Cadmium	1.2		11/21/2024	1942
7440-70-2	Calcium	6800		11/21/2024	1942
7440-47-3	Chromium	12		11/21/2024	1942
7440-48-4	Cobalt	7.1		11/21/2024	1942
7440-50-8	Copper	28		11/21/2024	1942
7439-89-6	Iron	16000		11/21/2024	1942
7439-92-1	Lead	410		11/21/2024	1942
7439-95-4	Magnesium	2200		11/21/2024	1942
7439-96-5	Manganese	1100		11/21/2024	1942
7440-02-0	Nickel	16		11/21/2024	1942
7440-09-7	Potassium	740		11/21/2024	1942
7782-49-2	Selenium	3.5	U*	11/21/2024	1942
7440-22-4	Silver	1.0	U*	11/21/2024	1942
7440-23-5	Sodium	110	J	11/21/2024	1942
7440-28-0	Thallium	2.5	U	11/21/2024	1942
7440-62-2	Vanadium	18		11/21/2024	1942
7440-66-6	Zinc	200		11/21/2024	1942

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

Comments:

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



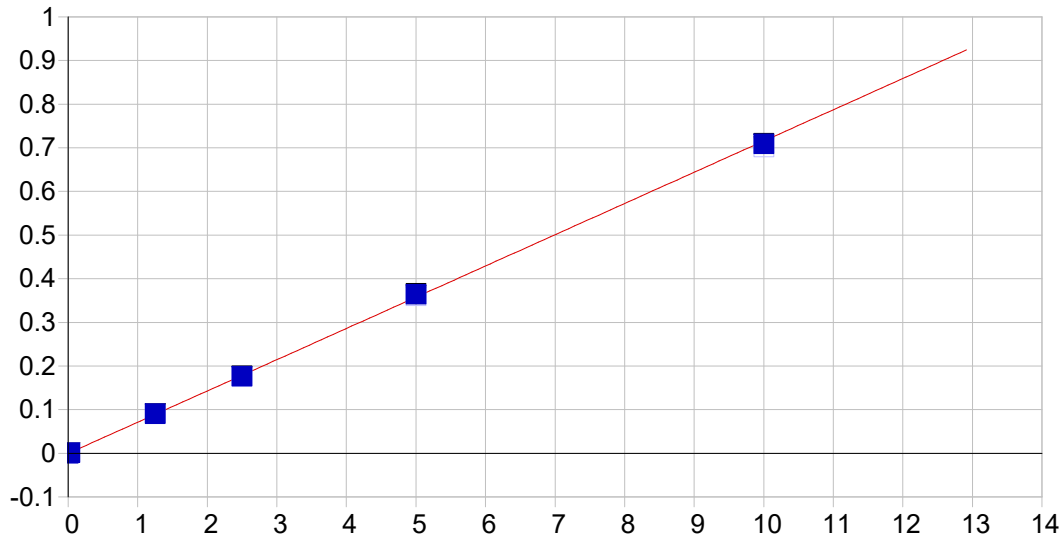
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A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998766	Status:	OK.
Std Error of Est:	0.000024		
Predicted MDL:	0.007231		
Predicted MQL:	0.024104		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00004	.000	1
S1	.01000	.00902	-.001	-9.77	.00030	.000	1
S2	1.2500	1.1286	-.121	-9.71	.03214	.000	1
S3	2.5000	2.2762	-.224	-8.95	.06477	.000	1
S4	5.0000	4.9639	-.036	-.722	.14114	.001	1
S5	10.000	10.382	.382	3.82	.29511	.001	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



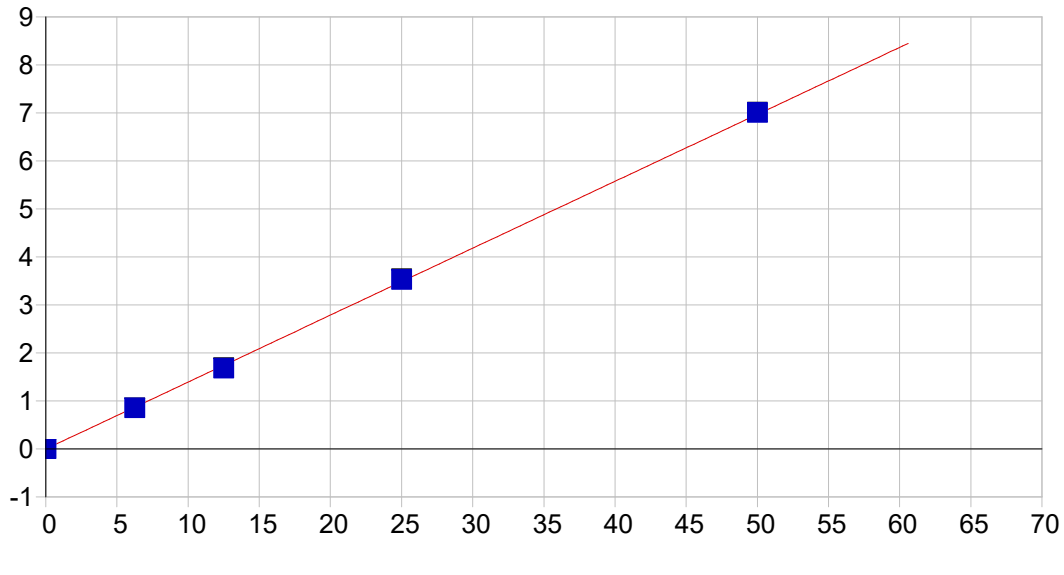
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A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999909	Status:	OK.
Std Error of Est:	0.000025		
Predicted MDL:	0.003211		
Predicted MQL:	0.010702		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00038	.000	1
S1	.02500	.02666	.002	6.64	.00149	.000	1
S2	1.2500	1.2733	.023	1.86	.08982	.000	1
S3	2.5000	2.4740	-.026	-1.04	.17482	.000	1
S4	5.0000	5.0922	.092	1.84	.36035	.002	1
S5	10.000	9.9088	-.091	-.912	.70134	.001	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



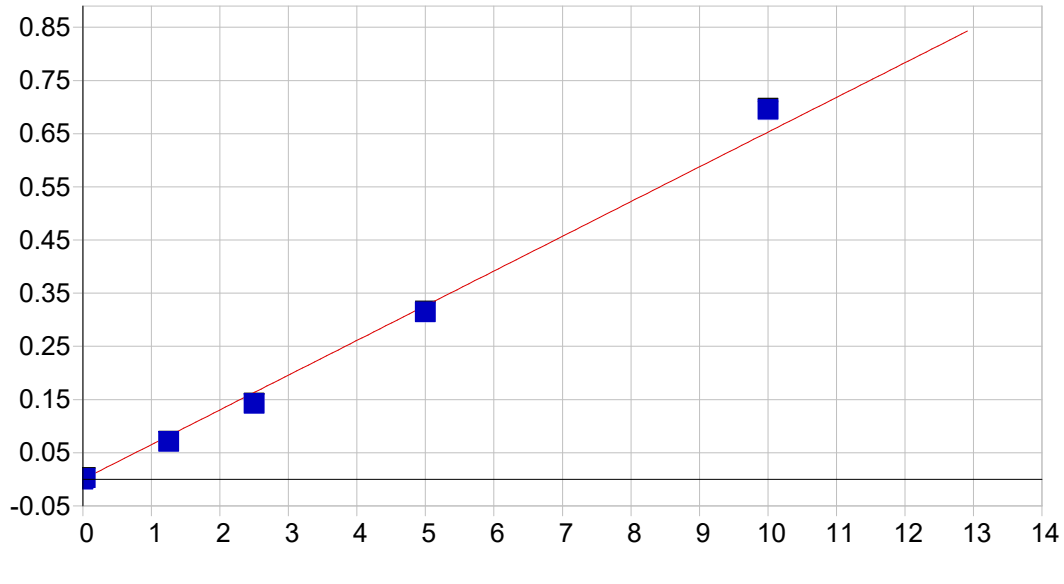
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A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999876	Status:	OK.
Std Error of Est:	0.000082		
Predicted MDL:	0.003551		
Predicted MQL:	0.011835		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00149	.000	1
S1	.01000	.01208	.002	20.8	.00020	.000	1
S2	6.2500	6.1135	-.136	-2.18	.85067	.001	1
S3	12.500	12.071	-.429	-3.43	1.6811	.003	1
S4	25.000	25.309	.309	1.23	3.5263	.013	1
S5	50.000	50.254	.254	.509	7.0035	.010	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



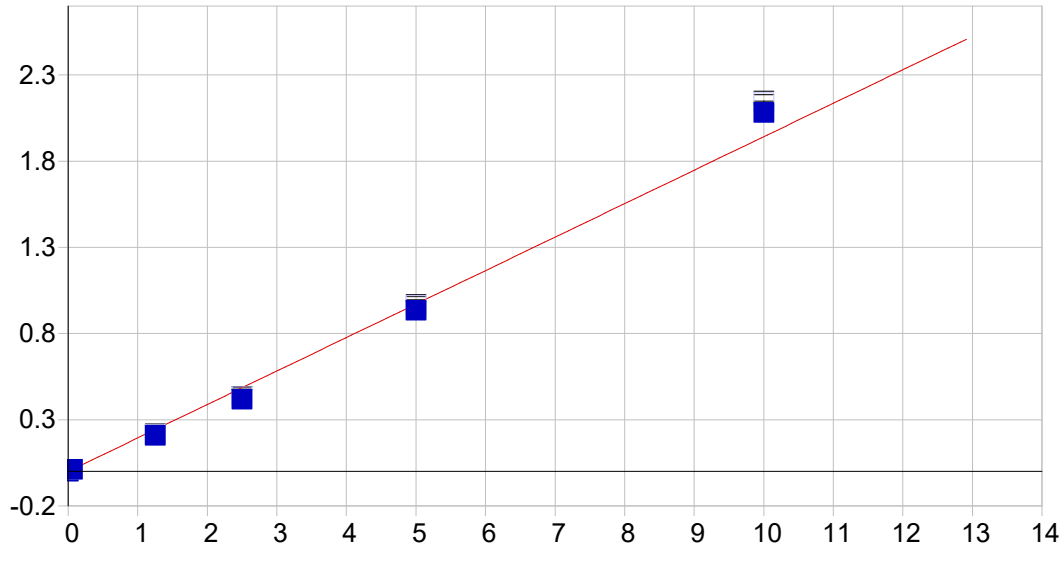
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A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997074	Status:	OK.
Std Error of Est:	0.000157		
Predicted MDL:	0.006528		
Predicted MQL:	0.021761		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00004	.000	1
S1	.03500	.03798	.003	8.50	.00244	.000	1
S2	1.2500	1.0905	-.160	-12.8	.07101	.000	1
S3	2.5000	2.1822	-.318	-12.7	.14214	.001	1
S4	5.0000	4.8216	-.178	-3.57	.31416	.001	1
S5	10.000	10.653	.653	6.53	.69427	.003	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



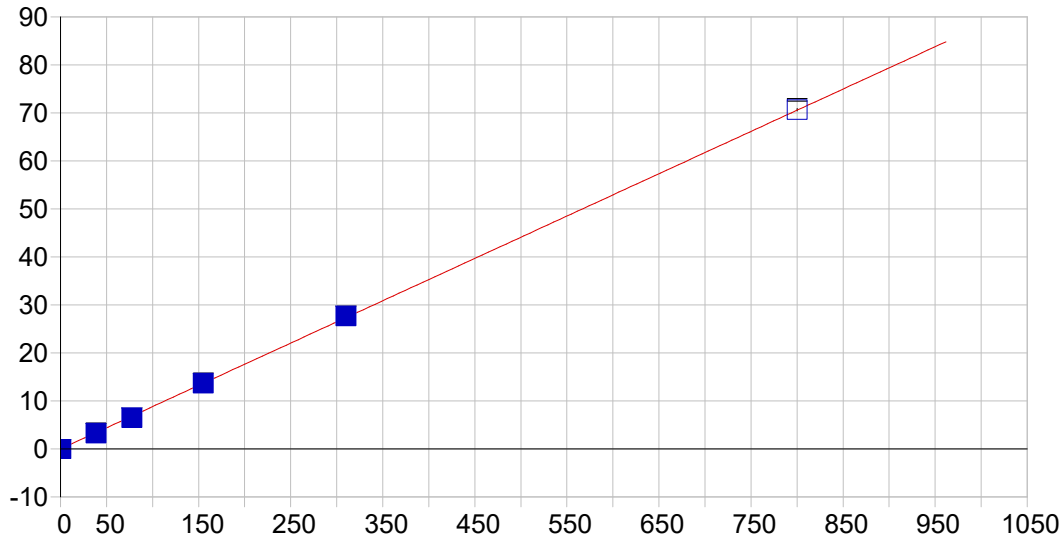
Sb 206.833 {463}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000142	Re-Slope:	1.000000
A1 (Gain):	0.194176	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996718	Status:	OK.
Std Error of Est:	0.000668		
Predicted MDL:	0.002668		
Predicted MQL:	0.008894		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00015	.000	1
S1	.06000	.05513	-.005	-8.11	.01085	.000	1
S2	1.2500	1.0756	-.174	-14.0	.21616	.001	1
S3	2.5000	2.1543	-.346	-13.8	.43278	.001	1
S4	5.0000	4.8071	-.193	-3.86	.96222	.005	1
S5	10.000	10.718	.718	7.18	2.1386	.010	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



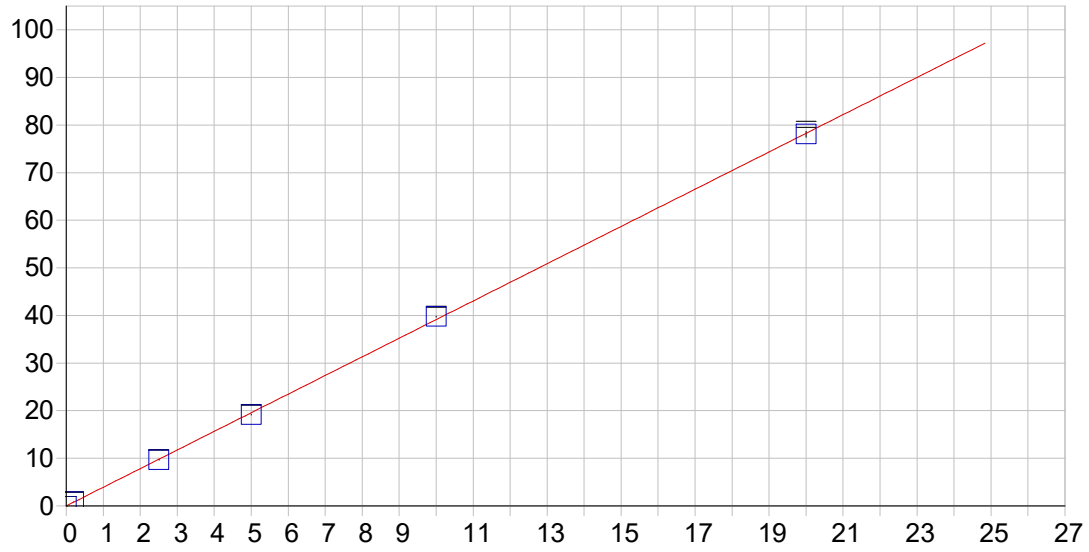
Al 396.152 { 85}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.003509	Re-Slope:	1.000000
A1 (Gain):	0.088205	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999883	Status:	OK.
Std Error of Est:	0.000838		
Predicted MDL:	0.013030		
Predicted MQL:	0.043433		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	-.00351	.001	1
S1	.20000	.19301	-.007	-3.50	.01355	.001	1
S2	38.750	36.931	-1.82	-4.69	3.2581	.004	1
S3	77.500	73.682	-3.82	-4.93	6.5038	.006	1
S4	155.00	155.35	.347	.224	13.715	.031	1
S5	310.00	313.74	3.74	1.21	27.702	.068	1
S6	800.00	801.56	1.56	.195	70.698	.268	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



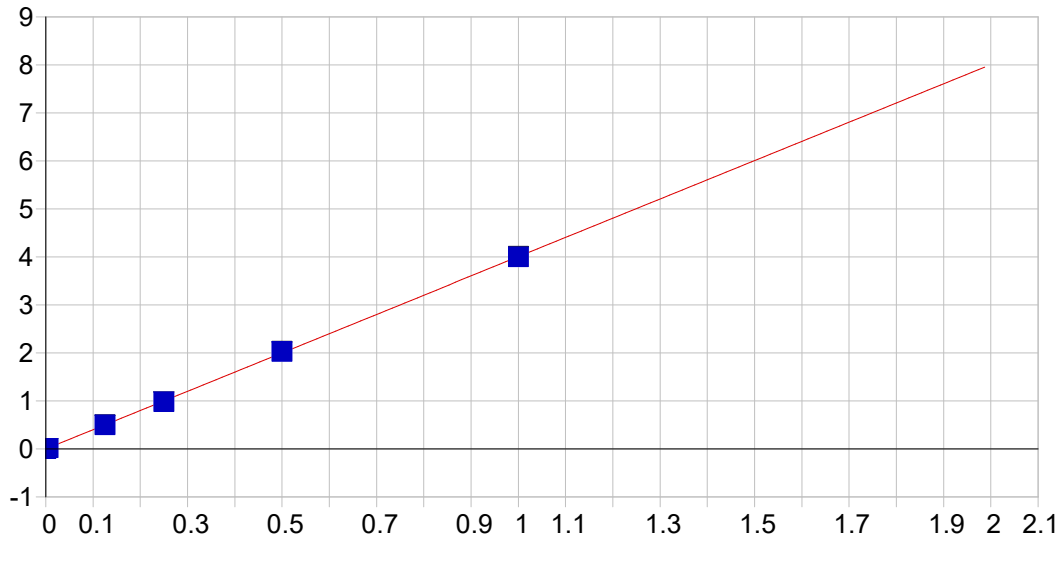
Ba 493.409 { 68}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002592	Re-Slope:	1.000000
A1 (Gain):	3.913545	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.005257		
Predicted MDL:	0.000658		
Predicted MQL:	0.002194		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00255	.001	1
S1	.20000	.21472	.015	7.36	.84291	.005	1
S2	2.5000	2.4747	-.025	-1.01	9.6875	.008	1
S3	5.0000	4.8994	-.101	-2.01	19.177	.057	1
S4	10.000	10.159	.159	1.59	39.762	.090	1
S5	20.000	19.952	-.048	-.242	78.084	.650	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

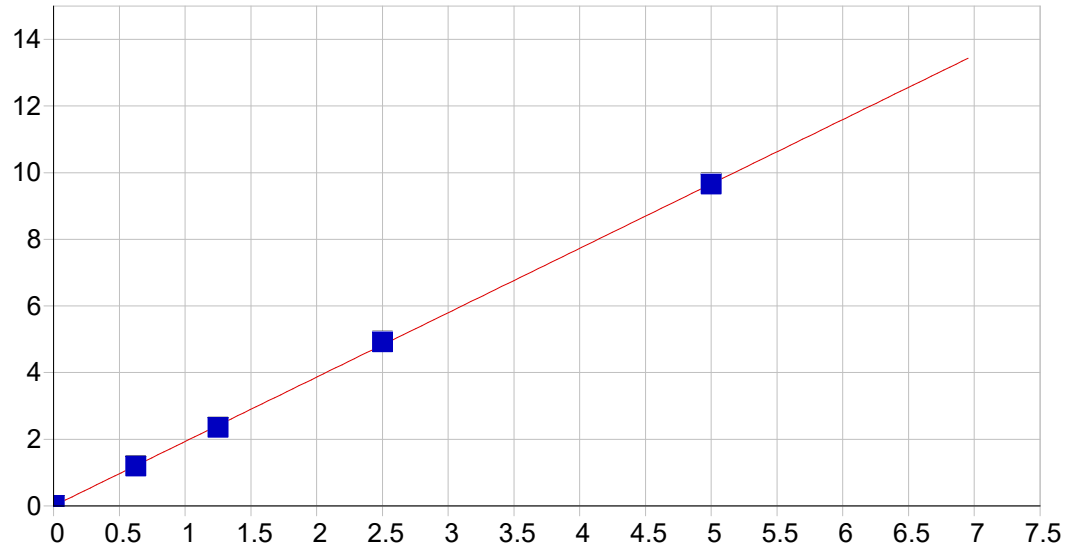


Be 234.861 {144}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000888	Re-Slope:	1.000000
A1 (Gain):	4.004927	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.000160		
Predicted MDL:	0.000115		
Predicted MQL:	0.000382		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00089	.000	1
S1	.00500	.00542	.000	8.42	.02081	.000	1
S2	.12500	.12425	-.001	-.596	.49594	.001	1
S3	.25000	.24525	-.005	-1.90	.97972	.005	1
S4	.50000	.50638	.006	1.28	2.0239	.008	1
S5	1.0000	.99869	-.001	-.131	3.9923	.012	1



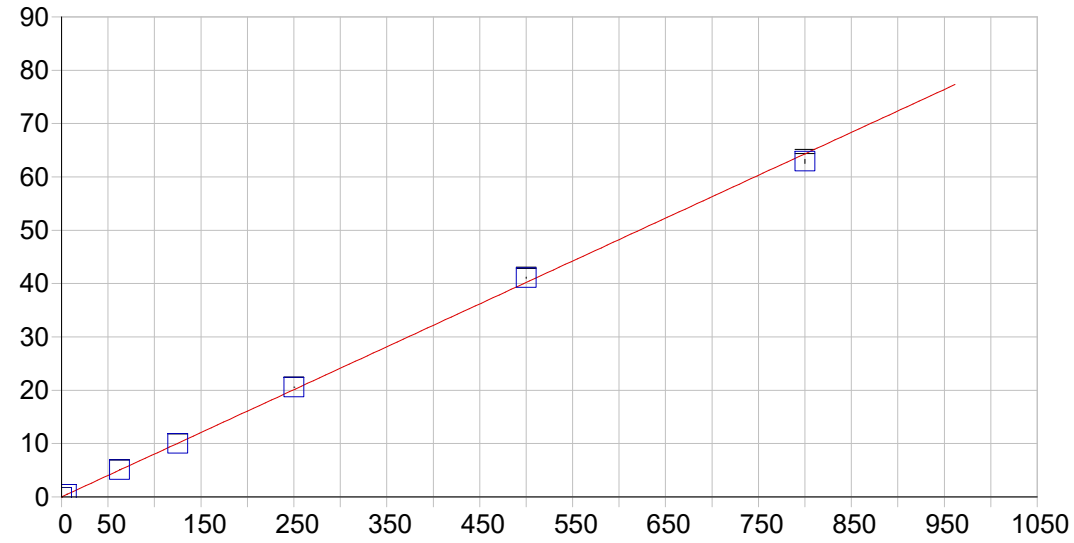
Cd 214.438 {457}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000065	Re-Slope:	1.000000
A1 (Gain):	1.932416	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999900	Status:	OK.
Std Error of Est:	0.000230		
Predicted MDL:	0.000156		
Predicted MQL:	0.000519		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00007	.000	1
S1	.00500	.00527	.000	5.49	.01027	.000	1
S2	.62500	.61596	-.009	-1.45	1.1932	.001	1
S3	1.2500	1.2164	-.034	-2.69	2.3565	.003	1
S4	2.5000	2.5458	.046	1.83	4.9312	.015	1
S5	5.0000	4.9965	-.003	-.069	9.6787	.015	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



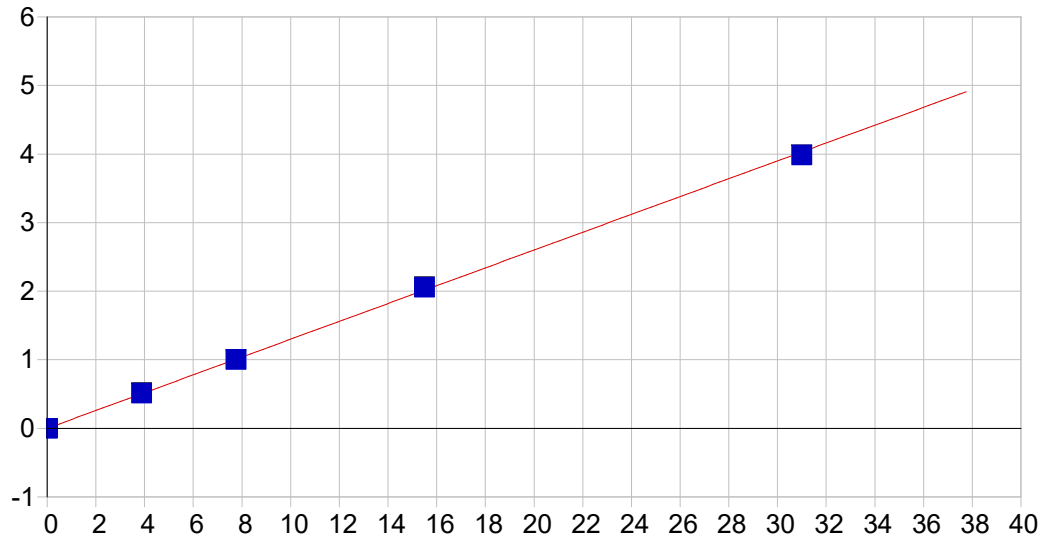
Ca 373.690 { 90}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.007299	Re-Slope:	1.000000
A1 (Gain):	0.080400	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999757	Status:	OK.
Std Error of Est:	0.006193		
Predicted MDL:	0.012775		
Predicted MQL:	0.042583		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00071	-.001	.000	.00724	.000	1
S1	5.0000	5.5671	.567	11.3	.45490	.001	1
S2	62.500	63.177	.677	1.08	5.0867	.005	1
S3	125.00	124.34	-.655	-.524	10.005	.041	1
S4	250.00	255.98	5.98	2.39	20.588	.006	1
S5	500.00	511.03	11.0	2.21	41.094	.129	1
S6	800.00	782.40	-17.6	-2.20	62.912	.393	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



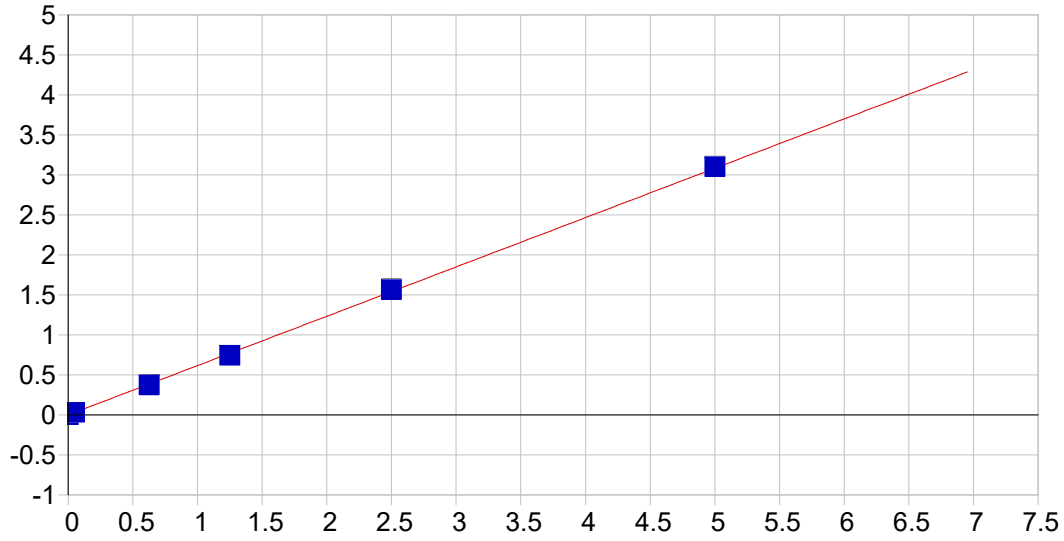
Cr 267.716 {126}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000140	Re-Slope:	1.000000
A1 (Gain):	0.130017	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999894	Status:	OK.
Std Error of Est:	0.000056		
Predicted MDL:	0.001235		
Predicted MQL:	0.004118		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00014	.000	1
S1	.01000	.01062	.001	6.21	.00124	.000	1
S2	3.8750	3.9521	.077	1.99	.51427	.001	1
S3	7.7500	7.6923	-.058	-.745	1.0011	.003	1
S4	15.500	15.820	.320	2.06	2.0589	.004	1
S5	31.000	30.660	-.340	-1.10	3.9908	.003	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



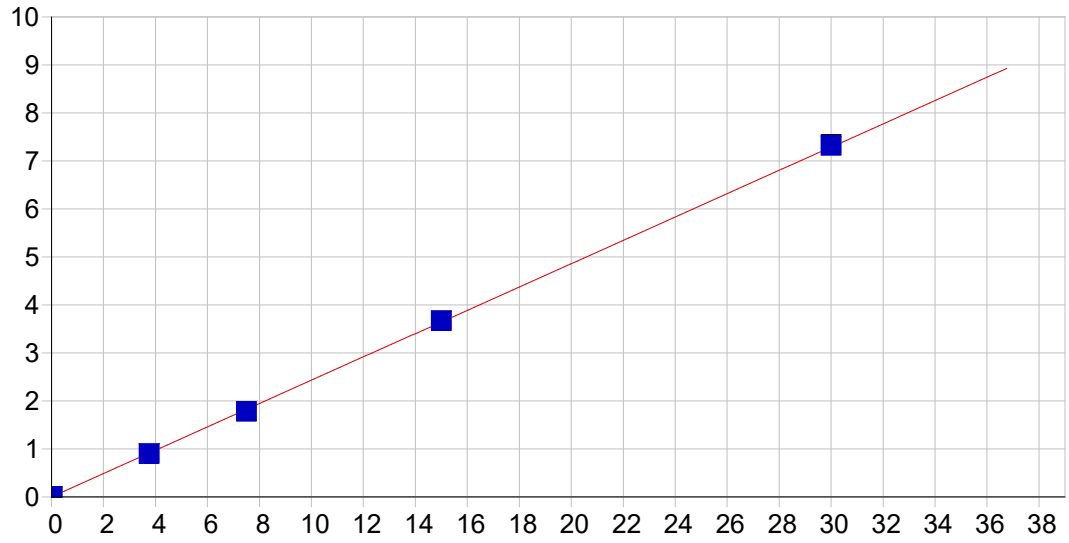
Co 228.616 {448}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000077	Re-Slope:	1.000000
A1 (Gain):	0.616587	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999841	Status:	OK.
Std Error of Est:	0.000292		
Predicted MDL:	0.000555		
Predicted MQL:	0.001851		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00008	.000	1
S1	.05000	.05090	.001	1.80	.03141	.000	1
S2	.62500	.60644	-.019	-2.97	.37432	.000	1
S3	1.2500	1.2036	-.046	-3.71	.74301	.001	1
S4	2.5000	2.5378	.038	1.51	1.5666	.006	1
S5	5.0000	5.0262	.026	.524	3.1028	.005	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



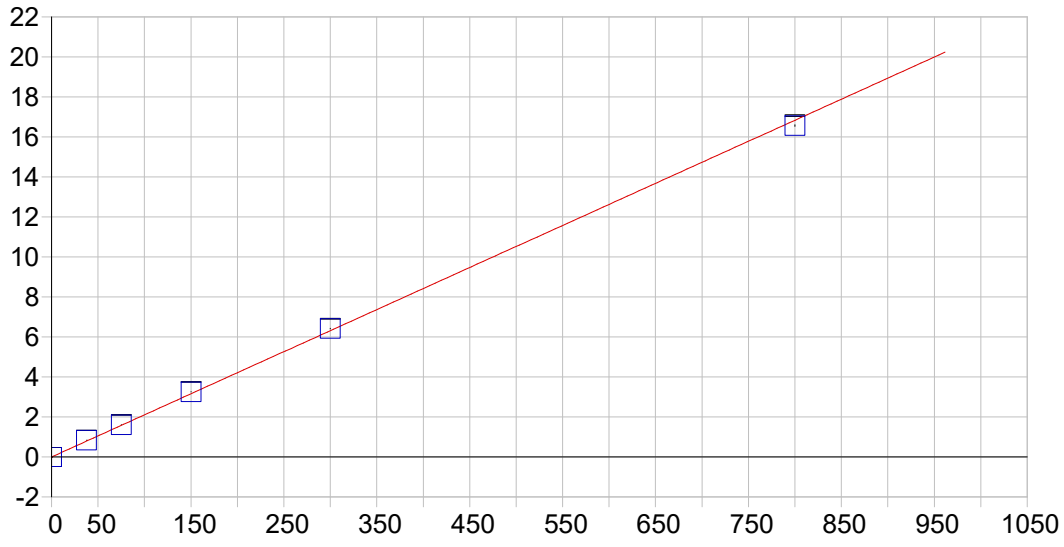
Cu 324.754 {104}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002465	Re-Slope:	1.000000
A1 (Gain):	0.242830	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.000119		
Predicted MDL:	0.002761		
Predicted MQL:	0.009202		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00246	.000	1
S1	.02500	.02574	.001	2.94	.00871	.001	1
S2	3.7500	3.7060	-.044	-1.17	.90181	.001	1
S3	7.5000	7.3131	-.187	-2.49	1.7771	.002	1
S4	15.000	15.089	.089	.591	3.6641	.008	1
S5	30.000	30.142	.142	.472	7.3171	.016	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



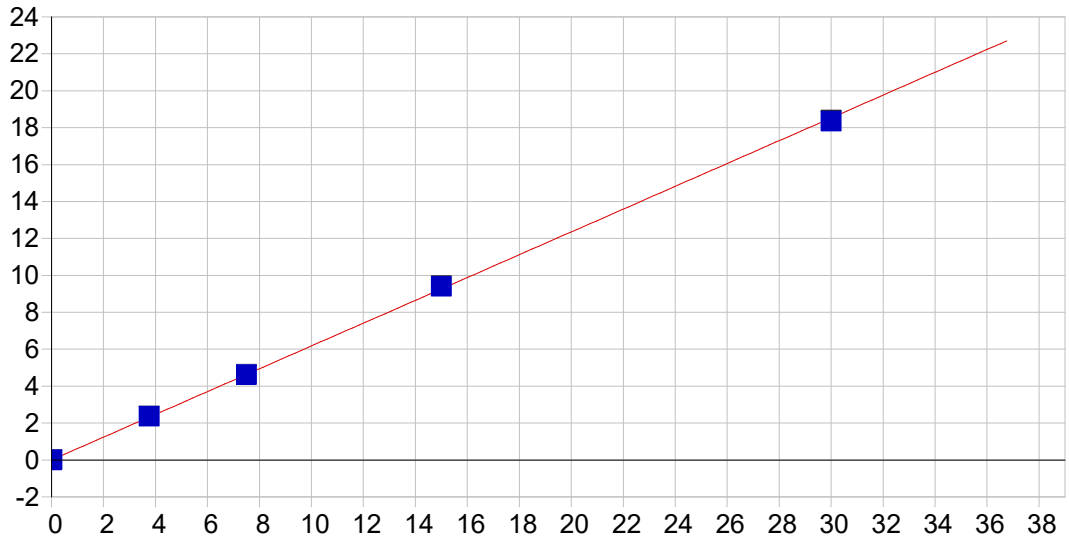
Fe 259.837 {130}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000031	Re-Slope:	1.000000
A1 (Gain):	0.021043	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999804	Status:	OK.
Std Error of Est:	0.000182		
Predicted MDL:	0.013963		
Predicted MQL:	0.046543		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00003	-.000	.000	-.00003	.000	1
S1	.10000	.12067	.021	20.7	.00251	.000	1
S2	37.500	39.265	1.77	4.71	.82621	.002	1
S3	75.000	76.354	1.35	1.81	1.6067	.002	1
S4	150.00	154.56	4.56	3.04	3.2523	.008	1
S5	300.00	304.97	4.97	1.66	6.4172	.016	1
S6	800.00	787.33	-12.7	-1.58	16.567	.033	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



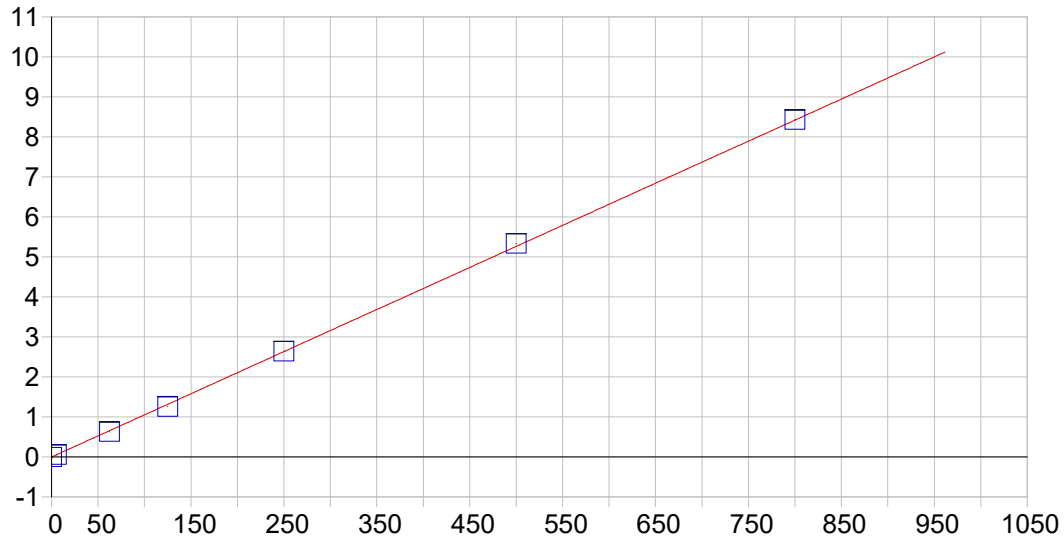
Mn 257.610 {131}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000174	Re-Slope:	1.000000
A1 (Gain):	0.617638	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999926	Status:	OK.
Std Error of Est:	0.000267		
Predicted MDL:	0.000563		
Predicted MQL:	0.001878		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00017	.000	1
S1	.01500	.01748	.002	16.6	.01100	.000	1
S2	3.7500	3.8271	.077	2.06	2.3643	.005	1
S3	7.5000	7.4812	-.019	-.251	4.6215	.014	1
S4	15.000	15.228	.228	1.52	9.4072	.012	1
S5	30.000	29.711	-.289	-.964	18.353	.043	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



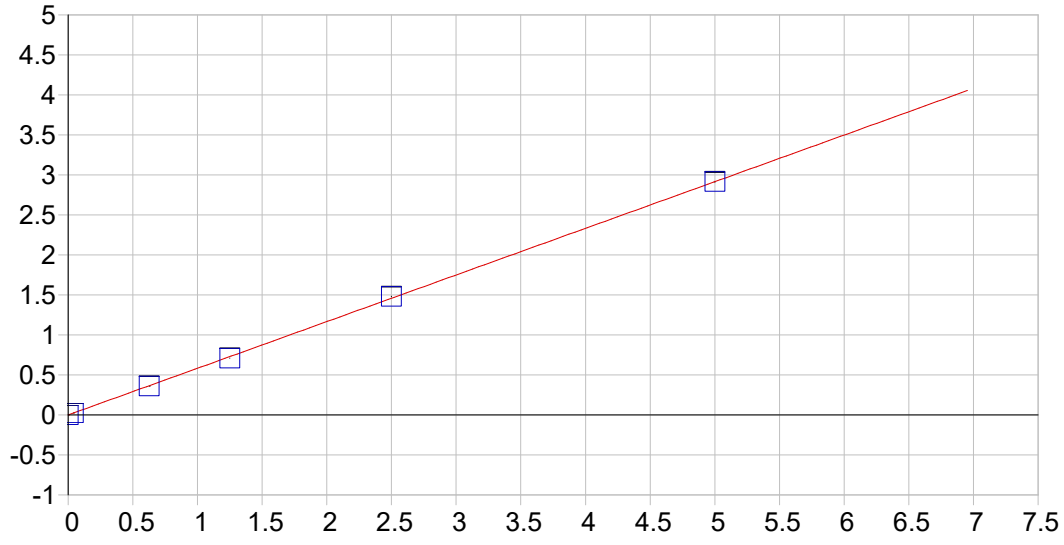
Mg 279.079 {121}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000280	Re-Slope:	1.000000
A1 (Gain):	0.010527	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999870	Status:	OK.
Std Error of Est:	0.000592		
Predicted MDL:	0.036337		
Predicted MQL:	0.121125		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00014	.000	.000	-.00028	.000	1
S1	5.0000	5.2158	.216	4.32	.05463	.000	1
S2	62.500	59.743	-2.76	-4.41	.62861	.001	1
S3	125.00	119.60	-5.40	-4.32	1.2587	.004	1
S4	250.00	250.68	.678	.271	2.6385	.001	1
S5	500.00	506.57	6.57	1.31	5.3322	.003	1
S6	800.00	800.69	.687	.086	8.4283	.004	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



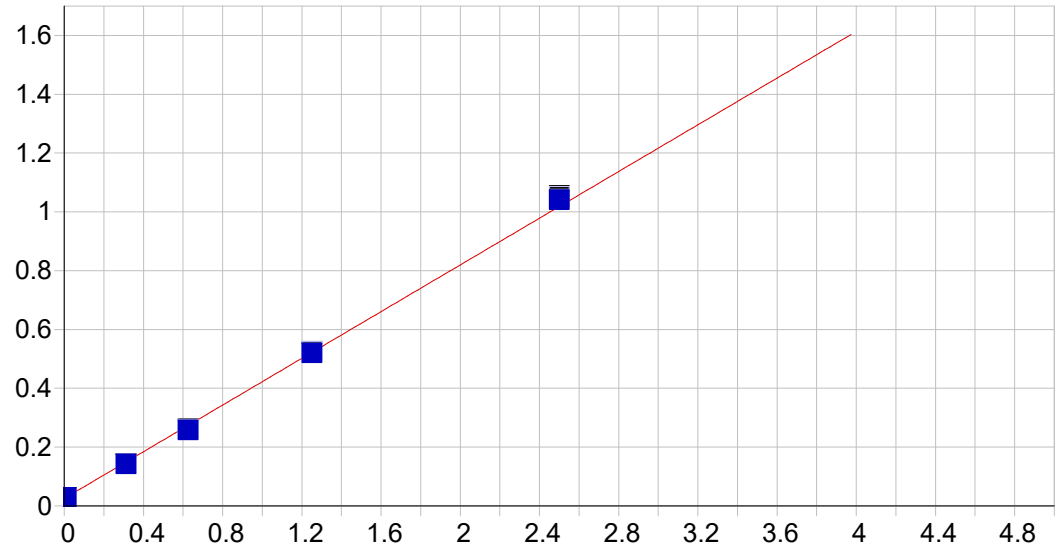
Ni 231.604 {446}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000148	Re-Slope:	1.000000
A1 (Gain):	0.583017	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999897	Status:	OK.
Std Error of Est:	0.000199		
Predicted MDL:	0.000623		
Predicted MQL:	0.002077		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00015	.000	1
S1	.04000	.04354	.004	8.86	.02553	.000	1
S2	.62500	.61697	-.008	-1.28	.35985	.001	1
S3	1.2500	1.2163	-.034	-2.69	.70928	.001	1
S4	2.5000	2.5391	.039	1.56	1.4805	.005	1
S5	5.0000	4.9991	-.001	-.018	2.9147	.006	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



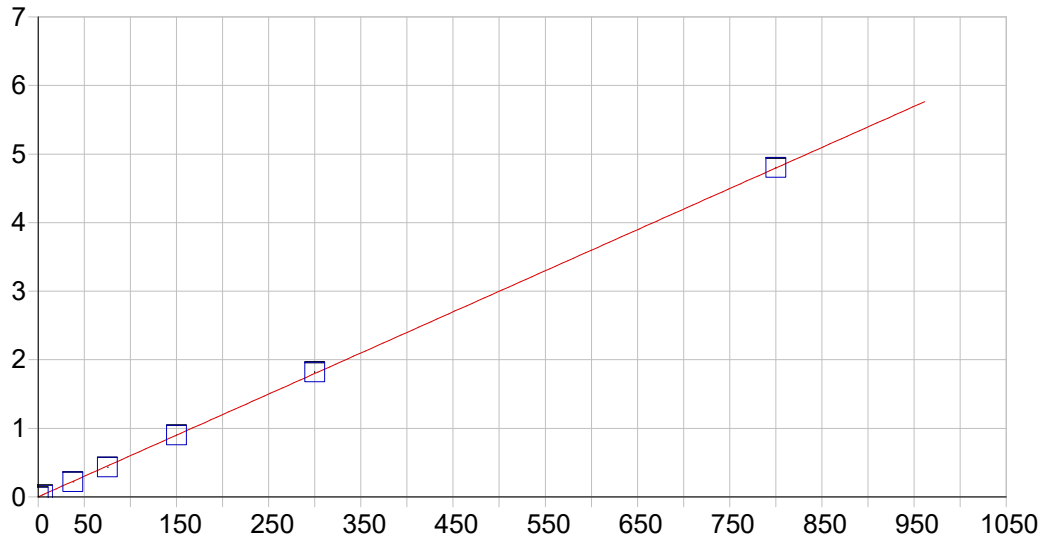
Ag 328.068 {103}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.025461	Re-Slope:	1.000000
A1 (Gain):	0.397117	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999479	Status:	OK.
Std Error of Est:	0.000109		
Predicted MDL:	n/a		
Predicted MQL:	n/a		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.02546	.000	1
S1	.01000	.01135	.001	13.5	.02996	.000	1
S2	.31250	.29471	-.018	-5.69	.14383	.000	1
S3	.62500	.58649	-.039	-6.16	.26104	.001	1
S4	1.2500	1.2455	-.005	-.363	.52541	.000	1
S5	2.5000	2.5595	.059	2.38	1.0526	.003	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

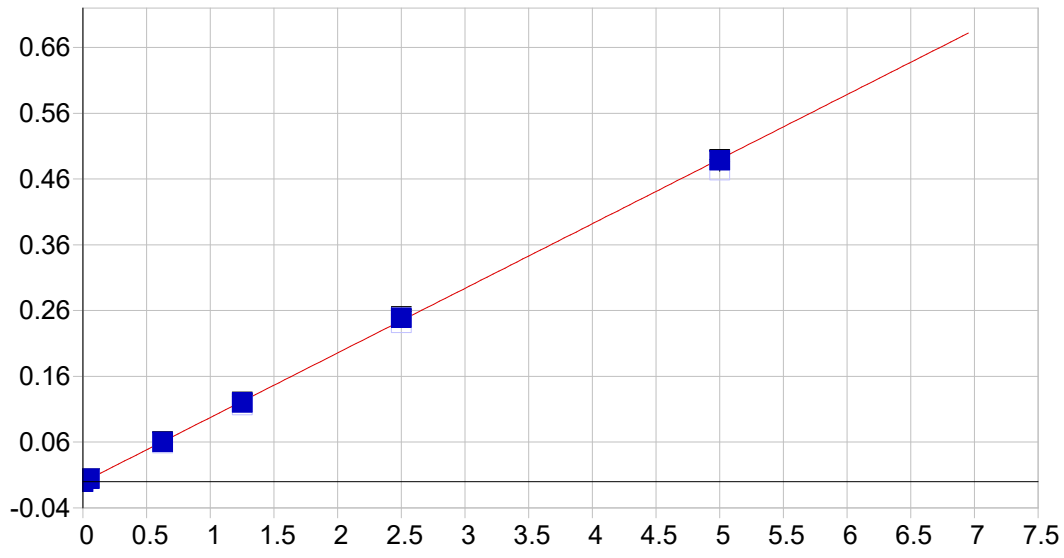


Na 818.326 { 41}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001739	Re-Slope:	1.000000
A1 (Gain):	0.005993	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999920	Status:	OK.
Std Error of Est:	0.000235		
Predicted MDL:	0.357265		
Predicted MQL:	1.190883		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00068	.001	.000	.00174	.001	1
S1	5.0000	4.6058	-.394	-7.88	.02934	.001	1
S2	37.500	36.213	-1.29	-3.43	.21876	.001	1
S3	75.000	72.192	-2.81	-3.74	.43439	.001	1
S4	150.00	150.35	.349	.232	.90279	.002	1
S5	300.00	303.38	3.38	1.13	1.8199	.007	1
S6	800.00	800.76	.764	.096	4.8008	.007	1



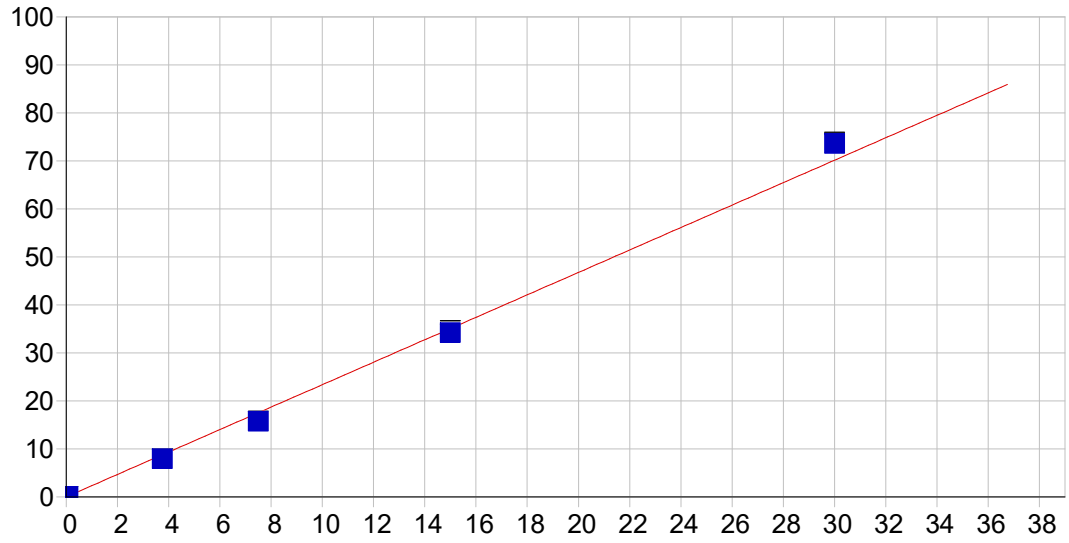
V 292.402 {115}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000767	Re-Slope:	1.000000
A1 (Gain):	0.098211	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999932	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.006548		
Predicted MQL:	0.021825		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00077	.000	1
S1	.05000	.05040	.000	.799	.00417	.001	1
S2	.62500	.62225	-.003	-.441	.05846	.001	1
S3	1.2500	1.2284	-.022	-1.73	.11610	.001	1
S4	2.5000	2.5430	.043	1.72	.24144	.002	1
S5	5.0000	4.9809	-.019	-.381	.47333	.001	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



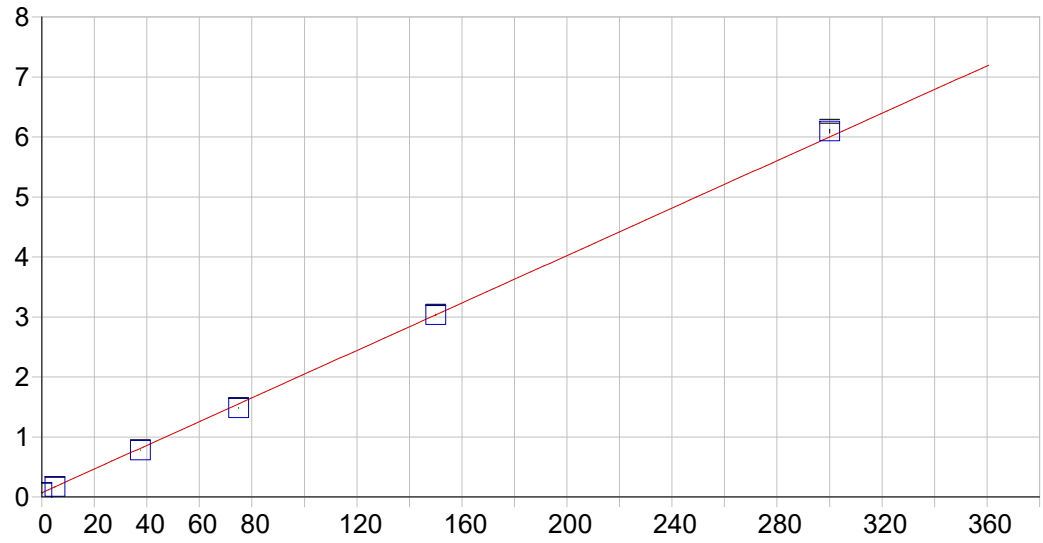
Zn 213.856 {158}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006548	Re-Slope:	1.000000
A1 (Gain):	2.337916	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998274	Status:	OK.
Std Error of Est:	0.009797		
Predicted MDL:	0.000569		
Predicted MQL:	0.001895		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00655	.002	1
S1	.06000	.06802	.008	13.4	.16625	.003	1
S2	3.7500	3.3895	-.361	-9.61	7.9415	.018	1
S3	7.5000	6.7371	-.763	-10.2	15.778	.053	1
S4	15.000	14.635	-.365	-2.44	34.264	.404	1
S5	30.000	31.481	1.48	4.94	73.691	.254	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



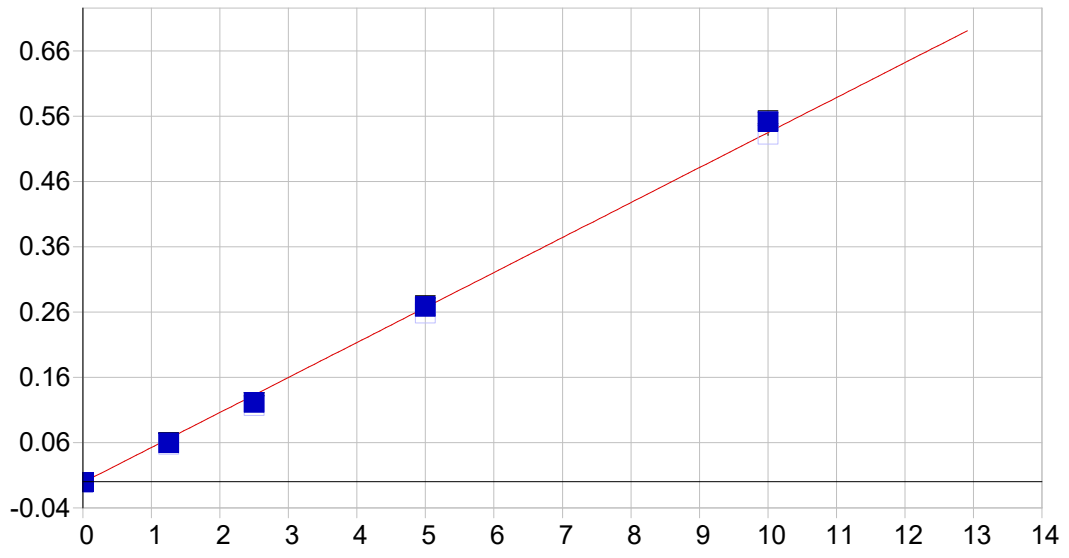
K 769.896 { 44}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.069032	Re-Slope:	1.000000
A1 (Gain):	0.019767	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999727	Status:	OK.
Std Error of Est:	0.000952		
Predicted MDL:	0.135232		
Predicted MQL:	0.450775		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00031	.000	.000	.06904	.000	1
S1	5.0000	5.0440	.044	.881	.16874	.002	1
S2	37.500	36.022	-1.48	-3.94	.78107	.004	1
S3	75.000	71.438	-3.56	-4.75	1.4812	.005	1
S4	150.00	150.04	.045	.030	3.0350	.010	1
S5	300.00	304.95	4.95	1.65	6.0970	.032	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



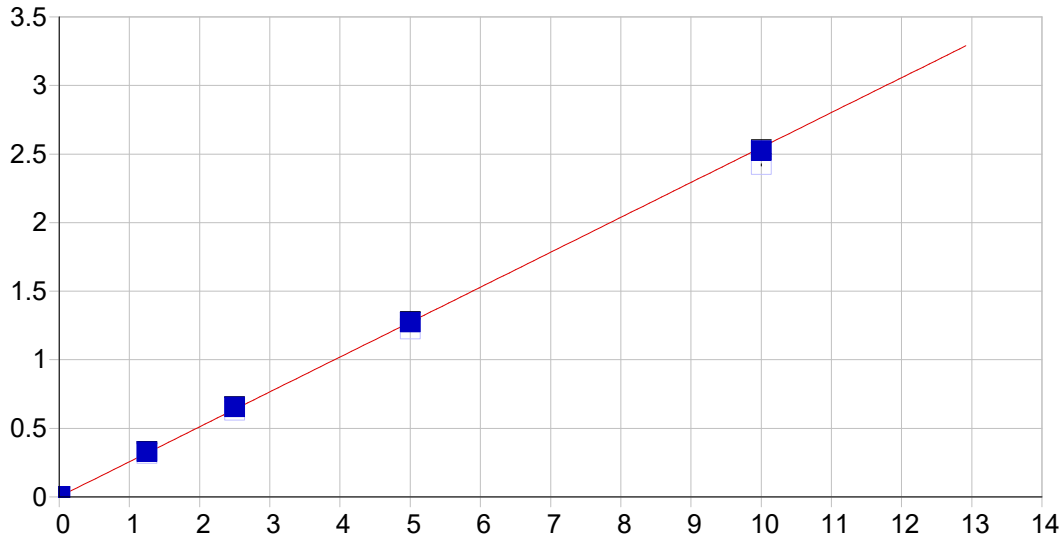
P 177.495 {490}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000997	Re-Slope:	1.000000
A1 (Gain):	0.053582	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998853	Status:	OK.
Std Error of Est:	0.000041		
Predicted MDL:	0.003672		
Predicted MQL:	0.012240		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00100	.000	1
S1	.01000	.00843	-.002	-15.7	-.00056	.000	1
S2	1.2500	1.1329	-.117	-9.36	.05725	.000	1
S3	2.5000	2.2831	-.217	-8.68	.11641	.000	1
S4	5.0000	5.0210	.021	.420	.25819	.002	1
S5	10.000	10.315	.315	3.15	.53197	.001	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

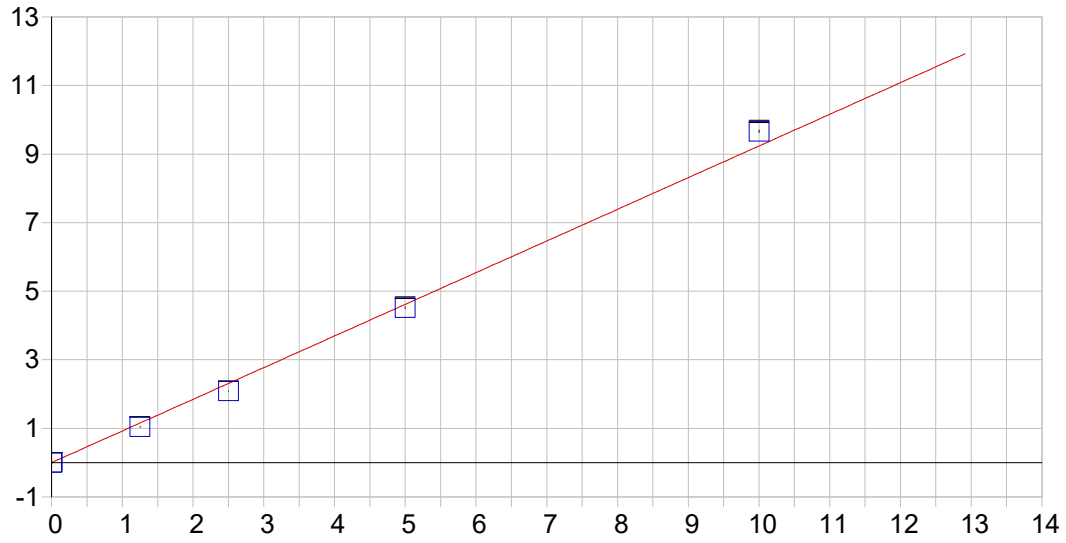


B 249.678 {135}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001640	Re-Slope:	1.000000
A1 (Gain):	0.254585	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999534	Status:	OK.
Std Error of Est:	0.000125		
Predicted MDL:	0.001872		
Predicted MQL:	0.006240		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00164	.000	1
S1	.01000	-.00116	-.011	-112.	.00132	.000	1
S2	1.2500	1.2858	.036	2.87	.31615	.002	1
S3	2.5000	2.5668	.067	2.67	.62941	.003	1
S4	5.0000	4.9998	-.000	-.003	1.2231	.004	1
S5	10.000	9.9091	-.091	-.909	2.4216	.008	1



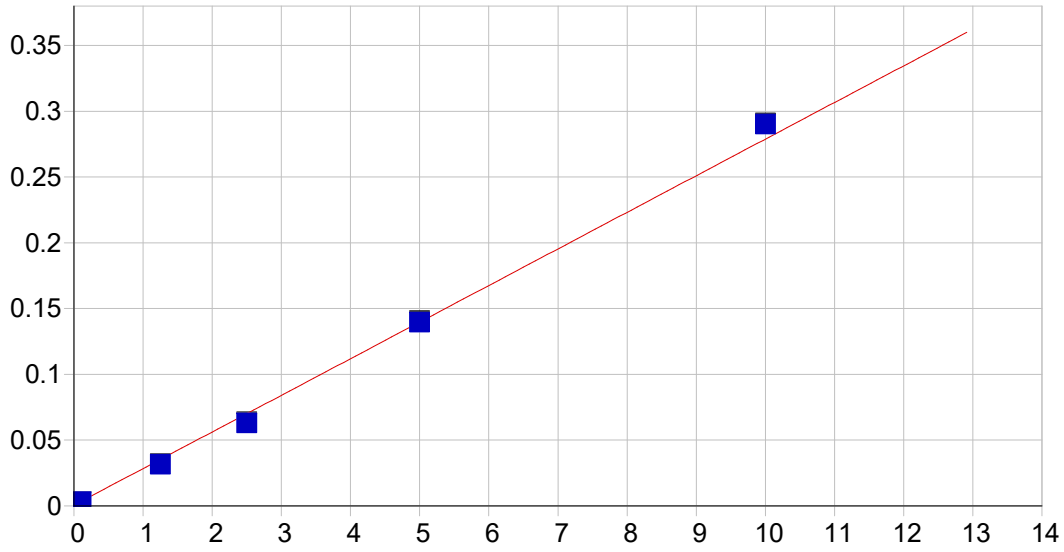
Mo 202.030 {467}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000529	Re-Slope:	1.000000
A1 (Gain):	0.923553	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998466	Status:	OK.
Std Error of Est:	0.000859		
Predicted MDL:	0.000502		
Predicted MQL:	0.001673		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00053	.001	1
S1	.01000	.01018	.000	1.81	.00887	.000	1
S2	1.2500	1.1326	-.117	-9.39	1.0455	.002	1
S3	2.5000	2.2599	-.240	-9.60	2.0866	.006	1
S4	5.0000	4.8950	-.105	-2.10	4.5203	.021	1
S5	10.000	10.462	.462	4.62	9.6620	.036	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



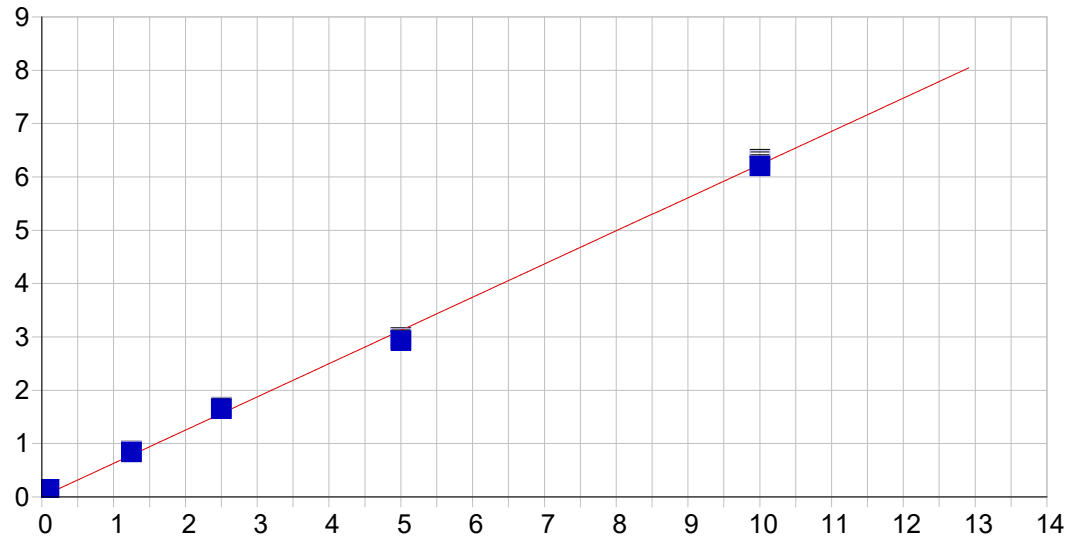
S 182.034 {485}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000560	Re-Slope:	1.000000
A1 (Gain):	0.027830	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998453	Status:	OK.
Std Error of Est:	0.000082		
Predicted MDL:	0.006898		
Predicted MQL:	0.022992		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	.00056	.000	1
S1	.10000	.08978	-.010	-10.2	.00306	.000	1
S2	1.2500	1.1135	-.136	-10.9	.03155	.000	1
S3	2.5000	2.2450	-.255	-10.2	.06304	.001	1
S4	5.0000	4.9956	-.004	-.089	.13960	.001	1
S5	10.000	10.406	.406	4.06	.29019	.001	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



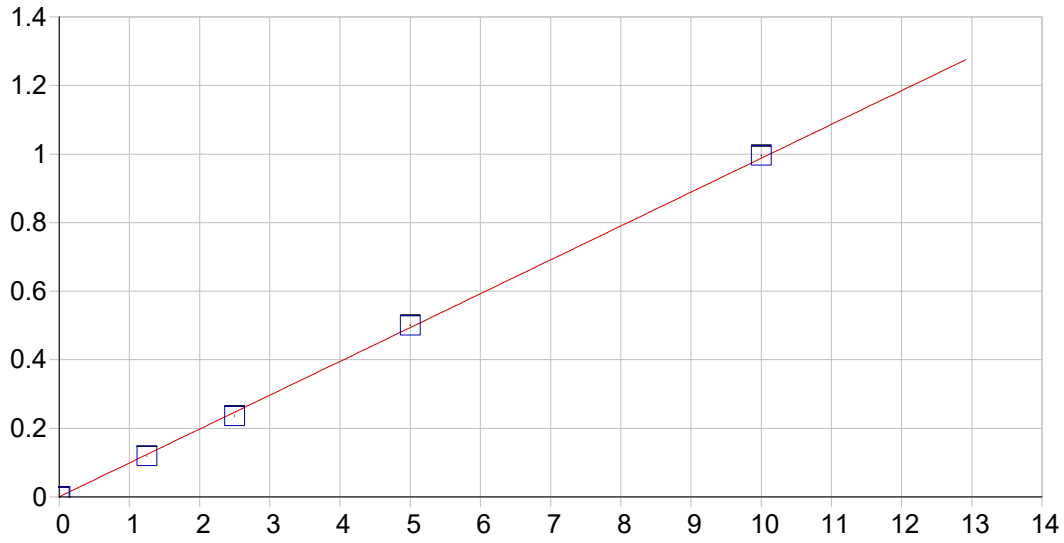
Si 251.611 {134}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.004753	Re-Slope:	1.000000
A1 (Gain):	0.622872	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.994872	Status:	OK.
Std Error of Est:	0.003419		
Predicted MDL:	0.000720		
Predicted MQL:	0.002401		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00014	-.000	.000	.00467	.000	1
S1	.10000	.22928	.129	129.	.14798	.000	1
S2	1.2500	1.3432	.093	7.46	.85399	.003	1
S3	2.5000	2.6366	.137	5.46	1.6722	.008	1
S4	5.0000	4.6906	-.309	-6.19	2.9767	.013	1
S5	10.000	9.9515	-.048	-.485	6.3040	.023	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



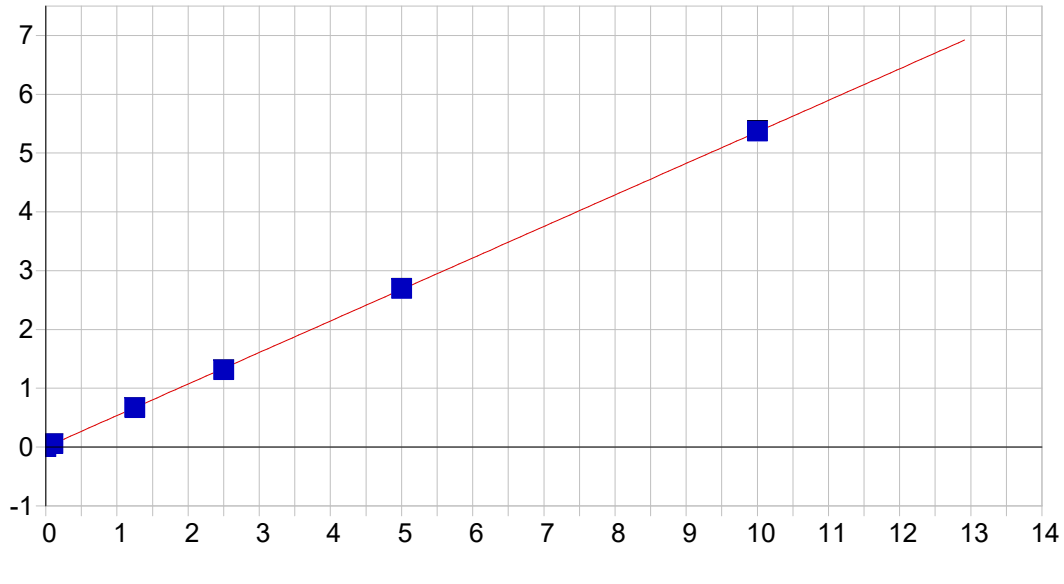
Sn 189.989 {478}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000333	Re-Slope:	1.000000
A1 (Gain):	0.098718	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999784	Status:	OK.
Std Error of Est:	0.000029		
Predicted MDL:	0.001949		
Predicted MQL:	0.006495		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00033	.000	1
S1	.00700	.00600	-.001	-14.3	.00093	.000	1
S2	1.2500	1.2046	-.045	-3.64	.11924	.001	1
S3	2.5000	2.3924	-.108	-4.30	.23651	.001	1
S4	5.0000	5.0687	.069	1.37	.50070	.001	1
S5	10.000	10.085	.085	.854	.99594	.002	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



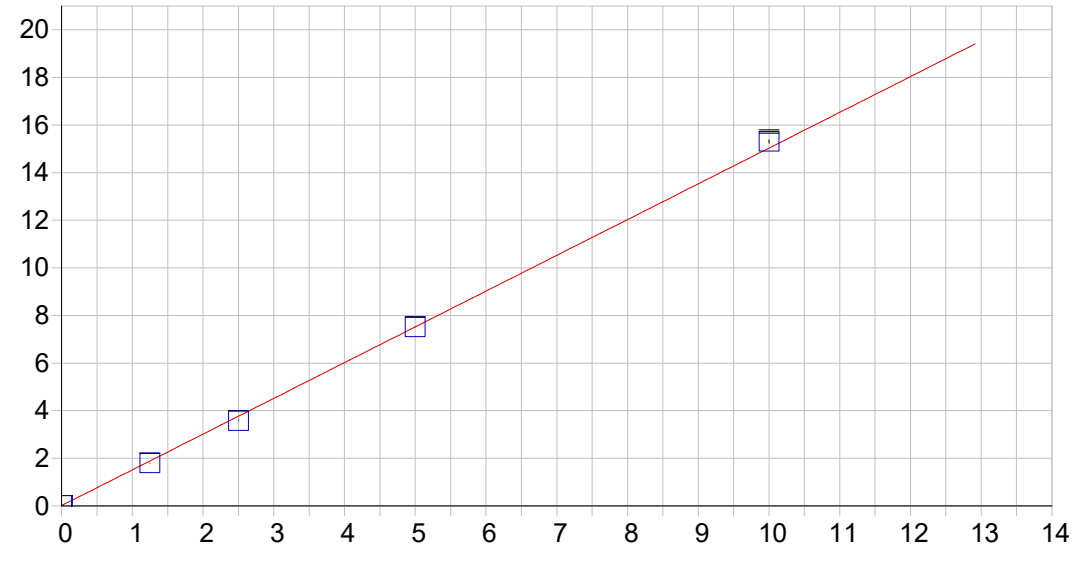
Ti 336.121 {100}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000029	Re-Slope:	1.000000
A1 (Gain):	0.536058	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999967	Status:	OK.
Std Error of Est:	0.000232		
Predicted MDL:	0.001369		
Predicted MQL:	0.004565		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00003	.000	1
S1	.10000	.10424	.004	4.24	.05589	.000	1
S2	1.2500	1.2463	-.004	-.296	.66778	.001	1
S3	2.5000	2.4530	-.047	-1.88	1.3143	.003	1
S4	5.0000	5.0251	.025	.502	2.6924	.004	1
S5	10.000	10.021	.021	.214	5.3694	.014	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



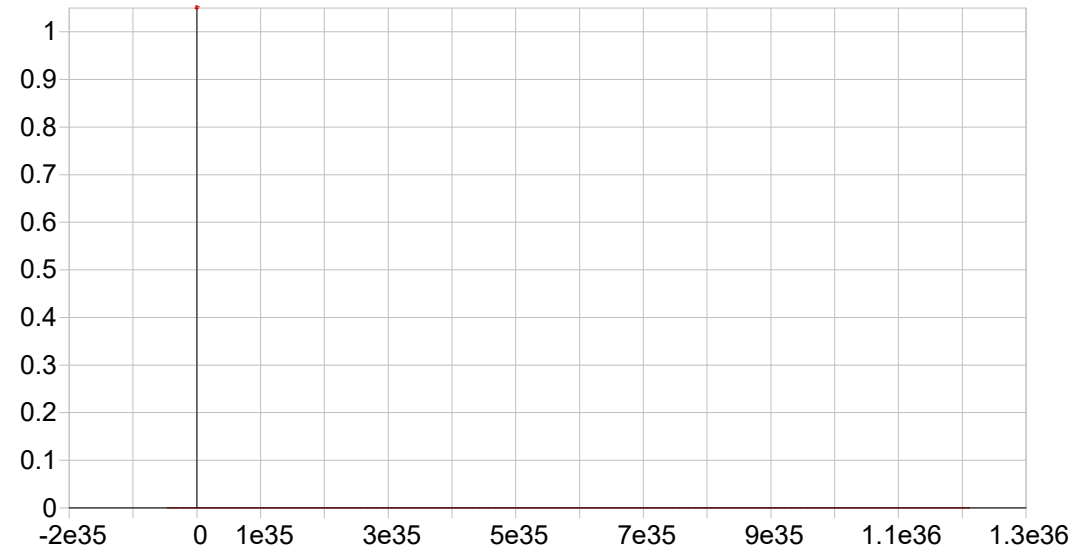
Li 670.784 { 50}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.011981	Re-Slope:	1.000000
A1 (Gain):	1.502069	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999650	Status:	OK.
Std Error of Est:	0.000816		
Predicted MDL:	0.001419		
Predicted MQL:	0.004728		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.01199	.001	1
S5	10.000	10.189	.189	1.89	15.317	.067	1
S4	5.0000	4.9987	-.001	-.026	7.5204	.007	1
S3	2.5000	2.3770	-.123	-4.92	3.5825	.007	1
S2	1.2500	1.1877	-.062	-4.98	1.7960	.004	1
S1	.01500	.01254	-.002	-16.4	.03081	.001	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

