EPA SAMPLE NO.

ME28R5

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-01

% Solids: 78.7 Date Received: 12/10/2024

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	11000		12/20/2024	1921
7440-70-2	Calcium	32000	*	12/20/2024	1921
7439-89-6	Iron	63000		12/20/2024	1921
7439-95-4	Magnesium	7300		12/20/2024	1921
7440-09-7	Potassium	2100		12/20/2024	1921
7440-23-5	Sodium	210	J	12/20/2024	1921

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

Comments:

EPA SAMPLE NO.

ME28R6

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-02

% Solids: 78.3 Date Received: 12/10/2024

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	9400		12/20/2024	1925
7440-70-2	Calcium	35000	*	12/20/2024	1925
7439-89-6	Iron	72000		12/20/2024	1925
7439-95-4	Magnesium	7700		12/20/2024	1925
7440-09-7	Potassium	2100		12/20/2024	1925
7440-23-5	Sodium	200	J	12/20/2024	1925

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

Comments:

EPA SAMPLE NO.

ME28R7

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-03

% Solids: 84.3 Date Received: 12/10/2024

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	7900		12/20/2024	1929
7440-70-2	Calcium	73000	D*	12/23/2024	1500
7439-89-6	Iron	17000		12/20/2024	1929
7439-95-4	Magnesium	20000		12/20/2024	1929
7440-09-7	Potassium	950		12/20/2024	1929
7440-23-5	Sodium	440	U	12/20/2024	1929

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

Comments:

EPA SAMPLE NO.

ME28R8

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-04

% Solids: 86.6 Date Received: 12/10/2024

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	8300		12/20/2024	1932
7440-70-2	Calcium	130000	D*	12/23/2024	1504
7439-89-6	Iron	8100		12/20/2024	1932
7439-95-4	Magnesium	36000		12/20/2024	1932
7440-09-7	Potassium	480		12/20/2024	1932
7440-23-5	Sodium	180	J	12/20/2024	1932

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

Comments:

EPA SAMPLE NO.

ME28R9

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-05

% Solids: 83.4 Date Received: 12/10/2024

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		12/20/2024	1936
7440-70-2	Calcium	64000	*	12/20/2024	1936
7439-89-6	Iron	19000		12/20/2024	1936
7439-95-4	Magnesium	11000		12/20/2024	1936
7440-09-7	Potassium	740		12/20/2024	1936
7440-23-5	Sodium	130	J	12/20/2024	1936

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

Comments:

EPA SAMPLE NO.

ME28S0

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-06

% Solids: 58 Date Received: 12/10/2024

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	9900		12/20/2024	1940
7440-70-2	Calcium	140000	D*	12/23/2024	1508
7439-89-6	Iron	23000		12/20/2024	1940
7439-95-4	Magnesium	39000		12/20/2024	1940
7440-09-7	Potassium	1300		12/20/2024	1940
7440-23-5	Sodium	250	J	12/20/2024	1940

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

Comments:

EPA SAMPLE NO.

ME28S1

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-07

% Solids: 75.8 Date Received: 12/10/2024

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	8000		12/20/2024	1944
7440-70-2	Calcium	27000	*	12/20/2024	1944
7439-89-6	Iron	24000		12/20/2024	1944
7439-95-4	Magnesium	7200		12/20/2024	1944
7440-09-7	Potassium	1300		12/20/2024	1944
7440-23-5	Sodium	510	U	12/20/2024	1944

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

Comments:

EPA SAMPLE NO.

ME28S2

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-08

% Solids: 78.1 Date Received: 12/10/2024

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	8400		12/20/2024	1948
7440-70-2	Calcium	41000	*	12/20/2024	1948
7439-89-6	Iron	52000		12/20/2024	1948
7439-95-4	Magnesium	9700		12/20/2024	1948
7440-09-7	Potassium	1700		12/20/2024	1948
7440-23-5	Sodium	170	J	12/20/2024	1948

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

Comments:

EPA SAMPLE NO.

ME28S3

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-09

% Solids: 76.7 Date Received: 12/10/2024

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	8600		12/20/2024	1952
7440-70-2	Calcium	16000	*	12/20/2024	1952
7439-89-6	Iron	32000		12/20/2024	1952
7439-95-4	Magnesium	6400		12/20/2024	1952
7440-09-7	Potassium	930		12/20/2024	1952
7440-23-5	Sodium	530	U	12/20/2024	1952

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

Comments:

EPA SAMPLE NO.

ME28S4

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-10

% Solids: 82 Date Received: 12/10/2024

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	7000		12/20/2024	1955
7440-70-2	Calcium	23000	*	12/20/2024	1955
7439-89-6	Iron	23000		12/20/2024	1955
7439-95-4	Magnesium	10000		12/20/2024	1955
7440-09-7	Potassium	750		12/20/2024	1955
7440-23-5	Sodium	580	U	12/20/2024	1955

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

Comments:

EPA SAMPLE NO.

ME28S5

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-11

% Solids: 79.1 Date Received: 12/10/2024

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	8500		12/20/2024	1959
7440-70-2	Calcium	14000	*	12/20/2024	1959
7439-89-6	Iron	31000		12/20/2024	1959
7439-95-4	Magnesium	5000		12/20/2024	1959
7440-09-7	Potassium	800		12/20/2024	1959
7440-23-5	Sodium	430	U	12/20/2024	1959

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

Comments:

EPA SAMPLE NO.

ME28S6

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-12

% Solids: 76.5 Date Received: 12/10/2024

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	8700		12/20/2024	2003
7440-70-2	Calcium	11000	*	12/20/2024	2003
7439-89-6	Iron	32000		12/20/2024	2003
7439-95-4	Magnesium	4300		12/20/2024	2003
7440-09-7	Potassium	930		12/20/2024	2003
7440-23-5	Sodium	600	U	12/20/2024	2003

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

Comments:

EPA SAMPLE NO.

ME28S7

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-13

% Solids: 74.8 Date Received: 12/10/2024

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	8300		12/20/2024	2007
7440-70-2	Calcium	9800	*	12/20/2024	2007
7439-89-6	Iron	31000		12/20/2024	2007
7439-95-4	Magnesium	4000		12/20/2024	2007
7440-09-7	Potassium	940		12/20/2024	2007
7440-23-5	Sodium	470	U	12/20/2024	2007

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

Comments:

EPA SAMPLE NO.

ME28S8

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-14

% Solids: 76.3 Date Received: 12/10/2024

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	9000		12/20/2024	2011
7440-70-2	Calcium	11000	*	12/20/2024	2011
7439-89-6	Iron	40000		12/20/2024	2011
7439-95-4	Magnesium	4500		12/20/2024	2011
7440-09-7	Potassium	970		12/20/2024	2011
7440-23-5	Sodium	510	U	12/20/2024	2011

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

Comments:

EPA SAMPLE NO.

ME28S9

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-15

% Solids: 62.5 Date Received: 12/10/2024

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	16000		12/20/2024	2015
7440-70-2	Calcium	16000	*	12/20/2024	2015
7439-89-6	Iron	40000		12/20/2024	2015
7439-95-4	Magnesium	9600		12/20/2024	2015
7440-09-7	Potassium	2300		12/20/2024	2015
7440-23-5	Sodium	230	J	12/20/2024	2015

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

Comments:

EPA SAMPLE NO.

ME28T0

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-16

% Solids: 68.2 Date Received: 12/10/2024

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	9700		12/20/2024	2018
7440-70-2	Calcium	9600	*	12/20/2024	2018
7439-89-6	Iron	33000		12/20/2024	2018
7439-95-4	Magnesium	5300		12/20/2024	2018
7440-09-7	Potassium	1400		12/20/2024	2018
7440-23-5	Sodium	620	U	12/20/2024	2018

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

Comments:

EPA SAMPLE NO.

ME28T1

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-17

% Solids: 79.9 Date Received: 12/10/2024

Analytical Method: ICP_AES

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

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	5300		12/20/2024	2022
7440-70-2	Calcium	73000	*	12/20/2024	2022
7439-89-6	Iron	250000	D	12/23/2024	1511
7439-95-4	Magnesium	11000		12/20/2024	2022
7440-09-7	Potassium	280	J	12/20/2024	2022
7440-23-5	Sodium	490	J	12/20/2024	2022

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

Comments:

EPA SAMPLE NO.

ME28T2

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-18

% Solids: 74.1 Date Received: 12/10/2024

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	10000		12/20/2024	2026
7440-70-2	Calcium	18000	*	12/20/2024	2026
7439-89-6	Iron	22000		12/20/2024	2026
7439-95-4	Magnesium	7200		12/20/2024	2026
7440-09-7	Potassium	1100		12/20/2024	2026
7440-23-5	Sodium	610	U	12/20/2024	2026

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

Comments:

EPA SAMPLE NO.

ME28T3

FORM 1 - IN

INORGANIC ANALYSIS DATA SHEET

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

Lab Code: ACE Case No.: 51847 MA No. : SDG No.: ME28R5

Matrix: SOIL Lab Sample ID: P5233-19

% Solids: 70.3 Date Received: 12/10/2024

Analytical Method: ICP_AES

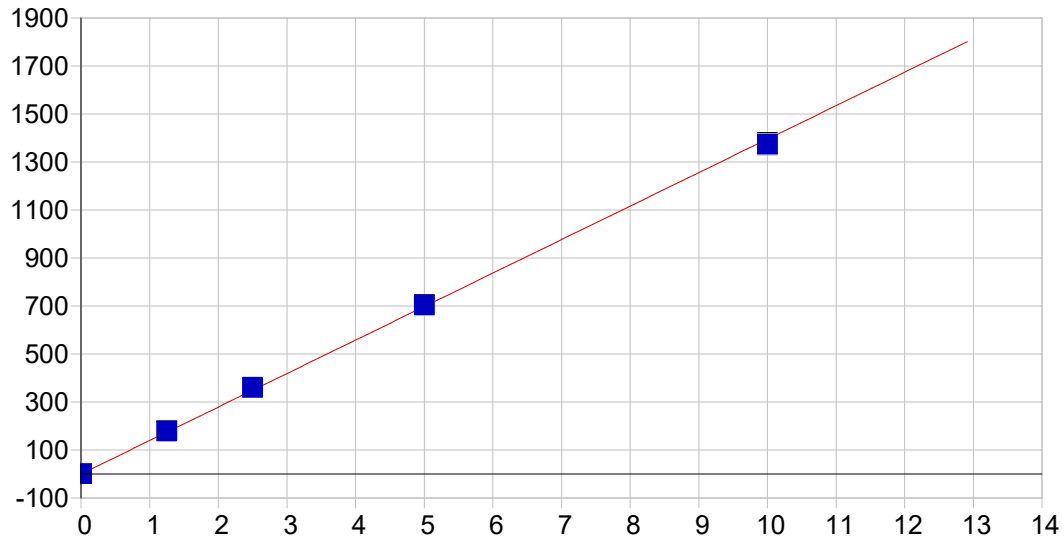
Concentration Units (µg/L, mg/L, mg/kg dry weight, µg, or µg/cm²): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7429-90-5	Aluminum	8100		12/20/2024	2037
7440-70-2	Calcium	71000	*	12/20/2024	2037
7439-89-6	Iron	120000	D	12/23/2024	1515
7439-95-4	Magnesium	11000		12/20/2024	2037
7440-09-7	Potassium	1200		12/20/2024	2037
7440-23-5	Sodium	390	J	12/20/2024	2037

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

Comments:

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



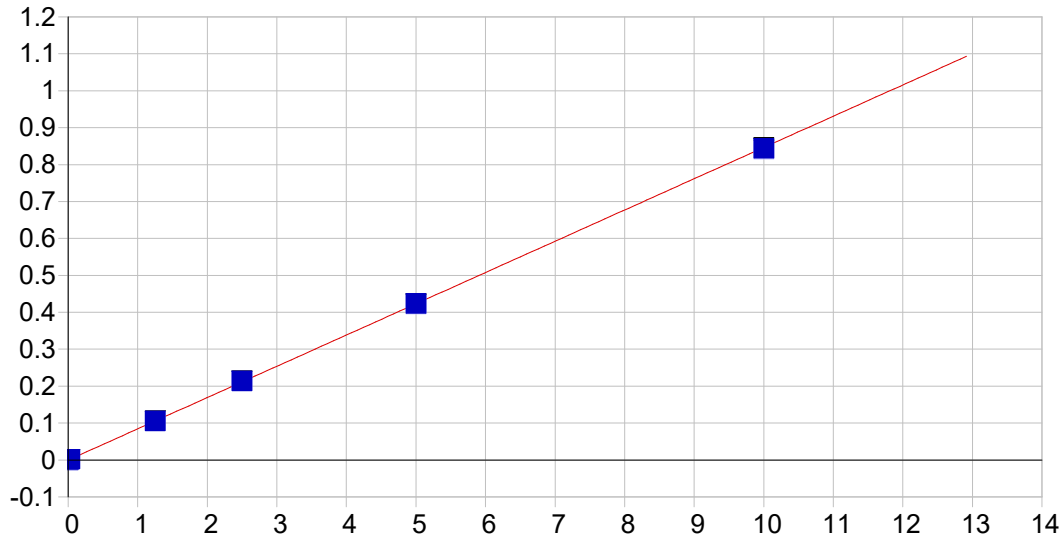
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A1 (Gain):	139.527252	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999838	Status:	OK.
Std Error of Est:	0.041962		
Predicted MDL:	0.005577		
Predicted MQL:	0.018590		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.13961	.234	1
S1	.01000	.01118	.001	11.8	1.4180	.037	1
S2	1.2500	1.2804	.030	2.43	177.78	.441	1
S3	2.5000	2.5785	.078	3.14	358.16	1.53	1
S4	5.0000	5.0426	.043	.852	700.51	1.39	1
S5	10.000	9.8473	-.153	-1.53	1368.0	6.94	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



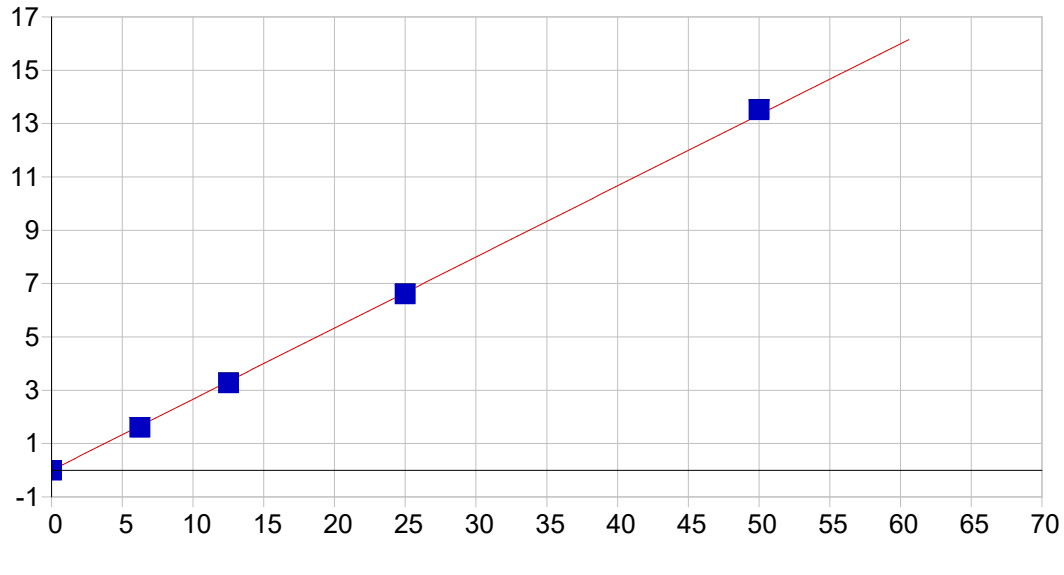
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A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999987	Status:	OK.
Std Error of Est:	0.000011		
Predicted MDL:	0.003029		
Predicted MQL:	0.010096		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00022	.000	1
S1	.02500	.02519	.000	.746	.00184	.000	1
S2	1.2500	1.2524	.002	.189	.10553	.001	1
S3	2.5000	2.5300	.030	1.20	.21343	.001	1
S4	5.0000	4.9996	-.000	-.008	.42195	.000	1
S5	10.000	9.9678	-.032	-.322	.84147	.003	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



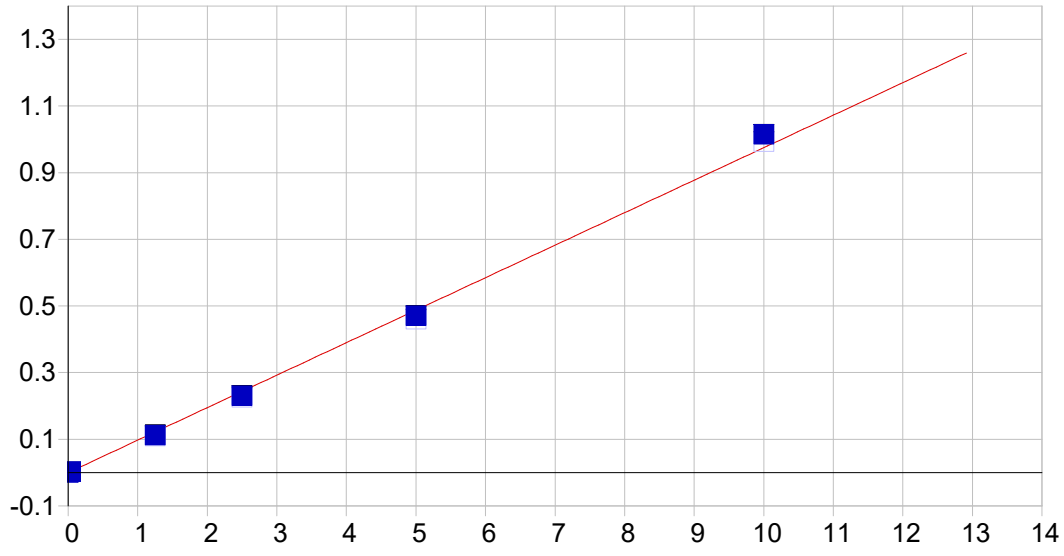
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A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999861	Status:	OK.
Std Error of Est:	0.000166		
Predicted MDL:	0.002382		
Predicted MQL:	0.007940		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00016	.000	1
S1	.01000	.00742	-.003	-25.8	.00212	.001	1
S2	6.2500	6.0156	-.234	-3.75	1.6019	.004	1
S3	12.500	12.261	-.239	-1.91	3.2648	.004	1
S4	25.000	24.772	-.228	-.911	6.5963	.010	1
S5	50.000	50.704	.704	1.41	13.501	.019	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



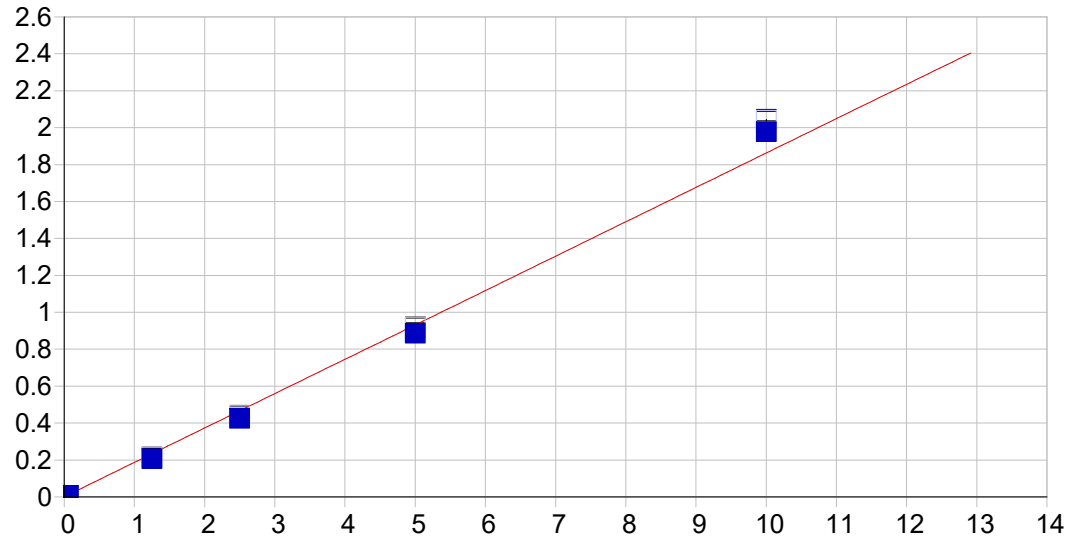
Se 196.090 {472}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000207	Re-Slope:	1.000000
A1 (Gain):	0.097523	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998947	Status:	OK.
Std Error of Est:	0.000137		
Predicted MDL:	0.003721		
Predicted MQL:	0.012404		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	-.00021	.000	1
S1	.03500	.02914	-.006	-16.7	.00263	.000	1
S2	1.2500	1.1550	-.095	-7.60	.10969	.000	1
S3	2.5000	2.3666	-.133	-5.34	.22510	.000	1
S4	5.0000	4.8274	-.173	-3.45	.45960	.001	1
S5	10.000	10.407	.407	4.07	.99278	.000	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



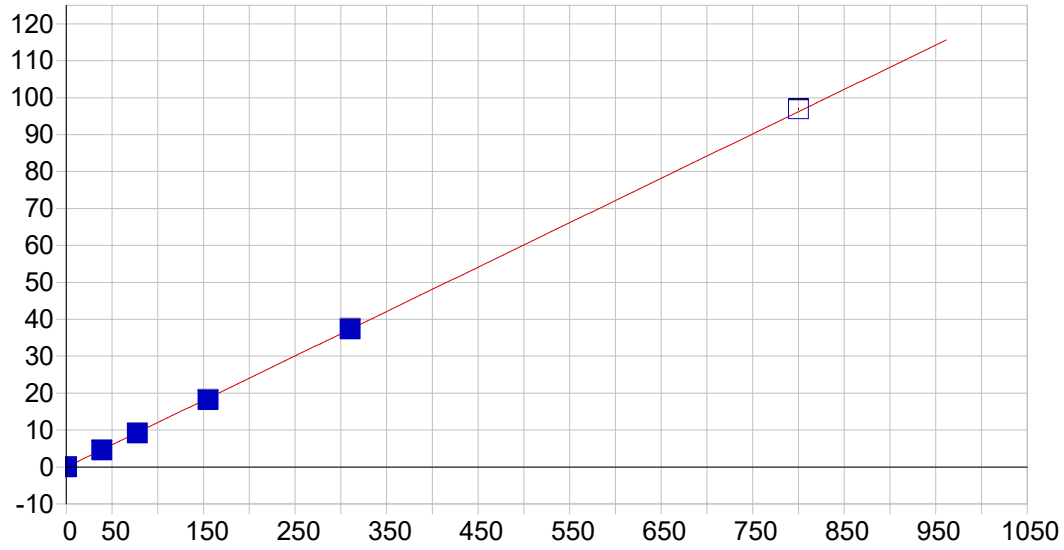
Sb 206.833 {463}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000823	Re-Slope:	1.000000
A1 (Gain):	0.186161	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.997822	Status:	OK.
Std Error of Est:	0.000523		
Predicted MDL:	0.002511		
Predicted MQL:	0.008370		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00083	.000	1
S1	.06000	.04933	-.011	-17.8	.01001	.000	1
S2	1.2500	1.1073	-.143	-11.4	.21473	.000	1
S3	2.5000	2.2778	-.222	-8.89	.44042	.002	1
S4	5.0000	4.7579	-.242	-4.84	.91768	.002	1
S5	10.000	10.617	.617	6.17	2.0396	.005	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



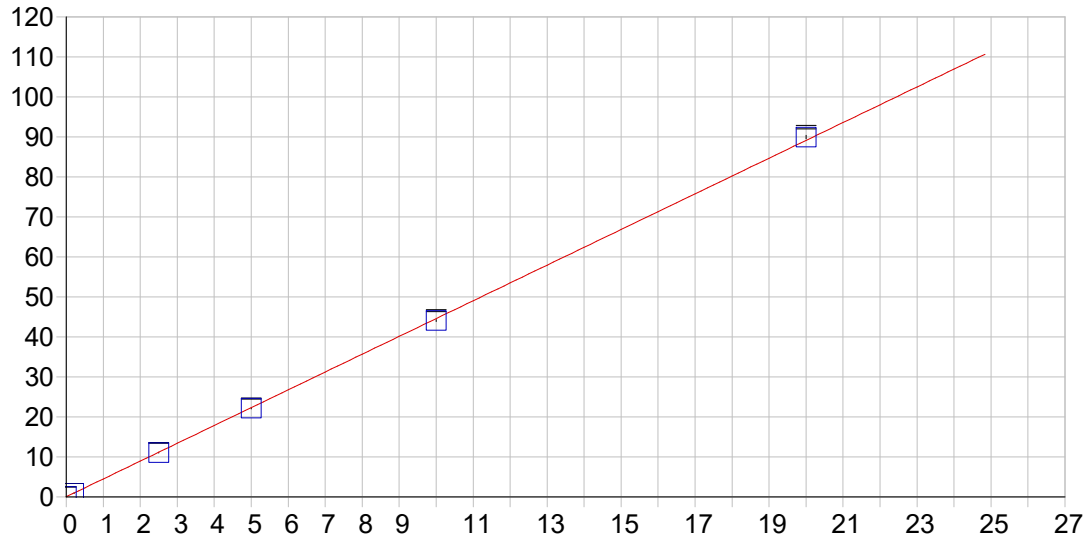
Al 396.152 { 85}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002445	Re-Slope:	1.000000
A1 (Gain):	0.120257	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999930	Status:	OK.
Std Error of Est:	0.000883		
Predicted MDL:	0.023684		
Predicted MQL:	0.078948		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	-.00244	.002	1
S1	.20000	.18779	-.012	-6.10	.02018	.003	1
S2	38.750	37.650	-1.10	-2.84	4.5303	.030	1
S3	77.500	75.936	-1.56	-2.02	9.1394	.044	1
S4	155.00	151.38	-3.62	-2.34	18.222	.085	1
S5	310.00	310.34	.345	.111	37.359	.188	1
S6	800.00	805.96	5.96	.745	96.919	.193	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



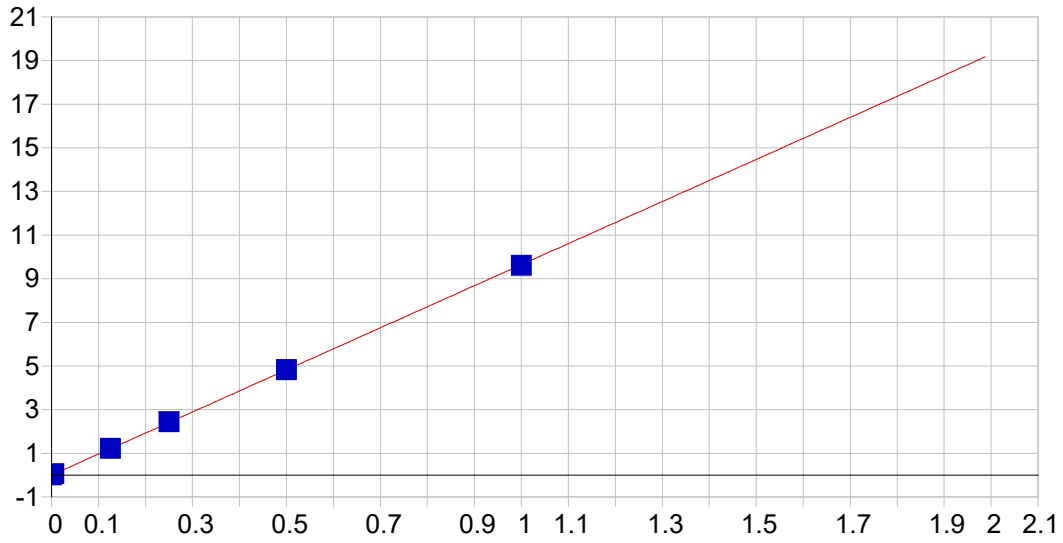
Ba 493.409 { 68}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.042860	Re-Slope:	1.000000
A1 (Gain):	4.454282	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999950	Status:	OK.
Std Error of Est:	0.004723		
Predicted MDL:	0.001278		
Predicted MQL:	0.004261		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.04287	.004	1
S1	.20000	.20162	.002	.812	.94095	.010	1
S2	2.5000	2.4660	-.034	-1.36	11.027	.075	1
S3	5.0000	4.9636	-.036	-.728	22.152	.118	1
S4	10.000	9.8850	-.115	-1.15	44.073	.221	1
S5	20.000	20.184	.184	.919	89.947	.466	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



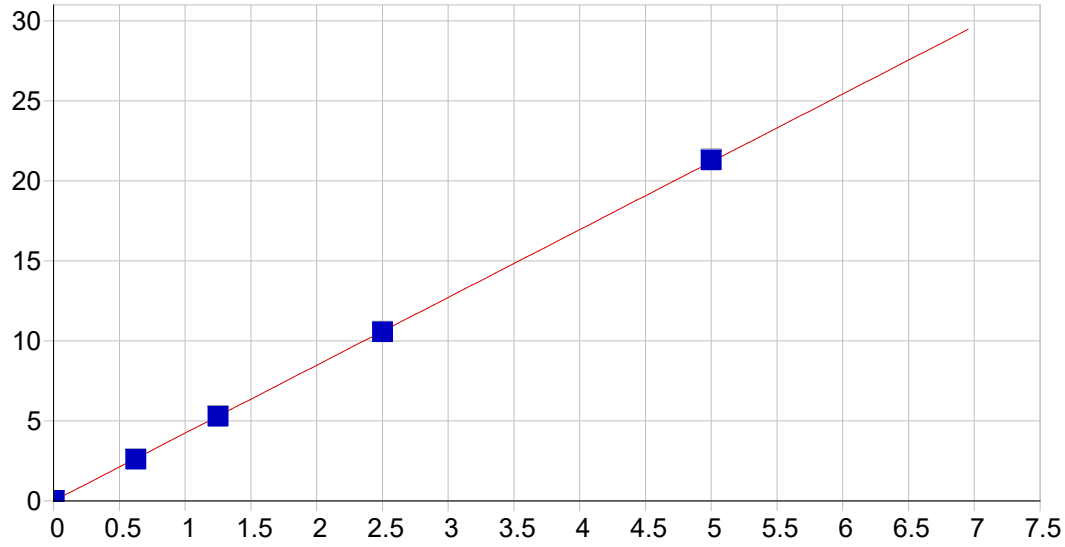
Be 234.861 {144}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000184	Re-Slope:	1.000000
A1 (Gain):	9.644659	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999984	Status:	OK.
Std Error of Est:	0.000204		
Predicted MDL:	0.000123		
Predicted MQL:	0.000409		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00019	.001	1
S1	.00500	.00516	.000	3.21	.04954	.001	1
S2	.12500	.12594	.001	.751	1.2089	.009	1
S3	.25000	.25294	.003	1.18	2.4283	.013	1
S4	.50000	.49945	-.001	-.111	4.7947	.012	1
S5	1.0000	.99652	-.003	-.348	9.5666	.012	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



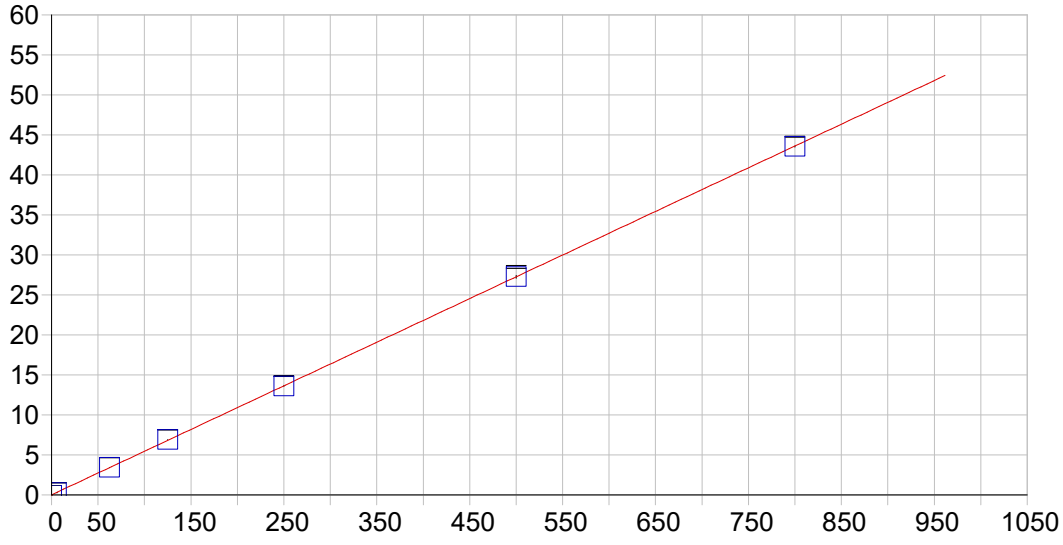
Cd 214.438 {457}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000221	Re-Slope:	1.000000
A1 (Gain):	4.238630	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999977	Status:	OK.
Std Error of Est:	0.000243		
Predicted MDL:	0.000101		
Predicted MQL:	0.000337		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00022	.000	1
S1	.00500	.00480	-.000	-3.91	.02066	.001	1
S2	.62500	.61228	-.013	-2.04	2.5995	.007	1
S3	1.2500	1.2464	-.004	-.286	5.2915	.010	1
S4	2.5000	2.4910	-.009	-.361	10.575	.017	1
S5	5.0000	5.0255	.026	.510	21.334	.030	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



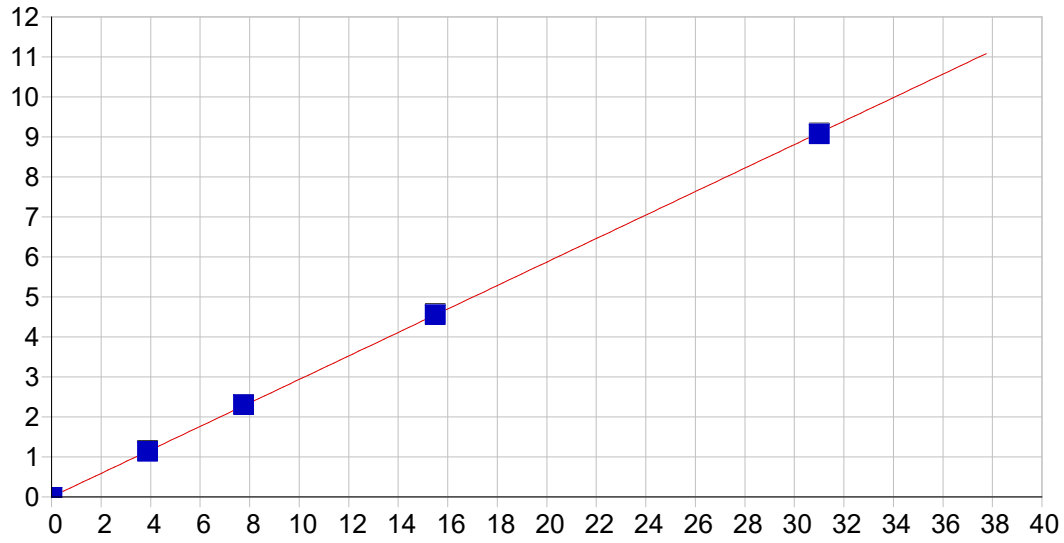
Ca 373.690 { 90}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006339	Re-Slope:	1.000000
A1 (Gain):	0.054510	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000668		
Predicted MDL:	0.034609		
Predicted MQL:	0.115364		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00009	-.000	.000	.00633	.003	1
S1	5.0000	5.0307	.031	.614	.28057	.003	1
S2	62.500	62.686	.186	.297	3.4234	.022	1
S3	125.00	126.48	1.48	1.18	6.9008	.018	1
S4	250.00	249.49	-.507	-.203	13.606	.066	1
S5	500.00	500.12	.121	.024	27.268	.171	1
S6	800.00	798.69	-1.31	-.164	43.543	.068	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



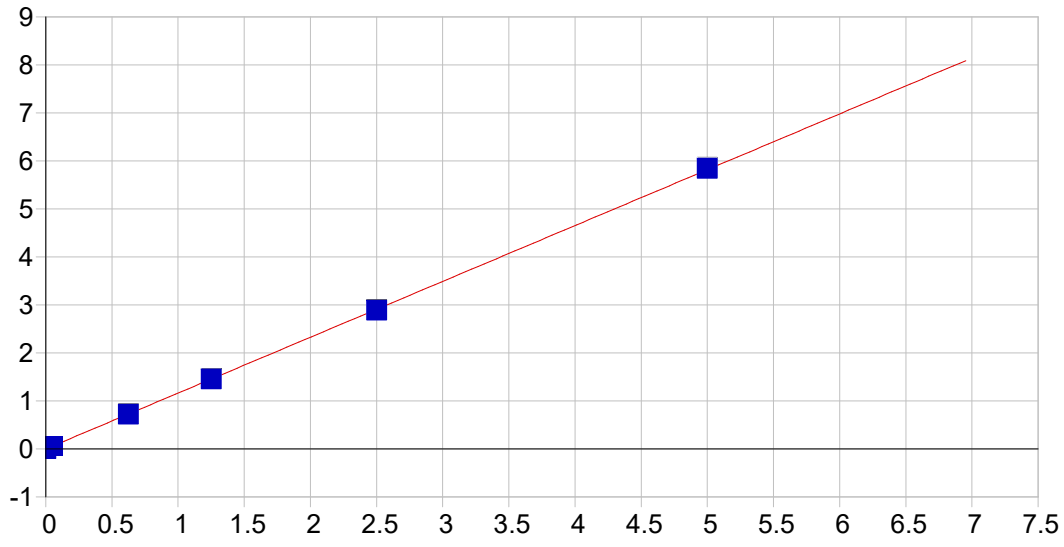
Cr 267.716 {126}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000286	Re-Slope:	1.000000
A1 (Gain):	0.293572	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000041		
Predicted MDL:	0.000799		
Predicted MQL:	0.002663		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00029	.000	1
S1	.01000	.00959	-.000	-4.13	.00310	.000	1
S2	3.8750	3.8717	-.003	-.085	1.1378	.011	1
S3	7.7500	7.8377	.088	1.13	2.3030	.005	1
S4	15.500	15.513	.013	.087	4.5581	.015	1
S5	31.000	30.903	-.097	-.314	9.0795	.016	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



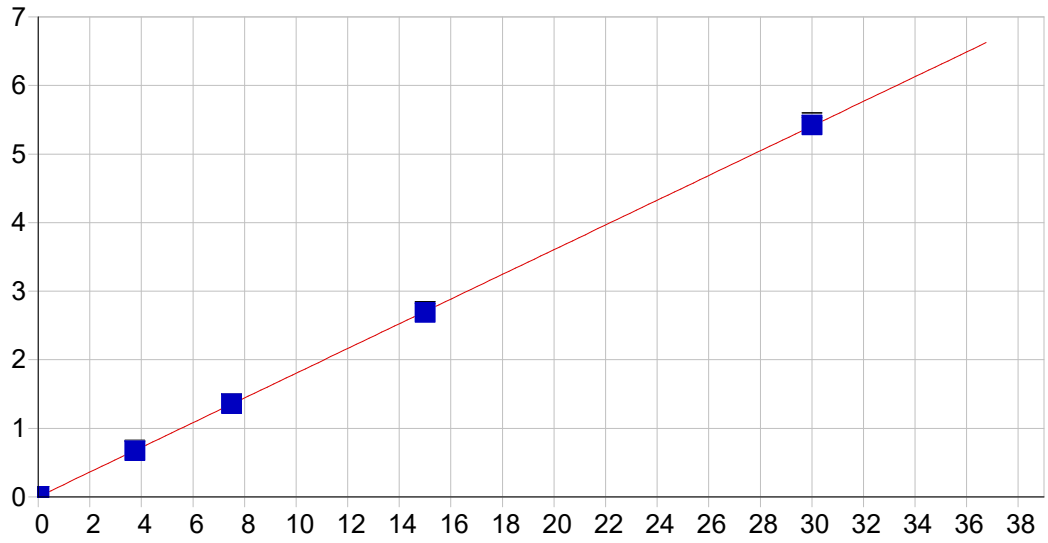
Co 228.616 {448}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000551	Re-Slope:	1.000000
A1 (Gain):	1.163432	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999986	Status:	OK.
Std Error of Est:	0.000162		
Predicted MDL:	0.000398		
Predicted MQL:	0.001328		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00055	.000	1
S1	.05000	.05008	.000	.168	.05791	.000	1
S2	.62500	.62107	-.004	-.629	.72437	.002	1
S3	1.2500	1.2524	.002	.192	1.4612	.003	1
S4	2.5000	2.4810	-.019	-.761	2.8953	.007	1
S5	5.0000	5.0205	.020	.409	5.8592	.007	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



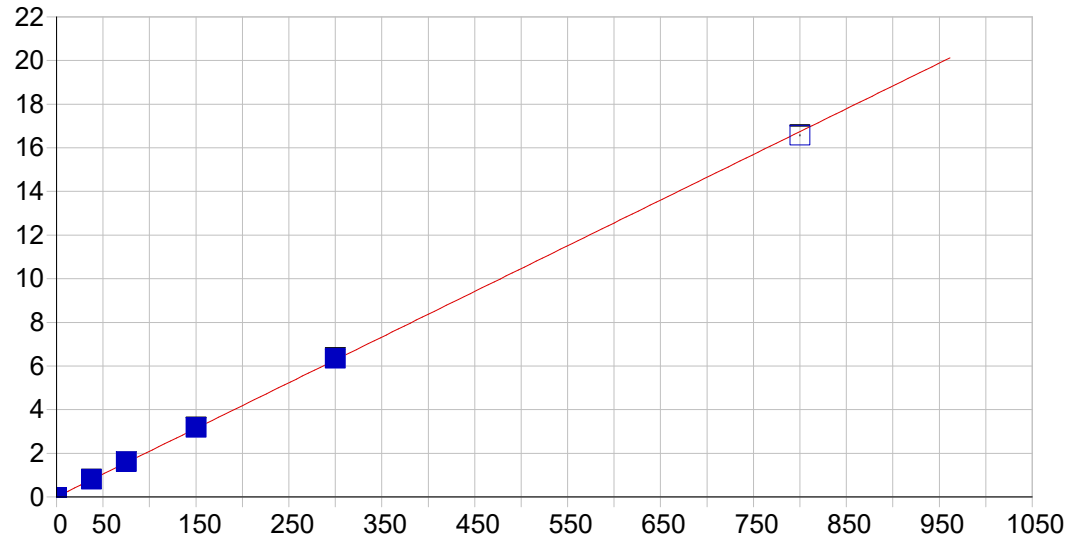
Cu 324.754 {104}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001749	Re-Slope:	1.000000
A1 (Gain):	0.180195	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999988	Status:	OK.
Std Error of Est:	0.000041		
Predicted MDL:	0.007783		
Predicted MQL:	0.025944		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00175	.001	1
S1	.02500	.02292	-.002	-8.30	.00587	.001	1
S2	3.7500	3.7128	-.037	-.991	.67071	.009	1
S3	7.5000	7.5318	.032	.424	1.3588	.004	1
S4	15.000	14.918	-.082	-.545	2.6896	.011	1
S5	30.000	30.089	.089	.297	5.4231	.032	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



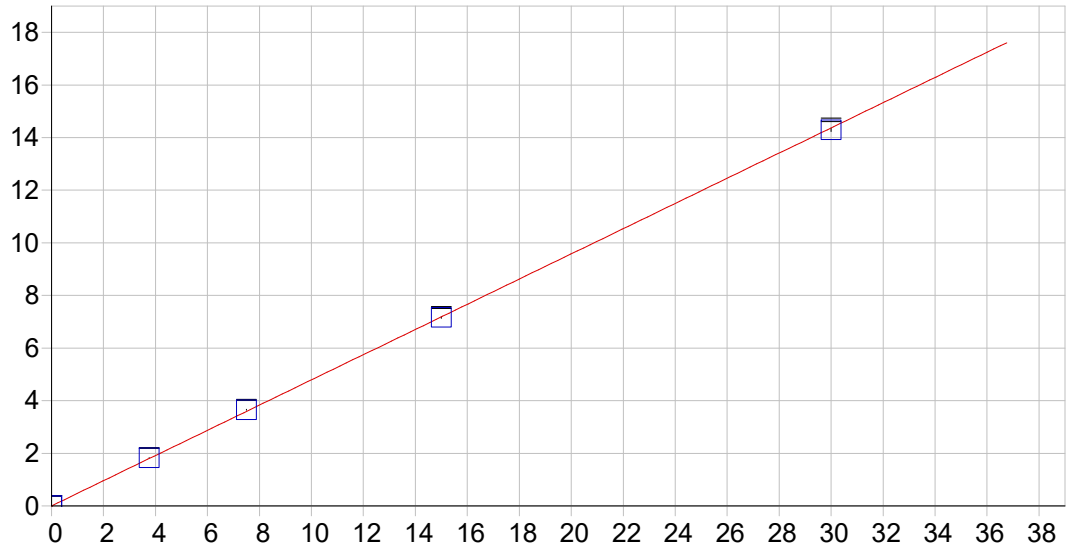
Fe 259.837 {130}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000223	Re-Slope:	1.000000
A1 (Gain):	0.020928	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999919	Status:	OK.
Std Error of Est:	0.000116		
Predicted MDL:	0.033293		
Predicted MQL:	0.110976		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	.00022	.000	1
S1	.10000	.10151	.002	1.51	.00235	.000	1
S2	37.500	38.570	1.07	2.85	.80762	.005	1
S3	75.000	76.916	1.92	2.55	1.6103	.003	1
S4	150.00	151.94	1.94	1.29	3.1807	.017	1
S5	300.00	303.16	3.16	1.05	6.3463	.038	1
S6	800.00	791.91	-8.09	-1.01	16.574	.026	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



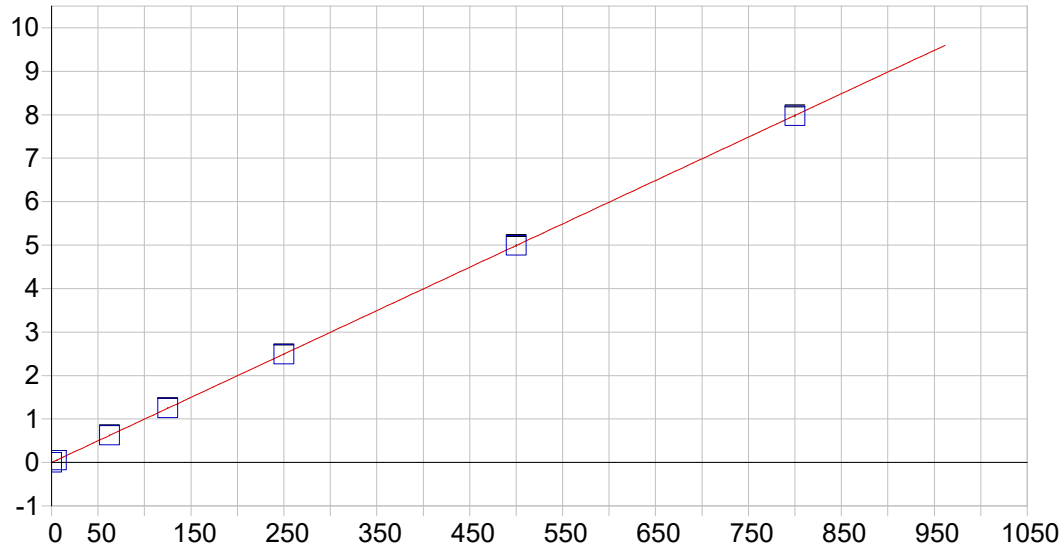
Mn 257.610 {131}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000601	Re-Slope:	1.000000
A1 (Gain):	0.478988	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999963	Status:	OK.
Std Error of Est:	0.000147		
Predicted MDL:	0.001288		
Predicted MQL:	0.004293		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00060	.000	1
S1	.01500	.01597	.001	6.47	.00825	.000	1
S2	3.7500	3.8148	.065	1.73	1.8279	.015	1
S3	7.5000	7.6260	.126	1.68	3.6534	.022	1
S4	15.000	14.960	-.040	-.268	7.1662	.035	1
S5	30.000	29.848	-.152	-.505	14.298	.068	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



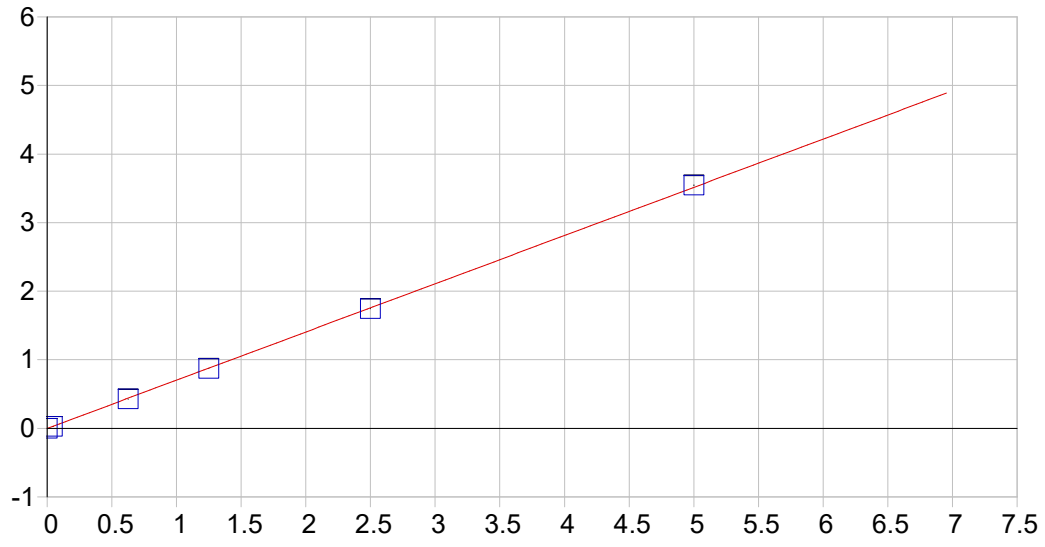
Mg 279.079 {121}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001370	Re-Slope:	1.000000
A1 (Gain):	0.009981	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999994	Status:	OK.
Std Error of Est:	0.000117		
Predicted MDL:	0.089420		
Predicted MQL:	0.298067		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00027	-.000	.000	-.00137	.000	1
S1	5.0000	5.2254	.225	4.51	.05079	.001	1
S2	62.500	62.929	.429	.686	.62675	.004	1
S3	125.00	125.54	.542	.433	1.2517	.008	1
S4	250.00	249.21	-.788	-.315	2.4861	.011	1
S5	500.00	500.52	.519	.104	4.9945	.022	1
S6	800.00	799.07	-.926	-.116	7.9745	.019	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



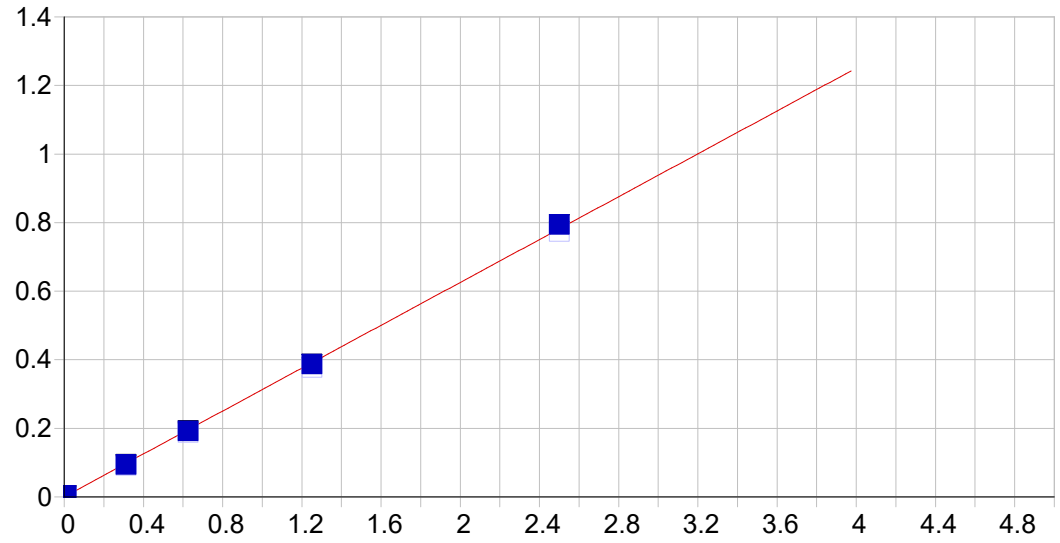
Ni 231.604 {446}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000784	Re-Slope:	1.000000
A1 (Gain):	0.703093	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999939	Status:	OK.
Std Error of Est:	0.000185		
Predicted MDL:	0.000683		
Predicted MQL:	0.002275		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00078	.000	1
S1	.04000	.03808	-.002	-4.81	.02599	.000	1
S2	.62500	.60672	-.018	-2.93	.42579	.000	1
S3	1.2500	1.2427	-.007	-.583	.87295	.001	1
S4	2.5000	2.4840	-.016	-.640	1.7457	.004	1
S5	5.0000	5.0435	.044	.870	3.5453	.005	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



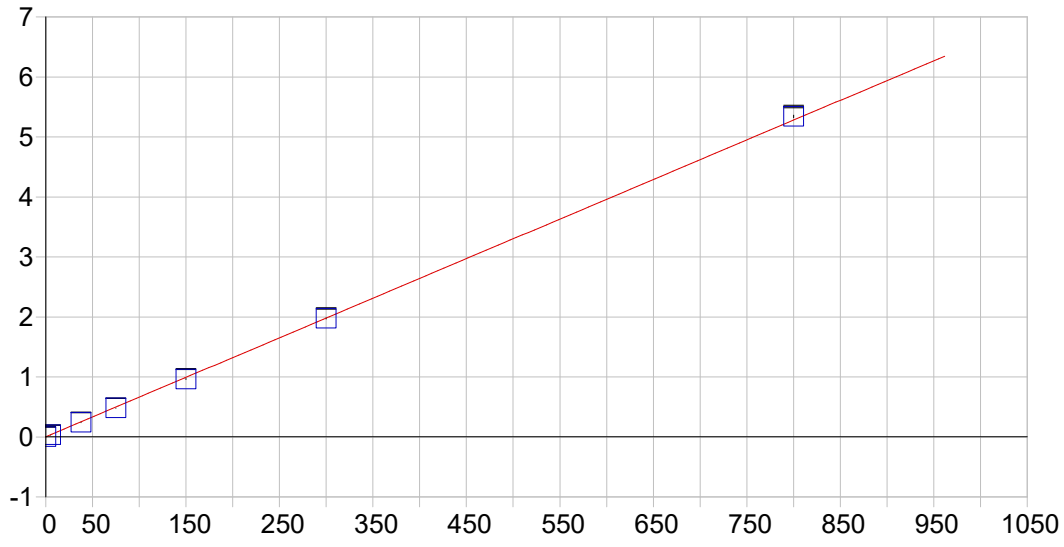
Ag 328.068 {103}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000540	Re-Slope:	1.000000
A1 (Gain):	0.312554	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999824	Status:	OK.
Std Error of Est:	0.000048		
Predicted MDL:	0.001337		
Predicted MQL:	0.004458		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00054	.000	1
S1	.01000	.00945	-.001	-5.50	.00349	.000	1
S2	.31250	.29886	-.014	-4.36	.09137	.001	1
S3	.62500	.61409	-.011	-1.75	.18732	.000	1
S4	1.2500	1.2363	-.014	-1.09	.37665	.001	1
S5	2.5000	2.5388	.039	1.55	.77341	.000	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



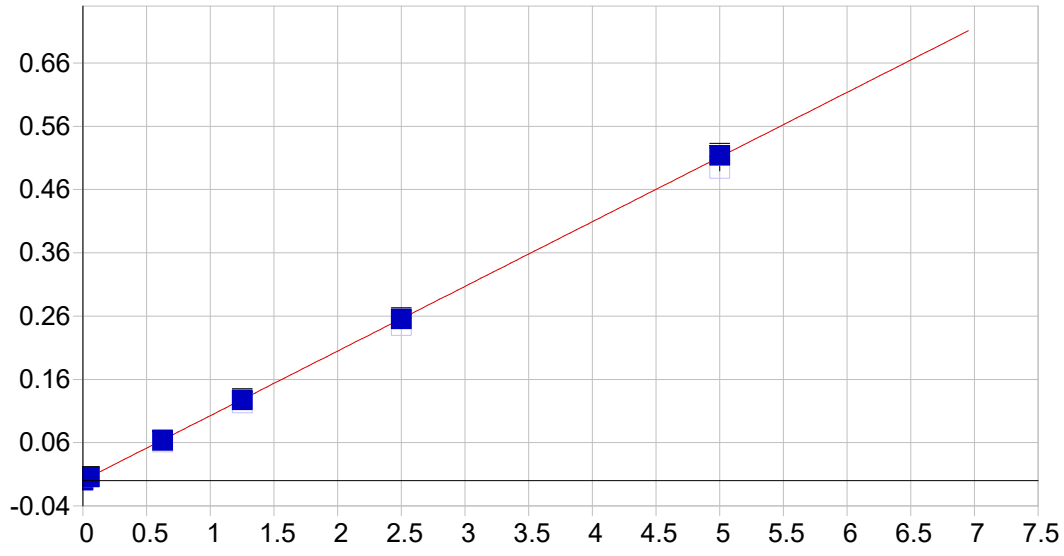
Na 818.326 { 41}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002880	Re-Slope:	1.000000
A1 (Gain):	0.006596	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999852	Status:	OK.
Std Error of Est:	0.000351		
Predicted MDL:	0.733718		
Predicted MQL:	2.445728		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00091	.001	.000	.00289	.006	1
S1	5.0000	4.5293	-.471	-9.41	.03275	.003	1
S2	37.500	36.076	-1.42	-3.80	.24083	.006	1
S3	75.000	72.708	-2.29	-3.06	.48243	.003	1
S4	150.00	145.80	-4.20	-2.80	.96451	.010	1
S5	300.00	298.85	-1.15	-.385	1.9739	.011	1
S6	800.00	809.54	9.54	1.19	5.3423	.020	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



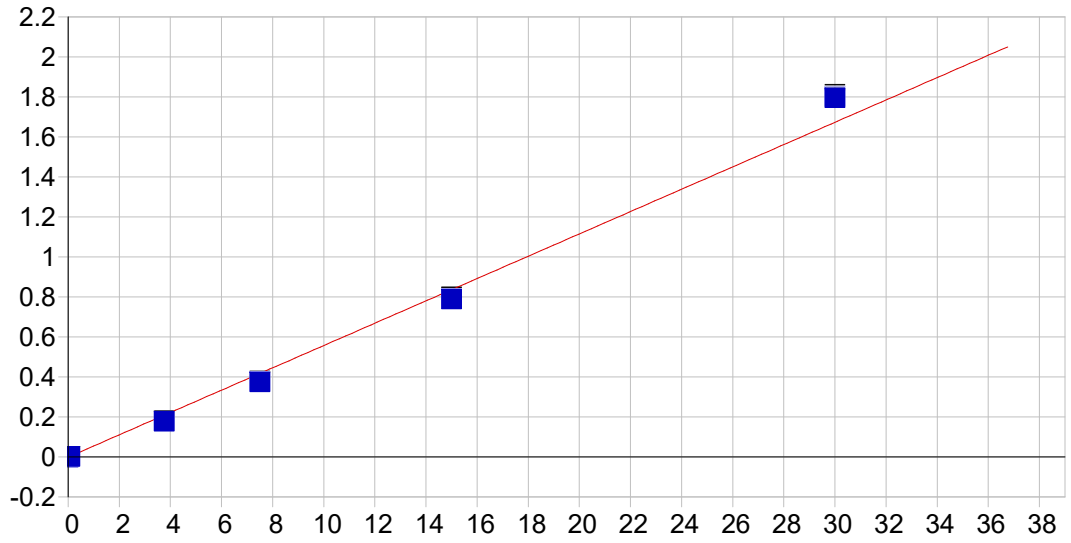
V 292.402 {115}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000332	Re-Slope:	1.000000
A1 (Gain):	0.102217	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999978	Status:	OK.
Std Error of Est:	0.000017		
Predicted MDL:	0.008579		
Predicted MQL:	0.028596		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00033	.001	1
S1	.05000	.05215	.002	4.31	.00565	.001	1
S2	.62500	.61648	-.009	-1.36	.06079	.001	1
S3	1.2500	1.2414	-.009	-.691	.12210	.002	1
S4	2.5000	2.4927	-.007	-.291	.24489	.002	1
S5	5.0000	5.0222	.022	.444	.49320	.004	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



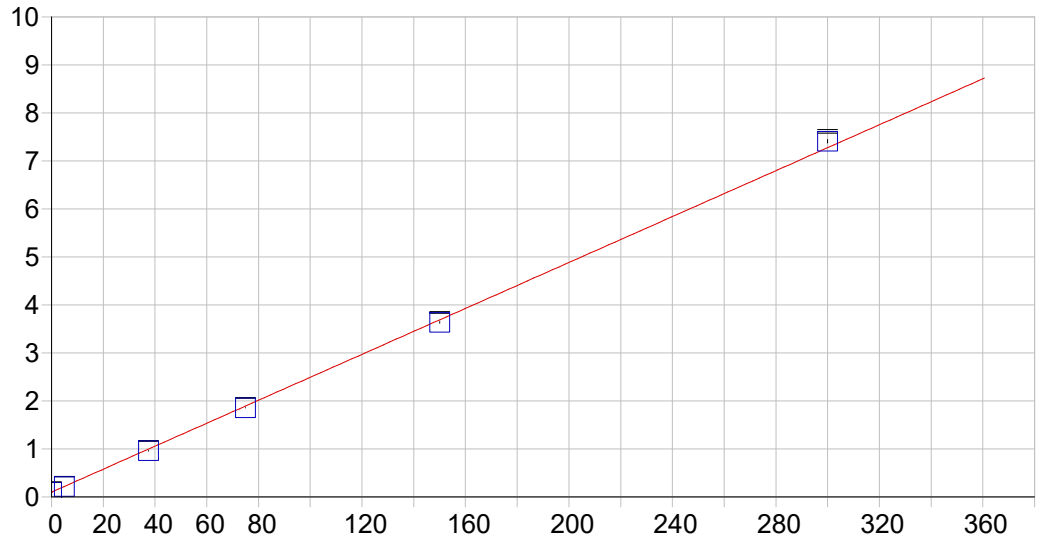
Zn 213.856 {158}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001141	Re-Slope:	1.000000
A1 (Gain):	0.055813	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.996801	Status:	OK.
Std Error of Est:	0.000320		
Predicted MDL:	0.009056		
Predicted MQL:	0.030186		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	-.00114	.001	1
S1	.06000	.04451	-.015	-25.8	.00135	.000	1
S2	3.7500	3.2116	-.538	-14.4	.17913	.002	1
S3	7.5000	6.7371	-.763	-10.2	.37692	.003	1
S4	15.000	14.142	-.858	-5.72	.79229	.008	1
S5	30.000	32.174	2.17	7.25	1.8028	.009	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



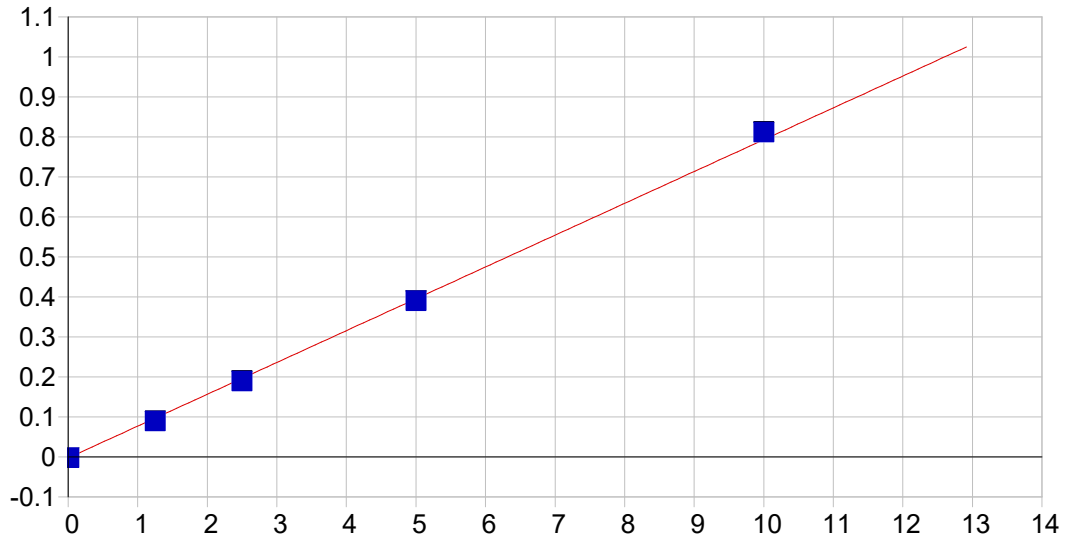
K 769.896 { 44}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.100005	Re-Slope:	1.000000
A1 (Gain):	0.023917	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999791	Status:	OK.
Std Error of Est:	0.001008		
Predicted MDL:	0.153613		
Predicted MQL:	0.512043		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00048	.000	.000	.10002	.004	1
S1	5.0000	4.8074	-.193	-3.85	.21499	.004	1
S2	37.500	35.960	-1.54	-4.11	.96007	.006	1
S3	75.000	73.446	-1.55	-2.07	1.8566	.005	1
S4	150.00	147.77	-2.23	-1.48	3.6344	.017	1
S5	300.00	305.51	5.51	1.84	7.4070	.037	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



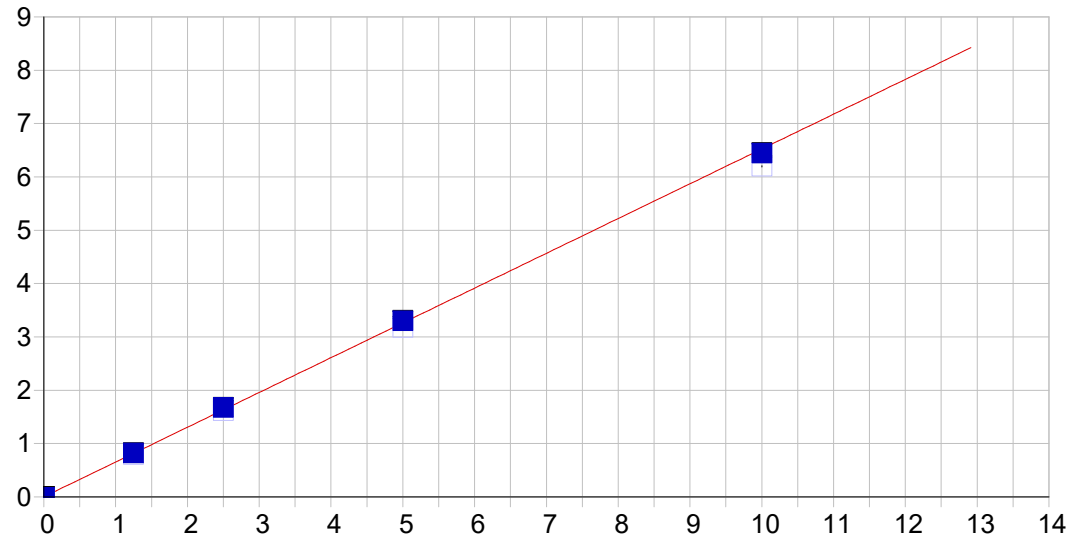
P 177.495 {490}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002541	Re-Slope:	1.000000
A1 (Gain):	0.079556	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999531	Status:	OK.
Std Error of Est:	0.000041		
Predicted MDL:	0.002487		
Predicted MQL:	0.008290		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00254	.000	1
S1	.01000	.00668	-.003	-33.2	-.00201	.000	1
S2	1.2500	1.1579	-.092	-7.37	.08943	.000	1
S3	2.5000	2.4135	-.087	-3.46	.18917	.001	1
S4	5.0000	4.9389	-.061	-1.22	.38980	.001	1
S5	10.000	10.243	.243	2.43	.81120	.001	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



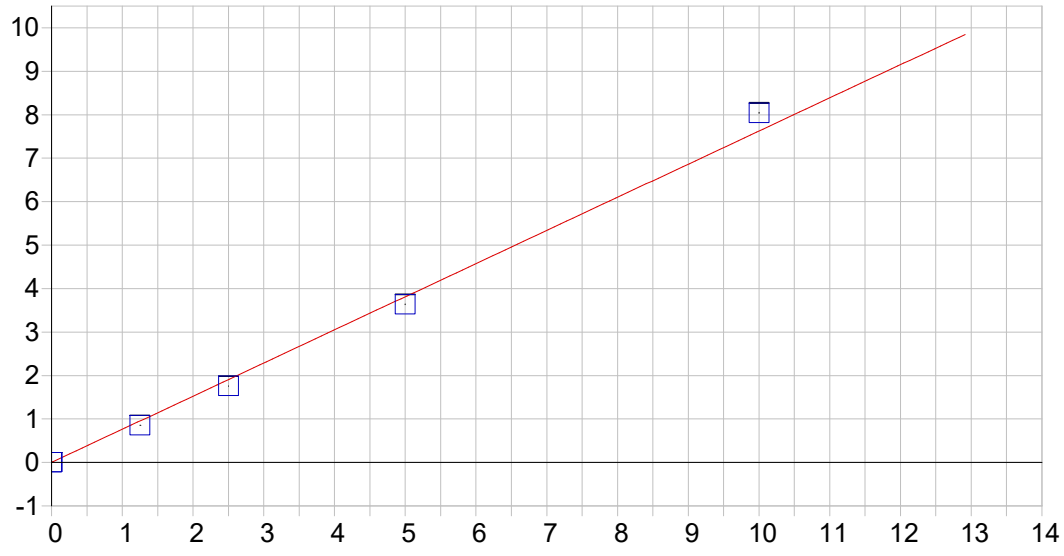
B 249.678 {135}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001529	Re-Slope:	1.000000
A1 (Gain):	0.652227	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999676	Status:	OK.
Std Error of Est:	0.000268		
Predicted MDL:	0.002480		
Predicted MQL:	0.008268		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00153	.001	1
S1	.01000	.00137	-.009	-86.3	.00239	.001	1
S2	1.2500	1.2592	.009	.733	.79178	.005	1
S3	2.5000	2.5639	.064	2.56	1.6118	.006	1
S4	5.0000	5.0565	.056	1.13	3.1755	.014	1
S5	10.000	9.8794	-.121	-1.21	6.1971	.014	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



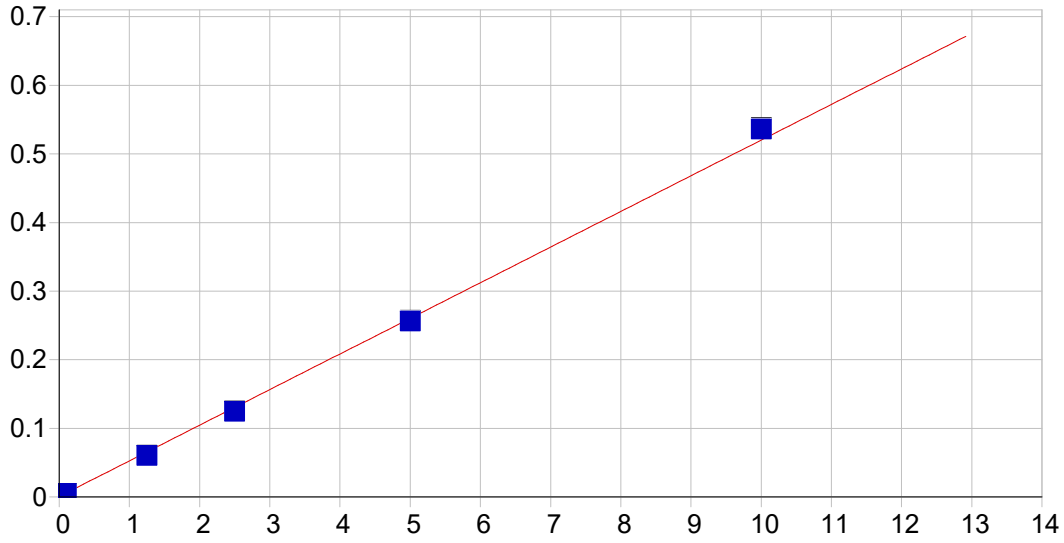
Mo 202.030 {467}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000218	Re-Slope:	1.000000
A1 (Gain):	0.762505	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998177	Status:	OK.
Std Error of Est:	0.000773		
Predicted MDL:	0.000493		
Predicted MQL:	0.001643		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00022	.000	1
S1	.01000	.00879	-.001	-12.1	.00692	.000	1
S2	1.2500	1.1220	-.128	-10.2	.85573	.001	1
S3	2.5000	2.3062	-.194	-7.75	1.7587	.004	1
S4	5.0000	4.7743	-.226	-4.51	3.6407	.008	1
S5	10.000	10.549	.549	5.49	8.0437	.011	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



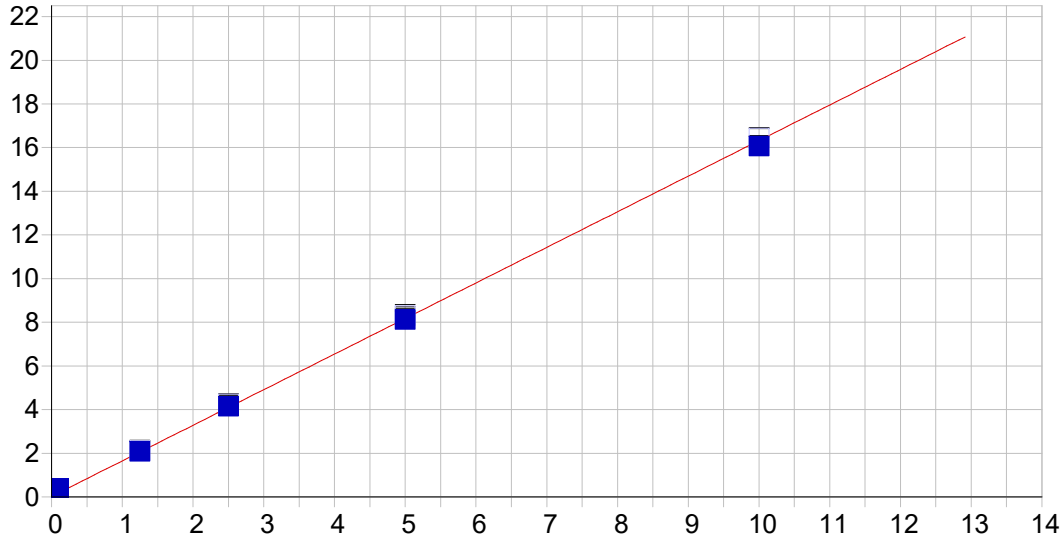
S 182.034 {485}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000602	Re-Slope:	1.000000
A1 (Gain):	0.051945	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999332	Status:	OK.
Std Error of Est:	0.000101		
Predicted MDL:	0.004446		
Predicted MQL:	0.014819		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00060	.000	1
S1	.10000	.08812	-.012	-11.9	.00518	.000	1
S2	1.2500	1.1478	-.102	-8.17	.06043	.000	1
S3	2.5000	2.3885	-.111	-4.46	.12509	.000	1
S4	5.0000	4.9197	-.080	-1.61	.25699	.001	1
S5	10.000	10.306	.306	3.06	.53761	.001	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



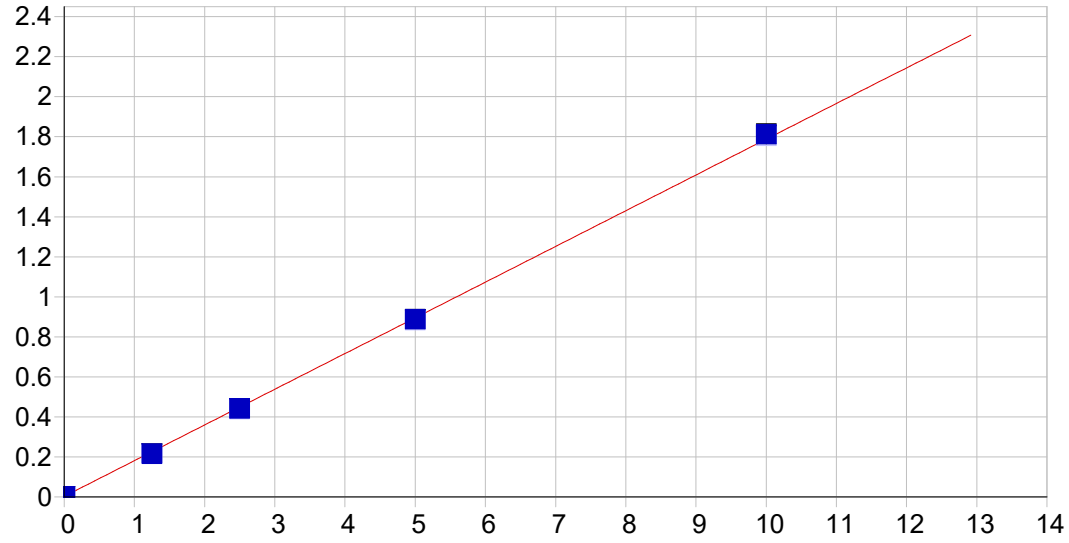
Si 251.611 {134}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.021460	Re-Slope:	1.000000
A1 (Gain):	1.630014	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.995022	Status:	OK.
Std Error of Est:	0.008872		
Predicted MDL:	0.000903		
Predicted MQL:	0.003010		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00014	-.000	.000	.02123	.002	1
S1	.10000	.23934	.139	139.	.41390	.001	1
S2	1.2500	1.2661	.016	1.28	2.1314	.012	1
S3	2.5000	2.5356	.036	1.42	4.2469	.018	1
S4	5.0000	4.9661	-.034	-.678	8.3013	.054	1
S5	10.000	9.8441	-.156	-1.56	16.438	.020	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



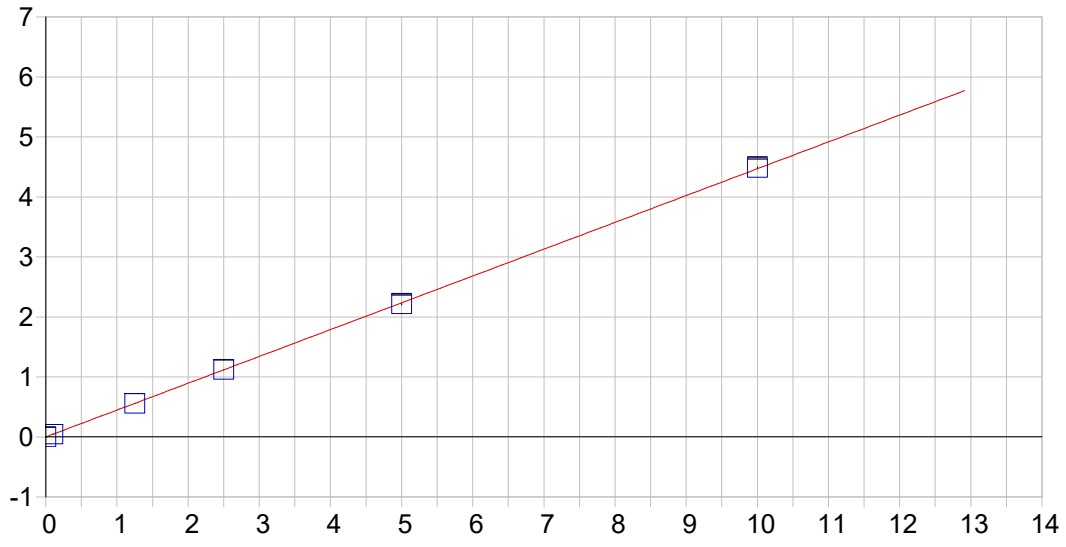
Sn 189.989 {478}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.002522	Re-Slope:	1.000000
A1 (Gain):	0.178477	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999844	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.001266		
Predicted MQL:	0.004218		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00252	.000	1
S1	.00700	.00814	.001	16.3	.00392	.000	1
S2	1.2500	1.1939	-.056	-4.49	.21448	.000	1
S3	2.5000	2.4567	-.043	-1.73	.43875	.001	1
S4	5.0000	4.9580	-.042	-.840	.88294	.001	1
S5	10.000	10.140	.140	1.40	1.8034	.003	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



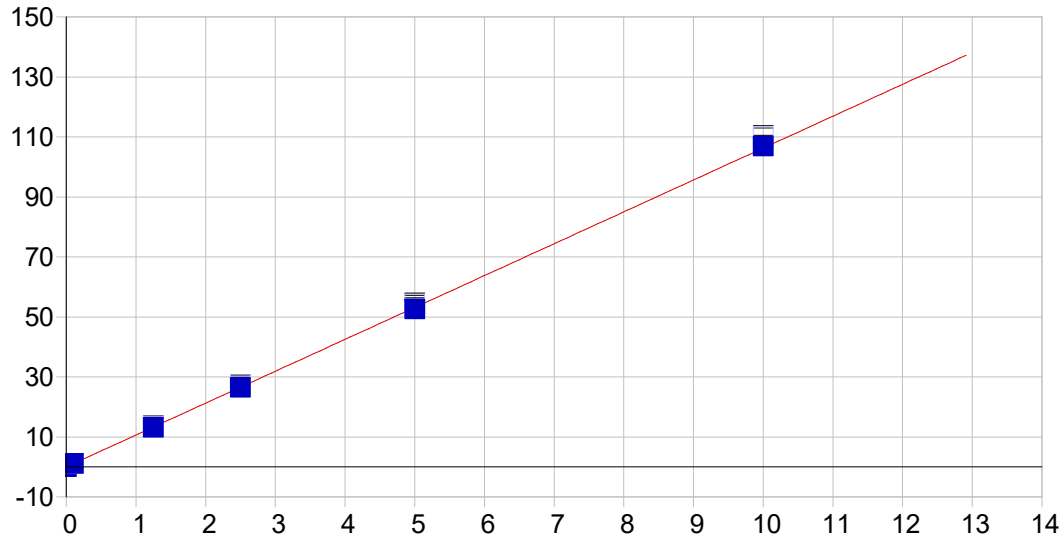
Ti 336.121 {100}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000175	Re-Slope:	1.000000
A1 (Gain):	0.446975	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.000143		
Predicted MDL:	0.003082		
Predicted MQL:	0.010274		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00018	.000	1
S1	.10000	.10385	.004	3.85	.04624	.001	1
S2	1.2500	1.2455	-.005	-.364	.55651	.001	1
S3	2.5000	2.5077	.008	.306	1.1207	.004	1
S4	5.0000	4.9570	-.043	-.859	2.2155	.013	1
S5	10.000	10.036	.036	.360	4.4857	.019	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



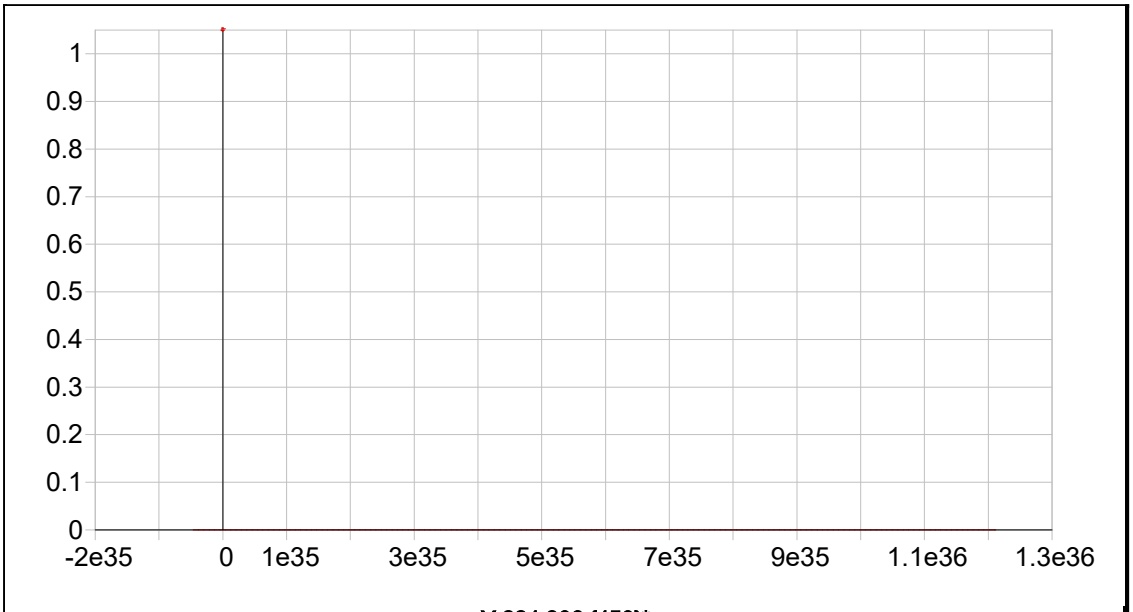
Sr 407.771 { 83}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.002467	Re-Slope:	1.000000
A1 (Gain):	10.626997	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999975	Status:	OK.
Std Error of Est:	0.004095		
Predicted MDL:	0.000208		
Predicted MQL:	0.000695		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00250	.001	1
S1	.10000	.10445	.004	4.45	1.1086	.004	1
S2	1.2500	1.2407	-.009	-.746	13.581	.072	1
S3	2.5000	2.4931	-.007	-.276	27.289	.095	1
S4	5.0000	4.9558	-.044	-.883	54.257	.344	1
S5	10.000	10.056	.056	.561	110.05	.402	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

