

FORM 1 - IN
INORGANIC ANALYSIS DATA SHEET

MJNKG0

Lab Name: Alliance Technical Group, LLC Contract: 68HERH20D0011
Lab Code: ACE Case No.: 51821 MA No. : SDG No.: MJNKG0
Matrix: SOIL Lab Sample ID: P5249-01
% Solids: 73.6 Date Received: 12/10/2024
Analytical Method: ICP_MS
Concentration Units ($\mu\text{g/L}$, mg/L , mg/kg dry weight, μg , or $\mu\text{g/cm}^2$): mg/kg

CAS No.	Analyte	Concentration	Q	Date Analyzed	Time Analyzed
7440-38-2	Arsenic	290		12/21/2024	1805
7440-50-8	Copper	190		12/21/2024	1805
7439-92-1	Lead	320		12/21/2024	1805
7440-66-6	Zinc	1500		12/21/2024	1805

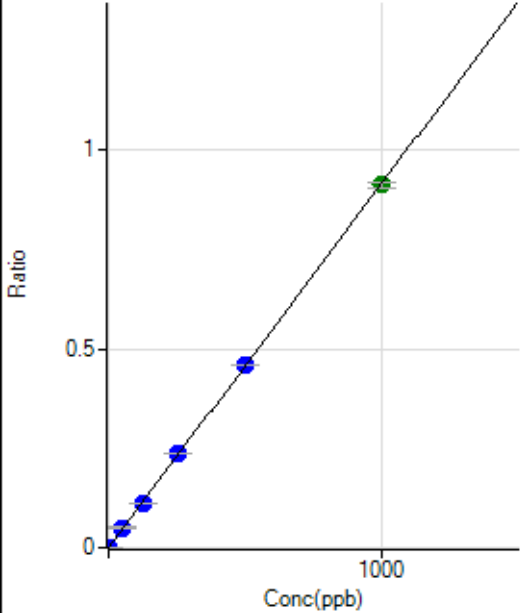
NOTE: Hardness (total) is reported in mg/L

Comments:

Batch Folder: D:\Agilent\ICPMH\1\DATA\P7122124MS-1.b\
Analysis File: P7122124MS-1.batch.bin
DA Date-Time: 2024-12-22 13:10:31
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB.d	S00	2024-12-21 16:08:12
2	006CALS.d	S02	2024-12-21 16:14:49
3	007CALS.d	S03	2024-12-21 16:18:06
4	008CALS.d	S04	2024-12-21 16:21:10
5	009CALS.d	S05	2024-12-21 16:24:01
6	010CALS.d	S06	2024-12-21 16:26:49
7	011CALS.d	S07	2024-12-21 16:29:33
8	012CALS.d	S08	2024-12-21 16:32:20

9 Be [No Gas] ISTD:6 Li [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	37.78	0.0000	P	19.1
2	☐	1.000	1.187	1525.65	0.0011	P	1.4
3	☐	50.000	55.197	70235.42	0.0506	P	1.6
4	☐	125.000	122.746	164262.33	0.1125	P	0.5
5	☐	250.000	258.829	354117.16	0.2371	P	0.4
6	☐	500.000	501.835	686397.73	0.4598	P	0.9
7	☐	1000.000	996.897	1359107.19	0.9133	A	1.6
8	☐			421.12	0.0003	P	13.1

$y = 9.1613E-004 * x + 2.8155E-005$

$R = 0.9999$

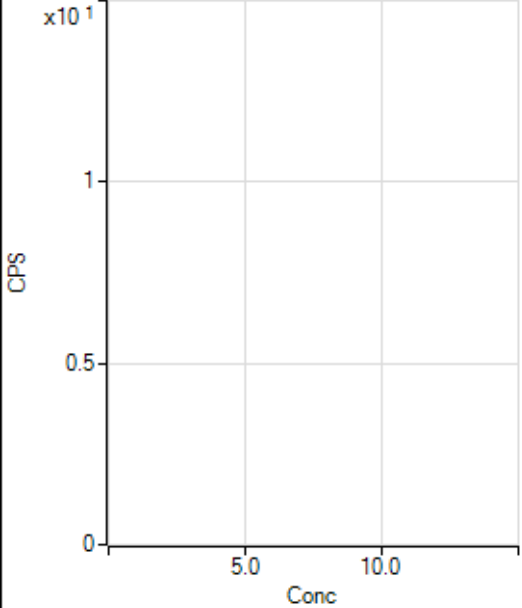
$DL = 0.01762$

$BEC = 0.03073$

Weight: <None>

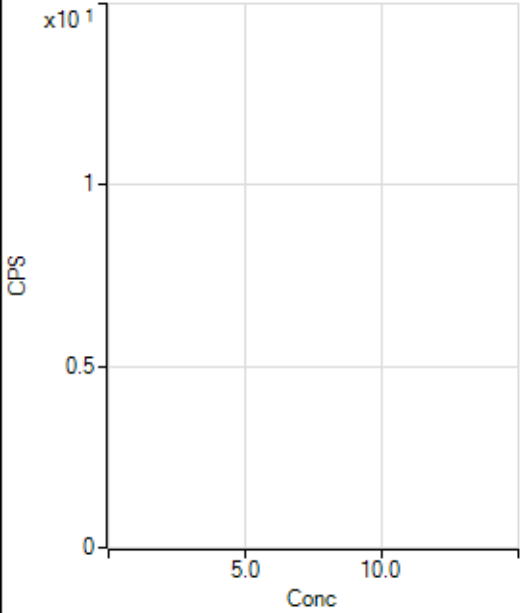
Min Conc: 0

12 C [No Gas] No available calibration points



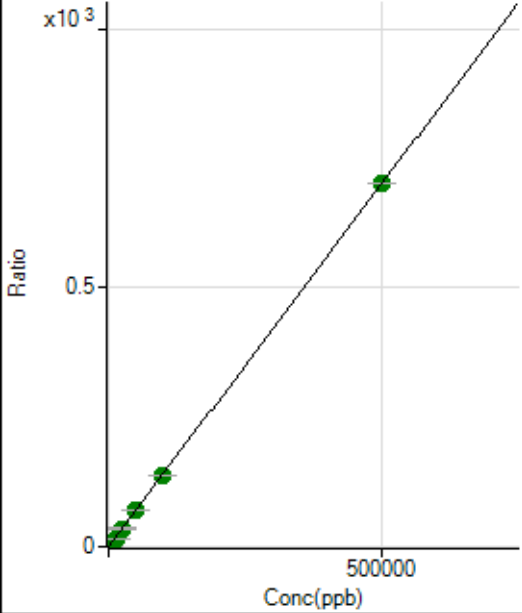
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

12 C [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

23 Na [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	17958.33	0.0315	P	1.4
2	☐	500.000	512.348	427680.69	0.7492	P	0.7
3	☐	5000.000	4926.201	3892177.55	6.9321	A	0.7
4	☐	12500.000	11408.585	8508294.18	16.0125	A	0.9
5	☐	25000.000	25113.439	17694470.99	35.2100	A	0.5
6	☐	50000.000	49840.112	33816750.05	69.8468	A	0.4
7	☐	100000.00	98836.156	66976502.34	138.4796	A	0.5
8	☐	500000.00	500271.09	342385759.34	700.8032	A	0.2

$y = 0.0014 * x + 0.0315$

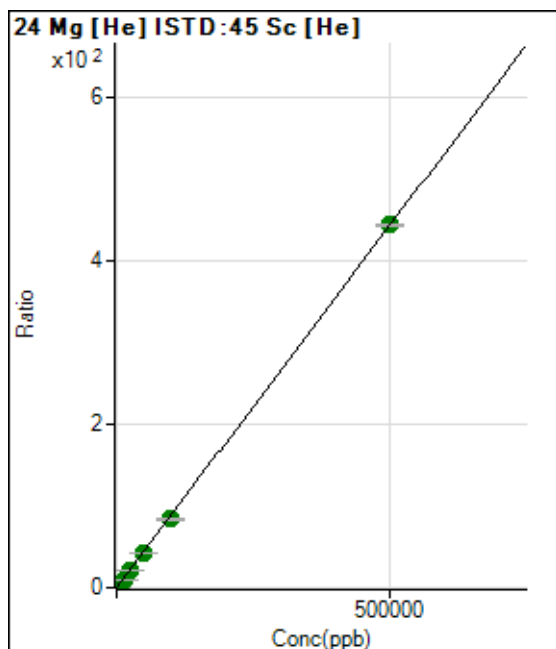
$R = 1.0000$

$DL = 0.924$

$BEC = 22.52$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	457.79	0.0008	P	2.3
2	☐	500.000	530.036	268340.81	0.4701	P	0.7
3	☐	5000.000	4758.115	2365845.80	4.2136	A	0.7
4	☐	12500.000	10961.139	5156917.32	9.7058	A	1.4
5	☐	25000.000	24120.994	10732792.76	21.3575	A	0.7
6	☐	50000.000	47793.453	20487979.55	42.3170	A	0.8
7	☐	100000.00	94452.176	40447517.17	83.6286	A	0.4
8	☐	500000.00	501415.03	216899263.43	443.9526	A	0.6

$$y = 8.8540E-004 * x + 8.0429E-004$$

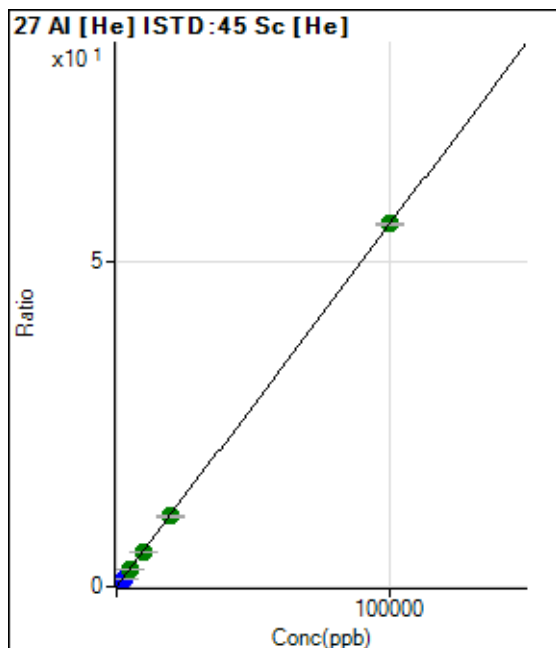
R = 0.9999

DL = 0.06275

BEC = 0.9084

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	101.11	0.0002	P	21.7
2	☐	20.000	20.563	6624.82	0.0116	P	2.0
3	☐	1000.000	956.208	298491.99	0.5316	P	1.0
4	☐	2500.000	2218.696	655288.44	1.2333	P	0.9
5	☐	5000.000	4941.843	1380321.06	2.7468	A	0.9
6	☐	10000.000	9769.331	2628841.39	5.4298	A	0.4
7	☐	20000.000	19456.805	5230147.07	10.8140	A	1.4
8	☐	100000.00	100142.08	27192062.65	55.6575	A	0.2

$$y = 5.5578E-004 * x + 1.7757E-004$$

R = 1.0000

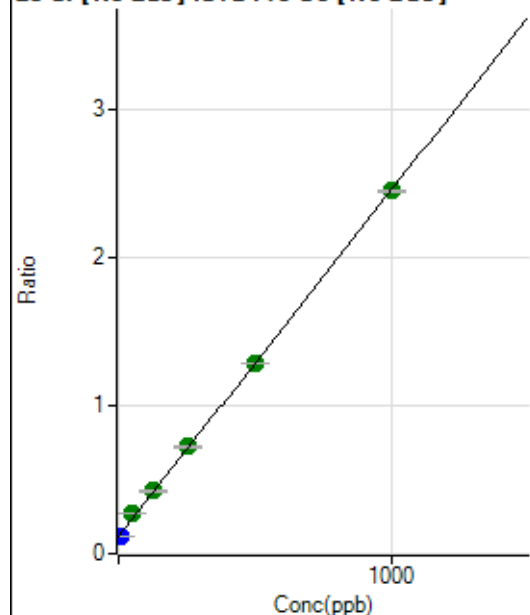
DL = 0.208

BEC = 0.3195

Weight: <None>

Min Conc: 0

28 Si [No Gas] ISTD : 45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	721496.99	0.1176	P	0.7
2	☐	10.000	1.866	753227.50	0.1220	P	1.0
3	☐	50.000	66.917	1657929.40	0.2738	A	0.9
4	☐	125.000	130.266	2486751.27	0.4218	A	1.2
5	☐	250.000	258.791	4099261.08	0.7218	A	1.6
6	☐	500.000	498.839	6951295.80	1.2823	A	0.3
7	☐	1000.000	996.960	13047694.95	2.4453	A	0.7
8	☐			641936.87	0.1216	P	0.8

$$y = 0.0023 * x + 0.1176$$

$$R = 0.9998$$

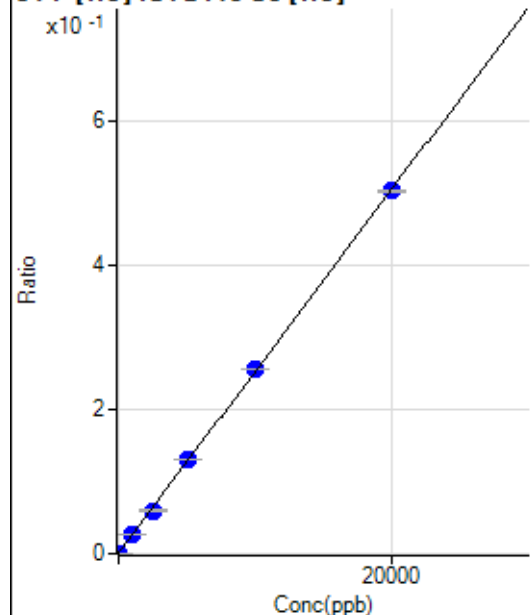
$$DL = 1.016$$

$$BEC = 50.37$$

Weight: <None>

Min Conc: 0

31 P [He] ISTD : 45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-17.802	138.89	0.0002	P	29.3
2	☐	0.000	17.802	652.24	0.0011	P	5.2
3	☐	1000.000	1036.433	15077.52	0.0269	P	0.9
4	☐	2500.000	2343.190	31791.90	0.0598	P	1.1
5	☐	5000.000	5122.046	65316.28	0.1300	P	0.4
6	☐	10000.000	10115.735	123948.65	0.2560	P	0.2
7	☐	20000.000	19929.400	243622.50	0.5037	P	0.3
8	☐			231.12	0.0005	P	10.9

$$y = 2.5240E-005 * x + 6.9353E-004$$

$$R = 0.9999$$

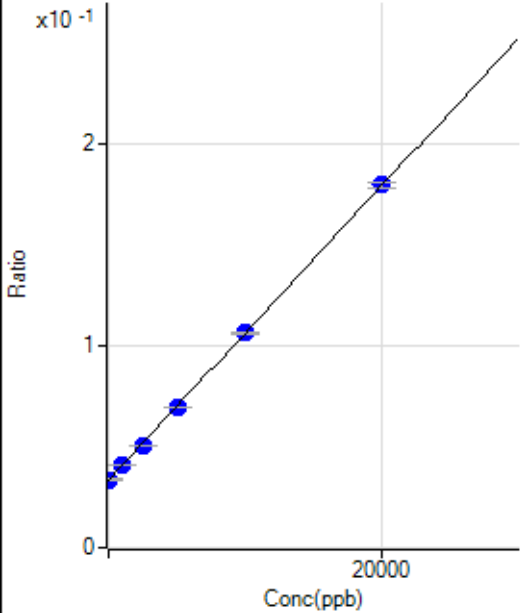
$$DL = 7.791$$

$$BEC = 27.48$$

Weight: <None>

Min Conc: 0

34 S [No Gas] ISTD:45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-29.888	203963.03	0.0332	P	1.0
2	☐	0.000	29.888	208004.43	0.0337	P	1.6
3	☐	1000.000	1042.881	248533.11	0.0411	P	0.7
4	☐	2500.000	2304.976	296240.28	0.0502	P	1.0
5	☐	5000.000	4948.274	394601.27	0.0695	P	1.1
6	☐	10000.000	9971.898	574846.18	0.1060	P	0.9
7	☐	20000.000	20049.216	957183.06	0.1794	P	1.4
8	☐			162514.79	0.0308	P	2.9

$y = 7.2786E-006 * x + 0.0335$

R = 0.9999

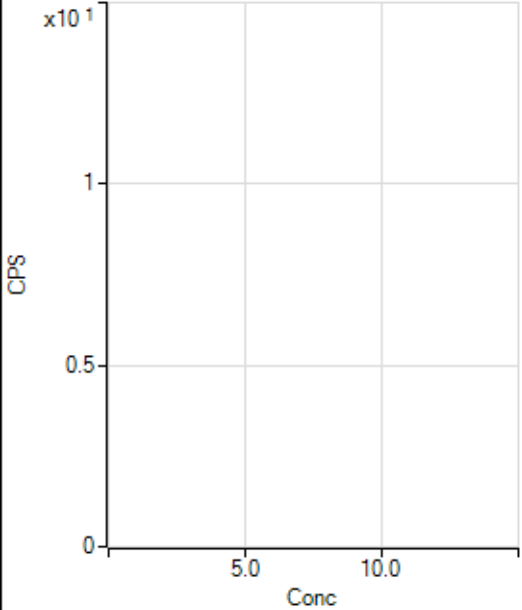
DL = 173.8

BEC = 4597

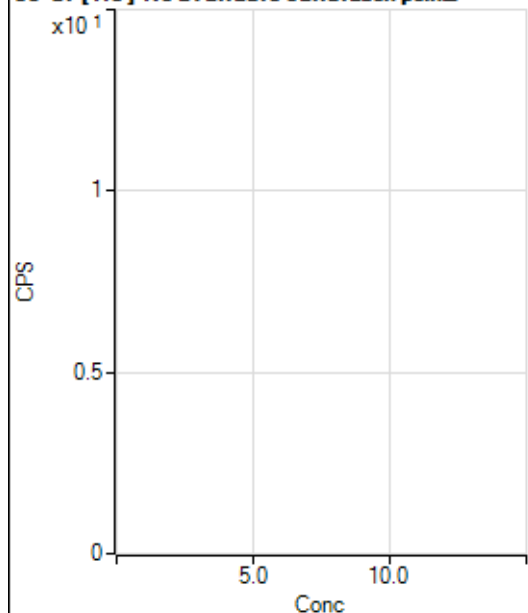
Weight: <None>

Min Conc: 0

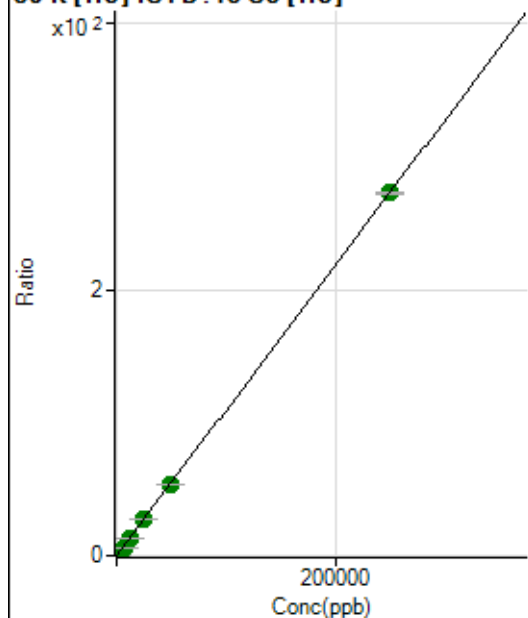
35 Cl [No Gas] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

35 Cl [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐						
2	☐						
3	☐						
4	☐						
5	☐						
6	☐						
7	☐						
8	☐						

39 K [He] ISTD :45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	61381.92	0.1078	P	1.0
2	☐	500.000	555.872	407012.01	0.7130	P	1.0
3	☐	2500.000	2518.534	1600118.67	2.8499	A	1.2
4	☐	6250.000	5778.555	3400303.63	6.3992	A	0.6
5	☐	12500.000	12456.669	6869685.04	13.6700	A	0.4
6	☐	25000.000	24703.248	13073765.50	27.0035	A	0.2
7	☐	50000.000	48946.474	25826577.12	53.3983	A	0.7
8	☐	250000.00	250254.03	133167129.13	272.5717	A	0.6

$$y = 0.0011 * x + 0.1078$$

$$R = 1.0000$$

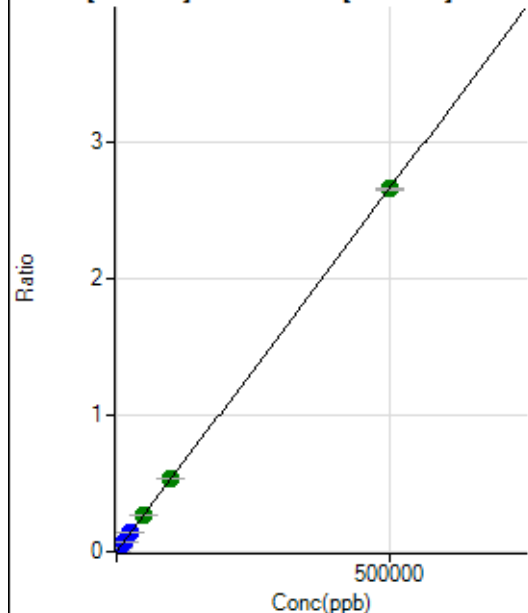
$$DL = 2.881$$

$$BEC = 99.04$$

Weight: <None>

Min Conc: 0

43 Ca [No Gas] ISTD:45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	358.90	0.0001	P	8.0
2	☐	500.000	567.123	18957.47	0.0031	P	1.7
3	☐	5000.000	5276.379	169946.46	0.0281	P	0.5
4	☐	12500.000	12128.992	380054.67	0.0645	P	0.9
5	☐	25000.000	26225.868	791075.60	0.1393	P	1.6
6	☐	50000.000	51194.063	1473714.04	0.2719	A	0.8
7	☐	100000.00	100911.48	2858954.68	0.5358	A	1.6
8	☐	500000.00	499643.44	13999875.62	2.6528	A	0.8

$$y = 5.3093E-006 * x + 5.8494E-005$$

R = 1.0000

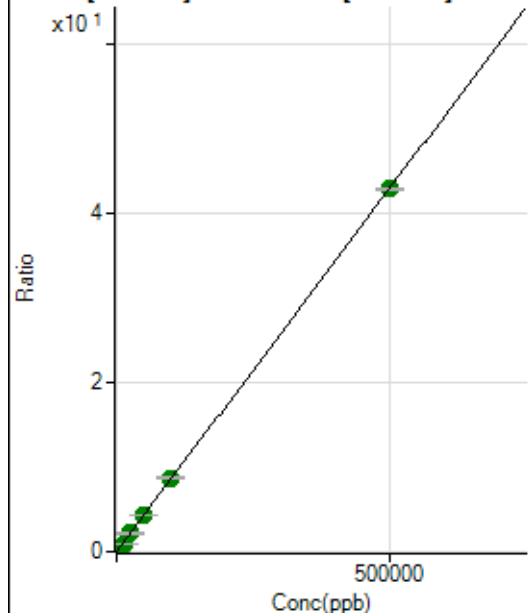
DL = 2.629

BEC = 11.02

Weight: <None>

Min Conc: 0

44 Ca [No Gas] ISTD:45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9783.22	0.0016	P	0.9
2	☐	500.000	562.224	307659.10	0.0498	P	0.9
3	☐	5000.000	5093.064	2653970.76	0.4384	A	1.5
4	☐	12500.000	11651.093	5901410.95	1.0009	A	1.1
5	☐	25000.000	25257.353	12311587.32	2.1678	A	1.1
6	☐	50000.000	50829.571	23640520.76	4.3610	A	1.0
7	☐	100000.00	101554.80	46481783.19	8.7115	A	1.2
8	☐	500000.00	499613.44	226142529.97	42.8514	A	0.8

$$y = 8.5766E-005 * x + 0.0016$$

R = 1.0000

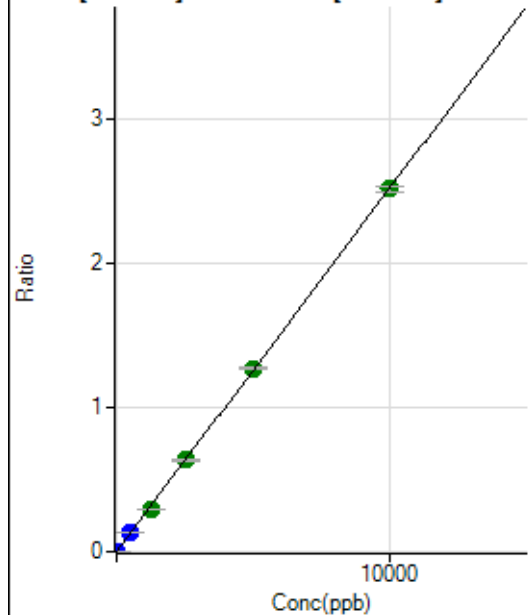
DL = 0.5048

BEC = 18.59

Weight: <None>

Min Conc: 0

47 Ti [No Gas] ISTD :45 Sc [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	75.56	0.0000	P	35.3
2	☐	5.000	5.360	8404.63	0.0014	P	1.0
3	☐	500.000	504.566	768489.49	0.1269	P	0.3
4	☐	1250.000	1157.245	1716506.99	0.2911	A	1.5
5	☐	2500.000	2520.321	3599899.81	0.6340	A	3.2
6	☐	5000.000	5033.396	6863668.51	1.2662	A	1.0
7	☐	10000.000	9989.588	13408222.16	2.5130	A	1.6
8	☐			2893.64	0.0005	P	13.3

$$y = 2.5156E-004 * x + 1.2305E-005$$

$$R = 0.9999$$

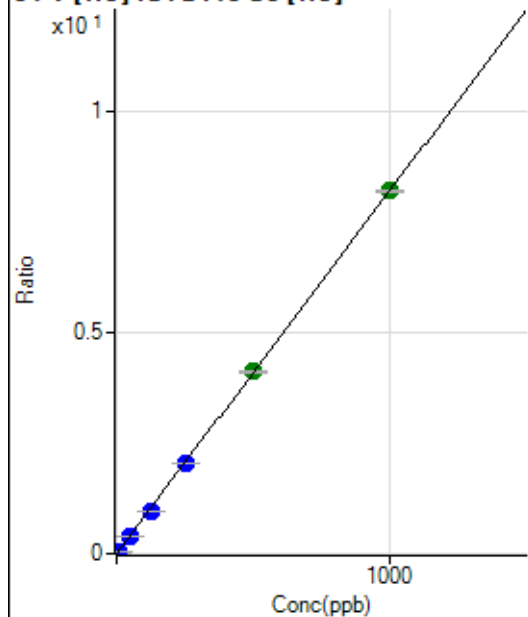
$$DL = 0.05173$$

$$BEC = 0.04892$$

Weight: <None>

Min Conc: 0

51 V [He] ISTD :45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5.56	0.0000	P	91.7
2	☐	5.000	5.529	25853.27	0.0453	P	1.1
3	☐	50.000	49.566	227929.07	0.4059	P	1.5
4	☐	125.000	114.933	500154.98	0.9413	P	0.5
5	☐	250.000	249.982	1028832.06	2.0473	P	0.8
6	☐	500.000	501.226	1987406.45	4.1049	A	0.7
7	☐	1000.000	1000.669	3963688.31	8.1953	A	0.7
8	☐			880.03	0.0018	P	8.6

$$y = 0.0082 * x + 9.7353E-006$$

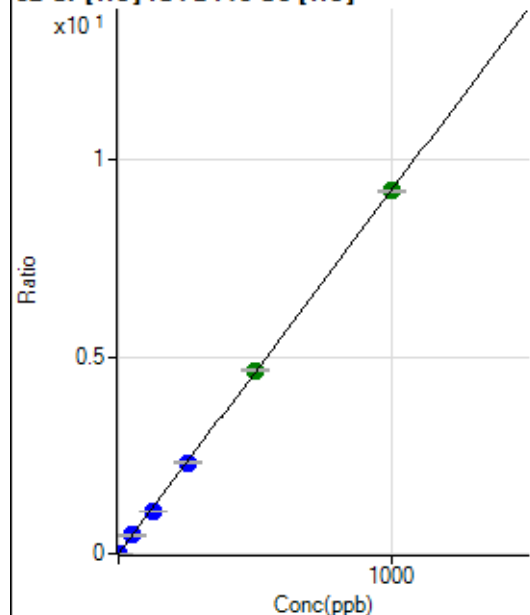
$$R = 0.9999$$

$$DL = 0.003269$$

$$BEC = 0.001189$$

Weight: <None>

Min Conc: 0

52 Cr [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1381.19	0.0024	P	7.4
2	☐	2.000	2.213	13029.05	0.0228	P	1.7
3	☐	50.000	50.049	260374.35	0.4637	P	0.7
4	☐	125.000	115.424	566564.89	1.0663	P	1.0
5	☐	250.000	250.472	1161383.98	2.3111	P	0.8
6	☐	500.000	505.066	2255062.17	4.6577	A	0.2
7	☐	1000.000	998.543	4452693.30	9.2062	A	0.3
8	☐			7883.82	0.0161	P	11.1

$$y = 0.0092 * x + 0.0024$$

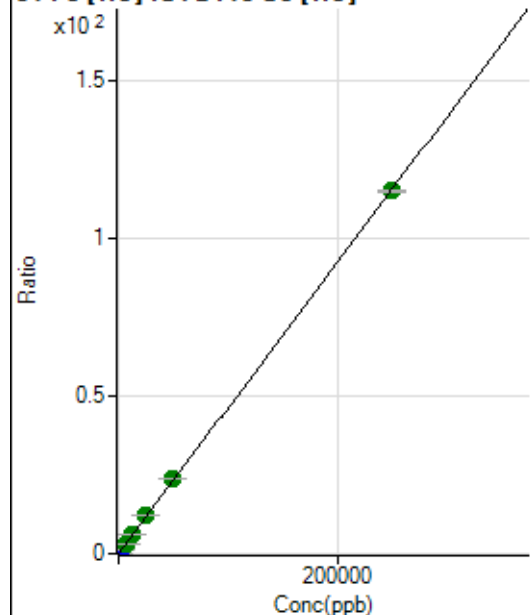
$$R = 0.9999$$

$$DL = 0.05846$$

$$BEC = 0.2632$$

Weight: <None>

Min Conc: 0

54 Fe [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2725.83	0.0048	P	7.7
2	☐	50.000	59.350	18379.08	0.0322	P	1.4
3	☐	2500.000	2659.768	692326.73	1.2331	P	0.7
4	☐	6250.000	6118.172	1503726.97	2.8302	A	1.2
5	☐	12500.000	13323.827	3094384.99	6.1577	A	1.1
6	☐	25000.000	26309.799	5884722.97	12.1546	A	0.5
7	☐	50000.000	51835.469	11579831.08	23.9424	A	0.6
8	☐	250000.00	249462.43	56285021.38	115.2063	A	0.4

$$y = 4.6180E-004 * x + 0.0048$$

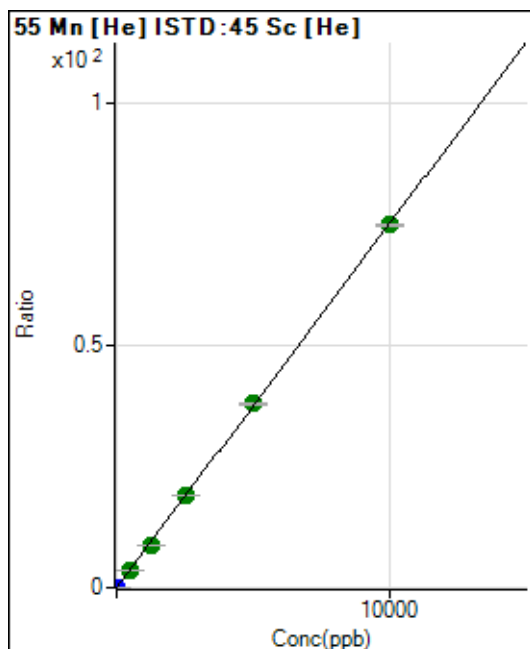
$$R = 1.0000$$

$$DL = 2.386$$

$$BEC = 10.37$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	342.23	0.0006	P	8.6
2	☐	1.000	1.101	5060.90	0.0089	P	3.4
3	☐	500.000	498.546	2101058.37	3.7420	A	0.5
4	☐	1250.000	1158.889	4621158.72	8.6977	A	2.1
5	☐	2500.000	2541.526	9585282.63	19.0739	A	0.8
6	☐	5000.000	5059.595	18383564.86	37.9712	A	1.2
7	☐	10000.000	9971.282	36193097.51	74.8318	A	0.4
8	☐			17346.81	0.0355	P	3.9

$$y = 0.0075 * x + 6.0138E-004$$

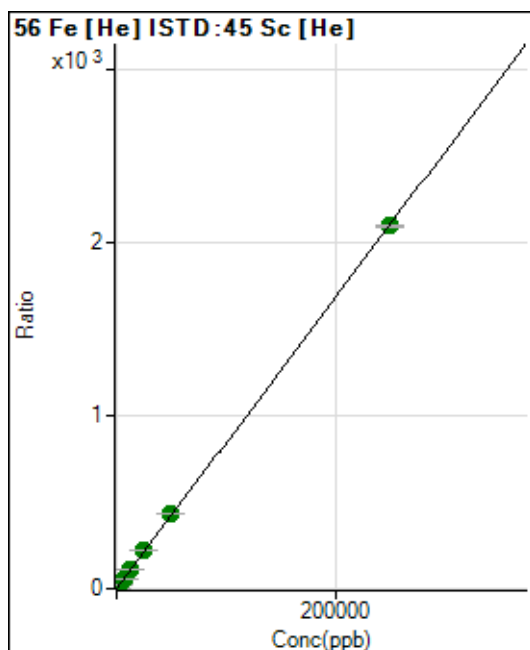
$$R = 0.9999$$

$$DL = 0.02066$$

$$BEC = 0.08013$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	19405.92	0.0341	P	0.7
2	☐	50.000	57.344	294758.73	0.5164	P	0.4
3	☐	2500.000	2609.173	12340072.18	21.9779	A	0.4
4	☐	6250.000	6027.501	26953377.93	50.7270	A	0.7
5	☐	12500.000	13175.683	55703739.72	110.8451	A	0.5
6	☐	25000.000	26216.723	106765960.63	220.5237	A	0.6
7	☐	50000.000	51547.995	209700559.10	433.5665	A	0.5
8	☐	250000.00	249539.41	1025351335.8	2,098.727	A	0.5

$$y = 0.0084 * x + 0.0341$$

$$R = 1.0000$$

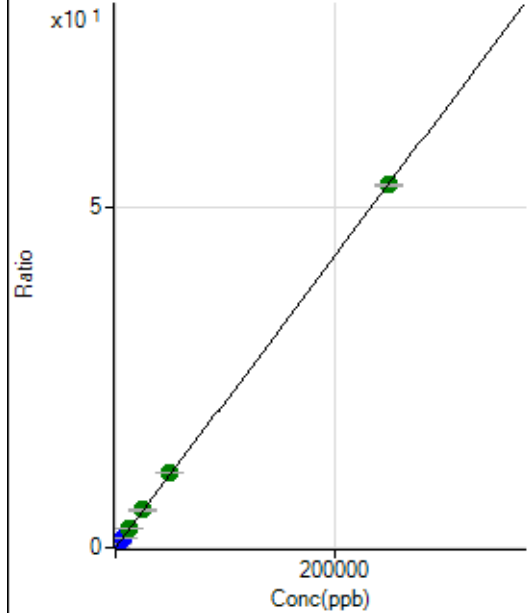
$$DL = 0.07959$$

$$BEC = 4.054$$

Weight: <None>

Min Conc: 0

57 Fe [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1175.61	0.0021	P	5.5
2	☐	50.000	59.526	8446.89	0.0148	P	2.8
3	☐	2500.000	2598.896	313301.91	0.5580	P	0.2
4	☐	6250.000	6030.589	686520.30	1.2921	P	1.1
5	☐	12500.000	13008.769	1399442.46	2.7848	A	0.6
6	☐	25000.000	25845.796	2677735.50	5.5308	A	0.8
7	☐	50000.000	51383.258	5317212.66	10.9936	A	0.9
8	☐	250000.00	249617.82	26088245.17	53.3983	A	0.2

$$y = 2.1391E-004 * x + 0.0021$$

R = 1.0000

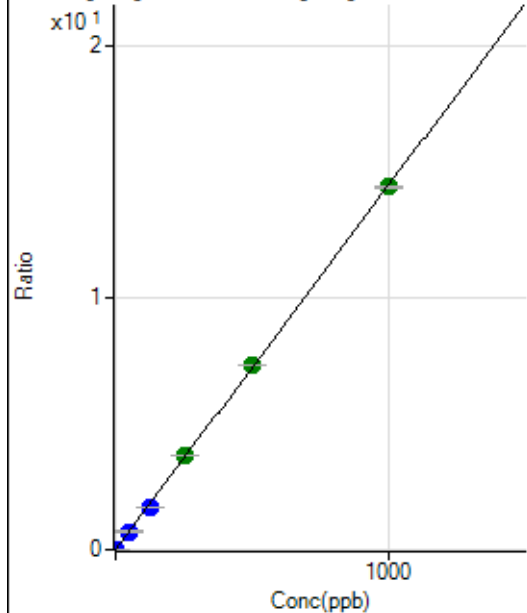
DL = 1.579

BEC = 9.654

Weight: <None>

Min Conc: 0

59 Co [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	158.89	0.0003	P	4.2
2	☐	1.000	1.167	9779.92	0.0171	P	0.7
3	☐	50.000	50.108	406302.32	0.7236	P	0.7
4	☐	125.000	115.140	883326.09	1.6625	P	0.8
5	☐	250.000	257.050	1864949.82	3.7111	A	0.4
6	☐	500.000	507.142	3544682.69	7.3214	A	0.4
7	☐	1000.000	995.893	6953663.65	14.3771	A	0.4
8	☐			18887.54	0.0387	P	0.9

$$y = 0.0144 * x + 2.7913E-004$$

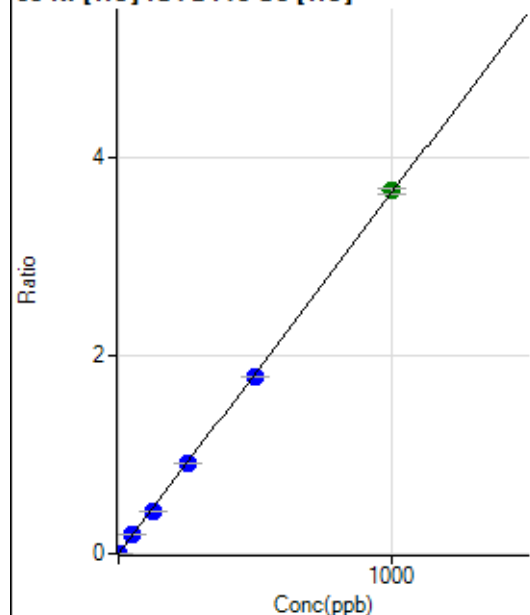
R = 0.9999

DL = 0.002441

BEC = 0.01934

Weight: <None>

Min Conc: 0

60 Ni [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	345.56	0.0006	P	9.1
2	☐	1.000	1.144	2722.50	0.0048	P	5.5
3	☐	50.000	50.774	104079.96	0.1854	P	0.1
4	☐	125.000	116.460	225490.98	0.4244	P	0.9
5	☐	250.000	251.571	460338.63	0.9160	P	0.6
6	☐	500.000	489.273	862273.21	1.7810	P	0.4
7	☐	1000.000	1005.999	1770823.01	3.6613	A	1.6
8	☐			6336.95	0.0130	P	1.4

$$y = 0.0036 * x + 6.0722E-004$$

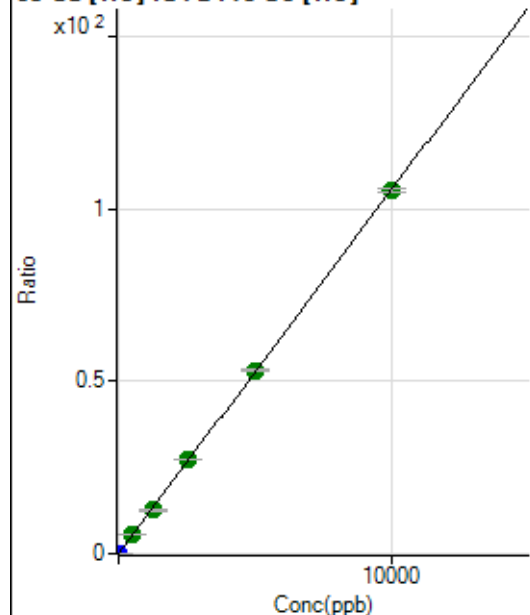
$$R = 0.9999$$

$$DL = 0.0457$$

$$BEC = 0.1669$$

Weight: <None>

Min Conc: 0

63 Cu [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	624.46	0.0011	P	9.7
2	☐	2.000	2.082	13161.41	0.0231	P	0.9
3	☐	500.000	515.702	3055234.47	5.4415	A	1.6
4	☐	1250.000	1195.184	6699644.14	12.6097	A	1.7
5	☐	2500.000	2569.339	13621914.52	27.1064	A	0.4
6	☐	5000.000	5042.049	25753345.73	53.1923	A	0.7
7	☐	10000.000	9967.707	50860213.69	105.1555	A	1.1
8	☐			10011.21	0.0205	P	8.9

$$y = 0.0105 * x + 0.0011$$

$$R = 0.9999$$

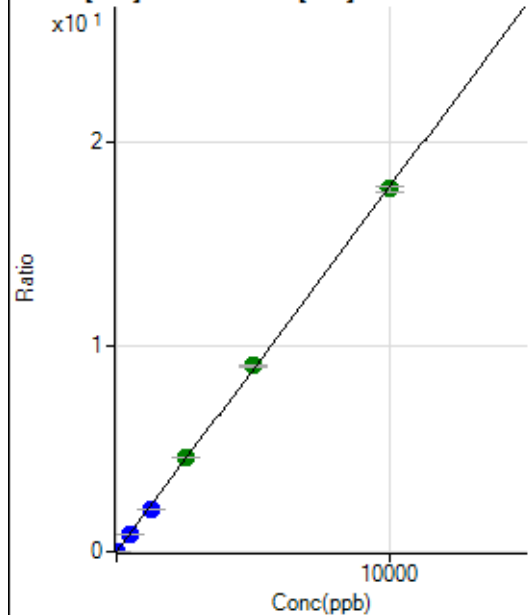
$$DL = 0.0303$$

$$BEC = 0.104$$

Weight: <None>

Min Conc: 0

66 Zn [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	287.79	0.0005	P	8.1
2	☐	5.000	5.450	5827.85	0.0102	P	3.7
3	☐	500.000	494.517	494695.70	0.8811	P	1.0
4	☐	1250.000	1144.041	1082666.82	2.0376	P	0.9
5	☐	2500.000	2584.003	2312475.64	4.6017	A	1.4
6	☐	5000.000	5091.500	4389726.67	9.0667	A	1.0
7	☐	10000.000	9946.768	8566530.98	17.7122	A	1.3
8	☐			6831.62	0.0140	P	1.2

$$y = 0.0018 * x + 5.0558E-004$$

$$R = 0.9998$$

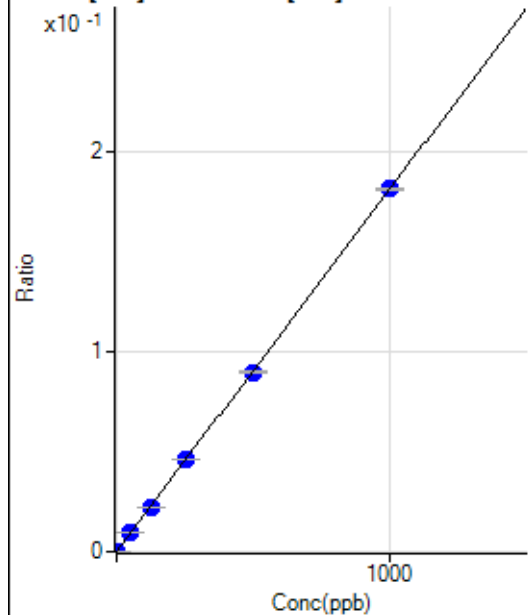
$$DL = 0.06926$$

$$BEC = 0.2839$$

Weight: <None>

Min Conc: 0

75 As [He] ISTD:89 Y [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	7.78	0.0000	P	66.3
2	☐	1.000	1.235	832.25	0.0002	P	1.4
3	☐	50.000	52.066	34051.25	0.0094	P	1.5
4	☐	125.000	119.868	74728.92	0.0217	P	0.6
5	☐	250.000	253.261	153405.22	0.0459	P	0.8
6	☐	500.000	495.971	293190.88	0.0899	P	1.4
7	☐	1000.000	1001.737	584156.22	0.1816	P	0.9
8	☐			367.79	0.0001	P	5.7

$$y = 1.8127E-004 * x + 2.1227E-006$$

$$R = 1.0000$$

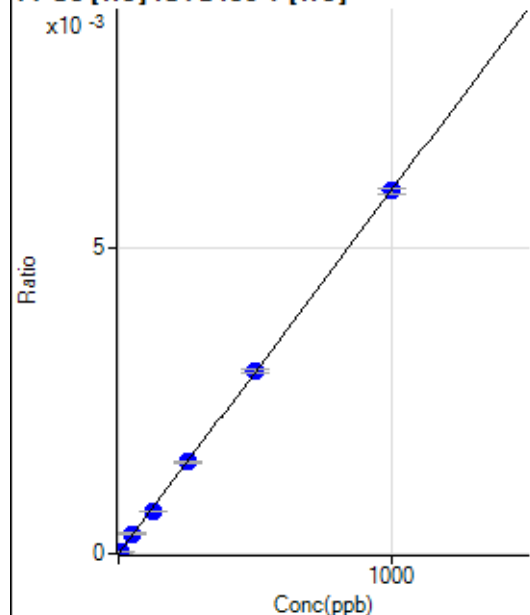
$$DL = 0.02328$$

$$BEC = 0.01171$$

Weight: <None>

Min Conc: 0

77 Se [He] ISTD:89 Y [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	5.000	5.792	127.78	0.0000	P	7.7
3	☐	50.000	54.258	1162.28	0.0003	P	5.5
4	☐	125.000	117.649	2402.44	0.0007	P	1.9
5	☐	250.000	252.941	5016.45	0.0015	P	1.7
6	☐	500.000	502.940	9734.37	0.0030	P	1.8
7	☐	1000.000	998.497	19063.46	0.0059	P	1.9
8	☐			6.67	0.0000	P	49.2

$$y = 5.9347\text{E-}006 * x + 3.0497\text{E-}007$$

$$R = 0.9999$$

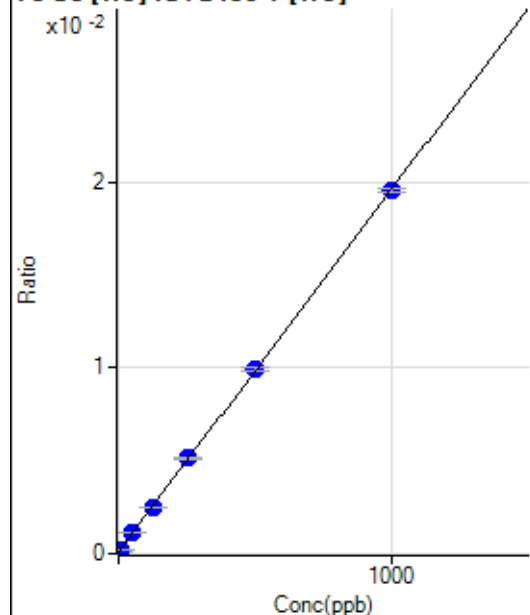
$$DL = 0.267$$

$$BEC = 0.05139$$

Weight: <None>

Min Conc: 0

78 Se [He] ISTD:89 Y [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	434.45	0.0001	P	8.4
2	☐	5.000	6.578	907.82	0.0002	P	5.5
3	☐	50.000	53.696	4200.64	0.0012	P	0.9
4	☐	125.000	121.266	8532.52	0.0025	P	1.8
5	☐	250.000	258.079	17198.95	0.0051	P	1.2
6	☐	500.000	504.247	32427.72	0.0099	P	2.6
7	☐	1000.000	996.131	62827.97	0.0195	P	1.0
8	☐			408.90	0.0001	P	8.0

$$y = 1.9487\text{E-}005 * x + 1.1828\text{E-}004$$

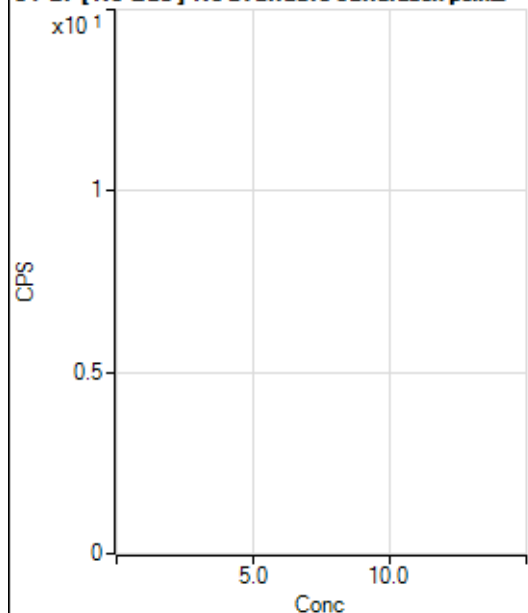
$$R = 0.9999$$

$$DL = 1.53$$

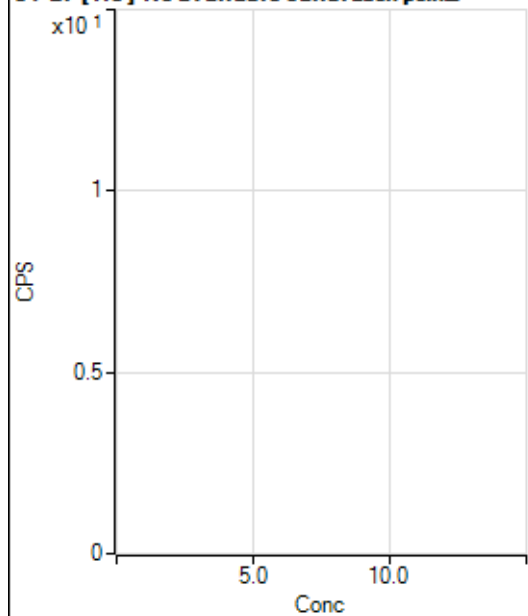
$$BEC = 6.069$$

Weight: <None>

Min Conc: 0

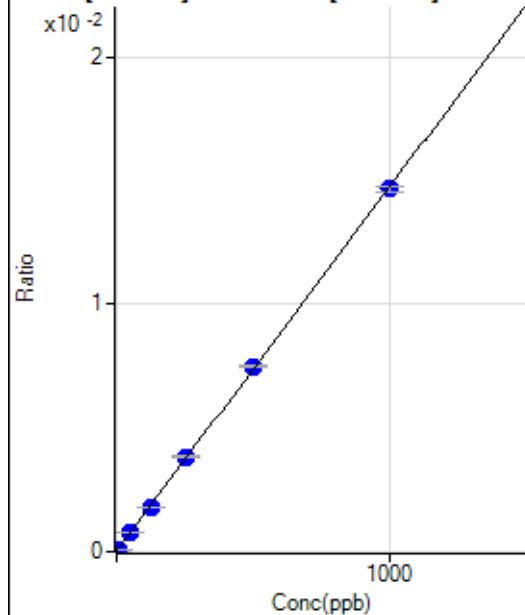
81 Br [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			16897.54		P	2.1
2	☐			16458.18		P	1.2
3	☐			16304.66		P	1.5
4	☐			14985.49		P	2.2
5	☐			13671.98		P	1.3
6	☐			13157.08		P	1.6
7	☐			12221.82		P	2.2
8	☐			12683.32		P	0.5

81 Br [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			308.89		P	6.3
2	☐			232.23		P	5.0
3	☐			153.34		P	4.3
4	☐			131.11		P	18.4
5	☐			148.89		P	10.3
6	☐			125.56		P	6.1
7	☐			106.67		P	14.3
8	☐			136.67		P	14.6

82 Se [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	331.04	0.0000	P	7.7
2	☐	5.000	5.740	1429.40	0.0001	P	6.1
3	☐	50.000	52.653	10356.66	0.0008	P	3.5
4	☐	125.000	119.119	22489.73	0.0018	P	1.6
5	☐	250.000	258.017	46346.34	0.0038	P	1.4
6	☐	500.000	507.543	88297.73	0.0075	P	1.4
7	☐	1000.000	994.823	170791.32	0.0147	P	1.7
8	☐			453.31	0.0000	P	11.0

$$y = 1.4720E-005 * x + 2.5323E-005$$

$$R = 0.9999$$

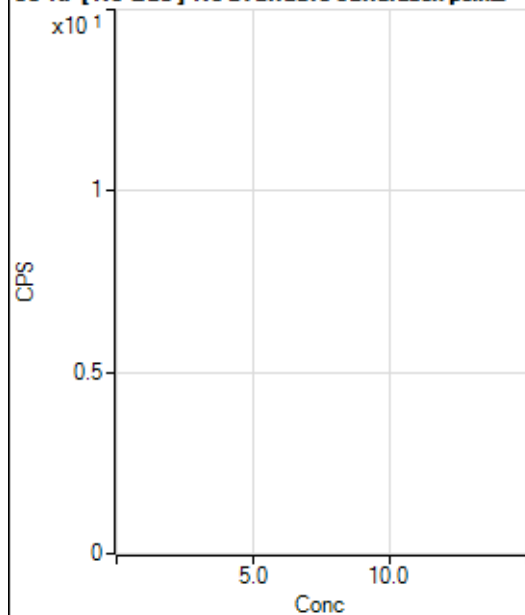
$$DL = 0.3984$$

$$BEC = 1.72$$

Weight: <None>

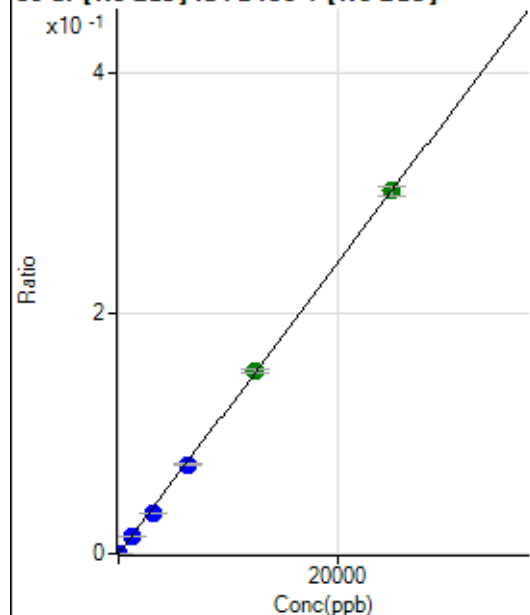
Min Conc: 0

83 Kr [No Gas] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			220.00		P	14.9
2	☐			237.78		P	21.1
3	☐			205.56		P	7.7
4	☐			214.45		P	0.9
5	☐			171.12		P	9.8
6	☐			184.45		P	16.3
7	☐			220.01		P	6.6
8	☐			205.56		P	13.1

86 Sr [No Gas] ISTD : 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	386.68	0.0000	P	16.3
2	☐	1.000	27.347	4683.01	0.0004	P	2.5
3	☐	1250.000	1219.212	190871.38	0.0147	P	2.3
4	☐	3125.000	2811.557	429517.28	0.0340	P	1.6
5	☐	6250.000	6133.151	897931.14	0.0741	P	1.1
6	☐	12500.000	12599.676	1791770.58	0.1521	A	2.4
7	☐	25000.000	25020.093	3516940.19	0.3021	A	2.5
8	☐			10313.69	0.0009	P	3.3

$$y = 1.2073\text{E-}005 * x + 2.9599\text{E-}005$$

$$R = 0.9999$$

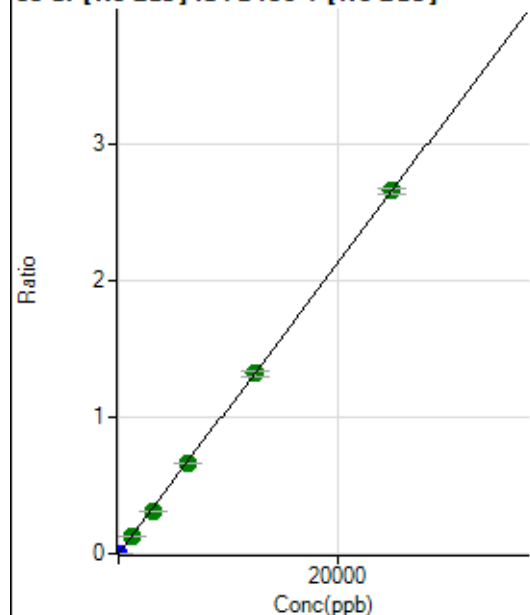
$$DL = 1.198$$

$$BEC = 2.452$$

Weight: <None>

Min Conc: 0

88 Sr [No Gas] ISTD : 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	202.23	0.0000	P	12.7
2	☐	1.000	26.684	37117.97	0.0029	P	0.7
3	☐	1250.000	1257.613	1730556.42	0.1337	A	0.4
4	☐	3125.000	2900.022	3897509.00	0.3083	A	1.2
5	☐	6250.000	6239.927	8039536.13	0.6632	A	1.5
6	☐	12500.000	12469.491	15607359.21	1.3254	A	3.1
7	☐	25000.000	25045.513	30993075.65	2.6621	A	1.9
8	☐			89760.51	0.0080	P	1.5

$$y = 1.0629\text{E-}004 * x + 1.5474\text{E-}005$$

$$R = 1.0000$$

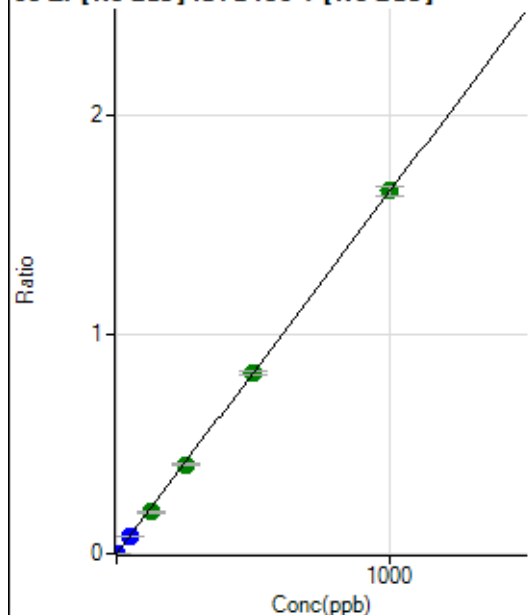
$$DL = 0.05548$$

$$BEC = 0.1456$$

Weight: <None>

Min Conc: 0

90 Zr [No Gas] ISTD : 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	626.69	0.0000	P	13.8
2	☐	1.000	1.046	23051.46	0.0018	P	0.8
3	☐	50.000	48.605	1036947.75	0.0801	P	2.0
4	☐	125.000	114.733	2390534.43	0.1891	A	1.1
5	☐	250.000	246.592	4925343.57	0.4063	A	0.9
6	☐	500.000	499.109	9683961.18	0.8223	A	2.7
7	☐	1000.000	1002.651	19231206.66	1.6519	A	2.4
8	☐			13175.99	0.0012	P	3.3

$$y = 0.0016 * x + 4.7927E-005$$

$$R = 0.9999$$

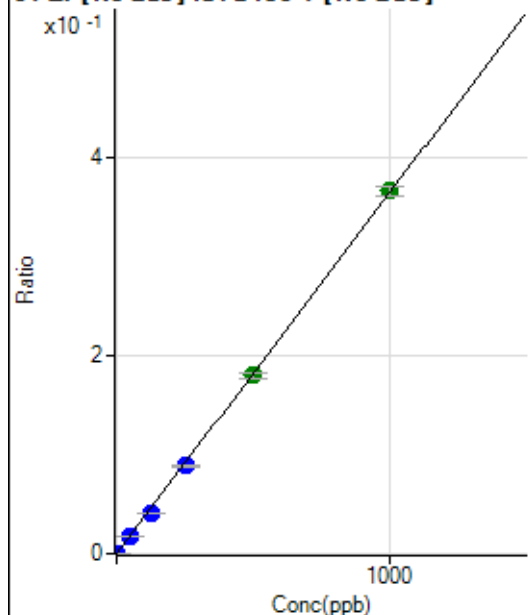
$$DL = 0.01208$$

$$BEC = 0.02909$$

Weight: <None>

Min Conc: 0

91 Zr [No Gas] ISTD : 89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	126.67	0.0000	P	16.2
2	☐	1.000	1.042	5063.14	0.0004	P	3.0
3	☐	50.000	48.932	230636.83	0.0178	P	1.8
4	☐	125.000	112.268	516789.44	0.0409	P	1.4
5	☐	250.000	244.821	1080243.52	0.0891	P	2.0
6	☐	500.000	493.729	2116486.37	0.1797	A	3.4
7	☐	1000.000	1006.075	4263341.64	0.3662	A	2.7
8	☐			2983.66	0.0003	P	4.3

$$y = 3.6399E-004 * x + 9.6875E-006$$

$$R = 0.9999$$

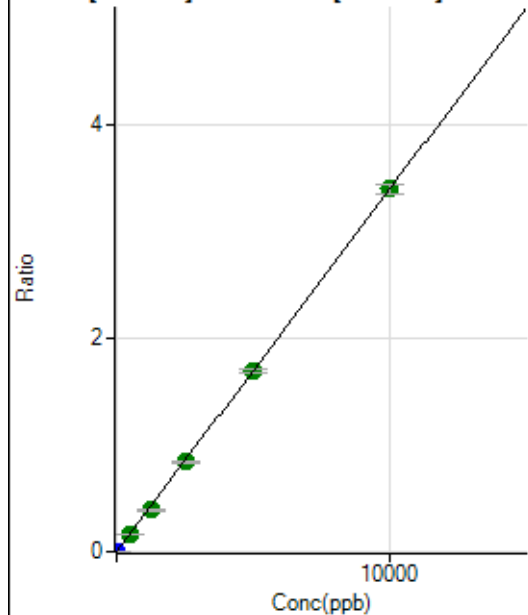
$$DL = 0.01293$$

$$BEC = 0.02661$$

Weight: <None>

Min Conc: 0

94 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	284.45	0.0000	P	11.4
2	☐	5.000	6.140	27443.55	0.0021	P	1.1
3	☐	500.000	499.831	2198788.34	0.1699	A	1.0
4	☐	1250.000	1142.392	4908517.91	0.3882	A	1.3
5	☐	2500.000	2493.066	10268780.61	0.8472	A	2.1
6	☐	5000.000	4998.664	20005676.65	1.6987	A	2.3
7	☐	10000.000	10015.860	39622589.41	3.4036	A	3.0
8	☐			12333.10	0.0011	P	9.4

$$y = 3.3982E-004 * x + 2.1770E-005$$

$$R = 0.9999$$

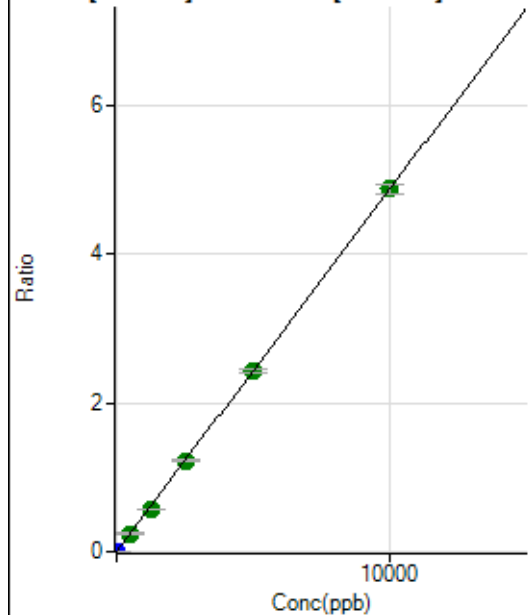
$$DL = 0.02192$$

$$BEC = 0.06406$$

Weight: <None>

Min Conc: 0

95 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	152.22	0.0000	P	12.3
2	☐	5.000	5.316	33786.69	0.0026	P	0.1
3	☐	500.000	501.848	3157216.62	0.2439	A	1.5
4	☐	1250.000	1153.696	7090117.25	0.5608	A	1.3
5	☐	2500.000	2506.962	14769476.59	1.2185	A	2.1
6	☐	5000.000	4985.424	28539403.47	2.4232	A	2.2
7	☐	10000.000	10017.493	56685164.71	4.8691	A	2.5
8	☐			12854.65	0.0011	P	10.8

$$y = 4.8606E-004 * x + 1.1640E-005$$

$$R = 0.9999$$

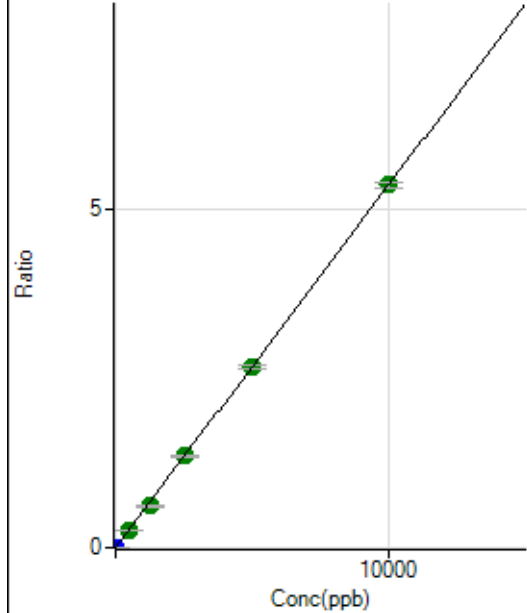
$$DL = 0.008825$$

$$BEC = 0.02395$$

Weight: <None>

Min Conc: 0

96 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	243.34	0.0000	P	10.7
2	☐	5.000	5.392	37838.88	0.0029	P	1.6
3	☐	500.000	497.875	3452789.36	0.2667	A	1.0
4	☐	1250.000	1142.589	7738728.43	0.6121	A	2.0
5	☐	2500.000	2522.069	16377266.56	1.3511	A	2.0
6	☐	5000.000	4995.987	31522075.09	2.6764	A	2.0
7	☐	10000.000	10010.022	62434211.85	5.3625	A	1.6
8	☐			23237.49	0.0021	P	5.2

$$y = 5.3572E-004 * x + 1.8621E-005$$

$$R = 0.9999$$

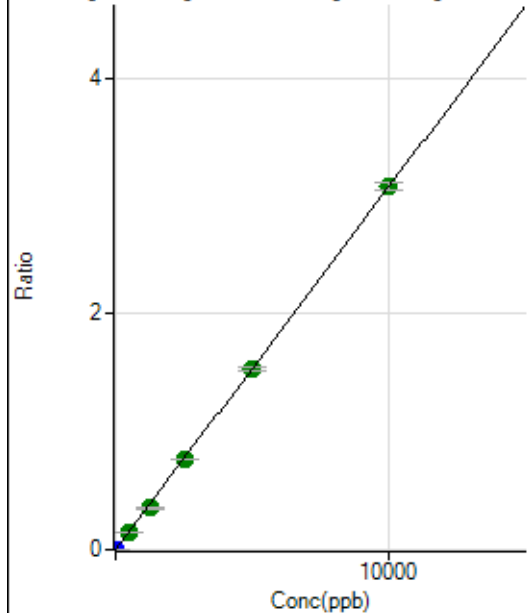
$$DL = 0.01118$$

$$BEC = 0.03476$$

Weight: <None>

Min Conc: 0

97 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	97.78	0.0000	P	5.7
2	☐	5.000	5.188	20866.06	0.0016	P	0.9
3	☐	500.000	498.556	1984592.39	0.1533	A	1.0
4	☐	1250.000	1143.385	4446169.34	0.3516	A	0.5
5	☐	2500.000	2489.956	9281790.07	0.7657	A	1.7
6	☐	5000.000	5009.066	18142448.20	1.5404	A	2.0
7	☐	10000.000	10011.377	35844401.13	3.0788	A	2.0
8	☐			8043.42	0.0007	P	10.3

$$y = 3.0753E-004 * x + 7.4815E-006$$

$$R = 0.9999$$

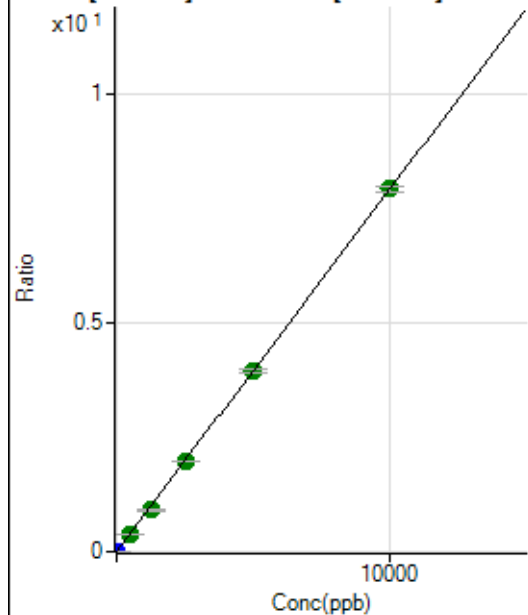
$$DL = 0.00417$$

$$BEC = 0.02433$$

Weight: <None>

Min Conc: 0

98 Mo [No Gas] ISTD:89 Y [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	274.45	0.0000	P	16.1
2	☐	5.000	5.250	54406.35	0.0042	P	0.4
3	☐	500.000	497.271	5098478.61	0.3939	A	1.1
4	☐	1250.000	1143.319	11451430.11	0.9056	A	0.9
5	☐	2500.000	2499.260	23997261.03	1.9797	A	1.2
6	☐	5000.000	4986.900	46521001.53	3.9501	A	2.3
7	☐	10000.000	10020.206	92405943.07	7.9369	A	1.8
8	☐			20128.52	0.0018	P	10.4

$$y = 7.9209\text{E-}004 * x + 2.0985\text{E-}005$$

$$R = 0.9999$$

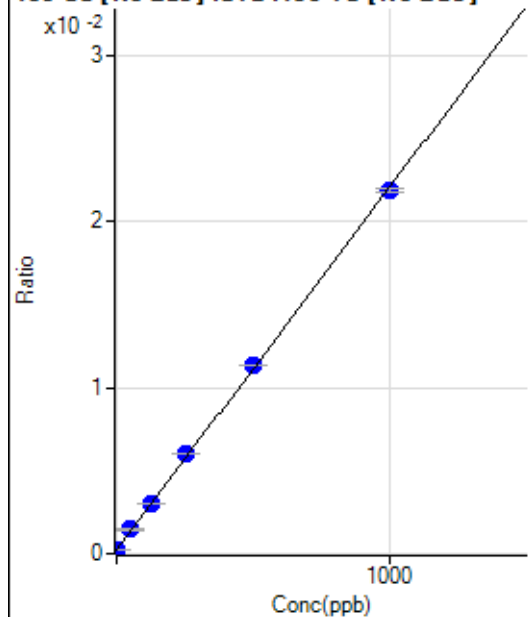
$$DL = 0.01279$$

$$BEC = 0.02649$$

Weight: <None>

Min Conc: 0

106 Cd [No Gas] ISTD:159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	3043.68	0.0002	P	7.2
2	☐	1.000	1.584	3573.81	0.0003	P	6.1
3	☐	50.000	56.458	20257.51	0.0015	P	1.7
4	☐	125.000	126.503	41252.89	0.0030	P	1.2
5	☐	250.000	267.090	83035.53	0.0061	P	0.2
6	☐	500.000	509.328	156059.37	0.0113	P	0.9
7	☐	1000.000	990.552	301597.31	0.0219	P	1.2
8	☐			2912.54	0.0002	P	2.0

$$y = 2.1848\text{E-}005 * x + 2.1908\text{E-}004$$

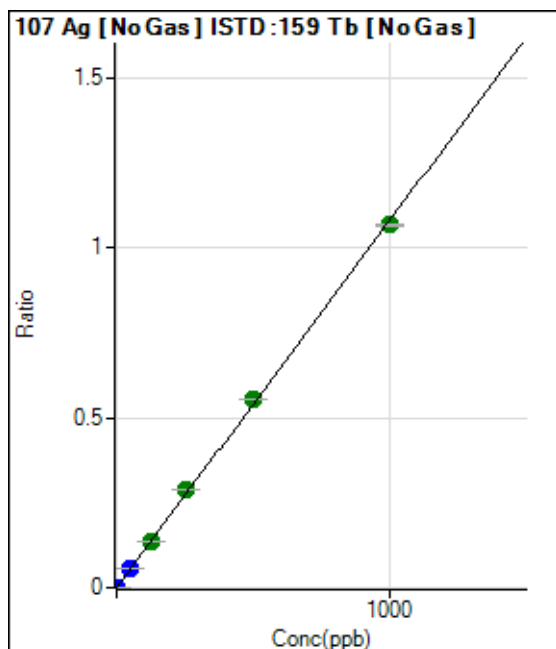
$$R = 0.9998$$

$$DL = 2.171$$

$$BEC = 10.03$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	85.56	0.0000	P	9.5
2	☐	1.000	1.112	16994.49	0.0012	P	1.2
3	☐	50.000	54.206	816115.64	0.0585	P	1.3
4	☐	125.000	126.558	1889615.65	0.1366	A	0.2
5	☐	250.000	267.893	3966386.50	0.2892	A	0.2
6	☐	500.000	512.387	7608259.82	0.5532	A	0.5
7	☐	1000.000	988.928	14729859.92	1.0676	A	0.8
8	☐			3360.42	0.0003	P	7.8

$$y = 0.0011 * x + 6.1564E-006$$

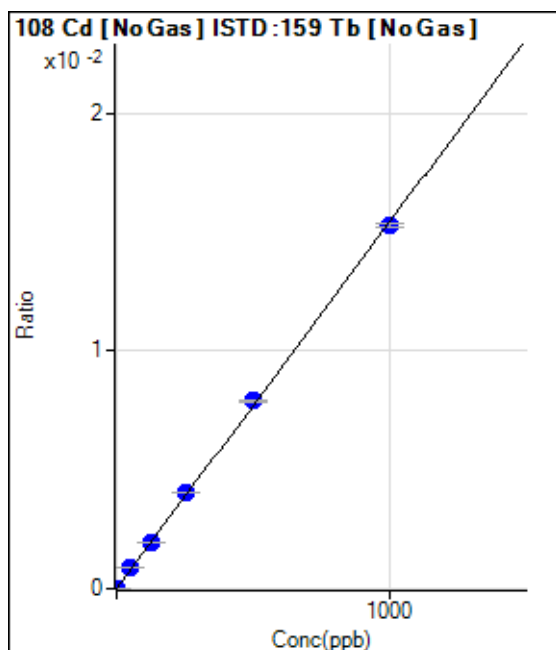
$$R = 0.9997$$

$$DL = 0.001623$$

$$BEC = 0.005703$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	10.00	0.0000	P	33.4
2	☐	1.000	1.094	247.78	0.0000	P	4.9
3	☐	50.000	57.071	12278.60	0.0009	P	0.7
4	☐	125.000	127.088	27104.26	0.0020	P	0.4
5	☐	250.000	263.837	55786.67	0.0041	P	0.6
6	☐	500.000	511.954	108555.37	0.0079	P	0.3
7	☐	1000.000	989.949	210556.33	0.0153	P	1.2
8	☐			113.33	0.0000	P	4.3

$$y = 1.5415E-005 * x + 7.2010E-007$$

$$R = 0.9998$$

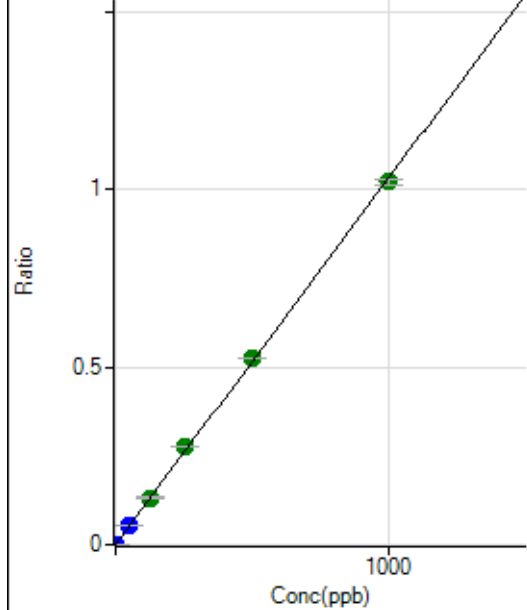
$$DL = 0.04683$$

$$BEC = 0.04671$$

Weight: <None>

Min Conc: 0

109 Ag [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	35.55	0.0000	P	30.5
2	☐	1.000	1.108	16116.84	0.0011	P	1.3
3	☐	50.000	54.441	782310.76	0.0561	P	0.9
4	☐	125.000	128.269	1827941.50	0.1322	A	1.3
5	☐	250.000	267.392	3778476.19	0.2755	A	0.7
6	☐	500.000	509.843	7225673.71	0.5253	A	0.2
7	☐	1000.000	990.100	14075193.12	1.0202	A	1.5
8	☐			3279.30	0.0003	P	10.3

$$y = 0.0010 * x + 2.5614E-006$$

$$R = 0.9998$$

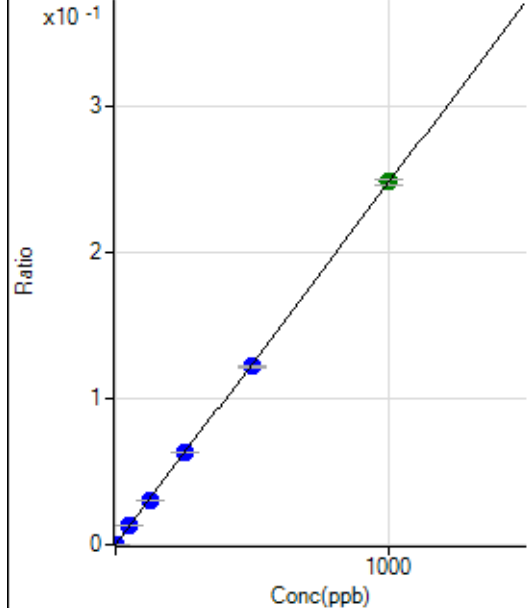
$$DL = 0.002277$$

$$BEC = 0.002486$$

Weight: <None>

Min Conc: 0

111 Cd [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2132.66	0.0002	P	6.9
2	☐	1.000	1.188	6303.71	0.0004	P	0.6
3	☐	50.000	52.759	184263.13	0.0132	P	0.5
4	☐	125.000	121.219	417090.22	0.0302	P	0.7
5	☐	250.000	255.552	869586.97	0.0634	P	1.0
6	☐	500.000	492.315	1678161.75	0.1220	P	1.2
7	☐	1000.000	1002.789	3426836.65	0.2484	A	1.4
8	☐			2803.47	0.0002	P	5.3

$$y = 2.4753E-004 * x + 1.5351E-004$$

$$R = 0.9999$$

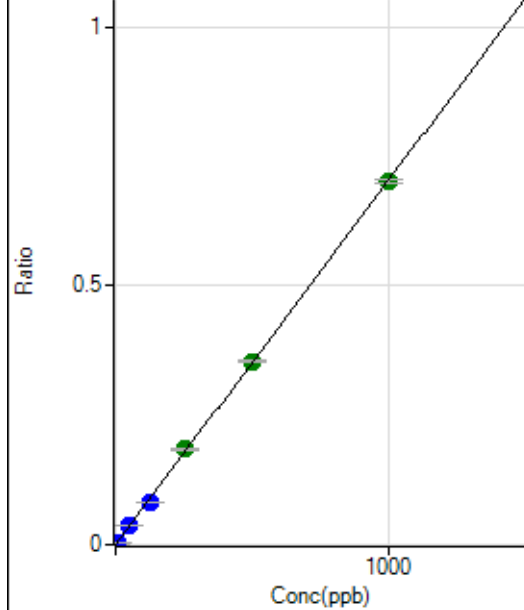
$$DL = 0.1279$$

$$BEC = 0.6201$$

Weight: <None>

Min Conc: 0

118 Sn [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1461.20	0.0001	P	4.2
2	☐	5.000	5.592	56944.12	0.0040	P	1.0
3	☐	50.000	51.674	508756.88	0.0365	P	1.2
4	☐	125.000	117.369	1144163.57	0.0827	P	0.8
5	☐	250.000	262.111	2532217.63	0.1846	A	0.8
6	☐	500.000	503.561	4877544.17	0.3546	A	1.1
7	☐	1000.000	996.059	9676430.27	0.7013	A	1.0
8	☐			4419.61	0.0003	P	5.0

$$y = 7.0401E-004 * x + 1.0518E-004$$

$$R = 0.9999$$

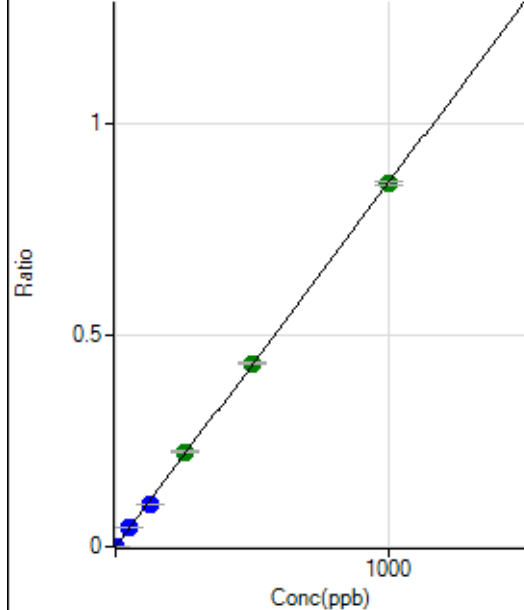
$$DL = 0.01883$$

$$BEC = 0.1494$$

Weight: <None>

Min Conc: 0

121 Sb [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	36.67	0.0000	P	9.4
2	☐	2.000	2.198	26634.70	0.0019	P	0.1
3	☐	50.000	50.824	608856.81	0.0437	P	0.7
4	☐	125.000	115.797	1375660.79	0.0995	P	0.7
5	☐	250.000	260.113	3064052.56	0.2234	A	1.2
6	☐	500.000	503.354	5946904.56	0.4324	A	0.9
7	☐	1000.000	996.903	11814952.18	0.8563	A	1.2
8	☐			6359.23	0.0005	P	4.1

$$y = 8.5900E-004 * x + 2.6395E-006$$

$$R = 0.9999$$

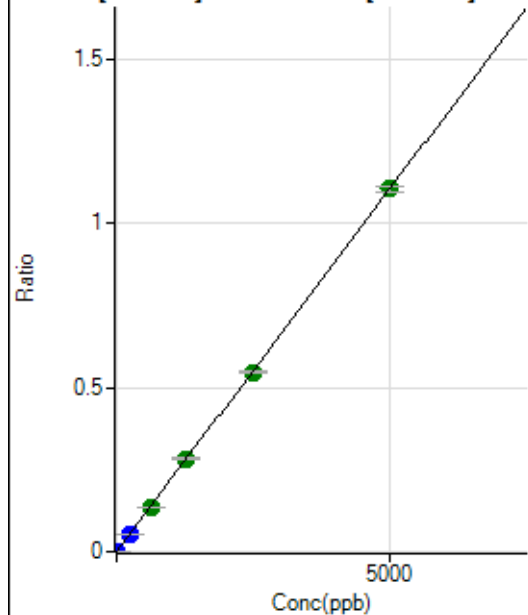
$$DL = 0.0008692$$

$$BEC = 0.003073$$

Weight: <None>

Min Conc: 0

135 Ba [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	27.78	0.0000	P	34.3
2	☐	10.000	10.614	33000.44	0.0023	P	1.4
3	☐	250.000	250.366	769970.94	0.0552	P	1.3
4	☐	625.000	599.387	1828114.31	0.1322	A	0.2
5	☐	1250.000	1283.911	3883265.19	0.2831	A	0.7
6	☐	2500.000	2476.640	7512290.03	0.5462	A	0.6
7	☐	5000.000	5006.384	15232524.77	1.1041	A	1.4
8	☐			7089.61	0.0005	P	6.9

$$y = 2.2053E-004 * x + 1.9970E-006$$

$$R = 0.9999$$

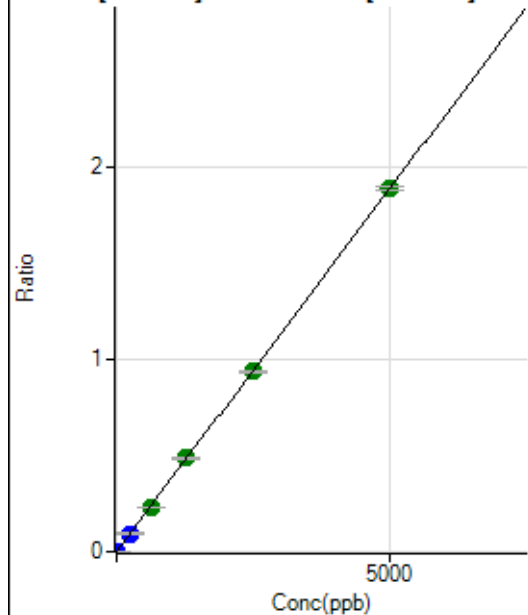
$$DL = 0.009314$$

$$BEC = 0.009055$$

Weight: <None>

Min Conc: 0

137 Ba [No Gas] ISTD :159 Tb [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	64.44	0.0000	P	7.7
2	☐	10.000	10.704	56923.28	0.0040	P	0.8
3	☐	250.000	250.701	1318337.88	0.0945	P	1.0
4	☐	625.000	601.598	3137316.83	0.2269	A	0.8
5	☐	1250.000	1286.041	6650724.69	0.4849	A	0.2
6	☐	2500.000	2485.807	12892033.70	0.9374	A	0.8
7	☐	5000.000	5000.975	26017432.39	1.8858	A	1.2
8	☐			12129.69	0.0009	P	1.8

$$y = 3.7708E-004 * x + 4.6377E-006$$

$$R = 0.9999$$

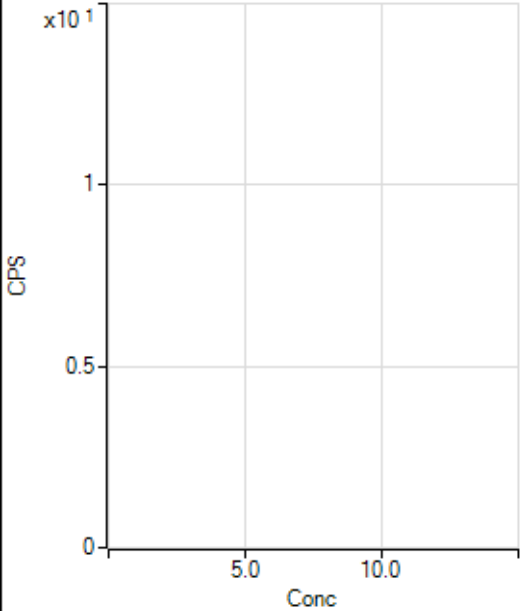
$$DL = 0.002847$$

$$BEC = 0.0123$$

Weight: <None>

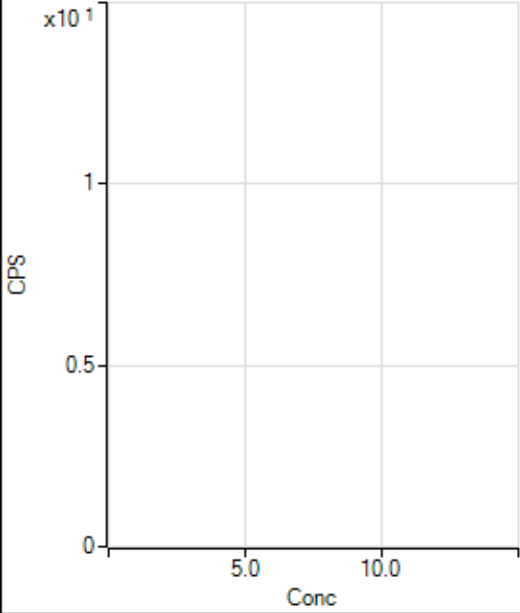
Min Conc: 0

150 Nd [No Gas] No available calibration points

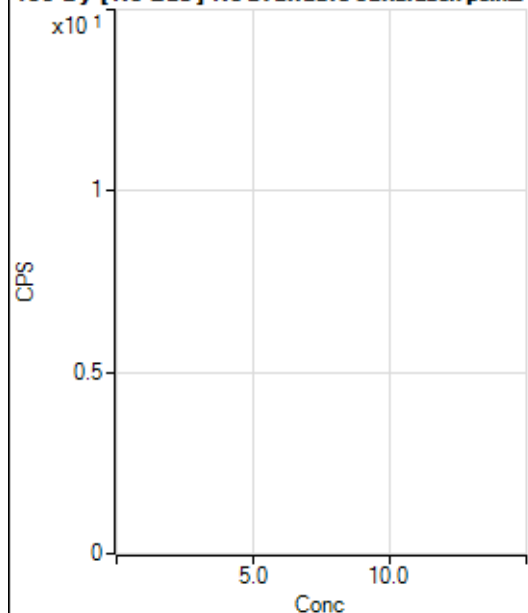


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.56		P	34.7
2	☐			3.33		P	100.
3	☐			52.22		P	13.3
4	☐			101.11		P	23.9
5	☐			222.23		P	11.1
6	☐			390.01		P	8.2
7	☐			667.80		P	11.5
8	☐			243.34		P	14.3