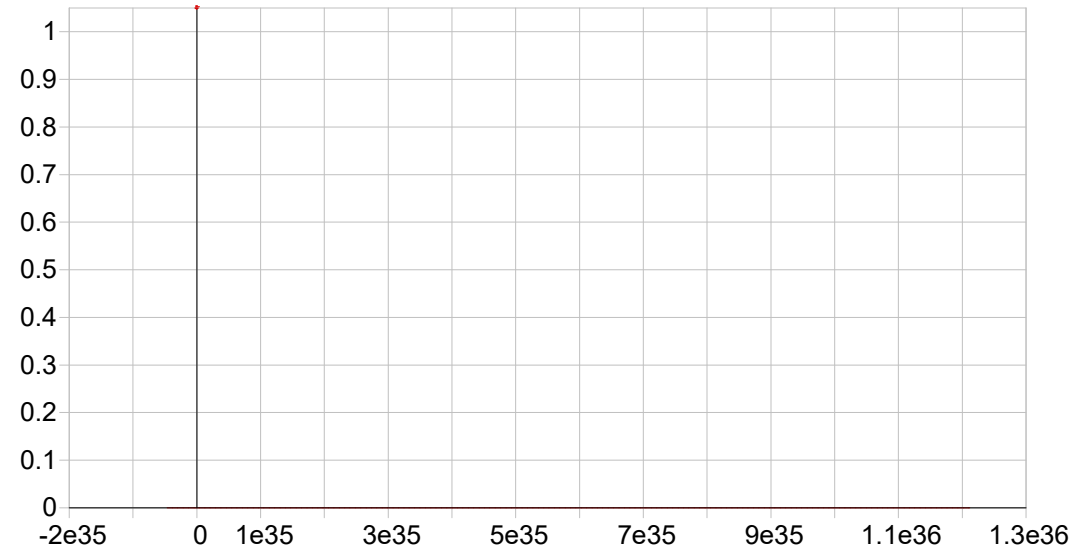


Y 224.306 {450}*

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}*

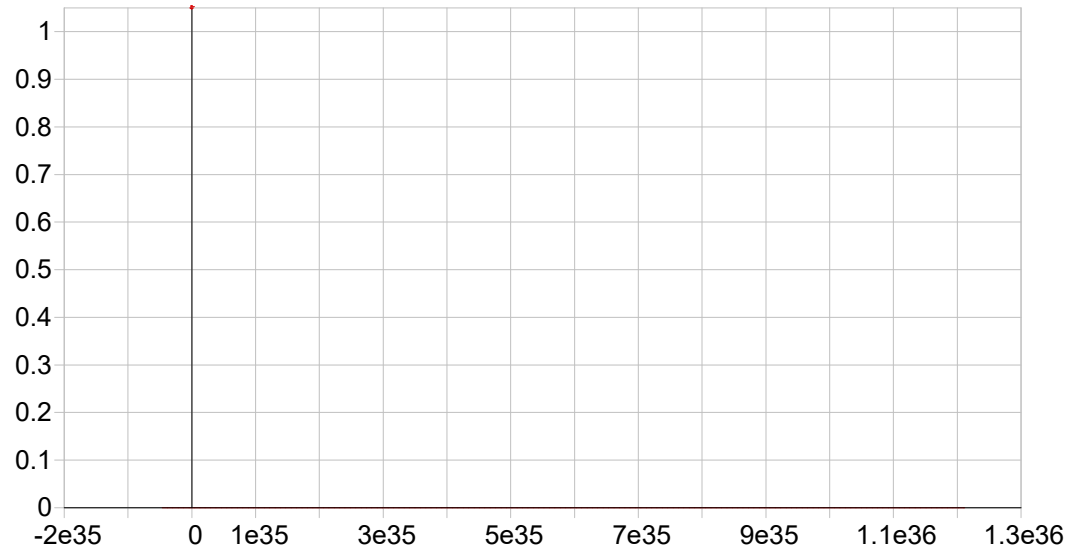
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:Mohan
On:11/22/2024 4:49:50 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



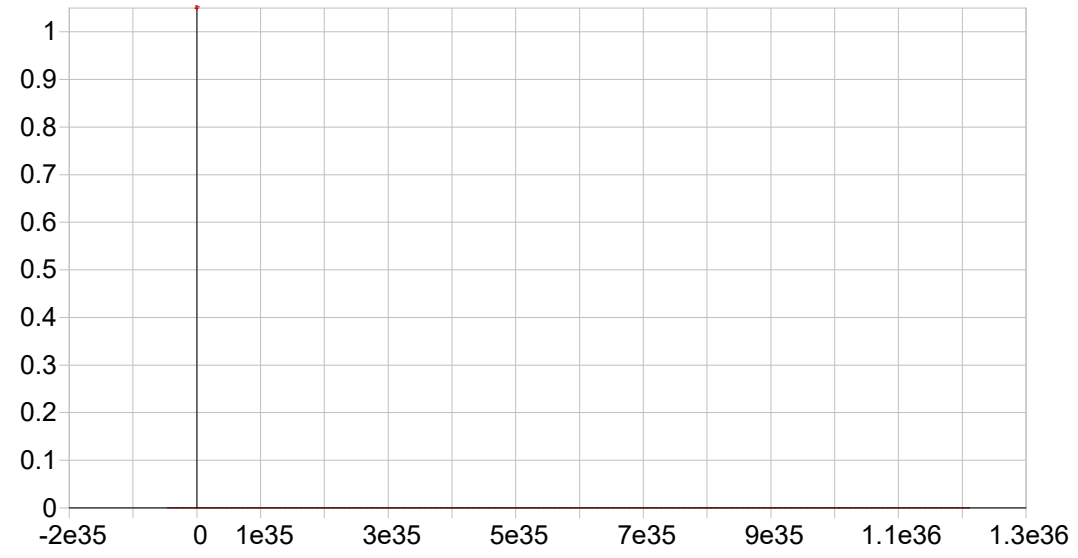
Y 371.030 { 91}*

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

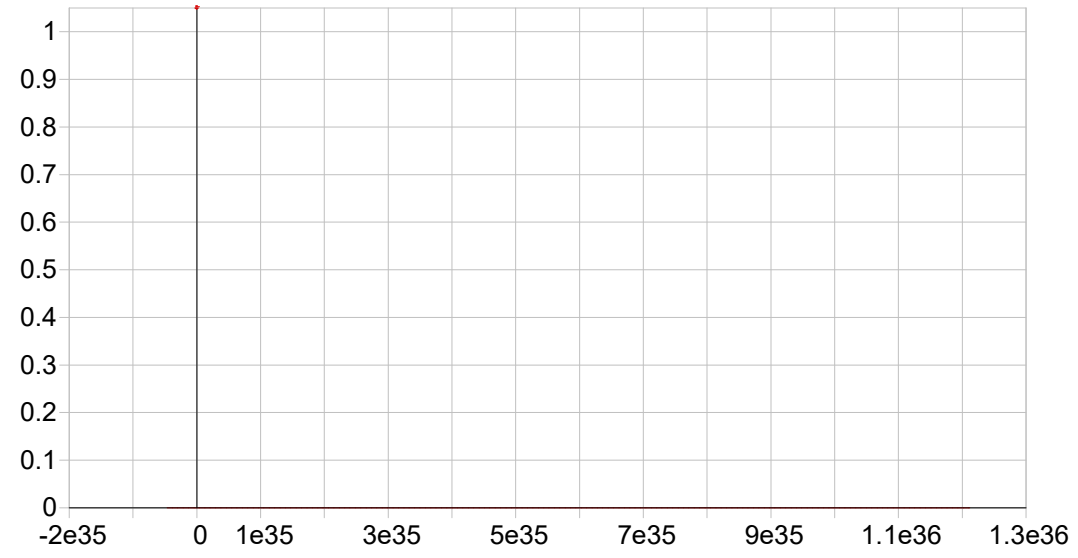
Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5



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



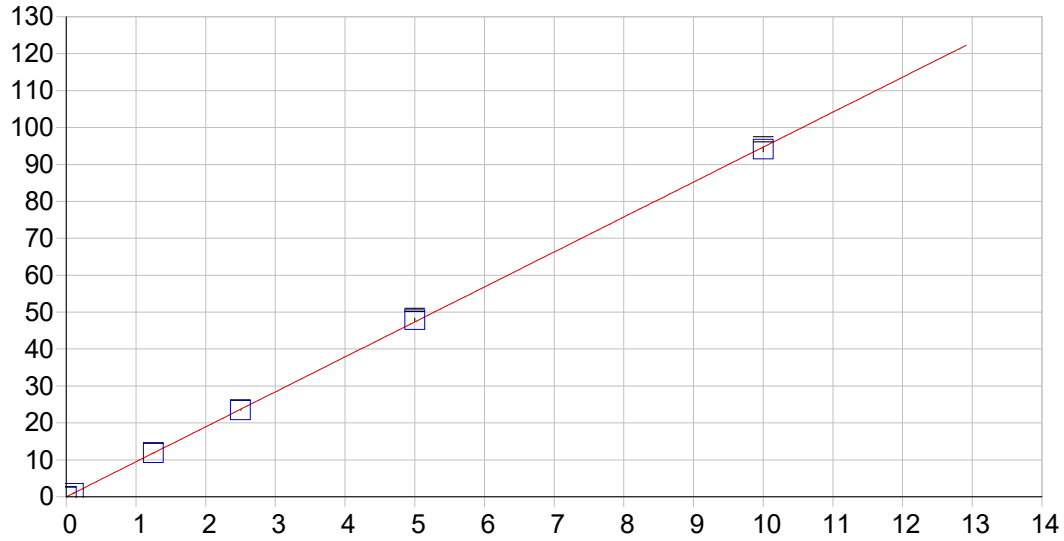
In 230.606 {446}*

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:11/22/2024 4:49:50 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



Sr 407.771 { 83}

Date of Fit:	11/21/2024 22:03:15	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002085	Re-Slope:	1.000000
A1 (Gain):	9.469166	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999947	Status:	OK.
Std Error of Est:	0.005162		
Predicted MDL:	0.000111		
Predicted MQL:	0.000370		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00201	.001	1
S1	.10000	.10771	.008	7.71	1.0220	.004	1
S2	1.2500	1.2573	.007	.583	11.908	.002	1
S3	2.5000	2.4811	-.019	-.756	23.496	.018	1
S4	5.0000	5.0646	.065	1.29	47.959	.443	1
S5	10.000	9.9393	-.061	-.607	94.119	.726	1

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S0 Acquired: 11/21/2024 11:55:00 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	.00004	-.00038	-.00149	-.00004	.00015	-.00351	.00255	-.00089
Stddev	.00000	.00032	.00018	.00012	.00041	.00133	.00129	.00029
%RSD	7.7335	84.072	12.080	298.45	279.77	37.818	50.494	32.224
#1	.00004	-.00075	-.00144	.00008	.00022	-.00490	.00232	-.00068
#2	.00004	-.00018	-.00134	-.00005	.00051	-.00336	.00393	-.00078
#3	.00004	-.00021	-.00169	-.00015	-.00029	-.00226	.00139	-.00121

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	.00007	.00724	-.00014	-.00008	.00246	-.00003	.00017	-.00028
Stddev	.00003	.00028	.00011	.00036	.00030	.00006	.00019	.00028
%RSD	53.091	3.8757	81.063	466.72	12.315	177.31	112.24	100.24
#1	.00007	.00693	-.00026	.00008	.00215	-.00000	-.00004	-.00058
#2	.00010	.00731	-.00012	-.00049	.00249	-.00010	.00023	-.00023
#3	.00003	.00748	-.00004	.00018	.00276	.00000	.00033	-.00003

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	.00015	.02546	.00174	-.00077	.00655	.06904	-.00100	.00164
Stddev	.00025	.00011	.00129	.00029	.00239	.00041	.00010	.00029
%RSD	168.28	.43902	74.124	37.613	36.485	.59289	9.9545	17.843
#1	.00025	.02558	.00258	-.00110	.00399	.06861	-.00108	.00173
#2	-.00014	.02544	.00026	-.00060	.00696	.06907	-.00089	.00132
#3	.00032	.02536	.00239	-.00060	.00872	.06943	-.00102	.00188

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	-.00053	.00056	.00467	.00033	.00003	.01199	.00201
Stddev	.00055	.00004	.00049	.00013	.00024	.00086	.00080
%RSD	103.44	6.7907	10.498	38.981	900.98	7.1628	39.890
#1	.00008	.00059	.00467	.00048	.00028	.01238	.00216
#2	-.00098	.00057	.00516	.00029	.00002	.01258	.00272
#3	-.00068	.00052	.00418	.00023	-.00021	.01100	.00114

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S0 Acquired: 11/21/2024 11:55:00 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	907.22	24635.	4802.5	754.59	1746.2
Stddev	1.97	55.	12.6	3.13	2.2
%RSD	.21710	.22129	.26241	.41522	.12841
#1	909.46	24642.	4793.3	752.22	1748.7
#2	906.49	24577.	4816.9	753.42	1744.3
#3	905.73	24685.	4797.4	758.14	1745.6

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S1 Acquired: 11/21/2024 11:59:39 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	.00030	.00149	.00020	.00244	.01085	.01355	.84291	.02081
Stddev	.00022	.00006	.00035	.00025	.00038	.00095	.00511	.00016
%RSD	72.348	4.3718	174.55	10.109	3.5389	7.0432	.60641	.78326
#1	.00018	.00150	.00004	.00229	.01110	.01252	.84297	.02065
#2	.00017	.00141	-.00004	.00230	.01104	.01441	.84799	.02081
#3	.00055	.00154	.00060	.00272	.01041	.01371	.83776	.02097

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	.01027	.45490	.00124	.03141	.00871	.00251	.01100	.05463
Stddev	.00022	.00135	.00005	.00020	.00078	.00015	.00016	.00022
%RSD	2.1802	.29571	3.6315	.63244	8.9946	5.8428	1.4847	.40693
#1	.01051	.45359	.00128	.03139	.00838	.00262	.01081	.05445
#2	.01007	.45628	.00119	.03122	.00961	.00234	.01112	.05488
#3	.01022	.45482	.00125	.03162	.00815	.00257	.01106	.05455

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	.02553	.02996	.02934	.00417	.16625	.16874	-.00056	.00132
Stddev	.00026	.00009	.00100	.00053	.00274	.00160	.00012	.00029
%RSD	1.0359	.29999	3.3980	12.631	1.6468	.94843	21.540	22.179
#1	.02523	.03006	.02918	.00388	.16642	.16806	-.00069	.00107
#2	.02563	.02991	.03041	.00478	.16891	.17057	-.00045	.00164
#3	.02573	.02990	.02844	.00385	.16344	.16759	-.00054	.00126

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00887	.00306	.14798	.00093	.05589	.03081	1.0220
Stddev	.00027	.00009	.00044	.00014	.00022	.00145	.0040
%RSD	2.9929	2.9391	.30069	15.589	.39118	4.7125	.38727
#1	.00858	.00309	.14799	.00090	.05612	.03097	1.0212
#2	.00909	.00296	.14753	.00079	.05569	.03217	1.0264
#3	.00895	.00313	.14842	.00108	.05585	.02928	1.0186

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S1 Acquired: 11/21/2024 11:59:39 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	903.76	24486.	4818.4	751.34	1699.6
Stddev	1.13	75.	12.4	3.04	1.6
%RSD	.12486	.30642	.25757	.40486	.09566
#1	903.80	24475.	4811.0	752.95	1701.5
#2	904.87	24417.	4811.5	747.83	1699.0
#3	902.62	24566.	4832.7	753.24	1698.4

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S2 Acquired: 11/21/2024 12:04:18 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	.03214	.08982	.85067	.07101	.21616	3.2581	9.6875	.49594
Stddev	.00020	.00020	.00103	.00033	.00100	.0043	.0082	.00052
%RSD	.62702	.22443	.12101	.46980	.46336	.13191	.08470	.10463
#1	.03221	.08989	.85069	.07063	.21504	3.2569	9.6783	.49560
#2	.03229	.08997	.84963	.07113	.21646	3.2629	9.6942	.49654
#3	.03191	.08959	.85169	.07127	.21698	3.2545	9.6898	.49568

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	1.1932	5.0867	.51427	.37432	.90181	.82621	2.3643	.62861
Stddev	.0007	.0049	.00082	.00043	.00122	.00163	.0051	.00137
%RSD	.06219	.09709	.15914	.11610	.13484	.19769	.21598	.21733
#1	1.1935	5.0810	.51467	.37430	.90158	.82740	2.3608	.62707
#2	1.1924	5.0894	.51481	.37390	.90073	.82688	2.3619	.62910
#3	1.1938	5.0897	.51333	.37476	.90313	.82435	2.3701	.62966

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	.35985	.14383	.21876	.05846	7.9415	.78107	.05725	.31615
Stddev	.00086	.00028	.00058	.00059	.0183	.00358	.00011	.00172
%RSD	.23867	.19758	.26467	1.0112	.23030	.45827	.20062	.54328
#1	.36082	.14351	.21906	.05821	7.9290	.77985	.05732	.31786
#2	.35919	.14399	.21810	.05803	7.9625	.78511	.05711	.31442
#3	.35954	.14401	.21914	.05913	7.9330	.77827	.05731	.31617

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.0455	.03155	.85399	.11924	.66778	1.7960	11.908
Stddev	.0019	.00028	.00299	.00057	.00067	.0037	.002
%RSD	.17823	.88346	.35011	.47995	.09996	.20612	.01360
#1	1.0437	.03180	.85714	.11971	.66855	1.7965	11.906
#2	1.0474	.03161	.85362	.11861	.66742	1.7921	11.908
#3	1.0454	.03125	.85120	.11942	.66737	1.7995	11.909

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S2 Acquired: 11/21/2024 12:04:18 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	855.47	23661.	4829.9	701.51	1522.8
Stddev	1.25	27.	6.2	2.16	2.6
%RSD	.14571	.11262	.12755	.30752	.16804
#1	856.33	23669.	4830.4	703.33	1522.3
#2	856.03	23631.	4823.5	699.13	1525.6
#3	854.04	23682.	4835.7	702.07	1520.6

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S3 Acquired: 11/21/2024 12:08:42 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	.06477	.17482	1.6811	.14214	.43278	6.5038	19.177	.97972
Stddev	.00011	.00015	.0027	.00080	.00132	.0060	.057	.00455
%RSD	.16648	.08635	.15849	.56122	.30426	.09152	.29693	.46448
#1	.06477	.17476	1.6807	.14281	.43219	6.4973	19.112	.97450
#2	.06466	.17471	1.6787	.14234	.43187	6.5051	19.200	.98180
#3	.06488	.17499	1.6840	.14126	.43429	6.5090	19.219	.98285

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	2.3565	10.005	1.0011	.74301	1.7771	1.6067	4.6215	1.2587
Stddev	.0028	.041	.0028	.00128	.0025	.0020	.0140	.0045
%RSD	.11955	.40982	.28293	.17251	.13977	.12593	.30370	.35320
#1	2.3572	9.9575	1.0039	.74406	1.7743	1.6043	4.6072	1.2545
#2	2.3534	10.024	1.0012	.74158	1.7780	1.6076	4.6352	1.2584
#3	2.3589	10.032	.99826	.74339	1.7791	1.6080	4.6221	1.2633

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	.70928	.26104	.43439	.11610	15.778	1.4812	.11641	.62941
Stddev	.00118	.00121	.00059	.00136	.053	.0050	.00007	.00310
%RSD	.16693	.46496	.13595	1.1739	.33628	.33951	.06305	.49225
#1	.70915	.26112	.43399	.11519	15.768	1.4760	.11634	.62592
#2	.70817	.26221	.43507	.11767	15.836	1.4861	.11640	.63049
#3	.71052	.25979	.43412	.11544	15.731	1.4814	.11649	.63183

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.0866	.06304	1.6722	.23651	1.3143	3.5825	23.496
Stddev	.0059	.00062	.0080	.00097	.0030	.0074	.018
%RSD	.28252	.99122	.47938	.41187	.22725	.20569	.07640
#1	2.0805	.06363	1.6631	.23630	1.3121	3.5740	23.475
#2	2.0871	.06312	1.6752	.23565	1.3132	3.5857	23.509
#3	2.0922	.06239	1.6783	.23757	1.3177	3.5876	23.504

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S3 Acquired: 11/21/2024 12:08:42 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	816.28	23016.	4728.6	669.03	1441.8
Stddev	1.26	69.	20.0	2.81	1.0
%RSD	.15462	.29794	.42369	.42074	.07159
#1	817.50	22979.	4751.7	671.11	1441.3
#2	816.35	22975.	4716.8	665.83	1442.9
#3	814.98	23096.	4717.3	670.15	1441.0

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S4 Acquired: 11/21/2024 12:13:06 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	.14114	.36035	3.5263	.31416	.96222	13.715	39.762	2.0239
Stddev	.00091	.00204	.0127	.00145	.00516	.031	.090	.0076
%RSD	.64609	.56646	.36152	.46162	.53608	.22276	.22581	.37372
#1	.14014	.35823	3.5196	.31411	.95858	13.727	39.837	2.0181
#2	.14136	.36050	3.5183	.31273	.95995	13.738	39.787	2.0325
#3	.14193	.36230	3.5410	.31563	.96812	13.681	39.663	2.0212

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	4.9312	20.588	2.0589	1.5666	3.6641	3.2523	9.4072	2.6385
Stddev	.0148	.006	.0035	.0055	.0082	.0085	.0121	.0010
%RSD	.29927	.02993	.17216	.35215	.22464	.26083	.12916	.03750
#1	4.9182	20.584	2.0560	1.5603	3.6647	3.2565	9.4208	2.6390
#2	4.9281	20.595	2.0629	1.5687	3.6720	3.2578	9.4035	2.6374
#3	4.9473	20.585	2.0580	1.5707	3.6556	3.2425	9.3973	2.6391

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	1.4805	.52541	.90279	.24144	34.264	3.0350	.25819	1.2231
Stddev	.0046	.00050	.00203	.00217	.404	.0100	.00166	.0037
%RSD	.31044	.09452	.22529	.89732	1.1783	.32991	.64183	.30060
#1	1.4759	.52534	.90081	.23902	34.728	3.0353	.25628	1.2193
#2	1.4806	.52593	.90487	.24320	34.065	3.0448	.25912	1.2266
#3	1.4850	.52495	.90270	.24209	33.998	3.0248	.25917	1.2236

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	4.5203	.13960	2.9767	.50070	2.6924	7.5204	47.959
Stddev	.0212	.00111	.0127	.00114	.0041	.0073	.443
%RSD	.46860	.79399	.42499	.22847	.15276	.09681	.92380
#1	4.5077	.13880	2.9690	.49949	2.6965	7.5231	48.091
#2	4.5083	.13914	2.9913	.50087	2.6925	7.5259	48.322
#3	4.5447	.14087	2.9699	.50176	2.6883	7.5122	47.466

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S4 Acquired: 11/21/2024 12:13:06 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	744.12	22082.	4662.9	598.56	1331.2
Stddev	3.35	66.	16.0	7.57	3.8
%RSD	.45002	.30052	.34216	1.2640	.28852
#1	744.95	22044.	4667.5	589.86	1333.2
#2	746.98	22043.	4645.1	602.22	1333.7
#3	740.44	22158.	4676.0	603.60	1326.8

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S5 Acquired: 11/21/2024 12:17:37 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	.29511	.70134	7.0035	.69427	2.1386	27.702	78.084	3.9923
Stddev	.00108	.00120	.0098	.00280	.0097	.068	.650	.0117
%RSD	.36482	.17180	.14011	.40382	.45325	.24652	.83297	.29239
#1	.29398	.70063	6.9932	.69592	2.1440	27.630	78.822	3.9861
#2	.29612	.70273	7.0045	.69104	2.1274	27.765	77.591	4.0058
#3	.29523	.70066	7.0128	.69586	2.1444	27.712	77.840	3.9851

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	9.6787	41.094	3.9908	3.1028	7.3171	6.4172	18.353	5.3322
Stddev	.0145	.129	.0034	.0049	.0156	.0155	.043	.0035
%RSD	.14997	.31399	.08597	.15910	.21270	.24163	.23418	.06542
#1	9.6620	41.012	3.9947	3.0971	7.3031	6.3995	18.329	5.3308
#2	9.6887	41.028	3.9884	3.1062	7.3339	6.4282	18.328	5.3297
#3	9.6852	41.243	3.9892	3.1051	7.3143	6.4240	18.403	5.3362

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	2.9147	1.0526	1.8199	.47333	73.691	6.0970	.53197	2.4216
Stddev	.0055	.0031	.0072	.00142	.254	.0315	.00141	.0082
%RSD	.18965	.29479	.39405	.29919	.34476	.51692	.26432	.33996
#1	2.9086	1.0553	1.8119	.47169	73.640	6.0730	.53139	2.4166
#2	2.9161	1.0492	1.8259	.47417	73.466	6.1327	.53096	2.4311
#3	2.9194	1.0533	1.8219	.47412	73.967	6.0853	.53358	2.4171

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	9.6620	.29019	6.3040	.99594	5.3694	15.317	94.119
Stddev	.0356	.00077	.0232	.00221	.0138	.067	.727
%RSD	.36886	.26538	.36726	.22148	.25704	.43713	.77189
#1	9.6827	.28959	6.2898	.99341	5.3543	15.243	93.297
#2	9.6208	.28992	6.3307	.99746	5.3814	15.374	94.387
#3	9.6825	.29106	6.2915	.99696	5.3724	15.332	94.674

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S5 Acquired: 11/21/2024 12:17:37 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	641.28	21004.	4591.3	489.94	1223.3
Stddev	2.83	57.	4.4	2.60	1.1
%RSD	.44057	.26965	.09595	.53085	.08612
#1	638.60	20962.	4596.2	490.33	1224.4
#2	644.23	21068.	4589.9	492.33	1222.4
#3	641.02	20981.	4587.8	487.17	1223.0

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: S6 Acquired: 11/21/2024 12:22:13 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) 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	70.698	62.912	16.567	8.4283	4.8008
Stddev	.268	.393	.033	.0045	.0072
%RSD	.37843	.62476	.19787	.05294	.14999
#1	71.005	63.332	16.590	8.4259	4.8090
#2	70.574	62.553	16.582	8.4334	4.7980
#3	70.515	62.852	16.530	8.4255	4.7954

Int. Std.	Y_3710
Units	Cts/S
Avg	4530.9
Stddev	6.4
%RSD	.14196
#1	4533.8
#2	4523.6
#3	4535.5

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: ICV007 Acquired: 11/21/2024 12:27:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9096507	1.069298	.9951118	.9294721	.9077649	2.407263
Stddev	.0102760	.003032	.0036513	.0033790	.0075029	.008422
%RSD	1.129666	.2835592	.3669229	.3635374	.8265246	.3498743
#1	.9211810	1.069209	.9976761	.9256290	.9112617	2.399132
#2	.9014596	1.072373	.9909313	.9319771	.8991519	2.406708
#3	.9063115	1.066311	.9967280	.9308103	.9128811	2.415949

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5252169	.5170852	.4997805	10.11974	.5577644	.5042489
Stddev	.0009553	.0015545	.0006163	.02851	.0000606	.0014283
%RSD	.1818940	.3006303	.1233241	.2817238	.0108713	.2832547
#1	.5250563	.5165574	.5004030	10.14755	.5577711	.5049682
#2	.5243520	.5188348	.4997682	10.09058	.5577007	.5026039
#3	.5262423	.5158632	.4991704	10.12111	.5578214	.5051745

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4909017	10.77687	.5304127	5.472040	.5104633	.2382511
Stddev	.0038502	.00355	.0030404	.027304	.0006350	.0004399
%RSD	.7843029	.0329027	.5732099	.4989813	.1244017	.1846521
#1	.4931042	10.77821	.5289351	5.454410	.5108727	.2380322
#2	.4864560	10.77285	.5283935	5.458219	.5097318	.2387575
#3	.4931448	10.77956	.5339095	5.503492	.5107856	.2379636

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.452907	.5364564	.9531518	10.02550	F .0031631	F .0094080
Stddev	.196513	.0039951	.0023478	.08173	.0019079	.0024327
%RSD	2.078863	.7447287	.2463168	.8152605	60.31837	25.85716
#1	9.314311	.5332552	.9523481	9.98217	.0047006	.0069523
#2	9.366608	.5409337	.9557959	9.97455	.0010279	.0118169
#3	9.677803	.5351803	.9513114	10.11977	.0037609	.0094549

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: ICV007 Acquired: 11/21/2024 12:27:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F -.000146	F -.002185	F .0024234	F -.002844	F -.001419	F .0052847
Stddev	.000316	.006301	.0008432	.000591	.001720	.0014718
%RSD	216.6577	288.3697	34.79279	20.79229	121.2245	27.85045
#1	-.000510	.002448	.0033681	-.003124	.000558	.0036029
#2	.000007	.000357	.0017473	-.003244	-.002572	.0063376
#3	.000065	-.009360	.0021547	-.002165	-.002243	.0059136

Elem	Sr4077
Units	ppm
Avg	F .0012900
Stddev	.0002037
%RSD	15.79402
#1	.0014737
#2	.0010708
#3	.0013256

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	893.6502	24494.47	4917.749	746.8692	1667.838
Stddev	.6734	31.52	8.617	1.8914	.998
%RSD	.0753509	.1287003	.1752220	.2532494	.0598382
#1	893.1776	24458.38	4917.900	745.7276	1667.699
#2	893.3518	24516.62	4909.058	745.8275	1666.918
#3	894.4212	24508.41	4926.290	749.0525	1668.899

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: ICB007 Acquired: 11/21/2024 12:33:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000430	.0000614	.0020290	-.002453	.0003479	-.004703	-.000033
Stddev	.001578	.0027798	.0032327	.002299	.0032743	.007792	.000543
%RSD	366.7171	4528.755	159.3239	93.73316	941.1051	165.6904	1645.486
#1	.000019	.0031441	-.001555	-.005043	.0025102	-.005336	-.000616
#2	.000874	-.002255	.002918	-.001664	-.003419	.003387	.000060
#3	-.002184	-.000705	.004724	-.000653	.001953	-.012160	.000457

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000096	.0000698	-.020902	-.000369	.0005287	-.003431	.0078692
Stddev	.0000350	.0001298	.003830	.000642	.0003584	.001741	.0200727
%RSD	364.5997	186.0232	18.32138	173.8493	67.79709	50.73618	255.0805
#1	.0000498	.0002184	-.016535	-.000648	.0002600	-.005277	.0252055
#2	-.000008	.0000126	-.023686	.000365	.0003904	-.001819	.0125241
#3	-.000014	-.000022	-.022485	-.000825	.0009357	-.003197	-.014122

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000414	-.030474	-.000223	-.000249	-.470729	.0015611	-.000458
Stddev	.000404	.022602	.000235	.000572	.166622	.0015105	.000577
%RSD	97.80692	74.16591	105.6119	229.4023	35.39670	96.75850	125.8601
#1	.000015	-.004376	-.000366	.000401	-.289224	.0008393	-.000779
#2	-.000467	-.043603	.000049	-.000672	-.506208	.0032972	-.000803
#3	-.000788	-.043444	-.000350	-.000477	-.616754	.0005469	.000208

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2480320	-.002168	.0010001	.0007057	-.007174	.0008893	-.002441
Stddev	.0956695	.001486	.0002921	.0003013	.005831	.0003678	.000516
%RSD	38.57145	68.52110	29.20526	42.69792	81.28040	41.36067	21.15040
#1	.3522262	-.003880	.0010666	.0005875	-.013893	.0012952	-.002455
#2	.2277206	-.001216	.0012532	.0010482	-.004188	.0005780	-.002950
#3	.1641491	-.001408	.0006805	.0004814	-.003441	.0007948	-.001918

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: ICB007 Acquired: 11/21/2024 12:33:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB007 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0004451	.0045668	-.000005
Stddev	.0010834	.0012821	.000159
%RSD	243.3995	28.07325	3031.953
#1	-.000063	.0030991	.000178
#2	.001689	.0051331	-.000111
#3	-.000291	.0054682	-.000083

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	900.7378	24643.47	4774.788	750.1502	1742.313
Stddev	.3738	130.55	10.018	4.9369	2.001
%RSD	.0415043	.5297644	.2098074	.6581207	.1148266
#1	900.5675	24559.50	4779.607	749.2776	1740.063
#2	901.1665	24793.88	4781.486	755.4652	1742.983
#3	900.4795	24577.03	4763.271	745.7077	1743.893

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: ICSA007 Acquired: 11/21/2024 13:20:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012639	-.002997	-.006283	.0082413	.0041889	231.5946
Stddev	.0126396	.003986	.005021	.0040647	.0027963	.3018
%RSD	1000.073	132.9875	79.91707	49.32034	66.75560	.1303141
#1	.0071113	-.006303	-.011179	.0127815	.0010470	231.3888
#2	.0099210	-.004119	-.001145	.0070018	.0064046	231.9410
#3	-.013241	.001429	-.006525	.0049408	.0051153	231.4539

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054311	.0000307	.0015904	237.1245	.0492938	-.004041
Stddev	.0003246	.0002234	.0000617	.3689	.0022477	.000692
%RSD	5.977028	727.3288	3.882888	.1555612	4.559804	17.12242
#1	.0053525	.0001473	.0016246	237.2310	.0501890	-.004014
#2	.0057878	-.000227	.0015191	237.4283	.0509559	-.003363
#3	.0051529	.000172	.0016274	236.7140	.0467364	-.004747

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003177	98.05774	.0103091	228.6239	.0029921	.0032956
Stddev	.001335	.17046	.0004238	.9345	.0003590	.0004392
%RSD	42.02378	.1738412	4.111385	.4087506	11.99768	13.32584
#1	-.004337	97.88531	.0100757	229.0769	.0029378	.0035563
#2	-.001718	98.22617	.0100532	229.2456	.0026634	.0035420
#3	-.003476	98.06174	.0107984	227.5493	.0033752	.0027886

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.186720	.0040642	.0124180	-.198024	.0007434	F .0419810
Stddev	.083511	.0098016	.0003375	.151568	.0045628	.0010866
%RSD	44.72540	241.1688	2.717660	76.54058	613.7612	2.588398
#1	-.265921	.0153117	.0124415	-.050419	-.003354	.0408729
#2	-.099480	-.002651	.0120694	-.353267	.005660	.0430448
#3	-.194760	-.000468	.0127432	-.190385	-.000076	.0420254

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: ICSA007 Acquired: 11/21/2024 13:20:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000819	.0063103	.0001047	F -.007470	-.002195	-.000314
Stddev	.000492	.0162536	.0007737	.003068	.000342	.000323
%RSD	60.08052	257.5727	739.3970	41.06641	15.57789	102.8162
#1	-.001359	.0236702	-.000270	-.010248	-.002352	-.000501
#2	-.000396	.0038076	-.000410	-.004177	-.002430	-.000500
#3	-.000702	-.008547	.000994	-.007985	-.001803	.000059

Elem	Sr4077
Units	ppm
Avg	.0991346
Stddev	.0002252
%RSD	.2271773
#1	.0992842
#2	.0992440
#3	.0988756

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	831.3295	22553.72	4765.823	692.7134	1401.080
Stddev	.7161	64.35	20.699	3.5067	5.550
%RSD	.0861391	.2853281	.4343180	.5062305	.3960961
#1	830.5459	22512.68	4772.509	691.2116	1395.116
#2	831.4925	22520.59	4742.607	690.2076	1402.035
#3	831.9500	22627.88	4782.352	696.7209	1406.091

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: ICSAB007 Acquired: 11/21/2024 13:24:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB007 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1124335	.1029155	.0435558	.0571689	.5442792	242.3450
Stddev	.0168982	.0025486	.0043468	.0209815	.0059798	.0483
%RSD	15.02950	2.476386	9.979871	36.70083	1.098657	.0199472
#1	.1178968	.1058087	.0409715	.0703412	.5456290	242.2998
#2	.0934795	.1019355	.0485743	.0681921	.5494686	242.3960
#3	.1259242	.1010025	.0411216	.0329734	.5377398	242.3391

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5270262	.5133079	1.017941	247.7892	.5853830	.5057986
Stddev	.0005300	.0037264	.000968	.2845	.0013674	.0011232
%RSD	.1005682	.7259519	.0950943	.1147974	.2335892	.2220650
#1	.5274687	.5151092	1.017692	247.6513	.5856721	.5050885
#2	.5264388	.5157915	1.017122	248.1163	.5838942	.5052138
#3	.5271712	.5090232	1.019009	247.6000	.5865828	.5070936

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4736536	102.0454	.5219264	239.1882	1.019240	.1862935
Stddev	.0012818	.1475	.0025565	.3132	.000726	.0003719
%RSD	.2706252	.1445184	.4898178	.1309284	.0712394	.1996404
#1	.4721977	101.9590	.5206138	239.0179	1.019613	.1860115
#2	.4746127	102.2157	.5248726	239.5497	1.018404	.1861540
#3	.4741504	101.9616	.5202930	238.9972	1.019704	.1867150

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2894167	.5147026	.9137419	-.376439	.0089986	F .0449505
Stddev	.4739413	.0040661	.0055236	.136113	.0073865	.0008173
%RSD	163.7574	.7899987	.6044999	36.15806	82.08406	1.818118
#1	.5901218	.5110954	.9142951	-.378630	.0026345	.0440363
#2	.5350473	.5191090	.9189680	-.511443	.0072631	.0456104
#3	-.256919	.5139032	.9079625	-.239244	.0170983	.0452048

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: ICSAB007 Acquired: 11/21/2024 13:24:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB007 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000785	.0016491	.0005248	-.004418	-.001562	.0001075
Stddev	.000717	.0109213	.0003066	.002742	.001084	.0007737
%RSD	91.34547	662.2478	58.43279	62.07548	69.38251	719.9395
#1	-.000049	-.008136	.0001728	-.005256	-.000893	.0007787
#2	-.001481	-.000347	.0006673	-.001354	-.002812	.0002824
#3	-.000825	.013431	.0007342	-.006642	-.000981	-.000739

Elem	Sr4077
Units	ppm
Avg	F .1034444
Stddev	.0001748
%RSD	.1689937
#1	.1036444
#2	.1033206
#3	.1033681

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	823.5216	22462.21	4766.294	683.4873	1392.045
Stddev	.9818	44.18	22.589	3.2706	1.970
%RSD	.1192224	.1966724	.4739264	.4785114	.1415138
#1	824.5118	22483.98	4764.104	683.6694	1393.723
#2	822.5483	22491.27	4744.881	680.1295	1392.536
#3	823.5046	22411.37	4789.899	686.6630	1389.876

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV041 Acquired: 11/21/2024 13:29:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV041 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.035732	4.852377	24.53745	4.756416	4.813257	403.6788	10.09662
Stddev	.016114	.010856	.06035	.007844	.024408	1.0204	.02076
%RSD	.3200026	.2237281	.2459465	.1649187	.5071078	.2527662	.2056418
#1	5.028524	4.839886	24.48508	4.763021	4.825352	402.5990	10.07363
#2	5.054193	4.857711	24.60345	4.758481	4.785163	403.8107	10.10221
#3	5.024481	4.859535	24.52381	4.747746	4.829256	404.6269	10.11401

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4918789	2.477214	399.7341	15.19981	2.479665	14.84682	408.5113
Stddev	.0018274	.007625	.7524	.02939	.006313	.01795	1.0685
%RSD	.3715165	.3078076	.1882160	.1933652	.2546056	.1208847	.2615475
#1	.4900452	2.470603	398.8654	15.16698	2.474207	14.83501	407.2778
#2	.4918916	2.485556	400.1649	15.20876	2.486579	14.83798	409.1056
#3	.4937000	2.475485	400.1721	15.22368	2.478208	14.86747	409.1505

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.68706	396.8431	2.471775	1.249754	399.1023	2.462846	14.58257
Stddev	.00381	.5884	.005622	.000326	.7973	.010481	.04216
%RSD	.0259220	.1482605	.2274654	.0260473	.1997720	.4255800	.2890825
#1	14.68291	396.3458	2.467615	1.249691	398.1966	2.451304	14.59565
#2	14.68785	397.4926	2.478171	1.250106	399.6984	2.471772	14.61664
#3	14.69040	396.6907	2.469538	1.249464	399.4118	2.465461	14.53543

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	150.8264	4.992886	4.963517	4.732977	5.048334	5.011073	4.944975
Stddev	.4358	.012925	.016944	.006127	.016958	.014291	.022113
%RSD	.2889242	.2588634	.3413746	.1294457	.3359136	.2851829	.4471745
#1	150.3629	4.978395	4.950089	4.734094	5.029265	4.994758	4.940626
#2	150.8885	4.997040	4.957907	4.726369	5.061720	5.017090	4.968940
#3	151.2278	5.003223	4.982554	4.738469	5.054018	5.021373	4.925361

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV041 Acquired: 11/21/2024 13:29:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV041 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.920688	5.033940	5.031030
Stddev	.010349	.018214	.024405
%RSD	.2103188	.3618224	.4850878
#1	4.910385	5.017972	5.052607
#2	4.920597	5.030070	5.004544
#3	4.931083	5.053778	5.035941

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	709.9892	21208.37	4658.617	569.8941	1242.775
Stddev	1.1695	38.58	7.371	2.1469	1.961
%RSD	.1647250	.1819085	.1582250	.3767145	.1577682
#1	709.6040	21240.54	4666.155	569.1978	1244.950
#2	711.3027	21165.60	4651.425	568.1818	1241.144
#3	709.0608	21218.97	4658.270	572.3027	1242.231

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB041 Acquired: 11/21/2024 13:33:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB041 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.007934	.0036200	.0042708	-.002166	.0012728	.0149766	-.000359
Stddev	.007152	.0034468	.0020320	.003689	.0009374	.0095891	.000269
%RSD	90.13661	95.21519	47.57940	170.3293	73.65171	64.02683	74.89395
#1	-.015862	.0038565	.0066126	-.006184	.0006751	.0237754	-.000564
#2	-.001967	.0069424	.0032263	.001068	.0007900	.0163985	-.000055
#3	-.005974	.0000610	.0029734	-.001382	.0023532	.0047560	-.000457

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000003	.0000087	-.011081	-.000398	.0009915	-.000177	.0255161
Stddev	.000199	.0000218	.014759	.001300	.0001206	.000242	.0126242
%RSD	7571.206	250.2948	133.1872	326.8435	12.16304	136.4989	49.47557
#1	-.000106	.0000321	.004040	-.000502	.0008556	-.000062	.0389475
#2	.000227	-.000011	-.011834	-.001643	.0010335	-.000015	.0138943
#3	-.000128	.000005	-.025449	.000951	.0010856	-.000456	.0237064

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004744	.0179459	.0000991	-.001219	-.661319	-.004897	.0003104
Stddev	.0005453	.0282136	.0003448	.000266	.306135	.008341	.0004584
%RSD	114.9474	157.2147	348.0929	21.82208	46.29152	170.3299	147.6560
#1	.0010373	.0495341	.0003018	-.001164	-.419797	.004156	.0003250
#2	-.000051	-.004751	.0002945	-.001509	-.558544	-.012270	-.000155
#3	.000437	.009055	-.000299	-.000985	-1.00562	-.006578	.000761

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2078922	.0012886	.0032419	.0007335	-.007438	.0005702	-.003111
Stddev	.0751304	.0034059	.0015317	.0004402	.001515	.0002140	.001736
%RSD	36.13909	264.3042	47.24600	60.00460	20.36783	37.53243	55.79826
#1	.1321041	.0024455	.0039619	.0012180	-.006398	.0007796	-.001173
#2	.2823470	.0039654	.0042809	.0006243	-.009176	.0005791	-.004523
#3	.2092256	-.002545	.0014829	.0003583	-.006740	.0003519	-.003636

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB041 Acquired: 11/21/2024 13:33:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB041 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000361	.0026955	.0002568
Stddev	.002706	.0005454	.0000829
%RSD	749.1582	20.23296	32.26915
#1	-.001778	.0022446	.0003401
#2	.002759	.0025403	.0002561
#3	-.002065	.0033017	.0001743

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	896.3935	24609.03	4861.129	746.2299	1728.095
Stddev	1.2570	40.15	19.463	5.3154	2.752
%RSD	.1402293	.1631448	.4003732	.7123023	.1592702
#1	895.1697	24603.47	4861.218	744.0345	1729.161
#2	897.6813	24651.67	4841.621	752.2913	1730.156
#3	896.3295	24571.95	4880.546	742.3637	1724.970

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-01 Acquired: 11/21/2024 13:38:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1168127	-.006189	1.469777	-.002310	.0069120	78.59386
Stddev	.0014305	.002939	.005949	.002278	.0035168	.04150
%RSD	1.224638	47.47954	.4047615	98.65071	50.87962	.0528052
#1	.1172845	-.008766	1.473867	-.002255	.0108747	78.56315
#2	.1179477	-.002989	1.462952	-.000059	.0041624	78.64108
#3	.1152058	-.006811	1.472511	-.004615	.0056987	78.57735

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.862502	.0050101	.0149868	267.9024	.1341450	.0882307
Stddev	.003852	.0001225	.0002553	.5298	.0008458	.0004901
%RSD	.2068090	2.445823	1.703280	.1977755	.6305412	.5554924
#1	1.859787	.0051076	.0149775	267.4705	.1340790	.0886155
#2	1.866910	.0048726	.0147363	268.4936	.1333341	.0876789
#3	1.860809	.0050503	.0152466	267.7431	.1350219	.0883977

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.501311	160.3999	9.634651	67.96407	.2063994	-.016653
Stddev	.002123	.0874	.011789	.05165	.0003357	.000336
%RSD	.1413831	.0544621	.1223575	.0759936	.1626635	2.014957
#1	1.499334	160.3700	9.627052	67.90764	.2062256	-.016952
#2	1.503554	160.3315	9.648232	68.00899	.2061861	-.016718
#3	1.501045	160.4983	9.628670	67.97557	.2067864	-.016290

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.072177	.1922625	4.012485	9.871545	F 16.24821	.1325096
Stddev	.248264	.0031532	.017195	.103431	.02554	.0005041
%RSD	23.15512	1.640036	.4285378	1.047770	.1572117	.3804080
#1	.787502	.1900243	4.008932	9.918795	16.24730	.1330864
#2	1.185278	.1958686	4.031179	9.942913	16.22313	.1321538
#3	1.243752	.1908945	3.997344	9.752928	16.27420	.1322886

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-01 Acquired: 11/21/2024 13:38:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035018	4.097162	9.481407	.0821290	.9899002	.1201012
Stddev	.0006191	.019406	.007248	.0007632	.0029017	.0009655
%RSD	17.67972	.4736401	.0764470	.9292653	.2931320	.8039289
#1	.0028931	4.103638	9.476555	.0828056	.9901113	.1191307
#2	.0041309	4.075347	9.477928	.0813017	.9868988	.1201111
#3	.0034815	4.112502	9.489739	.0822796	.9926907	.1210617

Elem	Sr4077
Units	ppm
Avg	.3953949
Stddev	.0006228
%RSD	.1575098
#1	.3955013
#2	.3959577
#3	.3947258

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1060.133	29703.62	6251.801	890.9478	1413.249
Stddev	2.037	46.73	8.870	5.0168	4.247
%RSD	.1921480	.1573266	.1418725	.5630901	.3005319
#1	1059.999	29696.87	6249.390	889.9332	1411.566
#2	1062.233	29660.62	6244.386	886.5158	1418.080
#3	1058.166	29753.35	6261.626	896.3944	1410.101

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-02 Acquired: 11/21/2024 13:42:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1400898	-.003715	2.277476	-.002694	.0028478	74.91103
Stddev	.0108975	.003995	.003671	.008170	.0026917	.07946
%RSD	7.778916	107.5410	.1611985	303.2203	94.51996	.1060676
#1	.1517806	-.005985	2.273344	-.004404	.0053130	74.83276
#2	.1302135	.000898	2.278719	.006195	.0032546	74.90872
#3	.1382751	-.006059	2.280364	-.009874	-.000024	74.99162

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.997394	.0048675	.0180811	240.8764	.1247235	.0895468
Stddev	.000584	.0000872	.0002527	.3909	.0007623	.0012908
%RSD	.0292175	1.790931	1.397678	.1622942	.6111708	1.441491
#1	1.996861	.0049441	.0182840	241.0017	.1250258	.0901749
#2	1.997305	.0047726	.0177980	241.1893	.1252883	.0904033
#3	1.998018	.0048857	.0181613	240.4382	.1238565	.0880621

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.476300	226.8808	10.25553	59.33140	.2027520	-.021916
Stddev	.008014	1.0615	.02501	.24930	.0016685	.000330
%RSD	.5428765	.4678476	.2438572	.4201887	.8229354	1.504682
#1	1.474186	225.8818	10.23091	59.27160	.2037558	-.021690
#2	1.485160	226.7652	10.28091	59.60516	.2036741	-.021762
#3	1.469555	227.9953	10.25477	59.11743	.2008259	-.022294

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.257899	.2161780	3.956493	9.173804	F 16.61202	.1627836
Stddev	.261955	.0023732	.003774	.152009	.04458	.0028622
%RSD	20.82480	1.097783	.0953836	1.656989	.2683362	1.758312
#1	1.028022	.2187050	3.958093	9.301444	16.61157	.1617002
#2	1.202580	.2139965	3.959203	9.214328	16.65682	.1606212
#3	1.543095	.2158324	3.952183	9.005639	16.56767	.1660294

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-02 Acquired: 11/21/2024 13:42:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050138	3.907759	10.09879	.3159190	.9339007	.1136751
Stddev	.0002134	.002155	.07132	.0007277	.0026829	.0010702
%RSD	4.256190	.0551411	.7061828	.2303393	.2872748	.9414786
#1	.0047979	3.905494	10.01663	.3153466	.9308091	.1145403
#2	.0050191	3.909783	10.13498	.3156726	.9352763	.1140068
#3	.0052246	3.908000	10.14474	.3167379	.9356168	.1124783

Elem	Sr4077
Units	ppm
Avg	.3776291
Stddev	.0005769
%RSD	.1527706
#1	.3771296
#2	.3774972
#3	.3782606

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1063.468	29620.44	6181.896	886.4578	1448.548
Stddev	2.714	60.35	16.299	2.6723	6.301
%RSD	.2552144	.2037459	.2636610	.3014636	.4349979
#1	1061.646	29550.76	6196.208	883.4682	1445.752
#2	1062.170	29654.23	6164.155	887.2906	1444.129
#3	1066.587	29656.32	6185.324	888.6146	1455.763

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-01LX5 Acquired: 11/21/2024 13:47:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0286135	.0026436	.2992625	-.003523	.0033876	18.78920	.4520707
Stddev	.0103168	.0031672	.0029733	.005876	.0038008	.07405	.0017084
%RSD	36.05585	119.8061	.9935543	166.8060	112.1993	.3941347	.3779078
#1	.0195207	-.000692	.2965612	-.001207	.0069756	18.74499	.4528025
#2	.0264944	.005611	.2987780	-.010204	-.000595	18.87469	.4532912
#3	.0398253	.003012	.3024484	.000843	.003782	18.74791	.4501182

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013137	.0025511	66.29564	.0331664	.0144549	.3742324	39.97461
Stddev	.0001473	.0001503	.28270	.0017093	.0006132	.0039955	.13637
%RSD	11.20901	5.893198	.4264263	5.153750	4.242205	1.067650	.3411296
#1	.0013875	.0026415	66.30386	.0345320	.0151628	.3728174	39.83932
#2	.0014095	.0023776	66.57415	.0337177	.0140897	.3787429	40.11202
#3	.0011442	.0026343	66.00892	.0312494	.0141121	.3711370	39.97251

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.439026	16.77895	.0414961	-.003462	-.341302	.0452337	1.007286
Stddev	.008806	.08866	.0010996	.000421	.312323	.0036305	.002210
%RSD	.3610380	.5283821	2.649807	12.17231	91.50930	8.026047	.2194036
#1	2.435899	16.73099	.0412576	-.003036	-.417341	.0416926	1.009613
#2	2.448968	16.88125	.0405354	-.003471	.002019	.0489473	1.005214
#3	2.432210	16.72460	.0426954	-.003878	-.608584	.0450611	1.007032

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.360492	3.168893	.0342359	.0009298	.7781274	2.401872	.0135401
Stddev	.101891	.006936	.0006837	.0003301	.0025949	.024698	.0011761
%RSD	4.316532	.2188873	1.997054	35.50010	.3334759	1.028264	8.686003
#1	2.471976	3.161171	.0342042	.0007795	.7751880	2.386427	.0140031
#2	2.337315	3.174596	.0349349	.0013083	.7790935	2.430357	.0144143
#3	2.272186	3.170911	.0335686	.0007017	.7801006	2.388833	.0122030

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-01LX5 Acquired: 11/21/2024 13:47:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2421830	.0276874	.0968448
Stddev	.0005145	.0002125	.0003808
%RSD	.2124282	.7676497	.3931935
#1	.2416752	.0277245	.0965414
#2	.2427039	.0274587	.0972722
#3	.2421698	.0278789	.0967210

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	934.4619	25681.65	5166.726	778.5321	1601.189
Stddev	1.3499	54.51	35.207	1.1879	.602
%RSD	.1444534	.2122512	.6814191	.1525835	.0375802
#1	935.5386	25618.76	5182.277	777.7889	1601.610
#2	932.9475	25710.90	5126.421	779.9022	1601.457
#3	934.8996	25715.30	5191.480	777.9054	1600.500

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-04 Acquired: 11/21/2024 13:56:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0797150	-.012473	.1577677	-.006719	.0045314	44.18970
Stddev	.0041526	.002721	.0028186	.006359	.0019565	.05585
%RSD	5.209355	21.81690	1.786559	94.64896	43.17663	.1263809
#1	.0828190	-.013135	.1595203	.000619	.0048848	44.23397
#2	.0749978	-.009481	.1592665	-.010636	.0024223	44.20817
#3	.0813282	-.014801	.1545164	-.010139	.0062871	44.12695

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9670750	.0025483	.0077010	F 1156.443	.0685896	.0585904
Stddev	.0032069	.0002019	.0000950	6.956	.0013678	.0011401
%RSD	.3316089	7.921549	1.233495	.6014651	1.994227	1.945922
#1	.9658745	.0023554	.0076485	1152.356	.0683663	.0572797
#2	.9707090	.0027580	.0078106	1152.498	.0700553	.0591389
#3	.9646416	.0025315	.0076437	1164.474	.0673471	.0593526

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1973641	111.2910	7.755759	187.6032	.1172324	.0032173
Stddev	.0018755	.1856	.022603	.7417	.0018688	.0006899
%RSD	.9502938	.1667540	.2914410	.3953746	1.594138	21.44244
#1	.1993743	111.4775	7.738232	186.8654	.1193578	.0036946
#2	.1970566	111.2892	7.781271	188.3488	.1158465	.0024263
#3	.1956613	111.1064	7.747774	187.5954	.1164927	.0035310

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.183538	.1315272	.3750448	6.647169	7.400355	.0879223
Stddev	.180438	.0010287	.0019931	.133945	.005967	.0008458
%RSD	15.24563	.7821226	.5314279	2.015069	.0806252	.9620029
#1	1.202474	.1312006	.3749518	6.677798	7.405402	.0877169
#2	1.353761	.1307015	.3730999	6.763147	7.393770	.0871981
#3	.994379	.1326796	.3770828	6.500562	7.401891	.0888519

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-04 Acquired: 11/21/2024 13:56:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009544	1.696730	9.047212	-.001237	.8469762	.0909870
Stddev	.0004169	.006886	.022380	.004162	.0013372	.0011822
%RSD	43.68252	.4058208	.2473659	336.5245	.1578757	1.299248
#1	.0004730	1.689169	9.043094	-.000737	.8469381	.0910583
#2	.0011978	1.702641	9.027177	.002653	.8483319	.0897708
#3	.0011925	1.698379	9.071364	-.005626	.8456584	.0921319

Elem	Sr4077
Units	ppm
Avg	.9786441
Stddev	.0018209
%RSD	.1860591
#1	.9789358
#2	.9803015
#3	.9766950

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	915.7863	25508.76	5614.421	767.2879	1241.182
Stddev	1.6290	46.88	9.151	1.6993	1.845
%RSD	.1778775	.1837975	.1629936	.2214743	.1486777
#1	914.3410	25526.31	5615.975	767.4158	1243.171
#2	917.5515	25455.64	5622.696	768.9197	1240.852
#3	915.4665	25544.35	5604.592	765.5283	1239.524

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-05 Acquired: 11/21/2024 14:01:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0509820	-.001943	.1029978	-.004538	.0019757	36.86599
Stddev	.0159233	.007134	.0023308	.009848	.0012700	.07861
%RSD	31.23314	367.1728	2.262938	216.9956	64.27734	.2132451
#1	.0370038	.005425	.1016133	-.014005	.0006157	36.84477
#2	.0476266	-.002436	.1056887	-.005260	.0021808	36.95304
#3	.0683156	-.008818	.1016913	.005651	.0031307	36.80017

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6292584	.0025178	.0060622	F 1003.185	.0648619	.0481543
Stddev	.0010455	.0001455	.0001539	6.960	.0006367	.0007268
%RSD	.1661416	5.780318	2.538253	.6938215	.9815602	1.509276
#1	.6291731	.0025933	.0058958	995.285	.0641328	.0487515
#2	.6303439	.0023501	.0060912	1008.415	.0653080	.0473451
#3	.6282581	.0026101	.0061994	1005.855	.0651449	.0483664

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1041383	97.25108	11.38505	71.32890	.1251185	-.002471
Stddev	.0016749	.04265	.02354	.13995	.0012105	.000160
%RSD	1.608387	.0438517	.2067318	.1962079	.9675009	6.485981
#1	.1022063	97.24332	11.36365	71.18634	.1264523	-.002461
#2	.1051813	97.21285	11.41026	71.33426	.1248137	-.002636
#3	.1050272	97.29708	11.38123	71.46609	.1240895	-.002316

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7062562	.0993827	.2553753	8.966258	9.738186	.0885646
Stddev	.1943272	.0038987	.0019807	.142862	.024512	.0008802
%RSD	27.51512	3.922899	.7755999	1.593327	.2517057	.9938812
#1	.8652048	.1029839	.2534806	9.035596	9.717163	.0895332
#2	.7639480	.0999215	.2552132	8.801960	9.732286	.0878136
#3	.4896157	.0952426	.2574321	9.061217	9.765109	.0883469

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-05 Acquired: 11/21/2024 14:01:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000049	1.165710	7.588329	-.001592	.6853414	.0784059
Stddev	.0006549	.017846	.002242	.004733	.0012707	.0012072
%RSD	13424.70	1.530879	.0295489	297.3611	.1854171	1.539674
#1	.0007298	1.185382	7.588173	-.004645	.6862857	.0770787
#2	-.000544	1.161187	7.586170	.003861	.6858420	.0794386
#3	-.000171	1.150561	7.590646	-.003991	.6838966	.0787005

Elem	Sr4077
Units	ppm
Avg	.6147027
Stddev	.0005960
%RSD	.0969580
#1	.6140652
#2	.6152460
#3	.6147969

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1005.452	27907.27	6023.270	842.4739	1285.435
Stddev	2.725	6.95	6.472	4.7339	1.599
%RSD	.2710186	.0248984	.1074534	.5618989	.1244188
#1	1008.593	27903.21	6026.834	847.6430	1285.583
#2	1003.710	27903.29	6027.177	841.4287	1286.955
#3	1004.055	27915.29	6015.799	838.3500	1283.767

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-06 Acquired: 11/21/2024 14:05:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1099225	-.000834	4.379581	.0016198	.0049332	75.33599
Stddev	.0083659	.004997	.018859	.0025820	.0011595	.05216
%RSD	7.610704	599.4369	.4306148	159.4040	23.50344	.0692336
#1	.1007321	.002319	4.368738	.0006761	.0054318	75.28688
#2	.1119409	.001775	4.368647	-.000358	.0036079	75.39073
#3	.1170946	-.006595	4.401358	.004541	.0057600	75.33036

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.893361	.0050683	.0128272	204.7989	.1408107	.0814532
Stddev	.001251	.0000989	.0003698	.2009	.0004750	.0008272
%RSD	.0660491	1.950398	2.883204	.0980946	.3373103	1.015576
#1	1.892173	.0051651	.0132538	204.5680	.1410595	.0816764
#2	1.894666	.0049675	.0125959	204.9336	.1411095	.0805372
#3	1.893245	.0050724	.0126320	204.8952	.1402630	.0821458

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4886778	154.5314	7.861035	52.10118	.2104078	-.017515
Stddev	.0006875	.1000	.014783	.08564	.0004235	.000305
%RSD	.1406908	.0646923	.1880585	.1643738	.2012938	1.741292
#1	.4894652	154.6053	7.843984	52.06752	.2107969	-.017658
#2	.4883720	154.5712	7.870274	52.19854	.2099567	-.017164
#3	.4881962	154.4176	7.868845	52.03749	.2104699	-.017721

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.289322	.1817049	1.756436	9.944300	F 16.01388	.1334209
Stddev	.282280	.0050771	.003603	.063001	.05766	.0008117
%RSD	21.89370	2.794129	.2051033	.6335432	.3600329	.6084023
#1	1.615162	.1833406	1.758432	9.875949	15.96798	.1328635
#2	1.133675	.1857625	1.752277	9.956907	15.99508	.1330471
#3	1.119127	.1760116	1.758597	10.00005	16.07859	.1343522

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-06 Acquired: 11/21/2024 14:05:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038842	4.770504	9.017321	.0966033	1.153039	.1155520
Stddev	.0003602	.012668	.044140	.0013684	.001804	.0012204
%RSD	9.273997	.2655497	.4894999	1.416532	.1564945	1.056187
#1	.0037200	4.776593	8.968508	.0962813	1.152001	.1165283
#2	.0036353	4.755941	9.054428	.0954246	1.155122	.1159440
#3	.0042973	4.778978	9.029027	.0981040	1.151993	.1141837

Elem	Sr4077
Units	ppm
Avg	.3191082
Stddev	.0000995
%RSD	.0311950
#1	.3190149
#2	.3192130
#3	.3190966

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1078.481	29991.71	6209.729	897.4557	1462.752
Stddev	2.440	93.04	10.782	4.2478	3.002
%RSD	.2262520	.3102324	.1736377	.4733185	.2052168
#1	1079.885	29896.60	6218.383	893.2027	1464.182
#2	1079.896	29995.98	6197.650	901.6983	1464.772
#3	1075.664	30082.54	6213.154	897.4660	1459.303

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-07 Acquired: 11/21/2024 14:10:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0877881	-.002517	.9332607	.0032898	.0053391	58.13622	.8108946
Stddev	.0093133	.003611	.0423268	.0067817	.0022626	.18749	.0025778
%RSD	10.60882	143.4628	4.535373	206.1472	42.37768	.3224973	.3178895
#1	.0791543	-.004861	.8849745	.0111143	.0042282	57.91974	.8079347
#2	.0976575	.001641	.9508544	-.000895	.0038467	58.24282	.8121025
#3	.0865525	-.004331	.9639532	-.000350	.0079424	58.24610	.8126466

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026723	.0053716	135.3053	.0676389	.0394781	.1810245	111.4410
Stddev	.0000393	.0004519	.5347	.0022533	.0010290	.0016044	.3030
%RSD	1.471669	8.412067	.3951555	3.331373	2.606412	.8863009	.2719074
#1	.0027168	.0048534	134.6928	.0656928	.0384592	.1801572	111.0916
#2	.0026579	.0056831	135.6788	.0701076	.0394581	.1828759	111.6305
#3	.0026422	.0055784	135.5443	.0671164	.0405169	.1800404	111.6010

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.883607	74.77475	.0981424	-.010156	.6152291	.1204376	.6035042
Stddev	.031107	.38058	.0040342	.001397	.2228523	.0047320	.0131596
%RSD	.4518966	.5089703	4.110551	13.75418	36.22265	3.928966	2.180534
#1	6.852684	74.38671	.0935555	-.011422	.5321444	.1241116	.5903889
#2	6.914895	75.14741	.1011395	-.008658	.8676881	.1221032	.6167077
#3	6.883242	74.79013	.0997321	-.010389	.4458548	.1150981	.6034158

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.334706	7.440669	.0730822	.0011962	1.115873	9.169989	.0176823
Stddev	.079466	.323988	.0025365	.0012443	.050840	.077862	.0025259
%RSD	1.833249	4.354287	3.470744	104.0184	4.556032	.8490962	14.28496
#1	4.377661	7.073808	.0741431	.0006183	1.057169	9.097564	.0150846
#2	4.383449	7.560633	.0749160	.0026244	1.145199	9.252337	.0201297
#3	4.243007	7.687566	.0701875	.0003460	1.145252	9.160067	.0178327

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-07 Acquired: 11/21/2024 14:10:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.033358	.0626508	.1158578
Stddev	.005200	.0008242	.0003307
%RSD	.5032486	1.315479	.2854281
#1	1.027467	.0631240	.1154786
#2	1.037312	.0616992	.1160083
#3	1.035294	.0631293	.1160864

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	965.2142	26435.19	5444.713	794.8367	1526.601
Stddev	32.0469	506.55	26.309	15.9121	60.284
%RSD	3.320185	1.916184	.4831981	2.001932	3.948899
#1	1001.699	26907.40	5467.073	810.6151	1594.868
#2	952.325	25900.16	5415.724	778.7942	1504.249
#3	941.619	26498.00	5451.342	795.1008	1480.685

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-08 Acquired: 11/21/2024 14:14:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0980467	-.000906	1.578270	-.003284	.0090884	73.53632	1.387473
Stddev	.0111565	.001258	.012531	.008457	.0011671	.15934	.000689
%RSD	11.37872	138.8812	.7939622	257.4769	12.84166	.2166772	.0496909
#1	.0887887	.000537	1.565279	-.012340	.0088803	73.36313	1.386716
#2	.1104335	-.001482	1.579247	.004408	.0080393	73.56911	1.388065
#3	.0949179	-.001772	1.590284	-.001921	.0103455	73.67670	1.387639

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041210	.0097420	243.0499	.1310379	.0693411	.3277236	157.0461
Stddev	.0001589	.0004564	.3157	.0011799	.0006461	.0020182	.4745
%RSD	3.856307	4.685172	.1299079	.9004340	.9318211	.6158177	.3021631
#1	.0040228	.0093477	242.7168	.1311598	.0689863	.3262494	156.5048
#2	.0040358	.0096364	243.3449	.1298018	.0689501	.3300238	157.2431
#3	.0043043	.0102421	243.0878	.1321521	.0700869	.3268977	157.3905

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.871448	60.38616	.1630361	-.012126	1.055537	.1875886	1.411928
Stddev	.005567	.14176	.0007533	.000315	.403362	.0019814	.004177
%RSD	.0707209	.2347507	.4620733	2.600335	38.21395	1.056255	.2958691
#1	7.866080	60.31893	.1622096	-.011907	1.521058	.1856478	1.407692
#2	7.871069	60.54903	.1632145	-.011983	.809770	.1875097	1.416044
#3	7.877194	60.29053	.1636842	-.012487	.835784	.1896083	1.412048

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.605333	9.690459	.1094218	.0036750	2.330127	9.196610	.0644341
Stddev	.120258	.108817	.0012072	.0004017	.026890	.012398	.0022552
%RSD	1.581231	1.122934	1.103261	10.92958	1.154033	.1348153	3.500053
#1	7.658608	9.578792	.1106944	.0037193	2.304174	9.186326	.0647479
#2	7.467640	9.696401	.1092784	.0032530	2.328341	9.210378	.0620385
#3	7.689751	9.796183	.1082928	.0040526	2.357866	9.193126	.0665161

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-08 Acquired: 11/21/2024 14:14:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.199272	.1016833	.3501134
Stddev	.004510	.0007420	.0009514
%RSD	.3760803	.7297418	.2717529
#1	1.196818	.1008768	.3491071
#2	1.204477	.1018362	.3502346
#3	1.196522	.1023370	.3509984

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	976.2547	27066.49	5601.698	815.7009	1470.693
Stddev	4.4484	126.87	7.929	.7127	13.670
%RSD	.4556604	.4687522	.1415416	.0873671	.9295054
#1	980.9621	26922.12	5595.032	815.3108	1484.349
#2	975.6813	27117.07	5599.596	815.2684	1470.721
#3	972.1209	27160.27	5610.466	816.5234	1457.008

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-09 Acquired: 11/21/2024 14:19:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1074974	.0009312	2.524534	-.004365	.0035613	68.01666
Stddev	.0102406	.0045350	.001120	.003785	.0016782	.14281
%RSD	9.526352	487.0224	.0443506	86.70957	47.12242	.2099620
#1	.1017292	.0042641	2.523248	-.008366	.0044007	67.85414
#2	.1014419	.0027625	2.525286	-.003890	.0016290	68.07373
#3	.1193210	-.004233	2.525069	-.000841	.0046542	68.12211

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.561502	.0040270	.0114400	390.6637	.1191906	.0787701
Stddev	.002881	.0000790	.0003233	.7394	.0006499	.0009092
%RSD	.1844935	1.961151	2.826064	.1892635	.5452609	1.154218
#1	1.559233	.0039736	.0117464	389.8806	.1191344	.0796178
#2	1.560530	.0041177	.0114717	390.7608	.1198668	.0778099
#3	1.564743	.0039896	.0111021	391.3498	.1185707	.0788826

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5239316	163.0782	9.425527	78.91435	.1693868	-.011846
Stddev	.0032383	.2325	.018142	.21595	.0016267	.000476
%RSD	.6180754	.1425801	.1924754	.2736510	.9603414	4.019650
#1	.5251168	162.8097	9.410622	78.73132	.1707402	-.012246
#2	.5264102	163.2114	9.420232	78.85922	.1675821	-.011973
#3	.5202676	163.2135	9.445728	79.15253	.1698380	-.011319

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.166351	.1863053	1.997201	7.944817	F 13.63934	.1180529
Stddev	.092999	.0047164	.014390	.064454	.03798	.0030003
%RSD	7.973466	2.531569	.7205198	.8112708	.2784894	2.541457
#1	1.123193	.1891469	1.980889	7.976395	13.68306	.1176751
#2	1.102773	.1889079	2.008101	7.987392	13.62054	.1152594
#3	1.273087	.1808609	2.002611	7.870663	13.61442	.1212242

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-09 Acquired: 11/21/2024 14:19:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032914	2.375443	9.683194	.3042669	1.239357	.0939521
Stddev	.0008931	.018226	.032613	.0026417	.003264	.0011756
%RSD	27.13399	.7672567	.3368044	.8682233	.2633507	1.251246
#1	.0042993	2.390335	9.716507	.3072843	1.242040	.0939709
#2	.0029766	2.355119	9.651329	.3023709	1.235724	.0951181
#3	.0025984	2.380874	9.681745	.3031455	1.240307	.0927672

Elem	Sr4077
Units	ppm
Avg	.4900663
Stddev	.0003961
%RSD	.0808227
#1	.4901251
#2	.4896441
#3	.4904297

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	972.5554	27231.16	5738.054	814.6600	1403.238
Stddev	2.8126	66.21	6.891	7.5508	4.050
%RSD	.2891924	.2431309	.1200889	.9268672	.2886527
#1	971.5933	27305.17	5735.098	822.5315	1399.993
#2	970.3501	27210.74	5745.929	807.4770	1401.942
#3	975.7228	27177.56	5733.134	813.9715	1407.777

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-10 Acquired: 11/21/2024 14:23:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1098329	.0043896	1.357864	-.003073	.0060730	73.38155
Stddev	.0046542	.0031673	.004485	.007537	.0016419	.11804
%RSD	4.237480	72.15511	.3303116	245.2485	27.03622	.1608636
#1	.1046805	.0039505	1.358288	-.009727	.0078623	73.48783
#2	.1137323	.0014648	1.353182	.005112	.0046354	73.25450
#3	.1110859	.0077536	1.362123	-.004605	.0057214	73.40233

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.413034	.0053838	.0138900	56.68698	.1063984	.1062275
Stddev	.003190	.0002014	.0003016	.13757	.0013438	.0013455
%RSD	.2257762	3.740345	2.171360	.2426790	1.263025	1.266657
#1	1.415178	.0055257	.0135589	56.81485	.1049788	.1047028
#2	1.409368	.0051534	.0141490	56.54143	.1076508	.1067313
#3	1.414556	.0054724	.0139623	56.70466	.1065656	.1072485

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3350428	218.6761	20.97782	22.63313	.1922927	-.027615
Stddev	.0034975	.2658	.03258	.09492	.0015639	.000244
%RSD	1.043890	.1215289	.1553174	.4193648	.8133166	.8826571
#1	.3357573	218.8031	21.01510	22.72335	.1919194	-.027856
#2	.3312432	218.3707	20.95477	22.64191	.1909491	-.027622
#3	.3381278	218.8545	20.96360	22.53413	.1940095	-.027368

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9350930	.1972085	1.090414	9.877693	F 18.84344	.1440859
Stddev	.3117328	.0029322	.009339	.081917	.01741	.0023462
%RSD	33.33709	1.486871	.8564622	.8293123	.0923935	1.628307
#1	1.294965	.1969265	1.093778	9.932464	18.85430	.1429324
#2	.748333	.1944274	1.079859	9.783521	18.82336	.1467855
#3	.761981	.2002715	1.097605	9.917096	18.85266	.1425398

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-10 Acquired: 11/21/2024 14:23:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064459	2.285232	7.886987	.2463130	1.155742	.0888756
Stddev	.0003305	.004419	.039846	.0047362	.002710	.0001067
%RSD	5.127553	.1933805	.5052155	1.922826	.2345138	.1200710
#1	.0060646	2.281680	7.920183	.2462743	1.157976	.0887524
#2	.0066231	2.283834	7.897979	.2415963	1.152727	.0889389
#3	.0066501	2.290181	7.842798	.2510684	1.156524	.0889355

Elem	Sr4077
Units	ppm
Avg	.2531607
Stddev	.0004899
%RSD	.1935332
#1	.2536646
#2	.2526860
#3	.2531314

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1129.313	31499.32	6370.150	952.8058	1554.374
Stddev	3.479	51.97	15.170	6.9953	7.018
%RSD	.3080865	.1649930	.2381419	.7341772	.4515132
#1	1129.166	31551.10	6357.728	950.4849	1559.855
#2	1132.864	31499.68	6365.664	960.6666	1556.802
#3	1125.910	31447.16	6387.057	947.2660	1546.464

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-11 Acquired: 11/21/2024 14:27:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0643565	-.000156	1.197682	.0007402	.0086456	44.31604	.7530520
Stddev	.0091045	.004195	.007734	.0063857	.0008340	1.38978	.0235274
%RSD	14.14693	2682.968	.6457606	862.7280	9.646331	3.136059	3.124272
#1	.0654493	.004317	1.200685	-.002602	.0095175	45.58638	.7759760
#2	.0547549	-.004002	1.203464	.008103	.0078555	42.83166	.7289644
#3	.0728652	-.000784	1.188896	-.003281	.0085637	44.53009	.7542156