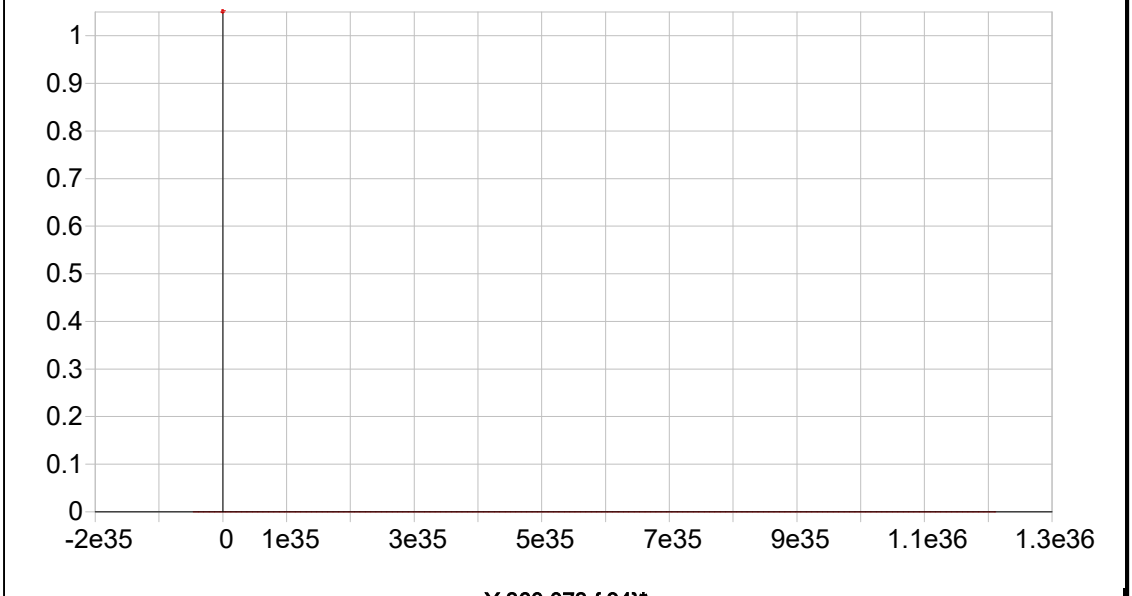


Y 224.306 {450}*

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}*

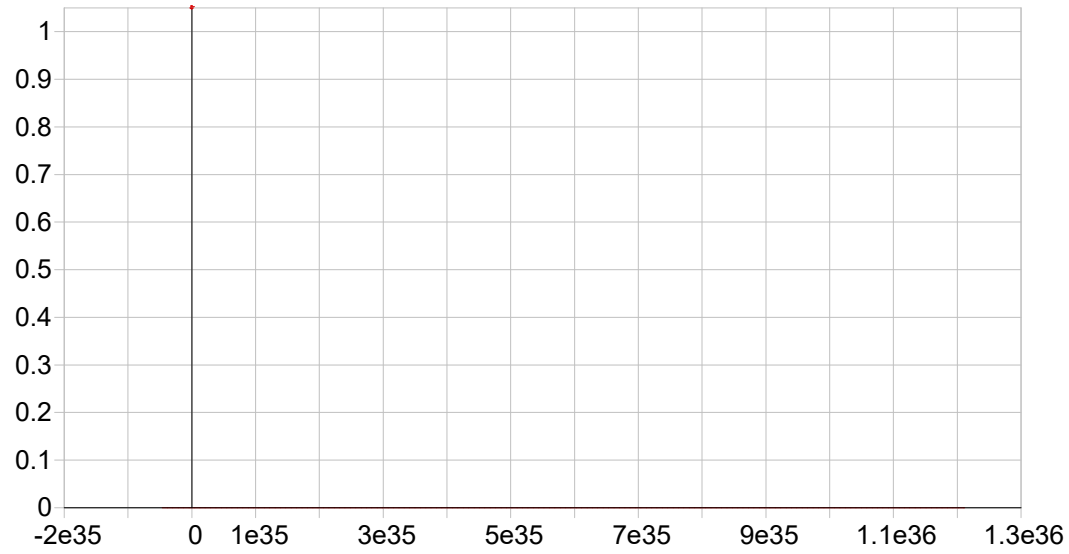
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
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

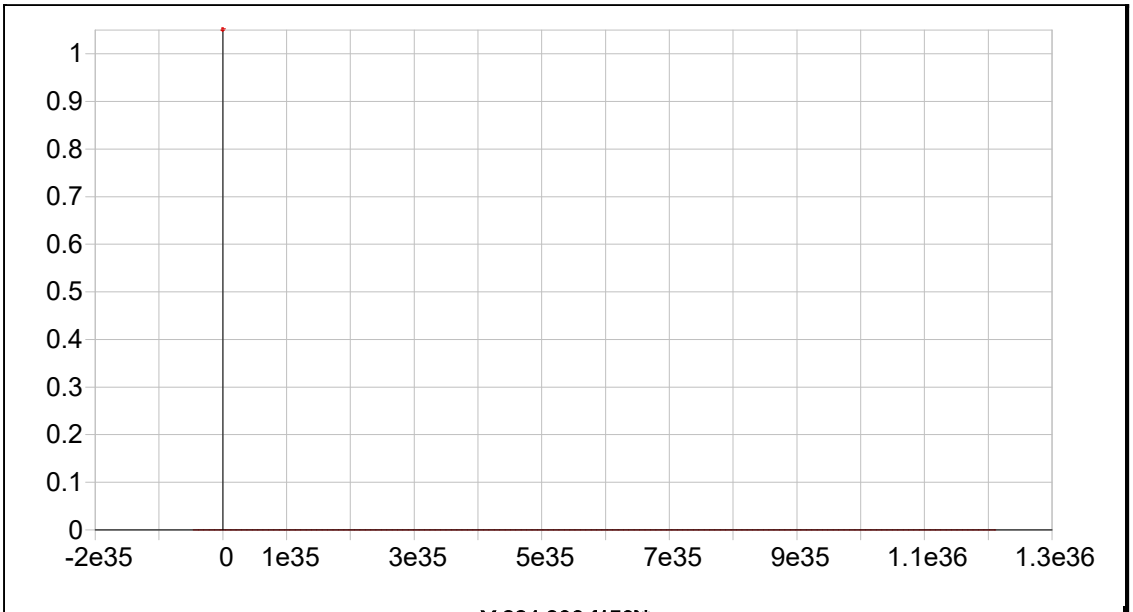


Y 371.030 { 91}*

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

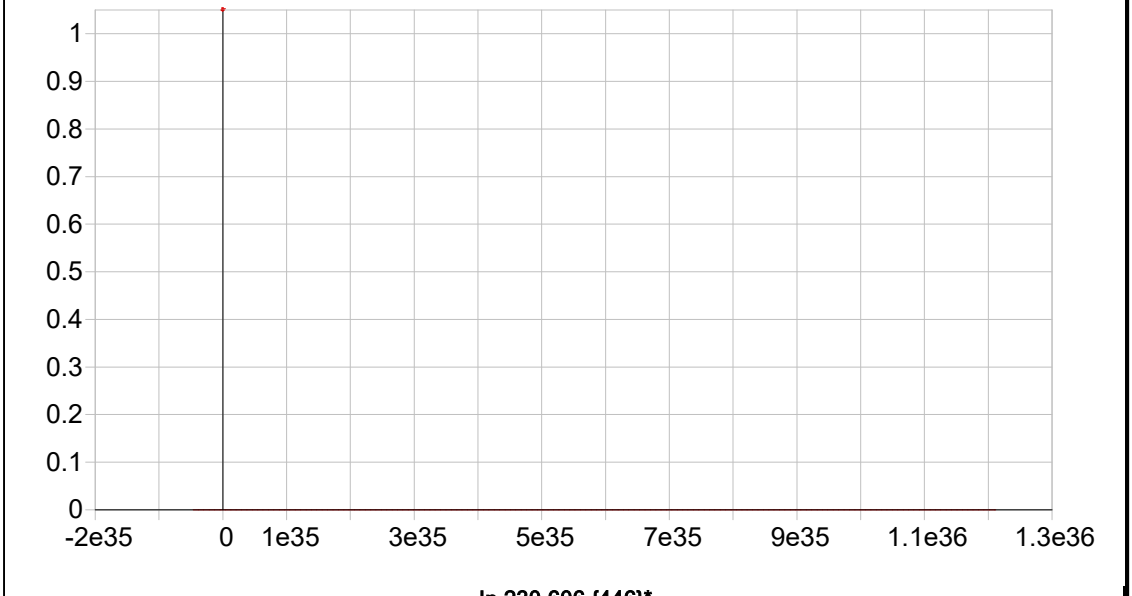
Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5



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



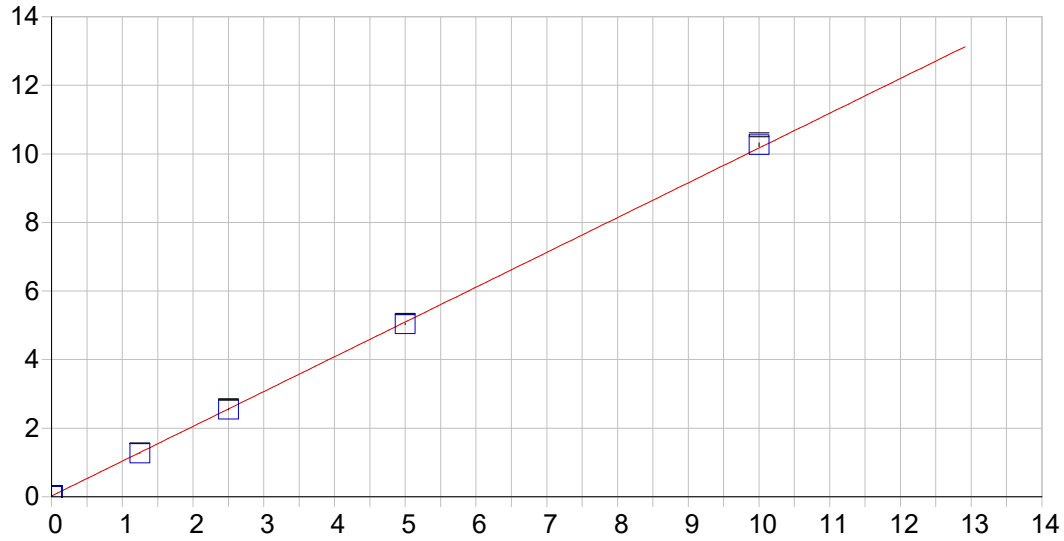
In 230.606 {446}*

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:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

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

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



Li 670.784 { 50}

Date of Fit:	12/20/2024 17:45:49	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.023247	Re-Slope:	1.000000
A1 (Gain):	1.014736	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999876	Status:	OK.
Std Error of Est:	0.000328		
Predicted MDL:	0.004135		
Predicted MQL:	0.013783		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.02325	.005	1
S5	10.000	10.096	.096	.963	10.268	.058	1
S4	5.0000	4.9438	-.056	-1.12	5.0399	.018	1
S3	2.5000	2.4856	-.014	-.576	2.5455	.020	1
S2	1.2500	1.2306	-.019	-1.55	1.2720	.008	1
S1	.01500	.00864	-.006	-42.4	.03201	.002	1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S0 Acquired: 12/20/2024 17:18:43 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	-.13961	-.00022	.00016	-.00021	.00083	-.00244	.04287	-.00019
Stddev	.23435	.00037	.00016	.00029	.00043	.00180	.00446	.00053
%RSD	167.86	166.41	101.84	139.13	51.742	73.557	10.411	287.40
#1	-.35829	-.00061	.00003	-.00031	.00044	-.00447	.04801	-.00001
#2	-.16831	.00012	.00010	-.00042	.00129	-.00103	.03991	-.00079
#3	.10776	-.00017	.00034	.00012	.00075	-.00183	.04070	.00024

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	.00022	.00633	.00029	-.00055	.00175	.00022	.00060	-.00137
Stddev	.00004	.00317	.00007	.00020	.00118	.00022	.00032	.00034
%RSD	19.178	50.008	24.224	35.944	67.250	98.826	53.065	24.561
#1	.00019	.00311	.00036	-.00076	.00277	.00045	.00073	-.00099
#2	.00027	.00646	.00027	-.00053	.00046	.00021	.00024	-.00163
#3	.00020	.00944	.00022	-.00036	.00201	.00001	.00083	-.00150

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	-.00078	.00054	.00289	.00033	-.00114	.10002	-.00254	.00153
Stddev	.00023	.00014	.00559	.00096	.00059	.00350	.00013	.00096
%RSD	28.866	26.459	193.53	289.96	51.637	3.5035	5.1039	62.802
#1	-.00063	.00043	.00821	.00144	-.00175	.10406	-.00245	.00222
#2	-.00104	.00050	-.00293	-.00020	-.00109	.09813	-.00269	.00043
#3	-.00068	.00070	.00338	-.00025	-.00058	.09786	-.00248	.00195

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00022	.00060	.02123	.00252	-.00018	-.00250	.02325
Stddev	.00022	.00011	.00177	.00026	.00044	.00123	.00546
%RSD	101.62	17.782	8.3137	10.340	248.99	49.196	23.494
#1	.00042	.00048	.02251	.00231	-.00068	-.00190	.02038
#2	.00026	.00066	.01922	.00281	.00014	-.00169	.02955
#3	-.00002	.00067	.02196	.00245	.00001	-.00391	.01982

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S0 Acquired: 12/20/2024 17:18:43 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	1829.7	22569.	2287.6	1561.3	2139.9
Stddev	1.0	60.	13.9	2.6	1.1
%RSD	.05704	.26598	.60611	.16540	.05112
#1	1828.8	22550.	2272.7	1558.5	2139.7
#2	1830.8	22521.	2289.9	1561.9	2138.9
#3	1829.6	22637.	2300.2	1563.5	2141.1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S1 Acquired: 12/20/2024 17:22:50 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.4180	.00184	.00212	.00263	.01001	.02018	.94095	.04954
Stddev	.0374	.00035	.00081	.00036	.00040	.00276	.00974	.00067
%RSD	2.6341	18.970	38.241	13.741	3.9742	13.692	1.0352	1.3567
#1	1.3931	.00150	.00305	.00269	.00983	.01900	.93841	.04893
#2	1.3998	.00182	.00175	.00296	.01047	.01820	.95171	.05026
#3	1.4609	.00219	.00156	.00224	.00974	.02334	.93273	.04944

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	.02066	.28057	.00310	.05791	.00587	.00235	.00825	.05079
Stddev	.00060	.00259	.00005	.00013	.00117	.00032	.00037	.00097
%RSD	2.8936	.92174	1.7427	.23237	19.911	13.570	4.4688	1.9158
#1	.01998	.27990	.00316	.05790	.00615	.00237	.00809	.04967
#2	.02096	.28342	.00308	.05804	.00459	.00202	.00799	.05145
#3	.02106	.27838	.00306	.05777	.00688	.00265	.00867	.05124

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	.02599	.00349	.03275	.00565	.00135	.21499	-.00201	.00239
Stddev	.00005	.00028	.00289	.00060	.00031	.00404	.00021	.00146
%RSD	.17702	8.1617	8.8133	10.695	22.721	1.8802	10.620	61.168
#1	.02604	.00364	.03585	.00500	.00129	.21141	-.00179	.00276
#2	.02595	.00316	.03014	.00620	.00169	.21937	-.00202	.00362
#3	.02597	.00366	.03227	.00575	.00109	.21417	-.00221	.00078

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00692	.00518	.41390	.00392	.04624	1.1086	.03201
Stddev	.00008	.00008	.00124	.00014	.00119	.0042	.00232
%RSD	1.2223	1.5496	.29950	3.5541	2.5822	.37780	7.2406
#1	.00700	.00525	.41342	.00394	.04520	1.1051	.02934
#2	.00692	.00519	.41296	.00378	.04598	1.1132	.03342
#3	.00683	.00509	.41530	.00405	.04755	1.1074	.03327

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S1 Acquired: 12/20/2024 17:22:50 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	1825.4	22472.	2266.7	1551.0	2140.7
Stddev	2.3	125.	10.3	7.7	3.2
%RSD	.12851	.55583	.45298	.49536	.14731
#1	1823.3	22448.	2274.5	1543.5	2140.2
#2	1827.9	22360.	2255.1	1550.7	2144.0
#3	1824.9	22607.	2270.6	1558.9	2137.8

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S2 Acquired: 12/20/2024 17:26:55 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	177.78	.10553	1.6019	.10969	.21473	4.5303	11.027	1.2089
Stddev	.44	.00056	.0037	.00033	.00038	.0302	.075	.0087
%RSD	.24780	.53413	.23273	.30535	.17639	.66769	.68136	.72328
#1	178.22	.10489	1.5985	.10985	.21490	4.5025	10.972	1.2017
#2	177.34	.10574	1.6013	.10931	.21430	4.5625	11.113	1.2186
#3	177.78	.10597	1.6059	.10991	.21499	4.5258	10.996	1.2064

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	2.5995	3.4234	1.1378	.72437	.67071	.80762	1.8279	.62675
Stddev	.0065	.0224	.0110	.00163	.00864	.00520	.0146	.00422
%RSD	.25066	.65328	.96908	.22457	1.2885	.64377	.79733	.67321
#1	2.5943	3.4062	1.1426	.72257	.66154	.80296	1.8149	.62506
#2	2.5974	3.4487	1.1456	.72480	.67870	.81322	1.8436	.63156
#3	2.6068	3.4152	1.1252	.72573	.67190	.80667	1.8251	.62365

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	.42579	.09137	.24083	.06079	.17913	.96007	.08943	.79178
Stddev	.00027	.00106	.00559	.00100	.00220	.00577	.00008	.00477
%RSD	.06288	1.1567	2.3213	1.6382	1.2276	.60129	.09137	.60230
#1	.42549	.09156	.23543	.06032	.18055	.95416	.08934	.78664
#2	.42590	.09232	.24045	.06193	.18026	.96570	.08944	.79605
#3	.42599	.09023	.24659	.06011	.17660	.96034	.08950	.79266

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.85573	.06043	2.1314	.21448	.55651	13.581	1.2720
Stddev	.00146	.00019	.0116	.00029	.00095	.072	.0085
%RSD	.17117	.31035	.54451	.13664	.17000	.53162	.66576
#1	.85613	.06026	2.1217	.21447	.55610	13.534	1.2659
#2	.85410	.06041	2.1442	.21419	.55759	13.664	1.2817
#3	.85694	.06063	2.1283	.21478	.55584	13.544	1.2686

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S2 Acquired: 12/20/2024 17:26:55 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	1758.8	22142.	2294.7	1501.9	1995.2
Stddev	2.8	273.	14.9	16.7	.8
%RSD	.16050	1.2343	.64751	1.1103	.03769
#1	1755.6	21988.	2299.2	1492.4	1996.1
#2	1759.6	21981.	2278.1	1492.2	1994.9
#3	1761.0	22458.	2306.8	1521.2	1994.7

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S3 Acquired: 12/20/2024 17:30:46 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	358.16	.21343	3.2648	.22510	.44042	9.1394	22.152	2.4283
Stddev	1.53	.00078	.0043	.00033	.00151	.0440	.118	.0126
%RSD	.42796	.36721	.13057	.14479	.34348	.48188	.53438	.51793
#1	357.60	.21317	3.2667	.22546	.43989	9.0894	22.019	2.4241
#2	356.99	.21431	3.2599	.22502	.43925	9.1724	22.245	2.4424
#3	359.90	.21281	3.2677	.22483	.44213	9.1565	22.192	2.4183

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.2915	6.9008	2.3030	1.4612	1.3588	1.6103	3.6534	1.2517
Stddev	.0101	.0176	.0054	.0026	.0042	.0025	.0219	.0080
%RSD	.19110	.25520	.23618	.17473	.30513	.15666	.59909	.63844
#1	5.2920	6.8806	2.3092	1.4614	1.3544	1.6074	3.6292	1.2444
#2	5.2811	6.9093	2.3001	1.4586	1.3593	1.6121	3.6717	1.2603
#3	5.3014	6.9125	2.2996	1.4637	1.3627	1.6114	3.6592	1.2505

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	.87295	.18732	.48243	.12210	.37692	1.8566	.18917	1.6118
Stddev	.00100	.00048	.00276	.00197	.00286	.0049	.00085	.0059
%RSD	.11450	.25730	.57125	1.6111	.75764	.26515	.45023	.36654
#1	.87383	.18782	.48373	.12064	.37395	1.8510	.18827	1.6131
#2	.87187	.18730	.48430	.12434	.37719	1.8599	.18929	1.6169
#3	.87316	.18685	.47927	.12133	.37964	1.8591	.18996	1.6053

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.7587	.12509	4.2469	.43875	1.1207	27.289	2.5455
Stddev	.0043	.00009	.0181	.00083	.0043	.095	.0203
%RSD	.24230	.07293	.42726	.19011	.38632	.34698	.79894
#1	1.7601	.12499	4.2473	.43844	1.1166	27.195	2.5224
#2	1.7539	.12517	4.2649	.43812	1.1252	27.384	2.5609
#3	1.7621	.12512	4.2286	.43970	1.1202	27.288	2.5531

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S3 Acquired: 12/20/2024 17:30:46 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	1698.7	21676.	2288.2	1443.2	1922.5
Stddev	1.4	28.	15.9	3.7	2.9
%RSD	.07956	.13111	.69604	.25540	.14881
#1	1698.0	21662.	2292.5	1447.3	1921.6
#2	1697.9	21657.	2270.6	1441.9	1920.2
#3	1700.3	21708.	2301.5	1440.3	1925.7

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S4 Acquired: 12/20/2024 17:34:34 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	700.51	.42195	6.5963	.45960	.91768	18.222	44.073	4.7947
Stddev	1.39	.00014	.0096	.00084	.00235	.085	.221	.0120
%RSD	.19886	.03422	.14555	.18268	.25564	.46908	.50115	.24955
#1	699.90	.42185	6.5969	.45922	.91814	18.313	44.328	4.7837
#2	699.52	.42212	6.5864	.45903	.91514	18.143	43.929	4.7928
#3	702.10	.42189	6.6055	.46057	.91977	18.212	43.963	4.8074

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	10.575	13.606	4.5581	2.8953	2.6896	3.1807	7.1662	2.4861
Stddev	.017	.066	.0154	.0071	.0115	.0171	.0355	.0114
%RSD	.16051	.48168	.33862	.24493	.42709	.53899	.49536	.45792
#1	10.586	13.669	4.5430	2.8986	2.7005	3.1992	7.2025	2.4960
#2	10.555	13.538	4.5575	2.8871	2.6776	3.1653	7.1315	2.4737
#3	10.583	13.612	4.5739	2.9001	2.6909	3.1776	7.1645	2.4887

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	1.7457	.37665	.96451	.24489	.79229	3.6344	.38980	3.1755
Stddev	.0038	.00062	.00963	.00206	.00805	.0170	.00052	.0143
%RSD	.21533	.16586	.99825	.84202	1.0158	.46819	.13402	.44903
#1	1.7482	.37662	.97462	.24614	.79961	3.6518	.39006	3.1595
#2	1.7414	.37604	.95544	.24251	.78367	3.6178	.38920	3.1802
#3	1.7475	.37729	.96347	.24601	.79358	3.6335	.39014	3.1868

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.6407	.25699	8.3013	.88294	2.2155	54.257	5.0399
Stddev	.0081	.00053	.0541	.00089	.0129	.344	.0178
%RSD	.22257	.20718	.65107	.10105	.58255	.63428	.35264
#1	3.6444	.25759	8.2471	.88352	2.2303	54.639	5.0535
#2	3.6314	.25657	8.3015	.88191	2.2066	53.970	5.0198
#3	3.6462	.25682	8.3552	.88338	2.2096	54.163	5.0465

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S4 Acquired: 12/20/2024 17:34:34 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	1592.0	21186.	2274.3	1345.1	1838.1
Stddev	1.2	58.	1.5	2.1	2.8
%RSD	.07498	.27246	.06494	.15756	.15072
#1	1591.0	21120.	2273.0	1342.7	1834.9
#2	1593.3	21228.	2275.9	1346.8	1839.9
#3	1591.8	21210.	2274.2	1345.8	1839.5

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S5 Acquired: 12/20/2024 17:38:17 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	1368.0	.84147	13.501	.99278	2.0396	37.359	89.947	9.5666
Stddev	6.9	.00315	.019	.00022	.0052	.188	.466	.0118
%RSD	.50727	.37433	.14115	.02179	.25285	.50269	.51779	.12380
#1	1363.2	.84499	13.520	.99300	2.0422	37.433	90.084	9.5732
#2	1364.8	.83891	13.482	.99257	2.0336	37.145	89.428	9.5529
#3	1375.9	.84052	13.502	.99276	2.0429	37.498	90.329	9.5737

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	21.334	27.268	9.0795	5.8592	5.4231	6.3463	14.298	4.9945
Stddev	.030	.171	.0158	.0065	.0315	.0377	.068	.0218
%RSD	.13832	.62598	.17428	.11131	.58168	.59466	.47812	.43720
#1	21.366	27.385	9.0618	5.8611	5.4446	6.3539	14.306	4.9903
#2	21.307	27.072	9.0924	5.8519	5.3869	6.3053	14.225	4.9751
#3	21.329	27.347	9.0841	5.8645	5.4378	6.3796	14.361	5.0182

Elem	Ni2316	Ag3280	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	3.5453	.77341	1.9739	.49320	1.8028	7.4070	.81120	6.1971
Stddev	.0053	.00021	.0108	.00360	.0095	.0366	.00114	.0136
%RSD	.15017	.02684	.54701	.72925	.52424	.49431	.14011	.21904
#1	3.5502	.77321	1.9666	.49349	1.8035	7.4240	.81233	6.2046
#2	3.5396	.77362	1.9689	.48947	1.7930	7.3650	.81006	6.2053
#3	3.5460	.77340	1.9863	.49664	1.8119	7.4320	.81119	6.1814

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	8.0437	.53761	16.438	1.8034	4.4857	110.05	10.268
Stddev	.0113	.00063	.020	.0029	.0188	.40	.058
%RSD	.14015	.11655	.12359	.16383	.41997	.36562	.56150
#1	8.0562	.53783	16.449	1.8032	4.4813	110.51	10.302
#2	8.0344	.53691	16.450	1.8005	4.4694	109.85	10.202
#3	8.0404	.53810	16.414	1.8064	4.5063	109.79	10.302

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S5 Acquired: 12/20/2024 17:38:17 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	1394.4	20375.	2245.0	1163.1	1721.3
Stddev	5.0	90.	8.6	3.9	6.6
%RSD	.35973	.44073	.38468	.33283	.38243
#1	1389.9	20433.	2246.9	1162.9	1714.9
#2	1393.5	20420.	2252.6	1167.1	1720.9
#3	1399.8	20271.	2235.6	1159.3	1728.1

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: S6 Acquired: 12/20/2024 17:42:11 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) 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	96.919	43.543	16.574	7.9745	5.3423
Stddev	.193	.068	.026	.0188	.0202
%RSD	.19912	.15653	.15859	.23630	.37881
#1	96.907	43.561	16.570	7.9848	5.3547
#2	96.733	43.468	16.549	7.9528	5.3189
#3	97.118	43.601	16.602	7.9860	5.3532

Int. Std.	Y_3710
Units	Cts/S
Avg	2196.5
Stddev	9.7
%RSD	.44269
#1	2185.6
#2	2204.4
#3	2199.5

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: ICV009 Acquired: 12/20/2024 18:43:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV009 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.095878	1.020101	.9759660	.9467524	1.015107	2.405723
Stddev	.004875	.003717	.0055564	.0047870	.001218	.025879
%RSD	.4448140	.3644052	.5693187	.5056261	.1200138	1.075722
#1	1.100878	1.017545	.9734401	.9440655	1.016514	2.378512
#2	1.091139	1.018394	.9721213	.9439124	1.014391	2.408633
#3	1.095617	1.024366	.9823366	.9522793	1.014417	2.430023

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5244617	.5256698	.5043901	10.37361	.5547014	.5039497
Stddev	.0022893	.0037227	.0016573	.04046	.0001990	.0020100
%RSD	.4365107	.7081920	.3285700	.3899806	.0358781	.3988538
#1	.5227484	.5262603	.5039540	10.38583	.5549290	.5028747
#2	.5235750	.5216871	.5029945	10.32846	.5546151	.5027057
#3	.5270618	.5290620	.5062218	10.40655	.5545601	.5062686

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5100395	10.54768	.5338618	6.328964	.5133974	.2430099
Stddev	.0017230	.02214	.0033795	.117339	.0022051	.0003120
%RSD	.3378246	.2098685	.6330218	1.853999	.4295209	.1283892
#1	.5116607	10.52908	.5328742	6.398205	.5134495	.2428525
#2	.5102278	10.54180	.5310861	6.395204	.5111666	.2428080
#3	.5082301	10.57217	.5376250	6.193484	.5155760	.2433693

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.078670	.5131804	.9400343	9.218355	F -.000859	F .0016484
Stddev	.373600	.0099150	.0139820	.321245	.001771	.0012488
%RSD	4.115141	1.932075	1.487396	3.484837	206.2562	75.75633
#1	9.015584	.5021313	.9245423	9.371009	-.000885	.0027755
#2	8.740629	.5213021	.9517167	8.849247	.000926	.0018637
#3	9.479796	.5161079	.9438440	9.434809	-.002617	.0003060

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: ICV009 Acquired: 12/20/2024 18:43:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV009 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0002412	F .0032379	F -.000811	F .0000915	F -.000032	F -.009343
Stddev	.0003605	.0047529	.000966	.0008949	.001786	.000155
%RSD	149.4463	146.7922	119.1181	978.4445	5551.220	1.659620
#1	.0003687	.0010651	.000299	-.000890	-.001009	-.009389
#2	-.000166	-.000040	-.001271	.000302	-.001116	-.009170
#3	.000521	.008689	-.001460	.000862	.002029	-.009469

Elem	Li6707
Units	ppm
Avg	F -.000613
Stddev	.001684
%RSD	274.8356
#1	-.002146
#2	.001190
#3	-.000882

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1829.987	22487.96	2320.080	1553.860	2133.754
Stddev	.995	114.27	14.207	9.415	4.885
%RSD	.0543783	.5081278	.6123593	.6059317	.2289610
#1	1829.983	22394.93	2306.081	1549.970	2133.895
#2	1830.985	22453.45	2334.486	1547.012	2138.568
#3	1828.994	22615.51	2319.673	1564.597	2128.800

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: ICB009 Acquired: 12/20/2024 18:47:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB009 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024891	-.000271	-.001191	-.000286	-.000186	-.016879	-.001087
Stddev	.0019829	.003144	.000665	.000539	.001787	.024212	.001125
%RSD	79.66106	1158.857	55.84614	188.7763	959.1672	143.4482	103.5148
#1	.0026850	-.000174	-.001263	-.000793	-.000669	-.001858	-.001482
#2	.0043668	-.003463	-.000493	-.000343	.001792	-.003968	.000182
#3	.0004156	.002823	-.001817	.000280	-.001683	-.044810	-.001961

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0001520	.0001707	.0104752	-.000505	-.000081	-.004613	-.010125
Stddev	.0001234	.0000206	.0378204	.000601	.000410	.004816	.007621
%RSD	81.16942	12.04123	361.0484	119.0923	507.6642	104.4013	75.26976
#1	.0002133	.0001767	-.024869	-.000962	.000299	-.010102	-.014271
#2	.0000100	.0001478	.050361	-.000728	-.000516	-.002634	-.001330
#3	.0002327	.0001876	.005933	.000176	-.000025	-.001101	-.014774

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000779	.0426357	.0000121	.0003640	-.167003	-.011085	-.000400
Stddev	.000504	.1141329	.0002092	.0000947	.883191	.003648	.015502
%RSD	64.66564	267.6932	1731.678	26.00935	528.8462	32.90782	3871.015
#1	-.000990	-.066863	.0002530	.0004261	-.097081	-.010418	.015512
#2	-.000204	.033872	-.000123	.0004110	.679148	-.007816	-.001257
#3	-.001142	.160898	-.000094	.0002551	-1.08308	-.015020	-.015457

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.330496	-.002878	-.002182	-.000115	-.006179	-.002199	-.005951
Stddev	.122090	.001637	.000844	.000072	.004588	.001383	.000653
%RSD	36.94152	56.86676	38.68280	63.00005	74.25742	62.86546	10.97234
#1	-.368184	-.001391	-.001284	-.000097	-.001364	-.001474	-.005438
#2	-.429298	-.002612	-.002303	-.000194	-.006672	-.001331	-.006686
#3	-.194005	-.004632	-.002958	-.000053	-.010501	-.003794	-.005729

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: ICB009 Acquired: 12/20/2024 18:47:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB009 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0025407	-.000057	-.000381
Stddev	.0018674	.000149	.003983
%RSD	73.50073	260.9339	1045.952
#1	.0004061	-.000042	-.002167
#2	.0033438	.000084	.004183
#3	.0038722	-.000213	-.003158

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1847.829	22747.49	2316.166	1573.044	2162.423
Stddev	2.573	102.14	12.262	1.571	5.196
%RSD	.1392519	.4490192	.5294268	.0998431	.2403003
#1	1850.800	22705.29	2319.640	1574.605	2168.409
#2	1846.391	22863.97	2302.541	1573.062	2159.064
#3	1846.297	22673.21	2326.316	1571.464	2159.798

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: ICSA009 Acquired: 12/20/2024 18:51:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA009 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0083435	-.015072	-.000198	.0254589	.0039875	237.4675
Stddev	.0038220	.004722	.004219	.0056786	.0030531	1.0293
%RSD	45.80774	31.33126	2135.501	22.30485	76.56671	.4334466
#1	.0127510	-.017496	-.004240	.0319856	.0028814	236.3113
#2	.0059460	-.018090	-.000531	.0216498	.0016416	237.8072
#3	.0063335	-.009630	.004178	.0227413	.0074395	238.2841

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054289	.0023987	.0007455	245.3578	.0503061	.0342003
Stddev	.0005274	.0001144	.0001224	.8711	.0007286	.0002352
%RSD	9.714990	4.769637	16.41323	.3550466	1.448424	.6876973
#1	.0057770	.0025142	.0008121	244.5060	.0495400	.0344191
#2	.0048221	.0023965	.0006043	245.3206	.0503878	.0339516
#3	.0056876	.0022854	.0008201	246.2470	.0509904	.0342300

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.013234	100.9271	.0090810	256.5480	.0035584	.0055300
Stddev	.004637	.1797	.0005398	1.2217	.0006846	.0015117
%RSD	35.03891	.1780872	5.944036	.4762095	19.23869	27.33565
#1	-.016993	100.7213	.0089557	255.1655	.0040386	.0042966
#2	-.014657	101.0536	.0086149	256.9963	.0038620	.0050771
#3	-.008052	101.0062	.0096724	257.4822	.0027745	.0072164

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.03503	.0083949	-.020978	-.758622	-.006772	F .0185641
Stddev	.10290	.0114413	.013606	.161072	.003502	.0014610
%RSD	9.941636	136.2889	64.85723	21.23225	51.71014	7.870007
#1	-.96009	.0142984	-.030192	-.724631	-.002869	.0171056
#2	-.99266	-.004792	-.027392	-.617257	-.007810	.0200276
#3	-1.15235	.015679	-.005351	-.933977	-.009638	.0185592

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: ICSA009 Acquired: 12/20/2024 18:51:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA009 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014427	.0135100	-.003623	.0004282	.0016293	.0032390
Stddev	.0004463	.0026512	.000759	.0014551	.0014593	.0000974
%RSD	30.93511	19.62427	20.94010	339.7939	89.56339	3.008236
#1	.0009653	.0164559	-.003032	.0008133	.0024162	.0032359
#2	.0018495	.0113156	-.004479	-.001181	-.000055	.0031431
#3	.0015131	.0127586	-.003359	.001652	.002526	.0033379

Elem	Li6707
Units	ppm
Avg	-.002410
Stddev	.002479
%RSD	102.8641
#1	-.004057
#2	-.003612
#3	.000441

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1742.570	21259.70	2275.695	1484.330	1904.662
Stddev	2.429	136.54	1.024	8.165	5.442
%RSD	.1394069	.6422269	.0449789	.5500624	.2857087
#1	1744.674	21411.99	2276.848	1493.741	1910.807
#2	1739.911	21148.23	2274.894	1480.112	1900.452
#3	1743.124	21218.89	2275.344	1479.138	1902.728

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: ICSAB009 Acquired: 12/20/2024 19:01:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB009 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1118575	.0961657	.0506467	.0716440	.5560824	243.3925
Stddev	.0040234	.0028159	.0019234	.0023818	.0027692	1.0598
%RSD	3.596925	2.928222	3.797709	3.324540	.4979784	.4354357
#1	.1072183	.0986114	.0500369	.0739561	.5530477	243.3421
#2	.1143921	.0930872	.0528011	.0717778	.5584723	244.4766
#3	.1139621	.0967985	.0491021	.0691980	.5567273	242.3587

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5363016	.5309610	1.018593	250.7849	.5965439	.5278232
Stddev	.0017899	.0041157	.001864	.8634	.0034289	.0004708
%RSD	.3337557	.7751458	.1829596	.3442667	.5747987	.0891975
#1	.5368522	.5330615	1.016552	250.9519	.6004104	.5277621
#2	.5377516	.5336026	1.019026	251.5526	.5938722	.5273860
#3	.5343011	.5262189	1.020203	249.8503	.5953492	.5283216

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4739588	103.9016	.5304337	262.8718	1.013251	.1929764
Stddev	.0044010	.7374	.0012638	1.2390	.002251	.0010457
%RSD	.9285529	.7096799	.2382530	.4713291	.2221566	.5418690
#1	.4741378	103.9918	.5310942	262.6563	1.010842	.1920144
#2	.4782676	104.5896	.5312304	264.2045	1.013610	.1928256
#3	.4694712	103.1232	.5289766	261.7548	1.015300	.1940893

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.716099	.5226847	.9018573	-1.23806	-.002624	F .0193516
Stddev	.409028	.0060679	.0179656	.17068	.003043	.0064013
%RSD	57.11890	1.160914	1.992065	13.78572	115.9767	33.07906
#1	-.252030	.5253536	.8843190	-1.43282	-.004104	.0218163
#2	-.872080	.5269606	.9202217	-1.11461	.000876	.0241542
#3	-1.02419	.5157397	.9010311	-1.16674	-.004643	.0120843

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: ICSAB009 Acquired: 12/20/2024 19:01:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB009 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021555	.0178216	-.003293	.0006657	-.000674	.0036435
Stddev	.0003338	.0035796	.000826	.0002975	.002408	.0002401
%RSD	15.48623	20.08594	25.07212	44.69337	357.2888	6.590143
#1	.0022225	.0211158	-.002399	.0007658	-.002582	.0033705
#2	.0017932	.0183368	-.003453	.0009002	-.001472	.0037379
#3	.0024507	.0140123	-.004027	.0003310	.002032	.0038221

Elem	Li6707
Units	ppm
Avg	-.004154
Stddev	.003279
%RSD	78.94520
#1	-.002215
#2	-.002307
#3	-.007940

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1736.765	21118.01	2277.677	1475.815	1901.015
Stddev	5.097	31.20	13.371	1.866	4.920
%RSD	.2934993	.1477576	.5870621	.1264228	.2588293
#1	1733.990	21082.90	2275.000	1477.364	1899.151
#2	1733.657	21142.57	2265.847	1476.337	1897.299
#3	1742.648	21128.56	2292.185	1473.743	1906.595

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCV081 Acquired: 12/20/2024 19:05:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV081 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.020170	4.936962	24.95856	4.904866	4.900146	407.9779	10.28323
Stddev	.007234	.023310	.09863	.021134	.012227	.8425	.02999
%RSD	.1440889	.4721618	.3951691	.4308694	.2495218	.2065031	.2915969
#1	5.024110	4.962063	25.05062	4.929266	4.914147	407.6079	10.25551
#2	5.011822	4.915995	24.85447	4.893010	4.891567	407.3837	10.27911
#3	5.024577	4.932829	24.97060	4.892322	4.894726	408.9420	10.31506

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5171305	2.509632	410.7829	15.59473	2.511059	15.36999	415.0674
Stddev	.0020238	.010274	.8776	.10006	.010690	.03765	1.0395
%RSD	.3913597	.4093815	.2136528	.6416296	.4257144	.2449630	.2504502
#1	.5147991	2.519515	411.5464	15.48239	2.521997	15.39185	414.1884
#2	.5181569	2.499007	409.8240	15.67429	2.500636	15.32652	414.7989
#3	.5184354	2.510373	410.9782	15.62750	2.510543	15.39161	416.2148

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.28200	409.4045	2.528850	1.303178	408.4372	2.569120	14.86148
Stddev	.04945	1.2378	.011001	.007585	2.3811	.010572	.10020
%RSD	.3235727	.3023509	.4350298	.5820054	.5829887	.4114864	.6741963
#1	15.23217	408.8571	2.539689	1.297175	405.8596	2.558533	14.76973
#2	15.28277	408.5348	2.517694	1.311702	408.8970	2.569148	14.84632
#3	15.33106	410.8217	2.529168	1.300656	410.5548	2.579676	14.96839

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	154.9553	5.023603	5.042218	4.846655	5.074105	4.995840	5.025764
Stddev	.3922	.017646	.029896	.017345	.014621	.015470	.020704
%RSD	.2531305	.3512521	.5929138	.3578799	.2881529	.3096580	.4119512
#1	154.6554	5.034554	5.007770	4.866620	5.088132	4.980626	5.045808
#2	154.8112	5.003247	5.061385	4.835292	5.058955	5.011554	5.004458
#3	155.3992	5.033008	5.057500	4.838053	5.075228	4.995339	5.027026

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCV081 Acquired: 12/20/2024 19:05:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV081 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	5.128113	4.879557	5.202074
Stddev	.011961	.009765	.011549
%RSD	.2332523	.2001222	.2220056
#1	5.123049	4.870658	5.199288
#2	5.119515	4.878008	5.192173
#3	5.141773	4.890003	5.214761

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1535.435	20457.32	2237.880	1302.606	1755.359
Stddev	2.545	71.05	3.853	3.995	3.932
%RSD	.1657755	.3473189	.1721764	.3067153	.2239798
#1	1532.529	20539.32	2238.307	1306.930	1752.494
#2	1536.505	20418.64	2241.502	1301.840	1759.841
#3	1537.270	20414.00	2233.831	1299.050	1753.743

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCB081 Acquired: 12/20/2024 19:09:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB081 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0021532	.0006173	.0009618	.0020062	-.003261	.0024440
Stddev	.0037779	.0031260	.0014775	.0037565	.000527	.0274107
%RSD	175.4526	506.3609	153.6144	187.2432	16.17034	1121.546
#1	.0040558	-.002852	.0019294	-.001795	-.003852	.0308517
#2	.0046016	.003214	-.000739	.002097	-.003090	.0003273
#3	-.002198	.001490	.001695	.005716	-.002840	-.023847

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000463	.0002247	.0002119	.0075773	-.000314	.0002193
Stddev	.001354	.0001498	.0000700	.0256691	.000734	.0003049
%RSD	292.7268	66.63149	33.02544	338.7608	233.6939	139.0217
#1	.000052	.0003814	.0002286	-.016179	-.000326	.0003242
#2	.000559	.0002099	.0001351	.034805	-.001042	-.000124
#3	-.001999	.0000830	.0002720	.004106	.000426	.000458

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000064	-.006968	.0015303	.0952938	.0000636	.0005032
Stddev	.002301	.032548	.0010036	.0436448	.0007391	.0005211
%RSD	3608.588	467.0820	65.58417	45.80027	1162.218	103.5530
#1	-.000375	-.020111	.0026489	.1438063	.0004632	.0009503
#2	-.002194	-.030890	.0012330	.0828601	.0005168	.0006284
#3	.002377	.030096	.0007089	.0592150	-.000789	-.000069

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.460316	-.009999	-.007512	-.249786	-.002358	.0128566
Stddev	.410805	.003256	.006210	.028553	.001361	.0013148
%RSD	89.24409	32.55887	82.67196	11.43098	57.71168	10.22663
#1	-.934341	-.008835	-.002144	-.267916	-.003349	.0143746
#2	-.238663	-.007486	-.006078	-.216873	-.002919	.0121176
#3	-.207945	-.013677	-.014314	-.264569	-.000806	.0120776

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCB081 Acquired: 12/20/2024 19:09:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB081 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000019	-.003188	-.001159	F -.011152	.0031994	.0001466
Stddev	.000733	.002665	.000761	.001006	.0010132	.0002282
%RSD	3961.019	83.57311	65.62392	9.023791	31.66815	155.6881
#1	-.000749	-.006183	-.000521	-.011077	.0027554	.0002199
#2	.000717	-.002303	-.002001	-.012194	.0043589	.0003290
#3	-.000024	-.001080	-.000956	-.010186	.0024841	-.000109

Elem	Li6707
Units	ppm
Avg	.0002944
Stddev	.0012646
%RSD	429.5533
#1	-.000172
#2	.001726
#3	-.000671

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1841.251	22628.07	2308.995	1575.052	2157.436
Stddev	6.275	55.52	33.054	4.869	6.788
%RSD	.3408038	.2453804	1.431547	.3091332	.3146515
#1	1842.848	22578.41	2278.637	1570.308	2159.434
#2	1834.332	22688.02	2304.140	1580.037	2149.872
#3	1846.574	22617.78	2344.208	1574.811	2163.000

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5067-05DL2X5 Acquired: 12/20/2024 19:13:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28M4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0054454	.0339431	.0291286	-.028444	-.015649	1.957592	.3613054
Stddev	.0024106	.0050003	.0016065	.001577	.003170	.014364	.0026814
%RSD	44.26894	14.73153	5.515122	5.544485	20.25466	.7337467	.7421444
#1	.0026650	.0336970	.0292687	-.026626	-.014411	1.961427	.3589170
#2	.0067217	.0390619	.0274567	-.029432	-.013285	1.969649	.3607934
#3	.0069497	.0290703	.0306606	-.029276	-.019251	1.941700	.3642059

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006695	.0002923	378.0607	.0130536	.0393394	.0075448	8.973307
Stddev	.0001856	.0000783	.6253	.0007424	.0002280	.0002901	.004206
%RSD	27.72200	26.77808	.1653910	5.687691	.5794999	3.845078	.0468761
#1	.0005761	.0003116	377.5958	.0126477	.0395035	.0077658	8.971388
#2	.0005491	.0003591	377.8148	.0126026	.0394356	.0076524	8.970403
#3	.0008833	.0002062	378.7716	.0139105	.0390791	.0072163	8.978131

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2320900	206.5036	.0152412	.0014486	.1970955	.0034393	.0266272
Stddev	.0025900	.0924	.0009423	.0010321	1.307115	.0052802	.0007620
%RSD	1.115957	.0447516	6.182844	71.24618	663.1887	153.5267	2.861744
#1	.2297530	206.4240	.0161331	.0012624	-1.01756	.0006205	.0273832
#2	.2316423	206.4818	.0153350	.0005223	1.58032	.0095307	.0258594
#3	.2348747	206.6050	.0142555	.0025612	.02853	.0001667	.0266389

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1803359	.1941343	.0324919	.0031107	5.188287	1.054072	-.002370
Stddev	.0253261	.0013257	.0002454	.0007315	.007109	.003418	.001668
%RSD	14.04385	.6828793	.7553546	23.51639	.1370132	.3242926	70.35372
#1	.1772214	.1931591	.0327231	.0034715	5.195152	1.057148	-.000940
#2	.1567111	.1935999	.0322344	.0035918	5.188752	1.054675	-.001970
#3	.2070752	.1956437	.0325183	.0022689	5.180958	1.050392	-.004202

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5067-05DL2X5 Acquired: 12/20/2024 19:13:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28M4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0325331	11.34065	.0092815
Stddev	.0019681	.11218	.0052998
%RSD	6.049618	.9891764	57.10021
#1	.0347719	11.35758	.0078691
#2	.0317517	11.44339	.0048310
#3	.0310757	11.22096	.0151445

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1738.750	21449.50	2265.158	1470.186	1892.595
Stddev	3.630	121.05	6.920	8.067	1.811
%RSD	.2087917	.5643396	.3055035	.5486836	.0956854
#1	1740.801	21531.02	2257.978	1474.155	1892.802
#2	1740.891	21507.08	2271.785	1475.498	1894.294
#3	1734.559	21310.41	2265.712	1460.903	1890.690

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P4964-05DL2X5 Acquired: 12/20/2024 19:17:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJ03 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0092693	.0287108	.1799374	-.021151	-.014384	4.518460	.0504633
Stddev	.0043875	.0008875	.0012735	.005026	.000417	.021673	.0008813
%RSD	47.33366	3.091159	.7077565	23.76132	2.896758	.4796483	1.746475
#1	.0053576	.0288853	.1798023	-.026843	-.013903	4.500282	.0508726
#2	.0140134	.0277490	.1812730	-.019283	-.014618	4.512654	.0494517
#3	.0084370	.0294981	.1787368	-.017326	-.014631	4.542445	.0510655

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0008798	.0111622	409.2971	.0134089	.0429822	.0222336	24.68755
Stddev	.0000221	.0000518	2.5739	.0002385	.0005978	.0012176	.16537
%RSD	2.515649	.4639735	.6288705	1.778709	1.390809	5.476447	.6698409
#1	.0008637	.0112220	408.5350	.0134702	.0423132	.0229238	24.71378
#2	.0009050	.0111326	407.1903	.0136108	.0431695	.0208277	24.51063
#3	.0008706	.0111319	412.1661	.0131457	.0434639	.0229492	24.83823

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.605132	217.1335	.0219587	.0037182	.1861600	.0014189	2.005069
Stddev	.028125	1.6584	.0014224	.0000760	.4160004	.0042581	.045828
%RSD	1.079597	.7637680	6.477448	2.044665	223.4639	300.0903	2.285589
#1	2.599988	216.6442	.0235933	.0036333	.1963870	-.001893	1.992166
#2	2.579934	215.7748	.0210032	.0037410	.5969525	-.000072	1.967076
#3	2.635474	218.9815	.0212795	.0037802	-.234860	.006222	2.055965

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.299819	.6218632	.0338582	.0018915	5.327831	2.036378	.0033125
Stddev	.122302	.0041311	.0014298	.0002040	.006709	.004803	.0017040
%RSD	9.409192	.6643080	4.223007	10.78567	.1259304	.2358669	51.44031
#1	1.167057	.6258649	.0349115	.0016588	5.327778	2.031509	.0025458
#2	1.407897	.6221108	.0322305	.0019758	5.321148	2.036514	.0021266
#3	1.324501	.6176139	.0344328	.0020398	5.334567	2.041112	.0052651

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P4964-05DL2X5 Acquired: 12/20/2024 19:17:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJ03 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0610361	.1210162	.0168822
Stddev	.0035294	.0012297	.0002095
%RSD	5.782418	1.016185	1.240830
#1	.0622353	.1206159	.0166974
#2	.0638096	.1200365	.0168395
#3	.0570634	.1223962	.0171098

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1733.739	21481.35	2267.360	1470.571	1867.307
Stddev	2.957	98.14	6.560	5.713	1.555
%RSD	.1705589	.4568401	.2893329	.3884797	.0832665
#1	1730.581	21402.23	2268.902	1474.635	1865.964
#2	1736.443	21591.17	2273.011	1473.040	1866.947
#3	1734.194	21450.65	2260.166	1464.039	1869.011

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-01 Acquired: 12/20/2024 19:21:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1888606	-.267788	2.046992	.2979501	.1487171	106.8684	1.455803
Stddev	.0028351	.004810	.011882	.0074856	.0017613	1.0027	.012379
%RSD	1.501163	1.796216	.5804755	2.512372	1.184302	.9382532	.8502918
#1	.1890740	-.263146	2.052960	.2895442	.1467758	105.9538	1.445833
#2	.1915831	-.267469	2.054708	.3004096	.1491630	106.7109	1.451919
#3	.1859249	-.272750	2.033309	.3038965	.1502126	107.9406	1.469658

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0194712	.0229252	319.9638	2.399306	.1535406	1.952968	629.1286
Stddev	.0000846	.0004330	2.9824	.018229	.0012220	.023763	5.5149
%RSD	.4346463	1.888766	.9321088	.7597792	.7958560	1.216754	.8765983
#1	.0194215	.0232062	317.4471	2.409968	.1536330	1.938367	624.2999
#2	.0195690	.0231430	319.1865	2.378257	.1547137	1.940148	627.9475
#3	.0194233	.0224266	323.2579	2.409693	.1522750	1.980387	635.1384

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.59683	73.25588	1.563392	.0439782	2.077908	.3611963	6.897816
Stddev	.11958	.55384	.010157	.0027582	.260185	.0005877	.052528
%RSD	.9493066	.7560341	.6496838	6.271616	12.52148	.1626989	.7615213
#1	12.49839	72.92294	1.570321	.0408007	2.378045	.3605672	6.928678
#2	12.56218	72.94949	1.568122	.0457539	1.939439	.3612907	6.837164
#3	12.72991	73.89522	1.551732	.0453801	1.916240	.3617311	6.927605

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.46351	8.844960	.2990643	.2771696	7.844249	9.282330	.1848983
Stddev	.33577	.063567	.0051366	.0003555	.051612	.067829	.0021592
%RSD	1.640833	.7186771	1.717546	.1282467	.6579661	.7307302	1.167784
#1	20.20530	8.868898	.2991692	.2773567	7.860035	9.217383	.1855363
#2	20.34213	8.893083	.2938761	.2767597	7.886125	9.276892	.1866666
#3	20.84309	8.772900	.3041476	.2773926	7.786587	9.352714	.1824920

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-01 Acquired: 12/20/2024 19:21:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.630028	.2113659	.1220139
Stddev	.022579	.0024723	.0030995
%RSD	1.385188	1.169673	2.540295
#1	1.607948	.2093829	.1202557
#2	1.629061	.2105791	.1201933
#3	1.653075	.2141359	.1255928

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1962.551	24521.50	2625.032	1664.759	1982.277
Stddev	5.224	156.43	31.151	8.283	14.514
%RSD	.2661936	.6379183	1.186692	.4975227	.7322112
#1	1958.052	24526.64	2657.081	1664.827	1974.277
#2	1961.321	24675.29	2623.151	1673.008	1973.522
#3	1968.281	24362.56	2594.864	1656.443	1999.031

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-02 Acquired: 12/20/2024 19:25:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2277652	-.275526	2.258135	.3047480	.1540585	83.43936	1.482926
Stddev	.0026345	.002715	.008074	.0052525	.0018955	.38477	.009693
%RSD	1.156650	.9852741	.3575683	1.723543	1.230367	.4611331	.6536179
#1	.2307710	-.273438	2.249717	.3107539	.1518790	83.85008	1.492239
#2	.2266673	-.274546	2.265815	.3010132	.1553215	83.08728	1.472894
#3	.2258572	-.278595	2.258871	.3024770	.1549751	83.38074	1.483644

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0192101	.0203959	308.9870	2.025288	.1578196	4.615900	646.2016
Stddev	.0003955	.0002255	1.4816	.044892	.0005426	.008342	3.8310
%RSD	2.058832	1.105827	.4795034	2.216556	.3438264	.1807123	.5928457
#1	.0196642	.0201886	310.5972	2.022171	.1581291	4.620724	649.9264
#2	.0189406	.0206361	307.6813	1.982036	.1581366	4.606268	642.2726
#3	.0190256	.0203631	308.6825	2.071657	.1571930	4.620708	646.4057

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	13.97184	68.65187	1.141819	.0445514	1.813617	.3563599	6.096980
Stddev	.08607	.53732	.003356	.0032005	.357281	.0065419	.116598
%RSD	.6160276	.7826684	.2938976	7.183912	19.69990	1.835743	1.912384
#1	14.05594	69.26816	1.139876	.0459812	1.977591	.3594481	6.030406
#2	13.88392	68.28166	1.145694	.0467877	1.403783	.3607861	6.028922
#3	13.97567	68.40580	1.139887	.0408852	2.059478	.3488457	6.231613

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.61876	7.381667	.2823770	.2245370	6.837727	9.386163	.3939592
Stddev	.25610	.018138	.0060719	.0004397	.027763	.147624	.0009702
%RSD	1.375501	.2457144	2.150287	.1958158	.4060244	1.572781	.2462644
#1	18.80997	7.369822	.2756651	.2246830	6.825852	9.554462	.3940306
#2	18.32779	7.402548	.2839776	.2240429	6.869453	9.278573	.3948917
#3	18.71852	7.372632	.2874883	.2248851	6.817877	9.325455	.3929553

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-02 Acquired: 12/20/2024 19:25:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.643731	.1161520	.1184840
Stddev	.007919	.0006186	.0030845
%RSD	.4817553	.5325812	2.603301
#1	1.652330	.1166452	.1206444
#2	1.636738	.1154579	.1198561
#3	1.642127	.1163527	.1149515

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1946.489	24112.97	2541.019	1637.390	1994.565
Stddev	7.430	439.91	24.186	29.066	6.283
%RSD	.3817109	1.824357	.9518107	1.775120	.3150306
#1	1938.128	24293.29	2513.103	1649.696	1990.613
#2	1949.004	24434.06	2555.649	1658.278	1991.271
#3	1952.335	23611.55	2554.306	1604.196	2001.811

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-03 Acquired: 12/20/2024 19:29:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0876158	-.055961	.1746149	.0663457	.0248031	90.25794
Stddev	.0073287	.003185	.0013047	.0053428	.0009001	1.54196
%RSD	8.364582	5.691743	.7471842	8.053005	3.628794	1.708396
#1	.0826247	-.059336	.1753745	.0684818	.0237805	91.23755
#2	.0960297	-.055538	.1731083	.0702899	.0251539	88.48053
#3	.0841930	-.053008	.1753617	.0602653	.0254749	91.05573

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.173255	.0096013	.0045336	F 800.2999	.1728316	.1401536
Stddev	.021062	.0001964	.0000660	13.8461	.0018388	.0005773
%RSD	1.795192	2.045378	1.455046	1.730115	1.063949	.4118910
#1	1.188557	.0097898	.0044612	809.9836	.1722098	.1397252
#2	1.149234	.0093979	.0045904	784.4406	.1749008	.1408101
#3	1.181976	.0096164	.0045491	806.4756	.1713844	.1399256

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1605544	199.9301	4.218514	230.3460	.2929522	.0109090
Stddev	.0128877	3.7124	.080021	4.6164	.0013878	.0007186
%RSD	8.026989	1.856834	1.896905	2.004118	.4737412	6.587507
#1	.1510949	202.2428	4.269174	232.6870	.2922694	.0117382
#2	.1553354	195.6480	4.126262	225.0281	.2920380	.0105220
#3	.1752331	201.8995	4.260106	233.3229	.2945491	.0104668

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5815166	.2218498	.5278443	10.83781	4.184266	.0963408
Stddev	.4345503	.0033392	.0180954	.16207	.002818	.0038538
%RSD	74.72708	1.505161	3.428168	1.495404	.0673377	4.000176
#1	.8643262	.2249167	.5177163	11.02483	4.186277	.1002320
#2	.7990657	.2182925	.5487358	10.73856	4.181046	.0925256
#3	.0811577	.2223402	.5170807	10.75002	4.185476	.0962648

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-03 Acquired: 12/20/2024 19:29:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R7 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0203889	6.001793	9.091521	.0186609	1.253438	1.398207
Stddev	.0009338	.020388	.183730	.0024020	.025826	.026508
%RSD	4.579990	.3397006	2.020899	12.87157	2.060452	1.895854
#1	.0199627	6.007403	9.225099	.0212482	1.271362	1.415156
#2	.0214598	5.979188	8.881993	.0182329	1.223835	1.367659
#3	.0197443	6.018789	9.167473	.0165018	1.265117	1.411805

Elem	Li6707
Units	ppm
Avg	.1716492
Stddev	.0092924
%RSD	5.413604
#1	.1761959
#2	.1609590
#3	.1777928

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1918.251	23722.89	2562.661	1624.691	1835.621
Stddev	6.732	51.72	62.798	2.466	4.741
%RSD	.3509652	.2180053	2.450497	.1518001	.2582905
#1	1924.743	23675.11	2517.056	1622.754	1839.585
#2	1918.708	23777.81	2634.287	1627.468	1836.910
#3	1911.302	23715.75	2536.639	1623.852	1830.369

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-04 Acquired: 12/20/2024 19:32:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0251648	.0138914	.2077070	.0110794	-.002702	86.76077
Stddev	.0042251	.0043666	.0029213	.0014678	.002911	.69998
%RSD	16.78959	31.43359	1.406460	13.24849	107.7477	.8067908
#1	.0226778	.0134464	.2086784	.0119494	-.001791	86.87291
#2	.0227733	.0184634	.2100188	.0119041	-.005960	86.01150
#3	.0300431	.0097644	.2044237	.0093847	-.000355	87.39791

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8028868	.0133139	.0022916	F 1286.505	.1313314	.0802356
Stddev	.0088106	.0001110	.0002073	3.771	.0003838	.0004524
%RSD	1.097367	.8340428	9.047191	.2931232	.2922203	.5638129
#1	.8062205	.0132465	.0022848	1288.506	.1317685	.0797182
#2	.7928957	.0132531	.0020877	1288.853	.1310499	.0805564
#3	.8095440	.0134421	.0025022	1282.155	.1311757	.0804321

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1050198	84.92306	6.784415	378.6371	.0876772	.0056493
Stddev	.0089800	.54091	.039408	2.3717	.0008817	.0013572
%RSD	8.550768	.6369454	.5808626	.6263711	1.005624	24.02442
#1	.1099050	84.92272	6.802408	378.0775	.0886950	.0045200
#2	.1104983	84.38232	6.739222	376.5953	.0871485	.0052729
#3	.0946563	85.46414	6.811615	381.2386	.0871880	.0071550

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.930968	.0981174	.4080971	4.992844	2.152437	.2681432
Stddev	.177461	.0077584	.0028869	.158607	.006714	.0038288
%RSD	9.190262	7.907241	.7073982	3.176677	.3119429	1.427882
#1	1.890469	.1004594	.4057238	5.169620	2.146462	.2666740
#2	1.777258	.0894579	.4072566	4.863000	2.151145	.2652667
#3	2.125179	.1044350	.4113110	4.945912	2.159703	.2724890

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-04 Acquired: 12/20/2024 19:32:49 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0071096	25.16209	9.573862	.0225282	2.304932	2.495513
Stddev	.0000771	.05497	.059652	.0023899	.013531	.015267
%RSD	1.083955	.2184770	.6230726	10.60855	.5870395	.6117631
#1	.0070437	25.22063	9.576817	.0249351	2.307015	2.497972
#2	.0071944	25.11156	9.512788	.0224939	2.290481	2.479166
#3	.0070907	25.15410	9.631982	.0201556	2.317301	2.509401

Elem	Li6707
Units	ppm
Avg	.1139813
Stddev	.0032335
%RSD	2.836824
#1	.1163087
#2	.1102892
#3	.1153459

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1876.096	23205.83	2545.376	1583.226	1730.362
Stddev	3.874	87.47	16.264	7.296	3.817
%RSD	.2064754	.3769148	.6389673	.4608065	.2205914
#1	1878.370	23213.03	2542.590	1580.255	1729.548
#2	1878.296	23114.98	2562.853	1577.884	1734.521
#3	1871.624	23289.47	2530.685	1591.538	1727.018

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-05 Acquired: 12/20/2024 19:36:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0808951	-.074213	.1777450	.0866530	.0353886	72.82175	.8042998
Stddev	.0039183	.001005	.0018100	.0027677	.0010481	.56990	.0064043
%RSD	4.843726	1.354880	1.018303	3.194037	2.961653	.7825981	.7962533
#1	.0843427	-.075170	.1798255	.0885588	.0353934	73.36102	.8109082
#2	.0817088	-.073165	.1768765	.0834783	.0364343	72.22549	.7981214
#3	.0766338	-.074302	.1765329	.0879218	.0343381	72.87873	.8038698

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0111927	.0033258	786.7080	.1887916	.1189805	.2139310	237.2166
Stddev	.0002809	.0000801	7.2417	.0014885	.0006582	.0090957	1.7975
%RSD	2.509919	2.409220	.9205032	.7884359	.5532034	4.251700	.7577410
#1	.0115167	.0032451	793.6685	.1897441	.1183029	.2059216	238.8843
#2	.0110179	.0033271	779.2146	.1870764	.1196174	.2120520	235.3127
#3	.0110434	.0034053	787.2410	.1895544	.1190212	.2238195	237.4527

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.123491	134.1862	.2379985	.0143201	1.595872	.1626421	.3811369
Stddev	.040397	.9989	.0009095	.0005729	.324464	.0131353	.0088109
%RSD	.6597071	.7443868	.3821461	4.000584	20.33144	8.076176	2.311728
#1	6.163233	135.0712	.2390468	.0145978	1.479885	.1714420	.3720743
#2	6.082469	133.1031	.2375292	.0147011	1.345342	.1689406	.3896723
#3	6.124772	134.3842	.2374195	.0136613	1.962390	.1475437	.3816640

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.085507	3.592506	.1309188	.0305028	9.510758	10.46079	.0440855
Stddev	.046792	.008347	.0018544	.0005619	.023951	.13925	.0007204
%RSD	.5150170	.2323485	1.416413	1.842246	.2518272	1.331164	1.634131
#1	9.138403	3.599375	.1287787	.0299285	9.538031	10.58374	.0435369
#2	9.068597	3.594928	.1320489	.0305283	9.493149	10.48905	.0449013
#3	9.049521	3.583216	.1319287	.0310516	9.501095	10.30957	.0438182

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-05 Acquired: 12/20/2024 19:36:48 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.420065	1.410319	.1146262
Stddev	.011703	.011743	.0050160
%RSD	.8241331	.8326599	4.375960
#1	1.428964	1.420100	.1185111
#2	1.406808	1.397295	.1089634
#3	1.424424	1.413562	.1164041

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1948.957	23973.09	2597.033	1650.435	1892.224
Stddev	5.459	239.79	35.119	12.660	5.277
%RSD	.2801063	1.000234	1.352282	.7670721	.2788868
#1	1954.339	23821.87	2561.468	1635.918	1898.015
#2	1943.424	24249.57	2597.943	1659.186	1887.686
#3	1949.107	23847.84	2631.688	1656.200	1890.973

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-06 Acquired: 12/20/2024 19:40:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0966158	-.045367	.5201552	.0504826	.0220699	79.53174
Stddev	.0042578	.000791	.0006663	.0034190	.0014682	.84243
%RSD	4.406987	1.744570	.1280916	6.772647	6.652514	1.059234
#1	.0917381	-.045938	.5208772	.0508466	.0217896	78.56853
#2	.0995888	-.044464	.5195642	.0468961	.0236580	80.13101
#3	.0985205	-.045700	.5200241	.0537050	.0207621	79.89569

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7640419	.0095593	.0044344	F 1056.072	.1838136	.1317827
Stddev	.0072045	.0001441	.0000516	10.190	.0011362	.0002549
%RSD	.9429527	1.507687	1.164607	.9648569	.6181209	.1934003
#1	.7557323	.0096505	.0044676	1044.677	.1832654	.1317270
#2	.7685408	.0096343	.0043749	1064.307	.1830555	.1320609
#3	.7678526	.0093932	.0044608	1059.231	.1851200	.1315604

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2679774	183.6350	5.122385	311.7652	.2853712	.0108494
Stddev	.0023696	2.1799	.052295	3.9303	.0010245	.0008133
%RSD	.8842677	1.187087	1.020909	1.260672	.3589870	7.496054
#1	.2654890	181.1745	5.062678	307.3279	.2865534	.0110638
#2	.2682363	185.3250	5.160053	314.8084	.2847455	.0115340
#3	.2702070	184.4056	5.144424	313.1594	.2848146	.0099504

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.024167	.2372574	.5811496	10.10178	4.396456	.1174247
Stddev	1.055795	.0070180	.0088846	.22704	.002606	.0008637
%RSD	52.15946	2.957967	1.528797	2.247521	.0592821	.7355504
#1	2.682650	.2348742	.5827901	9.86797	4.396101	.1183573
#2	.806386	.2451566	.5715591	10.32138	4.394045	.1172646
#3	2.583464	.2317413	.5890996	10.11599	4.399221	.1166522

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-06 Acquired: 12/20/2024 19:40:38 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0324998	19.61708	11.05320	.0540749	1.540296	3.112287
Stddev	.0008745	.03243	.14992	.0010953	.014287	.035111
%RSD	2.690618	.1653236	1.356315	2.025594	.9275419	1.128131
#1	.0331204	19.61218	10.90766	.0528180	1.529040	3.072362
#2	.0328794	19.65169	11.20714	.0545811	1.556369	3.138353
#3	.0314997	19.58738	11.04481	.0548255	1.535480	3.126145

Elem	Li6707
Units	ppm
Avg	.1392234
Stddev	.0025186
%RSD	1.809027
#1	.1373074
#2	.1420761
#3	.1382866

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1890.660	23404.87	2564.457	1607.380	1787.580
Stddev	.410	205.06	25.114	8.006	3.966
%RSD	.0217115	.8761357	.9793062	.4980932	.2218591
#1	1890.238	23403.94	2590.963	1604.329	1784.572
#2	1891.058	23610.40	2541.017	1616.464	1786.094
#3	1890.685	23200.29	2561.392	1601.349	1792.075

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-07 Acquired: 12/20/2024 19:44:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1081760	-.078601	.3449956	.1003813	.0408389	78.59105
Stddev	.0027582	.002760	.0038496	.0050078	.0012580	.29288
%RSD	2.549739	3.511464	1.115847	4.988813	3.080379	.3726690
#1	.1053876	-.081492	.3446021	.0985340	.0394360	78.77896
#2	.1082376	-.075995	.3413578	.0965596	.0418666	78.25358
#3	.1109029	-.078315	.3490268	.1060504	.0412141	78.74060

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7158343	.0099301	.0063639	265.4040	.4034689	.1228707
Stddev	.0039953	.0000823	.0001270	.9530	.0018669	.0006161
%RSD	.5581293	.8293359	1.994994	.3590654	.4627211	.5013904
#1	.7174559	.0099081	.0064315	266.0727	.4017267	.1230534
#2	.7112831	.0100212	.0064428	264.3128	.4032404	.1221840
#3	.7187638	.0098610	.0062175	265.8265	.4054395	.1233748

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2773412	231.7629	8.634911	71.29583	.2936457	.0157953
Stddev	.0022808	1.0364	.029830	.53541	.0010379	.0011304
%RSD	.8223722	.4471625	.3454561	.7509637	.3534359	7.156507
#1	.2753029	232.3186	8.653901	71.71891	.2930233	.0157677
#2	.2798046	230.5672	8.600530	70.69389	.2930700	.0146790
#3	.2769160	232.4029	8.650303	71.47469	.2948438	.0169392

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4046005	.2819664	.7875562	13.15851	F 11.86495	.1413714
Stddev	.3756798	.0028370	.0147701	.02523	.04185	.0042839
%RSD	92.85203	1.006140	1.875434	.1917443	.3527425	3.030248
#1	.1570727	.2808979	.7795777	13.12942	11.85998	.1381909
#2	.8368815	.2851825	.7784912	13.17170	11.82580	.1396805
#3	.2198474	.2798189	.8045997	13.17441	11.90907	.1462427

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-07 Acquired: 12/20/2024 19:44:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0359707	6.512611	9.702811	.0316875	1.124609	.6987560
Stddev	.0005378	.024453	.056258	.0028801	.010460	.0034389
%RSD	1.495096	.3754676	.5798153	9.089092	.9300950	.4921399
#1	.0353705	6.487891	9.738311	.0283815	1.133421	.7005556
#2	.0364089	6.513155	9.732177	.0330282	1.113050	.6947907
#3	.0361326	6.536788	9.637946	.0336529	1.127357	.7009215

Elem	Li6707
Units	ppm
Avg	.1223883
Stddev	.0040517
%RSD	3.310547
#1	.1268188
#2	.1214745
#3	.1188715

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2075.636	25411.38	2692.664	1758.659	2038.116
Stddev	5.569	176.53	12.997	11.249	7.439
%RSD	.2682880	.6946844	.4826847	.6396145	.3649772
#1	2074.442	25518.96	2677.874	1767.430	2040.352
#2	2081.705	25507.53	2697.857	1762.570	2044.181
#3	2070.761	25207.65	2702.263	1745.977	2029.816

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-08 Acquired: 12/20/2024 19:48:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1693728	-.208952	1.424794	.2419704	.1121870	84.49024
Stddev	.0016116	.005726	.038018	.0066539	.0018789	.71624
%RSD	.9514921	2.740574	2.668298	2.749893	1.674761	.8477228
#1	.1684763	-.202958	1.393073	.2419690	.1143564	84.35434
#2	.1712333	-.214367	1.414373	.2486250	.1111191	85.26470
#3	.1684088	-.209531	1.466935	.2353172	.1110854	83.85169

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.225645	.0169085	.0214578	413.9298	1.303474	.1317638
Stddev	.011113	.0002289	.0010636	3.6036	.009933	.0039525
%RSD	.9067359	1.353997	4.956819	.8705927	.7620113	2.999669
#1	1.224918	.0169290	.0206724	414.7443	1.310549	.1288146
#2	1.237104	.0171265	.0210328	417.0565	1.292119	.1302220
#3	1.214913	.0166700	.0226682	409.9886	1.307753	.1362548

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.086731	519.4000	17.15889	97.51479	.5893329	.0358306
Stddev	.004255	5.0715	.16386	1.25286	.0161482	.0012976
%RSD	.3915734	.9764129	.9549642	1.284791	2.740088	3.621483
#1	1.082526	518.8444	17.16272	97.58652	.5781190	.0367546
#2	1.091035	524.7265	17.32081	98.73024	.5820382	.0363900
#3	1.086634	514.6292	16.99315	96.22760	.6078415	.0343471

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.724396	.3937611	3.667088	16.83541	F 10.10574	.3264872
Stddev	.324998	.0036096	.040224	.16772	.27984	.0049601
%RSD	18.84705	.9166888	1.096884	.9962455	2.769150	1.519227
#1	1.548390	.3976614	3.706234	16.86929	9.89608	.3239293
#2	1.525362	.3930835	3.625867	16.98361	9.99763	.3322041
#3	2.099435	.3905383	3.669164	16.65334	10.42351	.3233283

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-08 Acquired: 12/20/2024 19:48:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S2 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0774693	9.410476	10.07459	.1595462	1.790167	.6982135
Stddev	.0023684	.264200	.10808	.0044822	.021883	.0072168
%RSD	3.057190	2.807507	1.072757	2.809366	1.222422	1.033610
#1	.0760822	9.217530	10.05033	.1552027	1.792089	.6986431
#2	.0761217	9.302300	10.19273	.1592807	1.811027	.7052060
#3	.0802040	9.711596	9.98070	.1641554	1.767387	.6907915

Elem	Li6707
Units	ppm
Avg	.1119727
Stddev	.0008684
%RSD	.7755055
#1	.1126622
#2	.1122582
#3	.1109975

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2006.282	24876.32	2691.390	1706.568	1978.013
Stddev	45.702	279.78	23.906	18.030	49.055
%RSD	2.277933	1.124696	.8882331	1.056492	2.480039
#1	2045.624	24679.44	2685.497	1689.892	2020.291
#2	2017.072	25196.59	2670.982	1725.700	1989.520
#3	1956.151	24752.95	2717.692	1704.112	1924.226

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-09 Acquired: 12/20/2024 19:52:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1064132	-.113526	.4090069	.1411101	.0591369	81.04091	.7430862
Stddev	.0010149	.007563	.0048586	.0173906	.0052860	5.57846	.0514305
%RSD	.9536947	6.662185	1.187903	12.32413	8.938555	6.883514	6.921203
#1	.1059320	-.120519	.4118855	.1557976	.0648428	85.98181	.7891057
#2	.1057286	-.105499	.4033973	.1219072	.0544068	74.99137	.6875687
#3	.1075792	-.114561	.4117379	.1456254	.0581610	82.14957	.7525843

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0115147	.0048827	151.8781	.6940823	.1136165	.1597327	304.8346
Stddev	.0006437	.0003576	10.4658	.0022111	.0003233	.0174901	20.8664
%RSD	5.590032	7.324269	6.890897	.3185689	.2845864	10.94958	6.845146
#1	.0120942	.0045536	161.3422	.6927754	.1137515	.1798236	323.3377
#2	.0108219	.0052632	140.6380	.6928364	.1132475	.1479068	282.2177
#3	.0116279	.0048312	153.6541	.6966353	.1138504	.1514677	308.9484

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	12.49359	60.26602	.2489503	.0211164	.7847066	.3534748	.5753981
Stddev	.85597	4.00780	.0015684	.0052800	.0830936	.0228011	.0085526
%RSD	6.851308	6.650186	.6299989	25.00423	10.58913	6.450567	1.486385
#1	13.24511	63.77847	.2506370	.0265139	.7732867	.3681604	.5711289
#2	11.56186	55.90029	.2475358	.0159623	.7079135	.3272074	.5852449
#3	12.67380	61.11931	.2486782	.0208730	.8729195	.3650565	.5698205

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.750144	5.461857	.1327501	.0314704	4.192726	10.35131	.0303829
Stddev	.952599	.021322	.0116624	.0002340	.005294	.67103	.0036241
%RSD	10.88667	.3903756	8.785208	.7435881	.1262780	6.482540	11.92824
#1	9.665031	5.484689	.1389134	.0316707	4.190485	10.93103	.0343152
#2	7.763852	5.442463	.1192992	.0312132	4.198772	9.61623	.0271770
#3	8.821550	5.458420	.1400376	.0315274	4.188921	10.50666	.0296564

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-09 Acquired: 12/20/2024 19:52:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.456315	-.076069	.1171722
Stddev	.101655	.005259	.0136595
%RSD	6.980258	6.913388	11.65766
#1	1.549333	-.080400	.1295457
#2	1.347803	-.070217	.1025146
#3	1.471809	-.077589	.1194561

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1983.386	24404.27	2584.705	1691.674	2056.872
Stddev	8.929	66.06	161.037	4.710	7.554
%RSD	.4501776	.2706794	6.230395	.2784033	.3672644
#1	1976.613	24479.21	2448.365	1696.261	2051.966
#2	1993.505	24379.09	2762.381	1691.911	2065.571
#3	1980.041	24354.51	2543.369	1686.851	2053.079

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-10 Acquired: 12/20/2024 19:55:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0783813	-.066090	.4224285	.0799618	.0321619	60.51920	.6032639
Stddev	.0049889	.004643	.0015563	.0070699	.0019257	.17843	.0026275
%RSD	6.364923	7.025581	.3684243	8.841626	5.987393	.2948403	.4355423
#1	.0749945	-.062943	.4235836	.0718401	.0325929	60.42683	.6022470
#2	.0841103	-.071422	.4230432	.0833062	.0338355	60.40588	.6012969
#3	.0760390	-.063903	.4206587	.0847389	.0300573	60.72488	.6062479

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081444	.0047811	197.7338	.2641435	.0997263	.1804953	199.0801
Stddev	.0000090	.0000317	.0171	.0014638	.0006123	.0047324	.6650
%RSD	.1107138	.6628211	.0086523	.5541648	.6140127	2.621890	.3340245
#1	.0081547	.0047921	197.7255	.2629122	.0993364	.1825882	198.4727
#2	.0081401	.0048058	197.7224	.2657619	.0994103	.1750773	198.9768
#3	.0081383	.0047453	197.7535	.2637563	.1004320	.1838204	199.7906

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.939366	88.61282	.2235056	.0144008	.6584948	.1984686	.6317389
Stddev	.022652	.41554	.0008046	.0016362	1.157448	.0044142	.0093772
%RSD	.4586107	.4689345	.3599741	11.36222	175.7717	2.224143	1.484339
#1	4.930741	88.41401	.2227815	.0162866	1.545209	.1953657	.6236163
#2	4.922293	88.33403	.2243717	.0135576	-.650881	.1965180	.6295996
#3	4.965064	89.09041	.2233635	.0133581	1.081157	.2035221	.6420009

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.462208	4.049647	.0966238	.0161627	4.174956	9.164636	.0336311
Stddev	.086898	.015722	.0040960	.0003599	.014776	.022672	.0010456
%RSD	1.344715	.3882394	4.239090	2.226814	.3539079	.2473852	3.108970
#1	6.546925	4.032885	.0963978	.0164440	4.158442	9.138998	.0332845
#2	6.373281	4.064066	.0926456	.0157571	4.179501	9.182040	.0328028
#3	6.466419	4.051990	.1008282	.0162869	4.186924	9.172871	.0348060

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-10 Acquired: 12/20/2024 19:55:55 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.187289	.0953283	.0983849
Stddev	.003446	.0008953	.0020437
%RSD	.2902110	.9391766	2.077203
#1	1.187125	.0949943	.0992744
#2	1.183928	.0946480	.0960472
#3	1.190814	.0963426	.0998331

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1970.766	24253.00	2556.573	1684.602	2043.270
Stddev	3.209	64.95	8.385	10.053	4.839
%RSD	.1628137	.2678206	.3279949	.5967518	.2368484
#1	1972.617	24327.04	2565.937	1695.567	2046.353
#2	1972.620	24205.59	2549.758	1675.819	2045.765
#3	1967.061	24226.39	2554.023	1682.422	2037.692

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-11 Acquired: 12/20/2024 19:59:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1242967	-.133982	.4708794	.1740756	.0704163	99.46637	.7741459
Stddev	.0034656	.005485	.0039338	.0018517	.0033905	1.23765	.0088360
%RSD	2.788190	4.093848	.8354101	1.063731	4.814951	1.244287	1.141390
#1	.1282677	-.139627	.4682475	.1760345	.0739362	99.75588	.7752279
#2	.1227407	-.128673	.4754015	.1723539	.0701407	98.10963	.7648187
#3	.1218819	-.133646	.4689892	.1738385	.0671720	100.5336	.7823911

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0139003	.0058700	157.7441	.8452662	.1277047	.1743478	361.5121
Stddev	.0002755	.0000786	2.0894	.0066207	.0009705	.0027347	3.9347
%RSD	1.981654	1.338473	1.324543	.7832729	.7599340	1.568540	1.088400
#1	.0141292	.0059604	157.6759	.8507283	.1284633	.1741760	362.3208
#2	.0135946	.0058319	155.6897	.8471676	.1266111	.1717031	357.2358
#3	.0139770	.0058178	159.8668	.8379028	.1280398	.1771644	364.9796

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.91485	58.37935	.2770963	.0263556	.5966733	.4474110	.6076115
Stddev	.19004	.77606	.0017671	.0010708	.6689704	.0072095	.0032429
%RSD	1.123501	1.329348	.6377050	4.062952	112.1167	1.611371	.5337111
#1	16.94293	58.50789	.2752094	.0274208	1.368006	.4483725	.6071621
#2	16.71234	57.54705	.2773673	.0252793	.247135	.4397691	.6110557
#3	17.08930	59.08313	.2787122	.0263666	.174878	.4540915	.6046168

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.407859	6.052981	.1407979	.0300418	3.959670	10.17677	.0313712
Stddev	.168237	.023588	.0033593	.0003765	.019895	.09557	.0019895
%RSD	1.788255	.3896939	2.385902	1.253094	.5024490	.9391133	6.341939
#1	9.494157	6.043230	.1407737	.0304515	3.950615	10.26471	.0332644
#2	9.213985	6.035832	.1374508	.0299628	3.945914	10.07506	.0292976
#3	9.515435	6.079881	.1441693	.0297111	3.982483	10.19055	.0315514

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-11 Acquired: 12/20/2024 19:59:45 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.593656	-.089583	.1347921
Stddev	.019110	.001256	.0022420
%RSD	1.199099	1.402497	1.663312
#1	1.596290	-.089744	.1324270
#2	1.573366	-.088254	.1350629
#3	1.611312	-.090752	.1368864

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2062.543	25321.30	2663.851	1755.222	2078.221
Stddev	2.262	74.91	28.521	1.835	4.448
%RSD	.1096792	.2958250	1.070684	.1045360	.2140179
#1	2059.979	25257.95	2649.366	1753.746	2078.101
#2	2064.258	25301.97	2696.709	1754.644	2082.728
#3	2063.392	25403.98	2645.479	1757.277	2073.835

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-12 Acquired: 12/20/2024 20:03:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0958407	-.109547	.3364185	.1268756	.0529428	72.37326	.6080875
Stddev	.0014246	.004399	.0056065	.0018701	.0016686	.49899	.0036469
%RSD	1.486468	4.016052	1.666535	1.474005	3.151688	.6894619	.5997380
#1	.0960735	-.112573	.3322608	.1248191	.0510306	71.86547	.6038904
#2	.0971346	-.104500	.3427948	.1284745	.0541032	72.39137	.6098885
#3	.0943139	-.111568	.3341998	.1273331	.0536947	72.86295	.6104835

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0108588	.0036681	91.23675	.3561533	.0952848	.1631204	269.2859
Stddev	.0002526	.0002770	.74044	.0022628	.0017363	.0041925	1.3583
%RSD	2.326472	7.552883	.8115535	.6353503	1.822175	2.570157	.5044001
#1	.0105672	.0035602	90.57677	.3573804	.0938778	.1593454	268.3045
#2	.0110116	.0039829	91.09603	.3575375	.0972251	.1623833	268.7171
#3	.0109975	.0034613	92.03744	.3535420	.0947514	.1676325	270.8361

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.291818	35.51333	.1988311	.0197448	.6396222	.2571903	.4794084
Stddev	.039913	.25010	.0045169	.0008193	.2397162	.0060077	.0089895
%RSD	.6343643	.7042566	2.271703	4.149252	37.47778	2.335903	1.875127
#1	6.252078	35.22998	.1961689	.0190148	.5009086	.2515564	.4896642
#2	6.291475	35.60662	.2040463	.0195886	.9164224	.2565020	.4756678
#3	6.331902	35.70337	.1962780	.0206309	.5015357	.2635125	.4728932

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.728343	4.988681	.1182477	.0272932	3.549688	10.26897	.0252373
Stddev	.030124	.084831	.0017538	.0005016	.060719	.03711	.0003294
%RSD	.3897896	1.700467	1.483192	1.837922	1.710537	.3613953	1.305051
#1	7.756323	4.930801	.1173880	.0268400	3.503404	10.22705	.0249548
#2	7.732251	5.086058	.1202655	.0278322	3.618438	10.28227	.0251580
#3	7.696455	4.949183	.1170895	.0272073	3.527222	10.29760	.0255990

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-12 Acquired: 12/20/2024 20:03:35 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.185939	-.031600	.0986796
Stddev	.006095	.000607	.0003816
%RSD	.5139188	1.922029	.3866668
#1	1.179958	-.032247	.0987353
#2	1.192141	-.031042	.0982733
#3	1.185717	-.031510	.0990303

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1978.813	24416.92	2552.901	1696.866	2092.315
Stddev	37.207	81.36	10.444	11.567	38.370
%RSD	1.880262	.3332220	.4091040	.6816457	1.833833
#1	2005.053	24358.83	2564.823	1690.106	2117.273
#2	1936.232	24382.03	2545.364	1690.271	2048.133
#3	1995.154	24509.91	2548.517	1710.222	2111.538