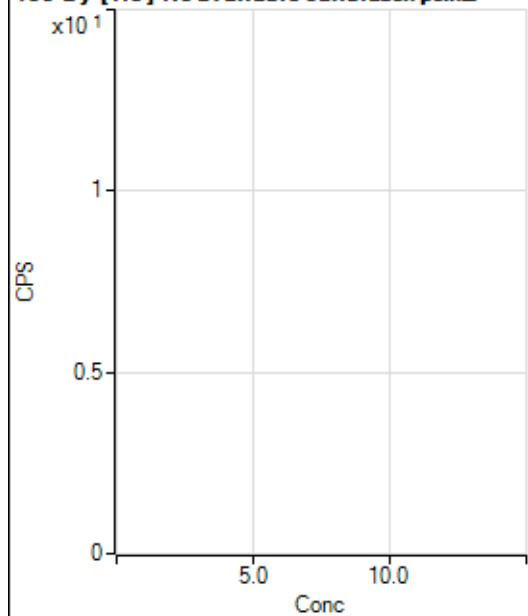
150 Nd [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			3.33		P	0.0
2	☐			3.33		P	100.
3	☐			13.34		P	43.3
4	☐			23.33		P	37.8
5	☐			47.78		P	14.5
6	☐			98.89		P	23.7
7	☐			173.34		P	25.4
8	☐			152.23		P	9.9

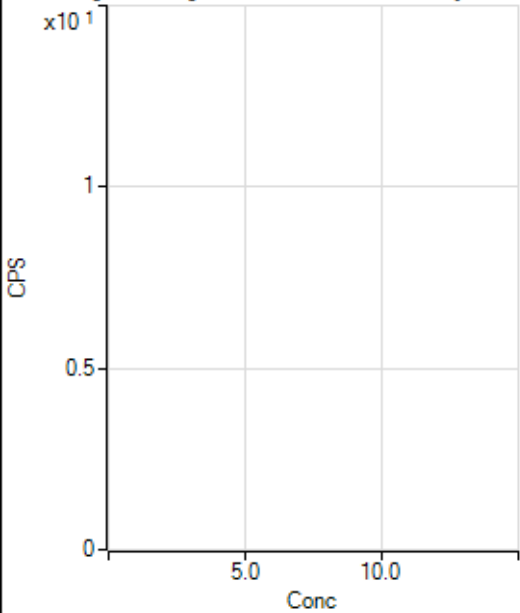
156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			10.00		P	66.7
2	☐			14.44		P	35.3
3	☐			31.11		P	44.6
4	☐			43.33		P	50.4
5	☐			60.00		P	5.5
6	☐			130.00		P	11.7
7	☐			236.67		P	10.2
8	☐			421.12		P	3.0

156 Dy [He] No available calibration points

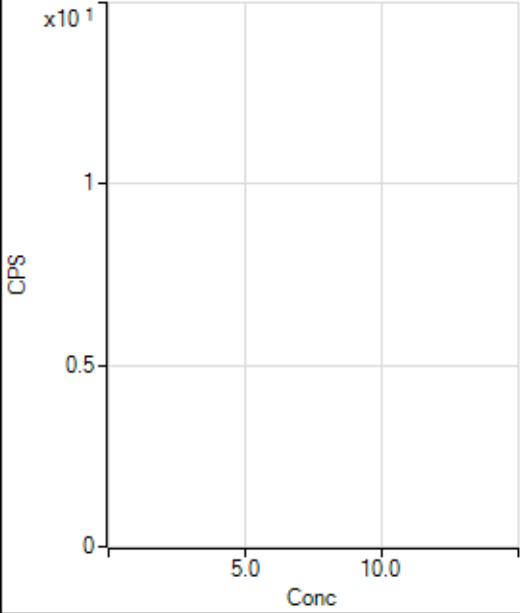
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	21.6
2	☐			14.44		P	58.1
3	☐			46.67		P	58.5
4	☐			77.78		P	17.8
5	☐			212.22		P	22.0
6	☐			363.34		P	0.9
7	☐			756.70		P	7.3
8	☐			343.34		P	2.6

160 Gd [No Gas] Noavailable calibration poin...

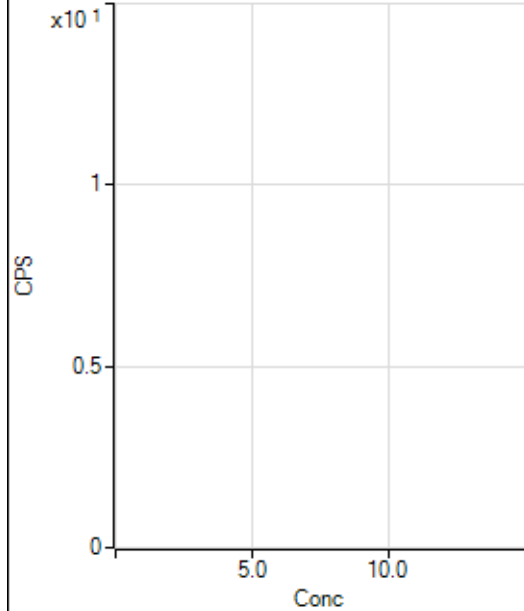


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			43.33		P	27.7
2	☐			52.22		P	22.4
3	☐			42.22		P	44.9
4	☐			64.44		P	21.5
5	☐			61.11		P	13.7
6	☐			97.78		P	17.2
7	☐			133.33		P	18.0
8	☐			428.90		P	3.5

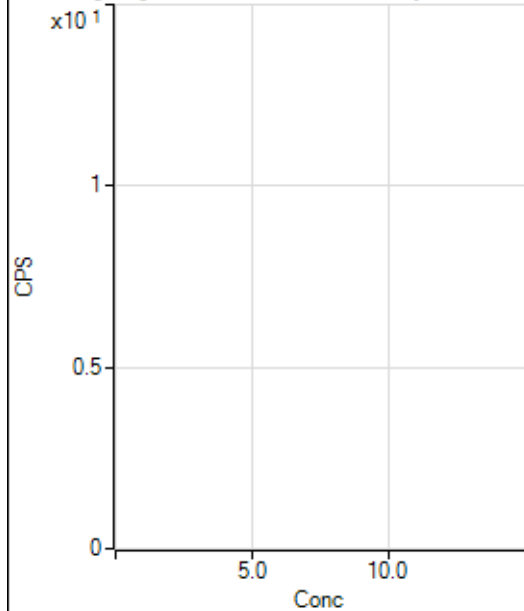
160 Gd [He] No available calibration points



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			511.13		P	9.5
2	☐			557.80		P	5.8
3	☐			567.80		P	2.4
4	☐			550.02		P	6.3
5	☐			582.24		P	8.8
6	☐			555.58		P	11.7
7	☐			567.79		P	8.3
8	☐			862.26		P	3.1

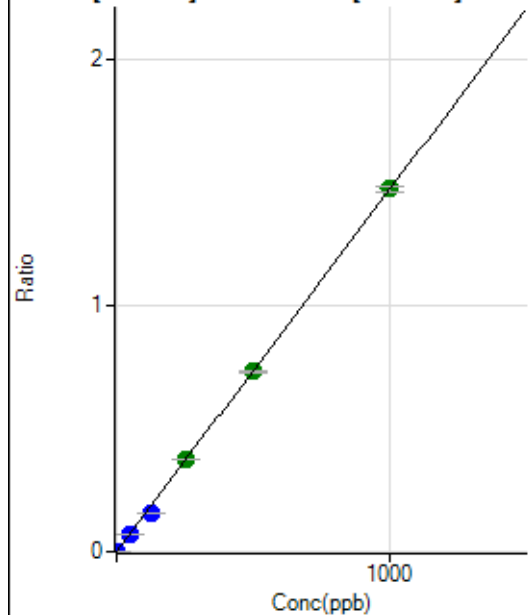
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			56.67		P	15.6
2	☐			60.00		P	14.7
3	☐			67.78		P	32.0
4	☐			63.33		P	22.9
5	☐			73.33		P	27.7
6	☐			112.22		P	27.6
7	☐			178.89		P	15.8
8	☐			492.24		P	1.4

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			36.66		P	15.7
2	☐			41.11		P	24.8
3	☐			50.00		P	29.1
4	☐			58.89		P	8.6
5	☐			53.33		P	6.3
6	☐			88.89		P	17.3
7	☐			128.89		P	27.4
8	☐			358.90		P	10.8

203 TI [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	154.45	0.0000	P	9.5
2	☐	1.000	0.980	12066.57	0.0015	P	1.4
3	☐	50.000	46.131	562316.16	0.0679	P	2.1
4	☐	125.000	106.391	1295371.58	0.1566	P	1.4
5	☐	250.000	253.821	3080651.72	0.3735	A	1.0
6	☐	500.000	498.437	6099681.23	0.7335	A	0.7
7	☐	1000.000	1002.346	12076888.57	1.4750	A	1.5
8	☐			2076.85	0.0003	P	15.1

$$y = 0.0015 * x + 1.8902E-005$$

$$R = 0.9998$$

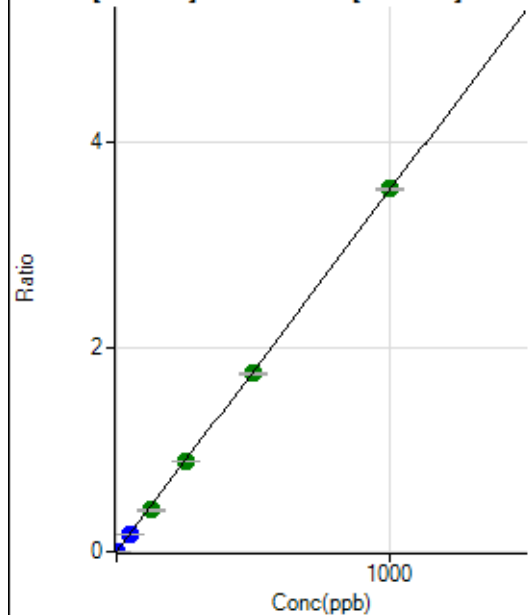
$$DL = 0.003649$$

$$BEC = 0.01285$$

Weight: <None>

Min Conc: 0

205 TI [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	278.90	0.0000	P	11.2
2	☐	1.000	0.962	28302.77	0.0034	P	1.0
3	☐	50.000	45.674	1334391.62	0.1611	P	0.9
4	☐	125.000	114.955	3354497.31	0.4055	A	1.3
5	☐	250.000	250.457	7285522.53	0.8833	A	0.6
6	☐	500.000	493.461	14473632.15	1.7404	A	0.7
7	☐	1000.000	1004.627	29010359.84	3.5432	A	0.8
8	☐			4846.47	0.0007	P	15.3

$$y = 0.0035 * x + 3.4141E-005$$

$$R = 0.9999$$

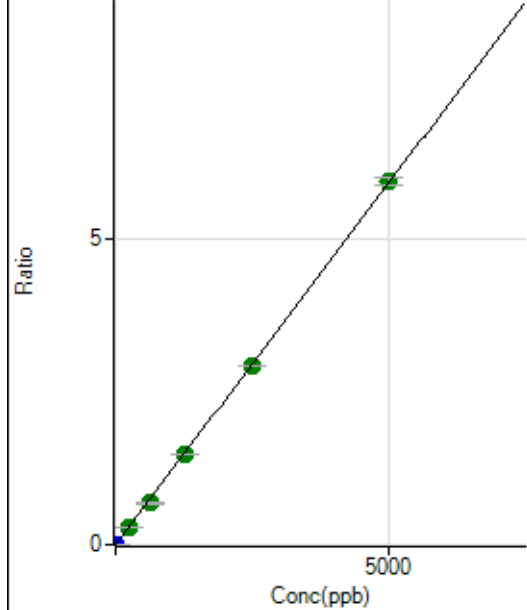
$$DL = 0.003255$$

$$BEC = 0.009681$$

Weight: <None>

Min Conc: 0

206 [Pb] [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	413.34	0.0001	P	16.1
2	☐	1.000	0.988	10037.13	0.0012	P	2.2
3	☐	250.000	246.811	2410137.95	0.2910	A	1.4
4	☐	625.000	575.920	5617553.32	0.6790	A	1.6
5	☐	1250.000	1252.362	12176831.48	1.4764	A	1.1
6	☐	2500.000	2474.789	24262663.25	2.9175	A	0.9
7	☐	5000.000	5018.309	48439133.17	5.9160	A	2.1
8	☐			12896.24	0.0018	P	7.1

$$y = 0.0012 * x + 5.0615E-005$$

$$R = 0.9999$$

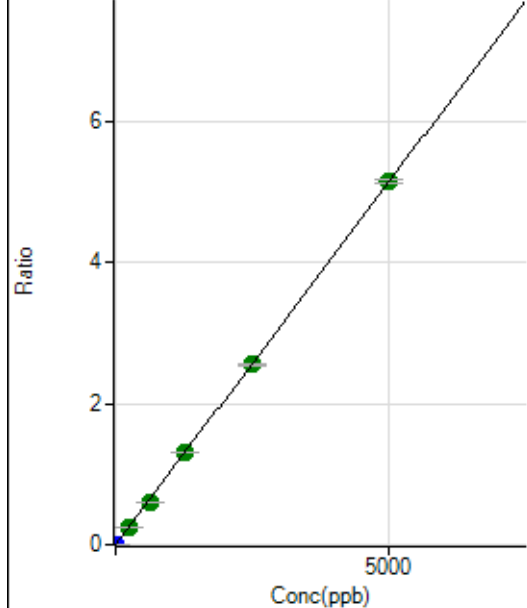
$$DL = 0.02074$$

$$BEC = 0.04293$$

Weight: <None>

Min Conc: 0

207 [Pb] [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	331.12	0.0000	P	6.6
2	☐	1.000	0.972	8571.67	0.0010	P	0.8
3	☐	250.000	248.227	2110007.56	0.2548	A	0.9
4	☐	625.000	581.197	4934740.41	0.5965	A	1.3
5	☐	1250.000	1265.525	10711225.54	1.2987	A	0.5
6	☐	2500.000	2486.766	21222778.85	2.5519	A	0.6
7	☐	5000.000	5008.300	42081157.70	5.1395	A	0.9
8	☐			11295.91	0.0016	P	6.5

$$y = 0.0010 * x + 4.0538E-005$$

$$R = 0.9999$$

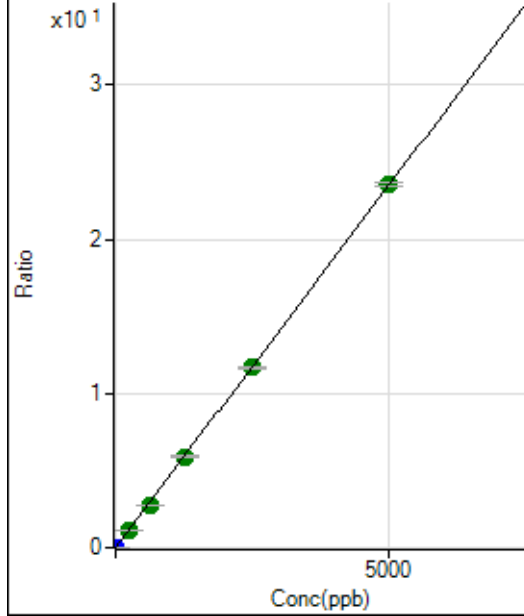
$$DL = 0.007851$$

$$BEC = 0.0395$$

Weight: <None>

Min Conc: 0

208 Pb [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1634.50	0.0002	P	8.5
2	☐	1.000	0.969	39208.96	0.0047	P	1.4
3	☐	250.000	248.241	9652161.92	1.1654	A	1.1
4	☐	625.000	578.383	22463291.60	2.7151	A	1.3
5	☐	1250.000	1258.659	48729427.47	5.9083	A	0.7
6	☐	2500.000	2484.842	97001287.44	11.6641	A	1.2
7	☐	5000.000	5011.329	192605287.13	23.5234	A	1.2
8	☐			51180.26	0.0072	P	6.6

$$y = 0.0047 * x + 2.0012E-004$$

$$R = 0.9999$$

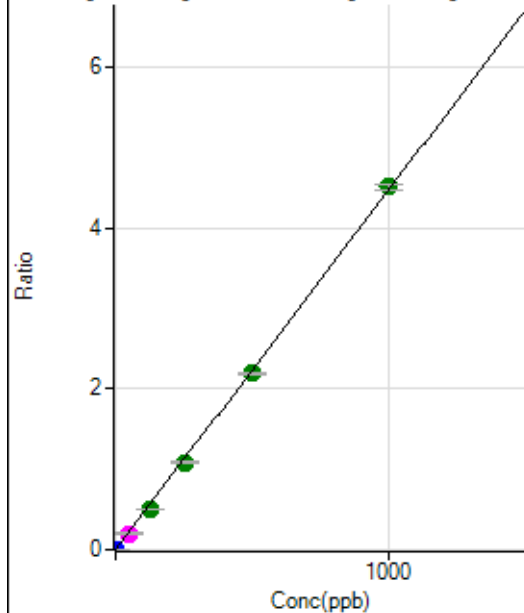
$$DL = 0.01085$$

$$BEC = 0.04263$$

Weight: <None>

Min Conc: 0

238 U [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	15.56	0.0000	P	12.8
2	☐	1.000	0.916	33844.34	0.0041	P	2.0
3	☐	50.000	45.446	1683872.55	0.2033	M	5.0
4	☐	125.000	110.823	4102500.43	0.4958	A	0.4
5	☐	250.000	242.415	8945083.76	1.0846	A	1.0
6	☐	500.000	489.886	18227369.17	2.1918	A	1.1
7	☐	1000.000	1008.953	36959996.12	4.5141	A	1.8
8	☐			5517.89	0.0008	P	16.1

$$y = 0.0045 * x + 1.9049E-006$$

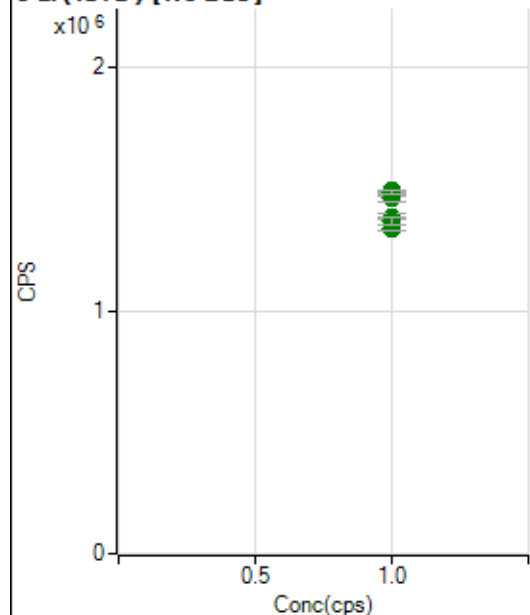
$$R = 0.9998$$

$$DL = 0.0001631$$

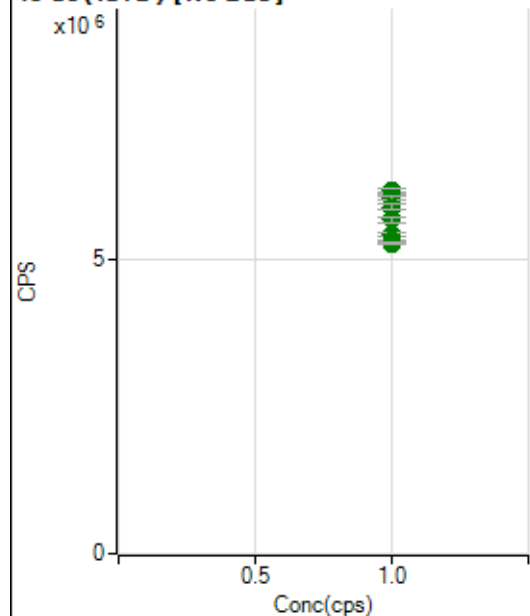
$$BEC = 0.0004258$$

Weight: <None>

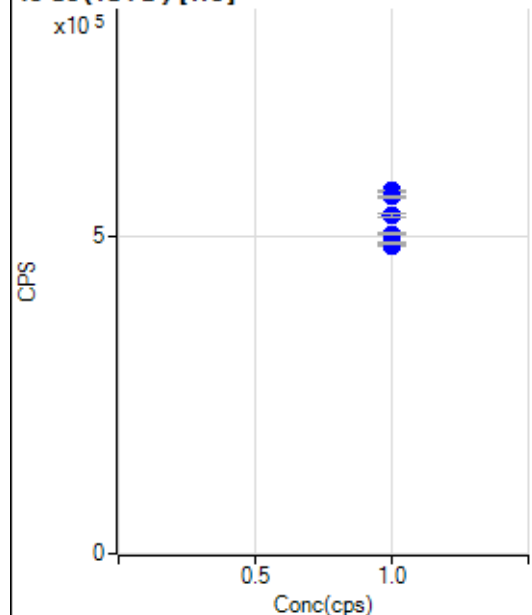
Min Conc: 0

6 Li (ISTD) [No Gas]

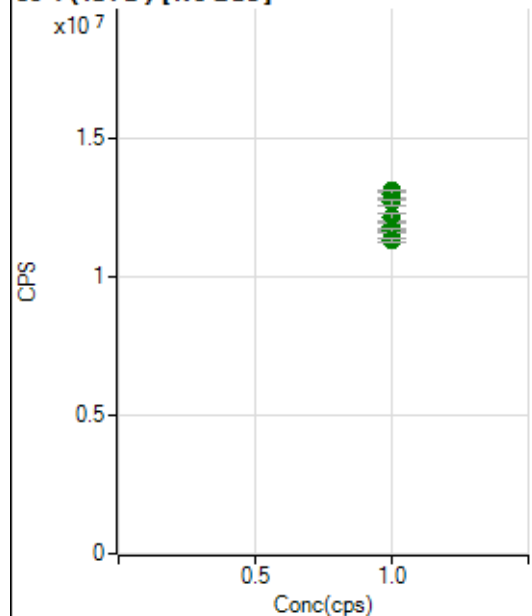
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1339895.07		A	2.0
2	☐	1.000		1367300.74		A	1.7
3	☐	1.000		1388341.54		A	1.3
4	☐	1.000		1460436.06		A	1.3
5	☐	1.000		1493245.88		A	0.5
6	☐	1.000		1492913.75		A	0.3
7	☐	1.000		1488153.16		A	1.2
8	☐	1.000		1369265.07		A	2.2

45 Sc (ISTD) [No Gas]

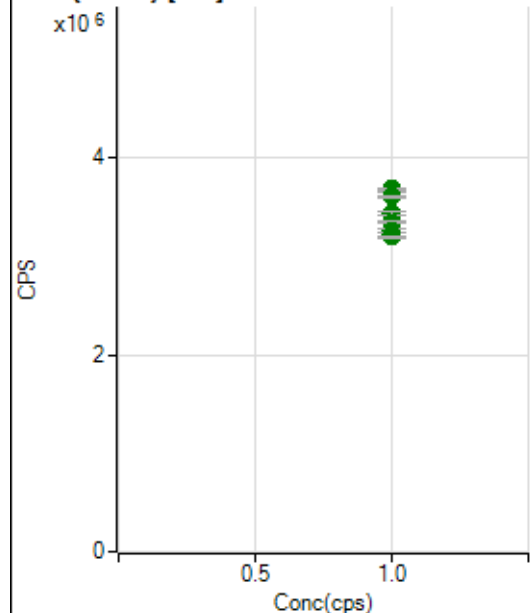
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6135053.52		A	0.4
2	☐	1.000		6176553.66		A	1.3
3	☐	1.000		6054034.01		A	0.9
4	☐	1.000		5896997.69		A	1.6
5	☐	1.000		5680056.44		A	1.9
6	☐	1.000		5421068.19		A	1.2
7	☐	1.000		5335881.87		A	0.5
8	☐	1.000		5277560.20		A	0.8

45 Sc (ISTD) [He]

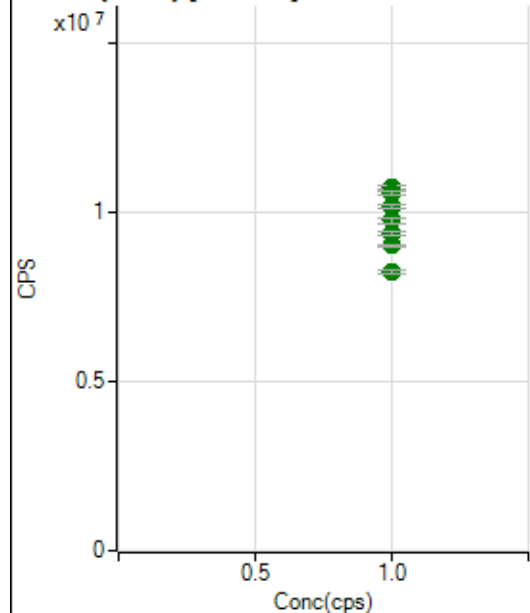
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		569225.06		P	0.5
2	☐	1.000		570835.41		P	0.6
3	☐	1.000		561475.99		P	0.4
4	☐	1.000		531372.31		P	1.2
5	☐	1.000		502543.38		P	0.7
6	☐	1.000		484153.60		P	0.3
7	☐	1.000		483660.57		P	0.3
8	☐	1.000		488560.90		P	0.2

89 Y (ISTD) [No Gas]

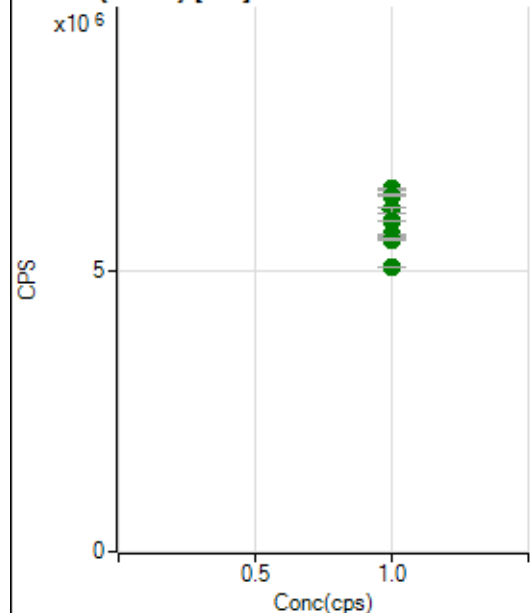
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13071677.17		A	0.6
2	☐	1.000		13016435.08		A	0.3
3	☐	1.000		12945276.47		A	2.0
4	☐	1.000		12645232.87		A	1.7
5	☐	1.000		12123678.01		A	1.8
6	☐	1.000		11780770.38		A	2.1
7	☐	1.000		11644170.52		A	1.2
8	☐	1.000		11282163.16		A	1.2

89 Y (ISTD) [He]

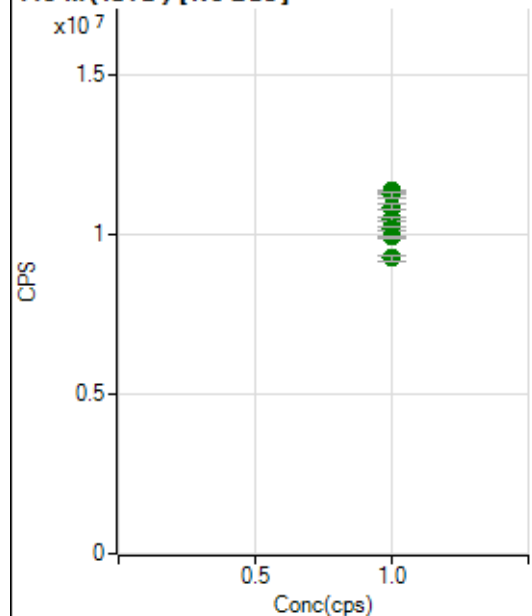
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3674046.85		A	0.9
2	☐	1.000		3683893.31		A	0.4
3	☐	1.000		3606871.79		A	0.8
4	☐	1.000		3439113.35		A	1.3
5	☐	1.000		3341382.90		A	0.7
6	☐	1.000		3261437.87		A	1.1
7	☐	1.000		3217188.77		A	1.1
8	☐	1.000		3194327.97		A	1.0

103 Rh (ISTD) [No Gas]

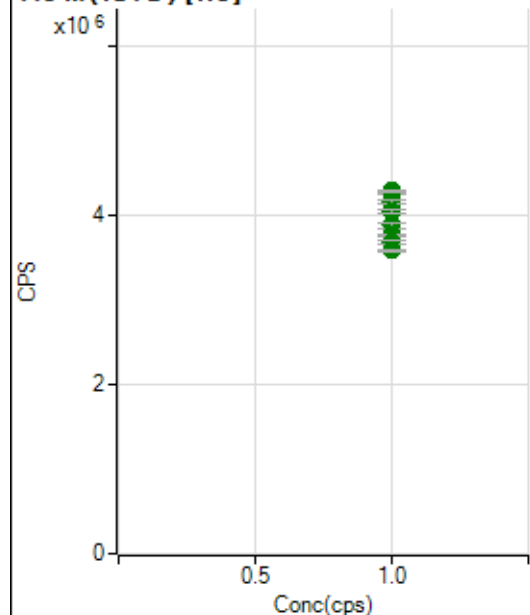
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10646171.30		A	0.7
2	☐	1.000		10733247.06		A	1.2
3	☐	1.000		10571932.55		A	1.4
4	☐	1.000		10187662.14		A	1.3
5	☐	1.000		9766839.23		A	1.5
6	☐	1.000		9392423.20		A	1.1
7	☐	1.000		9023077.57		A	1.1
8	☐	1.000		8258472.31		A	1.2

103 Rh (ISTD) [He]

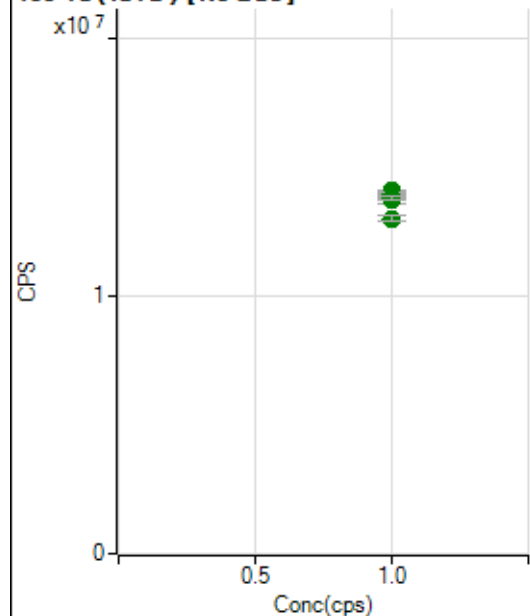
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		6479374.21		A	0.4
2	☐	1.000		6464829.49		A	0.7
3	☐	1.000		6365466.15		A	0.6
4	☐	1.000		6108157.20		A	1.7
5	☐	1.000		5909863.52		A	0.2
6	☐	1.000		5664765.89		A	0.6
7	☐	1.000		5567531.31		A	0.7
8	☐	1.000		5086652.18		A	0.2

115 In (ISTD) [No Gas]

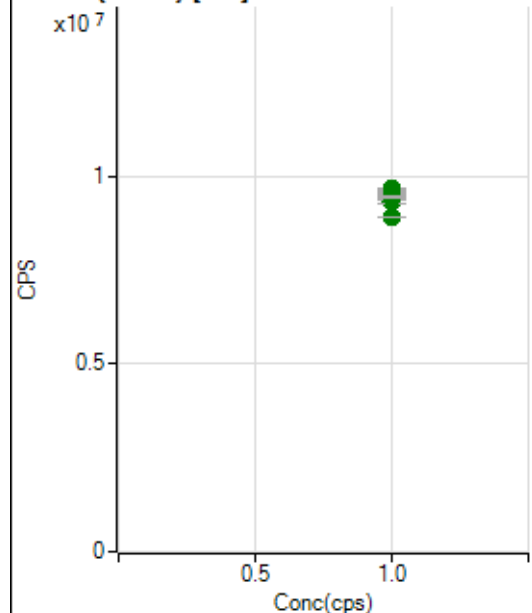
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		11380146.53		A	0.6
2	☐	1.000		11329687.32		A	0.7
3	☐	1.000		11265333.30		A	1.8
4	☐	1.000		10868529.03		A	1.8
5	☐	1.000		10492354.67		A	0.7
6	☐	1.000		10175002.67		A	1.1
7	☐	1.000		9939330.96		A	0.4
8	☐	1.000		9261623.59		A	1.7

115 In (ISTD) [He]

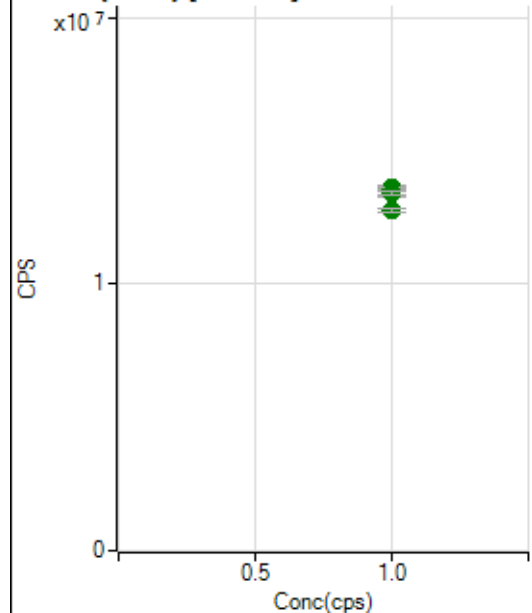
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		4259416.94		A	0.6
2	☐	1.000		4292484.76		A	0.7
3	☐	1.000		4169514.11		A	1.2
4	☐	1.000		4041978.91		A	1.2
5	☐	1.000		3880378.30		A	1.5
6	☐	1.000		3771233.98		A	0.4
7	☐	1.000		3677807.30		A	1.1
8	☐	1.000		3586211.70		A	0.3

159 Tb (ISTD) [No Gas]

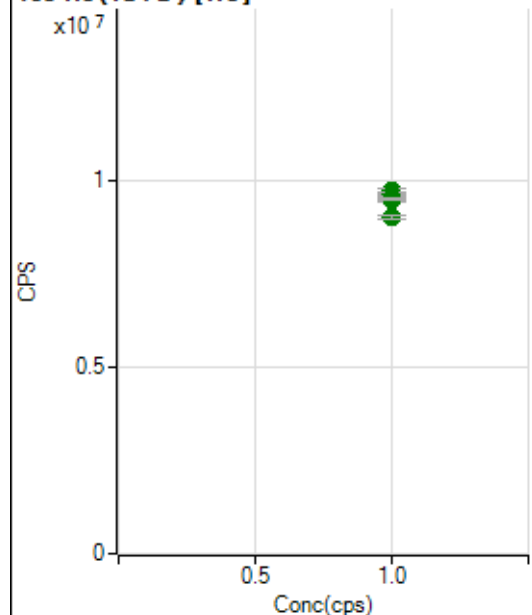
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13894184.79		A	0.5
2	☐	1.000		14086918.40		A	0.6
3	☐	1.000		13945765.07		A	1.0
4	☐	1.000		13829817.43		A	0.5
5	☐	1.000		13714532.99		A	1.3
6	☐	1.000		13754039.52		A	0.7
7	☐	1.000		13797739.93		A	1.3
8	☐	1.000		13005575.92		A	1.8

159 Tb (ISTD) [He]

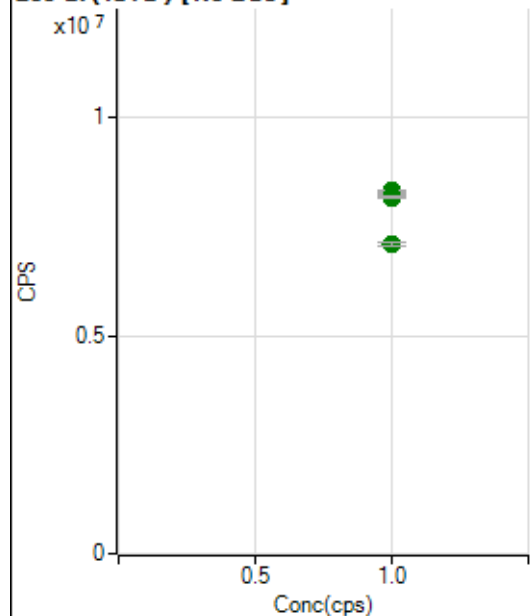
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9604679.44		A	1.1
2	☐	1.000		9661592.56		A	0.2
3	☐	1.000		9593169.16		A	0.3
4	☐	1.000		9517372.71		A	0.6
5	☐	1.000		9471588.05		A	0.3
6	☐	1.000		9331060.83		A	0.9
7	☐	1.000		9438634.44		A	0.7
8	☐	1.000		8893901.12		A	0.2

165 Ho (ISTD) [No Gas]

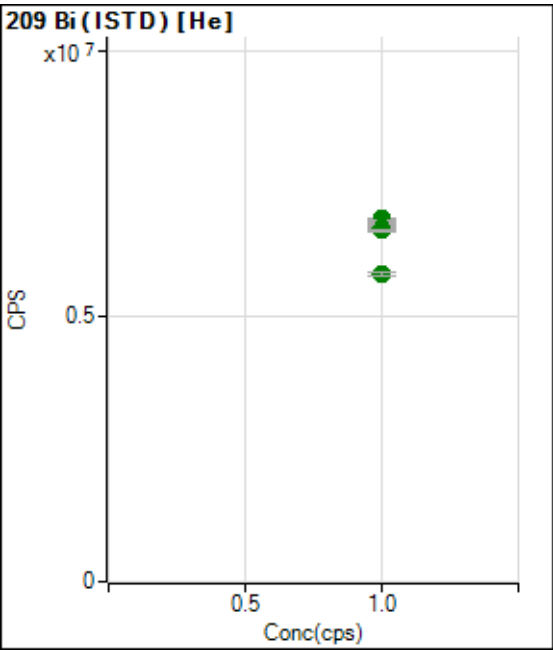
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		13557561.19		A	0.9
2	☐	1.000		13589402.58		A	0.7
3	☐	1.000		13599169.10		A	1.2
4	☐	1.000		13553729.24		A	1.5
5	☐	1.000		13525554.38		A	1.1
6	☐	1.000		13382162.30		A	1.5
7	☐	1.000		13407395.36		A	0.7
8	☐	1.000		12767908.01		A	1.1

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9646036.66		A	1.1
2	☐	1.000		9703219.23		A	0.2
3	☐	1.000		9741688.40		A	1.3
4	☐	1.000		9640718.12		A	1.0
5	☐	1.000		9543109.23		A	1.3
6	☐	1.000		9477647.01		A	0.8
7	☐	1.000		9531493.54		A	0.3
8	☐	1.000		9039356.74		A	0.6

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8169688.07		A	0.5
2	☐	1.000		8257542.52		A	1.3
3	☐	1.000		8282523.83		A	0.9
4	☐	1.000		8274282.10		A	1.3
5	☐	1.000		8247733.07		A	0.5
6	☐	1.000		8316419.60		A	0.5
7	☐	1.000		8187725.16		A	0.3
8	☐	1.000		7101283.23		A	0.9



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6819891.08		A	1.4
2	☐	1.000		6846218.23		A	0.1
3	☐	1.000		6826204.07		A	0.4
4	☐	1.000		6798850.25		A	0.6
5	☐	1.000		6683954.00		A	0.7
6	☐	1.000		6694602.88		A	1.1
7	☐	1.000		6635004.21		A	0.4
8	☐	1.000		5799485.82		A	1.5

US EPA Tune Check Report

Operator Name Jaswal

Acq/Data Batch D:\Agilent\ICPMH\1\DATA\IP7122124MS-1.b

Acq. Date-Time 2024-12-21 15:35:47

Report Comment ---

Instrument Name G8403A JP14410463

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9		6725	67253.30			0.578	5.000
24		220790	2207899.83			1.115	5.000
25		27508	275084.46			0.452	5.000
26		31511	315114.35			0.282	5.000
59		88106	881055.74			0.393	5.000
113		11343	113428.71			0.728	5.000
115		147076	1470764.46			0.439	5.000
206		28753	287529.77			0.824	5.000
207		25069	250688.22			0.543	5.000
208		59750	597501.24			0.352	5.000
220		0	3.20			35.972	

Mass	RSD% (Flag)
9	
24	
25	
26	
59	
113	
115	
206	
207	
208	
220	

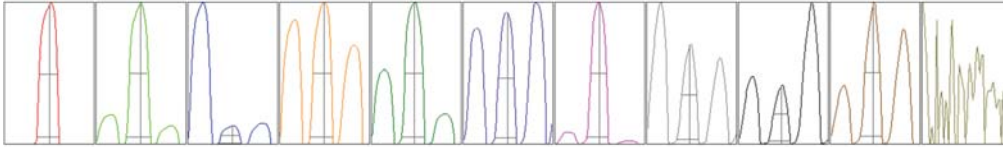
Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	6667	6711	6727	6761	6760
24	219710	218589	218762	223549	223340
25	27463	27566	27323	27534	27656
26	31458	31590	31412	31478	31618
59	88490	88098	87891	87655	88394
113	11429	11406	11340	11322	11218
115	147758	147782	146739	146407	146696
206	29007	28954	28458	28772	28574
207	25263	25144	24915	24997	25025
208	59976	59748	59422	59724	59880

US EPA Tune Check Report

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
220	0	0	0	0	0

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	11773.92	9.05	8.90 - 9.10	
24	372358.09	24.00	23.90 - 24.10	
25	46887.08	25.00	24.90 - 25.10	
26	53403.84	26.00	25.90 - 26.10	
59	151466.27	58.95	58.90 - 59.10	
113	22172.28	113.00	112.90 - 113.10	
115	286165.85	115.00	114.90 - 115.10	
206	59374.54	205.95	205.90 - 206.10	
207	51890.18	206.95	206.90 - 207.10	
208	124584.17	207.95	207.90 - 208.10	
220			-	

Mass	W-50%	W-5%	W-5% (Required)	W-5% (Flag)
9	0.60	0.738	0.900	
24	0.63	0.816	0.900	
25	0.62	0.752	0.900	
26	0.62	0.780	0.900	
59	0.60	0.782	0.900	
113	0.52	0.731	0.900	
115	0.52	0.728	0.900	
206	0.49	0.733	0.900	
207	0.49	0.732	0.900	
208	0.50	0.746	0.900	
220				

Integration Time [sec] 0.1

Acquisition Time [sec] 256.770000000002

Y Axis Linear

Tune Parameters

Plasma Parameters

Plasma Mode --- Nebulizer Gas 0.82 L/min Dilution Gas 0.40 L/min

US EPA Tune Check Report

RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	8.0 V	Deflect	16.4 V
Extract 2	-130.0 V	Cell Entrance	-30 V	Plate Bias	-35 V
Omega Bias	-65 V	Cell Exit	-50 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	---	OctP RF	190 V		

QP Parameters

Mass Gain	136	Axis Gain	0.9973	QP Bias	-3.0 V
Mass Offset	130	Axis Offset	0.15		

Hardware Settings

Torch

Torch H	0.6 mm	Torch V	0.3 mm
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EM

Discriminator	4.8 mV	Analog HV	2237 V	Pulse HV	1013 V
---------------	--------	-----------	--------	----------	--------

[He]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
59		29700	296996.67			0.429	
89		52669	526693.36			0.654	
205		31181	311809.14			0.510	

Mass	RSD% (Flag)
59	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
59	29879	29756	29642	29538	29683
89	53155	52884	52297	52494	52516
205	31446	31176	31149	31022	31112

Integration Time [sec] 0.1

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.82 L/min	Dilution Gas	0.40 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.80 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	9.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	9.0 V	Deflect	3.8 V
-----------	-------	------------	-------	---------	-------

US EPA Tune Check Report

Extract 2	-140.0 V	Cell Entrance	-40 V	Plate Bias	-60 V
Omega Bias	-70 V	Cell Exit	-60 V		
Cell Parameters					
Use Gas	Yes	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	3.9 mL/min	OctP Bias	-18.0 V		
H2 Flow	---	OctP RF	200 V		
QP Parameters					
Mass Gain	136	Axis Gain	0.9973	QP Bias	-13.0 V
Mass Offset	130	Axis Offset	0.15		
Hardware Settings					
Torch					
Torch H	0.6 mm	Torch V	0.3 mm		
EM					
Discriminator	4.8 mV	Analog HV	2237 V	Pulse HV	1013 V

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

S00

Instrumnet Name :

P7

Client Sample ID :

S0

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 16:08:12

DataFile Name :

004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	-0.04	0.08	-0.04	0.00	N/A	ppb
Antimony	121-1	0.00	0.00	0.00	0.00	N/A	ppb
Arsenic	75-2	-0.01	0.01	0.00	0.00	N/A	ppb
Barium	135-1	0.00	0.00	0.00	0.00	N/A	ppb
Barium	137-1	0.00	0.00	0.00	0.00	N/A	ppb
Beryllium	9-1	0.01	0.00	0.00	0.00	N/A	ppb
Bismuth	209-1				100		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.02	0.00	-0.02	0.00	N/A	ppb
Cadmium	106-1	0.73	-0.01	-0.72	0.00	N/A	ppb
Cadmium	111-1	0.04	0.00	-0.04	0.00	N/A	ppb
Calcium	43-1	-0.96	0.76	0.19	0.00	N/A	ppb
Calcium	44-1	0.07	0.12	-0.19	0.00	N/A	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	-0.01	0.02	0.00	N/A	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00	N/A	ppb
Copper	63-2	0.01	0.00	-0.01	0.00	N/A	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				100		%
Indium	115-2				100		%
Iron	56-2	0.03	-0.01	-0.02	0.00	N/A	ppb
Iron	57-2	-0.32	-0.29	0.61	0.00	N/A	ppb
Iron	54-2	0.67	0.20	-0.88	0.00	N/A	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:08:12 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.01	-0.01	0.00	0.00	N/A	ppb
Lead	207-1	0.00	0.00	0.00	0.00	N/A	ppb
Lead	208-1	0.00	0.00	0.00	0.00	N/A	ppb
Lithium	6-1				100		%
Magnesium	24-2	0.02	0.00	-0.02	0.00	N/A	ppb
Manganese	55-2	0.01	-0.01	0.00	0.00	N/A	ppb
Molybdenum	94-1	-0.01	0.01	0.00	0.00	N/A	ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	96-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	97-1	0.00	0.00	0.00	0.00	N/A	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00	N/A	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.01	-0.02	0.00	0.00	N/A	ppb
Phosphorus	31-2	-14.88	-17.99	-20.54	-17.80		ppb
Potassium	39-2	-0.27	1.07	-0.80	0.00	N/A	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	-0.07	-0.09	0.15	0.00	N/A	ppb
Selenium	77-2	-0.05	0.10	-0.05	0.00	N/A	ppb
Selenium	78-2	0.49	0.04	-0.53	0.00	N/A	ppb
Silicon	28-1	0.13	0.25	-0.39	0.00	N/A	ppb
Silver	107-1	0.00	0.00	0.00	0.00	N/A	ppb
Silver	109-1	0.00	0.00	0.00	0.00	N/A	ppb
Sodium	23-2	0.03	-0.32	0.29	0.00	N/A	ppb
Strontium	86-1	-0.22	0.46	-0.24	0.00	N/A	ppb
Strontium	88-1	0.01	0.01	-0.02	0.00	N/A	ppb
Sulfur	34-1	-52.04	20.18	-57.81	-29.89		ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.00	0.00	0.00	0.00	N/A	ppb
Thallium	205-1	0.00	0.00	0.00	0.00	N/A	ppb
Tin	118-1	0.00	0.01	0.00	0.00	N/A	ppb
Titanium	47-1	-0.01	-0.01	0.02	0.00	N/A	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:08:12 DataFile Name : 004CALB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	N/A	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	N/A	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	0.00	-0.02	0.02	0.00	N/A	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	N/A	ppb
Zirconium	91-1	0.00	0.00	0.00	0.00	N/A	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :S02Instrumnet Name :P7

Client Sample ID :S02Dilution Factor :1

Date & Time Acquired :2024-12-21 16:14:49DataFile Name :006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	20.62	20.12	20.95	20.56	2.04	ppb
Antimony	121-1	2.20	2.20	2.20	2.20	0.06	ppb
Arsenic	75-2	1.21	1.24	1.25	1.23	1.42	ppb
Barium	135-1	10.61	10.46	10.77	10.61	1.44	ppb
Barium	137-1	10.62	10.69	10.80	10.70	0.85	ppb
Beryllium	9-1	1.18	1.21	1.18	1.19	1.39	ppb
Bismuth	209-1				101		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.14	1.11	1.03	1.09	5.12	ppb
Cadmium	106-1	2.00	0.77	1.98	1.58	44.46	ppb
Cadmium	111-1	1.20	1.17	1.19	1.19	0.98	ppb
Calcium	43-1	564.77	558.77	577.83	567.12	1.72	ppb
Calcium	44-1	558.29	559.94	568.44	562.22	0.97	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.23	2.17	2.25	2.21	1.92	ppb
Cobalt	59-2	1.17	1.16	1.17	1.17	0.75	ppb
Copper	63-2	2.10	2.06	2.08	2.08	0.97	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				101		%
Indium	115-1				100		%
Indium	115-2				101		%
Iron	56-2	57.24	57.15	57.64	57.34	0.45	ppb
Iron	57-2	60.64	57.27	60.66	59.53	3.28	ppb
Iron	54-2	58.23	59.99	59.83	59.35	1.64	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P7
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:14:49 DataFile Name : 006CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.99	1.01	0.97	0.99	2.27	ppb
Lead	207-1	0.97	0.98	0.97	0.97	0.84	ppb
Lead	208-1	0.95	0.98	0.97	0.97	1.43	ppb
Lithium	6-1				102		%
Magnesium	24-2	530.01	526.12	533.98	530.04	0.74	ppb
Manganese	55-2	1.15	1.09	1.07	1.10	3.64	ppb
Molybdenum	94-1	6.22	6.11	6.09	6.14	1.14	ppb
Molybdenum	95-1	5.32	5.31	5.32	5.32	0.12	ppb
Molybdenum	96-1	5.45	5.44	5.29	5.39	1.64	ppb
Molybdenum	97-1	5.20	5.22	5.14	5.19	0.87	ppb
Molybdenum	98-1	5.24	5.24	5.28	5.25	0.42	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	1.22	1.13	1.08	1.14	6.36	ppb
Phosphorus	31-2	16.58	16.30	20.52	17.80	13.25	ppb
Potassium	39-2	553.41	551.23	562.97	555.87	1.12	ppb
Rhodium	103-1				101		%
Rhodium	103-2				100		%
Scandium	45-1				101		%
Scandium	45-2				100		%
Selenium	82-1	6.26	5.51	5.44	5.74	7.89	ppb
Selenium	77-2	6.19	5.88	5.31	5.79	7.72	ppb
Selenium	78-2	6.36	6.02	7.36	6.58	10.63	ppb
Silicon	28-1	1.35	1.82	2.42	1.87	28.87	ppb
Silver	107-1	1.12	1.11	1.10	1.11	1.23	ppb
Silver	109-1	1.11	1.09	1.12	1.11	1.32	ppb
Sodium	23-2	509.02	511.64	516.39	512.35	0.73	ppb
Strontium	86-1	27.07	28.19	26.78	27.35	2.72	ppb
Strontium	88-1	26.87	26.47	26.71	26.68	0.75	ppb
Sulfur	34-1	-37.81	21.24	106.24	29.89	242.28	ppb
Terbium	159-1				101		%
Terbium	159-2				101		%
Thallium	203-1	0.97	0.97	1.00	0.98	1.39	ppb
Thallium	205-1	0.96	0.97	0.96	0.96	0.98	ppb
Tin	118-1	5.60	5.65	5.53	5.59	1.01	ppb
Titanium	47-1	5.33	5.42	5.33	5.36	1.04	ppb

LB Number :LB134060

Operator :Jaswal

Lab Sample ID :S02

Instrumnet Name :P7

Client Sample ID :S02

Dilution Factor :1

Date & Time Acquired :2024-12-21 16:14:49

DataFile Name :006CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.90	0.93	0.92	0.92	2.02	ppb
Vanadium	51-2	5.58	5.46	5.55	5.53	1.12	ppb
Yttrium	89-1				100		%
Yttrium	89-2				100		%
Zinc	66-2	5.58	5.20	5.56	5.45	3.91	ppb
Zirconium	90-1	1.05	1.04	1.05	1.05	0.87	ppb
Zirconium	91-1	1.03	1.08	1.02	1.04	3.04	ppb

LB Number :
Lab Sample ID :
Client Sample ID :
Date & Time Acquired :

LB134060
S03
S03
2024-12-21 16:18:06

Operator :
Instrumnet Name :
Dilution Factor :
DataFile Name :

Jaswal
P7
1
007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	962.41	960.83	945.39	956.21	0.98	ppb
Antimony	121-1	50.44	51.20	50.83	50.82	0.74	ppb
Arsenic	75-2	52.92	51.78	51.50	52.07	1.45	ppb
Barium	135-1	247.86	253.91	249.32	250.37	1.26	ppb
Barium	137-1	248.31	253.21	250.59	250.70	0.98	ppb
Beryllium	9-1	54.64	54.76	56.19	55.20	1.56	ppb
Bismuth	209-1				101		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	56.68	57.42	57.11	57.07	0.65	ppb
Cadmium	106-1	57.18	57.03	55.17	56.46	1.98	ppb
Cadmium	111-1	52.71	53.04	52.52	52.76	0.50	ppb
Calcium	43-1	5249.27	5281.18	5298.69	5276.38	0.47	ppb
Calcium	44-1	5056.47	5039.31	5183.42	5093.06	1.55	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	49.85	50.46	49.84	50.05	0.71	ppb
Cobalt	59-2	49.98	50.48	49.86	50.11	0.65	ppb
Copper	63-2	520.23	520.99	505.88	515.70	1.65	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				101		%
Indium	115-1				99		%
Indium	115-2				98		%
Iron	56-2	2616.99	2613.06	2597.47	2609.17	0.40	ppb
Iron	57-2	2596.63	2605.82	2594.24	2598.90	0.24	ppb
Iron	54-2	2654.23	2681.67	2643.41	2659.77	0.74	ppb
Krypton	83-1						cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

S03

Instrumnet Name :

P7

Client Sample ID :

S03

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 16:18:06

DataFile Name :

007CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	242.95	248.69	248.79	246.81	1.35	ppb
Lead	207-1	246.52	247.49	250.67	248.23	0.87	ppb
Lead	208-1	246.15	247.36	251.22	248.24	1.07	ppb
Lithium	6-1				104		%
Magnesium	24-2	4781.20	4773.09	4720.06	4758.11	0.70	ppb
Manganese	55-2	500.56	499.16	495.92	498.55	0.48	ppb
Molybdenum	94-1	494.34	502.38	502.77	499.83	0.95	ppb
Molybdenum	95-1	493.37	508.55	503.63	501.85	1.54	ppb
Molybdenum	96-1	496.00	503.26	494.36	497.87	0.95	ppb
Molybdenum	97-1	492.66	502.39	500.62	498.56	1.04	ppb
Molybdenum	98-1	491.24	501.81	498.76	497.27	1.09	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	50.77	50.73	50.82	50.77	0.09	ppb
Phosphorus	31-2	1040.02	1025.55	1043.73	1036.43	0.93	ppb
Potassium	39-2	2529.02	2544.24	2482.34	2518.53	1.28	ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-1				99		%
Scandium	45-2				99		%
Selenium	82-1	50.54	54.20	53.22	52.65	3.60	ppb
Selenium	77-2	54.93	50.99	56.86	54.26	5.51	ppb
Selenium	78-2	53.64	53.18	54.26	53.70	1.01	ppb
Silicon	28-1	67.67	67.30	65.78	66.92	1.50	ppb
Silver	107-1	53.74	55.04	53.84	54.21	1.33	ppb
Silver	109-1	54.15	54.99	54.18	54.44	0.87	ppb
Sodium	23-2	4943.54	4950.69	4884.38	4926.20	0.74	ppb
Strontium	86-1	1187.71	1240.19	1229.74	1219.21	2.28	ppb
Strontium	88-1	1256.17	1263.00	1253.67	1257.61	0.38	ppb
Sulfur	34-1	999.18	1071.45	1058.01	1042.88	3.69	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	45.36	45.84	47.19	46.13	2.06	ppb
Thallium	205-1	45.30	45.57	46.15	45.67	0.94	ppb
Tin	118-1	51.27	52.41	51.34	51.67	1.24	ppb
Titanium	47-1	503.20	506.01	504.48	504.57	0.28	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S03 Instrumnet Name : P7
Client Sample ID : S03 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:18:06 DataFile Name : 007CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	46.22	42.91	47.21	45.45	4.96	ppb
Vanadium	51-2	50.23	49.68	48.79	49.57	1.47	ppb
Yttrium	89-1				99		%
Yttrium	89-2				98		%
Zinc	66-2	497.18	497.34	489.04	494.52	0.96	ppb
Zirconium	90-1	47.49	49.30	49.02	48.61	2.00	ppb
Zirconium	91-1	47.96	49.58	49.26	48.93	1.76	ppb

LB Number :	LB134060	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2024-12-21 16:21:10	DataFile Name :	008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2195.01	2231.35	2229.73	2218.70	0.93	ppb
Antimony	121-1	114.89	116.54	115.96	115.80	0.72	ppb
Arsenic	75-2	119.03	120.39	120.19	119.87	0.61	ppb
Barium	135-1	599.22	600.92	598.02	599.39	0.24	ppb
Barium	137-1	600.69	606.96	597.15	601.60	0.83	ppb
Beryllium	9-1	123.47	122.41	122.36	122.75	0.51	ppb
Bismuth	209-1				101		%
Bismuth	209-2				100		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	126.68	126.93	127.65	127.09	0.40	ppb
Cadmium	106-1	126.82	127.90	124.79	126.50	1.25	ppb
Cadmium	111-1	120.45	122.13	121.07	121.22	0.70	ppb
Calcium	43-1	11998.83	12194.14	12194.01	12128.99	0.93	ppb
Calcium	44-1	11503.24	11707.62	11742.42	11651.09	1.11	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	114.19	116.48	115.60	115.42	1.00	ppb
Cobalt	59-2	114.16	116.00	115.26	115.14	0.81	ppb
Copper	63-2	1175.87	1215.41	1194.28	1195.18	1.66	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				96		%
Indium	115-2				95		%
Iron	56-2	5979.07	6056.86	6046.58	6027.50	0.70	ppb
Iron	57-2	5965.50	6099.77	6026.49	6030.59	1.11	ppb
Iron	54-2	6041.02	6187.50	6126.00	6118.17	1.20	ppb
Krypton	83-1						cps

LB Number :	LB134060	Operator :	Jaswal
Lab Sample ID :	S04	Instrumnet Name :	P7
Client Sample ID :	S04	Dilution Factor :	1
Date & Time Acquired :	2024-12-21 16:21:10	DataFile Name :	008CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	565.81	582.89	579.06	575.92	1.56	ppb
Lead	207-1	574.00	588.83	580.76	581.20	1.28	ppb
Lead	208-1	571.10	586.29	577.76	578.38	1.32	ppb
Lithium	6-1				109		%
Magnesium	24-2	10832.66	11131.36	10919.40	10961.14	1.40	ppb
Manganese	55-2	1141.15	1186.44	1149.08	1158.89	2.09	ppb
Molybdenum	94-1	1127.89	1142.15	1157.14	1142.39	1.28	ppb
Molybdenum	95-1	1136.21	1162.17	1162.70	1153.70	1.31	ppb
Molybdenum	96-1	1121.39	1140.47	1165.90	1142.59	1.95	ppb
Molybdenum	97-1	1136.35	1145.45	1148.36	1143.38	0.55	ppb
Molybdenum	98-1	1134.48	1154.60	1140.88	1143.32	0.90	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	115.22	117.30	116.86	116.46	0.94	ppb
Phosphorus	31-2	2315.10	2367.32	2347.14	2343.19	1.12	ppb
Potassium	39-2	5764.66	5816.91	5754.10	5778.55	0.58	ppb
Rhodium	103-1				96		%
Rhodium	103-2				94		%
Scandium	45-1				96		%
Scandium	45-2				93		%
Selenium	82-1	117.67	118.38	121.31	119.12	1.62	ppb
Selenium	77-2	119.18	118.67	115.10	117.65	1.89	ppb
Selenium	78-2	118.57	122.66	122.57	121.27	1.93	ppb
Silicon	28-1	127.70	131.44	131.66	130.27	1.71	ppb
Silver	107-1	126.50	126.84	126.34	126.56	0.20	ppb
Silver	109-1	129.85	128.53	126.43	128.27	1.35	ppb
Sodium	23-2	11359.33	11526.67	11339.75	11408.58	0.90	ppb
Strontium	86-1	2763.39	2819.24	2852.03	2811.56	1.59	ppb
Strontium	88-1	2861.94	2924.35	2913.78	2900.02	1.15	ppb
Sulfur	34-1	2235.87	2371.03	2308.02	2304.98	2.93	ppb
Terbium	159-1				100		%
Terbium	159-2				99		%
Thallium	203-1	105.30	108.06	105.82	106.39	1.38	ppb
Thallium	205-1	113.81	116.58	114.47	114.95	1.26	ppb
Tin	118-1	116.57	118.38	117.16	117.37	0.79	ppb
Titanium	47-1	1137.64	1171.91	1162.19	1157.24	1.53	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

S04

Instrumnet Name :

P7

Client Sample ID :

S04

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 16:21:10

DataFile Name :

008CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	110.33	111.18	110.96	110.82	0.40	ppb
Vanadium	51-2	114.26	115.42	115.12	114.93	0.52	ppb
Yttrium	89-1				97		%
Yttrium	89-2				94		%
Zinc	66-2	1131.69	1148.81	1151.63	1144.04	0.94	ppb
Zirconium	90-1	113.32	115.51	115.37	114.73	1.07	ppb
Zirconium	91-1	110.91	111.88	114.01	112.27	1.41	ppb

LB Number :	LB134060	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2024-12-21 16:24:01	DataFile Name :	009CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	4894.13	4982.30	4949.09	4941.84	0.90	ppb
Antimony	121-1	257.47	259.17	263.69	260.11	1.24	ppb
Arsenic	75-2	255.21	251.41	253.16	253.26	0.75	ppb
Barium	135-1	1276.28	1294.03	1281.42	1283.91	0.71	ppb
Barium	137-1	1286.04	1283.77	1288.31	1286.04	0.18	ppb
Beryllium	9-1	257.71	258.77	260.00	258.83	0.44	ppb
Bismuth	209-1				101		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	262.15	264.14	265.21	263.84	0.59	ppb
Cadmium	106-1	267.78	266.87	266.63	267.09	0.23	ppb
Cadmium	111-1	254.51	253.80	258.34	255.55	0.96	ppb
Calcium	43-1	25759.76	26548.66	26369.18	26225.87	1.58	ppb
Calcium	44-1	24935.89	25444.01	25392.16	25257.35	1.11	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	248.53	252.46	250.42	250.47	0.78	ppb
Cobalt	59-2	256.22	258.15	256.78	257.05	0.39	ppb
Copper	63-2	2559.08	2577.66	2571.28	2569.34	0.37	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				99		%
Indium	115-1				92		%
Indium	115-2				91		%
Iron	56-2	13122.82	13163.88	13240.35	13175.68	0.45	ppb
Iron	57-2	12912.37	13050.54	13063.40	13008.77	0.64	ppb
Iron	54-2	13161.19	13366.80	13443.49	13323.83	1.10	ppb
Krypton	83-1						cps

LB Number :	LB134060	Operator :	Jaswal
Lab Sample ID :	S05	Instrumnet Name :	P7
Client Sample ID :	S05	Dilution Factor :	1
Date & Time Acquired :	2024-12-21 16:24:01	DataFile Name :	009CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1235.98	1260.98	1260.13	1252.36	1.13	ppb
Lead	207-1	1257.91	1268.61	1270.05	1265.53	0.52	ppb
Lead	208-1	1249.42	1259.05	1267.51	1258.66	0.72	ppb
Lithium	6-1				111		%
Magnesium	24-2	23947.34	24135.74	24279.90	24120.99	0.69	ppb
Manganese	55-2	2525.21	2534.74	2564.63	2541.53	0.81	ppb
Molybdenum	94-1	2433.93	2515.12	2530.14	2493.07	2.08	ppb
Molybdenum	95-1	2446.74	2534.01	2540.14	2506.96	2.08	ppb
Molybdenum	96-1	2474.29	2519.01	2572.91	2522.07	1.96	ppb
Molybdenum	97-1	2442.34	2524.53	2503.00	2489.96	1.71	ppb
Molybdenum	98-1	2464.88	2507.62	2525.28	2499.26	1.24	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	249.94	252.58	252.19	251.57	0.57	ppb
Phosphorus	31-2	5113.45	5146.32	5106.37	5122.05	0.42	ppb
Potassium	39-2	12406.95	12458.15	12504.91	12456.67	0.39	ppb
Rhodium	103-1				92		%
Rhodium	103-2				91		%
Scandium	45-1				93		%
Scandium	45-2				88		%
Selenium	82-1	253.81	259.26	260.99	258.02	1.45	ppb
Selenium	77-2	248.17	253.83	256.82	252.94	1.74	ppb
Selenium	78-2	256.09	256.55	261.60	258.08	1.18	ppb
Silicon	28-1	253.24	263.08	260.05	258.79	1.95	ppb
Silver	107-1	267.41	267.80	268.46	267.89	0.20	ppb
Silver	109-1	266.24	266.43	269.51	267.39	0.69	ppb
Sodium	23-2	25054.55	25023.90	25261.86	25113.44	0.52	ppb
Strontium	86-1	6056.67	6168.84	6173.94	6133.15	1.08	ppb
Strontium	88-1	6131.36	6279.26	6309.16	6239.93	1.53	ppb
Sulfur	34-1	4839.11	5046.80	4958.91	4948.27	2.11	ppb
Terbium	159-1				99		%
Terbium	159-2				99		%
Thallium	203-1	252.67	256.64	252.15	253.82	0.97	ppb
Thallium	205-1	248.90	252.07	250.41	250.46	0.63	ppb
Tin	118-1	264.51	260.13	261.69	262.11	0.85	ppb
Titanium	47-1	2433.37	2589.37	2538.22	2520.32	3.16	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

S05

Instrumnet Name :

P7

Client Sample ID :

S05

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 16:24:01

DataFile Name :

009CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	239.69	244.00	243.55	242.42	0.98	ppb
Vanadium	51-2	247.89	250.52	251.54	249.98	0.75	ppb
Yttrium	89-1				93		%
Yttrium	89-2				91		%
Zinc	66-2	2562.92	2626.27	2562.83	2584.00	1.42	ppb
Zirconium	90-1	244.34	246.42	249.01	246.59	0.95	ppb
Zirconium	91-1	239.20	248.58	246.69	244.82	2.03	ppb