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026617	.0068655	329.3593	.0740691	.0480121	.1851699	102.4274
Stddev	.0000922	.0003845	10.2261	.0030531	.0014638	.0081062	3.1381
%RSD	3.463577	5.600631	3.104841	4.121996	3.048819	4.377689	3.063738
#1	.0026011	.0067269	339.3333	.0734183	.0472930	.1927911	105.1755
#2	.0027678	.0073001	318.8985	.0773952	.0496963	.1766532	99.0080
#3	.0026161	.0065695	329.8461	.0713939	.0470469	.1860656	103.0988

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.378432	123.1548	.1138569	-.004403	1.070114	.1225249	.7421865
Stddev	.237625	3.9934	.0012065	.002333	.114296	.0100727	.0271444
%RSD	3.220536	3.242564	1.059643	52.99420	10.68069	8.220941	3.657360
#1	7.614454	127.1676	.1127414	-.005902	1.199857	.1249096	.7262804
#2	7.139235	119.1811	.1136918	-.001715	.984303	.1114739	.7735290
#3	7.381607	123.1158	.1151374	-.005592	1.026180	.1311913	.7267501

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.892193	7.334770	.0936484	.0025071	6.083182	10.33212	.0208696
Stddev	.303073	.028719	.0020481	.0007066	.005605	.21868	.0010041
%RSD	5.143639	.3915416	2.187017	28.18279	.0921441	2.116469	4.811122
#1	6.140661	7.306863	.0952977	.0016913	6.085726	10.56215	.0204797
#2	5.554532	7.333210	.0913559	.0029203	6.087064	10.12692	.0220101
#3	5.981386	7.364237	.0942917	.0029099	6.076756	10.30728	.0201190

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-11 Acquired: 11/21/2024 14:27:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.015791	.0669820	.3529561
Stddev	.036853	.0020326	.0107817
%RSD	3.628010	3.034520	3.054679
#1	1.048284	.0678128	.3633298
#2	.975748	.0646656	.3418082
#3	1.023341	.0684675	.3537301

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	935.3558	25615.07	5347.744	770.3164	1425.177
Stddev	1.3250	641.35	135.316	21.0227	3.423
%RSD	.1416573	2.503808	2.530347	2.729100	.2401567
#1	936.7908	26000.44	5215.759	785.5679	1428.798
#2	934.1788	24874.71	5486.162	746.3353	1424.736
#3	935.0977	25970.06	5341.311	779.0459	1421.995

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-12 Acquired: 11/21/2024 14:32:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1253064	.0013287	2.343355	.0005426	.0084499	59.59841	1.031653
Stddev	.0032044	.0024412	.009002	.0077685	.0018047	.09498	.001474
%RSD	2.557256	183.7210	.3841470	1431.751	21.35824	.1593696	.1429178
#1	.1290065	-.001362	2.353548	.0090186	.0084567	59.61300	1.032242
#2	.1234494	.003401	2.336493	-.006238	.0102512	59.49698	1.032741
#3	.1234632	.001948	2.340025	-.001152	.0066417	59.68526	1.029975

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037217	.0114521	269.5115	.0918350	.0766640	.2896828	159.9169
Stddev	.0000720	.0003716	.6998	.0009906	.0011200	.0029356	.2496
%RSD	1.935528	3.244386	.2596652	1.078646	1.460935	1.013392	.1560794
#1	.0036692	.0115104	269.2364	.0927212	.0776503	.2878427	160.1756
#2	.0038038	.0117910	270.3071	.0907657	.0768953	.2881375	159.6776
#3	.0036921	.0110548	268.9911	.0920182	.0754464	.2930683	159.8974

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.31092	85.82072	.1598801	-.013310	1.231961	.1792099	1.089939
Stddev	.04772	.39398	.0016938	.000180	.416704	.0043123	.001991
%RSD	.3875954	.4590789	1.059399	1.351263	33.82448	2.406269	.1826620
#1	12.29471	85.58043	.1609632	-.013281	1.322581	.1836237	1.088929
#2	12.36463	86.27541	.1607490	-.013502	1.595898	.1750069	1.088656
#3	12.27342	85.60632	.1579282	-.013146	.777403	.1789990	1.092233

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.372931	9.269745	.1239592	.0064283	4.198482	7.989190	.0488640
Stddev	.108909	.003848	.0031348	.0004585	.017016	.050187	.0020999
%RSD	1.300726	.0415139	2.528895	7.131743	.4053001	.6281870	4.297411
#1	8.484142	9.268640	.1259265	.0064281	4.195246	7.990989	.0494242
#2	8.266480	9.274025	.1203441	.0059700	4.183316	8.038453	.0465408
#3	8.368170	9.266571	.1256069	.0068869	4.216884	7.938127	.0506269

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-12 Acquired: 11/21/2024 14:32:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.123157	.0884069	.3119025
Stddev	.003447	.0008044	.0001799
%RSD	.3068832	.9099100	.0576858
#1	1.125936	.0887028	.3119860
#2	1.124236	.0874964	.3116960
#3	1.119300	.0890214	.3120255

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	990.9633	27520.44	5711.208	824.2072	1435.301
Stddev	1.9349	60.63	31.575	2.5478	1.568
%RSD	.1952527	.2203178	.5528579	.3091243	.1092432
#1	993.1947	27465.02	5702.885	823.4353	1433.923
#2	989.7514	27585.20	5684.629	827.0517	1437.007
#3	989.9437	27511.09	5746.111	822.1346	1434.974

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-13 Acquired: 11/21/2024 14:36:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1167561	.0044732	1.493830	.0045527	.0050324	60.93287
Stddev	.0030848	.0069751	.001896	.0068423	.0017432	.05855
%RSD	2.642079	155.9321	.1269298	150.2921	34.63956	.0960962
#1	.1170669	.0125209	1.495762	-.000837	.0068149	60.99475
#2	.1135277	.0007288	1.493754	.012250	.0033313	60.87834
#3	.1196737	.0001698	1.491972	.002245	.0049511	60.92550

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.104376	.0038129	.0109336	176.2445	.0841782	.0912274
Stddev	.001119	.0001196	.0001749	.3614	.0007812	.0007941
%RSD	.1013465	3.135928	1.599743	.2050650	.9280234	.8704716
#1	1.103917	.0039206	.0111303	176.1580	.0846863	.0918293
#2	1.103560	.0038338	.0108746	175.9342	.0845696	.0915255
#3	1.105652	.0036842	.0107957	176.6413	.0832786	.0903274

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2766429	153.6271	14.83156	29.23395	.1641333	-.017850
Stddev	.0008588	.1845	.04170	.11581	.0002745	.000119
%RSD	.3104307	.1201125	.2811320	.3961527	.1672683	.6681776
#1	.2763930	153.7960	14.83102	29.23756	.1639334	-.017857
#2	.2775990	153.4302	14.79014	29.11638	.1640201	-.017965
#3	.2759368	153.6551	14.87352	29.34792	.1644463	-.017727

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7636340	.1530286	.8657453	7.869643	F 14.44282	.1133862
Stddev	.2302059	.0081888	.0045393	.140732	.02346	.0024186
%RSD	30.14610	5.351176	.5243255	1.788287	.1624570	2.133071
#1	1.018684	.1502378	.8700344	7.870888	14.46754	.1149918
#2	.700971	.1622480	.8662101	8.009749	14.42086	.1106045
#3	.571248	.1466000	.8609915	7.728294	14.44006	.1145623

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-13 Acquired: 11/21/2024 14:36:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044116	1.977532	8.334793	.0349997	.8785930	.0987404
Stddev	.0001411	.006645	.016953	.0032132	.0031896	.0004132
%RSD	3.198978	.3360492	.2033983	9.180734	.3630322	.4185231
#1	.0042577	1.979541	8.325766	.0385851	.8821790	.0982649
#2	.0044421	1.970114	8.324264	.0340337	.8775272	.0990133
#3	.0045350	1.982941	8.354349	.0323803	.8760727	.0989429

Elem	Sr4077
Units	ppm
Avg	.2416669
Stddev	.0004755
%RSD	.1967703
#1	.2418686
#2	.2411238
#3	.2420083

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1079.154	29938.41	6159.800	900.4563	1512.849
Stddev	2.110	43.77	25.040	5.3189	3.948
%RSD	.1955475	.1461858	.4065046	.5906855	.2609452
#1	1078.819	29925.13	6166.127	895.4459	1508.695
#2	1081.412	29987.28	6181.070	906.0376	1513.301
#3	1077.231	29902.83	6132.204	899.8854	1516.552

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-14 Acquired: 11/21/2024 14:41:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1531409	.0003619	3.107248	.0010212	.0090226	67.93738
Stddev	.0015722	.0020888	.006818	.0032868	.0008630	.15800
%RSD	1.026652	577.1778	.2194109	321.8636	9.564818	.2325672
#1	.1547807	-.002000	3.112771	.0002410	.0097254	67.96278
#2	.1529958	.001118	3.109346	.0046279	.0092831	67.76823
#3	.1516463	.001967	3.099629	-.001805	.0080594	68.08115

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.386867	.0048436	.0130496	167.5616	.1177991	.0970013
Stddev	.002966	.0001941	.0001097	.5412	.0008951	.0010001
%RSD	.2138936	4.007077	.8408325	.3229711	.7598151	1.031050
#1	1.383454	.0050671	.0131423	167.0201	.1187883	.0973303
#2	1.388829	.0047175	.0130781	168.1025	.1175638	.0958781
#3	1.388317	.0047462	.0129285	167.5622	.1170452	.0977954

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3591954	166.6620	14.97266	48.02206	.2117210	-.016614
Stddev	.0019734	.4616	.03377	.14515	.0002356	.000219
%RSD	.5493858	.2769531	.2255295	.3022558	.1112871	1.315679
#1	.3569168	166.5160	14.95729	47.95524	.2114938	-.016589
#2	.3603394	166.2911	15.01138	48.18858	.2119642	-.016844
#3	.3603301	167.1789	14.94931	47.92235	.2117051	-.016409

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9817731	.2096417	1.217370	10.69932	F 10.49116	.1405857
Stddev	.2263622	.0077678	.007025	.04343	.04248	.0010486
%RSD	23.05647	3.705251	.5771025	.4059459	.4048939	.7458944
#1	.9688160	.2018877	1.221280	10.68691	10.51264	.1403689
#2	1.214336	.2096143	1.221570	10.66344	10.51861	.1417258
#3	.762168	.2174231	1.209259	10.74761	10.44224	.1396624

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-14 Acquired: 11/21/2024 14:41:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076060	5.089913	7.691441	.0629596	1.225960	.1059387
Stddev	.0006243	.020469	.011438	.0021207	.003846	.0012082
%RSD	8.208398	.4021416	.1487115	3.368300	.3137428	1.140513
#1	.0083105	5.108191	7.678356	.0629728	1.225337	.1073255
#2	.0073863	5.093751	7.696426	.0650736	1.222463	.1053775
#3	.0071213	5.067797	7.699541	.0608323	1.230080	.1051132

Elem	Sr4077
Units	ppm
Avg	.2822428
Stddev	.0007870
%RSD	.2788201
#1	.2818162
#2	.2817613
#3	.2831510

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1037.272	28849.15	5973.905	871.0683	1482.847
Stddev	1.413	36.57	10.967	5.3069	3.438
%RSD	.1362298	.1267762	.1835785	.6092444	.2318212
#1	1035.940	28827.86	5984.157	868.2014	1481.995
#2	1038.754	28828.21	5975.215	867.8115	1479.916
#3	1037.124	28891.38	5962.342	877.1921	1486.631

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-15 Acquired: 11/21/2024 14:45:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1676486	.0036802	2.312231	.0013191	.0064474	65.51499
Stddev	.0022083	.0008529	.008017	.0037826	.0007399	.20979
%RSD	1.317195	23.17501	.3467128	286.7706	11.47569	.3202146
#1	.1701535	.0040416	2.316329	.0050625	.0058148	65.43596
#2	.1659830	.0042930	2.317370	.0013962	.0072610	65.75282
#3	.1668094	.0027062	2.302993	-.002502	.0062665	65.35620

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.489548	.0046793	.0132662	70.82958	.1223873	.1036694
Stddev	.004371	.0001306	.0002470	.18823	.0010707	.0009285
%RSD	.2934197	2.791239	1.862170	.2657502	.8748130	.8956340
#1	1.485838	.0047127	.0134407	70.61282	.1220269	.1047357
#2	1.494366	.0045353	.0133744	70.95177	.1215433	.1030396
#3	1.488441	.0047901	.0129835	70.92415	.1235917	.1032329

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3887375	169.2438	17.38172	24.81157	.2127787	-.020552
Stddev	.0013573	.3793	.04550	.07728	.0005188	.000137
%RSD	.3491668	.2241203	.2617914	.3114586	.2438430	.6649589
#1	.3877379	169.4101	17.32918	24.74674	.2128767	-.020397
#2	.3902828	169.5116	17.40868	24.89709	.2122179	-.020654
#3	.3881918	168.8097	17.40729	24.79089	.2132416	-.020606

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.170563	.2053791	1.162362	11.00322	F 10.42057	.1334303
Stddev	.274448	.0075767	.005475	.04752	.05337	.0017277
%RSD	23.44581	3.689122	.4710344	.4318471	.5121788	1.294852
#1	.853670	.2006622	1.168645	10.98895	10.48086	.1322626
#2	1.326588	.2141188	1.158618	11.05623	10.37937	.1354150
#3	1.331431	.2013564	1.159821	10.96447	10.40146	.1326132

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-15 Acquired: 11/21/2024 14:45:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHC4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0091854	2.499558	6.467722	.0582803	1.045432	.1127229
Stddev	.0004437	.022259	.021871	.0012432	.002480	.0009798
%RSD	4.830184	.8905372	.3381489	2.133181	.2372506	.8692445
#1	.0091212	2.525216	6.442474	.0591476	1.046288	.1122115
#2	.0087774	2.485409	6.479861	.0588373	1.047371	.1138526
#3	.0096577	2.488049	6.480831	.0568560	1.042637	.1121046

Elem	Sr4077
Units	ppm
Avg	.2274545
Stddev	.0005562
%RSD	.2445304
#1	.2272220
#2	.2280892
#3	.2270523

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1093.397	30400.59	6098.080	913.9781	1556.450
Stddev	2.687	14.86	11.194	4.0131	3.350
%RSD	.2457815	.0488753	.1835675	.4390840	.2152248
#1	1093.774	30415.36	6108.264	909.3494	1555.180
#2	1095.876	30400.76	6086.094	916.4836	1560.249
#3	1090.541	30385.65	6099.883	916.1014	1553.920

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-16 Acquired: 11/21/2024 14:50:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHD6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2084896	.0032353	2.160715	-.003908	.0074458	64.53133
Stddev	.0017419	.0017643	.005795	.007875	.0028128	.03304
%RSD	.8354967	54.53322	.2681923	201.4906	37.77668	.0512028
#1	.2087570	.0033232	2.156303	-.008695	.0090981	64.49511
#2	.2066294	.0014287	2.158564	-.008210	.0041981	64.53905
#3	.2100824	.0049540	2.167278	.005180	.0090413	64.55983

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.521090	.0048882	.0132402	80.42387	.1137361	.1022760
Stddev	.000518	.0001676	.0001394	.19612	.0016016	.0004498
%RSD	.0340494	3.428585	1.052791	.2438534	1.408177	.4397639
#1	1.521250	.0049555	.0133567	80.22700	.1124484	.1025521
#2	1.521509	.0046974	.0132782	80.42540	.1132304	.1017570
#3	1.520511	.0050117	.0130858	80.61923	.1155295	.1025189

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4047988	180.2041	17.08053	26.51499	.2111296	-.020342
Stddev	.0020857	.0695	.04450	.14574	.0009923	.000456
%RSD	.5152505	.0385945	.2605543	.5496637	.4699863	2.242402
#1	.4043290	180.2641	17.03965	26.36083	.2102138	-.020062
#2	.4070794	180.2203	17.07402	26.53361	.2109911	-.020097
#3	.4029881	180.1278	17.12794	26.65053	.2121838	-.020869

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.240110	.2240352	1.203455	10.58384	F 11.96644	.1376651
Stddev	.286777	.0018319	.005155	.10211	.01435	.0007219
%RSD	23.12517	.8176623	.4283260	.9648015	.1199013	.5243846
#1	.988279	.2219249	1.207949	10.56612	11.95184	.1382893
#2	1.552243	.2252147	1.204586	10.49174	11.96695	.1378314
#3	1.179806	.2249661	1.197828	10.69365	11.98052	.1368746

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-16 Acquired: 11/21/2024 14:50:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHD6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0107333	2.534332	6.964303	.0657057	1.067756	.1086611
Stddev	.0003377	.002475	.026819	.0021748	.001884	.0004921
%RSD	3.146262	.0976615	.3850899	3.309923	.1764485	.4528370
#1	.0108180	2.531541	6.940734	.0663617	1.069910	.1089106
#2	.0110207	2.536262	6.958693	.0632783	1.066416	.1089785
#3	.0103614	2.535193	6.993484	.0674769	1.066941	.1080943

Elem	Sr4077
Units	ppm
Avg	.2389880
Stddev	.0001509
%RSD	.0631440
#1	.2389750
#2	.2388439
#3	.2391449

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1073.984	29851.42	6009.224	897.2937	1548.129
Stddev	1.106	67.19	17.578	3.0463	.532
%RSD	.1029723	.2250928	.2925231	.3395024	.0343442
#1	1072.713	29834.13	6024.143	894.8563	1548.208
#2	1074.730	29794.56	6013.684	896.3159	1547.563
#3	1074.507	29925.57	5989.845	900.7089	1548.617

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-17 Acquired: 11/21/2024 14:54:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHD7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1223488	.0076478	1.398727	.0006910	.0044303	75.72690
Stddev	.0160950	.0017134	.030973	.0046077	.0035899	.21012
%RSD	13.15504	22.40404	2.214403	666.8232	81.02930	.2774696
#1	.1081105	.0091196	1.387325	.0016756	.0002888	75.93716
#2	.1191237	.0057668	1.375071	-.004329	.0066534	75.72663
#3	.1398122	.0080569	1.433786	.004727	.0063487	75.51692

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.453332	.0051959	.0150674	53.28830	.1072020	.1108401
Stddev	.002582	.0001122	.0006102	.00672	.0016486	.0026450
%RSD	.1776818	2.160182	4.049707	.0126076	1.537825	2.386311
#1	1.456081	.0053093	.0147720	53.28849	.1070551	.1096090
#2	1.452958	.0050849	.0146610	53.28149	.1056318	.1090350
#3	1.450957	.0051936	.0157690	53.29492	.1089191	.1138762

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3622064	211.7376	21.24347	21.59766	.1973686	-.027427
Stddev	.0020382	.3834	.01728	.07229	.0040203	.000292
%RSD	.5627074	.1810509	.0813412	.3347130	2.036966	1.065447
#1	.3612614	212.0880	21.25759	21.58009	.1946876	-.027092
#2	.3645455	211.7968	21.22420	21.53577	.1954270	-.027631
#3	.3608123	211.3282	21.24863	21.67711	.2019912	-.027558

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.309436	.2005113	1.135421	10.16078	F 19.56470	.1401041
Stddev	.416006	.0027007	.007485	.11040	.39540	.0020438
%RSD	31.76987	1.346883	.6592645	1.086540	2.020991	1.458768
#1	1.780977	.2034342	1.143189	10.15419	19.30932	.1377710
#2	.994305	.1981085	1.134818	10.27433	19.36463	.1409636
#3	1.153027	.1999911	1.128255	10.05383	20.02015	.1415778

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-17 Acquired: 11/21/2024 14:54:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHD7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0064444	2.496944	10.72138	.3931220	1.201995	.0919418
Stddev	.0001513	.072074	.02625	.0063796	.003885	.0004530
%RSD	2.348445	2.886480	.2448390	1.622799	.3232336	.4927314
#1	.0066184	2.476475	10.69319	.3924788	1.205948	.0922424
#2	.0063714	2.437318	10.74512	.3870884	1.201858	.0914207
#3	.0063434	2.577038	10.72582	.3997988	1.198181	.0921622

Elem	Sr4077
Units	ppm
Avg	.2446354
Stddev	.0007160
%RSD	.2926970
#1	.2453871
#2	.2445577
#3	.2439614

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1138.928	31830.69	6415.343	959.5871	1538.986
Stddev	12.678	101.96	4.645	5.0249	25.121
%RSD	1.113122	.3203119	.0724061	.5236545	1.632330
#1	1146.370	31713.16	6414.718	954.1092	1555.641
#2	1146.124	31883.43	6411.042	960.6694	1551.226
#3	1124.290	31895.47	6420.269	963.9826	1510.090

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165102BL Acquired: 11/21/2024 14:59:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS102 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002941	.0023311	.0005998	-.001200	-.002371	.0017356	.0004289
Stddev	.005498	.0021263	.0019620	.002137	.002226	.0125654	.0003510
%RSD	186.9454	91.21381	327.0963	177.9947	93.88207	723.9720	81.82635
#1	.002712	.0031056	.0028652	-.001750	-.004292	.0134374	.0000685
#2	-.008270	.0039616	-.000554	-.003009	-.002889	.0033138	.0004486
#3	-.003265	-.000074	-.000512	.001157	.000068	-.011544	.0007696

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000074	-.000020	.0054787	.0002066	-.000259	-.001908	.0157526
Stddev	.000067	.000134	.0068827	.0011573	.000808	.000172	.0095832
%RSD	90.57267	655.8740	125.6269	560.1293	312.4352	8.999674	60.83595
#1	-.000053	-.000099	.0121808	.0014617	-.001107	-.002045	.0093078
#2	-.000020	-.000097	.0058265	-.000023	.000503	-.001964	.0267652
#3	-.000150	.000134	-.001571	-.000818	-.000172	-.001715	.0111848

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014376	.0264672	-.000788	-.001721	-.447705	.0026579	.0003502
Stddev	.0002932	.0055881	.000722	.000404	.336610	.0037808	.0007694
%RSD	20.39630	21.11327	91.68016	23.44968	75.18571	142.2476	219.7032
#1	.0013530	.0221546	.000042	-.001755	-.311284	.0062385	-.000334
#2	.0011960	.0244669	-.001134	-.001301	-.200719	.0030307	.000202
#3	.0017639	.0327801	-.001271	-.002106	-.831111	-.001296	.001183

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2858834	-.001492	-.002156	.0004227	.0011673	.0013204	-.001562
Stddev	.0182246	.003793	.001239	.0006885	.0062881	.0005642	.002857
%RSD	6.374835	254.1561	57.44034	162.8865	538.6860	42.73047	182.9266
#1	.2793490	-.004138	-.003112	.0001255	.0080141	.0013612	.000097
#2	.3064743	.002853	-.000757	.0012099	-.004349	.0018631	-.004861
#3	.2718269	-.003192	-.002599	-.000067	-.000163	.0007369	.000078

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165102BL Acquired: 11/21/2024 14:59:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS102 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0012951	.0001629	.0001080
Stddev	.0012844	.0007261	.0000571
%RSD	99.16980	445.7572	52.88349
#1	.0023390	-.000499	.0001588
#2	-.000139	.000048	.0001191
#3	.001686	.000939	.0000461

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	906.3055	24895.99	4845.387	756.0014	1745.583
Stddev	1.8566	132.49	16.452	5.5458	2.125
%RSD	.2048573	.5321751	.3395411	.7335729	.1217504
#1	906.2377	24927.00	4838.093	757.6226	1746.818
#2	904.4837	24750.75	4833.843	749.8257	1743.129
#3	908.1951	25010.23	4864.225	760.5560	1746.803

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165102BS Acquired: 11/21/2024 15:03:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS102 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0153759	.0512277	.0238235	.0629794	.1062607	.3826755
Stddev	.0023103	.0013157	.0027582	.0081013	.0010721	.0147767
%RSD	15.02515	2.568381	11.57757	12.86335	1.008923	3.861404
#1	.0128417	.0523177	.0248379	.0567351	.1061225	.3943390
#2	.0173646	.0497662	.0207018	.0600694	.1073952	.3876290
#3	.0159214	.0515992	.0259308	.0721337	.1052644	.3660585

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4195321	.0103908	.0102439	10.74855	.0217931	.0987673
Stddev	.0010377	.0000106	.0000793	.06078	.0009367	.0005624
%RSD	.2473481	.1016712	.7739105	.5655110	4.298331	.5694274
#1	.4184447	.0104006	.0102715	10.70175	.0228704	.0985505
#2	.4196398	.0103923	.0103056	10.81725	.0213382	.0983456
#3	.4205117	.0103796	.0101545	10.72665	.0211707	.0994059

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0491314	.2309698	.0344330	10.00566	.0839953	.0195932
Stddev	.0019374	.0201569	.0006347	.08175	.0001162	.0004310
%RSD	3.943373	8.727071	1.843234	.8170095	.1383674	2.199663
#1	.0473623	.2511281	.0350286	9.96605	.0840760	.0191579
#2	.0512018	.2309670	.0345049	10.09967	.0840479	.0196018
#3	.0488302	.2108143	.0337654	9.95126	.0838621	.0200198

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.594516	.1040658	.1336423	9.964291	.0180971	F -.002276
Stddev	.431775	.0026888	.0009767	.096673	.0030644	.000245
%RSD	4.500229	2.583707	.7308657	.9701928	16.93289	10.74488
#1	9.104005	.1056757	.1325401	10.07170	.0214084	-.002076
#2	9.917093	.1055598	.1344004	9.88426	.0153613	-.002548
#3	9.762452	.1009618	.1339865	9.93692	.0175216	-.002203

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165102BS Acquired: 11/21/2024 15:03:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS102 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0190857	.1823846	F .4415552	.0121308	.2039769	.0286032
Stddev	.0001735	.0054939	.0030478	.0001460	.0021502	.0011722
%RSD	.9090549	3.012279	.6902321	1.203703	1.054116	4.098277
#1	.0191626	.1884693	.4415146	.0121194	.2017761	.0285669
#2	.0192076	.1808965	.4446230	.0122822	.2060726	.0297932
#3	.0188871	.1777880	.4385279	.0119909	.2040820	.0274495

Elem	Sr4077
Units	ppm
Avg	.2100244
Stddev	.0007924
%RSD	.3772774
#1	.2091500
#2	.2106948
#3	.2102283

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	898.2367	24613.09	4912.559	751.4460	1674.734
Stddev	2.7073	81.97	23.260	.8399	1.841
%RSD	.3013991	.3330517	.4734730	.1117751	.1099237
#1	896.2476	24704.54	4918.380	752.1663	1674.710
#2	897.1428	24588.49	4886.941	751.6483	1672.905
#3	901.3198	24546.23	4932.355	750.5234	1676.586

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV042 Acquired: 11/21/2024 15:08:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV042 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.947447	4.731295	24.16935	4.627300	4.706212	402.7573	10.02146
Stddev	.010511	.013972	.02554	.001873	.016223	.1110	.01789
%RSD	.2124434	.2953046	.1056895	.0404821	.3447121	.0275584	.1785535
#1	4.958880	4.722319	24.14499	4.625270	4.690908	402.7024	10.01966
#2	4.938205	4.724173	24.16713	4.627669	4.723219	402.8851	10.00453
#3	4.945255	4.747392	24.19593	4.628962	4.704509	402.6845	10.04018

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4940537	2.437839	397.8181	14.93538	2.441488	14.77045	408.2510
Stddev	.0021836	.000591	1.2760	.02217	.002017	.01482	.6504
%RSD	.4419692	.0242324	.3207476	.1484309	.0826221	.1003445	.1593178
#1	.4933038	2.438096	398.1457	14.95990	2.439211	14.75361	408.1166
#2	.4923439	2.437163	396.4102	14.91675	2.442201	14.77628	408.9582
#3	.4965134	2.438257	398.8983	14.92951	2.443051	14.78148	407.6783

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.51602	395.3041	2.422540	1.223628	397.4866	2.446162	14.44532
Stddev	.05369	1.6563	.001009	.004742	.8388	.003298	.08026
%RSD	.3698671	.4189871	.0416345	.3875652	.2110186	.1348288	.5556179
#1	14.54237	396.0998	2.423538	1.228961	396.8429	2.446922	14.53429
#2	14.45424	393.4001	2.421521	1.222036	398.4352	2.442550	14.42333
#3	14.55144	396.4123	2.422560	1.219886	397.1819	2.449014	14.37835

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	150.9074	4.855883	4.910519	4.628673	4.907851	5.099920	4.863050
Stddev	.2920	.003959	.019969	.014328	.013307	.020155	.005057
%RSD	.1934998	.0815304	.4066483	.3095516	.2711391	.3952079	.1039867
#1	150.5909	4.851313	4.904683	4.612301	4.892561	5.090001	4.860311
#2	150.9650	4.858074	4.894118	4.634791	4.914176	5.086647	4.868885
#3	151.1663	4.858262	4.932755	4.638926	4.916817	5.123113	4.859953

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV042 Acquired: 11/21/2024 15:08:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV042 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.915832	4.992636	4.963533
Stddev	.007162	.009593	.057214
%RSD	.1456975	.1921481	1.152680
#1	4.912053	4.982794	5.028363
#2	4.924093	4.993156	4.920109
#3	4.911352	5.001959	4.942126

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	718.4513	21426.19	4636.494	575.2775	1256.587
Stddev	2.1109	71.60	11.375	4.6559	2.307
%RSD	.2938139	.3341512	.2453301	.8093376	.1835621
#1	720.7069	21360.35	4625.193	571.1215	1256.605
#2	718.1236	21415.81	4647.941	574.4018	1258.884
#3	716.5234	21502.41	4636.349	580.3091	1254.271

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB042 Acquired: 11/21/2024 15:12:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB042 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002021	-.001579	.0027441	.0032348	.0036699	.0119543	.0013817
Stddev	.004980	.000991	.0027031	.0032621	.0032988	.0035713	.0003803
%RSD	246.3342	62.74517	98.50477	100.8454	89.88691	29.87454	27.52398
#1	.003561	-.001682	.0055631	.0038029	.0017604	.0117646	.0009773
#2	-.006004	-.000541	.0024953	.0061755	.0017704	.0156167	.0017321
#3	-.003621	-.002515	.0001741	-.000274	.0074791	.0084817	.0014358

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000179	.0000964	-.003077	.0005154	.0001257	-.001742	.0336522
Stddev	.0001069	.0000834	.008925	.0006109	.0004918	.001666	.0217758
%RSD	598.9144	86.53909	290.0908	118.5405	391.1835	95.63924	64.70839
#1	.0000272	.0001209	-.013332	.0011590	.0004095	-.003083	.0261621
#2	.0001198	.0000035	.001170	.0004437	-.000442	.000123	.0581845
#3	-.000093	.0001648	.002932	-.000057	.000410	-.002268	.0166100

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003873	.0311444	-.000205	-.001434	-.160231	-.004958	.0002764
Stddev	.0004387	.0244682	.000212	.001055	.232208	.004886	.0002818
%RSD	113.2513	78.56379	103.2209	73.59569	144.9203	98.54918	101.9662
#1	.0003102	.0033545	-.000448	-.002641	-.428309	-.004992	-.000042
#2	.0008594	.0494533	-.000056	-.000975	-.021588	-.009828	.000494
#3	-.000008	.0406253	-.000112	-.000686	-.030797	-.000055	.000377

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2331053	-.001131	.0032986	.0009377	-.005768	.0013430	-.001299
Stddev	.1638297	.002381	.0005238	.0005814	.002162	.0006853	.002591
%RSD	70.28142	210.4256	15.88096	62.00082	37.48236	51.02490	199.4242
#1	.0602457	-.002903	.0036747	.0007444	-.003894	.0021339	-.002238
#2	.2529781	.001575	.0027003	.0004776	-.005276	.0009241	.001630
#3	.3860922	-.002066	.0035208	.0015911	-.008133	.0009711	-.003290

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB042 Acquired: 11/21/2024 15:12:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB042 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0011675	.0039691	.0003769
Stddev	.0004480	.0013204	.0000869
%RSD	38.36912	33.26753	23.06186
#1	.0008441	.0029665	.0004740
#2	.0016788	.0034756	.0003502
#3	.0009796	.0054652	.0003065

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	900.6002	24895.59	4792.407	755.3999	1749.197
Stddev	1.9283	451.93	13.876	13.2186	1.469
%RSD	.2141121	1.815290	.2895492	1.749887	.0840089
#1	902.4711	25408.27	4807.532	769.4189	1747.501
#2	900.7104	24723.54	4789.425	753.6185	1750.025
#3	898.6192	24554.96	4780.264	743.1623	1750.066

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-01 Acquired: 11/21/2024 15:17:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0696932	-.002419	1.240153	.0018735	.0068245	66.11975
Stddev	.0040339	.004693	.006999	.0087185	.0027336	.10597
%RSD	5.788138	194.0428	.5643344	465.3702	40.05520	.1602698
#1	.0731040	.001973	1.232097	.0087508	.0044401	66.20650
#2	.0652405	-.007364	1.243627	-.007932	.0098079	66.15111
#3	.0707350	-.001865	1.244735	.004802	.0062255	66.00164

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.249092	.0037317	.0084143	176.9328	.1407973	.0588699
Stddev	.001757	.0000347	.0000660	.2392	.0010838	.0006762
%RSD	.1406956	.9299817	.7844083	.1352031	.7697982	1.148576
#1	1.250733	.0037609	.0083450	177.1249	.1404547	.0589002
#2	1.249307	.0037410	.0084213	177.0086	.1399261	.0595303
#3	1.247237	.0036933	.0084765	176.6648	.1420110	.0581790

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3836886	137.2986	6.317863	42.98296	.1486070	-.010571
Stddev	.0040040	.2314	.012240	.04278	.0006275	.000707
%RSD	1.043542	.1685083	.1937389	.0995384	.4222720	6.688115
#1	.3881573	137.4078	6.330939	42.98821	.1487569	-.010891
#2	.3824812	137.4552	6.315971	42.93779	.1479181	-.009761
#3	.3804273	137.0329	6.306679	43.02288	.1491461	-.011062

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6838776	.1705892	1.471755	8.124412	F 14.29751	.1204423
Stddev	.3456696	.0029510	.005131	.086106	.01490	.0018344
%RSD	50.54554	1.729907	.3486000	1.059838	.1042201	1.523035
#1	.2883040	.1685970	1.465967	8.202224	14.28032	.1217813
#2	.9278017	.1739794	1.475745	8.139109	14.30541	.1211943
#3	.8355272	.1691911	1.473552	8.031904	14.30680	.1183515

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-01 Acquired: 11/21/2024 15:17:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049095	6.629132	11.35826	.0594968	1.407763	.0903891
Stddev	.0013224	.016687	.04652	.0019877	.003633	.0008666
%RSD	26.93655	.2517236	.4095499	3.340801	.2580943	.9587536
#1	.0034514	6.623347	11.41048	.0594214	1.411934	.0896179
#2	.0052457	6.616108	11.32125	.0575479	1.406073	.0913269
#3	.0060314	6.647942	11.34307	.0615211	1.405283	.0902224

Elem	Sr4077
Units	ppm
Avg	.3384029
Stddev	.0003346
%RSD	.0988842
#1	.3387562
#2	.3380907
#3	.3383618

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	969.1628	26846.02	5515.560	806.4554	1501.150
Stddev	1.5619	40.70	17.615	2.2663	2.728
%RSD	.1611628	.1515948	.3193728	.2810215	.1817102
#1	967.9019	26865.64	5499.409	809.0215	1500.371
#2	970.9101	26799.23	5512.929	804.7281	1504.183
#3	968.6766	26873.19	5534.343	805.6165	1498.897

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-02 Acquired: 11/21/2024 15:21:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0563947	-.000683	1.059144	.0020711	.0071243	67.41894
Stddev	.0084076	.003439	.007016	.0030193	.0024999	.08004
%RSD	14.90854	503.4071	.6624079	145.7814	35.09025	.1187240
#1	.0603602	-.000084	1.060938	.0052129	.0065987	67.42825
#2	.0620862	-.004382	1.051406	-.000809	.0098452	67.33465
#3	.0467377	.002417	1.065089	.001809	.0049289	67.49393

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.239290	.0038608	.0084928	186.0289	.1486744	.0598064
Stddev	.002711	.0001801	.0000963	.1971	.0002661	.0002506
%RSD	.2187450	4.664037	1.134425	.1059458	.1790183	.4189599
#1	1.240546	.0037533	.0083962	185.9504	.1483797	.0595377
#2	1.236179	.0040687	.0084933	185.8832	.1487465	.0598479
#3	1.241145	.0037604	.0085889	186.2532	.1488972	.0600336

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5190096	145.3714	5.892252	42.28605	.1481384	-.010193
Stddev	.0028179	.3406	.009501	.16394	.0012690	.000214
%RSD	.5429342	.2343244	.1612446	.3877043	.8565992	2.099835
#1	.5160784	145.4628	5.886495	42.09774	.1492099	-.010133
#2	.5192518	144.9943	5.903218	42.39702	.1467371	-.010431
#3	.5216986	145.6570	5.887042	42.36339	.1484681	-.010016

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8005133	.1886424	1.483568	8.640861	F 18.18513	.1223870
Stddev	.2380873	.0044037	.001513	.064459	.04706	.0019671
%RSD	29.74183	2.334411	.1019931	.7459788	.2587832	1.607308
#1	1.073113	.1854426	1.482116	8.587796	18.15245	.1201158
#2	.633349	.1868197	1.485135	8.622194	18.16387	.1235505
#3	.695078	.1936648	1.483451	8.712593	18.23907	.1234948

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-02 Acquired: 11/21/2024 15:21:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080784	10.87009	10.20665	.0485055	1.956313	.0937366
Stddev	.0005916	.03285	.03195	.0017213	.007189	.0013401
%RSD	7.322595	.3021909	.3130033	3.548670	.3674743	1.429590
#1	.0080157	10.83852	10.17062	.0502867	1.954901	.0926022
#2	.0086988	10.86767	10.21777	.0483786	1.949935	.0933923
#3	.0075207	10.90408	10.23155	.0468511	1.964103	.0952152

Elem	Sr4077
Units	ppm
Avg	.4491450
Stddev	.0002273
%RSD	.0506007
#1	.4489671
#2	.4490668
#3	.4494010

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	942.3747	26285.15	5411.203	782.4202	1503.443
Stddev	3.1585	69.94	5.826	2.1192	2.938
%RSD	.3351672	.2660850	.1076623	.2708572	.1954052
#1	939.2652	26216.45	5417.890	780.6453	1500.398
#2	945.5801	26282.72	5407.225	784.7666	1506.260
#3	942.2786	26356.27	5408.493	781.8486	1503.672

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-03 Acquired: 11/21/2024 15:26:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB3D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0544830	-.005259	1.073763	.0019546	.0075062	67.86648
Stddev	.0123112	.003150	.016125	.0047212	.0013137	.10286
%RSD	22.59643	59.89014	1.501747	241.5395	17.50203	.1515575
#1	.0467145	-.005709	1.057098	-.002902	.0085312	67.88282
#2	.0686777	-.008160	1.074904	.006527	.0060252	67.75644
#3	.0480570	-.001909	1.089288	.002239	.0079620	67.96019

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.278964	.0037709	.0083587	192.0745	.1497203	.0606206
Stddev	.003072	.0001393	.0003324	.2563	.0013493	.0010121
%RSD	.2401650	3.695179	3.976833	.1334636	.9012395	1.669483
#1	1.276270	.0039133	.0079945	191.7848	.1498813	.0594549
#2	1.278314	.0036348	.0086458	192.2719	.1482976	.0611316
#3	1.282309	.0037646	.0084358	192.1667	.1509819	.0612753

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5091198	148.1649	5.952089	42.50445	.1482487	-.011034
Stddev	.0045595	.1326	.006334	.08243	.0032223	.000156
%RSD	.8955713	.0894785	.1064223	.1939425	2.173564	1.417482
#1	.5112520	148.2766	5.945044	42.43141	.1448063	-.010886
#2	.5122227	148.0184	5.957315	42.59383	.1511928	-.011018
#3	.5038849	148.1997	5.953907	42.48811	.1487470	-.011198

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.117342	.1973813	1.473799	8.676411	F 17.91422	.1255729
Stddev	.170127	.0054460	.005359	.053729	.25107	.0027944
%RSD	15.22603	2.759136	.3636337	.6192561	1.401509	2.225292
#1	.949886	.2026891	1.479458	8.737433	17.62441	.1255702
#2	1.112120	.1976480	1.468801	8.655602	18.05250	.1227799
#3	1.290020	.1918068	1.473138	8.636200	18.06574	.1283686

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-03 Acquired: 11/21/2024 15:26:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB3D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0079127	10.61103	10.21999	.0572213	1.931021	.0937932
Stddev	.0000696	.13983	.01777	.0039397	.001907	.0008597
%RSD	.8793387	1.317783	.1738894	6.885034	.0987444	.9165559
#1	.0079602	10.45140	10.20061	.0548186	1.929365	.0928138
#2	.0079450	10.66988	10.22384	.0550772	1.930593	.0944226
#3	.0078328	10.71182	10.23552	.0617680	1.933106	.0941433

Elem	Sr4077
Units	ppm
Avg	.4496939
Stddev	.0006229
%RSD	.1385231
#1	.4495806
#2	.4491354
#3	.4503657

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	947.6768	26421.79	5441.125	790.6889	1507.146
Stddev	8.6722	78.41	17.468	6.5392	19.114
%RSD	.9150993	.2967527	.3210314	.8270268	1.268197
#1	957.6809	26345.90	5424.456	783.3300	1529.199
#2	943.0566	26416.96	5439.626	792.9034	1495.370
#3	942.2929	26502.49	5459.295	795.8333	1496.867

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-02LX5 Acquired: 11/21/2024 15:30:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB3L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111111	.0000141	.2266685	-.005344	.0008141	14.74458	.2708522
Stddev	.0104213	.0017647	.0019620	.005524	.0017291	.01962	.0003094
%RSD	93.79154	12548.82	.8655704	103.3644	212.3810	.1330687	.1142287
#1	.0019521	.0004210	.2278629	-.009856	.0009471	14.75656	.2705672
#2	.0089313	-.001919	.2244041	.000817	.0024729	14.75525	.2708083
#3	.0224498	.001540	.2277384	-.006994	-.000978	14.72194	.2711812

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009069	.0014322	41.12397	.0322618	.0095812	.1138558	32.93911
Stddev	.0000750	.0001753	.07766	.0011802	.0008603	.0019634	.04842
%RSD	8.269060	12.24226	.1888455	3.658206	8.978943	1.724477	.1470020
#1	.0009821	.0015663	41.19703	.0329503	.0086091	.1159255	32.98195
#2	.0008321	.0014964	41.13248	.0308991	.0098905	.1136225	32.88657
#3	.0009065	.0012338	41.04241	.0329361	.0102442	.1120195	32.94880

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.316877	9.322443	.0299335	-.002669	-.089376	.0395099	.3262180
Stddev	.003315	.044266	.0006043	.000397	.311545	.0029745	.0015500
%RSD	.2517435	.4748339	2.018809	14.88712	348.5797	7.528606	.4751358
#1	1.319768	9.272759	.0305888	-.002921	.270062	.0389765	.3279929
#2	1.317604	9.336886	.0298135	-.002874	-.256285	.0368382	.3251313
#3	1.313258	9.357684	.0293982	-.002211	-.281904	.0427151	.3255299

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.043514	3.549097	.0250869	.0011446	2.099367	2.430513	.0084274
Stddev	.132623	.010072	.0012491	.0005104	.015599	.012637	.0014037
%RSD	6.489928	.2837885	4.978947	44.59037	.7430180	.5199478	16.65595
#1	1.998164	3.540405	.0257698	.0007208	2.109045	2.441471	.0068465
#2	1.939515	3.546752	.0236453	.0017111	2.081372	2.433379	.0095275
#3	2.192863	3.560135	.0258456	.0010018	2.107683	2.416688	.0089081

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-02LX5 Acquired: 11/21/2024 15:30:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB3L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4425660	.0212451	.0991073
Stddev	.0063980	.0004167	.0002448
%RSD	1.445652	1.961157	.2470131
#1	.4417242	.0217162	.0992160
#2	.4366307	.0210945	.0988269
#3	.4493433	.0209248	.0992789

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	912.8937	25316.90	5002.256	769.7181	1649.122
Stddev	1.1157	75.00	5.063	3.5886	1.553
%RSD	.1222161	.2962322	.1012150	.4662291	.0941551
#1	911.6527	25401.88	4998.746	766.2199	1650.913
#2	913.2144	25288.80	5008.060	773.3908	1648.289
#3	913.8139	25260.01	4999.961	769.5437	1648.163

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-05 Acquired: 11/21/2024 15:39:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0696574	-.000434	1.684623	-.001948	.0100413	68.67110
Stddev	.0097774	.003307	.002857	.011261	.0006578	.13179
%RSD	14.03647	761.7317	.1695729	578.1295	6.550816	.1919156
#1	.0737730	.002164	1.685367	-.009915	.0094835	68.68348
#2	.0584949	.000691	1.687034	-.006864	.0107667	68.53356
#3	.0767042	-.004157	1.681468	.010936	.0098737	68.79626

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.520978	.0042017	.0157923	286.1398	.1386690	.0744015
Stddev	.002640	.0001688	.0002763	.4332	.0003322	.0010769
%RSD	.1735714	4.016778	1.749393	.1513985	.2395336	1.447430
#1	1.523702	.0040171	.0161002	286.3597	.1383149	.0751875
#2	1.518431	.0042401	.0157107	285.6408	.1387183	.0731740
#3	1.520802	.0043481	.0155661	286.4190	.1389737	.0748431

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4790165	301.1723	7.222452	60.99991	.1688899	-.021339
Stddev	.0036523	1.3428	.006214	.11046	.0007635	.000517
%RSD	.7624498	.4458519	.0860438	.1810753	.4520676	2.422478
#1	.4755709	301.0916	7.229297	61.11568	.1696665	-.021186
#2	.4786333	299.8716	7.217164	60.89567	.1688629	-.020915
#3	.4828452	302.5536	7.220893	60.98838	.1681403	-.021915

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.159211	.2081715	1.999399	8.028119	F 16.22012	.1986626
Stddev	.116569	.0039884	.011251	.140276	.05414	.0037929
%RSD	5.398679	1.915930	.5626945	1.747303	.3338019	1.909207
#1	2.202208	.2073101	2.010693	7.956667	16.22375	.1951268
#2	2.027251	.2046842	1.999310	7.937956	16.16426	.1981922
#3	2.248174	.2125202	1.988193	8.189735	16.27236	.2026687

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-05 Acquired: 11/21/2024 15:39:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0072444	6.774414	8.544246	.1421964	1.489894	.0975543
Stddev	.0011523	.009758	.027756	.0022328	.004081	.0009921
%RSD	15.90678	.1440363	.3248551	1.570203	.2739013	1.016960
#1	.0070388	6.764036	8.539545	.1447724	1.490036	.0968706
#2	.0062086	6.775805	8.519140	.1409998	1.485744	.0971002
#3	.0084857	6.783402	8.574052	.1408170	1.493902	.0986922

Elem	Sr4077
Units	ppm
Avg	.4677690
Stddev	.0007334
%RSD	.1567911
#1	.4680745
#2	.4669322
#3	.4683004

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	950.7450	26502.16	5470.672	797.3959	1453.815
Stddev	.9862	48.72	8.503	4.6752	2.201
%RSD	.1037270	.1838244	.1554352	.5863105	.1514047
#1	949.9971	26492.44	5462.338	793.7737	1451.697
#2	951.8626	26459.04	5479.336	795.7402	1456.091
#3	950.3752	26555.01	5470.341	802.6736	1453.656

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-06 Acquired: 11/21/2024 15:43:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0955542	-.005705	1.536208	.0025578	.0085183	86.84872
Stddev	.0071438	.002487	.004697	.0074705	.0030032	.17195
%RSD	7.476183	43.59958	.3057592	292.0656	35.25545	.1979843
#1	.0994531	-.008006	1.540258	.0062379	.0118455	87.04023
#2	.0999002	-.003066	1.537307	.0074744	.0077011	86.79831
#3	.0873093	-.006043	1.531058	-.006039	.0060084	86.70761

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.502937	.0048410	.0124200	274.4618	.1601903	.0848220
Stddev	.001766	.0003106	.0000633	.2500	.0001484	.0004723
%RSD	.1174735	6.416107	.5094265	.0910923	.0926279	.5567539
#1	1.504348	.0051854	.0123473	274.2387	.1601849	.0842887
#2	1.503507	.0045820	.0124628	274.7320	.1600447	.0851872
#3	1.500957	.0047557	.0124498	274.4147	.1603413	.0849901

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3634393	189.9696	8.120898	68.51362	.1954277	-.015090
Stddev	.0012993	.5219	.012450	.23296	.0008145	.000194
%RSD	.3575107	.2747259	.1533095	.3400242	.4167834	1.282688
#1	.3645640	190.5411	8.112061	68.41833	.1963503	-.014878
#2	.3637368	189.8496	8.135136	68.77912	.1948081	-.015135
#3	.3620170	189.5182	8.115496	68.34340	.1951247	-.015257

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.509073	.2226873	1.926276	10.28120	F 11.59410	.1470941
Stddev	.267684	.0020932	.003665	.15943	.04123	.0024224
%RSD	17.73829	.9399629	.1902522	1.550684	.3556300	1.646805
#1	1.199980	.2244105	1.926532	10.44605	11.59745	.1488537
#2	1.662761	.2232935	1.929806	10.26973	11.55130	.1443313
#3	1.664478	.2203579	1.922490	10.12781	11.63356	.1480974

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-06 Acquired: 11/21/2024 15:43:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0039788	3.643650	9.058672	.0673470	1.368959	.1207991
Stddev	.0001677	.011505	.022024	.0022861	.005639	.0012304
%RSD	4.215879	.3157668	.2431302	3.394442	.4119051	1.018549
#1	.0038495	3.650766	9.080189	.0648457	1.374740	.1196359
#2	.0041683	3.630376	9.036173	.0678673	1.368662	.1206743
#3	.0039186	3.649808	9.059654	.0693281	1.363474	.1220872

Elem	Sr4077
Units	ppm
Avg	.4306948
Stddev	.0003832
%RSD	.0889797
#1	.4310994
#2	.4306478
#3	.4303373

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	988.1636	27512.09	5697.037	824.2478	1438.115
Stddev	2.0689	72.25	14.788	3.8280	2.490
%RSD	.2093653	.2625985	.2595736	.4644176	.1731775
#1	986.6675	27481.08	5682.279	822.8107	1435.277
#2	987.2988	27460.53	5696.976	821.3465	1439.937
#3	990.5246	27594.67	5711.855	828.5864	1439.131

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-07 Acquired: 11/21/2024 15:48:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHD8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0948089	-.004765	1.747019	-.001430	.0074334	71.65043
Stddev	.0156718	.002271	.003198	.008693	.0035651	.04236
%RSD	16.52987	47.65473	.1830527	607.8687	47.96018	.0591163
#1	.1128702	-.006351	1.747042	.007739	.0113953	71.62491
#2	.0867522	-.005781	1.743810	-.002478	.0064209	71.69932
#3	.0848044	-.002164	1.750205	-.009551	.0044841	71.62706

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.660066	.0042077	.0122071	327.0029	.1515616	.0720327
Stddev	.006121	.0000475	.0000802	.8461	.0064422	.0014124
%RSD	.3686931	1.128151	.6567609	.2587414	4.250539	1.960777
#1	1.656523	.0042196	.0121393	326.2713	.1566931	.0705253
#2	1.667134	.0042481	.0122956	327.9295	.1443319	.0722472
#3	1.656542	.0041554	.0121864	326.8080	.1536598	.0733256

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5024157	166.7510	7.939443	65.11118	.1763520	-.012078
Stddev	.0028953	.1644	.024595	.19107	.0008343	.002126
%RSD	.5762764	.0985963	.3097834	.2934528	.4730683	17.60164
#1	.5045806	166.9090	7.913421	64.92533	.1768761	-.010442
#2	.5035395	166.5809	7.962306	65.30707	.1753900	-.014481
#3	.4991270	166.7631	7.942601	65.10113	.1767900	-.011311

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.223318	.2039769	1.951641	8.640086	F 17.68635	.1294123
Stddev	.101630	.0043050	.064346	.020314	.01108	.0011108
%RSD	8.307764	2.110506	3.297038	.2351146	.0626427	.8583454
#1	1.311921	.1990089	2.006431	8.642366	17.69270	.1298499
#2	1.112377	.2066076	1.880783	8.618727	17.69280	.1281493
#3	1.245656	.2063143	1.967707	8.659163	17.67356	.1302376

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-07 Acquired: 11/21/2024 15:48:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHD8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0062085	6.947012	9.193231	.1430925	1.584807	.1038593
Stddev	.0002716	.001680	.052017	.0006385	.002257	.0009806
%RSD	4.375160	.0241773	.5658230	.4461781	.1423984	.9441384
#1	.0065117	6.948525	9.248518	.1427898	1.586800	.1027383
#2	.0061264	6.947306	9.145258	.1438260	1.582357	.1042818
#3	.0059873	6.945204	9.185916	.1426617	1.585265	.1045578

Elem	Sr4077
Units	ppm
Avg	.4863480
Stddev	.0014592
%RSD	.3000370
#1	.4856204
#2	.4880280
#3	.4853958

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	959.0566	27368.00	5584.401	826.2515	1428.149
Stddev	2.8182	824.92	18.615	25.2894	3.916
%RSD	.2938467	3.014159	.3333459	3.060733	.2741972
#1	961.1676	26674.14	5565.582	803.5928	1427.963
#2	960.1458	28280.09	5584.816	853.5336	1432.154
#3	955.8564	27149.78	5602.806	821.6281	1424.329

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-08 Acquired: 11/21/2024 15:52:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHD9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0806368	-.004340	1.552634	.0020736	.0060459	66.53811
Stddev	.0046395	.001064	.009090	.0046168	.0007533	.09699
%RSD	5.753585	24.52447	.5854440	222.6410	12.45907	.1457683
#1	.0857857	-.005511	1.555152	.0016000	.0052987	66.42645
#2	.0767811	-.003431	1.542550	.0069089	.0060341	66.60153
#3	.0793436	-.004078	1.560199	-.002288	.0068050	66.58633

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.423697	.0042949	.0099123	174.2254	.1239360	.0636174
Stddev	.003744	.0001736	.0002635	.6003	.0007055	.0009119
%RSD	.2629956	4.042263	2.657991	.3445644	.5692873	1.433411
#1	1.423477	.0044047	.0097327	174.1267	.1236316	.0636256
#2	1.427547	.0040948	.0097894	174.8689	.1247426	.0627014
#3	1.420068	.0043853	.0102148	173.6805	.1234337	.0645251

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3897923	132.0718	6.648379	46.17849	.1722589	-.014626
Stddev	.0007093	.3765	.026842	.16911	.0008894	.000224
%RSD	.1819738	.2850976	.4037418	.3661988	.5163271	1.530332
#1	.3889733	131.6447	6.650612	46.24347	.1727694	-.014885
#2	.3902052	132.2150	6.674035	46.30547	.1712319	-.014485
#3	.3901986	132.3557	6.620490	45.98654	.1727753	-.014510

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6543182	.1602409	1.396564	9.894782	F 13.34129	.1196040
Stddev	.1008343	.0064356	.007751	.077854	.09535	.0008827
%RSD	15.41059	4.016194	.5549718	.7868153	.7146864	.7380630
#1	.7189852	.1582057	1.403547	9.902058	13.33985	.1195216
#2	.5381325	.1674481	1.388225	9.813546	13.24667	.1187654
#3	.7058369	.1550690	1.397920	9.968742	13.43735	.1205251

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-08 Acquired: 11/21/2024 15:52:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHD9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035022	4.473950	10.20021	.0696811	1.090833	.1004453
Stddev	.0004712	.045942	.07115	.0011458	.003508	.0017809
%RSD	13.45530	1.026870	.6975604	1.644329	.3215814	1.772953
#1	.0029979	4.498241	10.14094	.0689411	1.086846	.1006794
#2	.0035774	4.420962	10.27912	.0710009	1.092206	.0985590
#3	.0039313	4.502646	10.18058	.0691013	1.093446	.1020975

Elem	Sr4077
Units	ppm
Avg	.2733319
Stddev	.0004020
%RSD	.1470650
#1	.2736088
#2	.2728708
#3	.2735160

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1032.937	28794.63	5869.468	871.3990	1490.306
Stddev	6.034	29.72	29.265	5.4428	9.269
%RSD	.5841342	.1032042	.4985956	.6246009	.6219199
#1	1031.268	28796.63	5897.228	865.6493	1489.251
#2	1039.630	28823.30	5838.901	876.4715	1500.057
#3	1027.914	28763.96	5872.275	872.0762	1481.611

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-09 Acquired: 11/21/2024 15:57:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1054845	-.001756	1.887334	.0004827	.0071576	71.17456
Stddev	.0062282	.003945	.006979	.0035619	.0014286	.12931
%RSD	5.904387	224.7100	.3697690	737.8919	19.95919	.1816782
#1	.1064932	-.001478	1.892766	-.003001	.0085327	71.05395
#2	.0988136	-.005832	1.889772	.004118	.0072592	71.15863
#3	.1111469	.002043	1.879463	.000331	.0056809	71.31109

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.857340	.0047874	.0123905	204.2871	.1393186	.0791052
Stddev	.001551	.0001199	.0001780	.1196	.0004975	.0007205
%RSD	.0835022	2.504086	1.436830	.0585285	.3571216	.9108611
#1	1.855579	.0048509	.0122107	204.1956	.1387442	.0792827
#2	1.857936	.0046491	.0125667	204.2433	.1396068	.0783125
#3	1.858504	.0048621	.0123942	204.4224	.1396050	.0797205

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4743446	166.7767	8.613117	56.20123	.2010657	-.016784
Stddev	.0025010	.3602	.002798	.06963	.0005710	.000348
%RSD	.5272431	.2159559	.0324877	.1239011	.2840075	2.073422
#1	.4740033	166.4719	8.612452	56.14291	.2011055	-.017064
#2	.4720318	166.6842	8.610710	56.18246	.2004757	-.016394
#3	.4769986	167.1741	8.616187	56.27833	.2016157	-.016894

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.062280	.1824898	1.600499	9.456617	F 14.67057	.1342705
Stddev	.523942	.0026058	.008241	.020140	.01172	.0004104
%RSD	49.32240	1.427931	.5149216	.2129687	.0798639	.3056306
#1	.556939	.1849988	1.592022	9.475058	14.67228	.1338563
#2	1.603027	.1797969	1.608483	9.459666	14.65809	.1342783
#3	1.026874	.1826736	1.600993	9.435126	14.68133	.1346769

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-09 Acquired: 11/21/2024 15:57:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045358	4.027579	8.678773	.0846938	1.020167	.1093641
Stddev	.0001973	.007111	.007805	.0010185	.005822	.0013305
%RSD	4.349723	.1765668	.0899334	1.202519	.5707097	1.216567
#1	.0043432	4.033153	8.687697	.0855197	1.014720	.1088604
#2	.0047375	4.030014	8.675405	.0850059	1.019477	.1083590
#3	.0045267	4.019570	8.673218	.0835558	1.026303	.1108729

Elem	Sr4077
Units	ppm
Avg	.2944437
Stddev	.0002062
%RSD	.0700196
#1	.2942752
#2	.2943823
#3	.2946736

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1055.603	29318.86	5979.688	886.4387	1477.930
Stddev	1.703	26.01	4.891	3.5646	1.927
%RSD	.1613628	.0887100	.0817946	.4021305	.1303734
#1	1055.999	29334.02	5980.270	888.0172	1479.463
#2	1053.737	29288.83	5984.261	882.3573	1475.767
#3	1057.074	29333.74	5974.532	888.9415	1478.561

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-11 Acquired: 11/21/2024 16:01:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1115902	.0011343	1.271618	-.002258	.0056513	77.25867
Stddev	.0064631	.0025657	.016914	.009507	.0028357	2.53482
%RSD	5.791812	226.1867	1.330106	421.0049	50.17738	3.280950
#1	.1169988	.0010810	1.281777	.008046	.0088820	75.75050
#2	.1133392	-.001404	1.252093	-.004131	.0044975	75.84034
#3	.1044326	.003726	1.280984	-.010689	.0035745	80.18516

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.689335	.0045961	.0128195	346.6127	.1395711	.0811938
Stddev	.047093	.0001514	.0002812	9.9329	.0002049	.0016185
%RSD	2.787658	3.293261	2.193856	2.865714	.1468443	1.993360
#1	1.663045	.0045213	.0130934	341.1091	.1393815	.0825008
#2	1.661258	.0044967	.0125314	340.6498	.1397886	.0793834
#3	1.743704	.0047703	.0128337	358.0792	.1395431	.0816971

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5467787	179.9312	9.424404	56.15281	.1877428	-.016893
Stddev	.0195204	6.2621	.261287	1.55565	.0017431	.000360
%RSD	3.570079	3.480301	2.772453	2.770387	.9284379	2.128757
#1	.5386248	176.5233	9.278216	55.23356	.1885220	-.016660
#2	.5326573	176.1121	9.268930	55.27592	.1857461	-.016711
#3	.5690541	187.1582	9.726064	57.94895	.1889604	-.017307

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.432878	.1879996	1.858198	10.24059	F 14.12325	.1420831
Stddev	.036859	.0107510	.006697	.47788	.19389	.0051424
%RSD	2.572364	5.718626	.3604163	4.666525	1.372811	3.619270
#1	1.456459	.1810634	1.850469	9.95679	14.19632	.1406346
#2	1.451772	.1825513	1.861839	9.97266	13.90345	.1378204
#3	1.390403	.2003840	1.862286	10.79233	14.26998	.1477944

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-11 Acquired: 11/21/2024 16:01:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041910	3.575158	7.581612	.0679234	1.024177	.1204271
Stddev	.0003609	.040290	.173402	.0034022	.032576	.0031961
%RSD	8.611580	1.126953	2.287138	5.008859	3.180745	2.653988
#1	.0043494	3.586358	7.499904	.0650281	1.001691	.1186050
#2	.0037779	3.530453	7.464158	.0716706	1.009305	.1185588
#3	.0044456	3.608664	7.780773	.0670715	1.061536	.1241176

Elem	Sr4077
Units	ppm
Avg	.4302631
Stddev	.0132472
%RSD	3.078867
#1	.4225391
#2	.4226907
#3	.4455594

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1057.892	29256.19	5974.213	880.0909	1428.285
Stddev	6.872	82.30	156.314	4.3757	13.556
%RSD	.6495894	.2812983	2.616479	.4971818	.9491086
#1	1054.997	29228.01	6045.351	884.4504	1422.706
#2	1065.738	29348.87	6082.305	880.1229	1443.740
#3	1052.943	29191.68	5794.982	875.6993	1418.409

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-12 Acquired: 11/21/2024 16:05:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0805479	-.004839	.4497986	-.004196	.0026162	63.36140
Stddev	.0056406	.007368	.0115080	.002454	.0050982	.09326
%RSD	7.002731	152.2497	2.558471	58.49640	194.8664	.1471802
#1	.0833837	.002294	.4467543	-.006403	.0027778	63.46744
#2	.0842078	-.004391	.4401188	-.001552	.0076317	63.32462
#3	.0740521	-.012421	.4625226	-.004633	-.002561	63.29215

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.259377	.0035679	.0072933	469.8116	.1081715	.0580040
Stddev	.001920	.0001616	.0001403	.6076	.0003783	.0004435
%RSD	.1524298	4.530472	1.924058	.1293365	.3496740	.7645514
#1	1.259337	.0033903	.0074258	469.6739	.1077940	.0583014
#2	1.261316	.0036068	.0071462	470.4762	.1081700	.0574943
#3	1.257477	.0037065	.0073080	469.2846	.1085505	.0582164

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3137914	115.2236	5.859688	87.99408	.1189225	-.010150
Stddev	.0012434	.3914	.010336	.32044	.0017388	.000172
%RSD	.3962605	.3396644	.1763931	.3641574	1.462170	1.695954
#1	.3149082	115.5892	5.863299	88.00356	.1171234	-.010154
#2	.3140146	115.2708	5.867733	88.30968	.1190501	-.010321
#3	.3124515	114.8107	5.848031	87.66902	.1205941	-.009976

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7194228	.1419198	.7681748	7.247440	F 11.71307	.0972340
Stddev	.2179146	.0040048	.0005735	.152011	.10087	.0043379
%RSD	30.29020	2.821874	.0746539	2.097451	.8611973	4.461267
#1	.4710832	.1427025	.7675280	7.422501	11.61771	.0935864
#2	.8786979	.1375815	.7683754	7.148835	11.70281	.1020307
#3	.8084873	.1454755	.7686211	7.170983	11.81867	.0960849

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-12 Acquired: 11/21/2024 16:05:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014196	2.774032	7.479037	.0242575	.8967120	.1028684
Stddev	.0006452	.032858	.039703	.0025068	.0037209	.0000557
%RSD	45.44852	1.184474	.5308523	10.33409	.4149447	.0541075
#1	.0013009	2.749482	7.481851	.0213638	.8999098	.1029325
#2	.0021160	2.761255	7.517259	.0257669	.8975980	.1028319
#3	.0008420	2.811359	7.438003	.0256417	.8926281	.1028409

Elem	Sr4077
Units	ppm
Avg	.4824182
Stddev	.0007970
%RSD	.1652189
#1	.4828903
#2	.4828664
#3	.4814980

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1056.625	29218.12	6137.040	879.0182	1383.334
Stddev	3.900	87.23	22.947	3.1353	10.443
%RSD	.3690704	.2985577	.3739096	.3566868	.7548891
#1	1060.474	29172.18	6119.999	877.2745	1393.853
#2	1056.722	29318.73	6127.988	882.6378	1383.180
#3	1052.677	29163.47	6163.132	877.1423	1372.970

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-13 Acquired: 11/21/2024 16:10:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH98 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0514074	-.004488	1.112935	.0059789	.0052941	61.93970
Stddev	.0046178	.003571	.001103	.0024454	.0020280	.06806
%RSD	8.982843	79.56849	.0990673	40.90065	38.30678	.1098855
#1	.0515957	-.000399	1.112508	.0087310	.0042599	61.97016
#2	.0559283	-.006991	1.114187	.0040556	.0076307	61.98721
#3	.0466983	-.006075	1.112110	.0051501	.0039917	61.86173

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.268102	.0033681	.0077271	99.69856	.0981786	.0456616
Stddev	.002701	.0000272	.0001831	.20050	.0009235	.0010035
%RSD	.2130083	.8078915	2.369373	.2011016	.9406265	2.197616
#1	1.265961	.0033453	.0075999	99.47105	.0991254	.0447442
#2	1.271137	.0033982	.0079369	99.84945	.0972803	.0455072
#3	1.267209	.0033607	.0076444	99.77518	.0981300	.0467332

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2065793	120.1189	5.050527	19.67472	.1204602	-.015547
Stddev	.0020943	.1630	.012325	.12607	.0005059	.000313
%RSD	1.013778	.1356656	.2440320	.6407529	.4199976	2.014803
#1	.2086429	120.3055	5.036296	19.55666	.1209282	-.015243
#2	.2066393	120.0466	5.057806	19.80750	.1205290	-.015530
#3	.2044556	120.0045	5.057477	19.66000	.1199234	-.015868

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6059716	.1550034	.8862794	6.131560	F 12.21548	.0975441
Stddev	.2834100	.0039206	.0028622	.126388	.02777	.0024422
%RSD	46.76951	2.529334	.3229413	2.061274	.2273307	2.503645
#1	.9122789	.1539282	.8858040	6.005012	12.24745	.1002479
#2	.3530528	.1517327	.8836847	6.257788	12.20158	.0954984
#3	.5525830	.1593494	.8893495	6.131879	12.19740	.0968860

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-13 Acquired: 11/21/2024 16:10:12 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH98 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034175	4.741435	8.432296	.0462941	.9266361	.0737993
Stddev	.0002733	.011236	.041956	.0023164	.0029345	.0008429
%RSD	7.995594	.2369722	.4975609	5.003608	.3166785	1.142183
#1	.0031035	4.754224	8.385818	.0461804	.9271449	.0736019
#2	.0035472	4.736927	8.443698	.0440367	.9292830	.0747234
#3	.0036017	4.733152	8.467373	.0486652	.9234806	.0730726

Elem	Sr4077
Units	ppm
Avg	.1776506
Stddev	.0002315
%RSD	.1303184
#1	.1774269
#2	.1778892
#3	.1776357

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1039.333	28905.07	5873.789	869.6641	1552.643
Stddev	.898	115.95	8.105	5.3946	3.159
%RSD	.0864275	.4011355	.1379921	.6203134	.2034911
#1	1040.104	28774.70	5864.569	864.1239	1550.755
#2	1039.548	28943.85	5877.001	874.9004	1550.885
#3	1038.346	28996.66	5879.795	869.9681	1556.291

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-14 Acquired: 11/21/2024 16:14:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1041046	-.002966	1.532294	.0011602	.0070017	71.37022
Stddev	.0101385	.001837	.004967	.0046585	.0034353	.06395
%RSD	9.738798	61.93335	.3241318	401.5357	49.06306	.0896020
#1	.1094395	-.005064	1.536549	.0024162	.0048027	71.40913
#2	.1104618	-.001650	1.526836	.0050619	.0109603	71.29641
#3	.0924125	-.002182	1.533495	-.003998	.0052422	71.40511

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.487389	.0041155	.0110312	130.3876	.1131482	.0870587
Stddev	.000962	.0000850	.0001235	.1319	.0005941	.0004080
%RSD	.0646481	2.065848	1.119775	.1011777	.5250738	.4686927
#1	1.486948	.0041939	.0111624	130.2494	.1135082	.0874079
#2	1.488492	.0040251	.0109171	130.4010	.1134739	.0866102
#3	1.486727	.0041276	.0110142	130.5122	.1124625	.0871581

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2939697	180.8848	10.57885	33.31988	.1603244	-.019826
Stddev	.0037168	.3717	.02070	.09122	.0010745	.000156
%RSD	1.264344	.2054753	.1956843	.2737795	.6702245	.7844582
#1	.2941557	180.9991	10.55559	33.32152	.1598278	-.020004
#2	.2901634	180.4694	10.59524	33.22784	.1615574	-.019718
#3	.2975900	181.1859	10.58572	33.41026	.1595880	-.019757

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.056479	.1873654	1.034738	8.788422	F 13.82920	.1291371
Stddev	.226626	.0043550	.001797	.041291	.05057	.0009399
%RSD	21.45108	2.324354	.1736866	.4698393	.3656972	.7278086
#1	1.178712	.1838699	1.033372	8.743498	13.88467	.1285491
#2	1.195747	.1859824	1.034068	8.824718	13.78566	.1286411
#3	.794979	.1922441	1.036774	8.797051	13.81727	.1302210

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-14 Acquired: 11/21/2024 16:14:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH99 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023530	2.764311	6.706939	.0572150	1.163291	.0929212
Stddev	.0004656	.015479	.025028	.0024957	.005624	.0002510
%RSD	19.78534	.5599568	.3731593	4.362045	.4834501	.2700862
#1	.0022817	2.748067	6.735445	.0586738	1.169632	.0926338
#2	.0019272	2.765976	6.696797	.0586379	1.158908	.0930326
#3	.0028501	2.778890	6.688574	.0543332	1.161332	.0930972

Elem	Sr4077
Units	ppm
Avg	.2604282
Stddev	.0001599
%RSD	.0614123
#1	.2604070
#2	.2602799
#3	.2605977

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1061.152	29650.81	6060.382	892.2559	1510.124
Stddev	1.782	55.64	16.842	2.6566	2.182
%RSD	.1679118	.1876636	.2779042	.2977440	.1445111
#1	1060.457	29690.61	6043.143	893.1102	1507.774
#2	1059.823	29674.60	6076.797	894.3802	1510.513
#3	1063.177	29587.23	6061.204	889.2772	1512.086

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-15 Acquired: 11/21/2024 16:19:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0787327	.0000397	2.756337	-.001466	.0101275	65.72621
Stddev	.0086671	.0031249	.005611	.007025	.0000803	.03646
%RSD	11.00822	7861.443	.2035541	479.2136	.7931042	.0554792
#1	.0720041	.0017938	2.757551	.006170	.0101031	65.70783
#2	.0756812	-.003568	2.761242	-.002913	.0102172	65.76821
#3	.0885128	.001893	2.750219	-.007655	.0100622	65.70260

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.827068	.0040164	.0109963	175.3396	.1127484	.0685357
Stddev	.002755	.0001674	.0002245	.3346	.0007356	.0003747
%RSD	.1507975	4.168448	2.041731	.1908368	.6524416	.5466610
#1	1.827447	.0041658	.0107577	175.0200	.1135757	.0689683
#2	1.824143	.0038354	.0112034	175.3115	.1125015	.0683247
#3	1.829614	.0040478	.0110276	175.6874	.1121680	.0683142

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5552763	151.7031	8.439957	40.23635	.1549165	-.014479
Stddev	.0010652	.0789	.018538	.10951	.0007464	.000231
%RSD	.1918363	.0519926	.2196507	.2721619	.4817833	1.597606
#1	.5545857	151.6124	8.418552	40.13399	.1557676	-.014601
#2	.5565030	151.7409	8.450503	40.35183	.1543735	-.014624
#3	.5547400	151.7559	8.450817	40.22323	.1546085	-.014212

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8365350	.1742516	1.572209	7.312356	F 13.31235	.1225313
Stddev	.0665571	.0037325	.005250	.076168	.01836	.0017666
%RSD	7.956290	2.142046	.3338962	1.041633	.1378954	1.441750
#1	.7701328	.1715387	1.566230	7.271822	13.33348	.1221914
#2	.8362263	.1785084	1.576065	7.265026	13.30031	.1209594
#3	.9032460	.1727078	1.574331	7.400219	13.30326	.1244432

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-15 Acquired: 11/21/2024 16:19:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021640	2.798017	8.664388	.1576687	1.120807	.0883653
Stddev	.0007628	.012587	.038270	.0005985	.002861	.0007409
%RSD	35.25012	.4498565	.4416971	.3795629	.2552573	.8384443
#1	.0018222	2.795641	8.659736	.1583579	1.120307	.0885184
#2	.0016319	2.811623	8.704771	.1573675	1.118230	.0875598
#3	.0030379	2.786787	8.628656	.1572806	1.123885	.0890177

Elem	Sr4077
Units	ppm
Avg	.2981771
Stddev	.0001439
%RSD	.0482725
#1	.2980871
#2	.2983431
#3	.2981010

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1026.530	28689.86	5831.311	863.1503	1496.079
Stddev	.833	15.43	23.478	5.7833	.915
%RSD	.0811080	.0537980	.4026195	.6700259	.0611694
#1	1027.370	28707.62	5841.848	869.8281	1496.238
#2	1025.705	28679.75	5804.411	859.8613	1495.095
#3	1026.516	28682.20	5847.674	859.7616	1496.904