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-13 Acquired: 12/20/2024 20:07:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1188527	-.136979	.4398295	.1604759	.0662934	87.77082	.7494581
Stddev	.0018555	.002359	.0045467	.0049901	.0006790	.35533	.0036642
%RSD	1.561142	1.722412	1.033739	3.109553	1.024245	.4048427	.4889124
#1	.1187172	-.138425	.4446359	.1642926	.0666087	88.15855	.7536305
#2	.1207722	-.138255	.4355969	.1623059	.0655140	87.46071	.7479798
#3	.1170687	-.134256	.4392557	.1548291	.0667574	87.69322	.7467639

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0133545	.0048116	103.2072	.4468013	.1133747	.1873472	328.1955
Stddev	.0003281	.0001734	.4755	.0176223	.0001027	.0021953	.9560
%RSD	2.456811	3.604683	.4606764	3.944093	.0905928	1.171786	.2912787
#1	.0135270	.0046130	103.7261	.4668839	.1134856	.1898730	329.2583
#2	.0135605	.0049329	102.7924	.4395988	.1133555	.1858984	327.9221
#3	.0129762	.0048891	103.1032	.4339211	.1132829	.1862703	327.4060

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.176334	42.23441	.2522418	.0231569	.5672968	.3080533	.6112677
Stddev	.026936	.16833	.0011544	.0004727	.3627318	.0039722	.0255456
%RSD	.3753491	.3985707	.4576631	2.041227	63.94039	1.289460	4.179118
#1	7.206792	42.41504	.2515082	.0231821	.1670761	.3098402	.6405681
#2	7.166564	42.08192	.2516447	.0226721	.8743739	.3035014	.5936695
#3	7.155646	42.20627	.2535725	.0236165	.6604404	.3108181	.5995654

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.914972	6.382939	.1402496	.0323848	4.692477	10.58909	.0319968
Stddev	.086041	.019518	.0030488	.0006664	.018990	.03289	.0017662
%RSD	.8677885	.3057874	2.173863	2.057860	.4046811	.3106404	5.519779
#1	9.993357	6.393538	.1369947	.0324038	4.695142	10.62417	.0327392
#2	9.822912	6.360414	.1407153	.0317091	4.672296	10.58419	.0299806
#3	9.928646	6.394864	.1430388	.0330415	4.709993	10.55893	.0332706

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-13 Acquired: 12/20/2024 20:07:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.303119	-.043598	.1174363
Stddev	.004491	.000372	.0007469
%RSD	.3446698	.8528067	.6360252
#1	1.306001	-.043526	.1177216
#2	1.297943	-.043267	.1179985
#3	1.305411	-.044000	.1165887

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2036.598	24927.11	2633.615	1727.810	2101.889
Stddev	7.286	776.60	6.314	52.458	4.325
%RSD	.3577717	3.115502	.2397587	3.036078	.2057804
#1	2032.462	24032.87	2639.209	1667.258	2098.641
#2	2045.011	25316.24	2634.867	1756.728	2106.798
#3	2032.320	25432.22	2626.768	1759.445	2100.228

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-14 Acquired: 12/20/2024 20:11:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1329248	-.169062	.4805408	.1901028	.0822300	88.94610	.8325763
Stddev	.0056175	.004186	.0044102	.0009556	.0017942	.07115	.0011856
%RSD	4.226093	2.476179	.9177547	.5026833	2.181955	.0799964	.1424045
#1	.1366863	-.173465	.4764162	.1902187	.0811201	88.86468	.8327905
#2	.1356206	-.165132	.4800166	.1890945	.0843000	88.99636	.8312982
#3	.1264675	-.168588	.4851897	.1909952	.0812700	88.97727	.8336402

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0142696	.0052845	110.6064	.4868295	.1153178	.2634264	391.8643
Stddev	.0001142	.0001622	.2210	.0029328	.0006101	.0069864	.8430
%RSD	.8005515	3.069524	.1998400	.6024328	.5290912	2.652128	.2151307
#1	.0141437	.0051925	110.7796	.4894458	.1146380	.2707117	391.8943
#2	.0143665	.0051892	110.3574	.4873834	.1154974	.2567832	391.0067
#3	.0142987	.0054718	110.6821	.4836592	.1158179	.2627843	392.6919

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.465639	44.68537	.2715380	.0287251	.4895909	.3251371	1.011232
Stddev	.006575	.17478	.0039730	.0004386	.5153264	.0074408	.006416
%RSD	.0776622	.3911440	1.463166	1.526730	105.2565	2.288498	.6344433
#1	8.458827	44.50196	.2686621	.0286195	.0278952	.3307688	1.017462
#2	8.466142	44.70412	.2698804	.0292068	.3953402	.3167018	1.004646
#3	8.471947	44.85002	.2760714	.0283490	1.045537	.3279406	1.011588

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.590782	5.877463	.1480109	.0431890	4.706879	10.45976	.0370948
Stddev	.163864	.071534	.0026891	.0005267	.052256	.04173	.0005072
%RSD	1.708552	1.217095	1.816835	1.219559	1.110198	.3989981	1.367316
#1	9.776188	5.815805	.1510456	.0430878	4.660745	10.46091	.0376795
#2	9.530782	5.860692	.1470627	.0437590	4.696266	10.50091	.0367747
#3	9.465375	5.955894	.1459243	.0427202	4.763627	10.41746	.0368300

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-14 Acquired: 12/20/2024 20:11:14 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.312013	-.160808	.1228787
Stddev	.002647	.000367	.0028154
%RSD	.2017312	.2284188	2.291219
#1	1.308992	-.160867	.1203658
#2	1.313120	-.160415	.1259214
#3	1.313926	-.161142	.1223489

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2006.027	24856.03	2590.215	1723.079	2092.796
Stddev	18.959	67.72	5.270	6.138	22.191
%RSD	.9451223	.2724437	.2034736	.3562167	1.060361
#1	2019.799	24777.84	2596.156	1716.134	2108.268
#2	2013.878	24895.71	2588.388	1727.777	2102.748
#3	1984.403	24894.55	2586.102	1725.325	2067.370

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-15 Acquired: 12/20/2024 20:15:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0983154	-.116483	.9391186	.1370089	.0584171	110.6809	.6985239
Stddev	.0007119	.001754	.0081397	.0057645	.0033972	.7279	.0029703
%RSD	.7241030	1.505597	.8667351	4.207363	5.815382	.6576353	.4252220
#1	.0982506	-.114463	.9465112	.1304415	.0546399	109.9490	.6973443
#2	.0976381	-.117619	.9303957	.1393540	.0612225	110.6890	.6963247
#3	.0990575	-.117366	.9404489	.1412312	.0593888	111.4047	.7019028

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0131202	.0108007	115.2872	.3224334	.1331870	.2229562	284.3563
Stddev	.0001911	.0003175	.7120	.0030739	.0016075	.0008328	1.8426
%RSD	1.456731	2.939742	.6176110	.9533445	1.206917	.3735236	.6479977
#1	.0132739	.0111019	114.5438	.3212224	.1344578	.2221164	282.5091
#2	.0129062	.0104691	115.3548	.3201493	.1313800	.2237818	284.3655
#3	.0131805	.0108310	115.9630	.3259283	.1337231	.2229704	286.1943

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.409678	68.04934	.3059059	.0224346	1.654925	.3112854	2.015200
Stddev	.015932	.34328	.0031749	.0004904	.825696	.0047350	.037965
%RSD	.4672597	.5044558	1.037867	2.185952	49.89325	1.521119	1.883933
#1	3.396522	67.65522	.3072746	.0218805	1.976722	.3058327	1.971610
#2	3.405120	68.28301	.3022762	.0228130	.716782	.3143606	2.032962
#3	3.427392	68.20980	.3081668	.0226102	2.271270	.3136629	2.041028

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	16.21808	6.383532	.2668900	.0284162	11.06728	10.46280	.0261988
Stddev	.25988	.078233	.0027202	.0006803	.12118	.08916	.0013832
%RSD	1.602432	1.225539	1.019213	2.394037	1.094909	.8521202	5.279730
#1	15.99950	6.421263	.2637584	.0290965	11.10962	10.49246	.0273751
#2	16.14930	6.293584	.2686660	.0277360	10.93061	10.36260	.0246749
#3	16.50543	6.435748	.2682457	.0284162	11.16160	10.53335	.0265465

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-15 Acquired: 12/20/2024 20:15:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S9 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.199126	.2339394	.1801645
Stddev	.006630	.0012516	.0017710
%RSD	.5528742	.5349953	.9830083
#1	1.193170	.2326294	.1785765
#2	1.197938	.2340658	.1798426
#3	1.206269	.2351230	.1820744

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2020.143	25040.19	2572.994	1728.969	2097.730
Stddev	13.841	181.02	5.735	21.618	19.341
%RSD	.6851645	.7229311	.2228871	1.250312	.9219757
#1	2010.242	25236.76	2571.285	1753.773	2084.027
#2	2035.959	25003.47	2579.389	1718.999	2119.853
#3	2014.228	24880.34	2568.308	1714.136	2089.309

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-16 Acquired: 12/20/2024 20:18:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1386771	-.109932	.4323072	.1275616	.0505354	78.59390	.5436418
Stddev	.0045480	.002175	.0032907	.0064109	.0003540	.51151	.0042134
%RSD	3.279574	1.978223	.7611964	5.025764	.7004561	.6508301	.7750228
#1	.1334640	-.111552	.4296947	.1301893	.0503178	78.01427	.5388225
#2	.1407341	-.110785	.4360030	.1322412	.0503445	78.98204	.5454743
#3	.1418332	-.107461	.4312240	.1202542	.0509438	78.78538	.5466286

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0105104	.0068338	77.64142	.2330189	.1094020	.1545997	265.4972
Stddev	.0000466	.0000889	.30500	.0087039	.0001502	.0054237	2.0738
%RSD	.4430278	1.300722	.3928270	3.735289	.1373295	3.508257	.7811174
#1	.0104645	.0069175	77.29139	.2283648	.1092673	.1510860	263.1981
#2	.0105576	.0067405	77.78286	.2276315	.1093746	.1608462	267.2267
#3	.0105092	.0068433	77.85003	.2430604	.1095640	.1518667	266.0669

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.695024	43.37746	.2137116	.0209535	.5047766	.2386770	1.879054
Stddev	.023760	.22318	.0012006	.0025693	.1808685	.0033303	.059121
%RSD	.6430390	.5145046	.5617770	12.26190	35.83138	1.395311	3.146321
#1	3.667827	43.16303	.2127837	.0225453	.3732895	.2408953	1.838880
#2	3.711752	43.60846	.2132835	.0223257	.7110433	.2402883	1.851342
#3	3.705494	43.36088	.2150676	.0179894	.4299970	.2348475	1.946941

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.14025	4.281168	.1863900	.0205120	5.227457	9.669826	.0215360
Stddev	.13832	.000812	.0046219	.0004609	.023192	.086165	.0007177
%RSD	1.241659	.0189555	2.479677	2.247046	.4436662	.8910705	3.332514
#1	11.09669	4.281617	.1810800	.0204114	5.201865	9.591549	.0217038
#2	11.29511	4.281655	.1895085	.0201097	5.247084	9.655776	.0221548
#3	11.02895	4.280231	.1885814	.0210149	5.233422	9.762152	.0207492

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-16 Acquired: 12/20/2024 20:18:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.096106	.1234436	.1506142
Stddev	.013164	.0008060	.0055354
%RSD	1.200978	.6529514	3.675195
#1	1.081090	.1225155	.1450575
#2	1.101568	.1239679	.1561280
#3	1.105659	.1238475	.1506571

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1944.435	23441.42	2474.776	1624.269	2115.462
Stddev	3.088	661.88	15.117	47.330	1.729
%RSD	.1588345	2.823564	.6108255	2.913952	.0817499
#1	1946.454	23884.29	2492.227	1656.244	2116.365
#2	1945.971	23759.41	2465.746	1646.666	2116.553
#3	1940.880	22680.55	2466.354	1569.897	2113.468

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-17 Acquired: 12/20/2024 20:22:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3173129	-.917409	6.537132	1.045265	.5007129	47.45368
Stddev	.0077864	.009994	.008663	.000453	.0030443	.13848
%RSD	2.453851	1.089326	.1325265	.0433590	.6080013	.2918180
#1	.3084620	-.916212	6.538542	1.045703	.4996524	47.47293
#2	.3203691	-.927948	6.527850	1.044798	.5041456	47.58152
#3	.3231075	-.908069	6.545004	1.045295	.4983406	47.30658

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7850386	.0403654	.0562618	662.4751	5.893802	.1550127
Stddev	.0035784	.0003676	.0002746	2.8491	.022309	.0004695
%RSD	.4558232	.9107832	.4881435	.4300723	.3785149	.3028495
#1	.7890770	.0407627	.0562486	663.1207	5.919538	.1546222
#2	.7837762	.0402966	.0559940	664.9460	5.879971	.1548822
#3	.7822625	.0400371	.0565428	659.3585	5.881896	.1555335

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4212872	F 2103.761	F 94.18063	103.1537	2.196768	.1829941
Stddev	.0038042	6.696	.23236	.2429	.003351	.0037997
%RSD	.9029896	.3183057	.2467171	.2354291	.1525543	2.076385
#1	.4184041	2101.776	94.17788	102.9121	2.194573	.1812620
#2	.4255989	2111.225	94.41435	103.3978	2.195105	.1873512
#3	.4198587	2098.281	93.94966	103.1513	2.200625	.1803692

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.446345	1.047574	19.05873	2.559875	8.784684	.4542004
Stddev	.649323	.011787	.11439	.062324	.011316	.0067114
%RSD	14.60353	1.125133	.6002212	2.434655	.1288206	1.477627
#1	3.790662	1.043077	18.96818	2.622897	8.792337	.4476039
#2	5.089116	1.060947	19.02071	2.498273	8.771685	.4539762
#3	4.459256	1.038699	19.18729	2.558455	8.790031	.4610210

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-17 Acquired: 12/20/2024 20:22:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1102959	5.786013	8.695505	.2323351	4.697475	F -1.35298
Stddev	.0002819	.011298	.026582	.0015717	.009840	.00399
%RSD	.2556034	.1952691	.3056979	.6764570	.2094795	.2952185
#1	.1099704	5.773876	8.715617	.2339123	4.691345	-1.35075
#2	.1104652	5.796226	8.705529	.2323240	4.708825	-1.35759
#3	.1104519	5.787938	8.665368	.2307691	4.692253	-1.35059

Elem	Li6707
Units	ppm
Avg	.3563186
Stddev	.0026910
%RSD	.7552235
#1	.3586711
#2	.3569003
#3	.3533843

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1709.792	21736.04	2375.312	1446.458	2023.169
Stddev	6.548	71.28	5.964	7.875	5.362
%RSD	.3829706	.3279152	.2510872	.5444632	.2650482
#1	1716.366	21664.78	2370.349	1446.204	2027.088
#2	1709.740	21807.33	2373.658	1454.457	2025.361
#3	1703.270	21736.02	2381.928	1438.712	2017.058

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-18 Acquired: 12/20/2024 20:26:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0741781	-.059986	.1935924	.0787755	.0257502	85.23947	.6782171
Stddev	.0013788	.001140	.0008695	.0031322	.0005936	.46417	.0030573
%RSD	1.858805	1.900193	.4491673	3.976127	2.305367	.5445477	.4507888
#1	.0746922	-.061271	.1935191	.0754115	.0257312	85.48987	.6816727
#2	.0726161	-.059098	.1927618	.0816080	.0251663	84.70387	.6758639
#3	.0752260	-.059588	.1944963	.0793069	.0263531	85.52467	.6771146

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0094367	.0038564	144.8485	.3096350	.0990525	.1631993	183.9670
Stddev	.0000345	.0001116	.7491	.0010145	.0004549	.0017177	.8220
%RSD	.3659416	2.893092	.5171954	.3276572	.4592080	1.052536	.4468288
#1	.0094288	.0037284	145.2504	.3108019	.0995056	.1626576	184.6255
#2	.0094067	.0039332	143.9842	.3091413	.0985959	.1651225	183.0457
#3	.0094745	.0039074	145.3110	.3089618	.0990559	.1618176	184.2298

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.925493	59.56792	.2223341	.0129170	.6235726	.2514034	.6011505
Stddev	.016045	.23383	.0012301	.0003510	1.001282	.0052525	.0049772
%RSD	.4087407	.3925509	.5532797	2.717098	160.5718	2.089290	.8279478
#1	3.940147	59.73556	.2218676	.0130984	-.519688	.2461594	.6023148
#2	3.908348	59.30079	.2214054	.0125125	1.045934	.2513865	.6054423
#3	3.927982	59.66740	.2237292	.0131402	1.344472	.2566644	.5956943

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.005973	4.908766	.0886009	.0173595	3.310218	10.12831	.0130416
Stddev	.135782	.006748	.0021434	.0003684	.006105	.15974	.0016931
%RSD	1.507686	.1374746	2.419224	2.122486	.1844218	1.577132	12.98222
#1	9.144588	4.901924	.0861938	.0171944	3.317016	10.29310	.0137980
#2	8.873214	4.915416	.0893055	.0171025	3.308436	9.97416	.0142246
#3	9.000118	4.908959	.0903033	.0177816	3.305203	10.11765	.0111022

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-18 Acquired: 12/20/2024 20:26:27 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.9748665	.5412607	.1347103
Stddev	.0011055	.0019432	.0033953
%RSD	.1133972	.3590219	2.520463
#1	.9760844	.5430491	.1386281
#2	.9739266	.5391928	.1326238
#3	.9745884	.5415401	.1328789

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2007.820	24650.53	2596.394	1708.535	2057.505
Stddev	3.030	35.25	20.472	3.924	2.613
%RSD	.1508863	.1430060	.7884890	.2296792	.1270132
#1	2006.769	24678.89	2582.128	1712.946	2057.402
#2	2011.235	24611.06	2619.851	1707.228	2060.169
#3	2005.456	24661.64	2587.203	1705.432	2054.945

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCV082 Acquired: 12/20/2024 20:30:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV082 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.787581	4.759265	24.16313	4.768126	4.803623	402.7495	10.06096
Stddev	.007576	.006880	.03522	.009956	.005889	.7922	.00506
%RSD	.1582452	.1445513	.1457720	.2087992	.1226003	.1966857	.0502708
#1	4.794007	4.765593	24.13250	4.757818	4.797122	402.3210	10.06463
#2	4.789509	4.751942	24.15528	4.777688	4.808601	402.2640	10.05519
#3	4.779227	4.760261	24.20162	4.768871	4.805147	403.6636	10.06305

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5071467	2.428325	402.8537	15.29018	2.445195	15.04218	409.0547
Stddev	.0014574	.004233	1.3291	.05344	.004364	.02829	1.1712
%RSD	.2873778	.1743163	.3299202	.3495170	.1784542	.1880427	.2863173
#1	.5054645	2.427281	403.1121	15.28502	2.442066	15.04225	408.8346
#2	.5080297	2.424712	401.4144	15.23951	2.443339	15.01386	408.0091
#3	.5079459	2.432983	404.0347	15.34602	2.450180	15.07043	410.3203

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.98870	404.6338	2.459195	1.283183	406.2870	2.502132	14.12957
Stddev	.02518	1.0522	.004839	.007370	1.2040	.000440	.09094
%RSD	.1680066	.2600478	.1967627	.5743276	.2963403	.0175883	.6435878
#1	14.96383	403.8784	2.456909	1.278909	406.5297	2.501737	14.15896
#2	14.98810	404.1875	2.455921	1.278947	404.9801	2.502606	14.02757
#3	15.01418	405.8357	2.464753	1.291693	407.3511	2.502054	14.20217

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	151.3892	4.850791	4.926079	4.742393	4.835763	4.925004	4.858787
Stddev	.2417	.016072	.019371	.007311	.022157	.007161	.007440
%RSD	.1596415	.3313335	.3932308	.1541576	.4581995	.1454004	.1531158
#1	151.5103	4.857716	4.907478	4.735957	4.820491	4.919853	4.854002
#2	151.1109	4.832417	4.946137	4.740880	4.825622	4.921978	4.855001
#3	151.5464	4.862239	4.924622	4.750342	4.861176	4.933181	4.867358

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCV082 Acquired: 12/20/2024 20:30:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV082 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	5.004812	4.772535	5.107992
Stddev	.003458	.009161	.006055
%RSD	.0690936	.1919572	.1185327
#1	5.002677	4.763793	5.111363
#2	5.002958	4.771746	5.101002
#3	5.008802	4.782064	5.111611

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1518.207	20161.24	2208.054	1278.512	1748.285
Stddev	.895	96.56	5.098	6.936	3.507
%RSD	.0589287	.4789505	.2308805	.5424943	.2006098
#1	1518.778	20176.79	2213.155	1276.700	1747.726
#2	1518.668	20249.09	2208.048	1286.174	1752.038
#3	1517.176	20057.85	2202.959	1272.661	1745.090

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCB082 Acquired: 12/20/2024 20:33:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB082 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000500	.0011054	.0045187	-.001214	-.001996	.0282860	-.000711
Stddev	.001235	.0010011	.0004168	.001357	.001317	.0194448	.000869
%RSD	247.0362	90.55967	9.223630	111.7455	66.01686	68.74353	122.2306
#1	.000816	.0019823	.0043603	.000091	-.000838	.0324474	-.000585
#2	-.001633	.0013194	.0049915	-.002617	-.003429	.0453131	.000088
#3	-.000683	.0000147	.0042044	-.001117	-.001719	.0070974	-.001635

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000180	.0002982	.0382883	.0003763	-.000011	.0028268	.0143311
Stddev	.0001137	.0000665	.0255772	.0003004	.000237	.0045831	.0473547
%RSD	631.2398	22.28671	66.80163	79.82536	2125.969	162.1330	330.4320
#1	.0001445	.0002393	.0206294	.0007231	.000002	.0064592	.0613155
#2	-.000076	.0003702	.0676194	.0001956	.000219	.0043436	-.033385
#3	-.000015	.0002849	.0266161	.0002103	-.000254	-.002322	.015063

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000022	.0894161	.0006118	.0005903	-.407524	.0006971	-.001300
Stddev	.001952	.0720033	.0006465	.0014267	.551806	.0063247	.005828
%RSD	9064.342	80.52604	105.6780	241.6896	135.4044	907.2392	448.4423
#1	.000134	.1525232	.0010643	.0010357	-.982871	-.001420	-.000297
#2	.001849	.1047411	-.000129	-.001006	.117259	-.004298	-.007564
#3	-.002047	.0109841	.000900	.001741	-.356961	.007809	.003963

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.195977	-.003080	.0152585	.0000143	-.005968	-.000701	-.011993
Stddev	.321631	.002226	.0036571	.0007874	.001835	.000149	.000694
%RSD	164.1170	72.28524	23.96779	5505.332	30.74537	21.31427	5.786178
#1	.082764	-.002170	.0194794	.0006371	-.004215	-.000590	-.011588
#2	-.547890	-.005617	.0132624	.0002765	-.007875	-.000870	-.012794
#3	-.122804	-.001452	.0130339	-.000871	-.005814	-.000642	-.011597

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCB082 Acquired: 12/20/2024 20:33:57 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB082 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0017696	.0002383	.0179955
Stddev	.0012616	.0000714	.0030074
%RSD	71.29190	29.97442	16.71170
#1	.0020256	.0001642	.0194888
#2	.0003997	.0002439	.0145337
#3	.0028835	.0003067	.0199639

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1831.436	22668.44	2308.574	1561.629	2162.137
Stddev	3.840	126.48	16.473	10.617	6.108
%RSD	.2096930	.5579603	.7135608	.6798360	.2824853
#1	1828.986	22774.10	2290.044	1567.944	2161.824
#2	1835.862	22702.92	2314.116	1567.570	2168.396
#3	1829.459	22528.29	2321.561	1549.372	2156.192

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-19 Acquired: 12/20/2024 20:37:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2005393	-.444026	3.431482	.5089567	.2392255	76.41443
Stddev	.0013901	.000524	.029421	.0058560	.0015624	.27936
%RSD	.6931639	.1180618	.8573971	1.150582	.6531069	.3655818
#1	.1994285	-.443518	3.399777	.5126290	.2376421	76.62243
#2	.2000914	-.443995	3.457904	.5120376	.2407660	76.52396
#3	.2020981	-.444565	3.436765	.5022034	.2392683	76.09691

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.046111	.0264670	.0362043	665.7509	3.126197	.1348545
Stddev	.002406	.0004134	.0003540	1.6490	.019705	.0013617
%RSD	.2300079	1.561875	.9776676	.2476853	.6303049	1.009730
#1	1.046758	.0261413	.0357966	667.5492	3.113690	.1332844
#2	1.048127	.0269320	.0363835	665.3934	3.148911	.1355672
#3	1.043447	.0263275	.0364329	664.3100	3.115990	.1357119

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4152778	F 1055.166	F 39.15704	106.9835	1.385178	.0819907
Stddev	.0037164	4.737	.18636	.4244	.012841	.0014842
%RSD	.8949200	.4488924	.4759247	.3967113	.9270552	1.810237
#1	.4112382	1059.385	39.32169	107.3385	1.370715	.0836780
#2	.4160435	1056.069	39.19471	107.0985	1.395238	.0814075
#3	.4185518	1050.043	38.95472	106.5134	1.389582	.0808867

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.692603	.5885118	12.57514	10.94923	6.582133	.4045630
Stddev	.810935	.0033978	.02077	.00132	.054565	.0092793
%RSD	21.96106	.5773536	.1652053	.0120998	.8289893	2.293652
#1	4.022485	.5915148	12.55174	10.94960	6.527341	.4047221
#2	4.286607	.5891971	12.58225	10.94776	6.636468	.3952052
#3	2.768716	.5848236	12.59142	10.95034	6.582591	.4137617

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-19 Acquired: 12/20/2024 20:37:59 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0670305	10.78031	8.790307	.1509966	2.723864	.4841068
Stddev	.0012995	.07947	.109321	.0005687	.003450	.0021287
%RSD	1.938600	.7371660	1.243653	.3766190	.1266594	.4397182
#1	.0656300	10.69177	8.823873	.1508994	2.725830	.4848058
#2	.0681972	10.84546	8.878910	.1504828	2.725883	.4857981
#3	.0672642	10.80369	8.668139	.1516077	2.719881	.4817165

Elem	Li6707
Units	ppm
Avg	.1196534
Stddev	.0010787
%RSD	.9015430
#1	.1205783
#2	.1184684
#3	.1199135

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1830.300	22888.70	2491.957	1551.133	1970.229
Stddev	13.652	111.08	15.145	6.020	15.998
%RSD	.7458663	.4853064	.6077537	.3880978	.8119842
#1	1843.678	23016.81	2485.293	1558.080	1985.836
#2	1816.390	22830.18	2481.286	1547.870	1953.867
#3	1830.833	22819.12	2509.291	1547.450	1970.985

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-20 Acquired: 12/20/2024 20:41:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S7D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1030405	-.115609	.3604075	.1471539	.0610531	80.47697	.6695823
Stddev	.0048912	.003027	.0009448	.0040308	.0004781	.42417	.0023188
%RSD	4.746868	2.618187	.2621576	2.739194	.7831755	.5270735	.3463012
#1	.1066480	-.113786	.3593618	.1469052	.0605028	80.12625	.6684658
#2	.1050001	-.119103	.3606608	.1513033	.0612900	80.94842	.6722481
#3	.0974733	-.113939	.3611999	.1432531	.0613666	80.35624	.6680331

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0118792	.0040957	122.0843	.4803239	.1112099	.1651377	306.5612
Stddev	.0001719	.0001002	.6670	.0026017	.0004141	.0061503	1.5108
%RSD	1.447254	2.445793	.5463660	.5416593	.3723744	3.724356	.4928131
#1	.0120242	.0039801	121.6173	.4791682	.1108544	.1631726	304.9063
#2	.0116893	.0041554	122.8483	.4785002	.1111107	.1602101	307.8667
#3	.0119242	.0041518	121.7874	.4833032	.1116646	.1720304	306.9106

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.199770	39.12000	.2334670	.0198135	.7222322	.3042801	.5696304
Stddev	.013592	.15051	.0014429	.0007186	.6922205	.0070384	.0068484
%RSD	.1477439	.3847502	.6180170	3.626861	95.84460	2.313123	1.202247
#1	9.184797	38.95084	.2320896	.0197940	.3477749	.3039405	.5772475
#2	9.211330	39.23913	.2349674	.0205416	.2979009	.3114820	.5676616
#3	9.203184	39.17002	.2333440	.0191048	1.521021	.2974176	.5639821

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.003098	4.979242	.1291524	.0308603	3.488053	10.53718	.0262805
Stddev	.042648	.023680	.0035647	.0009409	.015286	.03879	.0009662
%RSD	.4737084	.4755690	2.760094	3.049001	.4382259	.3680808	3.676383
#1	8.955892	4.952197	.1265065	.0297738	3.471427	10.57779	.0272504
#2	9.014555	4.996250	.1332061	.0314028	3.501497	10.50052	.0253181
#3	9.038848	4.989279	.1277447	.0314043	3.491235	10.53322	.0262730

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-20 Acquired: 12/20/2024 20:41:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S7D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.313091	-.053520	.1097672
Stddev	.006632	.000596	.0053704
%RSD	.5050561	1.113005	4.892514
#1	1.316914	-.052970	.1127901
#2	1.316925	-.054153	.1129449
#3	1.305433	-.053436	.1035667

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2007.940	24792.63	2596.956	1713.580	2094.981
Stddev	4.053	59.73	4.541	4.813	5.512
%RSD	.2018356	.2409273	.1748467	.2808826	.2630971
#1	2008.402	24847.25	2595.895	1716.209	2098.108
#2	2003.676	24801.80	2593.039	1708.025	2088.617
#3	2011.742	24728.85	2601.933	1716.507	2098.218

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-13LX5 Acquired: 12/20/2024 20:45:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S7L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0237060	-.023548	.0756269	.0302590	.0070925	17.57575	.1467708
Stddev	.0009349	.000794	.0026094	.0027974	.0020764	.12174	.0014833
%RSD	3.943735	3.372174	3.450329	9.244862	29.27567	.6926838	1.010608
#1	.0238737	-.022694	.0762614	.0274154	.0048081	17.53253	.1471396
#2	.0226985	-.024264	.0778606	.0303538	.0076041	17.48151	.1451379
#3	.0245456	-.023687	.0727588	.0330078	.0088652	17.71321	.1480349

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0026318	.0009450	27.05968	.1052861	.0308144	.0348732	68.04789
Stddev	.0001003	.0000512	.18641	.0003606	.0001613	.0008601	.37734
%RSD	3.809556	5.415982	.6888775	.3425334	.5234280	2.466489	.5545170
#1	.0027430	.0009077	27.01882	.1048939	.0307727	.0355032	67.95706
#2	.0026039	.0010033	26.89709	.1056033	.0309924	.0352232	67.72426
#3	.0025484	.0009239	27.26313	.1053611	.0306780	.0338933	68.46236

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.050583	8.673621	.0458056	.0048090	.1293654	.0621741	.1335496
Stddev	.013790	.066022	.0004362	.0012126	.2446726	.0055031	.0129918
%RSD	.6724745	.7611814	.9523392	25.21527	189.1330	8.851116	9.728071
#1	2.045579	8.613960	.0453195	.0062086	-.021643	.0611838	.1425305
#2	2.039994	8.662351	.0459344	.0040726	.411659	.0681050	.1186527
#3	2.066176	8.744553	.0461630	.0041458	-.001920	.0572333	.1394656

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.642588	1.012715	.0266877	.0065870	.7066082	2.392569	-.004608
Stddev	.069828	.002628	.0021824	.0001881	.0020311	.030552	.000396
%RSD	4.251086	.2595424	8.177477	2.855459	.2874368	1.276943	8.605047
#1	1.568633	1.009714	.0249247	.0067516	.7086364	2.419056	-.004573
#2	1.651747	1.014612	.0291286	.0066273	.7045743	2.359145	-.004230
#3	1.707384	1.013818	.0260099	.0063820	.7066138	2.399505	-.005020

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-13LX5 Acquired: 12/20/2024 20:45:37 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S7L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2895757	-.012482	.0282135
Stddev	.0006534	.000474	.0036547
%RSD	.2256401	3.797852	12.95385
#1	.2903266	-.012432	.0282367
#2	.2892641	-.012979	.0318565
#3	.2891364	-.012035	.0245472

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1891.568	23324.75	2400.799	1616.878	2152.119
Stddev	7.918	93.74	19.755	10.750	9.816
%RSD	.4186126	.4018823	.8228584	.6648840	.4561315
#1	1892.988	23430.08	2394.512	1628.494	2156.574
#2	1883.036	23293.71	2422.932	1614.862	2140.865
#3	1898.680	23250.48	2384.952	1607.279	2158.918

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-21 Acquired: 12/20/2024 20:49:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S7S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1917238	-.033174	.3961364	.3007834	.2169515	83.16300	4.376580
Stddev	.0032628	.002013	.0009369	.0042718	.0025098	.29580	.013073
%RSD	1.701816	6.068190	.2365020	1.420234	1.156842	.3556928	.2986936
#1	.1889609	-.033262	.3971658	.2983579	.2176618	83.42514	4.389489
#2	.1953235	-.031119	.3959095	.3057159	.2141631	83.22157	4.376903
#3	.1908871	-.035142	.3953337	.2982765	.2190295	82.84229	4.363350

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1032669	.1002184	121.1267	.8732121	1.079353	.6066655	305.8140
Stddev	.0004522	.0000760	.4439	.0024848	.002351	.0119594	.7580
%RSD	.4378921	.0757874	.3664415	.2845632	.2178292	1.971336	.2478719
#1	.1035587	.1002370	121.5660	.8734090	1.080909	.5937710	306.6282
#2	.1034960	.1002832	121.1356	.8755927	1.076649	.6088317	305.6854
#3	.1027460	.1001348	120.6784	.8706347	1.080503	.6173937	305.1286

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.06085	38.67287	1.226393	.0883544	.4511409	1.253074	1.335375
Stddev	.03350	.22907	.003095	.0014430	.2151622	.008550	.011096
%RSD	.3329906	.5923347	.2523259	1.633186	47.69290	.6823514	.8309325
#1	10.09923	38.93734	1.229631	.0878720	.3899307	1.261357	1.337721
#2	10.04583	38.53666	1.223465	.0899768	.2732160	1.253585	1.323294
#3	10.03749	38.54461	1.226084	.0872145	.6902760	1.244279	1.345111

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.012810	4.919674	.1214543	.0298049	3.429934	10.53105	.0258845
Stddev	.035122	.006784	.0035405	.0001739	.001767	.06863	.0008008
%RSD	.3896910	.1378982	2.915082	.5833264	.0515191	.6516957	3.093578
#1	9.035790	4.922943	.1248456	.0296131	3.429798	10.58494	.0267190
#2	9.030260	4.911874	.1217359	.0299522	3.428239	10.55444	.0251223
#3	8.972380	4.924205	.1177815	.0298493	3.431765	10.45379	.0258123

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5233-21 Acquired: 12/20/2024 20:49:34 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S7S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.308452	-.054974	.1080877
Stddev	.010796	.000648	.0042840
%RSD	.8251161	1.179132	3.963443
#1	1.320625	-.054230	.1124148
#2	1.300036	-.055417	.1080002
#3	1.304696	-.055274	.1038482

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2005.832	24667.40	2589.531	1712.506	2096.393
Stddev	8.524	44.50	19.494	4.157	8.466
%RSD	.4249525	.1804059	.7528147	.2427495	.4038191
#1	1996.306	24625.36	2570.845	1708.209	2086.844
#2	2008.452	24662.84	2588.004	1712.802	2099.359
#3	2012.738	24714.01	2609.744	1716.507	2102.977

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: PB165605BL Acquired: 12/20/2024 20:53:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS605 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040720	.0005061	-.000188	.0008773	-.002024	-.013944
Stddev	.0007295	.0012692	.002339	.0020216	.000847	.015717
%RSD	17.91379	250.7626	1245.671	230.4223	41.82916	112.7120
#1	.0035426	.0019618	-.002812	.0016671	-.002887	-.022046
#2	.0049041	-.000074	.001678	.0023848	-.001194	-.023957
#3	.0037694	-.000369	.000570	-.001420	-.001991	.004170

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001297	.0000790	.0000654	-.012325	-.000212	-.000023
Stddev	.001210	.0001242	.0000803	.015934	.000425	.000317
%RSD	93.27877	157.1217	122.8165	129.2804	200.8903	1376.639
#1	-.002522	.0000609	.0000933	-.027598	-.000413	-.000218
#2	-.000103	.0002113	-.000025	-.013576	-.000499	-.000194
#3	-.001265	-.000035	.000128	.004197	.000277	.000343

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002312	.0233911	-.000647	-.002997	.0005571	-.000009
Stddev	.005194	.0159261	.000949	.062110	.0003768	.000193
%RSD	224.6278	68.08626	146.8076	2072.419	67.62400	2258.431
#1	-.003171	.0055954	-.000142	.049829	.0009054	-.000093
#2	-.007023	.0363048	-.000057	-.071419	.0006088	-.000145
#3	.003258	.0282730	-.001741	.012600	.0001572	.000212

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.385776	-.003909	-.001578	-.305745	-.005071	-.001013
Stddev	.969677	.014329	.003175	.065187	.002808	.002365
%RSD	251.3576	366.5360	201.1434	21.32079	55.38497	233.4934
#1	.384192	-.019480	-.004606	-.270829	-.002211	-.001821
#2	-1.47477	-.000972	.001726	-.265453	-.007825	.001650
#3	-.06675	.008723	-.001855	-.380953	-.005176	-.002868

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: PB165605BL Acquired: 12/20/2024 20:53:22 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: PBS605 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0002017	-.002673	-.000571	F -.013091	.0010863	-.000242
Stddev	.0004870	.001426	.000695	.001450	.0014247	.000181
%RSD	241.4790	53.34183	121.7499	11.07680	131.1513	74.71838
#1	-.000076	-.001046	.000034	-.013645	.0023318	-.000103
#2	-.000083	-.003264	-.001331	-.014183	.0013943	-.000447
#3	.000764	-.003707	-.000417	-.011446	-.000467	-.000177

Elem	Li6707
Units	ppm
Avg	-.000227
Stddev	.005091
%RSD	2245.358
#1	.004313
#2	-.005732
#3	.000739

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1848.787	22825.10	2348.983	1571.176	2169.617
Stddev	23.552	182.37	16.775	15.336	24.255
%RSD	1.273896	.7989738	.7141529	.9760570	1.117961
#1	1821.694	23016.77	2350.367	1583.683	2141.615
#2	1860.295	22653.74	2365.024	1554.066	2183.131
#3	1864.371	22804.80	2331.559	1575.779	2184.106

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: PB165605BS Acquired: 12/20/2024 20:57:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS605 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0227316	.0523258	.0190673	.0606704	.1033338	.4178619
Stddev	.0025709	.0031068	.0015907	.0032126	.0043495	.0111010
%RSD	11.30967	5.937403	8.342672	5.295155	4.209174	2.656632
#1	.0256811	.0488487	.0206111	.0620649	.0984077	.4166138
#2	.0215479	.0548288	.0174335	.0629501	.1066443	.4074377
#3	.0209659	.0533000	.0191571	.0569962	.1049494	.4295343

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4180015	.0108465	.0100487	10.27448	.0213204	.1022504
Stddev	.0013828	.0000353	.0000932	.04335	.0003358	.0004965
%RSD	.3308065	.3259288	.9279169	.4219040	1.574846	.4855650
#1	.4172615	.0108297	.0099412	10.23033	.0211677	.1017328
#2	.4195968	.0108227	.0101074	10.31698	.0217054	.1027227
#3	.4171462	.0108871	.0100976	10.27615	.0210881	.1022956

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0559512	.1859048	.0325999	10.58342	.0803838	.0205042
Stddev	.0075915	.0340186	.0005920	.11603	.0006384	.0011752
%RSD	13.56800	18.29892	1.816087	1.096338	.7941703	5.731564
#1	.0523750	.2199773	.0332818	10.45056	.0804159	.0203838
#2	.0508083	.1857967	.0323008	10.66483	.0797299	.0217349
#3	.0646703	.1519404	.0322170	10.63486	.0810055	.0193938

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	10.26144	.1046276	.1184108	9.507846	.0142183	F -.002914
Stddev	.61194	.0053713	.0084720	.215870	.0026212	.001920
%RSD	5.963447	5.133771	7.154735	2.270438	18.43558	65.89793
#1	9.56518	.1091107	.1266372	9.522296	.0129192	-.000749
#2	10.71388	.0986742	.1097129	9.285114	.0172353	-.003581
#3	10.50525	.1060979	.1188822	9.716127	.0125003	-.004411

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: PB165605BS Acquired: 12/20/2024 20:57:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: LCS605 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0190823	.1779442	F .4982877	F .0000732	.2072371	.2139839
Stddev	.0006305	.0070723	.0032093	.0001829	.0038742	.0005713
%RSD	3.304144	3.974439	.6440623	249.7449	1.869461	.2669840
#1	.0189639	.1708495	.5004967	.0002525	.2030957	.2134643
#2	.0185193	.1849939	.4997601	.0000804	.2107728	.2138918
#3	.0197635	.1779893	.4946065	-.000113	.2078427	.2145957

Elem	Li6707
Units	ppm
Avg	.0353267
Stddev	.0010434
%RSD	2.953535
#1	.0349145
#2	.0365132
#3	.0345523

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1850.628	22314.05	2322.997	1549.128	2164.637
Stddev	5.069	624.17	4.227	40.674	8.915
%RSD	.2738806	2.797227	.1819667	2.625584	.4118619
#1	1853.176	22709.48	2319.509	1566.589	2170.034
#2	1844.791	21594.49	2321.785	1502.639	2154.346
#3	1853.916	22638.17	2327.698	1578.156	2169.530

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-01 Acquired: 12/20/2024 21:01:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1030348	-.060015	1.020331	.0765731	.0274420	90.78031
Stddev	.0057594	.003320	.004019	.0009577	.0005068	.82349
%RSD	5.589767	5.531497	.3938744	1.250742	1.846663	.9071229
#1	.0968019	-.056446	1.019636	.0765134	.0269176	90.15244
#2	.1081597	-.060588	1.016705	.0756467	.0274792	90.47580
#3	.1041428	-.063011	1.024652	.0775593	.0279291	91.71268

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.222009	.0090048	.0117886	63.84150	.1646998	.1132331
Stddev	.009163	.0000387	.0001818	.58597	.0007737	.0006869
%RSD	.7498400	.4296122	1.542125	.9178517	.4697429	.6066605
#1	1.215076	.0090495	.0117827	63.53391	.1646525	.1126470
#2	1.218552	.0089815	.0116098	63.47338	.1654960	.1130633
#3	1.232397	.0089834	.0119732	64.51722	.1639509	.1139890

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2458077	162.9729	5.623143	30.33374	.2511244	.0139639
Stddev	.0046888	1.4877	.046564	.21803	.0015154	.0008700
%RSD	1.907517	.9128320	.8280832	.7187619	.6034582	6.230586
#1	.2430834	162.2872	5.597207	30.16952	.2510106	.0134938
#2	.2431178	161.9518	5.595321	30.25060	.2496691	.0134301
#3	.2512218	164.6798	5.676900	30.58111	.2526936	.0149678

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1049088	.1706662	1.824911	12.12551	F 17.05049	.1113723
Stddev	.1104092	.0086446	.010233	.17899	.09154	.0013550
%RSD	105.2430	5.065223	.5607227	1.476109	.5368843	1.216639
#1	.1856215	.1755351	1.826886	12.05231	17.01938	.1102392
#2	.1500176	.1606852	1.834013	11.99473	16.97855	.1110044
#3	-.020913	.1757783	1.813835	12.32950	17.15353	.1128732

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-01 Acquired: 12/20/2024 21:01:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035918	4.578077	8.625171	.0864828	1.017798	.0408226
Stddev	.0002307	.025418	.122814	.0004444	.011302	.0004846
%RSD	6.423810	.5552013	1.423900	.5138849	1.110468	1.187028
#1	.0035736	4.558011	8.593528	.0860901	1.008390	.0402632
#2	.0033708	4.569560	8.521275	.0863932	1.014669	.0411145
#3	.0038311	4.606659	8.760710	.0869652	1.030335	.0410900

Elem	Li6707
Units	ppm
Avg	.1269326
Stddev	.0012744
%RSD	1.004001
#1	.1258649
#2	.1265894
#3	.1283434

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2676.711	33038.80	3439.642	2284.340	2034.115
Stddev	3.503	139.78	40.604	8.219	8.174
%RSD	.1308634	.4230790	1.180481	.3597854	.4018661
#1	2678.309	32958.63	3438.482	2275.284	2036.117
#2	2679.130	32957.57	3480.814	2286.410	2041.102
#3	2672.694	33200.21	3399.630	2291.326	2025.125

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-02 Acquired: 12/20/2024 21:05:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0899185	-.072370	.3863045	.0859019	.0322260	112.7948
Stddev	.0024691	.002341	.0077782	.0019442	.0019704	.4691
%RSD	2.745874	3.234564	2.013484	2.263277	6.114348	.4159304
#1	.0874167	-.072215	.3791079	.0862450	.0308004	112.2531
#2	.0899853	-.070110	.3945565	.0838089	.0314031	113.0720
#3	.0923534	-.074784	.3852491	.0876516	.0344745	113.0593

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.029255	.0099395	.0087580	55.44914	.2130340	.1285739
Stddev	.002271	.0000505	.0001510	.17313	.0022774	.0015946
%RSD	.2206674	.5078407	1.724385	.3122284	1.069042	1.240211
#1	1.026930	.0099474	.0085895	55.25622	.2156425	.1267487
#2	1.031469	.0099856	.0088811	55.59097	.2120185	.1296964
#3	1.029367	.0098856	.0088033	55.50024	.2114410	.1292767

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1533566	183.5101	4.188263	39.00020	.3034966	.0136821
Stddev	.0009405	.7840	.014765	.17269	.0052336	.0007274
%RSD	.6132779	.4272396	.3525277	.4428030	1.724437	5.316435
#1	.1541662	182.6151	4.171495	38.80288	.2978656	.0133854
#2	.1523249	183.8395	4.199313	39.12380	.3082120	.0131498
#3	.1535786	184.0757	4.193983	39.07392	.3044122	.0145109

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4592350	.1742295	2.069793	10.60250	F 13.27652	.0912658
Stddev	.0521474	.0037044	.019525	.10720	.19592	.0008884
%RSD	11.35526	2.126142	.9433532	1.011115	1.475720	.9734058
#1	.4068060	.1718957	2.088782	10.48270	13.06175	.0903488
#2	.5110960	.1785008	2.070824	10.63539	13.44548	.0913261
#3	.4598031	.1722919	2.049772	10.68941	13.32233	.0921225

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-02 Acquired: 12/20/2024 21:05:11 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024488	3.459511	8.079114	.0184438	.9448574	-.015693
Stddev	.0004569	.049823	.050441	.0007546	.0068208	.000274
%RSD	18.65719	1.440175	.6243411	4.091184	.7218920	1.743920
#1	.0029763	3.403950	8.038973	.0190930	.9405856	-.015378
#2	.0021906	3.500217	8.062635	.0186225	.9527237	-.015830
#3	.0021795	3.474365	8.135734	.0176159	.9412630	-.015871

Elem	Li6707
Units	ppm
Avg	.1542896
Stddev	.0028979
%RSD	1.878220
#1	.1561880
#2	.1557268
#3	.1509540

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2831.518	34378.30	3640.804	2391.312	2035.008
Stddev	12.465	359.36	18.832	27.588	23.345
%RSD	.4402107	1.045314	.5172540	1.153668	1.147154
#1	2839.406	33963.58	3658.650	2359.465	2058.777
#2	2817.148	34597.83	3642.643	2406.574	2012.113
#3	2838.000	34573.49	3621.120	2407.896	2034.132

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-03 Acquired: 12/20/2024 21:09:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0830516	-.057288	.3091808	.0879840	.0303222	89.90051	1.186804
Stddev	.0031185	.003068	.0038687	.0026638	.0012775	2.81590	.036599
%RSD	3.754917	5.355841	1.251261	3.027564	4.212979	3.132239	3.083854
#1	.0811457	-.060830	.3109092	.0856009	.0308623	88.12826	1.164525
#2	.0866504	-.055476	.3118840	.0908597	.0288634	93.14749	1.229045
#3	.0813586	-.055556	.3047493	.0874915	.0312409	88.42578	1.166844

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0076729	.0112615	89.39513	.1554939	.1272852	.1153936	180.9967
Stddev	.0002344	.0001860	2.95437	.0007460	.0002169	.0115706	5.6960
%RSD	3.054655	1.651278	3.304847	.4797294	.1704408	10.02707	3.146997
#1	.0076259	.0114522	87.62126	.1559551	.1270348	.1070793	177.8061
#2	.0079272	.0110806	92.80563	.1546333	.1274163	.1286079	187.5729
#3	.0074655	.0112516	87.75851	.1558934	.1274046	.1104935	177.6111

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.20850	37.01725	.2681287	.0150227	.9092283	.1854839	1.605705
Stddev	.36507	1.17805	.0002568	.0015886	.3785213	.0068670	.019990
%RSD	3.257062	3.182443	.0957582	10.57450	41.63105	3.702209	1.244944
#1	11.00143	36.28502	.2678449	.0133486	1.271541	.1793188	1.583061
#2	11.63002	38.37619	.2683450	.0165090	.516352	.1928849	1.620907
#3	10.99405	36.39056	.2681961	.0152106	.939792	.1842480	1.613147

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.149733	9.859232	.0803307	.0038080	2.236053	7.903522	.0160586
Stddev	.279200	.013943	.0023657	.0001595	.007660	.207854	.0017383
%RSD	3.051453	.1414254	2.944987	4.189643	.3425554	2.629897	10.82491
#1	8.981253	9.855000	.0792345	.0037983	2.238641	7.818859	.0154157
#2	9.472014	9.874802	.0830457	.0039722	2.242083	8.140347	.0147333
#3	8.995932	9.847895	.0787120	.0036536	2.227434	7.751361	.0180268

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-03 Acquired: 12/20/2024 21:09:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.402481	.0069426	.1389185
Stddev	.045830	.0002138	.0064714
%RSD	3.267794	3.079625	4.658427
#1	1.373932	.0066984	.1354434
#2	1.455345	.0070960	.1463851
#3	1.378167	.0070336	.1349271

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2477.169	30477.38	3142.383	2100.106	2040.309
Stddev	3.664	56.92	76.297	7.149	6.132
%RSD	.1479184	.1867549	2.427993	.3404344	.3005284
#1	2479.941	30432.61	3168.560	2091.895	2046.164
#2	2473.015	30541.44	3056.444	2104.948	2033.934
#3	2478.552	30458.10	3202.146	2103.477	2040.830

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-04 Acquired: 12/20/2024 21:12:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0813433	-.031284	.1956788	.0659714	.0213110	69.89162
Stddev	.0019481	.006518	.0044759	.0046704	.0022549	.26156
%RSD	2.394878	20.83594	2.287368	7.079498	10.58097	.3742431
#1	.0816737	-.029925	.1905134	.0712439	.0204119	70.18083
#2	.0792512	-.038375	.1981109	.0623534	.0238768	69.82241
#3	.0831051	-.025553	.1984121	.0643170	.0196444	69.67162

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8291003	.0059992	.0067083	243.4787	.1162766	.1344552
Stddev	.0039668	.0000949	.0000719	1.0363	.0016116	.0003376
%RSD	.4784479	1.582203	1.072361	.4256081	1.385986	.2510852
#1	.8298852	.0061085	.0066357	244.6752	.1145003	.1340965
#2	.8326160	.0059522	.0067795	242.8908	.1166843	.1347667
#3	.8247998	.0059370	.0067097	242.8701	.1176451	.1345024

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1601031	161.2538	12.70717	98.69664	.2211103	.0134752
Stddev	.0057235	.6169	.07398	.24072	.0010124	.0005473
%RSD	3.574864	.3825722	.5821555	.2439022	.4578787	4.061323
#1	.1535028	161.8420	12.77021	98.81090	.2210298	.0132567
#2	.1636957	161.3076	12.72556	98.85895	.2201406	.0140980
#3	.1631108	160.6117	12.62573	98.42006	.2221606	.0130709

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.486148	.1614739	.7144347	7.696051	F 12.05355	.0705172
Stddev	.737564	.0041511	.0200052	.188361	.06227	.0023131
%RSD	49.62923	2.570769	2.800151	2.447500	.5165962	3.280177
#1	.868640	.1573895	.6913769	7.859458	11.98411	.0716677
#2	2.302853	.1613433	.7247533	7.738661	12.07214	.0720294
#3	1.286953	.1656887	.7271739	7.490036	12.10441	.0678544

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-04 Acquired: 12/20/2024 21:12:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ3 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036913	2.088767	9.273101	.0153619	1.435868	.0981006
Stddev	.0003420	.013164	.043918	.0007822	.012027	.0006187
%RSD	9.264400	.6302428	.4736086	5.091596	.8376239	.6307066
#1	.0036453	2.075391	9.318233	.0148873	1.446660	.0983172
#2	.0033747	2.089201	9.270564	.0149338	1.438040	.0985820
#3	.0040540	2.101709	9.230506	.0162647	1.422902	.0974027

Elem	Li6707
Units	ppm
Avg	.1268756
Stddev	.0030396
%RSD	2.395760
#1	.1303817
#2	.1249817
#3	.1252634

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2210.550	27412.29	2897.449	1894.711	1945.240
Stddev	2.136	258.13	20.735	20.842	4.479
%RSD	.0966459	.9416684	.7156258	1.099993	.2302336
#1	2210.250	27696.51	2873.796	1918.634	1949.962
#2	2208.579	27192.42	2906.058	1880.484	1944.704
#3	2212.820	27347.94	2912.493	1885.015	1941.053

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-05 Acquired: 12/20/2024 21:16:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ3D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0824132	-.033333	.1991262	.0653161	.0214174	69.87419
Stddev	.0032422	.005278	.0038044	.0025156	.0019190	.52336
%RSD	3.934099	15.83305	1.910553	3.851502	8.959940	.7490039
#1	.0846845	-.028121	.2019844	.0624446	.0219783	70.24654
#2	.0787001	-.038674	.1948081	.0671316	.0229934	70.10022
#3	.0838548	-.033205	.2005860	.0663721	.0192805	69.27580

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.8281377	.0059251	.0067911	242.7860	.1175049	.1339611
Stddev	.0079142	.0001905	.0002676	1.5154	.0007227	.0007685
%RSD	.9556592	3.215521	3.940245	.6241888	.6150548	.5736638
#1	.8320274	.0058603	.0065906	243.8114	.1180988	.1342555
#2	.8333544	.0061396	.0066877	243.5012	.1177155	.1330890
#3	.8190314	.0057755	.0070949	241.0453	.1167002	.1345389

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1586178	160.8781	12.68588	98.53740	.2218757	.0133979
Stddev	.0058229	1.3849	.08871	.67373	.0007610	.0005504
%RSD	3.671016	.8608397	.6992482	.6837256	.3429895	4.107918
#1	.1528754	161.8295	12.74086	98.82264	.2220832	.0127788
#2	.1584600	161.5157	12.73324	99.02158	.2210324	.0135834
#3	.1645180	159.2893	12.58355	97.76797	.2225114	.0138316

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.437052	.1672532	.7175578	7.693396	F 12.06074	.0680603
Stddev	.643237	.0049889	.0062344	.147093	.08784	.0010671
%RSD	44.76086	2.982852	.8688307	1.911942	.7282944	1.567844
#1	.991272	.1725941	.7103880	7.803775	12.07379	.0668282
#2	2.174446	.1627131	.7217017	7.750005	11.96710	.0686796
#3	1.145438	.1664524	.7205838	7.526409	12.14132	.0686732

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-05 Acquired: 12/20/2024 21:16:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ3D Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0036300	2.081157	9.214721	.0155670	1.436985	.0983187
Stddev	.0005403	.018853	.125369	.0005615	.011427	.0007692
%RSD	14.88385	.9058933	1.360533	3.606857	.7952116	.7823470
#1	.0042413	2.084988	9.305770	.0159333	1.445259	.0985904
#2	.0032166	2.060682	9.266665	.0149205	1.441750	.0989152
#3	.0034321	2.097799	9.071728	.0158470	1.423947	.0974506

Elem	Li6707
Units	ppm
Avg	.1274392
Stddev	.0010699
%RSD	.8395347
#1	.1286716
#2	.1268975
#3	.1267484

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2208.697	27163.64	2899.851	1865.807	1941.531
Stddev	12.256	69.04	31.992	5.930	15.619
%RSD	.5548811	.2541570	1.103231	.3178512	.8044924
#1	2207.684	27084.00	2879.324	1859.982	1942.290
#2	2221.428	27206.45	2883.516	1865.600	1956.756
#3	2196.980	27200.47	2936.713	1871.838	1925.545

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-04LX5 Acquired: 12/20/2024 21:20:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ3L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0151622	-.001612	.0448120	.0087486	-.000425	16.96269	.2011378
Stddev	.0057372	.002477	.0018008	.0011416	.001646	.09950	.0018112
%RSD	37.83892	153.6077	4.018541	13.04907	387.0089	.5865648	.9004714
#1	.0216722	.001119	.0427486	.0095351	-.001868	16.85431	.1993495
#2	.0108439	-.003712	.0456205	.0074392	.001367	16.98390	.2029711
#3	.0129705	-.002244	.0460668	.0092716	-.000775	17.04988	.2010927

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015962	.0012700	59.93497	.0280294	.0414138	.0409364	39.95076
Stddev	.0000862	.0001171	.40299	.0004221	.0005194	.0075769	.21892
%RSD	5.403101	9.223433	.6723835	1.505809	1.254291	18.50888	.5479728
#1	.0015086	.0011382	59.47999	.0283076	.0414795	.0482866	39.74769
#2	.0015991	.0013095	60.07791	.0275437	.0418972	.0413710	39.92191
#3	.0016810	.0013623	60.24701	.0282368	.0408646	.0331516	40.18267

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.160678	24.52088	.0427634	.0033944	-.548189	.0317028	.1844879
Stddev	.023110	.08399	.0002978	.0008593	.504452	.0026962	.0075651
%RSD	.7311686	.3425212	.6964865	25.31612	92.02154	8.504727	4.100588
#1	3.134238	24.42437	.0427912	.0043259	-.007814	.0290071	.1904624
#2	3.177022	24.56090	.0424526	.0032246	-.630047	.0343995	.1759816
#3	3.170775	24.57738	.0430463	.0026326	-1.00671	.0317018	.1870198

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.511191	2.415306	.0188517	.0017526	.4223826	2.329280	-.006319
Stddev	.155761	.010720	.0014870	.0001531	.0052097	.007797	.000881
%RSD	10.30714	.4438297	7.887705	8.734915	1.233411	.3347194	13.95032
#1	1.677203	2.405099	.0193441	.0019206	.4240949	2.325877	-.006423
#2	1.488110	2.414345	.0171810	.0016209	.4265206	2.323764	-.007143
#3	1.368258	2.426474	.0200300	.0017165	.4165322	2.338200	-.005390

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-04LX5 Acquired: 12/20/2024 21:20:33 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ3L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3498704	.0234250	.0365840
Stddev	.0056291	.0006673	.0022832
%RSD	1.608908	2.848694	6.241008
#1	.3433705	.0228242	.0349852
#2	.3531416	.0241432	.0355678
#3	.3530990	.0233077	.0391989

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1920.298	23570.29	2433.779	1637.373	2090.342
Stddev	1.979	249.22	10.804	11.545	2.246
%RSD	.1030487	1.057350	.4439335	.7050892	.1074600
#1	1918.014	23609.60	2443.032	1634.312	2089.629
#2	1921.494	23303.74	2421.905	1627.667	2088.538
#3	1921.387	23797.51	2436.399	1650.140	2092.858

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-06 Acquired: 12/20/2024 21:24:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ3S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1628223	.0545979	.2358516	.1965146	.1599257	71.96048
Stddev	.0027560	.0029032	.0009219	.0020439	.0017551	.39240
%RSD	1.692615	5.317439	.3908681	1.040069	1.097435	.5452962
#1	.1653516	.0579294	.2365627	.1942989	.1605071	71.51419
#2	.1632299	.0526088	.2348100	.1969183	.1579537	72.25141
#3	.1598852	.0532557	.2361821	.1983264	.1613163	72.11583

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.044744	.0837084	.1033812	239.6435	.4459755	1.088468
Stddev	.021660	.0012337	.0006536	1.8032	.0021313	.003586
%RSD	.5355173	1.473801	.6322608	.7524510	.4778869	.3294540
#1	4.019821	.0829818	.1038103	237.6198	.4457918	1.089735
#2	4.059031	.0851329	.1026289	241.0796	.4439420	1.084420
#3	4.055379	.0830106	.1037042	240.2312	.4481927	1.091248

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5301704	160.4419	13.33465	97.05750	1.198559	.0718507
Stddev	.0074541	1.0410	.08013	.62129	.004943	.0013413
%RSD	1.405992	.6488546	.6009233	.6401227	.4124282	1.866778
#1	.5234004	159.3833	13.25232	96.53773	1.199671	.0706331
#2	.5381586	161.4644	13.41239	97.74561	1.193155	.0716305
#3	.5289521	160.4780	13.33925	96.88915	1.202852	.0732884

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.257674	.9867744	1.425845	7.663423	F 11.93562	.0669887
Stddev	.114633	.0127766	.011144	.157281	.04619	.0024502
%RSD	9.114686	1.294784	.7815558	2.052361	.3870072	3.657660
#1	1.349114	.9722147	1.436819	7.642593	11.93937	.0685004
#2	1.129070	.9919918	1.414539	7.830082	11.88767	.0641617
#3	1.294839	.9961167	1.426177	7.517595	11.97982	.0683040

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-06 Acquired: 12/20/2024 21:24:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJQ3S Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0038097	2.070542	9.119294	.0138257	1.417177	.0956908
Stddev	.0004067	.013535	.100602	.0006757	.006100	.0005061
%RSD	10.67664	.6536733	1.103181	4.887184	.4304096	.5289078
#1	.0035246	2.064927	9.047491	.0130685	1.411499	.0955095
#2	.0042755	2.060719	9.234278	.0143670	1.423626	.0962627
#3	.0036290	2.085981	9.076112	.0140417	1.416407	.0953004

Elem	Li6707
Units	ppm
Avg	.1256155
Stddev	.0073770
%RSD	5.872671
#1	.1249517
#2	.1185929
#3	.1333020

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2207.036	27256.11	2904.866	1877.516	1947.253
Stddev	7.488	78.92	27.670	14.499	8.008
%RSD	.3392639	.2895489	.9525494	.7722603	.4112421
#1	2199.210	27186.58	2918.046	1868.387	1942.276
#2	2214.133	27341.89	2873.070	1894.235	1956.490
#3	2207.764	27239.85	2923.483	1869.926	1942.992

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-07 Acquired: 12/20/2024 21:28:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJR8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0747468	-.036090	1.069489	.0570259	.0189279	66.11068
Stddev	.0034257	.001957	.007134	.0010389	.0007246	.82465
%RSD	4.583053	5.422982	.6670208	1.821726	3.828486	1.247379
#1	.0713376	-.033904	1.074343	.0577769	.0181833	65.17515
#2	.0747139	-.037679	1.072825	.0574604	.0196308	66.73216
#3	.0781887	-.036686	1.061298	.0558403	.0189695	66.42473

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9450175	.0064145	.0065019	78.58173	.1284375	.0940266
Stddev	.0123414	.0000750	.0000212	.92731	.0008595	.0003097
%RSD	1.305943	1.169684	.3257713	1.180056	.6691917	.3293984
#1	.9308952	.0064824	.0064788	77.51291	.1286928	.0943610
#2	.9537309	.0063339	.0065204	79.17197	.1274792	.0939693
#3	.9504263	.0064273	.0065065	79.06030	.1291403	.0937496

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2361982	127.7527	5.238441	31.16084	.1901266	.0103199
Stddev	.0032379	1.4440	.064068	.39580	.0010935	.0008653
%RSD	1.370848	1.130330	1.223043	1.270189	.5751278	8.384517
#1	.2355338	126.0933	5.164736	30.75164	.1908399	.0098581
#2	.2333440	128.7237	5.280809	31.54173	.1906723	.0113181
#3	.2397168	128.4412	5.269778	31.18914	.1888677	.0097834

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.7589180	.1361821	1.848660	8.675520	F 13.92361	.0801005
Stddev	.7042505	.0033563	.011234	.180604	.06041	.0037253
%RSD	92.79666	2.464580	.6077036	2.081770	.4338956	4.650822
#1	.0147538	.1371894	1.835721	8.508189	13.98543	.0758898
#2	.8470396	.1324375	1.855938	8.866973	13.92068	.0814437
#3	1.414961	.1389194	1.854320	8.651398	13.86471	.0829679

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-07 Acquired: 12/20/2024 21:28:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJR8 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0049785	4.006753	9.450833	.0749575	1.151533	.0824422
Stddev	.0003563	.016317	.026858	.0013160	.016088	.0012398
%RSD	7.155870	.4072298	.2841848	1.755627	1.397115	1.503855
#1	.0048589	4.024073	9.463791	.0761482	1.134404	.0814782
#2	.0053792	3.991670	9.468755	.0751799	1.166325	.0838408
#3	.0046975	4.004515	9.419953	.0735446	1.153870	.0820077

Elem	Li6707
Units	ppm
Avg	.1029015
Stddev	.0003061
%RSD	.2974346
#1	.1027822
#2	.1026730
#3	.1032492

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2260.950	27831.22	2927.057	1918.662	2048.126
Stddev	7.211	96.08	17.509	6.919	8.702
%RSD	.3189174	.3452073	.5981893	.3605948	.4248770
#1	2252.859	27921.66	2937.819	1923.088	2040.018
#2	2263.298	27730.36	2906.853	1910.689	2047.038
#3	2266.694	27841.64	2936.498	1922.208	2057.320

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-08 Acquired: 12/20/2024 21:32:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJR9 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1150395	-.058912	1.310121	.0814967	.0293865	72.15179
Stddev	.0030491	.004269	.001442	.0017626	.0005120	.19710
%RSD	2.650475	7.246240	.1100814	2.162807	1.742304	.2731737
#1	.1154470	-.059345	1.311417	.0812900	.0297588	72.22914
#2	.1178643	-.054443	1.310380	.0833536	.0295981	72.29848
#3	.1118071	-.062948	1.308567	.0798466	.0288026	71.92775

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.074465	.0079160	.0085230	87.27142	.1329459	.1067841
Stddev	.003357	.0001137	.0000322	.11404	.0011496	.0005742
%RSD	.3124770	1.436862	.3779181	.1306783	.8647138	.5377074
#1	1.077662	.0080376	.0085557	87.40147	.1320559	.1061969
#2	1.074764	.0078122	.0085221	87.22430	.1325381	.1073443
#3	1.070967	.0078983	.0084913	87.18848	.1342439	.1068112

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2826592	173.0388	6.143840	34.17574	.2254754	.0149943
Stddev	.0077121	.3653	.011456	.17803	.0004680	.0010564
%RSD	2.728403	.2111178	.1864625	.5209144	.2075525	7.045013
#1	.2893806	173.3955	6.153704	34.38122	.2259399	.0152598
#2	.2843574	173.0556	6.146541	34.07815	.2254824	.0138305
#3	.2742396	172.6654	6.131275	34.06785	.2250040	.0158925

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1898355	.1720594	2.116648	8.677571	F 14.19094	.0842363
Stddev	.9906083	.0034758	.025097	.078556	.00998	.0004142
%RSD	521.8245	2.020133	1.185702	.9052783	.0703474	.4917409
#1	.9597862	.1687661	2.115426	8.766487	14.18127	.0843296
#2	.5374492	.1756927	2.092183	8.648659	14.19034	.0837834
#3	-.927729	.1717193	2.142333	8.617569	14.20121	.0845959

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-08 Acquired: 12/20/2024 21:32:10 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJR9 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0041597	2.954274	9.580547	.0853952	1.171131	.0556360
Stddev	.0004571	.010323	.006504	.0007287	.003126	.0004441
%RSD	10.98857	.3494258	.0678827	.8533044	.2668984	.7982756
#1	.0045997	2.948762	9.577772	.0852828	1.167524	.0554524
#2	.0036873	2.947878	9.575892	.0847293	1.173043	.0553130
#3	.0041921	2.966183	9.587978	.0861736	1.172827	.0561425

Elem	Li6707
Units	ppm
Avg	.1103119
Stddev	.0036459
%RSD	3.305129
#1	.1061556
#2	.1129702
#3	.1118101

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2322.332	28882.74	2988.899	1994.267	2069.041
Stddev	5.866	157.75	10.755	5.055	4.344
%RSD	.2526046	.5461791	.3598290	.2534863	.2099333
#1	2321.562	29047.75	2983.192	1997.435	2066.524
#2	2316.889	28867.06	2982.201	1996.928	2066.541
#3	2328.545	28733.42	3001.305	1988.437	2074.056

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-09 Acquired: 12/20/2024 21:36:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0891648	-.040510	1.049704	.0592060	.0200200	76.78852
Stddev	.0077042	.000867	.013223	.0030756	.0016377	.81752
%RSD	8.640434	2.140764	1.259704	5.194703	8.180220	1.064637
#1	.0979610	-.041284	1.061034	.0561939	.0182649	76.00329
#2	.0859181	-.039573	1.052902	.0623413	.0202879	77.63489
#3	.0836154	-.040673	1.035175	.0590827	.0215072	76.72738

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.9400694	.0071468	.0073132	117.5477	.1341526	.1012601
Stddev	.0096317	.0000709	.0002442	1.2084	.0032023	.0020080
%RSD	1.024579	.9919115	3.339314	1.028037	2.387059	1.983014
#1	.9308882	.0070679	.0075218	116.4253	.1354544	.1030043
#2	.9500960	.0071671	.0073732	118.8269	.1305044	.1017109
#3	.9392242	.0072052	.0070446	117.3909	.1364990	.0990650

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2472163	140.9795	5.375952	29.83277	.1942895	.0125392
Stddev	.0035912	1.5767	.044845	.31329	.0025708	.0005789
%RSD	1.452638	1.118410	.8341856	1.050155	1.323195	4.616659
#1	.2469369	139.5356	5.332807	29.47196	.1962519	.0122017
#2	.2509389	142.6619	5.422323	30.03585	.1952373	.0132077
#3	.2437729	140.7411	5.372726	29.99050	.1913793	.0122083

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4518208	.1476459	1.634417	8.097103	F 11.70438	.0803724
Stddev	.5177361	.0023780	.028076	.133104	.13740	.0041778
%RSD	114.5888	1.610613	1.717785	1.643852	1.173898	5.198025
#1	.3773824	.1503757	1.614343	7.979411	11.83146	.0785809
#2	1.002747	.1465382	1.622409	8.241554	11.72310	.0851472
#3	-.024667	.1460239	1.666500	8.070343	11.55858	.0773892

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-09 Acquired: 12/20/2024 21:36:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS0 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0027731	2.567019	8.101159	.0694343	1.048929	.0833285
Stddev	.0007154	.033650	.046206	.0010785	.011952	.0009337
%RSD	25.79800	1.310844	.5703606	1.553313	1.139401	1.120511
#1	.0034634	2.596460	8.078978	.0697602	1.037736	.0825358
#2	.0028209	2.574258	8.070226	.0703122	1.061516	.0843577
#3	.0020350	2.530339	8.154273	.0682303	1.047535	.0830919

Elem	Li6707
Units	ppm
Avg	.1097273
Stddev	.0021538
%RSD	1.962829
#1	.1091193
#2	.1121198
#3	.1079430

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2344.372	29140.01	3032.755	2005.722	2027.913
Stddev	6.710	474.93	15.376	35.010	17.233
%RSD	.2861996	1.629834	.5069862	1.745513	.8497990
#1	2339.984	28970.36	3050.474	1995.318	2013.176
#2	2341.035	29676.47	3022.932	2044.755	2023.701
#3	2352.095	28773.20	3024.858	1977.094	2046.861

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-10 Acquired: 12/20/2024 21:39:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0979151	-.062355	.6804719	.0764910	.0291411	105.4688
Stddev	.0024494	.003445	.0034404	.0015828	.0003007	.4048
%RSD	2.501564	5.524081	.5055867	2.069218	1.031690	.3838371
#1	.0951794	-.060215	.6777811	.0749143	.0288807	105.0201
#2	.0999049	-.066328	.6843483	.0780797	.0290723	105.8067
#3	.0986608	-.060521	.6792864	.0764789	.0294701	105.5796

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.118281	.0088273	.0094364	74.62803	.1826688	.1145678
Stddev	.005179	.0000882	.0001501	.34453	.0007247	.0005453
%RSD	.4630803	.9989068	1.590765	.4616579	.3967265	.4759811
#1	1.113748	.0087257	.0094393	74.25336	.1831837	.1151716
#2	1.123925	.0088841	.0092848	74.93119	.1829826	.1141112
#3	1.117170	.0088721	.0095850	74.69953	.1818401	.1144205

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.2110068	163.9940	5.075377	32.76146	.2392622	.0143954
Stddev	.0002466	.7870	.019279	.17453	.0008097	.0005088
%RSD	.1168483	.4798923	.3798442	.5327181	.3384107	3.534276
#1	.2108151	163.1221	5.054682	32.56791	.2401954	.0140290
#2	.2112850	164.6518	5.092828	32.90685	.2388459	.0149763
#3	.2109203	164.2080	5.078620	32.80961	.2387454	.0141809

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5437876	.1738989	1.915656	8.052134	F 15.68357	.0964598
Stddev	.2433021	.0063182	.017200	.088811	.01140	.0013225
%RSD	44.74213	3.633278	.8978589	1.102955	.0727093	1.371019
#1	.5195674	.1716388	1.919626	8.127975	15.69285	.0958187
#2	.3135013	.1810364	1.930523	8.073995	15.67084	.0979806
#3	.7982939	.1690216	1.896818	7.954434	15.68702	.0955801

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-10 Acquired: 12/20/2024 21:39:52 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS1 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0024463	4.245664	8.225685	.0308478	.8833922	.0367254
Stddev	.0004050	.012179	.059296	.0009814	.0060482	.0004465
%RSD	16.55653	.2868690	.7208667	3.181404	.6846547	1.215746
#1	.0022284	4.245992	8.157761	.0313061	.8766496	.0371777
#2	.0029136	4.233323	8.267117	.0297211	.8883393	.0362850
#3	.0021968	4.257676	8.252177	.0315161	.8851878	.0367134

Elem	Li6707
Units	ppm
Avg	.1385189
Stddev	.0026872
%RSD	1.939965
#1	.1358265
#2	.1412009
#3	.1385294

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2656.281	32817.29	3435.067	2259.755	2033.318
Stddev	3.176	133.57	14.728	15.345	2.573
%RSD	.1195791	.4070043	.4287629	.6790417	.1265518
#1	2655.178	32672.06	3450.336	2242.355	2030.398
#2	2659.861	32844.93	3420.947	2271.349	2035.253
#3	2653.803	32934.87	3433.919	2265.563	2034.304

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-11 Acquired: 12/20/2024 21:43:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0836350	-.074639	.1763908	.1230568	.0459730	111.9168	2.050711
Stddev	.0032314	.001677	.0060628	.0019952	.0049312	.8946	.013715
%RSD	3.863716	2.247204	3.437131	1.621381	10.72636	.7993605	.6687798
#1	.0849092	-.076467	.1832687	.1216248	.0484145	112.2136	2.054860
#2	.0799607	-.074278	.1740821	.1222099	.0402973	110.9115	2.035401
#3	.0860350	-.073171	.1718215	.1253358	.0492071	112.6252	2.061873

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0077336	.0129744	42.89754	.1634892	.1516919	.0549478	231.4306
Stddev	.0001139	.0002384	.36793	.0003067	.0003146	.0046084	1.7471
%RSD	1.473266	1.837743	.8576891	.1876073	.2074014	8.386930	.7549159
#1	.0077487	.0127799	43.04850	.1637875	.1514317	.0520607	232.7355
#2	.0076129	.0129029	42.47814	.1631747	.1520415	.0525202	229.4457
#3	.0078393	.0132404	43.16597	.1635055	.1516023	.0602626	232.1105

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.91533	36.53119	.2810976	.0189723	.1100683	.1812653	2.659709
Stddev	.15862	.35293	.0010378	.0005576	.2762178	.0075934	.016492
%RSD	.7964811	.9660925	.3692032	2.939204	250.9513	4.189091	.6200793
#1	19.99067	36.68455	.2799167	.0183321	.3499883	.1771822	2.654124
#2	19.73308	36.12753	.2815119	.0192324	-.191895	.1765871	2.646734
#3	20.02225	36.78149	.2818644	.0193523	.172111	.1900266	2.678269

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.542042	7.147805	.0831791	.0008822	.8124206	8.738866	.0147779
Stddev	.030056	.014389	.0022633	.0009925	.0044605	.128532	.0015220
%RSD	.3985069	.2013089	2.720991	112.5095	.5490399	1.470810	10.29929
#1	7.508538	7.131312	.0806177	.0005470	.8086130	8.791592	.0130218
#2	7.550955	7.157796	.0849092	.0001006	.8173282	8.592356	.0155943
#3	7.566633	7.154307	.0840105	.0019989	.8113206	8.832651	.0157175

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-11 Acquired: 12/20/2024 21:43:42 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.254978	-.090725	.1548938
Stddev	.012750	.001322	.0027594
%RSD	1.015934	1.456996	1.781479
#1	1.266790	-.092221	.1527160
#2	1.241462	-.089716	.1579970
#3	1.256683	-.090237	.1539684

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2294.591	28105.31	2927.382	1930.472	2045.049
Stddev	3.435	25.61	25.722	1.383	5.465
%RSD	.1497159	.0911127	.8786537	.0716358	.2672489
#1	2295.746	28082.64	2912.354	1929.028	2048.926
#2	2290.727	28100.20	2957.082	1931.784	2038.798
#3	2297.300	28133.08	2912.711	1930.603	2047.422

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-12 Acquired: 12/20/2024 21:47:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0888460	-.085812	.1826398	.1085474	.0433764	112.9871	1.609705
Stddev	.0028476	.005025	.0048975	.0039205	.0014619	.2720	.003279
%RSD	3.205046	5.855864	2.681533	3.611826	3.370192	.2407391	.2036767
#1	.0911829	-.091302	.1806715	.1085105	.0418693	113.0010	1.612595
#2	.0856744	-.081440	.1790326	.1124863	.0434715	112.7084	1.606142
#3	.0896809	-.084695	.1882153	.1046454	.0447884	113.2518	1.610379

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0084882	.0083984	44.11079	.1634529	.1406182	.0538768	225.6133
Stddev	.0000881	.0001832	.07222	.0020880	.0000601	.0034403	.1819
%RSD	1.037599	2.180902	.1637162	1.277458	.0427426	6.385448	.0806379
#1	.0084437	.0083833	44.14316	.1641081	.1406269	.0500734	225.4652
#2	.0084313	.0082233	44.02805	.1611159	.1406735	.0547854	225.5583
#3	.0085897	.0085887	44.16116	.1651348	.1405542	.0567716	225.8164

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	11.74208	38.80837	.2541387	.0184566	.4305344	.1844745	2.418061
Stddev	.00945	.09916	.0010560	.0002662	.3165312	.0050529	.040755
%RSD	.0804598	.2555041	.4155122	1.442164	73.52054	2.739051	1.685422
#1	11.74173	38.84978	.2550673	.0186361	.6579820	.1879483	2.390432
#2	11.73282	38.88012	.2529900	.0181508	.0690351	.1867973	2.398884
#3	11.75170	38.69523	.2543589	.0185829	.5645863	.1786780	2.464867

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	8.516050	8.541952	.0779379	.0003788	.8019966	8.147384	.0141102
Stddev	.061934	.013248	.0056883	.0006968	.0029508	.098758	.0004973
%RSD	.7272575	.1550913	7.298515	183.9262	.3679326	1.212138	3.524264
#1	8.569795	8.551274	.0716308	-.000348	.8022485	8.254698	.0145748
#2	8.448320	8.526788	.0826795	.000443	.7989279	8.060322	.0141701
#3	8.530035	8.547796	.0795033	.001041	.8048133	8.127132	.0135857

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-12 Acquired: 12/20/2024 21:47:32 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.287426	-.081825	.1617607
Stddev	.003674	.000284	.0013352
%RSD	.2853864	.3472031	.8254171
#1	1.283360	-.081771	.1624035
#2	1.290508	-.082132	.1626530
#3	1.288411	-.081571	.1602257

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2359.709	29153.17	3039.684	2005.081	2052.216
Stddev	15.807	250.02	26.342	20.959	12.673
%RSD	.6698659	.8576042	.8666011	1.045288	.6175515
#1	2347.510	29186.75	3011.267	2001.674	2045.141
#2	2354.050	29384.70	3063.287	2027.534	2044.660
#3	2377.567	28888.05	3044.497	1986.034	2066.848

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-13 Acquired: 12/20/2024 21:51:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS4 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0961515	-.080395	.1749611	.1116183	.0406239	98.68265	1.773680
Stddev	.0028304	.002369	.0001976	.0059214	.0020716	.32728	.006786
%RSD	2.943632	2.946335	.1129446	5.305048	5.099468	.3316489	.3826083
#1	.0959502	-.079646	.1751560	.1048691	.0384507	98.36697	1.766985
#2	.0934273	-.078491	.1747609	.1140451	.0408447	98.66059	1.773500
#3	.0990772	-.083048	.1749665	.1159409	.0425762	99.02041	1.780554

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0081828	.0101028	43.57436	.1541907	.1639801	.0824345	224.7297
Stddev	.0001345	.0001444	.12059	.0007005	.0018181	.0044583	.6998
%RSD	1.644021	1.429665	.2767395	.4542934	1.108753	5.408358	.3113801
#1	.0082594	.0102621	43.46812	.1539111	.1658796	.0838220	224.1175
#2	.0080275	.0100661	43.54954	.1549878	.1622561	.0860342	224.5790
#3	.0082615	.0099803	43.70543	.1536732	.1638045	.0774474	225.4925

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	14.37516	38.26428	.2638768	.0177373	-.044608	.1892666	1.989479
Stddev	.05419	.04891	.0035712	.0005792	.769041	.0038639	.011649
%RSD	.3770038	.1278211	1.353372	3.265657	1724.014	2.041510	.5855380
#1	14.32106	38.23543	.2679780	.0176548	-.328329	.1848577	1.977100
#2	14.37495	38.23666	.2614534	.0172038	.825985	.1920636	2.000227
#3	14.42945	38.32076	.2621991	.0183534	-.631478	.1908785	1.991111

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	7.450782	9.483780	.0750801	.0014197	.6329451	9.619772	.0137299
Stddev	.100515	.125923	.0021099	.0000467	.0084650	.045240	.0031841
%RSD	1.349055	1.327768	2.810201	3.287801	1.337405	.4702836	23.19099
#1	7.435882	9.629079	.0726601	.0014288	.6426901	9.666629	.0167625
#2	7.358548	9.406368	.0760470	.0013692	.6287305	9.576344	.0104133
#3	7.557915	9.415894	.0765333	.0014612	.6274146	9.616342	.0140139

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: P5009-13 Acquired: 12/20/2024 21:51:24 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJS4 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.368715	-.079294	.1475069
Stddev	.002548	.000244	.0028820
%RSD	.1861366	.3077676	1.953802
#1	1.366959	-.079496	.1442978
#2	1.367549	-.079023	.1498743
#3	1.371637	-.079362	.1483487

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2309.504	28550.54	2993.343	1972.054	2052.113
Stddev	23.959	27.41	20.217	3.496	26.861
%RSD	1.037414	.0959913	.6753863	.1772920	1.308962
#1	2282.128	28539.13	2970.150	1976.087	2021.121
#2	2326.651	28581.81	3007.236	1969.887	2066.532
#3	2319.732	28530.68	3002.644	1970.187	2068.686

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCV083 Acquired: 12/20/2024 21:55:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV083 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.130679	4.841657	24.94631	4.970703	4.981897	412.4722	10.28268
Stddev	.008278	.016087	.04808	.006187	.009371	1.8403	.06386
%RSD	.1613499	.3322582	.1927154	.1244682	.1880940	.4461526	.6210522
#1	5.122158	4.853322	25.00164	4.964575	4.978244	410.3658	10.20975
#2	5.131188	4.823305	24.91478	4.976947	4.974904	413.7681	10.32859
#3	5.138691	4.848343	24.92250	4.970588	4.992544	413.2826	10.30969

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5156408	2.508925	414.0775	15.79901	2.510001	15.49972	415.9626
Stddev	.0037529	.007302	.9149	.11884	.005788	.04097	2.3389
%RSD	.7278095	.2910458	.2209401	.7522136	.2305901	.2643335	.5622896
#1	.5168424	2.516815	413.0211	15.68992	2.516677	15.45244	413.3852
#2	.5186457	2.502405	414.5984	15.92565	2.506387	15.52488	417.9500
#3	.5114343	2.507556	414.6129	15.78145	2.506940	15.52183	416.5525

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.35009	411.0370	2.528825	1.329529	409.7406	2.568021	15.32096
Stddev	.07173	1.7372	.005116	.009975	1.9399	.005085	.07627
%RSD	.4673042	.4226428	.2023116	.7502751	.4734553	.1980241	.4978313
#1	15.26835	409.0964	2.534637	1.321807	407.6475	2.564234	15.23294
#2	15.40255	412.4472	2.525004	1.340791	411.4782	2.573801	15.36233
#3	15.37936	411.5673	2.526835	1.325988	410.0960	2.566027	15.36760

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	154.6537	5.014053	5.012428	4.864798	5.068218	4.969762	5.020518
Stddev	.5442	.010360	.025426	.006397	.003936	.031396	.019801
%RSD	.3518861	.2066147	.5072494	.1314975	.0776539	.6317371	.3943951
#1	154.0287	5.025056	5.009289	4.861811	5.068672	4.972270	5.041448
#2	155.0228	5.012616	5.039277	4.860440	5.064075	4.999829	5.002083
#3	154.9096	5.004486	4.988718	4.872142	5.071907	4.937188	5.018022

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCV083 Acquired: 12/20/2024 21:55:13 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV083 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	5.129337	4.884763	5.244764
Stddev	.033475	.024957	.025438
%RSD	.6526170	.5109128	.4850143
#1	5.091214	4.856012	5.215535
#2	5.153927	4.900844	5.256861
#3	5.142871	4.897432	5.261895