LB Number :	LB134060	Operator :	Jaswal
Lab Sample ID :	S06	Instrumnet Name :	P7
Client Sample ID :	S06	Dilution Factor :	1
Date & Time Acquired :	2024-12-21 16:26:49	DataFile Name :	010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	9804.77	9776.07	9727.16	9769.33	0.40	ppb
Antimony	121-1	498.16	507.29	504.61	503.35	0.93	ppb
Arsenic	75-2	498.86	487.92	501.14	495.97	1.42	ppb
Barium	135-1	2468.85	2492.49	2468.58	2476.64	0.55	ppb
Barium	137-1	2462.88	2497.40	2497.13	2485.81	0.80	ppb
Beryllium	9-1	496.88	505.62	503.01	501.83	0.89	ppb
Bismuth	209-1				102		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	510.05	512.48	513.33	511.95	0.33	ppb
Cadmium	106-1	504.83	509.37	513.79	509.33	0.88	ppb
Cadmium	111-1	486.05	493.49	497.41	492.32	1.17	ppb
Calcium	43-1	50759.92	51544.38	51277.89	51194.06	0.78	ppb
Calcium	44-1	50406.25	51396.35	50686.12	50829.57	1.00	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	504.44	504.81	505.95	505.07	0.16	ppb
Cobalt	59-2	509.10	505.32	507.02	507.14	0.37	ppb
Copper	63-2	5004.66	5079.88	5041.61	5042.05	0.75	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				99		%
Holmium	165-2				98		%
Indium	115-1				89		%
Indium	115-2				89		%
Iron	56-2	26342.83	26266.94	26040.40	26216.72	0.60	ppb
Iron	57-2	25760.01	26073.89	25703.49	25845.80	0.77	ppb
Iron	54-2	26371.52	26166.08	26391.80	26309.80	0.47	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P7
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:26:49 DataFile Name : 010CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2464.03	2460.68	2499.66	2474.79	0.87	ppb
Lead	207-1	2469.77	2490.57	2499.96	2486.77	0.62	ppb
Lead	208-1	2455.70	2485.67	2513.15	2484.84	1.16	ppb
Lithium	6-1				111		%
Magnesium	24-2	48060.65	47342.95	47976.76	47793.45	0.82	ppb
Manganese	55-2	5060.63	5121.42	4996.73	5059.60	1.23	ppb
Molybdenum	94-1	4908.92	5129.58	4957.50	4998.66	2.32	ppb
Molybdenum	95-1	4900.67	5107.93	4947.67	4985.42	2.18	ppb
Molybdenum	96-1	4901.12	5097.98	4988.86	4995.99	1.97	ppb
Molybdenum	97-1	4912.48	5116.87	4997.85	5009.07	2.05	ppb
Molybdenum	98-1	4889.84	5116.72	4954.14	4986.90	2.34	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	491.22	489.12	487.48	489.27	0.38	ppb
Phosphorus	31-2	10116.69	10137.35	10093.17	10115.74	0.22	ppb
Potassium	39-2	24751.47	24714.51	24643.77	24703.25	0.22	ppb
Rhodium	103-1				88		%
Rhodium	103-2				87		%
Scandium	45-1				88		%
Scandium	45-2				85		%
Selenium	82-1	499.22	513.23	510.18	507.54	1.45	ppb
Selenium	77-2	508.46	492.58	507.78	502.94	1.78	ppb
Selenium	78-2	508.12	489.66	514.96	504.25	2.60	ppb
Silicon	28-1	496.77	499.86	499.89	498.84	0.36	ppb
Silver	107-1	514.41	509.59	513.16	512.39	0.49	ppb
Silver	109-1	510.54	508.60	510.40	509.84	0.21	ppb
Sodium	23-2	49845.58	49646.18	50028.58	49840.11	0.38	ppb
Strontium	86-1	12251.62	12817.36	12730.05	12599.68	2.42	ppb
Strontium	88-1	12086.28	12847.89	12474.30	12469.49	3.05	ppb
Sulfur	34-1	9838.24	10084.62	9992.84	9971.90	1.25	ppb
Terbium	159-1				99		%
Terbium	159-2				97		%
Thallium	203-1	500.40	494.46	500.45	498.44	0.69	ppb
Thallium	205-1	489.52	494.96	495.90	493.46	0.70	ppb
Tin	118-1	502.90	509.43	498.35	503.56	1.11	ppb
Titanium	47-1	4975.61	5073.96	5050.61	5033.40	1.02	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P7
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:26:49 DataFile Name : 010CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	484.44	489.88	495.34	489.89	1.11	ppb
Vanadium	51-2	505.43	498.23	500.01	501.23	0.75	ppb
Yttrium	89-1				90		%
Yttrium	89-2				89		%
Zinc	66-2	5034.96	5132.91	5106.63	5091.50	1.00	ppb
Zirconium	90-1	487.13	513.93	496.27	499.11	2.73	ppb
Zirconium	91-1	483.88	512.83	484.47	493.73	3.35	ppb

LB Number :	LB134060	Operator :	Jaswal
Lab Sample ID :	S07	Instrumnet Name :	P7
Client Sample ID :	S07	Dilution Factor :	1
Date & Time Acquired :	2024-12-21 16:29:33	DataFile Name :	011CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	19150.09	19623.73	19596.59	19456.81	1.37	ppb
Antimony	121-1	987.83	992.60	1010.27	996.90	1.19	ppb
Arsenic	75-2	991.97	1004.22	1009.02	1001.74	0.88	ppb
Barium	135-1	4962.44	4969.50	5087.21	5006.38	1.40	ppb
Barium	137-1	4971.87	4963.64	5067.42	5000.98	1.15	ppb
Beryllium	9-1	985.08	990.80	1014.81	996.90	1.58	ppb
Bismuth	209-1				100		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	982.06	984.10	1003.69	989.95	1.21	ppb
Cadmium	106-1	990.20	978.42	1003.04	990.55	1.24	ppb
Cadmium	111-1	992.38	997.82	1018.17	1002.79	1.36	ppb
Calcium	43-1	99422.47	100648.91	102663.06	100911.48	1.62	ppb
Calcium	44-1	100445.96	101360.87	102857.58	101554.80	1.20	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	998.64	1001.21	995.78	998.54	0.27	ppb
Cobalt	59-2	997.84	998.33	991.51	995.89	0.38	ppb
Copper	63-2	9985.02	10072.51	9845.60	9967.71	1.15	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				99		%
Holmium	165-2				99		%
Indium	115-1				87		%
Indium	115-2				86		%
Iron	56-2	51658.72	51716.21	51269.05	51548.00	0.47	ppb
Iron	57-2	51514.38	51784.92	50850.47	51383.26	0.94	ppb
Iron	54-2	51595.42	51696.55	52214.44	51835.47	0.64	ppb
Krypton	83-1						cps

LB Number :LB134060Operator :Jaswal

Lab Sample ID :S07Instrumnet Name :P7

Client Sample ID :S07Dilution Factor :1

Date & Time Acquired :2024-12-21 16:29:33DataFile Name :011CAL.S.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	4902.23	5113.24	5039.46	5018.31	2.13	ppb
Lead	207-1	4956.24	5035.08	5033.59	5008.30	0.90	ppb
Lead	208-1	4943.49	5046.55	5043.95	5011.33	1.17	ppb
Lithium	6-1				111		%
Magnesium	24-2	94097.77	94452.02	94806.73	94452.18	0.38	ppb
Manganese	55-2	9937.93	10019.36	9956.56	9971.28	0.43	ppb
Molybdenum	94-1	9745.41	9968.45	10333.72	10015.86	2.97	ppb
Molybdenum	95-1	9804.17	9960.52	10287.79	10017.49	2.46	ppb
Molybdenum	96-1	9869.39	9972.43	10188.25	10010.02	1.63	ppb
Molybdenum	97-1	9798.36	10045.85	10189.92	10011.38	1.98	ppb
Molybdenum	98-1	9832.52	10039.52	10188.58	10020.21	1.78	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	997.77	1024.35	995.88	1006.00	1.58	ppb
Phosphorus	31-2	19895.87	19992.01	19900.32	19929.40	0.27	ppb
Potassium	39-2	48740.52	49342.28	48756.62	48946.47	0.70	ppb
Rhodium	103-1				85		%
Rhodium	103-2				86		%
Scandium	45-1				87		%
Scandium	45-2				85		%
Selenium	82-1	979.72	991.67	1013.09	994.82	1.70	ppb
Selenium	77-2	979.93	1018.07	997.49	998.50	1.91	ppb
Selenium	78-2	984.87	1001.98	1001.55	996.13	0.98	ppb
Silicon	28-1	991.70	993.51	1005.67	996.96	0.76	ppb
Silver	107-1	986.32	982.27	998.19	988.93	0.84	ppb
Silver	109-1	981.73	980.85	1007.71	990.10	1.54	ppb
Sodium	23-2	98301.73	99074.61	99132.14	98836.16	0.47	ppb
Strontium	86-1	24345.04	25153.50	25561.74	25020.09	2.47	ppb
Strontium	88-1	24519.10	25173.95	25443.49	25045.51	1.90	ppb
Sulfur	34-1	19673.61	20130.50	20343.54	20049.22	1.71	ppb
Terbium	159-1				99		%
Terbium	159-2				98		%
Thallium	203-1	985.50	1006.38	1015.16	1002.35	1.52	ppb
Thallium	205-1	997.26	1012.86	1003.76	1004.63	0.78	ppb
Tin	118-1	988.71	992.65	1006.82	996.06	0.96	ppb
Titanium	47-1	9816.02	10029.80	10122.94	9989.59	1.58	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

S07

Instrumnet Name :

P7

Client Sample ID :

S07

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 16:29:33

DataFile Name :

011CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	993.16	1028.92	1004.78	1008.95	1.81	ppb
Vanadium	51-2	992.82	1005.47	1003.71	1000.67	0.68	ppb
Yttrium	89-1				89		%
Yttrium	89-2				88		%
Zinc	66-2	9806.76	10048.67	9984.88	9946.77	1.26	ppb
Zirconium	90-1	978.05	1004.79	1025.11	1002.65	2.35	ppb
Zirconium	91-1	977.41	1008.91	1031.90	1006.08	2.72	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

S08

Instrumnet Name :

P7

Client Sample ID :

S08

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 16:32:20

DataFile Name :

012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	100102.60	100336.18	99987.47	100142.08	0.18	ppb
Antimony	121-1	0.58	0.58	0.54	0.57	4.14	ppb
Arsenic	75-2	0.64	0.64	0.58	0.62	5.82	ppb
Barium	135-1	2.58	2.54	2.27	2.46	6.95	ppb
Barium	137-1	2.47	2.50	2.41	2.46	1.85	ppb
Beryllium	9-1	0.35	0.29	0.27	0.31	14.45	ppb
Bismuth	209-1				87		%
Bismuth	209-2				85		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.54	0.49	0.52	0.52	4.71	ppb
Cadmium	106-1	0.45	0.11	0.09	0.22	92.19	ppb
Cadmium	111-1	0.30	0.24	0.21	0.25	18.29	ppb
Calcium	43-1	495269.61	502602.29	501058.44	499643.45	0.77	ppb
Calcium	44-1	496007.95	504012.48	498819.90	499613.45	0.81	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1.70	1.45	1.32	1.49	13.08	ppb
Cobalt	59-2	2.63	2.67	2.67	2.66	0.86	ppb
Copper	63-2	2.01	1.84	1.67	1.84	9.37	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				94		%
Holmium	165-2				94		%
Indium	115-1				81		%
Indium	115-2				84		%
Iron	56-2	249026.85	250900.33	248691.07	249539.41	0.48	ppb
Iron	57-2	249160.15	250132.42	249560.91	249617.82	0.20	ppb
Iron	54-2	248883.37	250609.41	248894.51	249462.43	0.40	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P7
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:32:20 DataFile Name : 012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.59	1.52	1.38	1.50	7.29	ppb
Lead	207-1	1.61	1.52	1.41	1.51	6.67	ppb
Lead	208-1	1.59	1.50	1.39	1.49	6.76	ppb
Lithium	6-1				102		%
Magnesium	24-2	502918.52	497918.90	503407.67	501415.03	0.61	ppb
Manganese	55-2	4.82	4.68	4.45	4.65	3.96	ppb
Molybdenum	94-1	3.44	3.18	2.84	3.15	9.63	ppb
Molybdenum	95-1	2.53	2.38	2.04	2.32	10.93	ppb
Molybdenum	96-1	3.95	3.90	3.58	3.81	5.22	ppb
Molybdenum	97-1	2.52	2.32	2.04	2.29	10.44	ppb
Molybdenum	98-1	2.43	2.28	1.97	2.23	10.55	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	3.35	3.44	3.41	3.40	1.43	ppb
Phosphorus	31-2	-8.33	-10.96	-6.93	-8.74		ppb
Potassium	39-2	248800.18	250420.29	251541.64	250254.04	0.55	ppb
Rhodium	103-1				78		%
Rhodium	103-2				79		%
Scandium	45-1				86		%
Scandium	45-2				86		%
Selenium	82-1	1.29	1.05	0.69	1.01	29.89	ppb
Selenium	77-2	0.47	0.30	0.13	0.30	57.65	ppb
Selenium	78-2	0.61	-0.07	0.96	0.50	104.94	ppb
Silicon	28-1	1.49	2.19	1.50	1.73	23.27	ppb
Silver	107-1	0.25	0.24	0.21	0.23	7.97	ppb
Silver	109-1	0.26	0.26	0.21	0.24	10.37	ppb
Sodium	23-2	500980.85	499456.15	500376.29	500271.10	0.15	ppb
Strontium	86-1	73.81	75.50	70.53	73.28	3.44	ppb
Strontium	88-1	75.19	75.52	73.42	74.71	1.51	ppb
Sulfur	34-1	-502.45	-332.24	-264.11	-366.27		ppb
Terbium	159-1				94		%
Terbium	159-2				93		%
Thallium	203-1	0.22	0.18	0.16	0.19	16.19	ppb
Thallium	205-1	0.21	0.18	0.15	0.18	16.06	ppb
Tin	118-1	0.35	0.34	0.31	0.33	7.19	ppb
Titanium	47-1	2.35	2.24	1.80	2.13	13.64	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P7
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:32:20 DataFile Name : 012CALS.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.20	0.18	0.14	0.17	16.14	ppb
Vanadium	51-2	0.23	0.23	0.20	0.22	8.64	ppb
Yttrium	89-1				86		%
Yttrium	89-2				87		%
Zinc	66-2	7.62	7.63	7.46	7.57	1.24	ppb
Zirconium	90-1	0.70	0.68	0.65	0.68	3.43	ppb
Zirconium	91-1	0.71	0.73	0.67	0.70	4.41	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :ICV006Instrumnet Name :P7

Client Sample ID :ICV006Dilution Factor :1

Date & Time Acquired :2024-12-21 17:01:52DataFile Name :017ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	480.48	492.61	485.38	486.16	1.26	ppb
Antimony	121-1	215.16	215.61	215.55	215.44	0.11	ppb
Arsenic	75-2	217.27	218.49	214.56	216.77	0.93	ppb
Barium	135-1	101.13	101.62	100.44	101.06	0.59	ppb
Barium	137-1	101.63	101.65	102.31	101.86	0.38	ppb
Beryllium	9-1	108.69	108.84	107.54	108.36	0.66	ppb
Bismuth	209-1				103		%
Bismuth	209-2				102		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	101.19	99.45	100.69	100.44	0.89	ppb
Cadmium	106-1	97.70	94.69	96.34	96.24	1.57	ppb
Cadmium	111-1	94.12	94.46	94.54	94.37	0.24	ppb
Calcium	43-1	2057.13	2076.29	2107.48	2080.30	1.22	ppb
Calcium	44-1	2063.57	2086.18	2104.66	2084.80	0.99	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	103.99	105.91	104.59	104.83	0.94	ppb
Cobalt	59-2	102.79	105.49	104.15	104.14	1.30	ppb
Copper	63-2	97.37	98.22	97.90	97.83	0.44	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				100		%
Indium	115-1				95		%
Indium	115-2				98		%
Iron	56-2	2084.72	2122.04	2124.22	2110.32	1.05	ppb
Iron	57-2	2101.27	2135.96	2127.01	2121.41	0.85	ppb
Iron	54-2	2198.70	2223.59	2220.55	2214.28	0.61	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICV006 Instrumnet Name : P7
Client Sample ID : ICV006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:01:52 DataFile Name : 017ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	207.62	210.93	210.26	209.61	0.83	ppb
Lead	207-1	180.87	183.64	187.44	183.98	1.79	ppb
Lead	208-1	198.23	200.85	203.79	200.96	1.38	ppb
Lithium	6-1				113		%
Magnesium	24-2	1132.44	1155.35	1147.10	1144.96	1.01	ppb
Manganese	55-2	100.97	102.67	102.52	102.06	0.92	ppb
Molybdenum	94-1	0.04	0.03	0.06	0.04	25.78	ppb
Molybdenum	95-1	0.02	0.02	0.02	0.02	3.24	ppb
Molybdenum	96-1	0.05	0.04	0.03	0.04	26.10	ppb
Molybdenum	97-1	0.02	0.02	0.03	0.02	25.90	ppb
Molybdenum	98-1	0.02	0.01	0.02	0.02	23.25	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	105.14	107.11	105.37	105.87	1.02	ppb
Phosphorus	31-2	-15.35	-15.89	-15.23	-15.49		ppb
Potassium	39-2	1964.08	1954.14	1997.92	1972.05	1.16	ppb
Rhodium	103-1				96		%
Rhodium	103-2				96		%
Scandium	45-1				96		%
Scandium	45-2				95		%
Selenium	82-1	218.78	220.40	220.89	220.03	0.50	ppb
Selenium	77-2	216.50	216.44	212.94	215.29	0.95	ppb
Selenium	78-2	227.58	224.97	233.11	228.55	1.82	ppb
Silicon	28-1	-7.11	-6.60	-6.31	-6.67		ppb
Silver	107-1	50.62	50.84	51.18	50.88	0.55	ppb
Silver	109-1	50.74	50.62	51.32	50.89	0.73	ppb
Sodium	23-2	2001.19	2003.47	2008.36	2004.34	0.18	ppb
Strontium	86-1	5.58	6.22	6.19	6.00	6.06	ppb
Strontium	88-1	6.02	6.09	6.05	6.05	0.56	ppb
Sulfur	34-1	-250.56	-273.86	-201.86	-242.09		ppb
Terbium	159-1				100		%
Terbium	159-2				99		%
Thallium	203-1	202.74	211.95	210.14	208.28	2.34	ppb
Thallium	205-1	201.70	204.93	206.49	204.37	1.19	ppb
Tin	118-1	0.01	-0.01	-0.01	0.00		ppb
Titanium	47-1	0.01	0.02	0.02	0.02	43.73	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICV006 Instrumnet Name : P7
Client Sample ID : ICV006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:01:52 DataFile Name : 017ICV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	82.68	ppb
Vanadium	51-2	100.14	101.94	101.35	101.14	0.91	ppb
Yttrium	89-1				95		%
Yttrium	89-2				95		%
Zinc	66-2	200.82	204.91	201.73	202.48	1.06	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	11.01	ppb
Zirconium	91-1	0.07	0.06	0.06	0.07	4.39	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :ICB006Instrumnet Name :P7

Client Sample ID :ICB006Dilution Factor :1

Date & Time Acquired :2024-12-21 17:08:20DataFile Name :019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.03	0.08	0.09	0.07	45.58	ppb
Antimony	121-1	0.03	0.03	0.04	0.03	12.04	ppb
Arsenic	75-2	0.00	-0.01	0.00	0.00		ppb
Barium	135-1	0.01	0.00	0.00	0.00	74.41	ppb
Barium	137-1	0.00	0.01	0.01	0.01	83.56	ppb
Beryllium	9-1	0.04	0.03	0.04	0.03	17.96	ppb
Bismuth	209-1				103		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	-0.02	-0.02	-0.03	-0.02		ppb
Cadmium	106-1	0.36	0.09	-0.27	0.06	525.93	ppb
Cadmium	111-1	0.03	0.01	0.00	0.01	143.32	ppb
Calcium	43-1	-2.48	-1.65	-2.77	-2.30		ppb
Calcium	44-1	-2.04	-1.45	-0.75	-1.42		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	-0.01	-0.01	0.01	0.00		ppb
Cobalt	59-2	0.00	-0.01	-0.01	0.00		ppb
Copper	63-2	0.01	0.02	0.02	0.01	41.06	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				100		%
Holmium	165-2				101		%
Indium	115-1				96		%
Indium	115-2				98		%
Iron	56-2	-0.11	-0.11	-0.18	-0.14		ppb
Iron	57-2	-1.32	-2.17	-1.21	-1.57		ppb
Iron	54-2	0.20	0.05	0.37	0.21	77.28	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICB006 Instrumnet Name : P7
Client Sample ID : ICB006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:08:20 DataFile Name : 019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.02	0.02	0.02	0.02	17.91	ppb
Lead	207-1	0.02	0.03	0.02	0.02	37.60	ppb
Lead	208-1	0.02	0.02	0.01	0.02	22.78	ppb
Lithium	6-1				112		%
Magnesium	24-2	0.18	0.24	0.28	0.23	20.93	ppb
Manganese	55-2	-0.01	-0.01	0.00	0.00		ppb
Molybdenum	94-1	0.01	-0.01	0.00	0.00	1980.17	ppb
Molybdenum	95-1	0.00	0.00	0.00	0.00	109.74	ppb
Molybdenum	96-1	-0.01	-0.01	0.00	0.00		ppb
Molybdenum	97-1	0.01	0.01	0.00	0.01	88.29	ppb
Molybdenum	98-1	0.00	0.00	0.00	0.00		ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.02	0.01	0.05	0.03	82.54	ppb
Phosphorus	31-2	-15.86	-14.36	-17.74	-15.99		ppb
Potassium	39-2	-6.48	-5.38	-4.94	-5.60		ppb
Rhodium	103-1				96		%
Rhodium	103-2				98		%
Scandium	45-1				96		%
Scandium	45-2				96		%
Selenium	82-1	-0.14	0.18	-0.14	-0.04		ppb
Selenium	77-2	-0.05	-0.05	-0.05	-0.05		ppb
Selenium	78-2	1.05	0.91	0.88	0.95	9.40	ppb
Silicon	28-1	-6.93	-6.61	-5.72	-6.42		ppb
Silver	107-1	0.01	0.00	0.01	0.01	23.17	ppb
Silver	109-1	0.01	0.01	0.01	0.01	12.62	ppb
Sodium	23-2	6.20	7.08	6.04	6.44	8.71	ppb
Strontium	86-1	-0.23	-0.44	-0.78	-0.48		ppb
Strontium	88-1	-0.02	0.01	0.00	0.00		ppb
Sulfur	34-1	-287.44	-241.18	-113.03	-213.88		ppb
Terbium	159-1				100		%
Terbium	159-2				101		%
Thallium	203-1	0.01	0.01	0.01	0.01	13.95	ppb
Thallium	205-1	0.02	0.02	0.02	0.02	6.14	ppb
Tin	118-1	0.01	0.00	-0.03	-0.01		ppb
Titanium	47-1	0.00	0.02	0.02	0.01	87.60	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

ICB006

Instrumnet Name :

P7

Client Sample ID :

ICB006

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:08:20

DataFile Name :

019CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	619.67	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	71.32	ppb
Yttrium	89-1				96		%
Yttrium	89-2				97		%
Zinc	66-2	0.04	0.11	0.04	0.06	59.16	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00		ppb
Zirconium	91-1	0.00	0.00	0.00	0.00	321.25	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

ICSA006

Instrumnet Name :

P7

Client Sample ID :

ICSA006

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:11:36

DataFile Name :

020ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	92408.30	92213.69	91109.32	91910.44	0.76	ppb
Antimony	121-1	1.12	1.08	1.14	1.11	2.54	ppb
Arsenic	75-2	0.34	0.27	0.32	0.31	10.68	ppb
Barium	135-1	1.38	1.40	1.42	1.40	1.26	ppb
Barium	137-1	1.44	1.39	1.43	1.42	1.64	ppb
Beryllium	9-1	0.32	0.32	0.27	0.30	7.99	ppb
Bismuth	209-1				99		%
Bismuth	209-2				97		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	9.04	9.07	7.79	8.63	8.43	ppb
Cadmium	106-1	-0.20	-0.53	0.00	-0.24		ppb
Cadmium	111-1	0.34	0.28	0.36	0.33	12.59	ppb
Calcium	43-1	100559.78	102335.79	103126.67	102007.41	1.29	ppb
Calcium	44-1	101760.78	102794.21	102323.66	102292.88	0.51	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	20.50	20.67	20.60	20.59	0.41	ppb
Cobalt	59-2	1.25	1.24	1.27	1.25	1.45	ppb
Copper	63-2	7.07	7.08	7.17	7.11	0.81	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				101		%
Indium	115-1				90		%
Indium	115-2				91		%
Iron	56-2	106319.35	104485.39	104881.02	105228.59	0.92	ppb
Iron	57-2	104153.27	103304.83	104757.48	104071.86	0.70	ppb
Iron	54-2	105347.94	105773.23	106747.09	105956.08	0.68	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICSA006 Instrumnet Name : P7
Client Sample ID : ICSA006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:11:36 DataFile Name : 020ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	5.25	5.07	4.86	5.06	3.87	ppb
Lead	207-1	4.80	4.63	4.51	4.64	3.08	ppb
Lead	208-1	4.93	4.73	4.62	4.76	3.35	ppb
Lithium	6-1				109		%
Magnesium	24-2	94876.96	94154.83	94607.47	94546.42	0.39	ppb
Manganese	55-2	7.73	7.97	8.07	7.93	2.23	ppb
Molybdenum	94-1	1627.30	1648.24	1626.12	1633.89	0.76	ppb
Molybdenum	95-1	2024.21	2004.69	1970.34	1999.75	1.36	ppb
Molybdenum	96-1	1981.53	1946.26	1952.93	1960.24	0.96	ppb
Molybdenum	97-1	1987.27	1978.45	1971.84	1979.18	0.39	ppb
Molybdenum	98-1	2001.30	1981.37	1980.81	1987.83	0.59	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	5.38	5.34	5.43	5.38	0.84	ppb
Phosphorus	31-2	100143.92	101320.07	100473.43	100645.81	0.60	ppb
Potassium	39-2	98338.79	98081.25	97629.92	98016.65	0.37	ppb
Rhodium	103-1				87		%
Rhodium	103-2				88		%
Scandium	45-1				90		%
Scandium	45-2				88		%
Selenium	82-1	0.40	0.41	0.40	0.40	2.22	ppb
Selenium	77-2	0.12	-0.05	0.28	0.12	144.42	ppb
Selenium	78-2	-0.21	0.16	1.07	0.34	193.78	ppb
Silicon	28-1	-1.55	-2.38	-1.32	-1.75		ppb
Silver	107-1	0.05	0.05	0.03	0.05	22.76	ppb
Silver	109-1	0.06	0.04	0.03	0.05	34.99	ppb
Sodium	23-2	99529.99	99044.91	98469.59	99014.83	0.54	ppb
Strontium	86-1	865.23	854.44	856.54	858.74	0.67	ppb
Strontium	88-1	859.95	844.59	848.23	850.92	0.94	ppb
Sulfur	34-1	103674.15	103545.41	104849.70	104023.09	0.69	ppb
Terbium	159-1				100		%
Terbium	159-2				100		%
Thallium	203-1	0.12	0.13	0.15	0.14	11.98	ppb
Thallium	205-1	0.12	0.15	0.15	0.14	14.32	ppb
Tin	118-1	0.17	0.17	0.17	0.17	2.91	ppb
Titanium	47-1	2066.94	2082.88	2089.00	2079.61	0.55	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

ICSA006

Instrumnet Name :

P7

Client Sample ID :

ICSA006

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:11:36

DataFile Name :

020ICSA.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.01	0.02	0.02	0.02	9.53	ppb
Vanadium	51-2	0.20	0.20	0.21	0.20	3.24	ppb
Yttrium	89-1				91		%
Yttrium	89-2				91		%
Zinc	66-2	10.85	10.60	11.25	10.90	2.98	ppb
Zirconium	90-1	0.03	0.04	0.04	0.04	12.14	ppb
Zirconium	91-1	0.04	0.04	0.05	0.04	17.18	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICSAB006 Instrumnet Name : P7
Client Sample ID : ICSAB006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:20:33 DataFile Name : 023ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	91570.13	90950.21	89767.72	90762.68	1.01	ppb
Antimony	121-1	20.95	21.49	21.07	21.17	1.32	ppb
Arsenic	75-2	20.24	21.05	21.72	21.00	3.51	ppb
Barium	135-1	20.97	21.56	21.32	21.29	1.38	ppb
Barium	137-1	21.49	21.93	21.51	21.64	1.16	ppb
Beryllium	9-1	21.54	21.36	21.25	21.38	0.68	ppb
Bismuth	209-1				101		%
Bismuth	209-2				98		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	27.42	26.32	26.26	26.67	2.45	ppb
Cadmium	106-1	16.92	16.20	15.89	16.34	3.21	ppb
Cadmium	111-1	17.17	17.53	17.37	17.36	1.06	ppb
Calcium	43-1	100081.13	103626.94	103085.10	102264.39	1.87	ppb
Calcium	44-1	99798.70	101650.91	102580.70	101343.43	1.40	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	40.57	40.80	40.79	40.72	0.31	ppb
Cobalt	59-2	21.51	21.51	21.30	21.44	0.57	ppb
Copper	63-2	26.44	26.47	26.20	26.37	0.56	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				102		%
Indium	115-1				93		%
Indium	115-2				92		%
Iron	56-2	106120.14	104943.35	104353.71	105139.07	0.86	ppb
Iron	57-2	103854.31	103077.05	103193.89	103375.08	0.41	ppb
Iron	54-2	105829.57	104578.05	103105.87	104504.50	1.30	ppb
Krypton	83-1						cps

LB Number :LB134060Operator :Jaswal

Lab Sample ID :ICSAB006Instrumnet Name :P7

Client Sample ID :ICSAB006Dilution Factor :1

Date & Time Acquired :2024-12-21 17:20:33DataFile Name :023ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	24.59	24.60	24.81	24.67	0.50	ppb
Lead	207-1	23.49	23.31	23.82	23.54	1.11	ppb
Lead	208-1	23.60	23.76	23.90	23.75	0.63	ppb
Lithium	6-1				106		%
Magnesium	24-2	94525.58	93975.08	91851.78	93450.82	1.51	ppb
Manganese	55-2	28.78	28.59	28.16	28.51	1.12	ppb
Molybdenum	94-1	1588.89	1616.37	1595.24	1600.17	0.90	ppb
Molybdenum	95-1	1953.90	1938.11	1949.91	1947.31	0.42	ppb
Molybdenum	96-1	1965.48	1918.46	1919.02	1934.32	1.39	ppb
Molybdenum	97-1	1951.39	1954.38	1933.74	1946.50	0.57	ppb
Molybdenum	98-1	1987.39	1969.51	1947.13	1968.01	1.02	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	25.39	25.56	25.33	25.43	0.46	ppb
Phosphorus	31-2	99691.47	101638.63	99082.29	100137.46	1.33	ppb
Potassium	39-2	97677.07	96608.75	97268.48	97184.77	0.55	ppb
Rhodium	103-1				89		%
Rhodium	103-2				91		%
Scandium	45-1				91		%
Scandium	45-2				89		%
Selenium	82-1	21.13	20.88	21.11	21.04	0.66	ppb
Selenium	77-2	21.36	16.94	19.86	19.39	11.59	ppb
Selenium	78-2	20.87	22.84	20.57	21.43	5.77	ppb
Silicon	28-1	1.41	2.40	2.23	2.01	26.33	ppb
Silver	107-1	18.96	19.15	18.85	18.99	0.81	ppb
Silver	109-1	18.85	19.33	18.87	19.02	1.42	ppb
Sodium	23-2	99240.88	98862.66	97394.28	98499.27	0.99	ppb
Strontium	86-1	844.24	855.31	846.68	848.74	0.69	ppb
Strontium	88-1	839.46	838.23	836.83	838.17	0.16	ppb
Sulfur	34-1	102211.69	103368.55	102022.99	102534.41	0.71	ppb
Terbium	159-1				103		%
Terbium	159-2				101		%
Thallium	203-1	19.73	19.89	19.97	19.87	0.62	ppb
Thallium	205-1	19.60	19.76	19.87	19.74	0.70	ppb
Tin	118-1	0.24	0.24	0.20	0.23	9.45	ppb
Titanium	47-1	2029.39	2034.72	2051.64	2038.58	0.57	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

ICSAB006

Instrumnet Name :

P7

Client Sample ID :

ICSAB006

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:20:33

DataFile Name :

023ICSB.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.09	0.08	0.08	0.09	10.27	ppb
Vanadium	51-2	20.66	20.65	20.47	20.60	0.52	ppb
Yttrium	89-1				95		%
Yttrium	89-2				93		%
Zinc	66-2	31.58	30.95	31.63	31.39	1.21	ppb
Zirconium	90-1	0.20	0.19	0.17	0.18	9.24	ppb
Zirconium	91-1	0.21	0.19	0.16	0.19	13.76	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :CCV037Instrumnet Name :P7

Client Sample ID :CCV037Dilution Factor :1

Date & Time Acquired :2024-12-21 17:23:36DataFile Name :024CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	49385.72	49413.30	50434.19	49744.40	1.20	ppb
Antimony	121-1	503.86	510.60	503.63	506.03	0.78	ppb
Arsenic	75-2	487.00	487.07	490.57	488.22	0.42	ppb
Barium	135-1	2533.33	2494.52	2509.76	2512.54	0.78	ppb
Barium	137-1	2550.60	2557.54	2503.84	2537.32	1.15	ppb
Beryllium	9-1	508.58	522.04	514.26	514.96	1.31	ppb
Bismuth	209-1				97		%
Bismuth	209-2				93		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	492.14	496.06	490.99	493.06	0.54	ppb
Cadmium	106-1	495.13	496.02	493.15	494.76	0.30	ppb
Cadmium	111-1	480.04	479.15	475.56	478.25	0.50	ppb
Calcium	43-1	248795.66	252018.65	253591.56	251468.62	0.97	ppb
Calcium	44-1	250751.96	251577.22	253752.07	252027.09	0.61	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	491.36	498.66	499.09	496.37	0.88	ppb
Cobalt	59-2	490.49	483.82	504.97	493.10	2.19	ppb
Copper	63-2	4673.85	4737.69	4806.69	4739.41	1.40	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				101		%
Holmium	165-2				100		%
Indium	115-1				89		%
Indium	115-2				88		%
Iron	56-2	127664.36	127715.96	128741.19	128040.51	0.47	ppb
Iron	57-2	125912.77	124445.78	129045.82	126468.12	1.86	ppb
Iron	54-2	126135.11	127597.91	130091.60	127941.54	1.56	ppb
Krypton	83-1						cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

CCV037

Instrumnet Name :

P7

Client Sample ID :

CCV037

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:23:36

DataFile Name :

024CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2573.71	2579.98	2571.31	2575.00	0.17	ppb
Lead	207-1	2572.97	2589.10	2533.96	2565.34	1.11	ppb
Lead	208-1	2562.72	2577.42	2540.08	2560.07	0.73	ppb
Lithium	6-1				101		%
Magnesium	24-2	236920.74	237333.18	241831.15	238695.03	1.14	ppb
Manganese	55-2	4879.15	4902.31	4989.38	4923.61	1.18	ppb
Molybdenum	94-1	4988.11	5065.96	5086.44	5046.84	1.03	ppb
Molybdenum	95-1	4942.12	5059.29	5093.26	5031.55	1.58	ppb
Molybdenum	96-1	4992.79	5094.26	5108.39	5065.14	1.24	ppb
Molybdenum	97-1	4955.34	5076.56	5032.58	5021.50	1.22	ppb
Molybdenum	98-1	4945.29	5016.45	5045.38	5002.38	1.03	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	459.32	456.50	469.15	461.66	1.44	ppb
Phosphorus	31-2	9769.15	9858.57	10071.10	9899.61	1.57	ppb
Potassium	39-2	124307.57	122991.78	125760.21	124353.19	1.11	ppb
Rhodium	103-1				86		%
Rhodium	103-2				86		%
Scandium	45-1				91		%
Scandium	45-2				89		%
Selenium	82-1	467.19	480.72	482.02	476.64	1.72	ppb
Selenium	77-2	471.33	454.67	470.38	465.46	2.01	ppb
Selenium	78-2	474.73	473.79	476.33	474.95	0.27	ppb
Silicon	28-1	199.34	201.67	203.87	201.63	1.12	ppb
Silver	107-1	494.28	490.14	496.54	493.65	0.66	ppb
Silver	109-1	483.58	492.17	491.24	489.00	0.96	ppb
Sodium	23-2	244743.72	243619.05	248517.77	245626.85	1.04	ppb
Strontium	86-1	12516.85	12700.18	12754.36	12657.13	0.98	ppb
Strontium	88-1	12484.84	12658.96	12689.33	12611.04	0.87	ppb
Sulfur	34-1	9260.85	9299.22	9378.27	9312.78	0.64	ppb
Terbium	159-1				100		%
Terbium	159-2				98		%
Thallium	203-1	523.28	522.11	520.32	521.90	0.29	ppb
Thallium	205-1	520.99	511.62	518.01	516.87	0.93	ppb
Tin	118-1	510.91	498.82	502.38	504.04	1.23	ppb
Titanium	47-1	4980.90	4948.66	4998.01	4975.86	0.50	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

CCV037

Instrumnet Name :

P7

Client Sample ID :

CCV037

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:23:36

DataFile Name :

024CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	517.09	522.33	518.66	519.36	0.52	ppb
Vanadium	51-2	507.94	501.18	511.53	506.88	1.04	ppb
Yttrium	89-1				93		%
Yttrium	89-2				91		%
Zinc	66-2	4668.83	4683.48	4840.19	4730.83	2.01	ppb
Zirconium	90-1	491.69	508.61	508.58	502.96	1.94	ppb
Zirconium	91-1	494.85	513.94	505.62	504.80	1.90	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

CCB037

Instrumnet Name :

P7

Client Sample ID :

CCB037

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:29:37

DataFile Name :

026CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.27	0.32	0.38	0.32	16.10	ppb
Antimony	121-1	0.06	0.06	0.05	0.06	6.52	ppb
Arsenic	75-2	0.00	0.01	0.00	0.00	257.85	ppb
Barium	135-1	0.02	0.01	0.01	0.01	41.32	ppb
Barium	137-1	0.02	0.01	0.01	0.01	30.43	ppb
Beryllium	9-1	0.05	0.02	0.03	0.03	46.67	ppb
Bismuth	209-1				106		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.03	0.01	0.00	0.01	105.14	ppb
Cadmium	106-1	-0.23	-0.10	-0.15	-0.16		ppb
Cadmium	111-1	0.00	0.01	0.00	0.00	6814.75	ppb
Calcium	43-1	-0.63	1.50	0.92	0.59	185.45	ppb
Calcium	44-1	0.92	0.54	-0.12	0.44	118.55	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.00	0.03	0.02	102.09	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	0.06	0.06	0.06	0.06	5.05	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				102		%
Indium	115-1				97		%
Indium	115-2				97		%
Iron	56-2	0.42	0.26	0.44	0.37	26.94	ppb
Iron	57-2	-0.37	-0.94	-0.88	-0.73		ppb
Iron	54-2	0.37	0.18	0.05	0.20	80.37	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB037 Instrumnet Name : P7
Client Sample ID : CCB037 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:29:37 DataFile Name : 026CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.08	0.07	0.08	0.08	8.88	ppb
Lead	207-1	0.08	0.08	0.08	0.08	5.24	ppb
Lead	208-1	0.08	0.07	0.07	0.07	1.78	ppb
Lithium	6-1				109		%
Magnesium	24-2	1.09	1.11	1.26	1.15	8.04	ppb
Manganese	55-2	0.04	0.03	0.03	0.03	23.06	ppb
Molybdenum	94-1	0.06	0.06	0.07	0.06	15.26	ppb
Molybdenum	95-1	0.07	0.06	0.05	0.06	14.53	ppb
Molybdenum	96-1	0.06	0.06	0.04	0.05	12.06	ppb
Molybdenum	97-1	0.06	0.04	0.04	0.05	17.94	ppb
Molybdenum	98-1	0.06	0.06	0.04	0.05	16.39	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.02	-0.01	0.01	0.01	199.57	ppb
Phosphorus	31-2	-14.95	-16.89	-17.43	-16.42		ppb
Potassium	39-2	-1.78	-2.24	-0.77	-1.60		ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				94		%
Scandium	45-2				92		%
Selenium	82-1	-0.02	0.04	-0.15	-0.05		ppb
Selenium	77-2	-0.05	-0.05	0.11	0.00	3697.03	ppb
Selenium	78-2	0.77	0.36	0.19	0.44	66.88	ppb
Silicon	28-1	-8.43	-7.60	-8.21	-8.08		ppb
Silver	107-1	0.02	0.02	0.01	0.01	14.89	ppb
Silver	109-1	0.02	0.02	0.02	0.02	9.21	ppb
Sodium	23-2	32.45	32.83	31.38	32.22	2.34	ppb
Strontium	86-1	-0.28	-0.23	-0.36	-0.29		ppb
Strontium	88-1	0.05	0.05	0.00	0.03	82.74	ppb
Sulfur	34-1	-495.45	-426.43	-437.38	-453.09		ppb
Terbium	159-1				103		%
Terbium	159-2				101		%
Thallium	203-1	0.07	0.06	0.06	0.07	8.94	ppb
Thallium	205-1	0.07	0.07	0.07	0.07	2.29	ppb
Tin	118-1	0.00	-0.01	0.00	0.00		ppb
Titanium	47-1	0.08	0.06	0.08	0.08	12.15	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB037 Instrumnet Name : P7
Client Sample ID : CCB037 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:29:37 DataFile Name : 026CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	31.57	ppb
Vanadium	51-2	0.01	0.00	0.00	0.00	59.26	ppb
Yttrium	89-1				97		%
Yttrium	89-2				95		%
Zinc	66-2	0.06	0.12	0.02	0.07	74.52	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	10.29	ppb
Zirconium	91-1	0.01	0.02	0.02	0.02	17.75	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :PB165675BLInstrumnet Name :P7

Client Sample ID :PBS675Dilution Factor :1

Date & Time Acquired :2024-12-21 17:32:56DataFile Name :027CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.30	0.32	0.50	0.37	29.52	ppb
Antimony	121-1	0.03	0.03	0.03	0.03	5.20	ppb
Arsenic	75-2	0.01	-0.01	0.00	0.00	2215.29	ppb
Barium	135-1	0.00	0.00	0.01	0.00	39.27	ppb
Barium	137-1	0.00	0.00	0.00	0.00	830.43	ppb
Beryllium	9-1	0.03	0.01	0.04	0.03	43.33	ppb
Bismuth	209-1				107		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.04	-0.05	-0.03	-0.01		ppb
Cadmium	106-1	-0.05	-0.47	-0.75	-0.42		ppb
Cadmium	111-1	0.00	-0.02	-0.03	-0.02		ppb
Calcium	43-1	-0.68	-1.01	-0.63	-0.77		ppb
Calcium	44-1	-0.29	-0.36	-0.35	-0.33		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.00	0.00	-0.01	0.00		ppb
Cobalt	59-2	-0.01	0.00	0.00	0.00		ppb
Copper	63-2	0.05	0.03	0.04	0.04	22.12	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				102		%
Indium	115-1				99		%
Indium	115-2				97		%
Iron	56-2	0.06	0.11	0.11	0.09	31.96	ppb
Iron	57-2	-1.16	-1.13	-0.96	-1.08		ppb
Iron	54-2	0.04	0.93	0.16	0.38	126.78	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BL Instrumnet Name : P7
Client Sample ID : PBS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:32:56 DataFile Name : 027CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.06	0.05	0.05	0.05	8.78	ppb
Lead	207-1	0.06	0.05	0.05	0.05	5.59	ppb
Lead	208-1	0.05	0.05	0.05	0.05	6.01	ppb
Lithium	6-1				108		%
Magnesium	24-2	0.92	0.99	0.83	0.91	8.39	ppb
Manganese	55-2	0.02	0.01	0.01	0.01	51.48	ppb
Molybdenum	94-1	0.02	0.02	0.04	0.03	32.07	ppb
Molybdenum	95-1	0.01	0.02	0.01	0.01	34.47	ppb
Molybdenum	96-1	0.02	0.02	0.02	0.02	11.36	ppb
Molybdenum	97-1	0.02	0.02	0.03	0.02	27.89	ppb
Molybdenum	98-1	0.02	0.01	0.02	0.02	27.04	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.01	-0.01	0.00	0.00		ppb
Phosphorus	31-2	-17.06	-18.48	-13.43	-16.32		ppb
Potassium	39-2	-2.08	-3.96	-3.34	-3.13		ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				96		%
Scandium	45-2				93		%
Selenium	82-1	0.14	0.02	-0.37	-0.07		ppb
Selenium	77-2	0.11	-0.05	-0.05	0.00	10189.99	ppb
Selenium	78-2	1.05	-0.16	0.31	0.40	154.00	ppb
Silicon	28-1	-8.13	-7.44	-7.02	-7.53		ppb
Silver	107-1	0.01	0.01	0.01	0.01	5.17	ppb
Silver	109-1	0.01	0.01	0.01	0.01	19.54	ppb
Sodium	23-2	21.58	20.22	18.87	20.22	6.71	ppb
Strontium	86-1	-0.33	-0.01	-0.31	-0.21		ppb
Strontium	88-1	-0.01	-0.01	0.04	0.01	383.18	ppb
Sulfur	34-1	-567.00	-434.28	-411.43	-470.90		ppb
Terbium	159-1				102		%
Terbium	159-2				101		%
Thallium	203-1	0.06	0.05	0.06	0.06	7.88	ppb
Thallium	205-1	0.06	0.06	0.06	0.06	2.57	ppb
Tin	118-1	-0.01	0.01	0.00	0.00		ppb
Titanium	47-1	0.02	0.06	0.01	0.03	75.97	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

PB165675BL

Instrumnet Name :

P7

Client Sample ID :

PBS675

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:32:56

DataFile Name :

027CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	190.45	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	91.88	ppb
Yttrium	89-1				97		%
Yttrium	89-2				96		%
Zinc	66-2	0.03	0.10	-0.01	0.04	138.18	ppb
Zirconium	90-1	0.00	0.00	0.01	0.00	49.94	ppb
Zirconium	91-1	0.01	0.01	0.01	0.01	28.78	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BS Instrumnet Name : P7
Client Sample ID : LCS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:36:12 DataFile Name : 028LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	42.38	40.92	40.99	41.43	1.99	ppb
Antimony	121-1	4.04	4.05	4.17	4.09	1.80	ppb
Arsenic	75-2	2.15	2.21	2.31	2.22	3.53	ppb
Barium	135-1	19.45	19.44	19.85	19.58	1.19	ppb
Barium	137-1	19.73	19.93	20.39	20.02	1.71	ppb
Beryllium	9-1	2.23	2.26	2.30	2.26	1.55	ppb
Bismuth	209-1				106		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.18	1.96	2.18	2.11	6.06	ppb
Cadmium	106-1	2.53	1.83	2.06	2.14	16.75	ppb
Cadmium	111-1	2.12	2.10	2.20	2.14	2.54	ppb
Calcium	43-1	1080.63	1076.46	1054.97	1070.69	1.29	ppb
Calcium	44-1	1075.34	1066.63	1071.90	1071.29	0.41	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.16	4.06	4.11	4.11	1.20	ppb
Cobalt	59-2	2.15	2.08	2.14	2.12	1.65	ppb
Copper	63-2	4.39	4.29	4.35	4.34	1.16	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				103		%
Indium	115-1				98		%
Indium	115-2				99		%
Iron	56-2	439.23	437.29	436.89	437.81	0.29	ppb
Iron	57-2	438.15	437.39	439.47	438.34	0.24	ppb
Iron	54-2	445.62	443.17	445.33	444.71	0.30	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BS Instrumnet Name : P7
Client Sample ID : LCS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:36:12 DataFile Name : 028LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.93	1.96	2.01	1.97	2.05	ppb
Lead	207-1	1.93	1.94	1.94	1.94	0.40	ppb
Lead	208-1	1.92	1.96	1.97	1.95	1.46	ppb
Lithium	6-1				106		%
Magnesium	24-2	966.57	960.64	972.82	966.68	0.63	ppb
Manganese	55-2	2.18	2.14	2.17	2.16	0.92	ppb
Molybdenum	94-1	11.62	11.62	11.91	11.72	1.43	ppb
Molybdenum	95-1	9.91	10.07	10.10	10.03	1.03	ppb
Molybdenum	96-1	10.05	10.17	10.21	10.14	0.79	ppb
Molybdenum	97-1	9.87	9.91	10.08	9.95	1.08	ppb
Molybdenum	98-1	9.93	9.95	10.07	9.98	0.77	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.15	1.97	2.09	2.07	4.27	ppb
Phosphorus	31-2	27.94	30.91	35.21	31.36	11.67	ppb
Potassium	39-2	1053.29	1051.34	1057.16	1053.93	0.28	ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				97		%
Scandium	45-2				95		%
Selenium	82-1	10.57	11.13	10.18	10.63	4.51	ppb
Selenium	77-2	14.36	10.89	11.03	12.09	16.24	ppb
Selenium	78-2	11.73	10.35	10.66	10.91	6.62	ppb
Silicon	28-1	0.98	1.16	0.87	1.00	14.77	ppb
Silver	107-1	2.04	2.06	2.18	2.09	3.58	ppb
Silver	109-1	2.03	2.06	2.12	2.07	2.37	ppb
Sodium	23-2	999.08	982.22	990.88	990.73	0.85	ppb
Strontium	86-1	50.69	47.90	52.39	50.33	4.51	ppb
Strontium	88-1	50.85	50.98	51.40	51.07	0.56	ppb
Sulfur	34-1	-378.46	-348.43	-393.66	-373.52		ppb
Terbium	159-1				103		%
Terbium	159-2				102		%
Thallium	203-1	1.96	1.92	1.93	1.93	1.08	ppb
Thallium	205-1	1.92	1.93	1.92	1.92	0.42	ppb
Tin	118-1	10.28	10.32	10.58	10.39	1.57	ppb
Titanium	47-1	2.53	2.42	2.57	2.50	3.17	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BS Instrumnet Name : P7
Client Sample ID : LCS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:36:12 DataFile Name : 028LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.74	1.78	1.76	1.76	1.06	ppb
Vanadium	51-2	10.61	10.52	10.51	10.54	0.52	ppb
Yttrium	89-1				97		%
Yttrium	89-2				96		%
Zinc	66-2	10.60	11.10	10.50	10.73	3.02	ppb
Zirconium	90-1	2.01	2.01	2.05	2.02	1.12	ppb
Zirconium	91-1	1.95	2.01	2.03	2.00	2.07	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :PB165800BLInstrumnet Name :P7

Client Sample ID :PBS800Dilution Factor :1

Date & Time Acquired :2024-12-21 17:39:29DataFile Name :029CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.27	0.45	0.22	0.31	39.39	ppb
Antimony	121-1	0.01	0.02	0.01	0.01	14.13	ppb
Arsenic	75-2	0.00	0.00	0.01	0.00	135.39	ppb
Barium	135-1	0.01	0.00	0.00	0.01	77.92	ppb
Barium	137-1	0.01	0.00	0.01	0.01	34.37	ppb
Beryllium	9-1	0.01	0.01	0.03	0.02	44.79	ppb
Bismuth	209-1				106		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.03	-0.02	0.00	0.00	595.83	ppb
Cadmium	106-1	-0.82	0.29	-0.78	-0.43		ppb
Cadmium	111-1	-0.05	0.03	-0.05	-0.02		ppb
Calcium	43-1	-0.30	1.46	-0.08	0.36	266.83	ppb
Calcium	44-1	0.51	0.77	0.36	0.55	37.77	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.01	0.00	0.02	0.01	117.74	ppb
Cobalt	59-2	0.00	0.00	0.00	0.00		ppb
Copper	63-2	0.04	0.03	0.03	0.03	8.98	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				102		%
Indium	115-1				98		%
Indium	115-2				98		%
Iron	56-2	0.14	0.12	0.05	0.10	43.26	ppb
Iron	57-2	-0.38	0.42	1.08	0.37	196.03	ppb
Iron	54-2	0.35	0.17	0.30	0.27	33.42	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165800BL Instrumnet Name : P7
Client Sample ID : PBS800 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:39:29 DataFile Name : 029CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.04	0.03	0.04	0.04	7.72	ppb
Lead	207-1	0.04	0.03	0.04	0.04	11.17	ppb
Lead	208-1	0.04	0.04	0.04	0.04	2.56	ppb
Lithium	6-1				106		%
Magnesium	24-2	1.34	0.99	1.03	1.12	17.12	ppb
Manganese	55-2	0.01	0.01	0.02	0.01	55.25	ppb
Molybdenum	94-1	0.03	0.02	0.02	0.02	21.61	ppb
Molybdenum	95-1	0.00	0.01	0.02	0.01	114.75	ppb
Molybdenum	96-1	0.00	0.01	0.00	0.01	58.38	ppb
Molybdenum	97-1	0.03	0.01	0.02	0.02	45.19	ppb
Molybdenum	98-1	0.01	0.01	0.01	0.01	25.33	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.00	-0.02	-0.01	-0.01		ppb
Phosphorus	31-2	-15.16	-18.72	-14.94	-16.27		ppb
Potassium	39-2	-2.74	-3.76	-2.59	-3.03		ppb
Rhodium	103-1				99		%
Rhodium	103-2				98		%
Scandium	45-1				96		%
Scandium	45-2				95		%
Selenium	82-1	-0.06	0.29	0.04	0.09	200.57	ppb
Selenium	77-2	0.11	-0.05	0.11	0.06	167.53	ppb
Selenium	78-2	1.58	0.42	0.33	0.77	90.08	ppb
Silicon	28-1	-8.20	-6.40	-6.60	-7.06		ppb
Silver	107-1	0.02	0.01	0.01	0.01	13.98	ppb
Silver	109-1	0.02	0.01	0.01	0.01	26.84	ppb
Sodium	23-2	13.02	12.32	12.11	12.48	3.82	ppb
Strontium	86-1	-0.07	-0.06	-0.29	-0.14		ppb
Strontium	88-1	0.15	0.18	0.12	0.15	19.41	ppb
Sulfur	34-1	-449.91	-335.90	-329.30	-371.70		ppb
Terbium	159-1				102		%
Terbium	159-2				100		%
Thallium	203-1	0.05	0.05	0.04	0.05	2.74	ppb
Thallium	205-1	0.05	0.05	0.04	0.05	4.90	ppb
Tin	118-1	-0.01	0.00	0.00	0.00		ppb
Titanium	47-1	0.02	0.03	0.01	0.02	41.94	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

PB165800BL

Instrumnet Name :

P7

Client Sample ID :

PBS800

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:39:29

DataFile Name :

029CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	52.42	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	200.15	ppb
Yttrium	89-1				99		%
Yttrium	89-2				96		%
Zinc	66-2	-0.04	0.03	0.04	0.01	398.82	ppb
Zirconium	90-1	0.01	0.00	0.00	0.00	74.36	ppb
Zirconium	91-1	0.01	0.01	0.00	0.01	66.18	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165800BS Instrumnet Name : P7
Client Sample ID : LCS800 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:42:46 DataFile Name : 030LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	41.13	41.29	40.91	41.11	0.46	ppb
Antimony	121-1	4.05	4.15	4.16	4.12	1.48	ppb
Arsenic	75-2	2.25	2.40	2.37	2.34	3.21	ppb
Barium	135-1	20.19	19.70	20.15	20.01	1.35	ppb
Barium	137-1	19.84	19.97	20.67	20.16	2.21	ppb
Beryllium	9-1	2.28	2.30	2.30	2.29	0.42	ppb
Bismuth	209-1				105		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.56	2.09	2.24	2.30	10.41	ppb
Cadmium	106-1	2.77	2.25	2.27	2.43	11.99	ppb
Cadmium	111-1	2.21	2.11	2.21	2.18	2.85	ppb
Calcium	43-1	1051.75	1069.53	1048.73	1056.67	1.06	ppb
Calcium	44-1	1065.69	1073.99	1069.85	1069.84	0.39	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.08	4.04	4.15	4.09	1.30	ppb
Cobalt	59-2	2.17	2.12	2.14	2.14	1.18	ppb
Copper	63-2	4.32	4.30	4.31	4.31	0.28	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				102		%
Indium	115-1				98		%
Indium	115-2				99		%
Iron	56-2	432.55	439.73	423.93	432.07	1.83	ppb
Iron	57-2	434.10	434.64	423.38	430.71	1.47	ppb
Iron	54-2	444.05	446.79	435.36	442.07	1.35	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165800BS Instrumnet Name : P7
Client Sample ID : LCS800 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:42:46 DataFile Name : 030LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.98	1.94	1.97	1.96	0.99	ppb
Lead	207-1	1.92	1.94	2.00	1.95	2.08	ppb
Lead	208-1	1.92	1.95	1.94	1.94	0.88	ppb
Lithium	6-1				104		%
Magnesium	24-2	959.44	968.89	943.90	957.41	1.32	ppb
Manganese	55-2	2.02	2.16	2.17	2.12	4.06	ppb
Molybdenum	94-1	11.63	11.73	11.66	11.67	0.45	ppb
Molybdenum	95-1	9.89	10.05	10.00	9.98	0.81	ppb
Molybdenum	96-1	10.24	10.11	9.95	10.10	1.44	ppb
Molybdenum	97-1	9.79	9.93	10.02	9.91	1.15	ppb
Molybdenum	98-1	9.94	10.05	9.82	9.93	1.17	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.02	2.11	2.00	2.05	2.92	ppb
Phosphorus	31-2	33.12	35.49	33.57	34.06	3.70	ppb
Potassium	39-2	1048.76	1059.33	1036.33	1048.14	1.10	ppb
Rhodium	103-1				99		%
Rhodium	103-2				99		%
Scandium	45-1				98		%
Scandium	45-2				96		%
Selenium	82-1	10.49	10.82	9.99	10.43	4.02	ppb
Selenium	77-2	10.62	10.91	8.86	10.13	10.97	ppb
Selenium	78-2	11.09	10.97	10.02	10.70	5.46	ppb
Silicon	28-1	1.72	2.11	1.88	1.90	10.24	ppb
Silver	107-1	2.06	2.12	2.13	2.10	1.68	ppb
Silver	109-1	2.09	2.11	2.10	2.10	0.33	ppb
Sodium	23-2	986.41	992.64	972.61	983.89	1.04	ppb
Strontium	86-1	51.27	49.87	49.30	50.15	2.01	ppb
Strontium	88-1	49.10	50.26	49.86	49.74	1.19	ppb
Sulfur	34-1	-288.76	-311.69	-284.51	-294.99		ppb
Terbium	159-1				102		%
Terbium	159-2				101		%
Thallium	203-1	1.92	1.93	1.94	1.93	0.66	ppb
Thallium	205-1	1.91	1.95	1.94	1.93	0.98	ppb
Tin	118-1	10.30	10.44	10.55	10.43	1.17	ppb
Titanium	47-1	2.45	2.50	2.44	2.46	1.15	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

PB165800BS

Instrumnet Name :

P7

Client Sample ID :

LCS800

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:42:46

DataFile Name :

030LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.72	1.76	1.75	1.74	1.23	ppb
Vanadium	51-2	10.68	10.43	10.45	10.52	1.32	ppb
Yttrium	89-1				99		%
Yttrium	89-2				97		%
Zinc	66-2	10.66	10.70	10.15	10.50	2.94	ppb
Zirconium	90-1	1.97	2.00	1.99	1.99	0.67	ppb
Zirconium	91-1	2.00	1.94	1.98	1.98	1.51	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BL Instrumnet Name : P7
Client Sample ID : PBS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:46:03 DataFile Name : 031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.33	0.26	0.26	0.28	14.65	ppb
Antimony	121-1	0.01	0.01	0.01	0.01	25.54	ppb
Arsenic	75-2	0.02	0.03	-0.01	0.01	175.61	ppb
Barium	135-1	0.01	0.01	0.01	0.01	27.71	ppb
Barium	137-1	0.01	0.00	0.00	0.00	53.56	ppb
Beryllium	9-1	0.02	0.02	0.01	0.02	27.37	ppb
Bismuth	209-1				105		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.00	-0.05	0.01	-0.01		ppb
Cadmium	106-1	0.36	-0.05	-0.30	0.00	11701.09	ppb
Cadmium	111-1	0.03	0.00	-0.01	0.01	269.58	ppb
Calcium	43-1	-1.19	-0.46	0.06	-0.53		ppb
Calcium	44-1	0.06	-1.04	-1.11	-0.70		ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.01	0.02	0.02	28.38	ppb
Cobalt	59-2	0.00	0.00	-0.01	0.00		ppb
Copper	63-2	0.03	0.01	0.02	0.02	50.22	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				102		%
Holmium	165-2				103		%
Indium	115-1				99		%
Indium	115-2				99		%
Iron	56-2	0.06	0.13	0.01	0.07	90.76	ppb
Iron	57-2	-1.29	-0.58	-0.30	-0.72		ppb
Iron	54-2	-0.24	0.87	0.31	0.31	178.73	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BL Instrumnet Name : P7
Client Sample ID : PBS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:46:03 DataFile Name : 031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.03	0.03	0.03	0.03	2.67	ppb
Lead	207-1	0.03	0.03	0.03	0.03	5.59	ppb
Lead	208-1	0.03	0.03	0.03	0.03	9.21	ppb
Lithium	6-1				104		%
Magnesium	24-2	0.84	0.90	0.90	0.88	3.93	ppb
Manganese	55-2	0.01	0.00	0.00	0.01	142.47	ppb
Molybdenum	94-1	0.00	0.02	0.02	0.01	66.60	ppb
Molybdenum	95-1	0.01	0.01	0.00	0.01	55.93	ppb
Molybdenum	96-1	0.01	0.00	0.01	0.01	22.86	ppb
Molybdenum	97-1	0.00	0.01	0.00	0.00	79.86	ppb
Molybdenum	98-1	0.01	0.00	0.01	0.01	64.22	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	-0.01	0.03	0.01	0.01	174.10	ppb
Phosphorus	31-2	-19.34	-17.84	-17.36	-18.18		ppb
Potassium	39-2	-5.60	-4.57	-4.42	-4.86		ppb
Rhodium	103-1				99		%
Rhodium	103-2				100		%
Scandium	45-1				97		%
Scandium	45-2				96		%
Selenium	82-1	0.39	-0.20	-0.05	0.04	722.73	ppb
Selenium	77-2	-0.05	0.10	-0.05	0.00	32633.84	ppb
Selenium	78-2	0.87	1.25	0.19	0.77	70.01	ppb
Silicon	28-1	-6.21	-5.91	-6.12	-6.08		ppb
Silver	107-1	0.01	0.01	0.01	0.01	3.39	ppb
Silver	109-1	0.01	0.01	0.01	0.01	8.08	ppb
Sodium	23-2	8.14	8.18	8.26	8.20	0.72	ppb
Strontium	86-1	-0.50	-0.10	-0.17	-0.26		ppb
Strontium	88-1	0.01	0.03	0.00	0.01	124.39	ppb
Sulfur	34-1	-311.84	-281.77	-224.96	-272.86		ppb
Terbium	159-1				102		%
Terbium	159-2				101		%
Thallium	203-1	0.04	0.03	0.04	0.04	9.88	ppb
Thallium	205-1	0.04	0.04	0.04	0.04	0.81	ppb
Tin	118-1	-0.01	-0.01	-0.02	-0.01		ppb
Titanium	47-1	0.01	0.01	0.02	0.01	38.32	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

PB165755BL

Instrumnet Name :

P7

Client Sample ID :

PBS755

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:46:03

DataFile Name :

031CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	86.90	ppb
Vanadium	51-2	0.00	0.00	0.00	0.00	123.28	ppb
Yttrium	89-1				99		%
Yttrium	89-2				98		%
Zinc	66-2	0.01	-0.01	0.10	0.03	167.07	ppb
Zirconium	90-1	0.00	0.00	0.00	0.00	388.47	ppb
Zirconium	91-1	0.01	0.01	0.00	0.01	58.40	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BS Instrumnet Name : P7
Client Sample ID : LCS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:49:20 DataFile Name : 032LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	39.89	41.18	41.78	40.95	2.36	ppb
Antimony	121-1	4.07	4.23	4.17	4.16	2.01	ppb
Arsenic	75-2	2.10	2.15	2.33	2.19	5.53	ppb
Barium	135-1	19.44	20.51	20.45	20.14	2.99	ppb
Barium	137-1	20.18	20.29	20.31	20.26	0.35	ppb
Beryllium	9-1	2.41	2.34	2.36	2.37	1.44	ppb
Bismuth	209-1				105		%
Bismuth	209-2				104		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.30	2.05	1.88	2.08	10.23	ppb
Cadmium	106-1	3.15	2.17	2.12	2.48	23.48	ppb
Cadmium	111-1	2.08	2.19	2.20	2.15	3.08	ppb
Calcium	43-1	1051.11	1089.30	1079.34	1073.25	1.85	ppb
Calcium	44-1	1066.55	1074.44	1093.65	1078.21	1.29	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4.21	4.09	4.10	4.13	1.69	ppb
Cobalt	59-2	2.14	2.14	2.06	2.11	2.19	ppb
Copper	63-2	4.31	4.35	4.31	4.32	0.48	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				103		%
Holmium	165-2				104		%
Indium	115-1				99		%
Indium	115-2				100		%
Iron	56-2	439.16	441.03	435.51	438.57	0.64	ppb
Iron	57-2	437.45	440.75	439.40	439.20	0.38	ppb
Iron	54-2	447.19	443.44	444.33	444.99	0.44	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BS Instrumnet Name : P7
Client Sample ID : LCS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:49:20 DataFile Name : 032LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1.91	1.96	2.03	1.96	3.05	ppb
Lead	207-1	1.97	1.94	2.03	1.98	2.31	ppb
Lead	208-1	1.91	1.95	2.00	1.95	2.44	ppb
Lithium	6-1				104		%
Magnesium	24-2	965.49	962.91	962.95	963.78	0.15	ppb
Manganese	55-2	2.23	2.16	2.20	2.20	1.68	ppb
Molybdenum	94-1	11.62	11.96	11.88	11.82	1.46	ppb
Molybdenum	95-1	9.78	10.08	10.08	9.98	1.72	ppb
Molybdenum	96-1	10.08	10.22	10.17	10.16	0.73	ppb
Molybdenum	97-1	10.00	9.90	10.07	9.99	0.82	ppb
Molybdenum	98-1	9.82	10.11	10.05	10.00	1.54	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.06	2.13	2.09	2.09	1.59	ppb
Phosphorus	31-2	35.22	36.36	38.47	36.68	4.49	ppb
Potassium	39-2	1063.88	1064.90	1059.00	1062.60	0.30	ppb
Rhodium	103-1				100		%
Rhodium	103-2				100		%
Scandium	45-1				99		%
Scandium	45-2				97		%
Selenium	82-1	11.00	10.75	10.96	10.90	1.24	ppb
Selenium	77-2	12.62	9.74	10.74	11.03	13.24	ppb
Selenium	78-2	12.84	12.05	10.94	11.95	8.00	ppb
Silicon	28-1	1.46	2.07	3.01	2.18	35.70	ppb
Silver	107-1	2.06	2.16	2.18	2.13	2.90	ppb
Silver	109-1	2.10	2.15	2.19	2.15	2.01	ppb
Sodium	23-2	989.91	989.20	990.97	990.03	0.09	ppb
Strontium	86-1	50.62	48.89	52.18	50.56	3.25	ppb
Strontium	88-1	50.36	51.05	51.27	50.89	0.93	ppb
Sulfur	34-1	-359.43	-284.49	-191.54	-278.49		ppb
Terbium	159-1				105		%
Terbium	159-2				102		%
Thallium	203-1	1.86	1.99	1.95	1.93	3.61	ppb
Thallium	205-1	1.91	1.94	1.98	1.94	1.93	ppb
Tin	118-1	10.19	10.62	10.60	10.47	2.35	ppb
Titanium	47-1	2.38	2.49	2.56	2.48	3.51	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

PB165755BS

Instrumnet Name :

P7

Client Sample ID :

LCS755

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:49:20

DataFile Name :

032LCSE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.71	1.81	1.79	1.77	2.96	ppb
Vanadium	51-2	10.74	10.51	10.68	10.64	1.12	ppb
Yttrium	89-1				100		%
Yttrium	89-2				99		%
Zinc	66-2	10.50	10.63	10.47	10.53	0.79	ppb
Zirconium	90-1	1.95	2.02	2.05	2.01	2.53	ppb
Zirconium	91-1	2.04	2.03	2.08	2.05	1.24	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-01 Instrumnet Name : P7
Client Sample ID : MJNKD0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:53:45 DataFile Name : 033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	16096.55	15820.07	15937.61	15951.41	0.87	ppb
Antimony	121-1	724.47	724.32	717.54	722.11	0.55	ppb
Arsenic	75-2	1592.87	1569.60	1601.02	1587.83	1.03	ppb
Barium	135-1	245.49	246.19	247.11	246.26	0.33	ppb
Barium	137-1	247.70	248.96	252.33	249.66	0.96	ppb
Beryllium	9-1	0.77	0.71	0.77	0.75	4.90	ppb
Bismuth	209-1				112		%
Bismuth	209-2				109		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	5.76	5.47	6.69	5.97	10.61	ppb
Cadmium	106-1	6.21	6.12	6.40	6.24	2.29	ppb
Cadmium	111-1	2.81	2.85	2.82	2.82	0.72	ppb
Calcium	43-1	14113.46	14269.77	14216.43	14199.88	0.56	ppb
Calcium	44-1	13544.19	13788.95	14066.58	13799.91	1.89	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	43.26	43.30	43.35	43.30	0.10	ppb
Cobalt	59-2	171.42	169.07	168.58	169.69	0.90	ppb
Copper	63-2	1038.43	1027.90	1036.84	1034.39	0.55	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				110		%
Holmium	165-2				108		%
Indium	115-1				113		%
Indium	115-2				113		%
Iron	56-2	103896.62	103106.99	104101.96	103701.86	0.51	ppb
Iron	57-2	103047.49	99561.43	99812.71	100807.21	1.93	ppb
Iron	54-2	103653.26	102138.90	103184.65	102992.27	0.75	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-01 Instrumnet Name : P7
Client Sample ID : MJNKD0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:53:45 DataFile Name : 033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1593.35	1621.28	1613.54	1609.39	0.90	ppb
Lead	207-1	1584.73	1619.94	1615.32	1606.66	1.19	ppb
Lead	208-1	1593.15	1610.92	1602.52	1602.20	0.56	ppb
Lithium	6-1				105		%
Magnesium	24-2	9752.66	9635.09	9678.78	9688.84	0.61	ppb
Manganese	55-2	694.70	706.51	696.02	699.08	0.93	ppb
Molybdenum	94-1	34.76	35.53	35.65	35.31	1.36	ppb
Molybdenum	95-1	21.39	21.92	21.83	21.72	1.31	ppb
Molybdenum	96-1	23.60	23.98	23.86	23.81	0.82	ppb
Molybdenum	97-1	21.34	21.64	21.72	21.57	0.94	ppb
Molybdenum	98-1	21.44	21.66	21.52	21.54	0.53	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	47.35	47.04	47.46	47.28	0.45	ppb
Phosphorus	31-2	1406.71	1435.44	1422.26	1421.47	1.01	ppb
Potassium	39-2	4197.06	4232.89	4260.34	4230.10	0.75	ppb
Rhodium	103-1				102		%
Rhodium	103-2				105		%
Scandium	45-1				104		%
Scandium	45-2				104		%
Selenium	82-1	2.53	2.72	1.90	2.38	18.01	ppb
Selenium	77-2	4.36	5.34	5.41	5.04	11.66	ppb
Selenium	78-2	3.51	2.00	4.04	3.18	33.19	ppb
Silicon	28-1	1724.43	1710.00	1728.01	1720.81	0.55	ppb
Silver	107-1	3.03	3.07	3.09	3.06	0.94	ppb
Silver	109-1	3.08	3.03	3.06	3.05	0.71	ppb
Sodium	23-2	12565.96	12417.41	12611.27	12531.55	0.81	ppb
Strontium	86-1	2915.15	2937.21	2947.69	2933.35	0.57	ppb
Strontium	88-1	2989.75	3060.84	3034.36	3028.32	1.19	ppb
Sulfur	34-1	2364.30	2260.25	2221.67	2282.07	3.23	ppb
Terbium	159-1				109		%
Terbium	159-2				107		%
Thallium	203-1	0.72	0.71	0.75	0.73	2.99	ppb
Thallium	205-1	0.71	0.73	0.73	0.72	1.44	ppb
Tin	118-1	223.89	225.59	224.81	224.77	0.38	ppb
Titanium	47-1	713.39	716.17	729.32	719.62	1.18	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5248-01

Instrumnet Name :

P7

Client Sample ID :

MJNKD0

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:53:45

DataFile Name :

033SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.11	2.19	2.14	2.15	1.99	ppb
Vanadium	51-2	59.91	59.30	59.43	59.55	0.55	ppb
Yttrium	89-1				108		%
Yttrium	89-2				107		%
Zinc	66-2	7017.20	6972.03	7114.52	7034.58	1.04	ppb
Zirconium	90-1	9.64	9.84	9.75	9.75	1.02	ppb
Zirconium	91-1	9.96	10.07	10.21	10.08	1.22	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-02 Instrumnet Name : P7
Client Sample ID : MJNKD0D Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:56:44 DataFile Name : 034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15417.41	15178.21	15533.50	15376.37	1.18	ppb
Antimony	121-1	677.43	705.86	702.14	695.14	2.22	ppb
Arsenic	75-2	1541.90	1533.18	1580.91	1552.00	1.64	ppb
Barium	135-1	234.12	241.69	240.64	238.82	1.72	ppb
Barium	137-1	235.31	244.77	242.76	240.95	2.07	ppb
Beryllium	9-1	0.71	0.74	0.75	0.73	2.44	ppb
Bismuth	209-1				114		%
Bismuth	209-2				109		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	4.89	5.46	5.43	5.26	6.09	ppb
Cadmium	106-1	5.72	6.67	6.51	6.30	8.09	ppb
Cadmium	111-1	2.65	2.81	2.65	2.71	3.38	ppb
Calcium	43-1	13118.97	13544.79	13573.60	13412.45	1.90	ppb
Calcium	44-1	12799.42	13173.23	12938.22	12970.29	1.46	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	41.78	41.98	42.31	42.03	0.64	ppb
Cobalt	59-2	159.10	160.48	162.11	160.56	0.94	ppb
Copper	63-2	984.59	987.39	1001.93	991.30	0.94	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				111		%
Holmium	165-2				109		%
Indium	115-1				115		%
Indium	115-2				113		%
Iron	56-2	101193.47	99800.08	101268.53	100754.03	0.82	ppb
Iron	57-2	98232.58	98343.09	99703.87	98759.85	0.83	ppb
Iron	54-2	99989.10	101918.09	101190.53	101032.57	0.96	ppb
Krypton	83-1						cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5248-02

Instrumnet Name :

P7

Client Sample ID :

MJNKD0D

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:56:44

DataFile Name :

034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1536.98	1534.44	1558.85	1543.43	0.87	ppb
Lead	207-1	1526.96	1548.21	1557.92	1544.37	1.03	ppb
Lead	208-1	1520.37	1543.90	1551.79	1538.69	1.06	ppb
Lithium	6-1				101		%
Magnesium	24-2	9447.68	9469.43	9455.59	9457.57	0.12	ppb
Manganese	55-2	689.46	686.20	696.43	690.70	0.76	ppb
Molybdenum	94-1	32.84	33.41	33.05	33.10	0.88	ppb
Molybdenum	95-1	20.47	21.04	20.88	20.80	1.41	ppb
Molybdenum	96-1	22.58	23.05	22.79	22.81	1.04	ppb
Molybdenum	97-1	20.50	20.63	20.66	20.60	0.41	ppb
Molybdenum	98-1	20.32	20.73	20.57	20.54	0.99	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	46.08	45.92	46.24	46.08	0.35	ppb
Phosphorus	31-2	1359.80	1413.95	1421.99	1398.58	2.42	ppb
Potassium	39-2	4086.82	4091.03	4123.03	4100.29	0.48	ppb
Rhodium	103-1				104		%
Rhodium	103-2				105		%
Scandium	45-1				104		%
Scandium	45-2				104		%
Selenium	82-1	1.65	2.04	1.90	1.86	10.76	ppb
Selenium	77-2	7.46	4.72	6.01	6.07	22.63	ppb
Selenium	78-2	3.17	2.44	3.78	3.13	21.43	ppb
Silicon	28-1	1617.82	1639.14	1670.44	1642.47	1.61	ppb
Silver	107-1	2.80	2.89	2.86	2.85	1.69	ppb
Silver	109-1	2.76	2.87	2.88	2.84	2.25	ppb
Sodium	23-2	12030.63	12134.40	12109.24	12091.42	0.45	ppb
Strontium	86-1	2752.19	2830.57	2794.28	2792.34	1.40	ppb
Strontium	88-1	2838.86	2856.96	2885.34	2860.38	0.82	ppb
Sulfur	34-1	1662.22	1815.71	1728.15	1735.36	4.44	ppb
Terbium	159-1				111		%
Terbium	159-2				107		%
Thallium	203-1	0.62	0.66	0.70	0.66	5.89	ppb
Thallium	205-1	0.64	0.67	0.70	0.67	4.33	ppb
Tin	118-1	207.15	217.94	215.92	213.67	2.69	ppb
Titanium	47-1	660.78	688.58	692.12	680.49	2.52	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :P5248-02Instrumnet Name :P7

Client Sample ID :MJNKD0DDilution Factor :1

Date & Time Acquired :2024-12-21 17:56:44DataFile Name :034SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.04	2.07	2.09	2.07	0.98	ppb
Vanadium	51-2	58.55	58.28	59.04	58.62	0.65	ppb
Yttrium	89-1				110		%
Yttrium	89-2				108		%
Zinc	66-2	6850.37	6866.66	6868.42	6861.82	0.15	ppb
Zirconium	90-1	8.88	9.10	9.02	9.00	1.24	ppb
Zirconium	91-1	9.12	9.49	9.31	9.31	2.01	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :P5248-01LX5Instrumnet Name :P7