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-16 Acquired: 11/21/2024 16:23:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1150857	-.000141	1.526019	.0016511	.0051489	80.51926
Stddev	.0050409	.006739	.005753	.0049780	.0050281	.19885
%RSD	4.380156	4779.095	.3769663	301.4982	97.65252	.2469542
#1	.1171241	-.003494	1.519998	-.003332	-.000432	80.74239
#2	.1187881	.007617	1.531459	.006624	.009325	80.36081
#3	.1093447	-.004546	1.526601	.001661	.006553	80.45457

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.652569	.0047763	.0134568	152.0806	.1257212	.1032957
Stddev	.002996	.0001142	.0003300	.3135	.0008720	.0011107
%RSD	.1812833	2.390504	2.452539	.2061119	.6936227	1.075265
#1	1.651917	.0049016	.0130955	152.4009	.1260212	.1020132
#2	1.649954	.0046780	.0137425	151.7745	.1264036	.1039271
#3	1.655838	.0047494	.0135324	152.0663	.1247388	.1039468

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3340409	202.1907	12.50686	38.82342	.1836272	-.020542
Stddev	.0014596	.5462	.03073	.05680	.0016043	.000337
%RSD	.4369600	.2701447	.2456898	.1462917	.8736439	1.638200
#1	.3335836	202.7906	12.53862	38.87221	.1818115	-.020727
#2	.3328648	201.7221	12.47728	38.76107	.1842169	-.020154
#3	.3356745	202.0593	12.50467	38.83697	.1848531	-.020747

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.292255	.2091251	1.165170	9.666657	F 16.21098	.1463191
Stddev	.173072	.0043982	.005098	.039545	.07367	.0048533
%RSD	13.39306	2.103163	.4375274	.4090846	.4544156	3.316908
#1	1.421923	.2128449	1.170416	9.680020	16.13600	.1518768
#2	1.359116	.2102597	1.164860	9.697789	16.21367	.1441640
#3	1.095725	.2042708	1.160234	9.622162	16.28326	.1429167

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-16 Acquired: 11/21/2024 16:23:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033653	3.112245	6.740972	.0717864	1.201075	.1091754
Stddev	.0000708	.030686	.053733	.0017747	.001503	.0009025
%RSD	2.104071	.9859708	.7971083	2.472210	.1251653	.8266106
#1	.0033531	3.078167	6.802581	.0710631	1.202018	.1102172
#2	.0034414	3.137687	6.716533	.0704875	1.199341	.1086767
#3	.0033013	3.120881	6.703803	.0738085	1.201866	.1086325

Elem	Sr4077
Units	ppm
Avg	.2900805
Stddev	.0004376
%RSD	.1508677
#1	.2899026
#2	.2897598
#3	.2905791

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1089.145	30098.47	6125.869	905.4986	1493.833
Stddev	2.103	10.37	34.625	3.0770	1.370
%RSD	.1930534	.0344539	.5652195	.3398127	.0917297
#1	1086.922	30109.28	6086.657	902.1652	1494.312
#2	1091.102	30097.53	6152.234	908.2304	1492.287
#3	1089.411	30088.61	6138.716	906.1002	1494.900

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-17 Acquired: 11/21/2024 16:27:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0967890	-.002120	.4563394	-.008732	.0058030	64.73843
Stddev	.0066000	.004766	.0029007	.002604	.0036449	.07224
%RSD	6.819010	224.8693	.6356389	29.82586	62.81055	.1115801
#1	.0891783	-.002592	.4568618	-.008206	.0089472	64.66740
#2	.1002505	-.006632	.4532131	-.006431	.0018079	64.81182
#3	.1009382	.002865	.4589435	-.011560	.0066538	64.73607

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8151012	.0036418	.0102077	367.3041	.0997409	.0872711
Stddev	.0013123	.0001638	.0001372	.6011	.0004602	.0009549
%RSD	.1609949	4.496441	1.344476	.1636653	.4613578	1.094146
#1	.8156593	.0035510	.0101064	367.7531	.0998147	.0872053
#2	.8136021	.0035436	.0103639	366.6211	.0992483	.0863509
#3	.8160421	.0038309	.0101529	367.5379	.1001597	.0882572

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2069765	195.5995	9.637272	78.28133	.1706942	-.015366
Stddev	.0019792	.3445	.017273	.11676	.0023604	.000285
%RSD	.9562474	.1761235	.1792291	.1491580	1.382801	1.857888
#1	.2092585	195.2168	9.639720	78.24820	.1680976	-.015286
#2	.2057285	195.6968	9.618906	78.18471	.1712749	-.015129
#3	.2059424	195.8848	9.653190	78.41108	.1727099	-.015683

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.171113	.1864129	.6088940	6.977671	F 12.89341	.1271288
Stddev	.232654	.0024292	.0017221	.049806	.03194	.0008913
%RSD	19.86608	1.303129	.2828180	.7137980	.2477549	.7010999
#1	.925126	.1865382	.6104837	7.022097	12.87137	.1266477
#2	1.387625	.1839235	.6070646	6.923828	12.87882	.1265815
#3	1.200588	.1887771	.6091335	6.987088	12.93005	.1281573

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-17 Acquired: 11/21/2024 16:27:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023490	1.370542	8.501440	.0128994	1.084025	.0966061
Stddev	.0001462	.010728	.054817	.0029082	.001761	.0009634
%RSD	6.223118	.7827735	.6447974	22.54547	.1624814	.9972416
#1	.0024559	1.363274	8.511603	.0112985	1.085587	.0955003
#2	.0024087	1.365488	8.442252	.0162563	1.082116	.0970540
#3	.0021824	1.382864	8.550464	.0111433	1.084372	.0972641

Elem	Sr4077
Units	ppm
Avg	.4130883
Stddev	.0006372
%RSD	.1542567
#1	.4124515
#2	.4130876
#3	.4137259

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1014.504	28041.46	5846.031	840.3610	1422.752
Stddev	3.573	78.75	26.226	3.8198	3.507
%RSD	.3522246	.2808340	.4486109	.4545471	.2464947
#1	1017.441	27960.73	5829.856	836.1571	1426.561
#2	1015.545	28045.57	5876.290	841.3067	1422.037
#3	1010.525	28118.07	5831.947	843.6190	1419.657

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-18 Acquired: 11/21/2024 16:32:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0733687	-.007805	.3513709	-.006019	.0031603	56.97916
Stddev	.0078447	.006075	.0046998	.006388	.0019891	.12998
%RSD	10.69216	77.83590	1.337571	106.1273	62.94178	.2281214
#1	.0824020	-.012934	.3558263	-.012672	.0047118	56.93628
#2	.0682698	-.009384	.3464598	.000065	.0009178	56.87603
#3	.0694342	-.001096	.3518266	-.005450	.0038512	57.12516

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5678892	.0034015	.0087230	F 1200.827	.0820449	.0697083
Stddev	.0019512	.0002978	.0003427	6.255	.0017806	.0017458
%RSD	.3435818	8.754109	3.928941	.5208661	2.170232	2.504482
#1	.5686923	.0032043	.0089315	1197.082	.0800952	.0700887
#2	.5656646	.0032561	.0083274	1197.352	.0835849	.0678036
#3	.5693105	.0037440	.0089100	1208.048	.0824546	.0712325

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2346386	151.7228	9.476993	151.0496	.1463664	.0009889
Stddev	.0011488	.3266	.043344	.8568	.0039928	.0003866
%RSD	.4895945	.2152692	.4573553	.5672316	2.727934	39.09869
#1	.2359582	151.4865	9.497066	151.3301	.1492063	.0011949
#2	.2338615	151.5864	9.427251	150.0877	.1418011	.0012289
#3	.2340962	152.0955	9.506660	151.7310	.1480918	.0005429

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.616653	.1551853	.4843271	10.39094	8.645025	.1302770
Stddev	.218469	.0078284	.0014776	.07450	.244521	.0007168
%RSD	13.51367	5.044568	.3050736	.7169765	2.828456	.5501938
#1	1.456922	.1634505	.4859419	10.36985	8.764406	.1295951
#2	1.527422	.1542228	.4830427	10.47371	8.363746	.1302117
#3	1.865614	.1478826	.4839969	10.32925	8.806922	.1310241

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-18 Acquired: 11/21/2024 16:32:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000292	1.925281	10.75376	.0080084	.8949990	.1047597
Stddev	.000113	.054443	.11303	.0062142	.0039375	.0009281
%RSD	38.58256	2.827786	1.051083	77.59522	.4399491	.8859081
#1	-.000271	1.944821	10.75616	.0051046	.8904532	.1036919
#2	-.000191	1.863765	10.63955	.0037778	.8973526	.1053718
#3	-.000413	1.967257	10.86557	.0151429	.8971910	.1052154

Elem	Sr4077
Units	ppm
Avg	1.390254
Stddev	.003726
%RSD	.2680076
#1	1.391693
#2	1.386023
#3	1.393046

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	926.9521	25496.34	5541.735	766.7244	1260.325
Stddev	15.7364	75.67	34.406	3.2167	25.907
%RSD	1.697650	.2968018	.6208455	.4195398	2.055605
#1	917.5300	25453.31	5533.108	764.0553	1246.828
#2	945.1187	25451.99	5579.633	765.8218	1290.194
#3	918.2076	25583.72	5512.464	770.2959	1243.952

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-19 Acquired: 11/21/2024 16:36:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0624566	-.005255	.2206488	-.004532	.0038385	54.26182
Stddev	.0029120	.001642	.0072965	.003383	.0028962	.16455
%RSD	4.662420	31.23995	3.306859	74.66244	75.45141	.3032490
#1	.0591774	-.003574	.2254987	-.006387	.0040280	54.41568
#2	.0647403	-.005337	.2122574	-.000626	.0008522	54.28145
#3	.0634520	-.006854	.2241904	-.006582	.0066352	54.08834

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5177676	.0031409	.0063420	F 831.8947	.0753173	.0646079
Stddev	.0013361	.0000718	.0001669	7.6914	.0002425	.0008827
%RSD	.2580607	2.286355	2.631737	.9245666	.3219366	1.366241
#1	.5186458	.0030684	.0065304	826.8258	.0754090	.0653637
#2	.5184271	.0031424	.0062125	840.7448	.0750424	.0636378
#3	.5162300	.0032120	.0062832	828.1135	.0755007	.0648223

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2237798	135.2731	6.846521	247.2153	.1387334	.0003617
Stddev	.0032800	.1716	.014633	.7203	.0039425	.0005478
%RSD	1.465739	.1268645	.2137341	.2913597	2.841752	151.4384
#1	.2275490	135.3214	6.836690	246.7744	.1416716	-.000063
#2	.2222173	135.4153	6.863338	248.0465	.1342529	.000980
#3	.2215732	135.0824	6.839536	246.8250	.1402756	.000169

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.386505	.1306993	.4622348	10.65669	4.752908	.1203722
Stddev	.178218	.0028356	.0022715	.02166	.065382	.0013450
%RSD	12.85375	2.169561	.4914079	.2032412	1.375631	1.117389
#1	1.572485	.1305458	.4637842	10.68167	4.789246	.1218669
#2	1.217225	.1279435	.4596273	10.64319	4.677428	.1199902
#3	1.369805	.1336085	.4632929	10.64521	4.792050	.1192595

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-19 Acquired: 11/21/2024 16:36:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007181	1.156226	11.35937	.0040349	.9149232	.1023010
Stddev	.0012736	.008548	.00404	.0016861	.0046493	.0000244
%RSD	177.3461	.7392766	.0355213	41.78679	.5081582	.0238780
#1	.0021485	1.165755	11.35480	.0021270	.9201931	.1023057
#2	.0002985	1.149235	11.36087	.0053245	.9131753	.1023227
#3	-.000293	1.153686	11.36245	.0046533	.9114013	.1022745

Elem	Sr4077
Units	ppm
Avg	.6796407
Stddev	.0008696
%RSD	.1279474
#1	.6805233
#2	.6796140
#3	.6787848

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	885.3123	24537.80	5294.747	736.3555	1296.041
Stddev	7.6074	123.04	22.338	2.1010	15.914
%RSD	.8592947	.5014434	.4218978	.2853293	1.227916
#1	882.1757	24629.05	5306.872	733.9296	1288.095
#2	893.9865	24397.86	5268.968	737.5448	1314.364
#3	879.7746	24586.49	5308.401	737.5922	1285.665

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-20 Acquired: 11/21/2024 16:41:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1230253	.0040453	5.092901	.0012851	-.001558	77.63779
Stddev	.0105348	.0018385	.004216	.0048932	.001680	.16814
%RSD	8.563081	45.44763	.0827881	380.7642	107.8374	.2165748
#1	.1148574	.0060361	5.088033	.0011638	-.001999	77.45473
#2	.1349160	.0024114	5.095280	-.003546	-.002973	77.67326
#3	.1193025	.0036885	5.095390	.006238	.000299	77.78536

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.605151	.0057011	.0151003	52.66099	.1262275	.1053224
Stddev	.001948	.0001539	.0001516	.03636	.0008746	.0012626
%RSD	.1213657	2.700220	1.004010	.0690490	.6929058	1.198771
#1	1.603705	.0055461	.0152246	52.65343	.1265524	.1038664
#2	1.607366	.0058539	.0149313	52.62901	.1268933	.1059860
#3	1.604381	.0057031	.0151448	52.70054	.1252370	.1061147

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4568154	222.6862	16.60916	18.33554	.2296456	-.026825
Stddev	.0048921	.5206	.02702	.04914	.0010212	.000272
%RSD	1.070926	.2337621	.1626748	.2680019	.4446889	1.014845
#1	.4519793	222.1192	16.62383	18.38459	.2305573	-.026654
#2	.4567051	222.7967	16.62566	18.33571	.2285421	-.027139
#3	.4617617	223.1425	16.57798	18.28631	.2298375	-.026683

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.120978	.2148210	1.727755	11.74751	F 20.06380	.1581895
Stddev	.037400	.0036063	.006871	.12831	.04107	.0017774
%RSD	3.336395	1.678754	.3977063	1.092210	.2046997	1.123602
#1	1.162953	.2177987	1.720774	11.63576	20.09921	.1595578
#2	1.091196	.2158532	1.734511	11.71916	20.07342	.1588300
#3	1.108784	.2108112	1.727981	11.88763	20.01878	.1561805

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-20 Acquired: 11/21/2024 16:41:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086449	4.606345	9.868983	.9845161	1.416646	.1020184
Stddev	.0003025	.016920	.035040	.0031528	.004940	.0005655
%RSD	3.498708	.3673126	.3550544	.3202393	.3487292	.5543097
#1	.0085213	4.617669	9.849112	.9821813	1.411138	.1013679
#2	.0084239	4.586896	9.848395	.9832644	1.420686	.1023930
#3	.0089896	4.614472	9.909442	.9881025	1.418115	.1022943

Elem	Sr4077
Units	ppm
Avg	.2411744
Stddev	.0001465
%RSD	.0607468
#1	.2410072
#2	.2412800
#3	.2412362

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1106.961	30880.38	6223.999	931.1823	1557.142
Stddev	1.513	19.86	21.414	3.4195	1.510
%RSD	.1366994	.0643036	.3440533	.3672200	.0970011
#1	1108.617	30876.68	6235.284	933.8897	1558.015
#2	1106.614	30862.63	6237.411	927.3395	1558.013
#3	1105.651	30901.82	6199.303	932.3177	1555.398

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV043 Acquired: 11/21/2024 16:45:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV043 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.931923	4.724285	24.06434	4.578717	4.673648	408.1238	10.15142
Stddev	.010971	.014941	.01971	.007271	.010871	13.5752	.33983
%RSD	.2224554	.3162686	.0819046	.1588038	.2326096	3.326239	3.347606
#1	4.935467	4.716979	24.06668	4.581183	4.676175	423.7744	10.54272
#2	4.940684	4.741473	24.04356	4.570533	4.661735	401.0597	9.98117
#3	4.919618	4.714402	24.08277	4.584434	4.683033	399.5373	9.93037

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5034109	2.426614	404.7328	14.89601	2.426945	14.98065	412.9041
Stddev	.0153277	.001461	14.2590	.01693	.000755	.49534	14.4015
%RSD	3.044759	.0602018	3.523073	.1136255	.0311028	3.306520	3.487848
#1	.5208718	2.424935	421.1925	14.91062	2.426927	15.54991	429.5226
#2	.4921757	2.427596	396.8625	14.87746	2.427709	14.74418	405.1154
#3	.4971852	2.427310	396.1435	14.89996	2.426200	14.64787	404.0744

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.73536	403.4600	2.412250	1.221821	402.8037	2.469358	14.27014
Stddev	.52980	14.6307	.000762	.003136	13.6406	.077563	.07775
%RSD	3.595412	3.626302	.0315872	.2566709	3.386425	3.141001	.5448660
#1	15.34549	420.3372	2.411523	1.222937	418.5325	2.555837	14.19832
#2	14.46886	395.6752	2.413042	1.224246	395.6604	2.446291	14.25940
#3	14.39172	394.3677	2.412187	1.218279	394.2181	2.405944	14.35270

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	153.1907	4.829779	5.053136	4.614732	4.881444	5.294303	4.845073
Stddev	5.3453	.016373	.168888	.006028	.012633	.163067	.012179
%RSD	3.489299	.3390026	3.342248	.1306342	.2587984	3.080045	.2513592
#1	159.3558	4.835085	5.246598	4.612037	4.893771	5.481219	4.852143
#2	150.3652	4.811411	4.935130	4.610522	4.882037	5.181157	4.852067
#3	149.8512	4.842841	4.977682	4.621638	4.868525	5.220533	4.831011

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV043 Acquired: 11/21/2024 16:45:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV043 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.979887	5.070200	5.036934
Stddev	.160157	.165420	.160400
%RSD	3.216073	3.262595	3.184483
#1	5.164528	5.260363	5.214976
#2	4.896555	4.990685	4.903707
#3	4.878577	4.959551	4.992120

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	718.1108	21337.64	4495.963	576.5541	1252.802
Stddev	1.2033	22.95	128.635	3.3257	2.196
%RSD	.1675589	.1075382	2.861115	.5768171	.1753091
#1	719.2629	21362.91	4348.236	580.0840	1255.096
#2	718.2073	21318.10	4583.218	576.0989	1252.592
#3	716.8622	21331.91	4556.436	573.4796	1250.719

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB043 Acquired: 11/21/2024 16:50:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB043 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010803	-.001515	.0039598	.0014386	.0035190	.0031813	.0009553
Stddev	.0034274	.003081	.0040099	.0046758	.0005299	.0127427	.0003540
%RSD	317.2636	203.3699	101.2669	325.0220	15.05951	400.5545	37.05562
#1	.0022218	-.000194	-.000658	.0067411	.0038862	.0044708	.0006044
#2	-.002772	-.005036	.005975	-.000332	.0029115	-.010157	.0009491
#3	.003791	.000685	.006562	-.002093	.0037594	.015230	.0013123

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000046	.0001354	-.000626	.0010170	.0002914	-.002953	.0225803
Stddev	.000066	.0001305	.016119	.0004206	.0004427	.001164	.0157773
%RSD	143.8605	96.38550	2573.788	41.35562	151.9205	39.41089	69.87182
#1	-.000049	.0000330	.013480	.0014572	.0005628	-.001881	.0047782
#2	.000021	.0002824	.002836	.0006192	.0005309	-.004191	.0281292
#3	-.000111	.0000909	-.018195	.0009747	-.000219	-.002788	.0348336

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001725	.0455880	.0001258	-.001170	-.272422	-.000399	.0011543
Stddev	.0001360	.0283577	.0004462	.000183	.354566	.000534	.0009155
%RSD	78.83523	62.20423	354.7896	15.64773	130.1530	133.8142	79.31356
#1	.0000169	.0702509	.0003778	-.000959	.000368	-.000037	.0002687
#2	.0002689	.0146028	-.000389	-.001263	-.144420	-.000148	.0020970
#3	.0002319	.0519103	.000389	-.001287	-.673215	-.001011	.0010972

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2263648	-.001575	.0041218	.0010665	-.000322	.0009498	-.000539
Stddev	.0250666	.001754	.0014017	.0000926	.005056	.0004257	.000655
%RSD	11.07354	111.3186	34.00668	8.684710	1568.399	44.81784	121.5089
#1	.2132964	-.001251	.0053355	.0009675	.004601	.0013093	.000049
#2	.2552652	-.000007	.0025876	.0010810	-.005501	.0004797	-.000421
#3	.2105328	-.003469	.0044422	.0011510	-.000067	.0010604	-.001245

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB043 Acquired: 11/21/2024 16:50:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB043 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000317	.0072877	.0002157
Stddev	.000934	.0007686	.0000795
%RSD	294.5546	10.54666	36.87725
#1	-.001288	.0080566	.0002970
#2	.000575	.0072872	.0001380
#3	-.000238	.0065193	.0002120

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	903.8566	24817.77	4778.758	753.9378	1746.163
Stddev	1.1868	15.33	21.931	4.1984	1.627
%RSD	.1312985	.0617737	.4589325	.5568632	.0931542
#1	902.6120	24808.46	4792.589	754.0685	1745.111
#2	903.9823	24809.39	4790.214	749.6756	1748.036
#3	904.9755	24835.47	4753.471	758.0693	1745.341

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-21 Acquired: 11/21/2024 16:54:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1285509	.0024579	2.363044	.0011764	.0047057	77.43550
Stddev	.0108265	.0038721	.006273	.0077668	.0009793	.18960
%RSD	8.421952	157.5347	.2654467	660.2392	20.81187	.2448496
#1	.1405095	.0050327	2.368175	-.007034	.0053433	77.21915
#2	.1194161	-.001995	2.356052	.008407	.0035781	77.57270
#3	.1257271	.004336	2.364907	.002156	.0051957	77.51465

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.589507	.0057075	.0138665	45.31053	.1258053	.0981963
Stddev	.002181	.0001157	.0002155	.03399	.0016142	.0008505
%RSD	.1371817	2.027736	1.554429	.0750190	1.283090	.8661416
#1	1.587247	.0058175	.0137367	45.28379	.1245954	.0988244
#2	1.589675	.0055868	.0141153	45.34878	.1276382	.0972284
#3	1.591599	.0057183	.0137474	45.29900	.1251824	.0985361

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4404057	198.2804	15.75696	16.66830	.2059782	-.023840
Stddev	.0027717	.7215	.02187	.02968	.0014847	.000443
%RSD	.6293473	.3638730	.1387689	.1780661	.7207938	1.856279
#1	.4374022	197.5265	15.74444	16.70255	.2066553	-.024281
#2	.4409501	198.3503	15.78221	16.65223	.2042757	-.023396
#3	.4428648	198.9644	15.74423	16.65012	.2070037	-.023844

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.108045	.2111222	1.646249	12.07276	F 18.90201	.1419851
Stddev	.024354	.0032140	.006120	.03785	.02046	.0019400
%RSD	2.197938	1.522362	.3717716	.3135045	.1082529	1.366313
#1	1.118268	.2105228	1.647675	12.08715	18.89935	.1415277
#2	1.125622	.2145937	1.651530	12.02983	18.88302	.1441129
#3	1.080246	.2082500	1.639542	12.10131	18.92368	.1403148

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-21 Acquired: 11/21/2024 16:54:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071750	3.470932	8.331281	.4577830	1.399421	.1043289
Stddev	.0001900	.002393	.019997	.0034794	.006161	.0004005
%RSD	2.648413	.0689509	.2400281	.7600591	.4402428	.3838728
#1	.0070732	3.469944	8.320182	.4555318	1.393672	.1046402
#2	.0073943	3.469191	8.354366	.4617905	1.398665	.1038771
#3	.0070576	3.473661	8.319294	.4560266	1.405924	.1044695

Elem	Sr4077
Units	ppm
Avg	.2444961
Stddev	.0003613
%RSD	.1477913
#1	.2441435
#2	.2444793
#3	.2448655

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1095.612	30335.79	6131.894	916.3286	1565.943
Stddev	1.785	60.76	27.442	4.9312	2.088
%RSD	.1629130	.2002869	.4475304	.5381493	.1333353
#1	1093.551	30328.62	6139.648	915.6693	1564.583
#2	1096.692	30278.94	6101.409	911.7603	1568.348
#3	1096.591	30399.82	6154.625	921.5564	1564.900

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-22 Acquired: 11/21/2024 16:59:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1254579	.0041060	1.900289	-.005729	-.001506	69.01613
Stddev	.0080683	.0053000	.002898	.003058	.001593	.10120
%RSD	6.431053	129.0797	.1525105	53.38580	105.7861	.1466364
#1	.1175613	-.001220	1.903324	-.002349	-.003327	68.96187
#2	.1251248	.004159	1.899992	-.006532	-.000371	68.95363
#3	.1336875	.009379	1.897551	-.008305	-.000820	69.13289

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.437009	.0049060	.0134919	55.54544	.1030545	.0921992
Stddev	.001592	.0002624	.0001810	.12690	.0010776	.0009892
%RSD	.1107589	5.347764	1.341162	.2284705	1.045632	1.072905
#1	1.438375	.0047771	.0134715	55.48779	.1042482	.0928010
#2	1.435261	.0052078	.0136822	55.45759	.1021535	.0910576
#3	1.437390	.0047330	.0133220	55.69093	.1027618	.0927391

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3332667	227.0534	16.17383	15.66472	.1791312	-.026138
Stddev	.0007295	.4465	.05767	.01994	.0002272	.000065
%RSD	.2188981	.1966338	.3565662	.1272674	.1268431	.2502360
#1	.3324580	227.2613	16.11812	15.66568	.1789908	-.026138
#2	.3338752	226.5409	16.17009	15.68417	.1793933	-.026073
#3	.3334668	227.3580	16.23328	15.64433	.1790094	-.026203

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.523332	.1974584	1.225407	9.776420	F 21.17166	.1504125
Stddev	.295675	.0063592	.002667	.032437	.07098	.0021523
%RSD	19.40974	3.220504	.2176172	.3317876	.3352829	1.430919
#1	1.310685	.1994437	1.228270	9.771477	21.17331	.1526521
#2	1.398334	.1903435	1.222994	9.746738	21.09986	.1502255
#3	1.860977	.2025881	1.224957	9.811044	21.24180	.1483598

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-22 Acquired: 11/21/2024 16:59:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067877	2.660459	6.839631	.9482788	1.186107	.0861463
Stddev	.0002246	.010713	.040786	.0029176	.002333	.0002327
%RSD	3.308504	.4026687	.5963188	.3076681	.1966943	.2701072
#1	.0065297	2.649534	6.805257	.9469876	1.188583	.0858954
#2	.0068940	2.670946	6.828939	.9462296	1.183950	.0863551
#3	.0069393	2.660897	6.884698	.9516191	1.185788	.0861883

Elem	Sr4077
Units	ppm
Avg	.2632245
Stddev	.0001890
%RSD	.0718109
#1	.2632655
#2	.2630183
#3	.2633896

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1082.978	30044.52	6070.357	908.5640	1564.033
Stddev	2.644	51.34	25.224	2.4131	.847
%RSD	.2441681	.1708868	.4155325	.2655945	.0541545
#1	1082.660	29985.35	6090.688	905.8571	1563.243
#2	1080.507	30070.98	6078.254	910.4898	1563.928
#3	1085.767	30077.24	6042.129	909.3451	1564.927

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165105BL Acquired: 11/21/2024 17:03:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS105 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002912	.0003056	.0025443	.0062351	-.001244	.0026852	-.000104
Stddev	.007321	.0020107	.0002474	.0018260	.000305	.0044544	.000406
%RSD	251.4316	658.0221	9.723858	29.28553	24.50399	165.8880	391.2701
#1	-.009815	.0025903	.0027941	.0043555	-.001512	-.000840	.000364
#2	-.003685	-.001194	.0025396	.0063476	-.001308	.001204	-.000319
#3	.004765	-.000479	.0022993	.0080022	-.000912	.007692	-.000356

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000194	.0000255	.0017338	-.000808	.0003831	-.001828	.0257041
Stddev	.0001113	.0000763	.0106175	.000356	.0002563	.001879	.0155909
%RSD	573.6714	299.2643	612.3995	44.10569	66.89654	102.7929	60.65524
#1	.0000322	.0000442	-.010461	-.001013	.0001304	.000336	.0428263
#2	.0001238	-.000058	.008925	-.001013	.0006427	-.002772	.0219595
#3	-.000098	.000091	.006737	-.000396	.0003761	-.003048	.0123265

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015756	.0288166	.0000783	-.002019	-.470713	-.001528	.0001017
Stddev	.0000954	.0081998	.0004268	.000254	.063686	.007004	.0003219
%RSD	6.051712	28.45532	545.4249	12.57471	13.52965	458.4676	316.4590
#1	.0015310	.0286611	.0001514	-.001820	-.432442	-.005872	.0002074
#2	.0016851	.0206956	-.000380	-.002305	-.544231	-.005262	-.000260
#3	.0015107	.0370931	.000464	-.001933	-.435467	.006552	.000358

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2120565	-.003075	-.001603	.0001640	.0021343	.0012999	-.001362
Stddev	.0918078	.002260	.001342	.0003336	.0082954	.0003642	.001175
%RSD	43.29403	73.49383	83.71518	203.3622	388.6742	28.01501	86.28781
#1	.1136349	-.005233	-.003014	.0003771	.0000598	.0012111	-.002717
#2	.2953783	-.000726	-.000344	-.000220	.0112701	.0017002	-.000751
#3	.2271563	-.003265	-.001450	.000335	-.004927	.0009883	-.000618

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165105BL Acquired: 11/21/2024 17:03:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS105 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0000382	.0021559	.0000550
Stddev	.0008464	.0007056	.0000616
%RSD	2217.040	32.72846	112.0754
#1	-.000657	.0021752	.0000041
#2	-.000210	.0028516	.0000373
#3	.000981	.0014408	.0001234

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	904.1471	24868.90	4853.258	756.2641	1734.896
Stddev	1.9234	32.84	18.240	.6894	3.386
%RSD	.2127294	.1320506	.3758295	.0911573	.1951800
#1	901.9302	24831.68	4873.139	756.3399	1731.260
#2	905.3721	24893.76	4849.339	756.9126	1735.470
#3	905.1388	24881.27	4837.296	755.5400	1737.959

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165105BS Acquired: 11/21/2024 17:07:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS105 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0180141	.0535267	.0236794	.0661960	.1097384	.3930057
Stddev	.0087724	.0004756	.0030305	.0049797	.0012077	.0055726
%RSD	48.69764	.8884902	12.79796	7.522712	1.100554	1.417938
#1	.0093388	.0539440	.0250012	.0631383	.1109969	.3961885
#2	.0178228	.0536271	.0258244	.0635074	.1096296	.3865712
#3	.0268806	.0530089	.0202125	.0719421	.1085888	.3962574

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4359984	.0110674	.0106638	11.18326	.0213131	.1004193
Stddev	.0080874	.0001402	.0000900	.17296	.0006799	.0002964
%RSD	1.854917	1.266932	.8438760	1.546592	3.190047	.2951209
#1	.4324453	.0109529	.0107025	11.10252	.0209468	.1007187
#2	.4302959	.0110256	.0105609	11.06545	.0208950	.1004131
#3	.4452542	.0112238	.0107280	11.38183	.0220977	.1001261

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0506409	.2295940	.0357337	10.46503	.0859544	.0208861
Stddev	.0005416	.0051995	.0002484	.24945	.0008329	.0002804
%RSD	1.069398	2.264667	.6952794	2.383646	.9689649	1.342332
#1	.0500167	.2284644	.0354592	10.34952	.0861478	.0206924
#2	.0509853	.2352656	.0359433	10.29427	.0850419	.0207585
#3	.0509207	.2250522	.0357986	10.75129	.0866736	.0212076

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.633793	.1107042	.1362223	10.52811	.0186475	F .0003097
Stddev	.421853	.0092279	.0010669	.23926	.0026416	.0006995
%RSD	4.378884	8.335657	.7832226	2.272538	14.16595	225.8723
#1	9.592607	.1212907	.1361636	10.30380	.0177917	-.000472
#2	10.07473	.1064596	.1373173	10.50060	.0216110	.000877
#3	9.23405	.1043623	.1351859	10.77993	.0165400	.000524

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165105BS Acquired: 11/21/2024 17:07:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS105 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0194746	.1870555	F .4644574	.0131083	.2132612	.0315681
Stddev	.0002278	.0018533	.0072372	.0010324	.0047737	.0008328
%RSD	1.169517	.9907936	1.558199	7.875756	2.238426	2.638135
#1	.0197211	.1886701	.4625078	.0139141	.2100911	.0322606
#2	.0194308	.1874646	.4583948	.0134662	.2109411	.0306440
#3	.0192719	.1850317	.4724697	.0119446	.2187515	.0317998

Elem	Sr4077
Units	ppm
Avg	.2189785
Stddev	.0037559
%RSD	1.715195
#1	.2171858
#2	.2164547
#3	.2232948

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	893.2522	24551.08	4767.815	749.7600	1671.543
Stddev	2.9680	41.13	72.609	1.5122	5.965
%RSD	.3322659	.1675254	1.522890	.2016947	.3568364
#1	891.2126	24583.44	4804.420	749.6514	1666.022
#2	896.6571	24565.00	4814.836	748.3051	1677.869
#3	891.8868	24504.79	4684.190	751.3237	1670.737

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-01 Acquired: 11/21/2024 17:12:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0735566	-.001073	2.217093	-.001213	.0091395	65.19029
Stddev	.0067969	.003344	.002077	.001853	.0018039	.05890
%RSD	9.240427	311.5168	.0936996	152.8175	19.73741	.0903482
#1	.0802760	-.004921	2.218473	-.002596	.0112209	65.24695
#2	.0737092	.000578	2.214704	-.001935	.0080287	65.19455
#3	.0666847	.001123	2.218101	.000893	.0081690	65.12938

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.053013	.0047302	.0151514	90.69660	.2609494	.0674584
Stddev	.007256	.0002154	.0002037	.14967	.0025130	.0004317
%RSD	.2376589	4.552854	1.344685	.1650255	.9630205	.6399409
#1	3.044992	.0044957	.0149351	90.52382	.2636419	.0675836
#2	3.054927	.0049191	.0151794	90.77957	.2605400	.0669779
#3	3.059120	.0047759	.0153397	90.78642	.2586662	.0678136

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3742809	246.4835	10.52161	24.77330	.1998960	-.021181
Stddev	.0002944	.5214	.00679	.13649	.0009170	.000479
%RSD	.0786595	.2115156	.0645058	.5509454	.4587367	2.263686
#1	.3742591	247.0849	10.51384	24.62179	.1991705	-.020684
#2	.3745856	246.1614	10.52638	24.88664	.2009267	-.021219
#3	.3739980	246.2040	10.52461	24.81146	.1995908	-.021641

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.256913	.8279968	2.563582	7.869723	F 10.81673	.1779594
Stddev	.417124	.0059977	.010223	.115227	.01874	.0032857
%RSD	33.18639	.7243575	.3987658	1.464178	.1732798	1.846292
#1	.775580	.8218117	2.573501	7.917466	10.83466	.1816550
#2	1.482356	.8283911	2.553081	7.738298	10.81827	.1768550
#3	1.512801	.8337876	2.564165	7.953404	10.79727	.1753683

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-01 Acquired: 11/21/2024 17:12:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028248	3.239809	5.852108	.0809979	1.156167	.1080005
Stddev	.0002754	.012086	.011310	.0004063	.003144	.0007784
%RSD	9.749227	.3730392	.1932639	.5016185	.2719410	.7207355
#1	.0028973	3.242703	5.839328	.0810289	1.159289	.1079433
#2	.0030568	3.250186	5.860828	.0805770	1.156211	.1072523
#3	.0025204	3.226540	5.856167	.0813878	1.153001	.1088059

Elem	Sr4077
Units	ppm
Avg	.3069308
Stddev	.0002351
%RSD	.0765981
#1	.3069637
#2	.3071477
#3	.3066809

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	984.6335	27354.18	5527.966	826.0018	1551.056
Stddev	.5273	35.33	9.704	3.2590	1.447
%RSD	.0535496	.1291626	.1755405	.3945528	.0932812
#1	985.1315	27324.53	5524.960	822.3868	1552.618
#2	984.6878	27344.73	5520.120	826.9039	1550.788
#3	984.0812	27393.27	5538.816	828.7148	1549.762

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-02 Acquired: 11/21/2024 17:16:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1171138	.0051908	4.204573	-.000848	.0084446	67.18485	2.983899
Stddev	.0027231	.0049168	.017077	.003913	.0026807	.07059	.006858
%RSD	2.325185	94.72070	.4061499	461.4912	31.74442	.1050725	.2298187
#1	.1163416	.0079870	4.198639	-.004862	.0073120	67.22564	2.976938
#2	.1148601	-.000486	4.191256	.002956	.0065160	67.10334	2.990649
#3	.1201395	.008072	4.223826	-.000638	.0115057	67.22557	2.984110

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043436	.0148290	97.94161	.2731916	.0872293	.5419448	177.7767
Stddev	.0001756	.0000787	.22892	.0001988	.0002340	.0017236	.3761
%RSD	4.042077	.5308598	.2337349	.0727743	.2682553	.3180350	.2115642
#1	.0044643	.0147623	97.71202	.2730158	.0872625	.5424648	177.8122
#2	.0044242	.0148089	98.16986	.2731516	.0874449	.5433485	177.3841
#3	.0041421	.0149159	97.94296	.2734074	.0869805	.5400211	178.1338

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.54491	28.73711	.2611539	-.015940	.8540701	.1828968	3.041987
Stddev	.01837	.07459	.0005559	.000445	.1653551	.0024115	.014352
%RSD	.1463942	.2595738	.2128793	2.791594	19.36083	1.318513	.4717968
#1	12.52802	28.72707	.2613214	-.015429	.8992818	.1815999	3.055736
#2	12.56446	28.81621	.2605335	-.016145	.6708118	.1814113	3.027100
#3	12.54225	28.66804	.2616068	-.016246	.9921168	.1856793	3.043126

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.180096	8.441306	.1295348	.0079481	2.611325	6.569751	.3011884
Stddev	.007956	.049661	.0005975	.0004850	.006223	.008060	.0011430
%RSD	.0972556	.5883096	.4612292	6.101498	.2383082	.1226829	.3794986
#1	8.170911	8.400274	.1299023	.0085076	2.604258	6.572495	.3014814
#2	8.184862	8.427130	.1288454	.0076472	2.613735	6.560677	.2999274
#3	8.184513	8.496513	.1298567	.0076897	2.615983	6.576080	.3021563

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-02 Acquired: 11/21/2024 17:16:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.174966	.0857939	.2162814
Stddev	.002711	.0008448	.0002836
%RSD	.2307339	.9846214	.1311254
#1	1.171997	.0858992	.2160345
#2	1.175590	.0865811	.2165911
#3	1.177310	.0849015	.2162185

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1020.374	28365.70	5754.950	851.6485	1537.539
Stddev	3.888	76.05	16.063	5.3065	7.217
%RSD	.3810536	.2680889	.2791124	.6230866	.4693620
#1	1018.655	28279.04	5737.354	845.6821	1535.287
#2	1024.825	28421.33	5768.827	855.8401	1545.614
#3	1017.641	28396.72	5758.670	853.4234	1531.718

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-03 Acquired: 11/21/2024 17:21:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1484056	.0002116	5.336711	.0033372	.0088698	74.13639	3.140669
Stddev	.0109149	.0027431	.010663	.0048846	.0039413	.26476	.009538
%RSD	7.354768	1296.264	.1998019	146.3668	44.43441	.3571208	.3036925
#1	.1391334	.0027380	5.324402	-.001649	.0046930	73.92465	3.144894
#2	.1456489	.0006029	5.342642	.003547	.0125232	74.43323	3.147364
#3	.1604346	-.002706	5.343091	.008114	.0093932	74.05128	3.129748

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0050162	.0153495	85.80871	.2807650	.1077824	.6691521	174.8786
Stddev	.0001209	.0002068	.17324	.0005517	.0013056	.0009709	.6420
%RSD	2.409542	1.347265	.2018956	.1965043	1.211352	.1450891	.3671182
#1	.0050260	.0151937	85.81728	.2812438	.1085764	.6683695	174.2687
#2	.0051319	.0152707	85.97750	.2801616	.1062756	.6702385	175.5485
#3	.0048907	.0155841	85.63133	.2808893	.1084954	.6688482	174.8187

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.28594	27.38512	.2936586	-.016798	.7943422	.1931672	2.917476
Stddev	.02376	.09624	.0006963	.000144	.3635161	.0028350	.007951
%RSD	.1458876	.3514439	.2371232	.8545270	45.76317	1.467613	.2725198
#1	16.27090	27.29172	.2942989	-.016942	.6407379	.1953841	2.919973
#2	16.31333	27.48397	.2929173	-.016796	1.209446	.1899729	2.923878
#3	16.27360	27.37967	.2937594	-.016655	.532842	.1941446	2.908577

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.15160	9.670583	.1306630	.0063221	2.434381	7.054543	.1623571
Stddev	.07030	.009420	.0018229	.0004101	.022538	.030078	.0001867
%RSD	.6924738	.0974134	1.395083	6.486349	.9258081	.4263595	.1149839
#1	10.07788	9.681442	.1297452	.0059934	2.418335	7.059035	.1623787
#2	10.21788	9.665713	.1294814	.0067816	2.424660	7.082122	.1621605
#3	10.15905	9.664594	.1327623	.0061911	2.460148	7.022472	.1625320

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-03 Acquired: 11/21/2024 17:21:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.234765	.0962991	.2323535
Stddev	.001696	.0001862	.0008461
%RSD	.1373637	.1933153	.3641277
#1	1.234256	.0965020	.2318313
#2	1.236657	.0961362	.2333297
#3	1.233381	.0962590	.2318995

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1050.566	29254.90	5928.375	881.7616	1532.230
Stddev	.354	56.33	26.156	1.1615	.873
%RSD	.0337330	.1925657	.4412017	.1317206	.0569659
#1	1050.864	29305.46	5934.818	880.4207	1531.299
#2	1050.659	29265.07	5899.599	882.4497	1533.030
#3	1050.174	29194.18	5950.707	882.4146	1532.361

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-04 Acquired: 11/21/2024 17:25:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1310531	.0050700	1.478835	.0034116	.0017463	73.64093
Stddev	.0066523	.0029471	.003857	.0062950	.0026239	.15471
%RSD	5.076028	58.12786	.2608407	184.5197	150.2592	.2100817
#1	.1233731	.0017659	1.480893	.0001220	-.000767	73.58524
#2	.1347647	.0074273	1.474385	-.000557	.001537	73.52178
#3	.1350214	.0060169	1.481228	.010670	.004469	73.81577

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.134311	.0046391	.0108424	47.06004	.1209383	.0989349
Stddev	.000633	.0001748	.0000942	.04770	.0009237	.0006064
%RSD	.0558056	3.769087	.8685882	.1013575	.7637744	.6129561
#1	1.135029	.0045470	.0108550	47.01685	.1217899	.0994525
#2	1.134068	.0048408	.0109297	47.11123	.1199564	.0990846
#3	1.133835	.0045296	.0107426	47.05203	.1210686	.0982677

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3352897	163.9677	15.13456	19.46744	.1769467	-.021322
Stddev	.0040024	.6402	.01265	.06412	.0009043	.000179
%RSD	1.193698	.3904538	.0835508	.3293870	.5110304	.8380501
#1	.3389409	163.7127	15.14736	19.53177	.1772230	-.021492
#2	.3310104	163.4943	15.13423	19.46702	.1776805	-.021340
#3	.3359178	164.6961	15.12207	19.40352	.1759365	-.021136

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8256441	.1729720	1.264644	7.815886	F 10.43279	.1136159
Stddev	.0833554	.0023736	.003373	.112206	.03727	.0020495
%RSD	10.09580	1.372258	.2667398	1.435620	.3572869	1.803914
#1	.8634512	.1753513	1.268484	7.712429	10.47302	.1151710
#2	.8833961	.1706041	1.263293	7.800065	10.42591	.1112934
#3	.7300849	.1729604	1.262156	7.935163	10.39943	.1143835

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-04 Acquired: 11/21/2024 17:25:36 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066717	1.378857	7.188564	.0604408	1.205592	.0881094
Stddev	.0000704	.014369	.035011	.0017920	.004565	.0003616
%RSD	1.055462	1.042069	.4870332	2.964897	.3786749	.4103758
#1	.0065937	1.395447	7.220944	.0588301	1.204356	.0881760
#2	.0067306	1.370425	7.193337	.0623711	1.201772	.0877191
#3	.0066908	1.370697	7.151412	.0601213	1.210648	.0884330

Elem	Sr4077
Units	ppm
Avg	.1567608
Stddev	.0004595
%RSD	.2931278
#1	.1572141
#2	.1562953
#3	.1567731

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1085.052	30137.27	6060.982	911.6261	1550.413
Stddev	.959	33.93	11.515	3.2529	3.462
%RSD	.0883666	.1125834	.1899792	.3568263	.2232905
#1	1084.158	30172.58	6047.700	914.9461	1546.474
#2	1086.065	30134.33	6067.102	911.4874	1552.975
#3	1084.932	30104.91	6068.145	908.4447	1551.790

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-05 Acquired: 11/21/2024 17:30:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1083657	.0053357	1.164345	.0019664	.0068489	80.56895	1.157074
Stddev	.0069571	.0028365	.005372	.0034861	.0023950	.03824	.001673
%RSD	6.419994	53.16003	.4613418	177.2855	34.96876	.0474577	.1445932
#1	.1162142	.0021745	1.166477	.0008137	.0094043	80.58358	1.156584
#2	.1029577	.0061743	1.168324	.0058828	.0046555	80.59771	1.158938
#3	.1059251	.0076583	1.158235	-.000797	.0064871	80.52556	1.155701

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049268	.0108086	45.64190	.1239738	.1036291	.2683849	175.7831
Stddev	.0001681	.0001602	.07202	.0009939	.0004907	.0013003	.3788
%RSD	3.412510	1.482121	.1577883	.8017059	.4735033	.4844716	.2154775
#1	.0047651	.0109918	45.63860	.1242386	.1036169	.2685543	175.7850
#2	.0049145	.0107387	45.71552	.1228743	.1031446	.2695922	176.1609
#3	.0051007	.0106951	45.57159	.1248085	.1041258	.2670083	175.4034

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.41362	19.29272	.1760230	-.020948	.5722872	.1835002	1.041534
Stddev	.03650	.06828	.0012984	.000300	.2347840	.0038114	.002669
%RSD	.2096223	.3539243	.7376208	1.430230	41.02556	2.077034	.2562540
#1	17.40146	19.22610	.1772910	-.021294	.3664271	.1800923	1.043125
#2	17.45465	19.36255	.1760816	-.020768	.8279908	.1876158	1.038453
#3	17.38474	19.28953	.1746962	-.020782	.5224438	.1827926	1.043025

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.995481	6.308518	.1169640	.0058508	1.189299	7.852024	.0381216
Stddev	.072190	.041141	.0012434	.0002912	.012260	.013737	.0004401
%RSD	1.031956	.6521545	1.063037	4.977346	1.030895	.1749451	1.154533
#1	7.078839	6.354558	.1181263	.0061739	1.202891	7.856255	.0380818
#2	6.953940	6.295639	.1171128	.0056084	1.179073	7.863146	.0385803
#3	6.953665	6.275357	.1156530	.0057702	1.185933	7.836669	.0377027

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-05 Acquired: 11/21/2024 17:30:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.248355	.0844712	.1639705
Stddev	.002275	.0006213	.0002420
%RSD	.1822568	.7355171	.1476089
#1	1.250933	.0838626	.1638691
#2	1.247505	.0851045	.1642468
#3	1.246627	.0844466	.1637957

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1063.109	29415.52	5979.726	888.1509	1564.478
Stddev	2.008	48.39	9.597	.9047	5.807
%RSD	.1888844	.1644910	.1604939	.1018658	.3711791
#1	1062.462	29418.76	5986.065	887.1233	1560.675
#2	1061.504	29462.20	5968.685	888.8279	1561.598
#3	1065.361	29365.59	5984.429	888.5014	1571.162

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-06 Acquired: 11/21/2024 17:34:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0649914	-.001261	.6339961	-.000570	.0047349	72.92060	.7682589
Stddev	.0136187	.005070	.0046306	.001466	.0011921	.10394	.0012842
%RSD	20.95462	402.0562	.7303838	257.2937	25.17785	.1425341	.1671613
#1	.0806010	.004593	.6393370	-.000087	.0034931	72.95963	.7674302
#2	.0555361	-.004212	.6311052	.000594	.0058702	72.80280	.7697382
#3	.0588370	-.004164	.6315460	-.002217	.0048413	72.99938	.7676082

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043942	.0091992	21.54168	.1021693	.0906701	.1851262	164.8382
Stddev	.0001383	.0001539	.06765	.0012298	.0008118	.0012438	.5627
%RSD	3.146551	1.672545	.3140425	1.203684	.8953822	.6718795	.3413659
#1	.0042371	.0093457	21.58629	.1032027	.0912952	.1838408	164.8938
#2	.0044484	.0092129	21.57489	.1008091	.0897525	.1863238	164.2498
#3	.0044972	.0090389	21.46384	.1024961	.0909625	.1852140	165.3710

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.466287	20.54075	.1905846	-.026777	.9524692	.1605988	.7780008
Stddev	.016214	.08052	.0004927	.000235	.2059521	.0012197	.0053916
%RSD	.1712842	.3920089	.2585194	.8764853	21.62297	.7594610	.6930099
#1	9.473006	20.47710	.1906702	-.026521	1.190282	.1620058	.7837361
#2	9.478062	20.63127	.1910290	-.026827	.833811	.1599491	.7730357
#3	9.447794	20.51387	.1900548	-.026982	.833315	.1598415	.7772305

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.480607	6.263868	.1047982	.0033391	.6195280	8.301421	.0197811
Stddev	.047906	.012906	.0024972	.0002655	.0158311	.009650	.0028407
%RSD	.7392263	.2060443	2.382883	7.952136	2.555354	.1162407	14.36047
#1	6.425291	6.258617	.1036875	.0036392	.6355521	8.312415	.0223509
#2	6.507965	6.254414	.1030490	.0031346	.6191347	8.297489	.0202615
#3	6.508566	6.278572	.1076581	.0032436	.6038971	8.294357	.0167308

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-06 Acquired: 11/21/2024 17:34:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.226269	.0914938	.1072543
Stddev	.005052	.0006330	.0001911
%RSD	.4119557	.6918515	.1781688
#1	1.224238	.0919452	.1070492
#2	1.222550	.0907702	.1072861
#3	1.232021	.0917660	.1074274

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1174.657	32542.56	6464.170	978.4308	1584.623
Stddev	.759	32.99	11.070	4.9154	1.879
%RSD	.0645996	.1013599	.1712571	.5023738	.1186074
#1	1174.477	32563.04	6454.045	973.9802	1583.350
#2	1174.004	32560.14	6475.990	983.7065	1583.739
#3	1175.489	32504.51	6462.474	977.6056	1586.782

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-07 Acquired: 11/21/2024 17:38:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0451592	-.000798	.1748979	-.004628	.0055283	61.79042	.4326925
Stddev	.0078733	.005274	.0024663	.008286	.0009998	.14051	.0005273
%RSD	17.43454	661.2666	1.410114	179.0322	18.08583	.2273935	.1218568
#1	.0407630	.004861	.1763001	-.014175	.0060145	61.94975	.4331143
#2	.0542488	-.001677	.1720503	-.000404	.0061920	61.73728	.4328618
#3	.0404657	-.005576	.1763435	.000695	.0043783	61.68424	.4321014

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038675	.0064269	15.48889	.0762534	.0673187	.1463254	127.1309
Stddev	.0000409	.0002245	.06858	.0009069	.0006148	.0007871	.1256
%RSD	1.056956	3.492711	.4427467	1.189304	.9132045	.5379168	.0987757
#1	.0038203	.0063243	15.45268	.0764739	.0680286	.1464308	127.2727
#2	.0038897	.0062721	15.44600	.0770296	.0669693	.1470544	127.0860
#3	.0038924	.0066844	15.56798	.0752566	.0669583	.1454908	127.0339

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.739088	18.49843	.1582262	-.021249	.3816109	.1156915	.4661428
Stddev	.010192	.06262	.0006484	.000981	.2680344	.0015208	.0101471
%RSD	.1046483	.3384943	.4098070	4.615125	70.23762	1.314492	2.176830
#1	9.750741	18.56255	.1578299	-.021104	.6909936	.1174466	.4721327
#2	9.731840	18.43744	.1589745	-.020350	.2342815	.1147668	.4718688
#3	9.734683	18.49530	.1578743	-.022295	.2195576	.1148610	.4544269

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.712111	3.740687	.1061092	.0018913	.2460943	9.012344	.0074314
Stddev	.011519	.009778	.0018270	.0001357	.0027228	.048859	.0012250
%RSD	.1186090	.2613874	1.721794	7.173988	1.106420	.5421395	16.48463
#1	9.715060	3.735843	.1080207	.0018309	.2434374	9.059291	.0076806
#2	9.721870	3.751942	.1043804	.0020467	.2488786	9.015966	.0085126
#3	9.699404	3.734278	.1059264	.0017963	.2459668	8.961774	.0061009

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-07 Acquired: 11/21/2024 17:38:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8436861	.0860561	.0888536
Stddev	.0036879	.0008115	.0001286
%RSD	.4371190	.9429372	.1446814
#1	.8471768	.0860543	.0889940
#2	.8440530	.0868685	.0888251
#3	.8398284	.0852455	.0887417

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1096.920	30418.82	5995.416	917.7216	1602.305
Stddev	2.318	528.89	8.440	16.4559	1.219
%RSD	.2113048	1.738705	.1407762	1.793127	.0760983
#1	1094.525	30209.50	5992.093	909.8067	1601.392
#2	1097.084	30026.62	5989.144	906.7187	1601.834
#3	1099.152	31020.33	6005.012	936.6394	1603.690

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-08 Acquired: 11/21/2024 17:43:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1101977	.0019789	2.003859	-.005439	.0057255	46.81524	1.128772
Stddev	.0028199	.0037176	.010584	.004074	.0026181	.09983	.002954
%RSD	2.558956	187.8585	.5281706	74.89245	45.72722	.2132517	.2617340
#1	.1086803	.0062333	2.009891	-.004155	.0033378	46.71596	1.126775
#2	.1084614	.0003469	1.991638	-.010000	.0053135	46.81413	1.127375
#3	.1134514	-.000643	2.010047	-.002162	.0085251	46.91562	1.132166

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032301	.0122591	184.9297	.1209604	.0565692	.2896242	128.5800
Stddev	.0001150	.0000536	.1293	.0009148	.0008456	.0018580	.1627
%RSD	3.559598	.4375562	.0699419	.7562459	1.494843	.6415106	.1265411
#1	.0031678	.0122058	184.8757	.1210976	.0557514	.2882228	128.3979
#2	.0031597	.0122587	184.8360	.1199848	.0565162	.2889182	128.7113
#3	.0033628	.0123130	185.0772	.1217988	.0574401	.2917317	128.6306

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.547057	65.52302	.1653660	-.010882	.7226658	.1425189	2.628682
Stddev	.009138	.16822	.0003568	.000259	.0644710	.0018749	.004567
%RSD	.1210802	.2567326	.2157916	2.381830	8.921272	1.315546	.1737531
#1	7.552832	65.71113	.1649606	-.010777	.7869959	.1418749	2.628976
#2	7.536522	65.38703	.1655050	-.011177	.6580549	.1410509	2.633095
#3	7.551818	65.47090	.1656325	-.010692	.7229466	.1446310	2.623975

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.849671	7.658487	.1124674	.0051262	5.462416	8.955179	.0287642
Stddev	.054927	.035825	.0017318	.0003290	.037794	.051850	.0022562
%RSD	.9389795	.4677849	1.539810	6.418818	.6918935	.5789985	7.843732
#1	5.903301	7.671357	.1133544	.0051211	5.437539	8.986520	.0281962
#2	5.852179	7.618004	.1135760	.0047997	5.443802	8.983689	.0312501
#3	5.793532	7.686099	.1104718	.0054577	5.505907	8.895330	.0268462

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-08 Acquired: 11/21/2024 17:43:15 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHG9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.126858	.0649529	.2498304
Stddev	.004387	.0005912	.0008177
%RSD	.3893450	.9101248	.3273061
#1	1.122566	.0648029	.2490413
#2	1.126673	.0644512	.2497759
#3	1.131335	.0656046	.2506740

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	964.2632	26731.60	5472.238	803.8999	1487.067
Stddev	1.0289	34.14	26.493	.8930	3.468
%RSD	.1067025	.1277268	.4841361	.1110805	.2332128
#1	965.3042	26717.83	5446.996	803.3180	1486.351
#2	964.2386	26770.48	5469.891	803.4536	1490.837
#3	963.2468	26706.49	5499.826	804.9280	1484.013

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-09 Acquired: 11/21/2024 17:52:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1256469	-.001253	2.287655	-.008697	.0072150	56.05543	1.259079
Stddev	.0027638	.005539	.002464	.001613	.0022945	.13520	.000668
%RSD	2.199685	442.0054	.1077033	18.54404	31.80129	.2411837	.0530716
#1	.1249441	-.000545	2.286908	-.010529	.0053526	56.17732	1.258454
#2	.1286943	-.007112	2.285650	-.007493	.0065142	56.07896	1.259783
#3	.1233023	.003897	2.290405	-.008068	.0097781	55.91001	1.259000

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031600	.0149988	254.3017	.1294971	.0634566	.3345843	141.3160
Stddev	.0001347	.0001725	.2023	.0039423	.0005584	.0018731	.6271
%RSD	4.262795	1.149958	.0795491	3.044288	.8800074	.5598342	.4437591
#1	.0031411	.0149403	254.4604	.1249926	.0629080	.3328456	141.8615
#2	.0033032	.0148631	254.0739	.1323180	.0634375	.3365678	141.4555
#3	.0030358	.0151929	254.3707	.1311808	.0640243	.3343394	140.6309

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.18104	88.70383	.1926764	-.012447	1.087145	.1515511	2.834278
Stddev	.00745	.08313	.0007290	.001234	.138917	.0021102	.063667
%RSD	.0731289	.0937124	.3783676	9.915980	12.77812	1.392390	2.246313
#1	10.17268	88.62872	.1927706	-.013766	1.247431	.1492945	2.761830
#2	10.18349	88.68962	.1919048	-.012254	1.001616	.1534755	2.859689
#3	10.18695	88.79314	.1933536	-.011320	1.012387	.1518831	2.881316

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.305874	8.831895	.1167076	.0043577	5.854288	7.744966	.0351166
Stddev	.089113	.040345	.0020537	.0002537	.026962	.033899	.0030497
%RSD	1.413177	.4568119	1.759700	5.821376	.4605596	.4376925	8.684506
#1	6.217645	8.825205	.1151891	.0040911	5.837300	7.726858	.0315997
#2	6.395846	8.795314	.1158895	.0043857	5.840186	7.784074	.0370300
#3	6.304131	8.875167	.1190443	.0045962	5.885377	7.723966	.0367202

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-09 Acquired: 11/21/2024 17:52:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.098731	.0823275	.2745037
Stddev	.006400	.0011171	.0002569
%RSD	.5824468	1.356859	.0935958
#1	1.097824	.0835016	.2742368
#2	1.105536	.0812780	.2747494
#3	1.092834	.0822028	.2745249

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	977.5317	27382.84	5649.941	823.7185	1437.992
Stddev	1.2292	482.30	17.398	14.4043	.546
%RSD	.1257424	1.761332	.3079369	1.748692	.0379654
#1	976.3322	27939.55	5630.239	839.9731	1438.241
#2	978.7885	27091.38	5656.391	818.6451	1437.366
#3	977.4744	27117.59	5663.194	812.5374	1438.370

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-10 Acquired: 11/21/2024 17:56:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1385031	.0019019	1.028180	-.002164	.0040696	51.93152	.7890081
Stddev	.0027571	.0029097	.004206	.008484	.0015273	.10834	.0022382
%RSD	1.990672	152.9909	.4091106	392.1114	37.53011	.2086176	.2836706
#1	.1358160	.0035688	1.032963	.002888	.0043725	52.05295	.7911723
#2	.1413253	.0035947	1.025054	-.011959	.0054229	51.89684	.7891494
#3	.1383680	-.001458	1.026525	.002579	.0024136	51.84476	.7867026

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024618	.0089205	225.2045	.0835949	.0523341	.2812021	127.7850
Stddev	.0001345	.0001940	.4527	.0006583	.0009406	.0020922	.4731
%RSD	5.461661	2.174640	.2010223	.7874984	1.797366	.7440232	.3702211
#1	.0025909	.0090161	225.6144	.0829574	.0534132	.2834525	128.2472
#2	.0024721	.0086973	225.2805	.0835550	.0516878	.2808382	127.8060
#3	.0023226	.0090481	224.7186	.0842722	.0519013	.2793158	127.3018

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.518567	42.72962	.1411524	-.013305	.2471887	.1312246	1.131574
Stddev	.005775	.00674	.0006090	.000288	.2931596	.0021989	.005454
%RSD	.0606676	.0157742	.4314858	2.166233	118.5975	1.675665	.4819803
#1	9.525110	42.72552	.1411173	-.012982	.5843353	.1290488	1.136275
#2	9.516409	42.72595	.1405617	-.013534	.0523148	.1311790	1.125594
#3	9.514182	42.73740	.1417783	-.013400	.1049162	.1334459	1.132853

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.932156	5.316573	.0811297	.0012566	1.743913	5.729279	.0106746
Stddev	.037754	.017380	.0024797	.0001183	.019509	.006845	.0016190
%RSD	.9601249	.3268960	3.056457	9.412941	1.118680	.1194689	15.16705
#1	3.891126	5.320123	.0803243	.0011780	1.742366	5.723797	.0094823
#2	3.939917	5.331904	.0839120	.0011993	1.764148	5.736951	.0125178
#3	3.965427	5.297693	.0791529	.0013927	1.725223	5.727090	.0100238

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-10 Acquired: 11/21/2024 17:56:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.7763394	.0764654	.4515292
Stddev	.0024311	.0009601	.0010114
%RSD	.3131482	1.255611	.2239927
#1	.7791459	.0775740	.4524442
#2	.7749899	.0759218	.4517002
#3	.7748825	.0759005	.4504433

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1000.176	27823.31	5707.032	840.5495	1476.537
Stddev	1.703	67.51	5.274	3.8981	1.932
%RSD	.1702856	.2426432	.0924138	.4637593	.1308546
#1	998.799	27753.45	5711.887	836.2328	1475.520
#2	1002.080	27828.28	5701.421	843.8123	1475.326
#3	999.648	27888.19	5707.787	841.6034	1478.765

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-11 Acquired: 11/21/2024 18:05:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1378393	.0006529	2.871763	.0011407	.0065775	60.44271	1.096462
Stddev	.0033746	.0039932	.010606	.0053446	.0017376	4.20578	.072467
%RSD	2.448179	611.5749	.3693238	468.5425	26.41672	6.958287	6.609170
#1	.1394342	-.003431	2.869829	-.004339	.0057634	55.77682	1.015957
#2	.1401208	.004548	2.862257	.006339	.0053964	63.94213	1.156481
#3	.1339629	.000842	2.883203	.001422	.0085726	61.60917	1.116947

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036304	.0099037	53.25437	.0885761	.0676666	.2526025	140.4810
Stddev	.0002276	.0004903	3.54289	.0008967	.0006007	.0176562	9.8609
%RSD	6.269522	4.951007	6.652770	1.012356	.8877007	6.989705	7.019413
#1	.0034282	.0104689	49.32111	.0892460	.0669737	.2322286	129.5224
#2	.0035861	.0096501	56.19527	.0889248	.0679862	.2634357	148.6379
#3	.0038770	.0095922	54.24673	.0875574	.0680399	.2621433	143.2828

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.208392	31.57674	.1381902	-.016814	.6994816	.1499080	1.417994
Stddev	.597887	2.01279	.0007353	.001095	.1389152	.0092880	.002998
%RSD	6.492847	6.374271	.5320810	6.509640	19.85974	6.195778	.2114042
#1	8.549311	29.34096	.1385602	-.015566	.5409838	.1436516	1.415948
#2	9.715914	33.24442	.1373434	-.017611	.7573703	.1605800	1.416600
#3	9.359952	32.14484	.1386670	-.017265	.8000909	.1454922	1.421435

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.649911	5.913426	.0880037	.0030945	1.276232	7.289936	.0345211
Stddev	.592069	.010639	.0099626	.0001105	.006976	.412070	.0022039
%RSD	10.47927	.1799071	11.32060	3.570485	.5465914	5.652594	6.384140
#1	4.973071	5.903174	.0784604	.0030784	1.280491	6.837986	.0352698
#2	6.071770	5.912692	.0983383	.0032121	1.280024	7.644783	.0362530
#3	5.904890	5.924413	.0872125	.0029929	1.268182	7.387038	.0320404

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-11 Acquired: 11/21/2024 18:05:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.046476	.0769136	.1097110
Stddev	.073670	.0057570	.0077554
%RSD	7.039832	7.484981	7.068976
#1	.964504	.0706401	.1011703
#2	1.107153	.0819543	.1163135
#3	1.067770	.0781465	.1116492

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1014.143	28087.76	5712.589	843.0533	1558.679
Stddev	1.686	70.49	320.033	2.0423	1.075
%RSD	.1662447	.2509478	5.602238	.2422500	.0689530
#1	1012.413	28010.93	6067.184	842.2250	1559.250
#2	1014.236	28102.92	5445.194	845.3796	1559.348
#3	1015.781	28149.44	5625.388	841.5553	1557.439

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-12 Acquired: 11/21/2024 18:09:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1302346	.0023064	4.173965	.0006383	.0047739	68.99612	1.259996
Stddev	.0000698	.0020393	.007611	.0058441	.0012196	.36427	.002950
%RSD	.0536287	88.42221	.1823425	915.6121	25.54700	.5279601	.2341595
#1	.1302193	.0042035	4.180950	.0073156	.0058373	68.74727	1.256655
#2	.1301738	.0025659	4.165854	-.001856	.0034426	68.82688	1.261091
#3	.1303109	.0001497	4.175091	-.003545	.0050417	69.41423	1.262242

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0045614	.0102159	36.96209	.0984106	.0703384	.2414859	148.8751
Stddev	.0002092	.0003164	.14104	.0001500	.0004752	.0021679	.6456
%RSD	4.586402	3.096664	.3815900	.1524784	.6756328	.8977436	.4336206
#1	.0048027	.0099302	36.80269	.0982373	.0698421	.2399232	148.6297
#2	.0044322	.0105559	37.01287	.0985003	.0703839	.2439609	148.3883
#3	.0044492	.0101615	37.07072	.0984940	.0707893	.2405737	149.6074

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.52712	20.31067	.1408987	-.017341	.6539988	.1725265	1.394905
Stddev	.02335	.06013	.0004571	.000167	.2135755	.0010942	.005675
%RSD	.2218405	.2960476	.3244301	.9602600	32.65686	.6342298	.4068654
#1	10.52005	20.34326	.1407344	-.017186	.9006127	.1713211	1.398761
#2	10.55319	20.34748	.1405464	-.017517	.5314947	.1734572	1.397566
#3	10.50811	20.24128	.1414152	-.017319	.5298889	.1728012	1.388388

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.907141	6.884198	.0985339	.0037775	1.473305	7.770692	.0527976
Stddev	.068367	.014799	.0032619	.0001901	.004331	.015812	.0014514
%RSD	.9898082	.2149643	3.310410	5.031472	.2939924	.2034886	2.749042
#1	6.929743	6.874821	.1014079	.0035616	1.477210	7.777986	.0543027
#2	6.830334	6.876515	.0949886	.0038511	1.468646	7.752549	.0526835
#3	6.961344	6.901258	.0992052	.0039198	1.474060	7.781540	.0514066

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-12 Acquired: 11/21/2024 18:09:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.175455	.0806087	.1239030
Stddev	.006567	.0019663	.0002747
%RSD	.5586495	2.439303	.2216828
#1	1.171455	.0784131	.1237458
#2	1.171877	.0822073	.1237431
#3	1.183034	.0812056	.1242202

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1013.572	28091.64	5642.930	845.6805	1578.590
Stddev	1.803	36.06	2.014	4.7784	1.206
%RSD	.1779080	.1283777	.0356875	.5650402	.0764232
#1	1011.998	28098.73	5640.919	843.8187	1577.218
#2	1015.540	28052.56	5642.925	842.1132	1579.069
#3	1013.179	28123.64	5644.947	851.1096	1579.484

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-13 Acquired: 11/21/2024 18:14:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0727819	-.002942	.4538156	.0028373	.0053270	76.06692	.6181513
Stddev	.0129197	.002490	.0071008	.0027302	.0005244	.12007	.0019263
%RSD	17.75123	84.64923	1.564687	96.22318	9.845171	.1578429	.3116236
#1	.0601513	-.002298	.4564454	.0002290	.0058330	75.93942	.6184364
#2	.0859725	-.000837	.4457751	.0026081	.0053621	76.17782	.6199192
#3	.0722221	-.005691	.4592264	.0056749	.0047859	76.08353	.6160984

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048040	.0083514	14.48672	.0807852	.0788344	.1586838	155.9150
Stddev	.0001428	.0002318	.02186	.0011470	.0002956	.0021129	.4097
%RSD	2.973158	2.775035	.1508819	1.419871	.3750190	1.331514	.2627519
#1	.0046440	.0086173	14.50356	.0818622	.0787127	.1581580	155.4484
#2	.0049185	.0081918	14.49458	.0809143	.0791715	.1610100	156.0811
#3	.0048497	.0082453	14.46202	.0795791	.0786190	.1568835	156.2155

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.08197	16.99893	.1320706	-.023975	.9231218	.1694981	.4610259
Stddev	.04018	.04283	.0006319	.000082	.1258066	.0059168	.0031538
%RSD	.3625883	.2519676	.4784432	.3431844	13.62839	3.490775	.6840840
#1	11.10668	17.00530	.1322872	-.023901	.8831237	.1710010	.4585541
#2	11.10363	17.03821	.1313589	-.024064	1.064065	.1745185	.4645778
#3	11.03561	16.95326	.1325657	-.023961	.822177	.1629748	.4599457

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.826468	4.429362	.0933009	.0016299	.4826510	8.674386	.0095994
Stddev	.062977	.006603	.0013870	.0000898	.0133847	.021466	.0026762
%RSD	1.304835	.1490622	1.486587	5.509384	2.773160	.2474607	27.87890
#1	4.758642	4.430675	.0919676	.0016462	.4980503	8.676686	.0121667
#2	4.883094	4.435210	.0947359	.0015331	.4738129	8.694609	.0068261
#3	4.837668	4.422202	.0931990	.0017105	.4760897	8.651863	.0098055

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-13 Acquired: 11/21/2024 18:14:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.171632	.0741169	.0795995
Stddev	.003878	.0009506	.0000936
%RSD	.3310208	1.282585	.1175474
#1	1.168157	.0749339	.0794946
#2	1.175816	.0743433	.0796294
#3	1.170924	.0730735	.0796744

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1107.751	30581.33	6136.006	926.9535	1598.368
Stddev	2.593	35.13	13.823	5.1821	.909
%RSD	.2341221	.1148715	.2252775	.5590509	.0568468
#1	1107.485	30598.58	6127.356	932.3301	1597.622
#2	1110.467	30540.91	6128.714	921.9906	1598.102
#3	1105.301	30604.51	6151.948	926.5397	1599.380

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-14 Acquired: 11/21/2024 18:18:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0586068	.0034488	.4268078	-.000206	.0016965	77.29210	.5848541
Stddev	.0017869	.0040208	.0009965	.007728	.0007608	2.51338	.0183059
%RSD	3.048898	116.5841	.2334725	3747.414	44.84391	3.251798	3.129993
#1	.0586622	.0080704	.4267540	.000057	.0012806	80.19430	.6059918
#2	.0567929	.0015223	.4278301	-.008063	.0025746	75.83718	.5743573
#3	.0603653	.0007538	.4258393	.007387	.0012344	75.84481	.5742133

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0044723	.0077640	13.56060	.0799627	.0746085	.1325535	157.8732
Stddev	.0001487	.0004291	.37643	.0017755	.0000650	.0054943	5.1626
%RSD	3.323822	5.526714	2.775932	2.220405	.0870651	4.144982	3.270120
#1	.0046355	.0072696	13.99527	.0779474	.0745471	.1381418	163.8332
#2	.0044366	.0079834	13.34423	.0812964	.0746019	.1271583	154.7813
#3	.0043447	.0080391	13.34231	.0806444	.0746765	.1323605	155.0053

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.86648	16.52665	.1204753	-.024337	.7215349	.1691744	.4313315
Stddev	.30439	.49290	.0008126	.000681	.4146094	.0047263	.0003058
%RSD	2.801207	2.982438	.6744846	2.796384	57.46214	2.793748	.0709079
#1	11.21765	17.09559	.1195371	-.025114	.3824337	.1740778	.4315785
#2	10.70387	16.22894	.1209307	-.024055	.5984104	.1646477	.4309894
#3	10.67793	16.25541	.1209580	-.023844	1.183761	.1687977	.4314266

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.207677	3.657434	.0961911	.0024317	.4564265	7.068259	.0116785
Stddev	.262820	.006548	.0027845	.0001054	.0051747	.194377	.0011149
%RSD	6.246196	.1790286	2.894753	4.333348	1.133731	2.749999	9.546250
#1	4.497905	3.655224	.0993815	.0025040	.4507529	7.292005	.0109645
#2	3.985752	3.652277	.0949412	.0023108	.4608865	6.971748	.0129632
#3	4.139374	3.664801	.0942505	.0024804	.4576401	6.941026	.0111079

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-14 Acquired: 11/21/2024 18:18:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.243893	.0719407	.0776982
Stddev	.040820	.0029818	.0022971
%RSD	3.281664	4.144852	2.956399
#1	1.291018	.0753690	.0803138
#2	1.219495	.0705031	.0767722
#3	1.221164	.0699500	.0760087

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1104.275	30408.33	6009.757	918.1160	1598.784
Stddev	.087	30.21	151.420	1.1739	2.409
%RSD	.0078611	.0993358	2.519569	.1278633	.1506569
#1	1104.256	30417.89	5835.862	917.9789	1596.123
#2	1104.370	30432.60	6080.943	917.0166	1600.816
#3	1104.199	30374.50	6112.467	919.3524	1599.413

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-15 Acquired: 11/21/2024 18:23:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1849655	.0017250	4.239704	-.002333	.0065047	56.30570	1.773742
Stddev	.0068402	.0051097	.063552	.008506	.0027132	.11049	.003970
%RSD	3.698096	296.2095	1.498982	364.6005	41.71073	.1962293	.2238050
#1	.1890539	-.002419	4.312058	-.002859	.0074976	56.42818	1.777214
#2	.1770688	.000160	4.192917	-.010564	.0085816	56.21355	1.774598
#3	.1887740	.007434	4.214138	.006424	.0034350	56.27536	1.769414

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0032286	.0129089	88.53155	.1723431	.0583340	.4401520	118.5301
Stddev	.0000514	.0002509	.19843	.0006456	.0014921	.0048791	.4393
%RSD	1.593439	1.943635	.2241355	.3745750	2.557934	1.108509	.3705853
#1	.0032174	.0131959	88.72902	.1718515	.0599567	.4448646	118.8924
#2	.0031836	.0127314	88.33217	.1730742	.0570210	.4404695	118.0415
#3	.0032847	.0127993	88.53345	.1721037	.0580242	.4351219	118.6562