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1542.043	20319.58	2259.012	1288.266	1767.567
Stddev	1.475	129.29	11.777	1.026	6.278
%RSD	.0956716	.6362998	.5213442	.0796376	.3551949
#1	1541.707	20455.08	2260.798	1287.565	1760.755
#2	1543.657	20197.55	2246.443	1287.790	1773.121
#3	1540.764	20306.11	2269.794	1289.443	1768.826

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

Sample Name: CCB083 Acquired: 12/20/2024 21:58:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB083 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0007294	-.001201	.0030578	.0017750	-.003720	.0120415
Stddev	.0028791	.001547	.0022156	.0019974	.002049	.0181798
%RSD	394.7270	128.8083	72.45850	112.5256	55.08654	150.9764
#1	-.001601	-.001373	.0014520	.0016723	-.001551	.0205640
#2	.003948	.000425	.0055855	.0038217	-.005625	.0243944
#3	-.000159	-.002655	.0021359	-.000169	-.003985	-.008834

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000272	.0000867	.0000992	.0316390	-.000410	.0002007
Stddev	.002342	.0001431	.0000575	.0478490	.000301	.0002733
%RSD	862.2429	165.1824	57.97210	151.2345	73.44721	136.1810
#1	-.000763	.0000010	.0000336	.0076444	-.000617	.0005134
#2	.002277	.0002519	.0001231	.0005349	-.000548	.0000077
#3	-.002329	.0000071	.0001410	.0867376	-.000065	.0000809

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000319	.0083041	-.000232	.0828873	.0005131	.0005264
Stddev	.002336	.0175567	.001540	.0909702	.0001841	.0004839
%RSD	733.2111	211.4208	663.1820	109.7517	35.87136	91.92969
#1	-.002027	.0268125	.000826	.1242920	.0003071	.0001304
#2	.002343	-.008114	.000477	-.021420	.0006614	.0003830
#3	-.001272	.006213	-.001999	.145790	.0005709	.0010659

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4001026	-.009296	.0086687	-.297011	-.003285	.0165712
Stddev	.5016154	.003339	.0073412	.132452	.003210	.0007273
%RSD	125.3717	35.92316	84.68680	44.59497	97.72879	4.388890
#1	.9336982	-.013028	.0076031	-.377991	-.006989	.0173891
#2	-.061823	-.008269	.0019185	-.368882	-.001574	.0159974
#3	.328433	-.006591	.0164845	-.144159	-.001292	.0163270

Reviewed By:kareem
On:12/27/2024 8:22:17 PM
Inst Id :P5

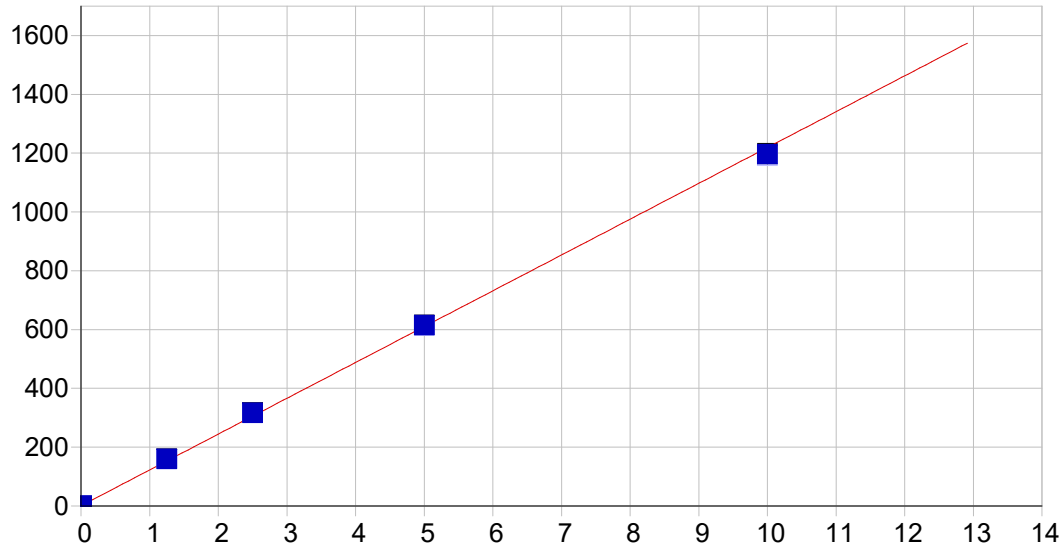
Sample Name: CCB083 Acquired: 12/20/2024 21:58:50 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v36) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB083 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0000220	-.006052	-.000116	F -.013348	.0020664	.0003563
Stddev	.0004533	.004735	.000932	.000519	.0033646	.0000573
%RSD	2062.253	78.23486	805.9037	3.888362	162.8236	16.06980
#1	-.000460	-.000604	.000811	-.013947	-.000639	.0004224
#2	.000085	-.008382	-.000106	-.013026	.001004	.0003239
#3	.000440	-.009171	-.001052	-.013071	.005834	.0003226

Elem	Li6707
Units	ppm
Avg	.0127877
Stddev	.0030575
%RSD	23.90983
#1	.0153413
#2	.0136222
#3	.0093996

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1851.656	22712.56	2332.963	1576.347	2170.293
Stddev	3.924	89.32	5.672	6.392	1.623
%RSD	.2119304	.3932634	.2431389	.4055255	.0747730
#1	1855.863	22815.22	2326.446	1583.700	2171.653
#2	1851.013	22652.63	2336.789	1573.231	2170.729
#3	1848.094	22669.84	2335.653	1572.110	2168.497

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



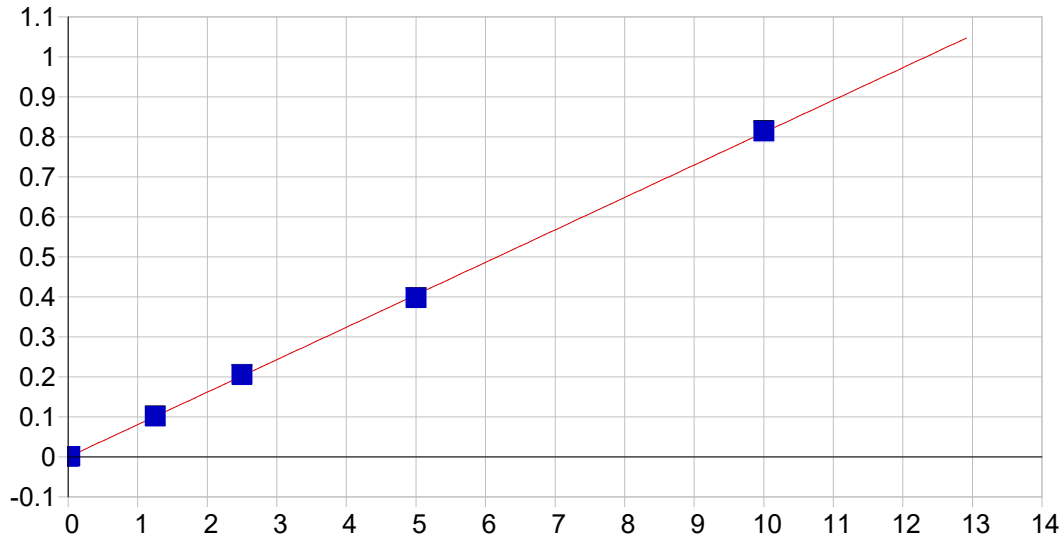
As 189.042 {478}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.707428	Re-Slope:	1.000000
A1 (Gain):	121.845964	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999711	Status:	OK.
Std Error of Est:	0.048899		
Predicted MDL:	0.006339		
Predicted MQL:	0.021131		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.70768	.190	1
S1	.01000	.00719	-.003	-28.1	1.5820	.224	1
S2	1.2500	1.3043	.054	4.34	158.99	.366	1
S3	2.5000	2.5966	.097	3.86	315.81	.865	1
S4	5.0000	5.0403	.040	.807	612.29	.382	1
S5	10.000	9.8116	-.188	-1.88	1191.1	2.71	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



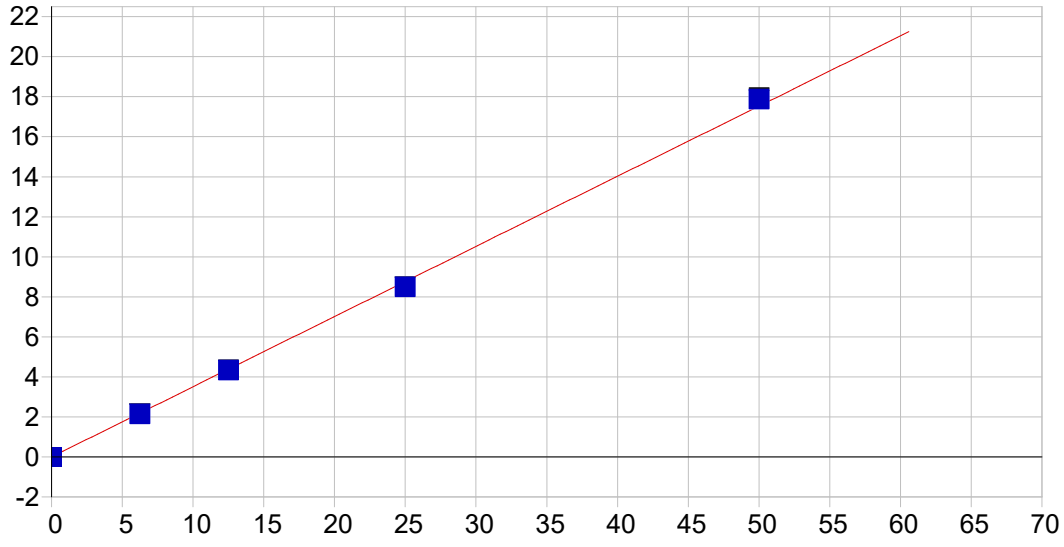
Tl 190.856 {477}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000342	Re-Slope:	1.000000
A1 (Gain):	0.081117	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999927	Status:	OK.
Std Error of Est:	0.000026		
Predicted MDL:	0.003623		
Predicted MQL:	0.012076		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00034	.000	1
S1	.02500	.02736	.002	9.46	.00181	.000	1
S2	1.2500	1.2605	.011	.841	.10164	.000	1
S3	2.5000	2.5389	.039	1.56	.20508	.001	1
S4	5.0000	4.9090	-.091	-1.82	.39682	.001	1
S5	10.000	10.039	.039	.393	.81192	.002	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



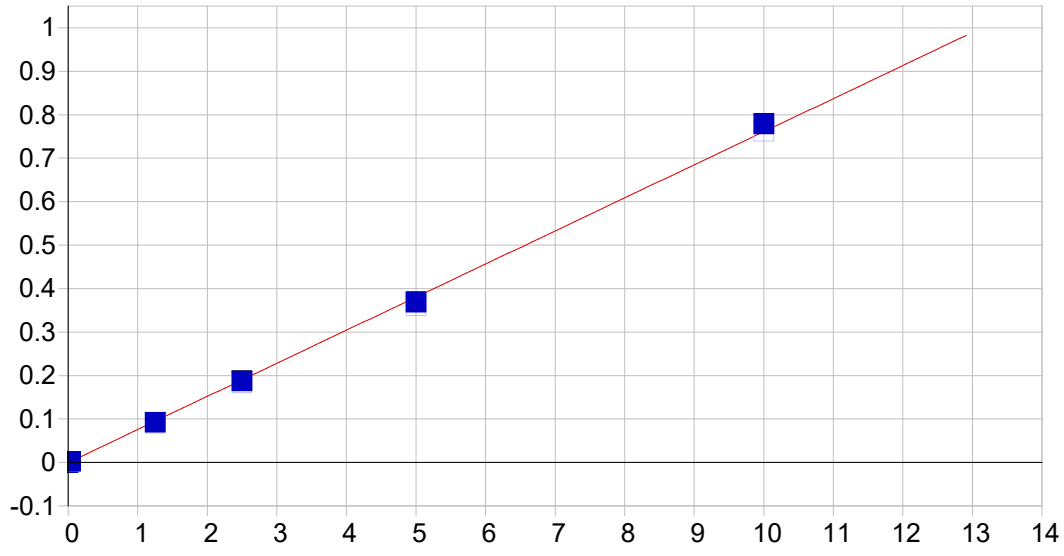
Pb 220.353 {453}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000135	Re-Slope:	1.000000
A1 (Gain):	0.350619	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999747	Status:	OK.
Std Error of Est:	0.000295		
Predicted MDL:	0.002288		
Predicted MQL:	0.007628		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00014	.001	1
S1	.01000	.00842	-.002	-15.8	.00307	.001	1
S2	6.2500	6.1312	-.119	-1.90	2.1475	.003	1
S3	12.500	12.375	-.125	-.997	4.3345	.001	1
S4	25.000	24.238	-.762	-3.05	8.4889	.010	1
S5	50.000	51.007	1.01	2.01	17.865	.055	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



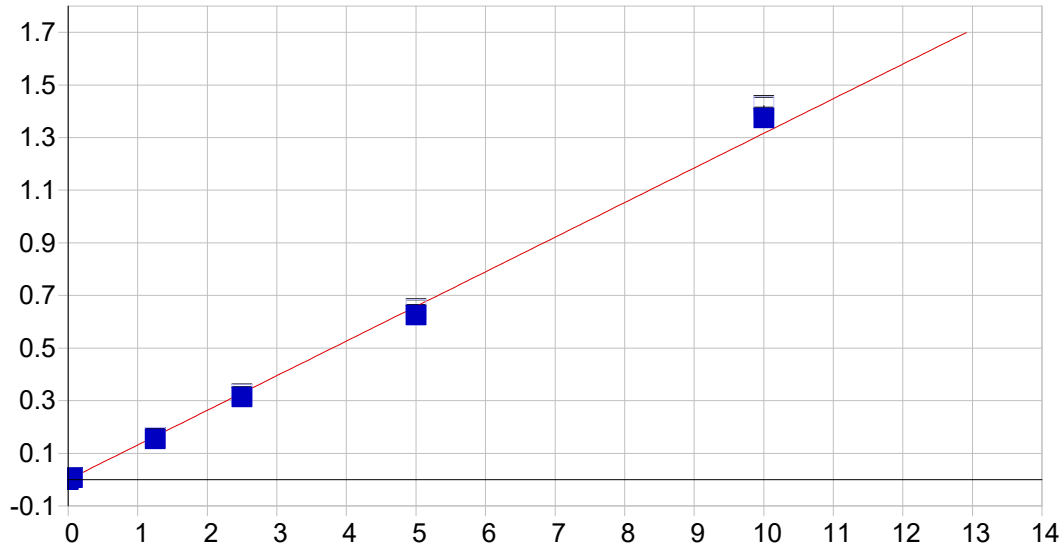
Se 196.090 {472}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000252	Re-Slope:	1.000000
A1 (Gain):	0.076112	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999668	Status:	OK.
Std Error of Est:	0.000060		
Predicted MDL:	0.004410		
Predicted MQL:	0.014700		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00025	.000	1
S1	.03500	.03245	-.003	-7.28	.00221	.000	1
S2	1.2500	1.2142	-.036	-2.86	.09002	.000	1
S3	2.5000	2.4639	-.036	-1.44	.18300	.001	1
S4	5.0000	4.8440	-.156	-3.12	.35987	.001	1
S5	10.000	10.230	.230	2.30	.76128	.002	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



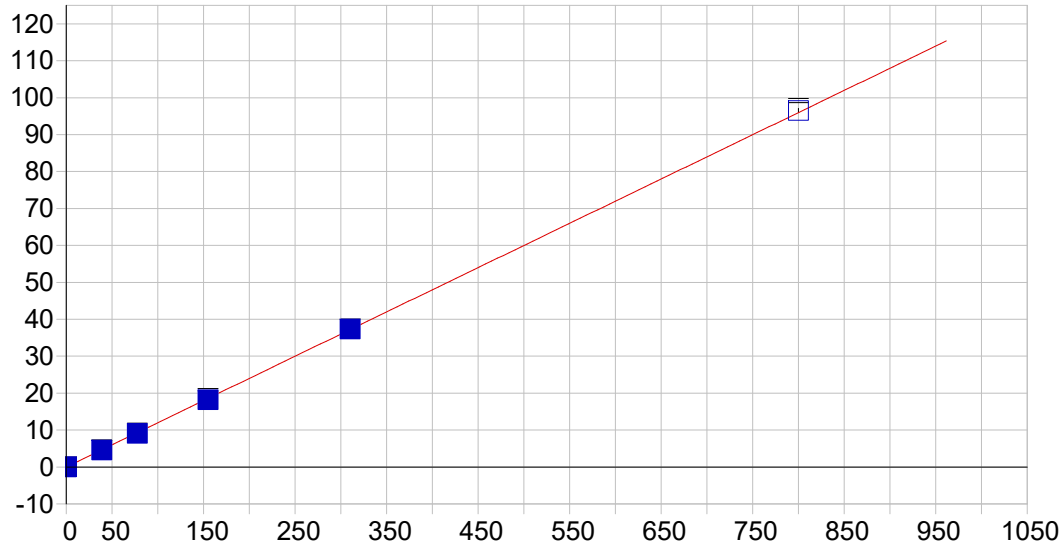
Sb 206.833 {463}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000155	Re-Slope:	1.000000
A1 (Gain):	0.131601	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998944	Status:	OK.
Std Error of Est:	0.000257		
Predicted MDL:	0.003267		
Predicted MQL:	0.010890		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00016	.000	1
S1	.06000	.05665	-.003	-5.58	.00761	.000	1
S2	1.2500	1.1714	-.079	-6.29	.15981	.001	1
S3	2.5000	2.3857	-.114	-4.57	.32512	.001	1
S4	5.0000	4.7515	-.248	-4.97	.64746	.002	1
S5	10.000	10.445	.445	4.45	1.4187	.003	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



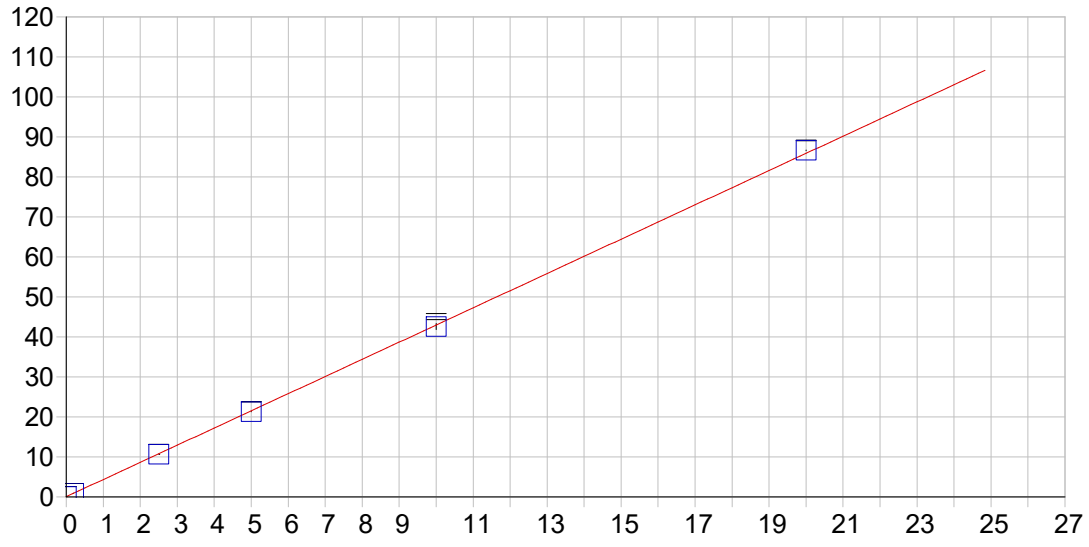
Al 396.152 { 85}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.005186	Re-Slope:	1.000000
A1 (Gain):	0.119963	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999943	Status:	OK.
Std Error of Est:	0.000795		
Predicted MDL:	0.025668		
Predicted MQL:	0.085559		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00519	.002	1
S1	.20000	.22162	.022	10.8	.02144	.003	1
S2	38.750	37.875	-.875	-2.26	4.5435	.006	1
S3	77.500	75.880	-1.62	-2.09	9.1077	.034	1
S4	155.00	151.71	-3.29	-2.13	18.214	.292	1
S5	310.00	311.10	1.10	.356	37.356	.034	1
S6	800.00	804.67	4.67	.583	96.525	.559	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



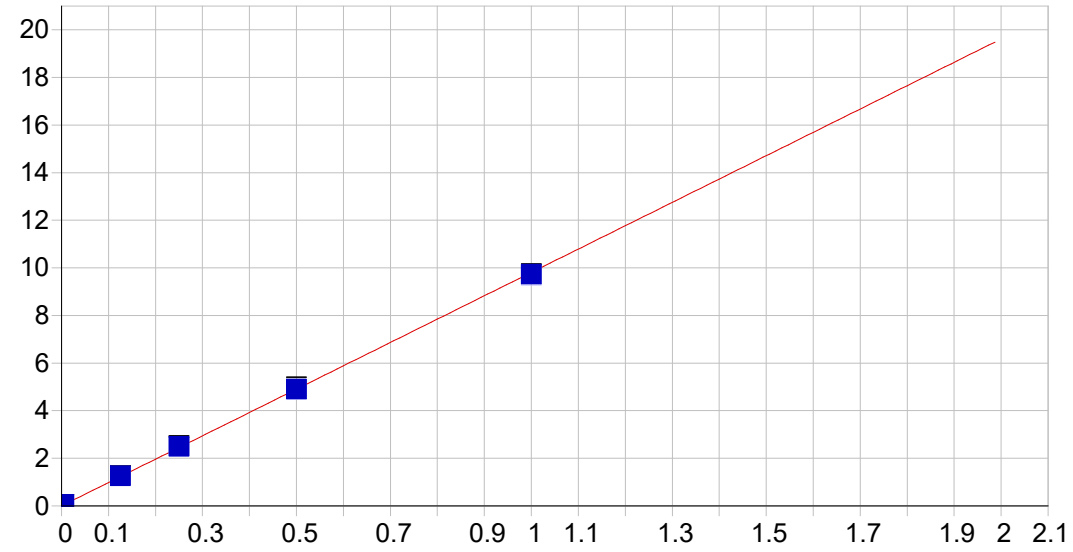
Ba 493.409 { 68}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.059957	Re-Slope:	1.000000
A1 (Gain):	4.291399	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999957	Status:	OK.
Std Error of Est:	0.004244		
Predicted MDL:	0.001517		
Predicted MQL:	0.005057		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.05997	.014	1
S1	.20000	.20102	.001	.512	.92263	.004	1
S2	2.5000	2.4644	-.036	-1.42	10.636	.006	1
S3	5.0000	4.9503	-.050	-.993	21.304	.056	1
S4	10.000	9.9119	-.088	-.881	42.596	.742	1
S5	20.000	20.172	.172	.861	86.627	.094	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



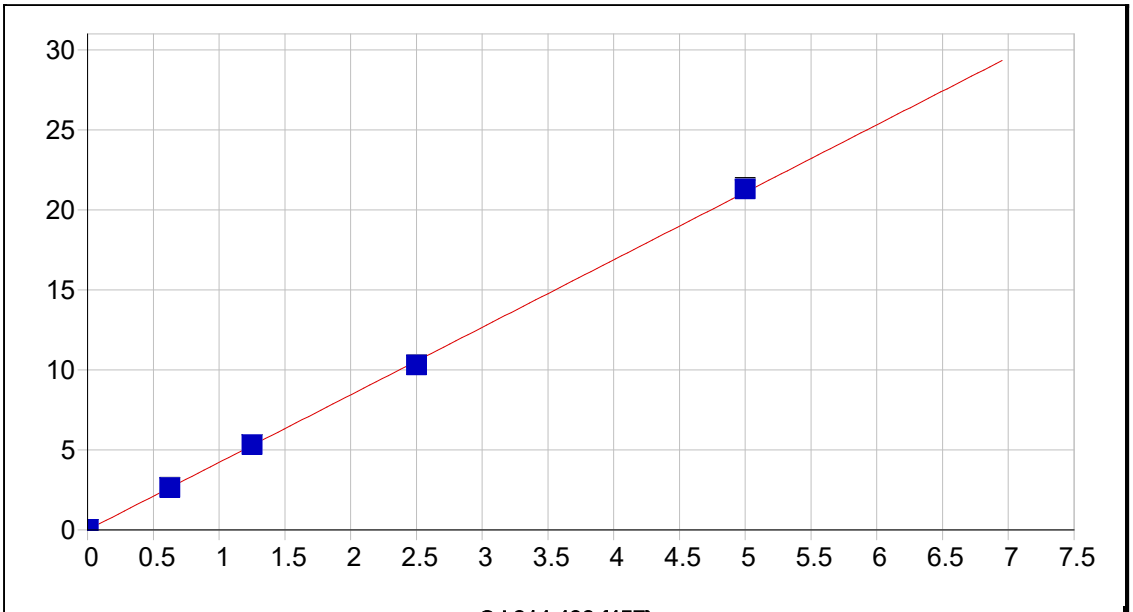
Be 234.861 {144}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001631	Re-Slope:	1.000000
A1 (Gain):	9.807787	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999925	Status:	OK.
Std Error of Est:	0.000450		
Predicted MDL:	0.000131		
Predicted MQL:	0.000437		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00163	.001	1
S1	.00500	.00525	.000	5.07	.05311	.000	1
S2	.12500	.12852	.004	2.82	1.2565	.009	1
S3	.25000	.25497	.005	1.99	2.4911	.031	1
S4	.50000	.49956	-.000	-.088	4.8787	.099	1
S5	1.0000	.99169	-.008	-.831	9.6829	.038	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



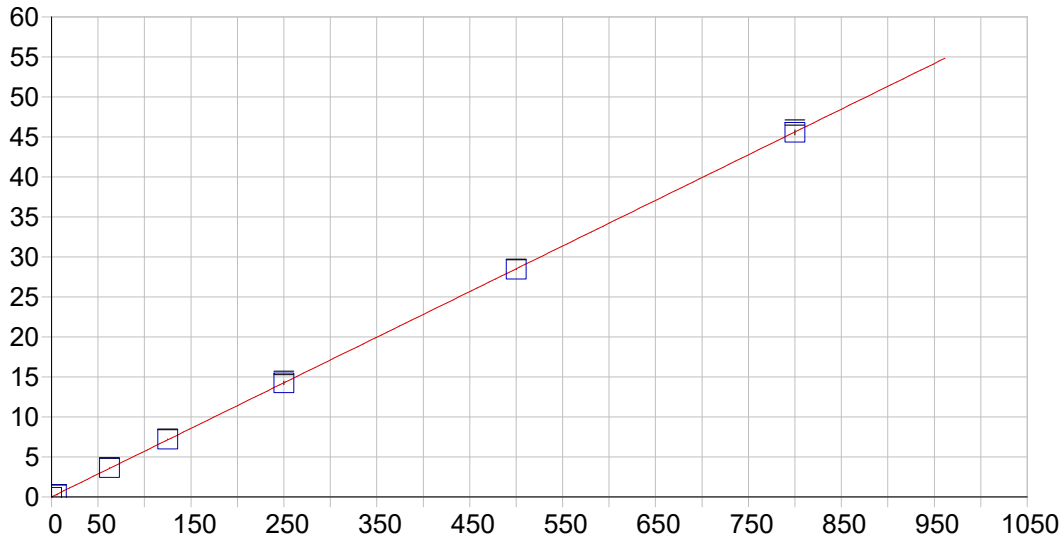
Cd 214.438 {457}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000638	Re-Slope:	1.000000
A1 (Gain):	4.219567	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999897	Status:	OK.
Std Error of Est:	0.000509		
Predicted MDL:	0.000118		
Predicted MQL:	0.000394		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00064	.000	1
S1	.00500	.00496	-.000	-.769	.02165	.001	1
S2	.62500	.62670	.002	.272	2.6491	.006	1
S3	1.2500	1.2615	.011	.919	5.3317	.010	1
S4	2.5000	2.4407	-.059	-2.37	10.316	.011	1
S5	5.0000	5.0461	.046	.923	21.326	.065	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



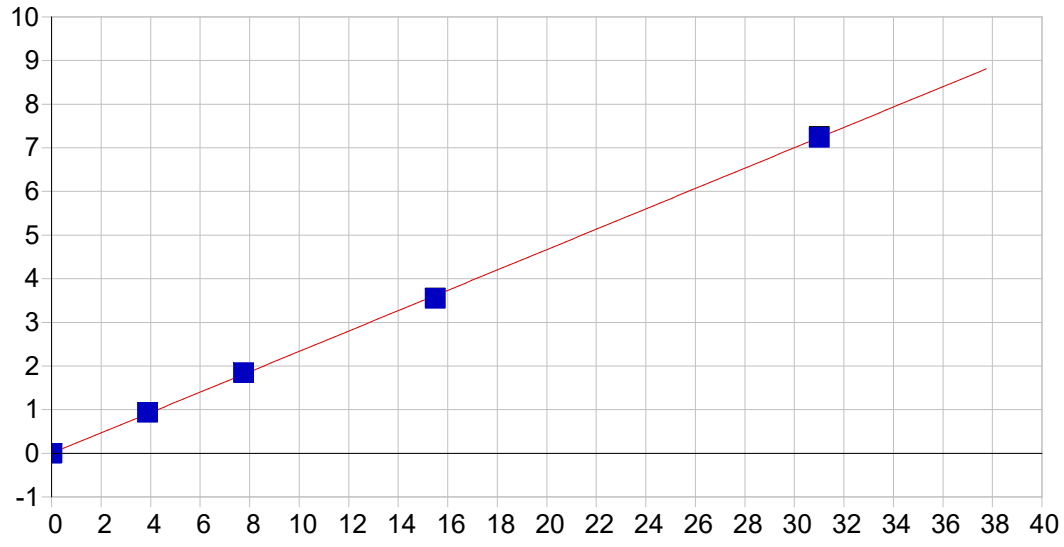
Ca 373.690 { 90}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.008027	Re-Slope:	1.000000
A1 (Gain):	0.057013	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999993	Status:	OK.
Std Error of Est:	0.000759		
Predicted MDL:	0.036050		
Predicted MQL:	0.120167		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00014	-.000	.000	.00802	.001	1
S1	5.0000	5.0495	.050	.991	.29592	.001	1
S2	62.500	63.377	.877	1.40	3.6213	.010	1
S3	125.00	126.08	1.08	.866	7.1963	.035	1
S4	250.00	249.84	-.159	-.063	14.252	.216	1
S5	500.00	498.92	-1.08	-.216	28.453	.037	1
S6	800.00	799.23	-.769	-.096	45.574	.315	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



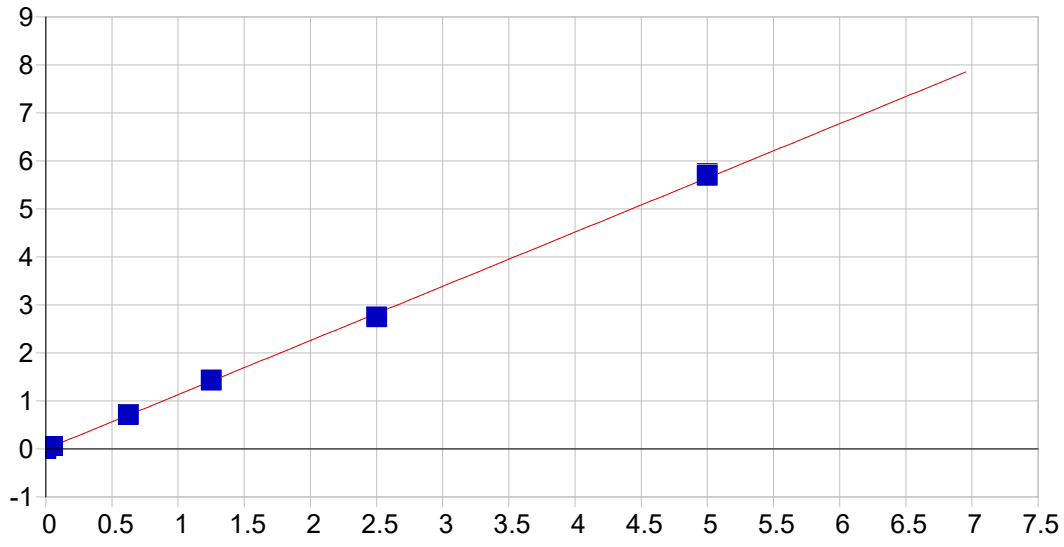
Cr 267.716 {126}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000231	Re-Slope:	1.000000
A1 (Gain):	0.233353	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999881	Status:	OK.
Std Error of Est:	0.000106		
Predicted MDL:	0.000934		
Predicted MQL:	0.003115		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00023	.000	1
S1	.01000	.00956	-.000	-4.40	.00246	.000	1
S2	3.8750	4.0070	.132	3.41	.93598	.002	1
S3	7.7500	7.9207	.171	2.20	1.8499	.002	1
S4	15.500	15.205	-.295	-1.90	3.5511	.005	1
S5	31.000	30.993	-.007	-.023	7.2381	.018	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



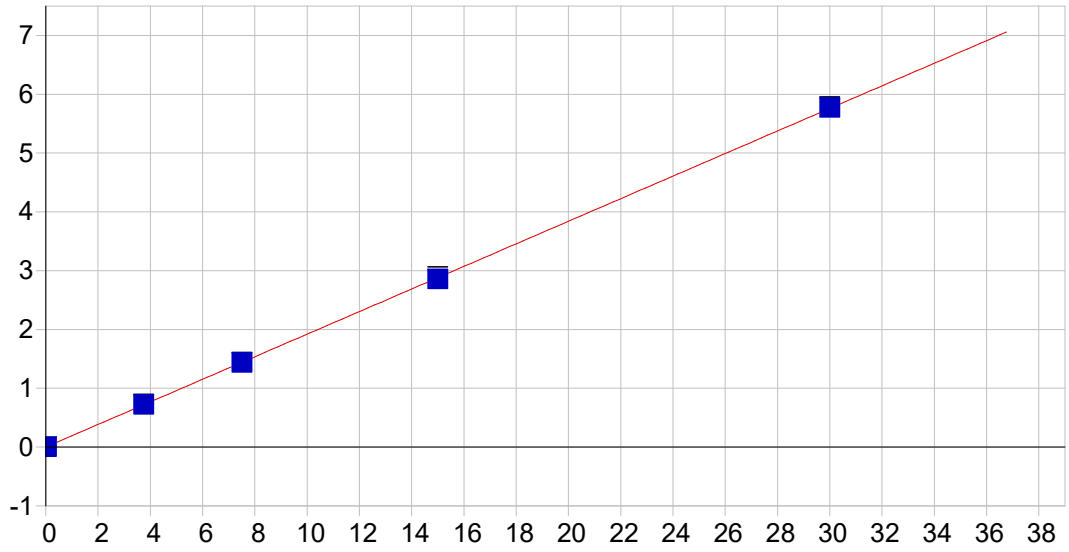
Co 228.616 {448}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000360	Re-Slope:	1.000000
A1 (Gain):	1.129159	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999875	Status:	OK.
Std Error of Est:	0.000476		
Predicted MDL:	0.000483		
Predicted MQL:	0.001611		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00036	.000	1
S1	.05000	.05108	.001	2.15	.05750	.001	1
S2	.62500	.63130	.006	1.01	.71475	.001	1
S3	1.2500	1.2642	.014	1.13	1.4316	.001	1
S4	2.5000	2.4342	-.066	-2.63	2.7573	.005	1
S5	5.0000	5.0443	.044	.886	5.7137	.022	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



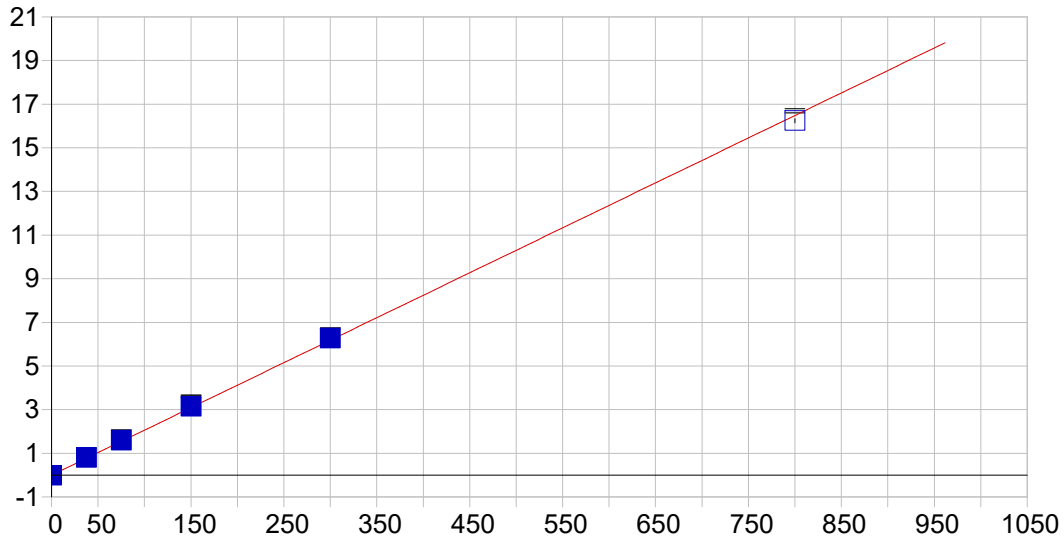
Cu 324.754 {104}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.001468	Re-Slope:	1.000000
A1 (Gain):	0.191957	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999982	Status:	OK.
Std Error of Est:	0.000052		
Predicted MDL:	0.008087		
Predicted MQL:	0.026956		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00147	.002	1
S1	.02500	.02886	.004	15.4	.00700	.001	1
S2	3.7500	3.7833	.033	.888	.72761	.004	1
S3	7.5000	7.4874	-.013	-.168	1.4386	.004	1
S4	15.000	14.889	-.111	-.737	2.8593	.036	1
S5	30.000	30.086	.086	.287	5.7760	.012	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



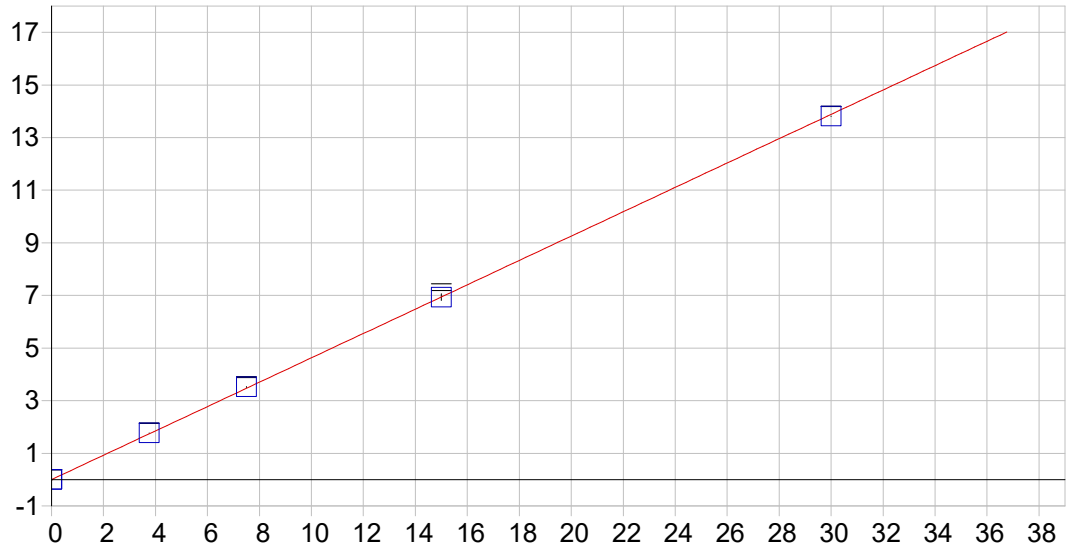
Fe 259.837 {130}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000159	Re-Slope:	1.000000
A1 (Gain):	0.020604	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999837	Status:	OK.
Std Error of Est:	0.000163		
Predicted MDL:	0.036143		
Predicted MQL:	0.120477		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00003	-.000	.000	-.00016	.001	1
S1	.10000	.12137	.021	21.4	.00234	.000	1
S2	37.500	38.887	1.39	3.70	.80125	.003	1
S3	75.000	77.537	2.54	3.38	1.5977	.006	1
S4	150.00	153.06	3.06	2.04	3.1543	.054	1
S5	300.00	304.63	4.63	1.54	6.2779	.012	1
S6	800.00	788.35	-11.6	-1.46	16.243	.095	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



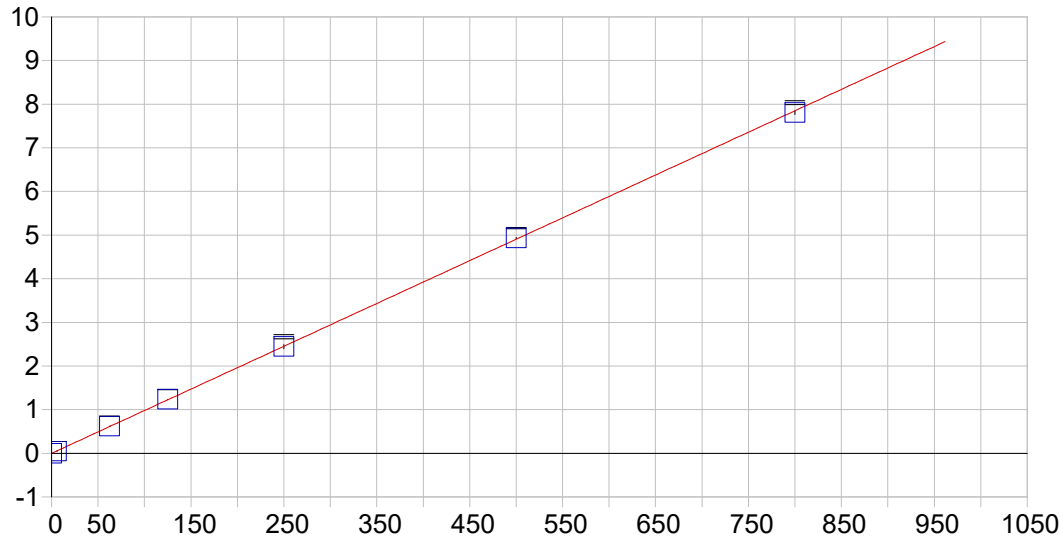
Mn 257.610 {131}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000226	Re-Slope:	1.000000
A1 (Gain):	0.462809	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999966	Status:	OK.
Std Error of Est:	0.000135		
Predicted MDL:	0.001420		
Predicted MQL:	0.004733		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.00023	.000	1
S1	.01500	.01673	.002	11.5	.00797	.000	1
S2	3.7500	3.8189	.069	1.84	1.7676	.007	1
S3	7.5000	7.6060	.106	1.41	3.5204	.017	1
S4	15.000	14.980	-.020	-.134	6.9331	.130	1
S5	30.000	29.843	-.157	-.522	13.812	.007	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



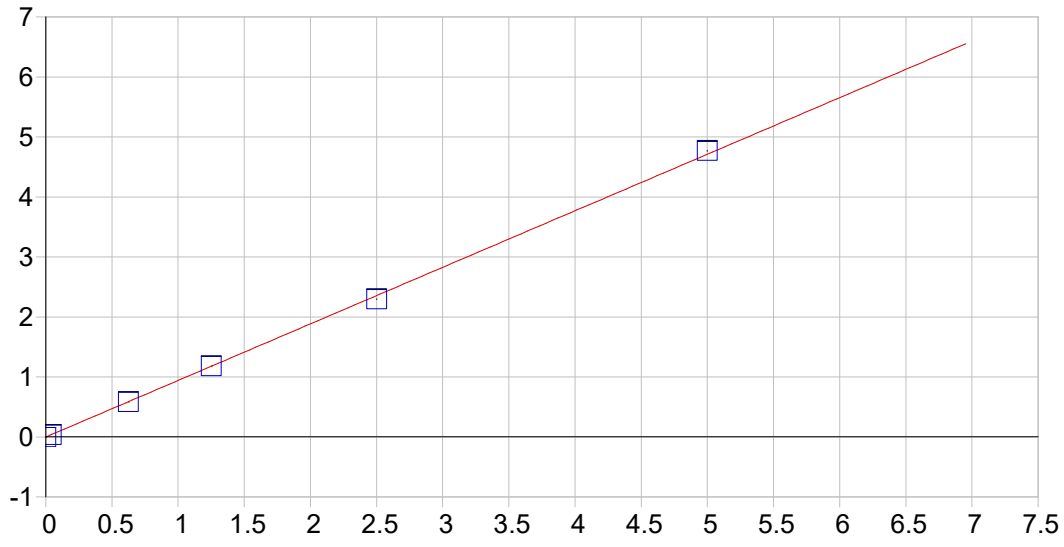
Mg 279.079 {121}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001515	Re-Slope:	1.000000
A1 (Gain):	0.009812	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999981	Status:	OK.
Std Error of Est:	0.000210		
Predicted MDL:	0.096315		
Predicted MQL:	0.321051		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00031	-.000	.000	-.00152	.000	1
S1	5.0000	5.2308	.231	4.62	.04981	.001	1
S2	62.500	63.176	.676	1.08	.61839	.001	1
S3	125.00	125.91	.906	.725	1.2339	.006	1
S4	250.00	249.38	-.620	-.248	2.4455	.048	1
S5	500.00	502.99	2.99	.598	4.9340	.014	1
S6	800.00	795.82	-4.18	-.523	7.8074	.041	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



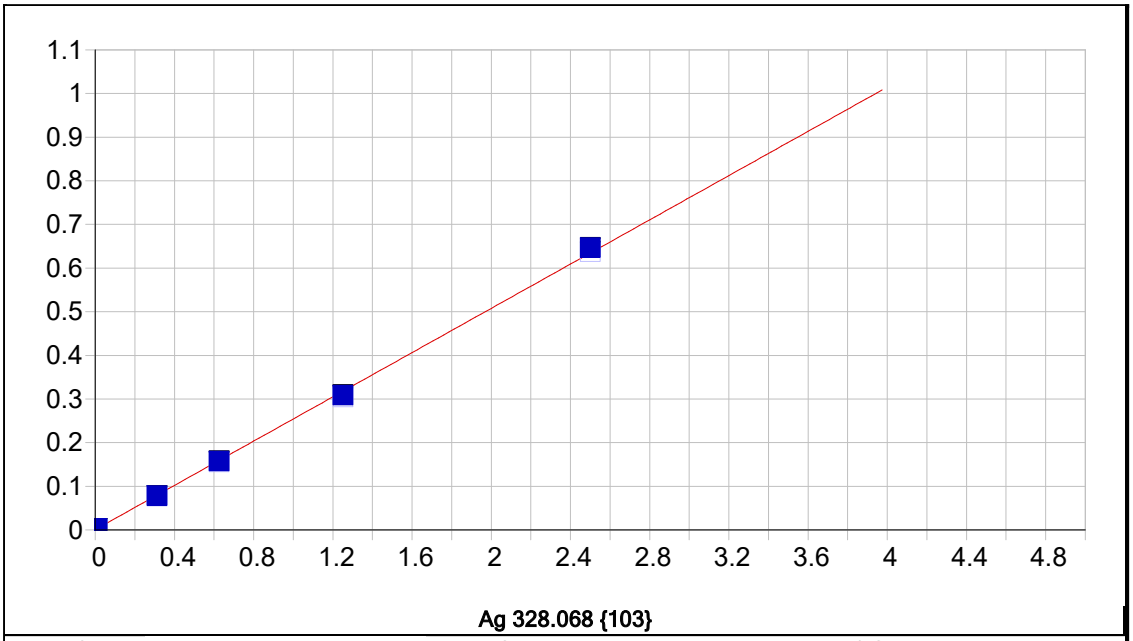
Ni 231.604 {446}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001258	Re-Slope:	1.000000
A1 (Gain):	0.942511	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999874	Status:	OK.
Std Error of Est:	0.000356		
Predicted MDL:	0.000650		
Predicted MQL:	0.002168		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00126	.001	1
S1	.04000	.04094	.001	2.35	.03733	.000	1
S2	.62500	.62074	-.004	-.682	.58379	.000	1
S3	1.2500	1.2550	.005	.404	1.1816	.001	1
S4	2.5000	2.4374	-.063	-2.50	2.2960	.003	1
S5	5.0000	5.0609	.061	1.22	4.7687	.009	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



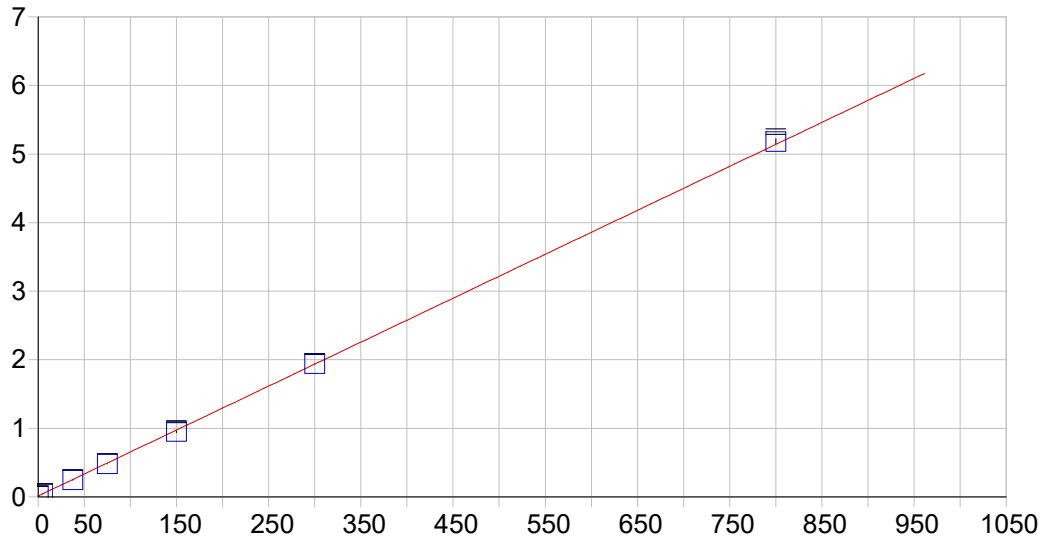
Ag 328.068 {103}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000720	Re-Slope:	1.000000
A1 (Gain):	0.253538	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999779	Status:	OK.
Std Error of Est:	0.000044		
Predicted MDL:	0.001501		
Predicted MQL:	0.005003		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00072	.000	1
S1	.01000	.00980	-.000	-2.03	.00320	.000	1
S2	.31250	.30606	-.006	-2.06	.07718	.000	1
S3	.62500	.61847	-.007	-1.05	.15524	.001	1
S4	1.2500	1.2160	-.034	-2.72	.30445	.001	1
S5	2.5000	2.5472	.047	1.89	.63740	.001	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



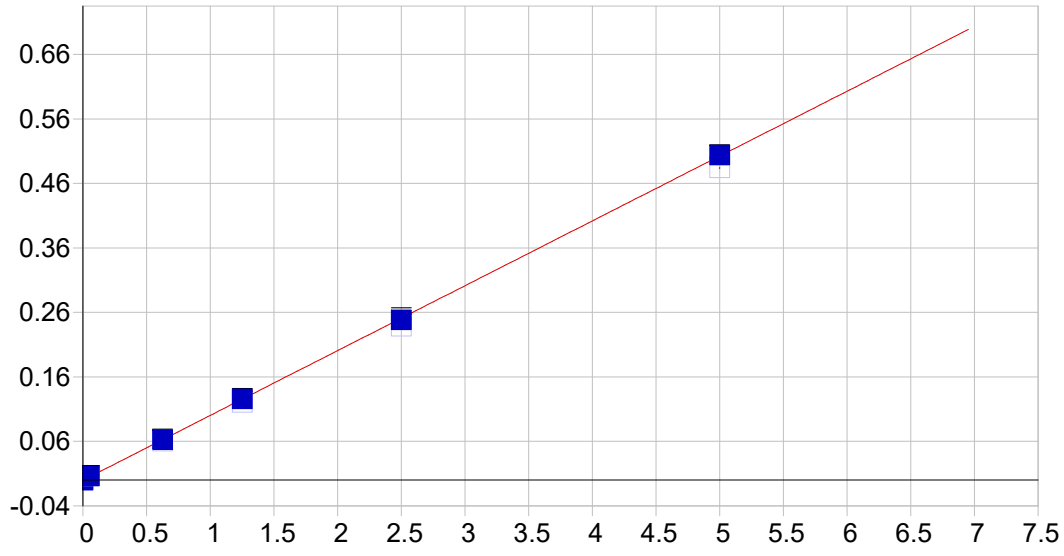
Na 818.326 { 41}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.014106	Re-Slope:	1.000000
A1 (Gain):	0.006408	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999918	Status:	OK.
Std Error of Est:	0.000254		
Predicted MDL:	0.802267		
Predicted MQL:	2.674224		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00037	.000	.000	.01411	.005	1
S1	5.0000	4.9699	-.030	-.602	.04596	.006	1
S2	37.500	36.499	-1.00	-2.67	.24801	.005	1
S3	75.000	73.037	-1.96	-2.62	.48216	.004	1
S4	150.00	146.22	-3.78	-2.52	.95112	.013	1
S5	300.00	300.43	.430	.143	1.9394	.005	1
S6	800.00	806.35	6.35	.793	5.1815	.040	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



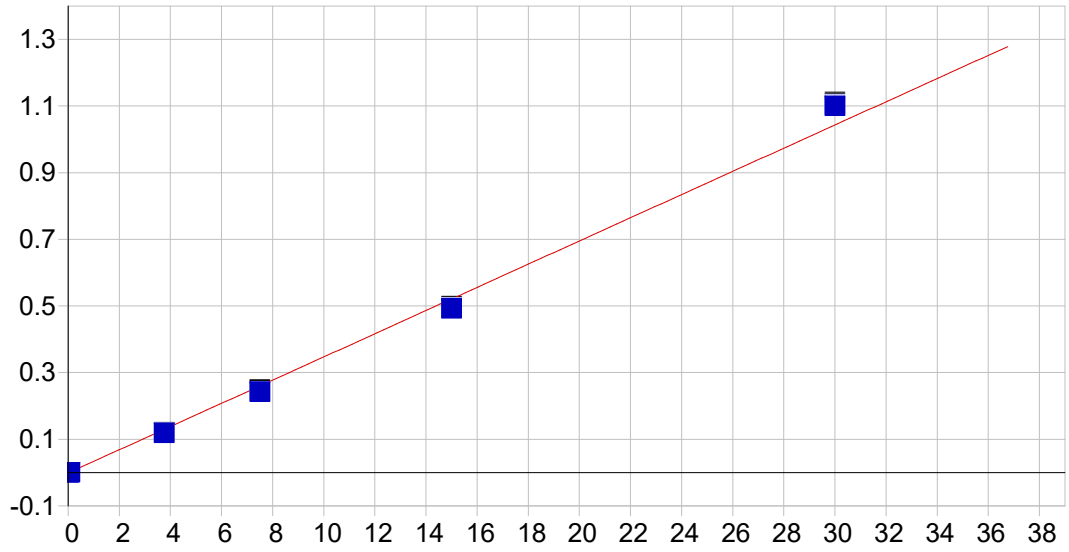
V 292.402 {115}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000210	Re-Slope:	1.000000
A1 (Gain):	0.100527	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999791	Status:	OK.
Std Error of Est:	0.000052		
Predicted MDL:	0.009268		
Predicted MQL:	0.030895		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00001	-.000	.000	-.00021	.000	1
S1	.05000	.06274	.013	25.5	.00608	.001	1
S2	.62500	.62384	-.001	-.185	.05999	.001	1
S3	1.2500	1.2505	.000	.036	.12046	.001	1
S4	2.5000	2.4716	-.028	-1.14	.23818	.004	1
S5	5.0000	5.0159	.016	.318	.48388	.000	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



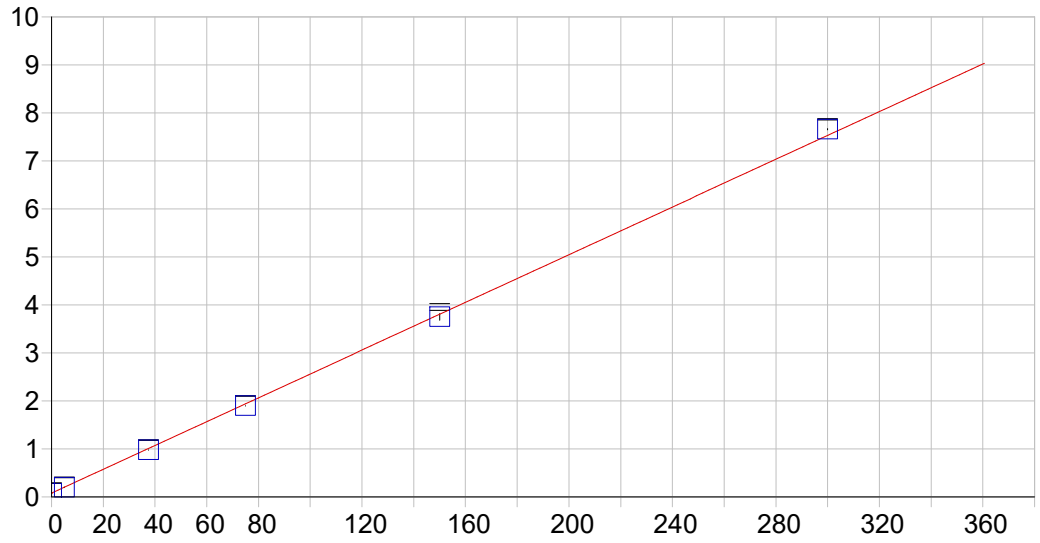
Zn 213.856 {158}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.001112	Re-Slope:	1.000000
A1 (Gain):	0.034810	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.998287	Status:	OK.
Std Error of Est:	0.000146		
Predicted MDL:	0.012124		
Predicted MQL:	0.040414		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00003	.000	.000	-.00111	.000	1
S1	.06000	.04210	-.018	-29.8	.00036	.001	1
S2	3.7500	3.4468	-.303	-8.08	.11951	.001	1
S3	7.5000	7.0070	-.493	-6.57	.24408	.004	1
S4	15.000	14.184	-.816	-5.44	.49517	.004	1
S5	30.000	31.630	1.63	5.43	1.1050	.007	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



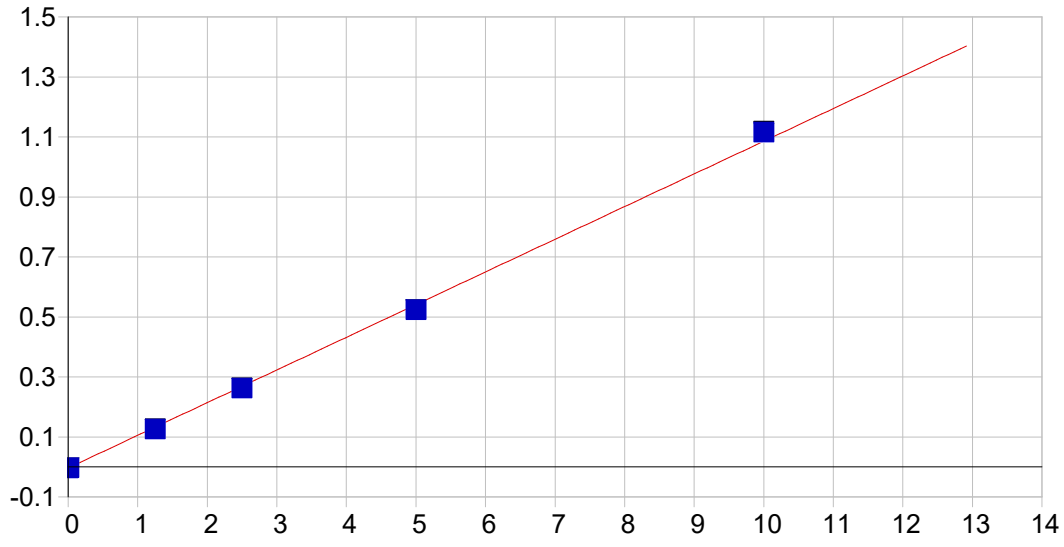
K 769.896 { 44}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.077346	Re-Slope:	1.000000
A1 (Gain):	0.024844	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999813	Status:	OK.
Std Error of Est:	0.000991		
Predicted MDL:	0.162277		
Predicted MQL:	0.540923		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00038	.000	.000	.07736	.006	1
S1	5.0000	4.8971	-.103	-2.06	.19901	.006	1
S2	37.500	36.211	-1.29	-3.44	.97697	.003	1
S3	75.000	73.238	-1.76	-2.35	1.8969	.006	1
S4	150.00	147.85	-2.15	-1.43	3.7506	.069	1
S5	300.00	305.30	5.30	1.77	7.6624	.013	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



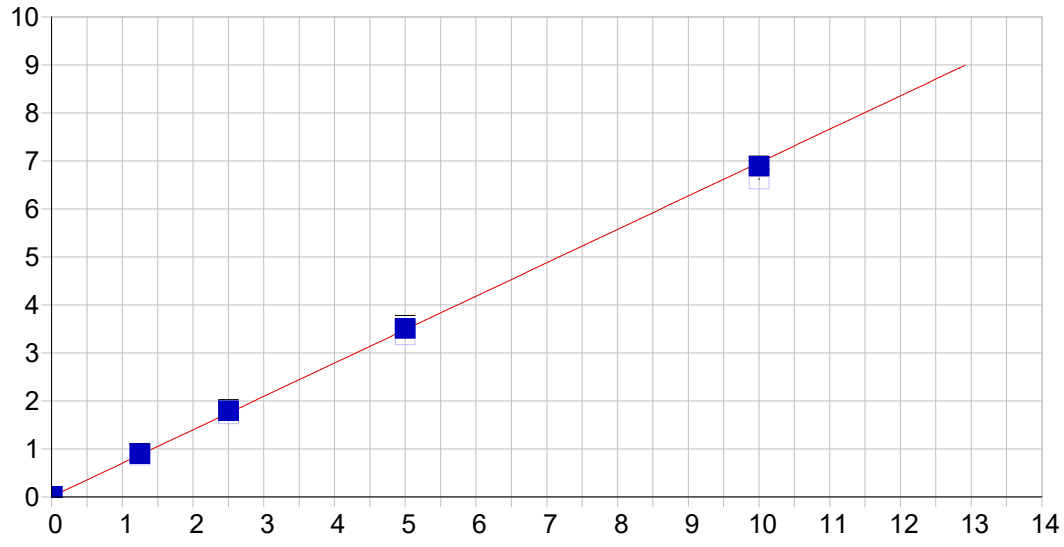
P 177.495 {490}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.003606	Re-Slope:	1.000000
A1 (Gain):	0.108914	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999540	Status:	OK.
Std Error of Est:	0.000055		
Predicted MDL:	0.002310		
Predicted MQL:	0.007699		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00361	.000	1
S1	.01000	.00967	-.000	-3.33	-.00255	.000	1
S2	1.2500	1.1873	-.063	-5.01	.12551	.000	1
S3	2.5000	2.4420	-.058	-2.32	.26197	.001	1
S4	5.0000	4.8424	-.158	-3.15	.52301	.001	1
S5	10.000	10.279	.279	2.79	1.1143	.004	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



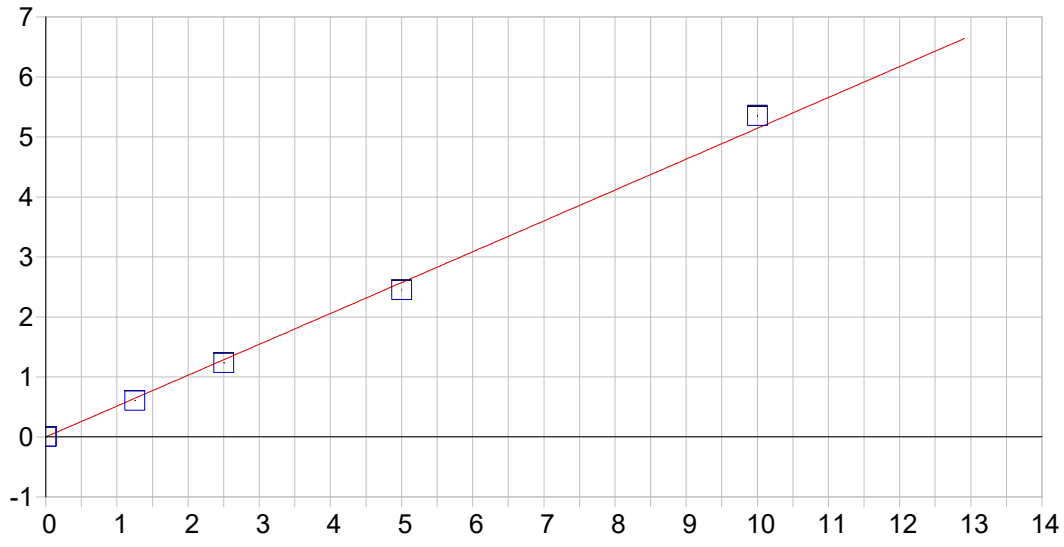
B 249.678 {135}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.006362	Re-Slope:	1.000000
A1 (Gain):	0.695827	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999482	Status:	OK.
Std Error of Est:	0.000361		
Predicted MDL:	0.002653		
Predicted MQL:	0.008845		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00001	.000	.000	.00637	.002	1
S1	.01000	-.00184	-.012	-118.	.00504	.002	1
S2	1.2500	1.2828	.033	2.63	.86591	.007	1
S3	2.5000	2.5651	.065	2.60	1.7251	.026	1
S4	5.0000	5.0263	.026	.527	3.3715	.068	1
S5	10.000	9.8880	-.112	-1.12	6.6221	.008	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



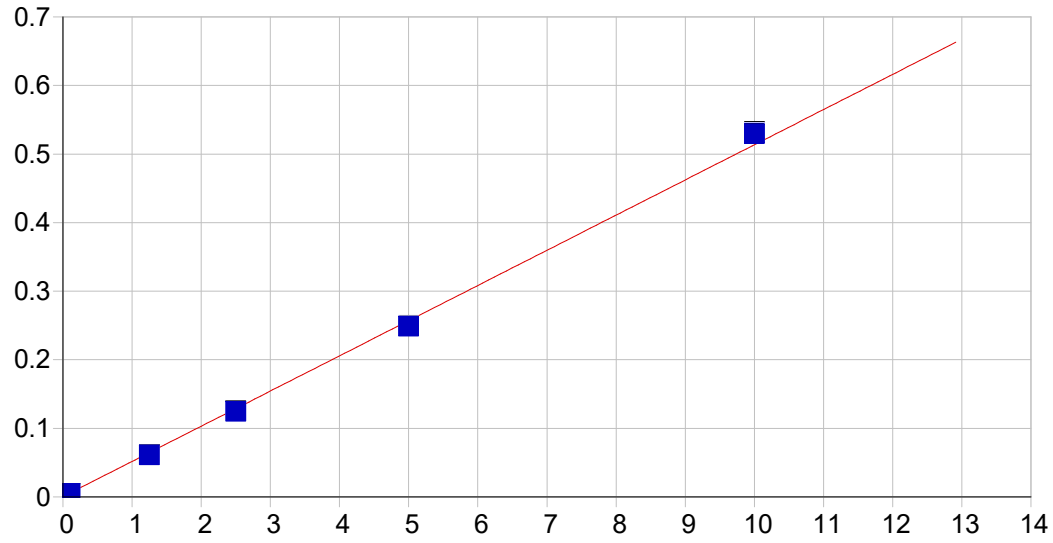
Mo 202.030 {467}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000060	Re-Slope:	1.000000
A1 (Gain):	0.514327	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999031	Status:	OK.
Std Error of Est:	0.000380		
Predicted MDL:	0.000669		
Predicted MQL:	0.002230		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00006	.000	1
S1	.01000	.01089	.001	8.95	.00566	.000	1
S2	1.2500	1.1787	-.071	-5.71	.60628	.000	1
S3	2.5000	2.4008	-.099	-3.97	1.2349	.002	1
S4	5.0000	4.7599	-.240	-4.80	2.4482	.002	1
S5	10.000	10.410	.410	4.10	5.3540	.011	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



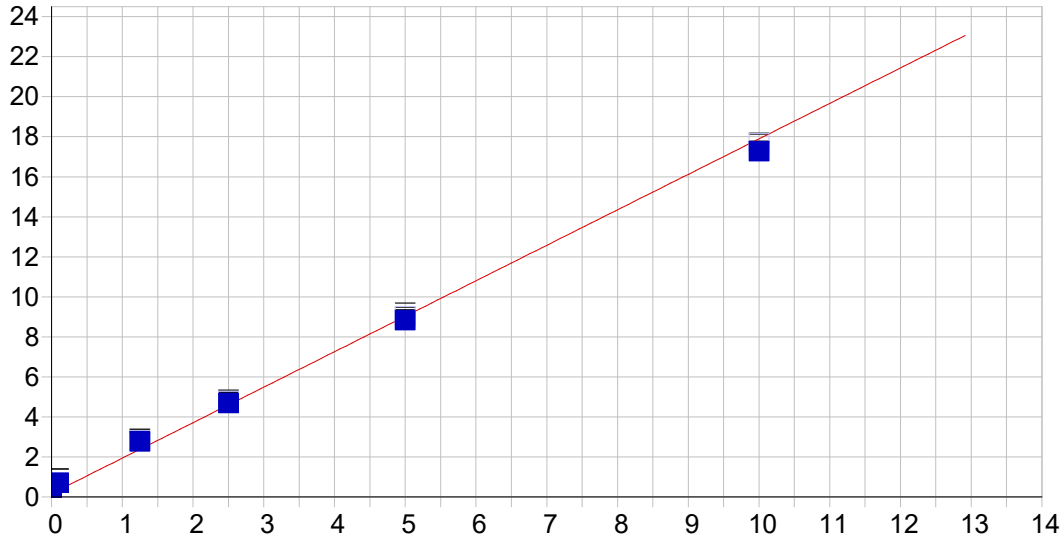
S 182.034 {485}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000493	Re-Slope:	1.000000
A1 (Gain):	0.051305	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999414	Status:	OK.
Std Error of Est:	0.000094		
Predicted MDL:	0.005236		
Predicted MQL:	0.017452		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00002	.000	.000	.00049	.000	1
S1	.10000	.09031	-.010	-9.69	.00513	.000	1
S2	1.2500	1.1800	-.070	-5.60	.06124	.000	1
S3	2.5000	2.4215	-.078	-3.14	.12514	.000	1
S4	5.0000	4.8424	-.158	-3.15	.24976	.000	1
S5	10.000	10.316	.316	3.16	.53139	.001	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



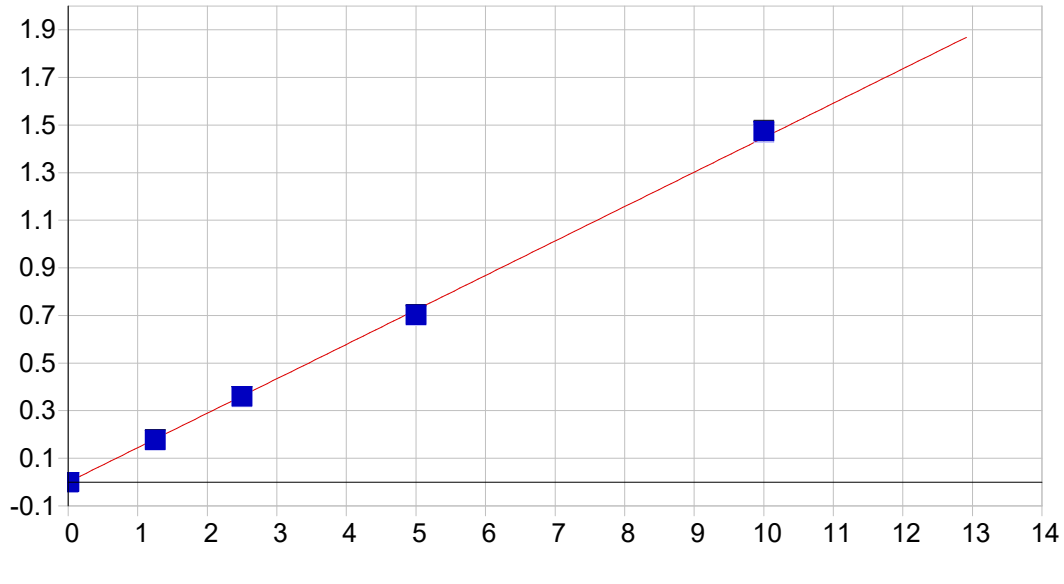
Si 251.611 {134}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.164857	Re-Slope:	1.000000
A1 (Gain):	1.772742	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.988066	Status:	OK.
Std Error of Est:	0.015018		
Predicted MDL:	0.000946		
Predicted MQL:	0.003154		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00022	-.000	.000	.16447	.003	1
S1	.10000	.30592	.206	206.	.70968	.194	1
S2	1.2500	1.4690	.219	17.5	2.8193	.079	1
S3	2.5000	2.5471	.047	1.88	4.7808	.064	1
S4	5.0000	4.8835	-.117	-2.33	9.0232	.167	1
S5	10.000	9.6462	-.354	-3.54	17.668	.027	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



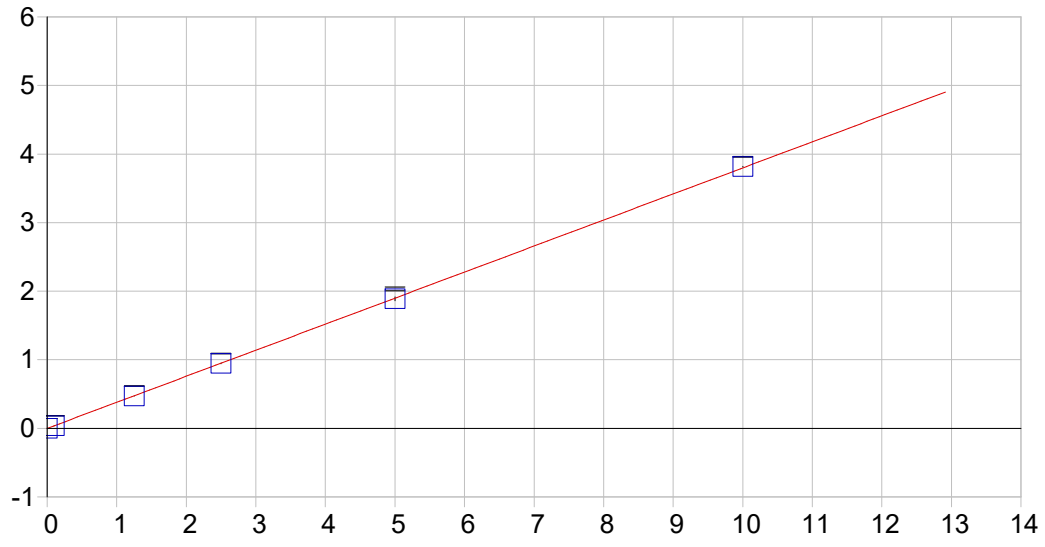
Sn 189.989 {478}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	0.000003	Re-Slope:	1.000000
A1 (Gain):	0.144693	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999769	Status:	OK.
Std Error of Est:	0.000043		
Predicted MDL:	0.001676		
Predicted MQL:	0.005585		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	.00000	.000	1
S1	.00700	.00724	.000	3.47	.00101	.000	1
S2	1.2500	1.2245	-.025	-2.04	.17628	.001	1
S3	2.5000	2.4849	-.015	-.603	.35774	.000	1
S4	5.0000	4.8517	-.148	-2.97	.69839	.002	1
S5	10.000	10.189	.189	1.89	1.4670	.004	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



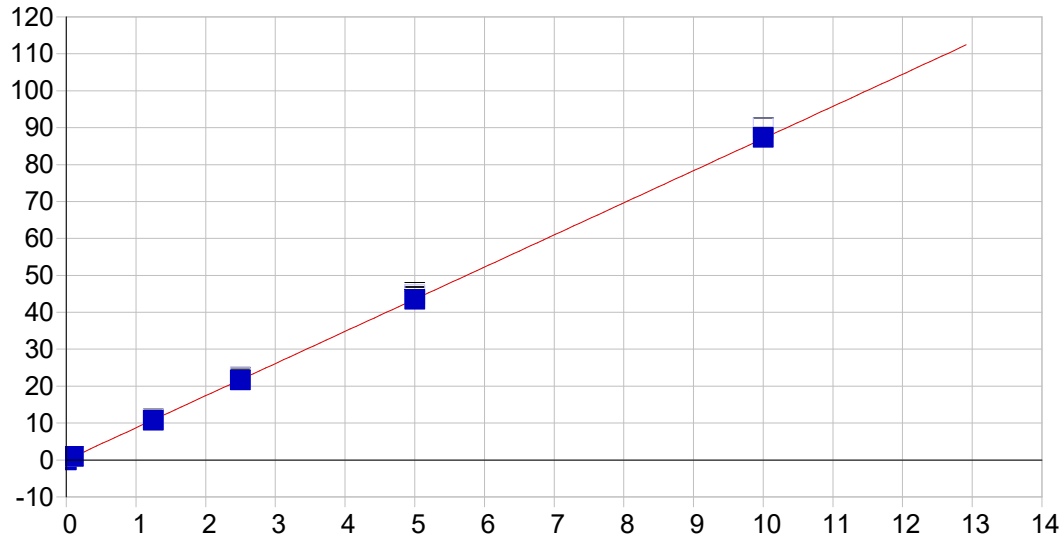
Ti 336.121 {100}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.000042	Re-Slope:	1.000000
A1 (Gain):	0.379794	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999989	Status:	OK.
Std Error of Est:	0.000094		
Predicted MDL:	0.003669		
Predicted MQL:	0.012231		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	.00000	.000	.000	-.00004	.002	1
S1	.10000	.09999	-.000	-.014	.03793	.001	1
S2	1.2500	1.2434	-.007	-.525	.47221	.002	1
S3	2.5000	2.4877	-.012	-.491	.94479	.005	1
S4	5.0000	4.9754	-.025	-.493	1.8896	.027	1
S5	10.000	10.043	.043	.435	3.8144	.005	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



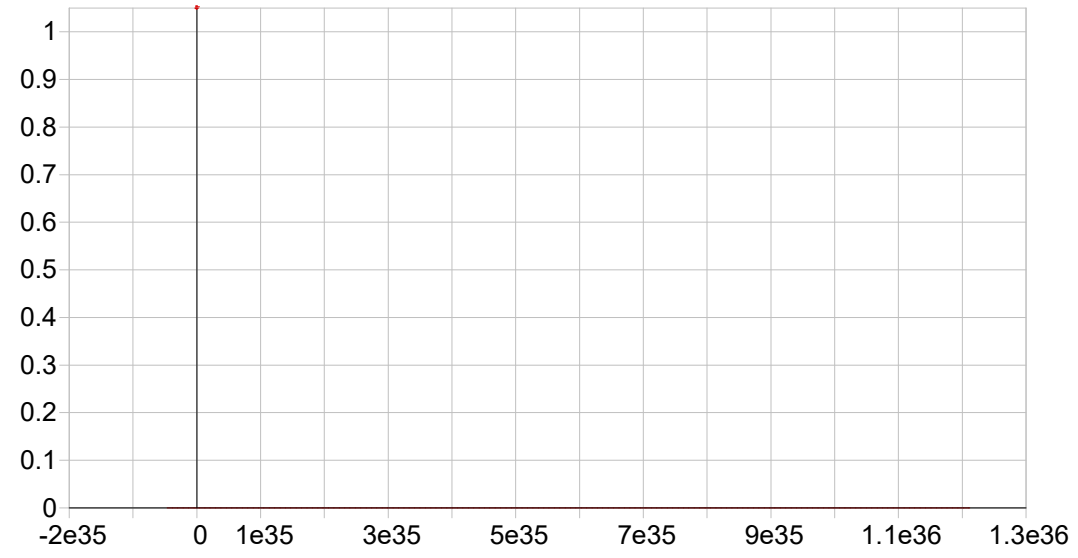
Sr 407.771 { 83}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc

A0 (Offset):	-0.003722	Re-Slope:	1.000000
A1 (Gain):	8.705836	Y-int:	0.000000
A2 (Curvature):	0.000000		
n (Exponent):	1.000000		
Correlation:	0.999987	Status:	OK.
Std Error of Est:	0.002466		
Predicted MDL:	0.000269		
Predicted MQL:	0.000897		

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	-.00374	.001	1
S1	.10000	.10403	.004	4.03	.90284	.007	1
S2	1.2500	1.2331	-.017	-1.35	11.058	.041	1
S3	2.5000	2.4871	-.013	-.515	22.302	.084	1
S4	5.0000	4.9982	-.002	-.036	44.815	.548	1
S5	10.000	10.028	.028	.277	89.908	.078	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

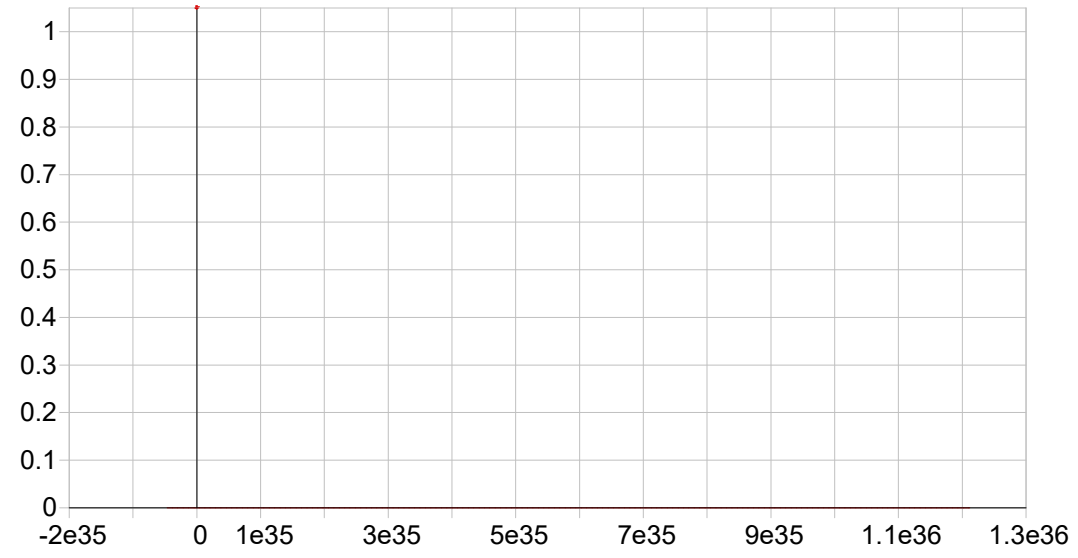


Y 224.306 {450}*

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}*

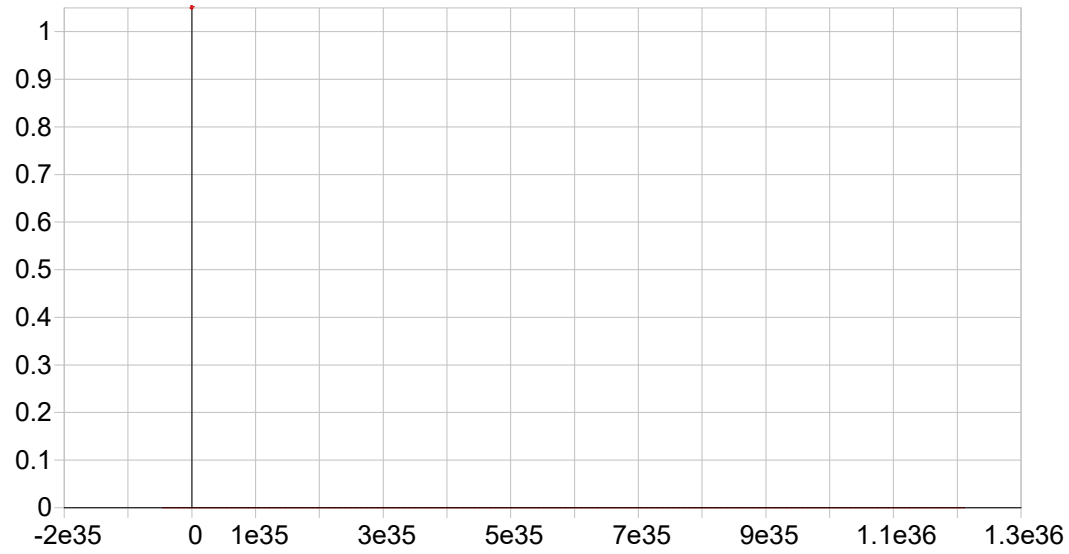
Date of Fit:	<not fit>	Type of Fit:	Linear	Weighting:	1/Conc

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

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
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