Client Sample ID :MJNKD0LDilution Factor :5

Date & Time Acquired :2024-12-21 17:59:45DataFile Name :035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3192.53	3226.47	3220.63	3213.21	0.56	ppb
Antimony	121-1	145.09	145.46	145.47	145.34	0.15	ppb
Arsenic	75-2	330.70	334.15	323.52	329.46	1.65	ppb
Barium	135-1	49.93	50.10	50.05	50.03	0.17	ppb
Barium	137-1	50.20	50.18	50.15	50.17	0.04	ppb
Beryllium	9-1	0.10	0.14	0.18	0.14	29.71	ppb
Bismuth	209-1				110		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.25	0.88	1.27	1.14	19.27	ppb
Cadmium	106-1	1.49	1.09	0.67	1.08	37.90	ppb
Cadmium	111-1	0.55	0.57	0.57	0.56	1.42	ppb
Calcium	43-1	2855.03	2908.77	2858.05	2873.95	1.05	ppb
Calcium	44-1	2794.44	2814.91	2765.73	2791.69	0.88	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	8.87	8.84	8.92	8.88	0.48	ppb
Cobalt	59-2	34.46	34.08	34.46	34.33	0.64	ppb
Copper	63-2	206.71	205.87	205.17	205.92	0.37	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				106		%
Indium	115-1				105		%
Indium	115-2				104		%
Iron	56-2	21233.76	21248.25	21289.67	21257.23	0.14	ppb
Iron	57-2	20953.05	20683.41	20848.51	20828.32	0.65	ppb
Iron	54-2	21353.52	20718.09	21221.01	21097.54	1.59	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-01LX5 Instrumnet Name : P7
Client Sample ID : MJNKD0L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 17:59:45 DataFile Name : 035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	323.79	327.38	323.72	324.96	0.64	ppb
Lead	207-1	327.88	327.25	324.97	326.70	0.47	ppb
Lead	208-1	325.27	324.26	325.36	324.96	0.19	ppb
Lithium	6-1				98		%
Magnesium	24-2	1953.78	1942.46	1948.26	1948.17	0.29	ppb
Manganese	55-2	140.19	140.17	141.46	140.61	0.52	ppb
Molybdenum	94-1	7.09	7.28	7.09	7.15	1.52	ppb
Molybdenum	95-1	4.46	4.52	4.39	4.46	1.38	ppb
Molybdenum	96-1	4.90	4.95	4.80	4.88	1.61	ppb
Molybdenum	97-1	4.49	4.45	4.41	4.45	0.90	ppb
Molybdenum	98-1	4.44	4.49	4.39	4.44	1.06	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	10.02	9.94	9.66	9.87	1.92	ppb
Phosphorus	31-2	268.03	271.45	296.07	278.52	5.49	ppb
Potassium	39-2	887.57	886.66	888.20	887.48	0.09	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				101		%
Scandium	45-2				100		%
Selenium	82-1	0.74	0.61	0.42	0.59	27.62	ppb
Selenium	77-2	0.40	0.86	1.13	0.79	46.60	ppb
Selenium	78-2	1.29	0.79	0.57	0.88	41.86	ppb
Silicon	28-1	344.70	352.98	349.43	349.04	1.19	ppb
Silver	107-1	0.61	0.63	0.64	0.63	2.43	ppb
Silver	109-1	0.62	0.61	0.61	0.61	0.49	ppb
Sodium	23-2	2624.16	2596.84	2544.80	2588.60	1.56	ppb
Strontium	86-1	601.99	614.87	598.83	605.23	1.40	ppb
Strontium	88-1	601.60	606.67	603.17	603.81	0.43	ppb
Sulfur	34-1	-566.40	-460.79	-513.81	-513.66		ppb
Terbium	159-1				107		%
Terbium	159-2				104		%
Thallium	203-1	0.18	0.16	0.16	0.17	4.90	ppb
Thallium	205-1	0.18	0.17	0.17	0.17	2.08	ppb
Tin	118-1	43.25	43.23	43.25	43.24	0.02	ppb
Titanium	47-1	144.28	146.87	142.92	144.69	1.39	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5248-01LX5

Instrumnet Name :

P7

Client Sample ID :

MJNKD0L

Dilution Factor :

5

Date & Time Acquired :

2024-12-21 17:59:45

DataFile Name :

035SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.42	0.43	0.44	0.43	1.92	ppb
Vanadium	51-2	12.30	12.06	12.20	12.19	0.96	ppb
Yttrium	89-1				103		%
Yttrium	89-2				102		%
Zinc	66-2	1413.43	1415.23	1417.66	1415.44	0.15	ppb
Zirconium	90-1	1.96	1.94	1.90	1.93	1.41	ppb
Zirconium	91-1	2.04	2.04	2.03	2.04	0.25	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :P5248-03Instrumnet Name :P7

Client Sample ID :MJNKD0SDilution Factor :1

Date & Time Acquired :2024-12-21 18:02:51DataFile Name :036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	15864.45	15785.86	15524.10	15724.80	1.13	ppb
Antimony	121-1	718.08	718.65	726.77	721.16	0.67	ppb
Arsenic	75-2	1588.54	1551.73	1531.55	1557.27	1.86	ppb
Barium	135-1	672.23	676.49	682.01	676.91	0.72	ppb
Barium	137-1	683.80	675.49	671.85	677.05	0.90	ppb
Beryllium	9-1	11.58	11.92	11.72	11.74	1.47	ppb
Bismuth	209-1				113		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	15.28	15.07	15.52	15.29	1.48	ppb
Cadmium	106-1	15.87	14.95	15.65	15.49	3.09	ppb
Cadmium	111-1	12.09	11.82	12.22	12.04	1.68	ppb
Calcium	43-1	13751.92	13746.15	13749.20	13749.09	0.02	ppb
Calcium	44-1	13186.53	13263.52	13136.43	13195.49	0.49	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	83.11	83.43	83.44	83.33	0.22	ppb
Cobalt	59-2	274.09	267.94	269.50	270.51	1.18	ppb
Copper	63-2	1063.14	1045.11	1042.23	1050.16	1.08	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				109		%
Holmium	165-2				108		%
Indium	115-1				114		%
Indium	115-2				112		%
Iron	56-2	100198.97	100884.15	99899.58	100327.57	0.50	ppb
Iron	57-2	99581.41	98383.37	97031.53	98332.10	1.30	ppb
Iron	54-2	100319.44	99555.22	100485.37	100120.01	0.50	ppb
Krypton	83-1						cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5248-03

Instrumnet Name :

P7

Client Sample ID :

MJNKD0S

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:02:51

DataFile Name :

036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	1519.04	1547.98	1536.48	1534.50	0.95	ppb
Lead	207-1	1533.26	1552.86	1536.85	1540.99	0.68	ppb
Lead	208-1	1532.95	1557.08	1532.54	1540.86	0.91	ppb
Lithium	6-1				100		%
Magnesium	24-2	9448.55	9493.92	9277.87	9406.78	1.21	ppb
Manganese	55-2	778.25	784.84	783.76	782.28	0.45	ppb
Molybdenum	94-1	33.35	34.26	33.97	33.86	1.36	ppb
Molybdenum	95-1	20.74	20.82	20.92	20.83	0.43	ppb
Molybdenum	96-1	22.53	23.15	22.87	22.85	1.34	ppb
Molybdenum	97-1	20.52	20.87	20.87	20.75	0.98	ppb
Molybdenum	98-1	20.56	20.75	20.68	20.67	0.46	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	150.13	149.81	147.24	149.06	1.06	ppb
Phosphorus	31-2	1372.86	1409.15	1374.47	1385.49	1.48	ppb
Potassium	39-2	4116.42	4071.22	4081.24	4089.63	0.58	ppb
Rhodium	103-1				103		%
Rhodium	103-2				104		%
Scandium	45-1				102		%
Scandium	45-2				103		%
Selenium	82-1	23.04	22.73	22.71	22.83	0.80	ppb
Selenium	77-2	30.04	25.04	27.09	27.39	9.19	ppb
Selenium	78-2	23.24	24.27	23.21	23.58	2.56	ppb
Silicon	28-1	1663.05	1696.85	1681.00	1680.30	1.01	ppb
Silver	107-1	13.37	13.33	13.46	13.39	0.52	ppb
Silver	109-1	13.26	13.38	13.47	13.37	0.82	ppb
Sodium	23-2	12165.54	12114.06	12063.72	12114.44	0.42	ppb
Strontium	86-1	2802.88	2861.21	2826.24	2830.11	1.04	ppb
Strontium	88-1	2904.29	2950.18	2911.67	2922.04	0.84	ppb
Sulfur	34-1	1813.94	1758.95	1721.77	1764.89	2.63	ppb
Terbium	159-1				110		%
Terbium	159-2				106		%
Thallium	203-1	9.75	9.85	9.85	9.82	0.62	ppb
Thallium	205-1	9.64	9.80	9.91	9.78	1.39	ppb
Tin	118-1	217.71	215.45	215.22	216.12	0.64	ppb
Titanium	47-1	695.97	688.89	693.94	692.93	0.53	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-03 Instrumnet Name : P7
Client Sample ID : MJNKD0S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:02:51 DataFile Name : 036SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	2.04	2.08	2.08	2.07	1.16	ppb
Vanadium	51-2	160.57	157.38	157.93	158.62	1.07	ppb
Yttrium	89-1				109		%
Yttrium	89-2				106		%
Zinc	66-2	6977.08	6895.51	6835.82	6902.80	1.03	ppb
Zirconium	90-1	9.21	9.44	9.26	9.31	1.29	ppb
Zirconium	91-1	9.56	9.65	9.74	9.65	0.91	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-01 Instrumnet Name : P7
Client Sample ID : MJNKG0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:05:49 DataFile Name : 037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	11374.16	11763.53	12116.20	11751.30	3.16	ppb
Antimony	121-1	261.72	294.61	292.23	282.85	6.48	ppb
Arsenic	75-2	516.75	542.06	550.40	536.40	3.27	ppb
Barium	135-1	95.70	107.70	108.74	104.04	6.97	ppb
Barium	137-1	97.02	107.75	109.86	104.87	6.57	ppb
Beryllium	9-1	0.36	0.41	0.45	0.41	11.91	ppb
Bismuth	209-1				118		%
Bismuth	209-2				109		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.38	2.39	2.57	2.45	4.41	ppb
Cadmium	106-1	1.79	2.05	2.00	1.94	7.02	ppb
Cadmium	111-1	1.20	1.36	1.48	1.35	10.39	ppb
Calcium	43-1	8290.42	9560.44	9537.95	9129.60	7.96	ppb
Calcium	44-1	8030.43	9161.96	9107.46	8766.62	7.28	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	33.19	35.26	35.46	34.64	3.63	ppb
Cobalt	59-2	57.16	60.69	61.25	59.70	3.72	ppb
Copper	63-2	334.70	359.34	358.44	350.83	3.98	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				116		%
Holmium	165-2				110		%
Indium	115-1				115		%
Indium	115-2				108		%
Iron	56-2	47395.38	50233.38	50841.93	49490.23	3.72	ppb
Iron	57-2	46479.70	48914.73	49880.24	48424.89	3.62	ppb
Iron	54-2	46907.81	49755.11	51050.39	49237.77	4.30	ppb
Krypton	83-1						cps

LB Number :	LB134060	Operator :	Jaswal
Lab Sample ID :	P5249-01	Instrumnet Name :	P7
Client Sample ID :	MJNKG0	Dilution Factor :	1
Date & Time Acquired :	2024-12-21 18:05:49	DataFile Name :	037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	543.22	619.92	610.12	591.09	7.06	ppb
Lead	207-1	544.23	610.00	607.77	587.33	6.36	ppb
Lead	208-1	539.52	611.48	606.54	585.84	6.86	ppb
Lithium	6-1				103		%
Magnesium	24-2	7582.47	7978.67	8061.17	7874.10	3.25	ppb
Manganese	55-2	467.18	487.11	507.21	487.16	4.11	ppb
Molybdenum	94-1	10.96	12.13	12.26	11.78	6.09	ppb
Molybdenum	95-1	7.36	8.37	8.50	8.08	7.76	ppb
Molybdenum	96-1	8.04	9.11	9.18	8.78	7.30	ppb
Molybdenum	97-1	7.45	8.34	8.39	8.06	6.52	ppb
Molybdenum	98-1	7.33	8.35	8.45	8.04	7.75	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	37.56	40.25	40.78	39.53	4.38	ppb
Phosphorus	31-2	912.93	987.18	955.25	951.78	3.91	ppb
Potassium	39-2	2862.66	3007.06	3003.15	2957.62	2.78	ppb
Rhodium	103-1				109		%
Rhodium	103-2				106		%
Scandium	45-1				107		%
Scandium	45-2				106		%
Selenium	82-1	1.45	1.17	0.93	1.18	22.26	ppb
Selenium	77-2	3.52	4.55	4.02	4.03	12.78	ppb
Selenium	78-2	0.53	2.11	2.30	1.65	58.94	ppb
Silicon	28-1	1063.89	1246.24	1252.55	1187.56	9.02	ppb
Silver	107-1	0.92	1.00	1.01	0.97	5.16	ppb
Silver	109-1	0.93	0.98	0.98	0.96	2.97	ppb
Sodium	23-2	9577.73	10103.36	10322.71	10001.27	3.83	ppb
Strontium	86-1	1578.50	1790.19	1821.76	1730.15	7.65	ppb
Strontium	88-1	1645.80	1841.88	1876.71	1788.13	6.96	ppb
Sulfur	34-1	332.69	970.18	876.53	726.46	47.38	ppb
Terbium	159-1				116		%
Terbium	159-2				109		%
Thallium	203-1	0.33	0.40	0.40	0.38	9.88	ppb
Thallium	205-1	0.35	0.41	0.41	0.39	9.11	ppb
Tin	118-1	59.01	66.14	67.07	64.07	6.88	ppb
Titanium	47-1	455.85	526.04	525.92	502.60	8.06	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5249-01

Instrumnet Name :

P7

Client Sample ID :

MJNKG0

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:05:49

DataFile Name :

037SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.09	1.25	1.24	1.19	7.73	ppb
Vanadium	51-2	48.24	50.87	51.03	50.04	3.13	ppb
Yttrium	89-1				114		%
Yttrium	89-2				108		%
Zinc	66-2	2559.34	2755.71	2801.31	2705.45	4.75	ppb
Zirconium	90-1	2.57	2.95	3.09	2.87	9.33	ppb
Zirconium	91-1	2.66	3.15	3.11	2.97	9.13	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :P5249-02Instrumnet Name :P7

Client Sample ID :MJNKG0DDilution Factor :1

Date & Time Acquired :2024-12-21 18:08:49DataFile Name :038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	10358.39	10343.74	10411.90	10371.34	0.35	ppb
Antimony	121-1	261.80	263.49	265.87	263.72	0.78	ppb
Arsenic	75-2	478.89	481.10	477.87	479.29	0.34	ppb
Barium	135-1	95.49	95.69	95.27	95.48	0.22	ppb
Barium	137-1	95.95	96.86	97.18	96.66	0.66	ppb
Beryllium	9-1	0.37	0.52	0.45	0.45	16.35	ppb
Bismuth	209-1				113		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	2.24	2.34	2.11	2.23	5.01	ppb
Cadmium	106-1	2.22	1.98	1.62	1.94	15.77	ppb
Cadmium	111-1	1.32	1.32	1.25	1.30	3.21	ppb
Calcium	43-1	9512.30	9483.00	9623.08	9539.46	0.77	ppb
Calcium	44-1	9228.11	9119.85	9463.63	9270.53	1.90	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	30.73	30.32	30.11	30.39	1.04	ppb
Cobalt	59-2	57.05	57.53	56.73	57.11	0.71	ppb
Copper	63-2	336.57	337.37	333.78	335.91	0.56	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				111		%
Holmium	165-2				108		%
Indium	115-1				109		%
Indium	115-2				107		%
Iron	56-2	45568.72	45937.72	44859.98	45455.48	1.20	ppb
Iron	57-2	45045.12	44320.69	43979.83	44448.55	1.22	ppb
Iron	54-2	45259.71	45041.68	44654.30	44985.23	0.68	ppb
Krypton	83-1						cps

LB Number :	LB134060	Operator :	Jaswal
Lab Sample ID :	P5249-02	Instrumnet Name :	P7
Client Sample ID :	MJNKG0D	Dilution Factor :	1
Date & Time Acquired :	2024-12-21 18:08:49	DataFile Name :	038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	543.87	547.59	541.41	544.29	0.57	ppb
Lead	207-1	555.71	552.94	548.75	552.47	0.63	ppb
Lead	208-1	545.96	547.48	542.76	545.40	0.44	ppb
Lithium	6-1				96		%
Magnesium	24-2	7098.17	7227.77	7149.40	7158.45	0.91	ppb
Manganese	55-2	446.34	433.60	435.94	438.63	1.55	ppb
Molybdenum	94-1	10.37	10.34	10.16	10.29	1.09	ppb
Molybdenum	95-1	7.09	7.18	7.13	7.13	0.63	ppb
Molybdenum	96-1	7.82	7.79	7.75	7.79	0.44	ppb
Molybdenum	97-1	7.14	7.18	6.97	7.10	1.52	ppb
Molybdenum	98-1	7.05	7.20	7.02	7.09	1.36	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	36.70	36.52	36.10	36.44	0.85	ppb
Phosphorus	31-2	901.45	882.93	904.30	896.23	1.29	ppb
Potassium	39-2	2738.83	2704.47	2697.33	2713.54	0.82	ppb
Rhodium	103-1				104		%
Rhodium	103-2				105		%
Scandium	45-1				103		%
Scandium	45-2				102		%
Selenium	82-1	0.88	0.87	0.54	0.76	25.00	ppb
Selenium	77-2	3.25	5.56	4.40	4.40	26.34	ppb
Selenium	78-2	2.44	1.78	1.49	1.90	25.72	ppb
Silicon	28-1	1127.25	1144.86	1120.70	1130.94	1.10	ppb
Silver	107-1	0.91	0.92	0.89	0.90	1.92	ppb
Silver	109-1	0.88	0.92	0.88	0.89	2.87	ppb
Sodium	23-2	9426.65	9527.87	9335.73	9430.09	1.02	ppb
Strontium	86-1	1667.31	1710.99	1665.52	1681.28	1.53	ppb
Strontium	88-1	1730.11	1767.24	1708.07	1735.14	1.72	ppb
Sulfur	34-1	705.56	647.82	728.69	694.02	6.00	ppb
Terbium	159-1				111		%
Terbium	159-2				107		%
Thallium	203-1	0.34	0.35	0.36	0.35	2.42	ppb
Thallium	205-1	0.33	0.35	0.35	0.34	3.06	ppb
Tin	118-1	59.66	59.91	59.31	59.63	0.51	ppb
Titanium	47-1	440.69	442.55	446.44	443.22	0.66	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5249-02

Instrumnet Name :

P7

Client Sample ID :

MJNKG0D

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:08:49

DataFile Name :

038SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.09	1.12	1.10	1.10	1.40	ppb
Vanadium	51-2	44.64	45.12	44.30	44.69	0.93	ppb
Yttrium	89-1				110		%
Yttrium	89-2				106		%
Zinc	66-2	2560.14	2583.78	2505.01	2549.64	1.59	ppb
Zirconium	90-1	2.48	2.51	2.48	2.49	0.59	ppb
Zirconium	91-1	2.61	2.52	2.53	2.55	2.04	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-01LX5 Instrumnet Name : P7
Client Sample ID : MJNKG0L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:11:51 DataFile Name : 039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	2543.64	2538.75	2553.95	2545.45	0.30	ppb
Antimony	121-1	59.71	60.03	60.82	60.19	0.94	ppb
Arsenic	75-2	119.24	118.54	121.47	119.75	1.28	ppb
Barium	135-1	23.16	23.19	23.36	23.24	0.45	ppb
Barium	137-1	23.09	23.25	23.78	23.37	1.55	ppb
Beryllium	9-1	0.09	0.11	0.10	0.10	7.61	ppb
Bismuth	209-1				110		%
Bismuth	209-2				105		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.58	0.40	0.54	0.51	18.49	ppb
Cadmium	106-1	-0.19	0.10	-0.20	-0.10		ppb
Cadmium	111-1	0.28	0.30	0.28	0.28	3.83	ppb
Calcium	43-1	2017.62	2041.43	2063.84	2040.96	1.13	ppb
Calcium	44-1	2035.74	2043.69	2063.53	2047.65	0.70	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	7.68	7.79	7.71	7.72	0.77	ppb
Cobalt	59-2	13.22	13.16	13.25	13.21	0.35	ppb
Copper	63-2	75.07	75.41	75.73	75.40	0.43	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				106		%
Indium	115-1				104		%
Indium	115-2				102		%
Iron	56-2	11007.23	11018.68	10939.59	10988.50	0.39	ppb
Iron	57-2	10770.83	10772.88	10912.44	10818.72	0.75	ppb
Iron	54-2	10867.06	10949.36	10959.76	10925.40	0.46	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-01LX5 Instrumnet Name : P7
Client Sample ID : MJNKG0L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:11:51 DataFile Name : 039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	122.23	120.42	121.43	121.36	0.75	ppb
Lead	207-1	120.26	119.73	120.03	120.00	0.22	ppb
Lead	208-1	127.67	126.15	127.24	127.02	0.62	ppb
Lithium	6-1				93		%
Magnesium	24-2	1676.86	1674.40	1695.45	1682.24	0.68	ppb
Manganese	55-2	105.64	105.21	106.10	105.65	0.42	ppb
Molybdenum	94-1	2.66	2.73	2.66	2.68	1.47	ppb
Molybdenum	95-1	1.88	1.83	1.81	1.84	1.97	ppb
Molybdenum	96-1	2.02	2.03	1.98	2.01	1.34	ppb
Molybdenum	97-1	1.82	1.93	1.87	1.87	2.94	ppb
Molybdenum	98-1	1.82	1.81	1.84	1.82	0.86	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	8.70	8.76	8.96	8.81	1.58	ppb
Phosphorus	31-2	204.03	217.53	197.46	206.34	4.96	ppb
Potassium	39-2	660.93	660.29	663.86	661.69	0.29	ppb
Rhodium	103-1				103		%
Rhodium	103-2				104		%
Scandium	45-1				99		%
Scandium	45-2				100		%
Selenium	82-1	0.40	0.60	-0.04	0.32	101.32	ppb
Selenium	77-2	0.70	1.31	1.48	1.17	35.07	ppb
Selenium	78-2	1.20	0.10	0.94	0.75	77.53	ppb
Silicon	28-1	270.50	266.91	271.37	269.59	0.88	ppb
Silver	107-1	0.21	0.21	0.23	0.22	6.36	ppb
Silver	109-1	0.22	0.21	0.22	0.22	2.95	ppb
Sodium	23-2	2297.18	2252.31	2235.79	2261.76	1.40	ppb
Strontium	86-1	404.64	401.35	395.79	400.59	1.12	ppb
Strontium	88-1	393.17	393.82	397.13	394.70	0.54	ppb
Sulfur	34-1	-837.66	-735.00	-731.97	-768.21		ppb
Terbium	159-1				108		%
Terbium	159-2				104		%
Thallium	203-1	0.10	0.09	0.09	0.09	5.65	ppb
Thallium	205-1	0.10	0.10	0.09	0.10	3.79	ppb
Tin	118-1	14.33	14.19	14.52	14.35	1.16	ppb
Titanium	47-1	112.21	112.80	115.00	113.34	1.30	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5249-01LX5

Instrumnet Name :

P7

Client Sample ID :

MJNKG0L

Dilution Factor :

5

Date & Time Acquired :

2024-12-21 18:11:51

DataFile Name :

039SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.26	0.26	0.26	0.26	0.95	ppb
Vanadium	51-2	10.96	10.75	11.25	10.98	2.28	ppb
Yttrium	89-1				103		%
Yttrium	89-2				101		%
Zinc	66-2	573.85	573.40	580.58	575.94	0.70	ppb
Zirconium	90-1	0.62	0.63	0.65	0.63	3.12	ppb
Zirconium	91-1	0.67	0.67	0.64	0.66	2.09	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :P5249-03Instrumnet Name :P7

Client Sample ID :MJNKG0SDilution Factor :1

Date & Time Acquired :2024-12-21 18:15:03DataFile Name :040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	11234.85	11433.33	11361.20	11343.13	0.89	ppb
Antimony	121-1	288.33	299.93	300.01	296.09	2.27	ppb
Arsenic	75-2	512.56	514.08	514.32	513.65	0.19	ppb
Barium	135-1	506.65	527.33	526.41	520.13	2.25	ppb
Barium	137-1	515.26	531.08	531.45	525.93	1.76	ppb
Beryllium	9-1	11.43	11.78	11.83	11.68	1.90	ppb
Bismuth	209-1				114		%
Bismuth	209-2				107		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	11.05	12.23	11.83	11.70	5.16	ppb
Cadmium	106-1	11.65	11.15	11.59	11.46	2.40	ppb
Cadmium	111-1	10.30	10.52	10.61	10.48	1.56	ppb
Calcium	43-1	8736.07	8777.88	8953.97	8822.64	1.31	ppb
Calcium	44-1	8444.44	8597.03	8630.89	8557.45	1.16	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	73.19	74.43	74.08	73.90	0.87	ppb
Cobalt	59-2	158.46	158.89	160.63	159.32	0.72	ppb
Copper	63-2	396.68	391.10	386.05	391.28	1.36	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				110		%
Holmium	165-2				108		%
Indium	115-1				108		%
Indium	115-2				107		%
Iron	56-2	46662.53	47576.50	46796.64	47011.89	1.05	ppb
Iron	57-2	45896.54	46145.24	46402.70	46148.16	0.55	ppb
Iron	54-2	46770.86	47419.98	47122.12	47104.32	0.69	ppb
Krypton	83-1						cps

LB Number :	LB134060	Operator :	Jaswal
Lab Sample ID :	P5249-03	Instrumnet Name :	P7
Client Sample ID :	MJNKG0S	Dilution Factor :	1
Date & Time Acquired :	2024-12-21 18:15:03	DataFile Name :	040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	562.15	564.19	560.66	562.33	0.31	ppb
Lead	207-1	567.50	570.92	555.07	564.50	1.48	ppb
Lead	208-1	561.80	567.23	557.10	562.04	0.90	ppb
Lithium	6-1				95		%
Magnesium	24-2	7347.07	7469.19	7337.64	7384.63	0.99	ppb
Manganese	55-2	566.10	562.52	556.53	561.72	0.86	ppb
Molybdenum	94-1	10.86	11.30	11.39	11.18	2.51	ppb
Molybdenum	95-1	7.49	7.87	7.81	7.72	2.65	ppb
Molybdenum	96-1	8.20	8.57	8.39	8.39	2.17	ppb
Molybdenum	97-1	7.47	7.78	7.76	7.67	2.22	ppb
Molybdenum	98-1	7.42	7.76	7.68	7.62	2.29	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	140.10	140.03	141.22	140.45	0.47	ppb
Phosphorus	31-2	907.93	930.48	893.10	910.50	2.07	ppb
Potassium	39-2	2761.74	2825.30	2831.03	2806.02	1.37	ppb
Rhodium	103-1				104		%
Rhodium	103-2				104		%
Scandium	45-1				104		%
Scandium	45-2				102		%
Selenium	82-1	21.23	21.89	22.03	21.72	1.98	ppb
Selenium	77-2	25.25	27.25	22.28	24.92	10.03	ppb
Selenium	78-2	21.31	22.06	22.91	22.09	3.62	ppb
Silicon	28-1	1174.23	1134.09	1157.76	1155.36	1.75	ppb
Silver	107-1	10.87	11.28	11.48	11.21	2.75	ppb
Silver	109-1	10.91	11.27	11.32	11.17	2.01	ppb
Sodium	23-2	9364.75	9541.96	9507.70	9471.47	0.99	ppb
Strontium	86-1	1637.62	1695.79	1686.85	1673.42	1.87	ppb
Strontium	88-1	1698.44	1735.47	1734.71	1722.87	1.23	ppb
Sulfur	34-1	604.60	623.41	692.08	640.03	7.19	ppb
Terbium	159-1				111		%
Terbium	159-2				107		%
Thallium	203-1	9.50	9.50	9.30	9.44	1.21	ppb
Thallium	205-1	9.33	9.38	9.33	9.35	0.33	ppb
Tin	118-1	60.20	62.18	62.76	61.71	2.18	ppb
Titanium	47-1	468.55	474.69	475.21	472.82	0.78	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5249-03

Instrumnet Name :

P7

Client Sample ID :

MJNKG0S

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:15:03

DataFile Name :

040SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.16	1.16	1.10	1.14	2.73	ppb
Vanadium	51-2	146.68	148.62	148.94	148.08	0.82	ppb
Yttrium	89-1				109		%
Yttrium	89-2				105		%
Zinc	66-2	2665.34	2683.31	2707.65	2685.44	0.79	ppb
Zirconium	90-1	2.66	2.78	2.76	2.74	2.31	ppb
Zirconium	91-1	2.81	2.98	2.90	2.90	2.84	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :P5272-04Instrumnet Name :P7

Client Sample ID :MJNKKJ9Dilution Factor :1

Date & Time Acquired :2024-12-21 18:18:03DataFile Name :041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3283.32	3302.28	3916.60	3500.73	10.29	ppb
Antimony	121-1	5.22	5.58	5.60	5.46	3.94	ppb
Arsenic	75-2	73.17	74.86	86.06	78.03	8.97	ppb
Barium	135-1	27.34	29.47	29.48	28.76	4.28	ppb
Barium	137-1	28.00	29.60	29.51	29.04	3.09	ppb
Beryllium	9-1	0.18	0.17	0.15	0.17	9.29	ppb
Bismuth	209-1				116		%
Bismuth	209-2				103		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.86	0.97	1.65	1.16	37.07	ppb
Cadmium	106-1	0.34	0.18	0.20	0.24	38.11	ppb
Cadmium	111-1	0.72	0.81	0.74	0.76	6.55	ppb
Calcium	43-1	4244.97	4598.42	4659.46	4500.95	4.97	ppb
Calcium	44-1	4123.60	4500.29	4411.59	4345.16	4.53	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	14.52	14.50	17.11	15.38	9.78	ppb
Cobalt	59-2	9.38	9.32	10.96	9.89	9.38	ppb
Copper	63-2	1705.36	1682.98	2001.26	1796.54	9.89	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				113		%
Holmium	165-2				102		%
Indium	115-1				108		%
Indium	115-2				97		%
Iron	56-2	12026.21	12074.63	14127.24	12742.69	9.41	ppb
Iron	57-2	11673.68	11855.96	14206.75	12578.80	11.23	ppb
Iron	54-2	12135.58	12099.65	14351.15	12862.13	10.03	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-04 Instrumnet Name : P7
Client Sample ID : MJNKJ9 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:18:03 DataFile Name : 041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	179.98	190.62	194.93	188.51	4.08	ppb
Lead	207-1	176.66	185.57	193.88	185.37	4.65	ppb
Lead	208-1	178.75	187.36	192.29	186.13	3.68	ppb
Lithium	6-1				95		%
Magnesium	24-2	2570.77	2492.50	3066.87	2710.05	11.49	ppb
Manganese	55-2	58.03	57.76	68.29	61.36	9.79	ppb
Molybdenum	94-1	2.26	2.49	2.43	2.39	4.97	ppb
Molybdenum	95-1	1.48	1.63	1.56	1.56	4.78	ppb
Molybdenum	96-1	1.70	1.76	1.72	1.73	1.58	ppb
Molybdenum	97-1	1.56	1.66	1.53	1.58	4.06	ppb
Molybdenum	98-1	1.49	1.64	1.58	1.57	4.96	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	9.80	10.03	11.99	10.61	11.36	ppb
Phosphorus	31-2	995.94	1009.33	1235.35	1080.21	12.45	ppb
Potassium	39-2	1553.02	1560.31	1847.30	1653.54	10.15	ppb
Rhodium	103-1				108		%
Rhodium	103-2				99		%
Scandium	45-1				103		%
Scandium	45-2				95		%
Selenium	82-1	0.25	0.68	0.46	0.46	46.41	ppb
Selenium	77-2	2.57	3.61	2.36	2.85	23.56	ppb
Selenium	78-2	1.52	1.07	3.25	1.95	59.28	ppb
Silicon	28-1	722.82	731.16	733.77	729.25	0.78	ppb
Silver	107-1	5.48	5.86	5.87	5.73	3.87	ppb
Silver	109-1	5.47	5.83	5.85	5.72	3.75	ppb
Sodium	23-2	11674.21	11454.45	13715.22	12281.29	10.15	ppb
Strontium	86-1	903.05	998.97	977.49	959.84	5.24	ppb
Strontium	88-1	916.15	994.43	990.15	966.91	4.55	ppb
Sulfur	34-1	2328.51	2869.98	2877.34	2691.94	11.69	ppb
Terbium	159-1				113		%
Terbium	159-2				100		%
Thallium	203-1	0.35	0.38	0.37	0.37	4.54	ppb
Thallium	205-1	0.35	0.37	0.38	0.37	4.13	ppb
Tin	118-1	10.81	11.69	11.79	11.43	4.70	ppb
Titanium	47-1	169.29	181.44	181.70	177.48	3.99	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5272-04

Instrumnet Name :

P7

Client Sample ID :

MJNKJ9

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:18:03

DataFile Name :

041SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.85	0.93	0.94	0.91	5.54	ppb
Vanadium	51-2	14.45	14.51	17.49	15.48	11.23	ppb
Yttrium	89-1				111		%
Yttrium	89-2				99		%
Zinc	66-2	390.80	391.28	469.83	417.30	10.90	ppb
Zirconium	90-1	0.60	0.64	0.63	0.63	3.32	ppb
Zirconium	91-1	0.63	0.65	0.64	0.64	0.89	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5272-05

Instrumnet Name :

P7

Client Sample ID :

MJNKJ9D

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:21:10

DataFile Name :

042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3433.49	3395.84	3441.72	3423.68	0.71	ppb
Antimony	121-1	5.51	5.53	5.74	5.59	2.32	ppb
Arsenic	75-2	72.47	72.89	71.81	72.39	0.76	ppb
Barium	135-1	27.28	27.87	28.60	27.91	2.37	ppb
Barium	137-1	27.89	28.57	29.02	28.50	2.00	ppb
Beryllium	9-1	0.13	0.16	0.16	0.15	12.81	ppb
Bismuth	209-1				115		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.91	0.92	0.80	0.88	7.75	ppb
Cadmium	106-1	0.03	0.73	-0.25	0.17	293.68	ppb
Cadmium	111-1	0.75	0.85	0.80	0.80	6.49	ppb
Calcium	43-1	4767.26	4842.86	4818.66	4809.59	0.80	ppb
Calcium	44-1	4676.14	4673.26	4656.06	4668.49	0.23	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	15.26	14.68	15.20	15.05	2.13	ppb
Cobalt	59-2	9.36	8.99	9.34	9.23	2.28	ppb
Copper	63-2	1738.00	1673.23	1707.42	1706.22	1.90	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				111		%
Holmium	165-2				107		%
Indium	115-1				107		%
Indium	115-2				102		%
Iron	56-2	12107.61	11697.64	12119.72	11974.99	2.01	ppb
Iron	57-2	11681.36	11526.48	11778.55	11662.13	1.09	ppb
Iron	54-2	12160.78	11762.50	12028.71	11984.00	1.69	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-05 Instrumnet Name : P7
Client Sample ID : MJNKJ9D Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:21:10 DataFile Name : 042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	187.53	191.34	189.68	189.52	1.01	ppb
Lead	207-1	185.50	188.80	188.30	187.53	0.95	ppb
Lead	208-1	186.82	189.65	187.38	187.95	0.80	ppb
Lithium	6-1				93		%
Magnesium	24-2	2551.62	2519.80	2604.86	2558.76	1.68	ppb
Manganese	55-2	56.75	56.19	57.46	56.80	1.13	ppb
Molybdenum	94-1	2.43	2.43	2.47	2.44	1.10	ppb
Molybdenum	95-1	1.57	1.60	1.57	1.58	0.92	ppb
Molybdenum	96-1	1.67	1.76	1.75	1.73	3.01	ppb
Molybdenum	97-1	1.54	1.53	1.58	1.55	1.56	ppb
Molybdenum	98-1	1.54	1.52	1.57	1.54	1.53	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	9.87	9.65	10.08	9.87	2.17	ppb
Phosphorus	31-2	1044.10	1020.12	1037.03	1033.75	1.19	ppb
Potassium	39-2	1568.37	1537.39	1576.09	1560.61	1.31	ppb
Rhodium	103-1				106		%
Rhodium	103-2				105		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	0.85	0.31	0.61	0.59	45.84	ppb
Selenium	77-2	4.88	2.28	3.72	3.63	35.89	ppb
Selenium	78-2	1.49	0.51	1.14	1.05	47.61	ppb
Silicon	28-1	706.67	774.34	768.24	749.75	4.99	ppb
Silver	107-1	5.68	5.78	5.91	5.79	2.01	ppb
Silver	109-1	5.74	5.81	5.96	5.84	1.99	ppb
Sodium	23-2	12071.54	11898.41	12169.18	12046.38	1.14	ppb
Strontium	86-1	1047.38	1061.71	1063.42	1057.50	0.83	ppb
Strontium	88-1	1088.42	1096.80	1080.66	1088.63	0.74	ppb
Sulfur	34-1	2876.80	3003.95	2977.36	2952.71	2.27	ppb
Terbium	159-1				111		%
Terbium	159-2				106		%
Thallium	203-1	0.36	0.36	0.38	0.37	3.28	ppb
Thallium	205-1	0.36	0.37	0.36	0.36	1.37	ppb
Tin	118-1	11.15	11.41	11.81	11.46	2.89	ppb
Titanium	47-1	174.92	176.04	177.01	175.99	0.59	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5272-05

Instrumnet Name :

P7

Client Sample ID :

MJNKJ9D

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:21:10

DataFile Name :

042SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.91	0.91	0.95	0.92	2.22	ppb
Vanadium	51-2	14.83	14.45	14.72	14.67	1.35	ppb
Yttrium	89-1				108		%
Yttrium	89-2				105		%
Zinc	66-2	387.94	382.09	394.03	388.02	1.54	ppb
Zirconium	90-1	0.63	0.64	0.66	0.64	2.56	ppb
Zirconium	91-1	0.65	0.67	0.66	0.66	1.29	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-04LX5 Instrumnet Name : P7
Client Sample ID : MJNKG9L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:24:19 DataFile Name : 043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	675.76	669.13	668.37	671.09	0.61	ppb
Antimony	121-1	1.15	1.15	1.11	1.13	1.95	ppb
Arsenic	75-2	14.80	15.20	14.48	14.82	2.42	ppb
Barium	135-1	5.79	5.82	5.60	5.74	2.04	ppb
Barium	137-1	5.77	5.87	5.72	5.79	1.31	ppb
Beryllium	9-1	0.05	0.04	0.04	0.04	16.35	ppb
Bismuth	209-1				109		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.16	0.22	0.23	0.20	19.30	ppb
Cadmium	106-1	-0.11	-1.05	-0.84	-0.67		ppb
Cadmium	111-1	0.13	0.09	0.10	0.11	16.88	ppb
Calcium	43-1	922.10	924.89	938.54	928.51	0.95	ppb
Calcium	44-1	920.00	921.15	947.60	929.58	1.68	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2.93	2.98	2.96	2.96	0.95	ppb
Cobalt	59-2	1.86	1.83	1.84	1.84	0.87	ppb
Copper	63-2	354.38	349.47	346.63	350.16	1.12	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				107		%
Holmium	165-2				105		%
Indium	115-1				103		%
Indium	115-2				100		%
Iron	56-2	2458.83	2395.11	2424.55	2426.16	1.31	ppb
Iron	57-2	2419.41	2406.63	2370.16	2398.73	1.07	ppb
Iron	54-2	2473.03	2437.07	2421.94	2444.01	1.07	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-04LX5 Instrumnet Name : P7
Client Sample ID : MJNKJ9L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:24:19 DataFile Name : 043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	35.83	35.75	36.31	35.96	0.83	ppb
Lead	207-1	35.67	35.06	35.31	35.35	0.86	ppb
Lead	208-1	35.48	35.18	35.51	35.39	0.51	ppb
Lithium	6-1				89		%
Magnesium	24-2	505.52	495.92	495.99	499.14	1.11	ppb
Manganese	55-2	11.71	11.45	11.49	11.55	1.24	ppb
Molybdenum	94-1	0.52	0.46	0.46	0.48	6.96	ppb
Molybdenum	95-1	0.31	0.30	0.29	0.30	3.06	ppb
Molybdenum	96-1	0.35	0.36	0.34	0.35	2.38	ppb
Molybdenum	97-1	0.34	0.33	0.36	0.34	4.22	ppb
Molybdenum	98-1	0.33	0.32	0.33	0.32	1.71	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	2.95	2.90	2.81	2.89	2.42	ppb
Phosphorus	31-2	198.85	197.89	200.22	198.99	0.59	ppb
Potassium	39-2	317.18	311.89	314.91	314.66	0.84	ppb
Rhodium	103-1				102		%
Rhodium	103-2				103		%
Scandium	45-1				97		%
Scandium	45-2				98		%
Selenium	82-1	-0.01	-0.04	0.08	0.01	594.57	ppb
Selenium	77-2	0.70	0.40	0.86	0.66	35.79	ppb
Selenium	78-2	0.90	-0.14	1.13	0.63	107.16	ppb
Silicon	28-1	155.62	171.67	152.51	159.93	6.43	ppb
Silver	107-1	1.18	1.20	1.16	1.18	1.70	ppb
Silver	109-1	1.16	1.21	1.17	1.18	2.05	ppb
Sodium	23-2	2360.60	2419.14	2347.54	2375.76	1.60	ppb
Strontium	86-1	193.34	193.06	199.21	195.20	1.78	ppb
Strontium	88-1	196.23	196.73	199.34	197.43	0.85	ppb
Sulfur	34-1	-492.19	-506.99	-399.12	-466.10		ppb
Terbium	159-1				107		%
Terbium	159-2				104		%
Thallium	203-1	0.09	0.08	0.07	0.08	9.60	ppb
Thallium	205-1	0.09	0.09	0.09	0.09	2.40	ppb
Tin	118-1	2.42	2.40	2.39	2.40	0.68	ppb
Titanium	47-1	35.40	35.85	36.23	35.83	1.16	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5272-04LX5

Instrumnet Name :

P7

Client Sample ID :

MJNKJ9L

Dilution Factor :

5

Date & Time Acquired :

2024-12-21 18:24:19

DataFile Name :

043SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.19	0.19	0.19	0.19	1.07	ppb
Vanadium	51-2	2.91	2.99	2.89	2.93	1.85	ppb
Yttrium	89-1				104		%
Yttrium	89-2				101		%
Zinc	66-2	79.26	78.54	79.87	79.23	0.84	ppb
Zirconium	90-1	0.12	0.12	0.13	0.12	6.34	ppb
Zirconium	91-1	0.12	0.11	0.13	0.12	8.21	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-06 Instrumnet Name : P7
Client Sample ID : MJNKJ9S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:27:31 DataFile Name : 044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3769.92	3624.59	3644.56	3679.69	2.14	ppb
Antimony	121-1	26.71	26.73	27.02	26.82	0.64	ppb
Arsenic	75-2	82.14	80.06	80.66	80.95	1.32	ppb
Barium	135-1	429.98	431.98	435.81	432.59	0.69	ppb
Barium	137-1	463.78	457.46	457.56	459.60	0.79	ppb
Beryllium	9-1	11.07	11.67	11.64	11.46	2.94	ppb
Bismuth	209-1				114		%
Bismuth	209-2				108		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	10.93	11.63	11.59	11.38	3.46	ppb
Cadmium	106-1	10.06	9.28	10.60	9.98	6.64	ppb
Cadmium	111-1	10.34	10.26	10.38	10.33	0.59	ppb
Calcium	43-1	4600.21	4753.38	4573.36	4642.32	2.09	ppb
Calcium	44-1	4480.85	4514.60	4451.83	4482.42	0.70	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	57.17	57.23	57.75	57.38	0.56	ppb
Cobalt	59-2	116.80	116.45	117.26	116.84	0.35	ppb
Copper	63-2	1755.90	1736.45	1728.16	1740.17	0.82	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				111		%
Holmium	165-2				108		%
Indium	115-1				106		%
Indium	115-2				103		%
Iron	56-2	12097.89	12034.36	11958.40	12030.21	0.58	ppb
Iron	57-2	11624.28	11745.66	11870.65	11746.86	1.05	ppb
Iron	54-2	11884.12	11974.03	12183.20	12013.78	1.28	ppb
Krypton	83-1						cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5272-06

Instrumnet Name :

P7

Client Sample ID :

MJNKJ9S

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:27:31

DataFile Name :

044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	194.87	188.75	194.96	192.86	1.85	ppb
Lead	207-1	191.57	191.71	174.75	186.01	5.24	ppb
Lead	208-1	193.55	190.63	186.99	190.39	1.73	ppb
Lithium	6-1				94		%
Magnesium	24-2	2468.17	2459.53	2492.70	2473.47	0.70	ppb
Manganese	55-2	159.24	159.05	158.87	159.05	0.12	ppb
Molybdenum	94-1	2.38	2.43	2.40	2.41	1.00	ppb
Molybdenum	95-1	1.58	1.59	1.55	1.57	1.43	ppb
Molybdenum	96-1	1.68	1.78	1.70	1.72	3.13	ppb
Molybdenum	97-1	1.55	1.57	1.59	1.57	1.08	ppb
Molybdenum	98-1	1.57	1.57	1.53	1.56	1.43	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	117.92	118.86	118.71	118.50	0.43	ppb
Phosphorus	31-2	1008.35	999.71	982.43	996.83	1.32	ppb
Potassium	39-2	1534.38	1529.29	1550.93	1538.20	0.74	ppb
Rhodium	103-1				103		%
Rhodium	103-2				105		%
Scandium	45-1				100		%
Scandium	45-2				100		%
Selenium	82-1	21.61	22.16	22.08	21.95	1.33	ppb
Selenium	77-2	21.62	23.41	25.58	23.54	8.43	ppb
Selenium	78-2	24.32	24.31	22.69	23.77	3.96	ppb
Silicon	28-1	727.25	747.90	707.12	727.43	2.80	ppb
Silver	107-1	16.37	16.53	16.59	16.50	0.72	ppb
Silver	109-1	16.31	16.72	16.52	16.51	1.25	ppb
Sodium	23-2	11544.26	11490.15	11529.29	11521.23	0.24	ppb
Strontium	86-1	995.09	1013.52	994.17	1000.92	1.09	ppb
Strontium	88-1	1011.81	1041.51	1007.86	1020.40	1.80	ppb
Sulfur	34-1	2792.88	2996.00	2774.39	2854.43	4.31	ppb
Terbium	159-1				111		%
Terbium	159-2				105		%
Thallium	203-1	9.84	9.76	9.93	9.84	0.89	ppb
Thallium	205-1	9.77	9.60	9.79	9.72	1.07	ppb
Tin	118-1	11.36	11.54	11.66	11.52	1.30	ppb
Titanium	47-1	175.16	177.93	176.35	176.48	0.79	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5272-06

Instrumnet Name :

P7

Client Sample ID :

MJNKJ9S

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:27:31

DataFile Name :

044SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.95	0.92	0.92	0.93	1.42	ppb
Vanadium	51-2	119.22	119.60	119.00	119.27	0.26	ppb
Yttrium	89-1				107		%
Yttrium	89-2				104		%
Zinc	66-2	495.76	492.52	493.86	494.05	0.33	ppb
Zirconium	90-1	0.64	0.64	0.63	0.64	1.04	ppb
Zirconium	91-1	0.61	0.65	0.66	0.64	3.54	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :P5273-01Instrumnet Name :P7

Client Sample ID :MJNKH1Dilution Factor :1

Date & Time Acquired :2024-12-21 18:30:38DataFile Name :045SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	3234.30	3244.25	3235.84	3238.13	0.17	ppb
Antimony	121-1	15.44	15.66	15.41	15.50	0.91	ppb
Arsenic	75-2	88.06	87.90	89.02	88.33	0.69	ppb
Barium	135-1	47.55	48.97	47.65	48.05	1.64	ppb
Barium	137-1	48.08	48.40	47.90	48.13	0.53	ppb
Beryllium	9-1	0.15	0.20	0.21	0.19	18.30	ppb
Bismuth	209-1				115		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	1.56	1.66	1.40	1.54	8.69	ppb
Cadmium	106-1	1.22	1.31	0.23	0.92	65.51	ppb
Cadmium	111-1	1.26	1.30	1.19	1.25	4.62	ppb
Calcium	43-1	10474.93	10437.01	10432.67	10448.20	0.22	ppb
Calcium	44-1	10103.31	10049.84	10168.38	10107.18	0.59	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	14.92	15.15	14.64	14.90	1.69	ppb
Cobalt	59-2	16.33	16.33	16.18	16.28	0.53	ppb
Copper	63-2	1129.57	1128.56	1123.09	1127.07	0.31	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				111		%
Holmium	165-2				106		%
Indium	115-1				105		%
Indium	115-2				102		%
Iron	56-2	17170.85	17350.34	17202.10	17241.10	0.56	ppb
Iron	57-2	17096.96	17122.69	16681.68	16967.11	1.46	ppb
Iron	54-2	17286.01	17452.34	17150.65	17296.33	0.87	ppb
Krypton	83-1						cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5273-01

Instrumnet Name :

P7

Client Sample ID :

MJNKH1

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:30:38

DataFile Name :

045SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	297.82	299.33	302.85	300.00	0.86	ppb
Lead	207-1	300.46	302.21	301.60	301.42	0.30	ppb
Lead	208-1	296.50	299.96	300.28	298.91	0.70	ppb
Lithium	6-1				91		%
Magnesium	24-2	2666.52	2642.20	2673.54	2660.75	0.62	ppb
Manganese	55-2	102.75	102.34	101.75	102.28	0.49	ppb
Molybdenum	94-1	4.07	4.07	4.10	4.08	0.47	ppb
Molybdenum	95-1	3.05	3.01	3.03	3.03	0.73	ppb
Molybdenum	96-1	3.26	3.22	3.29	3.26	1.17	ppb
Molybdenum	97-1	3.04	3.03	3.08	3.05	0.87	ppb
Molybdenum	98-1	3.00	3.05	2.99	3.01	1.05	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	10.42	10.57	10.46	10.48	0.72	ppb
Phosphorus	31-2	1356.83	1376.77	1386.73	1373.44	1.11	ppb
Potassium	39-2	1723.93	1719.37	1702.70	1715.33	0.65	ppb
Rhodium	103-1				104		%
Rhodium	103-2				103		%
Scandium	45-1				100		%
Scandium	45-2				99		%
Selenium	82-1	1.01	0.30	0.54	0.62	58.22	ppb
Selenium	77-2	5.36	3.92	3.90	4.39	19.05	ppb
Selenium	78-2	2.12	1.14	1.11	1.46	39.68	ppb
Silicon	28-1	734.99	766.12	760.69	753.93	2.21	ppb
Silver	107-1	2.85	2.88	2.84	2.86	0.80	ppb
Silver	109-1	2.87	2.85	2.83	2.85	0.71	ppb
Sodium	23-2	10680.11	10572.35	10484.62	10579.03	0.93	ppb
Strontium	86-1	1535.30	1535.96	1521.20	1530.82	0.54	ppb
Strontium	88-1	1557.90	1556.62	1566.20	1560.24	0.33	ppb
Sulfur	34-1	4976.02	5159.41	5325.09	5153.51	3.39	ppb
Terbium	159-1				111		%
Terbium	159-2				105		%
Thallium	203-1	0.42	0.41	0.43	0.42	1.95	ppb
Thallium	205-1	0.42	0.43	0.42	0.42	1.79	ppb
Tin	118-1	20.80	21.38	21.17	21.12	1.39	ppb
Titanium	47-1	225.64	225.76	226.10	225.83	0.11	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5273-01

Instrumnet Name :

P7

Client Sample ID :

MJNKH1

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:30:38

DataFile Name :

045SMPL.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	1.67	1.68	1.68	1.68	0.33	ppb
Vanadium	51-2	18.76	19.21	18.61	18.86	1.64	ppb
Yttrium	89-1				107		%
Yttrium	89-2				104		%
Zinc	66-2	900.27	898.69	893.92	897.63	0.37	ppb
Zirconium	90-1	0.85	0.87	0.89	0.87	2.54	ppb
Zirconium	91-1	1.09	0.94	0.90	0.98	10.39	ppb

LB Number :LB134060Operator :Jaswal

Lab Sample ID :CCV038Instrumnet Name :P7

Client Sample ID :CCV038Dilution Factor :1

Date & Time Acquired :2024-12-21 18:33:43DataFile Name :046CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	48636.37	48274.64	48183.54	48364.85	0.50	ppb
Antimony	121-1	479.77	489.88	493.70	487.78	1.48	ppb
Arsenic	75-2	479.17	488.65	476.68	481.50	1.31	ppb
Barium	135-1	2442.29	2448.05	2480.58	2456.97	0.84	ppb
Barium	137-1	2444.71	2480.11	2493.46	2472.76	1.02	ppb
Beryllium	9-1	517.35	526.50	528.48	524.11	1.13	ppb
Bismuth	209-1				101		%
Bismuth	209-2				96		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	472.61	472.14	486.22	476.99	1.68	ppb
Cadmium	106-1	479.78	480.23	485.25	481.75	0.63	ppb
Cadmium	111-1	457.64	462.29	470.65	463.52	1.42	ppb
Calcium	43-1	250447.69	251008.13	252780.63	251412.15	0.48	ppb
Calcium	44-1	252580.27	249597.81	251750.39	251309.49	0.61	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	498.40	509.38	491.12	499.64	1.84	ppb
Cobalt	59-2	492.79	489.97	484.30	489.02	0.88	ppb
Copper	63-2	4772.97	4736.85	4784.01	4764.61	0.52	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				104		%
Holmium	165-2				102		%
Indium	115-1				92		%
Indium	115-2				89		%
Iron	56-2	129170.37	127433.92	125552.24	127385.51	1.42	ppb
Iron	57-2	127355.15	124756.07	124922.00	125677.74	1.16	ppb
Iron	54-2	127461.43	126693.13	126387.94	126847.50	0.44	ppb
Krypton	83-1						cps

LB Number :LB134060Operator :Jaswal

Lab Sample ID :CCV038Instrumnet Name :P7

Client Sample ID :CCV038Dilution Factor :1

Date & Time Acquired :2024-12-21 18:33:43DataFile Name :046CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	2485.33	2540.65	2508.34	2511.44	1.11	ppb
Lead	207-1	2499.02	2539.16	2560.24	2532.81	1.23	ppb
Lead	208-1	2490.78	2524.69	2524.54	2513.34	0.78	ppb
Lithium	6-1				91		%
Magnesium	24-2	234437.24	232472.71	229971.74	232293.89	0.96	ppb
Manganese	55-2	4868.47	4926.63	4832.96	4876.02	0.97	ppb
Molybdenum	94-1	4942.59	5001.97	4946.94	4963.83	0.67	ppb
Molybdenum	95-1	4949.02	4982.33	4993.07	4974.80	0.46	ppb
Molybdenum	96-1	4920.98	4948.59	4953.29	4940.95	0.35	ppb
Molybdenum	97-1	4946.77	4979.49	4849.38	4925.21	1.37	ppb
Molybdenum	98-1	4872.68	4909.16	4881.01	4887.62	0.39	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	465.63	462.11	459.19	462.31	0.70	ppb
Phosphorus	31-2	9589.95	9414.37	9437.54	9480.62	1.01	ppb
Potassium	39-2	122010.05	121360.79	120188.86	121186.57	0.76	ppb
Rhodium	103-1				89		%
Rhodium	103-2				89		%
Scandium	45-1				90		%
Scandium	45-2				89		%
Selenium	82-1	467.86	468.10	473.55	469.84	0.69	ppb
Selenium	77-2	452.64	474.85	456.58	461.36	2.57	ppb
Selenium	78-2	465.17	472.81	462.10	466.69	1.18	ppb
Silicon	28-1	195.69	197.50	198.50	197.23	0.72	ppb
Silver	107-1	472.13	472.37	473.70	472.73	0.18	ppb
Silver	109-1	469.09	473.67	483.96	475.57	1.60	ppb
Sodium	23-2	242118.50	243096.23	239854.36	241689.70	0.69	ppb
Strontium	86-1	12261.39	12491.93	12383.81	12379.04	0.93	ppb
Strontium	88-1	12114.78	12380.30	12386.35	12293.81	1.26	ppb
Sulfur	34-1	9542.52	9360.68	9554.17	9485.79	1.14	ppb
Terbium	159-1				103		%
Terbium	159-2				100		%
Thallium	203-1	504.39	506.64	500.10	503.71	0.66	ppb
Thallium	205-1	493.90	504.35	498.23	498.83	1.05	ppb
Tin	118-1	480.56	488.48	498.48	489.17	1.84	ppb
Titanium	47-1	5025.29	4953.10	4910.33	4962.91	1.17	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCV038 Instrumnet Name : P7
Client Sample ID : CCV038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:33:43 DataFile Name : 046CCV.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	493.69	505.12	512.81	503.87	1.91	ppb
Vanadium	51-2	505.75	502.30	500.23	502.76	0.55	ppb
Yttrium	89-1				95		%
Yttrium	89-2				91		%
Zinc	66-2	4604.27	4673.34	4597.89	4625.17	0.90	ppb
Zirconium	90-1	488.81	500.77	495.77	495.12	1.21	ppb
Zirconium	91-1	500.54	492.44	498.95	497.31	0.86	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB038 Instrumnet Name : P7
Client Sample ID : CCB038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:39:43 DataFile Name : 048CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Aluminium	27-2	0.58	0.47	0.55	0.53	10.71	ppb
Antimony	121-1	0.05	0.06	0.06	0.06	14.85	ppb
Arsenic	75-2	0.00	-0.01	0.02	0.00	350.50	ppb
Barium	135-1	0.03	0.03	0.01	0.02	42.36	ppb
Barium	137-1	0.02	0.02	0.02	0.02	17.21	ppb
Beryllium	9-1	0.01	0.04	0.04	0.03	47.87	ppb
Bismuth	209-1				110		%
Bismuth	209-2				106		%
Bromine	81-1						cps
Bromine	81-2						cps
Cadmium	108-1	0.04	-0.02	0.04	0.02	151.55	ppb
Cadmium	106-1	-0.67	-0.73	-0.41	-0.60		ppb
Cadmium	111-1	-0.03	-0.04	-0.02	-0.03		ppb
Calcium	43-1	1.10	1.07	-0.29	0.63	127.02	ppb
Calcium	44-1	1.93	1.30	0.75	1.33	44.54	ppb
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	0.02	0.03	0.02	0.02	36.58	ppb
Cobalt	59-2	-0.01	0.00	-0.01	-0.01		ppb
Copper	63-2	0.11	0.12	0.12	0.12	7.34	ppb
Dysprosium	156-1						cps
Dysprosium	156-2						cps
Erbium	164-1						cps
Erbium	164-2						cps
Gadolinium	160-1						cps
Gadolinium	160-2						cps
Holmium	165-1				105		%
Holmium	165-2				104		%
Indium	115-1				98		%
Indium	115-2				97		%
Iron	56-2	0.48	0.47	0.38	0.44	12.17	ppb
Iron	57-2	-0.94	-2.04	-0.34	-1.11		ppb
Iron	54-2	0.15	0.36	-0.07	0.14	148.48	ppb
Krypton	83-1						cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB038 Instrumnet Name : P7
Client Sample ID : CCB038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:39:43 DataFile Name : 048CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Lead	206-1	0.12	0.13	0.12	0.12	5.48	ppb
Lead	207-1	0.13	0.12	0.12	0.13	5.03	ppb
Lead	208-1	0.12	0.12	0.12	0.12	3.39	ppb
Lithium	6-1				100		%
Magnesium	24-2	1.35	1.15	1.26	1.25	7.95	ppb
Manganese	55-2	0.04	0.03	0.02	0.03	30.84	ppb
Molybdenum	94-1	0.07	0.08	0.06	0.07	15.51	ppb
Molybdenum	95-1	0.05	0.07	0.05	0.06	15.39	ppb
Molybdenum	96-1	0.06	0.06	0.05	0.06	9.50	ppb
Molybdenum	97-1	0.06	0.07	0.07	0.07	9.58	ppb
Molybdenum	98-1	0.06	0.06	0.05	0.05	10.94	ppb
Neodymium	150-1						cps
Neodymium	150-2						cps
Nickel	60-2	0.03	0.04	0.05	0.04	21.02	ppb
Phosphorus	31-2	-18.94	-18.27	-18.54	-18.58		ppb
Potassium	39-2	-3.63	-4.68	-3.31	-3.87		ppb
Rhodium	103-1				97		%
Rhodium	103-2				98		%
Scandium	45-1				93		%
Scandium	45-2				91		%
Selenium	82-1	0.14	-0.19	-0.17	-0.07		ppb
Selenium	77-2	-0.05	-0.05	-0.05	-0.05		ppb
Selenium	78-2	-0.46	-0.27	0.39	-0.11		ppb
Silicon	28-1	-9.33	-9.35	-8.49	-9.06		ppb
Silver	107-1	0.02	0.02	0.02	0.02	10.68	ppb
Silver	109-1	0.02	0.01	0.02	0.02	14.44	ppb
Sodium	23-2	27.50	26.56	26.61	26.89	1.96	ppb
Strontium	86-1	-0.51	0.24	-0.53	-0.27		ppb
Strontium	88-1	0.10	0.15	0.08	0.11	29.63	ppb
Sulfur	34-1	-554.42	-522.09	-408.87	-495.13		ppb
Terbium	159-1				105		%
Terbium	159-2				102		%
Thallium	203-1	0.04	0.04	0.04	0.04	10.59	ppb
Thallium	205-1	0.05	0.05	0.05	0.05	3.60	ppb
Tin	118-1	-0.01	0.00	-0.01	-0.01		ppb
Titanium	47-1	0.05	0.05	0.05	0.05	9.96	ppb

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB038 Instrumnet Name : P7
Client Sample ID : CCB038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:39:43 DataFile Name : 048CCBE.d

Parameter	Mass	ConRep1	ConRep2	ConRep3	Avg. Conc.	ConcRSD	Units
Uranium	238-1	0.00	0.00	0.00	0.00	13.68	ppb
Vanadium	51-2	0.01	0.00	0.00	0.00	72.33	ppb
Yttrium	89-1				98		%
Yttrium	89-2				96		%
Zinc	66-2	0.24	0.26	0.26	0.25	4.22	ppb
Zirconium	90-1	0.01	0.01	0.01	0.01	13.90	ppb
Zirconium	91-1	0.00	0.01	0.00	0.00	65.47	ppb

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

S00

Instrumnet Name :

P7

Client Sample ID :

S0

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 16:08:12

DataFile Name :

004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	87	127	90	101	21.95	cps
Antimony	121-1	33	40	37	37	9.10	cps
Arsenic	75-2	3	13	7	8	65.47	cps
Barium	135-1	33	17	33	28	34.63	cps
Barium	137-1	70	60	63	64	7.90	cps
Beryllium	9-1	47	33	33	38	20.39	cps
Bismuth	209-1	8130270	8171166	8207628	8169688	0.47	cps
Bismuth	209-2	6906025	6830998	6722650	6819891	1.35	cps
Bromine	81-1	17247	16526	16920	16898	2.14	cps
Bromine	81-2	323	317	287	309	6.32	cps
Cadmium	108-1	13	10	7	10	33.30	cps
Cadmium	106-1	3267	3024	2840	3044	7.03	cps
Cadmium	111-1	2284	2113	2000	2133	6.71	cps
Calcium	43-1	327	383	367	359	8.12	cps
Calcium	44-1	9790	9837	9723	9783	0.58	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1323	1317	1503	1381	7.67	cps
Cobalt	59-2	157	153	167	159	4.37	cps
Copper	63-2	673	640	560	624	9.33	cps
Dysprosium	156-1	17	3	10	10	66.70	cps
Dysprosium	156-2	7	10	10	9	21.63	cps
Erbium	164-1	63	47	60	57	15.56	cps
Erbium	164-2	43	33	33	37	15.75	cps
Gadolinium	160-1	57	40	33	43	27.74	cps
Gadolinium	160-2	510	560	463	511	9.46	cps
Holmium	165-1	13688264	13521539	13462881	13557561	0.86	cps
Holmium	165-2	9705183	9705393	9527535	9646037	1.06	cps
Indium	115-1	11355518	11329194	11455728	11380147	0.59	cps
Indium	115-2	4235373	4285421	4257457	4259417	0.59	cps
Iron	56-2	19439	19413	19366	19406	0.19	cps
Iron	57-2	1130	1143	1253	1176	5.76	cps
Iron	54-2	2887	2787	2504	2726	7.30	cps
Krypton	83-1	210	257	193	220	14.92	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:08:12 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	487	363	390	413	15.70	cps
Lead	207-1	353	327	313	331	6.15	cps
Lead	208-1	1783	1583	1537	1635	8.02	cps
Lithium	6-1	1358664	1308544	1352478	1339895	2.04	cps
Magnesium	24-2	467	457	450	458	1.83	cps
Manganese	55-2	373	320	333	342	8.11	cps
Molybdenum	94-1	250	310	293	284	10.89	cps
Molybdenum	95-1	167	130	160	152	12.83	cps
Molybdenum	96-1	247	267	217	243	10.34	cps
Molybdenum	97-1	97	103	93	98	5.21	cps
Molybdenum	98-1	290	223	310	274	16.54	cps
Neodymium	150-1	3	7	7	6	34.70	cps
Neodymium	150-2	3	3	3	3	0.00	cps
Nickel	60-2	373	313	350	346	8.75	cps
Phosphorus	31-2	180	137	100	139	28.83	cps
Potassium	39-2	60871	62193	61082	61382	1.16	cps
Rhodium	103-1	10724749	10630375	10583390	10646171	0.68	cps
Rhodium	103-2	6455841	6478298	6503984	6479374	0.37	cps
Scandium	45-1	6115766	6128448	6160947	6135054	0.38	cps
Scandium	45-2	566040	570604	571031	569225	0.49	cps
Selenium	82-1	320	312	361	331	7.91	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	470	433	400	434	8.06	cps
Silicon	28-1	721139	724338	719013	721497	0.37	cps
Silver	107-1	93	77	87	86	9.80	cps
Silver	109-1	40	43	23	36	30.14	cps
Sodium	23-2	17884	17744	18248	17958	1.45	cps
Strontium	86-1	353	457	350	387	15.68	cps
Strontium	88-1	213	220	173	202	12.48	cps
Sulfur	34-1	202337	205978	203573	203963	0.91	cps
Terbium	159-1	13901007	13817544	13964004	13894185	0.53	cps
Terbium	159-2	9601619	9714675	9497745	9604679	1.13	cps
Thallium	203-1	153	140	170	154	9.73	cps
Thallium	205-1	270	313	253	279	11.10	cps
Tin	118-1	1433	1523	1427	1461	3.70	cps
Titanium	47-1	60	60	107	76	35.66	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S0 Instrumnet Name : P7
Client Sample ID : S0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:08:12 DataFile Name : 004CALB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	17	17	13	16	12.40	cps
Vanadium	51-2	0	10	7	6	91.64	cps
Yttrium	89-1	13137081	12986190	13091761	13071677	0.59	cps
Yttrium	89-2	3677601	3639699	3704841	3674047	0.89	cps
Zinc	66-2	290	263	310	288	8.14	cps
Zirconium	90-1	617	543	720	627	14.16	cps
Zirconium	91-1	120	110	150	127	16.43	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P7
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:14:49 DataFile Name : 006CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	6661	6511	6702	6625	1.51	cps
Antimony	121-1	26802	26618	26484	26635	0.60	cps
Arsenic	75-2	820	840	837	832	1.29	cps
Barium	135-1	33199	32494	33309	33000	1.34	cps
Barium	137-1	56833	56773	57164	56923	0.37	cps
Beryllium	9-1	1540	1540	1497	1526	1.64	cps
Bismuth	209-1	8374811	8227462	8170354	8257543	1.28	cps
Bismuth	209-2	6853974	6840176	6844505	6846218	0.10	cps
Bromine	81-1	16256	16636	16483	16458	1.16	cps
Bromine	81-2	233	220	243	232	5.04	cps
Cadmium	108-1	260	250	233	248	5.44	cps
Cadmium	106-1	3724	3320	3677	3574	6.17	cps
Cadmium	111-1	6371	6252	6288	6304	0.97	cps
Calcium	43-1	19135	18658	19079	18957	1.38	cps
Calcium	44-1	309702	306032	307244	307659	0.61	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	13136	12832	13119	13029	1.31	cps
Cobalt	59-2	9847	9737	9757	9780	0.60	cps
Copper	63-2	13333	13109	13042	13161	1.16	cps
Dysprosium	156-1	10	13	20	14	35.26	cps
Dysprosium	156-2	23	13	7	14	58.06	cps
Erbium	164-1	67	50	63	60	14.70	cps
Erbium	164-2	43	30	50	41	24.77	cps
Gadolinium	160-1	53	63	40	52	22.41	cps
Gadolinium	160-2	550	593	530	558	5.80	cps
Holmium	165-1	13474243	13626995	13666970	13589403	0.75	cps
Holmium	165-2	9679105	9725275	9705278	9703219	0.24	cps
Indium	115-1	11425519	11279706	11283837	11329687	0.73	cps
Indium	115-2	4327770	4279310	4270374	4292485	0.72	cps
Iron	56-2	295143	295044	294089	294759	0.20	cps
Iron	57-2	8609	8206	8526	8447	2.52	cps
Iron	54-2	18138	18625	18375	18379	1.33	cps
Krypton	83-1	180	270	263	238	21.09	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P7
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:14:49 DataFile Name : 006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	10181	10217	9714	10037	2.80	cps
Lead	207-1	8643	8619	8453	8572	1.21	cps
Lead	208-1	39149	39466	39012	39209	0.59	cps
Lithium	6-1	1392959	1358956	1349987	1367301	1.66	cps
Magnesium	24-2	269127	267457	268438	268341	0.31	cps
Manganese	55-2	5264	5041	4878	5061	3.84	cps
Molybdenum	94-1	27790	27382	27159	27444	1.17	cps
Molybdenum	95-1	33786	33849	33726	33787	0.18	cps
Molybdenum	96-1	38220	38273	37023	37839	1.87	cps
Molybdenum	97-1	20915	21079	20605	20866	1.15	cps
Molybdenum	98-1	54264	54438	54518	54406	0.24	cps
Neodymium	150-1	3	0	7	3	100.05	cps
Neodymium	150-2	3	7	0	3	100.05	cps
Nickel	60-2	2890	2714	2564	2722	6.01	cps
Phosphorus	31-2	637	633	687	652	4.58	cps
Potassium	39-2	406693	405795	408548	407012	0.34	cps
Rhodium	103-1	10802246	10810106	10587390	10733247	1.18	cps
Rhodium	103-2	6452086	6516318	6426084	6464829	0.72	cps
Scandium	45-1	6259535	6167646	6102480	6176554	1.28	cps
Scandium	45-2	572518	573168	566821	570835	0.61	cps
Selenium	82-1	1529	1391	1369	1429	6.07	cps
Selenium	77-2	137	130	117	128	7.97	cps
Selenium	78-2	893	870	960	908	5.14	cps
Silicon	28-1	755871	751593	752219	753227	0.31	cps
Silver	107-1	17287	17007	16690	16994	1.76	cps
Silver	109-1	16256	15872	16223	16117	1.32	cps
Sodium	23-2	426281	428866	427894	427681	0.31	cps
Strontium	86-1	4637	4831	4581	4683	2.80	cps
Strontium	88-1	37364	36946	37043	37118	0.59	cps
Sulfur	34-1	207742	207343	208928	208004	0.40	cps
Terbium	159-1	14170176	14073906	14016674	14086918	0.55	cps
Terbium	159-2	9646721	9651265	9686791	9661593	0.23	cps
Thallium	203-1	12149	11922	12129	12067	1.04	cps
Thallium	205-1	28597	28510	27802	28303	1.54	cps
Tin	118-1	57317	57434	56082	56944	1.32	cps
Titanium	47-1	8469	8492	8252	8405	1.58	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S02 Instrumnet Name : P7
Client Sample ID : S02 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:14:49 DataFile Name : 006CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	33573	34315	33646	33844	1.21	cps
Vanadium	51-2	26169	25635	25755	25853	1.08	cps
Yttrium	89-1	13011213	13058293	12979799	13016435	0.30	cps
Yttrium	89-2	3689436	3694180	3668064	3683893	0.38	cps
Zinc	66-2	5981	5601	5901	5828	3.44	cps
Zirconium	90-1	23118	22905	23132	23051	0.55	cps
Zirconium	91-1	5014	5248	4928	5063	3.27	cps

LB Number :LB134060Operator :Jaswal

Lab Sample ID :S03Instrumnet Name :P7

Client Sample ID :S03Dilution Factor :1

Date & Time Acquired :2024-12-21 16:18:06DataFile Name :007CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	301347	298682	295448	298492	0.99	cps
Antimony	121-1	610081	607213	609277	608857	0.24	cps
Arsenic	75-2	34804	33989	33361	34051	2.13	cps
Barium	135-1	769613	773143	767156	769971	0.39	cps
Barium	137-1	1318305	1318312	1318396	1318338	0.00	cps
Beryllium	9-1	70432	69652	70623	70235	0.73	cps
Bismuth	209-1	8351731	8297162	8198679	8282524	0.94	cps
Bismuth	209-2	6844442	6836014	6798156	6826204	0.36	cps
Bromine	81-1	16579	16169	16166	16305	1.46	cps
Bromine	81-2	160	153	147	153	4.35	cps
Cadmium	108-1	12312	12232	12292	12279	0.34	cps
Cadmium	106-1	20671	20228	19874	20258	1.97	cps
Cadmium	111-1	185853	183404	183533	184263	0.75	cps
Calcium	43-1	170853	169603	169383	169946	0.47	cps
Calcium	44-1	2662751	2618458	2680703	2653971	1.21	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	260163	261398	259561	260374	0.36	cps
Cobalt	59-2	406530	407607	404771	406302	0.35	cps
Copper	63-2	3091540	3073681	3000482	3055234	1.58	cps
Dysprosium	156-1	47	27	20	31	44.61	cps
Dysprosium	156-2	70	53	17	47	58.46	cps
Erbium	164-1	67	90	47	68	32.00	cps
Erbium	164-2	57	60	33	50	29.06	cps
Gadolinium	160-1	27	37	63	42	44.88	cps
Gadolinium	160-2	570	553	580	568	2.37	cps
Holmium	165-1	13657953	13410382	13729172	13599169	1.23	cps
Holmium	165-2	9867104	9743423	9614538	9741688	1.30	cps
Indium	115-1	11485983	11234521	11075497	11265333	1.84	cps
Indium	115-2	4168375	4220989	4119178	4169514	1.22	cps
Iron	56-2	12414820	12306823	12298573	12340072	0.53	cps
Iron	57-2	313988	312823	313095	313302	0.19	cps
Iron	54-2	693013	695100	688867	692327	0.46	cps
Krypton	83-1	223	193	200	206	7.66	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S03 Instrumnet Name : P7
Client Sample ID : S03 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:18:06 DataFile Name : 007CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2392455	2432952	2405007	2410138	0.86	cps
Lead	207-1	2113156	2107537	2109330	2110008	0.14	cps
Lead	208-1	9651323	9635587	9669576	9652162	0.18	cps
Lithium	6-1	1406127	1387709	1371188	1388342	1.26	cps
Magnesium	24-2	2384593	2363382	2349562	2365846	0.75	cps
Manganese	55-2	2116000	2094855	2092320	2101058	0.62	cps
Molybdenum	94-1	2223770	2179319	2193276	2198788	1.03	cps
Molybdenum	95-1	3174218	3155206	3142225	3157217	0.51	cps
Molybdenum	96-1	3517239	3441482	3399647	3452789	1.73	cps
Molybdenum	97-1	2005445	1972107	1976226	1984592	0.92	cps
Molybdenum	98-1	5150531	5073685	5071220	5098479	0.88	cps
Neodymium	150-1	50	47	60	52	13.28	cps
Neodymium	150-2	7	17	17	13	43.29	cps
Nickel	60-2	104380	103561	104299	104080	0.43	cps
Phosphorus	31-2	15174	14861	15198	15078	1.25	cps
Potassium	39-2	1611461	1609109	1579787	1600119	1.10	cps
Rhodium	103-1	10741329	10506876	10467592	10571933	1.40	cps
Rhodium	103-2	6370414	6403012	6322972	6365466	0.63	cps
Scandium	45-1	6117503	6036152	6008446	6054034	0.94	cps
Scandium	45-2	563192	559131	562105	561476	0.37	cps
Selenium	82-1	10182	10507	10382	10357	1.58	cps
Selenium	77-2	1183	1097	1207	1162	4.99	cps
Selenium	78-2	4221	4181	4201	4201	0.48	cps
Silicon	28-1	1685986	1658411	1629392	1657929	1.71	cps
Silver	107-1	816864	820409	811074	816116	0.58	cps
Silver	109-1	785626	782303	779003	782311	0.42	cps
Sodium	23-2	3917774	3895124	3863635	3892178	0.70	cps
Strontium	86-1	190182	191488	190944	190871	0.34	cps
Strontium	88-1	1767423	1713667	1710579	1730556	1.85	cps
Sulfur	34-1	249203	249064	247333	248533	0.42	cps
Terbium	159-1	14078863	13806559	13951874	13945765	0.98	cps
Terbium	159-2	9593958	9619701	9565849	9593169	0.28	cps
Thallium	203-1	557661	559803	569485	562316	1.12	cps
Thallium	205-1	1334706	1333854	1334615	1334392	0.04	cps
Tin	118-1	509609	510891	505770	508757	0.52	cps
Titanium	47-1	774456	768424	762588	768489	0.77	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S03 Instrumnet Name : P7
Client Sample ID : S03 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:18:06 DataFile Name : 007CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	1727118	1592810	1731690	1683873	4.69	cps
Vanadium	51-2	231675	227516	224596	227929	1.56	cps
Yttrium	89-1	13236017	12764025	12835787	12945276	1.96	cps
Yttrium	89-2	3627064	3620674	3572877	3606872	0.82	cps
Zinc	66-2	498880	495439	489769	494696	0.93	cps
Zirconium	90-1	1036229	1037335	1037279	1036948	0.06	cps
Zirconium	91-1	231167	230461	230283	230637	0.20	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S04 Instrumnet Name : P7
Client Sample ID : S04 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:21:10 DataFile Name : 008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	657463	653700	654703	655288	0.30	cps
Antimony	121-1	1371491	1377433	1378058	1375661	0.26	cps
Arsenic	75-2	75330	74348	74509	74729	0.70	cps
Barium	135-1	1836431	1823436	1824476	1828114	0.40	cps
Barium	137-1	3147764	3149127	3115059	3137317	0.61	cps
Beryllium	9-1	163197	163702	165888	164262	0.87	cps
Bismuth	209-1	8353042	8151144	8318660	8274282	1.31	cps
Bismuth	209-2	6835951	6760424	6800175	6798850	0.56	cps
Bromine	81-1	15291	15034	14631	14985	2.22	cps
Bromine	81-2	147	143	103	131	18.40	cps
Cadmium	108-1	27149	26932	27232	27104	0.57	cps
Cadmium	106-1	41549	41462	40747	41253	1.07	cps
Cadmium	111-1	416475	418083	416712	417090	0.21	cps
Calcium	43-1	382817	378432	378915	380055	0.63	cps
Calcium	44-1	5932700	5873265	5898268	5901411	0.51	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	568451	567135	564109	566565	0.39	cps
Cobalt	59-2	888176	882755	879048	883326	0.52	cps
Copper	63-2	6684892	6758264	6655776	6699644	0.79	cps
Dysprosium	156-1	23	40	67	43	50.45	cps
Dysprosium	156-2	93	67	73	78	17.84	cps
Erbium	164-1	53	57	80	63	22.94	cps
Erbium	164-2	63	60	53	59	8.65	cps
Gadolinium	160-1	60	53	80	64	21.54	cps
Gadolinium	160-2	530	590	530	550	6.30	cps
Holmium	165-1	13776468	13397304	13487416	13553729	1.46	cps
Holmium	165-2	9750438	9615777	9555939	9640718	1.03	cps
Indium	115-1	11088744	10709872	10806972	10868529	1.81	cps
Indium	115-2	4096963	4022326	4006647	4041979	1.19	cps
Iron	56-2	27114542	26865290	26880301	26953378	0.52	cps
Iron	57-2	688730	688777	682054	686520	0.56	cps
Iron	54-2	1505821	1508477	1496884	1503727	0.40	cps
Krypton	83-1	213	217	213	214	0.90	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S04 Instrumnet Name : P7
Client Sample ID : S04 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:21:10 DataFile Name : 008CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5572078	5601531	5679051	5617553	0.98	cps
Lead	207-1	4920511	4925674	4958037	4934740	0.41	cps
Lead	208-1	22394221	22433851	22561802	22463292	0.39	cps
Lithium	6-1	1442437	1459418	1479453	1460436	1.27	cps
Magnesium	24-2	5168620	5194763	5107368	5156917	0.87	cps
Manganese	55-2	4614978	4692982	4555516	4621159	1.49	cps
Molybdenum	94-1	4935039	4896074	4894441	4908518	0.47	cps
Molybdenum	95-1	7110621	7125602	7034129	7090117	0.69	cps
Molybdenum	96-1	7734959	7707026	7774200	7738728	0.44	cps
Molybdenum	97-1	4499415	4443500	4395593	4446169	1.17	cps
Molybdenum	98-1	11570029	11536372	11247889	11451430	1.55	cps
Neodymium	150-1	113	117	73	101	23.85	cps
Neodymium	150-2	27	30	13	23	37.81	cps
Nickel	60-2	226244	225280	224949	225491	0.30	cps
Phosphorus	31-2	31860	31856	31659	31792	0.36	cps
Potassium	39-2	3440048	3394657	3366206	3400304	1.10	cps
Rhodium	103-1	10332093	10073286	10157608	10187662	1.30	cps
Rhodium	103-2	6221685	6022514	6080272	6108157	1.68	cps
Scandium	45-1	6003654	5839914	5847425	5896998	1.57	cps
Scandium	45-2	538846	527040	528231	531372	1.22	cps
Selenium	82-1	22628	22300	22541	22490	0.75	cps
Selenium	77-2	2470	2400	2337	2402	2.78	cps
Selenium	78-2	8479	8546	8573	8533	0.56	cps
Silicon	28-1	2496124	2478952	2485178	2486751	0.35	cps
Silver	107-1	1897823	1884085	1886939	1889616	0.38	cps
Silver	109-1	1859404	1822263	1802157	1827942	1.59	cps
Sodium	23-2	8591102	8526414	8407366	8508294	1.10	cps
Strontium	86-1	429919	429707	428926	429517	0.12	cps
Strontium	88-1	3916694	3920955	3854878	3897509	0.95	cps
Sulfur	34-1	298606	296208	293907	296240	0.79	cps
Terbium	159-1	13896632	13759054	13833767	13829817	0.50	cps
Terbium	159-2	9565699	9526868	9459552	9517373	0.56	cps
Thallium	203-1	1294482	1296207	1295426	1295372	0.07	cps
Thallium	205-1	3353219	3351626	3358646	3354497	0.11	cps
Tin	118-1	1141886	1148114	1142490	1144164	0.30	cps
Titanium	47-1	1718216	1721695	1709610	1716507	0.36	cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