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.607576	34.57118	.1583710	-.014312	.4428674	.1375088	2.628095
Stddev	.009245	.14794	.0019672	.000510	.1624055	.0008314	.003587
%RSD	.1074082	.4279348	1.242131	3.560078	36.67136	.6046138	.1364994
#1	8.615993	34.55852	.1606163	-.014093	.2852878	.1372508	2.628372
#2	8.597680	34.42997	.1575465	-.013948	.6097029	.1368371	2.624377
#3	8.609054	34.72504	.1569502	-.014894	.4336115	.1384387	2.631536

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.595824	7.772670	.0934209	.0030673	3.411857	12.11121	.0499392
Stddev	.084896	.118173	.0019145	.0004613	.059815	.05254	.0007450
%RSD	1.847247	1.520368	2.049372	15.03815	1.753144	.4338445	1.491740
#1	4.558503	7.908519	.0944827	.0030127	3.480415	12.12142	.0497860
#2	4.535981	7.693625	.0945693	.0035534	3.370323	12.05431	.0492827
#3	4.692987	7.715866	.0912108	.0026357	3.384832	12.15790	.0507488

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-15 Acquired: 11/21/2024 18:23:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.117495	.0759184	.1738798
Stddev	.006427	.0005735	.0002747
%RSD	.5751286	.7554533	.1579675
#1	1.124891	.0759164	.1741376
#2	1.114322	.0753459	.1735909
#3	1.113271	.0764930	.1739108

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1011.735	28357.05	5714.056	853.8051	1559.556
Stddev	12.401	121.39	10.280	1.5734	21.291
%RSD	1.225683	.4280880	.1799096	.1842845	1.365201
#1	997.417	28316.40	5705.729	851.9888	1534.972
#2	1018.728	28261.20	5725.546	854.6738	1571.870
#3	1019.060	28493.55	5710.893	854.7526	1571.827

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-16 Acquired: 11/21/2024 18:27:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1841098	-.000545	4.100779	.0011135	.0076122	55.33422	1.739050
Stddev	.0105770	.003242	.012848	.0052435	.0026337	.09937	.007425
%RSD	5.744949	594.4639	.3132959	470.9221	34.59926	.1795832	.4269825
#1	.1727157	.000775	4.113910	-.001905	.0051174	55.22064	1.731683
#2	.1859985	.001828	4.100190	.007168	.0073533	55.40514	1.746533
#3	.1936152	-.004239	4.088235	-.001923	.0103658	55.37688	1.738932

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0033507	.0124492	88.15331	.1756838	.0570772	.4338044	117.5972
Stddev	.0000812	.0001573	.45998	.0011814	.0001879	.0031190	.3192
%RSD	2.424330	1.263522	.5217939	.6724598	.3292514	.7189954	.2714508
#1	.0034269	.0126292	87.76145	.1753801	.0571864	.4337134	117.2353
#2	.0032652	.0123380	88.65975	.1746838	.0568602	.4307318	117.7176
#3	.0033599	.0123804	88.03874	.1769873	.0571850	.4369679	117.8388

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.547937	34.08354	.1543751	-.013535	.5616966	.1386470	2.564342
Stddev	.037689	.10755	.0013602	.000252	.1341845	.0039354	.007894
%RSD	.4409086	.3155498	.8810679	1.863215	23.88914	2.838407	.3078237
#1	8.514604	33.98494	.1534997	-.013275	.6415779	.1351431	2.566550
#2	8.588834	34.19823	.1536835	-.013778	.6367331	.1378930	2.555579
#3	8.540372	34.06746	.1559421	-.013552	.4067790	.1429048	2.570896

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.518783	7.623059	.0951614	.0040675	3.314379	11.79077	.0480112
Stddev	.034565	.016702	.0013762	.0001697	.015644	.06837	.0018610
%RSD	.7649129	.2191016	1.446150	4.171341	.4719925	.5798621	3.876109
#1	4.480393	7.641965	.0951360	.0042029	3.325590	11.71368	.0459886
#2	4.547433	7.610306	.0937981	.0041223	3.296507	11.84404	.0483938
#3	4.528521	7.616906	.0965501	.0038771	3.321040	11.81460	.0496511

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-16 Acquired: 11/21/2024 18:27:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.107385	.0741256	.1712276
Stddev	.001109	.0009322	.0004233
%RSD	.1001337	1.257554	.2472168
#1	1.106258	.0743236	.1707389
#2	1.108475	.0731104	.1714618
#3	1.107423	.0749429	.1714820

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1017.765	28174.35	5645.521	851.1005	1577.820
Stddev	.460	82.97	24.437	5.1909	3.217
%RSD	.0451659	.2944772	.4328650	.6099077	.2038666
#1	1017.482	28143.97	5673.618	849.7152	1574.107
#2	1018.295	28268.22	5633.731	856.8436	1579.605
#3	1017.517	28110.85	5629.214	846.7428	1579.748

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV044 Acquired: 11/21/2024 18:36:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV044 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.924677	4.732022	24.07449	4.622541	4.671374	397.9984
Stddev	.013815	.020512	.01512	.008783	.014113	6.0157
%RSD	.2805289	.4334673	.0627994	.1900046	.3021202	1.511481
#1	4.918015	4.709449	24.08293	4.627230	4.677474	391.0534
#2	4.915455	4.749520	24.08351	4.612408	4.655237	401.3562
#3	4.940561	4.737098	24.05704	4.627984	4.681411	401.5857

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.901992	.4872667	2.436217	394.6036	14.91751	2.427077
Stddev	.156731	.0063814	.003584	6.5603	.03490	.000548
%RSD	1.582820	1.309641	.1471144	1.662513	.2339535	.0225895
#1	9.721030	.4800690	2.437549	387.0339	14.95664	2.427511
#2	9.994480	.4894988	2.438945	398.1395	14.90625	2.426461
#3	9.990467	.4922322	2.432158	398.6375	14.88962	2.427258

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.54701	411.0154	14.33518	390.8978	2.414140	1.226216
Stddev	.23325	5.9772	.25355	6.8638	.003446	.003463
%RSD	1.603409	1.454250	1.768693	1.755908	.1427429	.2824338
#1	14.27768	404.1237	14.04241	382.9727	2.417865	1.230173
#2	14.68245	414.1363	14.48250	394.7803	2.413489	1.224736
#3	14.68090	414.7861	14.48063	394.9404	2.411065	1.223738

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	395.6363	2.405127	14.36332	148.9145	4.855519	5.011235
Stddev	5.5363	.027687	.07773	2.1869	.002180	.049310
%RSD	1.399351	1.151151	.5411608	1.468565	.0448976	.9839794
#1	389.2455	2.374160	14.27379	146.3899	4.854350	4.954565
#2	398.9696	2.427490	14.40256	150.2241	4.858034	5.034795
#3	398.6939	2.413732	14.41360	150.1296	4.854172	5.044344

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV044 Acquired: 11/21/2024 18:36:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV044 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.608009	4.914112	F 5.560362	4.855086	4.826126	4.926120
Stddev	.006010	.012521	.072688	.007639	.069757	.077185
%RSD	.1304262	.2547943	1.307248	.1573453	1.445396	1.566862
#1	4.607761	4.927494	5.476652	4.863826	4.745774	4.837108
#2	4.602127	4.912161	5.596925	4.851750	4.861440	4.966710
#3	4.614139	4.902681	5.607508	4.849683	4.871164	4.974541

Elem	Sr4077
Units	ppm
Avg	4.923967
Stddev	.067717
%RSD	1.375245
#1	4.846676
#2	4.952356
#3	4.972868

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	719.5093	21279.08	4635.735	571.9576	1255.141
Stddev	.2894	22.57	57.954	3.3262	.589
%RSD	.0402274	.1060860	1.250154	.5815466	.0469398
#1	719.7427	21264.50	4702.614	575.7931	1255.573
#2	719.5997	21267.66	4604.326	569.8654	1254.470
#3	719.1854	21305.09	4600.266	570.2144	1255.382

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB044 Acquired: 11/21/2024 18:40:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB044 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003107	.0014572	.0019724	-.000487	-.000493	.0237372	.0009710
Stddev	.006101	.0022587	.0025339	.001800	.004655	.0110925	.0005764
%RSD	196.3864	154.9996	128.4675	369.7825	944.3890	46.73029	59.35363
#1	.001117	-.000268	-.000926	-.000308	-.000438	.0317291	.0010277
#2	-.000336	.000626	.003770	-.002370	.004134	.0284096	.0003685
#3	-.010101	.004014	.003073	.001217	-.005175	.0110729	.0015170

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000008	.0001332	.0155203	.0005076	.0003454	.0012363	.0258476
Stddev	.000038	.0001924	.0058338	.0004873	.0002396	.0022716	.0171964
%RSD	459.1377	144.4842	37.58852	96.00471	69.34651	183.7430	66.53024
#1	-.000018	.0002336	.0101219	.0003489	.0005594	-.001015	.0397805
#2	-.000040	.0002546	.0147300	.0010545	.0000866	.003528	.0066286
#3	.000033	-.000089	.0217090	.0001194	.0003903	.001196	.0311336

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011390	.0293556	-.000492	-.002186	-.037589	-.001652	.0007779
Stddev	.0000595	.0434726	.000206	.000804	.161586	.003353	.0003727
%RSD	5.221789	148.0897	41.86773	36.78248	429.8715	202.9769	47.91236
#1	.0012024	.0780082	-.000382	-.001769	.089054	-.000199	.0011129
#2	.0011302	-.005674	-.000729	-.001677	-.219575	.000730	.0008444
#3	.0010844	.015733	-.000364	-.003114	.017753	-.005486	.0003764

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2447061	-.000057	.0046860	.0005033	-.005085	.0010749	-.001119
Stddev	.0961786	.001915	.0011989	.0006151	.002475	.0007605	.001410
%RSD	39.30371	3334.251	25.58369	122.2257	48.67655	70.75030	126.0173
#1	.3535774	.002154	.0033017	.0003206	-.007205	.0005261	.000346
#2	.1712812	-.001183	.0053700	.0000002	-.002365	.0007556	-.001236
#3	.2092595	-.001144	.0053863	.0011890	-.005687	.0019429	-.002468

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB044 Acquired: 11/21/2024 18:40:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB044 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0012918	.0044807	.0003128
Stddev	.0009518	.0004280	.0000308
%RSD	73.67560	9.552691	9.847201
#1	.0023858	.0046325	.0003315
#2	.0008359	.0039975	.0002772
#3	.0006538	.0048122	.0003297

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	899.5096	24981.44	4821.899	757.9754	1733.506
Stddev	3.5061	235.52	27.526	6.7256	4.569
%RSD	.3897746	.9427748	.5708632	.8873164	.2635764
#1	895.7772	24876.63	4795.357	753.9687	1728.392
#2	900.0176	24816.52	4850.314	754.2174	1734.940
#3	902.7339	25251.17	4820.025	765.7402	1737.186

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-04 Acquired: 11/21/2024 18:45:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH3S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1369794	.0932856	1.096942	.1525939	.1607881	70.54256
Stddev	.0084891	.0011570	.007786	.0062690	.0027336	.05421
%RSD	6.197335	1.240244	.7097800	4.108275	1.700095	.0768494
#1	.1304888	.0945321	1.100806	.1597562	.1607928	70.49599
#2	.1338631	.0930785	1.087981	.1499216	.1580522	70.52962
#3	.1465862	.0922461	1.102041	.1481038	.1635193	70.60207

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.884321	.0888795	.1029380	184.7203	.5201755	1.028616
Stddev	.008185	.0003934	.0008337	.7235	.0002032	.002122
%RSD	.1675697	.4426225	.8099505	.3916505	.0390574	.2063373
#1	4.889486	.0893337	.1026868	184.5996	.5201216	1.028626
#2	4.874884	.0886513	.1022587	184.0647	.5200046	1.026488
#3	4.888592	.0886534	.1038685	185.4965	.5204001	1.030733

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9256732	145.6682	6.706057	42.10350	1.114114	.0726002
Stddev	.0028183	.1878	.016837	.33235	.005730	.0011075
%RSD	.3044634	.1288982	.2510788	.7893646	.5143165	1.525454
#1	.9226451	145.4807	6.707017	42.15802	1.113220	.0724732
#2	.9282198	145.6677	6.688760	41.74726	1.108883	.0715616
#3	.9261547	145.8562	6.722393	42.40522	1.120238	.0737656

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.170878	1.095197	2.187122	8.763291	F 18.14059	.1231679
Stddev	.143966	.002520	.008223	.020383	.07141	.0015177
%RSD	12.29558	.2300570	.3759927	.2325927	.3936646	1.232188
#1	1.303846	1.092358	2.178793	8.781726	18.12758	.1214636
#2	1.190799	1.096068	2.195236	8.741402	18.07658	.1236667
#3	1.017988	1.097166	2.187338	8.766744	18.21762	.1243734

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-04 Acquired: 11/21/2024 18:45:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHH3S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0074487	10.91476	10.57286	.0488566	1.967507	.0939667
Stddev	.0003834	.04134	.02544	.0043301	.006579	.0010126
%RSD	5.146797	.3787392	.2406210	8.862958	.3343595	1.077604
#1	.0078521	10.90722	10.57227	.0538564	1.960662	.0930266
#2	.0070891	10.87771	10.54773	.0463194	1.968075	.0938346
#3	.0074049	10.95934	10.59860	.0463940	1.973782	.0950388

Elem	Sr4077
Units	ppm
Avg	.4468608
Stddev	.0003923
%RSD	.0877824
#1	.4469206
#2	.4464420
#3	.4472197

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	937.4417	26243.99	5426.041	783.8467	1494.024
Stddev	.9738	36.17	29.683	1.8184	3.356
%RSD	.1038806	.1378314	.5470444	.2319863	.2246360
#1	938.0940	26262.00	5431.833	785.8889	1493.446
#2	937.9088	26267.63	5452.401	783.2484	1497.632
#3	936.3223	26202.35	5393.889	782.4028	1490.995

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-15LX5 Acquired: 11/21/2024 18:49:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0384089	.0019671	.8867645	-.001637	-.000852	12.89424	.4107442
Stddev	.0031587	.0015002	.0023662	.007836	.000974	.01717	.0015573
%RSD	8.223789	76.26429	.2668342	478.6552	114.3654	.1331970	.3791369
#1	.0395597	.0020186	.8893860	-.009204	-.000936	12.90881	.4096024
#2	.0408309	.0034409	.8861209	-.002150	-.001781	12.89860	.4125182
#3	.0348362	.0004418	.8847868	.006443	.000162	12.87530	.4101121

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007124	.0025091	20.79363	.0403091	.0108424	.1020293	27.67543
Stddev	.0001150	.0000460	.04989	.0015275	.0002586	.0031347	.11478
%RSD	16.14857	1.834703	.2399212	3.789597	2.385323	3.072322	.4147302
#1	.0008364	.0025545	20.73667	.0405889	.0105438	.0991317	27.80770
#2	.0006916	.0024625	20.82954	.0416773	.0109964	.1015995	27.61651
#3	.0006091	.0025104	20.81467	.0386609	.0109870	.1053567	27.60208

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.043306	8.151246	.0323855	-.004013	-.238203	.0339160	.6203909
Stddev	.008266	.066378	.0006255	.000103	.365123	.0056477	.0026584
%RSD	.4045189	.8143248	1.931488	2.576495	153.2824	16.65199	.4285004
#1	2.033822	8.115184	.0328188	-.004124	-.277047	.0294591	.6212253
#2	2.048977	8.227849	.0316684	-.003919	-.582351	.0320216	.6174155
#3	2.047119	8.110705	.0326693	-.003996	.144789	.0402674	.6225321

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.138546	1.588963	.0221175	.0006038	.6883775	2.900615	.0098727
Stddev	.124359	.004289	.0020864	.0005353	.0100875	.007877	.0016510
%RSD	10.92260	.2699549	9.433276	88.65550	1.465405	.2715546	16.72289
#1	1.134484	1.591753	.0219812	.0000044	.6988050	2.895992	.0113295
#2	1.016267	1.584024	.0201026	.0007730	.6876591	2.909710	.0080794
#3	1.264886	1.591113	.0242687	.0010342	.6786684	2.896144	.0102091

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-15LX5 Acquired: 11/21/2024 18:49:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.2605195	.0191022	.0403097
Stddev	.0008943	.0004395	.0000427
%RSD	.3432720	2.300731	.1059804
#1	.2595469	.0186685	.0402892
#2	.2613063	.0195472	.0402810
#3	.2607052	.0190909	.0403587

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	927.9237	25553.53	5048.466	775.6281	1662.708
Stddev	.6742	16.38	12.012	2.5167	2.911
%RSD	.0726548	.0640978	.2379382	.3244754	.1750873
#1	928.3662	25567.76	5056.901	773.0217	1665.401
#2	928.2572	25557.21	5034.713	778.0444	1659.619
#3	927.1478	25535.63	5053.785	775.8182	1663.105

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-03 Acquired: 11/21/2024 18:54:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1903152	.0825045	1.496091	.1342874	.1389477	81.30533
Stddev	.0038375	.0014701	.007739	.0030645	.0029372	.24602
%RSD	2.016403	1.781782	.5172954	2.282014	2.113873	.3025939
#1	.1932716	.0808825	1.501602	.1334451	.1411992	81.57689
#2	.1916957	.0837490	1.499428	.1376849	.1400185	81.09732
#3	.1859785	.0828822	1.487244	.1317322	.1356254	81.24177

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.999608	.0786538	.1100641	270.3155	.4427116	1.054703
Stddev	.016037	.0002743	.0002101	1.9186	.0031225	.002311
%RSD	.3207579	.3487501	.1908526	.7097614	.7053077	.2191140
#1	5.007389	.0785783	.1100043	269.0496	.4400748	1.057353
#2	4.981165	.0784252	.1102975	272.5229	.4461596	1.053106
#3	5.010269	.0789580	.1098904	269.3738	.4419002	1.053649

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.846667	160.2934	10.34273	68.55570	1.160810	.0561559
Stddev	.007920	.4372	.08014	.77430	.001005	.0004736
%RSD	.4288660	.2727714	.7748205	1.129445	.0865701	.8433064
#1	1.855789	160.3545	10.29821	68.13769	1.160979	.0560889
#2	1.842654	160.6969	10.43525	69.44916	1.161720	.0566594
#3	1.841556	159.8289	10.29475	68.08024	1.159731	.0557194

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.001716	.9619916	4.605949	10.02413	F 15.88901	.1270442
Stddev	.090803	.0006406	.045867	.12793	.03056	.0031065
%RSD	9.064750	.0665966	.9958150	1.276210	.1923346	2.445180
#1	1.106179	.9612531	4.555905	10.05197	15.85540	.1303119
#2	.957276	.9623979	4.645986	10.13585	15.91512	.1266917
#3	.941692	.9623239	4.615956	9.88457	15.89651	.1241290

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-03 Acquired: 11/21/2024 18:54:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035551	4.030238	9.615956	.0813030	.9932087	.1210745
Stddev	.0004125	.019778	.007993	.0034199	.0025043	.0013213
%RSD	11.60262	.4907515	.0831211	4.206316	.2521377	1.091324
#1	.0036746	4.053076	9.607080	.0839030	.9935168	.1217742
#2	.0030960	4.018861	9.618204	.0825771	.9955446	.1195505
#3	.0038946	4.018776	9.622585	.0774290	.9905646	.1218989

Elem	Sr4077
Units	ppm
Avg	.3915849
Stddev	.0008835
%RSD	.2256088
#1	.3926032
#2	.3910235
#3	.3911279

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1062.116	29605.54	6128.551	882.9706	1413.259
Stddev	2.063	79.10	14.756	7.8236	2.836
%RSD	.1941890	.2671963	.2407823	.8860506	.2006757
#1	1059.825	29560.01	6111.513	891.8063	1410.444
#2	1062.699	29559.73	6137.243	876.9231	1413.217
#3	1063.825	29696.88	6136.896	880.1824	1416.116

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-17 Acquired: 11/21/2024 19:07:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2540452	.0930022	4.201126	.1385083	.1513800	59.02546	5.281930
Stddev	.0064208	.0025159	.006124	.0052697	.0020440	.14272	.004260
%RSD	2.527411	2.705259	.1457750	3.804586	1.350256	.2417892	.0806575
#1	.2586128	.0952111	4.195782	.1423417	.1510572	58.86788	5.278164
#2	.2467038	.0902636	4.199786	.1406841	.1495165	59.06250	5.286554
#3	.2568188	.0935318	4.207809	.1324991	.1535661	59.14601	5.281073

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0874822	.1074172	87.99411	.5302771	1.024148	.8365977	118.5685
Stddev	.0003324	.0001628	.13642	.0012573	.002719	.0046613	.2237
%RSD	.3799242	.1515834	.1550355	.2371072	.2654894	.5571704	.1886574
#1	.0872430	.1073124	87.84116	.5300623	1.021284	.8416769	118.3625
#2	.0873419	.1076048	88.03796	.5291409	1.026694	.8325158	118.5365
#3	.0878617	.1073344	88.10322	.5316279	1.024467	.8356004	118.8064

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.370230	34.33323	1.120891	.0660027	.6354146	1.019070	3.300119
Stddev	.015869	.06105	.000169	.0006472	.1549945	.008359	.006740
%RSD	.1693607	.1778049	.0150646	.9805504	24.39265	.8202886	.2042229
#1	9.353153	34.29885	1.120697	.0661637	.8102664	1.024470	3.292587
#2	9.384525	34.40372	1.121004	.0665543	.5149215	1.023298	3.305581
#3	9.373012	34.29713	1.120971	.0652903	.5810561	1.009441	3.302189

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.662355	7.612408	.0925959	.0038226	3.373822	11.97369	.0496252
Stddev	.125202	.017844	.0023092	.0005687	.011313	.05248	.0022285
%RSD	2.685390	.2344002	2.493876	14.87679	.3353228	.4382770	4.490706
#1	4.668346	7.597060	.0902209	.0040835	3.374706	11.92565	.0487092
#2	4.534265	7.631987	.0927339	.0042140	3.362093	11.96573	.0521658
#3	4.784455	7.608178	.0948331	.0031703	3.384668	12.02970	.0480007

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-17 Acquired: 11/21/2024 19:07:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.101838	.0769953	.1718429
Stddev	.004220	.0008962	.0001953
%RSD	.3829861	1.163977	.1136429
#1	1.098603	.0772997	.1717330
#2	1.100301	.0776997	.1717273
#3	1.106612	.0759866	.1720683

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1007.391	28012.59	5638.746	841.6713	1558.434
Stddev	.266	36.32	5.549	2.1691	1.663
%RSD	.0264536	.1296668	.0984035	.2577096	.1067055
#1	1007.669	27971.55	5644.993	841.9807	1559.383
#2	1007.366	28025.60	5636.857	839.3641	1556.514
#3	1007.138	28040.61	5634.389	843.6691	1559.406

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-04 Acquired: 11/21/2024 19:11:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1463822	.0022681	5.057933	-.004404	.0110525	68.19796
Stddev	.0107706	.0016869	.031247	.005293	.0038476	.09014
%RSD	7.357827	74.37758	.6177811	120.1819	34.81194	.1321776
#1	.1473276	.0037947	5.037011	-.009422	.0154926	68.12773
#2	.1566488	.0004570	5.042937	.001126	.0089677	68.16654
#3	.1351701	.0025525	5.093851	-.004917	.0086972	68.29961

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.063871	.0052663	.0241511	172.6862	.1745284	.0871224
Stddev	.003215	.0002674	.0001634	.2775	.0005770	.0008860
%RSD	.1049349	5.077890	.6763641	.1607141	.3306290	1.016954
#1	3.064448	.0055543	.0241448	172.5251	.1747296	.0874375
#2	3.060406	.0050258	.0239910	172.5268	.1749779	.0861220
#3	3.066758	.0052189	.0243175	173.0067	.1738777	.0878078

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6671810	182.7291	12.33620	31.29446	.2122158	-.015135
Stddev	.0022861	.7250	.01336	.08216	.0009607	.000211
%RSD	.3426507	.3967413	.1083130	.2625303	.4526841	1.396767
#1	.6678458	182.3254	12.32778	31.20966	.2116724	-.015305
#2	.6646362	182.2958	12.32921	31.37369	.2116500	-.015202
#3	.6690611	183.5660	12.35160	31.30004	.2133250	-.014898

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.390831	.1939976	2.930063	8.351558	F 15.91157	.1413240
Stddev	.164838	.0014483	.015924	.074640	.13527	.0029163
%RSD	11.85176	.7465825	.5434593	.8937207	.8501460	2.063559
#1	1.517440	.1947307	2.929686	8.424196	15.84590	.1396308
#2	1.450607	.1923293	2.946171	8.355412	15.82167	.1446915
#3	1.204444	.1949329	2.914331	8.275066	16.06714	.1396498

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-04 Acquired: 11/21/2024 19:11:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111884	3.980310	7.155323	.3333895	1.495512	.0952403
Stddev	.0000711	.031093	.034425	.0038559	.000180	.0009671
%RSD	.6353433	.7811632	.4811159	1.156573	.0120502	1.015392
#1	.0112082	3.960951	7.133007	.3331575	1.495577	.0960992
#2	.0111095	3.963805	7.137992	.3296549	1.495309	.0954289
#3	.0112475	4.016175	7.194970	.3373562	1.495651	.0941929

Elem	Sr4077
Units	ppm
Avg	.4866308
Stddev	.0003824
%RSD	.0785869
#1	.4866727
#2	.4862292
#3	.4869906

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1019.111	28475.51	5797.031	854.5312	1489.562
Stddev	3.465	28.33	27.742	3.9420	8.387
%RSD	.3400350	.0995052	.4785607	.4613113	.5630660
#1	1019.526	28453.77	5811.125	854.9561	1491.417
#2	1022.350	28465.19	5814.897	850.3939	1496.866
#3	1015.457	28507.55	5765.071	858.2436	1480.402

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-06 Acquired: 11/21/2024 19:16:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ4S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2870712	.1896252	5.040849	.2989146	.2965805	73.77245
Stddev	.0083423	.0025765	.011190	.0037536	.0044135	.23230
%RSD	2.906007	1.358757	.2219883	1.255726	1.488140	.3148834
#1	.2887565	.1907827	5.032631	.2950993	.2978143	73.65458
#2	.2944422	.1914200	5.036324	.2990415	.3002458	73.62271
#3	.2780149	.1866729	5.053593	.3026032	.2916814	74.04005

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.723972	.1683898	.2146687	170.5561	.8649638	2.035786
Stddev	.025738	.0004829	.0001351	.1975	.0012747	.005628
%RSD	.2646910	.2867899	.0629274	.1157767	.1473729	.2764569
#1	9.698482	.1683725	.2147416	170.3357	.8657056	2.034570
#2	9.723481	.1679157	.2145128	170.6155	.8634919	2.030865
#3	9.749952	.1688811	.2147516	170.7170	.8656939	2.041922

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.434193	184.3984	13.79923	30.86208	2.147882	.1397993
Stddev	.002342	.8304	.01470	.09420	.007502	.0004709
%RSD	.1632651	.4503395	.1065243	.3052245	.3492513	.3368520
#1	1.436394	184.0070	13.78925	30.80040	2.147762	.1400139
#2	1.434454	183.8361	13.81611	30.97051	2.140441	.1401247
#3	1.431733	185.3522	13.79234	30.81533	2.155443	.1392593

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.332751	1.914868	4.298821	8.295128	F 15.64950	.1376756
Stddev	.284159	.014998	.025117	.143682	.05548	.0013883
%RSD	21.32123	.7832180	.5842663	1.732121	.3544960	1.008356
#1	1.624351	1.898415	4.283389	8.163222	15.67474	.1385448
#2	1.317234	1.918416	4.327802	8.273931	15.58589	.1360745
#3	1.056669	1.927774	4.285271	8.448230	15.68787	.1384074

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-06 Acquired: 11/21/2024 19:16:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ4S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0103888	3.908903	7.153883	.3264036	1.483842	.0953533
Stddev	.0005755	.026521	.036992	.0033773	.007986	.0009244
%RSD	5.539316	.6784659	.5170851	1.034697	.5381855	.9694819
#1	.0101476	3.933955	7.154510	.3271827	1.475030	.0942919
#2	.0110456	3.881124	7.116581	.3293232	1.485895	.0959828
#3	.0099732	3.911629	7.190557	.3227048	1.490601	.0957850

Elem	Sr4077
Units	ppm
Avg	.4802526
Stddev	.0008195
%RSD	.1706300
#1	.4805645
#2	.4793230
#3	.4808703

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1013.501	28487.77	5785.420	849.3967	1493.602
Stddev	.769	60.22	12.850	6.7160	3.548
%RSD	.0758321	.2113760	.2221062	.7906800	.2375601
#1	1013.936	28496.11	5797.421	852.2727	1493.413
#2	1013.953	28423.82	5786.975	841.7216	1497.240
#3	1012.614	28543.38	5771.863	854.1957	1490.152

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-04LX5 Acquired: 11/21/2024 19:20:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ4L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0354551	.0031711	1.066294	.0067484	.0031678	15.98451	.7270069
Stddev	.0080811	.0004769	.003464	.0047326	.0023608	.03984	.0018938
%RSD	22.79255	15.04023	.3248205	70.12897	74.52726	.2492369	.2604892
#1	.0409341	.0037015	1.070281	.0030078	.0021719	16.02985	.7289661
#2	.0392569	.0030341	1.064032	.0051685	.0058633	15.96859	.7251861
#3	.0261742	.0027776	1.064568	.0120688	.0014680	15.95510	.7268686

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0012944	.0045459	41.67463	.0439075	.0157555	.1586703	44.11251
Stddev	.0000737	.0000791	.11106	.0015531	.0006362	.0037309	.10866
%RSD	5.692949	1.739884	.2665019	3.537196	4.037824	2.351361	.2463208
#1	.0013012	.0046026	41.79828	.0438050	.0152098	.1562523	44.23287
#2	.0013645	.0045797	41.58335	.0424083	.0164542	.1629671	44.08301
#3	.0012176	.0044556	41.64225	.0455094	.0156024	.1567914	44.02165

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.024350	7.574059	.0432944	-.002228	-.112819	.0477687	.7285854
Stddev	.007935	.049393	.0006423	.002262	.329452	.0049697	.0272393
%RSD	.2623835	.6521304	1.483551	101.5201	292.0186	10.40373	3.738658
#1	3.033482	7.598931	.0429827	-.004078	.058353	.0454976	.7130754
#2	3.020430	7.517174	.0440331	-.002899	.095813	.0534682	.7126431
#3	3.019137	7.606071	.0428675	.000293	-.492622	.0443404	.7600377

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.982233	3.240448	.0317468	.0027525	.7794339	1.811781	.0668851
Stddev	.039597	.012321	.0015104	.0002588	.0038421	.010931	.0003029
%RSD	1.997598	.3802255	4.757547	9.402671	.4929339	.6033128	.4528176
#1	1.942466	3.244169	.0334683	.0029830	.7750083	1.807499	.0666914
#2	2.021657	3.250480	.0306441	.0028020	.7819152	1.803639	.0667298
#3	1.982576	3.226696	.0311279	.0024726	.7813782	1.824204	.0672342

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-04LX5 Acquired: 11/21/2024 19:20:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ4L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3573541	.0236594	.1161026
Stddev	.0017821	.0001146	.0002610
%RSD	.4986807	.4843683	.2248331
#1	.3570490	.0237906	.1162773
#2	.3557443	.0235787	.1162280
#3	.3592690	.0236090	.1158026

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	927.9821	25145.19	5061.114	763.6489	1628.594
Stddev	3.3859	792.85	11.166	24.5894	6.087
%RSD	.3648640	3.153081	.2206148	3.219990	.3737482
#1	924.1058	25609.50	5066.441	776.7928	1621.873
#2	929.4789	25596.35	5068.618	778.8730	1633.736
#3	930.3617	24229.72	5048.282	735.2809	1630.172

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-05 Acquired: 11/21/2024 19:25:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ4D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1396335	.0031532	5.136041	.0002338	.0113464	67.56341
Stddev	.0072504	.0042743	.005607	.0012209	.0014660	.04667
%RSD	5.192454	135.5539	.1091741	522.2210	12.92076	.0690752
#1	.1360015	-.000586	5.139265	.0000681	.0126473	67.59333
#2	.1349169	.002233	5.129566	.0015291	.0116340	67.58726
#3	.1479821	.007813	5.139292	-.000896	.0097579	67.50963

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.054247	.0052918	.0243510	172.8511	.1763791	.0860068
Stddev	.003871	.0000873	.0002032	.2591	.0046066	.0005838
%RSD	.1267554	1.649103	.8345138	.1499211	2.611773	.6787842
#1	3.053838	.0052654	.0241865	172.6403	.1732795	.0855478
#2	3.058307	.0052209	.0242883	173.1404	.1741852	.0858088
#3	3.050597	.0053893	.0245781	172.7727	.1816726	.0866639

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.6565818	183.8039	12.32557	31.83081	.2102682	-.013941
Stddev	.0017696	.2335	.00589	.04102	.0010256	.001025
%RSD	.2695188	.1270453	.0477590	.1288786	.4877741	7.356168
#1	.6560995	183.7494	12.31880	31.78359	.2114320	-.014532
#2	.6585425	184.0599	12.32847	31.85121	.2094961	-.014533
#3	.6551033	183.6025	12.32945	31.85764	.2098766	-.012757

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.339873	.1938159	3.030877	8.389324	F 15.88055	.1411494
Stddev	.164890	.0026892	.072916	.046428	.05502	.0018744
%RSD	12.30640	1.387490	2.405766	.5534181	.3464908	1.327960
#1	1.489291	.1966901	2.998809	8.392090	15.85555	.1408093
#2	1.162966	.1933969	2.979492	8.434307	15.84247	.1431706
#3	1.367361	.1913609	3.114331	8.341575	15.94364	.1394684

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-05 Acquired: 11/21/2024 19:25:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ4D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0104250	3.912940	7.328444	.3269831	1.486403	.0954335
Stddev	.0004586	.007403	.055711	.0047565	.003133	.0003454
%RSD	4.399176	.1891891	.7602063	1.454672	.2108052	.3619109
#1	.0100491	3.908759	7.276716	.3324578	1.483760	.0954190
#2	.0102900	3.921487	7.321187	.3246268	1.489864	.0957859
#3	.0109360	3.908574	7.387427	.3238647	1.485583	.0950956

Elem	Sr4077
Units	ppm
Avg	.4802355
Stddev	.0008204
%RSD	.1708362
#1	.4810903
#2	.4801618
#3	.4794545

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1021.824	27986.95	5792.567	838.4571	1488.673
Stddev	3.515	490.41	14.865	15.4268	2.989
%RSD	.3439720	1.752269	.2566291	1.839907	.2007698
#1	1025.792	28271.80	5808.846	844.4107	1491.695
#2	1020.578	28268.38	5779.714	850.0200	1488.603
#3	1019.101	27420.68	5789.139	820.9406	1485.719

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-18 Acquired: 11/21/2024 19:29:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1310280	-.004011	2.725441	-.004155	.0059300	62.80071	1.352946
Stddev	.0122949	.002424	.007980	.002096	.0012255	.15873	.002868
%RSD	9.383391	60.43724	.2928124	50.43235	20.66544	.2527593	.2120160
#1	.1169359	-.005607	2.720446	-.001777	.0053871	62.76928	1.355351
#2	.1395652	-.005205	2.721232	-.005730	.0050698	62.66004	1.349771
#3	.1365828	-.001222	2.734645	-.004959	.0073332	62.97281	1.353714

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029155	.0136412	225.5651	.1316725	.0694092	.4052400	169.8083
Stddev	.0000307	.0002305	.4044	.0021664	.0008757	.0013291	.5125
%RSD	1.051217	1.689663	.1792985	1.645276	1.261605	.3279813	.3018199
#1	.0029487	.0134029	225.4632	.1337272	.0689520	.4038290	169.9419
#2	.0029097	.0136576	225.2213	.1294095	.0688567	.4054225	169.2423
#3	.0028883	.0138630	226.0107	.1318808	.0704188	.4064684	170.2408

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.52188	50.45457	.1825073	-.016153	1.062475	.1583423	2.057044
Stddev	.01743	.07261	.0010307	.000135	.360897	.0006094	.007860
%RSD	.1656893	.1439103	.5647677	.8368079	33.96753	.3848636	.3821025
#1	10.50425	50.42689	.1815330	-.016073	.828367	.1588767	2.065864
#2	10.52228	50.39987	.1824022	-.016076	.880964	.1576787	2.054486
#3	10.53911	50.53695	.1835865	-.016309	1.478095	.1584716	2.050781

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.998072	7.859927	.1104789	.0025595	2.265853	9.447073	.0318737
Stddev	.027934	.020078	.0037469	.0003623	.003065	.053564	.0009289
%RSD	.5588867	.2554439	3.391476	14.15419	.1352569	.5669917	2.914335
#1	5.018978	7.840732	.1062172	.0027395	2.264536	9.420187	.0314351
#2	5.008891	7.880784	.1132556	.0027965	2.263667	9.412277	.0329407
#3	4.966347	7.858265	.1119640	.0021425	2.269356	9.508754	.0312453

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-18 Acquired: 11/21/2024 19:29:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.040740	.1059368	.3033817
Stddev	.006269	.0003969	.0005109
%RSD	.6023849	.3746787	.1684126
#1	1.045038	.1062166	.3033037
#2	1.033546	.1061113	.3029143
#3	1.043636	.1054825	.3039272

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1010.158	27964.35	5786.122	835.0151	1453.156
Stddev	2.079	66.09	22.287	3.7242	1.942
%RSD	.2058307	.2363540	.3851888	.4460088	.1336351
#1	1008.017	27889.83	5792.437	830.7151	1451.324
#2	1010.289	27987.33	5804.571	837.1152	1452.953
#3	1012.169	28015.89	5761.359	837.2151	1455.191

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-19 Acquired: 11/21/2024 19:33:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0770163	-.001822	2.334581	-.000968	.0037767	63.62326	1.022514
Stddev	.0161079	.003408	.001643	.006396	.0033667	.05371	.000880
%RSD	20.91493	187.0640	.0703969	660.7058	89.14414	.0844202	.0860220
#1	.0946256	-.001221	2.335542	.004204	.0015534	63.56893	1.022461
#2	.0733982	-.005490	2.332684	.001011	.0076501	63.67633	1.023418
#3	.0630252	.001246	2.335519	-.008120	.0021265	63.62451	1.021661

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028618	.0118748	148.8221	.0931505	.0700241	.3242610	152.8169
Stddev	.0000468	.0002356	.1135	.0010168	.0016116	.0038966	.2758
%RSD	1.634284	1.984092	.0762982	1.091562	2.301517	1.201674	.1804742
#1	.0028129	.0116568	148.8444	.0940784	.0682247	.3223814	152.5883
#2	.0028663	.0121248	148.9229	.0920636	.0705130	.3287411	153.1232
#3	.0029061	.0118428	148.6991	.0933097	.0713347	.3216605	152.7391

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.40962	39.75531	.1509031	-.019034	1.039809	.1554449	1.267825
Stddev	.01484	.15056	.0003463	.000375	.249984	.0063037	.009948
%RSD	.1196143	.3787229	.2295050	1.970602	24.04136	4.055274	.7846843
#1	12.40445	39.61353	.1512144	-.019000	.849974	.1518857	1.257007
#2	12.42636	39.91334	.1509647	-.019424	.946407	.1517257	1.276582
#3	12.39805	39.73905	.1505301	-.018677	1.323045	.1627232	1.269885

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.488062	6.494881	.0858456	.0009412	1.991250	8.536028	.0143724
Stddev	.105779	.029174	.0032678	.0003932	.016250	.018879	.0033653
%RSD	2.356901	.4491789	3.806563	41.77484	.8160656	.2211660	23.41464
#1	4.592498	6.528558	.0846441	.0004872	1.985955	8.525814	.0132176
#2	4.490699	6.477350	.0833486	.0011738	2.009487	8.557813	.0181630
#3	4.380989	6.478734	.0895440	.0011625	1.978308	8.524457	.0117366

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-19 Acquired: 11/21/2024 19:33:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.154235	.0920738	.2560335
Stddev	.002992	.0020035	.0004887
%RSD	.2592311	2.175963	.1908882
#1	1.153372	.0926692	.2557717
#2	1.157564	.0937121	.2565974
#3	1.151769	.0898401	.2557315

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1072.062	29577.16	6056.873	887.8279	1484.717
Stddev	2.381	86.73	5.964	2.1492	1.885
%RSD	.2220542	.2932368	.0984590	.2420752	.1269663
#1	1073.712	29570.35	6060.582	890.1855	1486.350
#2	1073.141	29667.09	6060.043	887.3201	1485.147
#3	1069.333	29494.03	6049.994	885.9780	1482.654

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-20 Acquired: 11/21/2024 19:38:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1128786	.0031748	7.199845	.0012298	.0072779	67.50527	2.077985
Stddev	.0107907	.0048316	.023161	.0050142	.0024469	.10514	.008647
%RSD	9.559520	152.1844	.3216861	407.7150	33.62091	.1557463	.4161072
#1	.1066876	-.002322	7.212596	.0042611	.0085754	67.56023	2.087314
#2	.1253384	.006748	7.173110	-.004558	.0088027	67.57153	2.076401
#3	.1066096	.005099	7.213827	.003986	.0044555	67.38404	2.070240

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0047449	.0157489	41.31079	.1141628	.0798992	.2907486	176.4395
Stddev	.0001566	.0002397	.13712	.0005544	.0003221	.0035982	.2559
%RSD	3.301112	1.521780	.3319295	.4856398	.4030999	1.237550	.1450371
#1	.0049220	.0157029	41.42046	.1136355	.0800819	.2933506	176.1631
#2	.0046244	.0160083	41.35487	.1141121	.0795273	.2922528	176.6683
#3	.0046883	.0155356	41.15705	.1147408	.0800884	.2866424	176.4870

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.33398	17.76258	.1651208	-.018852	1.113379	.1967963	2.816482
Stddev	.02818	.08325	.0012298	.000248	.349146	.0063930	.006232
%RSD	.2486704	.4686621	.7447611	1.313124	31.35911	3.248550	.2212645
#1	11.36436	17.82707	.1655168	-.019114	1.129833	.1917650	2.822380
#2	11.32889	17.79207	.1637418	-.018820	.756297	.2039901	2.817101
#3	11.30868	17.66860	.1661038	-.018622	1.454007	.1946336	2.809963

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.203461	7.950744	.1130280	.0048805	1.725465	6.341114	.0561720
Stddev	.026453	.025390	.0011227	.0001453	.011352	.026877	.0014808
%RSD	.3224665	.3193461	.9932614	2.977148	.6578928	.4238471	2.636097
#1	8.233529	7.942221	.1121641	.0049675	1.712419	6.371798	.0554637
#2	8.193084	7.930712	.1142969	.0049613	1.730885	6.321747	.0551785
#3	8.183769	7.979300	.1126228	.0047128	1.733090	6.329796	.0578739

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-20 Acquired: 11/21/2024 19:38:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.426191	.0958215	.1390654
Stddev	.002815	.0021500	.0004410
%RSD	.1973794	2.243771	.3171073
#1	1.425363	.0946603	.1395376
#2	1.429327	.0945018	.1389941
#3	1.423883	.0983025	.1386643

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1020.705	28242.25	5615.712	848.2299	1539.381
Stddev	.603	90.73	3.370	2.3894	2.477
%RSD	.0590562	.3212482	.0600019	.2816923	.1609232
#1	1021.113	28346.70	5619.596	850.8426	1537.244
#2	1020.991	28183.05	5613.569	846.1558	1542.096
#3	1020.013	28196.99	5613.972	847.6914	1538.803

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-21 Acquired: 11/21/2024 19:42:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1024953	.0013286	4.030439	-.002023	.0057832	62.72698	1.441480
Stddev	.0070478	.0016724	.010524	.005153	.0022801	.03054	.001600
%RSD	6.876184	125.8818	.2611238	254.7376	39.42590	.0486880	.1109803
#1	.0943577	.0018561	4.029746	-.007567	.0032719	62.72751	1.443280
#2	.1066423	.0026737	4.020278	-.001125	.0063540	62.75726	1.440941
#3	.1064858	-.000544	4.041293	.002622	.0077236	62.69618	1.440220

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0037376	.0122551	67.46470	.1220015	.0702245	.2724414	154.5509
Stddev	.0001928	.0002662	.08717	.0007924	.0004706	.0023537	.2237
%RSD	5.158704	2.172388	.1292090	.6494915	.6701647	.8639460	.1447191
#1	.0037097	.0119482	67.56452	.1220761	.0704658	.2741705	154.4287
#2	.0039429	.0124228	67.40357	.1211744	.0696822	.2733928	154.8091
#3	.0035603	.0123944	67.42602	.1227539	.0705256	.2697608	154.4150

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.11645	21.64256	.1559997	-.017143	1.060344	.1766308	1.988100
Stddev	.03058	.06955	.0010461	.000302	.217773	.0046157	.005973
%RSD	.2750938	.3213399	.6705673	1.759456	20.53797	2.613180	.3004511
#1	11.14345	21.72117	.1563175	-.017303	1.211224	.1732460	1.985176
#2	11.12266	21.61744	.1548316	-.016796	1.159121	.1818886	1.984153
#3	11.08324	21.58906	.1568501	-.017332	.810687	.1747579	1.994972

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.330730	8.622072	.1000195	.0032857	1.365742	6.433829	.0503554
Stddev	.086611	.039884	.0023055	.0003349	.004281	.030168	.0023656
%RSD	1.181476	.4625789	2.305023	10.19154	.3134705	.4688939	4.697884
#1	7.396253	8.598625	.0974065	.0033503	1.368330	6.456267	.0476294
#2	7.232536	8.599468	.1017667	.0029233	1.360800	6.445687	.0518698
#3	7.363403	8.668124	.1008854	.0035836	1.368095	6.399534	.0515671

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-21 Acquired: 11/21/2024 19:42:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.236054	.0956435	.1749575
Stddev	.001012	.0008536	.0003811
%RSD	.0818457	.8924984	.2178121
#1	1.235000	.0952813	.1751716
#2	1.236145	.0950307	.1751834
#3	1.237017	.0966185	.1745176

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1017.451	28225.34	5622.535	845.8828	1526.852
Stddev	1.629	84.64	7.949	3.6524	1.225
%RSD	.1600645	.2998571	.1413779	.4317837	.0802354
#1	1015.736	28307.13	5624.672	849.5902	1527.251
#2	1018.977	28230.77	5613.736	845.7701	1527.827
#3	1017.641	28138.12	5629.197	842.2881	1525.477

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165145BL Acquired: 11/21/2024 19:47:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS145 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001604	-.000407	.0016579	-.000890	.0018063	.0069329	.0007057
Stddev	.003038	.005100	.0020489	.003697	.0018055	.0098424	.0006468
%RSD	189.3720	1252.615	123.5840	415.1475	99.95905	141.9674	91.65293
#1	-.004937	.003629	.0039267	.002144	.0030977	.0163516	.0002421
#2	-.000885	.001288	.0011047	.000193	.0025779	-.003285	.0014445
#3	.001010	-.006139	-.000058	-.005007	-.000257	.007732	.0004303

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000083	.0000828	.0051848	-.001115	.0004263	-.000939	.0230361
Stddev	.000102	.0000999	.0128682	.000816	.0004034	.001275	.0069453
%RSD	122.7293	120.6631	248.1923	73.18150	94.61902	135.6942	30.14946
#1	-.000106	.0000002	.0193591	-.001078	.0001614	-.001490	.0297789
#2	.000028	.0001939	.0019586	-.001949	.0002270	.000518	.0234247
#3	-.000171	.0000543	-.005763	-.000318	.0008906	-.001846	.0159047

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011628	.0310952	-.000182	-.000768	-.702335	-.003648	.0006707
Stddev	.0003161	.0439501	.000397	.000111	.157604	.006750	.0003997
%RSD	27.18542	141.3405	217.6932	14.42333	22.43996	185.0549	59.58869
#1	.0015151	.0657564	.000041	-.000863	-.877496	-.001035	.0009194
#2	.0010690	.0458668	.000052	-.000794	-.657508	-.011313	.0008830
#3	.0009042	-.018338	-.000640	-.000646	-.572001	.001406	.0002097

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3089462	.0004389	-.001669	.0004232	-.004946	.0016412	-.002042
Stddev	.0554984	.0013775	.001993	.0003063	.007269	.0006181	.000739
%RSD	17.96376	313.8763	119.4250	72.37984	146.9653	37.66040	36.16391
#1	.2964084	.0014194	-.000203	.0007757	-.008570	.0020865	-.002840
#2	.2607892	.0010332	-.000865	.0002734	.003423	.0019017	-.001906
#3	.3696409	-.001136	-.003938	.0002207	-.009691	.0009356	-.001382

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165145BL Acquired: 11/21/2024 19:47:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS145 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0003029	.0029122	.0001085
Stddev	.0006657	.0016281	.0001445
%RSD	219.7459	55.90538	133.1036
#1	-.000456	.0039890	-.000039
#2	.000577	.0010392	.000249
#3	.000788	.0037082	.000116

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	901.7483	24827.63	4759.024	754.2540	1744.180
Stddev	.5249	60.08	12.282	.9549	2.151
%RSD	.0582131	.2420075	.2580817	.1266036	.1233206
#1	902.3187	24823.28	4744.871	753.1636	1743.502
#2	901.6407	24889.77	4765.304	754.6573	1746.589
#3	901.2855	24769.84	4766.896	754.9411	1742.450

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165145BS Acquired: 11/21/2024 19:51:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS145 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149855	.0536426	.0203723	.0633757	.1100636	.4035740
Stddev	.0056428	.0038659	.0031778	.0020404	.0015206	.0132158
%RSD	37.65529	7.206696	15.59852	3.219467	1.381526	3.274681
#1	.0111869	.0547096	.0221556	.0638572	.1091144	.4136495
#2	.0214696	.0568629	.0222578	.0611377	.1118174	.3886105
#3	.0123001	.0493553	.0167034	.0651323	.1092591	.4084620

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4354273	.0109411	.0107527	11.19432	.0207827	.1019435
Stddev	.0012993	.0001242	.0001123	.02046	.0003037	.0006092
%RSD	.2983886	1.135257	1.043954	.1827741	1.461511	.5975485
#1	.4349712	.0110187	.0108783	11.17121	.0206224	.1012428
#2	.4368932	.0110067	.0106623	11.21011	.0211330	.1023468
#3	.4344176	.0107978	.0107174	11.20164	.0205926	.1022409

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0509160	.2234836	.0348726	10.42687	.0867958	.0206703
Stddev	.0017308	.0089081	.0000538	.01576	.0006740	.0002909
%RSD	3.399261	3.986040	.1542100	.1511392	.7765355	1.407210
#1	.0516969	.2161169	.0348110	10.43264	.0873301	.0204041
#2	.0521187	.2209496	.0348963	10.43894	.0870187	.0206260
#3	.0489324	.2333842	.0349104	10.40904	.0860386	.0209808

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.20857	.1067828	.1365121	10.61946	.0202364	F -.000693
Stddev	.41589	.0038114	.0003249	.13141	.0021167	.001517
%RSD	4.073899	3.569339	.2379635	1.237407	10.46002	218.9196
#1	9.77271	.1034803	.1368609	10.63541	.0226801	-.001511
#2	10.60109	.1059147	.1362182	10.74216	.0190561	.001058
#3	10.25191	.1109534	.1364573	10.48081	.0189730	-.001626

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165145BS Acquired: 11/21/2024 19:51:39 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS145 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0198638	.1853760	F .4648124	.0126694	.2115701	.0330660
Stddev	.0003632	.0024515	.0032761	.0016305	.0011008	.0014328
%RSD	1.828356	1.322437	.7048154	12.86979	.5202991	4.333130
#1	.0196933	.1843152	.4649931	.0110208	.2125870	.0314735
#2	.0202808	.1881793	.4679944	.0142812	.2117219	.0342507
#3	.0196172	.1836337	.4614497	.0127062	.2104012	.0334739

Elem	Sr4077
Units	ppm
Avg	.2157501
Stddev	.0003521
%RSD	.1632106
#1	.2154858
#2	.2161498
#3	.2156145

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	892.9616	24578.72	4797.721	751.3446	1663.328
Stddev	2.8335	29.99	10.150	3.4684	4.188
%RSD	.3173126	.1220226	.2115644	.4616277	.2517925
#1	890.6046	24552.21	4790.175	754.1086	1658.674
#2	896.1053	24611.27	4793.727	752.4725	1664.519
#3	892.1748	24572.67	4809.261	747.4525	1666.793

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-01 Acquired: 11/21/2024 19:56:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0373946	-.003669	.9886082	.0014295	.0060853	39.00319	.6599581
Stddev	.0193953	.002864	.0043989	.0039852	.0036543	.05633	.0005369
%RSD	51.86656	78.06415	.4449568	278.7901	60.05117	.1444151	.0813532
#1	.0153397	-.002985	.9865286	.0049432	.0021253	38.93815	.6593536
#2	.0450513	-.001208	.9856346	-.002901	.0093273	39.03623	.6603793
#3	.0517930	-.006812	.9936613	.002246	.0068032	39.03518	.6601414

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020409	.0070246	177.0768	.0813927	.0438402	.3261334	106.0938
Stddev	.0001621	.0001334	.0626	.0008019	.0003606	.0022569	.1646
%RSD	7.939995	1.898500	.0353439	.9852513	.8224316	.6920045	.1551346
#1	.0021203	.0069712	177.0544	.0819765	.0434546	.3284938	105.9133
#2	.0021480	.0071764	177.0285	.0804783	.0438970	.3239967	106.1325
#3	.0018545	.0069263	177.1475	.0817231	.0441689	.3259096	106.2356

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.562242	45.10672	.1486294	-.010051	.6818557	.1114715	1.716704
Stddev	.003720	.03635	.0007956	.000360	.2480489	.0008891	.011197
%RSD	.0815392	.0805976	.5352861	3.577498	36.37850	.7976001	.6522125
#1	4.566470	45.09550	.1487221	-.009662	.8559776	.1115793	1.719568
#2	4.560784	45.14736	.1477915	-.010122	.7917451	.1105334	1.726190
#3	4.559472	45.07729	.1493745	-.010370	.3978445	.1123018	1.704354

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.274563	8.509738	.0795176	.0037717	3.438671	6.450291	.0281911
Stddev	.025746	.007075	.0014393	.0003590	.029334	.024402	.0024828
%RSD	.4881079	.0831361	1.810090	9.517585	.8530607	.3783013	8.807105
#1	5.276648	8.517902	.0779731	.0037775	3.408504	6.478116	.0276938
#2	5.299203	8.505423	.0808213	.0034099	3.467094	6.440217	.0259946
#3	5.247838	8.505888	.0797584	.0041278	3.440416	6.432539	.0308849

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-01 Acquired: 11/21/2024 19:56:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.029189	.0642085	.2612458
Stddev	.002673	.0002644	.0001622
%RSD	.2597094	.4117361	.0620849
#1	1.032058	.0644661	.2612319
#2	1.026769	.0642214	.2614145
#3	1.028741	.0639379	.2610911

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	961.3950	26854.11	5431.595	807.2079	1503.785
Stddev	1.7166	32.76	15.769	3.4042	.262
%RSD	.1785561	.1220053	.2903184	.4217196	.0173907
#1	960.5715	26827.23	5413.387	806.5280	1503.761
#2	960.2453	26844.50	5440.714	804.1949	1504.057
#3	963.3682	26890.60	5440.685	810.9006	1503.536

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-02 Acquired: 11/21/2024 20:00:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0387259	-.002823	.8357395	.0015249	.0063786	42.78519	.6843548
Stddev	.0067357	.001673	.0020625	.0037434	.0009700	.02472	.0009858
%RSD	17.39334	59.25406	.2467852	245.4899	15.20730	.0577686	.1440443
#1	.0321930	-.001590	.8376836	-.002475	.0069418	42.75699	.6846979
#2	.0383370	-.002152	.8359587	.002106	.0069354	42.80311	.6832434
#3	.0456476	-.004727	.8335762	.004943	.0052585	42.79546	.6851233

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022029	.0073570	206.7347	.0829978	.0469434	.2717671	106.3901
Stddev	.0000730	.0000454	.3014	.0009086	.0009107	.0044285	.1883
%RSD	3.311782	.6170106	.1457793	1.094761	1.939997	1.629522	.1770322
#1	.0021864	.0073669	206.5420	.0840408	.0460147	.2666536	106.1745
#2	.0022827	.0073075	206.5801	.0825755	.0469806	.2743472	106.5230
#3	.0021396	.0073967	207.0820	.0823772	.0478350	.2743006	106.4726

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.851445	46.97532	.1438983	-.009751	1.060355	.1262748	1.393900
Stddev	.003207	.11113	.0006495	.000094	.202367	.0052805	.004517
%RSD	.0660984	.2365748	.4513834	.9597904	19.08481	4.181779	.3240500
#1	4.848637	46.85156	.1438687	-.009788	1.073534	.1209656	1.396597
#2	4.850760	47.00781	.1432640	-.009644	.851721	.1315262	1.388686
#3	4.854940	47.06658	.1445620	-.009819	1.255810	.1263326	1.396418

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.717974	9.214586	.0776316	.0023496	2.430703	6.471802	.0302942
Stddev	.055494	.013049	.0005046	.0004945	.017036	.018599	.0016987
%RSD	1.176215	.1416145	.6500303	21.04762	.7008654	.2873902	5.607405
#1	4.687666	9.203871	.0773652	.0018922	2.411073	6.450330	.0292229
#2	4.782021	9.210768	.0782136	.0028743	2.439419	6.482935	.0322528
#3	4.684234	9.229118	.0773160	.0022822	2.441617	6.482141	.0294067

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-02 Acquired: 11/21/2024 20:00:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.9925125	.0736000	.3200795
Stddev	.0032171	.0012655	.0004165
%RSD	.3241343	1.719454	.1301323
#1	.9888205	.0722836	.3203594
#2	.9940025	.0737089	.3202782
#3	.9947144	.0748076	.3196008

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	973.2510	27075.05	5513.435	816.2998	1488.144
Stddev	.7015	34.26	16.073	2.4034	2.118
%RSD	.0720813	.1265356	.2915215	.2944313	.1423407
#1	972.8493	27112.22	5531.790	816.5117	1486.683
#2	972.8427	27044.73	5506.636	818.5903	1490.573
#3	974.0611	27068.20	5501.879	813.7974	1487.175

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-03 Acquired: 11/21/2024 20:04:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1340156	-.002149	1.098062	-.006976	.0090221	39.02799	.8839764
Stddev	.0029716	.008027	.004159	.006360	.0041302	.02488	.0016529
%RSD	2.217354	373.5326	.3787507	91.17786	45.77865	.0637420	.1869870
#1	.1306761	-.010966	1.101593	-.000068	.0131392	39.01464	.8822965
#2	.1350024	-.000214	1.093478	-.012589	.0048790	39.05669	.8856010
#3	.1363682	.004734	1.099114	-.008270	.0090480	39.01263	.8840317

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022364	.0090024	436.4260	.0790633	.0649848	.2263306	124.0226
Stddev	.0002065	.0001356	.7366	.0008654	.0012590	.0016689	.2163
%RSD	9.231404	1.505966	.1687768	1.094575	1.937295	.7373788	.1744322
#1	.0024618	.0091203	435.6702	.0783376	.0651148	.2282505	124.1732
#2	.0021909	.0088542	436.4661	.0800211	.0661737	.2255155	124.1200
#3	.0020565	.0090325	437.1418	.0788313	.0636659	.2252260	123.7747

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.948721	168.7913	.1572016	-.004064	1.300017	.1120482	.9333528
Stddev	.014354	.3541	.0016416	.000349	.214982	.0023608	.0021811
%RSD	.2065713	.2097952	1.044236	8.580793	16.53687	2.106906	.2336857
#1	6.932816	168.6399	.1583928	-.004373	1.440313	.1132447	.9349507
#2	6.952633	168.5380	.1578830	-.003686	1.407225	.1135712	.9342397
#3	6.960713	169.1959	.1553291	-.004133	1.052513	.1093288	.9308679

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.804333	8.049242	.0896369	.0018406	25.01207	6.785782	.0294140
Stddev	.045283	.034433	.0023308	.0001198	.02046	.004323	.0029488
%RSD	.9425475	.4277833	2.600316	6.506024	.0817994	.0637121	10.02507
#1	4.816012	8.047316	.0919658	.0019788	25.02576	6.784914	.0260883
#2	4.754354	8.084598	.0873041	.0017755	25.02191	6.790474	.0317091
#3	4.842633	8.015812	.0896408	.0017675	24.98855	6.781959	.0304447

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-03 Acquired: 11/21/2024 20:04:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.8776653	.0654933	.3546374
Stddev	.0018520	.0023646	.0004269
%RSD	.2110116	3.610493	.1203755
#1	.8785097	.0656129	.3543740
#2	.8789446	.0630711	.3551299
#3	.8755416	.0677959	.3544082

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	920.2998	25437.40	5344.828	762.6337	1374.678
Stddev	1.5349	74.31	7.405	2.0537	1.869
%RSD	.1667839	.2921155	.1385519	.2692840	.1359929
#1	919.2603	25457.27	5336.388	761.0228	1375.953
#2	922.0628	25355.18	5350.239	761.9320	1372.532
#3	919.5764	25499.75	5347.856	764.9462	1375.549

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-07 Acquired: 11/21/2024 20:09:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1329385	-.001225	3.488210	-.001428	.0080510	68.60358
Stddev	.0031005	.003406	.001427	.005412	.0040162	.50450
%RSD	2.332310	278.0027	.0409036	378.9629	49.88428	.7353899
#1	.1334026	-.000500	3.486706	-.000257	.0093247	68.82484
#2	.1296321	.001760	3.489544	.003303	.0035524	68.95964
#3	.1357809	-.004935	3.488379	-.007330	.0112760	68.02625

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.346890	.0045311	.0164967	148.5666	.1387247	.0764357
Stddev	.009618	.0001754	.0002236	.1666	.0007825	.0011217
%RSD	.4098059	3.870074	1.355106	.1121248	.5640751	1.467504
#1	2.349783	.0047246	.0162689	148.5979	.1378851	.0775740
#2	2.354729	.0044864	.0165056	148.7153	.1388552	.0753314
#3	2.336158	.0043825	.0167157	148.3866	.1394337	.0764016

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4790825	173.2167	13.76190	23.40019	.1603374	-.013845
Stddev	.0020868	1.1514	.02723	.09185	.0007868	.000678
%RSD	.4355775	.6647385	.1978555	.3925393	.4907008	4.896447
#1	.4814918	173.7281	13.78331	23.50603	.1596417	-.014495
#2	.4778423	174.0239	13.77113	23.35333	.1611912	-.013142
#3	.4779135	171.8982	13.73125	23.34122	.1601792	-.013900

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9776759	.1838109	1.894328	8.176812	F 13.55353	.1403632
Stddev	.1405580	.0012160	.008953	.092536	.02111	.0021985
%RSD	14.37675	.6615271	.4726263	1.131693	.1557635	1.566320
#1	.8925078	.1848986	1.896687	8.209969	13.52939	.1406036
#2	1.139911	.1840360	1.901865	8.248201	13.56266	.1424317
#3	.900609	.1824981	1.884431	8.072265	13.56854	.1380544

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-07 Acquired: 11/21/2024 20:09:21 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ5 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041704	2.229537	6.359122	.2800083	1.267864	.0884135
Stddev	.0004063	.013511	.022701	.0033649	.010396	.0019246
%RSD	9.741818	.6060230	.3569805	1.201706	.8199674	2.176766
#1	.0046110	2.243612	6.384891	.2788140	1.275763	.0888537
#2	.0038107	2.228327	6.342078	.2838074	1.271743	.0900799
#3	.0040894	2.216671	6.350397	.2774035	1.256086	.0863070

Elem	Sr4077
Units	ppm
Avg	.4793261
Stddev	.0029316
%RSD	.6116121
#1	.4803502
#2	.4816083
#3	.4760198

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1015.482	28023.46	5733.644	841.9992	1509.513
Stddev	2.398	23.71	14.534	3.8864	3.059
%RSD	.2361708	.0846092	.2534777	.4615639	.2026684
#1	1014.216	28039.42	5717.341	840.5895	1506.920
#2	1013.982	27996.22	5738.349	839.0144	1508.732
#3	1018.248	28034.75	5745.242	846.3937	1512.887

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-08 Acquired: 11/21/2024 20:13:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1111353	.0028640	2.554051	.0007526	.0060926	69.33739
Stddev	.0034418	.0059391	.008584	.0125656	.0031911	.12596
%RSD	3.096977	207.3734	.3360840	1669.547	52.37768	.1816562
#1	.1140524	.0024314	2.550846	.0142780	.0025757	69.33769
#2	.1073392	.0090076	2.547530	-.010559	.0068986	69.21129
#3	.1120143	-.002847	2.563776	-.001461	.0088034	69.46320

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.727131	.0045470	.0186181	255.0926	.1207909	.0906670
Stddev	.001514	.0001657	.0002949	.0545	.0009107	.0004161
%RSD	.0876631	3.644526	1.583711	.0213686	.7539285	.4588912
#1	1.726588	.0047215	.0183638	255.1198	.1201268	.0905814
#2	1.725963	.0045277	.0189413	255.0299	.1204168	.0903004
#3	1.728842	.0043918	.0185492	255.1282	.1218290	.0911192

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3802251	200.5813	16.31319	54.83737	.1881846	-.018436
Stddev	.0020693	.4730	.01705	.13033	.0007869	.000182
%RSD	.5442245	.2358028	.1045101	.2376681	.4181488	.9891532
#1	.3821938	200.6220	16.32634	54.98786	.1873011	-.018313
#2	.3780681	200.0893	16.31931	54.76248	.1888103	-.018645
#3	.3804134	201.0327	16.29393	54.76177	.1884423	-.018349

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.535986	.1891346	1.663641	9.264528	F 14.15016	.1422851
Stddev	.159916	.0048777	.007806	.075509	.02760	.0035738
%RSD	10.41132	2.578957	.4692218	.8150356	.1950713	2.511750
#1	1.528602	.1880598	1.659469	9.240667	14.11927	.1436341
#2	1.379889	.1848839	1.672646	9.203831	14.17240	.1382331
#3	1.699466	.1944600	1.658807	9.349085	14.15881	.1449881

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-08 Acquired: 11/21/2024 20:13:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ6 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048642	2.142682	7.855404	.2007925	1.223778	.0917044
Stddev	.0004404	.001294	.025645	.0022207	.003304	.0019746
%RSD	9.053715	.0603721	.3264665	1.105948	.2699843	2.153219
#1	.0053697	2.144135	7.836824	.2012829	1.223227	.0922534
#2	.0046592	2.142253	7.884663	.2027270	1.220785	.0895134
#3	.0045637	2.141657	7.844724	.1983677	1.227323	.0933464

Elem	Sr4077
Units	ppm
Avg	.4381055
Stddev	.0009591
%RSD	.2189135
#1	.4387230
#2	.4370006
#3	.4385928

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1064.805	29477.67	6093.178	886.8110	1435.662
Stddev	1.175	42.83	10.133	2.7300	3.618
%RSD	.1103520	.1452904	.1662982	.3078411	.2520383
#1	1065.606	29454.99	6104.790	889.1165	1438.696
#2	1065.354	29527.07	6086.130	883.7965	1436.634
#3	1063.456	29450.95	6088.613	887.5200	1431.657

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-09 Acquired: 11/21/2024 20:18:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0723229	-.005450	1.586682	-.005290	.0064993	51.81036
Stddev	.0091393	.005306	.014120	.004633	.0014506	.07604
%RSD	12.63677	97.36687	.8899000	87.57610	22.31943	.1467618
#1	.0767657	-.008848	1.578987	-.007261	.0055875	51.72667
#2	.0618116	.000665	1.578080	.000002	.0081720	51.87520
#3	.0783914	-.008166	1.602977	-.008612	.0057383	51.82921

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.046617	.0033799	.0123037	218.6374	.0822914	.0647415
Stddev	.003853	.0001133	.0003421	.9602	.0008756	.0005269
%RSD	.3681837	3.352740	2.780227	.4391518	1.063960	.8139022
#1	1.042591	.0033754	.0119651	217.7900	.0832911	.0645025
#2	1.050270	.0034955	.0122967	219.6802	.0819226	.0643764
#3	1.046991	.0032690	.0126492	218.4421	.0816607	.0653456

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2301310	145.8409	7.220749	38.00809	.1198754	-.016745
Stddev	.0020185	.1652	.034537	.13527	.0031637	.000270
%RSD	.8771125	.1133030	.4782960	.3559079	2.639173	1.612261
#1	.2278815	145.6515	7.189952	37.90049	.1188529	-.016444
#2	.2307273	145.9157	7.258089	38.15995	.1173494	-.016826
#3	.2317842	145.9555	7.214207	37.96384	.1234239	-.016966

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.205758	.1271275	1.122623	7.840538	F 16.94902	.1043578
Stddev	.087848	.0025165	.004198	.053838	.14553	.0009323
%RSD	7.285690	1.979507	.3739740	.6866575	.8586103	.8934173
#1	1.258786	.1296759	1.127211	7.898853	16.88657	.1052271
#2	1.254132	.1270623	1.121682	7.792726	16.84514	.1033731
#3	1.104356	.1246442	1.118974	7.830036	17.11535	.1044731

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-09 Acquired: 11/21/2024 20:18:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0020566	1.527778	6.030963	.1097192	2.599492	.1028368
Stddev	.0001774	.019103	.051855	.0009729	.004616	.0012984
%RSD	8.627026	1.250372	.8598207	.8867233	.1775894	1.262566
#1	.0018554	1.528494	5.987526	.1099107	2.595896	.1014543
#2	.0021235	1.508327	6.088374	.1086647	2.597882	.1030255
#3	.0021908	1.546513	6.016990	.1105820	2.604697	.1040304

Elem	Sr4077
Units	ppm
Avg	.3006916
Stddev	.0005088
%RSD	.1692135
#1	.3003531
#2	.3012768
#3	.3004451

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1092.773	30325.73	6242.371	909.1521	1455.905
Stddev	8.890	88.68	40.470	4.7390	12.315
%RSD	.8135143	.2924361	.6483071	.5212510	.8458669
#1	1096.665	30233.87	6264.822	903.9942	1462.128
#2	1099.053	30332.47	6195.653	910.1485	1463.867
#3	1082.600	30410.85	6266.640	913.3137	1441.720

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV045 Acquired: 11/21/2024 20:22:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV045 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.036670	4.763274	24.43318	4.670463	4.737961	399.6237
Stddev	.025705	.017627	.03688	.020200	.022227	1.0136
%RSD	.5103523	.3700568	.1509595	.4325084	.4691298	.2536467
#1	5.021860	4.760035	24.43717	4.677178	4.763384	399.1540
#2	5.021799	4.747491	24.39446	4.647761	4.722200	400.7870
#3	5.066351	4.782295	24.46790	4.686450	4.728299	398.9301

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.15329	.4890865	2.483703	406.6650	14.91504	2.467194
Stddev	.01129	.0040836	.004091	1.0132	.02017	.004387
%RSD	.1111805	.8349499	.1647213	.2491395	.1352100	.1778031
#1	10.14038	.4877813	2.483962	405.7008	14.91071	2.468049
#2	10.15814	.4936631	2.479488	407.7209	14.93702	2.462443
#3	10.16134	.4858150	2.487658	406.5734	14.89739	2.471091

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.64235	414.1422	14.62028	399.9156	2.453106	1.238690
Stddev	.00604	1.5284	.01903	.6022	.003921	.002398
%RSD	.0412515	.3690606	.1301702	.1505769	.1598452	.1935946
#1	14.64272	413.0554	14.60577	399.7723	2.453899	1.236205
#2	14.64820	415.8899	14.64182	400.5765	2.448849	1.240991
#3	14.63613	413.4814	14.61324	399.3980	2.456570	1.238874

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	397.3311	2.413751	14.56637	151.4487	4.898758	4.965539
Stddev	1.5967	.005545	.03498	.1538	.020308	.051630
%RSD	.4018556	.2297202	.2401152	.1015248	.4145543	1.039766
#1	396.3082	2.407622	14.57880	151.4664	4.912292	4.935902
#2	399.1710	2.418420	14.52688	151.5929	4.875407	5.025155
#3	396.5142	2.415210	14.59344	151.2869	4.908575	4.935558

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV045 Acquired: 11/21/2024 20:22:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV045 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.639370	4.979664	F 5.562997	4.915077	4.870574	4.998842
Stddev	.009894	.013857	.062525	.017047	.017275	.008107
%RSD	.2132592	.2782621	1.123939	.3468365	.3546906	.1621778
#1	4.650704	4.982131	5.538945	4.919463	4.861314	4.990861
#2	4.634943	4.964740	5.633976	4.896265	4.890506	5.007070
#3	4.632463	4.992122	5.516069	4.929502	4.859903	4.998595

Elem	Sr4077
Units	ppm
Avg	4.957691
Stddev	.039981
%RSD	.8064521
#1	4.997629
#2	4.957776
#3	4.917667

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	718.3542	21203.72	4614.442	563.4112	1243.980
Stddev	1.3274	27.35	29.004	2.5394	1.015
%RSD	.1847828	.1290077	.6285412	.4507255	.0815655
#1	716.9177	21213.74	4626.864	563.5851	1244.345
#2	718.6094	21224.65	4581.296	565.8591	1244.762
#3	719.5354	21172.77	4635.166	560.7892	1242.834

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB045 Acquired: 11/21/2024 20:26:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB045 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011205	.0016118	.0037588	-.002780	-.000710	.0223152	.0008531
Stddev	.0055423	.0036928	.0007952	.007243	.002940	.0073562	.0003871
%RSD	494.6305	229.1140	21.15535	260.5436	414.1710	32.96486	45.38162
#1	.0010353	.0046614	.0031709	-.007698	.000715	.0276168	.0008065
#2	-.004379	.0026680	.0046635	.005538	.001246	.0254118	.0004913
#3	.006705	-.002494	.0034418	-.006180	-.004091	.0139170	.0012613

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000057	.0001013	.0254639	.0005337	.0003733	-.003493	.0362243
Stddev	.000035	.0000321	.0067827	.0004026	.0005933	.002945	.0240321
%RSD	61.23042	31.65688	26.63666	75.43996	158.9343	84.30926	66.34247
#1	-.000019	.0001242	.0246738	.0003744	.0009437	-.001717	.0480622
#2	-.000064	.0001151	.0191109	.0009916	.0004168	-.001869	.0085696
#3	-.000088	.0000646	.0326072	.0002351	-.000241	-.006893	.0520409

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008344	.0222488	.0002335	-.000195	-.487650	.0002255	.0007837
Stddev	.0004397	.0007988	.0002827	.000257	.139778	.0048298	.0004000
%RSD	52.69770	3.590469	121.0628	131.4177	28.66364	2142.299	51.04256
#1	.0012196	.0222796	.0001967	-.000035	-.379099	-.004487	.0009077
#2	.0003553	.0230318	-.000029	-.000491	-.438483	.005164	.0011070
#3	.0009284	.0214351	.000533	-.000059	-.645369	-.000001	.0003364