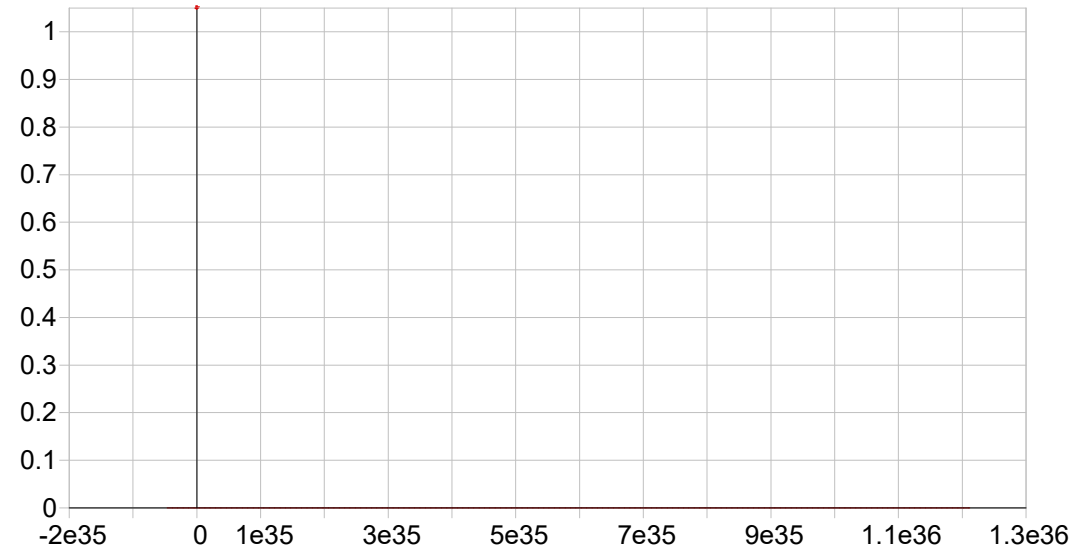
Y 371.030 { 91}*

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

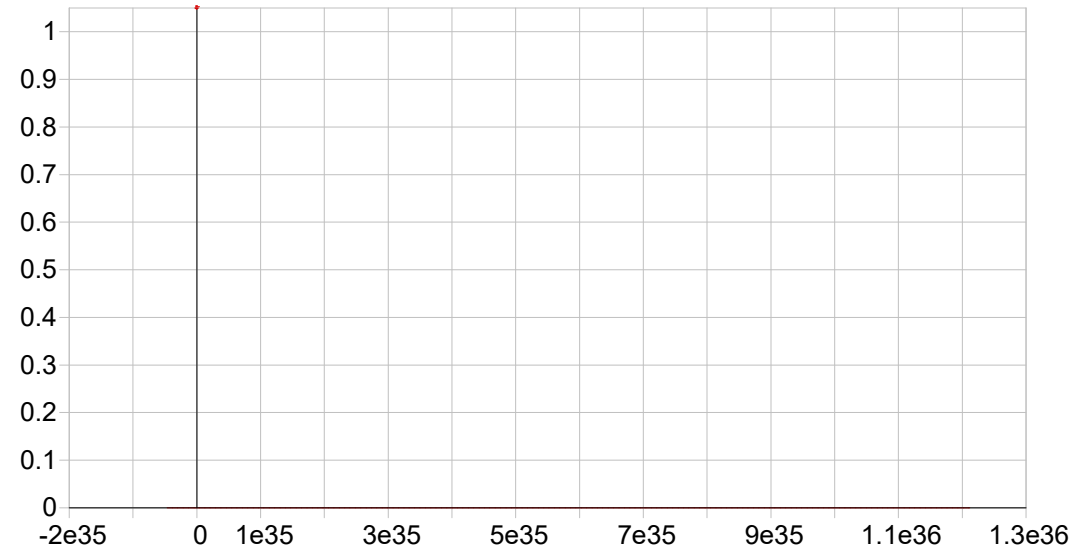
Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5



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



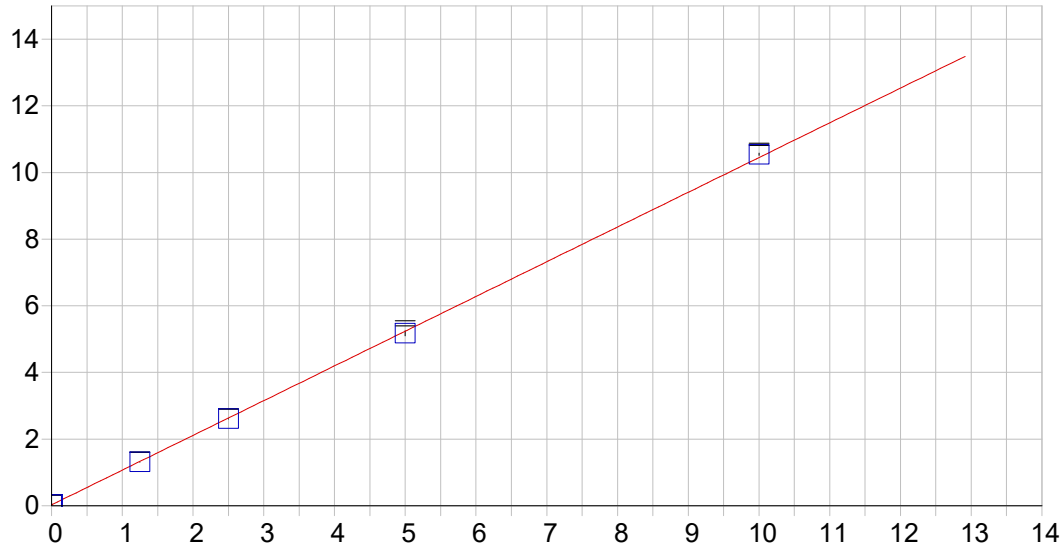
In 230.606 {446}*

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:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

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

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



Li 670.784 { 50}

Date of Fit:	12/23/2024 13:53:26	Type of Fit:	Linear	Weighting:	1/Conc
A0 (Offset):	0.027254		Re-Slope:	1.000000	
A1 (Gain):	1.042196		Y-int:	0.000000	
A2 (Curvature):	0.000000				
n (Exponent):	1.000000				
Correlation:	0.999943	Status:	OK.		
Std Error of Est:	0.000229				
Predicted MDL:	0.004384				
Predicted MQL:	0.014613				

Std. Name	Stated Conc.	Found Conc.	Difference	% Diff.	(S)IR	Std Dev	Emphasis
S0	.00000	-.00000	-.000	.000	.02725	.004	1
S5	10.000	10.094	.094	.942	10.547	.033	1
S4	5.0000	4.9437	-.056	-1.13	5.1796	.078	1
S3	2.5000	2.4767	-.023	-.933	2.6084	.006	1
S2	1.2500	1.2337	-.016	-1.31	1.3130	.004	1
S1	.01500	.01673	.002	11.5	.04469	.003	1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S0 Acquired: 12/23/2024 13:14:46 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	.70768	-.00034	.00014	-.00025	.00016	-.00519	.05997	.00163
Stddev	.19001	.00029	.00063	.00019	.00032	.00177	.01352	.00112
%RSD	26.850	85.141	461.10	75.935	206.33	34.166	22.540	68.875
#1	.51993	-.00006	.00022	-.00026	-.00005	-.00562	.07097	.00166
#2	.89988	-.00032	.00071	-.00044	-.00001	-.00670	.06407	.00273
#3	.70324	-.00064	-.00053	-.00006	.00053	-.00324	.04488	.00049

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	.00064	.00802	.00023	-.00036	.00147	-.00016	.00023	-.00152
Stddev	.00024	.00084	.00028	.00028	.00189	.00079	.00028	.00026
%RSD	38.236	10.441	123.12	76.052	128.86	493.88	123.53	17.300
#1	.00090	.00830	.00023	-.00005	.00210	-.00031	.00051	-.00131
#2	.00041	.00868	.00052	-.00058	.00296	.00070	-.00004	-.00181
#3	.00060	.00708	-.00005	-.00046	-.00066	-.00086	.00020	-.00143

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	-.00126	.00072	.01411	-.00021	-.00111	.07736	-.00361	.00637
Stddev	.00050	.00020	.00454	.00007	.00006	.00617	.00015	.00178
%RSD	39.834	27.169	32.194	35.390	5.0425	7.9755	4.0572	27.994
#1	-.00154	.00077	.00963	-.00030	-.00106	.07547	-.00344	.00445
#2	-.00155	.00050	.01871	-.00016	-.00117	.08425	-.00372	.00798
#3	-.00068	.00088	.01398	-.00018	-.00110	.07235	-.00366	.00667

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00006	.00049	.16447	.00000	-.00004	-.00374	.02725
Stddev	.00037	.00023	.00263	.00007	.00161	.00108	.00374
%RSD	615.56	46.421	1.6015	2062.3	3848.8	28.978	13.718
#1	.00018	.00036	.16470	.00003	.00039	-.00392	.02999
#2	-.00035	.00036	.16698	.00005	-.00183	-.00473	.02877
#3	.00035	.00076	.16172	-.00007	.00132	-.00258	.02299

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S0 Acquired: 12/23/2024 13:14:46 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	1973.1	25641.	2057.2	1695.9	1769.4
Stddev	1.7	420.	40.0	24.4	3.3
%RSD	.08470	1.6362	1.9451	1.4406	.18520
#1	1975.0	26075.	2073.7	1722.2	1765.6
#2	1971.9	25238.	2011.6	1673.9	1770.9
#3	1972.4	25610.	2086.4	1691.6	1771.5

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S1 Acquired: 12/23/2024 13:18:52 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: IR Corr. Factor: 1.000000
User: Kareem Custom ID1: S01 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934	Be2348
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.5820	.00181	.00307	.00221	.00761	.02144	.92263	.05311
Stddev	.2244	.00010	.00075	.00040	.00007	.00265	.00446	.00047
%RSD	14.186	5.7191	24.336	17.979	.89782	12.346	.48377	.88778
#1	1.7598	.00187	.00292	.00242	.00767	.01903	.92440	.05341
#2	1.3298	.00186	.00241	.00175	.00754	.02102	.92593	.05257
#3	1.6564	.00169	.00388	.00247	.00763	.02427	.91755	.05336

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	.02165	.29592	.00246	.05750	.00700	.00234	.00797	.04981
Stddev	.00054	.00136	.00020	.00103	.00109	.00031	.00021	.00107
%RSD	2.5035	.46022	8.0777	1.7839	15.619	13.229	2.6040	2.1558
#1	.02150	.29526	.00248	.05837	.00814	.00206	.00796	.04947
#2	.02226	.29500	.00226	.05637	.00689	.00267	.00776	.04895
#3	.02120	.29748	.00265	.05775	.00596	.00229	.00818	.05102

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	.03733	.00320	.04596	.00608	.00036	.19901	-.00255	.00504
Stddev	.00019	.00026	.00557	.00102	.00052	.00569	.00008	.00183
%RSD	.51293	8.1318	12.125	16.756	144.49	2.8571	3.3172	36.217
#1	.03746	.00319	.05238	.00720	.00096	.20551	-.00261	.00655
#2	.03711	.00295	.04250	.00584	.00004	.19658	-.00245	.00301
#3	.03742	.00347	.04298	.00521	.00008	.19494	-.00258	.00557

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.00566	.00513	.70968	.00101	.03793	.90284	.04469
Stddev	.00021	.00028	.19423	.00024	.00099	.00737	.00271
%RSD	3.7365	5.3727	27.368	24.063	2.6216	.81599	6.0705
#1	.00560	.00504	.60388	.00128	.03685	.91134	.04759
#2	.00549	.00490	.59133	.00094	.03815	.89870	.04221
#3	.00590	.00543	.93384	.00081	.03880	.89847	.04427

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S1 Acquired: 12/23/2024 13:18:52 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	1994.3	25796.	2073.0	1701.0	1804.2
Stddev	2.3	141.	21.0	7.1	2.0
%RSD	.11614	.54656	1.0121	.41528	.11158
#1	1995.1	25948.	2048.8	1708.7	1804.7
#2	1991.7	25670.	2084.1	1699.3	1802.0
#3	1996.2	25769.	2086.1	1694.9	1805.9

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S2 Acquired: 12/23/2024 13:23:00 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	158.99	.10164	2.1475	.09002	.15981	4.5435	10.636	1.2565
Stddev	.37	.00032	.0028	.00028	.00055	.0064	.006	.0086
%RSD	.23046	.31539	.13124	.31178	.34300	.14045	.05518	.68764
#1	159.39	.10128	2.1460	.09034	.15920	4.5442	10.630	1.2579
#2	158.69	.10180	2.1456	.08981	.15996	4.5495	10.641	1.2644
#3	158.87	.10186	2.1507	.08992	.16027	4.5368	10.637	1.2473

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	2.6491	3.6213	.93598	.71475	.72761	.80125	1.7676	.61839
Stddev	.0060	.0103	.00165	.00127	.00378	.00255	.0074	.00058
%RSD	.22472	.28298	.17587	.17787	.51977	.31801	.42008	.09348
#1	2.6492	3.6234	.93787	.71414	.72559	.80337	1.7630	.61772
#2	2.6431	3.6304	.93488	.71389	.73198	.80196	1.7762	.61871
#3	2.6550	3.6102	.93518	.71621	.72528	.79842	1.7638	.61874

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	.58379	.07718	.24801	.05999	.11951	.97697	.12551	.86591
Stddev	.00038	.00010	.00538	.00099	.00132	.00265	.00040	.00654
%RSD	.06489	.13203	2.1677	1.6422	1.1022	.27128	.32171	.75540
#1	.58423	.07715	.24468	.05951	.11938	.97990	.12510	.86834
#2	.58359	.07709	.24514	.06112	.11826	.97628	.12552	.87090
#3	.58356	.07729	.25421	.05933	.12089	.97473	.12591	.85851

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	.60628	.06124	2.8193	.17628	.47221	11.058	1.3130
Stddev	.00011	.00028	.0787	.00067	.00222	.041	.0042
%RSD	.01876	.45521	2.7902	.38221	.47057	.36902	.32260
#1	.60640	.06154	2.8989	.17665	.47041	11.026	1.3090
#2	.60625	.06100	2.8175	.17550	.47469	11.104	1.3175
#3	.60618	.06118	2.7416	.17669	.47153	11.043	1.3125

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S2 Acquired: 12/23/2024 13:23:00 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	1942.5	25366.	2090.0	1658.5	1702.8
Stddev	.6	94.	8.9	15.3	3.3
%RSD	.03338	.37229	.42678	.92523	.19305
#1	1943.2	25320.	2083.9	1654.1	1704.0
#2	1941.9	25474.	2085.8	1675.5	1705.4
#3	1942.3	25302.	2100.2	1645.8	1699.1

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S3 Acquired: 12/23/2024 13:26:51 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	315.81	.20508	4.3345	.18300	.32512	9.1077	21.304	2.4911
Stddev	.86	.00088	.0013	.00053	.00089	.0345	.056	.0315
%RSD	.27376	.42785	.03034	.29159	.27326	.37839	.26325	1.2643
#1	315.23	.20471	4.3330	.18273	.32492	9.1275	21.345	2.5272
#2	315.40	.20445	4.3348	.18265	.32434	9.0679	21.240	2.4693
#3	316.81	.20609	4.3356	.18361	.32609	9.1278	21.326	2.4768

Elem	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598	Mn2576	Mg2790
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.3317	7.1963	1.8499	1.4316	1.4386	1.5977	3.5204	1.2339
Stddev	.0104	.0349	.0019	.0014	.0044	.0062	.0166	.0055
%RSD	.19541	.48478	.10272	.09480	.30774	.38553	.47243	.44765
#1	5.3229	7.2193	1.8509	1.4321	1.4435	1.5997	3.5281	1.2368
#2	5.3289	7.1562	1.8512	1.4301	1.4351	1.5909	3.5013	1.2276
#3	5.3432	7.2136	1.8478	1.4327	1.4371	1.6027	3.5317	1.2374

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	1.1816	.15524	.48216	.12046	.24408	1.8969	.26197	1.7251
Stddev	.0013	.00061	.00355	.00127	.00407	.0060	.00065	.0261
%RSD	.11356	.39321	.73629	1.0509	1.6686	.31505	.24916	1.5135
#1	1.1801	.15491	.48506	.12178	.23946	1.8999	.26121	1.7552
#2	1.1820	.15595	.48322	.12033	.24715	1.8900	.26231	1.7099
#3	1.1827	.15487	.47820	.11926	.24562	1.9008	.26238	1.7101

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1.2349	.12514	4.7808	.35774	.94479	22.302	2.6084
Stddev	.0022	.00018	.0638	.00041	.00514	.084	.0062
%RSD	.17641	.14180	1.3340	.11411	.54430	.37712	.23831
#1	1.2332	.12522	4.8544	.35786	.95057	22.390	2.6122
#2	1.2340	.12494	4.7431	.35729	.94305	22.222	2.6013
#3	1.2373	.12526	4.7449	.35808	.94074	22.293	2.6118

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S3 Acquired: 12/23/2024 13:26:51 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	1892.2	25131.	2092.8	1617.5	1650.8
Stddev	1.4	133.	15.7	10.9	1.0
%RSD	.07322	.53051	.74986	.67645	.05805
#1	1893.8	25257.	2074.7	1630.0	1650.1
#2	1891.1	24991.	2101.3	1610.1	1650.5
#3	1891.9	25146.	2102.4	1612.2	1651.9

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S4 Acquired: 12/23/2024 13:30:38 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	612.29	.39682	8.4889	.35987	.64746	18.214	42.596	4.8787
Stddev	.38	.00066	.0103	.00104	.00151	.292	.742	.0992
%RSD	.06242	.16642	.12111	.28870	.23301	1.6027	1.7413	2.0330
#1	612.51	.39738	8.4947	.36104	.64597	18.417	43.137	4.9660
#2	611.85	.39698	8.4771	.35904	.64741	18.345	42.901	4.8993
#3	612.52	.39609	8.4950	.35955	.64899	17.880	41.751	4.7709

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	10.316	14.252	3.5511	2.7573	2.8593	3.1543	6.9331	2.4455
Stddev	.011	.216	.0051	.0055	.0360	.0544	.1298	.0475
%RSD	.10672	1.5159	.14407	.19861	1.2607	1.7237	1.8714	1.9425
#1	10.327	14.403	3.5483	2.7636	2.8801	3.1929	7.0322	2.4782
#2	10.305	14.349	3.5480	2.7534	2.8801	3.1779	6.9808	2.4673
#3	10.316	14.005	3.5570	2.7549	2.8176	3.0921	6.7862	2.3910

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	2.2960	.30445	.95112	.23818	.49517	3.7506	.52301	3.3715
Stddev	.0027	.00130	.01336	.00372	.00399	.0695	.00056	.0684
%RSD	.11915	.42771	1.4044	1.5621	.80573	1.8522	.10730	2.0284
#1	2.2990	.30546	.95979	.24022	.49402	3.8009	.52365	3.4209
#2	2.2936	.30298	.95783	.24043	.49188	3.7796	.52273	3.4002
#3	2.2956	.30492	.93574	.23389	.49961	3.6713	.52264	3.2935

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2.4482	.24976	9.0232	.69839	1.8896	44.815	5.1796
Stddev	.0016	.00029	.1674	.00177	.0274	.548	.0777
%RSD	.06614	.11809	1.8549	.25346	1.4480	1.2234	1.5000
#1	2.4478	.25007	9.1503	.69980	1.9079	45.173	5.2234
#2	2.4468	.24948	9.0856	.69640	1.9026	45.089	5.2255
#3	2.4500	.24971	8.8336	.69897	1.8581	44.184	5.0899

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S4 Acquired: 12/23/2024 13:30:38 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	1840.7	25059.	2069.3	1564.5	1617.1
Stddev	1.1	19.	41.5	1.4	.4
%RSD	.06219	.07559	2.0037	.09139	.02169
#1	1842.0	25080.	2037.6	1566.1	1616.9
#2	1839.8	25044.	2054.2	1563.6	1617.5
#3	1840.2	25052.	2116.2	1563.8	1617.0

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S5 Acquired: 12/23/2024 13:34:24 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	1191.1	.81192	17.865	.76128	1.4187	37.356	86.627	9.6829
Stddev	2.7	.00198	.055	.00176	.0027	.034	.094	.0384
%RSD	.22715	.24340	.30602	.23065	.19361	.09097	.10811	.39675
#1	1189.7	.81146	17.832	.76107	1.4183	37.352	86.709	9.6835
#2	1194.2	.81021	17.835	.75964	1.4161	37.325	86.525	9.7210
#3	1189.4	.81408	17.928	.76313	1.4216	37.392	86.648	9.6441

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	21.326	28.453	7.2381	5.7137	5.7760	6.2779	13.812	4.9340
Stddev	.065	.037	.0179	.0220	.0116	.0117	.007	.0143
%RSD	.30403	.13090	.24678	.38437	.20035	.18647	.04965	.28965
#1	21.298	28.447	7.2357	5.7008	5.7646	6.2666	13.809	4.9261
#2	21.279	28.418	7.2216	5.7012	5.7757	6.2771	13.807	4.9255
#3	21.400	28.492	7.2571	5.7390	5.7877	6.2900	13.820	4.9505

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	4.7687	.63740	1.9394	.48388	1.1050	7.6624	1.1143	6.6221
Stddev	.0094	.00084	.0052	.00044	.0068	.0128	.0037	.0084
%RSD	.19647	.13236	.26806	.09192	.61653	.16680	.33344	.12630
#1	4.7638	.63758	1.9428	.48343	1.1024	7.6560	1.1142	6.6151
#2	4.7627	.63648	1.9334	.48432	1.0999	7.6540	1.1106	6.6197
#3	4.7795	.63814	1.9420	.48388	1.1128	7.6771	1.1180	6.6313

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	5.3540	.53139	17.668	1.4670	3.8144	89.908	10.547
Stddev	.0106	.00141	.027	.0043	.0054	.078	.033
%RSD	.19809	.26491	.15534	.29500	.14160	.08658	.31474
#1	5.3570	.53101	17.681	1.4665	3.8133	89.880	10.561
#2	5.3423	.53022	17.685	1.4629	3.8097	89.847	10.510
#3	5.3629	.53295	17.636	1.4715	3.8203	89.996	10.571

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S5 Acquired: 12/23/2024 13:34:24 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	1634.7	23577.	2036.8	1373.0	1480.6
Stddev	7.0	32.	6.9	5.4	6.2
%RSD	.42581	.13406	.33647	.39292	.42003
#1	1631.9	23549.	2035.5	1369.6	1480.6
#2	1642.6	23611.	2030.6	1379.2	1486.8
#3	1629.5	23570.	2044.2	1370.2	1474.3

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: S6 Acquired: 12/23/2024 13:38:17 Type: Cal
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) 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	96.525	45.574	16.243	7.8074	5.1815
Stddev	.559	.315	.095	.0410	.0403
%RSD	.57887	.69185	.58431	.52533	.77686
#1	96.948	45.768	16.294	7.8359	5.2229
#2	95.892	45.210	16.134	7.7604	5.1425
#3	96.736	45.744	16.302	7.8259	5.1791

Int. Std.	Y_3710
Units	Cts/S
Avg	1999.3
Stddev	14.5
%RSD	.72647
#1	1983.3
#2	2011.7
#3	2003.0

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: ICV001 Acquired: 12/23/2024 13:56:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV001 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.097705	1.009504	.9904277	.9805424	.9066308	2.443882
Stddev	.002451	.004636	.0032467	.0029034	.0033667	.025575
%RSD	.2233201	.4592311	.3278049	.2960991	.3713419	1.046477
#1	1.099905	1.014729	.9927212	.9798775	.9029474	2.435952
#2	1.098146	1.007902	.9918492	.9780292	.9095491	2.423212
#3	1.095063	1.005881	.9867127	.9837206	.9073958	2.472483

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5206880	.5265912	.5121546	10.21306	.5547057	.5097208
Stddev	.0039120	.0046471	.0002879	.05874	.0013900	.0009832
%RSD	.7513106	.8824801	.0562055	.5751161	.2505833	.1928990
#1	.5192724	.5261751	.5119337	10.17669	.5554431	.5095012
#2	.5176810	.5221661	.5124802	10.18168	.5555716	.5107953
#3	.5251108	.5314323	.5120500	10.28082	.5531023	.5088660

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5028334	10.58304	.5318669	6.327666	.5215067	.2467561
Stddev	.0142278	.03737	.0072838	.218736	.0004380	.0014089
%RSD	2.829521	.3531366	1.369473	3.456821	.0839888	.5709741
#1	.5011987	10.54076	.5237633	6.147006	.5215685	.2454262
#2	.4894936	10.59672	.5339685	6.265134	.5219106	.2482326
#3	.5178079	10.61165	.5378688	6.570858	.5210411	.2466094

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	9.650437	.5109738	.9069055	8.866641	F .0027338	F .0016169
Stddev	.401675	.0016811	.0077157	.091244	.0008418	.0015939
%RSD	4.162245	.3290068	.8507769	1.029065	30.79337	98.58114
#1	10.08316	.5113681	.9151831	8.782866	.0034030	.0024636
#2	9.57866	.5124228	.9056205	8.963861	.0017886	.0026087
#3	9.28949	.5091306	.8999129	8.853196	.0030097	-.000222

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: ICV001 Acquired: 12/23/2024 13:56:43 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICV001 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F .0009926	F .0055932	F -.012064	F .0014148	F .0003059	F -.009186
Stddev	.0006746	.0021417	.000981	.0020685	.0012174	.000113
%RSD	67.95988	38.29081	8.130862	146.2025	397.9983	1.227982
#1	.0015541	.0031306	-.011971	.0022120	.0016757	-.009073
#2	.0011794	.0070209	-.013088	.0029662	-.000105	-.009298
#3	.0002443	.0066280	-.011133	-.000934	-.000653	-.009186

Elem	Li6707
Units	ppm
Avg	F .0037256
Stddev	.0059965
%RSD	160.9541
#1	.0058862
#2	.0083423
#3	-.003052

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2029.388	26343.11	2140.188	1740.604	1822.592
Stddev	1.217	67.48	23.552	10.265	1.560
%RSD	.0599480	.2561403	1.100465	.5897588	.0856190
#1	2029.951	26418.49	2140.669	1740.891	1820.855
#2	2030.222	26288.36	2163.496	1750.722	1823.047
#3	2027.992	26322.48	2116.399	1730.198	1823.875

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: ICB001 Acquired: 12/23/2024 14:00:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB001 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.003310	-.001601	-.001366	.0048692	.0006039	.0370921	-.001654
Stddev	.005994	.000820	.001181	.0013263	.0021066	.0263886	.001975
%RSD	181.0692	51.24100	86.50156	27.23961	348.8074	71.14333	119.4467
#1	-.009343	-.002537	-.000033	.0047871	-.001803	.0488166	.000296
#2	.002643	-.001258	-.002285	.0035858	.001501	.0555868	-.001604
#3	-.003231	-.001008	-.001779	.0062346	.002113	.0068730	-.003654

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000002	-.000029	-.016150	-.000513	-.000190	-.003490	-.003411
Stddev	.000016	.000123	.037108	.000715	.000167	.010339	.058460
%RSD	686.6488	432.6773	229.7738	139.5119	87.68182	296.2715	1713.859
#1	-.000017	-.000077	-.019499	-.000879	-.000318	-.014298	-.068760
#2	.000015	.000112	-.051469	-.000971	-.000250	.006304	.014609
#3	-.000005	-.000120	.022519	.000312	-.000002	-.002475	.043917

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0011009	-.001647	.0008901	-.000408	-.231366	-.004941	-.004143
Stddev	.0007370	.103436	.0003304	.002012	.184844	.003898	.006325
%RSD	66.94802	6279.909	37.11793	493.5170	79.89251	78.89524	152.6425
#1	.0004190	-.102843	.0005669	-.002376	-.426916	-.005804	.003110
#2	.0010008	.103892	.0008761	.001646	-.207669	-.000683	-.008504
#3	.0018828	-.005990	.0012272	-.000493	-.059513	-.008335	-.007036

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.490042	-.002035	-.000443	.0006349	-.006083	-.017388	.0000172
Stddev	.039956	.001447	.002643	.0003115	.006338	.000991	.0010353
%RSD	8.153624	71.07581	596.7517	49.06358	104.2011	5.699089	6022.351
#1	-.448229	-.001815	-.003235	.0009291	-.008127	-.018300	-.000420
#2	-.494059	-.003579	-.000115	.0003086	-.011147	-.016333	.001199
#3	-.527838	-.000711	.002021	.0006671	.001025	-.017530	-.000727

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: ICB001 Acquired: 12/23/2024 14:00:41 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICB001 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0007898	.0002543	.0057534
Stddev	.0028597	.0000156	.0010639
%RSD	362.0821	6.129717	18.49102
#1	.0039038	.0002373	.0069385
#2	-.001719	.0002679	.0054412
#3	.000184	.0002576	.0048806

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2021.490	26277.58	2113.547	1737.924	1820.832
Stddev	1.896	91.96	4.502	5.628	2.351
%RSD	.0937862	.3499554	.2130264	.3238464	.1291343
#1	2019.376	26171.50	2109.568	1731.425	1819.942
#2	2022.054	26334.72	2118.434	1741.212	1823.499
#3	2023.040	26326.53	2112.640	1741.134	1819.056

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: ICSA001 Acquired: 12/23/2024 14:04:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA001 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.009508	-.010812	.0055747	.0244191	.0238240	236.4366
Stddev	.003015	.004417	.0014368	.0078781	.0011857	.9851
%RSD	31.70506	40.85655	25.77368	32.26220	4.976829	.4166594
#1	-.006624	-.015680	.0051257	.0165621	.0249401	235.4856
#2	-.009262	-.007058	.0044160	.0323182	.0239527	237.4526
#3	-.012638	-.009697	.0071824	.0243770	.0225793	236.3715

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028451	.0020196	.0010455	242.1648	.0521193	.0364007
Stddev	.0026461	.0001208	.0000499	1.2307	.0006230	.0003283
%RSD	93.00402	5.982478	4.769726	.5081931	1.195302	.9018821
#1	.0027269	.0018898	.0010579	241.2717	.0517763	.0362282
#2	.0002602	.0021288	.0010879	243.5686	.0528384	.0361947
#3	.0055484	.0020402	.0009905	241.6541	.0517432	.0367793

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001171	100.7543	.0123397	257.1051	.0038986	.0026556
Stddev	.006184	.1511	.0014035	.8350	.0002715	.0007506
%RSD	528.2150	.1499542	11.37420	.3247538	6.964331	28.26443
#1	-.003578	100.5890	.0139189	256.1442	.0039558	.0028919
#2	.005855	100.8852	.0118654	257.6543	.0036031	.0032595
#3	-.005790	100.7888	.0112348	257.5167	.0041370	.0018153

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-1.84089	.0089735	-.015816	-.855043	-.001025	F -.011812
Stddev	.65846	.0158117	.004204	.131253	.001462	.003901
%RSD	35.76858	176.2040	26.58355	15.35046	142.7257	33.02341
#1	-2.17277	.0171335	-.019343	-.995124	-.002578	-.010715
#2	-1.08253	.0190383	-.011163	-.835106	-.000821	-.008578
#3	-2.26737	-.009251	-.016941	-.734899	.000325	-.016144

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: ICSA001 Acquired: 12/23/2024 14:04:46 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSA001 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0035359	.0200226	-.026184	F .0129833	-.004881	.0015312
Stddev	.0008416	.0010926	.000930	.0009306	.002391	.0006983
%RSD	23.80170	5.456612	3.552547	7.167600	48.97955	45.60576
#1	.0038233	.0188216	-.025751	.0130218	-.002560	.0018082
#2	.0025883	.0209575	-.025550	.0120341	-.004747	.0020484
#3	.0041962	.0202887	-.027252	.0138941	-.007336	.0007369

Elem	Li6707
Units	ppm
Avg	.0084396
Stddev	.0016651
%RSD	19.72960
#1	.0103596
#2	.0073926
#3	.0075665

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1929.079	24812.76	2093.846	1646.319	1647.136
Stddev	1.737	100.46	2.577	7.764	.803
%RSD	.0900649	.4048901	.1230788	.4716181	.0487221
#1	1931.046	24858.16	2093.584	1644.090	1648.062
#2	1927.754	24882.51	2096.545	1654.954	1646.650
#3	1928.437	24697.61	2091.411	1639.913	1646.694

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: ICSAB001 Acquired: 12/23/2024 14:08:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB001 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0982024	.0831045	.0572344	.0693546	.5832036	236.9457
Stddev	.0048223	.0101188	.0023294	.0035492	.0044597	2.2810
%RSD	4.910592	12.17602	4.069987	5.117508	.7646963	.9626512
#1	.0930094	.0823399	.0560167	.0671594	.5791173	238.7269
#2	.0990587	.0733897	.0599203	.0734493	.5879608	237.7354
#3	.1025393	.0935840	.0557662	.0674551	.5825328	234.3749

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5258380	.5251327	1.019382	242.5419	.5961679	.5307926
Stddev	.0049631	.0048217	.003271	2.5055	.0018312	.0020734
%RSD	.9438458	.9181903	.3208646	1.033031	.3071629	.3906261
#1	.5285457	.5283708	1.016827	244.2667	.5969659	.5292143
#2	.5288584	.5274360	1.018252	243.6910	.5974646	.5300226
#3	.5201100	.5195913	1.023068	239.6679	.5940731	.5331408

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.4788955	101.3140	.5265784	258.1679	1.016280	.1847340
Stddev	.0042526	1.1393	.0073320	2.6874	.004354	.0008688
%RSD	.8879930	1.124525	1.392392	1.040942	.4284452	.4703018
#1	.4806117	102.0543	.5324628	259.7154	1.014028	.1856135
#2	.4820218	101.8857	.5289078	259.7234	1.013512	.1847120
#3	.4740530	100.0021	.5183647	255.0648	1.021298	.1838763

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.944968	.5172710	.9267439	-1.24301	-.002438	F -.011429
Stddev	.925273	.0113762	.0172517	.22769	.002183	.004662
%RSD	97.91576	2.199266	1.861535	18.31793	89.54633	40.79375
#1	-.387888	.5221363	.9327057	-1.17258	-.004937	-.013747
#2	-.433966	.5042713	.9402239	-1.05886	-.000904	-.006062
#3	-2.01305	.5254055	.9073020	-1.49760	-.001473	-.014479

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: ICSAB001 Acquired: 12/23/2024 14:08:47 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ICSAB001 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0042221	.0162405	-.029529	F .0130058	-.006371	.0013206
Stddev	.0015429	.0018697	.000671	.0033935	.001406	.0003761
%RSD	36.54334	11.51262	2.273004	26.09247	22.07108	28.48045
#1	.0024482	.0146393	-.028756	.0166358	-.005125	.0008904
#2	.0052518	.0157868	-.029865	.0124688	-.006092	.0015871
#3	.0049665	.0182952	-.029966	.0099128	-.007895	.0014843

Elem	Li6707
Units	ppm
Avg	.0071303
Stddev	.0013110
%RSD	18.38596
#1	.0080136
#2	.0056240
#3	.0077532

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1923.948	24876.11	2110.058	1648.195	1649.141
Stddev	6.458	91.79	12.560	7.017	6.484
%RSD	.3356581	.3690069	.5952391	.4257640	.3931609
#1	1929.337	24923.63	2104.831	1651.352	1655.745
#2	1925.718	24934.41	2100.957	1653.079	1648.893
#3	1916.790	24770.30	2124.388	1640.154	1642.784

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: CCV001 Acquired: 12/23/2024 14:12:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV001 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.005187	4.860599	24.94315	5.001554	4.953275	403.6886	10.16410
Stddev	.022926	.006987	.07643	.029779	.003855	4.5583	.10684
%RSD	.4580396	.1437556	.3064262	.5953896	.0778284	1.129150	1.051169
#1	5.031459	4.858332	24.87374	5.000786	4.957560	404.7458	10.20522
#2	4.989231	4.855026	24.93064	4.972166	4.950089	398.6946	10.04280
#3	4.994872	4.868438	25.02506	5.031709	4.952175	407.6253	10.24426

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5155738	2.503588	410.4360	15.79103	2.526658	15.21268	413.3318
Stddev	.0069292	.006451	4.2911	.04763	.007530	.18976	4.6911
%RSD	1.343973	.2576859	1.045510	.3016516	.2980340	1.247365	1.134956
#1	.5137668	2.499709	411.0921	15.84344	2.520650	15.24028	414.4449
#2	.5097272	2.500018	405.8546	15.75037	2.524218	15.01064	408.1843
#3	.5232275	2.511035	414.3614	15.77927	2.535106	15.38713	417.3663

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.06966	408.3939	2.533485	1.305511	404.7655	2.533295	15.08649
Stddev	.15941	4.5774	.004572	.003742	4.2368	.009711	.11288
%RSD	1.057812	1.120819	.1804656	.2866187	1.046718	.3833256	.7481963
#1	15.09623	410.1387	2.532527	1.309499	406.7292	2.542490	15.19944
#2	14.89863	403.2008	2.529468	1.302078	399.9032	2.523140	15.08635
#3	15.21411	411.8423	2.538460	1.304955	407.6641	2.534256	14.97369

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	153.1964	5.043375	4.994342	4.916126	5.035171	4.936523	5.066555
Stddev	1.5133	.010945	.076278	.012741	.010884	.068101	.017358
%RSD	.9877856	.2170197	1.527284	.2591630	.2161681	1.379534	.3425956
#1	153.4537	5.038795	4.982612	4.920150	5.022996	4.919038	5.054688
#2	151.5711	5.035464	4.924609	4.901859	5.038558	4.878869	5.058500
#3	154.5646	5.055866	5.075806	4.926369	5.043960	5.011662	5.086477

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: CCV001 Acquired: 12/23/2024 14:12:44 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV001 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	5.055174	4.832406	5.113268
Stddev	.050991	.056893	.057730
%RSD	1.008689	1.177331	1.129021
#1	5.046159	4.825273	5.131326
#2	5.009291	4.779416	5.048668
#3	5.110071	4.892530	5.159810

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1757.337	23869.46	2053.477	1497.352	1533.736
Stddev	6.884	122.32	23.871	8.652	8.212
%RSD	.3917553	.5124659	1.162486	.5778446	.5354069
#1	1763.377	23730.69	2052.914	1489.283	1542.133
#2	1758.793	23916.07	2077.625	1496.284	1533.350
#3	1749.841	23961.63	2029.893	1506.488	1525.724

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: CCB001 Acquired: 12/23/2024 14:16:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB001 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028919	.0012033	.0036605	.0022437	-.000066	.0378423	-.000999
Stddev	.0053961	.0027323	.0023915	.0047833	.002072	.0462896	.001053
%RSD	186.5908	227.0678	65.33412	213.1937	3161.328	122.3222	105.3644
#1	.0029740	-.001499	.0047063	.0057142	-.001379	.0020892	-.001494
#2	.0082466	.003965	.0053509	.0042296	.002323	.0901283	.000210
#3	-.002545	.001144	.0009241	-.003213	-.001141	.0213095	-.001713

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.000053	-.000054	.0018350	.0003506	-.000032	.0083635	.0330278
Stddev	.000092	.000051	.0068233	.0002243	.000240	.0097983	.0279130
%RSD	174.7336	93.98517	371.8346	63.97844	746.8645	117.1554	84.51380
#1	-.000076	.000001	.0017088	.0005087	.000216	.0098373	.0335555
#2	-.000131	-.000064	.0087205	.0000939	-.000264	-.002088	.0048546
#3	.000049	-.000099	-.004924	.0004494	-.000048	.017341	.0606732

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0015270	.1197950	.0009785	.0008518	-.110412	.0081163	-.004226
Stddev	.0012417	.0279895	.0002351	.0010047	.490852	.0045776	.009262
%RSD	81.31457	23.36450	24.02574	117.9483	444.5638	56.39959	219.1728
#1	.0009140	.1062140	.0012217	.0015575	-.040363	.0109801	-.012809
#2	.0007110	.1519839	.0009612	.0012965	-.632526	.0105320	.005591
#3	.0029560	.1011870	.0007525	-.000298	.341652	.0028369	-.005459

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.497514	-.001293	.0126564	.0006421	-.001531	-.034101	.0016355
Stddev	.106479	.001161	.0002901	.0004300	.004945	.001152	.0013538
%RSD	21.40219	89.79830	2.292122	66.97069	323.0139	3.377829	82.77380
#1	-.401480	-.000179	.0129475	.0001496	.000647	-.033500	.0022749
#2	-.479040	-.001203	.0126544	.0008337	.001951	-.033374	.0025512
#3	-.612020	-.002495	.0123673	.0009430	-.007190	-.035429	.0000805

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: CCB001 Acquired: 12/23/2024 14:16:26 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB001 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	-.002682	.0003368	.0137388
Stddev	.002457	.0003157	.0049226
%RSD	91.62129	93.72576	35.83009
#1	-.000289	.0003768	.0141281
#2	-.002558	.0006306	.0184552
#3	-.005199	.0000031	.0086330

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2039.177	26411.95	2124.655	1747.132	1835.178
Stddev	6.115	166.23	26.214	6.429	4.564
%RSD	.2998608	.6293683	1.233788	.3680006	.2486739
#1	2036.919	26220.01	2114.761	1739.810	1836.437
#2	2046.100	26508.37	2104.828	1751.857	1838.981
#3	2034.513	26507.48	2154.376	1749.729	1830.117

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5033-04DLX2 Acquired: 12/23/2024 14:28:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK96 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0225509	.0015843	.0967704	.0108569	.0157128	27.98752	.4098541
Stddev	.0020264	.0048151	.0039473	.0046679	.0022530	.09991	.0010734
%RSD	8.985976	303.9283	4.079081	42.99461	14.33855	.3569716	.2619049
#1	.0202405	.0031102	.1002274	.0122511	.0145192	28.06200	.4107968
#2	.0233851	-.003809	.0976146	.0146689	.0183115	27.87399	.4086858
#3	.0240271	.005452	.0924693	.0056508	.0143077	28.02658	.4100797

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0028621	.0015438	518.5643	.0452803	.0863384	.1030168	75.14285
Stddev	.0000973	.0000555	2.9479	.0008518	.0002785	.0143462	.33207
%RSD	3.399787	3.592972	.5684711	1.881137	.3225240	13.92607	.4419160
#1	.0029082	.0015262	520.8992	.0462589	.0862617	.0916435	75.42370
#2	.0027503	.0014993	515.2518	.0448764	.0861063	.0982728	74.77635
#3	.0029279	.0016060	519.5418	.0447056	.0866472	.1191341	75.22850

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.375428	85.12960	.0893618	.0022448	-1.45629	.0619682	.2544435
Stddev	.016630	.46639	.0008427	.0011614	.11314	.0031410	.0115419
%RSD	.4926813	.5478544	.9429967	51.73555	7.769249	5.068746	4.536140
#1	3.389644	84.94112	.0886647	.0009045	-1.58662	.0615064	.2653029
#2	3.357140	84.78695	.0891224	.0029542	-1.39894	.0590836	.2557049
#3	3.379499	85.66073	.0902983	.0028756	-1.38331	.0653145	.2423227

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.072825	2.918575	.0139432	.0045159	.8867764	4.970236	.0157657
Stddev	.173509	.006818	.0029766	.0004357	.0124083	.077247	.0008414
%RSD	5.646575	.2336007	21.34826	9.647462	1.399256	1.554197	5.336884
#1	3.074881	2.920230	.0135529	.0047274	.8898991	5.047162	.0150254
#2	2.898297	2.911081	.0170956	.0048054	.8731051	4.892672	.0166808
#3	3.245297	2.924412	.0111809	.0040148	.8973251	4.970874	.0155911

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5033-04DLX2 Acquired: 12/23/2024 14:28:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK96 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3927391	.3931578	.0727012
Stddev	.0069193	.0011924	.0019639
%RSD	1.761796	.3032739	2.701282
#1	.3963474	.3935260	.0706844
#2	.3847615	.3918248	.0728117
#3	.3971084	.3941227	.0746075

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2067.811	26933.92	2260.024	1771.166	1633.616
Stddev	5.926	207.25	26.236	16.888	4.490
%RSD	.2866022	.7694621	1.160865	.9534794	.2748446
#1	2061.296	26946.58	2232.075	1772.105	1628.439
#2	2072.883	26720.64	2284.121	1753.829	1635.967
#3	2069.254	27134.55	2263.877	1787.565	1636.443

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5033-12DLX2 Acquired: 12/23/2024 14:32:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKA2 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0685572	-.007129	.3279795	.0247713	.0228690	40.27653	.5503356
Stddev	.0024173	.003066	.0027664	.0012352	.0015264	.18870	.0026067
%RSD	3.525982	43.00628	.8434687	4.986572	6.674709	.4685138	.4736558
#1	.0695690	-.008162	.3281848	.0246228	.0242659	40.13950	.5476945
#2	.0703042	-.009544	.3306375	.0260740	.0231014	40.49176	.5529065
#3	.0657984	-.003680	.3251161	.0236169	.0212397	40.19834	.5504058

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0043265	.0034828	485.2011	.0718956	.0922161	4.972718	104.4086
Stddev	.0001382	.0000279	1.8880	.0007118	.0006207	.022594	.5301
%RSD	3.195107	.7998045	.3891209	.9900394	.6731489	.4543660	.5076793
#1	.0041753	.0034519	483.3545	.0710738	.0916216	4.946804	103.9214
#2	.0044464	.0034906	487.1280	.0723170	.0928602	4.988292	104.9730
#3	.0043578	.0035060	485.1209	.0722960	.0921665	4.983058	104.3315

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.632948	80.50361	.1082767	.0044035	-.833074	.0877204	1.614655
Stddev	.030613	.46196	.0013918	.0009811	.449729	.0045909	.026128
%RSD	.4615281	.5738351	1.285386	22.27928	53.98428	5.233588	1.618171
#1	6.613998	80.37664	.1071184	.0050511	-.313827	.0876500	1.643314
#2	6.668266	81.01578	.1078910	.0032747	-1.09928	.0923461	1.608490
#3	6.616582	80.11842	.1098206	.0048845	-1.08611	.0831651	1.592161

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.948969	3.591317	.0289138	.0034962	1.238999	5.290007	.0401240
Stddev	.059543	.014479	.0020456	.0003115	.004655	.019833	.0015784
%RSD	.8568560	.4031616	7.074859	8.909209	.3757200	.3749179	3.933899
#1	6.924454	3.575829	.0265733	.0037229	1.240827	5.278913	.0383538
#2	6.905597	3.604513	.0303599	.0031410	1.242463	5.278204	.0406335
#3	7.016856	3.593609	.0298083	.0036248	1.233708	5.312905	.0413848

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5033-12DLX2 Acquired: 12/23/2024 14:32:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKA2 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4297152	.3487660	.0839816
Stddev	.0022779	.0007799	.0042315
%RSD	.5300873	.2236265	5.038620
#1	.4283641	.3481212	.0792208
#2	.4284364	.3485438	.0854097
#3	.4323451	.3496329	.0873143

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2175.155	28345.97	2378.325	1855.985	1655.674
Stddev	7.730	165.57	2.001	13.960	4.677
%RSD	.3553836	.5841216	.0841480	.7521438	.2824668
#1	2177.674	28210.65	2376.805	1844.238	1658.041
#2	2181.312	28296.65	2377.578	1852.300	1658.694
#3	2166.480	28530.59	2380.593	1871.418	1650.287

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5033-13DLX2 Acquired: 12/23/2024 14:36:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKA3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0170614	.0086901	.1110210	-.004688	.0114631	27.20762	.3449406
Stddev	.0026694	.0019361	.0032133	.001580	.0038816	.15917	.0030894
%RSD	15.64581	22.27964	2.894268	33.69923	33.86215	.5850138	.8956408
#1	.0154059	.0079394	.1106485	-.003979	.0117245	27.38523	.3484385
#2	.0156374	.0108891	.1080103	-.006498	.0074573	27.07789	.3437983
#3	.0201408	.0072417	.1144043	-.003587	.0152074	27.15972	.3425849

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0030642	.0014239	593.5666	.0480336	.0741249	.1473819	64.21548
Stddev	.0002328	.0000959	2.3498	.0017720	.0006748	.0021805	.42670
%RSD	7.598406	6.737580	.3958820	3.689107	.9103957	1.479477	.6644747
#1	.0031586	.0013134	596.2646	.0462669	.0744958	.1457198	64.65024
#2	.0027990	.0014722	592.4673	.0498109	.0745328	.1465751	63.79733
#3	.0032350	.0014861	591.9679	.0480230	.0733459	.1498508	64.19889

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.188343	57.18041	.0708181	.0029453	-.609537	.0542027	.2813171
Stddev	.020175	.42621	.0008111	.0003769	.540099	.0064759	.0184335
%RSD	.6327814	.7453856	1.145347	12.79823	88.60807	11.94757	6.552569
#1	3.210695	57.67053	.0715681	.0027844	-1.17807	.0600855	.2873333
#2	3.182853	56.89670	.0709290	.0026755	-.54727	.0552590	.2959908
#3	3.171482	56.97400	.0699573	.0033760	-.10327	.0472636	.2606271

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.737038	1.798972	.0444419	.0030749	1.209467	4.737006	.0152007
Stddev	.111546	.012552	.0004256	.0002749	.006838	.034029	.0003777
%RSD	1.655719	.6977531	.9576425	8.940638	.5654096	.7183560	2.484581
#1	6.614106	1.798860	.0447570	.0032188	1.205273	4.750888	.0149306
#2	6.831798	1.811580	.0439578	.0032481	1.217359	4.698231	.0150392
#3	6.765209	1.786476	.0446110	.0027579	1.205770	4.761900	.0156323

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5033-13DLX2 Acquired: 12/23/2024 14:36:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKA3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.1428217	.4526459	.0639584
Stddev	.0026572	.0010219	.0046635
%RSD	1.860523	.2257704	7.291411
#1	.1426804	.4537068	.0586079
#2	.1455468	.4525628	.0671598
#3	.1402379	.4516680	.0661076

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2059.757	26897.91	2240.570	1764.765	1624.485
Stddev	7.384	85.02	9.672	11.027	7.548
%RSD	.3584653	.3160739	.4316841	.6248388	.4646519
#1	2053.291	26888.06	2231.324	1759.168	1617.385
#2	2058.177	26818.24	2250.619	1757.659	1623.656
#3	2067.802	26987.42	2239.767	1777.468	1632.413

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-03DLX2 Acquired: 12/23/2024 14:40:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB6 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0913763	-.015451	.3342841	.0587225	.0241963	43.46176	1.023358
Stddev	.0044129	.003258	.0014848	.0014166	.0010895	.05516	.002245
%RSD	4.829389	21.08776	.4441741	2.412298	4.502941	.1269146	.2193443
#1	.0951338	-.015517	.3334173	.0573751	.0247594	43.52374	1.024415
#2	.0865168	-.018675	.3334365	.0601993	.0248892	43.41804	1.020780
#3	.0924781	-.012160	.3359986	.0585930	.0229405	43.44351	1.024879

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040685	.0059184	122.8441	.0679909	.0968196	.1552627	122.1707
Stddev	.0001572	.0000784	.0105	.0010387	.0014970	.0045443	.3028
%RSD	3.863679	1.325380	.0085198	1.527731	1.546144	2.926830	.2478104
#1	.0042388	.0059194	122.8333	.0680584	.0951032	.1506666	122.2351
#2	.0040380	.0058395	122.8449	.0689942	.0978549	.1553682	121.8409
#3	.0039289	.0059963	122.8542	.0669201	.0975006	.1597533	122.4361

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.17656	47.68016	.1092877	.0077402	-.815263	.0989152	.4203638
Stddev	.02675	.33326	.0007741	.0010907	.503830	.0058982	.0112897
%RSD	.1471471	.6989541	.7083317	14.09088	61.79970	5.962930	2.685695
#1	18.17552	47.37241	.1097622	.0080656	-.283585	.0923786	.4207347
#2	18.15035	47.63397	.1083944	.0086311	-1.28563	.1005271	.4314635
#3	18.20381	48.03411	.1097064	.0065239	-.87657	.1038400	.4088933

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.321977	3.506004	.0068564	.0058242	1.327975	6.685938	.0247767
Stddev	.091078	.020252	.0030702	.0006007	.012903	.039520	.0030377
%RSD	2.741690	.5776478	44.77896	10.31429	.9716606	.5910847	12.26046
#1	3.401966	3.485904	.0088213	.0062131	1.313717	6.715834	.0271278
#2	3.222851	3.505703	.0084294	.0061272	1.331362	6.641133	.0258556
#3	3.341113	3.526406	.0033184	.0051323	1.338848	6.700848	.0213468

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-03DLX2 Acquired: 12/23/2024 14:40:05 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB6 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2260622	.0028587	.0490084
Stddev	.0036854	.0002350	.0031843
%RSD	1.630257	8.220947	6.497533
#1	.2231597	.0028719	.0526043
#2	.2248183	.0026174	.0478753
#3	.2302086	.0030868	.0465455

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2364.691	30717.03	2526.814	2027.673	1759.972
Stddev	10.631	148.15	18.743	13.781	10.524
%RSD	.4495663	.4823135	.7417806	.6796378	.5979589
#1	2375.413	30636.43	2507.484	2020.151	1770.188
#2	2364.505	30626.65	2544.910	2019.290	1760.564
#3	2354.154	30888.01	2528.047	2043.578	1749.165

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-04DLX2 Acquired: 12/23/2024 14:44:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB6D Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0949371	-.015931	.3331671	.0575795	.0228122	44.14331	1.035129
Stddev	.0089612	.001231	.0001360	.0012995	.0037237	.16217	.001652
%RSD	9.439047	7.728332	.0408068	2.256861	16.32325	.3673652	.1596219
#1	.0979759	-.017185	.3330277	.0590540	.0205683	44.11291	1.033412
#2	.1019837	-.015882	.3332994	.0566013	.0271105	44.31853	1.036709
#3	.0848517	-.014725	.3331741	.0570832	.0207576	43.99849	1.035265

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0040808	.0058577	123.6537	.0681909	.0970610	.1516273	123.5096
Stddev	.0000473	.0001092	.5156	.0008108	.0003779	.0024672	.5012
%RSD	1.157931	1.863801	.4169534	1.188999	.3893069	1.627123	.4058359
#1	.0040619	.0059216	123.5345	.0685584	.0974434	.1539265	123.3657
#2	.0041345	.0057316	124.2185	.0672614	.0966879	.1519346	124.0671
#3	.0040459	.0059199	123.2083	.0687528	.0970518	.1490210	123.0961

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	18.36340	48.11956	.1095808	.0068832	-1.09421	.0980086	.3964953
Stddev	.07764	.19554	.0010852	.0020425	.21900	.0076312	.0056487
%RSD	.4227876	.4063525	.9903154	29.67443	20.01432	7.786296	1.424666
#1	18.33302	48.13184	.1108326	.0061075	-.91241	.1027065	.3901238
#2	18.45163	48.30866	.1089058	.0091999	-1.03288	.0892034	.3984724
#3	18.30554	47.91817	.1090040	.0053421	-1.33733	.1021159	.4008897

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.283067	3.517788	.0123863	.0061984	1.324999	7.042350	.0223670
Stddev	.162526	.006957	.0014244	.0004509	.002103	.036295	.0029960
%RSD	4.950437	.1977727	11.49949	7.274362	.1587127	.5153772	13.39475
#1	3.095449	3.522064	.0140252	.0064955	1.326588	7.058704	.0192264
#2	3.373063	3.509760	.0114476	.0056796	1.322614	7.067589	.0226808
#3	3.380688	3.521540	.0116861	.0064202	1.325794	7.000755	.0251938

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-04DLX2 Acquired: 12/23/2024 14:44:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB6D Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2417732	.0026123	.0475375
Stddev	.0057566	.0002234	.0059253
%RSD	2.380992	8.553533	12.46451
#1	.2364273	.0024964	.0541340
#2	.2478673	.0024706	.0458126
#3	.2410249	.0028699	.0426661

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2333.127	30203.68	2475.487	2002.694	1738.367
Stddev	1.789	123.54	14.257	14.727	2.591
%RSD	.0766853	.4090364	.5759199	.7353577	.1490663
#1	2332.568	30260.58	2476.851	2000.128	1738.334
#2	2335.129	30061.94	2460.597	1989.419	1740.976
#3	2331.684	30288.52	2489.013	2018.536	1735.793

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-03LDLX10 Acquired: 12/23/2024 14:48:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB6L Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0149961	-.000043	.0676067	.0065681	.0048629	9.893973	.2300490
Stddev	.0032764	.005534	.0025452	.0004418	.0042014	.038846	.0020520
%RSD	21.84816	12738.54	3.764779	6.726772	86.39835	.3926185	.8919670
#1	.0182010	-.004666	.0694798	.0069865	.0042441	9.853286	.2289762
#2	.0116527	-.001552	.0686315	.0061061	.0010051	9.930669	.2287557
#3	.0151346	.006088	.0647088	.0066118	.0093394	9.897963	.2324149

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0009116	.0010301	27.97978	.0144381	.0274655	.0372169	27.92818
Stddev	.0001665	.0000545	.15100	.0008136	.0001099	.0017663	.07924
%RSD	18.26792	5.293761	.5396816	5.635136	.4002674	4.746035	.2837120
#1	.0008676	.0009920	27.86609	.0148430	.0273580	.0377095	27.91811
#2	.0010957	.0010057	28.15112	.0135015	.0274608	.0386847	28.01197
#3	.0007715	.0010926	27.92214	.0149697	.0275778	.0352566	27.85446

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.172565	11.04984	.0212191	.0013163	-1.78878	.0261593	.0802138
Stddev	.014864	.05356	.0005015	.0010658	.94026	.0049255	.0245343
%RSD	.3562406	.4847085	2.363232	80.96868	52.56435	18.82870	30.58611
#1	4.158574	11.01241	.0210230	.0002057	-2.35016	.0209083	.1083949
#2	4.188171	11.02591	.0217889	.0023308	-2.31290	.0306769	.0686328
#3	4.170951	11.11119	.0208453	.0014125	-.70327	.0268927	.0636136

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1613107	.6891325	.0021971	.0026400	.2565638	1.558592	.0047072
Stddev	.0490577	.0032152	.0032372	.0008581	.0008291	.021355	.0020565
%RSD	30.41196	.4665583	147.3394	32.50401	.3231480	1.370124	43.68955
#1	.1321083	.6855681	.0013025	.0030743	.2562729	1.538846	.0062496
#2	.1338753	.6918140	.0057876	.0031941	.2559194	1.581255	.0023723
#3	.2179486	.6900155	-.000499	.0016516	.2574991	1.555674	.0054996

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-03LDLX10 Acquired: 12/23/2024 14:48:03 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB6L Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0523613	.0004488	.0119954
Stddev	.0048933	.0002448	.0043832
%RSD	9.345246	54.54919	36.54057
#1	.0477547	.0003661	.0167945
#2	.0574981	.0002560	.0082033
#3	.0518312	.0007243	.0109885

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2105.632	27527.67	2230.203	1819.669	1818.403
Stddev	4.053	150.28	20.751	9.697	.702
%RSD	.1925017	.5459381	.9304671	.5329261	.0386087
#1	2108.944	27356.52	2244.869	1809.965	1819.214
#2	2101.112	27638.06	2206.460	1829.360	1817.999
#3	2106.841	27588.44	2239.281	1819.681	1817.997

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-05DLX2 Acquired: 12/23/2024 14:52:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB6S Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.1372985	.0300452	.3363727	.1308802	.0998256	43.30071	2.654654
Stddev	.0032025	.0032815	.0013230	.0013456	.0022400	.25665	.022931
%RSD	2.332517	10.92189	.3933003	1.028111	2.243900	.5927174	.8637860
#1	.1368991	.0280014	.3357195	.1293432	.0974113	43.03339	2.629715
#2	.1406820	.0338303	.3355034	.1318457	.1002293	43.54516	2.674828
#3	.1343145	.0283039	.3378952	.1314518	.1018363	43.32357	2.659418

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0464084	.0535060	117.4575	.2433279	.5617803	.3506155	118.0658
Stddev	.0004114	.0001079	.8207	.0003713	.0002330	.0142779	1.0316
%RSD	.8865114	.2015956	.6986936	.1525860	.0414668	4.072232	.8737130
#1	.0461189	.0534090	116.6026	.2433427	.5617639	.3355293	116.9921
#2	.0468793	.0534869	118.2390	.2436915	.5615560	.3524001	119.0492
#3	.0462270	.0536222	117.5309	.2429494	.5620210	.3639172	118.1562

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	17.85743	45.75406	.5891337	.0363584	-1.12716	.5190420	.7708917
Stddev	.16308	.41242	.0010258	.0017955	.60620	.0016054	.0168099
%RSD	.9132266	.9013944	.1741265	4.938249	53.78104	.3092986	2.180584
#1	17.68119	45.37819	.5882358	.0343482	-.54645	.5183683	.7749381
#2	18.00300	46.19524	.5902517	.0378028	-1.07905	.5178833	.7524279
#3	17.88808	45.68875	.5889136	.0369242	-1.75598	.5208745	.7853091

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.982016	3.349533	.0073533	.0051312	1.264832	6.439987	.0207771
Stddev	.139254	.012175	.0027534	.0006550	.003278	.059354	.0009292
%RSD	4.669789	.3634822	37.44523	12.76439	.2591323	.9216418	4.472337
#1	2.992003	3.344813	.0064339	.0047394	1.261679	6.393156	.0197048
#2	2.838038	3.340425	.0051771	.0047668	1.264596	6.506739	.0213458
#3	3.116008	3.363361	.0104488	.0058873	1.268221	6.420067	.0212807

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-05DLX2 Acquired: 12/23/2024 14:52:07 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKB6S Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2204833	.0016975	.0477828
Stddev	.0014149	.0002463	.0042014
%RSD	.6417048	14.51058	8.792742
#1	.2190034	.0016601	.0509711
#2	.2218226	.0014721	.0430219
#3	.2206238	.0019604	.0493552

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2407.635	31295.87	2575.721	2070.106	1804.561
Stddev	5.629	84.39	23.854	4.136	1.954
%RSD	.2337832	.2696383	.9261060	.1997906	.1082876
#1	2414.114	31369.15	2599.520	2066.089	1806.816
#2	2404.848	31314.84	2551.812	2074.352	1803.505
#3	2403.944	31203.61	2575.831	2069.877	1803.362

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-13DLX5 Acquired: 12/23/2024 14:56:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKJ0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0010123	.0132804	.0363928	-.011459	.0060540	11.65384	.0884583
Stddev	.0031095	.0032516	.0005693	.001886	.0014995	.00853	.0013012
%RSD	307.1576	24.48444	1.564309	16.46206	24.76947	.0731920	1.470986
#1	.0044659	.0164240	.0366766	-.010913	.0073166	11.66163	.0889005
#2	.0001361	.0099305	.0367644	-.013559	.0064488	11.65516	.0894808
#3	-.001565	.0134867	.0357374	-.009907	.0043965	11.64473	.0869936

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0014162	.0006404	206.5279	.0217319	.0460503	.0439594	35.80746
Stddev	.0001915	.0000756	.1720	.0009236	.0004696	.0033948	.10175
%RSD	13.52399	11.80793	.0832849	4.250079	1.019774	7.722677	.2841627
#1	.0015395	.0006656	206.6803	.0209357	.0462750	.0478104	35.91354
#2	.0011955	.0007001	206.3414	.0227445	.0455105	.0413995	35.71067
#3	.0015135	.0005554	206.5620	.0215154	.0463653	.0426683	35.79816

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.775902	42.89046	.0282005	.0011821	-1.03903	.0349418	.0868453
Stddev	.006662	.25181	.0002734	.0009719	.36711	.0089214	.0095669
%RSD	.3751336	.5871063	.9695299	82.22388	35.33248	25.53206	11.01608
#1	1.781462	43.16593	.0278921	.0018574	-.89959	.0411261	.0954074
#2	1.777728	42.83331	.0284133	.0016206	-1.45543	.0247148	.0886094
#3	1.768518	42.67213	.0282960	.0000681	-.76206	.0389846	.0765190

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.253466	1.042007	.0086369	.0042177	.3128784	1.931247	.0090324
Stddev	.032361	.004644	.0027850	.0003042	.0037205	.018620	.0031861
%RSD	2.581717	.4456312	32.24540	7.212130	1.189112	.9641593	35.27373
#1	1.274355	1.045666	.0069424	.0041903	.3129229	1.927248	.0093279
#2	1.216189	1.036783	.0071171	.0045346	.3091359	1.951542	.0057089
#3	1.269854	1.043571	.0118512	.0039281	.3165764	1.914952	.0120605

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5034-13DLX5 Acquired: 12/23/2024 14:56:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKJ0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2888712	.1364957	.0213223
Stddev	.0012916	.0007288	.0029431
%RSD	.4471186	.5338963	13.80275
#1	.2873825	.1359803	.0179666
#2	.2896938	.1361774	.0234648
#3	.2895372	.1373294	.0225355

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2028.446	26731.64	2185.702	1764.496	1703.514
Stddev	5.075	111.36	8.893	4.085	5.682
%RSD	.2502150	.4165784	.4068705	.2314863	.3335386
#1	2022.866	26784.33	2187.923	1765.853	1696.974
#2	2032.788	26603.72	2175.910	1759.906	1707.236
#3	2029.684	26806.89	2193.275	1767.729	1706.331

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-03DLX2 Acquired: 12/23/2024 15:00:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0351538	-.014196	.0974547	.0227531	.0229033	47.06037	.6103552
Stddev	.0021589	.002497	.0022433	.0051715	.0035355	.07746	.0011042
%RSD	6.141236	17.59002	2.301923	22.72878	15.43660	.1646032	.1809163
#1	.0374440	-.015193	.0965043	.0200758	.0191184	46.98072	.6096537
#2	.0331560	-.016040	.0958430	.0287144	.0261208	47.06497	.6097838
#3	.0348613	-.011354	.1000168	.0194692	.0234706	47.13544	.6116280

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0048829	.0023868	415.8688	.0925597	.0866079	.0756606	106.6873
Stddev	.0000716	.0000741	.7694	.0006481	.0005397	.0024746	.1847
%RSD	1.466898	3.102671	.1850142	.7002206	.6232003	3.270655	.1731590
#1	.0049346	.0023496	415.2704	.0921711	.0860804	.0777190	106.5229
#2	.0049129	.0024721	415.5992	.0933079	.0871591	.0763477	106.6518
#3	.0048011	.0023389	416.7367	.0922001	.0865843	.0729150	106.8872

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.222240	121.6019	.1439966	.0021310	-.853073	.1229990	.3191396
Stddev	.001993	.4314	.0010357	.0018619	.508568	.0014253	.0116131
%RSD	.0896828	.3547626	.7192675	87.37322	59.61601	1.158790	3.638866
#1	2.220658	121.3623	.1430083	.0034829	-.520183	.1232425	.3238618
#2	2.221583	121.3434	.1439075	.0000073	-.600556	.1214677	.3276477
#3	2.224478	122.0999	.1450740	.0029027	-1.43848	.1242869	.3059093

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.240331	2.063535	.0159257	.0138281	2.930084	5.902586	.0175140
Stddev	.144309	.006600	.0025175	.0007041	.024963	.035304	.0005562
%RSD	2.753818	.3198626	15.80782	5.091602	.8519465	.5981177	3.175882
#1	5.400873	2.064475	.0150227	.0131126	2.931244	5.932486	.0169131
#2	5.121398	2.056515	.0187701	.0138516	2.904562	5.863638	.0180109
#3	5.198721	2.069616	.0139841	.0145201	2.954447	5.911633	.0176181

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-03DLX2 Acquired: 12/23/2024 15:00:04 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.6923031	.7079578	.0893270
Stddev	.0020918	.0016220	.0032964
%RSD	.3021545	.2291157	3.690312
#1	.6901359	.7090778	.0931240
#2	.6924629	.7060977	.0871967
#3	.6943104	.7086978	.0876604

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2088.431	27109.98	2282.484	1781.842	1680.724
Stddev	2.487	176.03	4.246	7.560	3.030
%RSD	.1190735	.6492999	.1860137	.4242556	.1802908
#1	2088.981	27282.24	2282.769	1787.347	1677.414
#2	2085.715	26930.42	2286.579	1773.222	1683.361
#3	2090.597	27117.27	2278.102	1784.956	1681.398

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-04DLX2 Acquired: 12/23/2024 15:04:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R8 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0056047	.0195158	.1100900	-.010341	.0089329	43.94582	.4122944
Stddev	.0043340	.0066155	.0010979	.003297	.0023513	.24160	.0017016
%RSD	77.32799	33.89802	.9972562	31.88735	26.32202	.5497646	.4127075
#1	.0065148	.0126569	.1103657	-.006966	.0062305	43.81222	.4114635
#2	.0094115	.0200331	.1088805	-.010502	.0100568	43.80052	.4111680
#3	.0008879	.0258575	.1110237	-.013555	.0105114	44.22471	.4142518

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0067967	.0011224	655.4018	.0687353	.0588710	.0515692	45.05707
Stddev	.0001734	.0002160	3.3447	.0004517	.0004727	.0040847	.24932
%RSD	2.550703	19.24230	.5103283	.6572020	.8029381	7.920863	.5533431
#1	.0069344	.0013587	652.7483	.0692100	.0594141	.0476717	44.91770
#2	.0066021	.0010734	654.2983	.0686851	.0586474	.0512173	44.90860
#3	.0068538	.0009351	659.1588	.0683107	.0585517	.0558184	45.34491

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.505404	196.6350	.0439795	.0006567	-.365704	.0665073	.2304782
Stddev	.020615	1.6000	.0004704	.0011427	.879041	.0053382	.0074408
%RSD	.5880973	.8136674	1.069475	173.9916	240.3696	8.026429	3.228442
#1	3.484544	195.3089	.0445017	-.000418	-.987938	.0618658	.2234243
#2	3.505902	196.1840	.0438477	.001857	-.749088	.0653155	.2297568
#3	3.525765	198.4120	.0435891	.000530	.639914	.0723406	.2382534

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.373692	1.016693	.1248064	.0076763	11.76877	5.798905	.0195787
Stddev	.099289	.015236	.0021019	.0004406	.10342	.038671	.0021517
%RSD	4.182888	1.498590	1.684134	5.740054	.8787759	.6668732	10.99009
#1	2.380764	1.031808	.1261477	.0081607	11.83138	5.843020	.0194654
#2	2.271056	1.016932	.1223840	.0075689	11.82552	5.770860	.0174858
#3	2.469256	1.001338	.1258875	.0072993	11.64940	5.782834	.0217847

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-04DLX2 Acquired: 12/23/2024 15:04:02 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28R8 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.214214	1.246210	.0581521
Stddev	.001358	.007135	.0037340
%RSD	.1118386	.5725425	6.421159
#1	1.213143	1.242834	.0555629
#2	1.215741	1.241391	.0624325
#3	1.213757	1.254407	.0564610

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2043.187	26655.92	2265.617	1745.639	1623.209
Stddev	10.082	132.94	9.300	1.352	10.561
%RSD	.4934668	.4987421	.4104796	.0774701	.6506520
#1	2033.188	26785.27	2267.795	1746.926	1612.571
#2	2043.021	26662.84	2273.635	1745.761	1623.364
#3	2053.351	26519.65	2255.422	1744.229	1633.692

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-06DLX2 Acquired: 12/23/2024 15:08:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0401652	-.009007	.2632828	.0186186	.0209520	41.45703	.3964863
Stddev	.0021924	.001530	.0058293	.0039111	.0041236	.24720	.0011839
%RSD	5.458450	16.98786	2.214097	21.00621	19.68098	.5962750	.2985882
#1	.0393786	-.008404	.2687902	.0229487	.0213686	41.74132	.3977813
#2	.0426424	-.010747	.2571776	.0175646	.0166360	41.29270	.3954597
#3	.0384747	-.007870	.2638805	.0153426	.0248515	41.33707	.3962178

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0046504	.0022092	547.2288	.0971208	.0827129	.1386178	97.83961
Stddev	.0001275	.0000601	2.3987	.0003451	.0002201	.0090332	.50364
%RSD	2.741855	2.722002	.4383432	.3553404	.2660506	6.516587	.5147629
#1	.0045032	.0022611	549.9700	.0970724	.0829320	.1288387	98.40458
#2	.0047241	.0022231	546.2022	.0974876	.0827147	.1403650	97.43768
#3	.0047240	.0021433	545.5143	.0968024	.0824919	.1466498	97.67659

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.709253	165.6885	.1389636	.0113648	.0785736	.1320381	.3385397
Stddev	.012451	.8302	.0008425	.0005961	.3945080	.0029904	.0163770
%RSD	.4595830	.5010335	.6062715	5.244941	502.0875	2.264790	4.837528
#1	2.720426	166.6453	.1398494	.0110395	.5336311	.1354810	.3212085
#2	2.695830	165.2602	.1381723	.0120527	-.130829	.1300886	.3406534
#3	2.711504	165.1599	.1388691	.0110021	-.167082	.1305446	.3537571

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.817348	2.122965	.0297802	.0208368	9.323190	6.898028	.0334333
Stddev	.068126	.003149	.0025937	.0003083	.006563	.043728	.0014513
%RSD	1.414181	.1483254	8.709617	1.479466	.0703977	.6339171	4.340877
#1	4.741978	2.119457	.0316752	.0208507	9.316495	6.930905	.0349841
#2	4.874543	2.123894	.0268242	.0211380	9.323463	6.914778	.0332077
#3	4.835523	2.125546	.0308413	.0205219	9.329613	6.848401	.0321080

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-06DLX2 Acquired: 12/23/2024 15:08:01 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28S0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.8446866	1.594024	.0661601
Stddev	.0081405	.006781	.0020569
%RSD	.9637362	.4253856	3.109027
#1	.8537753	1.601254	.0639605
#2	.8380650	1.593010	.0680359
#3	.8422195	1.587807	.0664839

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2058.421	26867.61	2251.442	1763.581	1651.196
Stddev	5.138	91.86	16.578	10.856	3.375
%RSD	.2496226	.3418996	.7363222	.6155586	.2043974
#1	2053.588	26765.27	2235.849	1751.273	1648.040
#2	2063.818	26942.95	2249.624	1767.681	1654.754
#3	2057.857	26894.60	2268.854	1771.790	1650.795

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-17DLX5 Acquired: 12/23/2024 15:11:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T1 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0567554	-.175448	1.420011	.2329077	.0952291	9.578620	.1548260
Stddev	.0069248	.004915	.002689	.0041844	.0014851	.037760	.0009056
%RSD	12.20118	2.801418	.1893781	1.796584	1.559455	.3942124	.5848874
#1	.0589673	-.169928	1.417301	.2377306	.0939924	9.621468	.1556637
#2	.0623040	-.177067	1.422678	.2302442	.0948187	9.564187	.1538652
#3	.0489948	-.179350	1.420055	.2307483	.0968762	9.550205	.1549491

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0080878	.0125558	139.6329	1.252607	.0518852	.0816227	444.3348
Stddev	.0000200	.0001977	1.1053	.002557	.0004777	.0027486	2.9354
%RSD	.2469386	1.574780	.7915996	.2041744	.9207532	3.367459	.6606318
#1	.0080854	.0123993	140.9009	1.255521	.0519855	.0830949	447.6945
#2	.0081089	.0127781	139.1244	1.251564	.0523049	.0784515	443.0435
#3	.0080691	.0124901	138.8733	1.250735	.0513653	.0833215	442.2664

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	19.76173	21.94341	.4654375	.0208030	-.145524	.2126545	4.019313
Stddev	.12542	.12392	.0012792	.0007550	.739531	.0074712	.036713
%RSD	.6346637	.5647324	.2748353	3.629131	508.1856	3.513331	.9134181
#1	19.90414	22.08163	.4650990	.0206001	-.307385	.2189590	4.053290
#2	19.71338	21.84223	.4668519	.0216388	.661532	.2044023	4.024280
#3	19.66769	21.90637	.4643617	.0201703	-.790717	.2146021	3.980369

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.038886	1.897070	-.009492	.0249231	1.213727	2.174855	.0526410
Stddev	.048650	.008894	.002002	.0006229	.004056	.005371	.0008626
%RSD	125.1118	.4688135	21.09308	2.499176	.3342054	.2469571	1.638724
#1	-.093796	1.887949	-.011718	.0242493	1.213801	2.179964	.0535327
#2	-.021701	1.905718	-.008923	.0250424	1.217746	2.175346	.0518107
#3	-.001159	1.897541	-.007837	.0254777	1.209634	2.169256	.0525797

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-17DLX5 Acquired: 12/23/2024 15:11:56 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T1 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.9520485	-.297050	.0648387
Stddev	.0091588	.002222	.0072589
%RSD	.9620123	.7480221	11.19525
#1	.9613736	-.299615	.0729723
#2	.9430656	-.295712	.0625254
#3	.9517065	-.295823	.0590185

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2027.270	26399.04	2152.628	1739.994	1813.680
Stddev	6.486	176.47	15.407	14.737	6.646
%RSD	.3199178	.6684631	.7157472	.8469544	.3664451
#1	2034.564	26219.97	2136.513	1728.747	1819.608
#2	2022.153	26404.37	2154.157	1734.558	1806.495
#3	2025.092	26572.79	2167.214	1756.677	1814.936

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-19DLX2 Acquired: 12/23/2024 15:15:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0911012	-.212715	1.748930	.2790690	.1236056	38.66287	.5244850
Stddev	.0034162	.005470	.001466	.0077616	.0045475	.05899	.0003947
%RSD	3.749930	2.571625	.0838262	2.781239	3.679061	.1525635	.0752507
#1	.0942118	-.215482	1.747897	.2781405	.1203523	38.72653	.5248208
#2	.0874450	-.216249	1.748286	.2872530	.1216627	38.65201	.5245839
#3	.0916468	-.206414	1.750608	.2718134	.1288019	38.61007	.5240502

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0126768	.0197000	340.7263	1.623918	.0818104	.1928078	545.0382
Stddev	.0001039	.0000441	.6920	.006177	.0009151	.0053633	.4695
%RSD	.8194668	.2240231	.2030895	.3804072	1.118531	2.781679	.0861345
#1	.0126663	.0196643	340.5044	1.620557	.0808207	.1917668	545.4922
#2	.0127856	.0196864	341.5020	1.631047	.0819849	.1986152	544.5547
#3	.0125786	.0197493	340.1724	1.620149	.0826257	.1880413	545.0678

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	20.00630	55.39403	.6902394	.0242803	1.070197	.2875560	6.771159
Stddev	.04463	.14280	.0025340	.0020175	.373615	.0049934	.024847
%RSD	.2230696	.2577805	.3671207	8.309299	34.91083	1.736505	.3669584
#1	20.04883	55.45340	.6931223	.0252196	.726698	.2848057	6.798974
#2	20.01025	55.23113	.6883642	.0219644	1.467988	.2845424	6.763347
#3	19.95983	55.49756	.6892319	.0256570	1.015906	.2933199	6.751157

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.127317	3.346313	.0407908	.0370933	5.400600	5.898293	.0848035
Stddev	.096973	.012036	.0052567	.0005395	.009088	.008505	.0034370
%RSD	1.891302	.3596725	12.88695	1.454589	.1682830	.1441869	4.052929
#1	5.069425	3.339463	.0419911	.0366313	5.403878	5.889640	.0868396
#2	5.239270	3.339266	.0453435	.0369622	5.390327	5.898599	.0808353
#3	5.073256	3.360211	.0350377	.0376863	5.407594	5.906641	.0867358

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5233-19DLX2 Acquired: 12/23/2024 15:15:53 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: ME28T3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	1.431042	.2168574	.0590920
Stddev	.005094	.0030334	.0067101
%RSD	.3559392	1.398780	11.35529
#1	1.429142	.2139412	.0569528
#2	1.436812	.2199957	.0537124
#3	1.427171	.2166351	.0666109

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2045.733	26662.05	2244.333	1744.728	1750.976
Stddev	2.716	75.27	6.475	9.032	2.907
%RSD	.1327635	.2823253	.2885037	.5176551	.1660228
#1	2043.073	26632.81	2237.360	1734.328	1747.625
#2	2045.626	26605.78	2250.156	1750.609	1752.815
#3	2048.502	26747.56	2245.481	1749.245	1752.488

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5037-12DLX2 Acquired: 12/23/2024 15:29:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK75 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0188634	-.004027	.0621240	.0110028	.0140137	32.96734	.3569716
Stddev	.0045072	.004283	.0029956	.0006734	.0024245	.14936	.0011917
%RSD	23.89380	106.3450	4.822045	6.119964	17.30069	.4530666	.3338253
#1	.0219915	.000731	.0655584	.0116305	.0147708	32.81831	.3559918
#2	.0136972	-.005238	.0600500	.0110863	.0113010	33.11704	.3582981
#3	.0209016	-.007574	.0607635	.0102916	.0159692	32.96667	.3566248

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0029983	.0016549	445.7581	.0533893	.0729311	.0574128	79.49569
Stddev	.0000763	.0000442	1.6411	.0008547	.0007677	.0026989	.36547
%RSD	2.544143	2.672831	.3681628	1.600870	1.052569	4.700849	.4597363
#1	.0029269	.0016875	445.3806	.0533571	.0734490	.0551589	79.24077
#2	.0029892	.0016726	447.5550	.0525511	.0720492	.0566759	79.91441
#3	.0030787	.0016045	444.3386	.0542596	.0732952	.0604036	79.33190

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.810866	62.58761	.0856332	.0011348	-1.25217	.0703549	.1990824
Stddev	.015849	.41985	.0002530	.0011219	.65355	.0088637	.0190997
%RSD	.8752423	.6708215	.2954394	98.85935	52.19353	12.59849	9.593880
#1	1.795790	62.44009	.0856709	.0023793	-1.31027	.0715657	.1878157
#2	1.827390	63.06131	.0858651	.0002009	-.57151	.0785509	.2211352
#3	1.809420	62.26142	.0853634	.0008244	-1.87473	.0609481	.1882964

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.996817	3.327001	-.001460	.0033984	.8066062	5.270851	.0163056
Stddev	.153326	.003574	.001273	.0005005	.0050569	.012923	.0003137
%RSD	7.678526	.1074213	87.15459	14.72604	.6269329	.2451791	1.923573
#1	1.941195	3.331031	-.002831	.0028619	.8026696	5.285772	.0166669
#2	1.879065	3.324215	-.000316	.0038526	.8048395	5.263555	.0161464
#3	2.170191	3.325757	-.001234	.0034807	.8123094	5.263225	.0161035

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5037-12DLX2 Acquired: 12/23/2024 15:29:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK75 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.5153909	.2768400	.0761942
Stddev	.0064741	.0009085	.0033084
%RSD	1.256154	.3281815	4.342022
#1	.5111499	.2774161	.0746604
#2	.5228429	.2773113	.0739311
#3	.5121800	.2757927	.0799911

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2073.052	26909.98	2260.721	1764.538	1680.224
Stddev	2.252	108.60	5.139	5.933	2.589
%RSD	.1086115	.4035602	.2273342	.3362214	.1540618
#1	2070.456	27032.96	2265.251	1770.445	1677.240
#2	2074.470	26869.69	2255.136	1758.580	1681.861
#3	2074.230	26827.28	2261.776	1764.588	1681.572

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5037-20DLX2 Acquired: 12/23/2024 15:33:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKG7 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0267489	.0094735	.1812382	.0017300	.0135034	24.79956	.1427899
Stddev	.0031958	.0009258	.0031869	.0032960	.0017096	.09950	.0005253
%RSD	11.94732	9.772530	1.758408	190.5232	12.66056	.4012008	.3678954
#1	.0304374	.0105322	.1782683	.0037626	.0149520	24.68803	.1422188
#2	.0248093	.0090721	.1808414	.0035002	.0116176	24.87921	.1432524
#3	.0249999	.0088161	.1846049	-.002073	.0139404	24.83143	.1428987

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0022970	.0022401	629.2614	.0407779	.0801947	.2152272	68.91455
Stddev	.0000824	.0001476	2.4539	.0010261	.0004647	.0070688	.33670
%RSD	3.587439	6.587456	.3899581	2.516396	.5794489	3.284343	.4885813
#1	.0022589	.0022298	626.8470	.0417944	.0802358	.2233606	68.58337
#2	.0023915	.0023926	631.7529	.0397424	.0806374	.2117553	68.90375
#3	.0022405	.0020980	629.1843	.0407968	.0797108	.2105657	69.25652

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.521039	83.19612	.0776823	.0011469	-.853488	.0581245	.2661666
Stddev	.029205	.67269	.0006112	.0010381	.557059	.0071449	.0179917
%RSD	.5289706	.8085555	.7868213	90.51079	65.26850	12.29250	6.759543
#1	5.492620	82.66683	.0769896	.0001421	-1.32790	.0533965	.2839543
#2	5.550970	83.95310	.0781457	.0022153	-.99246	.0663438	.2665678
#3	5.519526	82.96842	.0779116	.0010834	-.24010	.0546331	.2479778

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	3.939867	5.052917	.0085980	.0040785	.6813906	4.834214	.0160406
Stddev	.197113	.004868	.0012847	.0008735	.0045213	.027897	.0012388
%RSD	5.003048	.0963440	14.94141	21.41649	.6635326	.5770769	7.723049
#1	3.761318	5.049653	.0078467	.0047103	.6846222	4.829907	.0169864
#2	3.906895	5.058513	.0078660	.0044434	.6762238	4.864014	.0146383
#3	4.151387	5.050587	.0100814	.0030817	.6833256	4.808721	.0164972

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5037-20DLX2 Acquired: 12/23/2024 15:33:29 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHKG7 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.4875103	.4468275	.0552302
Stddev	.0043246	.0027574	.0044499
%RSD	.8870759	.6170986	8.056949
#1	.4898188	.4444417	.0563611
#2	.4825213	.4498463	.0503240
#3	.4901908	.4461944	.0590055

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2136.853	27872.23	2348.170	1828.121	1653.077
Stddev	6.381	35.59	14.523	3.807	1.995
%RSD	.2986205	.1276843	.6184620	.2082474	.1206765
#1	2130.102	27893.22	2358.502	1832.273	1651.388
#2	2142.786	27831.13	2331.566	1827.298	1655.278
#3	2137.670	27892.32	2354.443	1824.793	1652.565

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5028-01DLX2 Acquired: 12/23/2024 15:37:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK34 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0163755	.0226201	.4181767	-.006794	.0060534	16.36175	.2403742
Stddev	.0030667	.0038375	.0015784	.002093	.0043102	.02843	.0021464
%RSD	18.72738	16.96490	.3774384	30.80842	71.20254	.1737635	.8929566
#1	.0190132	.0268771	.4179704	-.007395	.0093765	16.37380	.2381453
#2	.0130105	.0215569	.4198481	-.008521	.0011832	16.32927	.2405498
#3	.0171027	.0194263	.4167117	-.004466	.0076005	16.38216	.2424274

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0018859	.0022983	595.1550	.0353136	.0620658	.0708749	50.60425
Stddev	.0001097	.0000814	.6956	.0015574	.0004708	.0066744	.05483
%RSD	5.817574	3.540576	.1168833	4.410080	.7585565	9.417151	.1083409
#1	.0017652	.0023370	595.5423	.0360766	.0616329	.0672553	50.57857
#2	.0019797	.0023531	594.3519	.0363423	.0625670	.0785772	50.56697
#3	.0019128	.0022048	595.5708	.0335218	.0619976	.0667922	50.66720

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.021823	285.0778	.0436538	.0024640	-.936904	.0501545	.4580016
Stddev	.010651	.3151	.0001932	.0002753	.028913	.0047297	.0038952
%RSD	.2648198	.1105363	.4425496	11.17167	3.086019	9.430159	.8504668
#1	4.015845	285.3390	.0436047	.0027800	-.968545	.0552391	.4538488
#2	4.034120	284.7278	.0438668	.0023355	-.911858	.0458861	.4585820
#3	4.015504	285.1665	.0434898	.0022764	-.930308	.0493383	.4615740