S04

Instrumnet Name :

P7

Client Sample ID :

S04

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 16:21:10

DataFile Name :

008CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	4123169	4054708	4129625	4102500	1.01	cps
Vanadium	51-2	504237	498194	498034	500155	0.71	cps
Yttrium	89-1	12875140	12614064	12446495	12645233	1.71	cps
Yttrium	89-2	3491073	3406547	3419719	3439113	1.32	cps
Zinc	66-2	1086122	1078397	1083481	1082667	0.36	cps
Zirconium	90-1	2404334	2400943	2366326	2390534	0.88	cps
Zirconium	91-1	519920	513819	516630	516789	0.59	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P7
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:24:01 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1377227	1385254	1378482	1380321	0.31	cps
Antimony	121-1	3062346	3071017	3058794	3064053	0.21	cps
Arsenic	75-2	155484	152581	152151	153405	1.18	cps
Barium	135-1	3897164	3936538	3816094	3883265	1.58	cps
Barium	137-1	6714567	6677551	6560056	6650725	1.21	cps
Beryllium	9-1	352506	355875	353971	354117	0.48	cps
Bismuth	209-1	8288025	8241989	8213185	8247733	0.46	cps
Bismuth	209-2	6683649	6730226	6637987	6683954	0.69	cps
Bromine	81-1	13850	13676	13490	13672	1.32	cps
Bromine	81-2	140	140	167	149	10.34	cps
Cadmium	108-1	55964	56178	55218	55787	0.90	cps
Cadmium	106-1	84038	83448	81621	83036	1.52	cps
Cadmium	111-1	874438	868704	865619	869587	0.51	cps
Calcium	43-1	794455	792563	786210	791076	0.55	cps
Calcium	44-1	12427022	12274125	12233615	12311587	0.83	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1161021	1165225	1157906	1161384	0.32	cps
Cobalt	59-2	1872766	1864348	1857736	1864950	0.40	cps
Copper	63-2	13668744	13603213	13593786	13621915	0.30	cps
Dysprosium	156-1	60	63	57	60	5.55	cps
Dysprosium	156-2	250	160	227	212	22.01	cps
Erbium	164-1	60	63	97	73	27.65	cps
Erbium	164-2	50	57	53	53	6.25	cps
Gadolinium	160-1	70	53	60	61	13.73	cps
Gadolinium	160-2	617	607	523	582	8.80	cps
Holmium	165-1	13675720	13372714	13528230	13525554	1.12	cps
Holmium	165-2	9621496	9609696	9398135	9543109	1.32	cps
Indium	115-1	10561038	10494233	10421793	10492355	0.66	cps
Indium	115-2	3933213	3889677	3818245	3880378	1.50	cps
Iron	56-2	55894161	55397816	55819243	55703740	0.48	cps
Iron	57-2	1399461	1397493	1401373	1399442	0.14	cps
Iron	54-2	3079537	3090171	3113447	3094385	0.56	cps
Krypton	83-1	187	153	173	171	9.80	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P7
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:24:01 DataFile Name : 009CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	12076641	12252463	12201390	12176831	0.74	cps
Lead	207-1	10698990	10730052	10704635	10711226	0.15	cps
Lead	208-1	48609077	48711495	48867710	48729427	0.27	cps
Lithium	6-1	1492878	1500967	1485893	1493246	0.51	cps
Magnesium	24-2	10735139	10690076	10773164	10732793	0.39	cps
Manganese	55-2	9594858	9515786	9645204	9585283	0.68	cps
Molybdenum	94-1	10233140	10274897	10298305	10268781	0.32	cps
Molybdenum	95-1	14713630	14806759	14788041	14769477	0.33	cps
Molybdenum	96-1	16399559	16222966	16509274	16377267	0.88	cps
Molybdenum	97-1	9292589	9333176	9219605	9281790	0.62	cps
Molybdenum	98-1	24155531	23878175	23958077	23997261	0.59	cps
Neodymium	150-1	213	250	203	222	11.05	cps
Neodymium	150-2	50	40	53	48	14.52	cps
Nickel	60-2	460778	460061	460177	460339	0.08	cps
Phosphorus	31-2	65693	65322	64934	65316	0.58	cps
Potassium	39-2	6893525	6838889	6876641	6869685	0.41	cps
Rhodium	103-1	9927417	9735966	9637135	9766839	1.51	cps
Rhodium	103-2	5900155	5925894	5903542	5909864	0.24	cps
Scandium	45-1	5806351	5620469	5613350	5680056	1.93	cps
Scandium	45-2	506285	500225	501120	502543	0.65	cps
Selenium	82-1	46537	46183	46319	46346	0.39	cps
Selenium	77-2	4951	5044	5054	5016	1.14	cps
Selenium	78-2	17170	17133	17293	17199	0.49	cps
Silicon	28-1	4116015	4113282	4068486	4099261	0.65	cps
Silver	107-1	3997285	3988110	3913765	3966387	1.15	cps
Silver	109-1	3798416	3786940	3750072	3778476	0.67	cps
Sodium	23-2	17784573	17550202	17748638	17694471	0.71	cps
Strontium	86-1	905021	895661	893111	897931	0.70	cps
Strontium	88-1	8062971	8023516	8032122	8039536	0.26	cps
Sulfur	34-1	398812	394541	390450	394601	1.06	cps
Terbium	159-1	13845972	13794035	13503592	13714533	1.35	cps
Terbium	159-2	9466330	9502195	9446239	9471588	0.30	cps
Thallium	203-1	3081721	3112664	3047571	3080652	1.06	cps
Thallium	205-1	7275618	7327293	7253657	7285523	0.52	cps
Tin	118-1	2579846	2527586	2489221	2532218	1.80	cps
Titanium	47-1	3554340	3661110	3584249	3599900	1.53	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S05 Instrumnet Name : P7
Client Sample ID : S05 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:24:01 DataFile Name : 009CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	8888128	8997687	8949435	8945084	0.61	cps
Vanadium	51-2	1027843	1026326	1032328	1028832	0.30	cps
Yttrium	89-1	12372061	12021551	11977422	12123678	1.78	cps
Yttrium	89-2	3360837	3347893	3315419	3341383	0.70	cps
Zinc	66-2	2310772	2339538	2287117	2312476	1.14	cps
Zirconium	90-1	4980933	4881004	4914094	4925344	1.03	cps
Zirconium	91-1	1077307	1087828	1075595	1080244	0.61	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P7
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:26:49 DataFile Name : 010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	2630943	2628587	2626994	2628841	0.08	cps
Antimony	121-1	5922969	6002700	5915045	5946905	0.82	cps
Arsenic	75-2	293653	292134	293786	293191	0.31	cps
Barium	135-1	7536083	7571809	7428978	7512290	0.99	cps
Barium	137-1	12854459	12972231	12849411	12892034	0.54	cps
Beryllium	9-1	679208	689528	690458	686398	0.91	cps
Bismuth	209-1	8315331	8362469	8271459	8316420	0.55	cps
Bismuth	209-2	6644710	6780133	6658966	6694603	1.11	cps
Bromine	81-1	13376	13129	12966	13157	1.57	cps
Bromine	81-2	130	130	117	126	6.13	cps
Cadmium	108-1	108838	108834	107994	108555	0.45	cps
Cadmium	106-1	155694	156314	156170	156059	0.21	cps
Cadmium	111-1	1667412	1684802	1682272	1678162	0.56	cps
Calcium	43-1	1481441	1478499	1461202	1473714	0.74	cps
Calcium	44-1	23767891	23818440	23335231	23640521	1.12	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2245895	2252116	2267176	2255062	0.49	cps
Cobalt	59-2	3548292	3529121	3556635	3544683	0.40	cps
Copper	63-2	25490005	25925815	25844218	25753346	0.90	cps
Dysprosium	156-1	117	147	127	130	11.75	cps
Dysprosium	156-2	360	363	367	363	0.92	cps
Erbium	164-1	87	147	103	112	27.60	cps
Erbium	164-2	80	107	80	89	17.32	cps
Gadolinium	160-1	113	100	80	98	17.16	cps
Gadolinium	160-2	627	540	500	556	11.65	cps
Holmium	165-1	13536960	13450090	13159436	13382162	1.48	cps
Holmium	165-2	9421926	9568120	9442895	9477647	0.83	cps
Indium	115-1	10294583	10144152	10086273	10175003	1.06	cps
Indium	115-2	3752515	3776400	3784786	3771234	0.44	cps
Iron	56-2	106977615	106886888	106433378	106765961	0.27	cps
Iron	57-2	2661323	2699229	2672655	2677736	0.73	cps
Iron	54-2	5881832	5847923	5924414	5884723	0.65	cps
Krypton	83-1	187	153	213	184	16.30	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P7
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:26:49 DataFile Name : 010CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	24154744	24258583	24374663	24262663	0.45	cps
Lead	207-1	21075121	21373067	21220148	21222779	0.70	cps
Lead	208-1	95853144	97572689	97578029	97001287	1.03	cps
Lithium	6-1	1492010	1488485	1498246	1492914	0.33	cps
Magnesium	24-2	20544248	20278705	20640986	20487980	0.92	cps
Manganese	55-2	18335694	18593773	18221227	18383565	1.04	cps
Molybdenum	94-1	20092411	20143946	19780672	20005677	0.98	cps
Molybdenum	95-1	28690464	28690940	28236806	28539403	0.92	cps
Molybdenum	96-1	31624695	31560654	31380877	31522075	0.40	cps
Molybdenum	97-1	18196214	18184512	18046618	18142448	0.46	cps
Molybdenum	98-1	46651393	46835979	46075633	46521002	0.85	cps
Neodymium	150-1	420	357	393	390	8.15	cps
Neodymium	150-2	123	77	97	99	23.67	cps
Nickel	60-2	863265	861322	862233	862273	0.11	cps
Phosphorus	31-2	123610	124114	124121	123949	0.24	cps
Potassium	39-2	13062221	13069374	13089701	13073766	0.11	cps
Rhodium	103-1	9513776	9339537	9323957	9392423	1.12	cps
Rhodium	103-2	5646437	5702476	5645385	5664766	0.58	cps
Scandium	45-1	5495800	5401430	5365974	5421068	1.24	cps
Scandium	45-2	482785	483769	485907	484154	0.33	cps
Selenium	82-1	88818	87598	88477	88298	0.71	cps
Selenium	77-2	9800	9657	9747	9734	0.74	cps
Selenium	78-2	32539	31908	32836	32428	1.46	cps
Silicon	28-1	7020738	6939213	6893937	6951296	0.92	cps
Silver	107-1	7686726	7578184	7559870	7608260	0.90	cps
Silver	109-1	7281342	7218972	7176708	7225674	0.73	cps
Sodium	23-2	33724679	33658282	34067289	33816750	0.65	cps
Strontium	86-1	1781891	1788544	1804877	1791771	0.66	cps
Strontium	88-1	15473092	15780964	15568022	15607359	1.01	cps
Sulfur	34-1	577457	577228	569854	574846	0.75	cps
Terbium	159-1	13841184	13774938	13645997	13754040	0.72	cps
Terbium	159-2	9274692	9429940	9288550	9331061	0.92	cps
Thallium	203-1	6123045	6084647	6091352	6099681	0.34	cps
Thallium	205-1	14356354	14597923	14466619	14473632	0.84	cps
Tin	118-1	4901879	4941758	4788995	4877544	1.62	cps
Titanium	47-1	6878918	6894432	6817656	6863669	0.59	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S06 Instrumnet Name : P7
Client Sample ID : S06 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:26:49 DataFile Name : 010CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	18022698	18328492	18330918	18227369	0.97	cps
Vanadium	51-2	1998428	1973991	1989800	1987406	0.62	cps
Yttrium	89-1	12044635	11556096	11741580	11780770	2.09	cps
Yttrium	89-2	3247342	3302965	3234007	3261438	1.12	cps
Zinc	66-2	4328664	4421858	4418658	4389727	1.21	cps
Zirconium	90-1	9666658	9784908	9600317	9683961	0.97	cps
Zirconium	91-1	2121517	2157259	2070684	2116486	2.06	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P7
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:29:33 DataFile Name : 011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5165471	5272671	5252299	5230147	1.09	cps
Antimony	121-1	11666455	11934759	11843642	11814952	1.15	cps
Arsenic	75-2	585448	583953	583068	584156	0.21	cps
Barium	135-1	15046297	15340176	15311101	15232525	1.06	cps
Barium	137-1	25775856	26198544	26077897	26017432	0.84	cps
Beryllium	9-1	1331886	1369702	1375734	1359107	1.75	cps
Bismuth	209-1	8173226	8173434	8216515	8187725	0.30	cps
Bismuth	209-2	6605729	6634533	6664751	6635004	0.44	cps
Bromine	81-1	12025	12522	12118	12222	2.16	cps
Bromine	81-2	103	93	123	107	14.32	cps
Cadmium	108-1	208149	212352	211168	210556	1.03	cps
Cadmium	106-1	300448	302280	302065	301597	0.33	cps
Cadmium	111-1	3379423	3459403	3441684	3426837	1.23	cps
Calcium	43-1	2830885	2853781	2892198	2858955	1.08	cps
Calcium	44-1	46203979	46429181	46812189	46481783	0.66	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	4468374	4462471	4427235	4452693	0.50	cps
Cobalt	59-2	6991084	6967322	6902584	6953664	0.66	cps
Copper	63-2	51122414	51370099	50088128	50860214	1.34	cps
Dysprosium	156-1	230	217	263	237	10.16	cps
Dysprosium	156-2	813	753	703	757	7.28	cps
Erbium	164-1	147	190	200	179	15.85	cps
Erbium	164-2	123	97	167	129	27.41	cps
Gadolinium	160-1	160	113	127	133	18.03	cps
Gadolinium	160-2	593	597	513	568	8.31	cps
Holmium	165-1	13315315	13496699	13410172	13407395	0.68	cps
Holmium	165-2	9518842	9515620	9560018	9531494	0.26	cps
Indium	115-1	9985945	9930260	9901788	9939331	0.43	cps
Indium	115-2	3677872	3717791	3637759	3677807	1.09	cps
Iron	56-2	210869250	210284177	207948250	209700559	0.74	cps
Iron	57-2	5348975	5356181	5246482	5317213	1.15	cps
Iron	54-2	11565835	11543502	11630156	11579831	0.39	cps
Krypton	83-1	203	230	227	220	6.60	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P7
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:29:33 DataFile Name : 011CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	47234581	49268878	48813941	48439133	2.20	cps
Lead	207-1	41569588	42231929	42441956	42081158	1.08	cps
Lead	208-1	189659317	193618052	194538492	192605287	1.35	cps
Lithium	6-1	1475800	1508938	1479721	1488153	1.22	cps
Magnesium	24-2	40434097	40428721	40479734	40447517	0.07	cps
Manganese	55-2	36195703	36350598	36032992	36193098	0.44	cps
Molybdenum	94-1	38989904	39510964	40366901	39622589	1.75	cps
Molybdenum	95-1	56104901	56469006	57481587	56685165	1.26	cps
Molybdenum	96-1	62248411	62312797	62741427	62434212	0.43	cps
Molybdenum	97-1	35476544	36034042	36022617	35844401	0.89	cps
Molybdenum	98-1	91694392	92753279	92770159	92405943	0.67	cps
Neodymium	150-1	587	740	677	668	11.54	cps
Neodymium	150-2	157	140	223	173	25.44	cps
Nickel	60-2	1762358	1802277	1747834	1770823	1.59	cps
Phosphorus	31-2	244047	244272	242549	243622	0.38	cps
Potassium	39-2	25806275	26022798	25650658	25826577	0.72	cps
Rhodium	103-1	9012954	9126049	8930229	9023078	1.09	cps
Rhodium	103-2	5562168	5609347	5531079	5567531	0.71	cps
Scandium	45-1	5362303	5339810	5305532	5335882	0.54	cps
Scandium	45-2	485317	483433	482232	483661	0.32	cps
Selenium	82-1	170092	170561	171721	170791	0.49	cps
Selenium	77-2	18936	19383	18872	19063	1.46	cps
Selenium	78-2	62873	63016	62595	62828	0.34	cps
Silicon	28-1	13046761	13014645	13081679	13047695	0.26	cps
Silver	107-1	14639639	14843161	14706780	14729860	0.70	cps
Silver	109-1	13907955	14146699	14170926	14075193	1.03	cps
Sodium	23-2	66843232	67107062	66979212	66976502	0.20	cps
Strontium	86-1	3460699	3542326	3547795	3516940	1.39	cps
Strontium	88-1	30682817	31209031	31087379	30993076	0.89	cps
Sulfur	34-1	947308	961092	963149	957183	0.90	cps
Terbium	159-1	13748594	13997201	13647424	13797740	1.30	cps
Terbium	159-2	9434522	9502288	9379093	9438634	0.65	cps
Thallium	203-1	11852618	12104076	12273971	12076889	1.76	cps
Thallium	205-1	28746635	29197062	29087383	29010360	0.81	cps
Tin	118-1	9571308	9783178	9674805	9676430	1.09	cps
Titanium	47-1	13241200	13472819	13510647	13408222	1.09	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S07 Instrumnet Name : P7
Client Sample ID : S07 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:29:33 DataFile Name : 011CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	36317124	37625970	36936894	36959996	1.77	cps
Vanadium	51-2	3946121	3980890	3964055	3963688	0.44	cps
Yttrium	89-1	11773418	11663820	11495274	11644171	1.20	cps
Yttrium	89-2	3255852	3207907	3187807	3217189	1.09	cps
Zinc	66-2	8475069	8650395	8574129	8566531	1.03	cps
Zirconium	90-1	18971141	19308422	19414057	19231207	1.20	cps
Zirconium	91-1	4188762	4283484	4317780	4263342	1.57	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P7
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:32:20 DataFile Name : 012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	27244415	27192175	27139597	27192063	0.19	cps
Antimony	121-1	6632	6445	6001	6359	5.09	cps
Arsenic	75-2	383	380	340	368	6.56	cps
Barium	135-1	7575	7229	6465	7090	8.01	cps
Barium	137-1	12415	12189	11785	12130	2.63	cps
Beryllium	9-1	483	393	387	421	12.82	cps
Bismuth	209-1	7177663	7064862	7061324	7101283	0.93	cps
Bismuth	209-2	5838890	5697181	5862387	5799486	1.54	cps
Bromine	81-1	12632	12756	12662	12683	0.51	cps
Bromine	81-2	157	117	137	137	14.63	cps
Cadmium	108-1	120	107	113	113	5.88	cps
Cadmium	106-1	3040	2847	2850	2913	3.80	cps
Cadmium	111-1	3028	2726	2657	2803	7.03	cps
Calcium	43-1	13995166	13993991	14010471	13999876	0.07	cps
Calcium	44-1	226416777	226694970	225315843	226142530	0.32	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	8854	7692	7105	7884	11.29	cps
Cobalt	59-2	18745	18959	18959	18888	0.65	cps
Copper	63-2	10921	9997	9116	10011	9.01	cps
Dysprosium	156-1	407	430	427	421	3.00	cps
Dysprosium	156-2	333	347	350	343	2.57	cps
Erbium	164-1	487	490	500	492	1.41	cps
Erbium	164-2	323	400	353	359	10.77	cps
Gadolinium	160-1	413	430	443	429	3.51	cps
Gadolinium	160-2	850	893	843	862	3.15	cps
Holmium	165-1	12917470	12755320	12630934	12767908	1.13	cps
Holmium	165-2	9064609	9080812	8972649	9039357	0.65	cps
Indium	115-1	9432887	9214912	9137073	9261624	1.66	cps
Indium	115-2	3579365	3579590	3599680	3586212	0.33	cps
Iron	56-2	1025623078	1028956571	1021474358	1025351336	0.37	cps
Iron	57-2	26100876	26091598	26072261	26088245	0.06	cps
Iron	54-2	56284857	56434827	56135379	56285021	0.27	cps
Krypton	83-1	210	177	230	206	13.11	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P7
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:32:20 DataFile Name : 012CAL.S.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	13850	13003	11835	12896	7.85	cps
Lead	207-1	12132	11278	10477	11296	7.33	cps
Lead	208-1	55004	51101	47436	51180	7.39	cps
Lithium	6-1	1368306	1339943	1399546	1369265	2.18	cps
Magnesium	24-2	218052790	214969523	217675477	216899263	0.78	cps
Manganese	55-2	18008	17413	16619	17347	4.01	cps
Molybdenum	94-1	13583	12275	11141	12333	9.91	cps
Molybdenum	95-1	14184	13036	11344	12855	11.11	cps
Molybdenum	96-1	24320	23486	21906	23237	5.28	cps
Molybdenum	97-1	8919	8026	7185	8043	10.78	cps
Molybdenum	98-1	22174	20348	17864	20129	10.75	cps
Neodymium	150-1	260	267	203	243	14.30	cps
Neodymium	150-2	167	153	137	152	9.87	cps
Nickel	60-2	6258	6401	6351	6337	1.15	cps
Phosphorus	31-2	237	203	253	231	11.02	cps
Potassium	39-2	132701578	132998901	133800908	133167129	0.43	cps
Rhodium	103-1	8372053	8210288	8193076	8258472	1.20	cps
Rhodium	103-2	5095893	5078260	5085804	5086652	0.17	cps
Scandium	45-1	5322167	5244081	5266433	5277560	0.76	cps
Scandium	45-2	489694	487617	488372	488561	0.22	cps
Selenium	82-1	505	454	401	453	11.47	cps
Selenium	77-2	10	7	3	7	50.03	cps
Selenium	78-2	420	373	433	409	7.71	cps
Silicon	28-1	644452	643568	637791	641937	0.56	cps
Silver	107-1	3657	3380	3044	3360	9.14	cps
Silver	109-1	3564	3410	2864	3279	11.22	cps
Sodium	23-2	343665928	341167022	342324328	342385759	0.37	cps
Strontium	86-1	10501	10477	9963	10314	2.94	cps
Strontium	88-1	91325	89543	88413	89761	1.64	cps
Sulfur	34-1	158633	162803	166108	162515	2.30	cps
Terbium	159-1	13276259	12851861	12888608	13005576	1.81	cps
Terbium	159-2	8877409	8896110	8908184	8893901	0.17	cps
Thallium	203-1	2444	1997	1790	2077	16.08	cps
Thallium	205-1	5635	4831	4074	4846	16.10	cps
Tin	118-1	4704	4414	4141	4420	6.38	cps
Titanium	47-1	3210	3020	2450	2894	13.67	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : S08 Instrumnet Name : P7
Client Sample ID : S08 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 16:32:20 DataFile Name : 012CALS.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	6395	5618	4541	5518	16.87	cps
Vanadium	51-2	937	910	793	880	8.66	cps
Yttrium	89-1	11405662	11133451	11307377	11282163	1.22	cps
Yttrium	89-2	3226198	3193986	3162800	3194328	0.99	cps
Zinc	66-2	6892	6868	6735	6832	1.24	cps
Zirconium	90-1	13716	13073	12739	13176	3.77	cps
Zirconium	91-1	3040	3057	2854	2984	3.78	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICV006 Instrumnet Name : P7
Client Sample ID : ICV006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:01:52 DataFile Name : 017ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	145505	146767	145545	145939	0.49	cps
Antimony	121-1	2576271	2587984	2573119	2579124	0.30	cps
Arsenic	75-2	137729	137923	135928	137193	0.80	cps
Barium	135-1	310883	313183	307836	310634	0.86	cps
Barium	137-1	534238	535642	536185	535355	0.19	cps
Beryllium	9-1	150252	151712	149599	150521	0.72	cps
Bismuth	209-1	8653151	8394666	8283363	8443726	2.25	cps
Bismuth	209-2	7003925	6898346	6903548	6935273	0.86	cps
Bromine	81-1	13870	14184	13987	14013	1.13	cps
Bromine	81-2	287	327	340	318	8.73	cps
Cadmium	108-1	21753	21433	21579	21588	0.74	cps
Cadmium	106-1	32807	31968	32296	32357	1.31	cps
Cadmium	111-1	326871	328864	327358	327698	0.32	cps
Calcium	43-1	65045	65380	65259	65228	0.26	cps
Calcium	44-1	1057851	1064981	1056557	1059796	0.43	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	523221	524264	521077	522854	0.31	cps
Cobalt	59-2	808131	815968	810814	811638	0.49	cps
Copper	63-2	559915	555663	557414	557664	0.38	cps
Dysprosium	156-1	10	7	10	9	21.63	cps
Dysprosium	156-2	13	27	23	21	32.88	cps
Erbium	164-1	23	40	40	34	27.94	cps
Erbium	164-2	23	40	40	34	27.94	cps
Gadolinium	160-1	53	43	57	51	13.58	cps
Gadolinium	160-2	597	567	500	554	8.92	cps
Holmium	165-1	13668285	13614222	13521462	13601323	0.55	cps
Holmium	165-2	9847202	9614576	9617417	9693065	1.38	cps
Indium	115-1	10964048	10854743	10767959	10862250	0.90	cps
Indium	115-2	4157905	4176181	4124927	4153005	0.63	cps
Iron	56-2	9565549	9579150	9650698	9598466	0.48	cps
Iron	57-2	245877	245879	246429	246062	0.13	cps
Iron	54-2	555484	552667	555467	554539	0.29	cps
Krypton	83-1	197	203	190	197	3.39	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICV006 Instrumnet Name : P7
Client Sample ID : ICV006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:01:52 DataFile Name : 017ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2118419	2087881	2053622	2086641	1.55	cps
Lead	207-1	1606429	1582339	1593628	1594132	0.76	cps
Lead	208-1	8053509	7916097	7925463	7965023	0.96	cps
Lithium	6-1	1508456	1521034	1518024	1515838	0.43	cps
Magnesium	24-2	546400	548438	548029	547622	0.20	cps
Manganese	55-2	412948	413106	415141	413732	0.30	cps
Molybdenum	94-1	460	413	507	460	10.15	cps
Molybdenum	95-1	273	283	277	278	1.83	cps
Molybdenum	96-1	563	523	423	503	14.33	cps
Molybdenum	97-1	173	153	193	173	11.54	cps
Molybdenum	98-1	480	400	433	438	9.18	cps
Neodymium	150-1	30	13	13	19	50.96	cps
Neodymium	150-2	3	0	3	2	86.60	cps
Nickel	60-2	208651	209121	207058	208277	0.52	cps
Phosphorus	31-2	167	157	167	163	3.53	cps
Potassium	39-2	1223105	1197543	1230950	1217199	1.44	cps
Rhodium	103-1	10443573	10054092	10132869	10210178	2.02	cps
Rhodium	103-2	6228334	6281092	6164032	6224486	0.94	cps
Scandium	45-1	5923718	5899571	5801978	5875089	1.10	cps
Scandium	45-2	544515	535716	539165	539799	0.82	cps
Selenium	82-1	40402	40900	40620	40641	0.61	cps
Selenium	77-2	4494	4474	4417	4462	0.89	cps
Selenium	78-2	15922	15678	16289	15963	1.93	cps
Silicon	28-1	598255	602894	596886	599345	0.53	cps
Silver	107-1	761822	767059	767857	765579	0.43	cps
Silver	109-1	728805	728922	734888	730872	0.48	cps
Sodium	23-2	1543582	1520353	1533832	1532589	0.76	cps
Strontium	86-1	1207	1310	1293	1270	4.37	cps
Strontium	88-1	8159	8289	8166	8205	0.89	cps
Sulfur	34-1	187424	185659	185629	186237	0.55	cps
Terbium	159-1	13938693	13973280	13896745	13936239	0.28	cps
Terbium	159-2	9645501	9528144	9361649	9511765	1.50	cps
Thallium	203-1	2581674	2618348	2561589	2587204	1.11	cps
Thallium	205-1	6155846	6067604	6032609	6085353	1.04	cps
Tin	118-1	1570	1403	1363	1446	7.58	cps
Titanium	47-1	87	107	93	96	10.66	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICV006 Instrumnet Name : P7
Client Sample ID : ICV006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:01:52 DataFile Name : 017ICV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	53	33	20	36	47.19	cps
Vanadium	51-2	446573	447269	447529	447124	0.11	cps
Yttrium	89-1	12447310	12508606	12395747	12450554	0.45	cps
Yttrium	89-2	3496926	3482335	3494725	3491329	0.23	cps
Zinc	66-2	194985	195735	193949	194890	0.46	cps
Zirconium	90-1	800	763	780	781	2.35	cps
Zirconium	91-1	433	410	413	419	3.01	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICB006 Instrumnet Name : P7
Client Sample ID : ICB006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:08:20 DataFile Name : 019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	107	120	123	117	7.56	cps
Antimony	121-1	397	373	463	411	11.36	cps
Arsenic	75-2	7	3	7	6	34.70	cps
Barium	135-1	43	37	30	37	18.18	cps
Barium	137-1	67	100	117	94	26.96	cps
Beryllium	9-1	93	80	90	88	7.90	cps
Bismuth	209-1	8554585	8412065	8363885	8443512	1.17	cps
Bismuth	209-2	6971937	7058931	7024279	7018382	0.62	cps
Bromine	81-1	13526	14127	13913	13855	2.20	cps
Bromine	81-2	147	120	137	134	10.02	cps
Cadmium	108-1	7	7	3	6	34.70	cps
Cadmium	106-1	3140	3047	2960	3049	2.95	cps
Cadmium	111-1	2220	2152	2117	2163	2.43	cps
Calcium	43-1	270	293	253	272	7.38	cps
Calcium	44-1	8452	8666	8859	8659	2.35	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1297	1270	1347	1305	2.98	cps
Cobalt	59-2	143	103	110	119	18.03	cps
Copper	63-2	643	700	700	681	4.80	cps
Dysprosium	156-1	3	7	17	9	78.08	cps
Dysprosium	156-2	3	3	10	6	69.34	cps
Erbium	164-1	57	43	57	52	14.75	cps
Erbium	164-2	33	30	40	34	14.78	cps
Gadolinium	160-1	47	63	77	62	24.16	cps
Gadolinium	160-2	543	573	513	543	5.52	cps
Holmium	165-1	13409067	13440825	13626289	13492060	0.87	cps
Holmium	165-2	9798782	9737895	9747903	9761527	0.33	cps
Indium	115-1	10945846	10908805	10882420	10912357	0.29	cps
Indium	115-2	4200935	4155460	4148257	4168218	0.69	cps
Iron	56-2	18081	18041	17657	17926	1.31	cps
Iron	57-2	973	870	980	941	6.55	cps
Iron	54-2	2664	2617	2690	2657	1.40	cps
Krypton	83-1	213	190	203	202	5.79	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICB006 Instrumnet Name : P7
Client Sample ID : ICB006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:08:20 DataFile Name : 019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	647	657	583	629	6.32	cps
Lead	207-1	533	637	483	551	14.19	cps
Lead	208-1	2437	2583	2240	2420	7.12	cps
Lithium	6-1	1475993	1520124	1488796	1494971	1.52	cps
Magnesium	24-2	527	553	570	550	3.97	cps
Manganese	55-2	287	300	333	307	7.84	cps
Molybdenum	94-1	310	250	263	274	11.48	cps
Molybdenum	95-1	150	170	150	157	7.37	cps
Molybdenum	96-1	187	193	253	211	17.39	cps
Molybdenum	97-1	123	123	93	113	15.29	cps
Molybdenum	98-1	280	237	257	258	8.41	cps
Neodymium	150-1	7	10	7	8	24.71	cps
Neodymium	150-2	0	3	3	2	86.60	cps
Nickel	60-2	367	353	437	386	11.61	cps
Phosphorus	31-2	160	180	133	158	14.84	cps
Potassium	39-2	54995	55440	55568	55334	0.54	cps
Rhodium	103-1	10196978	10192434	10201242	10196885	0.04	cps
Rhodium	103-2	6408171	6326358	6322534	6352354	0.76	cps
Scandium	45-1	5955053	5895115	5789085	5879751	1.43	cps
Scandium	45-2	545734	543680	542364	543926	0.31	cps
Selenium	82-1	292	350	291	311	10.87	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	490	490	483	488	0.79	cps
Silicon	28-1	604000	602374	603489	603288	0.14	cps
Silver	107-1	200	157	177	178	12.20	cps
Silver	109-1	133	143	120	132	8.86	cps
Sodium	23-2	21956	22547	21702	22068	1.96	cps
Strontium	86-1	337	303	253	298	14.08	cps
Strontium	88-1	170	203	190	188	8.94	cps
Sulfur	34-1	186817	186921	188959	187566	0.64	cps
Terbium	159-1	13830706	13782731	13890905	13834781	0.39	cps
Terbium	159-2	9788901	9686791	9721810	9732501	0.53	cps
Thallium	203-1	307	307	340	318	6.06	cps
Thallium	205-1	780	800	737	772	4.19	cps
Tin	118-1	1550	1433	1183	1389	13.49	cps
Titanium	47-1	73	100	93	89	15.61	cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

ICB006

Instrumnet Name :

P7

Client Sample ID :

ICB006

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:08:20

DataFile Name :

019CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	10	13	30	18	60.28	cps
Vanadium	51-2	7	10	13	10	33.30	cps
Yttrium	89-1	12567847	12506601	12525315	12533255	0.25	cps
Yttrium	89-2	3532187	3602611	3567269	3567356	0.99	cps
Zinc	66-2	313	377	317	336	10.62	cps
Zirconium	90-1	587	580	513	560	7.24	cps
Zirconium	91-1	133	110	133	126	10.73	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICSA006 Instrumnet Name : P7
Client Sample ID : ICSA006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:11:36 DataFile Name : 020ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	25898426	25522363	25319309	25580033	1.15	cps
Antimony	121-1	13396	13093	13450	13313	1.45	cps
Arsenic	75-2	213	173	200	196	10.41	cps
Barium	135-1	4251	4371	4321	4314	1.40	cps
Barium	137-1	7579	7449	7465	7498	0.94	cps
Beryllium	9-1	470	467	397	444	9.32	cps
Bismuth	209-1	8070769	8056596	8075951	8067772	0.12	cps
Bismuth	209-2	6633326	6526726	6601275	6587109	0.83	cps
Bromine	81-1	14077	14027	14561	14221	2.07	cps
Bromine	81-2	437	440	387	421	7.10	cps
Cadmium	108-1	1940	1973	1660	1858	9.26	cps
Cadmium	106-1	2974	2914	3010	2966	1.65	cps
Cadmium	111-1	3290	3136	3339	3255	3.26	cps
Calcium	43-1	2956442	3015756	2992724	2988307	1.00	cps
Calcium	44-1	48331938	48937976	47971281	48413732	1.01	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	96489	96063	96147	96233	0.23	cps
Cobalt	59-2	9213	9043	9330	9195	1.57	cps
Copper	63-2	38145	37744	38386	38092	0.85	cps
Dysprosium	156-1	60	57	90	69	26.65	cps
Dysprosium	156-2	37	20	43	33	36.05	cps
Erbium	164-1	120	80	107	102	19.92	cps
Erbium	164-2	83	87	80	83	4.00	cps
Gadolinium	160-1	87	100	113	100	13.33	cps
Gadolinium	160-2	520	523	503	516	2.08	cps
Holmium	165-1	13636202	13655094	13627376	13639557	0.10	cps
Holmium	165-2	9898386	9683146	9777508	9786347	1.10	cps
Indium	115-1	10390332	10228016	10201167	10273172	1.00	cps
Indium	115-2	3871648	3806160	3903274	3860361	1.28	cps
Iron	56-2	450913820	437623047	441067433	443201433	1.56	cps
Iron	57-2	11235774	11005610	11205765	11149049	1.12	cps
Iron	54-2	24534461	24327033	24650888	24504127	0.67	cps
Krypton	83-1	177	180	160	172	6.22	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICSA006 Instrumnet Name : P7
Client Sample ID : ICSA006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:11:36 DataFile Name : 020ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	50383	48606	46693	48561	3.80	cps
Lead	207-1	40046	38578	37712	38779	3.04	cps
Lead	208-1	188567	180678	176717	181987	3.31	cps
Lithium	6-1	1483234	1468836	1421512	1457861	2.22	cps
Magnesium	24-2	42360228	41514828	41884136	41919730	1.01	cps
Manganese	55-2	29552	30100	30591	30081	1.73	cps
Molybdenum	94-1	6535852	6720411	6623479	6626581	1.39	cps
Molybdenum	95-1	11628328	11690970	11478999	11599432	0.94	cps
Molybdenum	96-1	12546202	12509916	12540032	12532050	0.15	cps
Molybdenum	97-1	7222987	7300057	7268267	7263771	0.53	cps
Molybdenum	98-1	18735385	18830356	18805886	18790543	0.26	cps
Neodymium	150-1	57	57	50	54	7.07	cps
Neodymium	150-2	17	37	33	29	37.08	cps
Nickel	60-2	10174	9983	10187	10115	1.13	cps
Phosphorus	31-2	1274921	1273842	1268341	1272368	0.28	cps
Potassium	39-2	54043661	53231671	53202566	53492633	0.89	cps
Rhodium	103-1	9281498	9293955	9168561	9248005	0.75	cps
Rhodium	103-2	5743180	5703897	5749988	5732355	0.43	cps
Scandium	45-1	5536805	5549880	5465264	5517316	0.83	cps
Scandium	45-2	504260	497987	500013	500754	0.64	cps
Selenium	82-1	369	377	373	373	1.04	cps
Selenium	77-2	3	0	7	3	100.05	cps
Selenium	78-2	383	407	467	419	10.26	cps
Silicon	28-1	631154	621845	625867	626288	0.75	cps
Silver	107-1	870	853	583	769	20.93	cps
Silver	109-1	913	683	457	684	33.36	cps
Sodium	23-2	70319891	69106671	68984901	69470487	1.06	cps
Strontium	86-1	123805	124121	124299	124075	0.20	cps
Strontium	88-1	1080449	1077250	1080797	1079499	0.18	cps
Sulfur	34-1	4363396	4368500	4353779	4361892	0.17	cps
Terbium	159-1	13853501	14043224	13734793	13877173	1.12	cps
Terbium	159-2	9617392	9446033	9622518	9561981	1.05	cps
Thallium	203-1	1577	1730	1960	1756	10.99	cps
Thallium	205-1	3571	4461	4614	4215	13.37	cps
Tin	118-1	3164	3117	3127	3136	0.78	cps
Titanium	47-1	2878966	2908010	2872094	2886357	0.66	cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

ICSA006

Instrumnet Name :

P7

Client Sample ID :

ICSA006

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:11:36

DataFile Name :

020ICSA.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	527	630	607	588	9.22	cps
Vanadium	51-2	847	803	860	837	3.54	cps
Yttrium	89-1	11818721	11998093	11985899	11934238	0.84	cps
Yttrium	89-2	3357772	3349458	3353827	3353685	0.12	cps
Zinc	66-2	10000	9653	10267	9973	3.09	cps
Zirconium	90-1	1183	1293	1373	1283	7.43	cps
Zirconium	91-1	267	287	330	294	11.00	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICSAB006 Instrumnet Name : P7
Client Sample ID : ICSAB006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:20:33 DataFile Name : 023ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	25773955	25711534	25595150	25693546	0.35	cps
Antimony	121-1	256157	260744	260212	259038	0.97	cps
Arsenic	75-2	12425	13126	13329	12960	3.66	cps
Barium	135-1	65845	67191	67616	66884	1.38	cps
Barium	137-1	115360	116896	116627	116294	0.71	cps
Beryllium	9-1	28279	27728	27464	27824	1.49	cps
Bismuth	209-1	8274435	8289773	8202488	8255565	0.56	cps
Bismuth	209-2	6767667	6632743	6646083	6682164	1.11	cps
Bromine	81-1	14080	14764	15245	14696	3.98	cps
Bromine	81-2	400	397	423	407	3.57	cps
Cadmium	108-1	6025	5741	5828	5865	2.48	cps
Cadmium	106-1	8376	8096	8139	8203	1.84	cps
Cadmium	111-1	62645	63470	64012	63376	1.09	cps
Calcium	43-1	2964884	3056631	3045460	3022325	1.66	cps
Calcium	44-1	47762883	48438624	48958924	48386810	1.24	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	190622	192526	194105	192418	0.91	cps
Cobalt	59-2	157392	158112	157877	157794	0.23	cps
Copper	63-2	141811	142619	142379	142270	0.29	cps
Dysprosium	156-1	87	57	30	58	49.07	cps
Dysprosium	156-2	63	57	50	57	11.76	cps
Erbium	164-1	153	143	103	133	19.85	cps
Erbium	164-2	80	60	83	74	16.95	cps
Gadolinium	160-1	80	117	130	109	23.78	cps
Gadolinium	160-2	537	573	460	523	11.05	cps
Holmium	165-1	13910652	13860269	14052996	13941306	0.72	cps
Holmium	165-2	9859803	9847755	9900045	9869201	0.28	cps
Indium	115-1	10533708	10726633	10534759	10598367	1.05	cps
Indium	115-2	3908392	3884497	3953205	3915365	0.89	cps
Iron	56-2	452005700	448950313	450261167	450405727	0.34	cps
Iron	57-2	11251736	11216422	11325554	11264571	0.49	cps
Iron	54-2	24752676	24567063	24429233	24582991	0.66	cps
Krypton	83-1	173	150	220	181	19.68	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICSAB006 Instrumnet Name : P7
Client Sample ID : ICSAB006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:20:33 DataFile Name : 023ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	240332	240871	240350	240518	0.13	cps
Lead	207-1	199793	198621	200847	199754	0.56	cps
Lead	208-1	918282	926398	921829	922170	0.44	cps
Lithium	6-1	1431165	1414794	1408667	1418209	0.82	cps
Magnesium	24-2	42384957	42322583	41721537	42143025	0.87	cps
Manganese	55-2	109699	109424	108719	109281	0.46	cps
Molybdenum	94-1	6669578	6793118	6804659	6755785	1.11	cps
Molybdenum	95-1	11731011	11650274	11896566	11759284	1.07	cps
Molybdenum	96-1	13006182	12710437	12904411	12873677	1.17	cps
Molybdenum	97-1	7412677	7432978	7464571	7436742	0.35	cps
Molybdenum	98-1	19444791	19293154	19359432	19365792	0.39	cps
Neodymium	150-1	83	73	57	71	18.94	cps
Neodymium	150-2	37	27	30	31	16.37	cps
Nickel	60-2	47104	47619	47602	47441	0.62	cps
Phosphorus	31-2	1274623	1305201	1283308	1287711	1.22	cps
Potassium	39-2	53911359	53555743	54384086	53950396	0.77	cps
Rhodium	103-1	9555077	9408401	9476738	9480072	0.77	cps
Rhodium	103-2	5830625	5888628	5893523	5870925	0.60	cps
Scandium	45-1	5579170	5555023	5563810	5566001	0.22	cps
Scandium	45-2	506430	508647	513015	509364	0.66	cps
Selenium	82-1	4154	4114	4218	4162	1.26	cps
Selenium	77-2	430	347	400	392	10.76	cps
Selenium	78-2	1777	1937	1757	1823	5.41	cps
Silicon	28-1	674484	684409	683317	680737	0.80	cps
Silver	107-1	291372	292154	292547	292024	0.20	cps
Silver	109-1	276479	281408	279565	279151	0.89	cps
Sodium	23-2	70417397	70456179	70005937	70293171	0.35	cps
Strontium	86-1	126262	128068	128676	127669	0.98	cps
Strontium	88-1	1102299	1102018	1116638	1106985	0.76	cps
Sulfur	34-1	4337394	4365397	4317811	4340201	0.55	cps
Terbium	159-1	14228948	14125430	14372479	14242285	0.87	cps
Terbium	159-2	9747985	9749750	9690284	9729340	0.35	cps
Thallium	203-1	240392	242785	241244	241473	0.50	cps
Thallium	205-1	572125	577970	575039	575045	0.51	cps
Tin	118-1	3937	3854	3574	3788	5.03	cps
Titanium	47-1	2848292	2843404	2871584	2854427	0.53	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : ICSAB006 Instrumnet Name : P7
Client Sample ID : ICSAB006 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:20:33 DataFile Name : 023ICSB.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	3507	3124	2840	3157	10.60	cps
Vanadium	51-2	85701	86033	86020	85918	0.22	cps
Yttrium	89-1	12352090	12367023	12552100	12423738	0.90	cps
Yttrium	89-2	3384099	3437391	3384458	3401983	0.90	cps
Zinc	66-2	28734	28287	29155	28725	1.51	cps
Zirconium	90-1	4647	4427	4031	4368	7.16	cps
Zirconium	91-1	1047	997	840	961	11.22	cps

LB Number :LB134060Operator :Jaswal

Lab Sample ID :CCV037Instrumnet Name :P7

Client Sample ID :CCV037Dilution Factor :1

Date & Time Acquired :2024-12-21 17:23:36DataFile Name :024CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	14042745	14075565	14020003	14046104	0.20	cps
Antimony	121-1	6020352	6103344	6002135	6041944	0.89	cps
Arsenic	75-2	297365	294771	294415	295517	0.54	cps
Barium	135-1	7771112	7655163	7679061	7701779	0.79	cps
Barium	137-1	13378042	13419885	13099106	13299011	1.31	cps
Beryllium	9-1	632907	641810	643833	639517	0.91	cps
Bismuth	209-1	7935907	7944586	7900318	7926937	0.30	cps
Bismuth	209-2	6409493	6321000	6232549	6321014	1.40	cps
Bromine	81-1	13146	13463	13450	13353	1.34	cps
Bromine	81-2	83	130	133	116	24.20	cps
Cadmium	108-1	105537	106420	105020	105659	0.67	cps
Cadmium	106-1	153514	153848	152521	153294	0.45	cps
Cadmium	111-1	1654970	1652589	1635320	1647626	0.65	cps
Calcium	43-1	7413636	7503707	7476853	7464732	0.62	cps
Calcium	44-1	120704302	121005365	120860282	120856649	0.12	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2318305	2356948	2302080	2325778	1.21	cps
Cobalt	59-2	3622772	3579871	3646255	3616299	0.93	cps
Copper	63-2	25226590	25616607	25363071	25402089	0.78	cps
Dysprosium	156-1	293	327	270	297	9.60	cps
Dysprosium	156-2	497	467	470	478	3.44	cps
Erbium	164-1	270	283	307	287	6.47	cps
Erbium	164-2	143	163	227	178	24.47	cps
Gadolinium	160-1	230	297	267	264	12.63	cps
Gadolinium	160-2	613	617	730	653	10.17	cps
Holmium	165-1	13806625	13690417	13658048	13718364	0.57	cps
Holmium	165-2	9657888	9614062	9580091	9617347	0.41	cps
Indium	115-1	10392271	10166567	9927995	10162278	2.28	cps
Indium	115-2	3720358	3780871	3731230	3744153	0.86	cps
Iron	56-2	549332272	550531218	541570899	547144796	0.89	cps
Iron	57-2	13780972	13644638	13807837	13744482	0.64	cps
Iron	54-2	29803439	30202640	30050454	30018844	0.67	cps
Krypton	83-1	210	193	190	198	5.42	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCV037 Instrumnet Name : P7
Client Sample ID : CCV037 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:23:36 DataFile Name : 024CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	24078625	24163705	23948340	24063557	0.45	cps
Lead	207-1	20953894	21108282	20543684	20868620	1.40	cps
Lead	208-1	95465794	96118546	94198071	95260804	1.03	cps
Lithium	6-1	1358310	1341907	1366506	1355575	0.92	cps
Magnesium	24-2	107321092	107699035	107094378	107371502	0.28	cps
Manganese	55-2	18733748	18856155	18728346	18772750	0.39	cps
Molybdenum	94-1	20901315	20747984	20723743	20791014	0.46	cps
Molybdenum	95-1	29620138	29637412	29681518	29646356	0.11	cps
Molybdenum	96-1	32981127	32891255	32811261	32894548	0.26	cps
Molybdenum	97-1	18790804	18815603	18555801	18720736	0.77	cps
Molybdenum	98-1	48300776	47888969	47915136	48034960	0.48	cps
Neodymium	150-1	507	510	423	480	10.23	cps
Neodymium	150-2	137	147	110	131	14.46	cps
Nickel	60-2	855418	851678	854178	853758	0.22	cps
Phosphorus	31-2	126504	127885	127485	127291	0.56	cps
Potassium	39-2	69296787	68685754	68537346	68839962	0.58	cps
Rhodium	103-1	9236653	9060448	9158578	9151893	0.96	cps
Rhodium	103-2	5588784	5631664	5444178	5554876	1.77	cps
Scandium	45-1	5612172	5607716	5552991	5590960	0.59	cps
Scandium	45-2	511613	512523	500166	508101	1.36	cps
Selenium	82-1	85114	85590	85376	85360	0.28	cps
Selenium	77-2	9423	9009	9243	9225	2.25	cps
Selenium	78-2	31560	31220	31123	31301	0.73	cps
Silicon	28-1	3272019	3300003	3296270	3289431	0.46	cps
Silver	107-1	7422308	7363238	7437177	7407575	0.53	cps
Silver	109-1	6931035	7056902	7022658	7003532	0.93	cps
Sodium	23-2	175414077	174918471	174133451	174822000	0.37	cps
Strontium	86-1	1863686	1848260	1846510	1852819	0.51	cps
Strontium	88-1	16362855	16216259	16170798	16249971	0.62	cps
Sulfur	34-1	566099	567215	564875	566063	0.21	cps
Terbium	159-1	13909569	13915240	13873912	13899574	0.16	cps
Terbium	159-2	9575932	9423144	9309299	9436125	1.42	cps
Thallium	203-1	6110842	6103867	6048977	6087895	0.56	cps
Thallium	205-1	14581830	14335420	14433636	14450295	0.86	cps
Tin	118-1	5004482	4888165	4908379	4933675	1.26	cps
Titanium	47-1	7032046	6980970	6981792	6998269	0.42	cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

CCV037

Instrumnet Name :

P7

Client Sample ID :

CCV037

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:23:36

DataFile Name :

024CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	18359454	18565825	18332604	18419294	0.69	cps
Vanadium	51-2	2128291	2103675	2095368	2109111	0.81	cps
Yttrium	89-1	12330637	12052085	11989534	12124085	1.50	cps
Yttrium	89-2	3368417	3338568	3310724	3339236	0.86	cps
Zinc	66-2	4253586	4274523	4311030	4279713	0.68	cps
Zirconium	90-1	9988994	10099241	10046255	10044830	0.55	cps
Zirconium	91-1	2221125	2254697	2206709	2227510	1.11	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB037 Instrumnet Name : P7
Client Sample ID : CCB037 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:29:37 DataFile Name : 026CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	173	187	203	188	8.00	cps
Antimony	121-1	727	763	680	723	5.77	cps
Arsenic	75-2	7	13	7	9	43.25	cps
Barium	135-1	83	73	50	69	24.83	cps
Barium	137-1	163	123	123	137	16.90	cps
Beryllium	9-1	113	73	77	88	25.28	cps
Bismuth	209-1	8695087	8716419	8547572	8653026	1.06	cps
Bismuth	209-2	7122803	7167299	7091897	7127333	0.53	cps
Bromine	81-1	13927	14040	14320	14096	1.44	cps
Bromine	81-2	253	287	247	262	8.17	cps
Cadmium	108-1	17	13	10	13	25.01	cps
Cadmium	106-1	3087	3060	3064	3070	0.47	cps
Cadmium	111-1	2201	2184	2175	2187	0.60	cps
Calcium	43-1	320	380	367	356	8.86	cps
Calcium	44-1	9713	9383	9166	9421	2.92	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1383	1260	1420	1355	6.19	cps
Cobalt	59-2	123	127	137	129	5.38	cps
Copper	63-2	913	897	933	914	2.01	cps
Dysprosium	156-1	0	20	7	9	114.55	cps
Dysprosium	156-2	7	7	7	7	0.00	cps
Erbium	164-1	63	47	77	62	24.16	cps
Erbium	164-2	77	50	33	53	40.99	cps
Gadolinium	160-1	43	47	33	41	16.89	cps
Gadolinium	160-2	503	523	477	501	4.67	cps
Holmium	165-1	14229385	14007340	13710357	13982361	1.86	cps
Holmium	165-2	9823812	9908947	9755814	9829524	0.78	cps
Indium	115-1	11102728	10924747	11092094	11039856	0.90	cps
Indium	115-2	4155260	4142275	4055341	4117626	1.32	cps
Iron	56-2	19823	18995	19873	19564	2.52	cps
Iron	57-2	1047	977	987	1003	3.77	cps
Iron	54-2	2614	2554	2530	2566	1.68	cps
Krypton	83-1	203	170	207	193	10.49	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB037 Instrumnet Name : P7
Client Sample ID : CCB037 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:29:37 DataFile Name : 026CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1263	1167	1280	1237	4.95	cps
Lead	207-1	1097	1040	1090	1076	2.88	cps
Lead	208-1	4817	4740	4640	4733	1.87	cps
Lithium	6-1	1467925	1459231	1453590	1460249	0.49	cps
Magnesium	24-2	933	937	1010	960	4.51	cps
Manganese	55-2	470	420	420	437	6.61	cps
Molybdenum	94-1	517	517	580	538	6.80	cps
Molybdenum	95-1	570	517	457	514	11.02	cps
Molybdenum	96-1	617	617	537	590	7.83	cps
Molybdenum	97-1	313	253	257	274	12.29	cps
Molybdenum	98-1	853	820	683	786	11.47	cps
Neodymium	150-1	0	0	0	0	0.00	cps
Neodymium	150-2	3	0	0	1	173.21	cps
Nickel	60-2	367	300	340	336	10.00	cps
Phosphorus	31-2	167	140	133	147	12.03	cps
Potassium	39-2	55818	55226	56260	55768	0.93	cps
Rhodium	103-1	10454223	10151975	10280089	10295429	1.47	cps
Rhodium	103-2	6331271	6337131	6294023	6320808	0.37	cps
Scandium	45-1	5804767	5718034	5786423	5769741	0.79	cps
Scandium	45-2	527095	523992	525836	525641	0.30	cps
Selenium	82-1	319	328	290	312	6.37	cps
Selenium	77-2	0	0	3	1	173.21	cps
Selenium	78-2	463	443	423	443	4.51	cps
Silicon	28-1	568359	570985	569600	569648	0.23	cps
Silver	107-1	323	330	270	308	10.69	cps
Silver	109-1	317	267	277	287	9.23	cps
Sodium	23-2	40587	40627	39701	40305	1.30	cps
Strontium	86-1	333	340	317	330	3.64	cps
Strontium	88-1	267	257	197	240	15.77	cps
Sulfur	34-1	173314	173597	175212	174041	0.59	cps
Terbium	159-1	14428660	14104831	14201871	14245121	1.17	cps
Terbium	159-2	9680745	9665723	9722487	9689652	0.30	cps
Thallium	203-1	1100	970	953	1008	7.97	cps
Thallium	205-1	2437	2347	2354	2379	2.11	cps
Tin	118-1	1517	1403	1530	1483	4.69	cps
Titanium	47-1	187	163	190	180	8.07	cps

LB Number :LB134060

Operator :Jaswal

Lab Sample ID :CCB037

Instrumnet Name :P7

Client Sample ID :CCB037

Dilution Factor :1

Date & Time Acquired :2024-12-21 17:29:37

DataFile Name :026CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	150	110	87	116	27.72	cps
Vanadium	51-2	33	20	13	22	45.83	cps
Yttrium	89-1	12733052	12668056	12565044	12655384	0.67	cps
Yttrium	89-2	3477461	3535904	3469180	3494181	1.04	cps
Zinc	66-2	320	377	287	328	13.88	cps
Zirconium	90-1	803	763	777	781	2.61	cps
Zirconium	91-1	180	200	200	193	5.97	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BL Instrumnet Name : P7
Client Sample ID : PBS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:32:56 DataFile Name : 027CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	183	187	243	204	16.49	cps
Antimony	121-1	407	393	367	389	5.24	cps
Arsenic	75-2	13	3	7	8	65.47	cps
Barium	135-1	37	43	47	42	12.06	cps
Barium	137-1	90	43	73	69	34.33	cps
Beryllium	9-1	83	60	93	79	21.68	cps
Bismuth	209-1	8795796	8661288	8682412	8713166	0.83	cps
Bismuth	209-2	7002135	6970563	7091668	7021455	0.89	cps
Bromine	81-1	13696	14053	13843	13864	1.29	cps
Bromine	81-2	133	167	167	156	12.37	cps
Cadmium	108-1	20	0	3	8	137.80	cps
Cadmium	106-1	3137	2947	2874	2986	4.55	cps
Cadmium	111-1	2219	2097	2063	2126	3.87	cps
Calcium	43-1	327	310	320	319	2.63	cps
Calcium	44-1	9343	9126	9083	9184	1.52	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1313	1273	1257	1281	2.27	cps
Cobalt	59-2	77	137	173	129	37.86	cps
Copper	63-2	853	750	813	806	6.47	cps
Dysprosium	156-1	7	0	3	3	100.05	cps
Dysprosium	156-2	0	0	0	0	0.00	cps
Erbium	164-1	60	83	43	62	32.29	cps
Erbium	164-2	30	43	40	38	18.36	cps
Gadolinium	160-1	53	53	53	53	0.00	cps
Gadolinium	160-2	567	520	497	528	6.75	cps
Holmium	165-1	13966469	13781805	13974990	13907755	0.78	cps
Holmium	165-2	9751430	9812374	9824994	9796266	0.40	cps
Indium	115-1	11333813	11165235	11133026	11210691	0.96	cps
Indium	115-2	4119421	4140723	4146048	4135397	0.34	cps
Iron	56-2	18408	18501	18765	18558	1.00	cps
Iron	57-2	967	963	997	976	1.88	cps
Iron	54-2	2560	2757	2607	2641	3.89	cps
Krypton	83-1	203	150	227	193	20.33	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BL Instrumnet Name : P7
Client Sample ID : PBS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:32:56 DataFile Name : 027CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1040	950	940	977	5.64	cps
Lead	207-1	857	820	793	823	3.86	cps
Lead	208-1	3937	3690	3660	3762	4.04	cps
Lithium	6-1	1453943	1433801	1458111	1448619	0.90	cps
Magnesium	24-2	863	887	827	859	3.52	cps
Manganese	55-2	393	340	377	370	7.37	cps
Molybdenum	94-1	387	357	430	391	9.43	cps
Molybdenum	95-1	233	260	203	232	12.21	cps
Molybdenum	96-1	347	363	347	352	2.73	cps
Molybdenum	97-1	160	157	193	170	11.93	cps
Molybdenum	98-1	480	380	437	432	11.60	cps
Neodymium	150-1	23	17	3	14	70.51	cps
Neodymium	150-2	0	3	7	3	100.05	cps
Nickel	60-2	350	293	323	322	8.80	cps
Phosphorus	31-2	140	120	190	150	24.04	cps
Potassium	39-2	56193	54705	55839	55579	1.40	cps
Rhodium	103-1	10349409	10295090	10471189	10371896	0.87	cps
Rhodium	103-2	6371256	6302322	6342851	6338810	0.55	cps
Scandium	45-1	5951591	5834392	5804543	5863509	1.33	cps
Scandium	45-2	532279	528439	535891	532203	0.70	cps
Selenium	82-1	352	320	251	308	16.79	cps
Selenium	77-2	3	0	0	1	173.21	cps
Selenium	78-2	497	403	440	447	10.53	cps
Silicon	28-1	586995	584823	587535	586451	0.24	cps
Silver	107-1	220	227	230	226	2.26	cps
Silver	109-1	150	200	170	173	14.52	cps
Sodium	23-2	32885	31636	31071	31864	2.91	cps
Strontium	86-1	330	370	327	342	7.05	cps
Strontium	88-1	190	180	247	206	17.49	cps
Sulfur	34-1	174598	176796	176857	176083	0.73	cps
Terbium	159-1	14391125	14111347	14174138	14225537	1.03	cps
Terbium	159-2	9661254	9592587	9899967	9717936	1.66	cps
Thallium	203-1	917	833	950	900	6.68	cps
Thallium	205-1	2017	2030	2080	2042	1.64	cps
Tin	118-1	1413	1553	1477	1481	4.73	cps
Titanium	47-1	110	160	90	120	30.05	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BL Instrumnet Name : P7
Client Sample ID : PBS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:32:56 DataFile Name : 027CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	40	23	10	24	61.49	cps
Vanadium	51-2	10	10	27	16	61.87	cps
Yttrium	89-1	12862131	12541992	12608162	12670762	1.33	cps
Yttrium	89-2	3577833	3505093	3540860	3541262	1.03	cps
Zinc	66-2	300	357	260	306	15.89	cps
Zirconium	90-1	693	640	720	684	5.95	cps
Zirconium	91-1	150	163	167	160	5.51	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BS Instrumnet Name : P7
Client Sample ID : LCS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:36:12 DataFile Name : 028LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	12782	12442	12382	12535	1.72	cps
Antimony	121-1	50244	50361	50906	50504	0.70	cps
Arsenic	75-2	1390	1423	1490	1435	3.55	cps
Barium	135-1	62091	61997	62148	62079	0.12	cps
Barium	137-1	107697	108681	109181	108520	0.70	cps
Beryllium	9-1	2947	3014	3027	2996	1.43	cps
Bismuth	209-1	8685659	8592629	8613233	8630507	0.57	cps
Bismuth	209-2	7120680	7102303	7056954	7093312	0.46	cps
Bromine	81-1	14394	14677	14587	14553	1.00	cps
Bromine	81-2	163	177	150	163	8.16	cps
Cadmium	108-1	497	447	487	477	5.55	cps
Cadmium	106-1	3971	3744	3747	3821	3.40	cps
Cadmium	111-1	9812	9737	9917	9822	0.92	cps
Calcium	43-1	34513	34062	33911	34162	0.92	cps
Calcium	44-1	558679	549090	560389	556053	1.10	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	21973	21652	21752	21792	0.75	cps
Cobalt	59-2	16866	16489	16810	16722	1.22	cps
Copper	63-2	25518	25151	25355	25341	0.73	cps
Dysprosium	156-1	20	17	10	16	32.73	cps
Dysprosium	156-2	13	7	3	8	65.47	cps
Erbium	164-1	27	60	67	51	41.93	cps
Erbium	164-2	47	60	30	46	32.99	cps
Gadolinium	160-1	30	33	50	38	28.37	cps
Gadolinium	160-2	497	473	470	480	3.03	cps
Holmium	165-1	13907297	14074461	13920526	13967428	0.67	cps
Holmium	165-2	9894993	9903629	10028701	9942441	0.75	cps
Indium	115-1	11111808	11200755	11058388	11123650	0.65	cps
Indium	115-2	4235876	4163589	4236073	4211846	0.99	cps
Iron	56-2	2008056	2014903	1999981	2007647	0.37	cps
Iron	57-2	51595	51909	51812	51772	0.31	cps
Iron	54-2	113420	113692	113493	113535	0.12	cps
Krypton	83-1	167	177	193	179	7.53	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BS Instrumnet Name : P7
Client Sample ID : LCS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:36:12 DataFile Name : 028LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20168	20319	20816	20434	1.66	cps
Lead	207-1	17548	17425	17538	17504	0.39	cps
Lead	208-1	79865	80771	81365	80667	0.94	cps
Lithium	6-1	1423633	1436174	1418319	1426042	0.64	cps
Magnesium	24-2	461384	462137	464950	462824	0.41	cps
Manganese	55-2	9116	9033	9093	9081	0.47	cps
Molybdenum	94-1	50898	50614	51460	50991	0.84	cps
Molybdenum	95-1	61903	62499	62252	62218	0.48	cps
Molybdenum	96-1	69283	69641	69377	69434	0.27	cps
Molybdenum	97-1	39025	38938	39279	39081	0.45	cps
Molybdenum	98-1	101097	100670	101134	100967	0.26	cps
Neodymium	150-1	7	3	7	6	34.70	cps
Neodymium	150-2	0	3	3	2	86.60	cps
Nickel	60-2	4537	4231	4434	4401	3.55	cps
Phosphorus	31-2	753	800	853	802	6.24	cps
Potassium	39-2	675750	679880	678880	678170	0.32	cps
Rhodium	103-1	10329618	10332391	10393553	10351854	0.35	cps
Rhodium	103-2	6305919	6375256	6435278	6372151	1.02	cps
Scandium	45-1	5954647	5899390	5991742	5948593	0.78	cps
Scandium	45-2	538618	542829	539302	540250	0.42	cps
Selenium	82-1	2319	2411	2216	2315	4.23	cps
Selenium	77-2	303	230	233	256	16.20	cps
Selenium	78-2	1230	1133	1157	1173	4.30	cps
Silicon	28-1	713934	709798	716797	713509	0.49	cps
Silver	107-1	31959	32216	33458	32544	2.46	cps
Silver	109-1	30268	30686	31087	30680	1.33	cps
Sodium	23-2	770787	763991	765569	766782	0.46	cps
Strontium	86-1	8226	7745	8372	8115	4.04	cps
Strontium	88-1	69490	69245	69275	69337	0.19	cps
Sulfur	34-1	182859	182452	183335	182882	0.24	cps
Terbium	159-1	14470307	14453164	14190398	14371290	1.09	cps
Terbium	159-2	9920753	9728833	9884438	9844675	1.04	cps
Thallium	203-1	25187	24415	24586	24729	1.64	cps
Thallium	205-1	59114	58857	58542	58838	0.49	cps
Tin	118-1	106238	106490	107175	106634	0.45	cps
Titanium	47-1	3864	3657	3944	3822	3.87	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165675BS Instrumnet Name : P7
Client Sample ID : LCS675 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:36:12 DataFile Name : 028LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	67673	68380	67786	67946	0.56	cps
Vanadium	51-2	46796	46779	46408	46661	0.47	cps
Yttrium	89-1	12821213	12742605	12645184	12736334	0.69	cps
Yttrium	89-2	3546272	3541773	3547625	3545223	0.09	cps
Zinc	66-2	10437	11007	10357	10601	3.35	cps
Zirconium	90-1	43090	42702	43244	43012	0.65	cps
Zirconium	91-1	9243	9460	9483	9395	1.41	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165800BL Instrumnet Name : P7
Client Sample ID : PBS800 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:39:29 DataFile Name : 029CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	177	233	160	190	20.23	cps
Antimony	121-1	217	230	183	210	11.45	cps
Arsenic	75-2	7	10	13	10	33.30	cps
Barium	135-1	63	40	37	47	31.13	cps
Barium	137-1	103	83	100	96	11.22	cps
Beryllium	9-1	57	57	73	62	15.46	cps
Bismuth	209-1	8750072	8676877	8573316	8666755	1.02	cps
Bismuth	209-2	7073062	7067214	7023113	7054463	0.39	cps
Bromine	81-1	14491	14951	14744	14729	1.57	cps
Bromine	81-2	160	147	190	166	13.41	cps
Cadmium	108-1	17	7	10	11	45.82	cps
Cadmium	106-1	2887	3187	2874	2983	5.94	cps
Cadmium	111-1	2033	2260	2018	2104	6.45	cps
Calcium	43-1	343	387	340	357	7.30	cps
Calcium	44-1	9890	9690	9516	9699	1.93	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1360	1303	1380	1348	2.95	cps
Cobalt	59-2	143	127	137	136	6.19	cps
Copper	63-2	790	767	773	777	1.55	cps
Dysprosium	156-1	10	3	3	6	69.34	cps
Dysprosium	156-2	3	3	3	3	0.00	cps
Erbium	164-1	83	27	60	57	50.25	cps
Erbium	164-2	13	40	33	29	48.05	cps
Gadolinium	160-1	27	33	50	37	32.78	cps
Gadolinium	160-2	463	517	517	499	6.17	cps
Holmium	165-1	13986428	13849650	13818654	13884911	0.64	cps
Holmium	165-2	9859917	9830007	9835593	9841839	0.16	cps
Indium	115-1	11241573	11005218	11127043	11124611	1.06	cps
Indium	115-2	4167993	4168083	4137910	4157995	0.42	cps
Iron	56-2	18885	19075	18552	18837	1.41	cps
Iron	57-2	1063	1170	1233	1156	7.44	cps
Iron	54-2	2654	2644	2647	2648	0.19	cps
Krypton	83-1	183	200	187	190	4.64	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165800BL Instrumnet Name : P7
Client Sample ID : PBS800 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:39:29 DataFile Name : 029CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	860	797	800	819	4.35	cps
Lead	207-1	723	650	707	693	5.54	cps
Lead	208-1	3250	3300	3214	3255	1.34	cps
Lithium	6-1	1429473	1423601	1414794	1422623	0.52	cps
Magnesium	24-2	1067	913	920	967	8.97	cps
Manganese	55-2	367	357	410	378	7.50	cps
Molybdenum	94-1	413	380	363	386	6.60	cps
Molybdenum	95-1	137	223	247	202	28.66	cps
Molybdenum	96-1	273	307	263	281	8.07	cps
Molybdenum	97-1	203	140	157	167	19.70	cps
Molybdenum	98-1	343	377	383	368	5.83	cps
Neodymium	150-1	7	7	3	6	34.70	cps
Neodymium	150-2	3	0	3	2	86.60	cps
Nickel	60-2	323	297	310	310	4.30	cps
Phosphorus	31-2	167	120	170	152	18.37	cps
Potassium	39-2	56206	56330	56417	56318	0.19	cps
Rhodium	103-1	10536668	10466557	10462592	10488606	0.40	cps
Rhodium	103-2	6429120	6374800	6298620	6367513	1.03	cps
Scandium	45-1	6035662	5835710	5854685	5908685	1.87	cps
Scandium	45-2	536059	542981	537216	538752	0.69	cps
Selenium	82-1	319	383	334	345	9.61	cps
Selenium	77-2	3	0	3	2	86.60	cps
Selenium	78-2	530	447	433	470	11.15	cps
Silicon	28-1	594297	599164	598336	597266	0.44	cps
Silver	107-1	323	290	263	292	10.29	cps
Silver	109-1	277	210	177	221	23.03	cps
Sodium	23-2	26686	26500	26059	26415	1.22	cps
Strontium	86-1	377	373	337	362	6.13	cps
Strontium	88-1	410	443	363	406	9.91	cps
Sulfur	34-1	182208	181015	181884	181702	0.34	cps
Terbium	159-1	14345496	14139119	14216555	14233723	0.73	cps
Terbium	159-2	9542884	9620452	9761956	9641764	1.15	cps
Thallium	203-1	763	740	717	740	3.15	cps
Thallium	205-1	1773	1707	1603	1695	5.06	cps
Tin	118-1	1423	1527	1487	1479	3.52	cps
Titanium	47-1	110	117	90	106	13.15	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165800BL Instrumnet Name : P7
Client Sample ID : PBS800 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:39:29 DataFile Name : 029CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	33	40	23	32	26.04	cps
Vanadium	51-2	7	13	3	8	65.47	cps
Yttrium	89-1	13077937	12908787	12884334	12957020	0.81	cps
Yttrium	89-2	3556640	3534502	3475456	3522199	1.19	cps
Zinc	66-2	237	300	310	282	14.09	cps
Zirconium	90-1	753	633	703	697	8.65	cps
Zirconium	91-1	173	177	133	161	14.97	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165800BS Instrumnet Name : P7
Client Sample ID : LCS800 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:42:46 DataFile Name : 030LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	12602	12515	12642	12586	0.51	cps
Antimony	121-1	49956	50876	50348	50393	0.92	cps
Arsenic	75-2	1470	1520	1550	1513	2.67	cps
Barium	135-1	63906	61961	62613	62827	1.58	cps
Barium	137-1	107428	107418	109833	108227	1.29	cps
Beryllium	9-1	2960	2997	2964	2974	0.68	cps
Bismuth	209-1	8591464	8480973	8539767	8537401	0.65	cps
Bismuth	209-2	7124884	6985319	7058702	7056302	0.99	cps
Bromine	81-1	14968	14367	14998	14777	2.41	cps
Bromine	81-2	163	207	170	180	12.96	cps
Cadmium	108-1	577	470	497	514	10.79	cps
Cadmium	106-1	4011	3824	3784	3873	3.12	cps
Cadmium	111-1	10064	9619	9879	9854	2.27	cps
Calcium	43-1	33607	34379	33821	33936	1.17	cps
Calcium	44-1	553878	561537	561131	558849	0.77	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	21906	21469	22420	21932	2.17	cps
Cobalt	59-2	17273	16696	17163	17044	1.80	cps
Copper	63-2	25539	25124	25665	25443	1.11	cps
Dysprosium	156-1	13	17	33	21	50.75	cps
Dysprosium	156-2	13	20	17	17	20.01	cps
Erbium	164-1	53	53	47	51	7.52	cps
Erbium	164-2	67	13	67	49	62.99	cps
Gadolinium	160-1	47	57	47	50	11.55	cps
Gadolinium	160-2	537	543	533	538	0.95	cps
Holmium	165-1	14065119	13988410	14088339	14047289	0.37	cps
Holmium	165-2	10134520	9723236	9795465	9884407	2.22	cps
Indium	115-1	11174666	11192481	11168011	11178386	0.11	cps
Indium	115-2	4247918	4183360	4180888	4204056	0.90	cps
Iron	56-2	2008814	2019764	1985738	2004772	0.87	cps
Iron	57-2	51929	51431	51103	51488	0.81	cps
Iron	54-2	114803	114246	113557	114202	0.55	cps
Krypton	83-1	187	193	213	198	7.02	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165800BS Instrumnet Name : P7
Client Sample ID : LCS800 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:42:46 DataFile Name : 030LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20462	19821	20225	20169	1.61	cps
Lead	207-1	17274	17194	17845	17438	2.04	cps
Lead	208-1	79180	79512	79426	79373	0.22	cps
Lithium	6-1	1398638	1405376	1390585	1398200	0.53	cps
Magnesium	24-2	465168	464662	461498	463776	0.43	cps
Manganese	55-2	8609	9099	9316	9008	4.02	cps
Molybdenum	94-1	51423	51293	51396	51371	0.13	cps
Molybdenum	95-1	62342	62627	62844	62604	0.40	cps
Molybdenum	96-1	71249	69524	69025	69933	1.67	cps
Molybdenum	97-1	39069	39162	39858	39363	1.09	cps
Molybdenum	98-1	102120	102097	100586	101601	0.87	cps
Neodymium	150-1	13	20	17	17	20.01	cps
Neodymium	150-2	3	3	0	2	86.60	cps
Nickel	60-2	4351	4491	4357	4400	1.80	cps
Phosphorus	31-2	837	860	850	849	1.38	cps
Potassium	39-2	683653	682486	681950	682697	0.13	cps
Rhodium	103-1	10621989	10504788	10433029	10519935	0.91	cps
Rhodium	103-2	6518336	6248406	6472824	6413189	2.25	cps
Scandium	45-1	5956020	5992526	6010969	5986505	0.47	cps
Scandium	45-2	547067	541150	551677	546632	0.97	cps
Selenium	82-1	2326	2362	2224	2304	3.12	cps
Selenium	77-2	227	227	190	214	9.87	cps
Selenium	78-2	1197	1157	1127	1160	3.03	cps
Silicon	28-1	724359	734228	733319	730635	0.75	cps
Silver	107-1	32052	32730	32426	32403	1.05	cps
Silver	109-1	30966	30956	30542	30822	0.79	cps
Sodium	23-2	773165	769527	769021	770571	0.29	cps
Strontium	86-1	8392	8082	8062	8179	2.26	cps
Strontium	88-1	67735	68559	68585	68293	0.71	cps
Sulfur	34-1	186790	186935	188699	187474	0.57	cps
Terbium	159-1	14349439	14254202	14082280	14228641	0.95	cps
Terbium	159-2	9774179	9697701	9510945	9660942	1.40	cps
Thallium	203-1	24402	24208	24572	24394	0.75	cps
Thallium	205-1	58150	58488	58636	58425	0.43	cps
Tin	118-1	105607	106288	106053	105983	0.33	cps
Titanium	47-1	3751	3837	3767	3785	1.22	cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