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5982340	.0006341	.0041264	.0005301	-.010174	.0016408	-.000751
Stddev	.0169551	.0019817	.0004502	.0002420	.001257	.0002446	.000898
%RSD	2.834193	312.5059	10.90992	45.65315	12.35940	14.90590	119.6275
#1	.5876673	-.000524	.0040531	.0002536	-.009631	.0018582	-.001746
#2	.5892437	.002922	.0046087	.0007033	-.009279	.0013760	-.000002
#3	.6177909	-.000496	.0037173	.0006333	-.011612	.0016884	-.000504

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB045 Acquired: 11/21/2024 20:26:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB045 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0002709	.0072254	.0003447
Stddev	.0009368	.0007674	.0000589
%RSD	345.8454	10.62131	17.09768
#1	-.000765	.0080600	.0003430
#2	.000518	.0065502	.0002866
#3	.001060	.0070659	.0004044

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	901.2146	24486.88	4744.952	741.9467	1721.656
Stddev	1.1490	67.18	106.834	3.3325	3.682
%RSD	.1274990	.2743636	2.251527	.4491621	.2138650
#1	901.6479	24438.75	4820.907	745.3075	1721.408
#2	902.0840	24563.63	4791.157	741.8896	1725.456
#3	899.9119	24458.25	4622.793	738.6432	1718.105

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-10 Acquired: 11/21/2024 20:31:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1218097	-.002372	1.964428	-.010156	.0089213	65.79958
Stddev	.0062058	.007268	.002847	.008822	.0012596	.03788
%RSD	5.094651	306.3489	.1449211	86.86471	14.11896	.0575686
#1	.1251421	-.006384	1.961898	-.009372	.0085117	65.81847
#2	.1256374	-.006750	1.963876	-.019345	.0079175	65.82431
#3	.1146496	.006017	1.967511	-.001753	.0103347	65.75597

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.464186	.0048741	.0172282	318.5319	.1458992	.0891423
Stddev	.006142	.0000914	.0002271	.7783	.0005329	.0001707
%RSD	.2492676	1.875812	1.318470	.2443450	.3652294	.1915170
#1	2.471245	.0049094	.0174558	319.4187	.1453082	.0892110
#2	2.461260	.0047703	.0170015	317.9624	.1460465	.0892679
#3	2.460054	.0049426	.0172273	318.2144	.1463430	.0889479

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3820619	193.3441	18.39087	86.12658	.2126946	-.013789
Stddev	.0027471	.1881	.05889	.29239	.0009384	.000443
%RSD	.7190139	.0972791	.3202074	.3394906	.4411763	3.215536
#1	.3789532	193.1415	18.45885	86.46318	.2137666	-.013306
#2	.3830703	193.5132	18.35545	85.93547	.2122952	-.013882
#3	.3841623	193.3777	18.35831	85.98110	.2120220	-.014178

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.344904	.1950882	4.512517	13.52294	F 16.97277	.1607868
Stddev	.240350	.0065197	.019552	.16946	.03618	.0012482
%RSD	17.87114	3.341902	.4332873	1.253139	.2131847	.7763169
#1	1.229543	.1998206	4.493803	13.64423	17.01242	.1595747
#2	1.183982	.1977925	4.532812	13.59527	16.94155	.1607175
#3	1.621186	.1876516	4.510935	13.32931	16.96432	.1620683

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-10 Acquired: 11/21/2024 20:31:23 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0073683	5.779068	7.914532	.0876812	.9715949	.0966605
Stddev	.0003418	.001825	.031596	.0025026	.0027597	.0009358
%RSD	4.638976	.0315754	.3992118	2.854245	.2840362	.9681610
#1	.0077517	5.777208	7.914361	.0858765	.9684151	.0958912
#2	.0070954	5.780855	7.883022	.0866290	.9730055	.0977023
#3	.0072579	5.779142	7.946213	.0905382	.9733643	.0963879

Elem	Sr4077
Units	ppm
Avg	.3505583
Stddev	.0008472
%RSD	.2416595
#1	.3514062
#2	.3505569
#3	.3497119

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	993.3746	27372.84	5681.841	818.4764	1406.122
Stddev	1.9037	78.62	15.525	4.2888	2.108
%RSD	.1916415	.2872014	.2732415	.5240023	.1499435
#1	991.1925	27305.43	5667.162	819.8793	1404.710
#2	994.6962	27353.90	5698.093	813.6618	1408.546
#3	994.2349	27459.20	5680.267	821.8881	1405.112

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-11 Acquired: 11/21/2024 20:35:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0967985	.0034076	1.669037	-.002598	.0077166	60.99180
Stddev	.0024997	.0019337	.011464	.012207	.0023025	.04935
%RSD	2.582412	56.74517	.6868458	469.8082	29.83810	.0809141
#1	.0994346	.0029081	1.671782	-.012414	.0081096	60.95441
#2	.0944621	.0055420	1.678880	-.006450	.0052430	60.97326
#3	.0964989	.0017727	1.656450	.011070	.0097974	61.04774

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.617710	.0047591	.0125891	289.7346	.1224972	.0708379
Stddev	.001375	.0000419	.0003898	.7484	.0010386	.0009995
%RSD	.0849966	.8807703	3.096251	.2583193	.8478291	1.410903
#1	1.617934	.0047119	.0128434	290.1994	.1236295	.0703568
#2	1.618959	.0047734	.0127836	290.1333	.1222734	.0719869
#3	1.616237	.0047920	.0121403	288.8713	.1215888	.0701700

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3220964	167.3159	11.48387	78.18343	.1758531	-.011711
Stddev	.0025906	.1182	.03180	.28898	.0017349	.000397
%RSD	.8042886	.0706210	.2768930	.3696126	.9865738	3.390430
#1	.3235644	167.2357	11.51052	78.39897	.1757308	-.011259
#2	.3191052	167.4516	11.49241	78.29625	.1776459	-.012002
#3	.3236196	167.2604	11.44867	77.85506	.1741825	-.011872

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.347703	.1701806	3.547196	10.33076	F 11.52850	.1400258
Stddev	.210240	.0025259	.013074	.07940	.08651	.0022145
%RSD	15.59989	1.484256	.3685648	.7685682	.7503740	1.581470
#1	1.216806	.1687360	3.539976	10.33308	11.58466	.1399013
#2	1.590212	.1730973	3.562288	10.40898	11.57196	.1423000
#3	1.236092	.1687087	3.539325	10.25023	11.42888	.1378763

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-11 Acquired: 11/21/2024 20:35:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHJ9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0057887	4.604123	6.652855	.0732707	.9728743	.0889594
Stddev	.0003808	.023626	.022898	.0022300	.0013839	.0010713
%RSD	6.578975	.5131507	.3441763	3.043563	.1422529	1.204285
#1	.0054339	4.611511	6.648319	.0738736	.9734851	.0884212
#2	.0061911	4.623171	6.677682	.0751373	.9738478	.0901931
#3	.0057412	4.577685	6.632566	.0708012	.9712900	.0882639

Elem	Sr4077
Units	ppm
Avg	.2844395
Stddev	.0001678
%RSD	.0590026
#1	.2845420
#2	.2842458
#3	.2845306

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	984.4167	27047.63	5536.671	808.1243	1443.558
Stddev	7.3210	45.16	22.414	3.3805	9.776
%RSD	.7436854	.1669719	.4048314	.4183180	.6772361
#1	979.3708	27040.57	5527.119	807.1793	1437.969
#2	981.0658	27006.41	5520.616	805.3168	1437.858
#3	992.8134	27095.91	5562.279	811.8768	1454.846

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-12 Acquired: 11/21/2024 20:40:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHK0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1320647	.0003447	2.421983	.0009315	.0079698	71.87649
Stddev	.0073324	.0006455	.005236	.0109408	.0041777	.12528
%RSD	5.552112	187.2650	.2161949	1174.558	52.41908	.1742930
#1	.1383745	-.000401	2.424773	-.010234	.0059130	71.74014
#2	.1337990	.000708	2.415943	.011633	.0127771	71.98651
#3	.1240206	.000726	2.425233	.001395	.0052193	71.90282

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.529930	.0058059	.0167401	122.4392	.1491076	.0882354
Stddev	.005303	.0003515	.0001489	.3666	.0013640	.0009070
%RSD	.2095938	6.053994	.8894543	.2994249	.9147920	1.027975
#1	2.523883	.0054539	.0168215	122.0332	.1502924	.0882935
#2	2.532119	.0058070	.0168306	122.5382	.1476165	.0891120
#3	2.533787	.0061569	.0165683	122.7461	.1494140	.0873007

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4147291	218.3020	15.88555	34.96026	.2264048	-.020976
Stddev	.0009475	.3809	.04820	.14533	.0014850	.000517
%RSD	.2284554	.1744712	.3034490	.4157095	.6558893	2.465372
#1	.4143604	218.1268	15.82990	34.79444	.2250598	-.020425
#2	.4140214	218.7390	15.91451	35.06550	.2261562	-.021450
#3	.4158055	218.0403	15.91223	35.02084	.2279983	-.021053

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.507181	.2288404	2.970598	10.20541	F 13.51868	.1623385
Stddev	.060200	.0016623	.005273	.06497	.02930	.0026918
%RSD	3.994238	.7263851	.1775168	.6366290	.2167160	1.658117
#1	1.564812	.2290202	2.966753	10.13622	13.49763	.1640982
#2	1.444704	.2270955	2.968432	10.21491	13.50627	.1636774
#3	1.512028	.2304054	2.976610	10.26511	13.55214	.1592398

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-12 Acquired: 11/21/2024 20:40:08 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHK0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080731	3.699539	6.824024	.1187871	1.322186	.1024435
Stddev	.0002188	.001108	.057571	.0023789	.004263	.0011014
%RSD	2.710094	.0299590	.8436475	2.002689	.3224009	1.075123
#1	.0081475	3.700347	6.759163	.1160444	1.319357	.1036721
#2	.0082450	3.699995	6.843839	.1202907	1.327089	.1015445
#3	.0078268	3.698276	6.869071	.1200264	1.320112	.1021140

Elem	Sr4077
Units	ppm
Avg	.3461823
Stddev	.0003060
%RSD	.0883977
#1	.3458679
#2	.3461996
#3	.3464792

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1035.670	28802.90	5811.513	865.6802	1503.210
Stddev	3.060	110.64	29.486	3.7375	1.993
%RSD	.2955009	.3841288	.5073637	.4317383	.1325558
#1	1036.761	28675.46	5843.536	862.4101	1502.459
#2	1038.036	28858.90	5805.519	869.7542	1505.469
#3	1032.214	28874.35	5785.486	864.8763	1501.703

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-13 Acquired: 11/21/2024 20:44:31 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHK1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1768143	.0054951	2.251734	-.001904	.0105369	65.91835
Stddev	.0019221	.0043861	.010777	.002524	.0013011	.22049
%RSD	1.087048	79.81806	.4786139	132.5634	12.34820	.3344822
#1	.1747418	.0004305	2.252669	.000854	.0090792	66.16293
#2	.1785382	.0080460	2.240519	-.004099	.0115807	65.85726
#3	.1771630	.0080087	2.262013	-.002467	.0109509	65.73484

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.951415	.0059907	.0154501	103.7878	.1183359	.0988272
Stddev	.004464	.0001628	.0001423	.1890	.0063688	.0017024
%RSD	.1512586	2.717494	.9211591	.1820958	5.382004	1.722636
#1	2.949098	.0060659	.0153330	103.6163	.1135936	.1006270
#2	2.956562	.0061022	.0156085	103.9904	.1255748	.0972426
#3	2.948586	.0058038	.0154089	103.7567	.1158393	.0986121

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4323346	212.9246	22.61054	26.99983	.2101666	-.021941
Stddev	.0013489	.8270	.02457	.01699	.0020248	.001999
%RSD	.3120000	.3883780	.1086630	.0629252	.9634009	9.110413
#1	.4308160	213.8325	22.58242	26.99511	.2116248	-.023574
#2	.4327940	212.7266	22.62789	26.98571	.2078549	-.019712
#3	.4333938	212.2146	22.62130	27.01869	.2110202	-.022538

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.784187	.2144927	1.997385	9.422792	F 14.98996	.1585056
Stddev	.157047	.0037156	.064049	.114153	.01523	.0026671
%RSD	8.802144	1.732271	3.206650	1.211459	.1016001	1.682658
#1	1.634797	.2104814	1.955900	9.499272	14.99210	.1614347
#2	1.769855	.2151801	2.071152	9.477525	14.97377	.1578648
#3	1.947908	.2178166	1.965104	9.291578	15.00400	.1562172

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-13 Acquired: 11/21/2024 20:44:31 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHK1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0096987	3.373809	9.011413	.0936415	1.010554	.0824989
Stddev	.0006434	.002841	.044840	.0014882	.007588	.0013563
%RSD	6.633316	.0842210	.4975951	1.589272	.7508297	1.644000
#1	.0100956	3.371762	9.020659	.0950948	1.018547	.0819551
#2	.0089564	3.377053	9.050910	.0937091	1.003450	.0814988
#3	.0100442	3.372610	8.962670	.0921206	1.009666	.0840426

Elem	Sr4077
Units	ppm
Avg	.2564361
Stddev	.0007751
%RSD	.3022628
#1	.2572714
#2	.2562970
#3	.2557400

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1068.659	29444.64	6033.226	886.3902	1515.307
Stddev	3.173	874.10	19.130	23.8645	3.687
%RSD	.2969221	2.968617	.3170699	2.692326	.2433406
#1	1067.902	29968.53	6013.132	900.4347	1513.630
#2	1072.142	28435.57	6035.329	858.8356	1519.535
#3	1065.933	29929.83	6051.217	899.9003	1512.757

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-14 Acquired: 11/21/2024 20:48:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHK2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2289654	.0062331	1.537558	-.005688	.0119998	74.40735
Stddev	.0096965	.0041698	.004468	.004408	.0023677	.13325
%RSD	4.234902	66.89835	.2905893	77.48636	19.73125	.1790762
#1	.2395165	.0108335	1.537871	-.007764	.0122493	74.26949
#2	.2204453	.0027023	1.541861	-.008675	.0095172	74.41711
#3	.2269343	.0051634	1.532942	-.000626	.0142329	74.53545

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.123351	.0059397	.0195280	160.3654	.1138818	.1283868
Stddev	.001255	.0002521	.0002174	.1931	.0005256	.0002556
%RSD	.0401842	4.244262	1.113096	.1204204	.4614957	.1990929
#1	3.124003	.0062025	.0197690	160.2594	.1133877	.1280923
#2	3.124145	.0056999	.0193468	160.5883	.1138236	.1285504
#3	3.121904	.0059168	.0194683	160.2485	.1144340	.1285179

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4161594	286.3796	25.89162	29.36946	.2312520	-.031417
Stddev	.0028660	.6867	.05854	.11626	.0004699	.000309
%RSD	.6886780	.2397931	.2260783	.3958664	.2032069	.9841069
#1	.4130318	285.8383	25.86848	29.24236	.2311017	-.031171
#2	.4167862	286.1484	25.95819	29.47045	.2317787	-.031317
#3	.4186601	287.1521	25.84820	29.39557	.2308756	-.031764

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.348698	.2301767	1.409566	10.25812	F 20.88248	.1968677
Stddev	.269620	.0049485	.004162	.07037	.01646	.0011608
%RSD	11.47955	2.149869	.2952668	.6860291	.0788358	.5896351
#1	2.353394	.2245247	1.413255	10.17818	20.88976	.1955521
#2	2.076761	.2322756	1.410390	10.28546	20.86363	.1977476
#3	2.615940	.2337298	1.405054	10.31072	20.89404	.1973033

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-14 Acquired: 11/21/2024 20:48:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHK2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083704	4.060697	7.503586	.0589182	.8807818	.0883126
Stddev	.0004156	.020222	.014543	.0011353	.0017635	.0012705
%RSD	4.965536	.4979824	.1938077	1.926847	.2002217	1.438588
#1	.0083514	4.049698	7.515502	.0581559	.8788586	.0895070
#2	.0087952	4.084034	7.487381	.0602229	.8823231	.0884529
#3	.0079646	4.048360	7.507875	.0583757	.8811637	.0869778

Elem	Sr4077
Units	ppm
Avg	.2693958
Stddev	.0002050
%RSD	.0761099
#1	.2692108
#2	.2693602
#3	.2696162

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1147.117	32032.90	6546.318	964.5998	1476.308
Stddev	2.842	85.37	7.365	2.5812	1.571
%RSD	.2477267	.2665043	.1125112	.2675880	.1063882
#1	1143.875	32055.17	6544.175	963.6445	1474.686
#2	1149.174	31938.61	6540.263	962.6325	1477.822
#3	1148.303	32104.94	6554.518	967.5224	1476.417

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-15 Acquired: 11/21/2024 20:53:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHK3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1455710	.0042461	.4700943	-.005368	.0048518	53.56360
Stddev	.0077815	.0021048	.0076660	.008995	.0027633	.06670
%RSD	5.345523	49.56979	1.630736	167.5684	56.95319	.1245249
#1	.1475905	.0021248	.4756207	.003451	.0024258	53.49314
#2	.1369788	.0063340	.4613427	-.005026	.0078597	53.57190
#3	.1521437	.0042797	.4733196	-.014528	.0042699	53.62576

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.571340	.0044516	.0138471	154.3255	.0913036	.0987046
Stddev	.001657	.0001026	.0000781	.2889	.0046727	.0005435
%RSD	.0644345	2.304812	.5638851	.1871785	5.117730	.5506345
#1	2.573058	.0044939	.0138740	154.6537	.0966599	.0980971
#2	2.569752	.0045262	.0137591	154.2127	.0891881	.0988717
#3	2.571209	.0043346	.0139081	154.1100	.0880629	.0991448

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2175183	235.0975	25.34305	38.17312	.1741534	-.024302
Stddev	.0016844	.4634	.07381	.18711	.0018853	.002189
%RSD	.7743624	.1971188	.2912553	.4901491	1.082533	9.006217
#1	.2192784	234.7838	25.41135	38.38280	.1742519	-.021807
#2	.2173548	235.6298	25.35305	38.02318	.1722208	-.025898
#3	.2159216	234.8788	25.26474	38.11337	.1759875	-.025201

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.708420	.2076060	.8385379	7.409577	F 13.36879	.1648104
Stddev	.325708	.0078730	.0320174	.065778	.01197	.0030729
%RSD	19.06486	3.792299	3.818236	.8877413	.0895398	1.864500
#1	2.061623	.2041204	.8754701	7.467953	13.38219	.1612632
#2	1.419920	.2020775	.8215280	7.422471	13.36504	.1665074
#3	1.643716	.2166202	.8186157	7.338306	13.35915	.1666605

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-15 Acquired: 11/21/2024 20:53:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHK3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040365	2.016278	8.404025	.0514255	.6228531	.0711058
Stddev	.0004726	.011753	.054947	.0023745	.0014673	.0014086
%RSD	11.70692	.5829198	.6538150	4.617411	.2355838	1.981027
#1	.0044997	2.008496	8.445604	.0500363	.6213823	.0699091
#2	.0040546	2.010540	8.424740	.0541673	.6228598	.0726582
#3	.0035551	2.029798	8.341732	.0500730	.6243170	.0707500

Elem	Sr4077
Units	ppm
Avg	.2009344
Stddev	.0004084
%RSD	.2032412
#1	.2007582
#2	.2014013
#3	.2006437

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1076.012	29517.18	6081.729	892.4014	1488.395
Stddev	.918	951.15	13.060	32.3188	1.022
%RSD	.0853156	3.222348	.2147488	3.621557	.0686484
#1	1075.009	28419.30	6078.988	855.1187	1488.168
#2	1076.811	30092.05	6070.257	912.4601	1489.511
#3	1076.214	30040.20	6095.943	909.6254	1487.506

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-16 Acquired: 11/21/2024 20:57:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHL8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1341301	-.002607	3.932432	-.001999	.0086745	76.23138
Stddev	.0118231	.006167	.003451	.002030	.0040759	.06044
%RSD	8.814672	236.5641	.0877675	101.5399	46.98678	.0792834
#1	.1474789	-.007405	3.930356	-.003481	.0079249	76.25153
#2	.1299345	-.004765	3.930524	-.002829	.0050255	76.16345
#3	.1249771	.004349	3.936416	.000314	.0130732	76.27918

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.022864	.0053733	.0194560	61.32798	.1645522	.1214770
Stddev	.001358	.0000507	.0000718	.08101	.0009424	.0008853
%RSD	.0671417	.9432376	.3688953	.1320988	.5726809	.7287840
#1	2.023258	.0053659	.0194887	61.37237	.1644332	.1223223
#2	2.021352	.0054273	.0193737	61.23447	.1655484	.1205565
#3	2.023981	.0053268	.0195056	61.37710	.1636750	.1215522

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4844240	233.1620	12.96275	22.89574	.2444722	-.022836
Stddev	.0039396	.3139	.01777	.02708	.0017484	.000149
%RSD	.8132491	.1346395	.1371105	.1182877	.7151728	.6533766
#1	.4798778	233.1796	12.97342	22.91034	.2430214	-.023008
#2	.4868352	232.8396	12.97259	22.91239	.2439818	-.022763
#3	.4865591	233.4668	12.94223	22.86449	.2464134	-.022737

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.254921	.2231043	3.013516	9.897398	F 14.12570	.1662972
Stddev	.061980	.0011832	.007335	.041838	.02578	.0033016
%RSD	4.938916	.5303276	.2434046	.4227218	.1825306	1.985336
#1	1.306659	.2241961	3.019323	9.921885	14.09648	.1661637
#2	1.186229	.2218471	3.015953	9.921222	14.13535	.1630645
#3	1.271876	.2232697	3.005273	9.849089	14.14526	.1696635

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-16 Acquired: 11/21/2024 20:57:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHL8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0390374	5.110306	9.718710	.1434314	1.618646	.1041115
Stddev	.0006769	.023774	.041511	.0025827	.004120	.0004115
%RSD	1.733990	.4652166	.4271297	1.800623	.2545278	.3952757
#1	.0396167	5.082902	9.765131	.1408942	1.619721	.1038060
#2	.0382933	5.122604	9.705844	.1460572	1.614095	.1039490
#3	.0392021	5.125412	9.685154	.1433429	1.622121	.1045795

Elem	Sr4077
Units	ppm
Avg	.2106246
Stddev	.0001814
%RSD	.0861493
#1	.2107347
#2	.2104152
#3	.2107239

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1047.420	29025.84	5860.694	874.6427	1549.186
Stddev	1.865	63.67	16.082	2.9851	2.457
%RSD	.1780337	.2193567	.2743993	.3412948	.1585797
#1	1047.074	29072.39	5849.229	877.4182	1548.435
#2	1049.433	28953.28	5853.776	871.4848	1551.930
#3	1045.752	29051.84	5879.077	875.0250	1547.192

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-17 Acquired: 11/21/2024 21:02:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHL9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1590543	.0019589	4.528783	-.002249	.0097642	76.47702
Stddev	.0091333	.0028663	.010360	.008155	.0001959	.10874
%RSD	5.742261	146.3214	.2287625	362.5761	2.006842	.1421881
#1	.1503515	.0017224	4.516920	-.011437	.0095390	76.60255
#2	.1582469	.0049361	4.536049	.000555	.0098961	76.41148
#3	.1685645	-.000782	4.533379	.004134	.0098574	76.41705

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.030622	.0051556	.0191044	96.54170	.1695043	.0959743
Stddev	.001757	.0001327	.0002624	.10296	.0004548	.0007335
%RSD	.0865231	2.574508	1.373367	.1066456	.2683221	.7642893
#1	2.029684	.0052689	.0188464	96.64333	.1691005	.0962014
#2	2.029533	.0051885	.0193709	96.43747	.1699970	.0951541
#3	2.032649	.0050096	.0190958	96.54431	.1694153	.0965674

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5085698	185.3770	12.31647	38.45513	.2144570	-.018042
Stddev	.0029096	.5123	.01017	.07432	.0017484	.000503
%RSD	.5721228	.2763321	.0825775	.1932692	.8152835	2.785273
#1	.5116009	185.9631	12.32591	38.51976	.2157694	-.017999
#2	.5057991	185.1531	12.31780	38.37392	.2151294	-.017562
#3	.5083096	185.0148	12.30570	38.47170	.2124722	-.018565

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.238497	.2181682	3.091387	8.560547	F 13.11373	.1320987
Stddev	.283264	.0033345	.029381	.059860	.02673	.0028291
%RSD	22.87162	1.528422	.9504039	.6992570	.2038097	2.141665
#1	1.540555	.2202243	3.107202	8.494716	13.10151	.1319794
#2	1.196137	.2199594	3.057486	8.575214	13.09530	.1349855
#3	.978798	.2143208	3.109471	8.611710	13.14438	.1293311

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-17 Acquired: 11/21/2024 21:02:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHL9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0066832	3.484058	9.619071	.1345134	1.614301	.1071479
Stddev	.0002568	.002505	.019229	.0015664	.002143	.0016432
%RSD	3.843144	.0719130	.1999002	1.164468	.1327273	1.533573
#1	.0064315	3.486506	9.632307	.1358892	1.616325	.1052756
#2	.0069449	3.484170	9.627892	.1348424	1.614521	.1083500
#3	.0066732	3.481498	9.597015	.1328087	1.612057	.1078183

Elem	Sr4077
Units	ppm
Avg	.2187419
Stddev	.0004764
%RSD	.2177880
#1	.2192756
#2	.2183598
#3	.2185902

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1034.596	28752.94	5825.153	866.8807	1514.530
Stddev	1.306	19.25	14.786	6.8534	.997
%RSD	.1262619	.0669399	.2538306	.7905813	.0658467
#1	1035.299	28740.24	5809.916	863.4093	1515.546
#2	1033.089	28743.49	5826.099	874.7752	1513.553
#3	1035.401	28775.08	5839.443	862.4575	1514.490

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-18 Acquired: 11/21/2024 21:06:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2098529	.0026546	4.301929	.0024460	.0116500	77.80847
Stddev	.0068429	.0023259	.006159	.0089554	.0014048	.16708
%RSD	3.260818	87.61938	.1431586	366.1291	12.05800	.2147270
#1	.2152667	.0036396	4.296460	.0107136	.0108491	77.93086
#2	.2021616	-.000002	4.300727	-.007067	.0108288	77.87642
#3	.2121303	.004326	4.308599	.003691	.0132720	77.61812

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.494944	.0055376	.0289101	90.99219	.1503054	.1059340
Stddev	.007864	.0000529	.0001141	.14837	.0007522	.0006825
%RSD	.3151776	.9556077	.3947417	.1630554	.5004578	.6443206
#1	2.504024	.0054785	.0288986	91.00999	.1504791	.1065314
#2	2.490452	.0055805	.0288021	91.13085	.1509556	.1051901
#3	2.490356	.0055538	.0290295	90.83572	.1494815	.1060806

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5381678	237.0126	13.59021	25.19242	.2197982	-.020867
Stddev	.0039498	.2191	.03003	.01341	.0006549	.000478
%RSD	.7339373	.0924468	.2210042	.0532373	.2979763	2.290829
#1	.5366225	237.1573	13.61526	25.17978	.2198391	-.020464
#2	.5426566	237.1200	13.59845	25.19100	.2191238	-.020741
#3	.5352242	236.7605	13.55691	25.20649	.2204317	-.021395

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.232712	.2305822	3.459728	8.914365	F 14.11850	.1537800
Stddev	.071936	.0043523	.012113	.127008	.01029	.0015457
%RSD	5.835607	1.887524	.3501087	1.424759	.0729048	1.005158
#1	1.157157	.2265339	3.445757	9.038363	14.11523	.1552905
#2	1.240602	.2351853	3.467285	8.784547	14.11024	.1522013
#3	1.300379	.2300276	3.466143	8.920186	14.13003	.1538482

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-18 Acquired: 11/21/2024 21:06:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0086576	3.071799	7.402793	.1470930	1.496779	.1072823
Stddev	.0003319	.002587	.016866	.0005443	.004254	.0006262
%RSD	3.833713	.0842124	.2278340	.3700710	.2842137	.5836901
#1	.0085350	3.074270	7.384376	.1466545	1.501685	.1076685
#2	.0084044	3.072017	7.417485	.1469222	1.494540	.1065598
#3	.0090333	3.069110	7.406519	.1477022	1.494111	.1076187

Elem	Sr4077
Units	ppm
Avg	.3260354
Stddev	.0008793
%RSD	.2696868
#1	.3267267
#2	.3263338
#3	.3250458

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1045.678	28930.30	5860.106	872.6379	1525.590
Stddev	2.496	123.71	21.286	2.4322	2.649
%RSD	.2386784	.4276080	.3632348	.2787237	.1736606
#1	1042.806	28866.16	5862.568	872.0024	1523.779
#2	1046.908	28851.84	5837.696	870.5865	1528.631
#3	1047.321	29072.91	5880.054	875.3248	1524.360

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-19 Acquired: 11/21/2024 21:10:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1951783	.0003064	2.440201	.0041260	.0096665	87.46869
Stddev	.0044912	.0050620	.003305	.0037992	.0013874	.06785
%RSD	2.301103	1652.103	.1354519	92.08008	14.35307	.0775761
#1	.1990674	-.002892	2.436831	.0004946	.0102276	87.41617
#2	.1902626	.006143	2.443438	.0080733	.0080864	87.54530
#3	.1962050	-.002331	2.440335	.0038100	.0106854	87.44459

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.689217	.0058266	.0198679	76.89499	.1455886	.1175748
Stddev	.004332	.0001361	.0002241	.08735	.0005535	.0004712
%RSD	.2564548	2.335117	1.127713	.1135900	.3801845	.4008030
#1	1.686937	.0059366	.0199086	76.82090	.1461423	.1172008
#2	1.694213	.0058687	.0196264	76.99130	.1455882	.1174196
#3	1.686501	.0056745	.0200689	76.87276	.1450352	.1181041

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3822754	228.0969	15.27109	23.40915	.2033738	-.023662
Stddev	.0027614	.0979	.02591	.07592	.0014015	.000304
%RSD	.7223609	.0429012	.1696611	.3243267	.6891362	1.286314
#1	.3793345	228.0315	15.25017	23.39600	.2030524	-.023920
#2	.3848130	228.0499	15.30007	23.49079	.2049082	-.023739
#3	.3826785	228.2094	15.26303	23.34067	.2021610	-.023326

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.312515	.2451543	2.289099	8.556875	F 12.73239	.1404379
Stddev	.138800	.0001407	.012670	.099617	.02946	.0013337
%RSD	10.57512	.0574060	.5534758	1.164175	.2313497	.9496389
#1	1.226684	.2450090	2.298869	8.485740	12.70083	.1398297
#2	1.472649	.2451640	2.274784	8.670727	12.75915	.1419673
#3	1.238211	.2452900	2.293645	8.514159	12.73718	.1395168

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-19 Acquired: 11/21/2024 21:10:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0069730	2.354744	4.962336	.1418190	1.452372	.0979468
Stddev	.0005340	.005744	.011902	.0034037	.001648	.0011048
%RSD	7.657374	.2439420	.2398476	2.400008	.1134958	1.128005
#1	.0065742	2.352254	4.972023	.1405250	1.453988	.0986286
#2	.0067652	2.361313	4.965936	.1392520	1.450693	.0966720
#3	.0075796	2.350665	4.949050	.1456798	1.452434	.0985397

Elem	Sr4077
Units	ppm
Avg	.2525076
Stddev	.0003251
%RSD	.1287473
#1	.2525392
#2	.2528158
#3	.2521679

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1078.275	29701.67	6027.137	892.6688	1533.945
Stddev	2.088	49.49	1.545	3.5181	2.696
%RSD	.1936705	.1666087	.0256418	.3941110	.1757884
#1	1076.469	29743.82	6025.535	890.8338	1534.097
#2	1080.562	29714.01	6027.258	896.7250	1536.562
#3	1077.793	29647.18	6028.619	890.4475	1531.175

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-20 Acquired: 11/21/2024 21:15:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1527390	.0003663	2.725419	.0032340	.0090492	56.19853
Stddev	.0120808	.0039889	.011101	.0056256	.0034129	.14925
%RSD	7.909436	1088.983	.4073071	173.9540	37.71526	.2655833
#1	.1432430	-.000413	2.716717	.0054087	.0128979	56.03751
#2	.1663365	.004687	2.721619	-.003154	.0078588	56.33225
#3	.1486374	-.003175	2.737920	.007448	.0063909	56.22582

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.529040	.0039026	.0113046	341.7029	.1208720	.0754765
Stddev	.001919	.0000863	.0001863	.4981	.0020821	.0009835
%RSD	.1255332	2.210514	1.647693	.1457761	1.722565	1.303109
#1	1.529566	.0039640	.0115195	342.1469	.1220965	.0758428
#2	1.530641	.0039398	.0111892	341.7975	.1220516	.0743623
#3	1.526912	.0038040	.0112051	341.1643	.1184680	.0762243

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3488636	161.8830	13.37503	25.41721	.1288539	-.011080
Stddev	.0009713	.3143	.03802	.10737	.0011340	.000720
%RSD	.2784052	.1941246	.2842454	.4224306	.8800472	6.497112
#1	.3499851	161.7093	13.41768	25.53907	.1276671	-.010343
#2	.3483068	162.2458	13.36271	25.33653	.1289683	-.011115
#3	.3482990	161.6940	13.34470	25.37602	.1299264	-.011782

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.094151	.1555249	1.757844	7.346827	F 10.14832	.1165456
Stddev	.379641	.0018340	.004163	.129457	.03047	.0003855
%RSD	34.69727	1.179228	.2368006	1.762083	.3002465	.3307448
#1	1.338713	.1552269	1.758251	7.440514	10.14257	.1164720
#2	1.286942	.1574896	1.761788	7.400861	10.12113	.1169626
#3	.656800	.1538581	1.753493	7.199107	10.18125	.1162022

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-20 Acquired: 11/21/2024 21:15:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043614	2.364044	8.068135	.1844683	1.289938	.1008871
Stddev	.0006184	.018005	.026221	.0051285	.002782	.0007762
%RSD	14.17927	.7616082	.3249942	2.780133	.2157045	.7693674
#1	.0047442	2.343376	8.049728	.1803617	1.287462	.1016049
#2	.0046921	2.372439	8.098157	.1828266	1.292949	.1009929
#3	.0036480	2.376319	8.056519	.1902166	1.289401	.1000634

Elem	Sr4077
Units	ppm
Avg	.6961329
Stddev	.0014708
%RSD	.2112744
#1	.6958307
#2	.6977313
#3	.6948367

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	981.4455	27227.21	5634.581	813.2545	1436.235
Stddev	.6946	142.25	16.299	3.8405	1.674
%RSD	.0707694	.5224533	.2892744	.4722430	.1165676
#1	981.0235	27063.03	5615.938	808.8221	1438.153
#2	981.0659	27313.49	5641.667	815.5926	1435.485
#3	982.2471	27305.12	5646.138	815.3489	1435.067

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-21 Acquired: 11/21/2024 21:19:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1162932	.0004817	.9238869	-.001537	.0078993	79.84734
Stddev	.0016166	.0023989	.0029752	.000897	.0047275	2.41194
%RSD	1.390065	498.0355	.3220315	58.39106	59.84777	3.020695
#1	.1175870	-.001901	.9262878	-.001774	.0026361	77.15089
#2	.1168115	.002897	.9205584	-.000545	.0092762	81.79916
#3	.1144810	.000449	.9248146	-.002292	.0117855	80.59198

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.260158	.0050940	.0108155	36.56677	.1053471	.0967688
Stddev	.038456	.0001552	.0002651	1.10177	.0017391	.0013308
%RSD	3.051687	3.047219	2.450804	3.013032	1.650813	1.375202
#1	1.216788	.0050475	.0111145	35.33322	.1056227	.0967805
#2	1.290098	.0052671	.0107226	37.45310	.1034867	.0954321
#3	1.273587	.0049673	.0106094	36.91399	.1069320	.0980936

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2216811	203.8080	16.08681	17.87301	.1476145	-.024345
Stddev	.0103253	6.0183	.48839	.57808	.0007745	.000395
%RSD	4.657736	2.952928	3.035962	3.234392	.5246556	1.623150
#1	.2111009	197.0642	15.53680	17.23294	.1468651	-.023889
#2	.2317311	208.6327	16.46969	18.35709	.1484118	-.024591
#3	.2222112	205.7271	16.25394	18.02900	.1475666	-.024555

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.190426	.2084012	.7731585	6.152238	F 10.57763	.1248007
Stddev	.067516	.0081349	.0023631	.297143	.03304	.0045952
%RSD	5.671587	3.903473	.3056388	4.829837	.3123919	3.682036
#1	1.199636	.2012974	.7715397	5.811735	10.57553	.1223138
#2	1.118778	.2172755	.7758702	6.359056	10.54569	.1301033
#3	1.252864	.2066307	.7720655	6.285924	10.61168	.1219848

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-21 Acquired: 11/21/2024 21:19:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040594	1.491438	6.614746	.1713241	1.654466	.0850285
Stddev	.0002798	.009553	.139761	.0030385	.050524	.0035109
%RSD	6.893296	.6405218	2.112872	1.773515	3.053813	4.129069
#1	.0038004	1.502394	6.454488	.1731343	1.598375	.0812140
#2	.0040215	1.487074	6.711343	.1678162	1.696406	.0881246
#3	.0043562	1.484846	6.678407	.1730217	1.668617	.0857469

Elem	Sr4077
Units	ppm
Avg	.1914798
Stddev	.0058701
%RSD	3.065671
#1	.1849139
#2	.1962207
#3	.1933047

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1082.733	29828.87	6064.921	895.6343	1563.567
Stddev	2.654	44.67	136.115	2.7921	3.860
%RSD	.2451266	.1497593	2.244300	.3117438	.2468470
#1	1081.744	29831.92	6217.273	896.6025	1562.000
#2	1085.740	29782.76	5955.295	892.4870	1567.964
#3	1080.716	29871.94	6022.195	897.8135	1560.737

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-22 Acquired: 11/21/2024 21:23:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1267244	.0023820	2.036756	-.001358	.0120951	66.82262
Stddev	.0121624	.0013898	.001557	.001618	.0007741	.13409
%RSD	9.597539	58.34884	.0764524	119.1040	6.399843	.2006618
#1	.1199927	.0022368	2.035514	.000230	.0128488	66.97706
#2	.1407644	.0038387	2.036253	-.001302	.0113022	66.75488
#3	.1194161	.0010704	2.038503	-.003004	.0121344	66.73591

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.005793	.0048690	.0171017	391.7838	.1363639	.0874272
Stddev	.001235	.0000409	.0000792	.5254	.0011108	.0005517
%RSD	.0615543	.8394689	.4630127	.1340991	.8145758	.6310889
#1	2.007213	.0048886	.0171814	391.6198	.1356426	.0867981
#2	2.005191	.0048965	.0170231	392.3716	.1358060	.0876547
#3	2.004975	.0048221	.0171006	391.3600	.1376430	.0878288

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3911256	186.5708	15.01514	100.9786	.2074550	-.013350
Stddev	.0024164	.2726	.01537	.1325	.0016519	.000657
%RSD	.6178099	.1460877	.1023483	.1312639	.7962810	4.918506
#1	.3928598	186.8656	14.99754	100.8531	.2070091	-.012894
#2	.3921516	186.3279	15.02199	101.1172	.2060717	-.013054
#3	.3883655	186.5187	15.02589	100.9653	.2092841	-.014102

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.665853	.1885689	4.588410	13.93101	F 18.91071	.1617091
Stddev	.131390	.0053954	.011991	.00330	.04011	.0011455
%RSD	7.887277	2.861256	.2613372	.0237134	.2120853	.7083453
#1	1.779578	.1840059	4.600186	13.93465	18.92537	.1613989
#2	1.522023	.1871769	4.576214	13.92820	18.86534	.1629777
#3	1.695958	.1945240	4.588831	13.93017	18.94143	.1607507

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4912-22 Acquired: 11/21/2024 21:23:58 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHM4 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0055652	6.588094	12.31003	.0810534	1.009765	.0962512
Stddev	.0003115	.019500	.05325	.0011761	.003470	.0014040
%RSD	5.596685	.2959946	.4325342	1.450960	.3436246	1.458721
#1	.0053829	6.580412	12.37089	.0800071	1.013766	.0949205
#2	.0059248	6.573605	12.28714	.0808269	1.007956	.0961147
#3	.0053879	6.610266	12.27205	.0823262	1.007574	.0977186

Elem	Sr4077
Units	ppm
Avg	.4000872
Stddev	.0008553
%RSD	.2137677
#1	.4009605
#2	.4000498
#3	.3992513

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	994.1058	27457.54	5759.465	821.5440	1378.305
Stddev	.8056	37.65	21.802	.2073	1.940
%RSD	.0810368	.1371202	.3785481	.0252276	.1407625
#1	993.4678	27487.97	5741.924	821.6927	1377.181
#2	995.0110	27415.43	5752.598	821.3072	1380.545
#3	993.8386	27469.21	5783.875	821.6320	1377.188

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165139BL Acquired: 11/21/2024 21:28:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS139 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0003831	.0011449	.0025105	.0004730	.0007680	.0147353	.0007529
Stddev	.0071435	.0027309	.0011573	.0090337	.0021412	.0119521	.0005355
%RSD	1864.732	238.5273	46.09611	1910.013	278.8109	81.11227	71.13291
#1	.0070800	-.000504	.0037335	-.009773	-.001387	.0174694	.0011448
#2	-.007136	.004297	.0023656	.003901	.000795	.0250835	.0001427
#3	.001205	-.000358	.0014326	.007291	.002895	.0016530	.0009710

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000013	.0000087	.0381172	-.000706	.0002688	.0010596	.0341339
Stddev	.000120	.0000921	.0073077	.000632	.0002463	.0017408	.0078179
%RSD	909.8043	1058.602	19.17161	89.58469	91.63788	164.2978	22.90355
#1	.000094	-.000043	.0438567	-.000589	-.000010	.0019613	.0327381
#2	.000009	-.000046	.0298906	-.001388	.000359	-.000947	.0425557
#3	-.000142	.000115	.0406045	-.000140	.000458	.002164	.0271080

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008997	.0186685	.0004945	-.000779	-.309418	-.006010	.0003002
Stddev	.0002142	.0428492	.0002312	.000269	.708271	.001288	.0003470
%RSD	23.81150	229.5269	46.75023	34.59645	228.9040	21.42654	115.5735
#1	.0007164	-.010202	.0003214	-.001090	-.982421	-.007417	-.000100
#2	.0011352	.067902	.0004051	-.000635	-.375345	-.005726	.000482
#3	.0008475	-.001694	.0007570	-.000612	.429511	-.004889	.000519

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4104480	.0015096	-.002952	.0004153	-.003899	.0033521	-.001057
Stddev	.1056565	.0015804	.000944	.0002743	.004334	.0005954	.002624
%RSD	25.74175	104.6894	31.98930	66.06410	111.1482	17.76187	248.2349
#1	.3792310	-.000313	-.002735	.0007223	-.001765	.0040328	-.003587
#2	.3239172	.002349	-.002135	.0001942	-.001046	.0030955	.001652
#3	.5281957	.002493	-.003985	.0003294	-.008886	.0029281	-.001235

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165139BL Acquired: 11/21/2024 21:28:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS139 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	-.000939	.0039594	.0001435
Stddev	.001227	.0003411	.0000665
%RSD	130.6801	8.616015	46.37904
#1	.000346	.0040117	.0002195
#2	-.001066	.0035951	.0001153
#3	-.002099	.0042713	.0000957

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	908.1905	24600.01	4806.498	746.7788	1739.052
Stddev	7.2153	37.82	39.315	3.7467	12.485
%RSD	.7944655	.1537418	.8179467	.5017162	.7179215
#1	916.3916	24643.58	4778.936	748.8541	1753.457
#2	905.3612	24580.85	4851.518	742.4537	1732.367
#3	902.8187	24575.61	4789.039	749.0287	1731.334

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV046 Acquired: 11/21/2024 21:32:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV046 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.033939	4.792664	24.40148	4.643546	4.740741	397.1780
Stddev	.024423	.014430	.03136	.020171	.017738	.4617
%RSD	.4851667	.3010871	.1285325	.4343865	.3741561	.1162467
#1	5.057917	4.797589	24.37755	4.622522	4.723036	397.3450
#2	5.009094	4.776416	24.38990	4.645376	4.740676	396.6560
#3	5.034805	4.803987	24.43698	4.662739	4.758511	397.5329

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.15062	.4864211	2.479674	406.4665	15.09839	2.467388
Stddev	.01575	.0018434	.002716	.1372	.28213	.004321
%RSD	.1551993	.3789723	.1095418	.0337625	1.868620	.1751403
#1	10.16688	.4846104	2.481670	406.4438	14.94434	2.465360
#2	10.13543	.4863572	2.476581	406.3419	15.42401	2.464455
#3	10.14954	.4882955	2.480771	406.6136	14.92682	2.472351

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.55143	412.1866	14.62457	397.6257	2.455234	1.256923
Stddev	.02199	.7404	.01203	.2712	.003115	.027162
%RSD	.1511001	.1796175	.0822714	.0682002	.1268761	2.161012
#1	14.57620	411.4542	14.63482	397.8441	2.455925	1.243157
#2	14.53421	412.1710	14.61132	397.3222	2.451831	1.288212
#3	14.54387	412.9347	14.62757	397.7108	2.457945	1.239400

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	395.6104	2.406567	14.61685	151.0720	4.895398	4.977734
Stddev	.9368	.000555	.34715	.1369	.006613	.027619
%RSD	.2367982	.0230517	2.375007	.0906194	.1350848	.5548553
#1	395.9756	2.405938	14.33966	150.9144	4.893607	4.948596
#2	394.5460	2.406776	15.00622	151.1410	4.889865	4.981074
#3	396.3096	2.406987	14.50467	151.1608	4.902722	5.003531

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV046 Acquired: 11/21/2024 21:32:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV046 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.645382	4.998150	F 5.538741	4.923139	4.839990	5.008352
Stddev	.020131	.011216	.026935	.009601	.006974	.007266
%RSD	.4333482	.2243995	.4862992	.1950229	.1440832	.1450720
#1	4.623682	4.989857	5.509438	4.919325	4.840641	5.014895
#2	4.663448	5.010911	5.544367	4.916029	4.832714	5.000533
#3	4.649018	4.993683	5.562419	4.934061	4.846615	5.009628

Elem	Sr4077
Units	ppm
Avg	4.910656
Stddev	.034417
%RSD	.7008552
#1	4.874573
#2	4.943121
#3	4.914274

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	716.0406	20873.08	4603.290	558.0727	1240.147
Stddev	2.1931	370.75	5.687	12.9076	1.638
%RSD	.3062825	1.776199	.1235511	2.312893	.1320800
#1	718.1031	21053.08	4609.010	567.4765	1238.292
#2	713.7369	20446.69	4603.224	543.3566	1240.751
#3	716.2819	21119.46	4597.636	563.3849	1241.397

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB046 Acquired: 11/21/2024 21:37:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB046 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005221	.0019432	.0035413	.0017635	.0008950	.0127549	.0010910
Stddev	.002815	.0012882	.0029910	.0036709	.0010584	.0151837	.0005797
%RSD	53.90605	66.29329	84.46050	208.1624	118.2596	119.0422	53.13636
#1	-.005955	.0033581	.0055574	-.002437	.0000709	.0078627	.0009467
#2	-.007596	.0016330	.0049616	.003374	.0005254	.0006204	.0017291
#3	-.002113	.0008383	.0001048	.004354	.0020887	.0297816	.0005970

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000115	.0000980	.0098631	.0000136	-.000291	-.000817	.0431864
Stddev	.0000910	.0001489	.0095806	.0009196	.000149	.000639	.0027060
%RSD	791.7252	151.8846	97.13575	6759.841	51.26443	78.25015	6.265814
#1	-.000065	.0002096	.0151961	.0009878	-.000462	-.000240	.0401930
#2	.000112	-.000071	.0155906	-.000839	-.000225	-.001504	.0454590
#3	-.000012	.000156	-.001197	-.000108	-.000186	-.000707	.0439072

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009163	.0140976	.0002643	-.000572	-.551016	-.001400	.0000266
Stddev	.0004899	.0190897	.0004081	.000220	.247521	.003167	.0003388
%RSD	53.45975	135.4109	154.3645	38.46171	44.92077	226.2408	1273.494
#1	.0012810	.0254377	.0004292	-.000533	-.817043	.002233	.0001308
#2	.0011084	.0247974	.0005642	-.000374	-.327512	-.003582	-.000352
#3	.0003595	-.007942	-.000200	-.000809	-.508492	-.002851	.000301

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4891374	-.001177	.0056843	.0006352	.0004770	.0017146	-.001025
Stddev	.0529211	.001798	.0032443	.0003027	.0029163	.0001944	.001316
%RSD	10.81928	152.7737	57.07500	47.65743	611.3912	11.33810	128.3868
#1	.4345852	-.003135	.0094052	.0006352	-.001458	.0015488	-.002325
#2	.4925660	-.000796	.0034472	.0009379	-.000942	.0016664	.000306
#3	.5402608	.000400	.0042006	.0003325	.003831	.0019285	-.001055

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB046 Acquired: 11/21/2024 21:37:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB046 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0004490	.0089102	.0002682
Stddev	.0008321	.0012020	.0000916
%RSD	185.3429	13.48966	34.15420
#1	-.000306	.0080923	.0003653
#2	.001341	.0083481	.0002560
#3	.000311	.0102902	.0001833

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	897.0452	24443.21	4786.305	739.6596	1716.466
Stddev	1.6973	75.74	9.643	.6740	.960
%RSD	.1892055	.3098790	.2014740	.0911256	.0559110
#1	895.2454	24424.23	4783.714	739.9161	1715.832
#2	898.6169	24378.77	4778.221	738.8950	1717.570
#3	897.2732	24526.65	4796.979	740.1677	1715.996

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165139BS Acquired: 11/21/2024 21:41:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS139 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0205106	.0549718	.0236534	.0698601	.1106102	.3904943
Stddev	.0021344	.0011772	.0050585	.0033620	.0024926	.0053084
%RSD	10.40619	2.141505	21.38597	4.812536	2.253490	1.359404
#1	.0180683	.0544490	.0280973	.0662467	.1132796	.3893316
#2	.0220177	.0541464	.0181486	.0728960	.1083434	.3962876
#3	.0214460	.0563198	.0247142	.0704377	.1102076	.3858636

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4418853	.0108774	.0109067	11.39927	.0213145	.1031048
Stddev	.0008427	.0001623	.0001464	.06428	.0006252	.0003016
%RSD	.1907135	1.492215	1.342164	.5638673	2.933286	.2925661
#1	.4410534	.0109125	.0108627	11.36913	.0218549	.1031413
#2	.4427385	.0110193	.0110700	11.47308	.0214588	.1027866
#3	.4418639	.0107004	.0107873	11.35561	.0206297	.1033865

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0501156	.2289473	.0355818	10.54008	.0887321	.0222347
Stddev	.0018737	.0060338	.0002215	.04110	.0005805	.0001407
%RSD	3.738743	2.635464	.6226550	.3899533	.6541554	.6327108
#1	.0521963	.2358531	.0353834	10.57302	.0881364	.0223921
#2	.0495888	.2262943	.0358209	10.55320	.0892960	.0221211
#3	.0485616	.2246945	.0355411	10.49402	.0887639	.0221910

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.998660	.1121600	.1386409	10.77068	.0178548	F .0011455
Stddev	.044339	.0089004	.0012432	.14370	.0061986	.0020314
%RSD	.4434473	7.935454	.8967295	1.334191	34.71698	177.3377
#1	9.989908	.1210269	.1374926	10.90359	.0137278	.0005654
#2	9.959351	.1032265	.1399611	10.79025	.0148538	.0034038
#3	10.04672	.1122265	.1384690	10.61820	.0249827	-.000533

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: PB165139BS Acquired: 11/21/2024 21:41:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS139 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0206786	.1896217	F .4537583	.0119617	.2100888	F .0395270
Stddev	.0003595	.0043371	.0040854	.0021863	.0006166	.0009709
%RSD	1.738295	2.287242	.9003488	18.27742	.2935071	2.456354
#1	.0210918	.1866289	.4510107	.0094924	.2107652	.0402497
#2	.0205065	.1876406	.4584530	.0127418	.2099433	.0384234
#3	.0204377	.1945956	.4518111	.0136510	.2095579	.0399079

Elem	Sr4077
Units	ppm
Avg	.2163928
Stddev	.0003164
%RSD	.1462085
#1	.2160963
#2	.2163561
#3	.2167259

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	889.8969	24128.57	4827.096	732.2423	1646.745
Stddev	1.4146	49.14	33.967	2.5961	3.800
%RSD	.1589678	.2036430	.7036657	.3545445	.2307671
#1	891.1069	24135.49	4842.564	733.8147	1648.791
#2	888.3415	24076.34	4788.148	729.2458	1642.360
#3	890.2423	24173.88	4850.575	733.6663	1649.084

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-04DLX2 Acquired: 11/21/2024 21:46:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE5L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0275539	-.006784	.0833793	-.004736	.0022921	23.99418	.5437071
Stddev	.0098207	.003304	.0028469	.002627	.0033428	.01661	.0003518
%RSD	35.64170	48.69745	3.414421	55.46585	145.8390	.0692367	.0647114
#1	.0305018	-.009985	.0853003	-.007069	.0038400	23.98662	.5440738
#2	.0165969	-.006980	.0847290	-.001891	-.001544	24.01322	.5436752
#3	.0355629	-.003386	.0801085	-.005247	.004580	23.98269	.5433723

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015486	.0036296	668.8825	.0397544	.0283405	.1093626	62.36413
Stddev	.0000638	.0001055	3.5045	.0008054	.0007758	.0022815	.02054
%RSD	4.121459	2.906343	.5239284	2.025937	2.737301	2.086191	.0329319
#1	.0016149	.0036686	672.7566	.0389683	.0279108	.1094030	62.37523
#2	.0014876	.0037100	667.9581	.0405778	.0278747	.1116236	62.37672
#3	.0015432	.0035102	665.9330	.0397171	.0292360	.1070611	62.34043

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.420482	104.7648	.0613421	.0054345	.3739471	.0670504	.2097034
Stddev	.013500	.1698	.0006993	.0007629	.1278490	.0044091	.0014354
%RSD	.3054006	.1620934	1.140023	14.03869	34.18905	6.575734	.6844795
#1	4.434082	104.6603	.0609153	.0046141	.4769962	.0621918	.2089859
#2	4.407084	104.6733	.0621491	.0055666	.2308746	.0681622	.2087681
#3	4.420280	104.9607	.0609618	.0061227	.4139704	.0707971	.2113560

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.952412	3.663881	.0492010	.0001871	.8263446	5.048012	-.006199
Stddev	.103217	.008972	.0009199	.0007796	.0083329	.020600	.001451
%RSD	2.611503	.2448800	1.869745	416.6603	1.008407	.4080777	23.40835
#1	3.906874	3.673530	.0493469	.0000319	.8232542	5.064884	-.007254
#2	3.879794	3.655790	.0482168	-.000503	.8199984	5.054097	-.006798
#3	4.070567	3.662324	.0500392	.001033	.8357812	5.025055	-.004544

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-04DLX2 Acquired: 11/21/2024 21:46:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE5L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4715500	.0561807	.5396703
Stddev	.0013981	.0015754	.0001575
%RSD	.2964917	2.804133	.0291823
#1	.4706976	.0577621	.5396852
#2	.4731636	.0546114	.5398198
#3	.4707890	.0561684	.5395059

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	881.2760	24179.54	5149.214	728.6708	1334.984
Stddev	1.2561	81.65	3.529	5.9687	1.994
%RSD	.1425307	.3376895	.0685441	.8191276	.1493636
#1	880.2955	24243.23	5149.328	733.2485	1332.705
#2	882.6918	24207.89	5152.684	730.8440	1335.843
#3	880.8406	24087.49	5145.628	721.9199	1336.405

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-05DLX2 Acquired: 11/21/2024 21:50:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE6L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0298428	-.004028	.0579122	.0000570	.0046890	20.63309	.3692702
Stddev	.0091697	.003625	.0018815	.0105992	.0024946	.00495	.0004865
%RSD	30.72677	90.00906	3.248895	18603.41	53.20023	.0239685	.1317359
#1	.0401410	-.008083	.0600293	.0090486	.0018394	20.62801	.3697880
#2	.0268254	-.001101	.0564313	-.011630	.0064782	20.63337	.3692000
#3	.0225621	-.002899	.0572759	.002752	.0057494	20.63789	.3688227

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0013599	.0025963	593.5901	.0373650	.0228899	.0578841	55.86694
Stddev	.0001003	.0001673	2.1428	.0004872	.0005305	.0029552	.04765
%RSD	7.371938	6.444709	.3609937	1.303794	2.317516	5.105329	.0852983
#1	.0012764	.0026372	595.9047	.0377921	.0223663	.0610839	55.83629
#2	.0014711	.0027394	591.6755	.0368344	.0228763	.0552575	55.84269
#3	.0013321	.0024123	593.1900	.0374684	.0234270	.0573110	55.92184

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.726385	41.73465	.0663017	.0015884	.3178251	.0581218	.1440952
Stddev	.013418	.09603	.0003282	.0001842	.2750887	.0069060	.0011679
%RSD	.1994821	.2300926	.4949986	11.59834	86.55349	11.88189	.8104828
#1	6.737616	41.75745	.0666547	.0017646	.3418403	.0503454	.1427919
#2	6.711526	41.62927	.0660059	.0016036	.0315161	.0635391	.1450469
#3	6.730012	41.81722	.0662444	.0013970	.5801190	.0604810	.1444466

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.420474	4.883862	.0523300	-.000449	.5598964	4.299472	-.004805
Stddev	.060621	.021924	.0014084	.000788	.0101599	.020772	.001262
%RSD	1.118373	.4489092	2.691489	175.4360	1.814598	.4831208	26.26067
#1	5.428150	4.863617	.0520006	-.000564	.5490694	4.322401	-.006253
#2	5.356381	4.880822	.0511153	.000390	.5692220	4.294103	-.003937
#3	5.476892	4.907148	.0538739	-.001174	.5613980	4.281912	-.004226

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-05DLX2 Acquired: 11/21/2024 21:50:51 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE6L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.3939085	.0507089	.3512307
Stddev	.0001770	.0008631	.0003913
%RSD	.0449466	1.702140	.1114183
#1	.3937706	.0507112	.3515801
#2	.3938467	.0498445	.3513042
#3	.3941081	.0515708	.3508079

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	930.9040	25449.27	5391.394	767.0230	1365.288
Stddev	.1739	71.61	25.329	3.9031	3.846
%RSD	.0186782	.2813712	.4697979	.5088610	.2816753
#1	930.7226	25376.85	5364.095	763.4543	1367.472
#2	930.9202	25450.94	5395.955	766.4237	1360.847
#3	931.0692	25520.04	5414.133	771.1911	1367.543

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-18DLX2 Acquired: 11/21/2024 21:55:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA3L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0456794	-.000832	.1802064	-.007979	.0034486	30.72164	.3187580
Stddev	.0081256	.005887	.0025766	.005139	.0011108	.02252	.0008953
%RSD	17.78844	707.5065	1.429791	64.40463	32.20889	.0733162	.2808625
#1	.0481353	.000463	.1818609	-.006192	.0039708	30.74762	.3197740
#2	.0366090	.004300	.1772377	-.003972	.0021730	30.70968	.3184157
#3	.0522937	-.007259	.1815206	-.013773	.0042021	30.70761	.3180845

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018908	.0039318	683.0291	.0455867	.0333529	.1284155	84.53775
Stddev	.0000108	.0001241	2.7495	.0017261	.0005889	.0007430	.09594
%RSD	.5716712	3.156758	.4025506	3.786405	1.765799	.5786071	.1134934
#1	.0019028	.0038448	686.1242	.0437534	.0332386	.1288025	84.59281
#2	.0018881	.0038765	682.0943	.0471807	.0328295	.1275589	84.42696
#3	.0018817	.0040739	680.8689	.0458261	.0339907	.1288852	84.59348

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.386701	83.61756	.0766562	.0041761	.6127647	.0765638	.2680843
Stddev	.016074	.03839	.0006623	.0005363	.2231842	.0051186	.0029837
%RSD	.2983958	.0459104	.8639892	12.84198	36.42249	6.685412	1.112970
#1	5.391958	83.61233	.0762324	.0038014	.8635567	.0729475	.2715272
#2	5.399487	83.65829	.0763168	.0047905	.5387372	.0824206	.2662533
#3	5.368657	83.58205	.0774194	.0039366	.4360003	.0743233	.2664723

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.004914	4.316227	.0738681	-.000243	.9432255	5.861293	.0005650
Stddev	.116024	.008624	.0018877	.000381	.0089464	.009322	.0022944
%RSD	1.932144	.1998072	2.555452	157.0420	.9484868	.1590402	406.0988
#1	5.954723	4.308705	.0744298	-.000623	.9334072	5.868613	.0031192
#2	6.137583	4.325639	.0717633	-.000244	.9509164	5.864467	-.001321
#3	5.922436	4.314336	.0754110	.000139	.9453529	5.850798	-.000103

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-18DLX2 Acquired: 11/21/2024 21:55:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA3L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4939129	.0625709	.7636644
Stddev	.0005902	.0009592	.0003226
%RSD	.1194864	1.533002	.0422367
#1	.4938193	.0615328	.7636005
#2	.4945442	.0634245	.7633786
#3	.4933751	.0627553	.7640141

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	884.2656	24161.42	5150.831	727.2327	1337.557
Stddev	.4586	59.10	20.698	4.5519	1.180
%RSD	.0518672	.2446184	.4018423	.6259229	.0882511
#1	884.6159	24172.94	5148.509	723.3124	1338.856
#2	884.4345	24097.40	5131.391	726.1608	1337.266
#3	883.7464	24213.91	5172.592	732.2249	1336.549

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-19DLX2 Acquired: 11/21/2024 22:00:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA4L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0436484	-.000879	.1117586	-.001984	.0032216	28.58301	.2844236
Stddev	.0100796	.003894	.0058217	.008554	.0018960	.01391	.0010806
%RSD	23.09273	443.2998	5.209136	431.0796	58.85354	.0486825	.3799200
#1	.0321103	.003433	.1179489	.007769	.0010909	28.58712	.2841518
#2	.0480937	-.004141	.1109332	-.005508	.0047229	28.59441	.2856142
#3	.0507411	-.001927	.1063937	-.008214	.0038508	28.56750	.2835049

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015377	.0028671	467.1024	.0414770	.0309869	.1170222	73.42353
Stddev	.0000896	.0001781	1.3074	.0007759	.0012234	.0009975	.17190
%RSD	5.828598	6.210300	.2799014	1.870779	3.947982	.8524141	.2341279
#1	.0015540	.0027193	466.2349	.0423413	.0300031	.1178043	73.23960
#2	.0014410	.0030648	468.6062	.0412495	.0306011	.1158989	73.58013
#3	.0016180	.0028173	466.4662	.0408403	.0323567	.1173636	73.45086

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.813510	133.8684	.0715116	.0037495	.7348361	.0694512	.2513584
Stddev	.002352	.3954	.0010959	.0006651	.3341390	.0015140	.0007050
%RSD	.0616643	.2953557	1.532415	17.73766	45.47123	2.179928	.2804670
#1	3.812356	133.5201	.0724363	.0044157	.4769194	.0682938	.2518123
#2	3.816215	134.2982	.0703012	.0030856	.6152826	.0688953	.2505463
#3	3.811958	133.7870	.0717973	.0037470	1.112306	.0711646	.2517167

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.097736	2.374961	.0645402	-.000692	.5740768	6.115071	-.004630
Stddev	.047229	.008650	.0022890	.000262	.0089817	.033288	.000995
%RSD	.7745312	.3642300	3.546549	37.84617	1.564543	.5443537	21.49169
#1	6.090497	2.366505	.0619596	-.000625	.5749122	6.081985	-.005149
#2	6.148166	2.374585	.0653361	-.000469	.5647066	6.148557	-.005258
#3	6.054544	2.383793	.0663250	-.000980	.5826116	6.114672	-.003483

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-19DLX2 Acquired: 11/21/2024 22:00:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHA4L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.4923962	.0603524	.3650156
Stddev	.0017455	.0013905	.0001398
%RSD	.3544951	2.304046	.0382880
#1	.4907426	.0610314	.3649616
#2	.4942210	.0612730	.3651742
#3	.4922250	.0587528	.3649108

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	865.8912	23635.86	4997.720	707.6299	1369.437
Stddev	.4972	60.66	18.617	3.2300	.565
%RSD	.0574254	.2566319	.3725114	.4564481	.0412870
#1	865.5651	23565.89	5007.862	704.1559	1370.081
#2	866.4635	23668.07	4976.234	708.1919	1369.024
#3	865.6451	23673.60	5009.064	710.5421	1369.205

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-02A Acquired: 11/21/2024 22:04:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB3A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0562427	-.006056	1.076955	.0040722	.0085455	66.91273
Stddev	.0032947	.001868	.003480	.0038635	.0047692	.10150
%RSD	5.858033	30.85302	.3230910	94.87512	55.80988	.1516905
#1	.0533981	-.008195	1.080807	.0018285	.0087984	66.88076
#2	.0598528	-.004740	1.076019	.0018547	.0131831	67.02637
#3	.0554772	-.005233	1.074040	.0085333	.0036548	66.83107

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.268375	.0036038	.0089276	189.5155	.1493486	.0600960
Stddev	.002963	.0000731	.0000849	.2921	.0010787	.0008990
%RSD	.2336156	2.027526	.9509112	.1541041	.7222425	1.495958
#1	1.265779	.0035229	.0088297	189.1864	.1493778	.0593354
#2	1.271603	.0036651	.0089737	189.7438	.1482556	.0610881
#3	1.267742	.0036234	.0089795	189.6161	.1504123	.0598646

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5098708	143.4419	5.924806	42.63605	.1510365	.0110270
Stddev	.0028619	.2336	.007259	.10729	.0003304	.0005851
%RSD	.5613006	.1628728	.1225142	.2516377	.2187388	5.306396
#1	.5066422	143.6372	5.921588	42.55188	.1514097	.0106542
#2	.5108746	143.5052	5.933118	42.75686	.1507814	.0107254
#3	.5120956	143.1831	5.919713	42.59941	.1509183	.0117014

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.396163	.1882765	3.603306	9.178109	F 18.23384	.1225293
Stddev	.276133	.0026849	.017669	.145915	.01716	.0026309
%RSD	19.77796	1.426028	.4903541	1.589815	.0941154	2.147166
#1	1.396616	.1908575	3.621710	9.186853	18.22207	.1213529
#2	1.672069	.1884735	3.601732	9.319456	18.22591	.1206918
#3	1.119805	.1854986	3.586477	9.028019	18.25353	.1255431

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4906-02A Acquired: 11/21/2024 22:04:30 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHB3A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0078975	11.00942	10.47617	.0495276	1.962093	.0979296
Stddev	.0004024	.02385	.05952	.0010639	.003664	.0006811
%RSD	5.095480	.2165884	.5681025	2.148151	.1867528	.6955276
#1	.0083336	10.98294	10.51906	.0486914	1.964268	.0977385
#2	.0078185	11.01613	10.50124	.0491662	1.964148	.0973645
#3	.0075405	11.02920	10.40823	.0507251	1.957862	.0986859

Elem	Sr4077
Units	ppm
Avg	.4470147
Stddev	.0011819
%RSD	.2643928
#1	.4472417
#2	.4480666
#3	.4457358

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	933.5570	25866.31	5375.513	764.0796	1474.928
Stddev	1.5901	66.86	13.316	2.7335	.810
%RSD	.1703287	.2584758	.2477145	.3577468	.0549503
#1	933.6096	25889.88	5360.304	760.9412	1474.734
#2	935.1202	25918.20	5381.161	765.3570	1475.818
#3	931.9412	25790.87	5385.074	765.9404	1474.232

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-01A Acquired: 11/21/2024 22:08:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1199834	-.009557	1.472923	.0548071	.0996079	77.48859
Stddev	.0142409	.000897	.001678	.0035196	.0016235	.12689
%RSD	11.86908	9.382887	.1139450	6.421710	1.629918	.1637594
#1	.1332933	-.009792	1.471373	.0507431	.1011444	77.59480
#2	.1049655	-.008566	1.474705	.0568511	.0997697	77.52290
#3	.1216916	-.010313	1.472692	.0568272	.0979095	77.34807

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.887186	.0123901	.0152467	272.0891	.1339094	.0891122
Stddev	.001092	.0002811	.0001249	.2520	.0014998	.0009716
%RSD	.0578524	2.268428	.8188780	.0926073	1.120017	1.090310
#1	1.888256	.0120690	.0153595	272.3758	.1322031	.0899163
#2	1.887230	.0125098	.0151125	271.9889	.1345059	.0880326
#3	1.886074	.0125914	.0152682	271.9027	.1350192	.0893877

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.480667	156.8458	9.628293	68.28042	.2081599	.0023438
Stddev	.007906	.2474	.002197	.03329	.0013652	.0001157
%RSD	.5339629	.1577058	.0228212	.0487525	.6558583	4.937323
#1	1.481807	157.0489	9.626728	68.24383	.2066970	.0024688
#2	1.487942	156.9181	9.630805	68.30891	.2083826	.0023223
#3	1.472253	156.5703	9.627346	68.28852	.2094001	.0022403

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.337744	.1839540	4.012539	10.27937	F 16.18133	.1258965
Stddev	.266016	.0028741	.009171	.04031	.05284	.0015311
%RSD	19.88541	1.562375	.2285639	.3921755	.3265556	1.216141
#1	1.046534	.1812396	4.010250	10.31628	16.15782	.1268102
#2	1.398724	.1869648	4.022638	10.28549	16.14432	.1241289
#3	1.567976	.1836577	4.004729	10.23635	16.24184	.1267505

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4907-01A Acquired: 11/21/2024 22:08:54 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHE1A Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0034205	4.100925	9.401030	.0795000	.9829844	.1255177
Stddev	.0006030	.024975	.020825	.0022017	.0023731	.0014278
%RSD	17.62838	.6090147	.2215210	2.769460	.2414197	1.137542
#1	.0040678	4.098610	9.398312	.0770921	.9856997	.1263016
#2	.0028749	4.077188	9.381698	.0814105	.9813074	.1238696
#3	.0033187	4.126977	9.423081	.0799973	.9819461	.1263818

Elem	Sr4077
Units	ppm
Avg	.3894098
Stddev	.0006699
%RSD	.1720188
#1	.3900728
#2	.3894232
#3	.3887333

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1059.793	29206.33	6172.712	867.0453	1397.814
Stddev	1.917	19.67	7.137	2.1563	2.731
%RSD	.1808622	.0673595	.1156177	.2486953	.1954096
#1	1058.996	29186.42	6172.843	866.6317	1398.747
#2	1061.980	29225.76	6179.781	865.1257	1399.956
#3	1058.403	29206.83	6165.510	869.3784	1394.738

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-15A Acquired: 11/21/2024 22:13:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6A Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1944928	-.001816	4.204816	.0533158	.0053250	54.73092	1.769106
Stddev	.0051898	.002852	.020135	.0040352	.0015230	2.58687	.082530
%RSD	2.668396	157.0489	.4788645	7.568518	28.60097	4.726529	4.665069
#1	.1958146	-.004961	4.222449	.0563607	.0068390	51.82788	1.675752
#2	.1887699	-.001092	4.209123	.0487390	.0053429	56.79168	1.832365
#3	.1988940	.000604	4.182875	.0548478	.0037931	55.57322	1.799201

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031308	.0132017	88.25364	.1710823	.0578555	.4228271	113.8196
Stddev	.0001766	.0000353	4.05424	.0010427	.0004821	.0243208	5.3933
%RSD	5.639842	.2670999	4.593851	.6094932	.8332680	5.751959	4.738424
#1	.0029531	.0132132	83.71875	.1722670	.0579469	.3959333	107.8541
#2	.0033062	.0132298	91.52753	.1706764	.0582854	.4432773	118.3505
#3	.0031331	.0131621	89.51465	.1703036	.0573343	.4292707	115.2542

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.513850	34.15528	.1590456	.0054989	1.073510	.1377052	2.613982
Stddev	.387066	1.59871	.0006429	.0002326	.111877	.0023756	.000596
%RSD	4.546307	4.680702	.4041913	4.230935	10.42162	1.725135	.0227821
#1	8.078450	32.33716	.1597333	.0057206	.958088	.1349900	2.613297
#2	8.818958	35.34131	.1584598	.0052566	1.080974	.1394008	2.614276
#3	8.644141	34.78736	.1589435	.0055193	1.181468	.1387247	2.614373

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.758437	7.689922	.0897300	.0032767	3.388788	12.02617	.0503885
Stddev	.459569	.039816	.0082464	.0003592	.003892	.48004	.0021405
%RSD	9.657990	.5177681	9.190222	10.96321	.1148449	3.991610	4.248065
#1	4.254442	7.735668	.0804868	.0036255	3.387045	11.49155	.0526682
#2	5.154294	7.671019	.0963330	.0029079	3.386073	12.42027	.0500755
#3	4.866575	7.663078	.0923701	.0032968	3.393247	12.16668	.0484216

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: P4913-15A Acquired: 11/21/2024 22:13:16 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHHH6A Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	1.097822	.0800530	.1691472
Stddev	.052691	.0051996	.0078724
%RSD	4.799594	6.495150	4.654139
#1	1.038981	.0743923	.1603527
#2	1.140646	.0846162	.1755361
#3	1.113840	.0811506	.1715528

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1006.556	27648.17	5766.089	828.3867	1541.331
Stddev	2.348	38.87	231.755	.9476	2.815
%RSD	.2333097	.1405897	4.019283	.1143914	.1826175
#1	1003.891	27603.48	6021.898	829.3774	1538.304
#2	1008.324	27666.89	5570.127	827.4890	1541.818
#3	1007.453	27674.14	5706.242	828.2937	1543.870

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV047 Acquired: 11/21/2024 22:17:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV047 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.899640	4.692367	24.01519	4.530046	4.661751	377.8657	9.636577
Stddev	.027000	.009679	.04173	.029270	.021338	28.1868	.699937
%RSD	.5510535	.2062678	.1737546	.6461215	.4577167	7.459480	7.263334
#1	4.869347	4.685474	23.97731	4.536600	4.645886	395.1810	10.08054
#2	4.921167	4.703432	24.00834	4.555483	4.686009	393.0749	9.99948
#3	4.908407	4.688196	24.05992	4.498055	4.653357	345.3411	8.82972

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4680344	2.432837	385.6380	14.90270	2.431533	13.79160	390.4211
Stddev	.0295887	.004578	28.1216	.26223	.003671	1.01882	29.4688
%RSD	6.321912	.1881877	7.292219	1.759619	.1509689	7.387270	7.547961
#1	.4894552	2.433933	403.5319	15.20525	2.434446	14.42132	408.0813
#2	.4803752	2.427810	400.1577	14.74063	2.427410	14.33731	406.7804
#3	.4342729	2.436767	353.2245	14.76224	2.432742	12.61616	356.4017