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.058842	3.106323	.0436722	.0039673	11.85081	3.745284	.0188528
Stddev	.047472	.010924	.0011926	.0002920	.01824	.027397	.0017354
%RSD	1.169599	.3516758	2.730847	7.359130	.1539159	.7315040	9.205272
#1	4.031274	3.116022	.0424835	.0042243	11.84078	3.776916	.0182137
#2	4.031595	3.108459	.0448687	.0036499	11.87187	3.729049	.0175276
#3	4.113658	3.094489	.0436642	.0040278	11.83979	3.729887	.0208172

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5028-01DLX2 Acquired: 12/23/2024 15:37:28 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK34 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.2234811	.2971427	.0277512
Stddev	.0024395	.0017897	.0009298
%RSD	1.091594	.6022985	3.350512
#1	.2241748	.2989757	.0276582
#2	.2207698	.2970526	.0268714
#3	.2254985	.2953997	.0287241

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1996.187	26142.28	2201.655	1700.952	1612.197
Stddev	5.326	254.44	19.497	14.569	6.505
%RSD	.2668310	.9733037	.8855615	.8565311	.4034971
#1	2001.350	25986.82	2180.076	1689.490	1618.961
#2	1990.711	26004.10	2206.883	1696.018	1605.985
#3	1996.499	26435.92	2218.004	1717.347	1611.646

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5028-02DLX2 Acquired: 12/23/2024 15:41:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK35 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0468603	.0009497	.8856487	-.000983	.0150330	29.26238	.5068133
Stddev	.0008729	.0036231	.0025963	.002847	.0030816	.28448	.0052301
%RSD	1.862684	381.5199	.2931467	289.6401	20.49906	.9721581	1.031953
#1	.0478564	-.002907	.8870849	-.002358	.0122802	28.95443	.5014601
#2	.0464955	.001473	.8872096	.002290	.0144566	29.51536	.5119109
#3	.0462290	.004283	.8826517	-.002881	.0183621	29.31735	.5070690

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0031350	.0042886	576.3378	.0556746	.0758277	.1380335	77.07323
Stddev	.0001570	.0000899	4.7398	.0002874	.0003059	.0149074	.87395
%RSD	5.007600	2.096609	.8223995	.5161239	.4034302	10.79988	1.133927
#1	.0029582	.0043710	570.9930	.0560056	.0755475	.1232225	76.19925
#2	.0032581	.0043022	580.0302	.0554893	.0757816	.1530356	77.94716
#3	.0031887	.0041927	577.9902	.0555290	.0761541	.1378423	77.07328

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.110212	244.1238	.0746664	.0039481	-.305440	.0758214	.8351000
Stddev	.065317	2.3215	.0004474	.0006443	.650099	.0074776	.0212498
%RSD	1.068987	.9509685	.5991563	16.31944	212.8406	9.862073	2.544585
#1	6.045155	241.6793	.0743841	.0040254	-.943778	.0813815	.8345621
#2	6.175787	246.2988	.0744329	.0045503	-.328355	.0673205	.8566136
#3	6.109694	244.3932	.0751822	.0032687	.355815	.0787622	.8141242

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.363118	3.430597	.0299642	.0088773	7.825870	4.741508	.0334921
Stddev	.141086	.006014	.0034771	.0001646	.012887	.007060	.0043907
%RSD	3.233604	.1753025	11.60415	1.853813	.1646759	.1489076	13.10964
#1	4.234551	3.435233	.0259553	.0090638	7.828313	4.736328	.0334683
#2	4.340753	3.432757	.0321608	.0087525	7.837361	4.749550	.0291134
#3	4.514051	3.423802	.0317765	.0088157	7.811936	4.738646	.0378947

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5028-02DLX2 Acquired: 12/23/2024 15:41:25 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHK35 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3528922	.3129170	.0477139
Stddev	.0058608	.0020658	.0017898
%RSD	1.660789	.6601824	3.751057
#1	.3461768	.3105422	.0494755
#2	.3569759	.3139096	.0458972
#3	.3555238	.3142992	.0477692

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2049.530	26903.08	2252.208	1761.060	1619.822
Stddev	4.764	76.72	9.873	.659	3.715
%RSD	.2324620	.2851669	.4383497	.0374128	.2293766
#1	2054.385	26989.81	2262.507	1761.742	1623.909
#2	2049.344	26875.36	2242.826	1760.428	1616.647
#3	2044.862	26844.07	2251.290	1761.009	1618.912

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5009-21DLX2 Acquired: 12/23/2024 15:45:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJZ3 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0310893	.0126268	.1105465	-.001562	.0086559	21.36778	.3013883
Stddev	.0023501	.0024541	.0023861	.000658	.0032944	.18578	.0031276
%RSD	7.559181	19.43602	2.158446	42.13528	38.06002	.8694422	1.037745
#1	.0327213	.0104881	.1130234	-.002203	.0121556	21.37010	.3018086
#2	.0283957	.0120859	.1082630	-.000887	.0081972	21.18085	.2980717
#3	.0321509	.0153062	.1103532	-.001597	.0056148	21.55239	.3042845

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0023535	.0012433	705.2887	.0366832	.0751149	.1029151	62.69448
Stddev	.0000265	.0001656	6.7271	.0007661	.0005477	.0082124	.57114
%RSD	1.126138	13.31689	.9538131	2.088346	.7291705	7.979751	.9109966
#1	.0023838	.0013846	705.4105	.0369968	.0757319	.0946580	62.96031
#2	.0023424	.0010611	698.5014	.0372427	.0749267	.1030053	62.03887
#3	.0023344	.0012842	711.9541	.0358101	.0746861	.1110820	63.08426

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	6.183012	92.43127	.0532260	.0042685	-1.03467	.0574682	.2689804
Stddev	.067017	1.05816	.0003406	.0005343	.39304	.0052067	.0135159
%RSD	1.083887	1.144808	.6399547	12.51823	37.98642	9.060220	5.024860
#1	6.187272	92.67607	.0536191	.0048106	-.99210	.0604376	.2539500
#2	6.113967	91.27217	.0530198	.0042528	-.66466	.0514561	.2728561
#3	6.247798	93.34558	.0530390	.0037422	-1.44726	.0605108	.2801350

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	4.395309	3.541662	.0253063	.0039375	2.426365	5.491851	.0163962
Stddev	.026654	.006051	.0010752	.0002398	.012521	.057148	.0018291
%RSD	.6064168	.1708521	4.248641	6.090600	.5160221	1.040600	11.15559
#1	4.366551	3.538583	.0240851	.0036610	2.430326	5.534987	.0180429
#2	4.419183	3.548633	.0257232	.0040893	2.412343	5.427035	.0167182
#3	4.400193	3.537770	.0261106	.0040621	2.436426	5.513530	.0144275

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P5009-21DLX2 Acquired: 12/23/2024 15:45:20 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJZ3 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.3423601	.5687549	.0446350
Stddev	.0031724	.0043384	.0028208
%RSD	.9266406	.7627919	6.319644
#1	.3428046	.5677076	.0475171
#2	.3389888	.5650360	.0418798
#3	.3452868	.5735211	.0445080

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2102.691	27479.27	2293.514	1790.876	1644.412
Stddev	1.176	167.77	22.062	10.262	2.893
%RSD	.0559499	.6105182	.9619311	.5730008	.1759165
#1	2103.208	27286.61	2276.678	1780.986	1646.584
#2	2103.520	27593.08	2318.489	1801.473	1641.128
#3	2101.344	27558.13	2285.374	1790.167	1645.523

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P4984-08DLX5 Acquired: 12/23/2024 15:49:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJT5 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.004934	.0231649	.0946688	-.025313	.0026818	3.392508	.0334925
Stddev	.004728	.0040558	.0007924	.001597	.0016974	.036293	.0004745
%RSD	95.83581	17.50856	.8369832	6.310103	63.29431	1.069789	1.416592
#1	-.007796	.0266570	.0943428	-.023471	.0009908	3.379910	.0329918
#2	.000524	.0241213	.0955722	-.026322	.0043856	3.433422	.0335500
#3	-.007530	.0187163	.0940914	-.026145	.0026688	3.364194	.0339355

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0005715	.0017217	351.3308	.0110466	.0415777	.0158378	19.94774
Stddev	.0000794	.0000971	1.0137	.0001583	.0008655	.0029046	.04502
%RSD	13.88542	5.637897	.2885245	1.433396	2.081647	18.33981	.2256688
#1	.0005368	.0017737	350.4365	.0111633	.0410641	.0191918	19.99912
#2	.0006623	.0016097	352.4319	.0111102	.0410920	.0141434	19.92882
#3	.0005154	.0017817	351.1239	.0108663	.0425769	.0141784	19.91527

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.139994	201.9476	.0144007	-.000318	-1.07556	.0170438	.3597119
Stddev	.006967	.8276	.0004961	.001266	.74918	.0070971	.0187595
%RSD	.3255789	.4098286	3.444652	398.4051	69.65513	41.64012	5.215141
#1	2.136269	202.2441	.0141631	-.000461	-.98607	.0208170	.3382365
#2	2.148032	202.5861	.0149709	.001014	-1.86546	.0088572	.3679951
#3	2.135681	201.0125	.0140681	-.001505	-.37514	.0214573	.3729040

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	1.110425	.5803411	.0170862	.0032693	3.737683	1.639552	.0067370
Stddev	.145241	.0062533	.0006441	.0003656	.032497	.009381	.0017241
%RSD	13.07973	1.077522	3.769684	11.18366	.8694382	.5721584	25.59164
#1	.957261	.5732729	.0169329	.0036190	3.705625	1.630879	.0047546
#2	1.127844	.5851536	.0177931	.0028896	3.736822	1.649509	.0078865
#3	1.246172	.5825967	.0165325	.0032994	3.770602	1.638269	.0075700

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P4984-08DLX5 Acquired: 12/23/2024 15:49:18 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJT5 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0393104	.0940777	.0112296
Stddev	.0019203	.0004765	.0017569
%RSD	4.884967	.5064540	15.64483
#1	.0373880	.0935322	.0114577
#2	.0412286	.0944124	.0093699
#3	.0393147	.0942885	.0128614

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1962.657	25740.75	2136.820	1682.692	1663.240
Stddev	15.363	87.30	19.484	9.842	12.681
%RSD	.7827578	.3391393	.9118135	.5849181	.7624233
#1	1979.414	25664.88	2149.641	1674.893	1677.624
#2	1949.238	25721.21	2114.399	1679.432	1653.676
#3	1959.317	25836.16	2146.420	1693.751	1658.421

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P4983-20DLX5 Acquired: 12/23/2024 15:53:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJH0 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005135	.0312685	.0422828	-.030817	.0014044	4.067683	.0481763
Stddev	.001956	.0046109	.0007382	.002536	.0042751	.013986	.0023402
%RSD	38.08330	14.74631	1.745814	8.228557	304.4156	.3438391	4.857589
#1	-.004524	.0259926	.0422413	-.030477	.0063251	4.083668	.0490037
#2	-.007323	.0332862	.0430409	-.033506	-.001397	4.061684	.0455347
#3	-.003558	.0345266	.0415663	-.028469	-.000715	4.057698	.0499903

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0004490	.0006282	654.1922	.0078547	.0485784	.0321812	15.58177
Stddev	.0001616	.0000550	.9367	.0003466	.0001804	.0025583	.05397
%RSD	35.99084	8.749609	.1431807	4.412664	.3714398	7.949646	.3463869
#1	.0003949	.0006462	655.2725	.0074716	.0487620	.0297716	15.63890
#2	.0006307	.0005665	653.6069	.0079459	.0484013	.0348659	15.53164
#3	.0003214	.0006720	653.6971	.0081465	.0485718	.0319061	15.57475

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	2.952326	43.51719	.0131892	-.000461	-.965114	.0119867	.1031453
Stddev	.007419	.08663	.0002793	.000777	.577729	.0062541	.0013329
%RSD	.2512962	.1990813	2.117350	168.4451	59.86125	52.17527	1.292225
#1	2.949557	43.54618	.0128709	-.001065	-.970746	.0056472	.1036453
#2	2.946690	43.41977	.0133931	-.000733	-1.54001	.0121611	.1041558
#3	2.960731	43.58561	.0133035	.000415	-.38459	.0181518	.1016347

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.3624774	.6679291	.0076609	.0025518	.8024161	1.898233	.0084816
Stddev	.0244771	.0036219	.0017353	.0003469	.0008384	.012595	.0005433
%RSD	6.752715	.5422535	22.65145	13.59217	.1044900	.6635205	6.405015
#1	.3883974	.6702652	.0067384	.0029081	.8018462	1.912684	.0087176
#2	.3397583	.6697652	.0096626	.0025322	.8033788	1.892429	.0078603
#3	.3592763	.6637569	.0065817	.0022152	.8020232	1.889587	.0088670

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: P4983-20DLX5 Acquired: 12/23/2024 15:53:17 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: MBHJH0 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	.0495131	.4773864	.0099081
Stddev	.0053356	.0013887	.0042008
%RSD	10.77609	.2908990	42.39708
#1	.0483483	.4786581	.0141706
#2	.0448562	.4759046	.0097820
#3	.0553349	.4775966	.0057719

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1968.607	25749.77	2140.505	1675.822	1658.423
Stddev	3.393	74.80	14.102	9.853	.776
%RSD	.1723413	.2904823	.6588053	.5879222	.0467787
#1	1964.733	25727.50	2124.432	1686.148	1657.541
#2	1970.040	25688.63	2146.287	1666.524	1659.001
#3	1971.048	25833.17	2150.798	1674.794	1658.727

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: CCV002 Acquired: 12/23/2024 15:57:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV002 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961	Ba4934
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	5.061502	4.899265	24.97157	4.987082	4.940864	405.5304	10.23573
Stddev	.025083	.024881	.17605	.038422	.029250	3.4500	.06766
%RSD	.4955560	.5078509	.7049918	.7704388	.5919927	.8507463	.6610630
#1	5.039703	4.870760	24.76846	4.943029	4.907875	401.5573	10.15768
#2	5.055888	4.910412	25.06577	5.004554	4.951086	407.7693	10.27792
#3	5.088916	4.916624	25.08047	5.013664	4.963630	407.2646	10.27158

Elem	Be2348	Cd2144	Ca3736	Cr2677	Co2286	Cu3247	Fe2598
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.5105178	2.502524	410.2599	15.60108	2.510902	15.25956	416.1910
Stddev	.0041844	.015879	2.5778	.00562	.017865	.10823	3.0072
%RSD	.8196326	.6345308	.6283296	.0360546	.7114905	.7092520	.7225453
#1	.5070475	2.484230	407.2911	15.60163	2.490338	15.13483	412.7187
#2	.5151644	2.510604	411.5580	15.60642	2.522595	15.31529	417.9389
#3	.5093416	2.512738	411.9306	15.59521	2.519773	15.32857	417.9155

Elem	Mn2576	Mg2790	Ni2316	Ag3280	Na8183	V_2924	Zn2138
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	15.19655	411.6973	2.537109	1.305591	412.0913	2.559870	15.31654
Stddev	.12310	3.3915	.014989	.003268	.6536	.033993	.13515
%RSD	.8100589	.8237775	.5907773	.2503405	.1586165	1.327930	.8823784
#1	15.05810	407.9145	2.519810	1.303786	411.3460	2.521181	15.20609
#2	15.29366	414.4661	2.545285	1.309364	412.3602	2.573476	15.27627
#3	15.23789	412.7113	2.546232	1.303623	412.5675	2.584952	15.46724

Elem	K_7698	P_1774	B_2496	Mo2020	S_1820	Si2516	Sn1899
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	153.7266	5.046465	4.888562	4.927000	5.010294	4.813658	5.051284
Stddev	1.4771	.041757	.051462	.032940	.041263	.046623	.030427
%RSD	.9608886	.8274552	1.052708	.6685578	.8235653	.9685543	.6023690
#1	152.0270	4.998291	4.836405	4.889950	4.962658	4.775421	5.016192
#2	154.7008	5.068784	4.939300	4.938076	5.033237	4.865597	5.067323
#3	154.4520	5.072320	4.889981	4.952975	5.034987	4.799957	5.070336

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: CCV002 Acquired: 12/23/2024 15:57:19 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCV002 Custom ID2: Custom ID3:
Comment:

Elem	Ti3361	Sr4077	Li6707
Units	ppm	ppm	ppm
Avg	5.019106	4.788957	5.134688
Stddev	.032055	.031375	.034863
%RSD	.6386611	.6551428	.6789654
#1	4.982170	4.752747	5.094432
#2	5.039661	4.808063	5.154604
#3	5.035487	4.806061	5.155026

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	1764.042	24166.14	2093.303	1511.083	1541.178
Stddev	8.956	100.61	9.815	5.816	8.250
%RSD	.5076974	.4163227	.4688556	.3848831	.5353081
#1	1774.342	24128.66	2103.215	1515.747	1550.538
#2	1759.696	24280.11	2083.589	1512.934	1534.962
#3	1758.088	24089.65	2093.103	1504.566	1538.035

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: CCB002 Acquired: 12/23/2024 16:10:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB002 Custom ID2: Custom ID3:
Comment:

Elem	As1890	Tl1908	Pb2203	Se1960	Sb2068	Al3961
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.005214	-.002804	-.001236	.0060497	-.000822	.0317602
Stddev	.000649	.001197	.001660	.0022278	.002024	.0167543
%RSD	12.44632	42.67198	134.3278	36.82538	246.0323	52.75258
#1	-.005498	-.002068	.000368	.0036139	-.003046	.0399975
#2	-.005672	-.004185	-.002947	.0065510	.000911	.0124818
#3	-.004471	-.002160	-.001128	.0079841	-.000332	.0428013

Elem	Ba4934	Be2348	Cd2144	Ca3736	Cr2677	Co2286
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.001339	.0001989	.0001321	.0178254	-.001020	.0001203
Stddev	.000135	.0001218	.0000411	.0113203	.001149	.0000819
%RSD	10.08905	61.22026	31.11125	63.50642	112.6440	68.06381
#1	-.001352	.0001129	.0000973	.0198928	-.000381	.0002012
#2	-.001467	.0003382	.0001775	.0279695	-.000333	.0000375
#3	-.001198	.0001456	.0001217	.0056139	-.002346	.0001222

Elem	Cu3247	Fe2598	Mn2576	Mg2790	Ni2316	Ag3280
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.002941	.0262826	.0022393	.0647686	.0006934	.0007293
Stddev	.008780	.0646474	.0011820	.0359613	.0005680	.0005379
%RSD	298.4879	245.9700	52.78194	55.52276	81.92185	73.75392
#1	-.009071	-.008160	.0016978	.1055329	.0012498	.0006121
#2	-.006870	-.013851	.0035950	.0375365	.0001144	.0002597
#3	.007117	.100859	.0014252	.0512364	.0007158	.0013162

Elem	Na8183	V_2924	Zn2138	K_7698	P_1774	B_2496
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	-.861025	.0024722	.0035927	-.095416	-.000577	-.003280
Stddev	.870854	.0098272	.0103203	.132710	.002718	.003127
%RSD	101.1416	397.5135	287.2564	139.0853	471.1086	95.35714
#1	-1.18358	-.004513	.0123356	-.016407	-.001425	-.006045
#2	-1.52458	.013709	-.007792	-.248632	.002464	.000114
#3	.12509	-.001780	.006234	-.021210	-.002770	-.003908

Reviewed By:kareem
On:12/27/2024 4:23:37 PM
Inst Id :P5

Sample Name: CCB002 Acquired: 12/23/2024 16:10:00 Type: Unk
Method: SFAM01.1 INSTRUMENT P5 WITH 6 POINT ICAL-2(v39) Mode: CONC Corr. Factor: 1.000000
User: Kareem Custom ID1: CCB002 Custom ID2: Custom ID3:
Comment:

Elem	Mo2020	S_1820	Si2516	Sn1899	Ti3361	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	.0006665	-.006644	-.075099	.0002908	-.002364	.0002221
Stddev	.0002604	.007360	.000301	.0002049	.000720	.0001038
%RSD	39.07541	110.7791	.4013442	70.45988	30.47799	46.70800
#1	.0009448	-.000775	-.074779	.0003066	-.003074	.0002659
#2	.0006260	-.004255	-.075377	.0004873	-.001633	.0002968
#3	.0004287	-.014902	-.075142	.0000784	-.002384	.0001037

Elem	Li6707
Units	ppm
Avg	F .0150740
Stddev	.0008735
%RSD	5.794380
#1	.0142623
#2	.0159982
#3	.0149616

Int. Std.	Y_2243	Y_3600	Y_3710	Y_2243	In2306
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	2028.530	26477.48	2132.566	1743.862	1837.385
Stddev	.217	130.99	7.592	9.920	2.984
%RSD	.0106911	.4947061	.3559882	.5688783	.1624095
#1	2028.639	26485.50	2137.420	1748.676	1839.874
#2	2028.670	26604.27	2136.461	1750.456	1834.077
#3	2028.280	26342.66	2123.818	1732.453	1838.203

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

Prep Standard - Chemical Standard Summary

Order ID : P5233

Test : Metals CLP12

Prepbatch ID : PB165605,

Sequence ID/Qc Batch ID: LB134057,LB134069,

Standard ID :
MP83498,MP83500,MP83501,MP83502,MP83503,MP83504,MP83505,MP83506,MP83507,MP83508,MP83509,MP83510,MP83511,MP83512,MP83513,MP83514,

Chemical ID :
M5130,M5218,M5223,M5289,M5295,M5296,M5390,M5393,M5429,M5473,M5496,M5497,M5498,M5513,M5515,M5519,M5658,M5697,M5698,M5768,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5818,M5819,M5820,M5875,M5959,M5960,M5962,M5970,M5976,M5978,M5982,M5985,M5990,M5999,M6021,M6023,M6025,M6028,M6030,M6121,M6125,M6126,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
169	1:1HNO3	MP83498	12/09/2024	12/28/2024	Janvi Patel	None	None	Sarabjit Jaswal 12/09/2024

FROM 1250.00000ml of M6126 + 1250.00000ml of W3112 = Final Quantity: 2500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
902	ICP AES CAL BLK (SO/ICB/CCB)	MP83500	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 125.00000ml of M6121 + 2350.00000ml of W3112 + 25.00000ml of M6126 = Final Quantity: 2500.000 ml

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
2480	ICP AES STD 6 ISM01.3	MP83501	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 4.00000ml of M5289 + 4.00000ml of M5498 + 4.00000ml of M5515 + 4.00000ml of M5768 + 4.00000ml of M5806 + 30.00000ml of MP83500 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1004	ICPAES ISM01.2 (S5)	MP83502	12/06/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.25000ml of M5798 + 0.50000ml of M5429 + 0.50000ml of M5473 + 0.50000ml of M5815 + 0.50000ml of M5817 + 12.50000ml of M5519 + 12.50000ml of M5698 + 12.50000ml of M5806 + 12.50000ml of M5819 + 13.75000ml of M5697 + 14.50000ml of M5496 + 14.50000ml of M5515 + 14.50000ml of M5658 + 2.00000ml of M5513 + 22.50000ml of M5497 + 22.50000ml of M5768 + 5.00000ml of M5296 + 5.00000ml of M5393 + 5.00000ml of M5802 + 5.00000ml of M5818 + 5.00000ml of M5875 + 303.50000ml of MP83500 = Final Quantity: 500.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1005	ICPAES ISM01.2(S4)	MP83503	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 250.00000ml of MP83500 + 250.00000ml of MP83502 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1007	ICPAES ISM01.2(S3)	MP83504	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 25.00000ml of MP83502 + 75.00000ml of MP83500 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1008	ICPAES ISM01.2(S2)	MP83505	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 12.50000ml of MP83502 + 87.50000ml of MP83500 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
994	ICPAES ISM01.2 S1 (CONC.)	MP83506	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.02000ml of M5815 + 0.03000ml of M5429 + 0.10000ml of M5798 + 0.10000ml of M6028 + 0.14000ml of M5799 + 0.20000ml of M5473 + 0.20000ml of M5515 + 0.20000ml of M5658 + 0.20000ml of M5801 + 0.20000ml of M5817 + 0.20000ml of M5976 + 0.20000ml of M6025 + 0.20000ml of M6030 + 0.30000ml of M5698 + 0.40000ml of M5496 + 0.50000ml of M5697 + 0.50000ml of M6023 + 0.70000ml of M5962 + 0.80000ml of M5960 + 1.00000ml of M5800 + 1.00000ml of M6021 + 1.20000ml of M5802 + 1.20000ml of M5819 + 10.00000ml of M5498 + 10.00000ml of M5519 + 10.00000ml of M5769 + 10.00000ml of M5806 + 10.00000ml of M5818 + 2.00000ml of M5978 + 4.00000ml of M5390 + 34.24000ml of MP83500 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1003	ICPAES ISM01.2 S1	MP83507	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.50000ml of MP83506 + 99.50000ml of MP83500 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2054	ICV-ICPAES	MP83508	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.50000ml of M5218 + 0.50000ml of M5816 + 0.50000ml of M5820 + 0.50000ml of M5970 + 0.50000ml of M5982 + 10.00000ml of M5295 + 87.50000ml of MP83500 = Final Quantity: 100.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
904	ICP AES ICSA SOLN	MP83509	12/09/2024	01/06/2025	Kareem Khairalla	None	METALS_PIPETTE_3 (A)	Sarabjit Jaswal 12/09/2024

FROM 10.00000ml of M5130 + 90.00000ml of MP83500 = Final Quantity: 250.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
905	ICP AES ICSAB SOLN	MP83510	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 10.00000ml of M5130 + 10.00000ml of M5223 + 80.00000ml of MP83500 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1119	ICPAES ISM01.2(CCV)	MP83511	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 0.75000ml of M5497 + 0.75000ml of M5769 + 1.22500ml of M5496 + 1.25000ml of M5515 + 1.25000ml of M5806 + 19.77500ml of MP83500 + 25.00000ml of MP83502 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
921	ICPAES SPIKE SOL#6	MP83512	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 2.50000ml of M5962 + 50.00000ml of M5990 + 50.00000ml of M5999 + 147.50000ml of MP83500 = Final Quantity: 250.000 ml

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Metals STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
919	ICP AES INTERNAL STD	MP83513	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 1.00000ml of M5959 + 10.00000ml of M5985 + 1969.00000ml of W3112 + 20.00000ml of M6126 = Final Quantity: 2000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
513	RINSE SOLN	MP83514	12/09/2024	01/06/2025	Kareem Khairalla	None	None	Sarabjit Jaswal 12/09/2024

FROM 200.00000ml of M6126 + 9800.00000ml of W3112 = Final Quantity: 10000.000 ml

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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	12/28/2024	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	12/28/2024	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	04/20/2021 / bin	M5295

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	Z9651Q / CHEM-CLP-4/.25L	S2-MEB711673	11/02/2026	09/19/2022 / jaswal	08/20/2022 / jaswal	M5296

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57056 / Ba, 1000 PPM, 125 ml	072122	07/21/2025	08/07/2024 / jaswal	09/18/2022 / bin	M5390

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-3 / CLP CAL SOLUTION #3, 125mL	T2-MEB714159	01/13/2027	10/12/2022 / bin	09/19/2022 / bin	M5393

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57103 / Li, 10000 PPM, 125 ml	070622	07/06/2025	01/30/2023 / bin	01/26/2023 / bin	M5429

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57138 / Sr, 10000 PPM, 125 ml	082922	08/29/2025	03/16/2023 / jaswal	03/16/2023 / jaswal	M5473

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5496

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	03/18/2023 / bin	03/17/2023 / bin	M5497

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5498

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57119 / Potassium (K) 10,000PPM	120822	12/08/2025	01/08/2024 / bin	03/17/2023 / bin	M5519

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58024 / Chromium, Cr, 500 ml, 1000 PPM	060523	06/05/2026	08/28/2023 / jaswal	08/25/2023 / jaswal	M5658

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	102523	10/25/2026	04/03/2024 / jaswal	10/27/2023 / jaswal	M5697

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58025 / Mn, 1000 PPM, 500 ml	102623	10/26/2026	04/18/2024 / jaswal	10/27/2023 / jaswal	M5698

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	01/08/2024 / bin	01/03/2024 / bin	M5768

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58112 / Mg, 10000 PPM, 500 ml	091823	09/18/2026	05/24/2024 / Jaswal	01/03/2024 / bin	M5769

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57004 / Be, 1000 PPM, 125 ml	102523	10/25/2026	02/09/2024 / bin	02/09/2024 / bin	M5798

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57015 / P, 1000 PPM, 125 ml	091123	09/11/2026	05/01/2024 / jaswal	02/09/2024 / jaswal	M5820

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-CAL-1 / CLP CAL SOLUTION #1, 125mL	T2-MEB714417	01/27/2027	04/19/2024 / jaswal	02/22/2024 / jaswal	M5875

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGY10-1 / YTTRIUM 125mL 10,000ug/mL	V2-Y740548	02/20/2029	07/01/2024 / Jaswal	06/14/2024 / Jaswal	M5959

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	041124	04/11/2027	07/03/2024 / kareem	06/11/2024 / kareem	M5960

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57003 / Li, 1000 PPM, 125 ml	061224	06/21/2027	07/01/2024 / Jaswal	07/01/2024 / Jaswal	M5970

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGMO1-1 / MOLYBDENUM 125mL 1000ug/mL	T2-MO720876	07/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5976

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGTI1-1 / TITANIUM 125mL 1000ug/mL	T2-TI719972	06/17/2027	08/07/2024 / jaswal	02/22/2024 / Jaswal	M5978

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57038 / Sr, 1000 PPM, 125 ml	031524	03/15/2027	07/01/2024 / Jaswal	06/11/2024 / Jaswal	M5982

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CGIN10-5 / INDIUM 1 x 500 ml	U2-IN729349	02/21/2028	10/08/2024 / Jaswal	06/14/2024 / Jaswal	M5985

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-5 / CLP Spike Standard 5	V2-MEB742037	03/12/2029	10/04/2024 / Jaswal	02/22/2024 / Jaswal	M5990

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-1 / SOIL/WATER SPIKE SOLN 1, 125mL	T2-MEB721963	07/27/2027	09/04/2024 / Jaswal	02/22/2024 / kareem	M5999

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57023 / V, 1000 PPM, 125 ml	062424	06/24/2027	09/28/2024 / jaswal	08/05/2024 / Jaswal	M6021

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57081 / Tl, 1000 PPM, 125 ml	0624724	06/27/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6023

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57082 / Pb, 1000 PPM, 125 ml	061224	11/09/2026	08/05/2024 / Jaswal	08/05/2024 / Jaswal	M6025

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

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Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	05/25/2025	11/26/2024 / Eman	11/22/2024 / Eman	M6125

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / Iwona	07/03/2024 / Iwona	W3112

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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

R 8/5/24

M6028

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

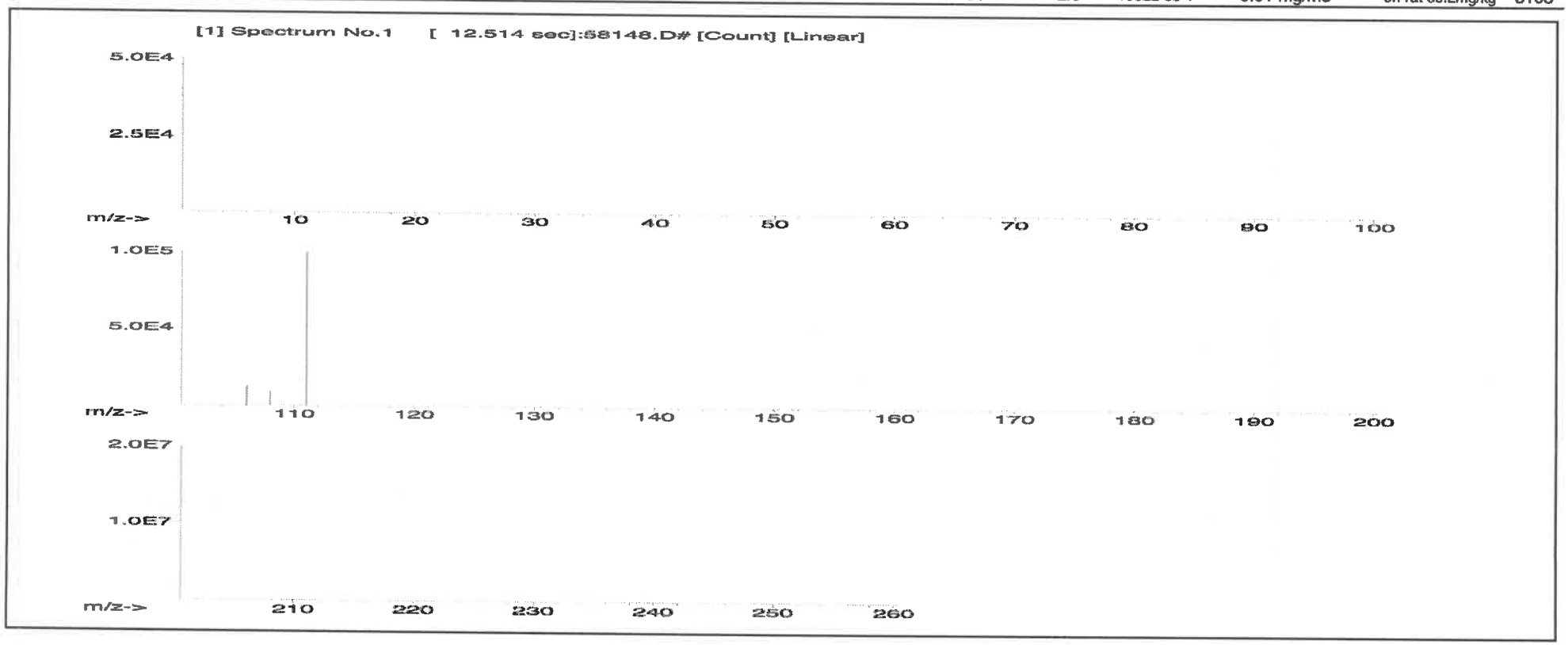
CERTIFIED WEIGHT REPORT:

Part Number:	**57048**		**Lot #**		
Lot Number:	**070124**	**Solvent:**	24002546	Nitric Acid	
Description:	**Cadmium (Cd)**	2%	40.0 (mL)	Nitric Acid	
Expiration Date:	070127				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	070124
Reviewed By:	Pedro L. Rentas	070124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cadmium nitrate tetrahydrate (Cd)	IN024	CDM092021A1	1000	99.999	0.10	36.5	5.4797	5.4804	**1000.1**	**2.0**	10022-68-1	0.01 mg/m3	orl-rat 60.2mg/kg	3108



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	T	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

M5296 OP: 09/19/2022 BH

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Refine your results. Redefine your industry.

Certificate of Analysis

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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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Certificate of Analysis

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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

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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:

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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 (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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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

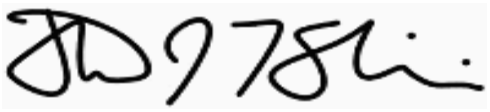
- Sealed TCT Bag Open Date: _____

- 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 (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 13, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 13, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

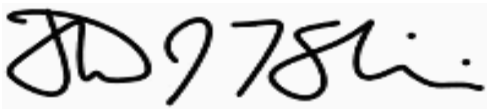
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 8/15/24 M6025

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57182
Lot Number: 110923
Description: Lead (Pb)

Expiration Date: 110926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

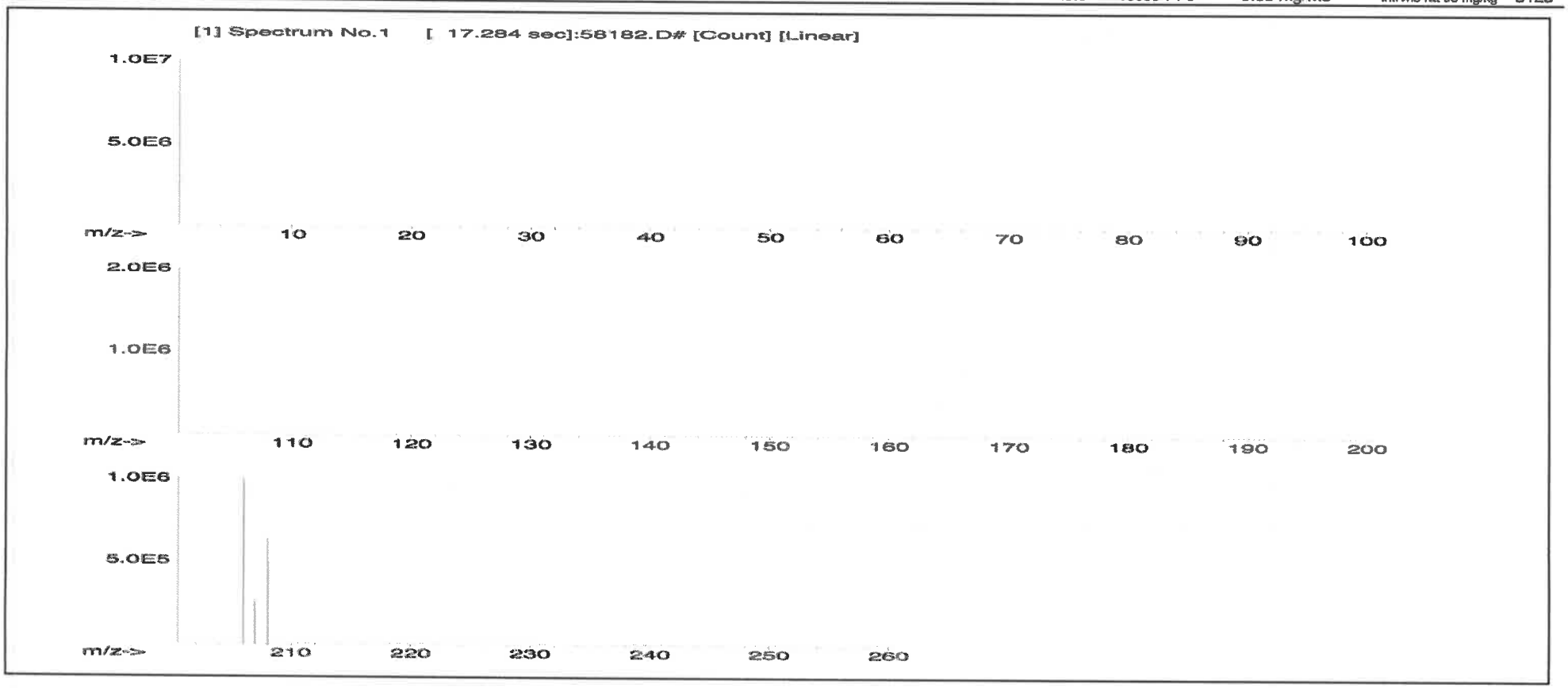
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

		Lot #	
Solvent:	24002546	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Formulated By:	Lawence Barry	110923
Reviewed By:	Pedro L. Rentas	110923

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lead(II) nitrate (Pb)	IN029	PBD122016A1	10000	99.999	0.10	62.5	32.0006	32.0040	**10001.1**	**20.0**	10099-74-8	0.05 mg/m3	intrvns-rat 93 mg/kg	3128



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).

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

ICSA M5126 M5127 M5128 M5129 M5130

ICSB M5219 M5220 M5221 M5222 M5223

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 1 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.

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Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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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:	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

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

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4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

November 02, 2021

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **November 02, 2026**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *ICP-AES ICS*

QATS LABORATORY INORGANIC REFERENCE MATERIAL INTERFERENCE CHECK SAMPLE SET FOR ICP-AES (ICSA WITH ICSB)

NOTE: These instructions are for advisory purposes only. If any apparent conflict exists between these instructions and the analytical protocol or your contract, disregard these instructions.

APPLICATION: For use with the CLP SFAM01.0 SOW and revisions.

CAUTION: Read instructions carefully before opening bottle(s) and proceeding with the analyses.

Contains Heavy Metals
HAZARDOUS MATERIAL

Safety Data Sheets
Available Upon Request

(A) *SAMPLE DESCRIPTION*

Enclosed is a set of one (1) or more bottles of Aqueous Reference Material, each composed of metals at various concentrations and prepared with nitrate salts and oxy-acids of the respective elements in a 5% nitric acid matrix. **For the reference material source in reporting ICSA and ICSAB mixture use "USEPA". For the reference material lot number for the ICSA use "ICSA-1211" and for the ICSAB mixture use "ICSA-1211+ICSB-0710".**

CAUTION: The bottle(s) should be protected from light during storage to ensure the stability of silver which is contained in the ICSB solution. The bottle(s) should be stored at room temperature. **Do not allow the solution(s) to freeze.**

(B) *BREAKAGE OR MISSING ITEMS*

Check the contents of the shipment carefully for any broken, leaking, or missing items. Check that the seal is intact on each bottle. Refer to the enclosed chain of custody record. Report any problems to Mr. Keith Strout, APTIM Federal Services, LLC, at (702) 895-8722. If requested, return the chain-of-custody record with appropriate annotations and signatures to the address provided below.

QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
APTIM Federal Services, LLC
2700 Chandler Avenue - Building C
Las Vegas, NV 89120

(C) *ANALYSIS OF SAMPLES*

The interference check sample set is to be used to verify inter-element and background correction factors of inductively-coupled plasma (ICP) spectrometers. This reference material set consists of two (2) concentrated solutions. The ICSA solution contains the four (4) interferent elements: Al, Ca, Fe, and Mg. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be,

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for ICP-AES Part A and Part B target analytes when diluted as directed.

Using Class "A" glassware, preparation and analysis must be performed according to the following instructions:

ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSA solution by ICP-AES.

ICSB-0710, Analytes, mixed with ICSA-1211, Interferents: Pipet 10 mL of the ICSA solution and 10 mL of the ICSB solution into a 100 mL volumetric flask and dilute to volume with 2% v/v HNO_3. Analyze this ICSAB solution by ICP-AES.

(D) *"CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-AES ICS SOLUTION(S)*

The "Certified Value" concentrations of the elements, listed in Table 1 below, were derived from statistically pooled analysis results from the following sources, if available: QATS Laboratory, CLP laboratories, Quarterly Blind (QB)/Proficiency Testing (PT) events, CLP pre-award events, and external referee laboratories.

Table 1. "CERTIFIED VALUES" FOR INTERFERENCE CHECK SAMPLE ICP-AES ICSA-1211, AND ICSA-1211 MIXED WITH ICSB-0710

Element	CRQL	Part A (µg/L)	Low Limit (µg/L)	High Limit (µg/L)	Part A +Part B (µg/L)	Low Limit (µg/L)	High Limit (µg/L)
Al	200	255000	216000	294000	247000	209000	285000
Sb	60	(0.0)	-60.0	60.0	618	525	711
As	10	(0.0)	-10.0	10.0	104	88.4	120
Ba	200	(6.0)	-194	206	(537)	337	737
Be	5.0	(0.0)	-5.0	5.0	495	420	570
Cd	5.0	(1.0)	-4.0	6.0	972	826	1120
Ca	5000	245000	208000	282000	235000	199000	271000
Cr	10	(52.0)	42.0	62.0	542	460	624
Co	50	(0.0)	-50.0	50.0	476	404	548
Cu	25	(2.0)	-23.0	27.0	511	434	588
Fe	100	101000	85600	116500	99300	84400	114500
Pb	10	(0.0)	-10.0	10.0	(49.0)	39.0	59.0
Mg	5000	255000	216000	294000	248000	210000	286000
Mn	15	(7.0)	-8.0	22.0	507	430	584
Ni	40	(2.0)	-38.0	42.0	954	810	1100
Se	35	(0.0)	-35.0	35.0	(46.0)	11.0	81.0
Ag	10	(0.0)	-10.0	10.0	201	170	232
Tl	25	(0.0)	-25.0	25.0	(108)	83.0	133
V	50	(0.0)	-50.0	50.0	491	417	565
Zn	60	(0.0)	-60.0	60.0	952	809	1095

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

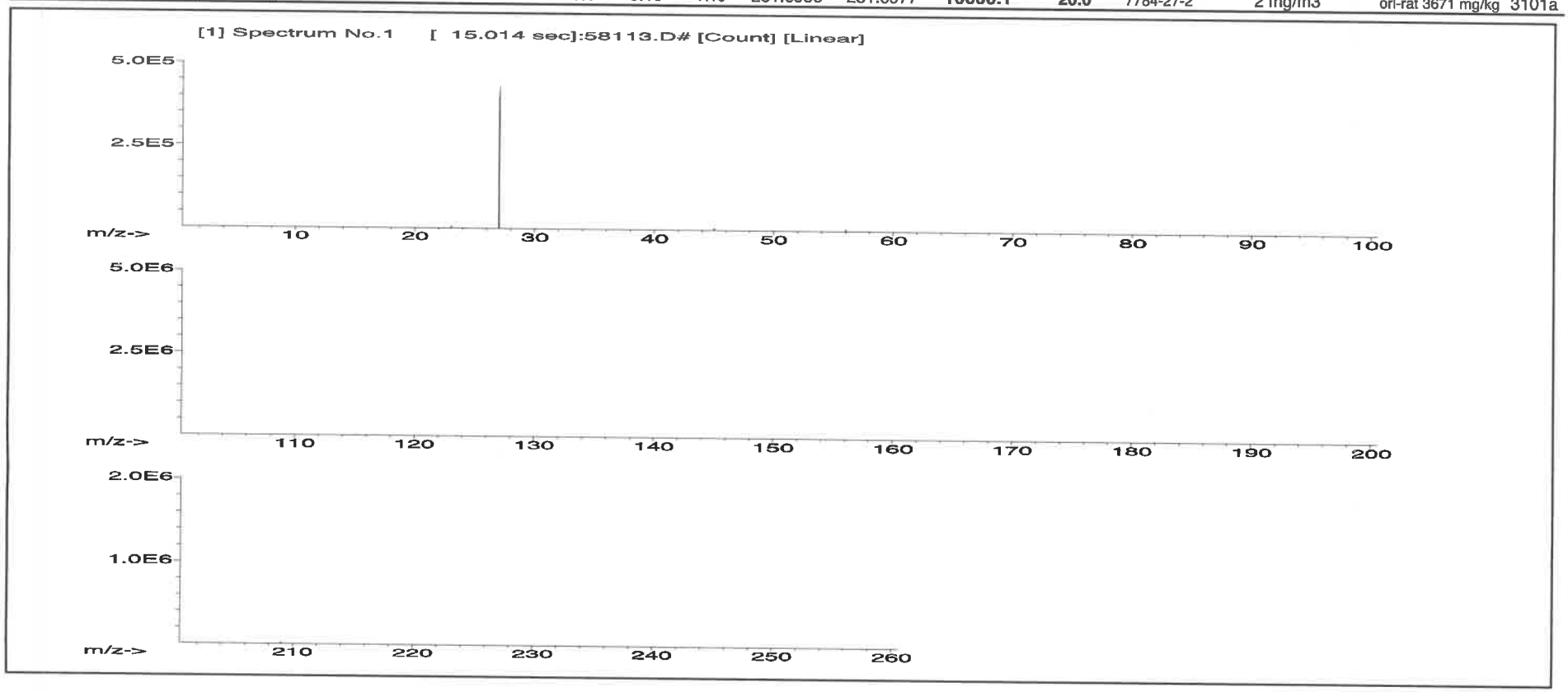
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AR-1539 Certificate Number
https://Absolutestandards.com

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.

The Quality Assurance Technical Support (QATS) contract is operated by APTIM Federal Services, LLC.

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

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

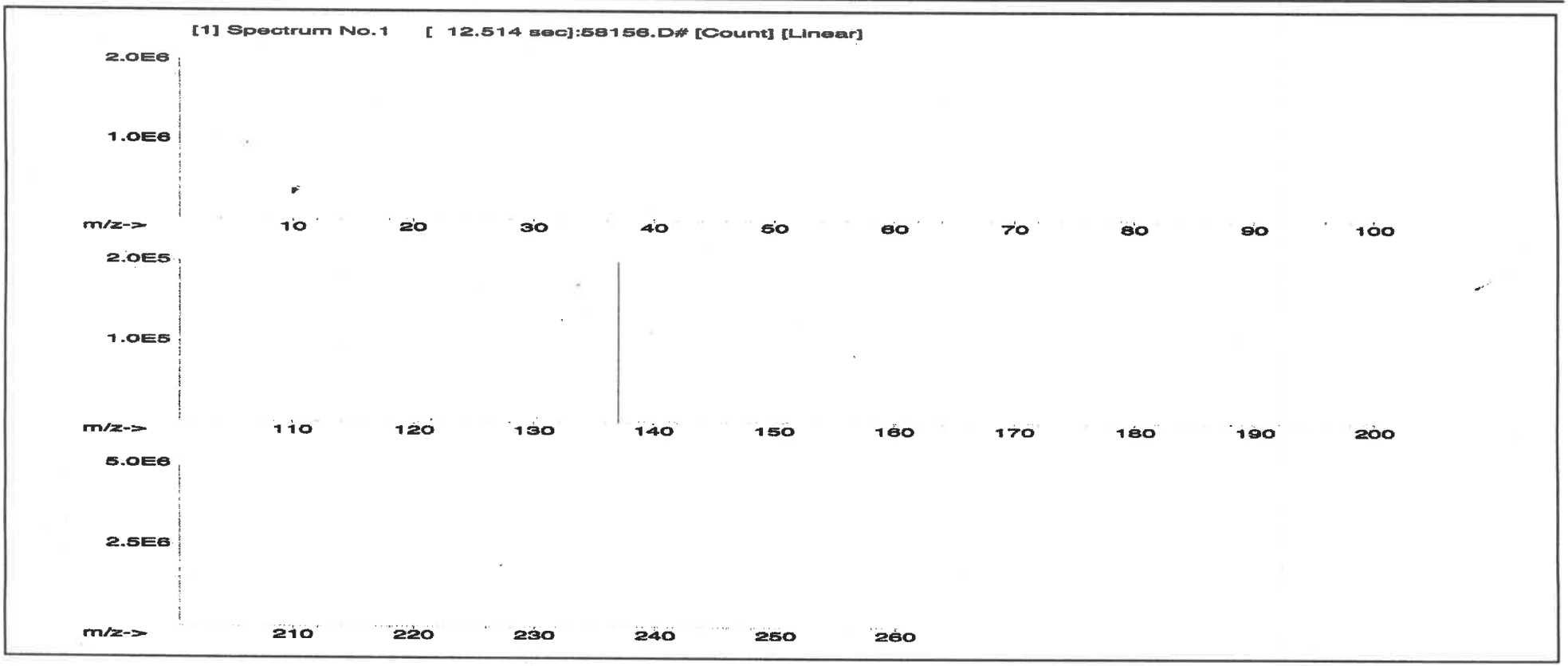
CERTIFIED WEIGHT REPORT:

		Lot #		
Part Number:	**57056**	**Solvent:**	20510011	Nitric Acid
Lot Number:	**072122**			
Description:	**Barium (Ba)**	2%	40.0 (mL)	Nitric Acid
Expiration Date:	072125			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	072122
Reviewed By:	Pedro L. Rentas	072122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Barium nitrate (Ba)	IN023	BAD022019A1	1000	99.999	0.10	52.3	3.82417	3.82426	**1000.0**	**2.0**	10022-31-8	0.5 mg/m3	orl-rat 355 mg/kg	3104a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	T	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* 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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AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

Part Number: 57103
Lot Number: 070622
Description: Lithium (Li)

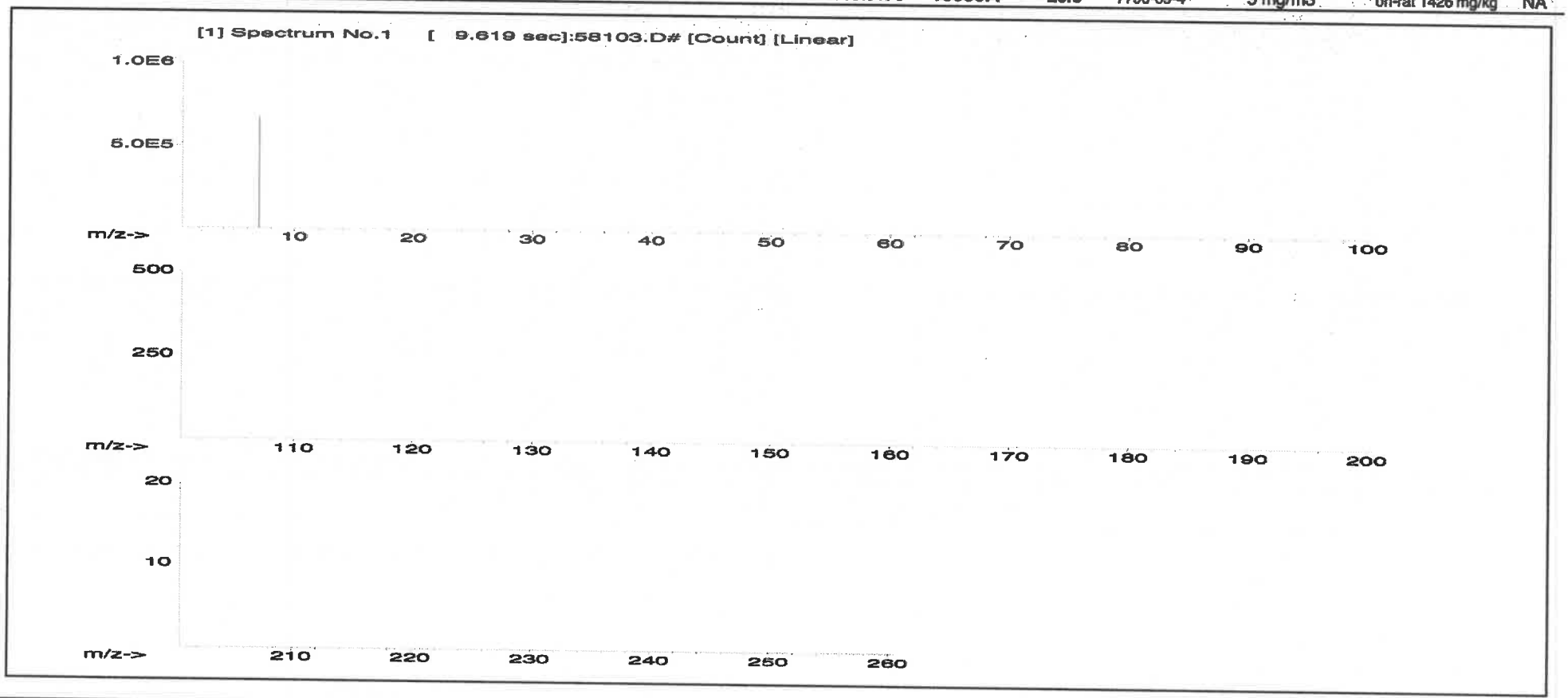
Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	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



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).

Absolute Standards, Inc.
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Certified Reference Material CRM

IN5497 - IN5498 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)

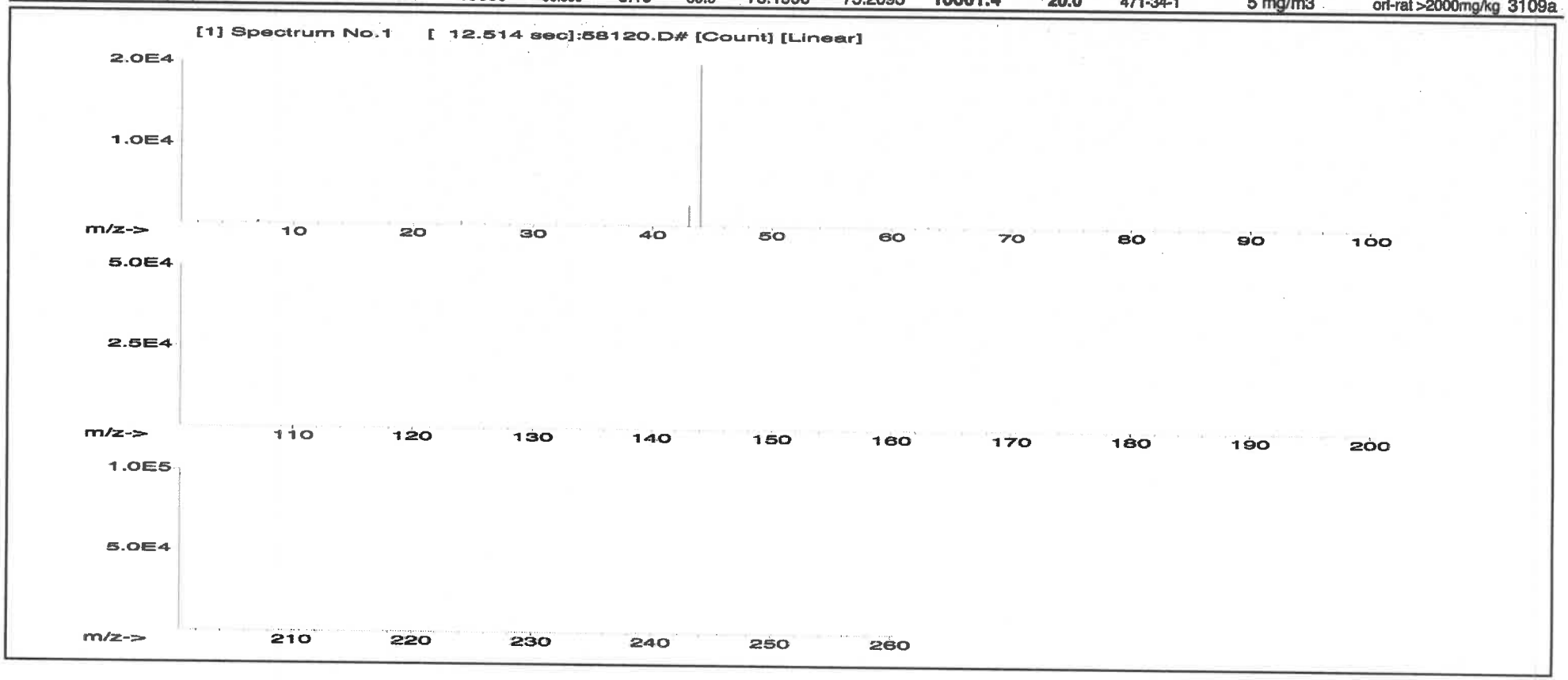
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	031523
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



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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IN5497 - IN5498 R: 03/17/23 BH

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CERTIFIED WEIGHT REPORT:

Part Number: 58120
Lot Number: 031523
Description: Calcium (Ca)

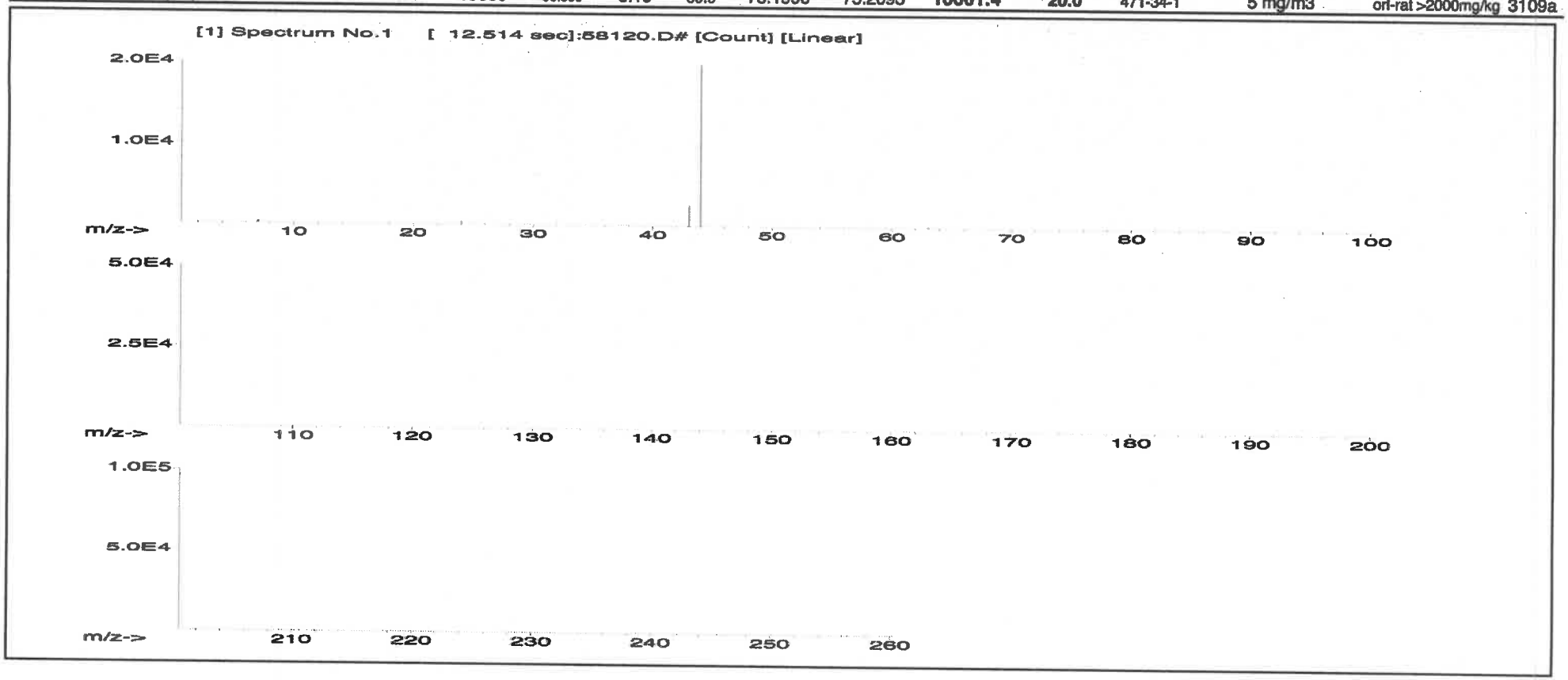
Expiration Date: 031526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.41 ± 0.058 Flask Uncertainty

		Lot #	
Solvent:	21110221	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	
	5E-05	Balance Uncertainty	

Giovanni Esposito

Formulated By:	Giovanni Esposito	031523
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



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

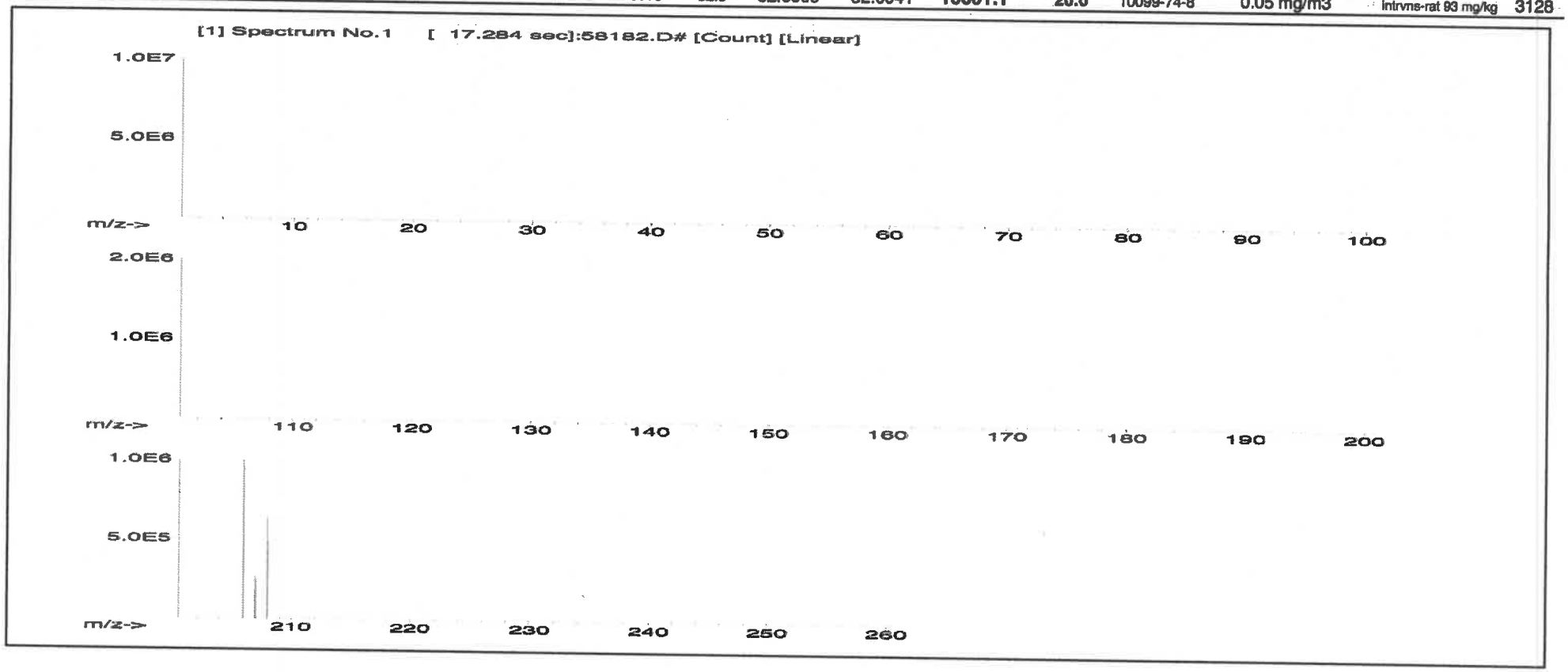
	Lot #		
Solvent:	20510011	Nitric Acid	
2%	40.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Giovanni Esposito

Formulated By:	Giovanni Esposito	061522
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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	T	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5514 , M5515 R: 03/17/23

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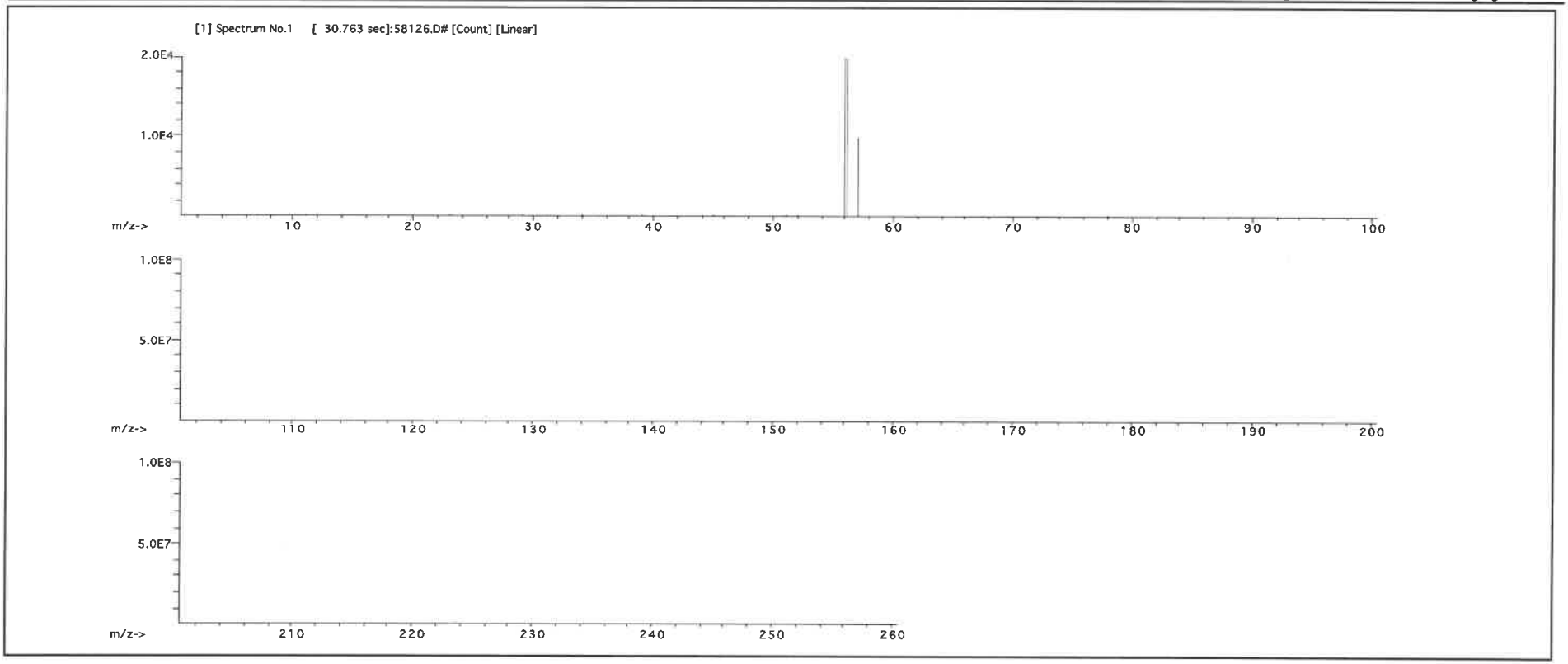
CERTIFIED WEIGHT REPORT:

Part Number:	**58126**		**Lot #**		
Lot Number:	**092122**	**Solvent:**	20510011	Nitric Acid	
Description:	**Iron (Fe)**		7.0%	350.0 (mL)	Nitric Acid
Expiration Date:	092125				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**10000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	5000.1	0.12	Flask Uncertainty		

Giovanni Esposito

Formulated By:	Giovanni Esposito	092122
Reviewed By:	Pedro L. Rentas	092122

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Iron (Fe)	IN346	2224912-500	10000	99.995	0.10	100.0	50.0034	50.0111	**10001.5**	**20.0**	7439-89-6	5 mg/m3	orl-rat 7500mg/kg	3126a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.10	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.10	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.05	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.10	Ge	<0.10	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.05
B	<0.02	Cu	<0.10	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* 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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M519. M520 (BH) R:03/17/23

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CERTIFIED WEIGHT REPORT:

Part Number: 58119
Lot Number: 120822
Description: Potassium (K)

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 3000.4

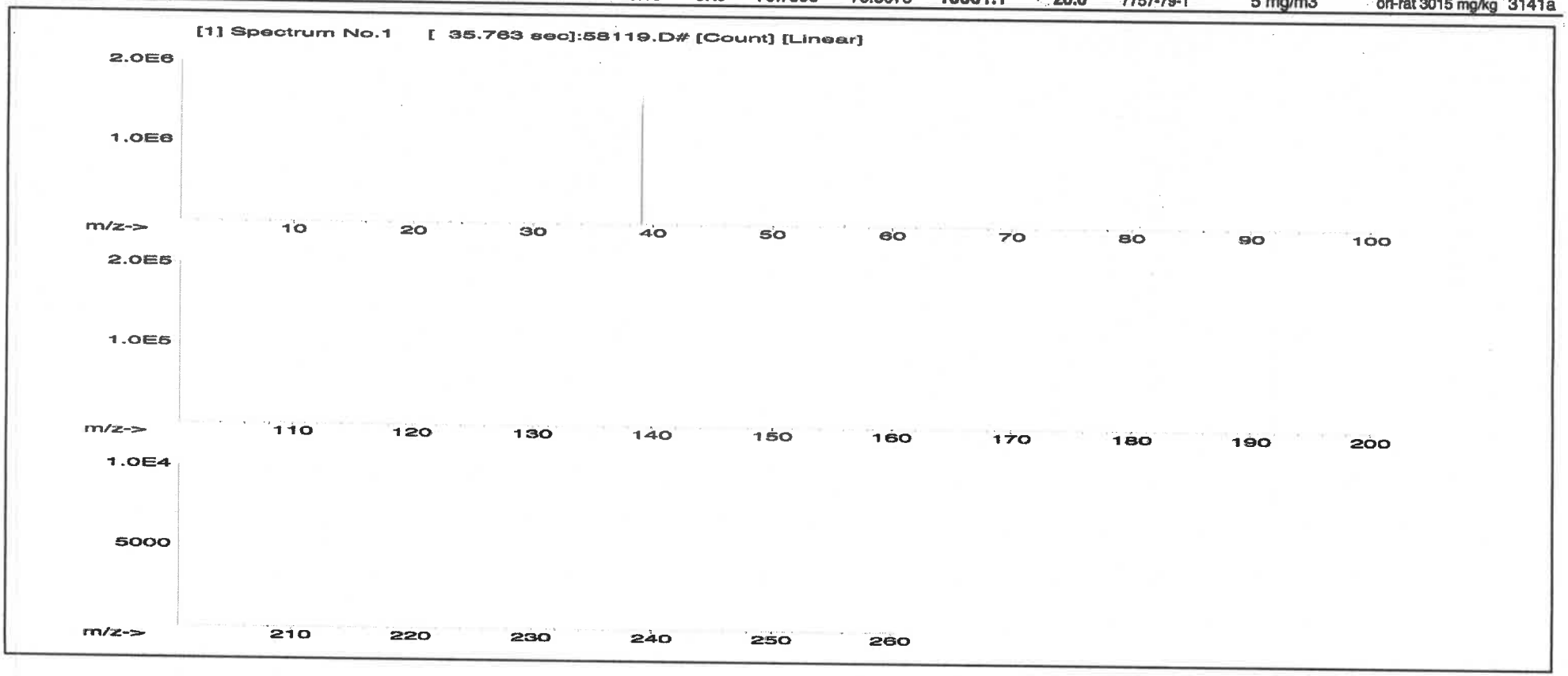
Lot #		
Solvent: 20510011		Nitric Acid
2%	60.0 (mL)	Nitric Acid

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	T	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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M5658 R ! 8/25/23

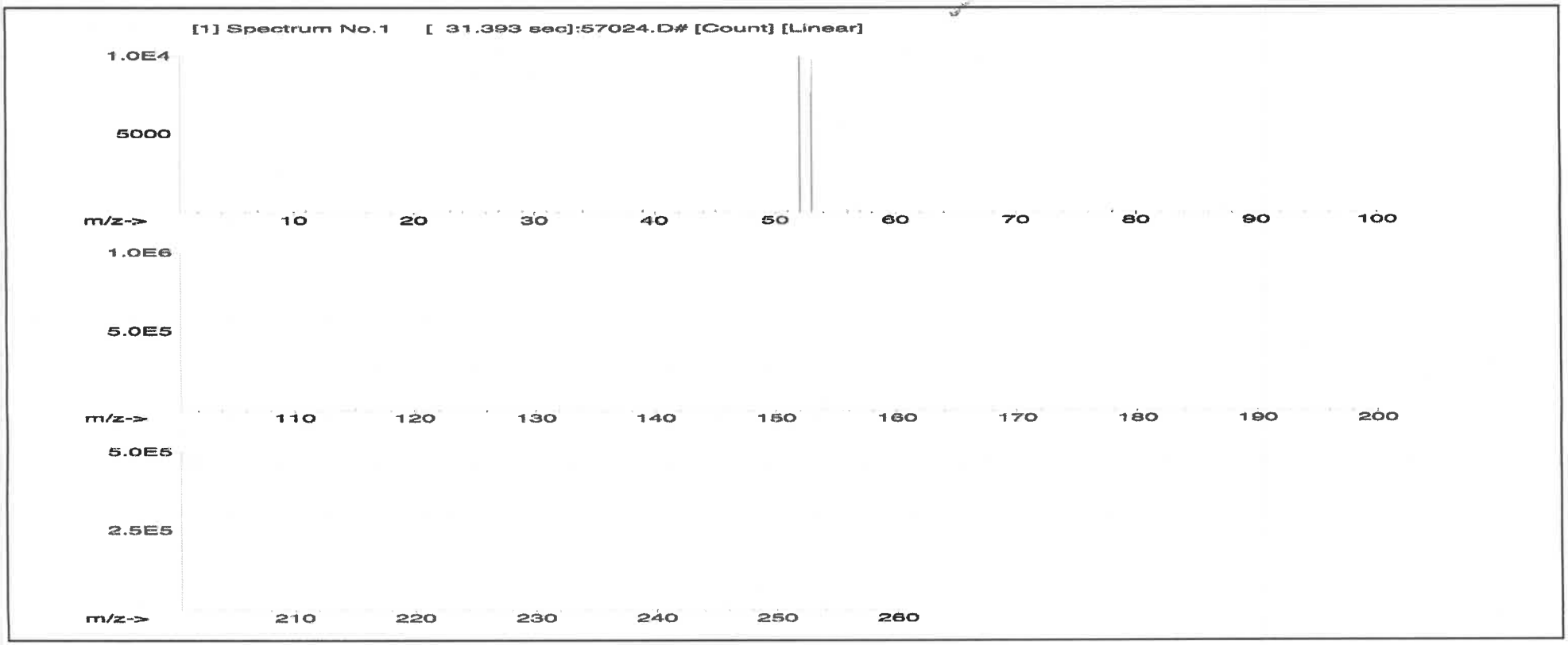
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58024**	21110221	Nitric Acid	
Lot Number:	**060523**			
Description:	**Chromium (Cr)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	060523
Reviewed By:	Pedro L. Rentas	060523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Chromium(III) nitrate nonahydrate (Cr)	58124	071122	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	7789-02-8	0.5 mg(Cr)/m3	orl-rat 3250 mg/kg	3112a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
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As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5697 R: 10/27/23

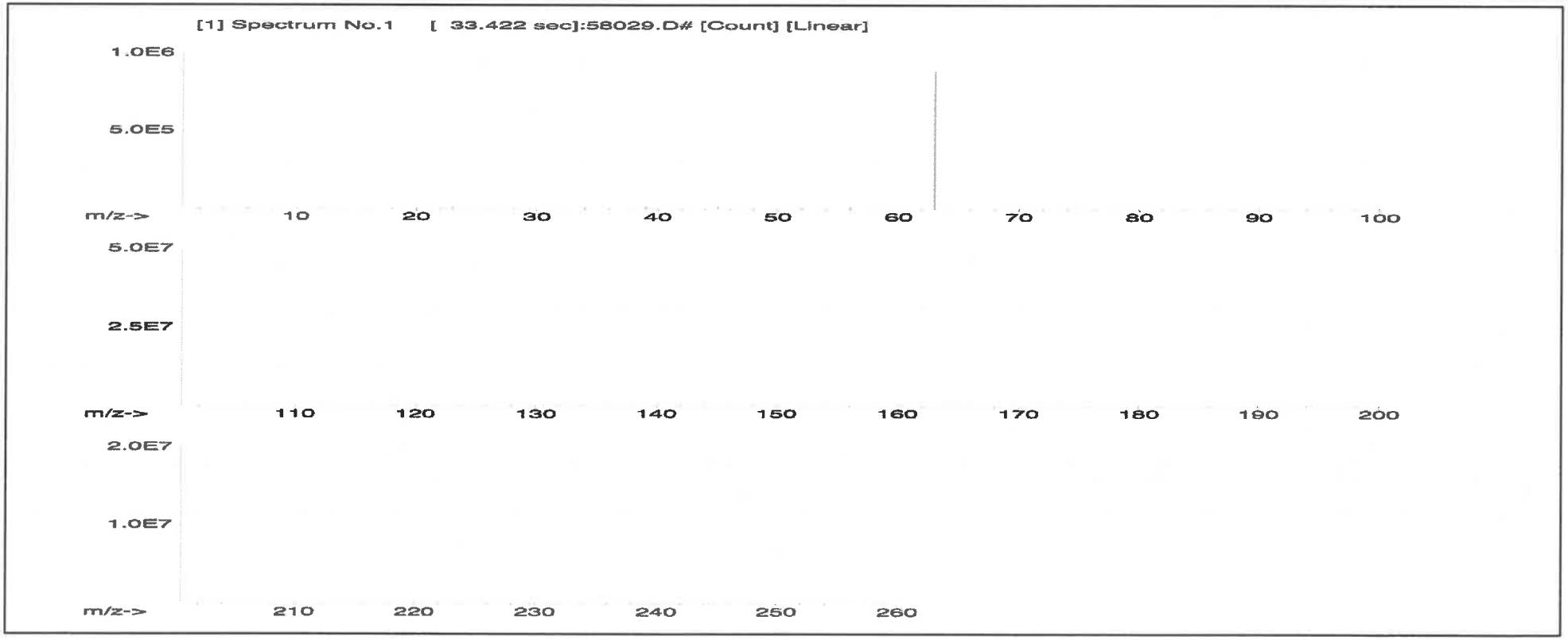
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**58029**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Copper (Cu)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Copper(II) nitrate trihydrate (Cu)	58129	100223	0.1000	200.0	0.084	1000	10000.1	**1000.0**	**2.2**	10031-43-3	1 mg/m3	orl-rat 794 mg/kg	3114



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* 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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M5648 R: 10/27/23

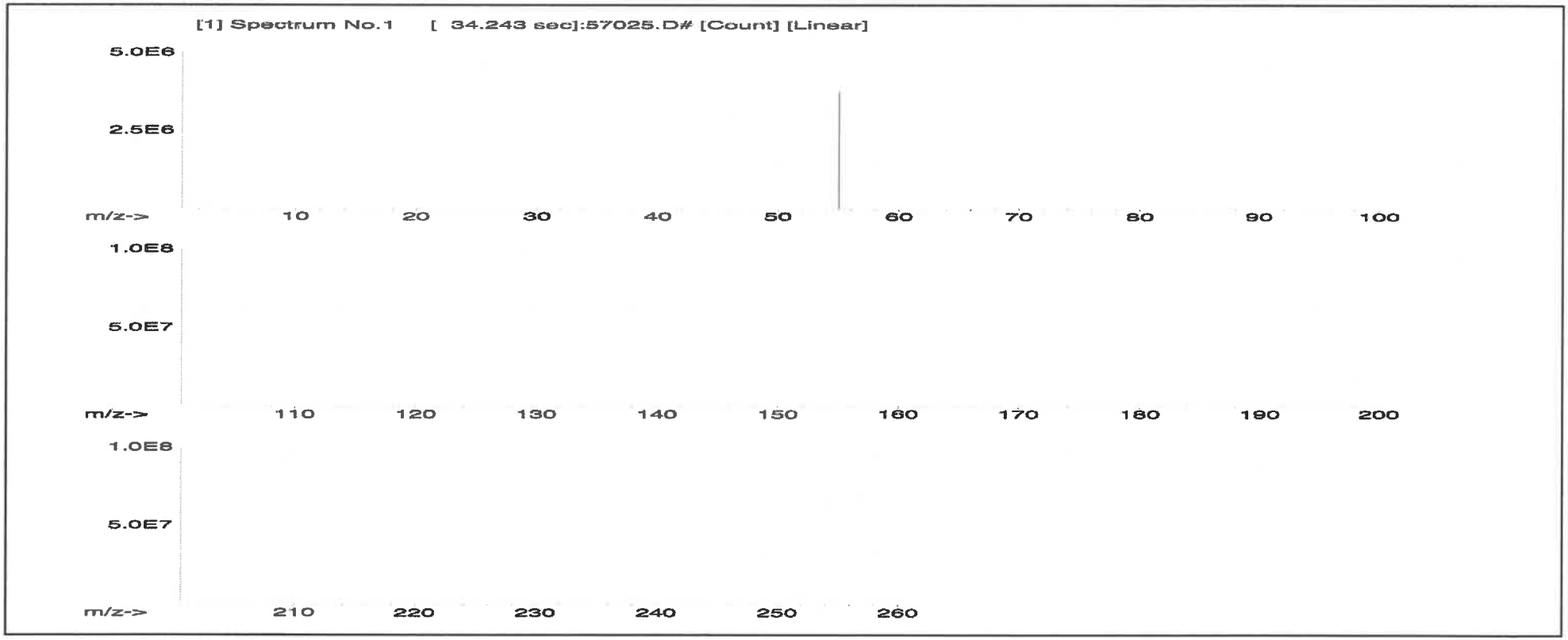
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CERTIFIED WEIGHT REPORT:

		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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	T	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5768 M5769 (BP) R:1/3/24

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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

M5768, M5769 (BP) R: 1/3/24

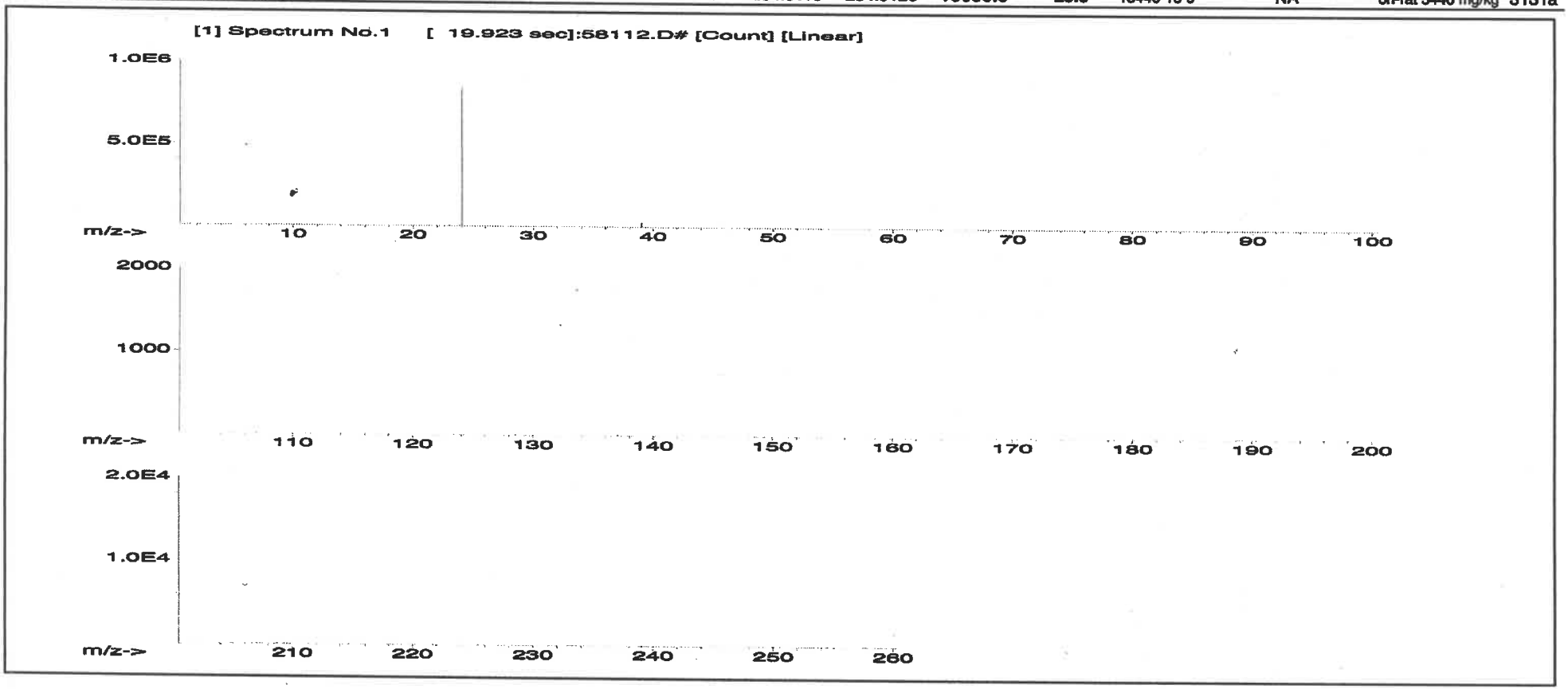
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid
		5E-05	Balance Uncertainty