PB165800BS

Instrumnet Name :

P7

Client Sample ID :

LCS800

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:42:46

DataFile Name :

030LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	65983	66630	66881	66498	0.70	cps
Vanadium	51-2	47842	46224	47207	47091	1.73	cps
Yttrium	89-1	12940756	12795733	12902853	12879781	0.58	cps
Yttrium	89-2	3579055	3482939	3592618	3551537	1.68	cps
Zinc	66-2	10661	10587	10247	10498	2.10	cps
Zirconium	90-1	42682	42745	42949	42792	0.33	cps
Zirconium	91-1	9560	9180	9436	9392	2.07	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BL Instrumnet Name : P7
Client Sample ID : PBS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:46:03 DataFile Name : 031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	200	177	177	184	7.30	cps
Antimony	121-1	157	107	137	133	18.87	cps
Arsenic	75-2	20	27	0	16	89.22	cps
Barium	135-1	47	57	47	50	11.55	cps
Barium	137-1	93	87	73	84	12.06	cps
Beryllium	9-1	67	60	57	61	8.33	cps
Bismuth	209-1	8602807	8529382	8548945	8560378	0.44	cps
Bismuth	209-2	7134416	7024404	7074727	7077849	0.78	cps
Bromine	81-1	15011	15105	15448	15188	1.52	cps
Bromine	81-2	177	213	200	197	9.44	cps
Cadmium	108-1	10	0	13	8	89.21	cps
Cadmium	106-1	3240	3080	3014	3111	3.74	cps
Cadmium	111-1	2308	2177	2140	2209	4.00	cps
Calcium	43-1	310	333	347	330	5.62	cps
Calcium	44-1	9506	8956	8836	9099	3.93	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1453	1393	1417	1421	2.13	cps
Cobalt	59-2	130	147	107	128	15.72	cps
Copper	63-2	803	677	707	729	9.08	cps
Dysprosium	156-1	10	10	10	10	0.00	cps
Dysprosium	156-2	10	7	7	8	24.71	cps
Erbium	164-1	50	63	53	56	12.49	cps
Erbium	164-2	40	27	30	32	21.53	cps
Gadolinium	160-1	50	20	50	40	43.30	cps
Gadolinium	160-2	520	510	483	504	3.76	cps
Holmium	165-1	13982958	13798809	13787963	13856577	0.79	cps
Holmium	165-2	10006149	9780215	9961333	9915899	1.21	cps
Indium	115-1	11220089	11229646	11279498	11243078	0.28	cps
Indium	115-2	4203781	4192563	4197650	4197998	0.13	cps
Iron	56-2	19079	19289	18738	19035	1.46	cps
Iron	57-2	987	1063	1097	1049	5.38	cps
Iron	54-2	2580	2844	2704	2709	4.86	cps
Krypton	83-1	153	240	197	197	22.03	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BL Instrumnet Name : P7
Client Sample ID : PBS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:46:03 DataFile Name : 031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	770	747	753	757	1.59	cps
Lead	207-1	603	623	627	618	2.04	cps
Lead	208-1	2990	2947	2773	2903	3.95	cps
Lithium	6-1	1383360	1390206	1426066	1399877	1.64	cps
Magnesium	24-2	853	877	877	869	1.55	cps
Manganese	55-2	393	323	347	354	10.06	cps
Molybdenum	94-1	300	377	357	344	11.55	cps
Molybdenum	95-1	200	220	170	197	12.80	cps
Molybdenum	96-1	290	270	283	281	3.62	cps
Molybdenum	97-1	113	133	103	117	13.10	cps
Molybdenum	98-1	347	287	357	330	11.47	cps
Neodymium	150-1	10	3	3	6	69.34	cps
Neodymium	150-2	3	0	3	2	86.60	cps
Nickel	60-2	323	397	347	356	10.54	cps
Phosphorus	31-2	113	133	140	129	10.77	cps
Potassium	39-2	56130	56360	56468	56319	0.31	cps
Rhodium	103-1	10605215	10448837	10437064	10497039	0.89	cps
Rhodium	103-2	6563006	6507581	6362852	6477813	1.60	cps
Scandium	45-1	5940703	5949812	5893377	5927964	0.51	cps
Scandium	45-2	551693	547928	548125	549248	0.39	cps
Selenium	82-1	405	288	318	337	17.92	cps
Selenium	77-2	0	3	0	1	173.21	cps
Selenium	78-2	487	517	437	480	8.42	cps
Silicon	28-1	612494	617691	608869	613018	0.72	cps
Silver	107-1	267	267	277	270	2.14	cps
Silver	109-1	220	197	193	203	7.14	cps
Sodium	23-2	23698	23568	23635	23634	0.28	cps
Strontium	86-1	307	367	357	343	9.36	cps
Strontium	88-1	220	243	197	220	10.61	cps
Sulfur	34-1	185311	186898	187562	186590	0.62	cps
Terbium	159-1	14282312	14126651	14181667	14196877	0.56	cps
Terbium	159-2	9815432	9689533	9680501	9728489	0.78	cps
Thallium	203-1	683	587	620	630	7.79	cps
Thallium	205-1	1497	1503	1497	1499	0.26	cps
Tin	118-1	1357	1370	1310	1346	2.34	cps
Titanium	47-1	87	90	100	92	7.52	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BL Instrumnet Name : P7
Client Sample ID : PBS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:46:03 DataFile Name : 031CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	43	27	20	30	40.05	cps
Vanadium	51-2	17	7	7	10	57.72	cps
Yttrium	89-1	13045904	12929572	12975006	12983494	0.45	cps
Yttrium	89-2	3596563	3620381	3581272	3599406	0.55	cps
Zinc	66-2	293	267	373	311	17.84	cps
Zirconium	90-1	563	667	690	640	10.53	cps
Zirconium	91-1	173	163	137	158	12.01	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BS Instrumnet Name : P7
Client Sample ID : LCS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:49:20 DataFile Name : 032LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	12382	12739	12982	12701	2.38	cps
Antimony	121-1	51846	52432	51575	51951	0.84	cps
Arsenic	75-2	1390	1440	1523	1451	4.64	cps
Barium	135-1	63608	65222	64894	64575	1.32	cps
Barium	137-1	112917	110357	110206	111160	1.37	cps
Beryllium	9-1	3120	3017	3077	3071	1.69	cps
Bismuth	209-1	8837358	8543055	8461972	8614128	2.29	cps
Bismuth	209-2	7025132	7097599	7156477	7093069	0.93	cps
Bromine	81-1	15358	15548	15221	15376	1.07	cps
Bromine	81-2	200	170	177	182	8.64	cps
Cadmium	108-1	537	467	427	477	11.68	cps
Cadmium	106-1	4271	3841	3817	3976	6.42	cps
Cadmium	111-1	9905	10012	10037	9985	0.70	cps
Calcium	43-1	34850	35605	34703	35053	1.38	cps
Calcium	44-1	575163	571353	571844	572787	0.36	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	22861	22150	22303	22438	1.67	cps
Cobalt	59-2	17250	17190	16629	17023	2.01	cps
Copper	63-2	25826	25936	25822	25861	0.25	cps
Dysprosium	156-1	13	0	20	11	91.66	cps
Dysprosium	156-2	10	10	13	11	17.30	cps
Erbium	164-1	50	50	40	47	12.37	cps
Erbium	164-2	47	53	37	46	18.41	cps
Gadolinium	160-1	37	43	33	38	13.48	cps
Gadolinium	160-2	450	553	587	530	13.45	cps
Holmium	165-1	14124749	13817377	13925502	13955876	1.12	cps
Holmium	165-2	9971398	10075710	10052854	10033321	0.55	cps
Indium	115-1	11370722	11357505	11065062	11264430	1.53	cps
Indium	115-2	4255508	4244067	4252468	4250681	0.14	cps
Iron	56-2	2065244	2067575	2050953	2061258	0.44	cps
Iron	57-2	52990	53217	53291	53166	0.30	cps
Iron	54-2	117071	115757	116493	116440	0.57	cps
Krypton	83-1	187	193	187	189	2.04	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BS Instrumnet Name : P7
Client Sample ID : LCS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:49:20 DataFile Name : 032LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	20305	20148	20632	20362	1.21	cps
Lead	207-1	18269	17321	17949	17846	2.70	cps
Lead	208-1	80807	79963	81151	80640	0.76	cps
Lithium	6-1	1396313	1388213	1403202	1395909	0.54	cps
Magnesium	24-2	474069	471355	473446	472957	0.30	cps
Manganese	55-2	9616	9283	9513	9471	1.80	cps
Molybdenum	94-1	52290	53173	52434	52632	0.90	cps
Molybdenum	95-1	62760	63959	63457	63392	0.95	cps
Molybdenum	96-1	71313	71527	70663	71168	0.63	cps
Molybdenum	97-1	40570	39747	40102	40140	1.03	cps
Molybdenum	98-1	102694	104544	103177	103472	0.93	cps
Neodymium	150-1	10	7	10	9	21.63	cps
Neodymium	150-2	3	3	3	3	0.00	cps
Nickel	60-2	4487	4607	4554	4550	1.32	cps
Phosphorus	31-2	877	890	923	897	2.68	cps
Potassium	39-2	701497	699964	699476	700313	0.15	cps
Rhodium	103-1	10714994	10648394	10584372	10649253	0.61	cps
Rhodium	103-2	6459578	6447226	6456279	6454361	0.10	cps
Scandium	45-1	6180020	6094773	5994614	6089802	1.52	cps
Scandium	45-2	554045	552350	554778	553725	0.22	cps
Selenium	82-1	2465	2390	2412	2422	1.61	cps
Selenium	77-2	273	213	230	239	12.97	cps
Selenium	78-2	1340	1297	1190	1276	6.05	cps
Silicon	28-1	747929	746278	747145	747117	0.11	cps
Silver	107-1	33101	33696	33873	33556	1.20	cps
Silver	109-1	32179	31945	32486	32204	0.84	cps
Sodium	23-2	785744	782797	787608	785383	0.31	cps
Strontium	86-1	8436	8069	8523	8342	2.89	cps
Strontium	88-1	70669	70836	70618	70708	0.16	cps
Sulfur	34-1	190636	191331	192242	191403	0.42	cps
Terbium	159-1	14828309	14412511	14379332	14540051	1.72	cps
Terbium	159-2	9826699	9801988	9785277	9804655	0.21	cps
Thallium	203-1	24308	25197	24492	24666	1.90	cps
Thallium	205-1	59683	58883	59386	59317	0.68	cps
Tin	118-1	107893	109284	108827	108668	0.65	cps
Titanium	47-1	3781	3891	3927	3866	1.97	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : PB165755BS Instrumnet Name : P7
Client Sample ID : LCS755 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:49:20 DataFile Name : 032LCSE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	67779	69320	67907	68335	1.25	cps
Vanadium	51-2	48758	47558	48514	48277	1.31	cps
Yttrium	89-1	13165104	13018093	12922497	13035231	0.94	cps
Yttrium	89-2	3635835	3671699	3590108	3632547	1.13	cps
Zinc	66-2	10644	10734	10624	10667	0.55	cps
Zirconium	90-1	42946	43985	44250	43727	1.58	cps
Zirconium	91-1	9880	9760	9900	9847	0.77	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-01 Instrumnet Name : P7
Client Sample ID : MJNKD0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:53:45 DataFile Name : 033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5318265	5213311	5235113	5255563	1.05	cps
Antimony	121-1	9434467	9505692	9325226	9421795	0.96	cps
Arsenic	75-2	1139904	1127245	1133932	1133694	0.56	cps
Barium	135-1	820765	829499	824530	824931	0.53	cps
Barium	137-1	1416079	1434286	1439623	1429996	0.86	cps
Beryllium	9-1	1037	960	1020	1006	4.01	cps
Bismuth	209-1	9168227	9177405	9167519	9171050	0.06	cps
Bismuth	209-2	7499105	7399061	7425368	7441178	0.70	cps
Bromine	81-1	63131	67376	69408	66638	4.81	cps
Bromine	81-2	11011	11144	11178	11111	0.79	cps
Cadmium	108-1	1357	1300	1570	1409	10.11	cps
Cadmium	106-1	5378	5391	5431	5400	0.51	cps
Cadmium	111-1	12856	13108	12882	12949	1.07	cps
Calcium	43-1	478864	487001	478370	481412	1.01	cps
Calcium	44-1	7427901	7606260	7650256	7561472	1.56	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	238493	238046	237592	238044	0.19	cps
Cobalt	59-2	1471266	1447283	1438450	1452333	1.17	cps
Copper	63-2	6512899	6430083	6465140	6469374	0.64	cps
Dysprosium	156-1	33944	35044	34385	34458	1.61	cps
Dysprosium	156-2	28071	28222	27303	27865	1.77	cps
Erbium	164-1	33437	33584	34442	33821	1.61	cps
Erbium	164-2	23516	22869	23730	23372	1.92	cps
Gadolinium	160-1	33647	34375	34512	34178	1.36	cps
Gadolinium	160-2	24932	25186	24916	25011	0.61	cps
Holmium	165-1	14874801	15035750	14762997	14891183	0.92	cps
Holmium	165-2	10422828	10475862	10265692	10388128	1.05	cps
Indium	115-1	12984037	12917905	12822245	12908062	0.63	cps
Indium	115-2	4833325	4782671	4823303	4813100	0.56	cps
Iron	56-2	519458352	514168432	517456566	517027783	0.52	cps
Iron	57-2	13104958	12628699	12619759	12784472	2.17	cps
Iron	54-2	28457835	27969103	28164359	28197099	0.87	cps
Krypton	83-1	227	227	273	242	11.12	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-01 Instrumnet Name : P7
Client Sample ID : MJNKD0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:53:45 DataFile Name : 033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	17221748	17541099	17438618	17400488	0.94	cps
Lead	207-1	14910064	15256534	15196655	15121084	1.22	cps
Lead	208-1	68564004	69398461	68961910	68974792	0.61	cps
Lithium	6-1	1418941	1421683	1386150	1408925	1.40	cps
Magnesium	24-2	5133628	5058543	5065102	5085758	0.82	cps
Manganese	55-2	3099563	3144044	3087398	3110335	0.96	cps
Molybdenum	94-1	168146	171356	171169	170224	1.06	cps
Molybdenum	95-1	147889	151111	149858	149619	1.09	cps
Molybdenum	96-1	179902	182271	180570	180914	0.68	cps
Molybdenum	97-1	93335	94396	94338	94023	0.63	cps
Molybdenum	98-1	241528	243392	240783	241901	0.56	cps
Neodymium	150-1	52557	52919	52166	52547	0.72	cps
Neodymium	150-2	31692	31422	31953	31689	0.84	cps
Nickel	60-2	102779	101853	102417	102349	0.46	cps
Phosphorus	31-2	21519	21892	21625	21679	0.89	cps
Potassium	39-2	2780517	2796403	2805054	2793991	0.45	cps
Rhodium	103-1	10846793	10832107	11004154	10894351	0.88	cps
Rhodium	103-2	6769791	6821356	6734736	6775294	0.64	cps
Scandium	45-1	6385605	6423022	6332843	6380490	0.71	cps
Scandium	45-2	594460	592912	591001	592791	0.29	cps
Selenium	82-1	889	925	751	855	10.73	cps
Selenium	77-2	103	127	127	119	11.33	cps
Selenium	78-2	737	623	770	710	10.83	cps
Silicon	28-1	26460967	26399615	26295247	26385276	0.32	cps
Silver	107-1	49715	50648	50548	50304	1.02	cps
Silver	109-1	48076	47765	47681	47841	0.43	cps
Sodium	23-2	10482553	10331882	10459074	10424503	0.78	cps
Strontium	86-1	500453	502781	502383	501873	0.25	cps
Strontium	88-1	4515142	4609149	4549447	4557913	1.04	cps
Sulfur	34-1	323573	320604	314325	319501	1.48	cps
Terbium	159-1	15160043	15277718	15129286	15189015	0.52	cps
Terbium	159-2	10366969	10165342	10183743	10238685	1.09	cps
Thallium	203-1	9930	9774	10334	10013	2.89	cps
Thallium	205-1	23303	23841	23934	23693	1.44	cps
Tin	118-1	2391171	2427996	2396119	2405095	0.83	cps
Titanium	47-1	1146029	1157233	1161938	1155067	0.71	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-01 Instrumnet Name : P7
Client Sample ID : MJNKD0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:53:45 DataFile Name : 033SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	86571	90105	87752	88143	2.04	cps
Vanadium	51-2	291696	287938	287664	289099	0.78	cps
Yttrium	89-1	14207910	14166861	14105387	14160053	0.36	cps
Yttrium	89-2	3947888	3961924	3907198	3939003	0.72	cps
Zinc	66-2	7428188	7361162	7487387	7425579	0.85	cps
Zirconium	90-1	226429	230400	227357	228062	0.91	cps
Zirconium	91-1	51661	52058	52544	52088	0.85	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-02 Instrumnet Name : P7
Client Sample ID : MJNKD0D Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:56:44 DataFile Name : 034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5109296	5021406	5111230	5080644	1.01	cps
Antimony	121-1	9097252	9238335	9284003	9206530	1.06	cps
Arsenic	75-2	1107054	1112092	1115208	1111452	0.37	cps
Barium	135-1	807205	812125	816917	812082	0.60	cps
Barium	137-1	1387188	1406361	1409133	1400894	0.85	cps
Beryllium	9-1	950	943	957	950	0.70	cps
Bismuth	209-1	9304317	9283838	9244774	9277643	0.33	cps
Bismuth	209-2	7449676	7411299	7375065	7412013	0.50	cps
Bromine	81-1	59814	64353	66191	63453	5.17	cps
Bromine	81-2	10904	10937	10284	10708	3.44	cps
Cadmium	108-1	1190	1293	1300	1261	4.89	cps
Cadmium	106-1	5378	5558	5561	5499	1.91	cps
Cadmium	111-1	12672	12942	12467	12694	1.88	cps
Calcium	43-1	451725	456690	459785	456067	0.89	cps
Calcium	44-1	7123727	7179232	7084068	7129009	0.67	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	231090	231778	232332	231733	0.27	cps
Cobalt	59-2	1369646	1379185	1385628	1378153	0.58	cps
Copper	63-2	6193953	6200940	6258300	6217731	0.57	cps
Dysprosium	156-1	33921	34138	35027	34362	1.71	cps
Dysprosium	156-2	27968	27317	27654	27646	1.18	cps
Erbium	164-1	33129	33704	34389	33741	1.87	cps
Erbium	164-2	23563	23680	23600	23614	0.25	cps
Gadolinium	160-1	33320	34225	34182	33909	1.51	cps
Gadolinium	160-2	25163	25366	25573	25367	0.81	cps
Holmium	165-1	15079538	15043013	15056014	15059522	0.12	cps
Holmium	165-2	10618034	10539323	10307974	10488443	1.54	cps
Indium	115-1	13141347	13075102	13040902	13085783	0.39	cps
Indium	115-2	4791791	4794557	4827248	4804532	0.41	cps
Iron	56-2	507474686	499629393	504246419	503783499	0.78	cps
Iron	57-2	12530485	12523078	12627871	12560478	0.47	cps
Iron	54-2	27535010	28018055	27668035	27740367	0.90	cps
Krypton	83-1	303	233	257	264	13.48	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-02 Instrumnet Name : P7
Client Sample ID : MJNKD0D Dilution Factor : 1
Date & Time Acquired : 2024-12-21 17:56:44 DataFile Name : 034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	16859114	16794192	16989546	16880951	0.59	cps
Lead	207-1	14579755	14750114	14780211	14703360	0.74	cps
Lead	208-1	66403296	67282651	67341843	67009263	0.78	cps
Lithium	6-1	1392616	1343407	1338779	1358267	2.20	cps
Magnesium	24-2	4988156	4991071	4956899	4978709	0.38	cps
Manganese	55-2	3085526	3065653	3094580	3081919	0.48	cps
Molybdenum	94-1	160704	162190	162389	161761	0.57	cps
Molybdenum	95-1	143189	145977	146619	145261	1.26	cps
Molybdenum	96-1	174143	176340	176511	175665	0.75	cps
Molybdenum	97-1	90740	90575	91820	91045	0.74	cps
Molybdenum	98-1	231680	234361	235469	233836	0.83	cps
Neodymium	150-1	52471	52440	53354	52755	0.98	cps
Neodymium	150-2	31739	32210	32070	32006	0.76	cps
Nickel	60-2	100346	99819	99973	100046	0.27	cps
Phosphorus	31-2	20878	21655	21659	21397	2.10	cps
Potassium	39-2	2717365	2715434	2721414	2718071	0.11	cps
Rhodium	103-1	11094212	10979134	11001855	11025067	0.55	cps
Rhodium	103-2	6831075	6805056	6700119	6778750	1.02	cps
Scandium	45-1	6479947	6345385	6374842	6400058	1.11	cps
Scandium	45-2	596259	595237	592026	594507	0.37	cps
Selenium	82-1	713	790	769	757	5.29	cps
Selenium	77-2	177	113	140	143	22.19	cps
Selenium	78-2	713	663	747	708	5.93	cps
Silicon	28-1	25238943	25030750	25612770	25294154	1.17	cps
Silver	107-1	47273	47604	47661	47513	0.44	cps
Silver	109-1	44565	45040	45735	45113	1.30	cps
Sodium	23-2	10067145	10136412	10060881	10088146	0.42	cps
Strontium	86-1	478026	487636	487306	484323	1.13	cps
Strontium	88-1	4337411	4329627	4426386	4364475	1.23	cps
Sulfur	34-1	295240	296198	293510	294982	0.46	cps
Terbium	159-1	15633148	15236165	15392784	15420699	1.30	cps
Terbium	159-2	10333659	10405387	10178298	10305781	1.13	cps
Thallium	203-1	8696	9243	9700	9213	5.46	cps
Thallium	205-1	21300	22105	23043	22149	3.94	cps
Tin	118-1	2281459	2339337	2341462	2320753	1.47	cps
Titanium	47-1	1077202	1099219	1109996	1095472	1.53	cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5248-02

Instrumnet Name :

P7

Client Sample ID :

MJNKD0D

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 17:56:44

DataFile Name :

034SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	85129	85907	86260	85765	0.67	cps
Vanadium	51-2	285919	284127	286261	285436	0.40	cps
Yttrium	89-1	14374060	14257354	14432601	14354672	0.62	cps
Yttrium	89-2	3960848	4001505	3891564	3951306	1.41	cps
Zinc	66-2	7273541	7278341	7240940	7264274	0.28	cps
Zirconium	90-1	210984	214493	215051	213509	1.03	cps
Zirconium	91-1	47834	49386	49062	48761	1.68	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-01LX5 Instrumnet Name : P7
Client Sample ID : MJNKD0L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 17:59:45 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1010503	1015925	1020961	1015796	0.51	cps
Antimony	121-1	1845050	1860200	1847259	1850836	0.44	cps
Arsenic	75-2	225687	225098	223619	224802	0.47	cps
Barium	135-1	163048	164515	163192	163585	0.49	cps
Barium	137-1	280267	281746	279630	280548	0.39	cps
Beryllium	9-1	153	200	250	201	24.04	cps
Bismuth	209-1	8999712	8923290	8932718	8951907	0.47	cps
Bismuth	209-2	7238934	7252836	7305782	7265851	0.49	cps
Bromine	81-1	26925	25766	25976	26222	2.35	cps
Bromine	81-2	2210	2560	2490	2420	7.65	cps
Cadmium	108-1	297	213	300	270	18.19	cps
Cadmium	106-1	3724	3617	3454	3598	3.78	cps
Cadmium	111-1	4303	4384	4338	4342	0.94	cps
Calcium	43-1	94636	94680	94240	94519	0.26	cps
Calcium	44-1	1500458	1484247	1477377	1487361	0.80	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	47953	47515	48287	47918	0.81	cps
Cobalt	59-2	283405	278843	283881	282043	0.99	cps
Copper	63-2	1242407	1230890	1235069	1236122	0.47	cps
Dysprosium	156-1	6675	6805	6772	6751	1.00	cps
Dysprosium	156-2	5691	5441	5561	5565	2.25	cps
Erbium	164-1	6862	6652	6488	6667	2.81	cps
Erbium	164-2	4981	4768	4811	4853	2.32	cps
Gadolinium	160-1	6712	6792	6648	6717	1.07	cps
Gadolinium	160-2	5511	5201	5421	5378	2.97	cps
Holmium	165-1	14437515	14711184	14557669	14568790	0.94	cps
Holmium	165-2	10136693	10195312	10223105	10185037	0.43	cps
Indium	115-1	11926966	11988206	11829988	11915053	0.67	cps
Indium	115-2	4432877	4402863	4494993	4443578	1.06	cps
Iron	56-2	101712028	101251398	102136412	101699946	0.44	cps
Iron	57-2	2553494	2507523	2544662	2535226	0.96	cps
Iron	54-2	5618055	5422567	5591782	5544135	1.91	cps
Krypton	83-1	220	193	220	211	7.29	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-01LX5 Instrumnet Name : P7
Client Sample ID : MJNKD0L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 17:59:45 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	3435676	3444283	3409377	3429779	0.53	cps
Lead	207-1	3028442	2997023	2979205	3001557	0.83	cps
Lead	208-1	13742577	13583819	13644188	13656861	0.59	cps
Lithium	6-1	1327357	1297369	1317447	1314058	1.16	cps
Magnesium	24-2	985527	974716	984256	981500	0.60	cps
Manganese	55-2	599462	596223	605792	600492	0.81	cps
Molybdenum	94-1	32920	33368	32847	33045	0.85	cps
Molybdenum	95-1	29510	29496	28989	29332	1.01	cps
Molybdenum	96-1	35797	35737	34972	35502	1.30	cps
Molybdenum	97-1	18819	18395	18432	18549	1.27	cps
Molybdenum	98-1	47882	47791	47266	47646	0.70	cps
Neodymium	150-1	9954	10364	10337	10218	2.25	cps
Neodymium	150-2	6271	6191	6672	6378	4.03	cps
Nickel	60-2	21098	20838	20387	20774	1.73	cps
Phosphorus	31-2	4247	4274	4657	4393	5.22	cps
Potassium	39-2	611685	607940	613015	610880	0.43	cps
Rhodium	103-1	10934465	10671097	10859372	10821645	1.25	cps
Rhodium	103-2	6757685	6749597	6594551	6700611	1.37	cps
Scandium	45-1	6219189	6107553	6186662	6171135	0.93	cps
Scandium	45-2	569446	566481	570321	568749	0.35	cps
Selenium	82-1	490	459	424	458	7.15	cps
Selenium	77-2	10	20	27	19	44.42	cps
Selenium	78-2	540	497	493	510	5.10	cps
Silicon	28-1	5736706	5751825	5775022	5754518	0.34	cps
Silver	107-1	9850	10297	10284	10144	2.51	cps
Silver	109-1	9467	9440	9373	9426	0.51	cps
Sodium	23-2	2111182	2078508	2051024	2080238	1.45	cps
Strontium	86-1	98825	99641	98027	98831	0.82	cps
Strontium	88-1	866179	862311	865939	864810	0.25	cps
Sulfur	34-1	182475	183895	183889	183420	0.45	cps
Terbium	159-1	14803618	14887382	14782512	14824504	0.37	cps
Terbium	159-2	10040174	9952955	10075250	10022793	0.63	cps
Thallium	203-1	2500	2304	2287	2364	5.02	cps
Thallium	205-1	5901	5695	5638	5745	2.41	cps
Tin	118-1	452276	454702	451618	452866	0.36	cps
Titanium	47-1	225797	225720	222505	224674	0.84	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-01LX5 Instrumnet Name : P7
Client Sample ID : MJNKD0L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 17:59:45 DataFile Name : 035SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	16964	17058	17488	17170	1.63	cps
Vanadium	51-2	57349	55970	57000	56773	1.26	cps
Yttrium	89-1	13542756	13369661	13503924	13472114	0.67	cps
Yttrium	89-2	3764719	3716171	3813087	3764659	1.29	cps
Zinc	66-2	1433491	1427834	1439979	1433768	0.42	cps
Zirconium	90-1	44277	43461	42993	43577	1.49	cps
Zirconium	91-1	10194	10040	10114	10116	0.76	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-03 Instrumnet Name : P7
Client Sample ID : MJNKD0S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:02:51 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	5183419	5146964	5109528	5146637	0.72	cps
Antimony	121-1	9408965	9523161	9471956	9468027	0.60	cps
Arsenic	75-2	1112444	1095814	1102944	1103734	0.76	cps
Barium	135-1	2261355	2301504	2282015	2281625	0.88	cps
Barium	137-1	3933166	3929445	3843842	3902151	1.29	cps
Beryllium	9-1	14517	14447	14237	14400	1.01	cps
Bismuth	209-1	9301216	9230476	9275534	9269075	0.39	cps
Bismuth	209-2	7359206	7345304	7393837	7366116	0.34	cps
Bromine	81-1	61320	65096	67775	64730	5.01	cps
Bromine	81-2	10557	10691	10397	10548	1.39	cps
Cadmium	108-1	3604	3594	3640	3613	0.68	cps
Cadmium	106-1	8629	8419	8513	8520	1.24	cps
Cadmium	111-1	47978	47522	48231	47911	0.75	cps
Calcium	43-1	456015	461658	459024	458899	0.62	cps
Calcium	44-1	7067845	7200047	7088890	7118927	1.00	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	451773	452528	456854	453718	0.60	cps
Cobalt	59-2	2326187	2269282	2304103	2299858	1.25	cps
Copper	63-2	6593886	6468538	6511767	6524731	0.98	cps
Dysprosium	156-1	33420	33881	33386	33562	0.82	cps
Dysprosium	156-2	27070	27073	27784	27309	1.51	cps
Erbium	164-1	32257	33300	33791	33116	2.36	cps
Erbium	164-2	23330	22605	23169	23035	1.65	cps
Gadolinium	160-1	32959	33567	33503	33343	1.00	cps
Gadolinium	160-2	24208	24602	24645	24485	0.98	cps
Holmium	165-1	14843939	14747956	14898496	14830130	0.51	cps
Holmium	165-2	10346919	10344899	10603355	10431724	1.42	cps
Indium	115-1	13021289	13026583	12906977	12984950	0.52	cps
Indium	115-2	4777206	4728643	4806072	4770641	0.82	cps
Iron	56-2	495412726	497758046	497565873	496912215	0.26	cps
Iron	57-2	12523676	12347167	12292792	12387878	0.97	cps
Iron	54-2	27237005	26973060	27482740	27230935	0.94	cps
Krypton	83-1	223	297	267	262	14.06	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-03 Instrumnet Name : P7
Client Sample ID : MJNKD0S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:02:51 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	16656742	16844931	16801419	16767698	0.59	cps
Lead	207-1	14634995	14709335	14628762	14657697	0.31	cps
Lead	208-1	66930294	67466657	66727809	67041587	0.57	cps
Lithium	6-1	1364814	1319163	1322579	1335518	1.90	cps
Magnesium	24-2	4918380	4931667	4865066	4905038	0.72	cps
Manganese	55-2	3433789	3455596	3483532	3457639	0.72	cps
Molybdenum	94-1	161816	165062	163991	163623	1.01	cps
Molybdenum	95-1	143801	143388	144333	143841	0.33	cps
Molybdenum	96-1	172285	175756	173955	173999	1.00	cps
Molybdenum	97-1	90008	90920	91112	90680	0.65	cps
Molybdenum	98-1	232386	232942	232552	232627	0.12	cps
Neodymium	150-1	51263	52019	51657	51646	0.73	cps
Neodymium	150-2	30430	30222	30045	30232	0.64	cps
Nickel	60-2	321509	320157	317650	319772	0.61	cps
Phosphorus	31-2	20778	21272	20954	21001	1.19	cps
Potassium	39-2	2698050	2663539	2695216	2685602	0.71	cps
Rhodium	103-1	11053806	11058315	10783455	10965192	1.44	cps
Rhodium	103-2	6787406	6621816	6733718	6714314	1.26	cps
Scandium	45-1	6240644	6320524	6283065	6281411	0.64	cps
Scandium	45-2	587864	586635	592188	588896	0.50	cps
Selenium	82-1	5194	5094	5100	5129	1.09	cps
Selenium	77-2	690	580	640	637	8.65	cps
Selenium	78-2	2207	2304	2267	2259	2.16	cps
Silicon	28-1	24966010	25784341	25398979	25383110	1.61	cps
Silver	107-1	220202	222083	220637	220974	0.45	cps
Silver	109-1	208400	212750	210690	210613	1.03	cps
Sodium	23-2	10036498	9973226	10025863	10011862	0.34	cps
Strontium	86-1	482592	489294	484211	485366	0.72	cps
Strontium	88-1	4398808	4438095	4388256	4408386	0.60	cps
Sulfur	34-1	291228	292426	288993	290882	0.60	cps
Terbium	159-1	15253590	15426544	15172173	15284102	0.85	cps
Terbium	159-2	10193545	10222029	10256429	10224001	0.31	cps
Thallium	203-1	133557	133914	134682	134051	0.43	cps
Thallium	205-1	316628	319184	324653	320155	1.28	cps
Tin	118-1	2339471	2341480	2300397	2327116	1.00	cps
Titanium	47-1	1092668	1095398	1096889	1094985	0.20	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5248-03 Instrumnet Name : P7
Client Sample ID : MJNKD0S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:02:51 DataFile Name : 036SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	84914	85836	86528	85759	0.94	cps
Vanadium	51-2	773050	756108	765943	765034	1.11	cps
Yttrium	89-1	14249121	14152760	14178909	14193597	0.35	cps
Yttrium	89-2	3863280	3895803	3972797	3910627	1.44	cps
Zinc	66-2	7303769	7203298	7208545	7238537	0.78	cps
Zirconium	90-1	216922	220805	217101	218276	1.00	cps
Zirconium	91-1	49734	49834	50393	49987	0.71	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-01 Instrumnet Name : P7
Client Sample ID : MJNKG0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:05:49 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3962443	3871461	3957650	3930518	1.30	cps
Antimony	121-1	3826198	3978557	3899135	3901296	1.95	cps
Arsenic	75-2	383477	384194	385208	384293	0.23	cps
Barium	135-1	359207	373434	372513	368385	2.16	cps
Barium	137-1	622684	638839	643511	635011	1.72	cps
Beryllium	9-1	523	540	580	548	5.32	cps
Bismuth	209-1	10306269	9384276	9290622	9660389	5.81	cps
Bismuth	209-2	7794739	7395398	7145467	7445201	4.40	cps
Bromine	81-1	45376	48392	49824	47864	4.74	cps
Bromine	81-2	7208	6952	7275	7145	2.39	cps
Cadmium	108-1	637	590	627	618	3.98	cps
Cadmium	106-1	4394	4147	4081	4207	3.92	cps
Cadmium	111-1	7669	7719	8071	7819	2.80	cps
Calcium	43-1	308466	321076	320159	316567	2.22	cps
Calcium	44-1	4831406	4974807	4942753	4916322	1.53	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	193281	193883	193516	193560	0.16	cps
Cobalt	59-2	517372	518929	519821	518708	0.24	cps
Copper	63-2	2213859	2245369	2222936	2227388	0.73	cps
Dysprosium	156-1	29224	31218	30329	30257	3.30	cps
Dysprosium	156-2	24288	24361	24742	24464	1.00	cps
Erbium	164-1	28182	29505	29388	29025	2.52	cps
Erbium	164-2	19540	20231	19911	19894	1.74	cps
Gadolinium	160-1	29354	30269	30667	30097	2.24	cps
Gadolinium	160-2	22391	22425	22338	22385	0.20	cps
Holmium	165-1	16924074	15369086	14941865	15745008	6.63	cps
Holmium	165-2	11003030	10491074	10297718	10597274	3.44	cps
Indium	115-1	13871863	12731737	12498363	13033988	5.64	cps
Indium	115-2	4768449	4542401	4512972	4607941	3.03	cps
Iron	56-2	249866683	250182370	251315916	250454990	0.30	cps
Iron	57-2	6233240	6196975	6271928	6234048	0.60	cps
Iron	54-2	13580614	13608196	13857780	13682197	1.12	cps
Krypton	83-1	213	267	270	250	12.72	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-01 Instrumnet Name : P7
Client Sample ID : MJNKG0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:05:49 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	6600506	6858569	6682850	6713975	1.96	cps
Lead	207-1	5756337	5874667	5794787	5808597	1.04	cps
Lead	208-1	26102703	26937296	26453088	26497696	1.58	cps
Lithium	6-1	1477118	1336604	1310110	1374611	6.53	cps
Magnesium	24-2	4208495	4183484	4195066	4195682	0.30	cps
Manganese	55-2	2197920	2164969	2237371	2200086	1.65	cps
Molybdenum	94-1	59002	59999	59888	59630	0.92	cps
Molybdenum	95-1	56529	59125	59246	58300	2.63	cps
Molybdenum	96-1	68118	70978	70563	69886	2.21	cps
Molybdenum	97-1	36225	37254	36973	36817	1.44	cps
Molybdenum	98-1	91736	96087	96026	94616	2.64	cps
Neodymium	150-1	44724	46955	47058	46246	2.85	cps
Neodymium	150-2	27674	27494	27216	27461	0.84	cps
Nickel	60-2	86038	87081	87574	86897	0.90	cps
Phosphorus	31-2	14877	15164	14577	14873	1.97	cps
Potassium	39-2	2021135	2002455	1984950	2002847	0.90	cps
Rhodium	103-1	12355803	11380932	11200657	11645798	5.34	cps
Rhodium	103-2	7093496	6818882	6647151	6853176	3.29	cps
Scandium	45-1	6998662	6318184	6314961	6543935	6.02	cps
Scandium	45-2	626795	592133	587697	602208	3.55	cps
Selenium	82-1	736	616	557	636	14.33	cps
Selenium	77-2	87	107	93	96	10.66	cps
Selenium	78-2	527	623	630	593	9.75	cps
Silicon	28-1	18207766	19127433	19210772	18848657	2.95	cps
Silver	107-1	16960	17017	17040	17006	0.24	cps
Silver	109-1	16343	15909	15699	15983	2.05	cps
Sodium	23-2	8429063	8398917	8516572	8448184	0.72	cps
Strontium	86-1	300653	313483	314812	309649	2.53	cps
Strontium	88-1	2755763	2835931	2851565	2814420	1.83	cps
Sulfur	34-1	251146	256044	251609	252933	1.07	cps
Terbium	159-1	17019116	15721061	15532804	16090994	5.03	cps
Terbium	159-2	10813130	10250420	10208454	10424001	3.24	cps
Thallium	203-1	5268	5735	5578	5527	4.30	cps
Thallium	205-1	12950	13787	13700	13479	3.42	cps
Tin	118-1	708811	733637	735103	725850	2.04	cps
Titanium	47-1	802643	836159	835548	824784	2.33	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-01 Instrumnet Name : P7
Client Sample ID : MJNKG0 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:05:49 DataFile Name : 037SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	50122	52591	51550	51421	2.41	cps
Vanadium	51-2	247623	246678	245602	246634	0.41	cps
Yttrium	89-1	15752182	14484848	14294457	14843829	5.34	cps
Yttrium	89-2	4093807	3910002	3860852	3954887	3.10	cps
Zinc	66-2	2856810	2905876	2931820	2898169	1.31	cps
Zirconium	90-1	67488	71172	73395	70685	4.22	cps
Zirconium	91-1	15398	16723	16326	16149	4.21	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-02 Instrumnet Name : P7
Client Sample ID : MJNKG0D Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:08:49 DataFile Name : 038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3341857	3331562	3373437	3348952	0.65	cps
Antimony	121-1	3473190	3491333	3543777	3502767	1.05	cps
Arsenic	75-2	340130	340151	339204	339828	0.16	cps
Barium	135-1	325272	325539	326043	325618	0.12	cps
Barium	137-1	558860	563456	568675	563663	0.87	cps
Beryllium	9-1	483	640	567	563	13.91	cps
Bismuth	209-1	9266044	9263109	9286793	9271982	0.14	cps
Bismuth	209-2	7309861	7184219	7309445	7267842	1.00	cps
Bromine	81-1	42711	44687	45788	44395	3.51	cps
Bromine	81-2	6261	6451	6408	6374	1.56	cps
Cadmium	108-1	543	567	517	542	4.61	cps
Cadmium	106-1	4134	4047	3947	4043	2.31	cps
Cadmium	111-1	7416	7404	7172	7331	1.87	cps
Calcium	43-1	317210	322058	323585	320951	1.04	cps
Calcium	44-1	4975334	5007645	5144751	5042577	1.78	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	165834	163364	163216	164138	0.90	cps
Cobalt	59-2	478241	481460	477588	479096	0.43	cps
Copper	63-2	2061675	2063094	2053287	2059352	0.26	cps
Dysprosium	156-1	27357	27804	28228	27796	1.57	cps
Dysprosium	156-2	21864	22455	22598	22306	1.75	cps
Erbium	164-1	25650	26098	26054	25934	0.95	cps
Erbium	164-2	17731	17588	17181	17500	1.63	cps
Gadolinium	160-1	27677	27798	28068	27848	0.72	cps
Gadolinium	160-2	20515	20325	20812	20551	1.20	cps
Holmium	165-1	15196737	14755410	15200951	15051033	1.70	cps
Holmium	165-2	10483830	10236450	10448678	10389653	1.29	cps
Indium	115-1	12436548	12200515	12460673	12365912	1.16	cps
Indium	115-2	4546284	4576205	4489973	4537487	0.96	cps
Iron	56-2	222480257	223907497	219953810	222113854	0.90	cps
Iron	57-2	5594380	5495246	5485386	5525004	1.09	cps
Iron	54-2	12135014	12056424	12023762	12071733	0.47	cps
Krypton	83-1	293	280	320	298	6.84	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-02 Instrumnet Name : P7
Client Sample ID : MJNKG0D Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:08:49 DataFile Name : 038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	5941458	5980228	5927860	5949849	0.46	cps
Lead	207-1	5284443	5256424	5229958	5256941	0.52	cps
Lead	208-1	23748209	23806858	23662118	23739062	0.31	cps
Lithium	6-1	1301708	1265323	1282862	1283298	1.42	cps
Magnesium	24-2	3648520	3708926	3690513	3682653	0.84	cps
Manganese	55-2	1944687	1886058	1907469	1912738	1.55	cps
Molybdenum	94-1	51129	50189	50467	50595	0.95	cps
Molybdenum	95-1	49878	49701	50517	50032	0.86	cps
Molybdenum	96-1	60725	59480	60608	60271	1.14	cps
Molybdenum	97-1	31771	31430	31257	31486	0.83	cps
Molybdenum	98-1	80892	81261	81056	81070	0.23	cps
Neodymium	150-1	42046	42765	42761	42524	0.97	cps
Neodymium	150-2	24949	24912	24648	24836	0.66	cps
Nickel	60-2	77877	77371	76936	77395	0.61	cps
Phosphorus	31-2	13609	13316	13710	13545	1.51	cps
Potassium	39-2	1793481	1768809	1774788	1779026	0.72	cps
Rhodium	103-1	11139443	11115897	10999960	11085100	0.67	cps
Rhodium	103-2	6897694	6717787	6759562	6791681	1.39	cps
Scandium	45-1	6273647	6389193	6326144	6329661	0.91	cps
Scandium	45-2	580465	579497	582939	580967	0.31	cps
Selenium	82-1	551	541	484	525	6.92	cps
Selenium	77-2	77	130	103	103	25.80	cps
Selenium	78-2	650	597	577	608	6.24	cps
Silicon	28-1	17249674	17830070	17297270	17459005	1.85	cps
Silver	107-1	15298	15375	14921	15198	1.60	cps
Silver	109-1	14057	14701	14040	14266	2.64	cps
Sodium	23-2	7683179	7752532	7641689	7692467	0.73	cps
Strontium	86-1	290788	293626	292480	292298	0.49	cps
Strontium	88-1	2652832	2666453	2637097	2652127	0.55	cps
Sulfur	34-1	242155	243930	245247	243778	0.64	cps
Terbium	159-1	15444139	15425343	15516411	15461964	0.31	cps
Terbium	159-2	10279919	10116033	10310864	10235605	1.02	cps
Thallium	203-1	4861	4968	5104	4978	2.45	cps
Thallium	205-1	11145	11762	11735	11547	3.02	cps
Tin	118-1	650347	652214	649461	650674	0.22	cps
Titanium	47-1	695569	711361	710534	705821	1.26	cps

LB Number :LB134060

Operator :Jaswal

Lab Sample ID :P5249-02

Instrumnet Name :P7

Client Sample ID :MJNKG0D

Dilution Factor :1

Date & Time Acquired :2024-12-21 18:08:49

DataFile Name :038SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	45174	46389	45582	45715	1.35	cps
Vanadium	51-2	212241	214150	211487	212626	0.65	cps
Yttrium	89-1	14424922	14194412	14524430	14381255	1.18	cps
Yttrium	89-2	3918153	3900351	3915789	3911431	0.25	cps
Zinc	66-2	2646474	2666448	2600522	2637815	1.28	cps
Zirconium	90-1	59684	59272	59999	59652	0.61	cps
Zirconium	91-1	13860	13139	13523	13507	2.67	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-01LX5 Instrumnet Name : P7
Client Sample ID : MJNKG0L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:11:51 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	809084	804133	806919	806712	0.31	cps
Antimony	121-1	777401	771169	773402	773991	0.41	cps
Arsenic	75-2	80349	79903	80584	80279	0.43	cps
Barium	135-1	77442	76504	76276	76741	0.81	cps
Barium	137-1	132046	131155	132824	132008	0.63	cps
Beryllium	9-1	147	160	147	151	5.09	cps
Bismuth	209-1	8936943	8998027	8908410	8947793	0.51	cps
Bismuth	209-2	7206696	7164718	7014102	7128505	1.42	cps
Bromine	81-1	22317	22407	22674	22466	0.83	cps
Bromine	81-2	1627	1617	1693	1646	2.53	cps
Cadmium	108-1	147	103	133	128	17.37	cps
Cadmium	106-1	3257	3310	3177	3248	2.07	cps
Cadmium	111-1	3362	3391	3294	3349	1.49	cps
Calcium	43-1	65872	66227	66167	66089	0.29	cps
Calcium	44-1	1077564	1074949	1072590	1075034	0.23	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	41875	42303	41761	41979	0.68	cps
Cobalt	59-2	109348	108425	108905	108893	0.42	cps
Copper	63-2	453831	453972	454719	454174	0.11	cps
Dysprosium	156-1	6435	6482	6151	6356	2.81	cps
Dysprosium	156-2	5144	5081	5071	5099	0.78	cps
Erbium	164-1	5988	5995	6081	6021	0.87	cps
Erbium	164-2	4224	4001	4304	4176	3.77	cps
Gadolinium	160-1	6315	5925	6238	6159	3.36	cps
Gadolinium	160-2	5011	5198	4854	5021	3.42	cps
Holmium	165-1	14716407	14428651	14252261	14465773	1.62	cps
Holmium	165-2	10219808	10228405	10086996	10178403	0.78	cps
Indium	115-1	11927826	11646449	11780100	11784792	1.19	cps
Indium	115-2	4373166	4340040	4330617	4347941	0.51	cps
Iron	56-2	52993861	52825876	52315299	52711679	0.67	cps
Iron	57-2	1319627	1314327	1327999	1320651	0.52	cps
Iron	54-2	2874466	2884035	2879532	2879344	0.17	cps
Krypton	83-1	253	173	267	231	21.84	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-01LX5 Instrumnet Name : P7
Client Sample ID : MJNKG0L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:11:51 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1288222	1277857	1275716	1280598	0.52	cps
Lead	207-1	1103247	1105873	1097600	1102240	0.38	cps
Lead	208-1	5357728	5330019	5322325	5336691	0.35	cps
Lithium	6-1	1274709	1241367	1228347	1248141	1.92	cps
Magnesium	24-2	850056	845241	853717	849672	0.50	cps
Manganese	55-2	454000	450263	452935	452400	0.43	cps
Molybdenum	94-1	12485	12742	12449	12559	1.27	cps
Molybdenum	95-1	12495	12138	11978	12204	2.17	cps
Molybdenum	96-1	14871	14878	14524	14758	1.37	cps
Molybdenum	97-1	7665	8082	7829	7859	2.67	cps
Molybdenum	98-1	19770	19506	19857	19711	0.93	cps
Neodymium	150-1	9780	9663	9954	9799	1.49	cps
Neodymium	150-2	5868	5908	5521	5766	3.69	cps
Nickel	60-2	18461	18502	18885	18616	1.26	cps
Phosphorus	31-2	3344	3524	3227	3365	4.44	cps
Potassium	39-2	473483	471096	472121	472233	0.25	cps
Rhodium	103-1	10930886	10939272	11029647	10966602	0.50	cps
Rhodium	103-2	6707822	6726648	6706278	6713582	0.17	cps
Scandium	45-1	6115864	6077493	6006386	6066581	0.92	cps
Scandium	45-2	572239	569833	568404	570159	0.34	cps
Selenium	82-1	422	459	333	405	15.93	cps
Selenium	77-2	17	30	33	27	33.06	cps
Selenium	78-2	527	447	500	491	8.29	cps
Silicon	28-1	4581875	4502150	4511975	4532000	0.96	cps
Silver	107-1	3510	3424	3787	3574	5.31	cps
Silver	109-1	3487	3277	3420	3395	3.16	cps
Sodium	23-2	1859436	1815798	1798093	1824443	1.73	cps
Strontium	86-1	66379	65528	64688	65531	1.29	cps
Strontium	88-1	564619	562856	568117	565197	0.47	cps
Sulfur	34-1	167368	170860	168993	169074	1.03	cps
Terbium	159-1	15154635	14953909	14803336	14970626	1.18	cps
Terbium	159-2	10076245	10008873	9921203	10002107	0.78	cps
Thallium	203-1	1470	1420	1327	1406	5.18	cps
Thallium	205-1	3437	3464	3227	3376	3.84	cps
Tin	118-1	154444	150954	152895	152764	1.14	cps
Titanium	47-1	172711	172525	173835	173024	0.41	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-01LX5 Instrumnet Name : P7
Client Sample ID : MJNKG0L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:11:51 DataFile Name : 039SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	10361	10514	10524	10466	0.88	cps
Vanadium	51-2	51360	50163	52364	51296	2.15	cps
Yttrium	89-1	13506142	13441765	13454432	13467446	0.25	cps
Yttrium	89-2	3717052	3718258	3659310	3698206	0.91	cps
Zinc	66-2	585017	582101	587906	585008	0.50	cps
Zirconium	90-1	14334	14591	15145	14690	2.82	cps
Zirconium	91-1	3410	3387	3277	3358	2.12	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-03 Instrumnet Name : P7
Client Sample ID : MJNKG0S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:15:03 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	3671862	3708372	3647840	3676025	0.83	cps
Antimony	121-1	3891939	3960869	3907897	3920235	0.92	cps
Arsenic	75-2	361027	360491	358822	360113	0.32	cps
Barium	135-1	1755748	1787885	1760401	1768012	0.98	cps
Barium	137-1	3053096	3078762	3038854	3056904	0.66	cps
Beryllium	9-1	13696	13739	13466	13634	1.08	cps
Bismuth	209-1	9212619	9231329	9401862	9281937	1.12	cps
Bismuth	209-2	7303597	7316313	7341412	7320440	0.26	cps
Bromine	81-1	43608	45536	46289	45144	3.06	cps
Bromine	81-2	6255	6541	6328	6375	2.34	cps
Cadmium	108-1	2687	2910	2777	2791	4.03	cps
Cadmium	106-1	7442	7112	7162	7239	2.46	cps
Cadmium	111-1	42462	42383	42171	42339	0.36	cps
Calcium	43-1	298770	297054	299382	298402	0.40	cps
Calcium	44-1	4669567	4703972	4665987	4679842	0.45	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	398102	401784	395839	398575	0.75	cps
Cobalt	59-2	1345288	1338692	1339748	1341243	0.26	cps
Copper	63-2	2461454	2408380	2353372	2407735	2.24	cps
Dysprosium	156-1	28365	28145	27687	28066	1.23	cps
Dysprosium	156-2	23259	22945	22879	23028	0.88	cps
Erbium	164-1	25987	26809	27066	26621	2.12	cps
Erbium	164-2	18709	18439	18025	18391	1.87	cps
Gadolinium	160-1	27811	28679	28733	28408	1.82	cps
Gadolinium	160-2	21089	20846	20622	20852	1.12	cps
Holmium	165-1	15212254	14792221	14830728	14945068	1.55	cps
Holmium	165-2	10466749	10511262	10258563	10412191	1.30	cps
Indium	115-1	12538507	12282309	12090854	12303890	1.83	cps
Indium	115-2	4574557	4482946	4560237	4539247	1.09	cps
Iron	56-2	230789763	233524110	227381677	230565183	1.33	cps
Iron	57-2	5774401	5761628	5735376	5757135	0.35	cps
Iron	54-2	12703554	12782084	12573803	12686480	0.83	cps
Krypton	83-1	233	247	243	241	2.88	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-03 Instrumnet Name : P7
Client Sample ID : MJNKG0S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:15:03 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	6105708	6140301	6214665	6153558	0.90	cps
Lead	207-1	5365477	5408733	5355697	5376636	0.52	cps
Lead	208-1	24296195	24581200	24587823	24488406	0.68	cps
Lithium	6-1	1304933	1269587	1238978	1271166	2.60	cps
Magnesium	24-2	3825666	3859734	3753548	3812982	1.42	cps
Manganese	55-2	2498545	2463923	2413096	2458521	1.75	cps
Molybdenum	94-1	53688	54391	55039	54373	1.24	cps
Molybdenum	95-1	52811	54049	53842	53568	1.24	cps
Molybdenum	96-1	63805	64883	63852	64180	0.95	cps
Molybdenum	97-1	33341	33786	33862	33663	0.84	cps
Molybdenum	98-1	85317	86819	86296	86144	0.89	cps
Neodymium	150-1	42845	43102	42818	42922	0.37	cps
Neodymium	150-2	25473	25006	25500	25326	1.10	cps
Nickel	60-2	300141	297704	297207	298351	0.53	cps
Phosphorus	31-2	13883	14110	13423	13805	2.54	cps
Potassium	39-2	1831528	1858010	1842894	1844144	0.72	cps
Rhodium	103-1	11116407	11026980	11044192	11062526	0.43	cps
Rhodium	103-2	6824005	6784897	6689715	6766206	1.02	cps
Scandium	45-1	6433323	6365943	6289819	6363029	1.13	cps
Scandium	45-2	588032	583569	577688	583096	0.89	cps
Selenium	82-1	4884	4893	4946	4908	0.69	cps
Selenium	77-2	583	627	510	573	10.29	cps
Selenium	78-2	2074	2120	2174	2122	2.36	cps
Silicon	28-1	18394347	17605079	17742132	17913853	2.35	cps
Silver	107-1	184564	187380	187994	186646	0.98	cps
Silver	109-1	176638	178595	176868	177367	0.60	cps
Sodium	23-2	7732349	7818527	7712007	7754294	0.73	cps
Strontium	86-1	286269	288667	288502	287812	0.47	cps
Strontium	88-1	2610224	2597340	2608445	2605336	0.27	cps
Sulfur	34-1	243591	241911	242162	242555	0.37	cps
Terbium	159-1	15713457	15373593	15163704	15416918	1.80	cps
Terbium	159-2	10222217	10286623	10300555	10269798	0.41	cps
Thallium	203-1	129011	129230	128892	129044	0.13	cps
Thallium	205-1	303357	305811	309820	306330	1.07	cps
Tin	118-1	667572	674567	671620	671253	0.52	cps
Titanium	47-1	758357	760242	751984	756861	0.57	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5249-03 Instrumnet Name : P7
Client Sample ID : MJNKG0S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:15:03 DataFile Name : 040SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	47716	47813	46428	47319	1.63	cps
Vanadium	51-2	706414	710317	704660	707131	0.41	cps
Yttrium	89-1	14457885	14079614	14145979	14227826	1.42	cps
Yttrium	89-2	3885614	3868416	3848707	3867579	0.48	cps
Zinc	66-2	2791125	2788614	2785551	2788430	0.10	cps
Zirconium	90-1	64163	65251	65000	64804	0.88	cps
Zirconium	91-1	14941	15392	15058	15130	1.55	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-04 Instrumnet Name : P7
Client Sample ID : MJNKJ9 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:18:03 DataFile Name : 041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1047807	1043760	1056692	1049420	0.63	cps
Antimony	121-1	72629	74733	74167	73843	1.47	cps
Arsenic	75-2	51134	52047	50954	51379	1.14	cps
Barium	135-1	97720	101381	100176	99759	1.87	cps
Barium	137-1	171131	174142	171473	172249	0.96	cps
Beryllium	9-1	260	223	207	230	11.86	cps
Bismuth	209-1	9760266	9393101	9155053	9436140	3.23	cps
Bismuth	209-2	7424619	7366886	6233672	7008392	9.58	cps
Bromine	81-1	41759	45373	45971	44368	5.14	cps
Bromine	81-2	6361	6121	6381	6288	2.30	cps
Cadmium	108-1	227	243	403	291	33.52	cps
Cadmium	106-1	3671	3477	3440	3529	3.50	cps
Cadmium	111-1	5369	5537	5195	5367	3.19	cps
Calcium	43-1	147792	152103	153029	150975	1.85	cps
Calcium	44-1	2323592	2408787	2344827	2359069	1.88	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	78215	77374	77736	77775	0.54	cps
Cobalt	59-2	77927	76698	76926	77184	0.85	cps
Copper	63-2	10329888	10096650	10248413	10224984	1.16	cps
Dysprosium	156-1	22542	23730	24328	23533	3.86	cps
Dysprosium	156-2	18759	18736	19684	19060	2.84	cps
Erbium	164-1	20602	20979	21330	20970	1.74	cps
Erbium	164-2	14534	14154	14414	14367	1.35	cps
Gadolinium	160-1	22905	23373	23286	23188	1.07	cps
Gadolinium	160-2	17518	16920	17337	17258	1.78	cps
Holmium	165-1	15788834	15037447	15121591	15315957	2.69	cps
Holmium	165-2	10256999	10409808	8712229	9793012	9.59	cps
Indium	115-1	12755567	12050902	11996052	12267507	3.45	cps
Indium	115-2	4389054	4306665	3702061	4132593	9.08	cps
Iron	56-2	58090521	57765399	57688514	57848145	0.37	cps
Iron	57-2	1434902	1443323	1476122	1451449	1.50	cps
Iron	54-2	3220364	3180065	3219223	3206550	0.72	cps
Krypton	83-1	277	247	263	262	5.73	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-04 Instrumnet Name : P7
Client Sample ID : MJNKJ9 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:18:03 DataFile Name : 041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2071391	2111227	2104253	2095623	1.02	cps
Lead	207-1	1769811	1789147	1821848	1793602	1.47	cps
Lead	208-1	8191148	8262645	8265080	8239624	0.51	cps
Lithium	6-1	1331418	1245406	1237232	1271352	4.10	cps
Magnesium	24-2	1307299	1255367	1318441	1293703	2.60	cps
Manganese	55-2	250398	246825	249072	248765	0.73	cps
Molybdenum	94-1	11795	12235	12082	12037	1.86	cps
Molybdenum	95-1	10914	11321	11021	11085	1.90	cps
Molybdenum	96-1	13920	13553	13453	13642	1.80	cps
Molybdenum	97-1	7269	7292	6845	7135	3.53	cps
Molybdenum	98-1	17921	18642	18218	18260	1.98	cps
Neodymium	150-1	36086	37533	37443	37021	2.19	cps
Neodymium	150-2	22398	21770	22461	22210	1.72	cps
Nickel	60-2	20824	21102	21479	21135	1.55	cps
Phosphorus	31-2	14831	14881	15471	15061	2.37	cps
Potassium	39-2	1032700	1027321	1028598	1029540	0.27	cps
Rhodium	103-1	11951654	11264118	11148882	11454885	3.79	cps
Rhodium	103-2	6780441	6814566	5594188	6396398	10.86	cps
Scandium	45-1	6540544	6215153	6171261	6308986	3.20	cps
Scandium	45-2	574143	568641	485398	542727	9.16	cps
Selenium	82-1	433	498	458	463	7.04	cps
Selenium	77-2	60	83	47	63	29.30	cps
Selenium	78-2	570	533	593	566	5.35	cps
Silicon	28-1	11807486	11340972	11298563	11482340	2.46	cps
Silver	107-1	95908	98709	97669	97429	1.45	cps
Silver	109-1	91383	93781	92932	92698	1.31	cps
Sodium	23-2	9407109	9141908	9340796	9296604	1.48	cps
Strontium	86-1	163457	170676	168903	167679	2.24	cps
Strontium	88-1	1456226	1492349	1502725	1483767	1.65	cps
Sulfur	34-1	329720	337811	335756	334429	1.26	cps
Terbium	159-1	16199518	15595631	15403111	15732753	2.64	cps
Terbium	159-2	10230310	10098440	8541263	9623338	9.76	cps
Thallium	203-1	5218	5468	5218	5301	2.72	cps
Thallium	205-1	12539	12686	12743	12656	0.83	cps
Tin	118-1	125041	129970	129516	128176	2.13	cps
Titanium	47-1	278624	283746	282152	281507	0.93	cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5272-04

Instrumnet Name :

P7

Client Sample ID :

MJNKJ9

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:18:03

DataFile Name :

041SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	37085	39181	38489	38252	2.79	cps
Vanadium	51-2	67972	67560	69543	68358	1.53	cps
Yttrium	89-1	14952309	14117189	14276754	14448750	3.07	cps
Yttrium	89-2	3854494	3834736	3265828	3651686	9.15	cps
Zinc	66-2	399823	396478	406333	400878	1.25	cps
Zirconium	90-1	15555	15618	15545	15573	0.26	cps
Zirconium	91-1	3597	3454	3454	3502	2.36	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-05 Instrumnet Name : P7
Client Sample ID : MJNKJ9D Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:21:10 DataFile Name : 042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1074745	1083002	1076393	1078046	0.41	cps
Antimony	121-1	74515	73670	74555	74247	0.67	cps
Arsenic	75-2	50840	50867	50362	50690	0.56	cps
Barium	135-1	94749	95202	95279	95077	0.30	cps
Barium	137-1	165687	166930	165366	165994	0.50	cps
Beryllium	9-1	180	227	220	209	12.08	cps
Bismuth	209-1	9444173	9428980	9289935	9387696	0.91	cps
Bismuth	209-2	7310943	7355314	7391548	7352602	0.55	cps
Bromine	81-1	43848	46600	48155	46201	4.72	cps
Bromine	81-2	6725	6552	6602	6626	1.35	cps
Cadmium	108-1	233	230	197	220	9.22	cps
Cadmium	106-1	3460	3640	3227	3443	6.02	cps
Cadmium	111-1	5332	5643	5301	5425	3.48	cps
Calcium	43-1	157019	158080	157154	157418	0.37	cps
Calcium	44-1	2492118	2468371	2457159	2472549	0.72	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	80570	79022	80215	79936	1.01	cps
Cobalt	59-2	76256	74601	76035	75630	1.19	cps
Copper	63-2	10325985	10128641	10135541	10196722	1.10	cps
Dysprosium	156-1	23206	23296	23460	23321	0.55	cps
Dysprosium	156-2	18572	18682	18709	18655	0.39	cps
Erbium	164-1	20528	21190	20522	20747	1.85	cps
Erbium	164-2	14084	14424	14010	14173	1.56	cps
Gadolinium	160-1	22986	23774	23323	23361	1.69	cps
Gadolinium	160-2	17368	17571	16980	17306	1.73	cps
Holmium	165-1	15336374	15022159	14873200	15077244	1.57	cps
Holmium	165-2	10269428	10292724	10347740	10303297	0.39	cps
Indium	115-1	12292010	12088865	12107869	12162915	0.92	cps
Indium	115-2	4314093	4323430	4445188	4360904	1.68	cps
Iron	56-2	57363637	56466882	57371556	57067359	0.91	cps
Iron	57-2	1408348	1415893	1418834	1414358	0.38	cps
Iron	54-2	3165247	3119395	3128204	3137615	0.78	cps
Krypton	83-1	210	250	253	238	10.14	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-05 Instrumnet Name : P7
Client Sample ID : MJNKJ9D Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:21:10 DataFile Name : 042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2088366	2127283	2077795	2097815	1.24	cps
Lead	207-1	1798146	1827181	1795448	1806925	0.97	cps
Lead	208-1	8283709	8395863	8172784	8284119	1.35	cps
Lithium	6-1	1226282	1270035	1244410	1246909	1.76	cps
Magnesium	24-2	1272717	1280551	1298146	1283805	1.01	cps
Manganese	55-2	240197	242284	242988	241823	0.60	cps
Molybdenum	94-1	12122	11952	12128	12067	0.83	cps
Molybdenum	95-1	11094	11108	10911	11038	1.00	cps
Molybdenum	96-1	13056	13563	13466	13362	2.02	cps
Molybdenum	97-1	6898	6762	6935	6865	1.33	cps
Molybdenum	98-1	17741	17290	17751	17594	1.50	cps
Neodymium	150-1	37543	37513	36928	37328	0.93	cps
Neodymium	150-2	20992	21667	21610	21423	1.75	cps
Nickel	60-2	20558	20501	20981	20680	1.27	cps
Phosphorus	31-2	15231	15171	15118	15173	0.37	cps
Potassium	39-2	1022334	1022259	1026185	1023593	0.22	cps
Rhodium	103-1	11275013	11328332	11117512	11240286	0.98	cps
Rhodium	103-2	6706629	6874745	6786669	6789348	1.24	cps
Scandium	45-1	6189311	6134096	6128700	6150702	0.55	cps
Scandium	45-2	563148	573767	562664	566526	1.11	cps
Selenium	82-1	542	422	482	482	12.47	cps
Selenium	77-2	113	53	87	84	35.60	cps
Selenium	78-2	570	493	543	536	7.27	cps
Silicon	28-1	10939919	11811485	11713869	11488424	4.16	cps
Silver	107-1	96582	96716	96421	96573	0.15	cps
Silver	109-1	93110	92697	92848	92885	0.22	cps
Sodium	23-2	9540393	9581126	9609135	9576885	0.36	cps
Strontium	86-1	181629	181301	181008	181313	0.17	cps
Strontium	88-1	1658064	1645352	1615929	1639782	1.32	cps
Sulfur	34-1	336714	339388	337903	338002	0.40	cps
Terbium	159-1	15745191	15486575	15103224	15444996	2.09	cps
Terbium	159-2	10225804	10149776	10310807	10228796	0.79	cps
Thallium	203-1	5131	5238	5371	5247	2.29	cps
Thallium	205-1	12276	12583	12192	12350	1.66	cps
Tin	118-1	125292	126062	127185	126180	0.75	cps
Titanium	47-1	272426	271723	272981	272377	0.23	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-05 Instrumnet Name : P7
Client Sample ID : MJNKKJ9D Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:21:10 DataFile Name : 042SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	38596	38473	39412	38827	1.31	cps
Vanadium	51-2	68424	67898	67845	68056	0.47	cps
Yttrium	89-1	14330436	14111940	14066572	14169649	1.00	cps
Yttrium	89-2	3869312	3849016	3868579	3862302	0.30	cps
Zinc	66-2	389298	390667	395063	391676	0.77	cps
Zirconium	90-1	15502	15562	15972	15679	1.63	cps
Zirconium	91-1	3537	3570	3514	3540	0.80	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-04LX5 Instrumnet Name : P7
Client Sample ID : MJNKJ9L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:24:19 DataFile Name : 043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	208101	207375	206532	207336	0.38	cps
Antimony	121-1	14761	14524	14301	14529	1.58	cps
Arsenic	75-2	10010	10257	9670	9979	2.95	cps
Barium	135-1	19079	18919	18529	18843	1.50	cps
Barium	137-1	32554	32668	32380	32534	0.44	cps
Beryllium	9-1	90	73	77	80	11.02	cps
Bismuth	209-1	8925413	9028412	8865704	8939843	0.92	cps
Bismuth	209-2	7113000	7286198	7197393	7198864	1.20	cps
Bromine	81-1	22955	22511	23051	22839	1.26	cps
Bromine	81-2	1630	1540	1530	1567	3.52	cps
Cadmium	108-1	47	60	63	57	15.56	cps
Cadmium	106-1	3234	2887	3007	3043	5.79	cps
Cadmium	111-1	2754	2591	2672	2672	3.05	cps
Calcium	43-1	29893	29996	29572	29820	0.74	cps
Calcium	44-1	485719	486542	486077	486113	0.08	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	16286	16673	16532	16497	1.19	cps
Cobalt	59-2	15024	14867	14908	14933	0.55	cps
Copper	63-2	2071070	2055425	2032737	2053077	0.94	cps
Dysprosium	156-1	4734	4531	4594	4620	2.25	cps
Dysprosium	156-2	3651	3831	3801	3761	2.56	cps
Erbium	164-1	4164	4317	4127	4203	2.40	cps
Erbium	164-2	2687	2747	2757	2730	1.39	cps
Gadolinium	160-1	4731	4554	4404	4563	3.58	cps
Gadolinium	160-2	3801	3991	3957	3916	2.59	cps
Holmium	165-1	14670923	14547528	14492531	14570327	0.63	cps
Holmium	165-2	10075348	10162047	10162447	10133281	0.50	cps
Indium	115-1	11788794	11843441	11659920	11764052	0.80	cps
Indium	115-2	4286187	4252799	4281102	4273363	0.42	cps
Iron	56-2	11471534	11246094	11350733	11356120	0.99	cps
Iron	57-2	287767	288081	282901	286250	1.01	cps
Iron	54-2	635137	629938	624207	629761	0.87	cps
Krypton	83-1	250	237	197	228	12.19	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-04LX5 Instrumnet Name : P7
Client Sample ID : MJNKJ9L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:24:19 DataFile Name : 043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	377447	380996	379903	379449	0.48	cps
Lead	207-1	327046	325209	321575	324610	0.86	cps
Lead	208-1	1488334	1492803	1479589	1486909	0.45	cps
Lithium	6-1	1215718	1183811	1185047	1194859	1.51	cps
Magnesium	24-2	248327	245177	244490	245998	0.83	cps
Manganese	55-2	49019	48220	48244	48494	0.94	cps
Molybdenum	94-1	2697	2450	2374	2507	6.74	cps
Molybdenum	95-1	2200	2167	2050	2139	3.68	cps
Molybdenum	96-1	2844	2890	2727	2820	2.98	cps
Molybdenum	97-1	1520	1487	1580	1529	3.09	cps
Molybdenum	98-1	3811	3721	3777	3769	1.21	cps
Neodymium	150-1	7422	7325	7209	7319	1.46	cps
Neodymium	150-2	4334	4334	4577	4415	3.18	cps
Nickel	60-2	6288	6211	6028	6176	2.16	cps
Phosphorus	31-2	3164	3170	3194	3176	0.50	cps
Potassium	39-2	250972	249363	250462	250266	0.33	cps
Rhodium	103-1	10970801	10830616	10893340	10898252	0.64	cps
Rhodium	103-2	6643625	6666135	6617062	6642274	0.37	cps
Scandium	45-1	6033840	6036643	5865756	5978746	1.64	cps
Scandium	45-2	553819	557355	555722	555632	0.32	cps
Selenium	82-1	344	337	356	346	2.80	cps
Selenium	77-2	17	10	20	16	32.73	cps
Selenium	78-2	507	430	517	484	9.79	cps
Silicon	28-1	2902043	3129540	2778522	2936702	6.06	cps
Silver	107-1	19156	19233	18909	19099	0.89	cps
Silver	109-1	17951	18405	18141	18166	1.25	cps
Sodium	23-2	1848777	1906286	1844968	1866677	1.84	cps
Strontium	86-1	32269	32205	32720	32398	0.87	cps
Strontium	88-1	284938	285510	284961	285136	0.11	cps
Sulfur	34-1	180296	179730	179247	179758	0.29	cps
Terbium	159-1	14922288	14724040	14973512	14873280	0.89	cps
Terbium	159-2	10050108	9924715	9901093	9958638	0.80	cps
Thallium	203-1	1343	1277	1130	1250	8.73	cps
Thallium	205-1	3230	3157	3084	3157	2.32	cps
Tin	118-1	26979	26454	26725	26719	0.98	cps
Titanium	47-1	53809	54518	53531	53952	0.94	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-04LX5 Instrumnet Name : P7
Client Sample ID : MJNKKJ9L Dilution Factor : 5
Date & Time Acquired : 2024-12-21 18:24:19 DataFile Name : 043SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	7472	7666	7372	7503	1.99	cps
Vanadium	51-2	13199	13666	13166	13344	2.10	cps
Yttrium	89-1	13651425	13643861	13439694	13578327	0.88	cps
Yttrium	89-2	3728251	3720850	3681644	3710248	0.68	cps
Zinc	66-2	78448	78234	79316	78666	0.73	cps
Zirconium	90-1	3300	3437	3597	3445	4.31	cps
Zirconium	91-1	743	683	770	732	6.06	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-06 Instrumnet Name : P7
Client Sample ID : MJNKKJ9S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:27:31 DataFile Name : 044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1199366	1146765	1147614	1164582	2.59	cps
Antimony	121-1	355390	351247	354635	353757	0.62	cps
Arsenic	75-2	56744	55249	55757	55917	1.36	cps
Barium	135-1	1468577	1457033	1468471	1464694	0.45	cps
Barium	137-1	2708493	2638276	2636194	2660988	1.55	cps
Beryllium	9-1	13039	13392	13373	13268	1.50	cps
Bismuth	209-1	9320425	9457118	9247271	9341605	1.14	cps
Bismuth	209-2	7390487	7306448	7397396	7364777	0.69	cps
Bromine	81-1	41909	44056	45476	43814	4.10	cps
Bromine	81-2	6495	6542	6595	6544	0.76	cps
Cadmium	108-1	2620	2754	2740	2705	2.72	cps
Cadmium	106-1	6798	6451	6885	6712	3.42	cps
Cadmium	111-1	42026	41207	41617	41617	0.98	cps
Calcium	43-1	151376	152231	151834	151814	0.28	cps
Calcium	44-1	2386026	2339788	2391740	2372518	1.20	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	302997	301626	302942	302522	0.26	cps
Cobalt	59-2	965261	957012	959126	960466	0.45	cps
Copper	63-2	10603166	10427759	10328808	10453244	1.33	cps
Dysprosium	156-1	23203	23102	22932	23079	0.59	cps
Dysprosium	156-2	18679	18639	18639	18652	0.12	cps
Erbium	164-1	20218	20665	20609	20497	1.19	cps
Erbium	164-2	14621	14027	14221	14290	2.12	cps
Gadolinium	160-1	23012	23503	23386	23301	1.10	cps
Gadolinium	160-2	17648	17274	17668	17530	1.27	cps
Holmium	165-1	15112403	14983117	14900231	14998584	0.71	cps
Holmium	165-2	10442502	10285842	10424792	10384378	0.83	cps
Indium	115-1	12134427	12091132	11988512	12071357	0.62	cps
Indium	115-2	4394392	4366374	4384957	4381908	0.33	cps
Iron	56-2	58256136	57630201	56995007	57627115	1.09	cps
Iron	57-2	1424420	1431332	1439690	1431814	0.53	cps
Iron	54-2	3143949	3150217	3189999	3161388	0.79	cps
Krypton	83-1	213	280	307	267	18.03	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5272-06 Instrumnet Name : P7
Client Sample ID : MJNKJ9S Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:27:31 DataFile Name : 044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	2141683	2104817	2125752	2124084	0.87	cps
Lead	207-1	1832649	1860878	1658640	1784056	6.14	cps
Lead	208-1	8469728	8464183	8118483	8350798	2.41	cps
Lithium	6-1	1281941	1249435	1250563	1260646	1.46	cps
Magnesium	24-2	1251268	1240002	1250760	1247343	0.51	cps
Manganese	55-2	684345	679753	675763	679953	0.63	cps
Molybdenum	94-1	11755	11785	11808	11783	0.23	cps
Molybdenum	95-1	10984	10907	10764	10885	1.03	cps
Molybdenum	96-1	12989	13530	13106	13208	2.15	cps
Molybdenum	97-1	6848	6828	6978	6885	1.18	cps
Molybdenum	98-1	17898	17527	17397	17607	1.48	cps
Neodymium	150-1	36597	36604	36858	36687	0.41	cps
Neodymium	150-2	22097	22194	21753	22015	1.05	cps
Nickel	60-2	245955	246539	245068	245854	0.30	cps
Phosphorus	31-2	14964	14757	14440	14721	1.79	cps
Potassium	39-2	1017897	1009121	1017680	1014899	0.49	cps
Rhodium	103-1	11043139	11035366	10932447	11003651	0.56	cps
Rhodium	103-2	6803758	6777300	6812917	6797992	0.27	cps
Scandium	45-1	6183033	6018074	6238066	6146391	1.86	cps
Scandium	45-2	572370	569208	566509	569362	0.52	cps
Selenium	82-1	4853	4884	4939	4892	0.89	cps
Selenium	77-2	490	530	580	533	8.46	cps
Selenium	78-2	2257	2254	2137	2216	3.08	cps
Silicon	28-1	11226024	11216651	11032763	11158479	0.98	cps
Silver	107-1	273710	272992	273809	273504	0.16	cps
Silver	109-1	260251	263492	260135	261292	0.73	cps
Sodium	23-2	9273861	9179490	9167011	9206788	0.63	cps
Strontium	86-1	170144	170434	169628	170068	0.24	cps
Strontium	88-1	1519594	1538427	1510463	1522828	0.94	cps
Sulfur	34-1	332596	332620	334717	333311	0.37	cps
Terbium	159-1	15486969	15294054	15278581	15353201	0.76	cps
Terbium	159-2	10183762	9955640	10123413	10087605	1.17	cps
Thallium	203-1	135102	135953	135308	135455	0.33	cps
Thallium	205-1	321440	320460	319527	320476	0.30	cps
Tin	118-1	125531	125877	127045	126151	0.63	cps
Titanium	47-1	272514	269446	276809	272923	1.36	cps

LB Number :

LB134060

Operator :

Jaswal

Lab Sample ID :

P5272-06

Instrumnet Name :

P7

Client Sample ID :

MJNKJ9S

Dilution Factor :

1

Date & Time Acquired :

2024-12-21 18:27:31

DataFile Name :

044SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	39462	39037	38249	38916	1.58	cps
Vanadium	51-2	558858	557553	552121	556178	0.64	cps
Yttrium	89-1	14127932	13895319	14098067	14040440	0.90	cps
Yttrium	89-2	3810397	3806435	3813152	3809995	0.09	cps
Zinc	66-2	505561	499492	498472	501175	0.76	cps
Zirconium	90-1	15532	15355	15281	15389	0.84	cps
Zirconium	91-1	3294	3404	3510	3403	3.18	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5273-01 Instrumnet Name : P7
Client Sample ID : MJNKH1 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:30:38 DataFile Name : 045SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	1017895	1015361	1014500	1015919	0.17	cps
Antimony	121-1	205264	204651	204459	204792	0.21	cps
Arsenic	75-2	61336	60897	61928	61387	0.84	cps
Barium	135-1	162283	164228	162350	162954	0.68	cps
Barium	137-1	280597	277606	279066	279090	0.54	cps
Beryllium	9-1	197	267	260	241	16.02	cps
Bismuth	209-1	9425692	9352497	9308978	9362389	0.63	cps
Bismuth	209-2	7300163	7252253	7231878	7261431	0.48	cps
Bromine	81-1	42772	45590	45928	44763	3.87	cps
Bromine	81-2	6598	6405	6338	6447	2.10	cps
Cadmium	108-1	383	400	343	376	7.75	cps
Cadmium	106-1	3804	3767	3460	3677	5.13	cps
Cadmium	111-1	7212	7243	6921	7125	2.49	cps
Calcium	43-1	341648	340515	338740	340301	0.43	cps
Calcium	44-1	5327339	5300796	5337456	5321864	0.36	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	79243	79974	77501	78906	1.61	cps
Cobalt	59-2	133605	132902	131900	132802	0.65	cps
Copper	63-2	6747740	6704319	6683515	6711858	0.49	cps
Dysprosium	156-1	30269	30727	31021	30672	1.23	cps
Dysprosium	156-2	24909	25129	24772	24937	0.72	cps
Erbium	164-1	26345	25914	26676	26311	1.45	cps
Erbium	164-2	17962	18185	17748	17965	1.22	cps
Gadolinium	160-1	30740	30316	30951	30669	1.05	cps
Gadolinium	160-2	22104	22264	22568	22312	1.06	cps
Holmium	165-1	15110573	14835570	15057806	15001316	0.97	cps
Holmium	165-2	10328314	10183988	10187553	10233285	0.80	cps
Indium	115-1	12072661	11941585	11930338	11981528	0.66	cps
Indium	115-2	4410647	4351891	4263781	4342106	1.70	cps
Iron	56-2	81785802	82181917	81622549	81863423	0.35	cps
Iron	57-2	2071919	2063520	2013922	2049787	1.53	cps
Iron	54-2	4522536	4540685	4470051	4511091	0.81	cps
Krypton	83-1	190	253	227	223	14.24	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5273-01 Instrumnet Name : P7
Client Sample ID : MJNKH1 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:30:38 DataFile Name : 045SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	3309820	3300671	3324046	3311512	0.36	cps
Lead	207-1	2906544	2900793	2881505	2896281	0.45	cps
Lead	208-1	13120241	13170223	13123089	13137851	0.21	cps
Lithium	6-1	1209407	1246509	1187616	1214511	2.45	cps
Magnesium	24-2	1337229	1317681	1335639	1330183	0.82	cps
Manganese	55-2	436927	432781	431061	433590	0.70	cps
Molybdenum	94-1	19640	19657	19800	19699	0.45	cps
Molybdenum	95-1	20862	20615	20768	20748	0.60	cps
Molybdenum	96-1	24658	24380	24915	24651	1.08	cps
Molybdenum	97-1	13179	13169	13366	13238	0.84	cps
Molybdenum	98-1	33428	34090	33412	33643	1.15	cps
Neodymium	150-1	51370	50724	50440	50845	0.94	cps
Neodymium	150-2	30242	29257	28987	29495	2.24	cps
Nickel	60-2	21813	21993	21813	21873	0.48	cps
Phosphorus	31-2	19783	19957	20133	19958	0.88	cps
Potassium	39-2	1123779	1114750	1106466	1114999	0.78	cps
Rhodium	103-1	11137320	11108915	10941676	11062637	0.96	cps
Rhodium	103-2	6737157	6702506	6650555	6696739	0.65	cps
Scandium	45-1	6136674	6138524	6109053	6128084	0.27	cps
Scandium	45-2	566205	563063	564048	564439	0.28	cps
Selenium	82-1	562	417	466	482	15.30	cps
Selenium	77-2	123	90	90	101	19.03	cps
Selenium	78-2	613	537	537	562	7.87	cps
Silicon	28-1	11252634	11702243	11568616	11507831	2.01	cps
Silver	107-1	47728	47407	47417	47517	0.38	cps
Silver	109-1	45849	44635	45137	45207	1.35	cps
Sodium	23-2	8488587	8356487	8301799	8382291	1.15	cps
Strontium	86-1	259293	260058	257196	258849	0.57	cps
Strontium	88-1	2312937	2316862	2327800	2319200	0.33	cps
Sulfur	34-1	427616	435939	441213	434922	1.58	cps
Terbium	159-1	15472680	15205708	15446730	15375039	0.96	cps
Terbium	159-2	10130004	10096318	10017961	10081427	0.57	cps
Thallium	203-1	6061	5865	6058	5995	1.88	cps
Thallium	205-1	14208	14595	14224	14342	1.53	cps
Tin	118-1	228193	230451	231841	230161	0.80	cps
Titanium	47-1	348405	348687	347548	348213	0.17	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : P5273-01 Instrumnet Name : P7
Client Sample ID : MJNKH1 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:30:38 DataFile Name : 045SMPL.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	70580	70410	70136	70375	0.32	cps
Vanadium	51-2	86982	88568	85980	87177	1.50	cps
Yttrium	89-1	13966836	14002032	13982062	13983644	0.13	cps
Yttrium	89-2	3842104	3821694	3837100	3833633	0.28	cps
Zinc	66-2	907956	901328	898119	902468	0.56	cps
Zirconium	90-1	20137	20711	21174	20674	2.51	cps
Zirconium	91-1	5675	4941	4691	5102	10.02	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCV038 Instrumnet Name : P7
Client Sample ID : CCV038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:33:43 DataFile Name : 046CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	13617796	13528026	13560532	13568785	0.33	cps
Antimony	121-1	5991989	6054780	6008056	6018275	0.54	cps
Arsenic	75-2	292261	294272	291100	292544	0.55	cps
Barium	135-1	7831012	7767925	7750071	7783002	0.55	cps
Barium	137-1	13403137	13456017	13320316	13393157	0.51	cps
Beryllium	9-1	576915	584496	589380	583597	1.08	cps
Bismuth	209-1	8316871	8250584	8260865	8276107	0.43	cps
Bismuth	209-2	6558548	6505997	6526039	6530195	0.41	cps
Bromine	81-1	15562	14868	15081	15170	2.34	cps
Bromine	81-2	313	277	330	307	8.90	cps
Cadmium	108-1	105937	104731	106195	105621	0.74	cps
Cadmium	106-1	155590	154114	153297	154334	0.75	cps
Cadmium	111-1	1649274	1648695	1652636	1650202	0.13	cps
Calcium	43-1	7435803	7398764	7355741	7396769	0.54	cps
Calcium	44-1	121143492	118850888	118343092	119445824	1.25	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	2315505	2368512	2293452	2325823	1.66	cps
Cobalt	59-2	3583969	3566525	3540410	3563635	0.62	cps
Copper	63-2	25366904	25196375	25556582	25373287	0.71	cps
Dysprosium	156-1	310	347	250	302	16.15	cps
Dysprosium	156-2	487	493	477	486	1.73	cps
Erbium	164-1	300	303	330	311	5.29	cps
Erbium	164-2	280	167	213	220	25.89	cps
Gadolinium	160-1	333	273	303	303	9.89	cps
Gadolinium	160-2	677	590	677	648	7.72	cps
Holmium	165-1	14034428	14054616	14122938	14070660	0.33	cps
Holmium	165-2	9866170	9908375	9770588	9848378	0.72	cps
Indium	115-1	10470496	10424488	10384382	10426456	0.41	cps
Indium	115-2	3762752	3814172	3787700	3788208	0.68	cps
Iron	56-2	547297112	540399792	534708925	540801943	1.17	cps
Iron	57-2	13725279	13456643	13532454	13571459	1.02	cps
Iron	54-2	29655400	29501763	29557199	29571454	0.26	cps
Krypton	83-1	237	197	170	201	16.69	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCV038 Instrumnet Name : P7
Client Sample ID : CCV038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:33:43 DataFile Name : 046CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	24367978	24711854	24428055	24502629	0.75	cps
Lead	207-1	21328677	21498491	21704006	21510391	0.87	cps
Lead	208-1	97240219	97778539	97894417	97637725	0.36	cps
Lithium	6-1	1217163	1211732	1217271	1215389	0.26	cps
Magnesium	24-2	104569155	103781195	103105968	103818773	0.71	cps
Manganese	55-2	18406378	18642123	18366293	18471598	0.81	cps
Molybdenum	94-1	20976601	20898997	20760651	20878750	0.52	cps
Molybdenum	95-1	30042444	29775104	29971476	29929675	0.46	cps
Molybdenum	96-1	32924325	32595020	32770481	32763275	0.50	cps
Molybdenum	97-1	18999253	18827978	18417234	18748155	1.60	cps
Molybdenum	98-1	48202878	47809698	47746209	47919595	0.52	cps
Neodymium	150-1	530	427	507	488	11.11	cps
Neodymium	150-2	193	133	173	167	18.33	cps
Nickel	60-2	853890	848155	846414	849486	0.46	cps
Phosphorus	31-2	122287	120157	120969	121138	0.89	cps
Potassium	39-2	66974989	66675607	66316089	66655562	0.49	cps
Rhodium	103-1	9651153	9325238	9311237	9429209	2.04	cps
Rhodium	103-2	5773516	5809044	5668702	5750420	1.27	cps
Scandium	45-1	5591824	5551548	5480567	5541313	1.02	cps
Scandium	45-2	503775	504204	506371	504784	0.28	cps
Selenium	82-1	86329	85032	86401	85920	0.90	cps
Selenium	77-2	9040	9363	9130	9177	1.82	cps
Selenium	78-2	30899	31002	30735	30879	0.44	cps
Silicon	28-1	3212585	3212825	3184521	3203311	0.51	cps
Silver	107-1	7410756	7337461	7245005	7331074	1.13	cps
Silver	109-1	7027685	7022511	7064811	7038336	0.33	cps
Sodium	23-2	170874124	171710184	170148697	170911002	0.46	cps
Strontium	86-1	1849105	1854618	1846713	1850146	0.22	cps
Strontium	88-1	16081789	16179101	16258715	16173202	0.55	cps
Sulfur	34-1	575510	564018	564525	568017	1.14	cps
Terbium	159-1	14539294	14388270	14166908	14364824	1.30	cps
Terbium	159-2	9702170	9656316	9488825	9615770	1.17	cps
Thallium	203-1	6173020	6151072	6079337	6134477	0.80	cps
Thallium	205-1	14487218	14675834	14516052	14559701	0.70	cps
Tin	118-1	4920431	4949592	4973093	4947705	0.53	cps
Titanium	47-1	7068982	6917257	6769853	6918697	2.16	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCV038 Instrumnet Name : P7
Client Sample ID : CCV038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:33:43 DataFile Name : 046CCV.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	18370371	18645676	18953198	18656415	1.56	cps
Vanadium	51-2	2086650	2074152	2074503	2078435	0.34	cps
Yttrium	89-1	12489011	12295115	12349580	12377902	0.81	cps
Yttrium	89-2	3364733	3322119	3368873	3351908	0.77	cps
Zinc	66-2	4130508	4196038	4146043	4157530	0.82	cps
Zirconium	90-1	10057875	10144047	10087349	10096424	0.43	cps
Zirconium	91-1	2275509	2203961	2242981	2240817	1.60	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB038 Instrumnet Name : P7
Client Sample ID : CCB038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:39:43 DataFile Name : 048CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Aluminium	27-2	263	227	250	247	7.52	cps
Antimony	121-1	637	833	793	754	13.78	cps
Arsenic	75-2	7	3	20	10	88.20	cps
Barium	135-1	113	127	67	102	30.82	cps
Barium	137-1	170	187	150	169	10.87	cps
Beryllium	9-1	57	90	87	78	23.60	cps
Bismuth	209-1	9126499	8925705	8860501	8970901	1.55	cps
Bismuth	209-2	7220619	7166133	7361433	7249395	1.39	cps
Bromine	81-1	14180	13917	13653	13917	1.89	cps
Bromine	81-2	173	200	173	182	8.45	cps
Cadmium	108-1	20	7	20	16	49.47	cps
Cadmium	106-1	2990	2964	3030	2995	1.12	cps
Cadmium	111-1	2131	2105	2129	2122	0.68	cps
Calcium	43-1	370	370	323	354	7.60	cps
Calcium	44-1	10120	9837	9420	9792	3.60	cps
Carbon	12-1						cps
Carbon	12-2						cps
Chlorine	35-1						cps
Chlorine	35-2						cps
Chromium	52-2	1363	1397	1330	1363	2.45	cps
Cobalt	59-2	107	123	80	103	21.15	cps
Copper	63-2	1170	1193	1243	1202	3.12	cps
Dysprosium	156-1	17	13	20	17	20.01	cps
Dysprosium	156-2	10	7	7	8	24.71	cps
Erbium	164-1	80	80	67	76	10.19	cps
Erbium	164-2	33	43	53	43	23.08	cps
Gadolinium	160-1	33	43	30	36	19.51	cps
Gadolinium	160-2	457	483	483	474	3.25	cps
Holmium	165-1	14295096	14329294	14103646	14242679	0.85	cps
Holmium	165-2	10029330	9939810	9987201	9985447	0.45	cps
Indium	115-1	11071704	11218479	11044674	11111619	0.84	cps
Indium	115-2	4110408	4093119	4151176	4118234	0.72	cps
Iron	56-2	20063	19626	19299	19663	1.95	cps
Iron	57-2	980	840	1030	950	10.37	cps
Iron	54-2	2554	2557	2460	2524	2.17	cps
Krypton	83-1	183	220	193	199	9.53	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB038 Instrumnet Name : P7
Client Sample ID : CCB038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:39:43 DataFile Name : 048CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Lead	206-1	1760	1817	1667	1748	4.33	cps
Lead	207-1	1613	1463	1493	1523	5.21	cps
Lead	208-1	7104	6827	6564	6832	3.95	cps
Lithium	6-1	1361021	1321234	1354989	1345748	1.59	cps
Magnesium	24-2	1050	940	993	994	5.53	cps
Manganese	55-2	457	423	383	421	8.72	cps
Molybdenum	94-1	570	630	550	583	7.14	cps
Molybdenum	95-1	490	560	463	504	9.90	cps
Molybdenum	96-1	660	663	597	640	5.87	cps
Molybdenum	97-1	343	383	377	368	5.83	cps
Molybdenum	98-1	837	863	753	818	7.02	cps
Neodymium	150-1	10	7	0	6	91.64	cps
Neodymium	150-2	3	0	3	2	86.60	cps
Nickel	60-2	383	390	410	394	3.52	cps
Phosphorus	31-2	113	120	117	117	2.86	cps
Potassium	39-2	54614	53022	53908	53848	1.48	cps
Rhodium	103-1	10405308	10362796	10284089	10350731	0.59	cps
Rhodium	103-2	6355396	6323165	6454770	6377777	1.08	cps
Scandium	45-1	5750042	5765332	5678473	5731282	0.81	cps
Scandium	45-2	525734	516108	517196	519679	1.01	cps
Selenium	82-1	355	285	291	310	12.54	cps
Selenium	77-2	0	0	0	0	0.00	cps
Selenium	78-2	383	397	447	409	8.17	cps
Silicon	28-1	551001	552175	555267	552814	0.40	cps
Silver	107-1	427	397	357	393	8.93	cps
Silver	109-1	323	260	327	303	12.38	cps
Sodium	23-2	36841	35487	35598	35975	2.09	cps
Strontium	86-1	303	410	297	337	18.89	cps
Strontium	88-1	337	390	310	346	11.79	cps
Sulfur	34-1	169212	171018	173121	171117	1.14	cps
Terbium	159-1	14622476	14584621	14422632	14543243	0.73	cps
Terbium	159-2	9693307	9840763	9805706	9779925	0.79	cps
Thallium	203-1	730	643	750	708	8.01	cps
Thallium	205-1	1797	1860	1827	1828	1.73	cps
Tin	118-1	1443	1493	1423	1453	2.48	cps
Titanium	47-1	137	137	147	140	4.12	cps

LB Number : LB134060 Operator : Jaswal
Lab Sample ID : CCB038 Instrumnet Name : P7
Client Sample ID : CCB038 Dilution Factor : 1
Date & Time Acquired : 2024-12-21 18:39:43 DataFile Name : 048CCBE.d

Parameter	Mass	CPS1	CPS2	CPS3	CPSMean	CPSRSD	Units
Uranium	238-1	173	173	137	161	13.14	cps
Vanadium	51-2	30	10	17	19	53.91	cps
Yttrium	89-1	12957465	12617047	12755711	12776741	1.34	cps
Yttrium	89-2	3504392	3509967	3548244	3520868	0.68	cps
Zinc	66-2	490	497	500	496	1.03	cps
Zirconium	90-1	807	820	853	827	2.91	cps
Zirconium	91-1	133	157	143	144	8.10	cps

Prep Standard - Chemical Standard Summary

Order ID : P5249
Test : Metals CLP4 MS
Prepbatch ID : PB165675,
Sequence ID/Qc Batch ID: LB134060,

Standard ID :
MP82128,MP83498,MP83619,MP83620,MP83621,MP83622,MP83623,MP83625,MP83626,MP83627,MP83628,MP836
29,MP83630,MP83631,MP83632,MP83633,MP83634,MP83635,MP83636,MP83669,MP83671,

Chemical ID :
M5288,M5289,M5295,M5304,M5390,M5476,M5498,M5513,M5515,M5516,M5519,M5658,M5698,M5739,M5751,M5768
,M5769,M5798,M5799,M5800,M5801,M5802,M5806,M5815,M5816,M5817,M5818,M5819,M5820,M5873,M5874,M596
1,M5962,M5976,M5978,M5981,M5983,M5993,M5999,M6021,M6023,M6025,M6028,M6030,M6033,M6040,M6055,M61
21,M6125,M6126,W3112,

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
641	1:4 HCL	MP82128	09/03/2024	02/08/2025	Janvi Patel	None	None	Sarabjit Jaswal
								09/03/2024

FROM 1500.00000ml of W3112 + 500.00000ml of M6040 = Final Quantity: 2000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1122	ICPMS CALIB BLANK(S0/ICB/CCB)	MP83619	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIP ETTE_3 (A)	Mohan Bera 12/17/2024

FROM 25.00000ml of M6121 + 4925.00000ml of W3112 + 50.00000ml of M6126 = Final Quantity: 5000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3947	S7(SFAM,6020,200.8)	MP83620	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIP ETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.10000ml of M5476 + 1.00000ml of M5799 + 1.00000ml of M5818 + 1.00000ml of M5981 + 1.00000ml of M5983 + 1.90000ml of M6033 + 10.00000ml of M6126 + 2.00000ml of M5815 + 2.00000ml of M5817 + 4.00000ml of M5390 + 4.00000ml of M6025 + 4.90000ml of M5515 + 4.90000ml of M5519 + 5.00000ml of M6121 + 50.00000ml of M5304 + 832.50000ml of W3112 + 9.00000ml of M5698 + 9.00000ml of M5751 + 9.00000ml of M5819 + 9.00000ml of M5976 + 9.00000ml of M5978 + 9.90000ml of M5498 + 9.90000ml of M5769 + 9.90000ml of M5806 = Final Quantity: 1000.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3948	S6(SFAM,6020,200.8)	MP83621	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 48.50000ml of W3112 + 50.00000ml of MP83620 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3949	S5(SFAM,6020,200.8)	MP83622	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 73.50000ml of W3112 + 25.00000ml of MP83620 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3954	S4(SFAM,6020,200.8)	MP83623	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 86.00000ml of W3112 + 12.50000ml of MP83620 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3951	S3(SFAM, 6020,200.8)	MP83625	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP83621 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3955	S2CONC(SFAM,6020,200.8)	MP83626	12/13/2024	01/07/2025	Sarabjit Jaswal	None	None	Mohan Bera
								12/17/2024

FROM 0.05000ml of M5476 + 0.05000ml of M5698 + 0.05000ml of M5798 + 0.05000ml of M5800 + 0.05000ml of M5801 + 0.05000ml of M5961 + 0.05000ml of M5981 + 0.05000ml of M5983 + 0.05000ml of M6023 + 0.05000ml of M6025 + 0.05000ml of M6028 + 0.05000ml of M6030 + 0.10000ml of M5658 + 0.10000ml of M5751 + 0.10000ml of M5802 + 0.10000ml of M6033 + 0.25000ml of M5515 + 0.25000ml of M5799 + 0.25000ml of M5819 + 0.25000ml of M5962 + 0.25000ml of M5976 + 0.25000ml of M5978 + 0.25000ml of M6021 + 0.50000ml of M5390 + 0.50000ml of M5818 + 1.25000ml of M5815 + 1.25000ml of M5817 + 2.50000ml of M5498 + 2.50000ml of M5519 + 2.50000ml of M5769 + 2.50000ml of M5806 + 2.50000ml of M6121 + 226.25000ml of W3112 + 5.00000ml of M6126 = Final Quantity: 250.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3956	S2(SFAM,6020,200.8)	MP83627	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera
								12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 98.00000ml of W3112 + 0.50000ml of MP83626 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3957	S1(SFAM,6020,200.8)	MP83628	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.50000ml of M6121 + 1.00000ml of M6126 + 88.50000ml of W3112 + 10.00000ml of MP83627 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3958	ICV(SFAM)	MP83629	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 2.00000ml of M5295 + 98.00000ml of MP83619 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1142	ICSA ICPMS	MP83630	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 10.00000ml of M5873 + 90.00000ml of MP83619 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1143	ICSAB ICPMS	MP83631	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 10.00000ml of M5873 + 10.00000ml of M5874 + 80.00000ml of MP83619 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3961	CCV	MP83632	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.20000ml of M5513 + 0.50000ml of M5476 + 0.50000ml of M5799 + 0.50000ml of M5818 + 0.50000ml of M5981 + 0.50000ml of M5983 + 1.00000ml of M5815 + 1.00000ml of M5817 + 10.00000ml of M6126 + 12.45000ml of M5515 + 12.45000ml of M5519 + 2.00000ml of M5390 + 24.95000ml of M5498 + 24.95000ml of M5516 + 24.95000ml of M5769 + 25.00000ml of M5304 + 4.50000ml of M5698 + 4.50000ml of M5751 + 4.50000ml of M5819 + 4.50000ml of M5976 + 4.50000ml of M5978 + 4.95000ml of M6033 + 5.00000ml of M6121 + 826.10000ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3962	MG 10PPM FOR TUNE	MP83633	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 0.01000ml of M5769 + 9.99000ml of MP83619 = Final Quantity: 100.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3894	TUNE 200PPB	MP83634	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 2.00000ml of M6055 + 2.00000ml of MP83633 + 96.00000ml of MP83619 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3903	ISS 3PPM	MP83635	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024

FROM 5.00000ml of M6126 + 75.00000ml of M5739 + 170.00000ml of MP83619 = Final Quantity: 250.000 ml

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2902	S8 ICPMS	MP83636	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024
<u>FROM</u> 1.00000ml of M6033 + 2.50000ml of M5288 + 2.50000ml of M5515 + 5.00000ml of M5498 + 5.00000ml of M5516 + 5.00000ml of M5769 + 79.00000ml of MP83619 = Final Quantity: 100.000 ml								

[illegible]

Metals STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
870	ICPMS SPIKE SOL.B	MP83671	12/13/2024	01/07/2025	Sarabjit Jaswal	None	METALS_PIPETTE_3 (A)	Mohan Bera 12/17/2024
<u>FROM</u> 0.45000ml of M5962 + 5.00000ml of M5993 + 5.00000ml of M5999 + 39.55000ml of MP83619 = Final Quantity: 50.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58119 / K, 10000 PPM, 500 ml	071122	07/11/2025	09/01/2022 / jaswal	07/21/2022 / jaswal	M5288

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	6020CAL-1 / Calibration Standard Method 6020	S2-MEB711244	10/20/2026	08/07/2024 / jaswal	04/01/2022 / jaswal	M5304

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 #
Absolute Standards, Inc.	57138 / Sr, 10000 PPM, 125 ml	082922	08/29/2025	07/29/2024 / Jaswal	03/16/2023 / jaswal	M5476

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58120 / Ca, 10000 PPM, 500 ml	031523	03/15/2026	08/15/2023 / jaswal	03/17/2023 / bin	M5498

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57182 / Pb, 10000 PPM, 125 ml	061522	06/15/2025	03/19/2023 / bin	03/17/2023 / bin	M5513

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58126 / Fe, 10000 PPM, 500 ml	092122	09/21/2025	08/01/2024 / Jaswal	03/17/2023 / bin	M5515

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	022123	11/06/2025	11/06/2024 / kareem	03/17/2023 / bin	M5516

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

CHEMICAL RECEIPT LOG BOOK

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 #
Inorganic Ventures	6020ISS / 6020ISS, 10 ug/ml, Bi, Ho, In, 6Li, Rh, Sc, TB, Y	T2-MEB709511	09/03/2026	08/07/2024 / jaswal	04/11/2022 / jaswal	M5739

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58029 / Cu, 1000 PPM, 500 ml	071723	07/17/2026	10/01/2024 / Jaswal	08/25/2023 / jaswal	M5751

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57050 / Sn, 1000 PPM, 125 ml	071123	07/11/2026	02/09/2024 / bin	02/09/2024 / bin	M5799

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57027 / CO, 1000 PPM, 125 ml	091923	09/19/2026	05/31/2024 / bin	02/09/2024 / bin	M5800

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57033 / As, 1000 PPM, 125 ml	111323	11/13/2026	02/09/2024 / bin	02/09/2024 / bin	M5801

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57051 / Sb, 1000 PPM, 125 ml	120523	12/05/2026	08/07/2024 / jaswal	01/03/2024 / jaswal	M5802

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58111 / Na, 10000 PPM, 500 ml	122223	12/22/2026	08/01/2024 / Jaswal	01/03/2024 / jaswal	M5806

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57115 / P, 10000 PPM, 125 ml	041723	04/17/2026	05/21/2024 / Jaswal	02/09/2024 / jaswal	M5815

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57016 / S, 1000 PPM, 125 ml	122923	12/29/2026	05/20/2024 / Jaswal	02/09/2024 / jaswal	M5816

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57116 / S, 10000 PPM, 125 ml	071123	07/11/2026	03/01/2024 / jaswal	02/09/2024 / jaswal	M5817

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57014 / Si, 1000 PPM, 125 ml	122023	12/20/2026	03/06/2024 / jaswal	02/09/2024 / jaswal	M5818

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58030 / Zinc, Zn, 500 ml, 1000 PPM	111623	11/16/2026	03/20/2024 / jaswal	02/09/2024 / jaswal	M5819

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 #
EPA	PART A / ICSA (ICPMS) STOCK SOLN	CP-MS ICSA-0803	04/30/2025	04/17/2024 / jaswal	07/14/2022 / jaswal	M5873

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
EPA	PART B / ICSB (ICPMS) STOCK SOLUTION	CP-MS ICSB-0803	04/30/2025	04/17/2024 / jaswal	07/14/2022 / jaswal	M5874

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57028 / Ni, 1000 PPM, 125 ml	041124	04/11/2027	07/02/2024 / Jaswal	06/11/2024 / Jaswal	M5961

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57034 / Se, 1000 PPM, 125 ml	060624	06/06/2027	07/02/2024 / Jaswal	06/14/2024 / Jaswal	M5962

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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	CGT11-1 / 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.	57092 / U, 1000 PPM, 125 ml	060724	06/07/2027	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5981

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57040 / Zr, 1000 PPM, 125 ml	071423	07/14/2026	07/29/2024 / Jaswal	06/11/2024 / Jaswal	M5983

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	CLPP-SPK-4 / SOIL/WATER SPIKE SOLN 4, 125mL	V2-MEB742036	03/12/2029	10/04/2024 / Jaswal	02/22/2024 / Jaswal	M5993

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 / TI, 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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57048 / Cd, 1000 PPM, 125 ml	070124	07/01/2027	08/05/2024 / kareem	08/05/2024 / Jaswal	M6028

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	57047 / Ag, 1000 PPM, 125 ml	122823	12/28/2026	08/05/2024 / kareem	08/05/2024 / Jaswal	M6030

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Absolute Standards, Inc.	58113 / Al, 10000 PPM, 500 ml	011623	01/16/2026	08/07/2024 / Jaswal	01/03/2024 / Jaswal	M6033

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	24D1562005	02/08/2025	08/09/2024 / Janvi	08/01/2024 / Janvi	M6040

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	IV-STOCK-12 / ICP-MS TUNING SOLUTION, 125mL	U2-MEB734294	06/21/2028	08/21/2024 / Jaswal	08/19/2024 / Jaswal	M6055

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

CHEMICAL RECEIPT LOG BOOK

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 / lwona	07/03/2024 / lwona	W3112



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300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

Certificate of Analysis

R: 02/22/24 M5991 M5992 M5993 M5994 M5995

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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: CLPP-SPK-4
Lot Number: V2-MEB742036
Matrix: 3% (v/v) HNO₃
Value / Analyte(s):
100 µg/mL ea:
Antimony,
50 µg/mL ea:
Cadmium, Thallium,
40 µg/mL ea:
Arsenic,
20 µg/mL ea:
Lead,
10 µg/mL ea:
Selenium

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	50.00 ± 0.22 µg/mL	Lead, Pb	20.00 ± 0.09 µg/mL
Selenium, Se	10.00 ± 0.04 µg/mL	Thallium, Tl	50.00 ± 0.22 µg/mL

Density: 1.016 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, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (z) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ITS} = long term stability standard uncertainty (storage)

u_{TS} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (z) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{ITS}}^2 + u_{\text{TS}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ITS} = long term stability standard uncertainty (storage)

u_{TS} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; Info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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





CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57048
070124
Cadmium (Cd)

Solvent: 24002546 Nitric Acid

Lot #

2% 40.0 Nitric Acid (mL)

Expiration Date: 070127

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL): 1000

NIST Test Number: 6UTB

SE-05 Balance Uncertainty

Weight shown below was diluted to (mL): 2000.07 0.100 Flask Uncertainty

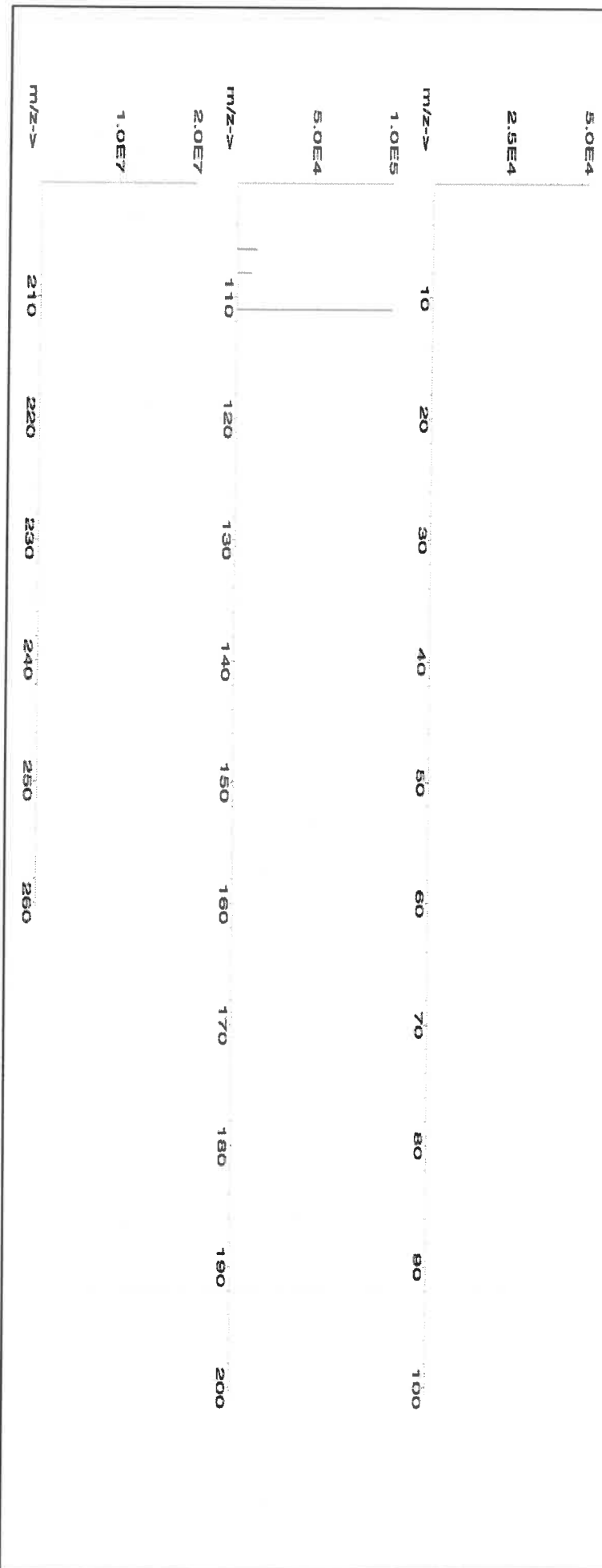
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	070124
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
	070124

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Cadmium nitrate tetrahydrate (Cd) IN024 CDM09221A1 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

[T1 Spectrum No.1 [12.514 sec]:\$8148.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.2	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<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	Ba	<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	Cd	<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 certified (+/-) 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).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: **57182**
Lot Number: **110923**
Description: **Lead (Pb)**

Solvent: **24002546 Nitric Acid**
Lot #: **M6025**

Expiration Date: **110926**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **10000**
NIST Test Number: **6UTB**

2% **40.0** **Nitric Acid**
(mL)

Weight shown below was diluted to (mL):

2000.02 **5E-05** **Balance Uncertainty**
0.058 **Flask Uncertainty**

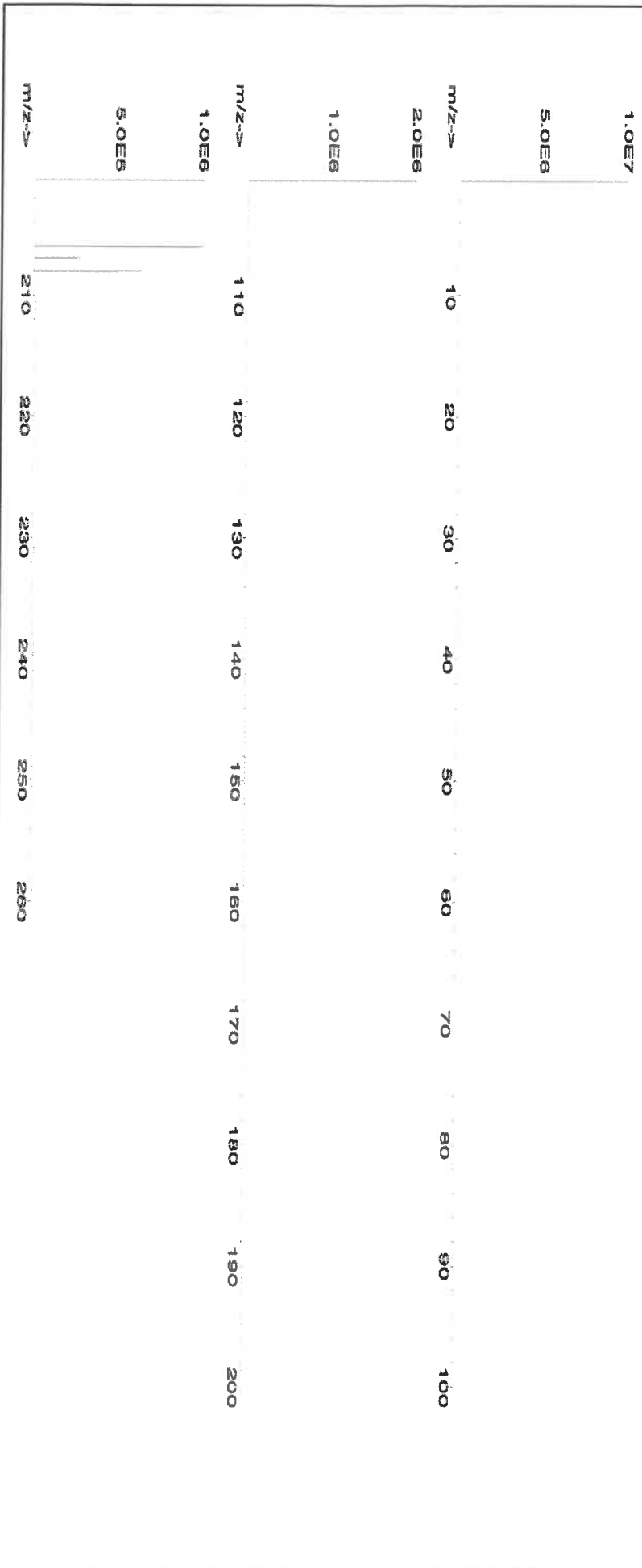
Formulated By:	Lawrence Barry
	110923
Reviewed By:	Pedro L. Rentas
	110923

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)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
-----	------------	-----------------------	------------	------------------------	-----------	-------------------	-------------------	----------------------	----------------------------------	------	----------------	------	----------

1. **Lead(II) nitrate (Pb)** **IN029** **PED12016A1** **10000** **99.999** **0.10** **62.5** **32.0006** **32.0040** **10001.1** **20.0** **10099-74-8** **0.05 mg/m3** **inhalant rat 83 mg/kg** **3128**

[1] Spectrum No.1 [17.284 sec]:58182.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<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

Physical Characterization:

(T)= Target analyte

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 certified (+/-) 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).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58119
071122
Potassium (K)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

071125
Ambient (20 °C)
10000
6UTB

Weight shown below was diluted to (mL):

2000.02

Lot

Solvent: 20510011 Nitric Acid

2% 40.0
(mL) Nitric Acid5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry	071122
Reviewed By:	Pedro L. Rentas	071122

SDS Information

Expanded
Uncertainty
+/- (µg/mL)

(Solvent Safety Info. On Attached pg.)
LD50

CAS#

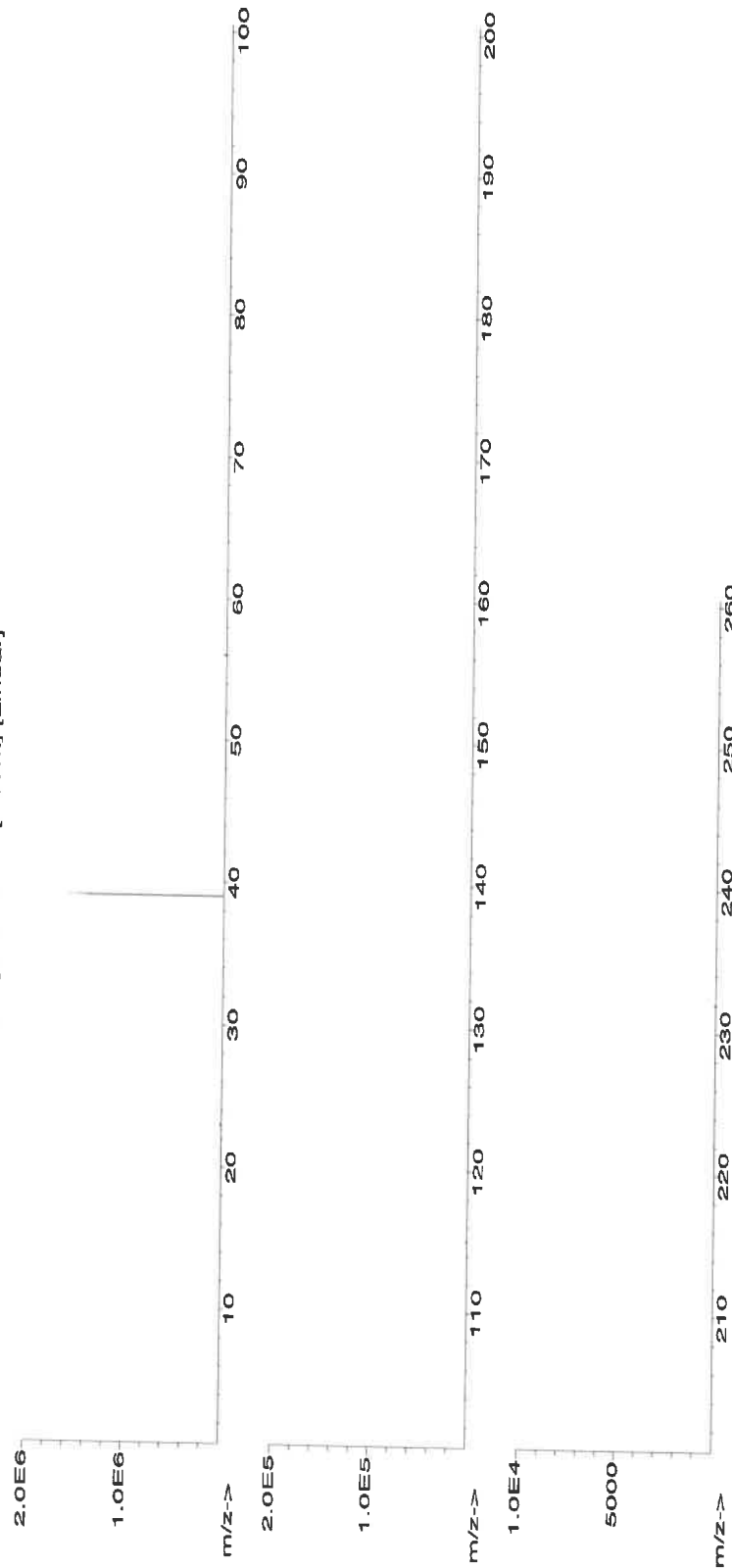
Actual
Conc. (µg/mL)

Actual
Weight (g)

Target
Weight (g)

1. Potassium nitrate (K) IN034 KD022021A1 10000 99.999 0.10 37.6 53.1925 53.1934 10000.2 20.0 7757-79-1 5 mg/m3 orl-rat 3015 mg/kg 3141a

[1] Spectrum No.1 [35.763 sec]:58119.D# [Count] [Linear]





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	Pt	<0.02	Se	<0.02	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	<0.02	Os	<0.01	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	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	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	<0.02	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 certified (+/-) 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).



M5289 R: 07/12/22
Certified Reference Material CRM

34



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58113
Lot Number: 070622
Description: Aluminum (Al)

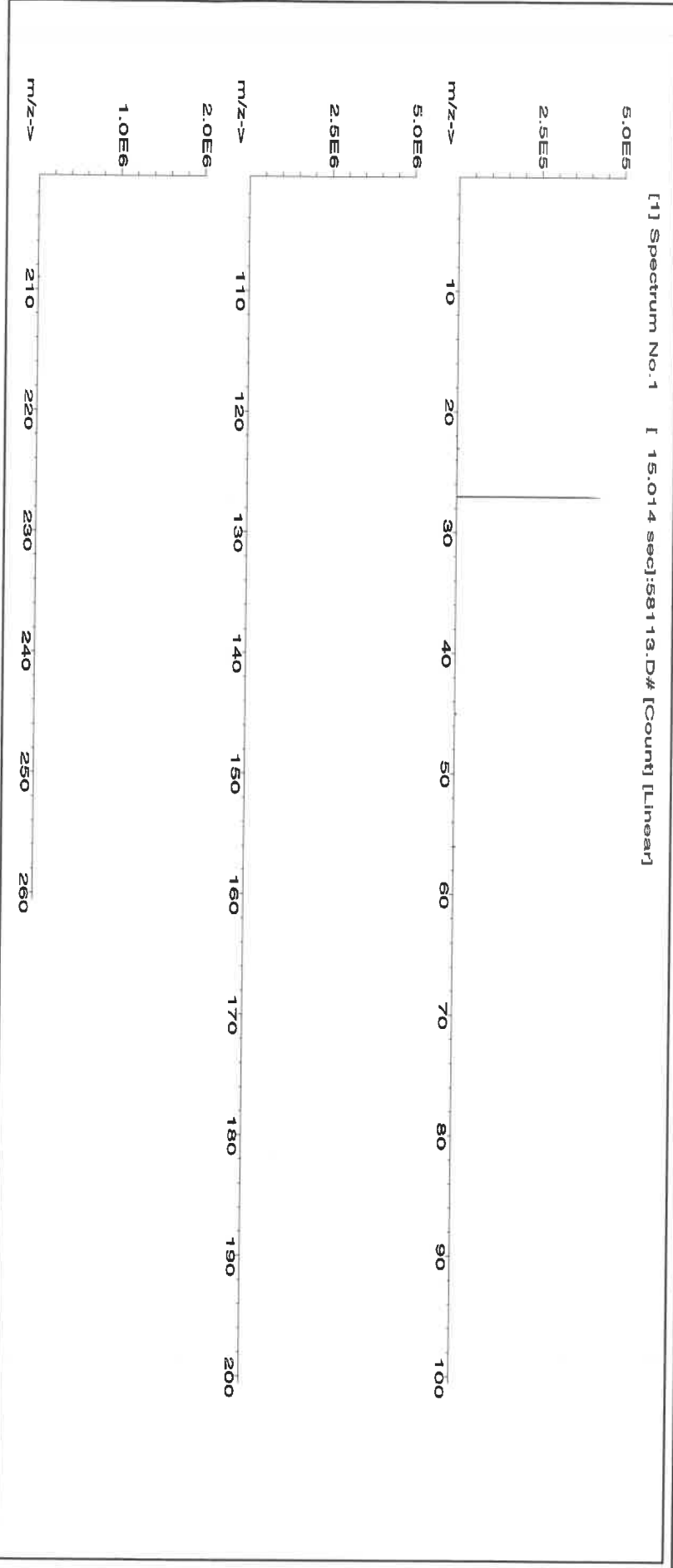
Lot #
Solvent: 20370011 Nitric Acid

Expiration Date: 070625
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Lawrence Barry
070622	
Reviewed By:	Pedro L. Renteria
070622	

SDS Information														
Expanded														
(Solvent, Safety Info. On Attached pg.)														
CAS#														
OSHA PEL (TWA)														
LD50														
SRM														
NIST														
Lot														
Nominal														
Purity														
Uncertainty														
Assay														
Target														
Actual														
Weight (g)														
Conc. (µg/mL)														
+/- (µg/mL)														
RM#														
Number														
Conc. (µg/mL)														
Purity (%)														
Purity (%)														
RM#														
Compound														

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 or-tal 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	Pt	<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	Ru	<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	Sr	<0.02	S	<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	Ta	<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	Ti	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
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- * Standards are certified (+/-) 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).



R: 4/20/21

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

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.





QUALITY ASSURANCE TECHNICAL SUPPORT LABORATORY
"An ISO 9001:2015 Certified Program"

Instructions for QATS Reference Material: *Inorganic ICV Solutions*

- 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



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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: 6020CAL-1
Lot Number: S2-MEB711244
Matrix: 5% (v/v) HNO₃
tr. HF
Value / Analyte(s): 20 µg/mL ea:
Silver, Aluminum,
Arsenic, Barium,
Beryllium, Calcium,
Cadmium, Cobalt,
Chromium, Copper,
Iron, Potassium,
Magnesium, Manganese,
Sodium, Nickel,
Lead, Antimony,
Selenium, Thallium,
Vanadium, Zinc

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	20.01 ± 0.08 µg/mL	Antimony, Sb	20.01 ± 0.12 µg/mL
Arsenic, As	20.01 ± 0.18 µg/mL	Barium, Ba	20.01 ± 0.11 µg/mL
Beryllium, Be	20.01 ± 0.14 µg/mL	Cadmium, Cd	20.01 ± 0.11 µg/mL
Calcium, Ca	20.01 ± 0.10 µg/mL	Chromium, Cr	20.01 ± 0.16 µg/mL
Cobalt, Co	20.01 ± 0.11 µg/mL	Copper, Cu	20.01 ± 0.10 µg/mL
Iron, Fe	20.01 ± 0.09 µg/mL	Lead, Pb	20.01 ± 0.11 µg/mL
Magnesium, Mg	19.99 ± 0.10 µg/mL	Manganese, Mn	20.01 ± 0.10 µg/mL
Nickel, Ni	20.01 ± 0.11 µg/mL	Potassium, K	20.01 ± 0.10 µg/mL
Selenium, Se	20.02 ± 0.14 µg/mL	Silver, Ag	20.02 ± 0.09 µg/mL
Sodium, Na	20.01 ± 0.10 µg/mL	Thallium, Tl	20.01 ± 0.13 µg/mL
Vanadium, V	20.01 ± 0.11 µg/mL	Zinc, Zn	20.01 ± 0.11 µg/mL

Density: 1.026 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
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
Fe	Calculated		See Sec. 4.2
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
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Se	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of $k = 2$.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum(w_i)(X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum(1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2 (u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a)(u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{Its}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = 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.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

October 20, 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

- **October 20, 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



24

Formulated By:	Giovanni Esposito	072122
Reviewed By:		072122

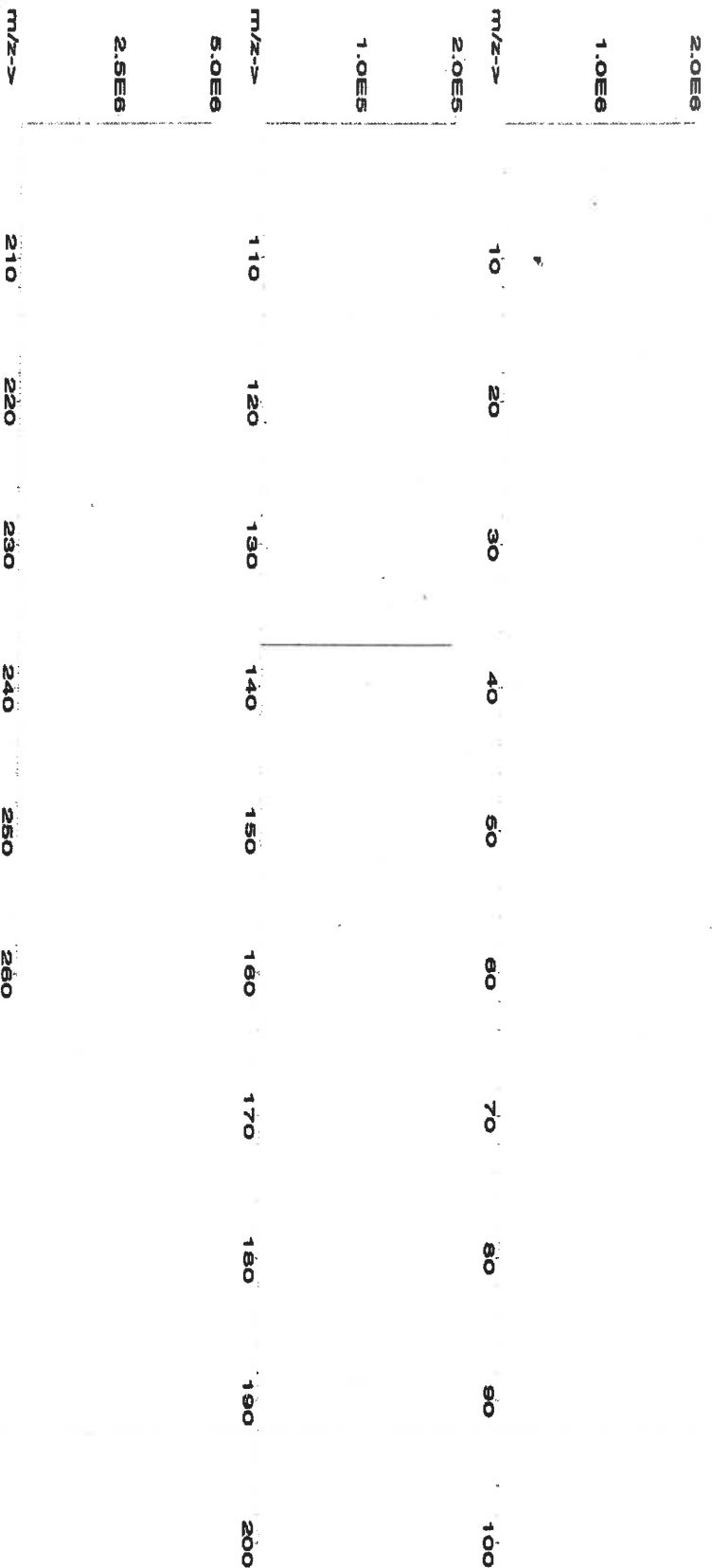
072122

100

Lot Number	Nominal Conc. ($\mu\text{g/mL}$)	Purity (%)	Uncertainty Purity (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. ($\mu\text{g/mL}$)	Uncertainty +/- ($\mu\text{g/mL}$)	(Solvent Safety Info. On Attached pg.) CAS#	ID50 SRM
R#:								OSHA PEL (TWA)	

	IN023	BAD022016A1	1000	52.3	3.83417	3.83426	1000.0	2.0	10022-31-8	0.5 mo/m ³	or-trit 355 mol/kn	3104a
1. Barium nitrate (Ba)			99.999	0.10								

[1] Spectrum No.1 [12.514 sec]:58158.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

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	<0.02	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	<0.02	Os	<0.01	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	<0.02	Hg	<0.2	P	<0.2	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	<0.02	Sc	<0.2	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:

Ben. L. R.

- * 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 certified (+/-) 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).



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.02	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	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	<0.02	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 certified (+/-) 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).

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

Solvent: Nitric Acid

Lot #

57182
061522
Lead (Pb)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

061525
Ambient (20 °C)
10000
6UTB

2% **40.0** **Nitric Acid**
(mL)

Weight shown below was diluted to (mL): **2000.02** **5E-05** **Balance Uncertainty**
0.058 **Vial Uncertainty**

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas
061522	

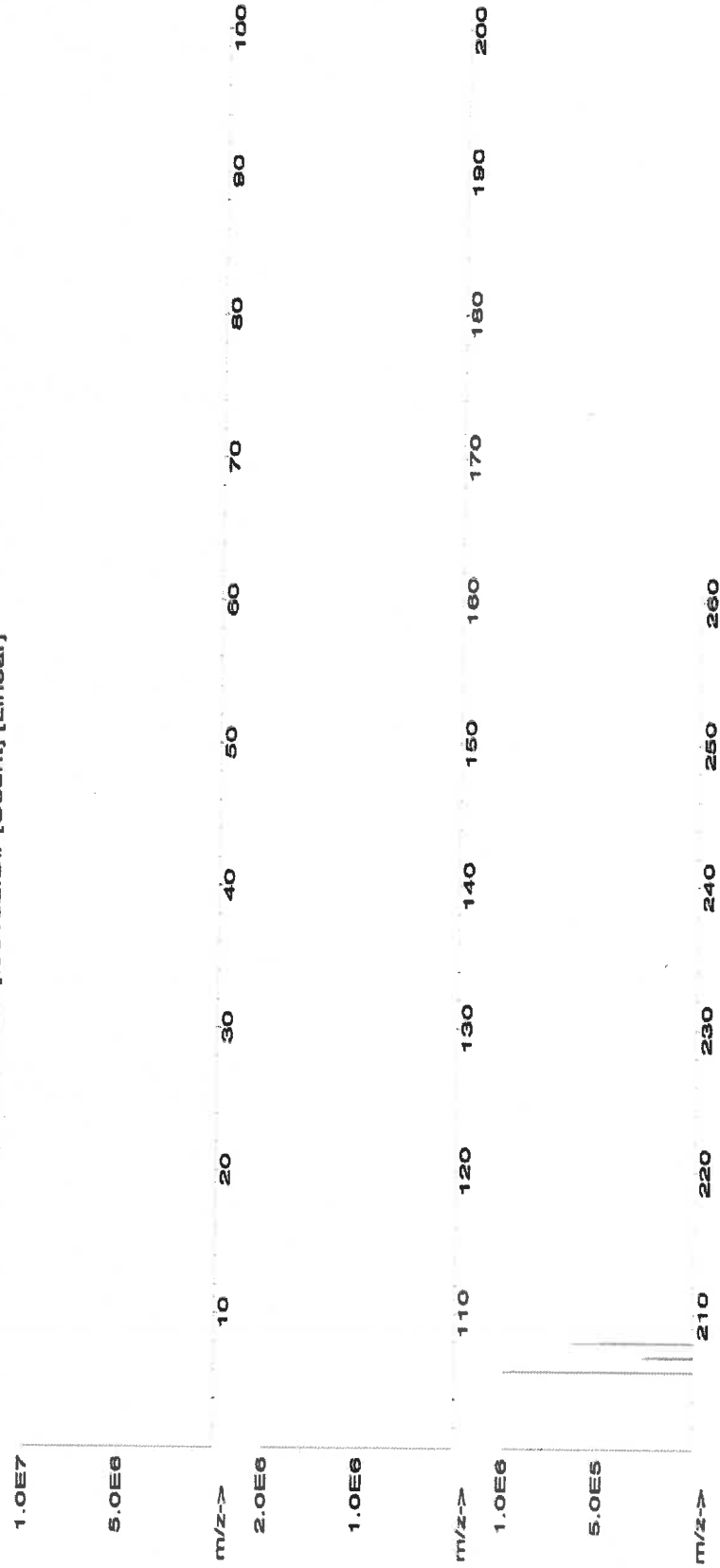
SDS Information

Expanded Uncertainty
Actual Conc. (µg/mL)
Actual Weight (g)
Target Weight (g)
Assay (%)
Purity (%)
Nominal Conc. (µg/mL)
Lot Number
RM#

(Solvent Safety Info. On Attached pg.)
OSHA PEL (TWA)
CAS#
LD50
NIST SRM

1. Lead(II) nitrate (Pb) **IN029** **PBD12201641** **10000** **99.999** **0.10** **82.5** **32.0006** **32.0041** **10001.1** **20.0** **10098-74-8** **0.05 mg/m3** **inhalation 88 mg/kg** **3128**

[1] Spectrum No.1 [17.284 sec]:58182.D# [Count] [Linear]





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	<0.2	Fe	<0.02	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	Pr	<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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

M5514, M5515
Lot #

R: 03/12/23

Part Number:

Solvent:

Lot Number:

Nitric Acid

Description:

Nitric Acid

Expiration Date:

7.0%

Recommended Storage:

350.0 (mL)

Nominal Concentration (µg/mL):

10000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

5000.1

0.12

Balance Uncertainty

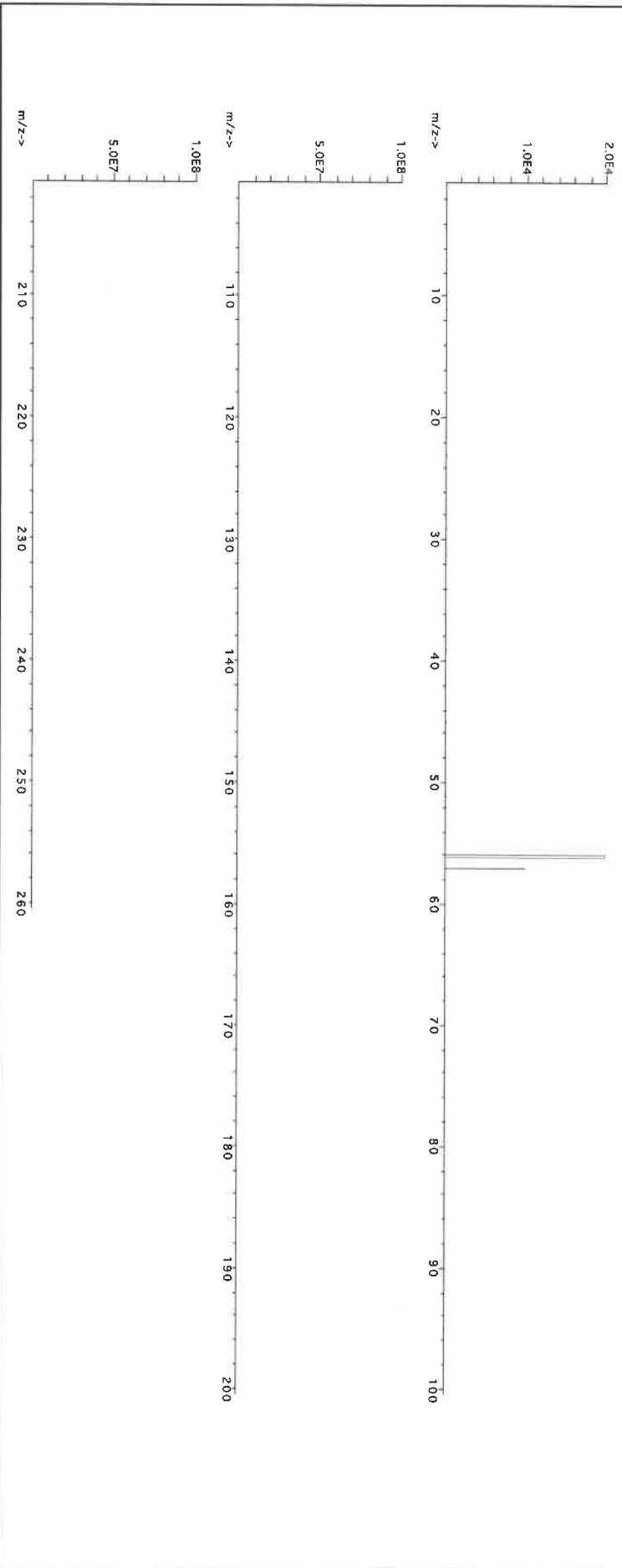
Flask Uncertainty

SDS Information
(Solvent Safety Info. On Attached pg.)
NIST SRM

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50
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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 or-hal 7500mg/kg 3126a

[1] Spectrum No.1 [30.763 sec] 58126.D# [Count] [Linear]





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	La	<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	<0.02	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	<0.05	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:

Ben P. Galt

- * 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 certified (+/-) 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).



Certified Reference Material CRM



M586 M587 R:03/17/22

CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 022123
Description: Sodium (Na)

Expiration Date: 022126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

Weight shown below was diluted to (mL): 3000.41

5E-05 Balance Uncertainty
0.06 Flask Uncertainty

Solvent: 21110221 Nitric Acid

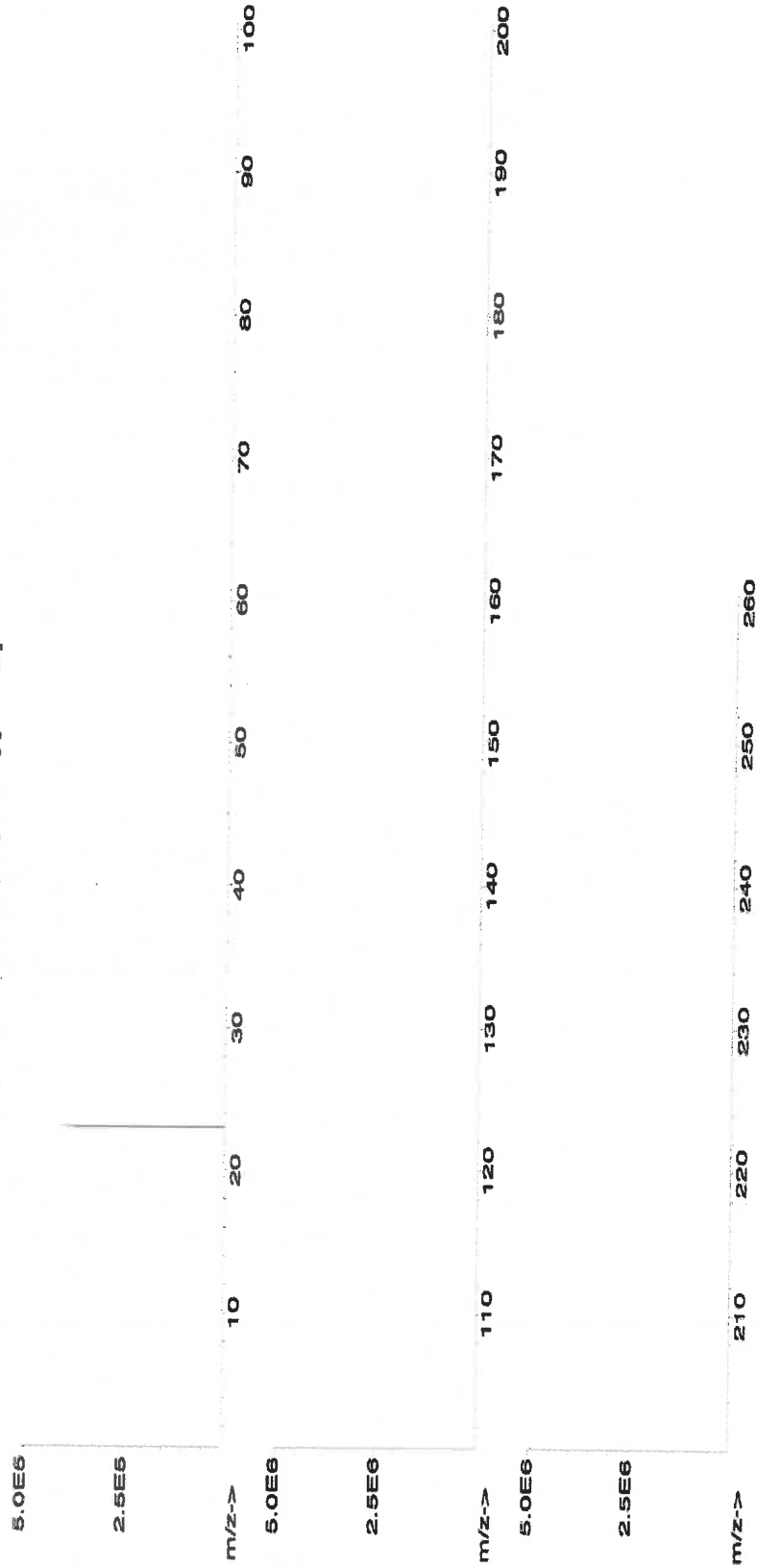
2% 60.0 Nitric Acid
(mL)

Formulated By:	Lawrence Barry 022123
Reviewed By:	Pedro L. Rentas 022123

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.)	OSHA PEL (TWA)	NIST SRM

1. Sodium nitrate (Na) IN036 NAV01201511 10000 99.998 0.10 26.9 111.5406 111.5410 10000.0 20.0 7631-99-4 5 mg/m3 orl-rat 3430 mg/kg 3152a

[1] Spectrum No.1 [8.935 sec]:58111.D# [Count] [Linear]





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	Pt	<0.02	Se	<0.02	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	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Ti	<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	<0.02	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.2	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 certified (+/-) 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).



Certified Reference Material CRM

CERTIFIED WEIGHT REPORT:

Part Number: **58119**
Lot Number: **120822**
Description: **Potassium (K)**

Solvent: 20510011 Nitric Acid

Lot #

MS19 MS20

BP R:03/17/23

Giovanni Esposito

Formulated By: Giovanni Esposito 120822

Expiration Date: 120825
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

2% 60.0 (mL) Nitric Acid

Reviewed By: *Pedro L. Rentas*

Pedro L. Rentas 120822

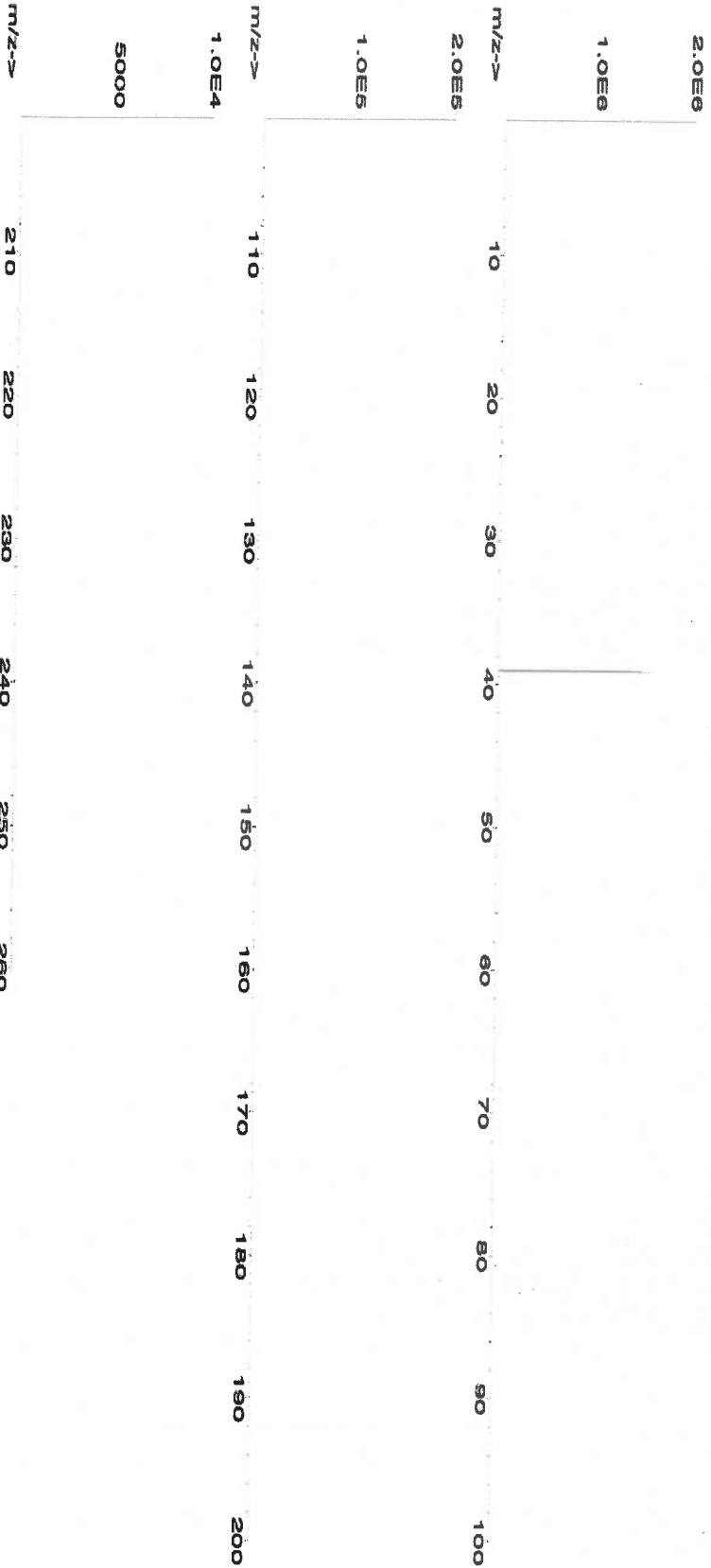
Weight shown below was diluted to (mL): 3000.4 0.06 Flask Uncertainty

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Expanded	SDS Information	NIST
Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	(Solvent Safety Info. On Attached pg.)	CAS#

1. Potassium nitrate (K) IN034 KD022021A1 10000 99.989 0.10 37.6 79.7990 79.8075 10001.1 20.0 7757-79-1 5 mg/m3 or/air 3015 mg/kg 3141a

[1] Spectrum No.1 [35.763 sec]:58119.D# [Count] [Linear]





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	Pt	<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	<0.02	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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: 58024
Lot Number: 060523
Description: Chromium (Cr)

Lot #
21110221
Solvent: Nitric Acid

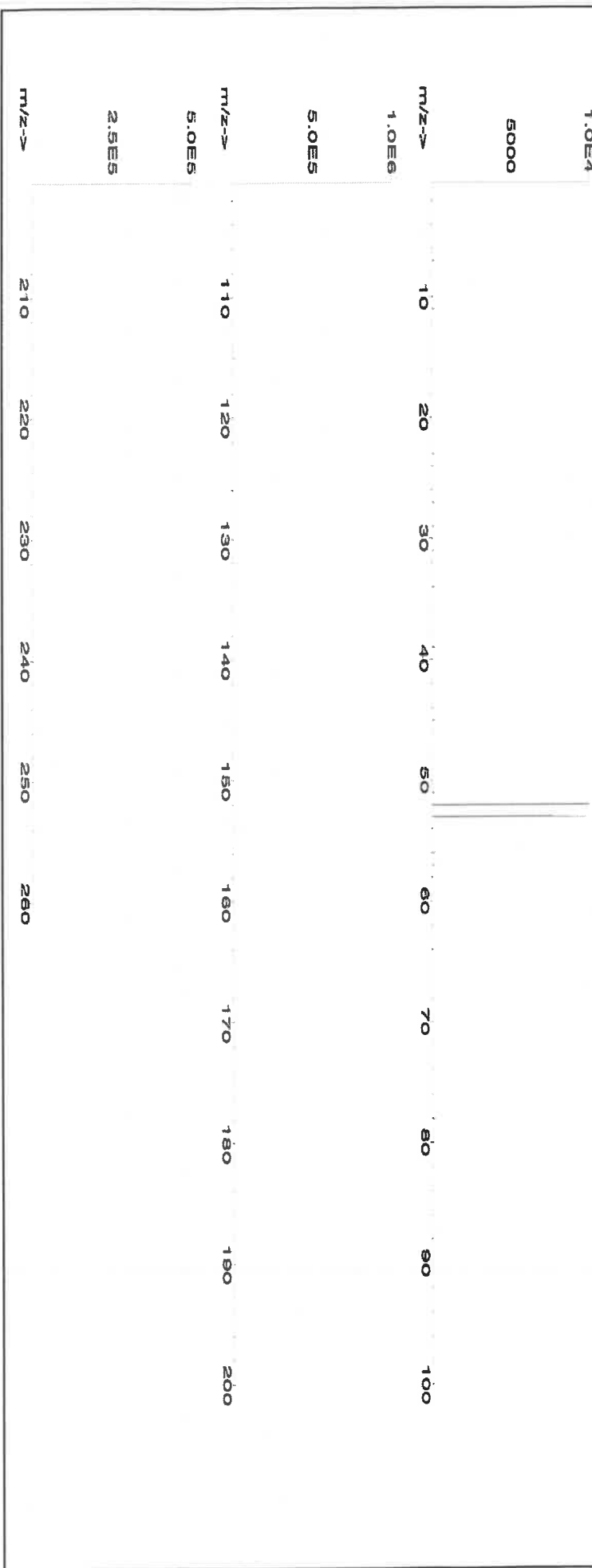
Formulated By:	Lawrence Barry
	060523
Reviewed By:	Pedro L. Ruelas
	060523

Expiration Date: 060526
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Volume shown below was diluted to (mL): 2000.02
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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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 or rat 3250 mg/kg 3112a

[1] Spectrum No.1 [31.393 sec]:57024.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	T	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

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 certified (+/-) 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).



Certified Reference Material CRM



M5648 R: 10/23/23

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

58025
102623
Manganese (Mn)

Lot # **Solvent:**
24002546 **Nitric Acid**

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

102626
Ambient (20 °C)
1000
6UTB

2.0% **Nitric Acid**
(mL)

Volume shown below was diluted to (mL): **3000.41**
5E-05 **Balance Uncertainty**
0.058 **Flask Uncertainty**

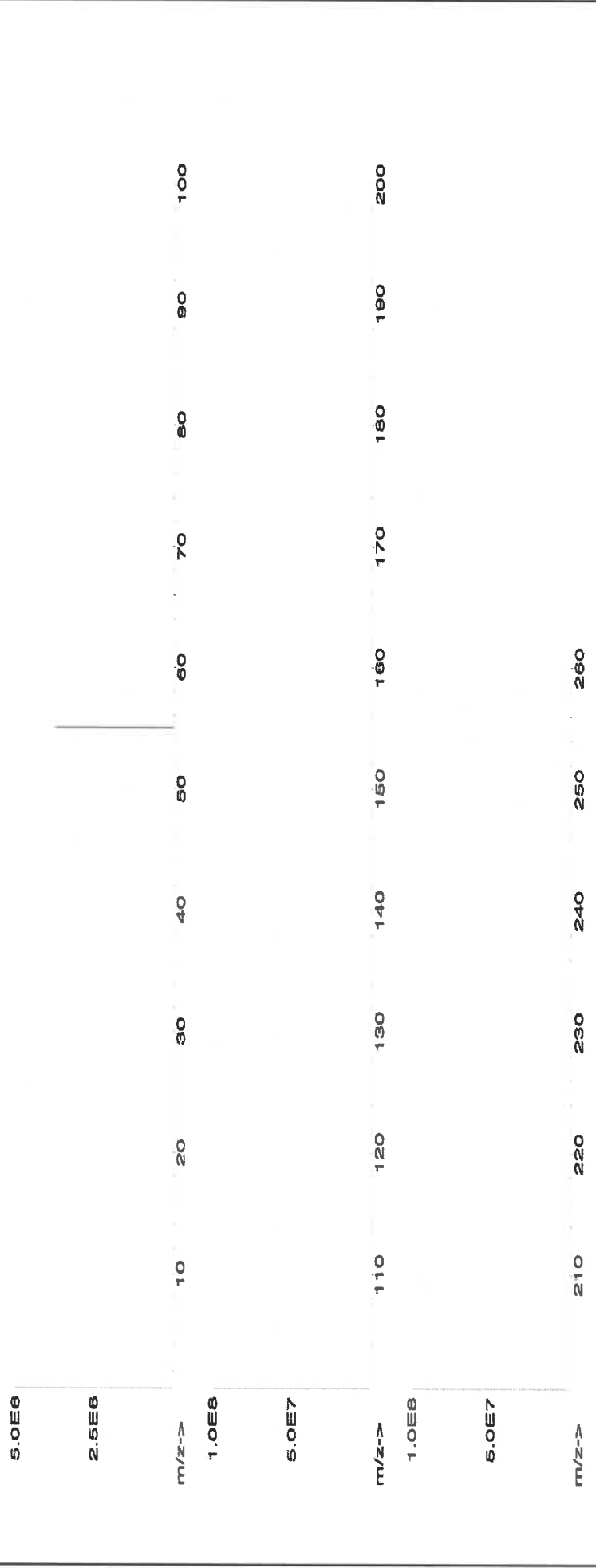
<i>Benson Chan</i>	Formulated By:	Benson Chan	102623
<i>Pedro L. Rentas</i>	Reviewed By:	Pedro L. Rentas	102623

SDS Information

Expanded **Uncertainty** **(Solvent Safety Info. On Attached pg.)** **NIST**
+/- (µg/mL) **CAS#** **OSHA PEL (TWA)** **LD50** **SRM**

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Initial Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	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	20894-39-7	5 mg/m3	ori-rat >300mg/kg	3132	

[1] Spectrum No.1 [34.243 sec]:57025.D# [Count] [Linear]





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	<0.02	Tb	<0.2	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	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.02	Os	<0.01	Rh	<0.02	Ag	<0.02	Ti	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	T	Rb	<0.02	Na	<0.02	Th	<0.2	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.02	Hg	<0.2	P	<0.2	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	<0.02	Sc	<0.2	Ta	<0.02	Tl	<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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: **58029**
Lot Number: **071723**
Description: **Copper (Cu)**

Lot #: **2110221**
Solvent: **Nitric Acid**

2.0%

40.0 (mL)
Nitric Acid

Formulated By:	Benson Chan	071723
Reviewed By:	Pedro L. Ruelas	071723

Expiration Date: **071726**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**

NIST Test Number: **6L7B**

Volume shown below was diluted to (mL): **2000.02**
Balance Uncertainty: **5E-05**
Flask Uncertainty: **0.058**

SDS Information

Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Uncertainty (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Copper(II) nitrate trihydrate (Cu) 58129 022723 0.1000 200.0 0.084 1000 10000.5 1000.0 2.2 10031-43-3 1 mg/m3 or rat 794 mg/kg 3114

[1] Spectrum No.1 [33.422 sec]:58029.D# [Count] [Linear]

1.0E6	m/z-->	10	20	30	40	50	60	70	80	90	100
5.0E5	m/z-->	110	120	130	140	150	160	170	180	190	200
2.5E7	m/z-->	210	220	230	240	250	260				



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	Bu	<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	Ru	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	La	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	Pb	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	T	Au	<0.02			Nd	<0.02	K	<0.2	Sc	<0.02			Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 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).