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.88523	378.4764	2.412997	1.249928	376.4055	2.285102	14.44861
Stddev	.99908	27.4682	.004127	.019930	27.0325	.164351	.28514
%RSD	7.195238	7.257582	.1710184	1.594477	7.181745	7.192267	1.973478
#1	14.52947	396.2080	2.415881	1.272868	392.1112	2.381184	14.75227
#2	14.39189	392.3856	2.408270	1.240040	391.9141	2.378791	14.40699
#3	12.73434	346.8357	2.414840	1.236876	345.1913	2.095331	14.18657

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	144.0997	4.771459	4.725258	4.585888	4.858684	5.302714	4.835377
Stddev	10.4093	.013322	.319108	.001777	.015496	.347707	.012456
%RSD	7.223654	.2791960	6.753240	.0387466	.3189357	6.557160	.2576050
#1	150.3838	4.774739	4.947970	4.584201	4.863728	5.548819	4.849740
#2	149.8311	4.782834	4.868126	4.587743	4.841294	5.454388	4.827538
#3	132.0844	4.756803	4.359679	4.585720	4.871030	4.904935	4.828853

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCV047 Acquired: 11/21/2024 22:17:40 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV047 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	4.578514	4.790731	4.721117
Stddev	.342751	.350350	.293292
%RSD	7.486067	7.313075	6.212350
#1	4.791115	5.005477	4.918098
#2	4.761312	4.980273	4.861204
#3	4.183114	4.386444	4.384049

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	712.7250	20771.64	4713.129	553.5971	1235.998
Stddev	.4878	288.84	305.973	8.4782	1.316
%RSD	.0684416	1.390560	6.491922	1.531480	.1064956
#1	712.8497	20438.47	4513.699	545.1569	1235.150
#2	713.1384	20924.97	4560.277	553.5215	1237.515
#3	712.1870	20951.49	5065.411	562.1129	1235.330

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB047 Acquired: 11/21/2024 22:22:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB047 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001455	.0002728	.0032601	.0061236	.0016543	.0291753	.0016032
Stddev	.001736	.0018061	.0014939	.0039912	.0013669	.0211110	.0006652
%RSD	119.3057	662.0522	45.82424	65.17736	82.63086	72.35926	41.49424
#1	-.001829	.0019497	.0031354	.0024636	.0000768	.0048889	.0022784
#2	-.002974	.0005080	.0048124	.0103791	.0024892	.0395003	.0015827
#3	.000437	-.001639	.0018324	.0055282	.0023968	.0431365	.0009484

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000059	.0000969	.0216780	.0006145	.0008478	-.000281	.0368621
Stddev	.000047	.0000985	.0056911	.0010955	.0003883	.000110	.0102834
%RSD	80.02377	101.6310	26.25295	178.2733	45.80540	39.20815	27.89694
#1	-.000053	.0001318	.0191125	-.000648	.0004710	-.000400	.0446666
#2	-.000109	.0001733	.0177211	.001314	.0012467	-.000260	.0252097
#3	-.000015	-.000014	.0282002	.001177	.0008257	-.000183	.0407102

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009908	.0428982	-.000012	-.001572	-.302932	-.002897	.0003520
Stddev	.0004352	.0337443	.000438	.002203	.161946	.003446	.0004427
%RSD	43.92604	78.66149	3537.964	140.1962	53.45960	118.9618	125.7608
#1	.0005250	.0042919	-.000086	-.001134	-.241618	.000806	.0003488
#2	.0010603	.0667671	-.000409	-.003961	-.486583	-.006010	.0007964
#3	.0013870	.0576354	.000458	.000380	-.180596	-.003486	-.000089

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4625714	-.000752	.0039020	.0004191	-.003041	.0014274	-.001055
Stddev	.1000748	.000392	.0015680	.0002041	.005317	.0009598	.002203
%RSD	21.63445	52.20069	40.18533	48.69706	174.8801	67.24527	208.8388
#1	.5284440	-.000963	.0021558	.0006055	-.009178	.0011822	-.000655
#2	.3474124	-.000993	.0043604	.0004507	-.000118	.0024860	.000921
#3	.5118578	-.000299	.0051897	.0002010	.000174	.0006139	-.003431

Reviewed By:Mohan
On:11/22/2024 4:49:50 AM
Inst Id :P5

Sample Name: CCB047 Acquired: 11/21/2024 22:22:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL(v753) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB047 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	.0012107	.0120660	.0003515
Stddev	.0006018	.0012514	.0001618
%RSD	49.71033	10.37144	46.02159
#1	.0011395	.0135101	.0002835
#2	.0018449	.0113006	.0002348
#3	.0006476	.0113872	.0005362

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	896.9582	24815.08	4745.238	747.9003	1736.727
Stddev	11.6798	812.40	35.514	25.6755	21.583
%RSD	1.302158	3.273823	.7484030	3.433013	1.242717
#1	910.2058	24478.84	4720.486	734.9043	1761.456
#2	888.1449	25741.62	4785.929	777.4755	1721.684
#3	892.5239	24224.77	4729.300	731.3210	1727.042

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

Prep Standard - Chemical Standard Summary

Order ID : P4913

Test : Metals CLP Full

Prepbatch ID : PB165145,

Sequence ID/Qc Batch ID: LB133566,

Standard ID :
MP83014,MP83122,MP83134,MP83136,MP83137,MP83138,MP83139,MP83140,MP83141,MP83142,MP83143,MP831
44,MP83145,MP83146,MP83147,MP83148,MP83149,MP83152,

Chemical ID :
M5130,M5218,M5223,M5289,M5295,M5296,M5390,M5395,M5429,M5476,M5498,M5513,M5515,M5519,M5634,M5658
,M5698,M5751,M5768,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5818,M5819,M5820,M587
5,M5960,M5962,M5970,M5976,M5978,M5982,M5984,M5985,M5990,M5999,M6021,M6023,M6025,M6028,M6030,M60
33,M6095,M6111,M6115,M6116,M6117,M6118,M6120,W3112,

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
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83014	11/02/2024	11/25/2024	Sarabjit Jaswal	None	None	Mohan Bera 11/04/2024

FROM 25.00000ml of M6095 + 4925.00000ml of W3112 + 50.00000ml of M6115 = Final Quantity: 5000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
169	1:1HNO3	MP83122	11/07/2024	12/06/2024	Janvi Patel	None	None	Sarabjit Jaswal 11/07/2024

FROM 1000.00000ml of M6116 + 1000.00000ml of W3112 = Final Quantity: 2000.000 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
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83134	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 125.00000ml of M6111 + 2350.00000ml of W3112 + 25.00000ml of M6117 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2480	ICP AES STD 6 ISM01.3	MP83136	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 4.00000ml of M5289 + 4.00000ml of M5498 + 4.00000ml of M5515 + 4.00000ml of M5768 + 4.00000ml of M5806 + 30.00000ml of MP83134 = Final Quantity: 50.000 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
1004	ICPAES ISM01.2 (S5)	MP83137	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 0.25000ml of M5798 + 0.50000ml of M5429 + 0.50000ml of M5476 + 0.50000ml of M5815 + 0.50000ml of M5817 + 12.50000ml of M5519 + 12.50000ml of M5698 + 12.50000ml of M5806 + 12.50000ml of M5819 + 13.75000ml of M5751 + 14.50000ml of M5515 + 14.50000ml of M5658 + 14.50000ml of M6033 + 2.00000ml of M5513 + 22.50000ml of M5498 + 22.50000ml of M5768 + 5.00000ml of M5296 + 5.00000ml of M5395 + 5.00000ml of M5802 + 5.00000ml of M5818 + 5.00000ml of M5875 + 303.50000ml of MP83134 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1005	ICPAES ISM01.2(S4)	MP83138	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 250.00000ml of MP83134 + 250.00000ml of MP83137 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1007	ICPAES ISM01.2(S3)	MP83139	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 25.00000ml of MP83137 + 75.00000ml of MP83134 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1008	ICPAES ISM01.2(S2)	MP83140	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 12.50000ml of MP83137 + 87.50000ml of MP83134 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
994	ICPAES ISM01.2 S1 (CONC.)	MP83141	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5476 + 0.20000ml of M5515 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5976 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M5698 + 0.40000ml of M6033 + 0.50000ml of M5751 + 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 M5768 + 10.00000ml of M5806 + 10.00000ml of M5818 + 2.00000ml of M5978 + 4.00000ml of M5390 + 34.24000ml of MP83134 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1003	ICPAES ISM01.2 S1	MP83142	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 0.50000ml of MP83141 + 99.50000ml of MP83134 = 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
2054	ICV-ICPAES	MP83143	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

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 MP83134 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP83144	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 25.00000ml of M5130 + 200.00000ml of MP83134 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
905	ICP AES ICSAB SOLN	MP83145	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 25.00000ml of M5130 + 25.00000ml of M5223 + 200.00000ml of MP83134 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1119	ICPAES ISM01.2(CCV)	MP83146	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 0.75000ml of M5498 + 0.75000ml of M5768 + 1.22500ml of M6033 + 1.25000ml of M5515 + 1.25000ml of M5806 + 19.77500ml of MP83134 + 25.00000ml of MP83137 = Final Quantity: 50.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
921	ICPAES SPIKE SOL#6	MP83147	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 2.50000ml of M5962 + 50.00000ml of M5990 + 50.00000ml of M5999 + 147.50000ml of MP83134 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP83148	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 1.00000ml of M5984 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6117 = Final Quantity: 2000.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
903	ICP AES RINSE SOLN	MP83149	10/30/2024	11/30/2024	Kareem Khairalla	None	None	Mohan Bera 11/08/2024

FROM 200.00000ml of M6117 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1883	SE 10PPM	MP83152	11/07/2024	11/25/2024	Sarabjit Jaswal	None	None	Mohan Bera 11/08/2024

FROM 0.10000ml of M5962 + 9.90000ml of MP83014 = 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	11/19/2024	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	11/19/2024	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	02/20/2020 / 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	01/30/2024 / bin	09/19/2022 / bin	M5395

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57138 / Sr, 10000 PPM, 125 ml	082922	08/09/2025	07/29/2024 / jaswal	03/16/2023 / jaswal	M5476

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

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57119 / Potassium (K) 10,000PPM	120822	12/08/2025	01/08/2024 / bin	03/17/2023 / bin	M5519

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	02/03/2025	04/18/2024 / jaswal	08/03/2022 / Al-Terek	M5634

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.	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.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	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

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

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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 #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	041124	04/11/2027	07/03/2024 / kareem	06/11/2024 / kareem	M5960

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

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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	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	08/05/2024 / kareem	06/14/2024 / Jaswal	M5984

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-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

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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	06/12/2027	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	01/25/2019 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)		03/17/2029	10/26/2024 / Janvi	10/21/2024 / Janvi	M6095

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)	22F0762009	05/09/2027	11/04/2024 / Eman	09/29/2024 / Janvi	M6111

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/04/2025	11/02/2024 / Janvi	09/29/2024 / Eman	M6115

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/03/2025	11/04/2024 / Janvi	09/29/2024 / Eman	M6116

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24B1362001	05/06/2025	11/06/2024 / Janvi	09/29/2024 / Eman	M6117

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)	22E1662006	05/09/2025	11/09/2024 / Janvi	10/09/2024 / Janvi	M6118

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	23I0662003	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6120

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

INORGANIC VENTURES™
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Certificate of Analysis

R: 02/22/24 M5986 M5987, M5988, M5989-M5990

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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-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

M6028

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R 8/5/24

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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		

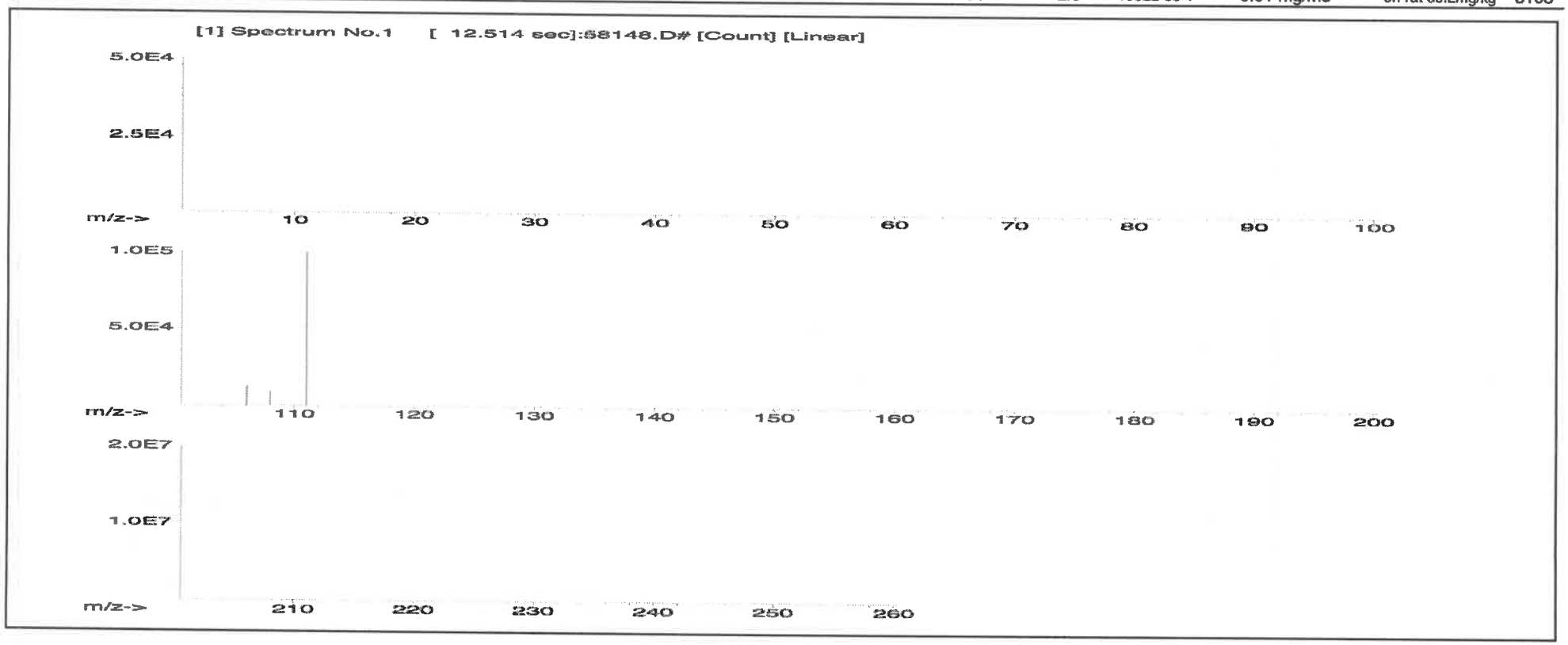
Aleah O'Brady

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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1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-CLP-4
Lot Number:	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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

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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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

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-CAL-1
Lot Number:	T2-MEB714417
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Calcium, Potassium, Magnesium, Sodium, 2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Nickel, Vanadium, Zinc, Cobalt, Manganese, 250 µg/mL ea: Silver, Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	**2 000 ± 7 µg/mL**	**Barium, Ba**	**2 000 ± 9 µg/mL**
Beryllium, Be	**50.00 ± 0.26 µg/mL**	**Calcium, Ca**	**5 000 ± 22 µg/mL**
Chromium, Cr	**200.0 ± 1.0 µg/mL**	**Cobalt, Co**	**500.0 ± 2.4 µg/mL**
Copper, Cu	**250.0 ± 1.0 µg/mL**	**Iron, Fe**	**1 000 ± 4 µg/mL**
Magnesium, Mg	**5 000 ± 20 µg/mL**	**Manganese, Mn**	**500.0 ± 2.0 µg/mL**
Nickel, Ni	**500.0 ± 2.2 µg/mL**	**Potassium, K**	**5 000 ± 19 µg/mL**
Silver, Ag	**250.0 ± 1.1 µg/mL**	**Sodium, Na**	**5 000 ± 18 µg/mL**
Vanadium, V	**499.7 ± 2.2 µg/mL**	**Zinc, Zn**	**500.0 ± 2.2 µg/mL**

Density: 1.118 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cr	Calculated		See Sec. 4.2
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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 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

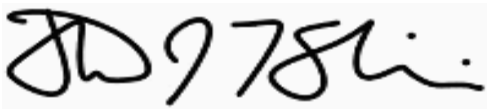
- Sealed TCT Bag Open Date: _____

- 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

$CRM/RM\ Expanded\ Uncertainty\ (\pm) = U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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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.

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- 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

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- 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.

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- 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.

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- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

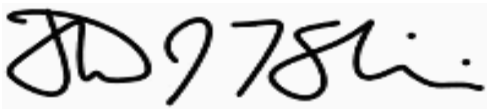
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

R: 8/5/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

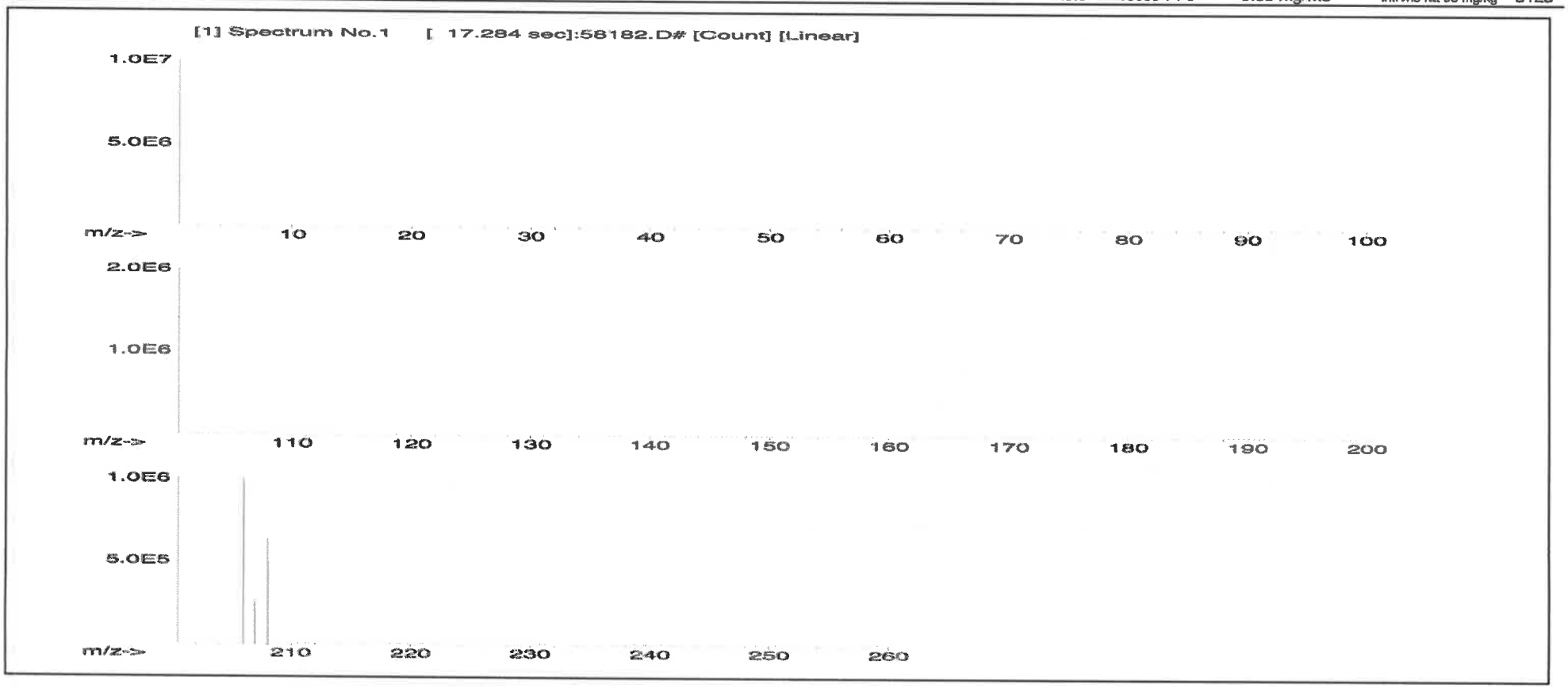
Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	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.

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

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inorganicventures.com

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ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CHEM-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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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

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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

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- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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

Certified Reference Material CRM

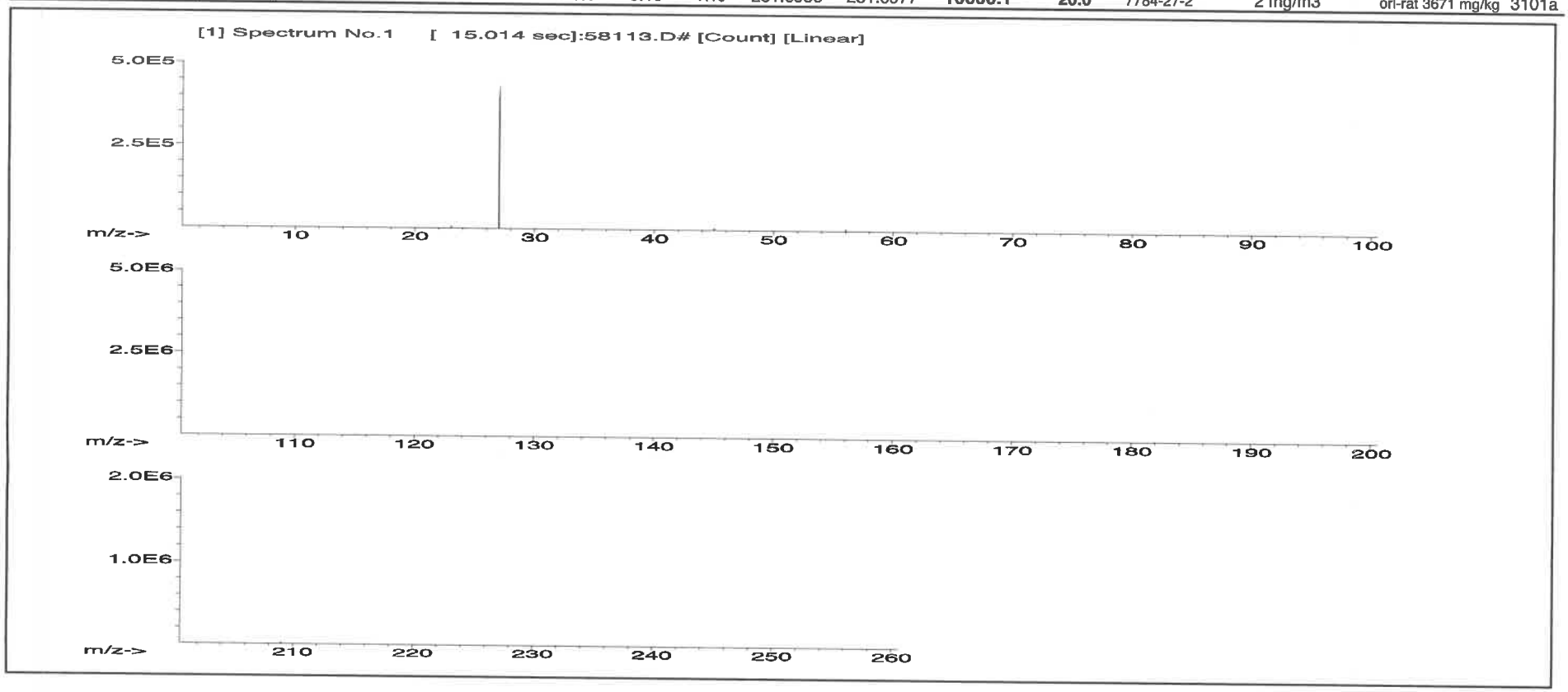
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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)

Certified Reference Material CRM

M5387 . M5389 . M5390 . M5391 . M5392

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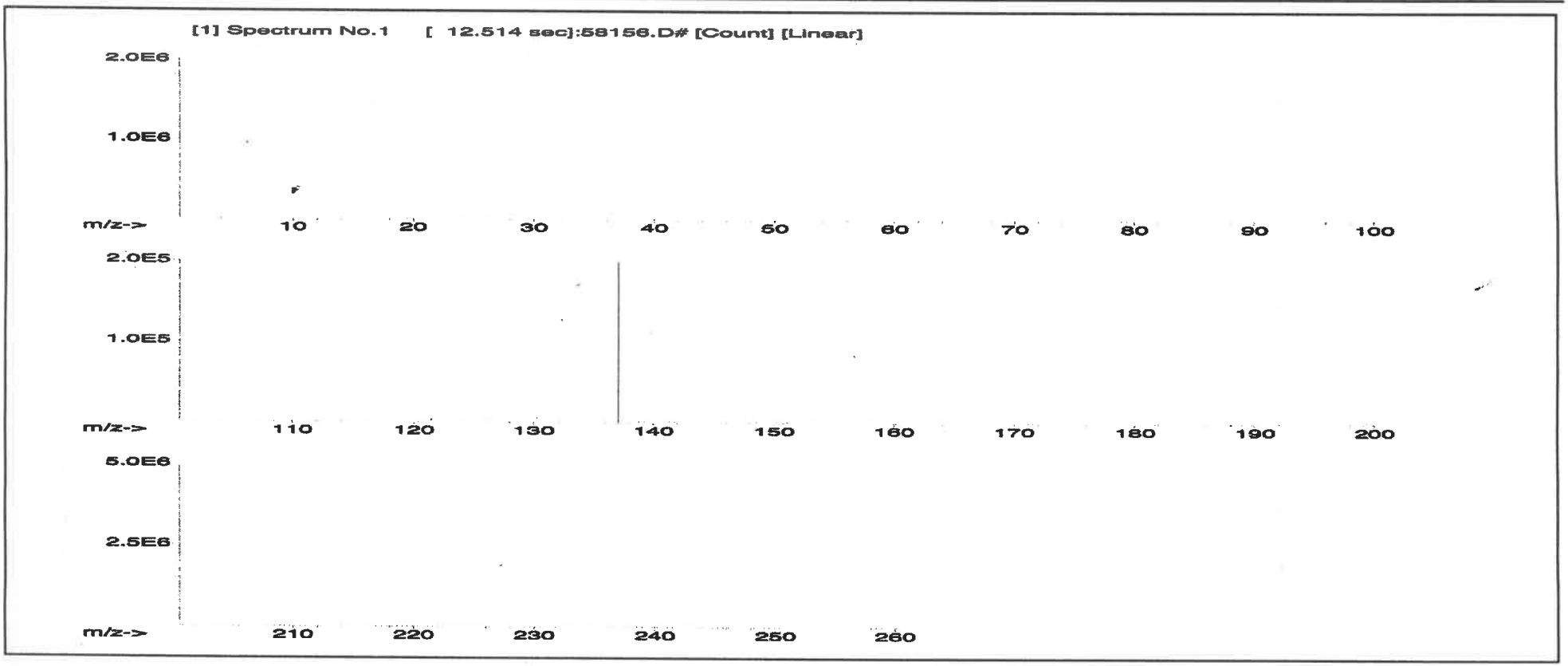
CERTIFIED WEIGHT REPORT:

Part Number:	**57056**		**Lot #**		
Lot Number:	**072122**	**Solvent:**	20510011	Nitric Acid	
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	072125				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	072122
Reviewed By:	Pedro L. Rentas	072122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82426	**1000.0**	2.0	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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

M5429 R1 01/26/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

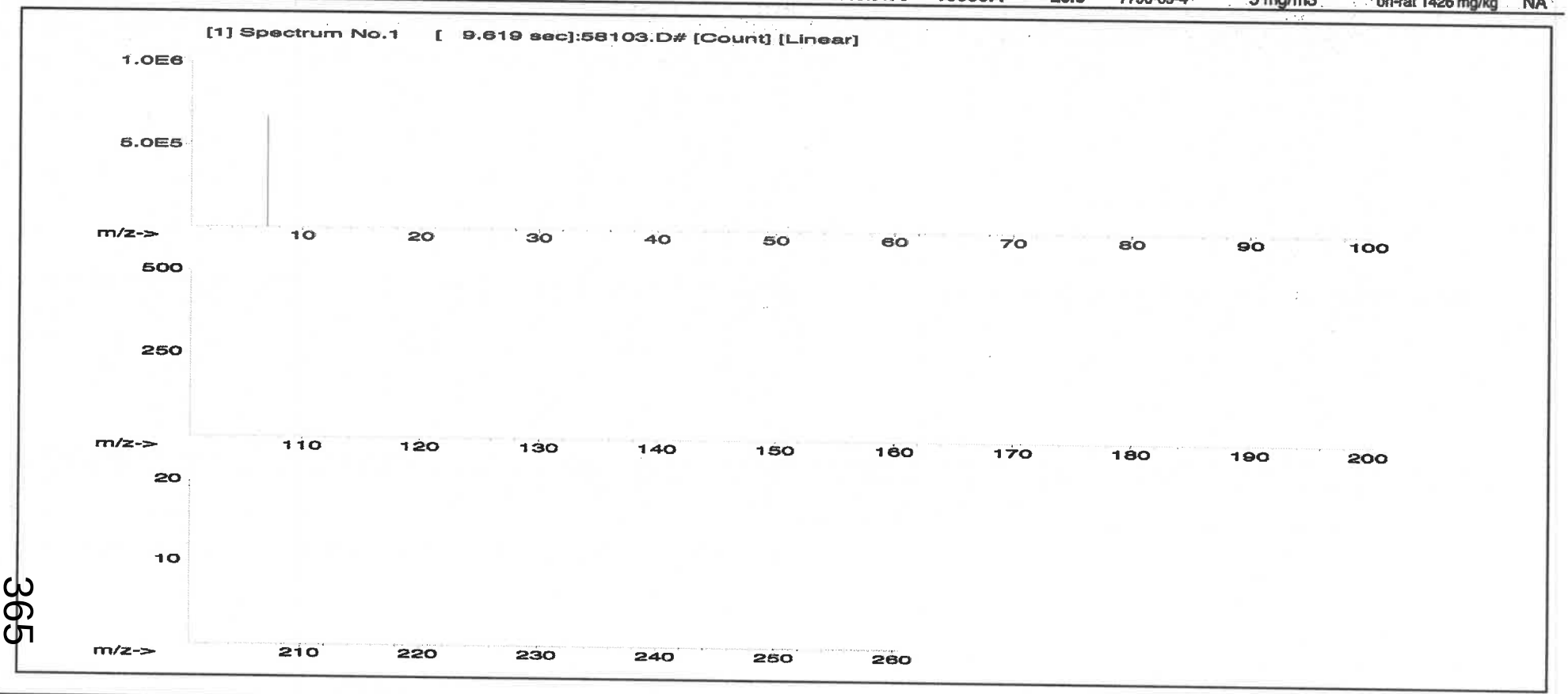
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #			
Solvent:	20510011	Nitric Acid		
2%	20.0 (mL)	Nitric Acid		

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	070622
Reviewed By:	Pedro L. Rentas	070622

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	IN019	LIZ042018A1	10000	99.999	0.10	10.0	100.0134	100.0173	**10000.4**	**20.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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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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Certified Reference Material CRM

M5497 - M5498 R: 03/17/23 BH

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

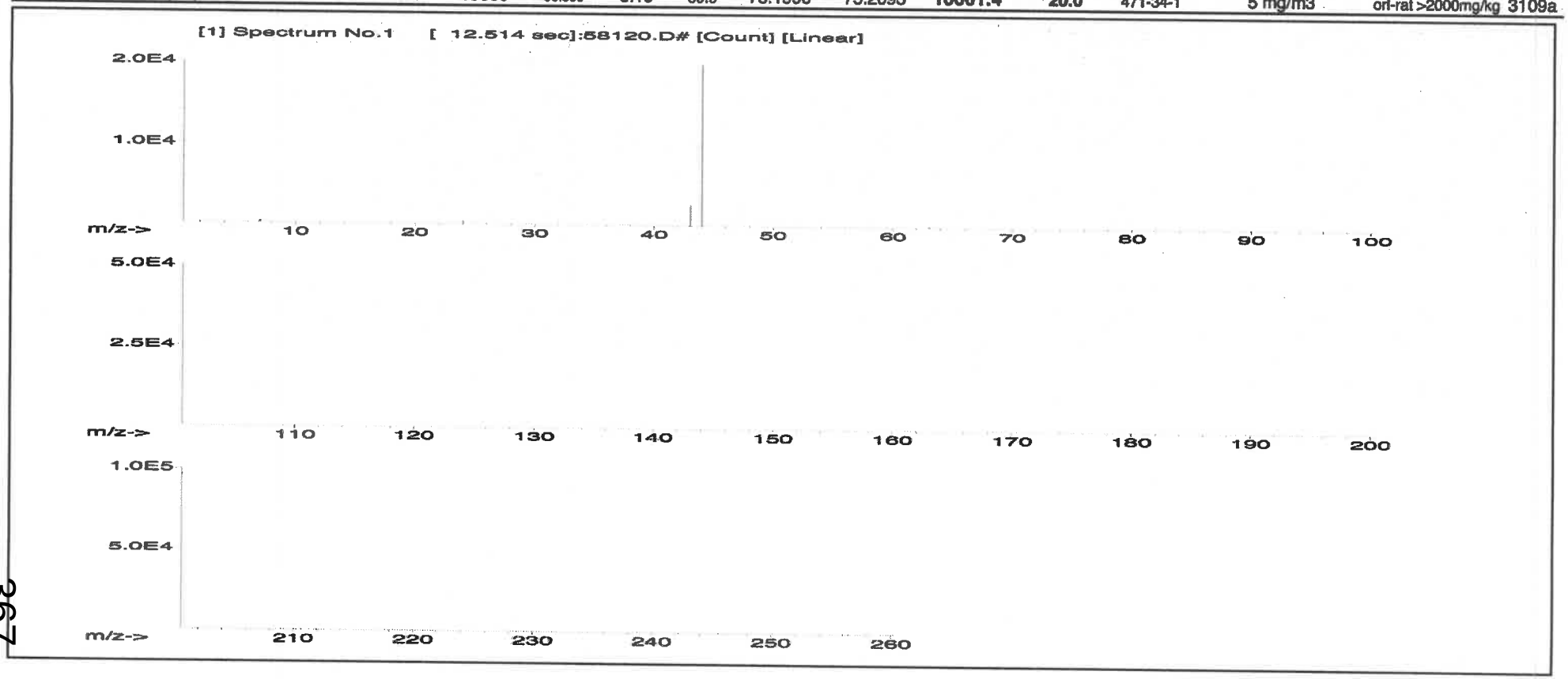
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.058 Flask Uncertainty

	Lot #		
Solvent:	21110221	Nitric Acid	
2%	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



367

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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MS513 R:03/17/23 BE

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CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 061522
Description: Lead (Pb)

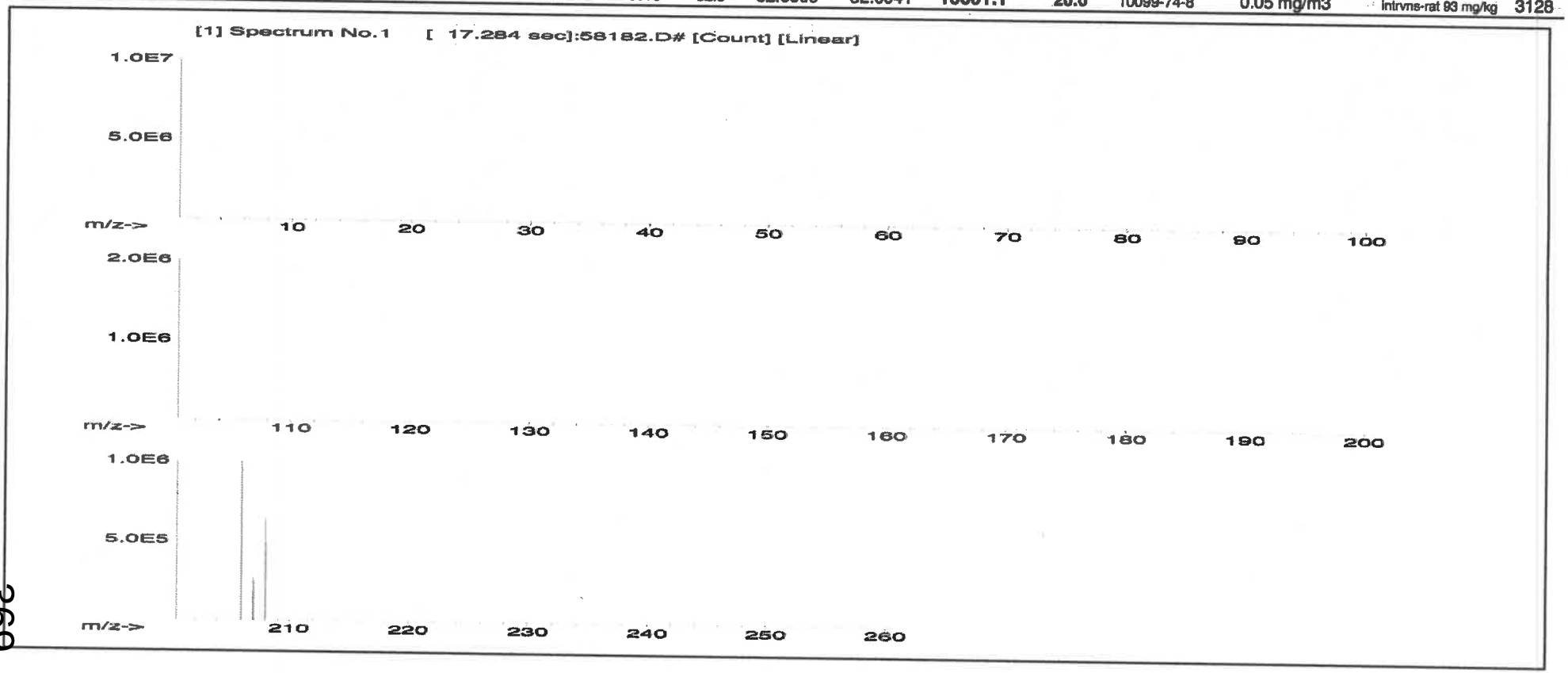
Expiration Date: 061525
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito		
Formulated By:	Giovanni Esposito	061522
Pedro Rentas		
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



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	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are 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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MS514 - MS515 R: 03/17/22

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CERTIFIED WEIGHT REPORT:

Part Number: 58126
Lot Number: 092122
Description: Iron (Fe)

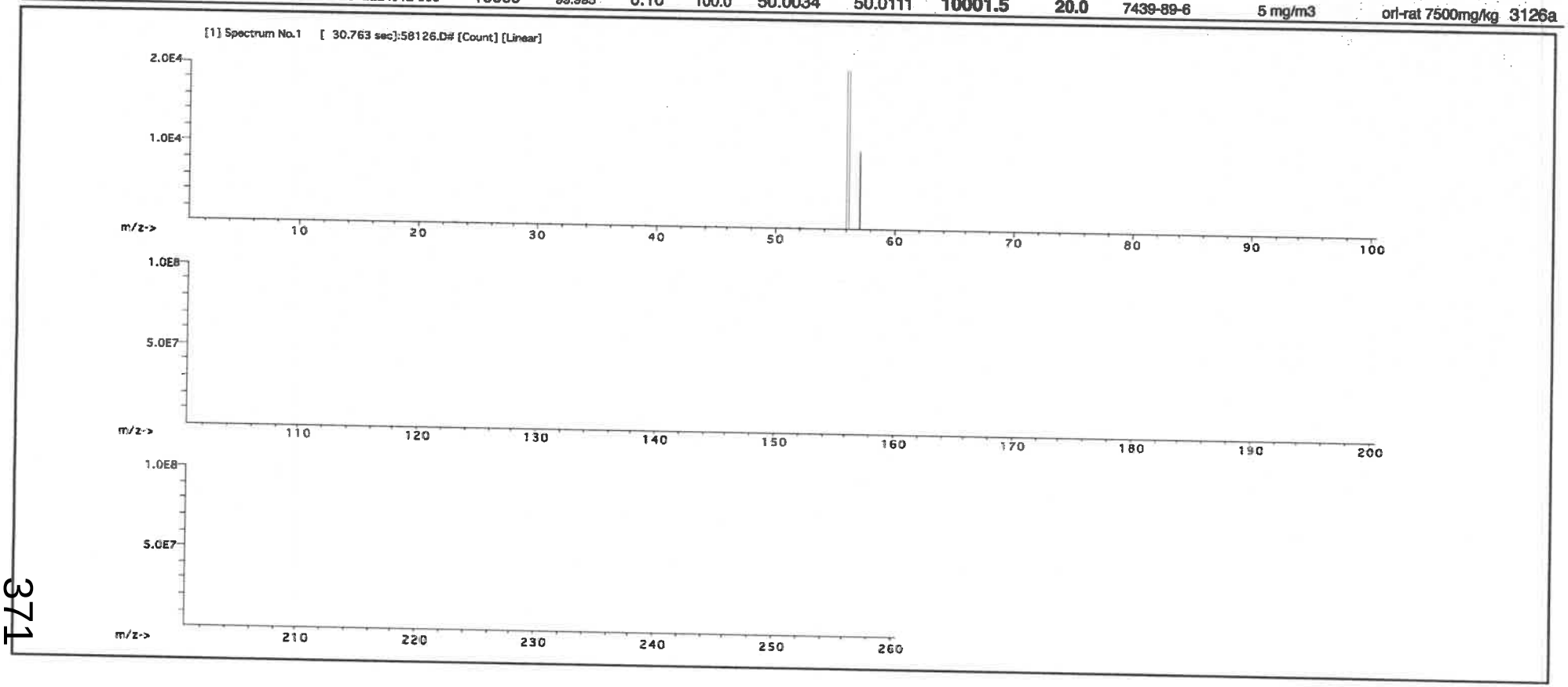
Expiration Date: 092125
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 5000.1 ± 0.12 Flask Uncertainty

	Lot #			
Solvent:	20510011	Nitric Acid		
	7.0%	350.0 (mL)	Nitric Acid	
		5E-05	Balance 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



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	<0.10	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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* 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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M5519. M5520 BH R:03/17/23

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373

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

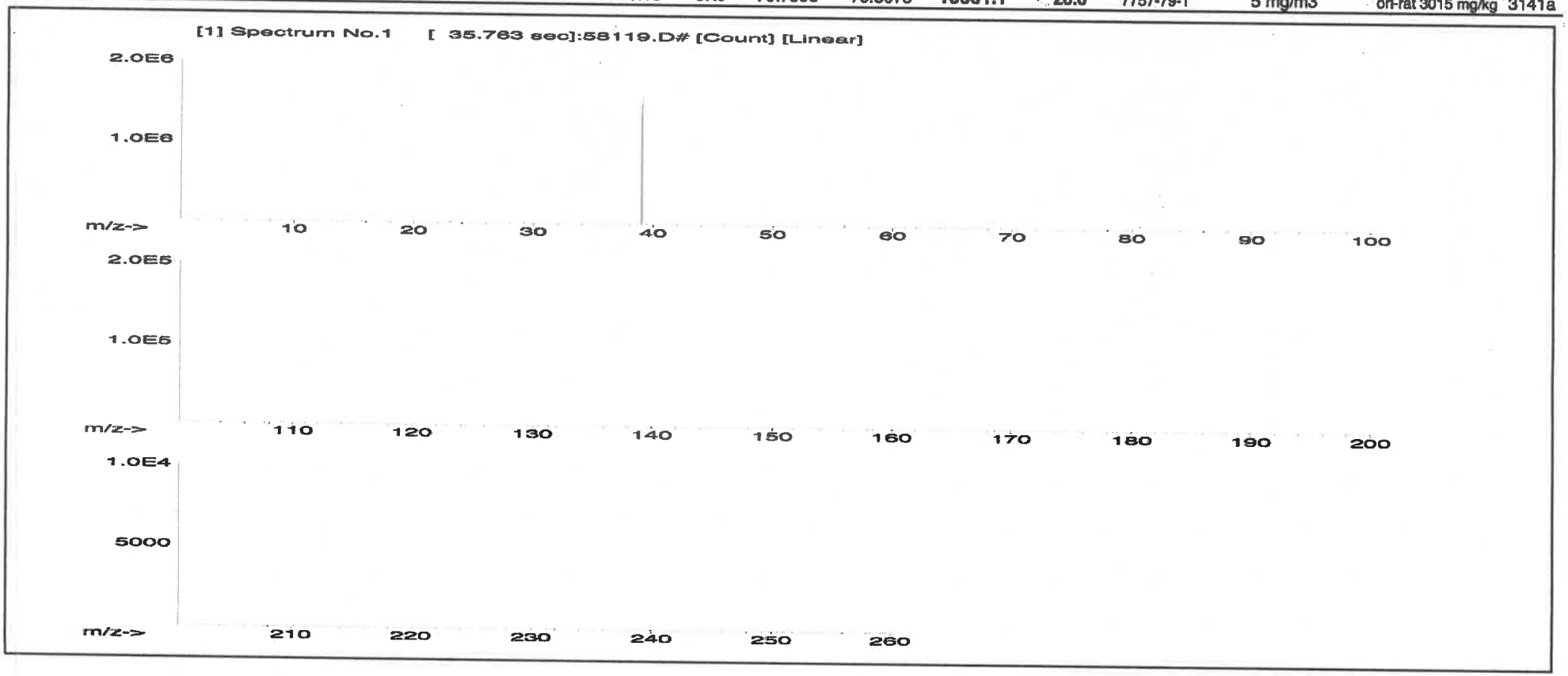
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

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



374

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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* 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).

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

CERTIFICATE OF ANALYSIS

Date: 8/3/2022 MS631 MS632 MS633 MS634 **Lot No 820803**

Hydrogen Peroxide, ACS
Reagent Grade

TEST	MAXIMUM LIMITS	RESULT
Appearance	Colorless and free from suspended matter or sediment	Pass
Assay	29-32%	31.4%
Color (APHA)	10	5
Residue after Evaporation	0.002%	.0001%
Titratable Acid	0.0006 meq/g	< .0006 meq/g
Chloride (Cl)	2 ppm	< 1 ppm
Nitrate (NO_3)	2 ppm	< 1 ppm
Phosphate	2 ppm	< 1 ppm
Sulfate (SO_4)	5 ppm	< .5 ppm
Ammonium (NH_4)	5 ppm	< 1 ppm
Heavy Metals (as Pb)	1 ppm	< .1 ppm
Iron (Fe)	0.5 ppm	< .1 ppm
Sodium Stannate	200 – 300 ppb	Pass

***Our Hydrogen Peroxide is considered un-stabilized because it is very slightly stabilized with Sodium Stannate, 500 ppb maximum, just for safety purposes.

Date of MFG: 8/2022
Retest date: 8/2024

Gina M. Rambo
Office Manager

CORCO CHEMICAL CORPORATION. 299 CEDAR LANE. FAIRLESS HILLS, PA 19030. 215-295-5006. FAX 215-295-0781

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M5658 R! 8/25/23

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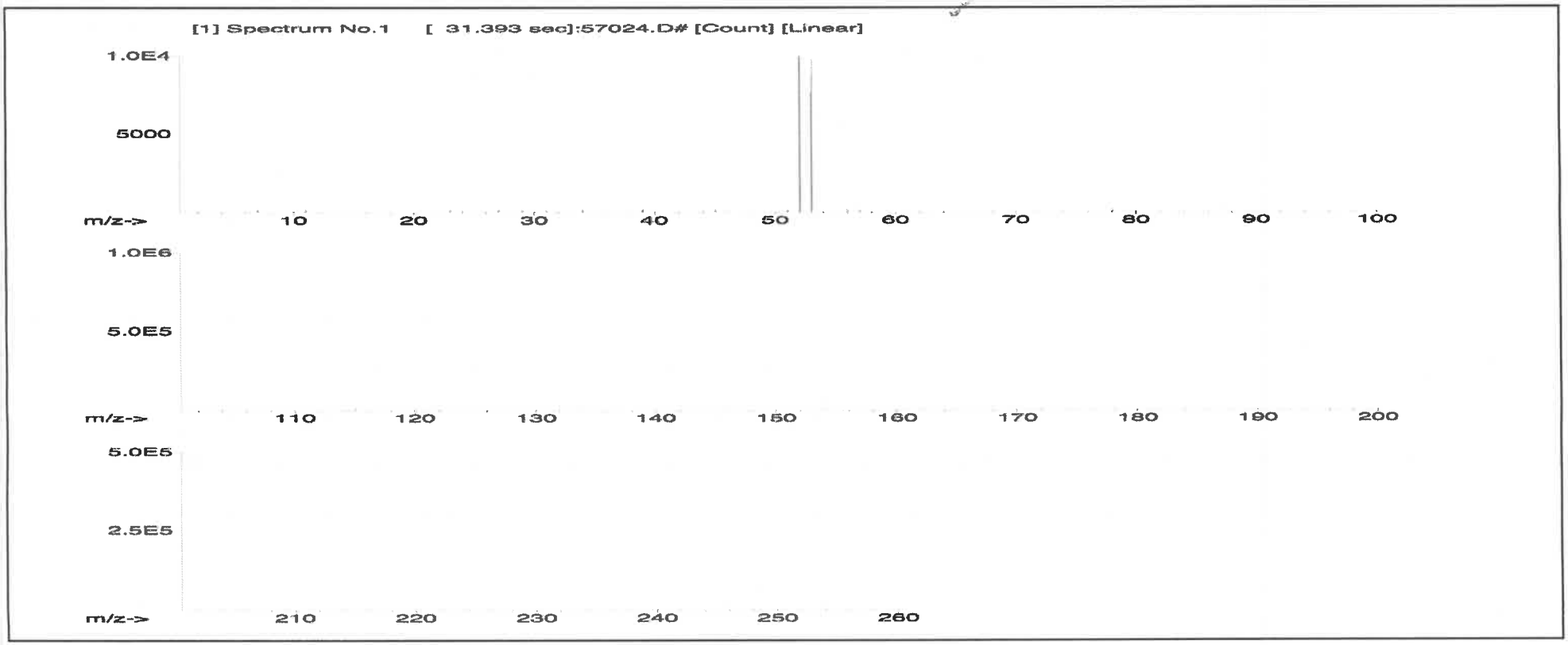
376

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



377

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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M5648 R: 10/27/23

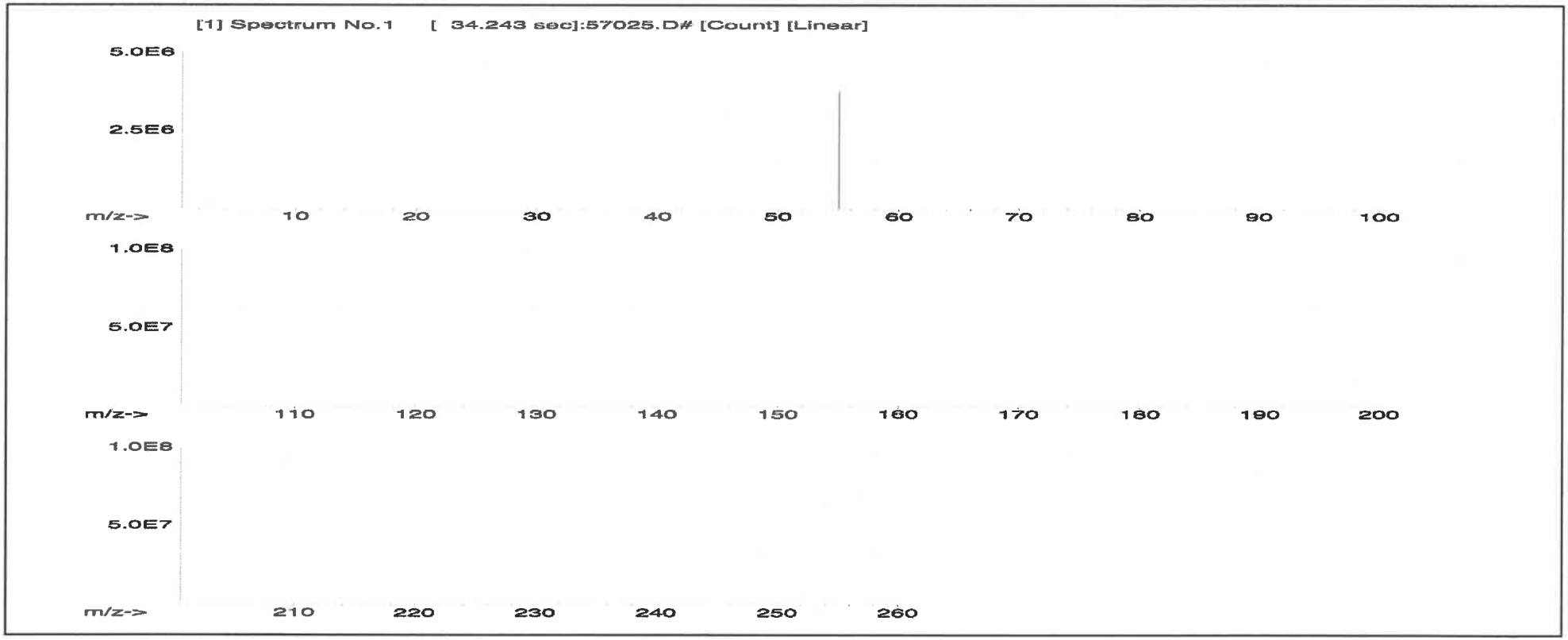
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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58025**	24002546	Nitric Acid	
Lot Number:	**102623**			
Description:	**Manganese (Mn)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	102626			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102623
Reviewed By:	Pedro L. Rentas	102623

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Manganese(II) nitrate tetrahydrate (Mn)	58125	071123	0.1000	300.0	0.084	1000	10000.1	**1000.0**	**2.1**	20694-39-7	5 mg/m3	orl-rat >300mg/kg	3132



379

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the 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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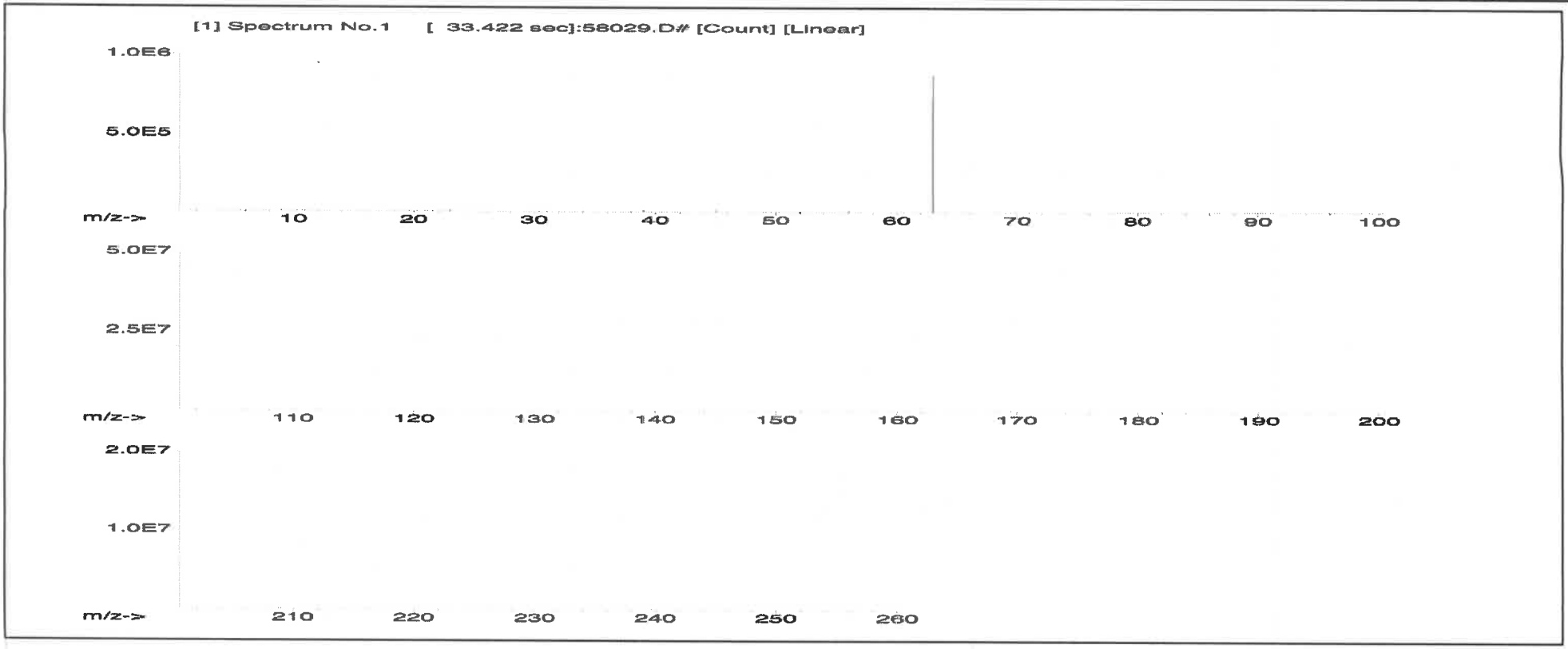
380

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	21110221	Nitric Acid	
Lot Number:	**071723**			
Description:	**Copper (Cu)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	071726			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Rentas	071723

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	022723	0.1000	200.0	0.084	1000	10000.5	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



381

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5768 M5769 (BP) R:1/3/24

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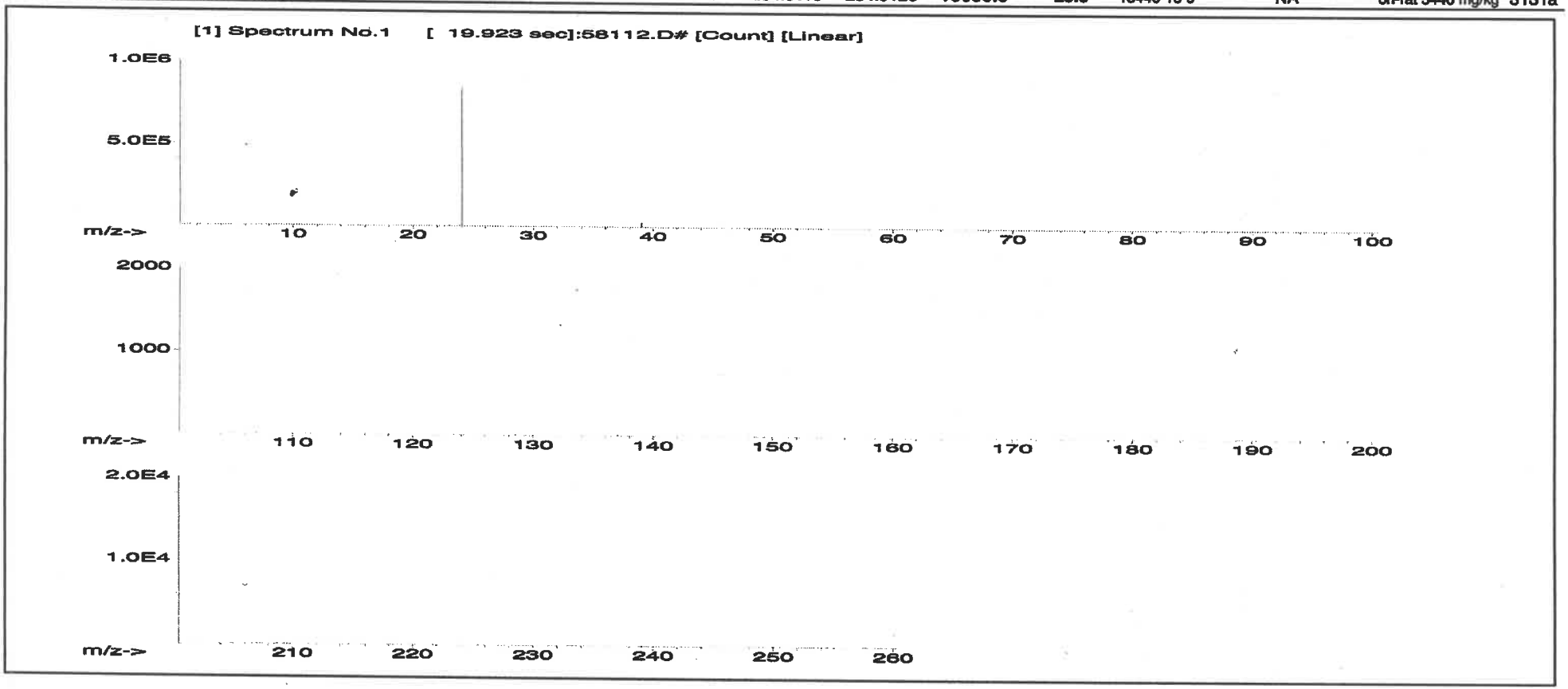
382

CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**58112**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**091823**			
Description:	**Magnesium (Mg)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	091826			
Recommended Storage:	Ambient (20 °C)	M5768, M5769 (BP) R: 1/3/24		
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	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



383

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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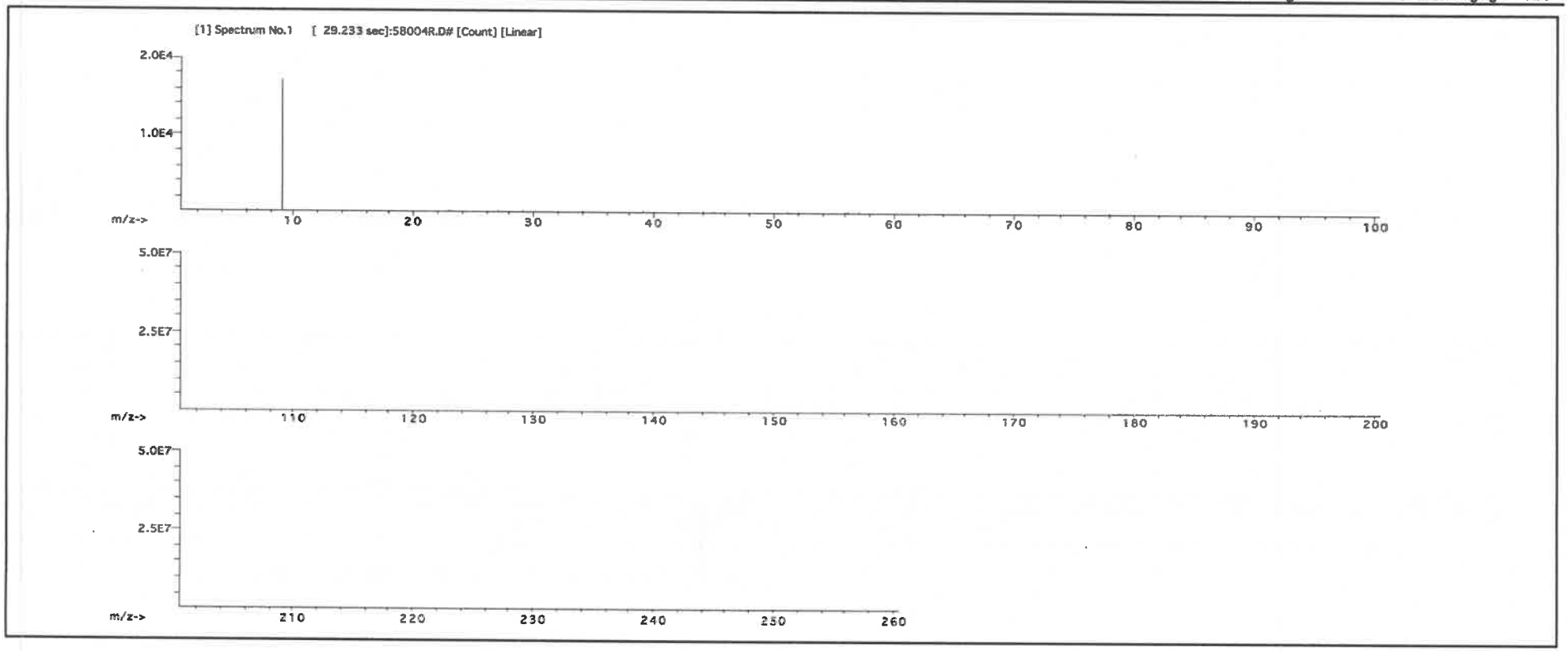
384

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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* 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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386

CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

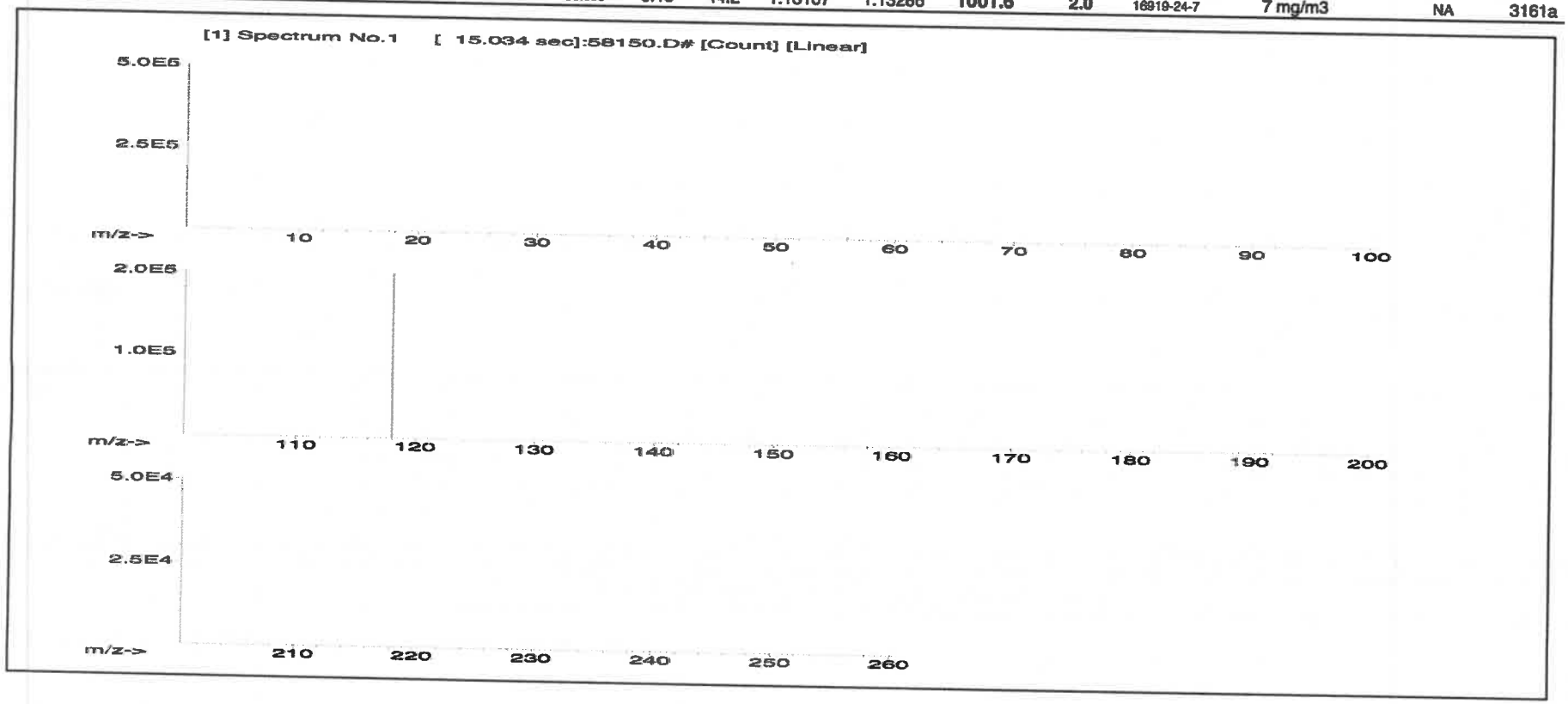
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	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



387

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
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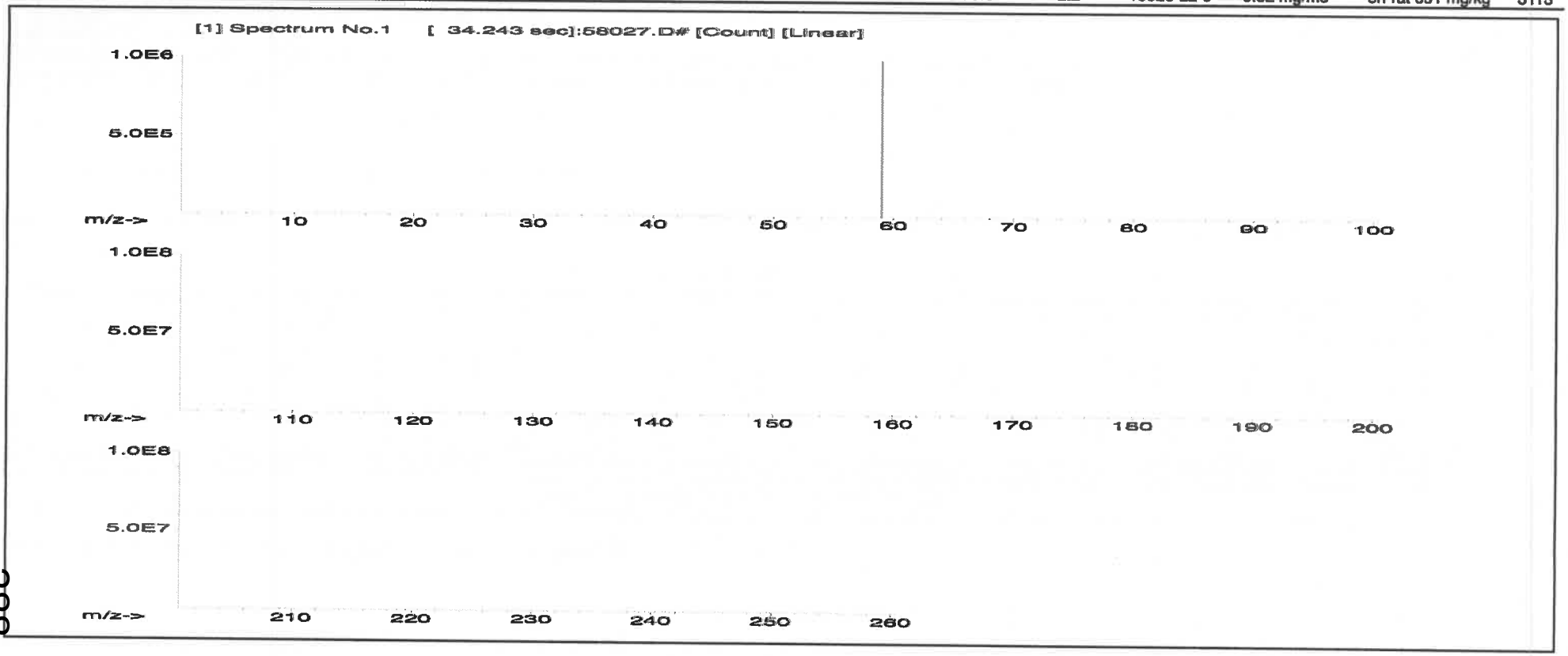
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By: Lawrence Barry 091923

Reviewed By: Pedro L. Rentas 091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



388

Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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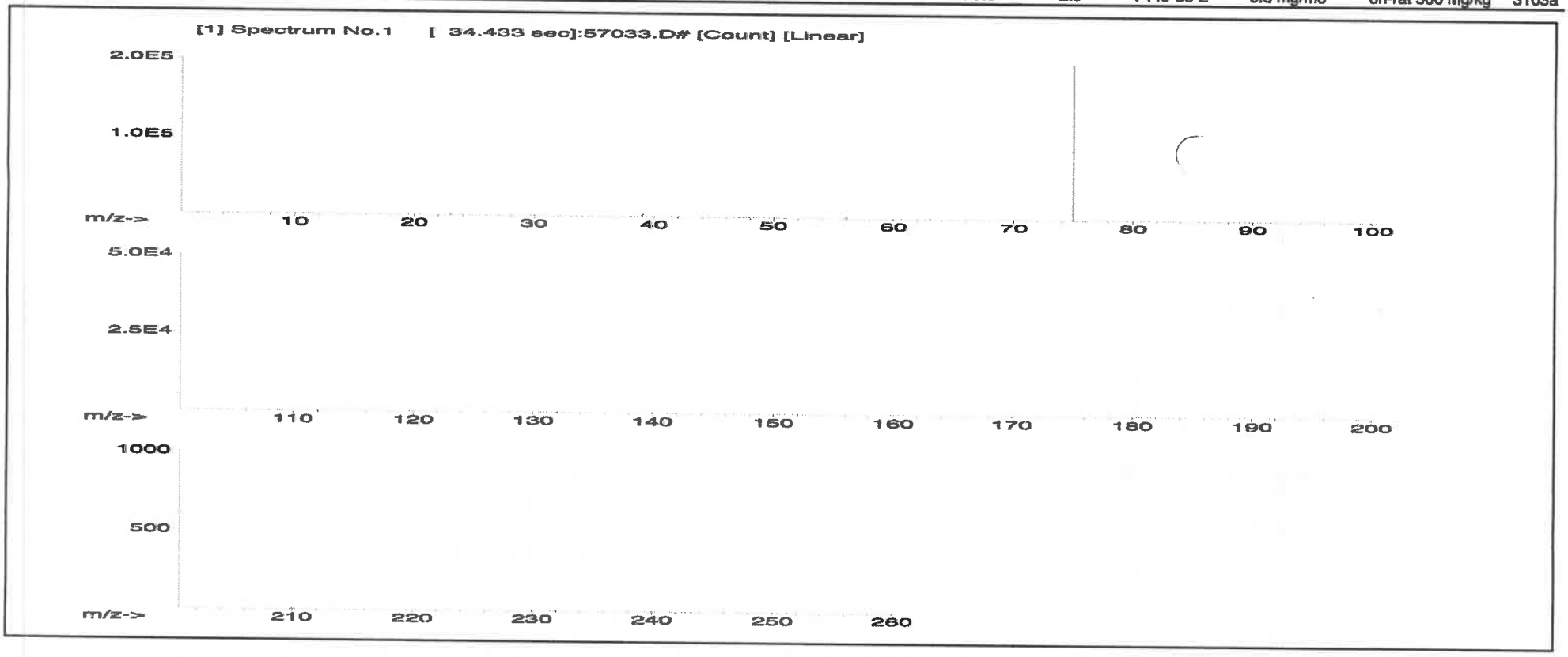
390

CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



391

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.
* 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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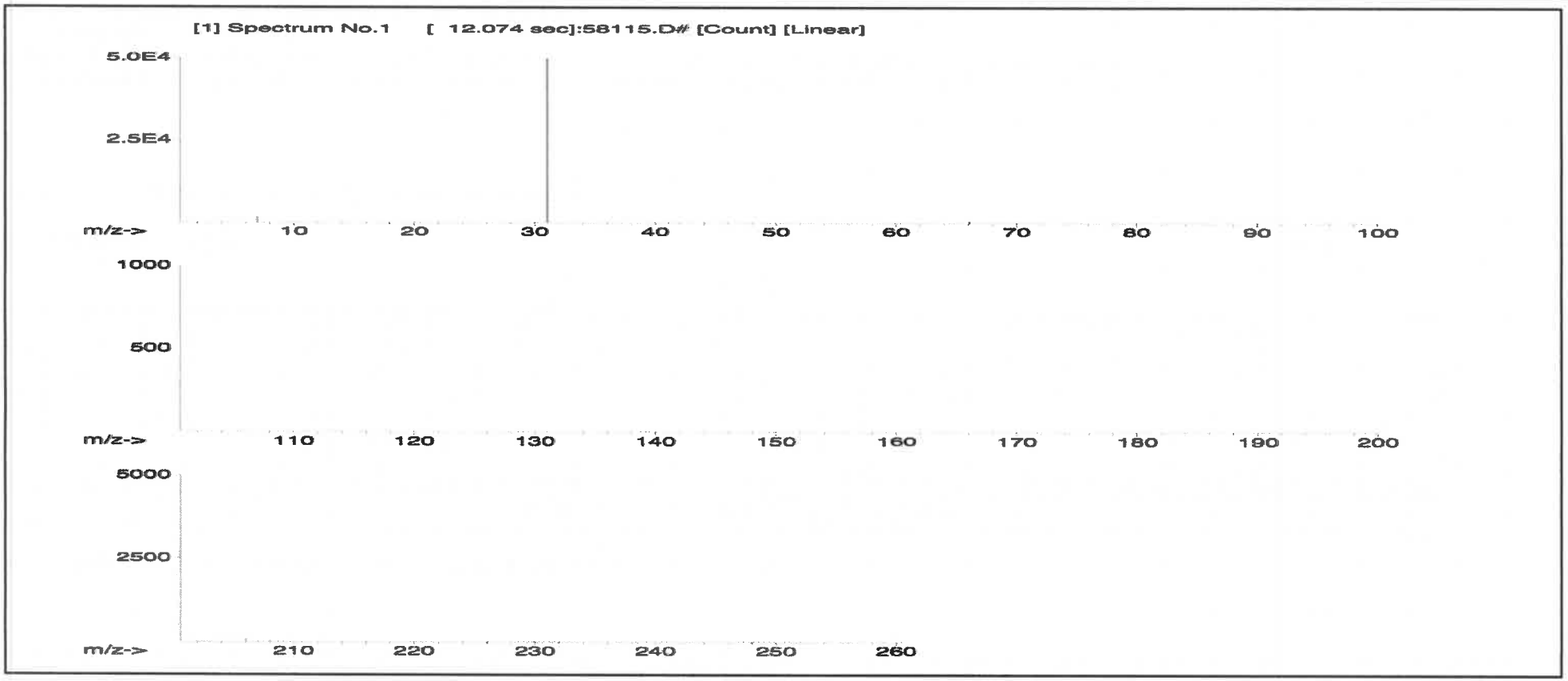
392

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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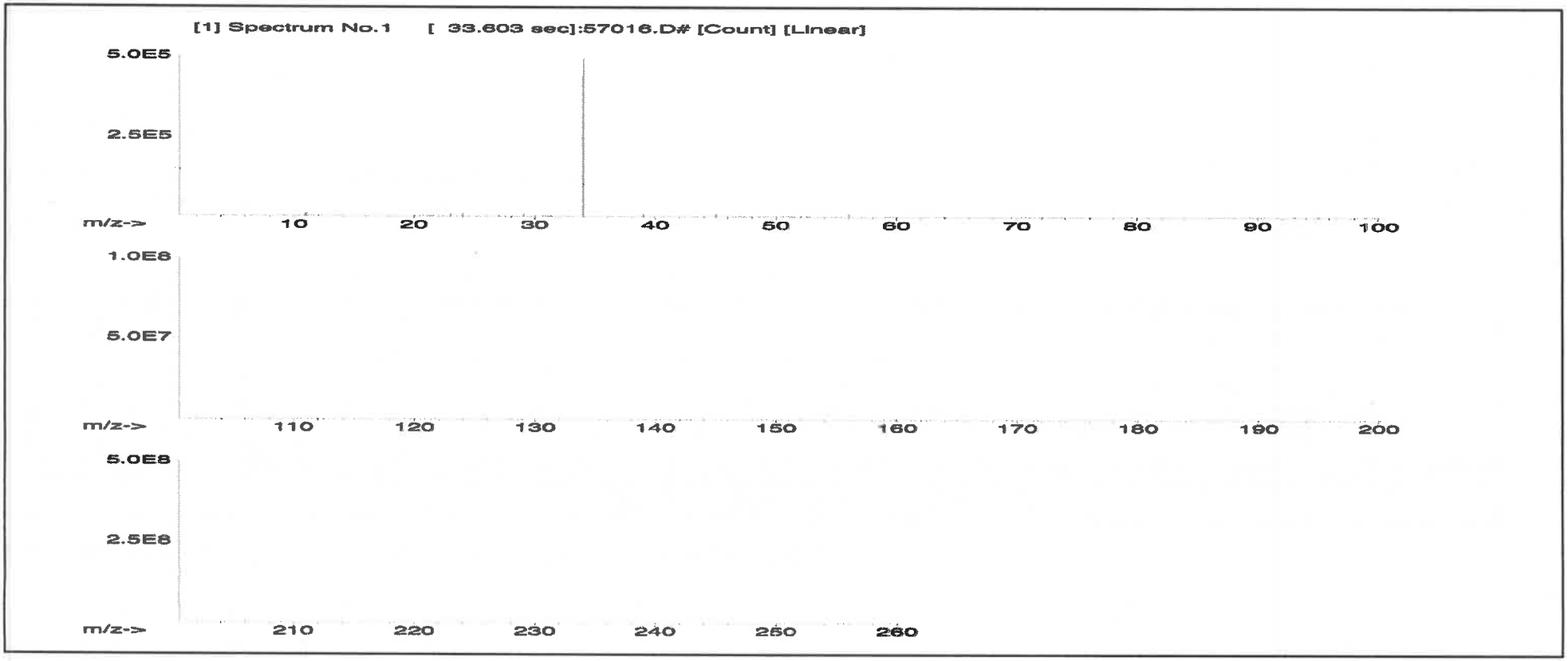
394

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



395

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:

* 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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396

CERTIFIED WEIGHT REPORT:

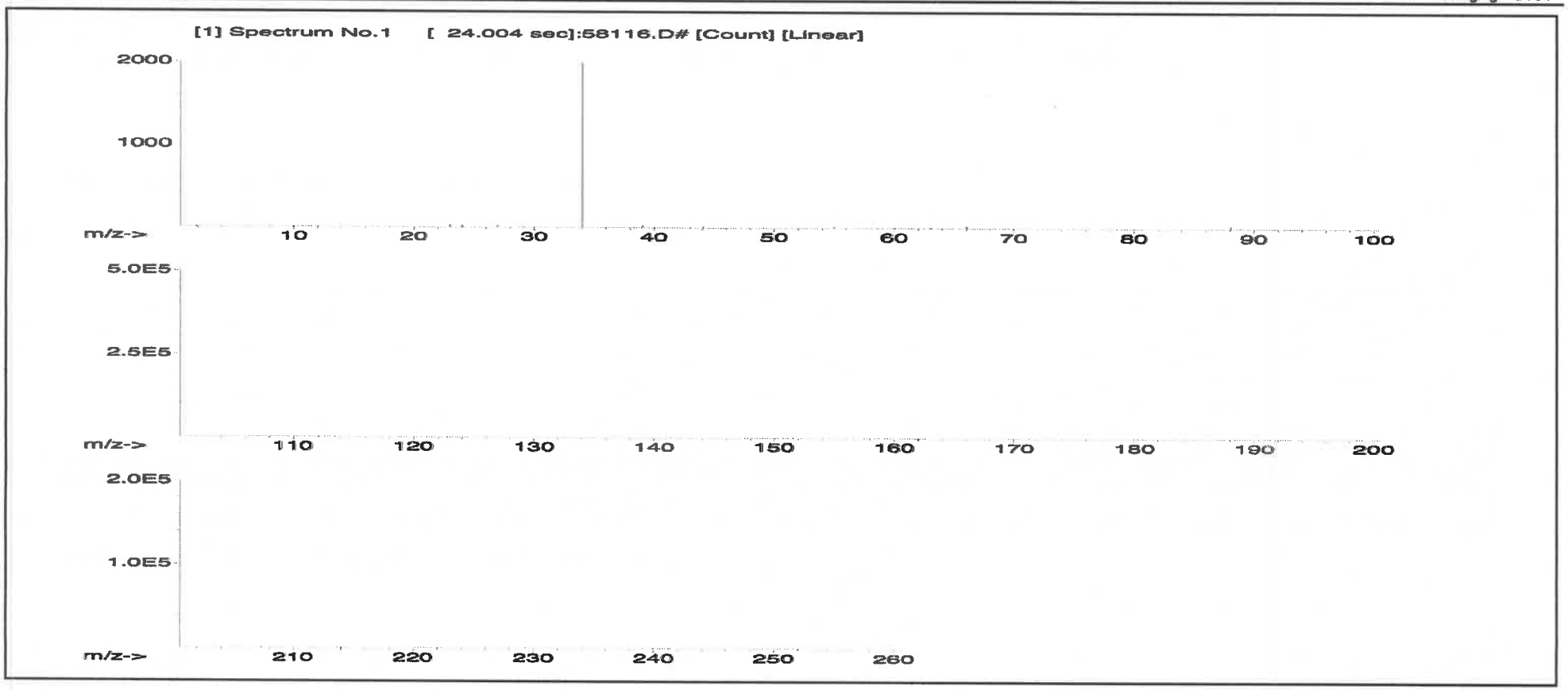
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

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



397

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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398

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

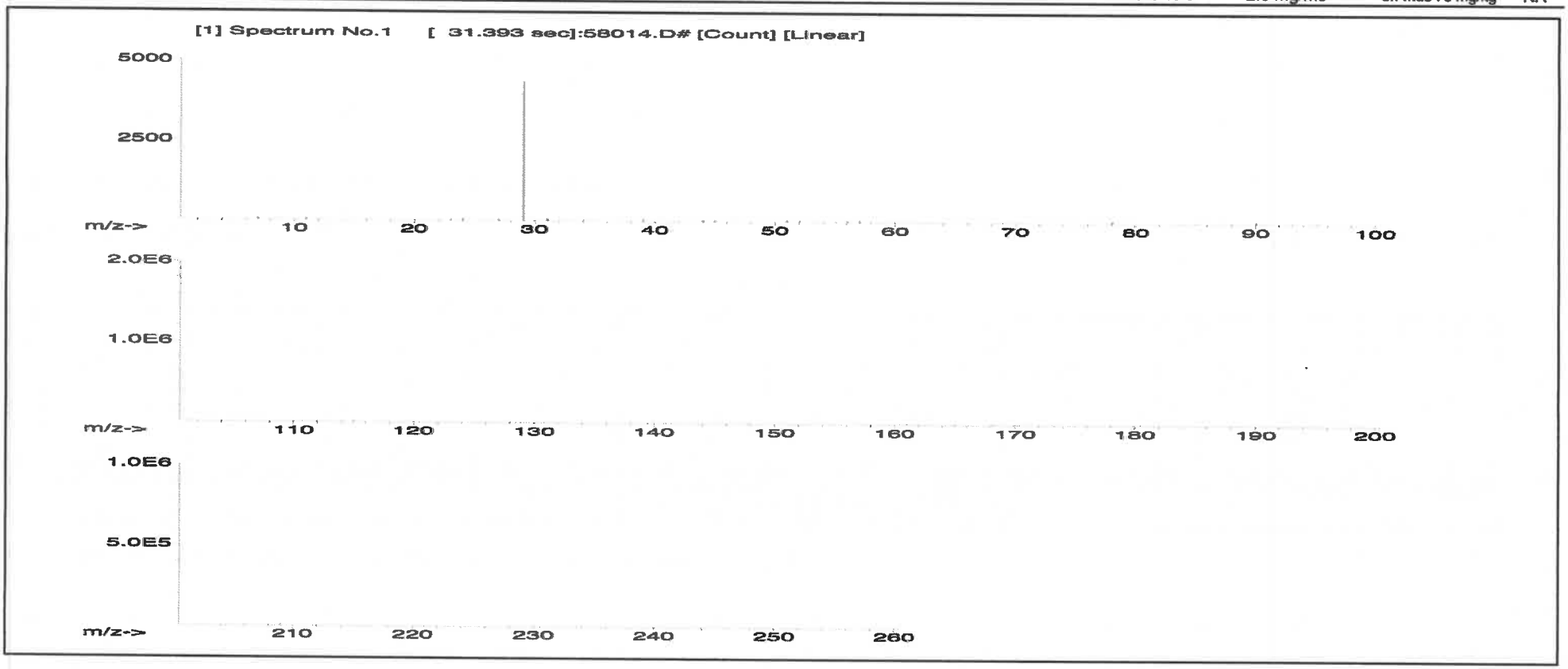
Aleah O'Brady

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



399

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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400

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

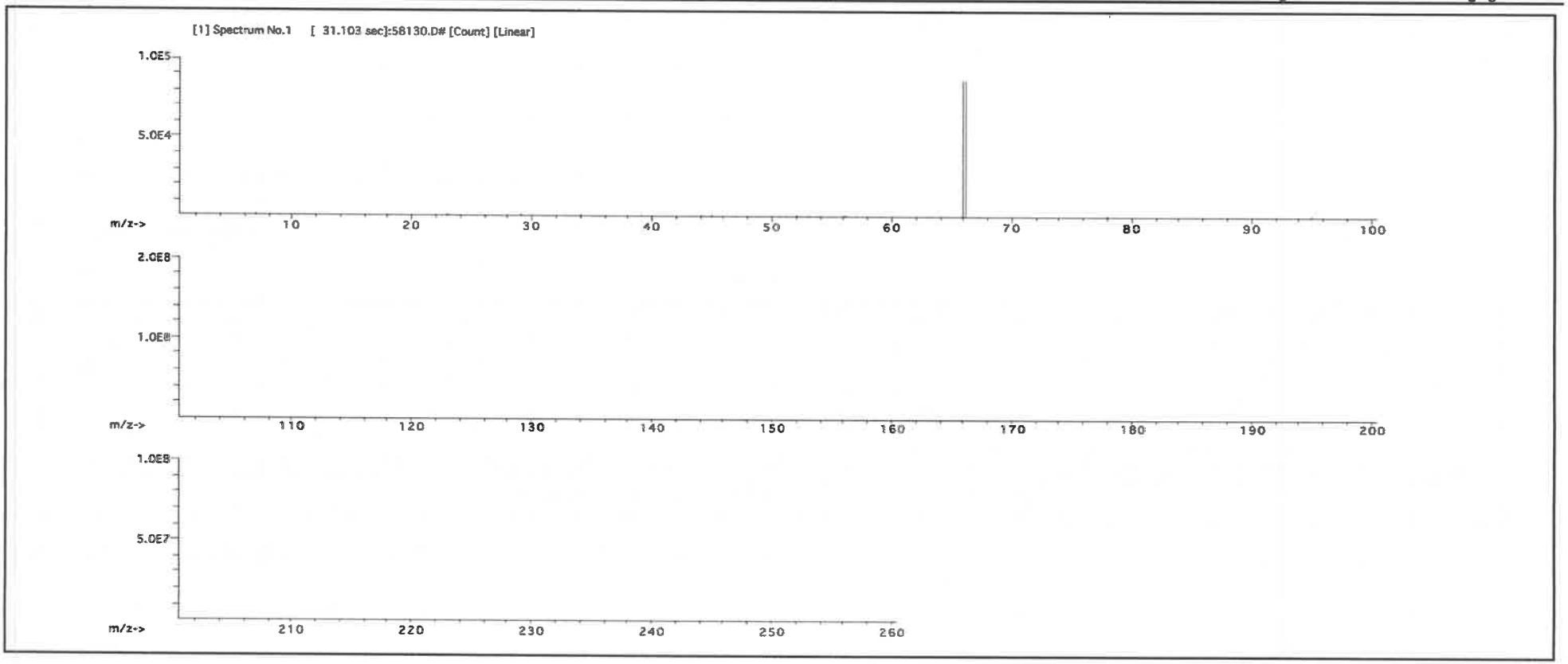
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

	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



401

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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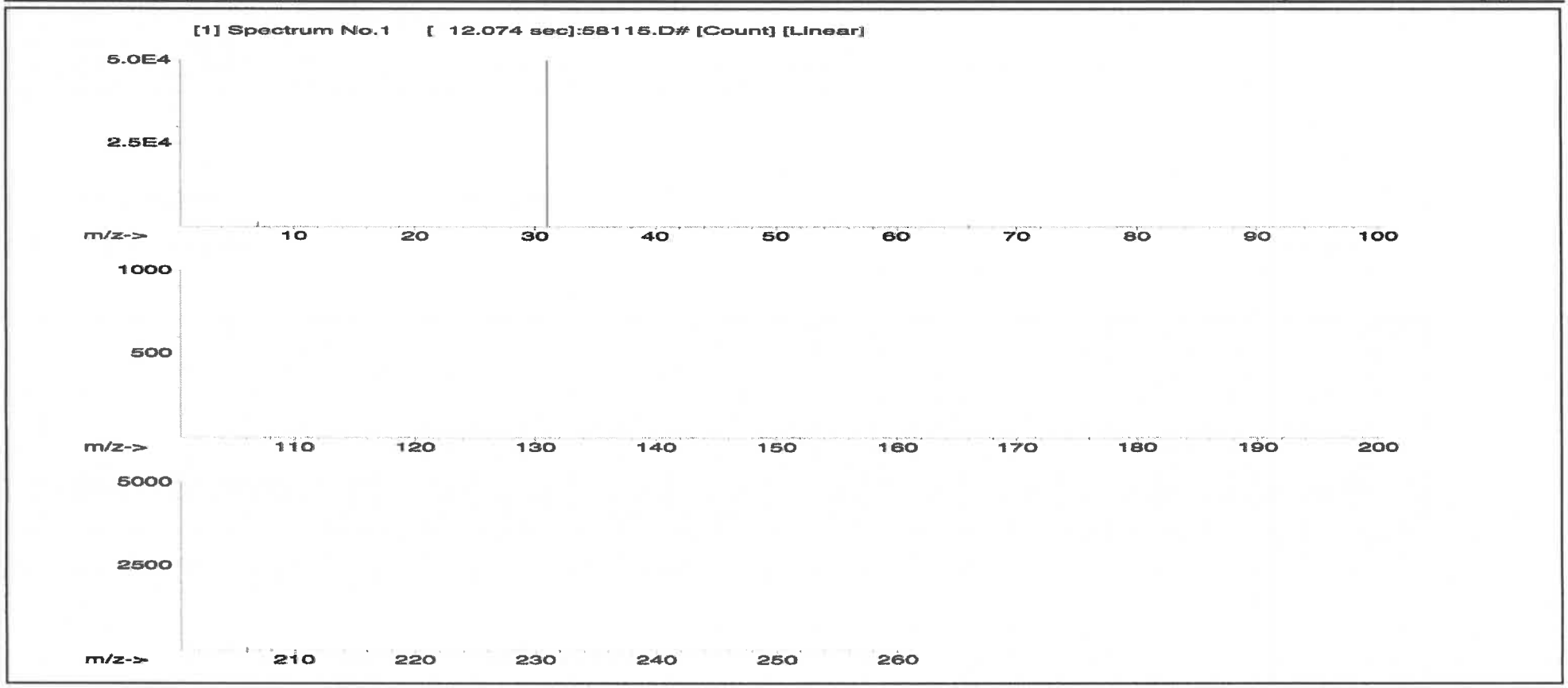
402

CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Solvent:**	**Lot #** 24002546	Nitric Acid
Lot Number:	**091123**				
Description:	**Phosphorous (P)**		2%	40.0 (mL)	Nitric Acid
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



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).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

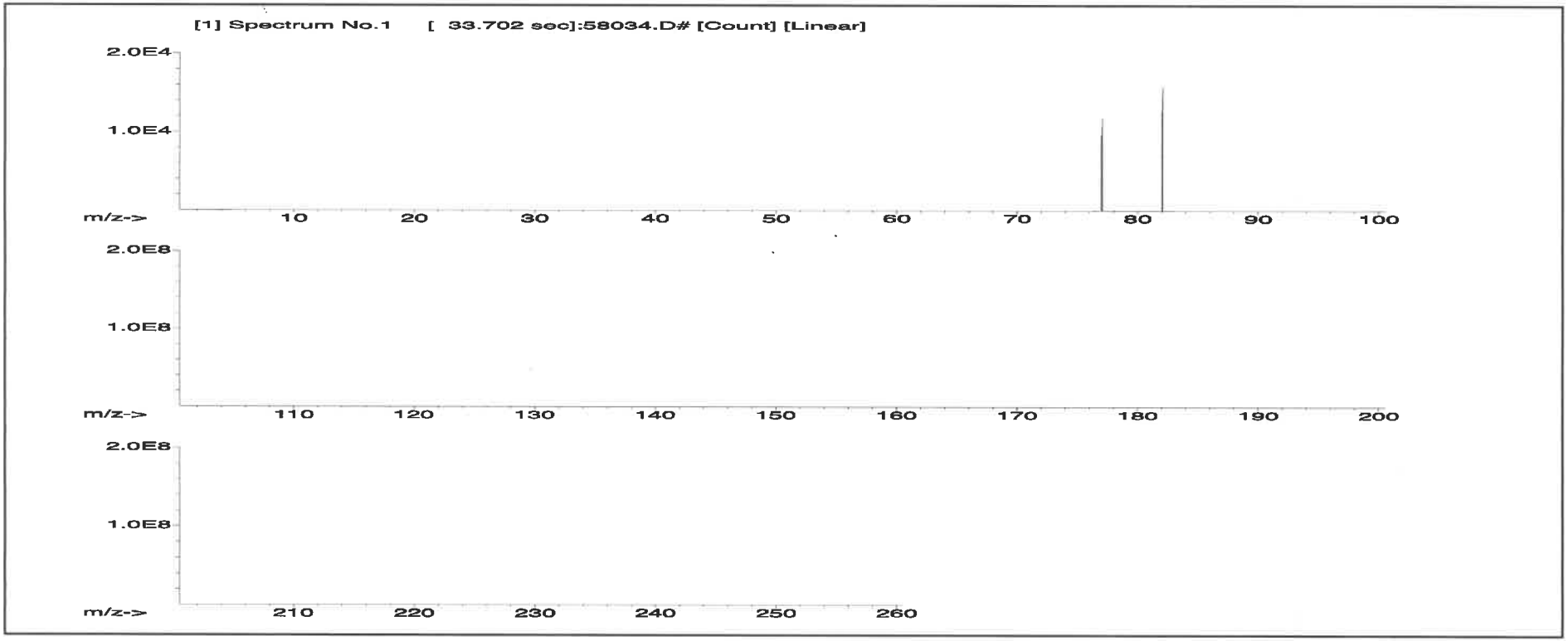
404

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5970, M5971 R: 7/01/24

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CERTIFIED WEIGHT REPORT:

Part Number: 57003
Lot Number: 062124
Description: Lithium (Li)
Expiration Date: 062127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 250.11

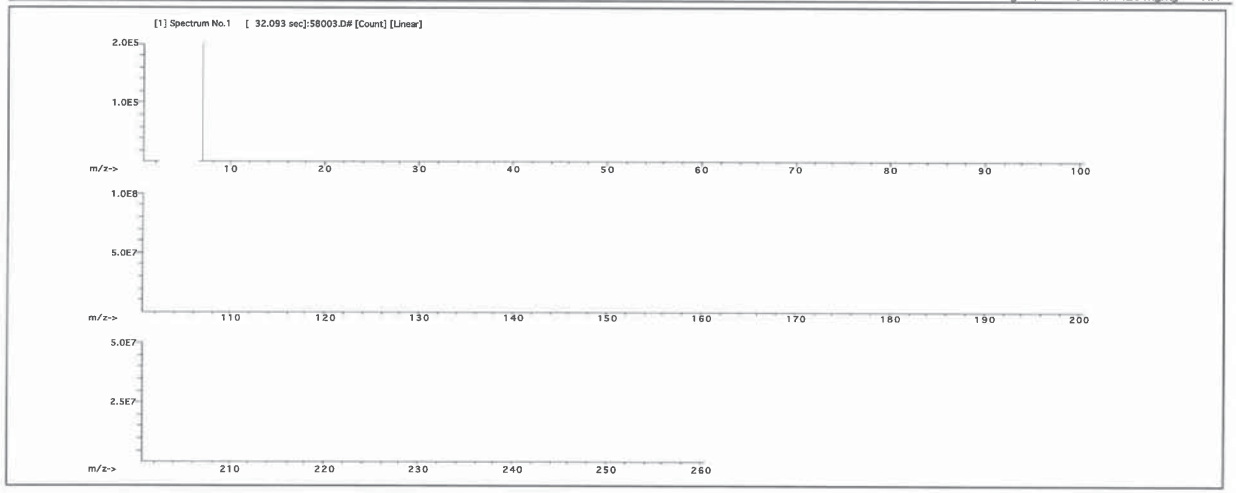
Lot #	Solvent:		
24002546	Nitric Acid		
2.0%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.016 Flask Uncertainty

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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

M5976, M5977
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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

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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

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	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 (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

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	<	0.000536	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

45982 R: 6/11/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

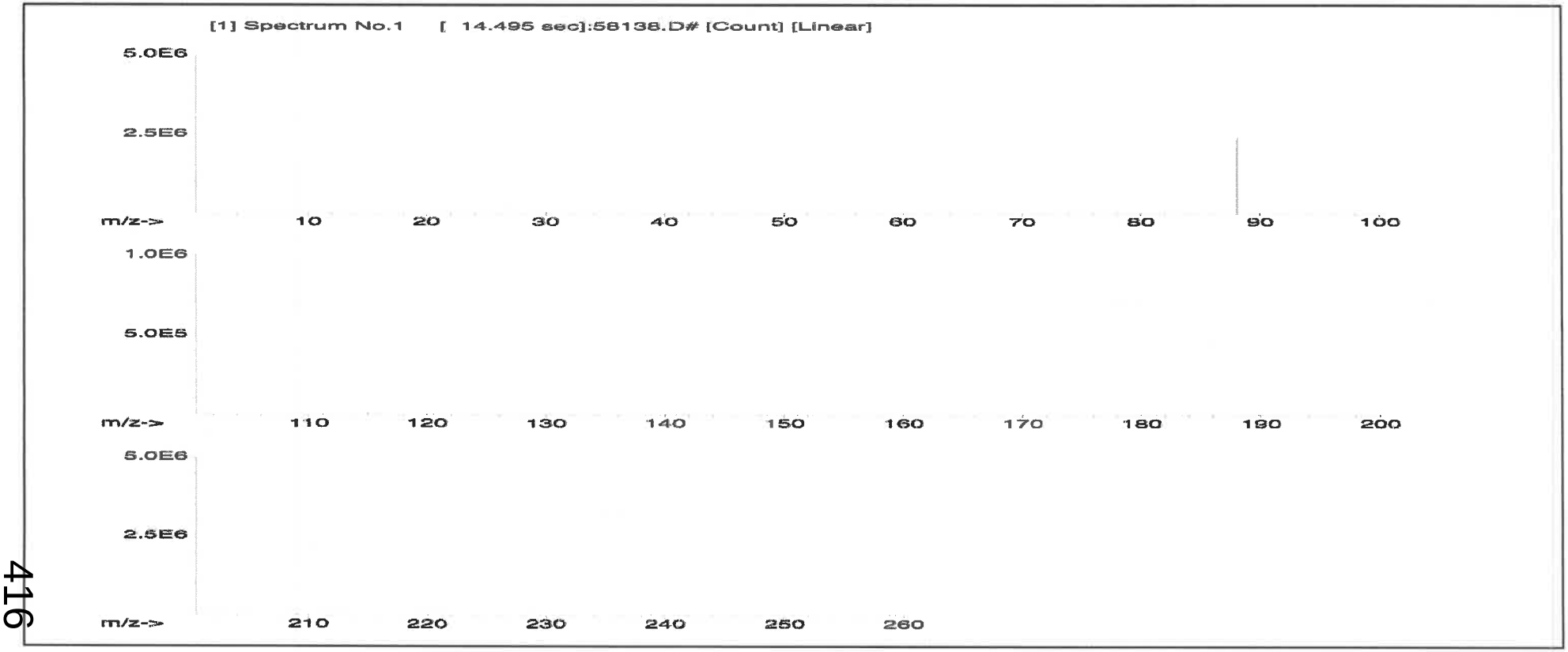
Part Number: 57038
Lot Number: 031524
Description: Strontium (Sr)

Expiration Date: 031527
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.07

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	
5E-05	Balance Uncertainty		
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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Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

MS984
R:6/14/24

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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

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

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



INORGANIC VENTURES™
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Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/2024
M5999

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-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



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M6033

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

430

CERTIFIED WEIGHT REPORT:

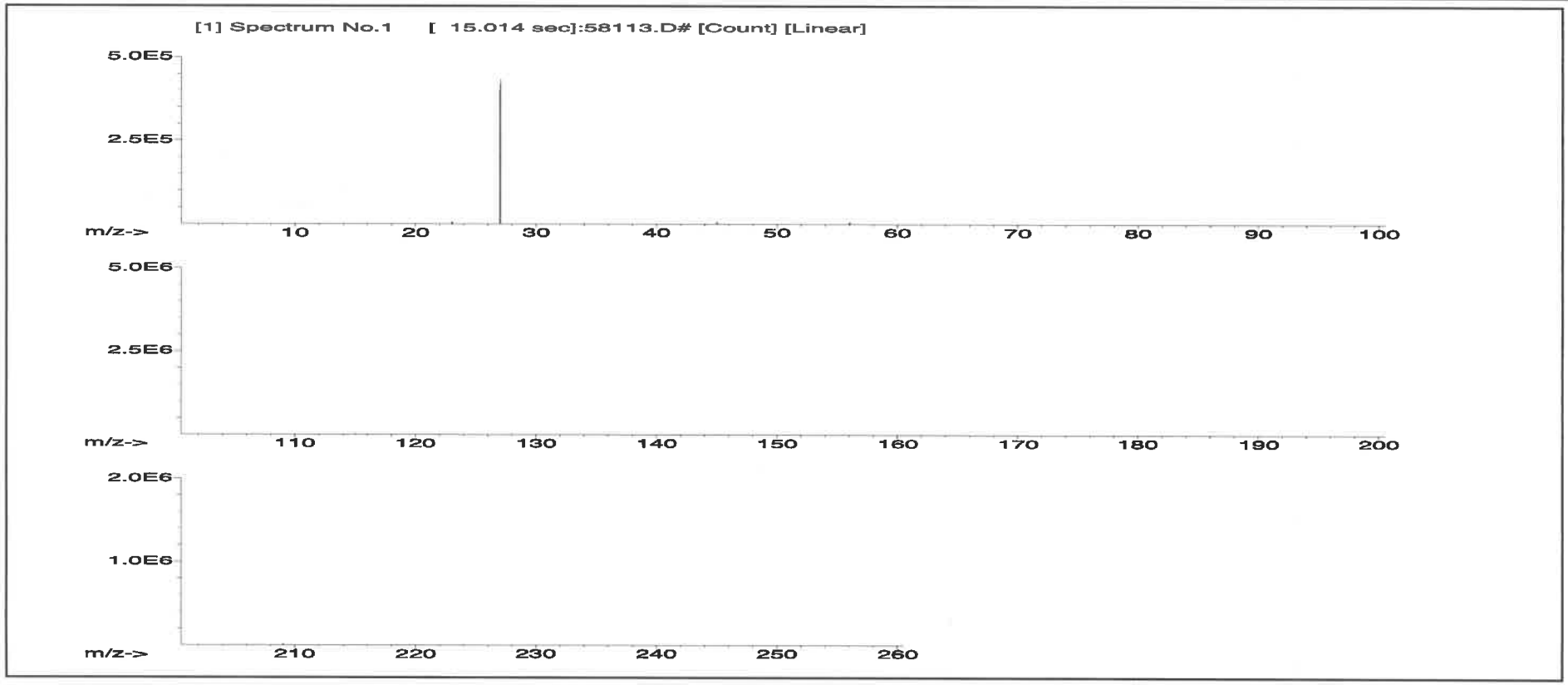
Part Number:	**58113**		**Solvent:**	20510011	Nitric Acid
Lot Number:	**011623**				
Description:	**Aluminum (Al)**				
			2%	40.0 (mL)	Nitric Acid
Expiration Date:	011626				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05 Balance Uncertainty			
Weight shown below was diluted to (mL):	2000.02	0.058 Flask Uncertainty			

Lot #

Giovanni Esposito

Formulated By:	Giovanni Esposito	011623
Reviewed By:	Pedro L. Rentas	011623

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Aluminum nitrate nonahydrate (Al)	IN022	ALM112021A1	10000	99.999	0.10	7.30	273.9779	274.0078	**10001.1**	**20.0**	7784-27-2	2 mg/m3	orl-rat 3671 mg/kg	3101a



Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

M6094
M6095.

metdig
10/21/24.

Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

M6109
M6110
M6111

Received date 9/29/24 Met dig.

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009
Manufactured Date: 2022-05-10
Retest Date: 2027-05-09
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	0.8 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	14.9 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	0.8 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	1.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	0.7 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22F0762009

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

M6112
M6113
M6114
M6115
M6116
M6117

Receive:
9/29/24
Met dig

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

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Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

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Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Nitric Acid 69%
CMOS

M6112
M6113
M6114
M6115
M6116
M6117

Receive:
9/29/24
Met dig

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
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Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

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Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Nitric Acid 69%
CMOS

M6112
M6113
M6114
M6115
M6116
M6117

Receive:
9/29/24
Met dig

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24B1362001
Manufactured Date: 2024-01-25
Retest Date: 2029-01-23
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.6 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	< 1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 0.2 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

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Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	3 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	1 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

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Material No.: 9606-03
Batch No.: 24B1362001

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Recieve → 10/9/24
Met dig

M6118

Material No.: 9530-33
Batch No.: 22E1662006
Manufactured Date: 2022-04-11
Retest Date: 2027-04-10
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6 %
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS - Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS - Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities - Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities - Aluminum (Al)	≤ 10.0 ppb	< 0.2 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	37.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	1 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22E1662006

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	1.0 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	< 0.4 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	1.9 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.3 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

Material No.: 9530-33
Batch No.: 22E1662006

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

James T Ethier

Jamie Ethier
Vice President Global Quality

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R ->10/13/24
Metal g

M 6120

Material No.: 9606-03
Batch No.: 2310662003
Manufactured Date: 2023-08-21
Retest Date: 2028-08-19
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.5 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	10
Residue after Ignition	≤ 2 ppm	< 2 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.08 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.10 ppm
Sulfate (SO_4)	≤ 0.2 ppm	0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 40.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 5.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 50 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	< 50.0 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	30.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 20 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 20 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 40.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 20 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 20.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 2310662003

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 50.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	< 50 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 50 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 150.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 30.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 20.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 10.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	60 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	10 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 2310662003

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Ken Koehnlein
Sr. Manager, Quality Assurance

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R: 01/03/24 M5806, M5807

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452

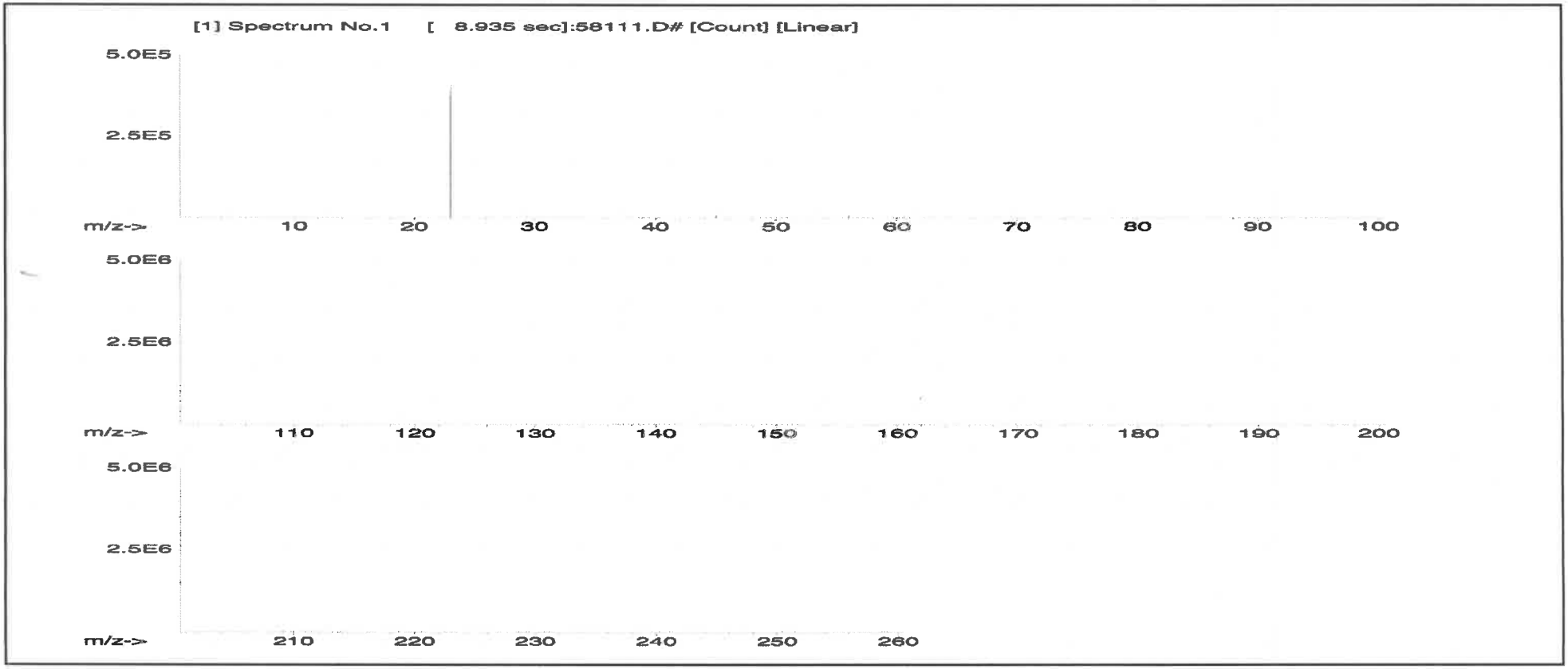
CERTIFIED WEIGHT REPORT:

			Lot #	
Part Number:	**58111**	**Solvent:**	24002546	Nitric Acid
Lot Number:	**122223**			
Description:	**Sodium (Na)**	2%	60.0 (mL)	Nitric Acid
Expiration Date:	122226			
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):	3000.4	0.06	Flask Uncertainty	

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



453

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.
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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 01/03/24 M5802, M5803

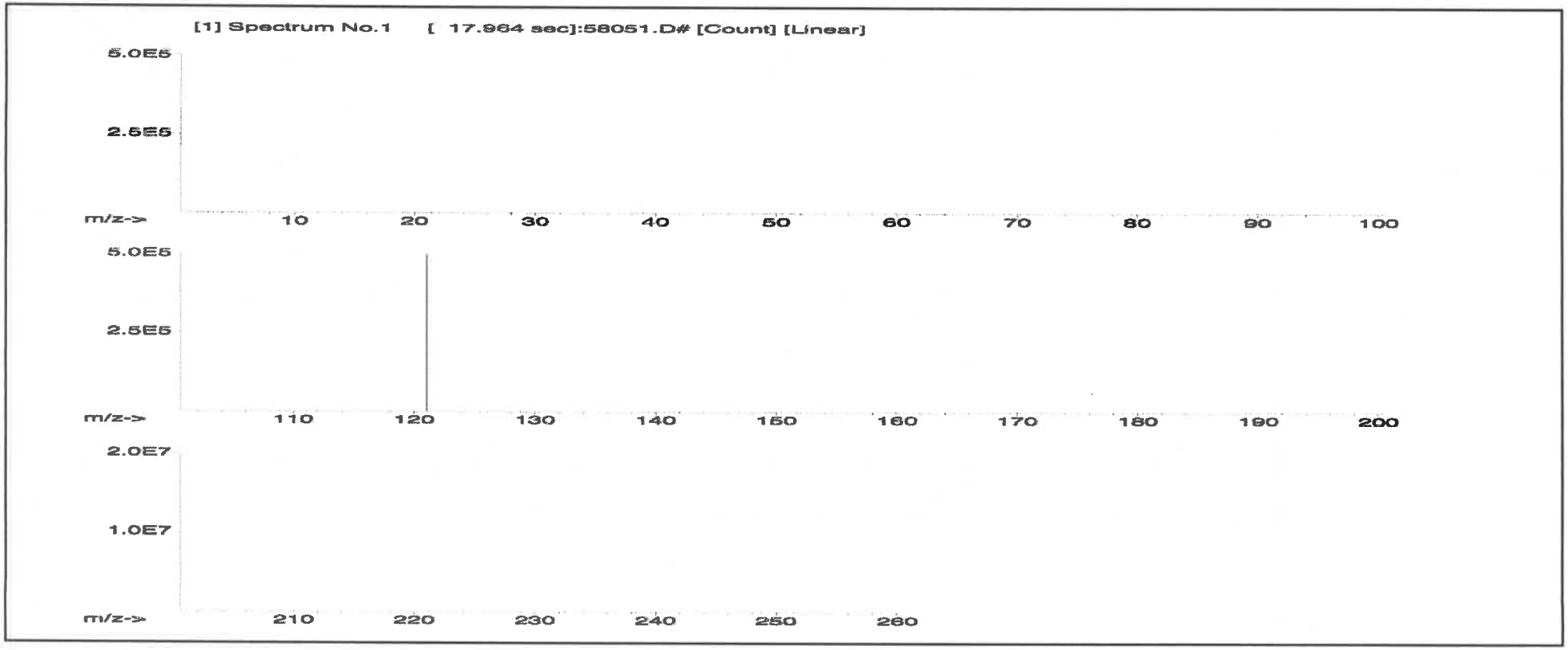
454

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



455

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:

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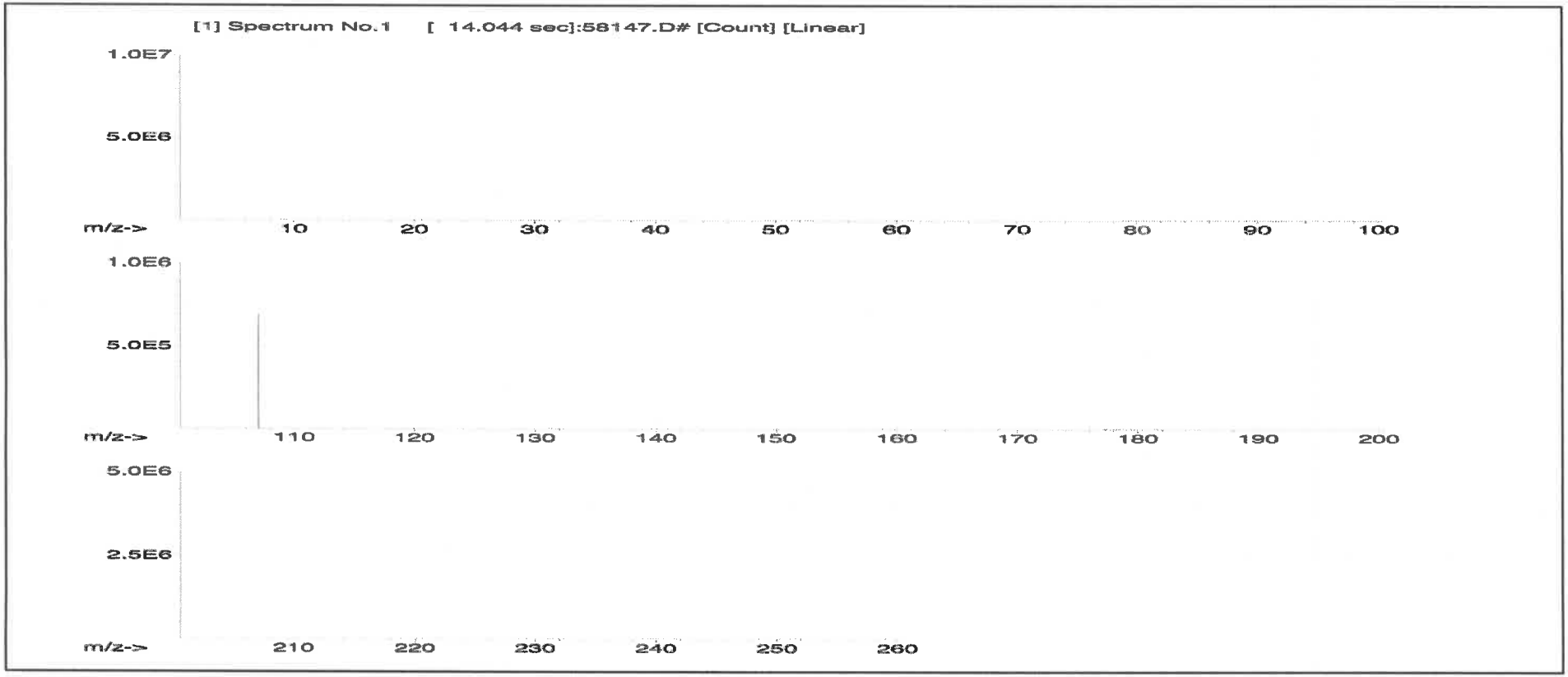
456

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



457

Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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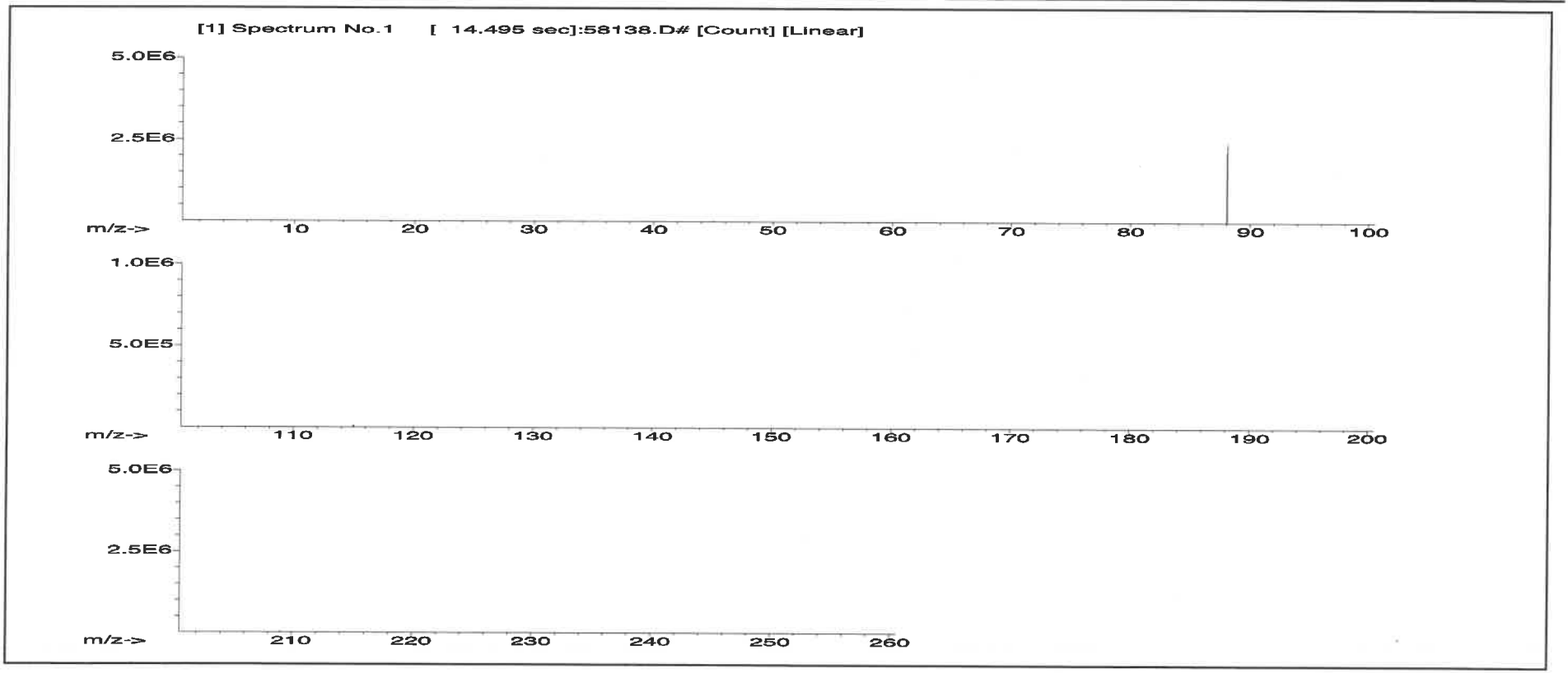
458

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



459

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.

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460

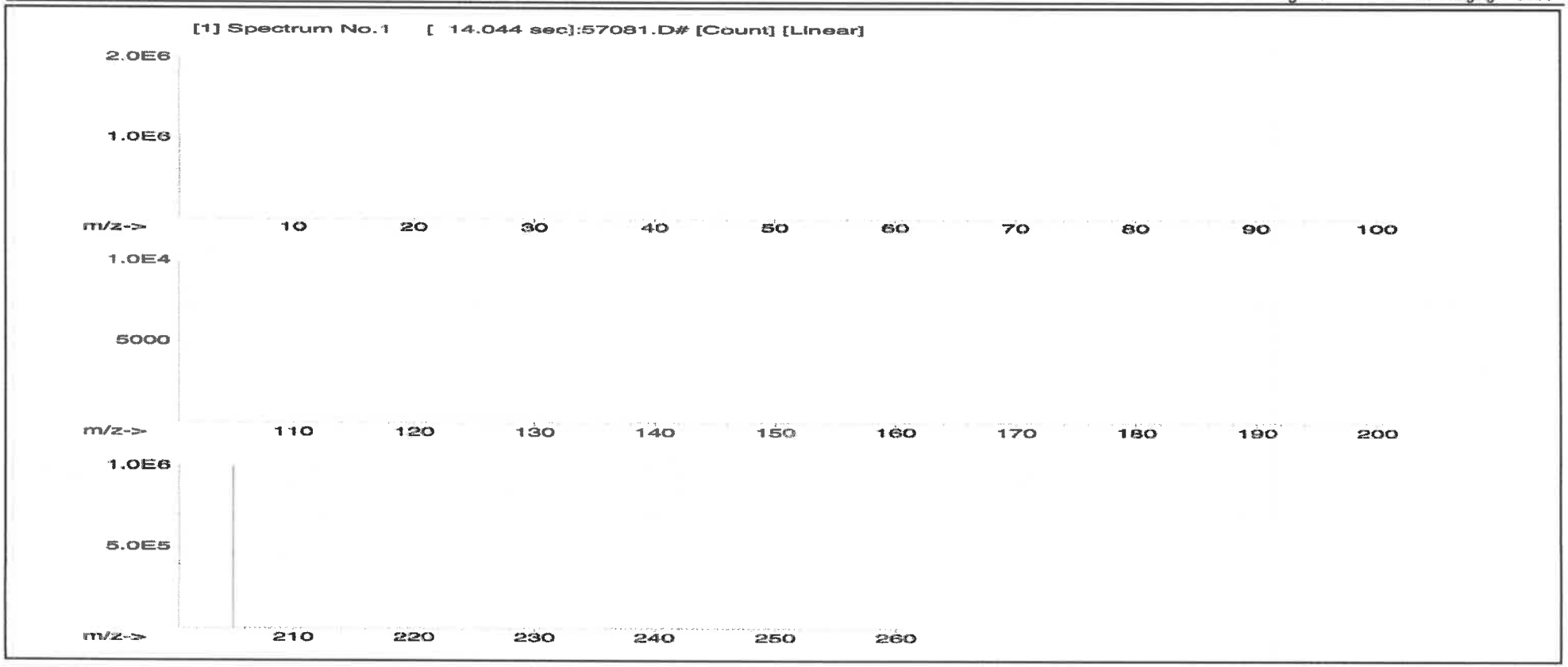
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**			**Lot #**	
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



461

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:

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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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462

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	

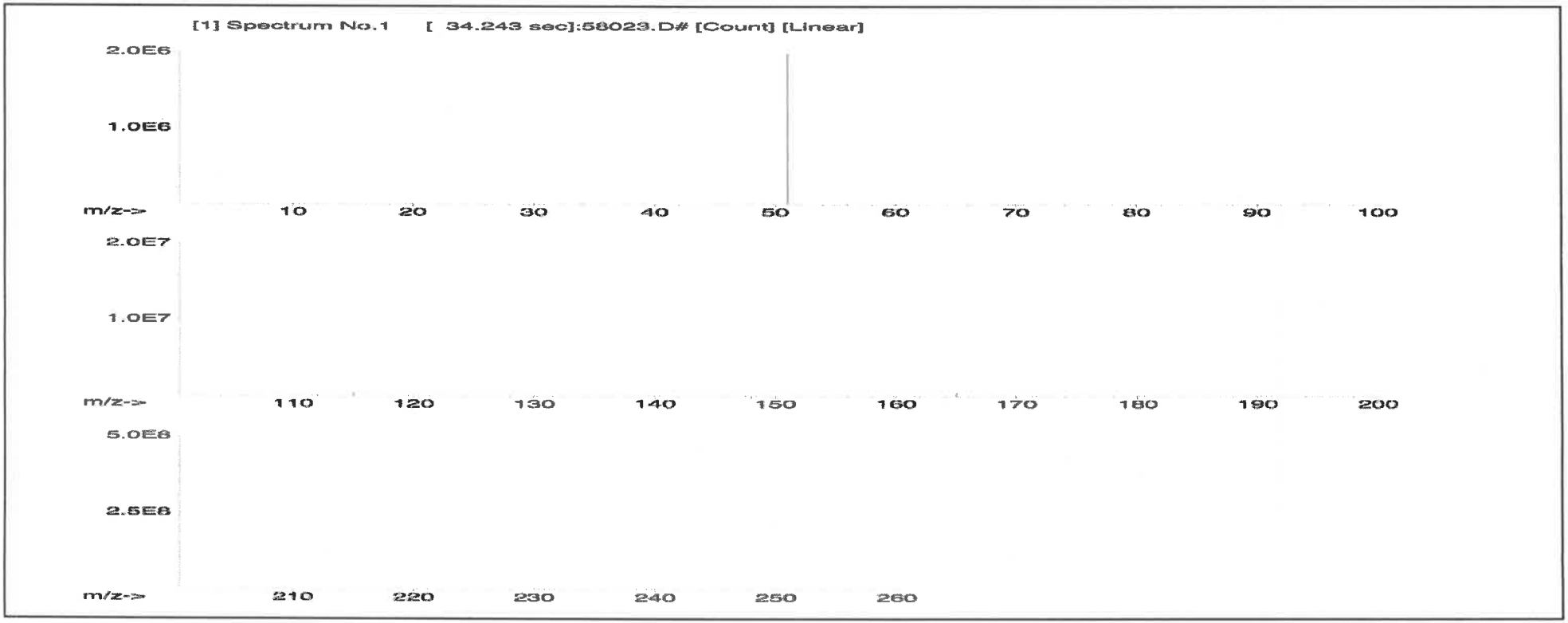
Aleah O'Brady

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



463

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.
* 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).

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165145

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : MBHHG2

Matrix : SOIL

Pippete ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : N/A

Hood ID : #3

Block ID: 1. HOT BLOCK #3 2. N/A

Start Digest Date: 11/20/2024 **Time :** 14:00 **Temp :** 96 °C

End Digest Date: 11/20/2024 **Time :** 16:10 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #3

Dig Technician Signature: JSP

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP83141
Spike Sol 6	1.00	MP83147
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	MP83122
Conc. HNO3	5.00	M6120
30% H2O2	3.00	M5634
Conc. HCL	10.00	M6118
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 #3 CELL #34 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/20/24 16:20	JSP / Met dig	[illegible]
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165145

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P4913-01	MBHHG2	N/A	1.26	100	Black	Yellow	Medium	N/A	N/A	1
P4913-02	MBHHG3	N/A	1.23	100	Brown	Yellow	Medium	N/A	N/A	2
P4913-03	MBHHG4	N/A	1.22	100	Brown	Yellow	Medium	N/A	N/A	3
P4913-04	MBHHG5	N/A	1.13	100	Brown	Yellow	Medium	N/A	N/A	4
P4913-05	MBHHG6	N/A	1.29	100	Brown	Yellow	Medium	N/A	N/A	5
P4913-06	MBHHG7	N/A	1.37	100	Brown	Yellow	Medium	N/A	N/A	6
P4913-07	MBHHG8	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	7
P4913-08	MBHHG9	N/A	1.22	100	Black	Yellow	Medium	N/A	N/A	8
P4913-09	MBHHH0	N/A	1.47	100	Black	Yellow	Medium	N/A	N/A	9
P4913-10	MBHHH1	N/A	1.12	100	Brown	Yellow	Medium	N/A	N/A	10
P4913-11	MBHHH2	N/A	1.18	100	Brown	Yellow	Medium	N/A	N/A	11
P4913-12	MBHHH3	N/A	1.26	100	Brown	Yellow	Medium	N/A	N/A	12
P4913-13	MBHHH4	N/A	1.28	100	Brown	Yellow	Medium	N/A	N/A	13
P4913-14	MBHHH5	N/A	1.23	100	Brown	Yellow	Medium	N/A	N/A	14
P4913-15	MBHHH6	N/A	1.24	100	Brown	Yellow	Medium	N/A	N/A	15
P4913-16	MBHHH6D	N/A	1.12	100	Brown	Yellow	Medium	N/A	N/A	16
P4913-17	MBHHH6S	N/A	1.14	100	Brown	Yellow	Medium	N/A	MP83147	17
P4913-18	MBHHH7	N/A	1.28	100	Brown	Yellow	Medium	N/A	N/A	18
P4913-19	MBHHH8	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	19
P4913-20	MBHHH9	N/A	1.20	100	Brown	Yellow	Medium	N/A	N/A	20
P4913-21	MBHHJ0	N/A	1.12	100	Brown	Yellow	Medium	N/A	N/A	21
PB165145BL	PBS145	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	22
PB165145BS	LCS145	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83141	23

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 # LB133566

Review By	Sarabjit Jaswal	Review On	11/22/2024 4:49:16 AM
Supervise By	Mohan Bera	Supervise On	11/22/2024 4:49:50 AM

STD. NAME	STD REF.#
ICAL Standard	MP83134,MP83142,MP83140,MP83139,MP83138,MP83137,MP83136
ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	11/21/24 11:55		Kareem	OK
2	S1	S01	CAL2	11/21/24 11:59		Kareem	OK
3	S2	S02	CAL3	11/21/24 12:04		Kareem	OK
4	S3	S03	CAL4	11/21/24 12:08		Kareem	OK
5	S4	S04	CAL5	11/21/24 12:13		Kareem	OK
6	S5	S05	CAL6	11/21/24 12:17		Kareem	OK
7	S6	S06	CAL7	11/21/24 12:22		Kareem	OK
8	ICV007	ICV007	ICV	11/21/24 12:27		Kareem	OK
9	ICB007	ICB007	ICB	11/21/24 12:33		Kareem	OK
10	ICSA007	ICSA007	ICSA	11/21/24 13:20	Inst. paused for review	Kareem	OK
11	ICSAB007	ICSAB007	ICSAB	11/21/24 13:24		Kareem	OK
12	CCV041	CCV041	CCV	11/21/24 13:29		Kareem	OK
13	CCB041	CCB041	CCB	11/21/24 13:33		Kareem	OK
14	P4907-01	MBHHE1	SAM	11/21/24 13:38		Kareem	OK
15	P4907-02	MBHHE1D	DUP	11/21/24 13:42		Kareem	OK
16	P4907-01L	MBHHE1L	SD	11/21/24 13:47		Kareem	OK
17	P4907-04	MBHHE4	SAM	11/21/24 13:56	Ca High	Kareem	Dilution
18	P4907-05	MBHHE5	SAM	11/21/24 14:01	Ca High	Kareem	Dilution

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133566

Review By	Sarabjit Jaswal	Review On	11/22/2024 4:49:16 AM
Supervise By	Mohan Bera	Supervise On	11/22/2024 4:49:50 AM

STD. NAME	STD REF.#
ICAL Standard	MP83134,MP83142,MP83140,MP83139,MP83138,MP83137,MP83136
ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

19	P4907-06	MBHHE6	SAM	11/21/24 14:05		Kareem	OK
20	P4907-07	MBHHE7	SAM	11/21/24 14:10		Kareem	OK
21	P4907-08	MBHHE8	SAM	11/21/24 14:14		Kareem	OK
22	P4907-09	MBHHE9	SAM	11/21/24 14:19		Kareem	OK
23	P4907-10	MBHHB9	SAM	11/21/24 14:23		Kareem	OK
24	P4907-11	MBHHC0	SAM	11/21/24 14:27		Kareem	OK
25	P4907-12	MBHHC1	SAM	11/21/24 14:32		Kareem	OK
26	P4907-13	MBHHC2	SAM	11/21/24 14:36		Kareem	OK
27	P4907-14	MBHHC3	SAM	11/21/24 14:41		Kareem	OK
28	P4907-15	MBHHC4	SAM	11/21/24 14:45		Kareem	OK
29	P4907-16	MBHHD6	SAM	11/21/24 14:50		Kareem	OK
30	P4907-17	MBHHD7	SAM	11/21/24 14:54		Kareem	OK
31	PB165102BL	PBS102	MB	11/21/24 14:59		Kareem	OK
32	PB165102BS	LCS102	LCS	11/21/24 15:03		Kareem	OK
33	CCV042	CCV042	CCV	11/21/24 15:08		Kareem	OK
34	CCB042	CCB042	CCB	11/21/24 15:12		Kareem	OK
35	P4906-01	MBHHB2	SAM	11/21/24 15:17		Kareem	OK
36	P4906-02	MBHHB3	SAM	11/21/24 15:21		Kareem	OK
37	P4906-03	MBHHB3D	DUP	11/21/24 15:26		Kareem	OK
38	P4906-02L	MBHHB3L	SD	11/21/24 15:30		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133566

Review By	Sarabjit Jaswal	Review On	11/22/2024 4:49:16 AM
Supervise By	Mohan Bera	Supervise On	11/22/2024 4:49:50 AM

STD. NAME	STD REF.#
ICAL Standard	MP83134,MP83142,MP83140,MP83139,MP83138,MP83137,MP83136
ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

39	P4906-05	MBHHB4	SAM	11/21/24 15:39		Kareem	OK
40	P4906-06	MBHHB5	SAM	11/21/24 15:43		Kareem	OK
41	P4906-07	MBHHD8	SAM	11/21/24 15:48		Kareem	OK
42	P4906-08	MBHHD9	SAM	11/21/24 15:52		Kareem	OK
43	P4906-09	MBHHE0	SAM	11/21/24 15:57		Kareem	OK
44	P4906-11	MBHHE2	SAM	11/21/24 16:01		Kareem	OK
45	P4906-12	MBHHE3	SAM	11/21/24 16:05		Kareem	OK
46	P4906-13	MBHH98	SAM	11/21/24 16:10		Kareem	OK
47	P4906-14	MBHH99	SAM	11/21/24 16:14		Kareem	OK
48	P4906-15	MBHHA0	SAM	11/21/24 16:19		Kareem	OK
49	P4906-16	MBHHA1	SAM	11/21/24 16:23		Kareem	OK
50	P4906-17	MBHHA2	SAM	11/21/24 16:27		Kareem	OK
51	P4906-18	MBHHA3	SAM	11/21/24 16:32	Ca High	Kareem	Dilution
52	P4906-19	MBHHA4	SAM	11/21/24 16:36	Ca High	Kareem	Dilution
53	P4906-20	MBHHB6	SAM	11/21/24 16:41		Kareem	OK
54	CCV043	CCV043	CCV	11/21/24 16:45		Kareem	OK
55	CCB043	CCB043	CCB	11/21/24 16:50		Kareem	OK
56	P4906-21	MBHHB7	SAM	11/21/24 16:54		Kareem	OK
57	P4906-22	MBHHB8	SAM	11/21/24 16:59		Kareem	OK
58	PB165105BL	PBS105	MB	11/21/24 17:03		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133566

Review By	Sarabjit Jaswal	Review On	11/22/2024 4:49:16 AM
Supervise By	Mohan Bera	Supervise On	11/22/2024 4:49:50 AM

STD. NAME	STD REF.#
ICAL Standard	MP83134,MP83142,MP83140,MP83139,MP83138,MP83137,MP83136
ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

59	PB165105BS	LCS105	LCS	11/21/24 17:07		Kareem	OK
60	P4913-01	MBHHG2	SAM	11/21/24 17:12		Kareem	OK
61	P4913-02	MBHHG3	SAM	11/21/24 17:16		Kareem	OK
62	P4913-03	MBHHG4	SAM	11/21/24 17:21		Kareem	OK
63	P4913-04	MBHHG5	SAM	11/21/24 17:25		Kareem	OK
64	P4913-05	MBHHG6	SAM	11/21/24 17:30		Kareem	OK
65	P4913-06	MBHHG7	SAM	11/21/24 17:34		Kareem	OK
66	P4913-07	MBHHG8	SAM	11/21/24 17:38		Kareem	OK
67	P4913-08	MBHHG9	SAM	11/21/24 17:43		Kareem	OK
68	P4913-09	MBHHH0	SAM	11/21/24 17:52		Kareem	OK
69	P4913-10	MBHHH1	SAM	11/21/24 17:56		Kareem	OK
70	P4913-11	MBHHH2	SAM	11/21/24 18:05		Kareem	OK
71	P4913-12	MBHHH3	SAM	11/21/24 18:09		Kareem	OK
72	P4913-13	MBHHH4	SAM	11/21/24 18:14		Kareem	OK
73	P4913-14	MBHHH5	SAM	11/21/24 18:18		Kareem	OK
74	P4913-15	MBHHH6	SAM	11/21/24 18:23		Kareem	OK
75	P4913-16	MBHHH6D	DUP	11/21/24 18:27		Kareem	OK
76	CCV044	CCV044	CCV	11/21/24 18:36		Kareem	OK
77	CCB044	CCB044	CCB	11/21/24 18:40		Kareem	OK
78	P4906-04	MBHHB3S	MS	11/21/24 18:45	MS Fail For Zn	Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB133566

Review By	Sarabjit Jaswal	Review On	11/22/2024 4:49:16 AM
Supervise By	Mohan Bera	Supervise On	11/22/2024 4:49:50 AM

STD. NAME	STD REF.#
ICAL Standard	MP83134,MP83142,MP83140,MP83139,MP83138,MP83137,MP83136
ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

79	P4913-15L	MBHHH6L	SD	11/21/24 18:49		Kareem	OK
80	P4907-03	MBHHE1S	MS	11/21/24 18:54		Kareem	OK
81	P4913-17	MBHHH6S	MS	11/21/24 19:07	MS Fail For Se(Below RL)	Kareem	OK
82	P4912-04	MBHHJ4	SAM	11/21/24 19:11	Not Use	Kareem	Not Ok
83	P4912-06	MBHHJ4S	MS	11/21/24 19:16	Not Use	Kareem	Not Ok
84	P4912-04L	MBHHJ4L	SD	11/21/24 19:20	Not Use	Kareem	Not Ok
85	P4912-05	MBHHJ4D	DUP	11/21/24 19:25	Not Use	Kareem	Not Ok
86	P4913-18	MBHHH7	SAM	11/21/24 19:29		Kareem	OK
87	P4913-19	MBHHH8	SAM	11/21/24 19:33		Kareem	OK
88	P4913-20	MBHHH9	SAM	11/21/24 19:38		Kareem	OK
89	P4913-21	MBHHJ0	SAM	11/21/24 19:42		Kareem	OK
90	PB165145BL	PBS145	MB	11/21/24 19:47		Kareem	OK
91	PB165145BS	LCS145	LCS	11/21/24 19:51		Kareem	OK
92	P4912-01	MBHHJ1	SAM	11/21/24 19:56	Not Use	Kareem	Not Ok
93	P4912-02	MBHHJ2	SAM	11/21/24 20:00	Not Use	Kareem	Not Ok
94	P4912-03	MBHHJ3	SAM	11/21/24 20:04	Not Use	Kareem	Not Ok
95	P4912-07	MBHHJ5	SAM	11/21/24 20:09	Not Use	Kareem	Not Ok
96	P4912-08	MBHHJ6	SAM	11/21/24 20:13	Not Use	Kareem	Not Ok
97	P4912-09	MBHHJ7	SAM	11/21/24 20:18	Not Use	Kareem	Not Ok
98	CCV045	CCV045	CCV	11/21/24 20:22		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 # LB133566

Review By	Sarabjit Jaswal	Review On	11/22/2024 4:49:16 AM
Supervise By	Mohan Bera	Supervise On	11/22/2024 4:49:50 AM

STD. NAME	STD REF.#
ICAL Standard	MP83134,MP83142,MP83140,MP83139,MP83138,MP83137,MP83136
ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

99	CCB045	CCB045	CCB	11/21/24 20:26		Kareem	OK
100	P4912-10	MBHHJ8	SAM	11/21/24 20:31	Not Use	Kareem	Not Ok
101	P4912-11	MBHHJ9	SAM	11/21/24 20:35	Not Use	Kareem	Not Ok
102	P4912-12	MBHHK0	SAM	11/21/24 20:40	Not Use	Kareem	Not Ok
103	P4912-13	MBHHK1	SAM	11/21/24 20:44	Not Use	Kareem	Not Ok
104	P4912-14	MBHHK2	SAM	11/21/24 20:48	Not Use	Kareem	Not Ok
105	P4912-15	MBHHK3	SAM	11/21/24 20:53	Not Use	Kareem	Not Ok
106	P4912-16	MBHHL8	SAM	11/21/24 20:57	Not Use	Kareem	Not Ok
107	P4912-17	MBHHL9	SAM	11/21/24 21:02	Not Use	Kareem	Not Ok
108	P4912-18	MBHHM0	SAM	11/21/24 21:06	Not Use	Kareem	Not Ok
109	P4912-19	MBHHM1	SAM	11/21/24 21:10	Not Use	Kareem	Not Ok
110	P4912-20	MBHHM2	SAM	11/21/24 21:15	Not Use	Kareem	Not Ok
111	P4912-21	MBHHM3	SAM	11/21/24 21:19	Not Use	Kareem	Not Ok
112	P4912-22	MBHHM4	SAM	11/21/24 21:23	Not Use	Kareem	Not Ok
113	PB165139BL	PBS139	MB	11/21/24 21:28	Not Use	Kareem	Not Ok
114	CCV046	CCV046	CCV	11/21/24 21:32		Kareem	OK
115	CCB046	CCB046	CCB	11/21/24 21:37		Kareem	OK
116	PB165139BS	LCS139	LCS	11/21/24 21:41	Not Use	Kareem	Not Ok
117	P4907-04DL	MBHHE4	SAM	11/21/24 21:46	Not Use	Kareem	Not Ok
118	P4907-05DL	MBHHE5	SAM	11/21/24 21:50	Not Use	Kareem	Not 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 # LB133566

Review By	Sarabjit Jaswal	Review On	11/22/2024 4:49:16 AM
Supervise By	Mohan Bera	Supervise On	11/22/2024 4:49:50 AM

STD. NAME	STD REF.#
ICAL Standard	MP83134,MP83142,MP83140,MP83139,MP83138,MP83137,MP83136
ICV Standard	MP83143
CCV Standard	MP83146
ICSA Standard	MP83144,MP83145
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83148,MP83149

119	P4906-18DL	MBHHA3	SAM	11/21/24 21:55	Not Use	Kareem	Not Ok
120	P4906-19DL	MBHHA4	SAM	11/21/24 22:00	Not Use	Kareem	Not Ok
121	P4906-02A	MBHHB3A	PS	11/21/24 22:04	PS For Zn	Kareem	OK
122	P4907-01A	MBHHE1A	PS	11/21/24 22:08	Not use	Kareem	Not Ok
123	P4913-15A	MBHHH6A	PS	11/21/24 22:13	PS For Se - 0.07 - MP83152 - 10 ml Sample	Kareem	OK
124	CCV047	CCV047	CCV	11/21/24 22:17	%RSD Fail For Al,Ba,Be,Ca,Cu,Fe,Mg,Mn, K,Na,V	Kareem	OK
125	CCB047	CCB047	CCB	11/21/24 22:22		Kareem	OK



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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: IMPORTANT: TRANSMIT YOUR SHIPPING DATA AND PRINT A MANIFEST:
At the end of each shipping day, you should perform the FedEx Ground End of Day Close procedure to transmit your shipping data to FedEx. To do so, click on the Ground End of Day Close Button. If required, print the pickup manifest that appears. A printed manifest is required to be tendered along with your packages if they are being picked up by FedEx Ground. If you are dropping your packages off at a FedEx drop off location, the manifest is not required.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide and applicable tariff, available upon request. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations, including limitations on our liability, can be found in the current FedEx Service Guide and applicable tariff apply. In no event shall FedEx Ground be liable for any special, incidental, or consequential damages, including, without limitation, loss of profit, loss to the intrinsic value of the package, loss of sale, interest income or attorney's fees. Recovery cannot exceed actual documented loss. Items of extraordinary value are subject to separate limitations of liability set forth in the Service Guide and tariff. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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

Login Summary Report

Order ID :	P4913	Order Date :	11/19/2024 9:57:00 AM	Project Mgr :	Deepak
Client :	USEPA CLP SMO	Project :	51879	Report Type :	USEPA CLP
Contact :	Anita Kapadia	Receive Date :	11/19/2024 9:57:00 AM	EDD Type :	EPA CLP
Date Sign Off :	11/19/2024 11:55:26 AM				

Sample ID	Client ID	Matrix	Sampling Date	Test	Test Group	Method	TAT Days	Fax Due Date	HC Due Date
P4913-01	MBHHG2	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-02	MBHHG3	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-03	MBHHG4	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-04	MBHHG5	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-05	MBHHG6	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-06	MBHHG7	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-07	MBHHG8	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-08	MBHHG9	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-09	MBHHH0	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-10	MBHHH1	Solid	11/15/2024						
				Metals CLP Full		SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids		Chemtech -SOP	15	12/24/2024	12/24/2024

P4913-11	MBHHH2	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-12	MBHHH3	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-13	MBHHH4	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-14	MBHHH5	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-15	MBHHH6	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-16	MBHHH6D	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/10/2024	12/10/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-17	MBHHH6S	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-18	MBHHH7	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-19	MBHHH8	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-20	MBHHH9	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024
P4913-21	MBHHJ0	Solid	11/15/2024					
				Metals CLP Full	SFAM_AES	15	12/24/2024	12/24/2024
				Percent Solids	Chemtech -SOP	15	12/24/2024	12/24/2024

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PB165145 **WorkList ID :** 185615 **Department :** Digestion **Date :** 11-20-2024 12:35:00

476

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4913-01	MBHHG2	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-02	MBHHG3	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-03	MBHHG4	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-04	MBHHG5	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-05	MBHHG6	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-06	MBHHG7	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-07	MBHHG8	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-08	MBHHG9	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-09	MBHHH0	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-10	MBHHH1	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-11	MBHHH2	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-12	MBHHH3	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-13	MBHHH4	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-14	MBHHH5	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-15	MBHHH6	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-16	MBHHH6D	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-17	MBHHH6S	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-18	MBHHH7	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-19	MBHHH8	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-20	MBHHH9	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES
P4913-21	MBHHJ0	Solid	Metals CLP Full	Cool 4 deg C	USEP01	C12	11/15/2024	SFAM_AES

Date/Time 11/20/24 12:40

Raw Sample Received by: JSP (Met dig)

Raw Sample Relinquished by: SM

Date/Time 11/20/24 18:40.

Raw Sample Received by: SM

Raw Sample Relinquished by: JSP (Met dig)