Formulated By: Lawrence Barry 091823

Reviewed By: Pedro L. Rentas 091823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	ori-rat 5440 mg/kg	3131a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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M5768 M5769 (BP) R:1/3/24

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CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

M5768, M5769 (BP) R: 1/3/24

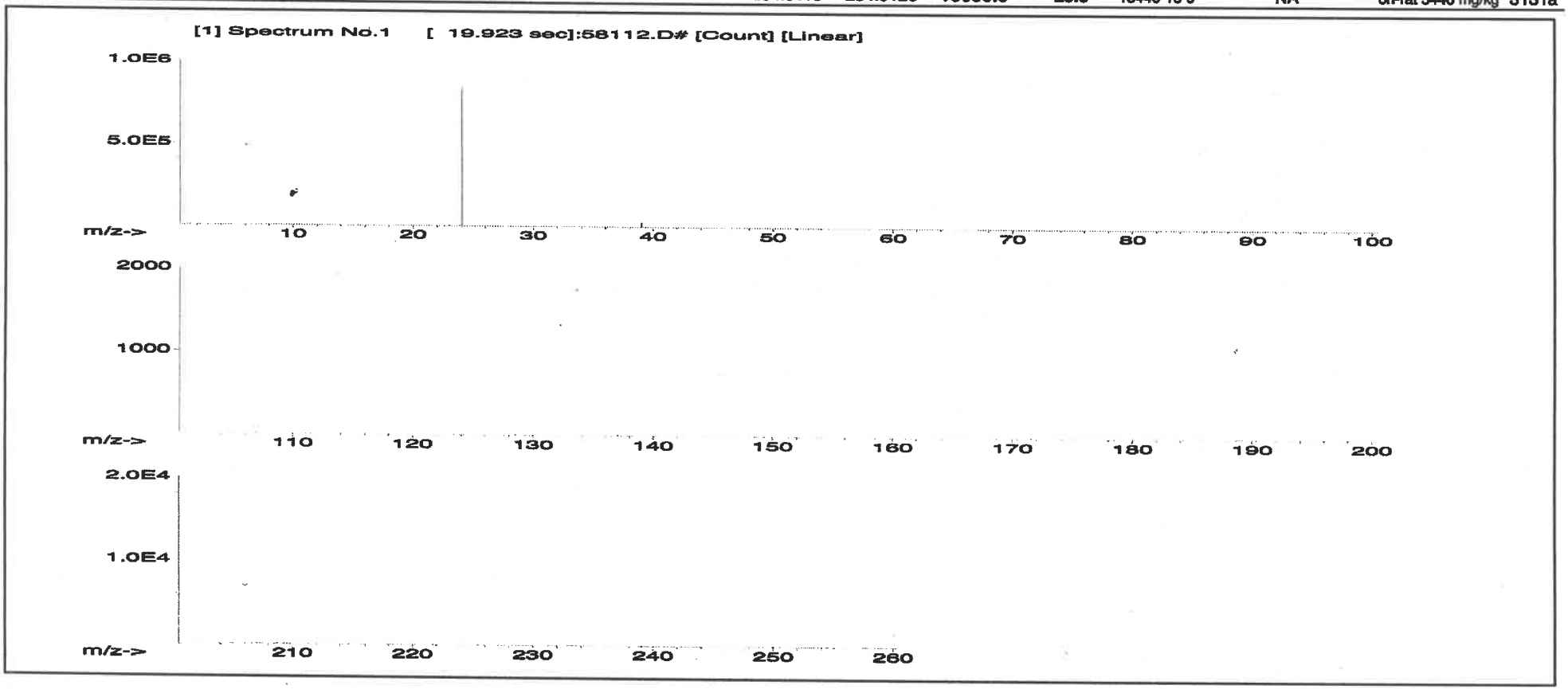
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

	Lot #		
Solvent:	24002546	Nitric Acid	
	2%	40.0 (mL)	Nitric Acid
		5E-05	Balance Uncertainty

Formulated By: Lawrence Barry 091823

Reviewed By: Pedro L. Rentas 091823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	IN030	MGD052023A1	10000	99.999	0.10	8.51	234.9118	234.9126	**10000.0**	**20.0**	13446-18-9	NA	ori-rat 5440 mg/kg	3131a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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R: 02/09/24 M5798

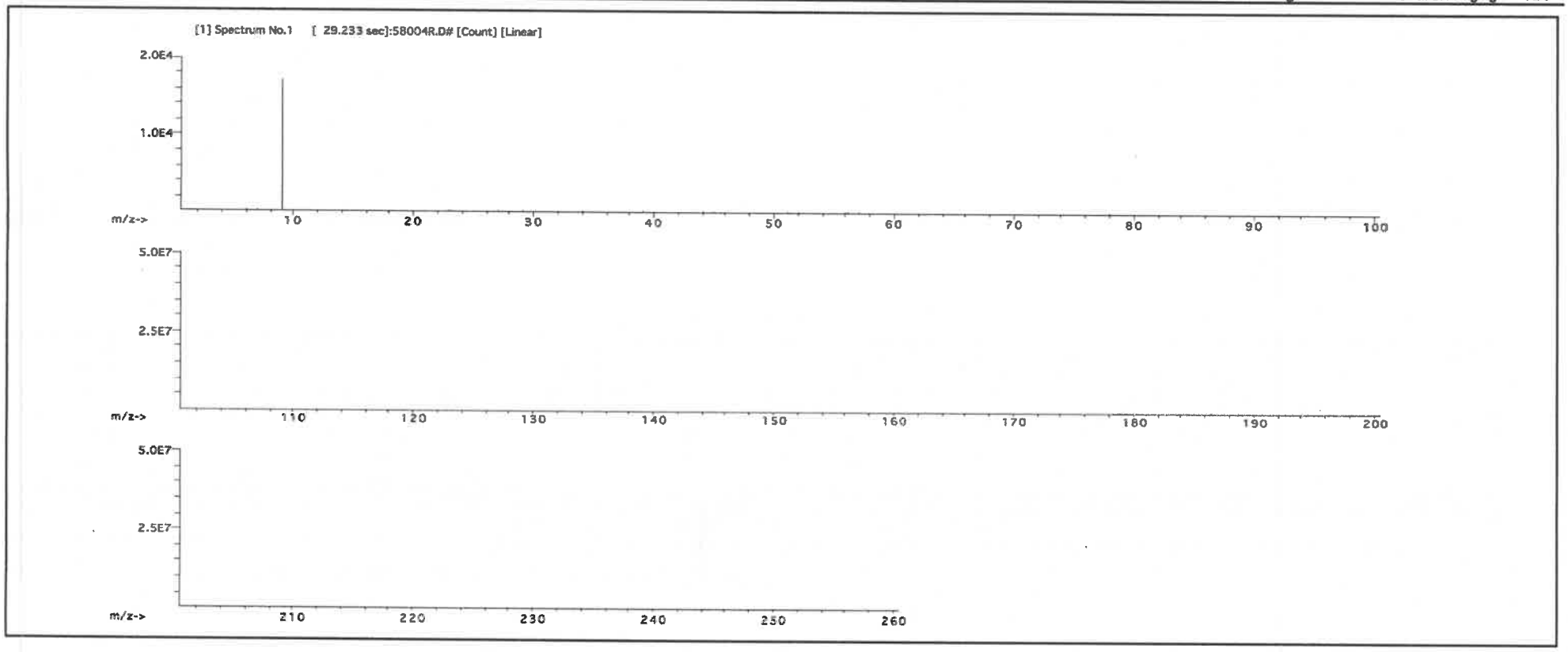
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57004**	24002546	Nitric Acid	
Lot Number:	**102523**			
Description:	**Beryllium (Be)**	2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	102526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty	

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	**1000.0**	**2.2**	13597-99-4	0.2ug/m3	intrvns-rat 3.16mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	T	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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R? 02/09/24 IV15799

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CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

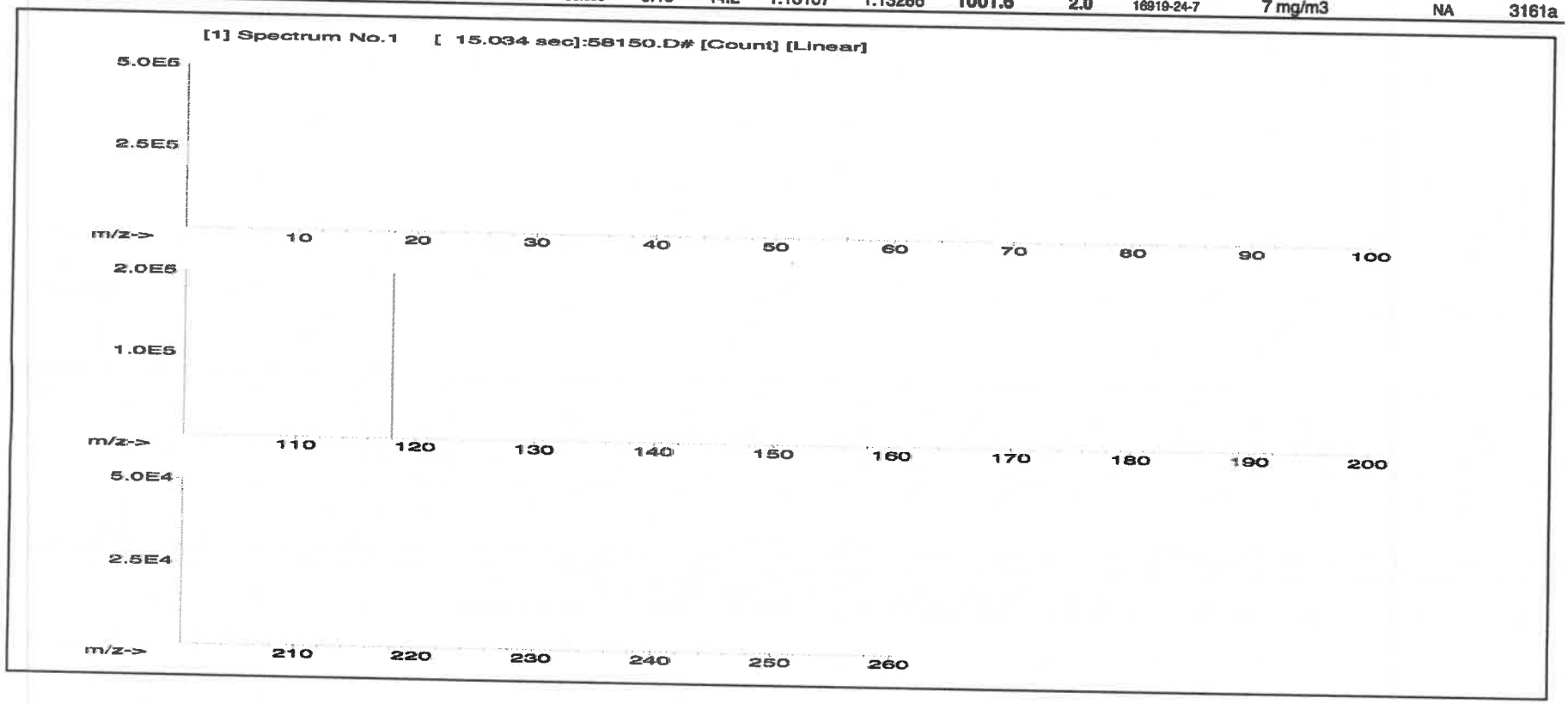
Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 499.93

	Lot #	
Solvents:	21110221	Nitric Acid
	22D0562008	Hydrochloric acid
2%	10.0	Nitric Acid
6%	30.0	Hydrochloric acid
	(mL)	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium hexafluorostannate(IV) (Sn)	IN010	SND042023A1	1000	99.999	0.10	44.2	1.13107	1.13286	**1001.6**	**2.0**	16919-24-7	7 mg/m3	NA	3161a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<500	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	T	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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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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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 IM5800 BH

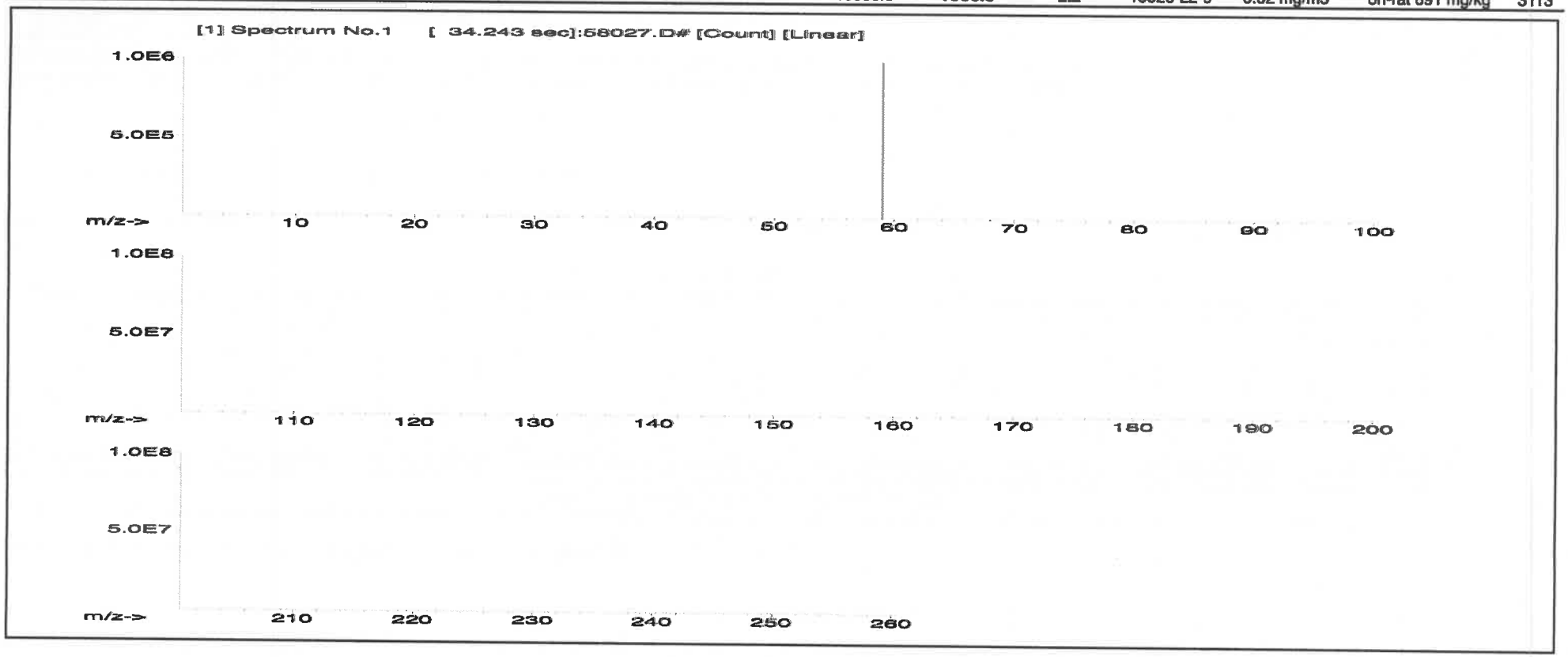
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:		
Part Number:	**57027**	24002546	Nitric Acid		
Lot Number:	**091923**				
Description:	**Cobalt (Co)**	2.0%	40.0 (mL)	Nitric Acid	
Expiration Date:	091926				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091923
Reviewed By:	Pedro L. Rentas	091923

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Cobalt(II) nitrate hexahydrate (Co)	58127	050923	0.1000	200.0	0.084	1000	10000.0	**1000.0**	**2.2**	10026-22-9	0.02 mg/m3	orl-rat 691 mg/kg	3113



Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	T	Gé	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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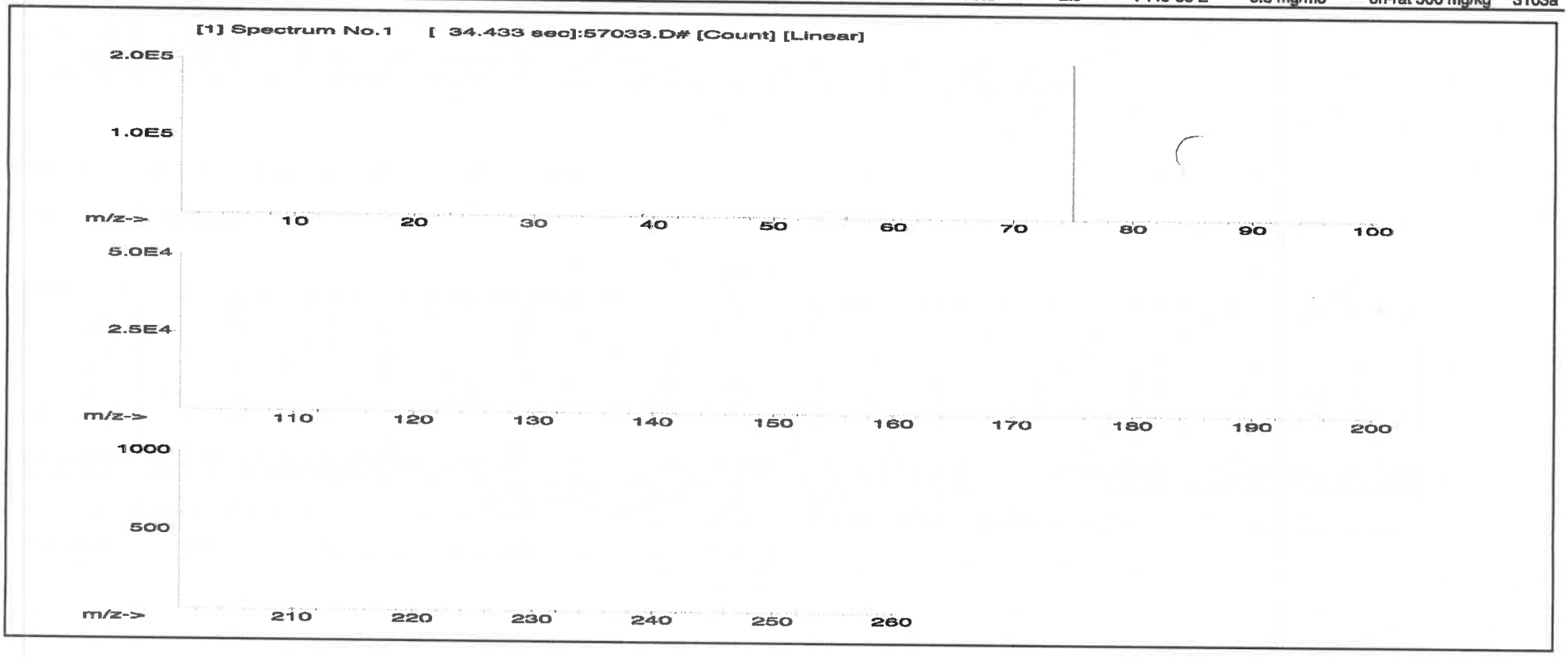
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CERTIFIED **WEIGHT** REPORT:

		Lot #	Solvent:		
Part Number:	**57033**	24002546	Nitric Acid		
Lot Number:	**111323**				
Description:	**Arsenic (As)**	2.0%	80.0 (mL)	Nitric Acid	
Expiration Date:	111326				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Volume shown below was diluted to (mL):	4000.0	0.06	Flask Uncertainty		

Formulated By:	Lawrence Barry	111323
Reviewed By:	Pedro L. Rentas	111323

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Arsenic (As)	58133	020522	0.1000	400.0	0.084	1000	10001.0	**1000.0**	**2.0**	7440-38-2	0.5 mg/m3	orl-rat 500 mg/kg	3103a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	T	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge*	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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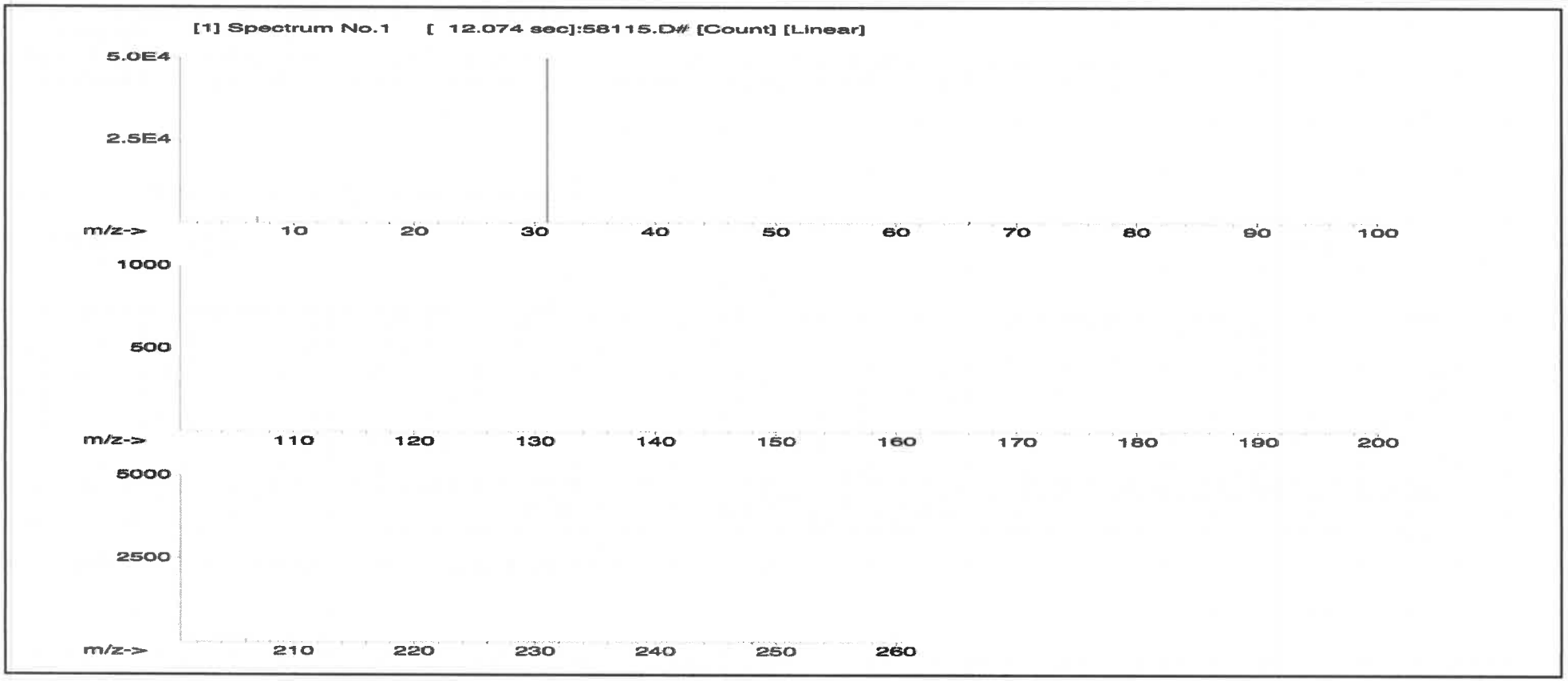
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CERTIFIED WEIGHT REPORT:

			Lot #	
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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R: 02/09/24 M5816

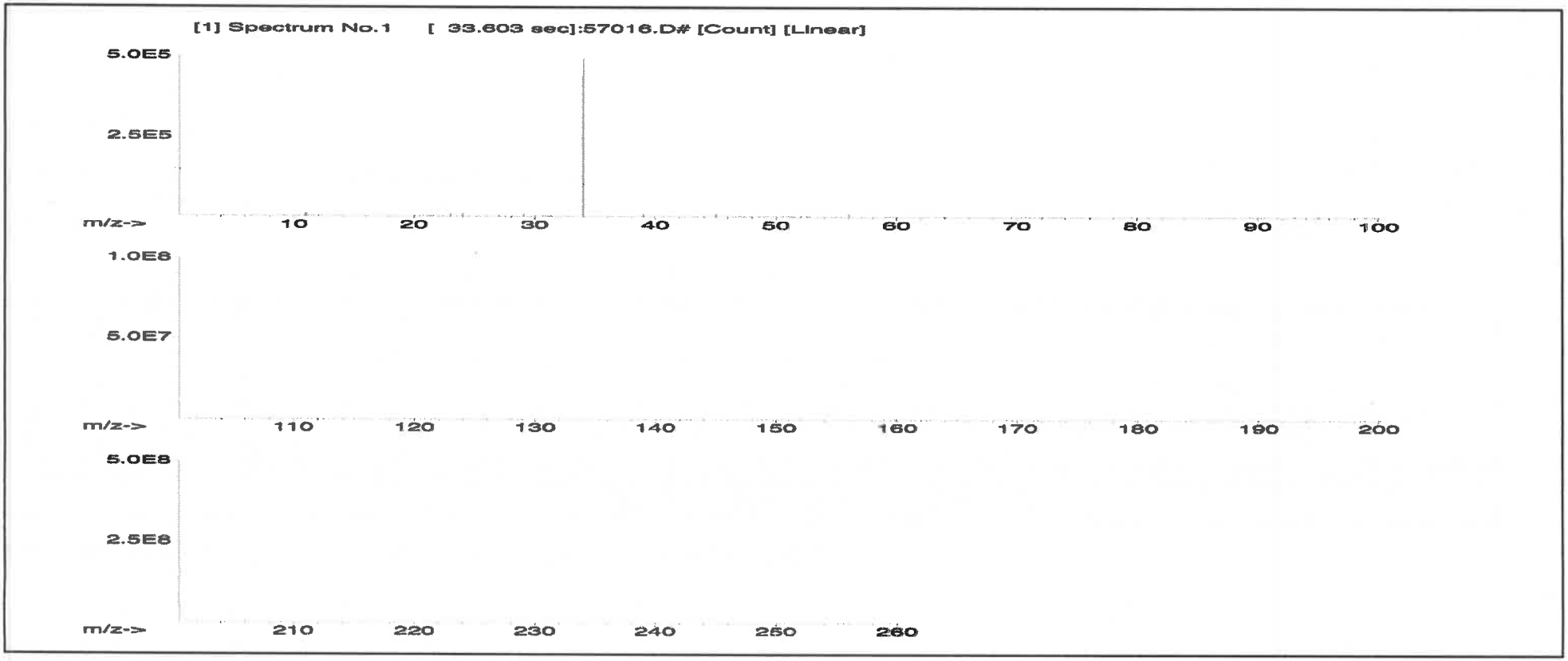
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CERTIFIED WEIGHT REPORT:

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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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CERTIFIED WEIGHT REPORT:

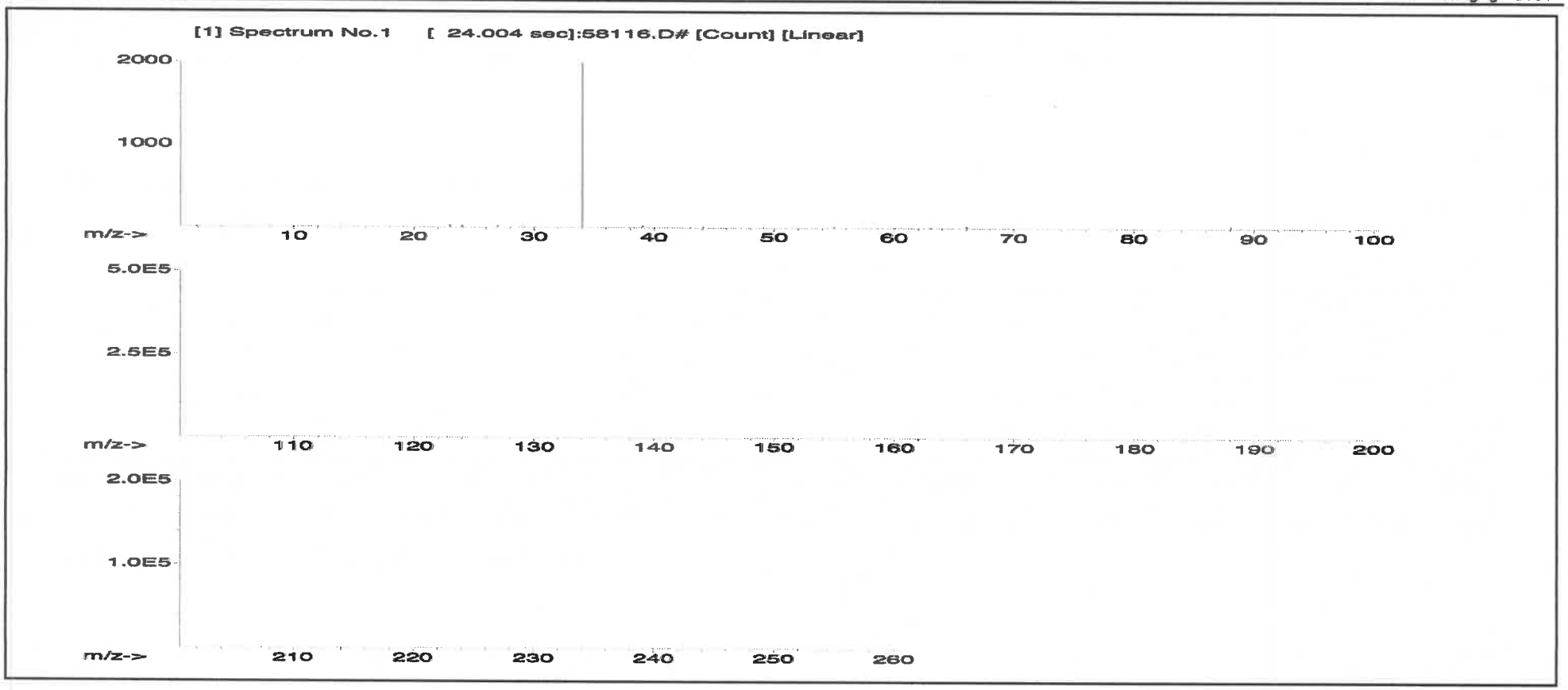
Part Number: 57116
Lot Number: 071123
Description: Sulfur (S)

Lot #
Solvent: 071123 ASTM Type 1 Water

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB 5E-05 Balance Uncertainty
Weight shown below was diluted to (mL): 1999.48 0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071123
Reviewed By:	Pedro L. Rentas	071123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium sulfate (S)	IN117	SLBR7225V	10000	99.9	0.10	24.3	82.4675	82.4682	**10000.1**	**20.0**	7783-20-2	NA	orl-rat 4250mg/kg	3181



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	T	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



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* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 02/09/24 M.5818

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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

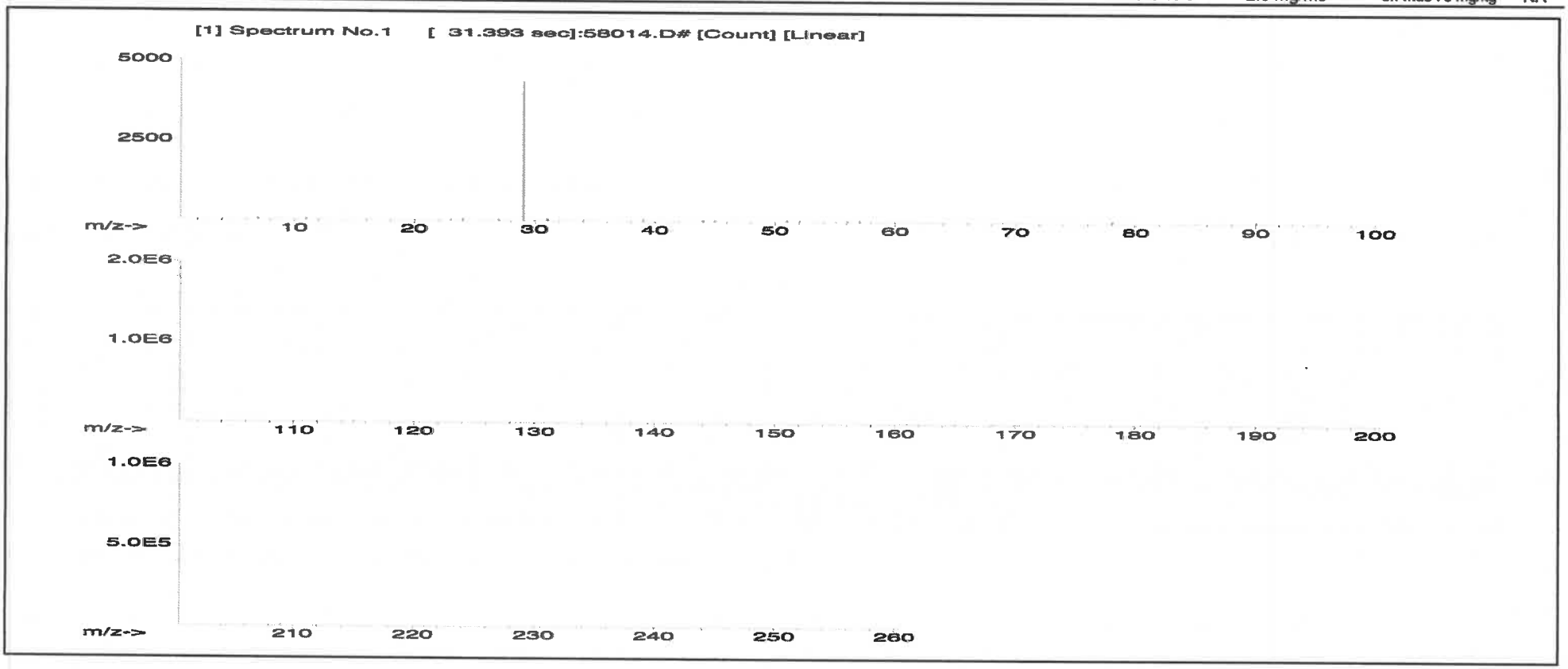
Aleah O'Brady

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



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:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

R: 02/09/24 M5819

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

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

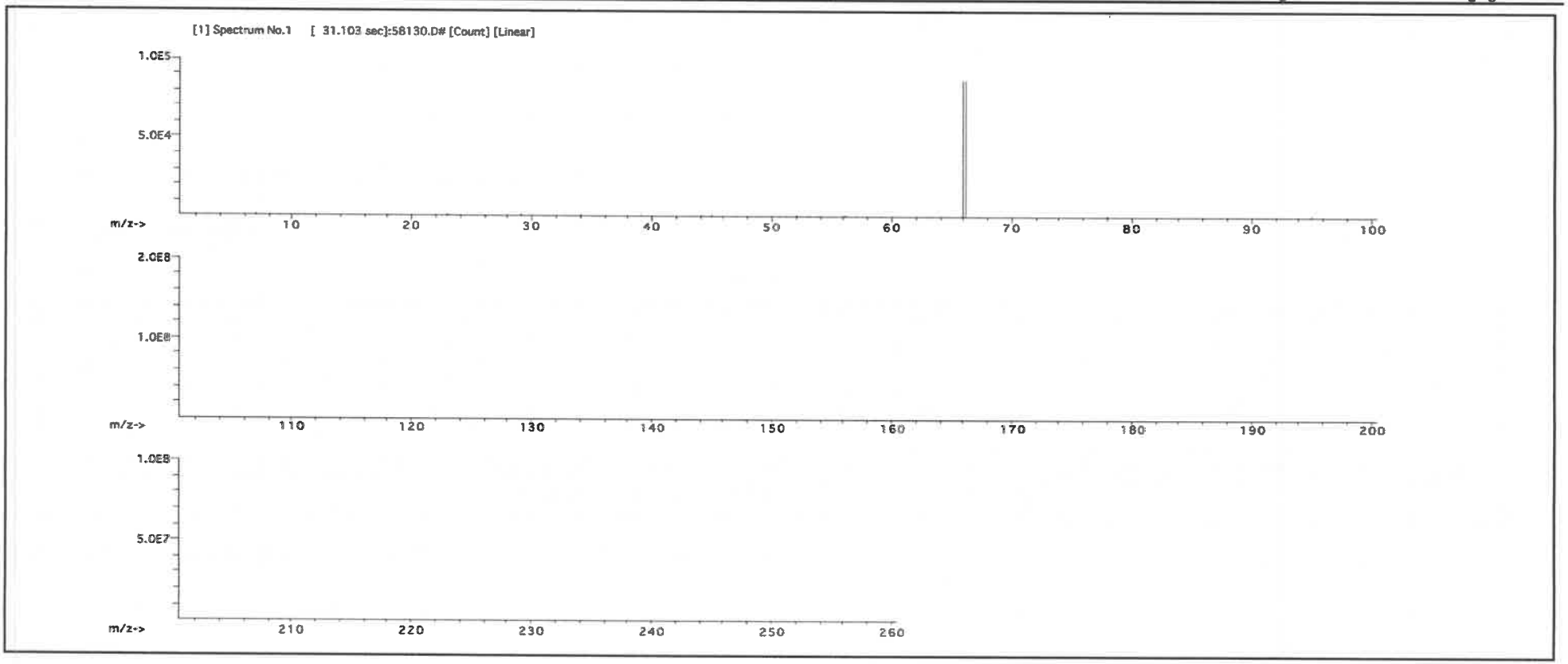
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

		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



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	T
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

R: 02/09/24 M5820

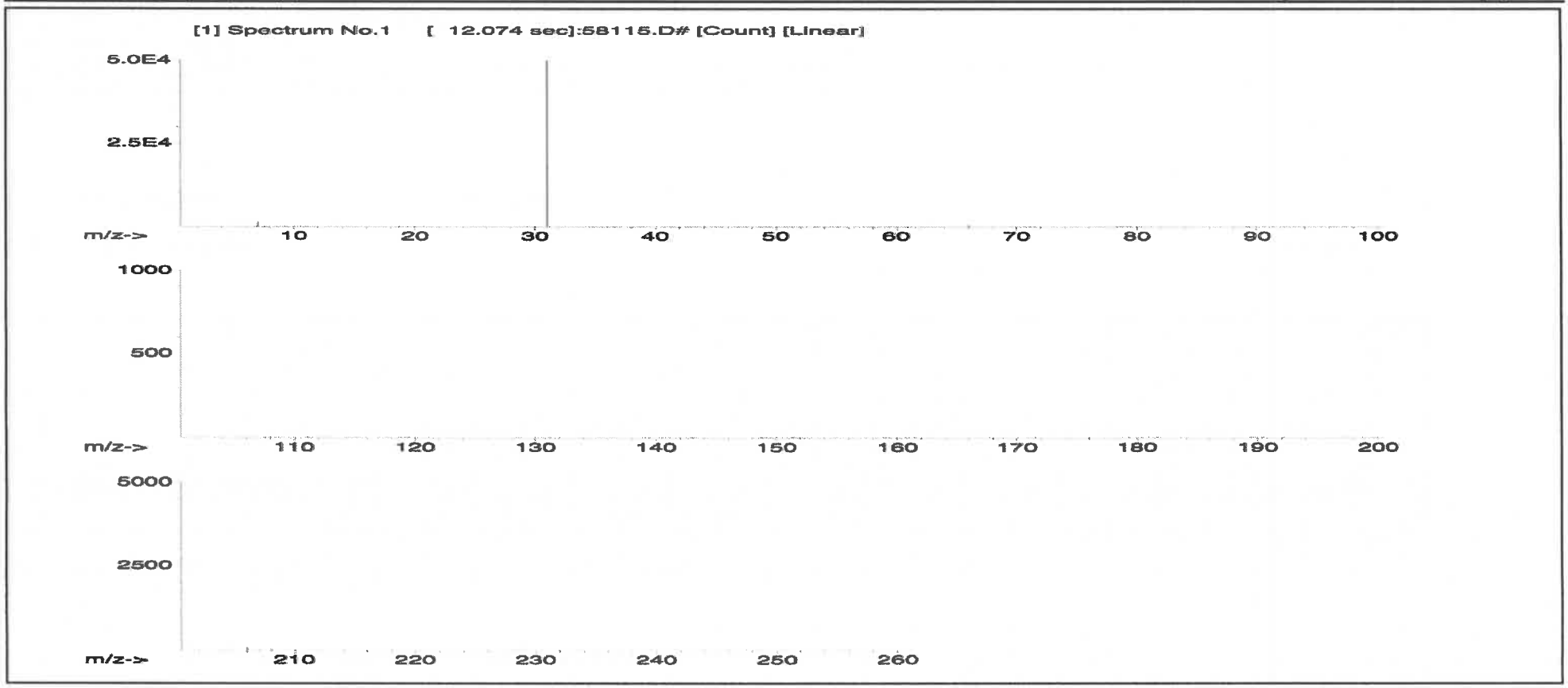
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57015**		**Lot #**		
Lot Number:	**091123**	**Solvent:**	24002546	Nitric Acid	
Description:	**Phosphorous (P)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	091126				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.02	0.058	Flask Uncertainty		

Formulated By:	Lawrence Barry	091123
Reviewed By:	Pedro L. Rentas	091123

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium dihydrogen phosphate (P)	IN008	PV082019A1	1000	99.999	0.10	27.5	7.2729	7.2730	**1000.0**	**2.0**	7722-76-1	5 mg/m3	orl-rat >2000mg/k	3186



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	T	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Certified by:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certificate of Analysis

M5959 R: 6/14/24.

300 Technology Drive
Christiansburg, VA 24073 USA
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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGY10
Lot Number:	V2-Y740548
Matrix:	2% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Yttrium
Starting Material:	Yttrium Oxide
Starting Material Lot#:	2661 and 06230520YL
Starting Material Purity:	99.9984%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10000 ± 30 µg/mL

Density: 1.032 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10011 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #2	**9997 ± 50 µg/mL** ICP Assay NIST SRM 3167a Lot Number: 190730
Assay Method #3	**9984 ± 31 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.004600	M	Eu		0.009037	M	Na		0.086360	M	Se	<	0.005200	M	Zn		0.030125
M	Al		0.014862	O	Fe		0.002410	M	Nb	<	0.000570	O	Si		0.024100	O	Zr	<	0.002600
M	As	<	0.003500	M	Ga	<	0.000570	M	Nd		0.000923	M	Sm		0.000461				
M	Au	<	0.001700	M	Gd	<	0.003500	M	Ni	<	0.005700	M	Sn	<	0.002300				
O	B		0.002209	M	Ge	<	0.005200	M	Os	<	0.001200	M	Sr	<	0.004600				
O	Ba	<	0.002500	M	Hf	<	0.000570	n	P	<		M	Ta	<	0.000570				
O	Be	<	0.001400	M	Hg	<	0.000570	M	Pb		0.005020	M	Tb		0.001044				
M	Bi	<	0.003500	M	Ho		0.009037	M	Pd	<	0.005100	M	Te	<	0.002300				
O	Ca		0.009841	M	In	<	0.002300	M	Pr	<	0.002300	M	Th	<	0.000570				
M	Cd	<	0.000570	M	Ir	<	0.000570	M	Pt	<	0.000570	M	Ti	<	0.003500				
M	Ce	<	0.002300	O	K		0.018677	M	Rb	<	0.000570	M	Tl	<	0.000570				
M	Co	<	0.000570	M	La		0.000461	M	Re	<	0.000570	M	Tm	<	0.003500				
M	Cr	<	0.004000	O	Li	<	0.009300	M	Rh	<	0.008000	M	U	<	0.000570				
M	Cs	<	0.000570	M	Lu		0.000582	M	Ru	<	0.000570	M	V		0.001265				
M	Cu		0.002610	O	Mg		0.001486	n	S	<		M	W	<	0.002300				
M	Dy		0.003815	M	Mn		0.000582	M	Sb		0.005422	s	Y	<					
M	Er		0.003615	M	Mo	<	0.005700	M	Sc	<	0.001200	M	Yb		0.001827				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 88.91 +3 6 Y(OH)(H2O)x+2

Chemical Compatibility -Soluble in HCl, H2SO4 and HNO3. Avoid HF, H3PO4 and neutral to basic media. Stable with most metals and inorganic anions forming an insoluble carbonate, oxide, oxalate, and fluoride. Avoid mixing with elements / solutions containing moderate amounts of fluoride.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

Y Containing Samples (Preparation and Solution) - Metal (Soluble in acids); Oxide (Dissolve by heating in H2O/ HNO3); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Dry ash and dissolve in 1:1 H2O / HCl or HNO3).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 89 amu	0.8 ppt	N/A	73Ge16O, 178Hf+2
ICP-OES 360.073 nm	0.005 / 0.000036 µg/mL	1	Ce, Th
ICP-OES 371.030 nm	0.004 / 0.00007 µg/mL	1	Ce
ICP-OES 377.433 nm	0.005 / 0.0009 µg/mL	1	Ta, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 20, 2024

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 20, 2029

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Muzzammil Khan
Stock Laboratory Supervisor



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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Certified Reference Material CRM

M5960 KK R. 6/11/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57028
Lot Number: 041124
Description: Nickel (Ni)

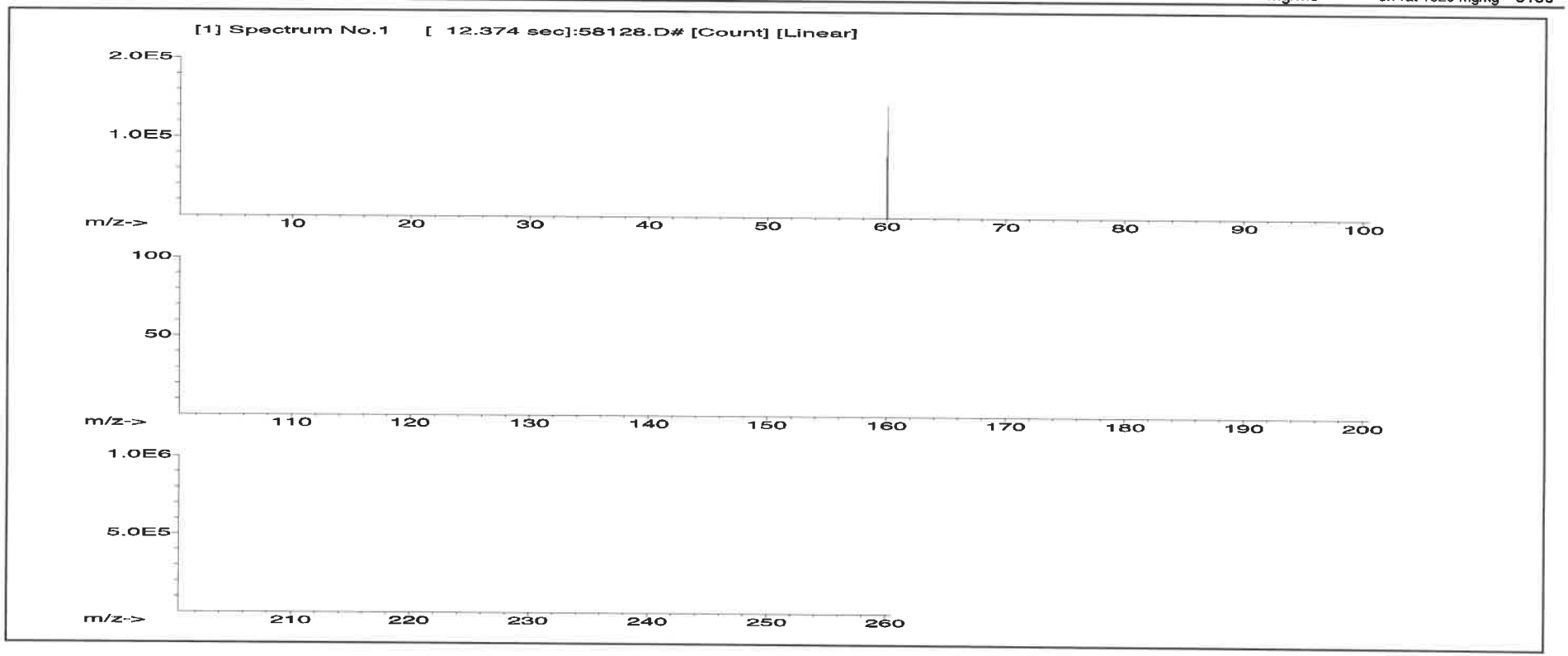
Expiration Date: 041127
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 249.85

	Lot #		
Solvent:	24002546	Nitric Acid	
2%	5.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.002 Flask Uncertainty

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	**Actual Conc. (µg/mL)**	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Nickel(II) nitrate hexahydrate (Ni)	IN033	NIM052023A1	1000	99.999	0.10	20.2	1.2369	1.2369	**1000.0**	**2.0**	13478-00-7	1 mg/m3	orl-rat 1620 mg/kg	3136



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

M5962 R! 06/14/24.

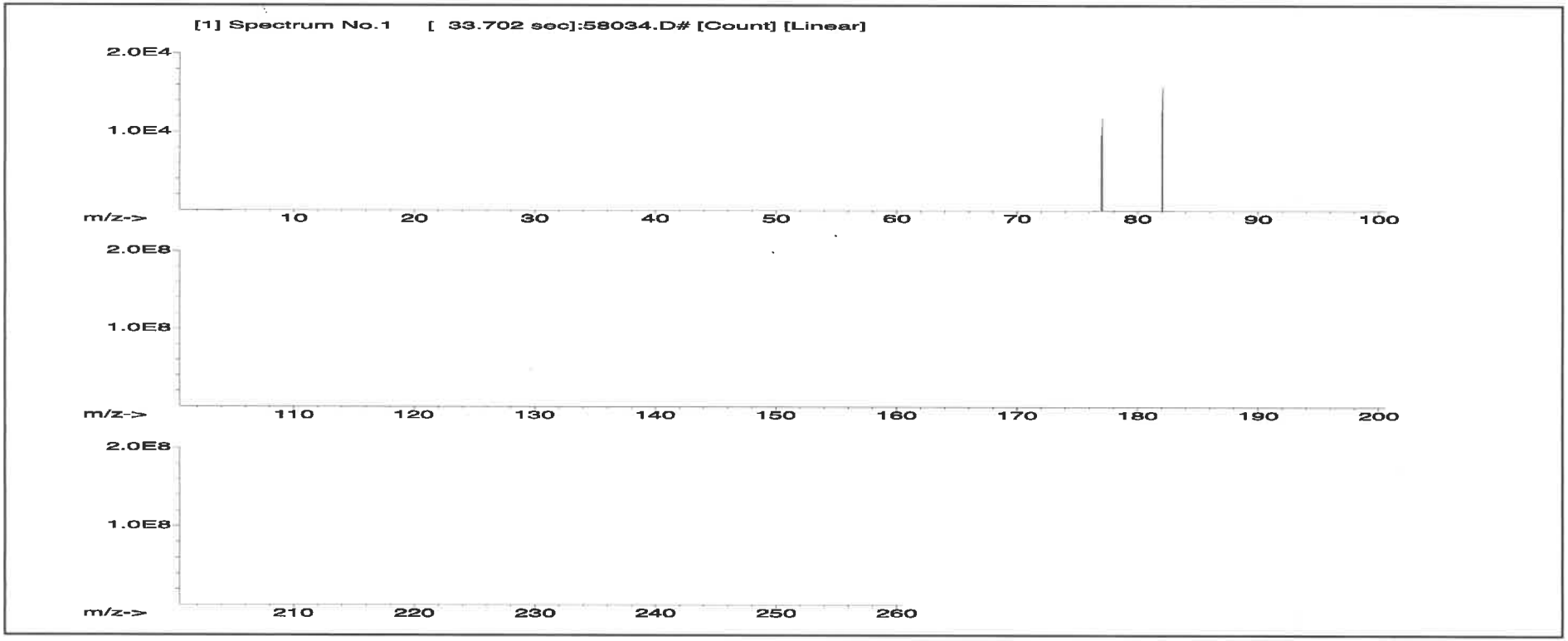
ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57034**	24002546	Nitric Acid	
Lot Number:	**060624**			
Description:	**Selenium (Se)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	060627			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty	

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rentas	060624

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Selenium (Se)	58134	071223	0.1000	200.0	0.084	1000	10002.5	**1000.0**	**2.2**	7782-49-2	0.2 mg/m3	orl-rat 6700 mg/kg	3149



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																		
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	T	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M5970, M5971 R: 7/01/24

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

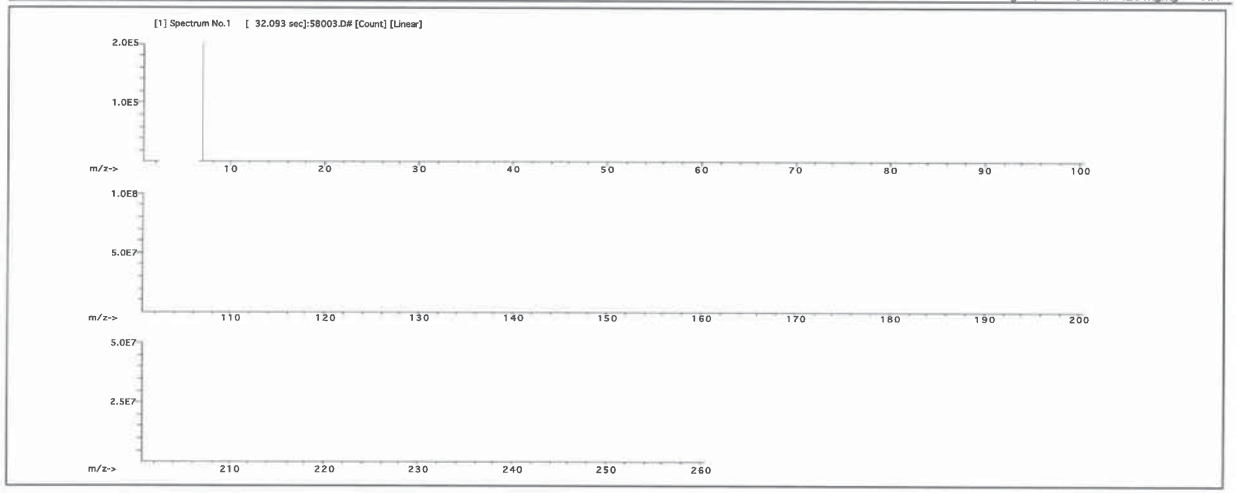
CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:
Part Number:	**57003**	24002546	Nitric Acid
Lot Number:	**062124**		
Description:	**Lithium (Li)**		
		2.0%	5.0 (mL) Nitric Acid
Expiration Date:	062127		
Recommended Storage:	Ambient (20 °C)		
Nominal Concentration (µg/mL):	**1000**		
NIST Test Number:	6UTB	5E-05 Balance Uncertainty	
Volume shown below was diluted to (mL):	250.11	0.016 Flask Uncertainty	

Giovanni Esposito
Formulated By: Giovanni Esposito 062124

Pedro Rentas
Reviewed By: Pedro L. Rentas 062124

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Lithium nitrate (Li)	58103	070622	0.1000	25.0	0.004	1000	10000.4	**1000.0**	**2.0**	7790-69-4	5 mg/m3	orl-rat 1426 mg/kg	NA



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	T	Ni	<0.02	Pr	<0.02	Sc	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* 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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M5976, M5977
R: 02/22/24

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F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGMO1
Lot Number:	T2-MO720876
Matrix:	H2O tr. NH4OH
Value / Analyte(s):	1 000 µg/mL ea: Molybdenum
Starting Material:	Ammonium Molybdate
Starting Material Lot#:	2361
Starting Material Purity:	99.9893%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 998 ± 7 µg/mL

Density: 1.000 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **998 ± 4 µg/mL**
ICP Assay NIST SRM 3134 Lot Number: 130418

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance.

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000590	M	Eu	<	0.000300	M	Na		0.000879	M	Se	<	0.008000	M	Zn		0.000598
M	Al		0.000563	M	Fe	<	0.006500	M	Nb	<	0.029000	i	Si	<		M	Zr	<	0.001800
M	As	<	0.002100	M	Ga	<	0.000300	i	Nd	<		M	Sm	<	0.000300				
M	Au	<	0.000300	M	Gd	<	0.000300	M	Ni	<	0.008000	M	Sn	<	0.008900				
M	B	<	0.003300	M	Ge	<	0.000300	M	Os	<	0.000590	M	Sr		0.000175				
M	Ba		0.001689	M	Hf	<	0.001800	i	P	<		M	Ta	<	0.004200				
M	Be	<	0.000890	M	Hg	<	0.003300	M	Pb	<	0.000300	M	Tb	<	0.000300				
M	Bi	<	0.000890	M	Ho	<	0.000300	M	Pd	<	0.001800	M	Te	<	0.021000				
O	Ca		0.006334	M	In	<	0.032000	M	Pr	<	0.013000	M	Th	<	0.000300				
O	Cd	<	0.026000	M	Ir	<	0.000300	M	Pt	<	0.000300	O	Tl	<	0.032000				
M	Ce	<	0.008300	M	K		0.130213	M	Rb		0.004575	M	Tl		0.001266				
M	Co		0.000598	M	La	<	0.000300	M	Re	<	0.000300	M	Tm	<	0.000300				
M	Cr		0.000527	O	Li		0.000059	M	Rh	<	0.000300	M	U	<	0.005300				
M	Cs		0.000527	M	Lu	<	0.000300	M	Ru	<	0.079000	M	V	<	0.000890				
M	Cu		0.002252	M	Mg		0.000563	i	S	<		M	W		0.087982				
M	Dy	<	0.000300	M	Mn	<	0.005900	M	Sb		0.001513	M	Y	<	0.000300				
M	Er	<	0.000300	s	Mo	<		M	Sc	<	0.001200	M	Yb	<	0.000300				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 95.94 +6 6,7,8,9 [MoO4]-2(chemical form as received)

Chemical Compatibility -Mo is received in a NH4OH matrix giving the operator the option of using HCl or HF to stabilize acidic solutions. The [MoO4]-2 is soluble in concentrated HCl [MoOCl5]-2, dilute HF / HNO3 [MoOF5]-2 and basic media [MoO4]-2. Stable at ppm levels with some metals provided it is fluorinated. Do not mix with Alkaline or Rare Earths when HF is present. Stable with most inorganic anions provided it is in the [MoO4]-2 chemical form.

Stability - 2-100 ppb levels stable (alone or mixed with all other metals that are at comparable levels) as the [MoOF5]-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the [MoO4]-2 chemically stable for years in 1% NH4OH in a LDPE container.

Mo Containing Samples (Preparation and Solution) -Metal (Soluble in HF / HNO3 or hot dilute HCl); Oxide (soluble in HF or NH4OH) ; Organic Matrices (Dry ash at 450EC in Pt0 and dissolve oxide with HF or HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 95 amu	3 ppt	n/a	40Ar39K16O,79Br1 6O,190Os2+,190Pt 2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Technical



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



M5978, M5979

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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGTI1
Lot Number:	T2-TI719972
Matrix:	2% (v/v) HNO_3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Titanium
Starting Material:	Ti Metal
Starting Material Lot#:	2094
Starting Material Purity:	99.9975%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1 **1002 ± 4 µg/mL**
ICP Assay NIST SRM 3162a Lot Number: 130925

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance

$w_i = (1/u_{char\ i}^2) / (\Sigma(1/u_{char\ i}^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma(w_i)^2\ (u_{char\ i})^2]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000536	M	Eu	<	0.000268	O	Na	<	0.032670	M	Se		0.001204	O	Zn	<	0.003267
O	Al		0.000872	O	Fe		0.003225	O	Nb	<	0.043560	O	Si		0.004735	O	Zr	<	0.043560
M	As	<	0.008586	M	Ga	<	0.000268	M	Nd	<	0.000268	M	Sm	<	0.000268				
M	Au	<	0.004577	M	Gd	<	0.000268	O	Ni	<	0.010890	M	Sn		0.000096				
O	B	<	0.008929	M	Ge	<	0.002146	M	Os	<	0.000269	O	Sr		0.000096				
M	Ba	<	0.002683	M	Hf		0.002161	O	P	<	0.054450	M	Ta		0.010560				
M	Be	<	0.005366	M	Hg	<	0.003231	M	Pb	<	0.001073	M	Tb	<	0.000268				
M	Bi	<	0.001609	M	Ho	<	0.000268	M	Pd	<	0.000268	M	Te	<	0.001341				
O	Ca		0.000676	M	In	<	0.002683	M	Pr	<	0.000268	M	Th	<	0.053663				
M	Cd	<	0.000268	M	Ir	<	0.000269	M	Pt	<	0.000536	s	Ti	<					
M	Ce	<	0.000268	M	K		0.001172	M	Rb	<	0.000268	M	Tl	<	0.000268				
M	Co	<	0.004293	M	La	<	0.000268	M	Re	<	0.000268	M	Tm	<	0.000268				
M	Cr		0.000752	O	Li	<	0.027225	M	Rh	<	0.000268	M	U	<	0.000268				
M	Cs	<	0.000268	M	Lu	<	0.000268	M	Ru	<	0.000269	M	V	<	0.019855				
O	Cu	<	0.010890	O	Mg	<	0.005445	i	S	<		M	W		0.000473				
M	Dy	<	0.000268	O	Mn	<	0.003267	M	Sb	<	0.006976	M	Y	<	0.002146				
M	Er	<	0.000268	M	Mo		0.000774	O	Sc	<	0.004900	M	Yb	<	0.000536				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 47.87 +4 6 Ti(F)6-2

Chemical Compatibility - Soluble in concentrated HCl, HF, H3PO4 H2SO4 and HNO3. Avoid neutral to basic media. Unstable at ppm levels with metals that would pull F- away (i.e. Do not mix with Alkaline or Rare Earths or high levels of transition elements unless they are fluorinated). Stable with most inorganic anions with a tendency to hydrolyze forming the hydrated oxide in all dilute acids except HF.

Stability - 2-100 ppb levels stable (Alone or mixed with all other metals) as the Ti(F)6-2 for months in 1% HNO3 / LDPE container. 1-10,000 ppm single element solutions as the Ti(F)6-2 chemically stable for years in 2-5% HNO3 / trace HF in an LDPE container.

Ti Containing Samples (Preparation and Solution) - Metal (Soluble in H2O / HF caution -powder reacts violently); Oxide - low temperature history anatase or rutile (Dissolved by heating in 1:1:1 H2O / HF / H2SO4); Oxide - high temperature history (~800EC) brookite (fuse in Pt0 with K2S2O7); Ores (fuse in Pt0 with KF + K2S2O7 - no KF if silica not present); Organic Matrices (Dry ash at 450EC in Pt0 and dissolve by heating with 1:1:1 H2O / HF / H2SO4 or fuse ash with pyrosulfate if oxide is as plastic pigment and likely in brookite crystalline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order	Interferences (underlined indicates severe)
ICP-MS 48 amu	14 ppt	N/A	32S16O, 32S14N, 14N16O18O, 14N17N2, 36Ar12C, 48Ca, [96X=2 (where X = Zr, Mo, Ru)]
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	1	Ce, Ar, Ni
ICP-OES 334.941 nm	0.0038 / 0.000028 µg/mL	1	Nb, Ta, Cr, U
ICP-OES 336.121 nm	0.0053 / 0.000034 µg/mL	1	W, Mo, Co

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- June 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Absolute Standards, Inc.
800-368-1131
www.absolutestandards.com

Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

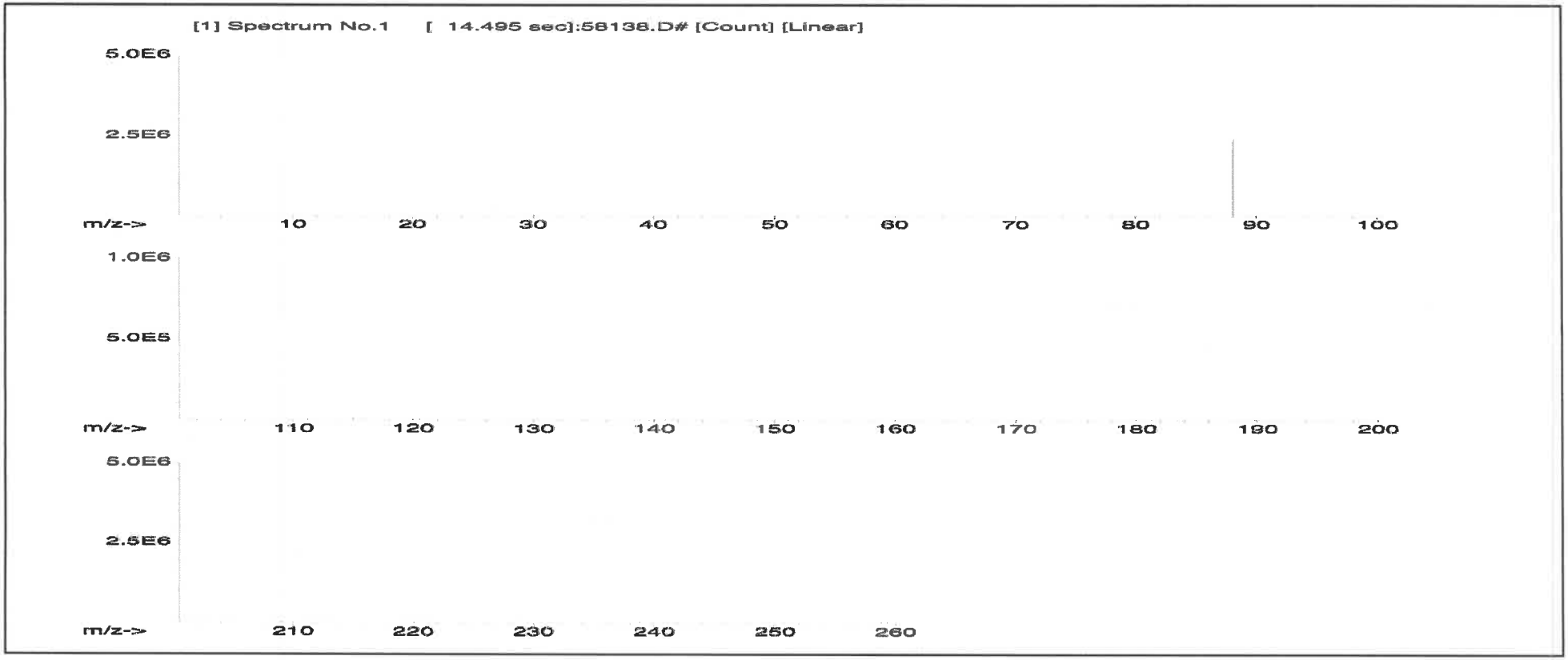
45982 R: 6/11/24

CERTIFIED WEIGHT REPORT:

Part Number:	**57038**		**Lot #**		
Lot Number:	**031524**	**Solvent:**	24002546	Nitric Acid	
Description:	**Strontium (Sr)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	031527				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.07	0.100	Flask Uncertainty		

Formulated By:	Benson Chan	031524
Reviewed By:	Pedro L. Rentas	031524

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	1000	99.997	0.10	41.2	4.85470	4.85502	**1000.1**	**2.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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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MS985
R: 6/14/24

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 863.02

2.0 PRODUCT DESCRIPTION

Product Code:	Single Analyte Custom Grade Solution
Catalog Number:	CGIN10
Lot Number:	U2-IN729349
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	10 000 µg/mL ea: Indium
Starting Material:	Indium Metal
Starting Material Lot#:	2511
Starting Material Purity:	99.9995%

3.0 CERTIFIED VALUES AND UNCERTAINTIES

Certified Value: 10022 ± 30 µg/mL

Density: 1.044 g/mL (measured at 20 ± 4 °C)

Assay Information:

Assay Method #1	**10021 ± 56 µg/mL** ICP Assay NIST SRM 3124a Lot Number: 110516
Assay Method #2	**10035 ± 25 µg/mL** EDTA NIST SRM 928 Lot Number: 928
Assay Method #3	**10001 ± 33 µg/mL** Calculated NIST SRM Lot Number: See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\ (u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\ (u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\ (u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

CRM/RMs are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

M	Ag	<	0.000760	M	Eu	<	0.000760	O	Na		0.012771	M	Se	<	0.023000	M	Zn	<	0.006100
M	Al		0.003385	O	Fe		0.004462	M	Nb	<	0.000760	O	Si		0.024619	M	Zr	<	0.000760
M	As	<	0.004600	M	Ga	<	0.000760	M	Nd	<	0.000760	M	Sm	<	0.000760				
M	Au	<	0.002300	M	Gd	<	0.000760	O	Ni	<	0.005100	M	Sn	<	0.000760				
O	B		0.003692	M	Ge	<	0.001600	M	Os	<	0.000760	O	Sr	<	0.000610				
M	Ba	<	0.001600	M	Hf	<	0.000760	n	P	<		M	Ta	<	0.000760				
O	Be	<	0.000130	M	Hg	<	0.003100	M	Pb		0.001400	M	Tb	<	0.000760				
M	Bi	<	0.000760	M	Ho	<	0.000760	M	Pd	<	0.001600	M	Te	<	0.000760				
O	Ca		0.004616	s	In	<		M	Pr	<	0.000760	M	Th	<	0.000760				
M	Cd	<	0.000760	M	Ir	<	0.000760	M	Pt	<	0.000760	O	Ti	<	0.001100				
M	Ce	<	0.000760	O	K		0.007078	M	Rb	<	0.000760	M	Tl	<	0.000760				
M	Co	<	0.000760	M	La	<	0.000760	M	Re	<	0.000760	M	Tm	<	0.000760				
O	Cr	<	0.001300	O	Li	<	0.000130	M	Rh	<	0.000760	M	U	<	0.000760				
M	Cs	<	0.000760	M	Lu	<	0.000760	M	Ru	<	0.000760	M	V	<	0.001600				
M	Cu	<	0.003800	O	Mg		0.000707	n	S	<		M	W	<	0.001600				
M	Dy	<	0.000760	O	Mn		0.000149	M	Sb	<	0.000760	M	Y	<	0.000760				
M	Er	<	0.000760	M	Mo	<	0.002300	M	Sc	<	0.000760	M	Yb	<	0.000760				

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference
n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Atomic Weight; Valence; Coordination Number; Chemical Form in Solution - 114.82 +3 6 In(H2O)6+3

Chemical Compatibility -Soluble in HCl, HNO3, and H2SO4. Avoid neutral and basic media. Stable with most metals and inorganic anions. The oxalate, sulfide, carbonate, hydroxide and phosphate are insoluble in water.

Stability - 2-100 ppb levels stable for months in 1% HNO3 / LDPE container. 1-10,000 ppm solutions chemically stable for years in 2-5% HNO3 / LDPE container.

In Containing Samples (Preparation and Solution) -Metal (Best dissolved in HCl / HNO3); Oxide (Soluble in mineral acids); Ores (Carbonate fusion in Pt0 followed by HCl dissolution); Organic Matrices (Sulfuric/peroxide digestion or dry ash and dissolution in dilute HCl).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	**Estimated D.L.**	**Order**	**Interferences** (underlined indicates severe)
ICP-MS 115 amu	1 ppt	n/a	115Sn, 99Ru16O
ICP-OES 158.583 nm	0.05 / 0.002 µg/mL	1	
ICP-OES 230.606 nm	0.1 / 0.03 µg/mL	1	Ni, Os
ICP-OES 325.609 nm	0.2 / 0.05 µg/mL	1	Mn, Mo, Th

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 21, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- February 21, 2028

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



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1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	CLPP-SPK-1
Lot Number:	T2-MEB721963
Matrix:	7% (v/v) HNO3
Value / Analyte(s):	2 000 µg/mL ea: Aluminum, Barium, 1 000 µg/mL ea: Iron, 500 µg/mL ea: Manganese, Nickel, Vanadium, Zinc, Cobalt, 250 µg/mL ea: Copper, 200 µg/mL ea: Chromium, 50 µg/mL ea: Beryllium, Silver

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 000 ± 7 µg/mL	Barium, Ba	2 000 ± 9 µg/mL
Beryllium, Be	50.00 ± 0.26 µg/mL	Chromium, Cr	200.0 ± 1.1 µg/mL
Cobalt, Co	500.0 ± 2.4 µg/mL	Copper, Cu	250.0 ± 1.0 µg/mL
Iron, Fe	1 000 ± 4 µg/mL	Manganese, Mn	500.0 ± 2.0 µg/mL
Nickel, Ni	500.0 ± 2.2 µg/mL	Silver, Ag	50.00 ± 0.22 µg/mL
Vanadium, V	500.0 ± 2.2 µg/mL	Zinc, Zn	500.0 ± 2.2 µg/mL

Density: 1.070 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Ag	Calculated		See Sec. 4.2
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)\,(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 27, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6/21

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

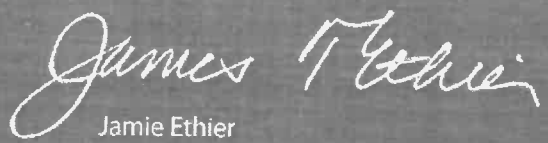
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities - Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities - Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities - Iron (Fe)	<= 15.0 ppb	<1
Trace Impurities - Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities - Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities - Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities - Selenium (Se), For Information Only	ppb	1.0
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities - Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities - Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities - Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities - Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

M6125 Receive -> 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

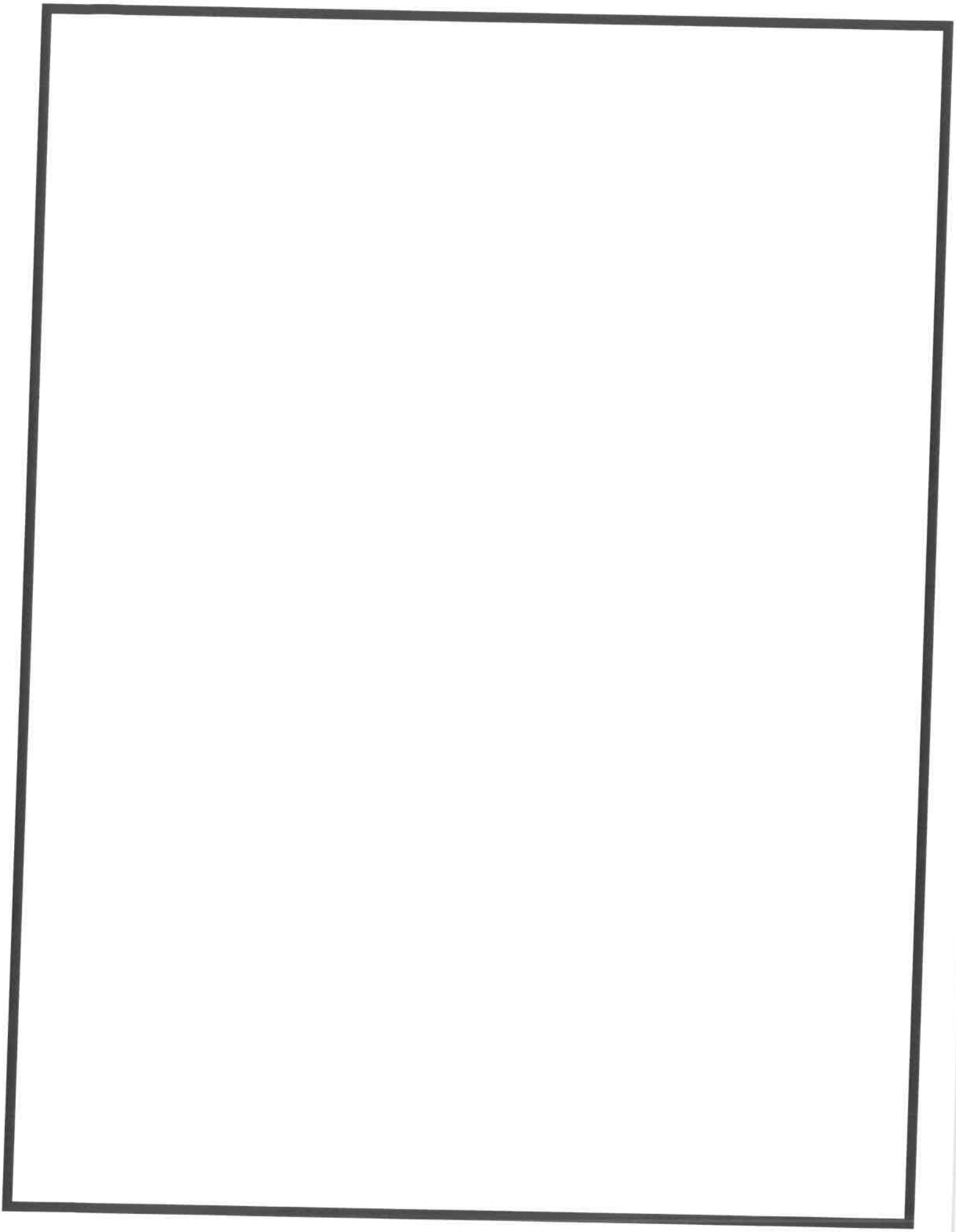
Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

Phone: 215-295-5006
Fax: 215-295-0781

Hydrogen Peroxide 30%, ACS

Reagent Grade

SPECIFICATION	MAXIMUM LIMITS
Appearance	Colorless and free from suspended matter or sediment
Assay	29-32%
Color (APHA)	10
Residue after Evaporation	0.002%
Titratable Acid	0.0006 meq/g
Chloride (Cl)	3 ppm
Nitrate (NO_3)	2 ppm
Phosphate	2 ppm
Sulfate (SO_4)	5 ppm
Ammonium (NH_4)	5 ppm
Heavy Metals (as Pb)	1 ppm
Iron (Fe)	0.5 ppm



Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

R -> 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO_3)	69.0 - 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO_4)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities - Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities - Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities - Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities - Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities - Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities - Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities - Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities - Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities - Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

avantor™ | J.T.Baker®

Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result

For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Croak
Director Quality Operations, Bioscience Production

Absolute Standards, Inc.
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www.absolutestandards.com

Certified Reference Material CRM

R: 01/03/24 M5806, M5807

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Expiration Date: 122226
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

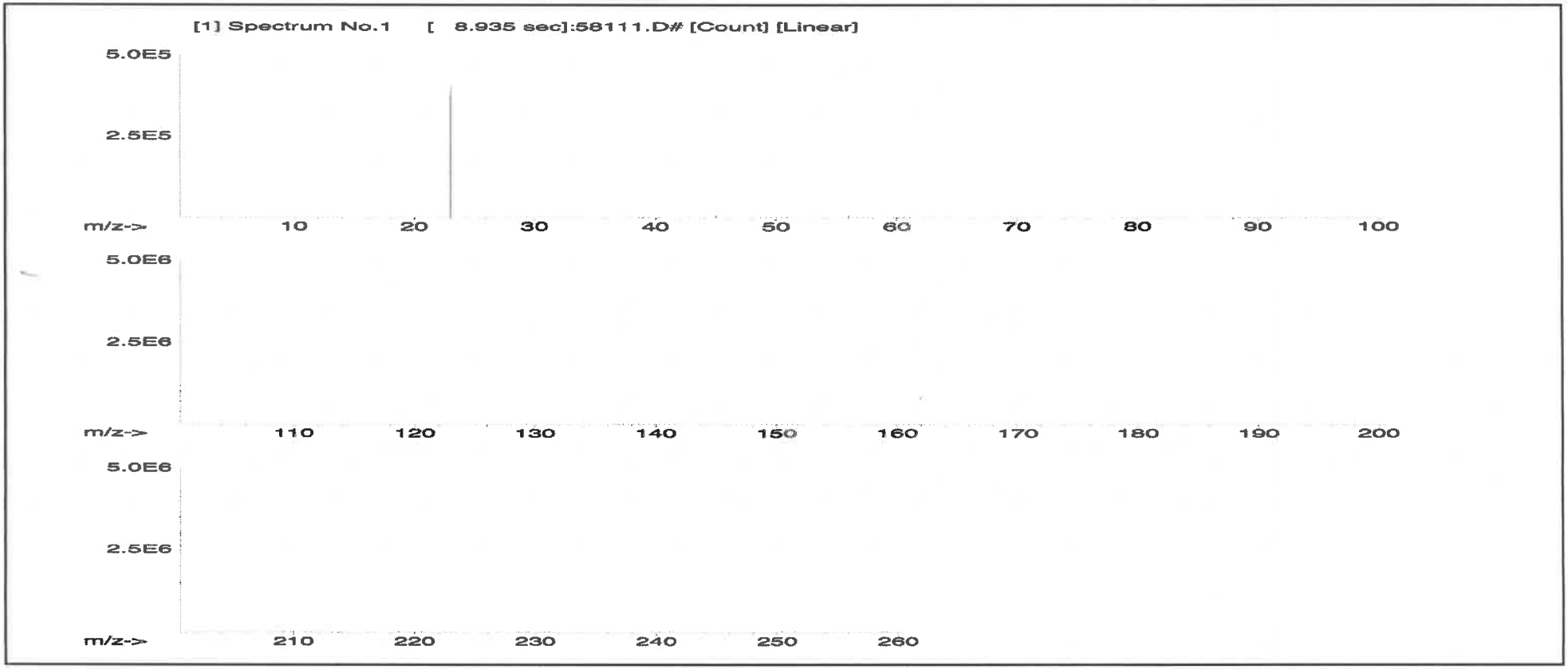
	Lot #		
Solvent:	24002546	Nitric Acid	
2%	60.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty

Aleah O'Brady

Formulated By:	Aleah O'Brady	122223
Reviewed By:	Pedro L. Rentas	122223

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Sodium nitrate (Na)	IN036	NAV012015I1	10000	99.999	0.10	26.9	111.5406	111.5479	**10000.7**	**20.0**	7631-99-4	5 mg/m3	orl-rat 3430 mg/kg	3152a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	T	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:



* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

ANAB ISO 17034 Accredited
AR-1539 Certificate Number
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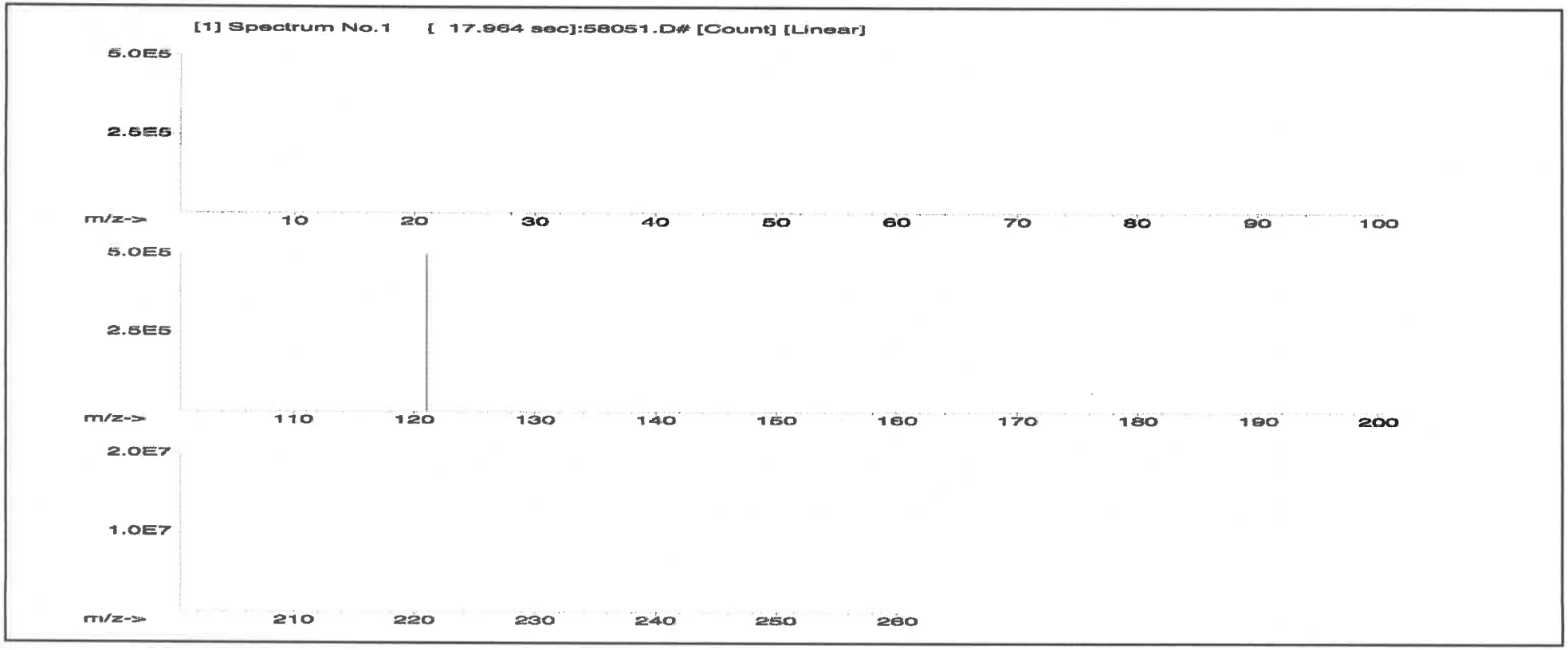
R: 01/03/24 M5802, M5803

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57051**	24002546	Nitric Acid	
Lot Number:	**120523**			
Description:	**Antimony (Sb)**			
		2.0%	60.0 (mL)	Nitric Acid
Expiration Date:	120526			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	3000.41	0.058	Flask Uncertainty	

Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Rentas	120523

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Antimony (Sb)	58151	100923	0.1000	300.0	0.084	1000	10001.4	**1000.0**	2.1	7440-36-0	0.5 mg/m3	orl-rat 7000 mg/kg	3102a



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	T	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

* The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
* All standard containers are meticulously cleaned prior to use.
* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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Certified Reference Material CRM

M6030

R: 8/5/24

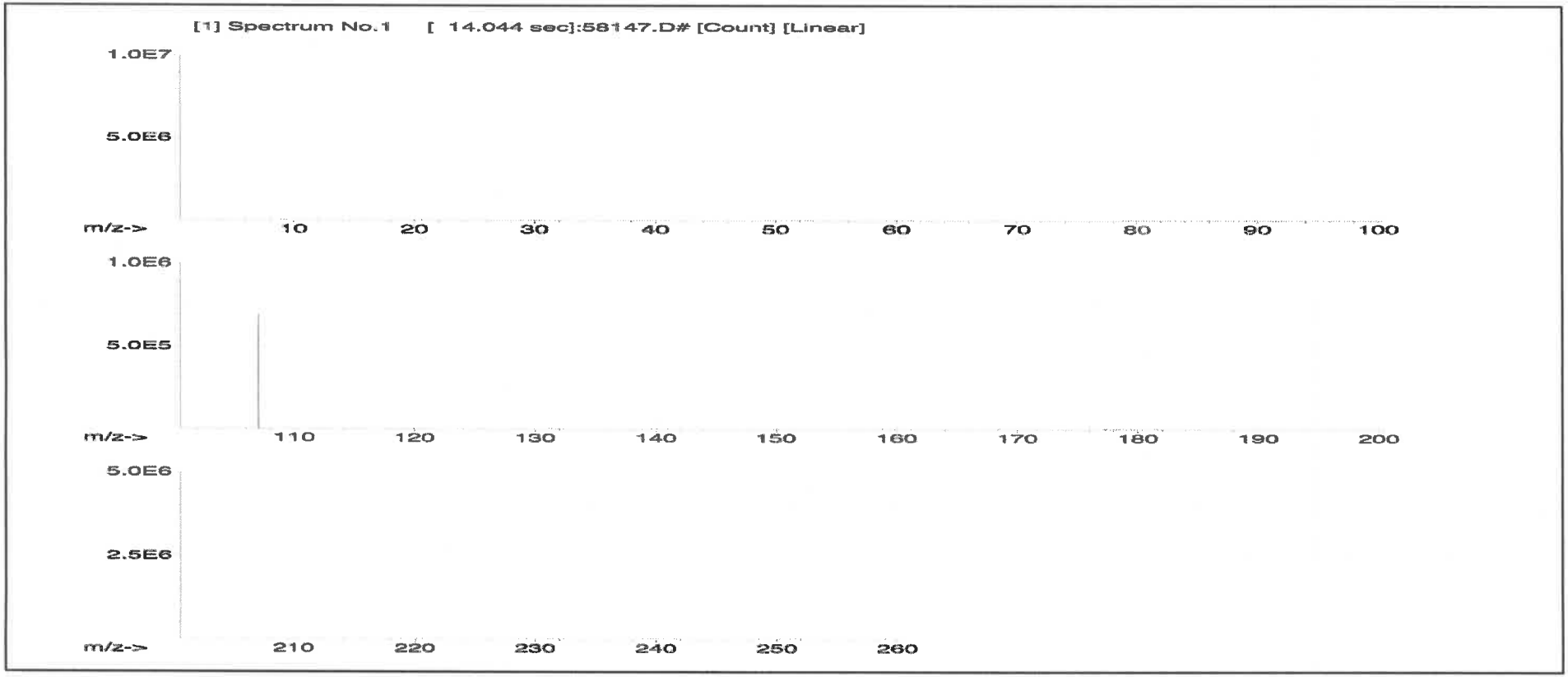
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AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number:	**57047**		**Lot #**		
Lot Number:	**122823**	**Solvent:**	24002546	Nitric Acid	
Description:	**Silver (Ag)**	2%	80.0 (mL)	Nitric Acid	
Expiration Date:	122826				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	4000.30	0.058	Flask Uncertainty		

Formulated By:	Benson Chan	122823
Reviewed By:	Pedro L. Rentas	122823

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Silver nitrate (Ag)	IN035	J0612AGA1	1000.0	99.9999	0.10	63.7	6.27992	6.27998	**1000.0**	**2.0**	7761-88-8	10 ug/m3	NA	3151



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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* Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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* Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
* Standards are certifed (+/-) 0.5% of the stated value, unless otherwise stated.
* All Standards should be stored with caps tight and under appropriate laboratory conditions.
* Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).

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R: 03/16/23 M5473, M5474, M5475, M5476

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AR-1539 Certificate Number
https://Absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 56138
Lot Number: 082922
Description: Strontium (Sr)

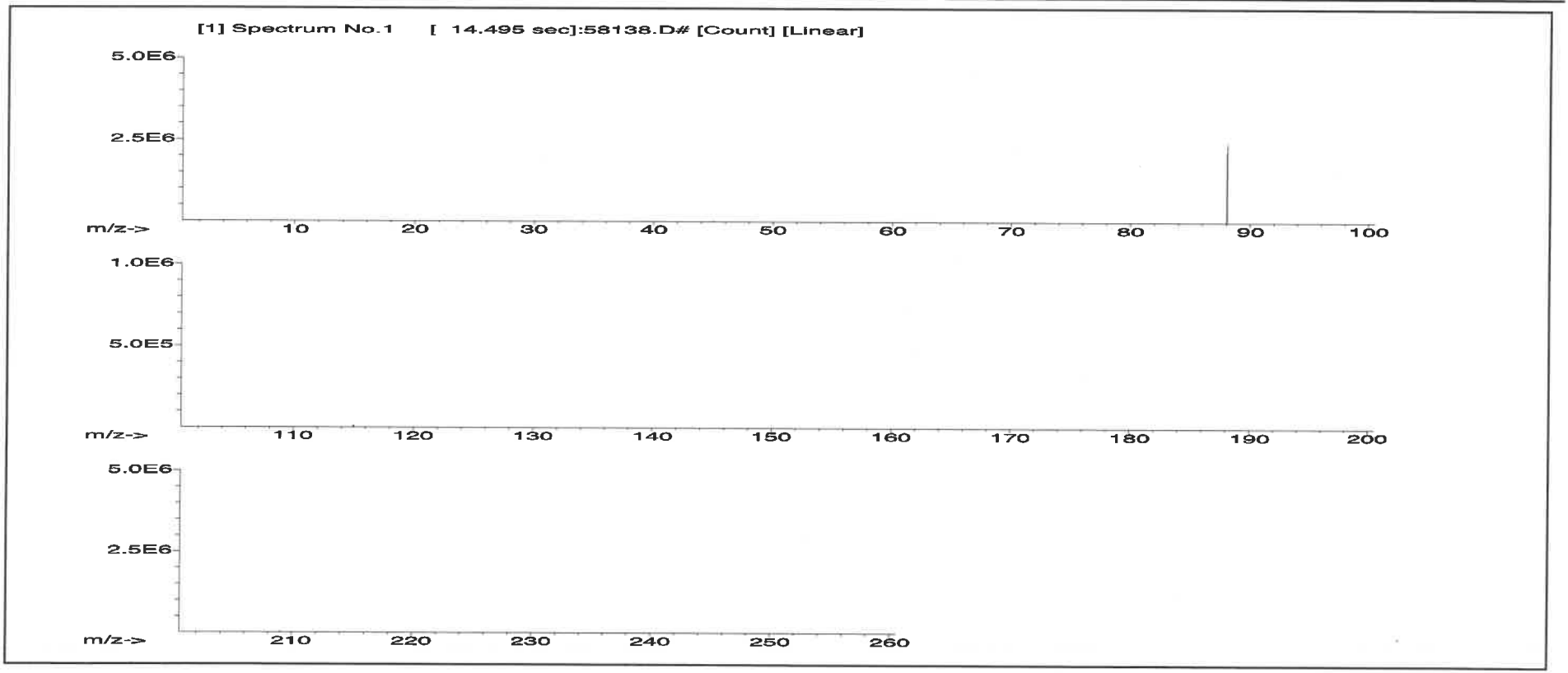
Expiration Date: 082925
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 1000.12

	Lot #		
Solvent:	20510011	Nitric Acid	
2%	20.0 (mL)	Nitric Acid	

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Rentas	082922

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Strontium nitrate (Sr)	IN017	SRZ022018A1	10000	99.997	0.10	41.2	24.2756	24.2758	**10000.1**	**20.0**	10042-76-9	NA	orl-rat >2000mg/kg	3153a



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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* 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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R ! 8/5/24

M6023

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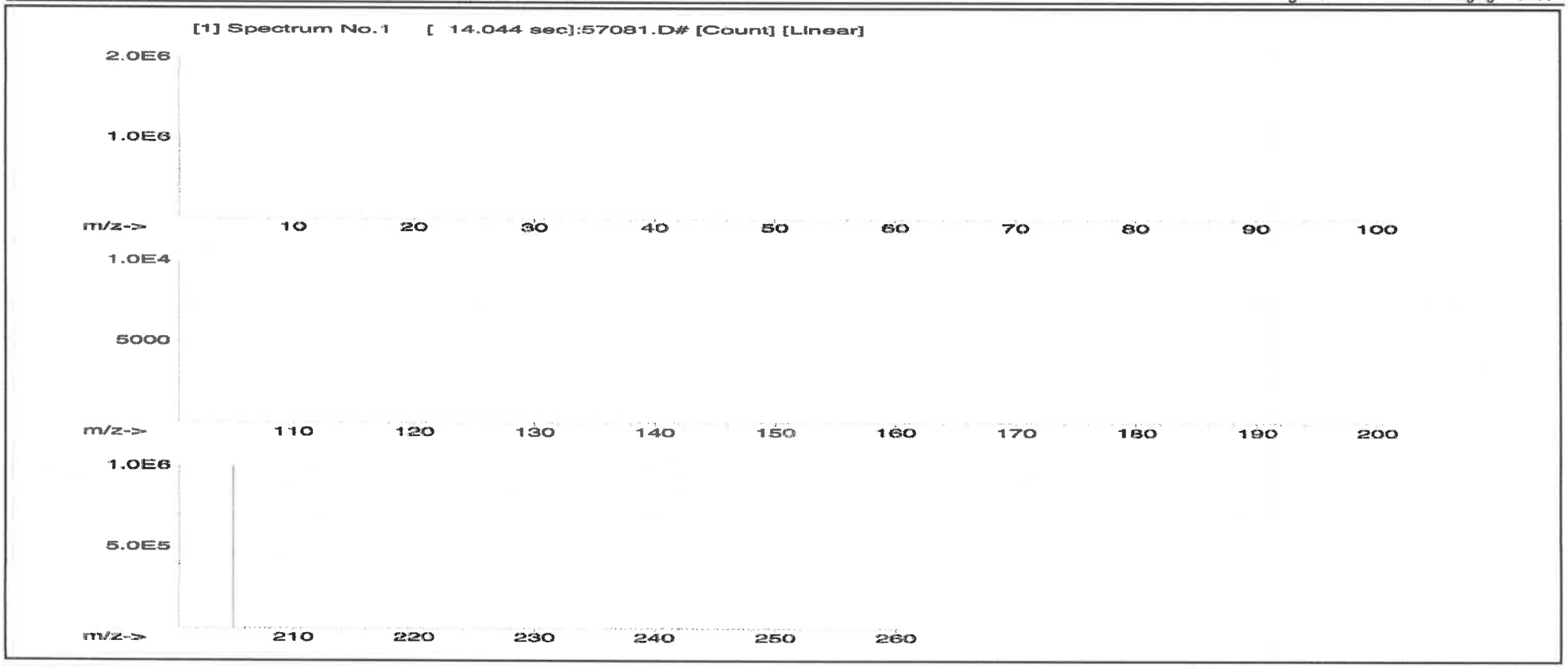
CERTIFIED WEIGHT REPORT:

Part Number:	**57081**		**Lot #**		
Lot Number:	**062724**	**Solvent:**	24002546	Nitric Acid	
Description:	**Thallium (Tl)**				
		2%	40.0 (mL)	Nitric Acid	
Expiration Date:	062727				
Recommended Storage:	Ambient (20 °C)				
Nominal Concentration (µg/mL):	**1000**				
NIST Test Number:	6UTB	5E-05	Balance Uncertainty		
Weight shown below was diluted to (mL):	2000.1	0.10	Flask Uncertainty		

Aleah O'Brady

Formulated By:	Aleah O'Brady	062724
Reviewed By:	Pedro L. Rentas	062724

Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Thallium nitrate (Tl)	IN037	BCCF4399	1000	99.999	0.10	77.0	2.5975	2.5977	**1000.1**	**2.0**	10102-45-1	0.1 mg/m3	orl-mus 15mg/kg	3158



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)																	
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	T	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

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Bc. 8/5/24

CERTIFIED WEIGHT REPORT:

		Lot #	Solvent:	
Part Number:	**57023**			
Lot Number:	**062424**	24002546	Nitric Acid	
Description:	**Vanadium (V)**			
		2.0%	40.0 (mL)	Nitric Acid
Expiration Date:	062427			
Recommended Storage:	Ambient (20 °C)			
Nominal Concentration (µg/mL):	**1000**			
NIST Test Number:	6UTB	5E-05	Balance Uncertainty	
Volume shown below was diluted to (mL):	2000.3	0.06	Flask Uncertainty	

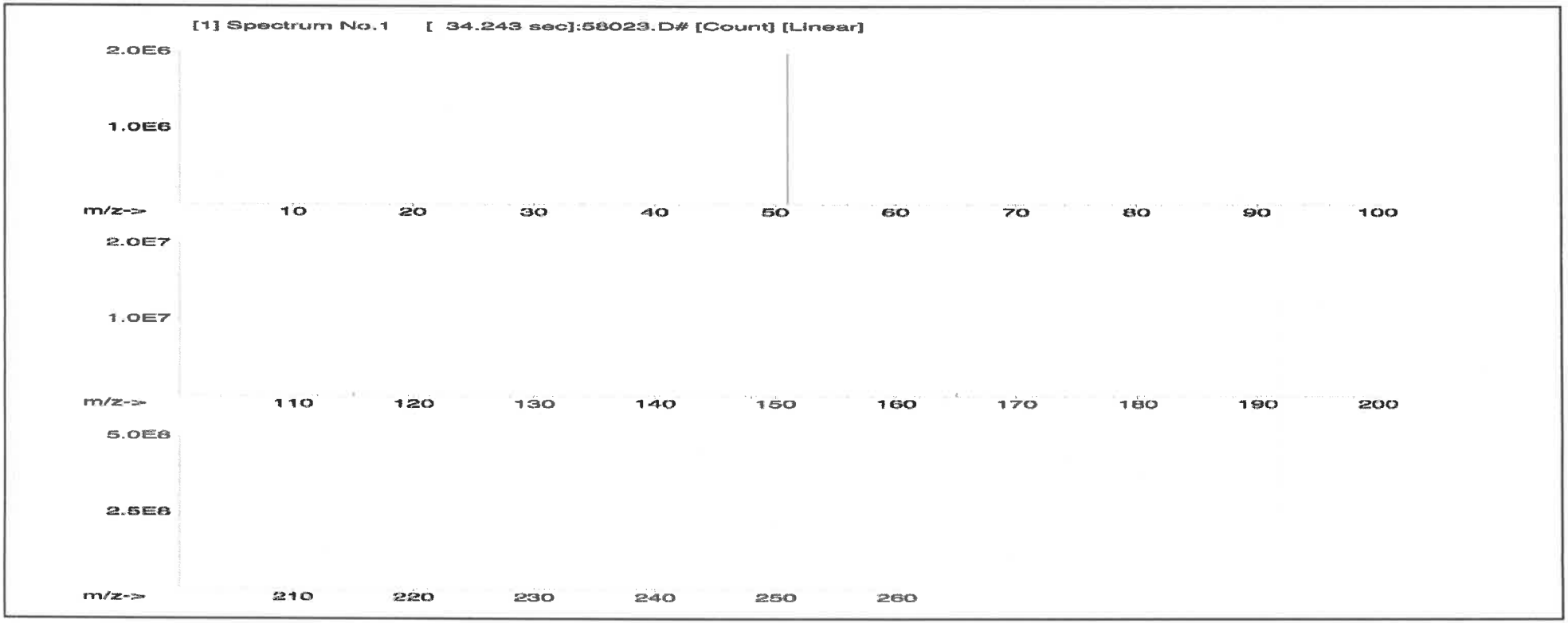
Aleah O'Brady

Formulated By:	Aleah O'Brady	062424

Pedro Rentas

Reviewed By:	Pedro L. Rentas	062424

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	SDS Information (Solvent Safety Info. On Attached pg.) CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Ammonium metavanadate (V)	58123	021224	0.1000	200.0	0.084	1000	10000.3	**1000.0**	**2.2**	7803-55-6	0.05 mg/m3	orl-rat 58.1mg/kg	3165



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	T
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

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Physical Characterization:

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Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165605

SOP ID : M3050B-Digestion-20, MSFAM01.1-Trace Metals-2

SDG No : ME28R5

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 #5 2. N/A

Start Digest Date: 12/12/2024 **Time :** 15:20 **Temp :** 96 °C

End Digest Date: 12/12/2024 **Time :** 17:25 **Temp :** 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. # 5

Dig Technician Signature: SLD.

Supervisor Signature:

Temp : 1. 96°C 2. N/A

Standared Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP83506
Spike Sol 6	1.00	MP83512
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
1:1 HNO3	10.00	MP83498
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
Conc. HCL	10.00	M6121
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK # 5 CELL #35 : 96 C

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/12/24 18:00	SLD. MET DIGESTION	
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Soil/Sludge Metals Preparation Sheet

PB165605

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5233-01	ME28R5	N/A	1.27	100	Brown	Yellow	Medium	N/A	N/A	1
P5233-02	ME28R6	N/A	1.14	100	Brown	Yellow	Medium	N/A	N/A	2
P5233-03	ME28R7	N/A	1.36	100	Brown	Yellow	Medium	N/A	N/A	3
P5233-04	ME28R8	N/A	1.21	100	Brown	Yellow	Medium	N/A	N/A	4
P5233-05	ME28R9	N/A	1.47	100	Brown	Yellow	Medium	N/A	N/A	5
P5233-06	ME28S0	N/A	1.39	100	Brown	Yellow	Medium	N/A	N/A	6
P5233-07	ME28S1	N/A	1.30	100	Brown	Yellow	Medium	N/A	N/A	7
P5233-08	ME28S2	N/A	1.29	100	Brown	Yellow	Medium	N/A	N/A	8
P5233-09	ME28S3	N/A	1.23	100	Brown	Yellow	Medium	N/A	N/A	9
P5233-10	ME28S4	N/A	1.05	100	Brown	Yellow	Medium	N/A	N/A	10
P5233-11	ME28S5	N/A	1.48	100	Brown	Yellow	Medium	N/A	N/A	11
P5233-12	ME28S6	N/A	1.09	100	Brown	Yellow	Medium	N/A	N/A	12
P5233-13	ME28S7	N/A	1.41	100	Brown	Yellow	Medium	N/A	N/A	13
P5233-14	ME28S8	N/A	1.29	100	Brown	Yellow	Medium	N/A	N/A	14
P5233-15	ME28S9	N/A	1.14	100	Brown	Yellow	Medium	N/A	N/A	15
P5233-16	ME28T0	N/A	1.19	100	Brown	Yellow	Medium	N/A	N/A	16
P5233-17	ME28T1	N/A	1.13	100	Brown	Yellow	Medium	N/A	N/A	17
P5233-18	ME28T2	N/A	1.11	100	Brown	Yellow	Medium	N/A	N/A	18
P5233-19	ME28T3	N/A	1.34	100	Brown	Yellow	Medium	N/A	N/A	19
P5233-20	ME28S7D	N/A	1.17	100	Brown	Yellow	Medium	N/A	N/A	20
P5233-21	ME28S7S	N/A	1.21	100	Brown	Yellow	Medium	N/A	MP83512	21
PB165605BL	PBS605	N/A	1.00	100	Colorless	Colorless	Fine	N/A	N/A	22
PB165605BS	LCS605	N/A	1.00	100	Colorless	Colorless	Fine	N/A	MP83506	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 # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/20/24 17:18		Kareem	OK
2	S1	S01	CAL2	12/20/24 17:22		Kareem	OK
3	S2	S02	CAL3	12/20/24 17:26		Kareem	OK
4	S3	S03	CAL4	12/20/24 17:30		Kareem	OK
5	S4	S04	CAL5	12/20/24 17:34		Kareem	OK
6	S5	S05	CAL6	12/20/24 17:38		Kareem	OK
7	S6	S06	CAL7	12/20/24 17:42		Kareem	OK
8	ICV009	ICV009	ICV	12/20/24 18:43	Inst. paused for calibration review	Kareem	OK
9	ICB009	ICB009	ICB	12/20/24 18:47		Kareem	OK
10	ICSA009	ICSA009	ICSA	12/20/24 18:51		Kareem	OK
11	ICSAB009	ICSAB009	ICSAB	12/20/24 19:01	Inst. paused for review	Kareem	OK
12	CCV081	CCV081	CCV	12/20/24 19:05		Kareem	OK
13	CCB081	CCB081	CCB	12/20/24 19:09		Kareem	OK
14	P5067-05DL2	ME28M4	SAM	12/20/24 19:13	5X for Ca	Kareem	Confirms
15	P4964-05DL2	MBHJ03	SAM	12/20/24 19:17	5X for Ca	Kareem	Confirms
16	P5233-01	ME28R5	SAM	12/20/24 19:21		Kareem	OK
17	P5233-02	ME28R6	SAM	12/20/24 19:25		Kareem	OK
18	P5233-03	ME28R7	SAM	12/20/24 19:29	Ca high	Kareem	Dilution

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 # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

19	P5233-04	ME28R8	SAM	12/20/24 19:32	Ca high	Kareem	Dilution
20	P5233-05	ME28R9	SAM	12/20/24 19:36		Kareem	OK
21	P5233-06	ME28S0	SAM	12/20/24 19:40	Ca high	Kareem	Dilution
22	P5233-07	ME28S1	SAM	12/20/24 19:44		Kareem	OK
23	P5233-08	ME28S2	SAM	12/20/24 19:48		Kareem	OK
24	P5233-09	ME28S3	SAM	12/20/24 19:52		Kareem	OK
25	P5233-10	ME28S4	SAM	12/20/24 19:55		Kareem	OK
26	P5233-11	ME28S5	SAM	12/20/24 19:59		Kareem	OK
27	P5233-12	ME28S6	SAM	12/20/24 20:03		Kareem	OK
28	P5233-13	ME28S7	SAM	12/20/24 20:07		Kareem	OK
29	P5233-14	ME28S8	SAM	12/20/24 20:11		Kareem	OK
30	P5233-15	ME28S9	SAM	12/20/24 20:15		Kareem	OK
31	P5233-16	ME28T0	SAM	12/20/24 20:18		Kareem	OK
32	P5233-17	ME28T1	SAM	12/20/24 20:22	Fe high	Kareem	Dilution
33	P5233-18	ME28T2	SAM	12/20/24 20:26		Kareem	OK
34	CCV082	CCV082	CCV	12/20/24 20:30		Kareem	OK
35	CCB082	CCB082	CCB	12/20/24 20:33		Kareem	OK
36	P5233-19	ME28T3	SAM	12/20/24 20:37	Fe high	Kareem	Dilution
37	P5233-20	ME28S7D	DUP	12/20/24 20:41		Kareem	OK
38	P5233-13L	ME28S7L	SD	12/20/24 20:45		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 # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

39	P5233-21	ME28S7S	MS	12/20/24 20:49		Kareem	OK
40	PB165605BL	PBS605	MB	12/20/24 20:53		Kareem	OK
41	PB165605BS	LCS605	LCS	12/20/24 20:57		Kareem	OK
42	P5009-01	MBHJQ0	SAM	12/20/24 21:01		Kareem	OK
43	P5009-02	MBHJQ1	SAM	12/20/24 21:05		Kareem	OK
44	P5009-03	MBHJQ2	SAM	12/20/24 21:09		Kareem	OK
45	P5009-04	MBHJQ3	SAM	12/20/24 21:12		Kareem	OK
46	P5009-05	MBHJQ3D	DUP	12/20/24 21:16		Kareem	OK
47	P5009-04L	MBHJQ3L	SD	12/20/24 21:20		Kareem	OK
48	P5009-06	MBHJQ3S	MS	12/20/24 21:24	MS fail for Cu(160.10 ppb),Se(65.97 ppb),Tl(Below RL),Zn(714 ppb)	Kareem	OK
49	P5009-07	MBHJR8	SAM	12/20/24 21:28		Kareem	OK
50	P5009-08	MBHJR9	SAM	12/20/24 21:32		Kareem	OK
51	P5009-09	MBHJS0	SAM	12/20/24 21:36		Kareem	OK
52	P5009-10	MBHJS1	SAM	12/20/24 21:39		Kareem	OK
53	P5009-11	MBHJS2	SAM	12/20/24 21:43		Kareem	OK
54	P5009-12	MBHJS3	SAM	12/20/24 21:47		Kareem	OK
55	P5009-13	MBHJS4	SAM	12/20/24 21:51		Kareem	OK
56	CCV083	CCV083	CCV	12/20/24 21:55		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

57	CCB083	CCB083	CCB	12/20/24 21:58		Kareem	OK
58	P5009-14	MBHJT8	SAM	12/20/24 22:02		Kareem	OK
59	P5009-15	MBHJY7	SAM	12/20/24 22:06		Kareem	OK
60	P5009-16	MBHJY8	SAM	12/20/24 22:10		Kareem	OK
61	P5009-17	MBHJY9	SAM	12/20/24 22:14		Kareem	OK
62	P5009-18	MBHJZ0	SAM	12/20/24 22:18		Kareem	OK
63	P5009-19	MBHJZ1	SAM	12/20/24 22:21		Kareem	OK
64	P5009-20	MBHJZ2	SAM	12/20/24 22:25		Kareem	OK
65	P5009-21	MBHJZ3	SAM	12/20/24 22:29	Ca high	Kareem	Dilution
66	P5009-22	MBHK10	SAM	12/20/24 22:33		Kareem	OK
67	PB165301BL	PBS301	MB	12/20/24 22:37		Kareem	OK
68	PB165301BS	LCS301	LCS	12/20/24 22:41		Kareem	OK
69	P5184-01DL	MYCZD9	SAM	12/20/24 22:45		Kareem	OK
70	P5184-02DL	MYCZE0	SAM	12/20/24 22:49		Kareem	OK
71	P5184-03DL	MYCZE1	SAM	12/20/24 22:52		Kareem	OK
72	P5184-04DL	MYCZE2	SAM	12/20/24 22:56		Kareem	OK
73	P5184-05DL	MYCZE3	SAM	12/20/24 23:00		Kareem	OK
74	P5184-06DL	MYCZE4	SAM	12/20/24 23:04		Kareem	OK
75	P5184-07DL	MYCZE5	SAM	12/20/24 23:08		Kareem	OK
76	P5184-08DL	MYCZE6	SAM	12/20/24 23:11		Kareem	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

77	P5184-09DL	MYCZE7	SAM	12/20/24 23:15		Kareem	OK
78	CCV084	CCV084	CCV	12/20/24 23:19		Kareem	OK
79	CCB084	CCB084	CCB	12/20/24 23:23		Kareem	OK
80	P5184-10DL	MYCZE8	SAM	12/20/24 23:27		Kareem	OK
81	P5184-11DL	MYCZE9	SAM	12/20/24 23:30		Kareem	OK
82	P5184-12DL	MYCZF0	SAM	12/20/24 23:34		Kareem	OK
83	P5184-13DL	MYCZF1	SAM	12/20/24 23:38		Kareem	OK
84	P5184-14DL	MYCZF2	SAM	12/20/24 23:42		Kareem	OK
85	P5184-15DL	MYCZF3	SAM	12/20/24 23:46		Kareem	OK
86	P5184-16DL	MYCZF4	SAM	12/20/24 23:49		Kareem	OK
87	P5184-17DL	MYCZF5	SAM	12/20/24 23:53		Kareem	OK
88	P5184-18DL	MYCZF6	SAM	12/20/24 23:57		Kareem	OK
89	P5184-19DL	MYCZF7	SAM	12/21/24 00:01		Kareem	OK
90	P5184-20DL	MYCZF8	SAM	12/21/24 00:05	MS fail for Many parameter	Kareem	Not Ok
91	P5184-21DL	MYCZF8D	DUP	12/21/24 00:08	MS fail for Many parameter	Kareem	Not Ok
92	P5184-20LDL	MYCZF8L	SD	12/21/24 00:12	MS fail for Many parameter	Kareem	Not Ok
93	P5184-22DL	MYCZF8S	MS	12/21/24 00:16	MS fail for Many parameter	Kareem	Not Ok
94	PB165634BL	PBS634	MB	12/21/24 00:20		Kareem	OK
95	PB165634BS	LCS634	LCS	12/21/24 00:24		Kareem	OK
96	PB165634BSD	LCDS634	LCSD	12/21/24 00:28		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

97	P5188-01DL	MYCZG9	SAM	12/21/24 00:32		Kareem	OK
98	P5188-02DL	MYCZH0	SAM	12/21/24 00:36		Kareem	OK
99	P5188-03DL	MYCZH1	SAM	12/21/24 00:40		Kareem	OK
100	CCV085	CCV085	CCV	12/21/24 00:43		Kareem	OK
101	CCB085	CCB085	CCB	12/21/24 00:47		Kareem	OK
102	P5188-04DL	MYCZH2	SAM	12/21/24 00:51		Kareem	OK
103	P5188-05DL	MYCZH3	SAM	12/21/24 00:55		Kareem	OK
104	P5188-06DL	MYCZH4	SAM	12/21/24 00:59		Kareem	OK
105	P5188-07DL	MYCZH5	SAM	12/21/24 01:03		Kareem	OK
106	P5188-08DL	MYCZH6	SAM	12/21/24 01:06		Kareem	OK
107	P5188-09DL	MYCZH7	SAM	12/21/24 01:10		Kareem	OK
108	P5188-10DL	MYCZH8	SAM	12/21/24 01:14		Kareem	OK
109	P5188-11DL	MYCZQ9	SAM	12/21/24 01:18		Kareem	OK
110	P5188-12DL	MYCZR0	SAM	12/21/24 01:22		Kareem	OK
111	P5188-13DL	MYCZR1	SAM	12/21/24 01:26		Kareem	OK
112	P5188-14DL	MYCZR2	SAM	12/21/24 01:29		Kareem	OK
113	P5188-15DL	MYCZR3	SAM	12/21/24 01:33		Kareem	OK
114	P5188-16DL	MYCZR4	SAM	12/21/24 01:37		Kareem	OK
115	P5188-17DL	MYCZR5	SAM	12/21/24 01:41		Kareem	OK
116	P5188-18DL	MYCZR6	SAM	12/21/24 01:45		Kareem	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

117	P5188-19DL	MYCZR7	SAM	12/21/24 01:49		Kareem	OK
118	P5188-20DL	MYCZR8	SAM	12/21/24 01:53		Kareem	OK
119	P5188-21DL	MYCZR8D	DUP	12/21/24 01:57		Kareem	OK
120	P5188-20LDL	MYCZR8L	SD	12/21/24 02:00		Kareem	OK
121	P5188-22DL	MYCZR8S	MS	12/21/24 02:04		Kareem	OK
122	CCV086	CCV086	CCV	12/21/24 02:08		Kareem	OK
123	CCB086	CCB086	CCB	12/21/24 02:12		Kareem	OK
124	PB165688BL	PBS688	MB	12/21/24 02:16		Kareem	OK
125	PB165688BS	LCS688	LCS	12/21/24 02:20		Kareem	OK
126	PB165688BSD	LCSD688	LCSD	12/21/24 02:24		Kareem	OK
127	P5185-01DL	MYCZF9	SAM	12/21/24 02:28		Kareem	OK
128	P5185-02DL	MYCZG0	SAM	12/21/24 02:32		Kareem	OK
129	P5185-03DL	MYCZG1	SAM	12/21/24 02:35		Kareem	OK
130	P5185-04DL	MYCZG2	SAM	12/21/24 02:39		Kareem	OK
131	P5185-05DL	MYCZG3	SAM	12/21/24 02:43		Kareem	OK
132	P5185-06DL	MYCZG4	SAM	12/21/24 02:47		Kareem	OK
133	P5185-07DL	MYCZG5	SAM	12/21/24 02:51		Kareem	OK
134	P5185-08DL	MYCZG6	SAM	12/21/24 02:55		Kareem	OK
135	P5185-09DL	MYCZG7	SAM	12/21/24 02:59		Kareem	OK
136	P5185-10DL	MYCZG8	SAM	12/21/24 03:02		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

137	P5185-11DL	MYCZM9	SAM	12/21/24 03:06		Kareem	OK
138	P5185-12DL	MYCZN0	SAM	12/21/24 03:10		Kareem	OK
139	P5185-13DL	MYCZN1	SAM	12/21/24 03:14		Kareem	OK
140	P5185-14DL	MYCZN2	SAM	12/21/24 03:18		Kareem	OK
141	P5185-15DL	MYCZN3	SAM	12/21/24 03:22		Kareem	OK
142	P5185-16DL	MYCZN4	SAM	12/21/24 03:26		Kareem	OK
143	P5185-17DL	MYCZN5	SAM	12/21/24 03:30		Kareem	OK
144	CCV087	CCV087	CCV	12/21/24 03:33		Kareem	OK
145	CCB087	CCB087	CCB	12/21/24 03:37		Kareem	OK
146	P5185-18DL	MYCZN6	SAM	12/21/24 03:41		Kareem	OK
147	P5185-19DL	MYCZN7	SAM	12/21/24 03:45		Kareem	OK
148	P5185-20DL	MYCZN8	SAM	12/21/24 03:49		Kareem	OK
149	P5185-21DL	MYCZN8D	DUP	12/21/24 03:53		Kareem	OK
150	P5185-20LDL	MYCZN8L	SD	12/21/24 03:57		Kareem	OK
151	P5185-22DL	MYCZN8S	MS	12/21/24 04:01		Kareem	OK
152	PB165654BL	PBS654	MB	12/21/24 04:04		Kareem	OK
153	PB165654BS	LCS654	LCS	12/21/24 04:08		Kareem	OK
154	PB165654BSD	LCSD654	LCSD	12/21/24 04:12		Kareem	OK
155	P5190-01DL	MYCZK9	SAM	12/21/24 04:16		Kareem	OK
156	P5190-02DL	MYCZL0	SAM	12/21/24 04:20		Kareem	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

157	P5190-03DL	MYCZL1	SAM	12/21/24 04:24		Kareem	OK
158	P5190-04DL	MYCZL2	SAM	12/21/24 04:28		Kareem	OK
159	P5190-05DL	MYCZL3	SAM	12/21/24 04:32		Kareem	OK
160	P5190-06DL	MYCZL4	SAM	12/21/24 04:36		Kareem	OK
161	P5190-07DL	MYCZL5	SAM	12/21/24 04:39		Kareem	OK
162	P5190-08DL	MYCZL6	SAM	12/21/24 04:43		Kareem	OK
163	P5190-09DL	MYCZL7	SAM	12/21/24 04:47		Kareem	OK
164	P5190-10DL	MYCZL8	SAM	12/21/24 04:51		Kareem	OK
165	P5190-11DL	MYCZL9	SAM	12/21/24 04:55		Kareem	OK
166	CCV088	CCV088	CCV	12/21/24 04:59		Kareem	OK
167	CCB088	CCB088	CCB	12/21/24 05:02		Kareem	OK
168	P5190-12DL	MYCZM0	SAM	12/21/24 05:06		Kareem	OK
169	P5190-13DL	MYCZM1	SAM	12/21/24 05:10		Kareem	OK
170	P5190-14DL	MYCZM2	SAM	12/21/24 05:14		Kareem	OK
171	P5190-15DL	MYCZM3	SAM	12/21/24 05:18		Kareem	OK
172	P5190-16DL	MYCZM4	SAM	12/21/24 05:22		Kareem	OK
173	P5190-17DL	MYCZM5	SAM	12/21/24 05:25		Kareem	OK
174	P5190-18DL	MYCZM6	SAM	12/21/24 05:29		Kareem	OK
175	P5190-19DL	MYCZM7	SAM	12/21/24 05:33		Kareem	OK
176	P5190-20DL	MYCZM8	SAM	12/21/24 05:37		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 # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

177	P5190-21DL	MYCZM8D	DUP	12/21/24 05:41		Kareem	OK
178	P5190-20LDL	MYCZM8L	SD	12/21/24 05:45		Kareem	OK
179	P5190-22DL	MYCZM8S	MS	12/21/24 05:49		Kareem	OK
180	PB165691BL	PBS691	MB	12/21/24 05:53		Kareem	OK
181	PB165691BS	LCS691	LCS	12/21/24 05:57		Kareem	OK
182	PB165691BSD	LCSD691	LCSD	12/21/24 06:01		Kareem	OK
183	P4941-06DL	MBHJ43	SAM	12/21/24 06:05	2X for Ca	Kareem	Confirms
184	P4941-07DL	MBHJ44	SAM	12/21/24 06:08	2X for Ca	Kareem	Confirms
185	P4941-10DL	MBHJ47	SAM	12/21/24 06:12	2X for Ca	Kareem	Confirms
186	P4941-22DL	MBHJF8	SAM	12/21/24 06:16	2X for Ca	Kareem	Confirms
187	P4978-01DL	MBHJ49	SAM	12/21/24 06:20	2X for Ca	Kareem	Confirms
188	CCV089	CCV089	CCV	12/21/24 06:24		Kareem	OK
189	CCB089	CCB089	CCB	12/21/24 06:27		Kareem	OK
190	P4978-02DL	MBHJ49D	DUP	12/21/24 06:31	2X for Ca	Kareem	Confirms
191	P4978-01LDL	MBHJ49L	SD	12/21/24 06:35	10X for Ca	Kareem	Confirms
192	P4978-03DL	MBHJ49S	MS	12/21/24 06:39	Not required	Kareem	Not Ok
193	P4978-04DL	MBHJ50	SAM	12/21/24 06:43	2X for Ca	Kareem	Confirms
194	P4978-05DL	MBHJ51	SAM	12/21/24 06:47	2X for Ca,Mg still Ca high	Kareem	Dilution
195	P4978-06DL	MBHJ52	SAM	12/21/24 06:51	2X for Ca,Mg still Ca high	Kareem	Dilution
196	P4978-07DL	MBHJ53	SAM	12/21/24 06:55	2X for Ca,Mg still Ca high	Kareem	Dilution

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Fax : 908 789 8922

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

197	P4978-08DL	MBHJ54	SAM	12/21/24 06:58	2X for Ca	Kareem	Confirms
198	P4978-09DL	MBHJ55	SAM	12/21/24 07:02	2X for Ca	Kareem	Confirms
199	P4979-03DL	MBHJ68	SAM	12/21/24 07:06	2X for Mn	Kareem	Confirms
200	P4979-04DL	MBHJ68D	DUP	12/21/24 07:10	2X for Mn	Kareem	Confirms
201	P4979-03LDL	MBHJ68L	SD	12/21/24 07:14	10X for Mn	Kareem	Confirms
202	P4979-05DL	MBHJ68S	MS	12/21/24 07:18	2X for Mn	Kareem	Confirms
203	P4979-06DL	MBHJ69	SAM	12/21/24 07:22	2X for Ca	Kareem	Confirms
204	P4979-14DL	MBHJA2	SAM	12/21/24 07:26	Not Use	Kareem	Not Ok
205	P4979-15DL	MBHJA3	SAM	12/21/24 07:29	2X for Ca	Kareem	Confirms
206	P4979-16DL	MBHJA4	SAM	12/21/24 07:33	Not Use	Kareem	Not Ok
207	P4979-17DL	MBHJB7	SAM	12/21/24 07:37	2X for Ca	Kareem	Confirms
208	P4980-01DL	MBHJ70	SAM	12/21/24 07:41	2X for Ca	Kareem	Confirms
209	P4980-02DL	MBHJ71	SAM	12/21/24 07:45	2X for Ca,Mg	Kareem	Confirms
210	CCV090	CCV090	CCV	12/21/24 07:49		Kareem	OK
211	CCB090	CCB090	CCB	12/21/24 07:52		Kareem	OK
212	P4980-03DL	MBHJ72	SAM	12/21/24 07:56	2X for Ca,Mg still Ca high	Kareem	Dilution
213	P4980-05DL	MBHJ74	SAM	12/21/24 08:00	2X for Ca	Kareem	Confirms
214	P4980-10DL	MBHJ86	SAM	12/21/24 08:04	2X for Ca,Mg still Ca high	Kareem	Dilution
215	P4980-11DL	MBHJ87	SAM	12/21/24 08:08	2X for Ca	Kareem	Confirms
216	P4980-15DL	MBHJ89	SAM	12/21/24 08:12	2X for Ca	Kareem	Confirms

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Fax : 908 789 8922

Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

217	P4980-16DL	MBHJ90	SAM	12/21/24 08:16	Not Use	Kareem	Not Ok
218	P4980-17DL	MBHJB0	SAM	12/21/24 08:19	2X for Ca,Mg still Ca high	Kareem	Dilution
219	P4980-18DL	MBHJB1	SAM	12/21/24 08:23	2X for Ca	Kareem	Confirms
220	P4980-20DL	MBHJB3	SAM	12/21/24 08:27	2X for Ca	Kareem	Confirms
221	P4982-02DL	MBHJ34	SAM	12/21/24 08:31	2X for Ca	Kareem	Confirms
222	P4982-03DL	MBHJ35	SAM	12/21/24 08:35	2X for Ca	Kareem	Confirms
223	P4982-04DL	MBHJ36	SAM	12/21/24 08:39	2X for Ca	Kareem	Confirms
224	P4982-05DL	MBHJ37	SAM	12/21/24 08:42	Not Use	Kareem	Not Ok
225	P4982-06DL	MBHJ38	SAM	12/21/24 08:46	2X for Ca	Kareem	Confirms
226	P4982-08DL	MBHJ40	SAM	12/21/24 08:50	2X for Ca	Kareem	Confirms
227	P4982-15DL	MBHJE9	SAM	12/21/24 08:54	Not Use	Kareem	Not Ok
228	P4982-16DL	MBHJF0	SAM	12/21/24 08:58	Not Use	Kareem	Not Ok
229	P4983-20DL	MBHJH0	SAM	12/21/24 09:02	Not USe	Kareem	Not Ok
230	P4984-06DL	MBHJT1	SAM	12/21/24 09:06	2X for Ca	Kareem	Confirms
231	P4984-07DL	MBHJT4	SAM	12/21/24 09:10	2X for Ca	Kareem	Confirms
232	CCV091	CCV091	CCV	12/21/24 09:14		Kareem	OK
233	CCB091	CCB091	CCB	12/21/24 09:17		Kareem	OK
234	P4984-08DL	MBHJT5	SAM	12/21/24 09:21	2X for Ca,Mg still Ca high	Kareem	Dilution
235	P5008-01DL	MBHJJ0	SAM	12/21/24 09:25	2X for Ca,Mg	Kareem	Confirms
236	P5008-02DL	MBHJJ1	SAM	12/21/24 09:29	2X for Ca,Mg still Ca high	Kareem	Dilution

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

237	P5008-03DL	MBHJJ3	SAM	12/21/24 09:33	2X for Ca,Mg still Ca high	Kareem	Dilution
238	P5008-04DL	MBHJJ4	SAM	12/21/24 09:37	2X for Ca,Mg still Ca high	Kareem	Dilution
239	P5008-05DL	MBHJJ5	SAM	12/21/24 09:41	2X for Ca,Mg still Ca high	Kareem	Dilution
240	P5008-06DL	MBHJJ6	SAM	12/21/24 09:45	2X for Ca,Mg still Ca high	Kareem	Dilution
241	P5008-07DL	MBHJJ7	SAM	12/21/24 09:49	2X for Ca	Kareem	Confirms
242	P5008-13DL	MBHJM4	SAM	12/21/24 09:53	2X for Ca	Kareem	Confirms
243	P5008-14DL	MBHJM5	SAM	12/21/24 09:57	2X for Ca	Kareem	Confirms
244	P5010-07DL	MBHJH9	SAM	12/21/24 10:01	2X for Ca	Kareem	Confirms
245	P5012-08DL	MBHJK0	SAM	12/21/24 10:04	2X for Ca	Kareem	Confirms
246	P5012-09DL	MBHJK1	SAM	12/21/24 10:08	2X for Ca	Kareem	Confirms
247	P5183-01DL	MYCZB9	SAM	12/21/24 10:12		Kareem	OK
248	P5183-02DL	MYCZC0	SAM	12/21/24 10:16		Kareem	OK
249	P5183-03DL	MYCZC1	SAM	12/21/24 10:20		Kareem	OK
250	P5183-04DL	MYCZC2	SAM	12/21/24 10:23		Kareem	OK
251	P5183-05DL	MYCZC3	SAM	12/21/24 10:27		Kareem	OK
252	P5183-06DL	MYCZC4	SAM	12/21/24 10:31		Kareem	OK
253	P5183-07DL	MYCZC5	SAM	12/21/24 10:35		Kareem	OK
254	CCV092	CCV092	CCV	12/21/24 10:39		Kareem	OK
255	CCB092	CCB092	CCB	12/21/24 10:43		Kareem	OK
256	P5183-08DL	MYCZC6	SAM	12/21/24 10:47		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

257	P5183-09DL	MYCZC7	SAM	12/21/24 10:51		Kareem	OK
258	P5183-10DL	MYCZC8	SAM	12/21/24 10:55		Kareem	OK
259	P5183-11DL	MYCZC9	SAM	12/21/24 10:59		Kareem	OK
260	P5183-12DL	MYCZD0	SAM	12/21/24 11:03		Kareem	OK
261	P5183-13DL	MYCZD1	SAM	12/21/24 11:07		Kareem	OK
262	P5183-14DL	MYCZD2	SAM	12/21/24 11:11		Kareem	OK
263	P5183-15DL	MYCZD3	SAM	12/21/24 11:15		Kareem	OK
264	P5183-16DL	MYCZD4	SAM	12/21/24 11:18		Kareem	OK
265	P5183-17DL	MYCZD5	SAM	12/21/24 11:23		Kareem	OK
266	P5183-18DL	MYCZD6	SAM	12/21/24 11:26		Kareem	OK
267	P5183-19DL	MYCZD7	SAM	12/21/24 11:30		Kareem	OK
268	P5183-20DL	MYCZD8	SAM	12/21/24 11:34		Kareem	OK
269	P5183-21DL	MYCZD8D	DUP	12/21/24 11:38		Kareem	OK
270	P5183-20LDL	MYCZD8L	SD	12/21/24 11:42		Kareem	OK
271	P5183-22DL	MYCZD8S	MS	12/21/24 11:45	MS fail for Cr(788 ppb),Cu(1907 ppb),Tl(Below RL)	Kareem	OK
272	PB165636BL	PBS636	MB	12/21/24 11:49		Kareem	OK
273	PB165636BS	LCS636	LCS	12/21/24 11:54		Kareem	OK
274	PB165636BSD	LCSD636	LCSD	12/21/24 11:57		Kareem	OK
275	P5180-01DL	MYCYW9	SAM	12/21/24 12:01	Mn high	Kareem	Dilution

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

276	CCV093	CCV093	CCV	12/21/24 12:05		Kareem	OK
277	CCB093	CCB093	CCB	12/21/24 12:09		Kareem	OK
278	P5180-02DL	MYCYX0	SAM	12/21/24 12:13		Kareem	OK
279	P5180-03DL	MYCYX1	SAM	12/21/24 12:17	Mn high	Kareem	Dilution
280	P5180-04DL	MYCYX2	SAM	12/21/24 12:20	Mn high	Kareem	Dilution
281	P5180-05DL	MYCYX3	SAM	12/21/24 12:24	Mn high	Kareem	Dilution
282	P5180-06DL	MYCYX4	SAM	12/21/24 12:28	Mn high	Kareem	Dilution
283	P5180-07DL	MYCYX5	SAM	12/21/24 12:32	Mn high	Kareem	Dilution
284	P5180-08DL	MYCYX6	SAM	12/21/24 12:36	Mn high	Kareem	Dilution
285	P5180-09DL	MYCYX7	SAM	12/21/24 12:40	Mn high	Kareem	Dilution
286	P5180-10DL	MYCYX8	SAM	12/21/24 12:44	Mn high	Kareem	Dilution
287	P5180-11DL	MYCZA9	SAM	12/21/24 12:47		Kareem	OK
288	P5180-12DL	MYCZB0	SAM	12/21/24 12:51		Kareem	OK
289	P5180-13DL	MYCZB1	SAM	12/21/24 12:55		Kareem	OK
290	P5180-14DL	MYCZB2	SAM	12/21/24 12:59		Kareem	OK
291	P5180-15DL	MYCZB3	SAM	12/21/24 13:03		Kareem	OK
292	P5180-16DL	MYCZB4	SAM	12/21/24 13:06		Kareem	OK
293	P5180-17DL	MYCZB5	SAM	12/21/24 13:10		Kareem	OK
294	P5180-18DL	MYCZB6	SAM	12/21/24 13:14		Kareem	OK
295	P5180-19DL	MYCZB7	SAM	12/21/24 13:18		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

296	P5180-20DL	MYCZB8	SAM	12/21/24 13:22		Kareem	OK
297	P5180-21DL	MYCZB8D	DUP	12/21/24 13:26		Kareem	OK
298	CCV094	CCV094	CCV	12/21/24 13:29		Kareem	OK
299	CCB094	CCB094	CCB	12/21/24 13:33		Kareem	OK
300	P5180-22DL	MYCZB8S	MS	12/21/24 13:41		Kareem	OK
301	PB165602BL	PBS602	MB	12/21/24 13:45		Kareem	OK
302	PB165602BS	LCS602	LCS	12/21/24 13:49		Kareem	OK
303	PB165602BSD	LCSD602	LCSD	12/21/24 13:53		Kareem	OK
304	PB165577BL	PBS577	MB	12/21/24 14:02		Kareem	OK
305	PB165577BSD	LCSD577	LCSD	12/21/24 14:10		Kareem	OK
306	P5178-14DL	MYCZ82	SAM	12/21/24 14:14		Kareem	OK
307	P5154-03DL	ME28P1	SAM	12/21/24 14:19	2X for Ca	Kareem	Confirms
308	P5154-06DL	ME28P4	SAM	12/21/24 14:22	2X for Ca	Kareem	Confirms
309	P5154-09DL	ME28P7	SAM	12/21/24 14:26	2X for Ca,Mg still Ca high	Kareem	Dilution
310	P5154-11DL	ME28P9	SAM	12/21/24 14:30	2X For Fe	Kareem	Confirms
311	P5154-13DL	ME28Q1	SAM	12/21/24 14:34	2X For Fe	Kareem	Confirms
312	P5154-14DL	ME28Q2	SAM	12/21/24 14:38	2X For Fe	Kareem	Confirms
313	P5154-15DL	ME28Q3	SAM	12/21/24 14:42	2X For Fe	Kareem	Confirms
314	P5154-16DL	ME28Q4	SAM	12/21/24 14:45	2X For Fe	Kareem	Confirms
315	P5154-16LDL	ME28Q4L	SD	12/21/24 14:49	10X For Fe	Kareem	Confirms

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

316	CCV095	CCV095	CCV	12/21/24 14:53		Kareem	OK
317	CCB095	CCB095	CCB	12/21/24 14:57		Kareem	OK
318	P5154-17DL	ME28Q4D	DUP	12/21/24 15:01	2X For Fe	Kareem	Confirms
319	P5154-18DL	ME28Q4S	MS	12/21/24 15:04	Not Required	Kareem	Not Ok
320	P5154-20DL	ME28R3	SAM	12/21/24 15:08	2X For Fe	Kareem	Confirms
321	P5154-21DL	ME28R4	SAM	12/21/24 15:12	2X For Fe	Kareem	Confirms
322	P5181-02DL	MYCYY0	SAM	12/21/24 15:16	5X for Mn	Kareem	Confirms
323	P5181-03DL	MYCYY1	SAM	12/21/24 15:20	5X for Mn	Kareem	Confirms
324	P5181-04DL	MYCYY2	SAM	12/21/24 15:24	5X for Mn	Kareem	Confirms
325	P5181-05DL	MYCYY3	SAM	12/21/24 15:27	5X for Mn	Kareem	Confirms
326	P5181-07DL	MYCYY5	SAM	12/21/24 15:31	5X for Mn	Kareem	Confirms
327	P5181-08DL	MYCYY6	SAM	12/21/24 15:35	5X for Mn	Kareem	Confirms
328	P5181-11DL	MYCYY9	SAM	12/21/24 15:39	5X for Mn	Kareem	Confirms
329	P5181-12DL	MYCYZ0	SAM	12/21/24 15:43	5X for Mn	Kareem	Confirms
330	P5181-13DL	MYCYZ1	SAM	12/21/24 15:47	5X for Mn	Kareem	Confirms
331	P5181-14DL	MYCYZ2	SAM	12/21/24 15:51	5X for Mn	Kareem	Confirms
332	P5186-09DL	MYCZP7	SAM	12/21/24 15:55	5X for Mn	Kareem	Confirms
333	P5008-20A	MBHJT0A	PS	12/21/24 15:59	PS For Cu-0.0031ml m5751,Se-0.01ml mp83726,Tl-0.05ml mp83745, Zn-0.014ml m5819-10ml sample.	Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134057

Review By	Mohan Bera	Review On	12/23/2024 12:36:57 AM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 8:22:17 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	MP83141
Chk Standard	MP83513,MP83514

334	P5058-03A	MBHL82A	PS	12/21/24 16:03	PS for Tl	Kareem	OK
335	P5059-14A	MBHLC4A	PS	12/21/24 16:06	PS for Tl,Zn	Kareem	OK
336	P5061-05A	MBHL52A	PS	12/21/24 16:10	PS for Se,Tl,Zn	Kareem	OK
337	P5154-16A	ME28Q4A	PS	12/21/24 16:14	PS for Tl	Kareem	OK
338	CCV096	CCV096	CCV	12/21/24 16:18		Kareem	OK
339	CCB096	CCB096	CCB	12/21/24 16:22		Kareem	OK
340	P5172-20ADL	MYCZ38A	PS	12/21/24 16:26	Not use - PS For -Cu-0.1ml mp83725 160 ,Zn-0.024 ml m5819	Kareem	Not Ok
341	P5177-20ADL	MYD021A	PS	12/21/24 16:29	PS FOr Pb-0.0026 ml m6025-10 ml final volume	Kareem	OK
342	P5180-20LDL	MYCZB8L	SD	12/21/24 16:33		Kareem	OK
343	PB165577BS	LCS577	LCS	12/21/24 16:37		Kareem	OK
344	CCV097	CCV097	CCV	12/21/24 16:41		Kareem	OK
345	CCB097	CCB097	CCB	12/21/24 16:45		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134069

Review By	Sarabjit Jaswal	Review On	12/25/2024 11:40:50 PM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	S0	S0	CAL1	12/23/24 13:14		Kareem	OK
2	S1	S01	CAL2	12/23/24 13:18		Kareem	OK
3	S2	S02	CAL3	12/23/24 13:23		Kareem	OK
4	S3	S03	CAL4	12/23/24 13:26		Kareem	OK
5	S4	S04	CAL5	12/23/24 13:30		Kareem	OK
6	S5	S05	CAL6	12/23/24 13:34		Kareem	OK
7	S6	S06	CAL7	12/23/24 13:38		Kareem	OK
8	ICV001	ICV001	ICV	12/23/24 13:56	Inst. paused for calibration review	Kareem	OK
9	ICB001	ICB001	ICB	12/23/24 14:00		Kareem	OK
10	ICSA001	ICSA001	ICSA	12/23/24 14:04		Kareem	OK
11	ICSAB001	ICSAB001	ICSAB	12/23/24 14:08		Kareem	OK
12	CCV001	CCV001	CCV	12/23/24 14:12		Kareem	OK
13	CCB001	CCB001	CCB	12/23/24 14:16		Kareem	OK
14	P5033-04DL	MBHK96	SAM	12/23/24 14:28	2x for Ca	Kareem	Confirms
15	P5033-12DL	MBHKA2	SAM	12/23/24 14:32	2x for Ca	Kareem	Confirms
16	P5033-13DL	MBHKA3	SAM	12/23/24 14:36	2x for Ca	Kareem	Confirms
17	P5034-03DL	MBHKB6	SAM	12/23/24 14:40	2x for Mn	Kareem	Confirms
18	P5034-04DL	MBHKB6D	DUP	12/23/24 14:44	2x for Mn	Kareem	Confirms

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134069

Review By	Sarabjit Jaswal	Review On	12/25/2024 11:40:50 PM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

19	P5034-03LDL	MBHKB6L	SD	12/23/24 14:48	10x for Mn	Kareem	Confirms
20	P5034-05DL	MBHKB6S	MS	12/23/24 14:52	2x for Mn	Kareem	Confirms
21	P5034-13DL	MBHKJ0	SAM	12/23/24 14:56	5x for Ca	Kareem	Confirms
22	P5233-03DL	ME28R7	SAM	12/23/24 15:00	2x for Ca	Kareem	Confirms
23	P5233-04DL	ME28R8	SAM	12/23/24 15:04	2x for Ca	Kareem	Confirms
24	P5233-06DL	ME28S0	SAM	12/23/24 15:08	2x for Ca	Kareem	Confirms
25	P5233-17DL	ME28T1	SAM	12/23/24 15:11	5x for Fe	Kareem	Confirms
26	P5233-19DL	ME28T3	SAM	12/23/24 15:15	2x for Fe	Kareem	Confirms
27	P5037-12DL	MBHK75	SAM	12/23/24 15:29	2x for Ca	Kareem	Confirms
28	P5037-20DL	MBHKG7	SAM	12/23/24 15:33	2x for Ca	Kareem	Confirms
29	P5028-01DL	MBHK34	SAM	12/23/24 15:37	2x for Ca	Kareem	Confirms
30	P5028-02DL	MBHK35	SAM	12/23/24 15:41	2x for Ca	Kareem	Confirms
31	P5009-21DL	MBHJZ3	SAM	12/23/24 15:45	2x for Ca	Kareem	Confirms
32	P4984-08DL	MBHJT5	SAM	12/23/24 15:49	5x for Ca	Kareem	Confirms
33	P4983-20DL	MBHJH0	SAM	12/23/24 15:53	5x for Ca	Kareem	Confirms
34	CCV002	CCV002	CCV	12/23/24 15:57		Kareem	OK
35	CCB002	CCB002	CCB	12/23/24 16:10	Inst. paused for review	Kareem	OK
36	P5039-07DL	MBHKJ7	SAM	12/23/24 16:14	2x for Ca	Kareem	Confirms
37	P5039-08DL	MBHKJ7D	DUP	12/23/24 16:18	2x for Ca	Kareem	Confirms
38	P5039-07LDL	MBHKJ7L	SD	12/23/24 16:21	10x for Ca	Kareem	Confirms

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134069

Review By	Sarabjit Jaswal	Review On	12/25/2024 11:40:50 PM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

39	P5039-09DL	MBHKJ7S	MS	12/23/24 16:26	2x for Ca	Kareem	Confirms
40	P5039-16DL	MBHKL8	SAM	12/23/24 16:29	2x for Ca	Kareem	Confirms
41	P5180-01DL	MYCYW9	SAM	12/23/24 16:33	4x for Mn	Kareem	Confirms
42	P5180-03DL	MYCYX1	SAM	12/23/24 16:37	4x for Mn	Kareem	Confirms
43	P5180-04DL	MYCYX2	SAM	12/23/24 16:41	5x for Mn	Kareem	Confirms
44	P5180-05DL	MYCYX3	SAM	12/23/24 16:45	8x for Mn	Kareem	Confirms
45	P5180-06DL	MYCYX4	SAM	12/23/24 16:49	8x for Mn	Kareem	Confirms
46	P5180-07DL	MYCYX5	SAM	12/23/24 16:53	8x for Mn	Kareem	Confirms
47	P5180-08DL	MYCYX6	SAM	12/23/24 16:57	8x for Mn	Kareem	Confirms
48	P5180-09DL	MYCYX7	SAM	12/23/24 17:01	8x for Mn	Kareem	Confirms
49	P5180-10DL	MYCYX8	SAM	12/23/24 17:05	10x for Mn	Kareem	Confirms
50	P5181-10DL	MYCYY8	SAM	12/23/24 17:09	4x for Mn	Kareem	Confirms
51	P5184-20DL	MYCZF8	SAM	12/23/24 17:13		Kareem	OK
52	P5184-21DL	MYCZF8D	DUP	12/23/24 17:17		Kareem	OK
53	P5184-20LDL	MYCZF8L	SD	12/23/24 17:21		Kareem	OK
54	P5184-22DL	MYCZF8S	MS	12/23/24 17:25	MS fail for Cr (862.76 ppb), Zn (1114.67 ppb), Ag(Below RL)	Kareem	OK
55	P5154-09DL	ME28P7	SAM	12/23/24 17:29	5x for Ca	Kareem	Confirms
56	CCV003	CCV003	CCV	12/23/24 17:33		Kareem	OK
57	CCB003	CCB003	CCB	12/23/24 17:37		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134069

Review By	Sarabjit Jaswal	Review On	12/25/2024 11:40:50 PM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

58	P4978-05DL	MBHJ51	SAM	12/23/24 17:41	5x for Ca	Kareem	Confirms
59	P4978-06DL	MBHJ52	SAM	12/23/24 17:45	5x for Ca	Kareem	Confirms
60	P4978-07DL	MBHJ53	SAM	12/23/24 17:49	5x for Ca	Kareem	Confirms
61	P4979-14DL	MBHJA2	SAM	12/23/24 17:53	2x for Ca	Kareem	Confirms
62	P4979-16DL	MBHJA4	SAM	12/23/24 17:57	5x for Ca	Kareem	Confirms
63	P4980-03DL	MBHJ72	SAM	12/23/24 18:01	5x for Ca	Kareem	Confirms
64	P4980-10DL	MBHJ86	SAM	12/23/24 18:05	5x for Ca	Kareem	Confirms
65	P4980-16DL	MBHJ90	SAM	12/23/24 18:09	5x for Ca	Kareem	Confirms
66	P4980-17DL	MBHJB0	SAM	12/23/24 18:13	5x for Ca	Kareem	Confirms
67	P4982-05DL	MBHJ37	SAM	12/23/24 18:17	5x for Ca	Kareem	Confirms
68	P4982-15DL	MBHJE9	SAM	12/23/24 18:21	5x for Ca	Kareem	Confirms
69	P4982-16DL	MBHJF0	SAM	12/23/24 18:24	5x for Ca	Kareem	Confirms
70	P5008-02DL	MBHJJ1	SAM	12/23/24 18:28	5x for Ca	Kareem	Confirms
71	P5008-03DL	MBHJJ3	SAM	12/23/24 18:32	5x for Ca	Kareem	Confirms
72	P5008-04DL	MBHJJ4	SAM	12/23/24 18:36	5x for Ca	Kareem	Confirms
73	P5008-05DL	MBHJJ5	SAM	12/23/24 18:40	5x for Ca	Kareem	Confirms
74	P5008-06DL	MBHJJ6	SAM	12/23/24 18:44	5x for Ca	Kareem	Confirms
75	P5183-20ADL	MYCZD8A	PS	12/23/24 18:48	PS For Cr(0.016ml m5658),Cu(-0.038ml m5697),Tl(0.05ml mp83745) - 10ml Sample	Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134069

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Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

76	P5009-04A	MBHJQ3A	PS	12/23/24 18:52	PS for Cu(0.0032ml m5697),Se(0.013ml mp83726),Tl(0.05ml mp83745), Zn(0.014ml m5819)- 10ml Sample	Kareem	OK
77	P5028-07A	MBHK40A	PS	12/23/24 18:56	PS for Se(0.07ml mp83723)- 10ml Sample	Kareem	OK
78	CCV004	CCV004	CCV	12/23/24 19:00		Kareem	OK
79	CCB004	CCB004	CCB	12/23/24 19:03		Kareem	OK
80	P5033-05A	MBHK97A	PS	12/23/24 19:07	PS for Se(0.07ml mp83723),Zn(0.037ml m5819) - 10ml Sample	Kareem	OK
81	P5034-03A	MBHKB6A	PS	12/23/24 19:11	PS For Cu(0.0053ml m5697),Se(0.07ml mp83723),Zn(0.013ml m5819) - 10ml Sample	Kareem	OK
82	P5037-06A	MBHKC0A	PS	12/23/24 19:15	PS for Se(0.07ml mp83723)- 10ml Sample	Kareem	OK
83	P5039-07A	MBHKJ7A	PS	12/23/24 19:19	PS for Se(0.07ml mp83723)- 10ml Sample	Kareem	OK
84	P5042-01A	MBHKB0A	PS	12/23/24 19:23	PS for Se(0.07ml mp83723)- 10ml Sample	Kareem	OK
85	P5090-01	MBHM14	SAM	12/23/24 19:27		Kareem	OK
86	P5090-02	MBHM15	SAM	12/23/24 19:31		Kareem	OK
87	P5090-03	MBHM16	SAM	12/23/24 19:34		Kareem	OK
88	P5090-04	MBHM17	SAM	12/23/24 19:38		Kareem	OK
89	P5090-05	MBHM18	SAM	12/23/24 19:42		Kareem	OK
90	P5090-06	MBHM19	SAM	12/23/24 19:46		Kareem	OK

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Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

91	P5090-07	MBHM20	SAM	12/23/24 19:50		Kareem	OK
92	P5090-08	MBHM21	SAM	12/23/24 19:54		Kareem	OK
93	P5090-09	MBHM22	SAM	12/23/24 19:58		Kareem	OK
94	P5090-10	MBHM23	SAM	12/23/24 20:01		Kareem	OK
95	P5090-11	MBHM24	SAM	12/23/24 20:05		Kareem	OK
96	P5090-12	MBHM25	SAM	12/23/24 20:09		Kareem	OK
97	P5090-13	MBHM25D	DUP	12/23/24 20:13		Kareem	OK
98	P5090-12L	MBHM25L	SD	12/23/24 20:17		Kareem	OK
99	P5090-14	MBHM25S	MS	12/23/24 20:21	MS fail for As (243.86 ppb) , Ba (1459.46 ppb), Cu (427.24 ppb), Se (177 ppb), Zn (1503.85 ppb) & Tl (Below RL)	Kareem	OK
100	CCV005	CCV005	CCV	12/23/24 20:28		Kareem	OK
101	CCB005	CCB005	CCB	12/23/24 20:32		Kareem	OK
102	P5090-15	MBHM26	SAM	12/23/24 20:36		Kareem	OK
103	P5090-16	MBHM27	SAM	12/23/24 20:40		Kareem	OK
104	P5090-17	MBHM28	SAM	12/23/24 20:44		Kareem	OK
105	P5090-18	MBHM36	SAM	12/23/24 20:48		Kareem	OK
106	P5090-19	MBHM37	SAM	12/23/24 20:51		Kareem	OK
107	PB165739BL	PBS739	MB	12/23/24 20:55		Kareem	OK
108	PB165739BS	LCS739	LCS	12/23/24 20:59		Kareem	OK

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Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

109	P5063-01	MBHL28	SAM	12/23/24 21:03		Kareem	OK
110	P5063-02	MBHL29	SAM	12/23/24 21:07		Kareem	OK
111	P5063-03	MBHL30	SAM	12/23/24 21:11		Kareem	OK
112	P5063-04	MBHL31	SAM	12/23/24 21:15		Kareem	OK
113	P5063-05	MBHL32	SAM	12/23/24 21:19		Kareem	OK
114	P5063-06	MBHL33	SAM	12/23/24 21:23		Kareem	OK
115	P5063-07	MBHL34	SAM	12/23/24 21:26		Kareem	OK
116	P5063-08	MBHL34D	DUP	12/23/24 21:30		Kareem	OK
117	P5063-07L	MBHL34L	SD	12/23/24 21:34		Kareem	OK
118	P5063-09	MBHL34S	MS	12/23/24 21:38	MS fail for Cu (179.98 ppb), Zn (381.63 ppb) & Sb,Se,Ag (Below RL)	Kareem	OK
119	P5063-10	MBHL77	SAM	12/23/24 21:42		Kareem	OK
120	P5063-11	MBHL78	SAM	12/23/24 21:46		Kareem	OK
121	P5063-12	MBHL79	SAM	12/23/24 21:49		Kareem	OK
122	CCV006	CCV006	CCV	12/23/24 21:53		Kareem	OK
123	CCB006	CCB006	CCB	12/23/24 21:57		Kareem	OK
124	P5071-01	MBHKX5	SAM	12/23/24 22:01		Kareem	OK
125	P5071-02	MBHKX5D	DUP	12/23/24 22:05		Kareem	OK
126	P5071-01L	MBHKX5L	SD	12/23/24 22:09		Kareem	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Daily Analysis Runlog For Sequence/QCBatch ID # LB134069

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Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

127	P5071-03	MBHKX5S	MS	12/23/24 22:13	MS fail for Cu (86.93 ppb), Se (40.18 ppb), Zn (565.58 ppb) & Sb,Ag,Tl (Below RL)	Kareem	OK
128	PB165507BL	PBS507	MB	12/23/24 22:16		Kareem	OK
129	PB165507BS	LCS507	LCS	12/23/24 22:20		Kareem	OK
130	P5084-01	MBHLR0	SAM	12/23/24 22:24		Kareem	OK
131	P5084-02	MBHLW6	SAM	12/23/24 22:28		Kareem	OK
132	P5084-03	MBHLW7	SAM	12/23/24 22:32		Kareem	OK
133	P5084-04	MBHLW8	SAM	12/23/24 22:36		Kareem	OK
134	P5084-05	MBHLW9	SAM	12/23/24 22:40	Ca high	Kareem	Dilution
135	P5084-06	MBHLX0	SAM	12/23/24 22:43	Ca high	Kareem	Dilution
136	P5084-07	MBHLX1	SAM	12/23/24 22:47	Ca high	Kareem	Dilution
137	P5084-08	MBHLX2	SAM	12/23/24 22:51	Ca high	Kareem	Dilution
138	P5084-09	MBHLX3	SAM	12/23/24 22:55		Kareem	OK
139	P5084-10	MBHLX4	SAM	12/23/24 22:59		Kareem	OK
140	P5084-11	MBHLX5	SAM	12/23/24 23:03		Kareem	OK
141	P5084-12	MBHLX6	SAM	12/23/24 23:06		Kareem	OK
142	P5084-13	MBHLX7	SAM	12/23/24 23:10		Kareem	OK
143	P5084-14	MBHLX7D	DUP	12/23/24 23:14		Kareem	OK
144	CCV007	CCV007	CCV	12/23/24 23:18		Kareem	OK
145	CCB007	CCB007	CCB	12/23/24 23:22		Kareem	OK

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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134069

Review By	Sarabjit Jaswal	Review On	12/25/2024 11:40:50 PM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

146	P5084-13L	MBHLX7L	SD	12/23/24 23:26		Kareem	OK
147	P5084-15	MBHLX7S	MS	12/23/24 23:30	MS fail for Se (70.78 ppb) & Sb,Ag,Tl (Below RL)	Kareem	OK
148	P5084-16	MBHLX8	SAM	12/23/24 23:33		Kareem	OK
149	P5084-17	MBHLX9	SAM	12/23/24 23:37		Kareem	OK
150	P5084-18	MBHM32	SAM	12/23/24 23:41	Ca high	Kareem	Dilution
151	P5084-19	MBHM33	SAM	12/23/24 23:45		Kareem	OK
152	PB165713BL	PBS713	MB	12/23/24 23:49		Kareem	OK
153	PB165713BS	LCS713	LCS	12/23/24 23:53		Kareem	OK
154	P5091-01	MBHLR4	SAM	12/23/24 23:57	Ca high	Kareem	Dilution
155	P5091-02	MBHLR5	SAM	12/24/24	Ca high	Kareem	Dilution
156	P5091-03	MBHLR6	SAM	12/24/24 00:04	Ca high	Kareem	Dilution
157	P5091-04	MBHLR7	SAM	12/24/24 00:08		Kareem	OK
158	P5091-05	MBHLR8	SAM	12/24/24 00:12		Kareem	OK
159	P5091-06	MBHLR9	SAM	12/24/24 00:16		Kareem	OK
160	P5091-07	MBHLS0	SAM	12/24/24 00:20		Kareem	OK
161	P5091-08	MBHLS0D	DUP	12/24/24 00:23		Kareem	OK
162	P5091-07L	MBHLS0L	SD	12/24/24 00:27		Kareem	OK
163	P5091-09	MBHLS0S	MS	12/24/24 00:31	MS fail for Se (100.55 ppb) & Ag,Tl (Below RL)	Kareem	OK
164	P5091-10	MBHLS1	SAM	12/24/24 00:35		Kareem	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Review By	Sarabjit Jaswal	Review On	12/25/2024 11:40:50 PM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

165	P5091-11	MBHLS2	SAM	12/24/24 00:39	Ca high	Kareem	Dilution
166	CCV008	CCV008	CCV	12/24/24 00:42		Kareem	OK
167	CCB008	CCB008	CCB	12/24/24 00:46		Kareem	OK
168	P5091-12	MBHLS3	SAM	12/24/24 00:50	Ca high	Kareem	Dilution
169	P5091-13	MBHLS4	SAM	12/24/24 00:54	Ca high	Kareem	Dilution
170	P5091-14	MBHLS5	SAM	12/24/24 00:58		Kareem	OK
171	P5091-15	MBHLS6	SAM	12/24/24 01:02		Kareem	OK
172	P5091-16	MBHLS7	SAM	12/24/24 01:06		Kareem	OK
173	P5091-17	MBHLS8	SAM	12/24/24 01:10		Kareem	OK
174	P5091-18	MBHLS9	SAM	12/24/24 01:13	Ca high	Kareem	Dilution
175	P5091-19	MBHLT0	SAM	12/24/24 01:17	Ca high	Kareem	Dilution
176	P5091-20	MBHLT1	SAM	12/24/24 01:21	Ca high	Kareem	Dilution
177	P5091-21	MBHLT2	SAM	12/24/24 01:25		Kareem	OK
178	P5091-22	MBHLT3	SAM	12/24/24 01:29		Kareem	OK
179	PB165740BL	PBS740	MB	12/24/24 01:33		Kareem	OK
180	PB165740BS	LCS740	LCS	12/24/24 01:37		Kareem	OK
181	P5015-02	MBHK13	SAM	12/24/24 01:41		Kareem	OK
182	P5033-21	MBHKQ4	SAM	12/24/24 01:45		Kareem	OK
183	P5059-20	MBHLD7	SAM	12/24/24 01:49		Kareem	OK
184	P5059-21	MBHLD8	SAM	12/24/24 01:53		Kareem	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Instrument ID: P5

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Review By	Sarabjit Jaswal	Review On	12/25/2024 11:40:50 PM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

185	P5092-20	MBHM40	SAM	12/24/24 01:57		Kareem	OK
186	P5132-21	MBHMN5	SAM	12/24/24 02:01		Kareem	OK
187	P5200-15	MBHNJ3	SAM	12/24/24 02:05		Kareem	OK
188	CCV009	CCV009	CCV	12/24/24 02:09		Kareem	OK
189	CCB009	CCB009	CCB	12/24/24 02:12		Kareem	OK
190	P5212-09	MBHNJ4	SAM	12/24/24 02:16		Kareem	OK
191	PB165669BL	PBW669	MB	12/24/24 02:20		Kareem	OK
192	PB165669BS	LCS669	LCS	12/24/24 02:24		Kareem	OK
193	P5086-01	MBHLM6	SAM	12/24/24 02:28		Kareem	OK
194	P5086-02	MBHLM7	SAM	12/24/24 02:32		Kareem	OK
195	P5086-03	MBHLM8	SAM	12/24/24 02:36		Kareem	OK
196	P5086-04	MBHLM9	SAM	12/24/24 02:40		Kareem	OK
197	P5086-05	MBHLN0	SAM	12/24/24 02:44		Kareem	OK
198	P5086-06	MBHLN1	SAM	12/24/24 02:48		Kareem	OK
199	P5086-07	MBHLN2	SAM	12/24/24 02:51		Kareem	OK
200	P5086-08	MBHLN2D	DUP	12/24/24 02:55		Kareem	OK
201	P5086-07L	MBHLN2L	SD	12/24/24 02:59		Kareem	OK
202	P5086-09	MBHLN2S	MS	12/24/24 03:03	MS fail for Be (8.0 ppb), Cu (169.15 ppb), Se (80.54 ppb), Zn (524.51 ppb) & Sb,Ag,Tl (Below RL)	Kareem	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Instrument ID: P5

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Review By	Sarabjit Jaswal	Review On	12/25/2024 11:40:50 PM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

203	P5086-10	MBHLN3	SAM	12/24/24 03:07		Kareem	OK
204	P5086-11	MBHLN4	SAM	12/24/24 03:11		Kareem	OK
205	P5086-12	MBHLN5	SAM	12/24/24 03:14		Kareem	OK
206	P5086-13	MBHLN6	SAM	12/24/24 03:18		Kareem	OK
207	P5086-14	MBHLN7	SAM	12/24/24 03:22	Ca high	Kareem	Dilution
208	P5086-15	MBHLN8	SAM	12/24/24 03:26	Ca high	Kareem	Dilution
209	P5086-16	MBHLN9	SAM	12/24/24 03:30	Ca high	Kareem	Dilution
210	CCV010	CCV010	CCV	12/24/24 03:34		Kareem	OK
211	CCB010	CCB010	CCB	12/24/24 03:37		Kareem	OK
212	P5086-17	MBHLP7	SAM	12/24/24 03:42		Kareem	OK
213	P5086-18	MBHLP8	SAM	12/24/24 03:45		Kareem	OK
214	P5086-19	MBHLP9	SAM	12/24/24 03:49		Kareem	OK
215	P5086-20	MBHLQ0	SAM	12/24/24 03:53		Kareem	OK
216	P5086-21	MBHLQ1	SAM	12/24/24 03:57		Kareem	OK
217	P5086-22	MBHLQ2	SAM	12/24/24 04:01		Kareem	OK
218	PB165725BL	PBS725	MB	12/24/24 04:04		Kareem	OK
219	PB165725BS	LCS725	LCS	12/24/24 04:08		Kareem	OK
220	P5089-01	MBHLZ4	SAM	12/24/24 04:12		Kareem	OK
221	P5089-02	MBHLZ4D	DUP	12/24/24 04:16		Kareem	OK
222	P5089-01L	MBHLZ4L	SD	12/24/24 04:20		Kareem	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Instrument ID: P5

Daily Analysis Runlog For Sequence/QCBatch ID # LB134069

Review By	Sarabjit Jaswal	Review On	12/25/2024 11:40:50 PM
Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

223	P5089-03	MBHLZ4S	MS	12/24/24 04:24	MS fail for As (201.58 ppb), Cu (299.10 ppb),Se (72.64 ppb), Zn (952.81 ppb) & Sb,Ag,Tl (Below RL)	Kareem	OK
224	P5089-04	MBHLZ5	SAM	12/24/24 04:28		Kareem	OK
225	P5089-05	MBHLZ6	SAM	12/24/24 04:32		Kareem	OK
226	P5089-06	MBHLZ7	SAM	12/24/24 04:35		Kareem	OK
227	P5089-07	MBHLZ8	SAM	12/24/24 04:39		Kareem	OK
228	P5089-08	MBHLZ9	SAM	12/24/24 04:43		Kareem	OK
229	P5089-09	MBHM00	SAM	12/24/24 04:47		Kareem	OK
230	P5089-10	MBHM01	SAM	12/24/24 04:51		Kareem	OK
231	P5089-11	MBHM02	SAM	12/24/24 04:55		Kareem	OK
232	CCV011	CCV011	CCV	12/24/24 04:58		Kareem	OK
233	CCB011	CCB011	CCB	12/24/24 05:02		Kareem	OK
234	P5089-12	MBHM03	SAM	12/24/24 05:06		Kareem	OK
235	P5089-13	MBHM04	SAM	12/24/24 05:10		Kareem	OK
236	P5089-14	MBHM05	SAM	12/24/24 05:14		Kareem	OK
237	P5089-15	MBHM06	SAM	12/24/24 05:17		Kareem	OK
238	P5089-16	MBHM07	SAM	12/24/24 05:21		Kareem	OK
239	P5089-17	MBHM08	SAM	12/24/24 05:25		Kareem	OK
240	P5089-18	MBHM09	SAM	12/24/24 05:29		Kareem	OK

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Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

241	P5089-19	MBHM10	SAM	12/24/24 05:33		Kareem	OK
242	P5089-20	MBHM11	SAM	12/24/24 05:37		Kareem	OK
243	P5089-21	MBHM12	SAM	12/24/24 05:40		Kareem	OK
244	P5089-22	MBHM13	SAM	12/24/24 05:44		Kareem	OK
245	PB165727BL	PBS727	MB	12/24/24 05:48		Kareem	OK
246	PB165727BS	LCS727	LCS	12/24/24 05:52		Kareem	OK
247	P5169-01	MJNLH1	SAM	12/24/24 05:56		Kareem	OK
248	P5169-02	MJNLH2	SAM	12/24/24 06:00		Kareem	OK
249	P5169-03	MJNLH5	SAM	12/24/24 06:04		Kareem	OK
250	P5169-04	MJNLH4	SAM	12/24/24 06:08	NOT USE	Kareem	Not Ok
251	P5169-05	MJNLH4D	DUP	12/24/24 06:12	NOT USE	Kareem	Not Ok
252	P5169-04L	MJNLH4L	SD	12/24/24 06:15	NOT USE	Kareem	Not Ok
253	CCV012	CCV012	CCV	12/24/24 06:19		Kareem	OK
254	CCB012	CCB012	CCB	12/24/24 06:23		Kareem	OK
255	P5169-06	MJNLH4S	MS	12/24/24 06:27	NOT USE	Kareem	Not Ok
256	PB165673BL	PBW673	MB	12/24/24 06:35	NOT USE	Kareem	Not Ok
257	PB165673BS	LCS673	LCS	12/24/24 06:39	NOT USE	Kareem	Not Ok
258	P5081-01	MBHLG0	SAM	12/24/24 06:43		Kareem	OK
259	P5081-02	MBHLG1	SAM	12/24/24 06:47	Ca high	Kareem	Dilution
260	P5081-03	MBHLG2	SAM	12/24/24 06:51	Ca high	Kareem	Dilution

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

261	P5081-04	MBHLG3	SAM	12/24/24 06:54		Kareem	OK
262	P5081-05	MBHLG4	SAM	12/24/24 06:59		Kareem	OK
263	P5081-06	MBHLG4D	DUP	12/24/24 07:02		Kareem	OK
264	P5081-05L	MBHLG4L	SD	12/24/24 07:06		Kareem	OK
265	P5081-07	MBHLG4S	MS	12/24/24 07:10	MS fail for Be (7.17 ppb) , Cu (275.06 ppb), Se (59.69 ppb), V (178.80 ppb), Zn (1028.26) & Sb,Ag,Tl (Below RL)	Kareem	OK
266	P5081-08	MBHLG5	SAM	12/24/24 07:14		Kareem	OK
267	P5081-09	MBHLG6	SAM	12/24/24 07:18		Kareem	OK
268	P5081-10	MBHLJ1	SAM	12/24/24 07:22		Kareem	OK
269	P5081-11	MBHLJ2	SAM	12/24/24 07:25		Kareem	OK
270	P5081-12	MBHLJ3	SAM	12/24/24 07:29		Kareem	OK
271	P5081-13	MBHLJ4	SAM	12/24/24 07:33		Kareem	OK
272	P5081-14	MBHLJ5	SAM	12/24/24 07:37		Kareem	OK
273	P5081-15	MBHLJ6	SAM	12/24/24 07:41		Kareem	OK
274	CCV013	CCV013	CCV	12/24/24 07:45		Kareem	OK
275	CCB013	CCB013	CCB	12/24/24 07:48		Kareem	OK
276	P5081-16	MBHLJ7	SAM	12/24/24 07:52		Kareem	OK
277	P5081-17	MBHLK5	SAM	12/24/24 07:56		Kareem	OK
278	P5081-18	MBHLK6	SAM	12/24/24 08:00		Kareem	OK

284 Sheffield Street, Mountainside, New Jersey 07092, Phone : 908 789 8900,
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Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

279	P5081-19	MBHLK7	SAM	12/24/24 08:04		Kareem	OK
280	P5081-20	MBHLK8	SAM	12/24/24 08:08		Kareem	OK
281	P5081-21	MBHLK9	SAM	12/24/24 08:11		Kareem	OK
282	P5081-22	MBHLL0	SAM	12/24/24 08:15		Kareem	OK
283	PB165694BL	PBS694	MB	12/24/24 08:19		Kareem	OK
284	PB165694BS	LCS694	LCS	12/24/24 08:23		Kareem	OK
285	P5083-01	MBHLJ8	SAM	12/24/24 08:27		Kareem	OK
286	P5083-02	MBHLJ9	SAM	12/24/24 08:31		Kareem	OK
287	P5083-03	MBHLK0	SAM	12/24/24 08:35		Kareem	OK
288	P5083-04	MBHLK0D	DUP	12/24/24 08:39		Kareem	OK
289	P5083-03L	MBHLK0L	SD	12/24/24 08:42		Kareem	OK
290	P5083-05	MBHLK0S	MS	12/24/24 08:46	MS fail for Se (74.03 ppb), Zn (183 ppb) & Ag,Tl (Below RL)	Kareem	OK
291	P5083-06	MBHLK1	SAM	12/24/24 08:50		Kareem	OK
292	P5083-07	MBHLK2	SAM	12/24/24 08:54		Kareem	OK
293	P5083-08	MBHLK3	SAM	12/24/24 08:58		Kareem	OK
294	P5083-09	MBHLK4	SAM	12/24/24 09:02		Kareem	OK
295	CCV014	CCV014	CCV	12/24/24 09:05		Kareem	OK
296	CCB014	CCB014	CCB	12/24/24 09:09		Kareem	OK
297	P5083-10	MBHLL9	SAM	12/24/24 09:13		Kareem	OK

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Supervise By	Kareem Khairalla	Supervise On	12/27/2024 4:23:37 PM

STD. NAME	STD REF.#
ICAL Standard	MP83500,MP83507,MP83505,MP83504,MP83503,MP83502,MP83501
ICV Standard	MP83508
CCV Standard	MP83511
ICSA Standard	MP83509,MP83510
CRI Standard	
LCS Standard	
Chk Standard	MP83513,MP83514

298	P5083-11	MBHLM0	SAM	12/24/24 09:17		Kareem	OK
299	P5083-12	MBHLM1	SAM	12/24/24 09:21		Kareem	OK
300	P5083-13	MBHLM2	SAM	12/24/24 09:25		Kareem	OK
301	P5083-14	MBHLM3	SAM	12/24/24 09:28	Ca high	Kareem	Dilution
302	P5083-15	MBHLM4	SAM	12/24/24 09:32	Ca high	Kareem	Dilution
303	P5083-16	MBHLM5	SAM	12/24/24 09:36	Ca high	Kareem	Dilution
304	P5083-17	MBHLQ4	SAM	12/24/24 09:40		Kareem	OK
305	P5083-18	MBHLQ5	SAM	12/24/24 09:44		Kareem	OK
306	P5083-19	MBHLQ6	SAM	12/24/24 09:48		Kareem	OK
307	P5083-20	MBHLQ7	SAM	12/24/24 09:52		Kareem	OK
308	P5083-21	MBHLQ8	SAM	12/24/24 09:55		Kareem	OK
309	P5083-22	MBHLQ9	SAM	12/24/24 09:59		Kareem	OK
310	PB165632BL	PBS632	MB	12/24/24 10:03	NOT USE	Kareem	Not Ok
311	PB165632BS	LCS632	LCS	12/24/24 10:07	NOT USE	Kareem	Not Ok
312	CCV015	CCV015	CCV	12/24/24 10:11		Kareem	OK
313	CCB015	CCB015	CCB	12/24/24 10:15		Kareem	OK