M5768 M5769
Certified Reference Material CRM
R: 1/13/24



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date: 091826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

2% 40.0 (mL) Nitric Acid

Formulated By: <i>Lawrence Barry</i>		091823
Reviewed By: <i>Pedro L. Rentas</i>		091823

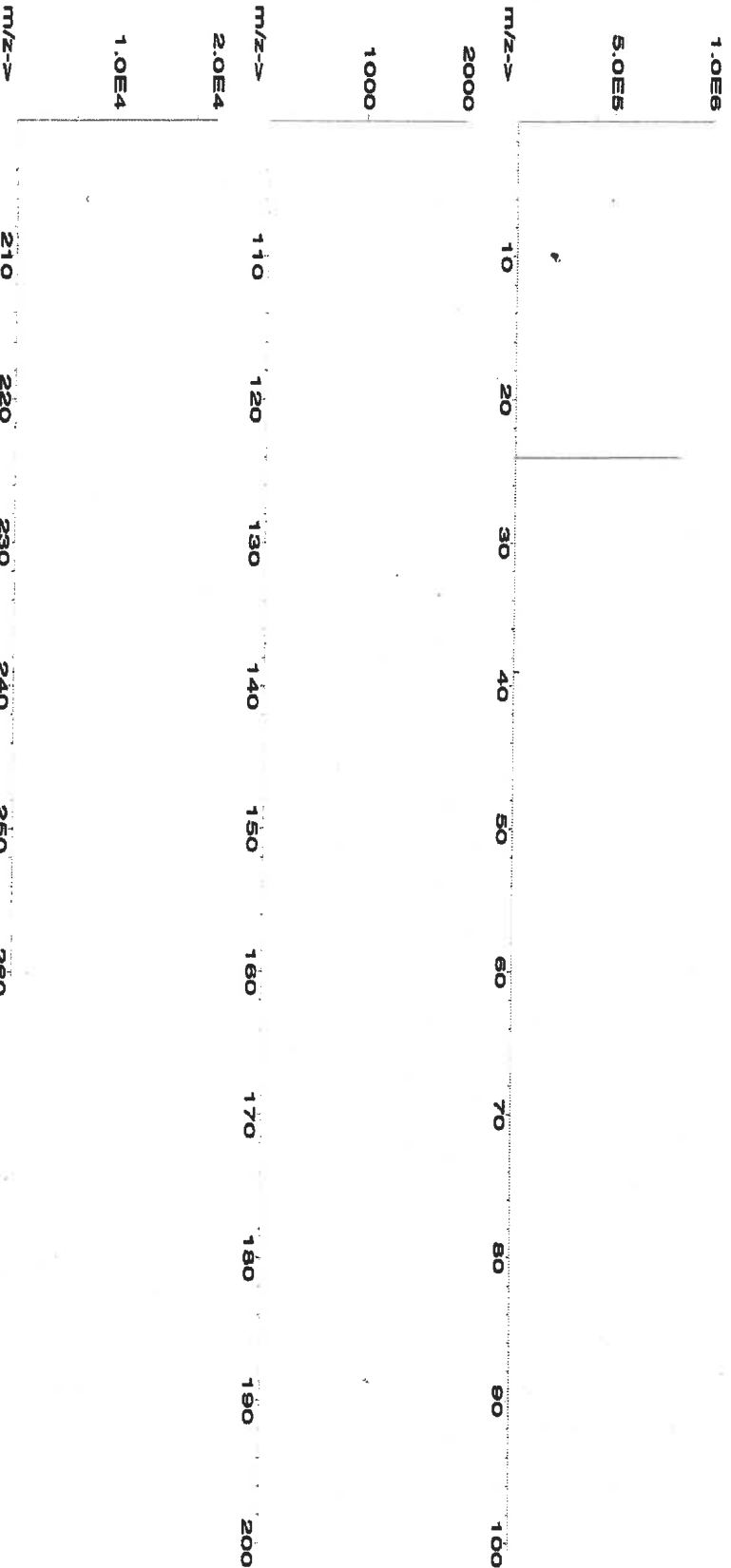
Compound

Lot	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Magnesium nitrate hexahydrate (Mg)	10030	99.999	0.10	8.51	234.9118	234.9126	10000.0	20.0	13446-18-9	NA	or-rat 5440 mg/kg	3131a

SDS Information

(Solvent Safety Info. On Attached pg.)

[1] Spectrum No. 1 [19.923 sec]:58112.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
- * Standards are prepared gravimetrically using balances that are calibrated with weights traceable to NIST (see above).
- * Standards are certified (+/-) 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).



M5768 M5769
Certified Reference Material CRM
R: 1/13/24



CERTIFIED WEIGHT REPORT:

Part Number: 58112
Lot Number: 091823
Description: Magnesium (Mg)

Solvent: 24002546 Nitric Acid

Lot #

Expiration Date: 091826

2% 40.0 (mL) Nitric Acid

Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000

M5768 M5769

NIST Test Number: 6UTB

5E-05 Balance Uncertainty

BP R: 1/13/24

Weight shown below was diluted to (mL): 2000.02 0.058 Flask Uncertainty

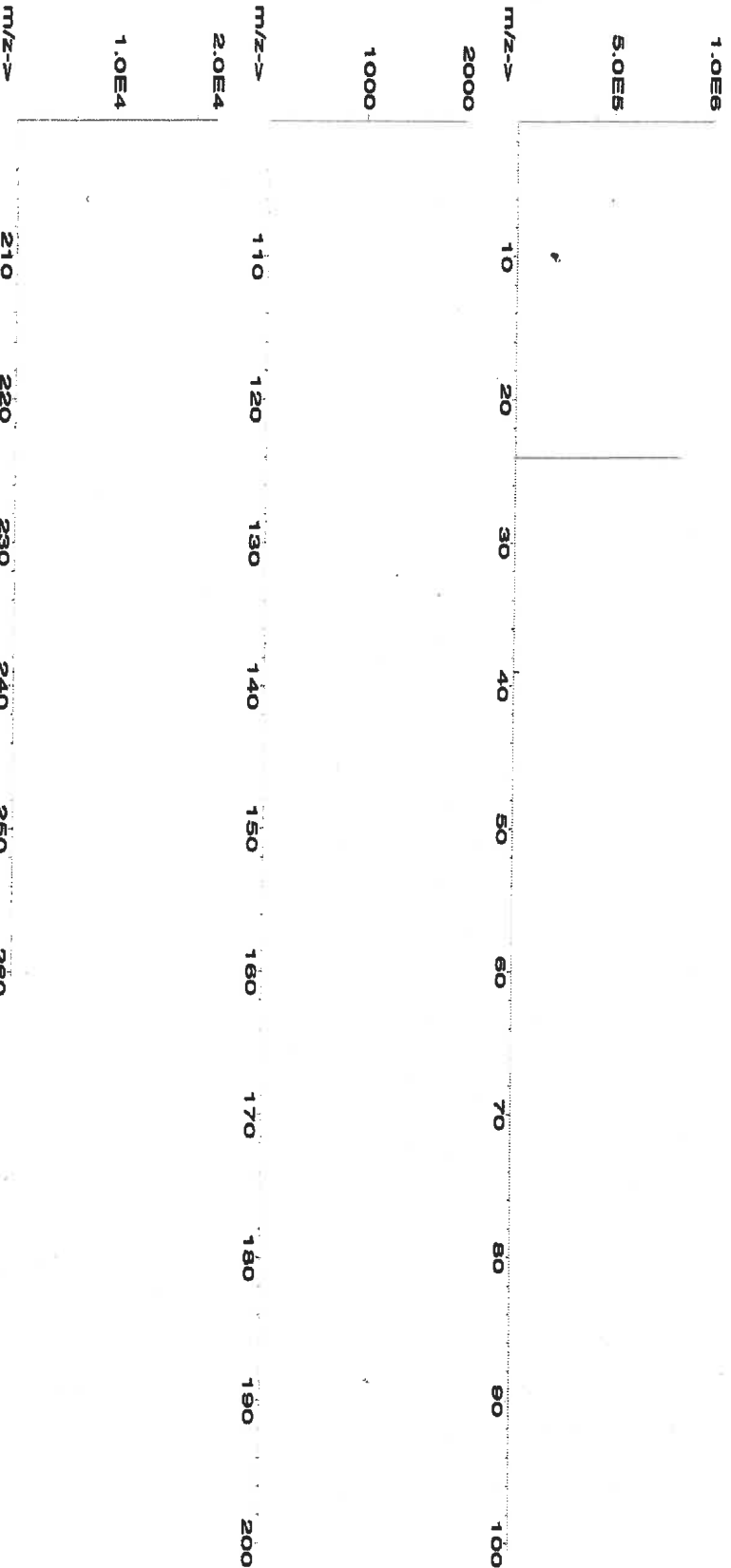
Formulated By: <i>Lawrence Barry</i>		091823
Reviewed By: <i>Pedro L. Rentas</i>		091823

Compound

Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information	NIST
Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	Uncertainty +/- (µg/mL)	(Solvent Safety Info. On Attached pg.)	SRM

1. Magnesium nitrate hexahydrate (Mg) IN030 M500222A1 10000 99.999 0.10 8.51 234.9118 234.9126 10000.0 20.0 13446-18-9 NA or-rat 5440 mg/kg 3131a

[1] Spectrum No. 1 [19.923 sec]: 58112.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS (µg/mL)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	T	Os	<0.02	Rh	<0.02	Ag	<0.02	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
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- * Standards are certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: 57004
Lot Number: 102523
Description: Beryllium (Be)

Lot # 24002546
Solvent: Nitric Acid

Expiration Date:

102526

2.0%

40.0 (mL)

Nitric Acid

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty

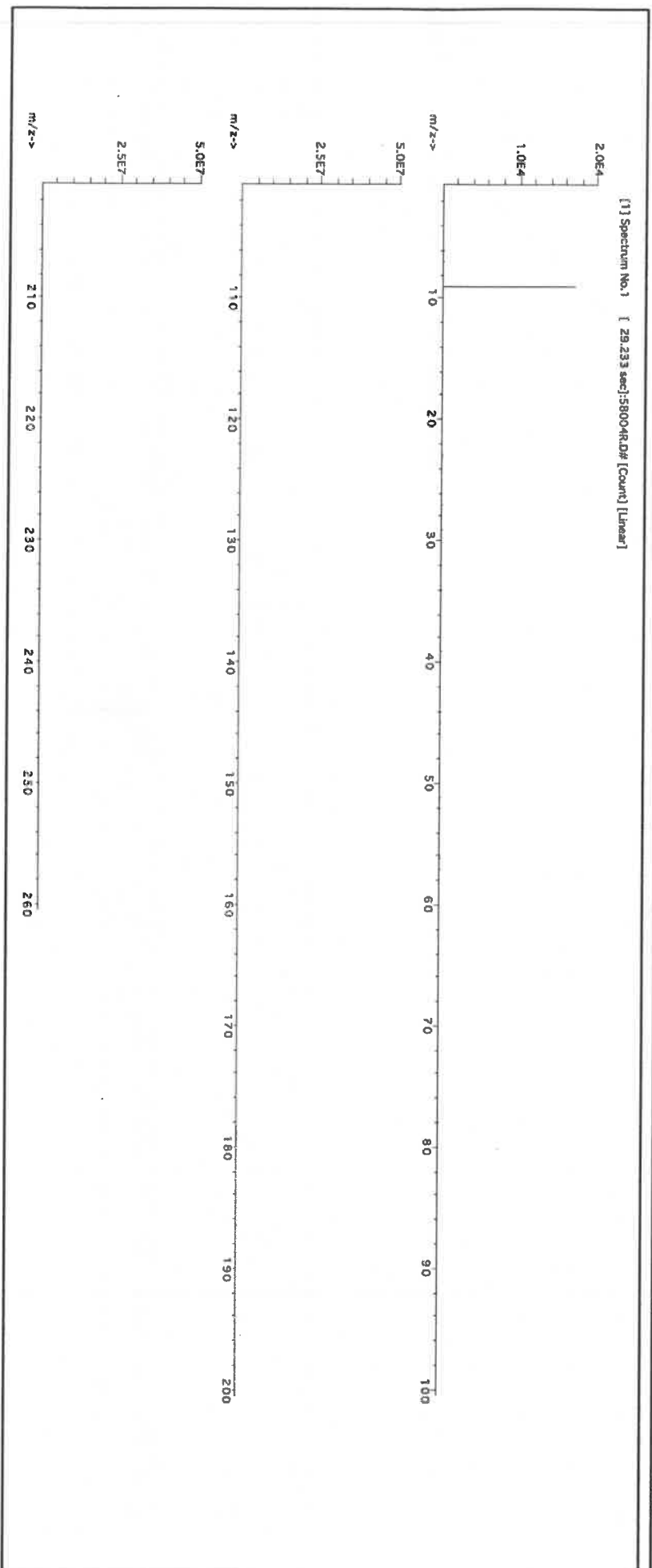
0.058 Flask Uncertainty

Formulated By:	Benson Chan	102523
Reviewed By:	Pedro L. Rentas	102523

SDS Information

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)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Beryllium nitrate (Be)	58104	091423	0.1000	200.0	0.084	1000	10001.5	1000.0	2.2	13597-99-4	0.2µg/m3	intrinsc-rat 3.16mg/kg	NA
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Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<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	Tc	<0.02	U	<0.02
As	<0.02	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	<0.02	Ti	<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	<0.02	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	<0.02	Sc	<0.02	Ta	<0.02	Tl	<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 certified (+/-) 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).



Certified Reference Material CRM



CERTIFIED WEIGHT REPORT:

Part Number: 57050
Lot Number: 071123
Description: Tin (Sn)

Solvents: 21110221 Nitric Acid
22D0562008 Hydrochloric acid

Lot # R-02509124 M599

Expiration Date: 071126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

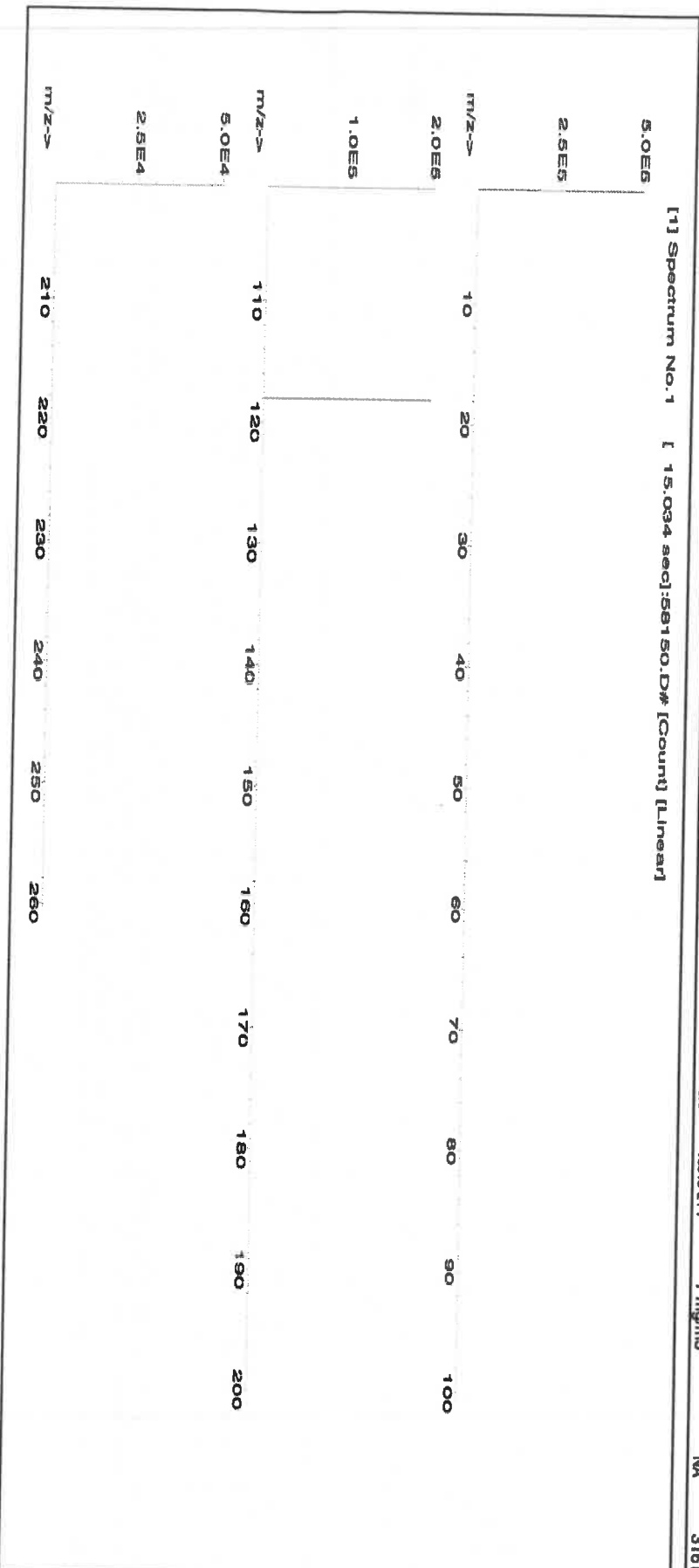
Weight shown below was diluted to (mL): 499.93
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan
	071123
Reviewed By:	Pedro L. Rentas
	071123

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty		CAS#	OSHA PEL (TWA)	LD50	NIST SRM
									+/- (µg/mL)	(µg/mL)				

1. Ammonium hexafluoroantimonate(V) (Sn) INO10 SMD042023A1 1000 99.999 0.10 44.2 1.13107 1.13286 1001.6 2.0 16919-24-7 7 mg/m3 NA 3161a

[1] Spectrum No. 1 [15.034 sec]:56150.D# [Count] [Linear]





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	Ti	<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	Ta	<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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- * 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).



R: 02/09/24 115800 (54)

CERTIFIED WEIGHT REPORT:

Part Number: 57027
Lot Number: 091923
Description: Cobalt (Co)

Expiration Date: 091926
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot # 24002546
Solvent: Nitric Acid

2.0% Nitric Acid
40.0 (mL)

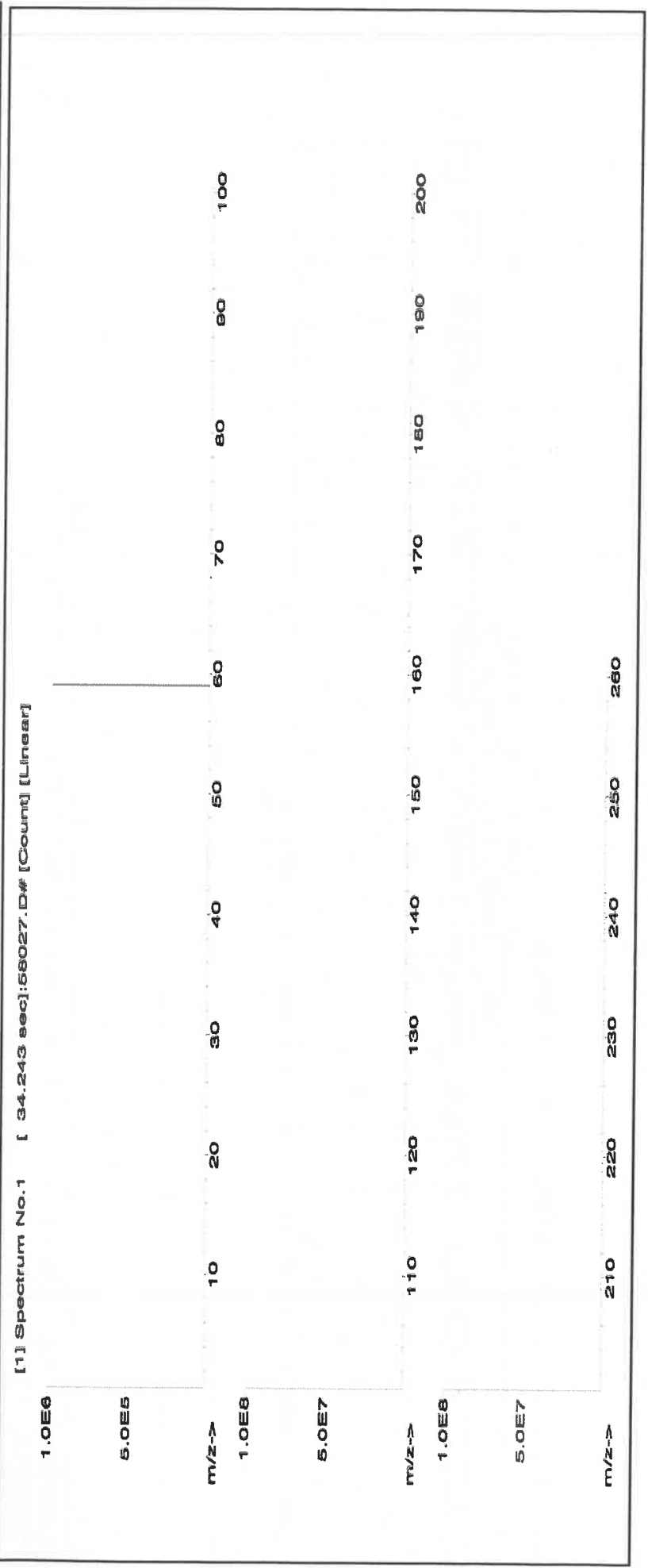
Formulated By:	Lawrence Barry
Reviewed By:	Pedro L. Rentas

SDS Information

Expanded Uncertainty +/- (µg/mL)
Final Conc. (µg/mL)
Initial Conc. (µg/mL)
Nominal Conc. (µg/mL)
Pipette (mL)
Initial Vol. (mL)
Dilution Factor
Part Number
Lot Number

(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 ($\mu\text{g/mL}$)

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	<0.02	Os	<0.01	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	<0.2	Na	<0.02	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	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	<0.2	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:

[Signature]

- * 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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57033
111323
Arsenic (As)

Lot #
Solvent:

24002546
Nitric Acid

2.0%

80.0

Nitric Acid

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):

111326
Ambient (20 °C)
1000

NIST Test Number:
Volume shown below was diluted to (mL):

6UTB
4000.0

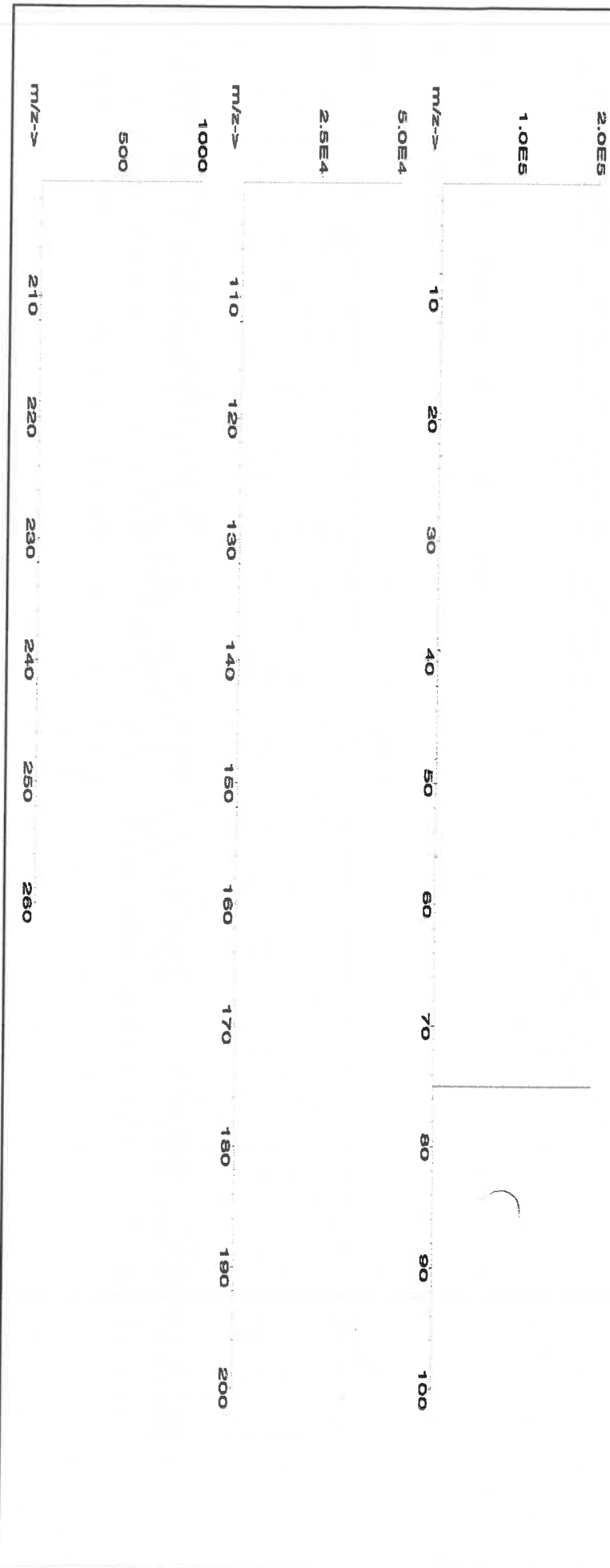
<i>[Signature]</i>	
Formulated By:	Lawrence Barry
Reviewed By:	<i>[Signature]</i>
	Pedro L. Rendas
	111323

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)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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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	or-rat 500 mg/kg	3103a
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[1] Spectrum No.1 [34.433 sec]:57033.D# [Count] [Linear]





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	Pt	<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	Tl _h	<0.02	Yb	<0.02
Bc	<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	Sa	<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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: 57115
Lot Number: 041723
Description: Phosphorous (P)

Solvent: 21110221 Nitric Acid

Lot #

R102109124 M5815

Expiration Date: 041726
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6UTB

2% 40.0 (mL) Nitric Acid

Weight shown below was diluted to (mL): 2000.02 0.056 Balance Uncertainty Flask Uncertainty

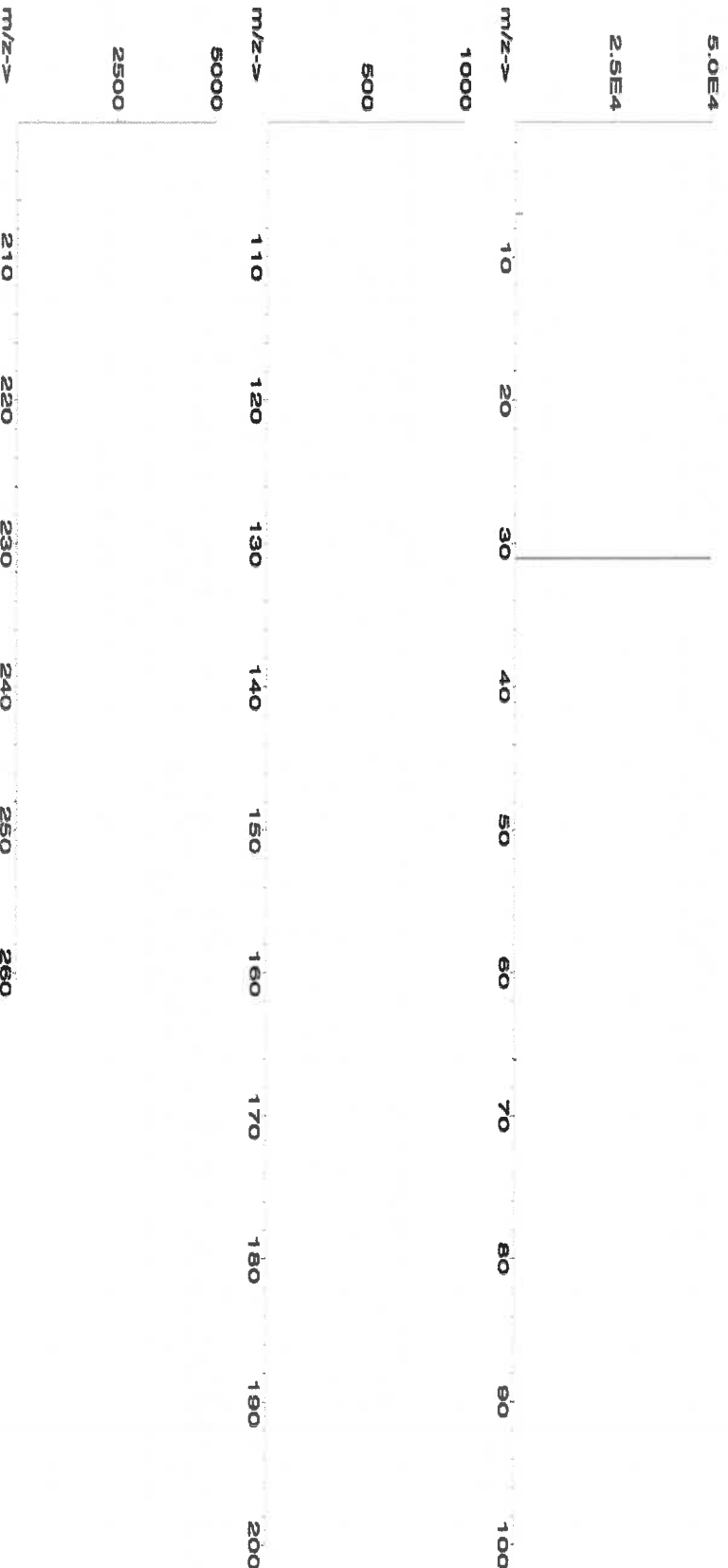
Formulated By:	Lawrence Barry
	041723
Reviewed By:	Pedro L. Rentas
	041723

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)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Ammonium dihydrogen phosphate (P) IN008 PVR2019A1 10000 99.999 0.10 27.5 72.7287 72.7289 10000.0 20.0 7722-76-1 5 mg/m3 or-hal->2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
- * All standard containers are meticulously cleaned prior to use.
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- * Standards are certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: **57016**
Lot Number: **122923**
Description: **Sulfur (S)**

Lot #
Solvent: **122923** ASTM Type 1 Water

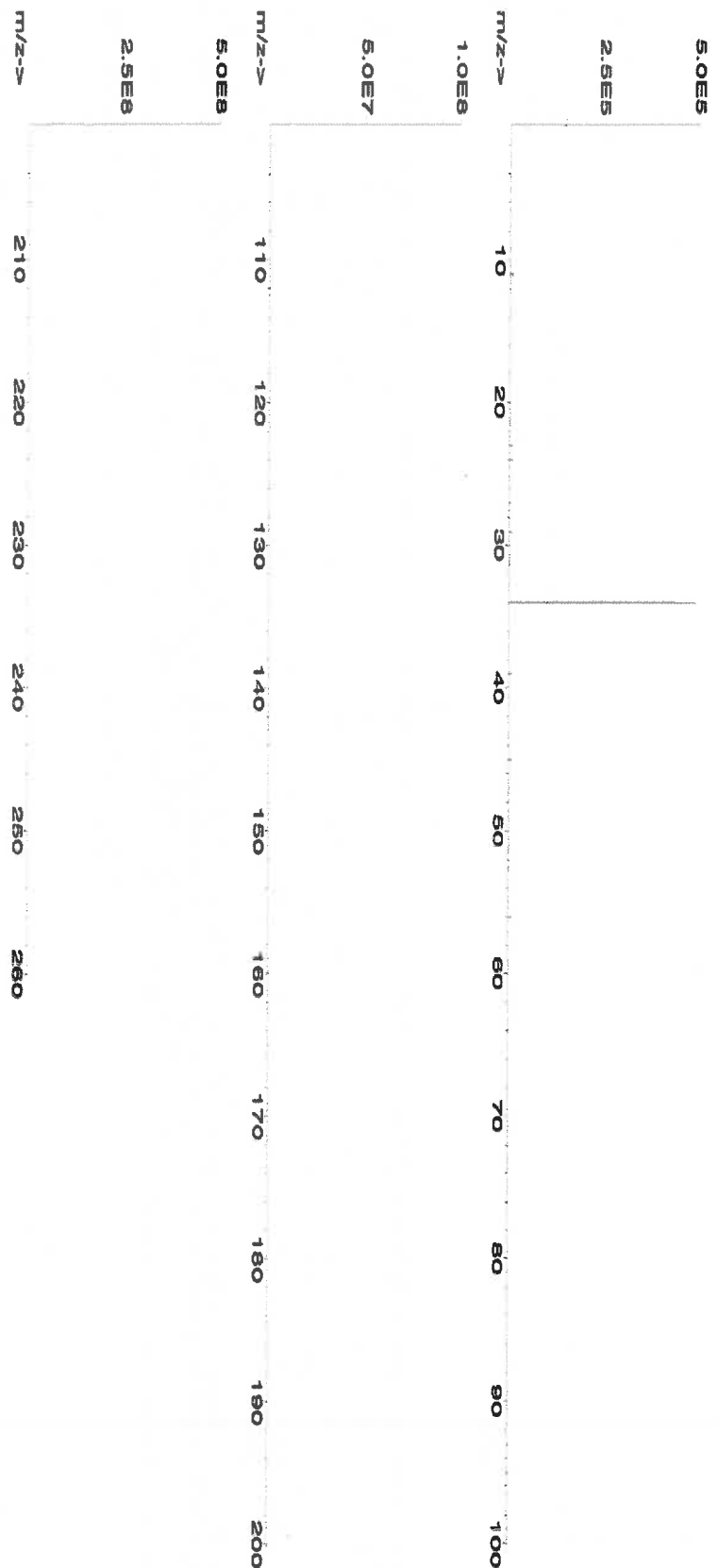
Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
122923	

Expiration Date: **122926**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6L7B**
Weight shown below was diluted to (mL): **4000.0**
5E-05 Balance Uncertainty
0.06 Flask Uncertainty

SDS Information													
Compound	Lot		Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Expanded	SDS Information		
	RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	CAS#	(Solvent Safety Info. On Attached pg.)	NIST
											OSHA PEL (TWA)	LD50	SRM

1. Ammonium sulfate (S) IN117 SLBR725V 1000 99.9 0.10 24.3 16.4979 16.4980 1000.0 2.0 7783-20-2 NA ort-rel 4250mg/kg 3181

[1] Spectrum No. 1 [33.603 sec]:57016.D# [Count] [Linear]





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	Ba	<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	Ru	<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	S	<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	Ta	<0.02	Ti	<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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: **57116**
Lot Number: **071123**
Description: **Sulfur (S)**

Lot #
Solvent: **071123** ASTM Type 1 Water

Formulated By:	Lawrence Barry
	071123
Reviewed By:	Pedro L. Rentas
	071123

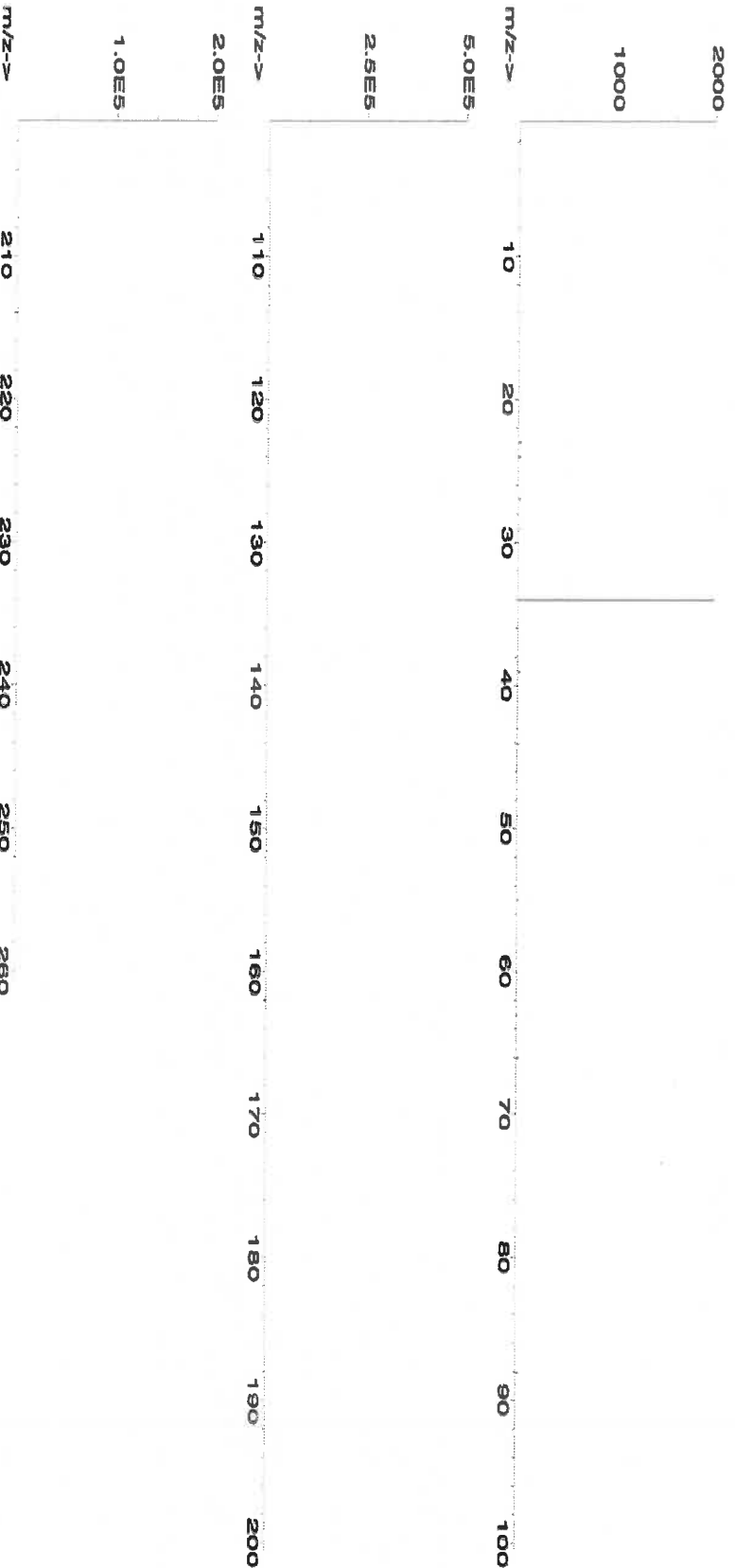
Expiration Date: **071126**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **10000**
NIST Test Number: **6UTB**
Weight shown below was diluted to (mL): **1999.48** **5E-05** Balance Uncertainty
0.058 Flask Uncertainty

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty		CAS#	OSHA PEL (TWA)	LD50	NIST SRM
									+/- (µg/mL)	(µg/mL)				

SDS Information

1. Ammonium sulfate (S) IN117 SLBR725V 10000 99.9 0.10 24.3 82.4675 82.4692 10000.1 20.0 7783-20-2 NA oral-rat 4250mg/kg 3181

[1] Spectrum No. 1 [24.004 sec]:58116.D# [Count] [Linear]





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	Pt	<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	Ti	<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

Physical Characterization:

(T)= Target analyte

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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: **57014**
Lot Number: **122023**
Description: **Silicon (Si)**

Solvent: **24002546 Nitric Acid**

Lot #

Formulated By: *Aleah O Brady*
Reviewed By: *Pedro L. Rentas*

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** Balance Uncertainty
0.058 Flask Uncertainty

2% **40.0** Nitric Acid
(mL)

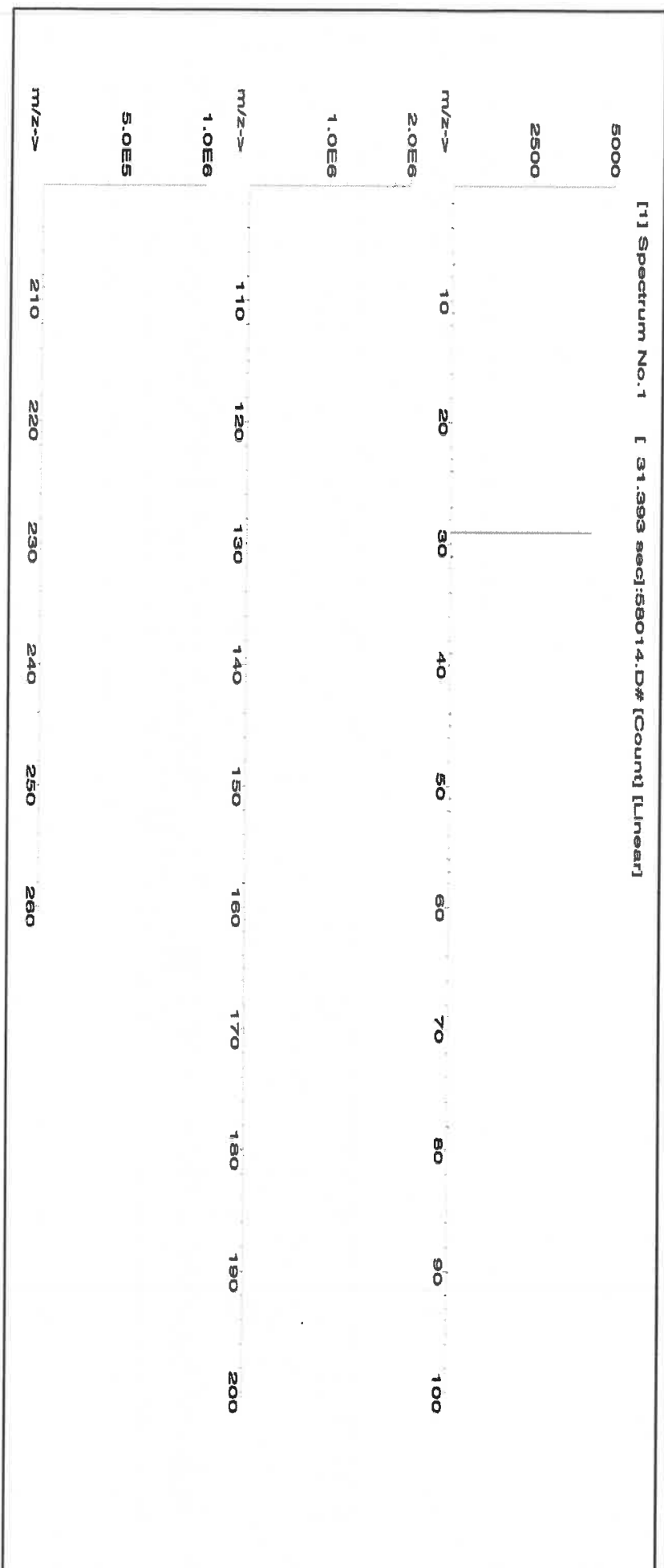
Expanded

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Ammonium hexafluorosilicate (Si) IN009 S1D08022A1 1000 99.999 0.10 14.4 13.8854 13.8855 1000.0 2.0 18919-19-0 2.5 mg/m3 off-mus 70 mg/kg NA

[1] Spectrum No. 1 [31.393 sec; 158014.D# [Count] [Linear]





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	Pt	<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	Bu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Ru	<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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: 58030
Lot Number: 111623
Description: Zinc (Zn)

Solvent: 24002546 Nitric Acid

Lot # R: 02109124 MS819

2% 60.0 (mL) Nitric Acid

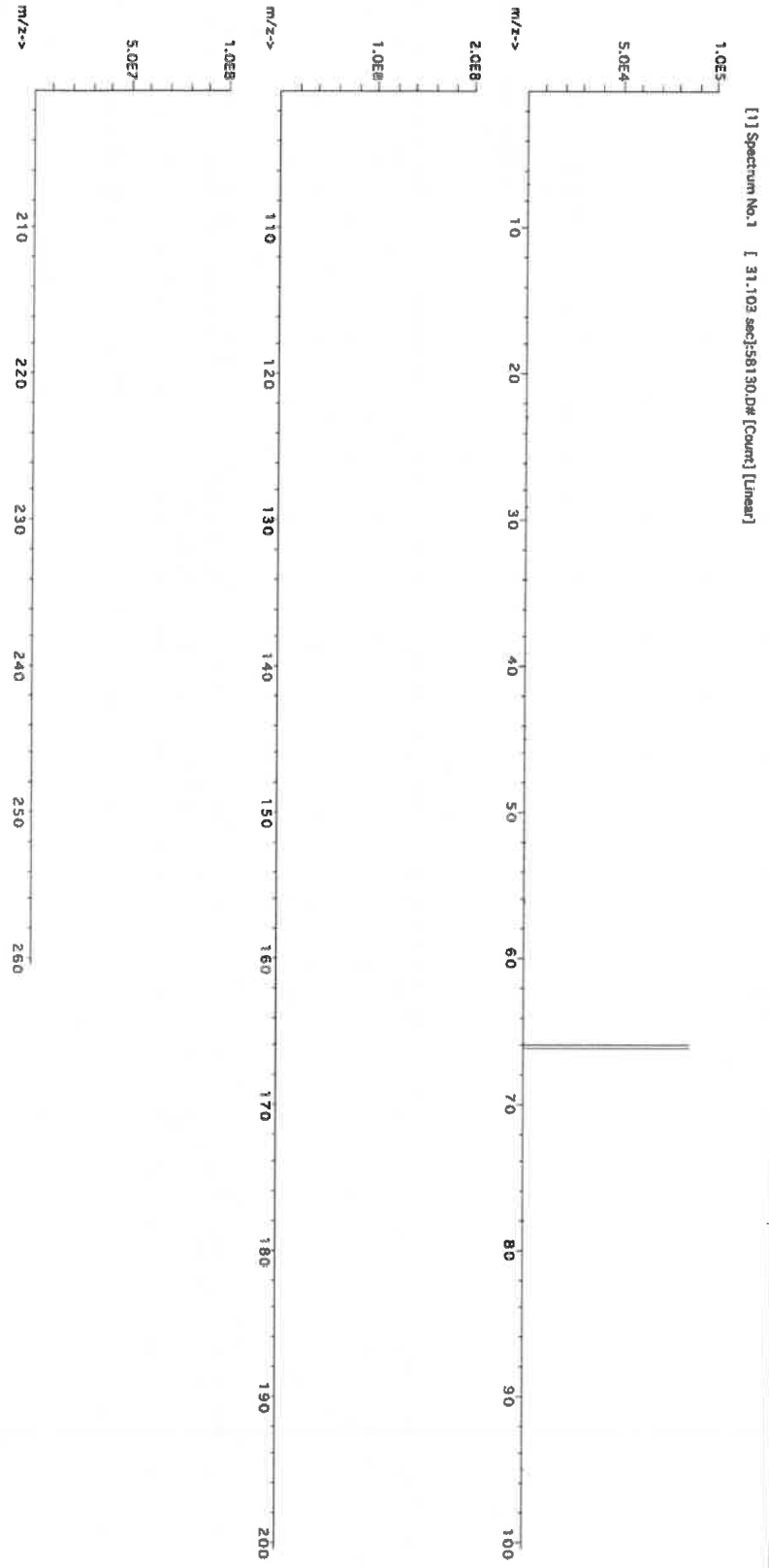
Expiration Date: 111626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Reitas
111623	

Weight shown below was diluted to (mL): 3000.4 0.06 Balance Uncertainty Flask Uncertainty

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)	CAS#	OSHA PEL (TWA)	LDSO	NIST SRM
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1. Zinc nitrate hexahydrate (Zn) IN016 ZNE03021A1 1000 99.999 0.10 24.3 12.3475 12.3502 1000.2 2.0 10196-16-6 1 mg/mL 3168 or-rat 1190mg/kg





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	Bu	<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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

Part Number: 57015
Lot Number: 091123
Description: Phosphorous (P)

Solvent: 24002546 Nitric Acid

Lot #

R: 02109124 M5820

Lawrence Barry
Formulated By: Lawrence Barry
091123

Pedro L. Rentas
Reviewed By: Pedro L. Rentas
091123

2% 40.0 (mL) Nitric Acid

Expiration Date: 091126
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6LJB

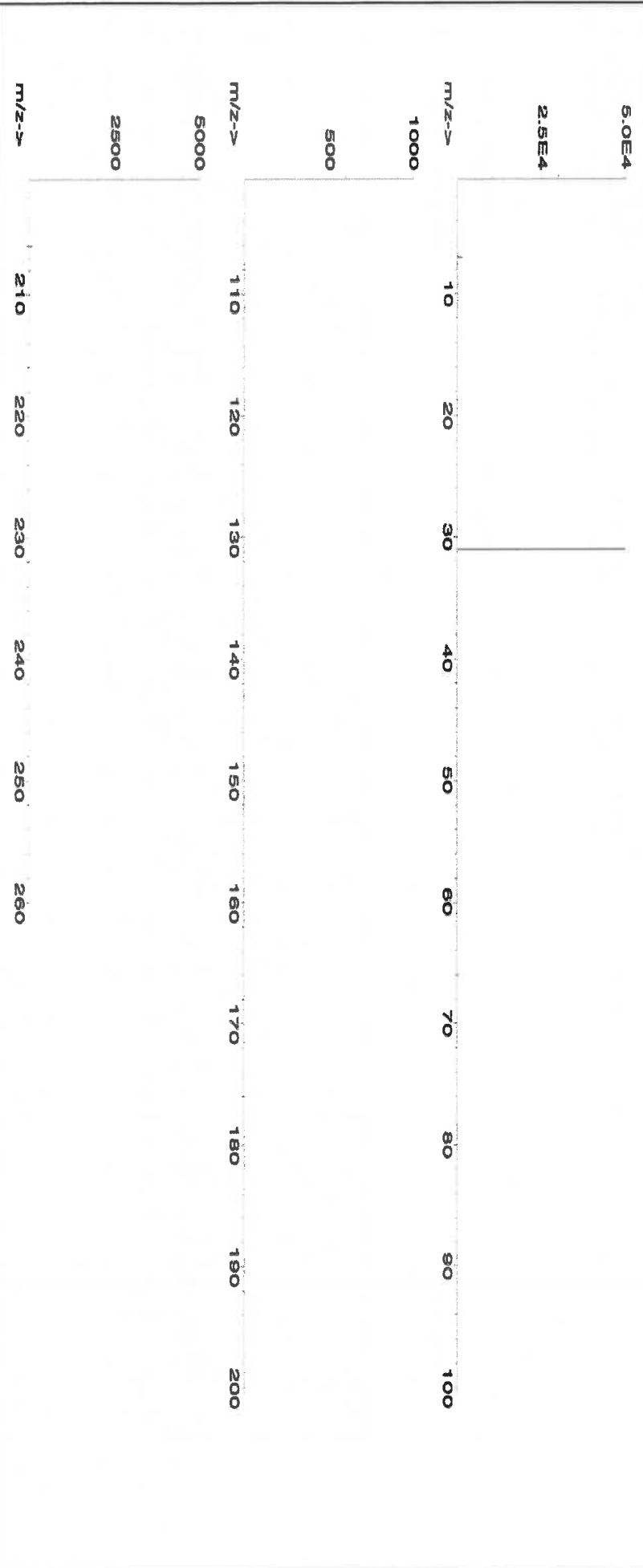
Weight shown below was diluted to (mL): 2000.02 0.058 Balance Uncertainty Flask Uncertainty

SDS Information

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)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-----	------------	-----------------------	------------	------------------------	-----------	-------------------	-------------------	----------------------	----------------------------------	------	----------------	------	----------

1. Ammonium dihydrogen phosphate (P) IN008 PVO62019A1 1000 99.999 0.10 27.5 7.2729 7.2730 1000.0 2.0 7722-76-1 5 mg/m3 xH-rat >2000mg/kg 3186

[1] Spectrum No.1 [12.074 sec]:58115.D# [Count] [Linear]





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	Tc	<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:

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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

MS961 R-1 6/11/24

Lot #

Part Number:

57028

Solvent: 24002546 Nitric Acid

Lot Number:

041124

Description:

Nickel (NI)

2% 5.0 (mL) Nitric Acid

Expiration Date:

041127

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL):

249.85

**5E-05 Balance Uncertainty
0.002 Flask Uncertainty**

Formulated By:	Brian Geddes	041124
Reviewed By:	Pedro L. Rentas	041124

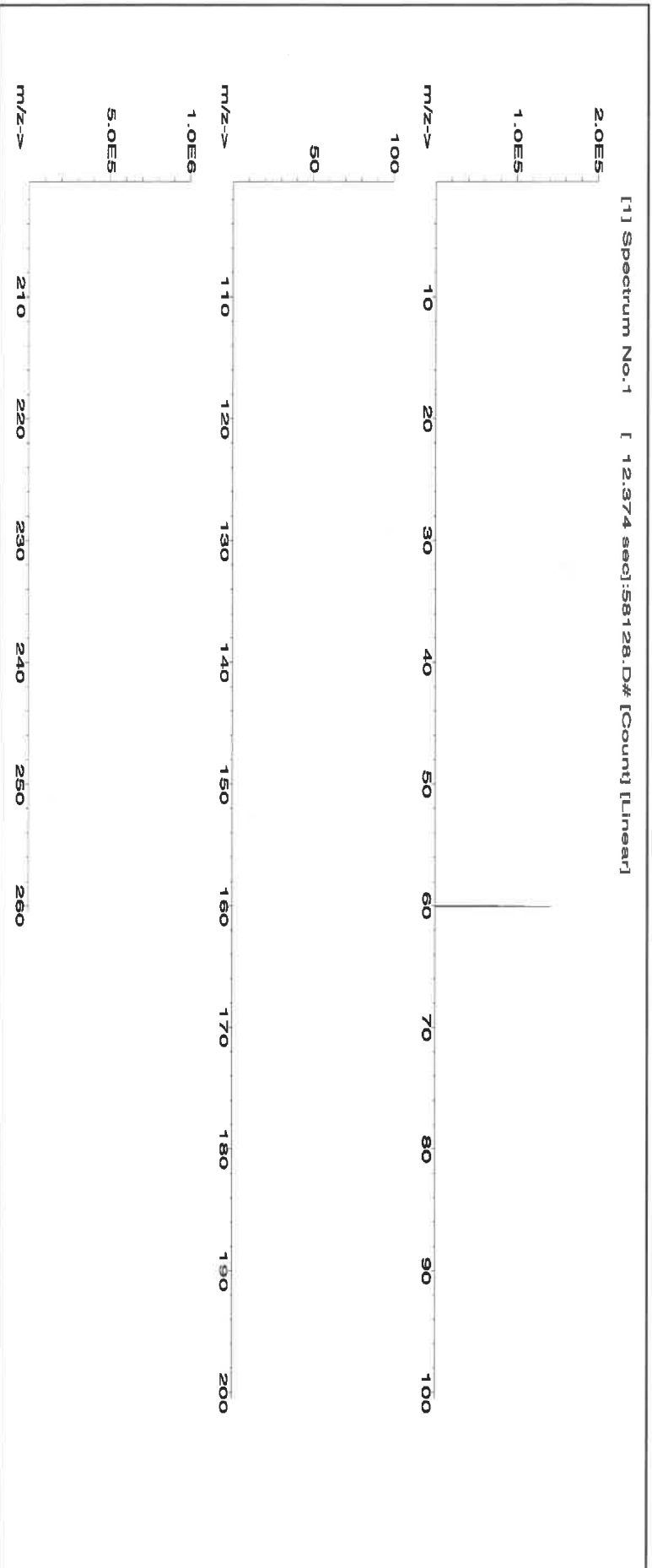
SDS Information

Compound

(Solvent Safety Info. On Attached pg.)											NIST	
Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Uncertainty				
RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	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 or-rat 1620 mg/kg 3136

[1] Spectrum No.1 [12.374 sec]:58128.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	T	Pr	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Ba	<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
Bc	<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 certified (+/-) 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).



CERTIFIED WEIGHT REPORT:

MS962 **R: 06/14/24**

Lot # **24002546** Solvent: **Nitric Acid**

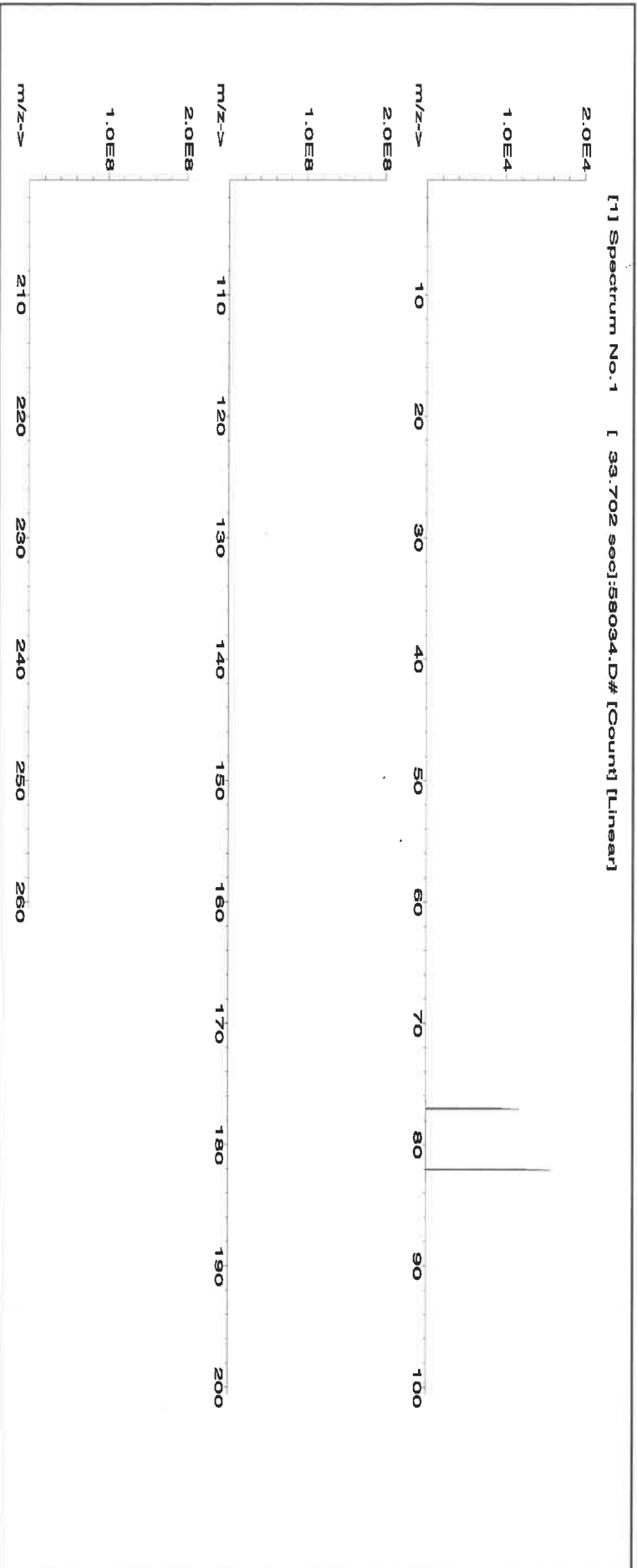
Part Number: **57034**
Lot Number: **060624**
Description: **Selenium (Se)**

2.0% 40.0 (mL) Nitric Acid

Expiration Date: **060627**
Recommended Storage: **Ambient (20 °C)**
Nominal Concentration (µg/mL): **1000**
NIST Test Number: **6UTB**
Volume shown below was diluted to (mL): **2000.07**
SE-05 Balance Uncertainty **0.100** Flask Uncertainty

Formulated By:	Benson Chan	060624
Reviewed By:	Pedro L. Rantas	060624

SDS Information									
Compound	Part Number	Lot Number	Dilution Factor	Initial Vol. (mL)	Pipette (mL)	Nominal Conc. (µg/mL)	Initial Conc. (µg/mL)	Final Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)
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	or-tral 6700 mg/kg	31.49





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	Pt	<0.02	Se	T	Tb	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	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	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2	Th	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02	Tm	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	Ta	<0.02	Sn	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02		<0.02	Ti	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 certified (+/-) 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).

Certificate of Analysis

M5976, M5977

R: 02/22/24

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).



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:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

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.

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum (w_i)^2 (u_{char i}^2)]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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	<	0.000590	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,79Br16O,190Os2+,190Pt2+
ICP-OES 202.030 nm	0.008 / 0.0002 µg/mL	1	Os, Hf
ICP-OES 203.844 nm	0.012 / 0.002 µg/mL	1	
ICP-OES 204.598 nm	0.012 / 0.001 µg/mL	1	Ir, Ta

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.569.6798; 540.585.3030, Fax: 540.585.3012; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

July 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- July 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Supervisor, Product Documentation



Certificate Approved By:

Michael Booth
Director, Technical



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





Certificate of Analysis

M5978, M5979

Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
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).



2.0 PRODUCT DESCRIPTION

Product Code: Single Analyte Custom Grade Solution

Catalog Number: CGT1

Lot Number: T2-T1719972

Matrix: 2% (v/v) HNO₃

Value / Analyte(s): tr. HF

Starting Material: 1 000 µg/mL ea. Titanium T1 Metal

Starting Material Lot#: 2094

Starting Material Purity: 99.9975%

Certified Value: 1002 ± 5 µg/mL

Density: 1.012 g/mL (measured at 20 ± 4 °C)

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:
 $X_{CRM/RM} = 2(w_1)(x_1)$
 $w_1 = (1/U_{CRM}^2) / \sum (1/U_{CRM}^2)$
the variance
 w_1 = the weighting factors for each method calculated using the inverse square of the variance
 $X_{CRM/RM} = (U_{CRM}^2) / \sum (U_{CRM}^2)$
CRM/RM Expanded Uncertainty (U) = $U_{CRM/RM} = k(U_{CRM}^2 + U_{lab}^2 + U_{rep}^2 + U_{hom}^2 + U_{stb}^2)^{1/2}$
 k = coverage factor = 2
 $U_{CRM}^2 = (2(w_1)^2)(U_{CRM}^2)$ where U_{CRM}^2 are the errors from each characterization method
 U_{lab} = bottle to bottle homogeneity standard uncertainty
 U_{rep} = long term stability standard uncertainty (storage)
 U_{hom} = bottle to bottle homogeneity standard uncertainty
 U_{stb} = 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 UHPA-filtered Clean Room. An UHPA-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
M 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	<	0.000986			
O B	<	0.008929	M Ge	<	0.002146	M Os	<	0.000269	O Sr	<	0.000986			
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 Th	<	0.001341			
O Ca	<	0.000676	M In	<	0.002683	M Pr	<	0.000268	M Tl	<	0.053663			
M Cd	<	0.000268	M Ir	<	0.000269	M Pt	<	0.000536	S Tl	<				
M Co	<	0.000268	M K	<	0.001172	M Rb	<	0.000268	M Ti	<	0.000268			
M Cr	<	0.000752	O Li	<	0.000268	M Re	<	0.000268	M Tm	<	0.000268			
M Cs	<	0.000268	M Lu	<	0.000268	M Rh	<	0.000268	M U	<	0.000268			
O Cu	<	0.010890	O Mg	<	0.005445	I S	<	0.006976	M Y	<	0.002146			
M Dy	<	0.000268	O Mn	<	0.003267	M Sb	<	0.004900	M Yb	<	0.000536			
M Er	<	0.000268	M Mo	<	0.000774	O Sc	<							

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 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); K₂SiO₇ - no KF if silica not present); Organic Matrices (Dry ash at 450EC in P10 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 crystaline form).

Atomic Spectroscopic Information (ICP-OES D.L.s are given as radial/axial view):

Technique/Line	Estimated D.L.	Order
ICP-MS 48 amu	14 ppt	N/A
ICP-OES 323.452 nm	0.0054 / 0.00092 µg/mL	14N160180, 32S160, 32S14N,
ICP-OES 334.941 nm	0.0038 / 0.00028 µg/mL	14N17N2, 36A12C,
ICP-OES 336.121 nm	0.0053 / 0.00034 µg/mL	48Ca, [96X=2

HF Note: This standard should not be prepared or stored in glass.

1
1
1
W, Mo, Co
Nb, Ta, Cr, U
Ce, Ar, Ni
Ru]]
(where X = Zr, Mo,

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: 800.868.6786; 540.565.3030; Fax: 540.565.3030; Email: info@inorganicventures.com; <http://www.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 Kozlowski
Manager, Quality Control

TD9784

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Paul R. Gaines



MS981

R:6/11/24



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57092
060724
Uranium (U)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

060727
Ambient (20 °C)
1000
6UTB

Volume shown below was diluted to (mL): 2000.07

5E-05 Balance Uncertainty
0.100 Flask Uncertainty

Lot # Solvent:
24002546 Nitric Acid

2.0% Nitric Acid
40.0 (mL)

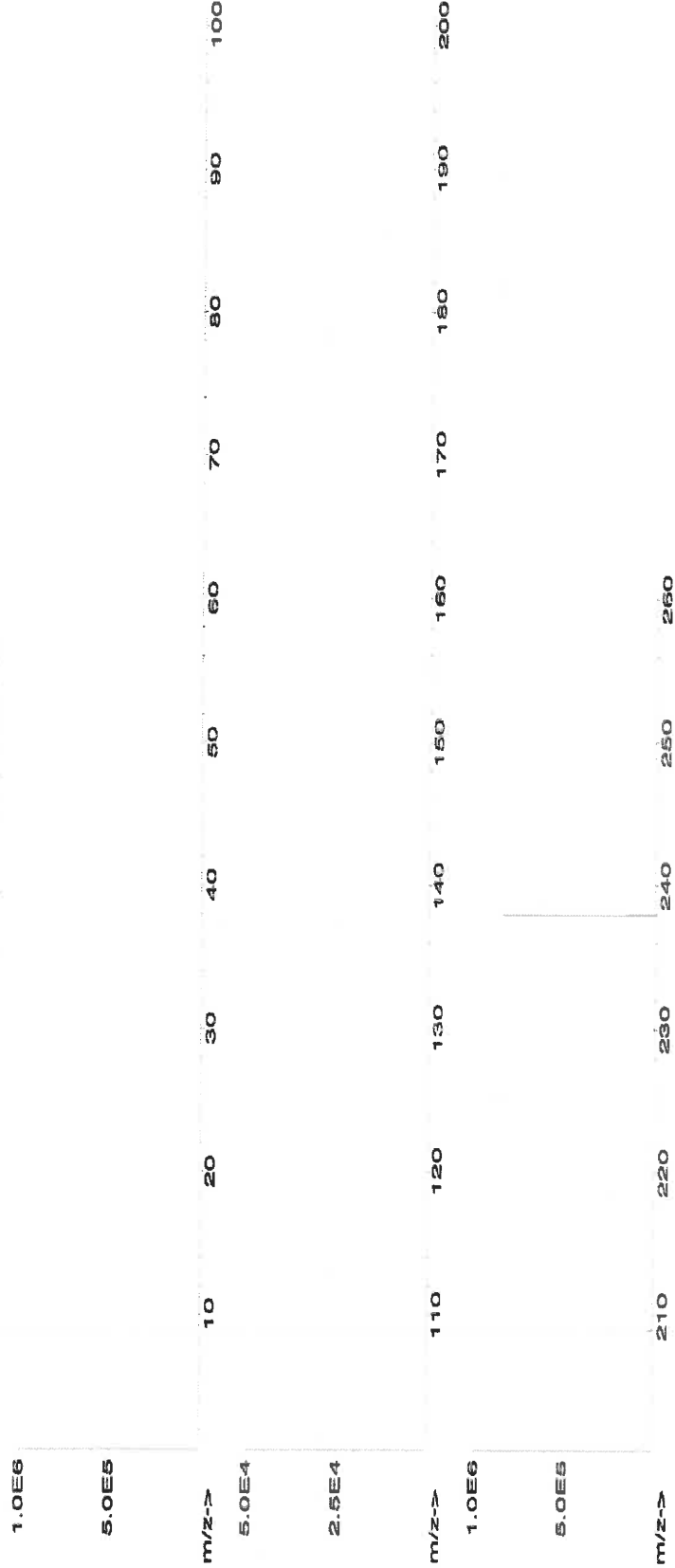
<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
<i>Pedro L. Rentas</i>	
Reviewed By:	Pedro L. Rentas

SDS Information

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)	(Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
----------	-------------	------------	-----------------	-------------------	--------------------------	-----------------------	-----------------------	---------------------	----------------------------------	--	------	----------------	------	----------

1. Uranyl nitrate hexahydrate (U) 58192 041524 0.1000 200.0 0.084 1000 10001.5 1000.0 2.2 13620-83-7 0.05 mg/m3 orl-rat 1040 mg/kg 3164

[1] Spectrum No.1 [23.264 sec]:57092.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)																			
Al	<0.02	Cd	<0.02	Dy	<0.02	Hf	<0.02	Li	<0.02	Ni	<0.02	Pt	<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	<0.02	Os	<0.01	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	<0.2	Fe	<0.02	Hg	<0.2	P	<0.2	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 certified (+/-) 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).

7236 673 3.67



145983

R: 6/11/24

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57040
071423
Zirconium (Zr)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):
NIST Test Number:

071426
Ambient (20 °C)
1000
6UTB

Volume shown below was diluted to (mL): 2000.02

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot # Solvent:
21110221 Nitric Acid

2.0% Nitric Acid
40.0 (mL)

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas

Expanded
Uncertainty
+/- (µg/mL)

Final
Conc. (µg/mL)

SDS Information
(Solvent Safety Info. On Attached pg.)

CAS# OSHA PEL (TWA) LD50

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)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
1. Zirconyl chloride octahydrate (Zr)	58140	070621	0.1000	200.0	0.084	1000	10000.3	1000.0	2.2	13520-92-8	NA	NA	NA

[1] Spectrum No.1 [41.153 sec]:57040.D# [Count] [Linear]

1.OE6

5.OE5

m/z-->

1.OE8

5.OE7

m/z-->

1.OE8

5.OE7

m/z-->



Instrumental Analysis by Inductively Coupled Plasma Mass Spectrometry (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

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	<0.02	Os	<0.01	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	<0.2	Fe	<0.02	Hg	<0.2	P	<0.2	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	<0.02	Sc	<0.2	Ta	<0.02	Ti	<0.02	Zr	<0.02
																			T

(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 certified (+/-) 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).



Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

R: 2/22/2024
M5999

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

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).



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, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

$$X_{\text{CRM/RM}} = \sum (w_i) (X_i)$$

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$$w_i = (1/u_{\text{char } i}^2) / (\sum (1/u_{\text{char } i}^2))$$

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char}}^2 + u_{\text{bb}}^2 + u_{\text{tts}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char}} = [\sum (w_i)^2 (u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{tts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a) (u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

$$\text{CRM/RM Expanded Uncertainty } (\pm) = U_{\text{CRM/RM}} = k (u_{\text{char } a}^2 + u_{\text{bb}}^2 + u_{\text{tts}}^2 + u_{\text{ts}}^2)^{1/2}$$

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{tts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

<https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver>

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

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





Certified Reference Material CRM
R: 01/03/24 M6033



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://AbsoluteStandards.com

CERTIFIED WEIGHT REPORT:

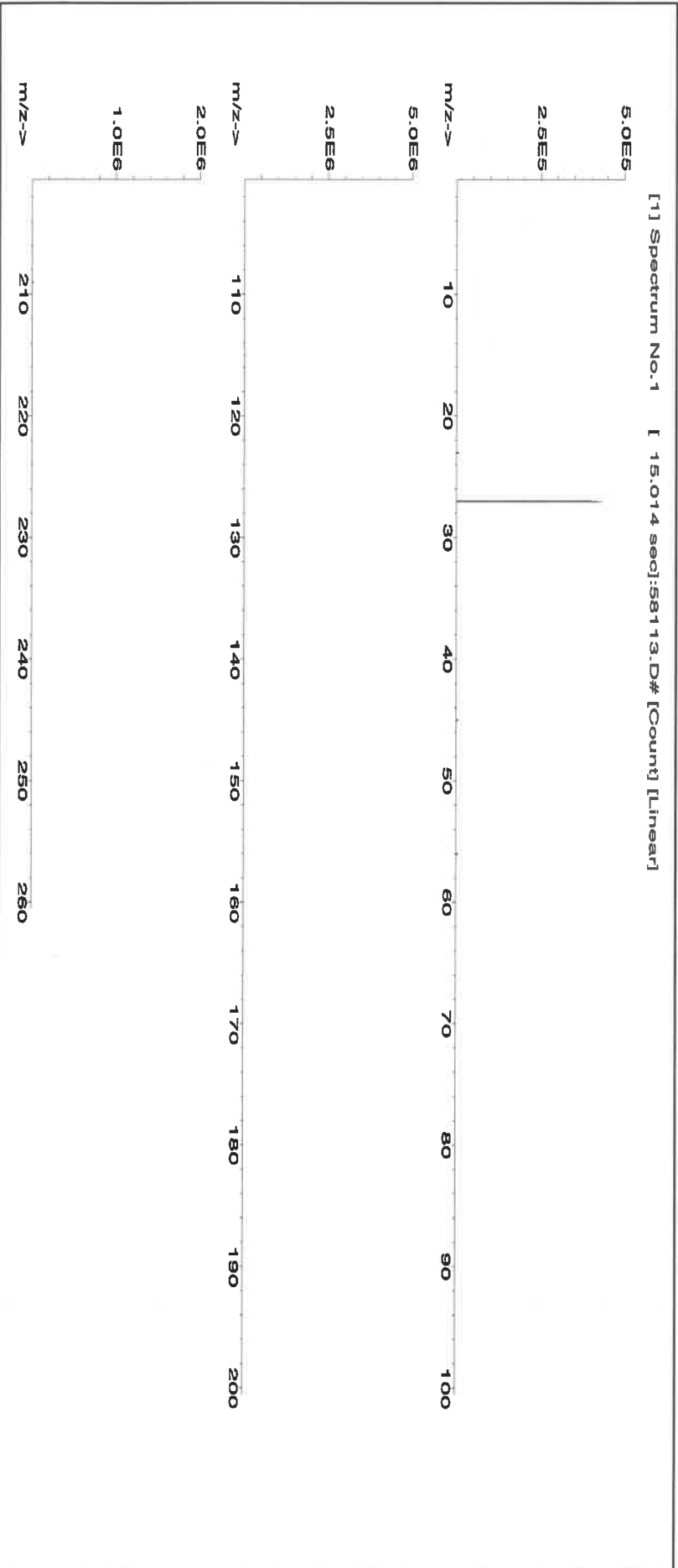
Part Number: 58113
Lot Number: 011623
Description: Aluminum (Al)
Expiration Date: 011626
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 10000
NIST Test Number: 6LUTB
Weight shown below was diluted to (mL): 2000.02
Solvent: 20510011 Nitric Acid
Lot #
2% 40.0 (mL) Nitric Acid
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

<i>Giovanni Esposito</i>	
Formulated By:	Giovanni Esposito
Reviewed By:	<i>Pedro L. Rentas</i>
	Pedro L. Rentas
	011623

SDS Information															Expanded	(Solvent Safety Info. On Attached pg.)	NIST
Compound		Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Uncertainty	CAS#	OSHA PEL (TWA)	LD50	SRM			
RM#	Number		Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)							

1. Aluminum nitrate nonahydrate (Al) IN022 ALUM12021A1 10000 99.999 0.10 7.30 273.9779 274.0078 10001.1 20.0 7784-27-2 2 mg/m3 or rat 3671 mg/kg 3101a

[1] Spectrum No. 1 [15.014 sec]:58113.D# [Count] [Linear]



Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantor™**



Material No.: 9530-33
Batch No.: 24D1562005
Manufactured Date: 2024-03-18
Retest Date: 2029-03-17
Revision No.: 0

Received! — 08/01/2024
pater
m6039
m6040

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.6 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.192
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	2.2 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	31.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	< 0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	3 ppb

>>> Continued on page 2 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantorsm**



Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.2 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	0.2 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 1.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.0 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.4 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

Hydrochloric Acid, 36.5–38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

 **avantor™**



Material No.: 9530-33
Batch No.: 24D1562005

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak
Director Quality Operations, Bioscience Production

18/19/24, M6055

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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: IV-STOCK-12
Lot Number: U2-MEB734294
Matrix: 5% (v/v) HNO₃
Value / Analyte(s): 10 µg/mL ea:
Barium, Beryllium,
Bismuth, Cerium,
Cobalt, Indium,
Lithium, Nickel,
Lead, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Barium, Ba	10.01 ± 0.04 µg/mL	Beryllium, Be	10.01 ± 0.05 µg/mL
Bismuth, Bi	10.01 ± 0.06 µg/mL	Cerium, Ce	10.01 ± 0.04 µg/mL
Cobalt, Co	10.01 ± 0.05 µg/mL	Indium, In	10.01 ± 0.04 µg/mL
Lead, Pb	10.00 ± 0.04 µg/mL	Lithium, Li	10.01 ± 0.04 µg/mL
Nickel, Ni	10.01 ± 0.04 µg/mL	Uranium, U	10.01 ± 0.05 µg/mL

Density: 1.025 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ba	ICP Assay	3104a	140909
Ba	Calculated		See Sec. 4.2
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Bi	ICP Assay	3106	180815
Ce	ICP Assay	3110	160830
Ce	EDTA	928	928
Ce	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Co	Calculated		See Sec. 4.2
In	ICP Assay	3124a	110516
In	EDTA	928	928
In	Calculated		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Calculated		See Sec. 4.2
Li	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Ni	Calculated		See Sec. 4.2
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
U	ICP Assay	traceable to 3164	R2-U689597
U	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:

$$X_{CRM/RM} = \sum (w_i) (X_i)$$

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:

$$w_i = (1/u_{char i}^2) / (\sum (1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum ((w_i)^2 (u_{char i})^2)]^{1/2}$ where $u_{char i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = 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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{ts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{ts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.
- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 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

- June 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



Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™



R → 16/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid-base titrn)	36.5 – 38.0 %	37.6
ACS – Color (APHA)	<= 10	5
ACS – Residue after Ignition	<= 3 ppm	1
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.190
ACS – Bromide (Br)	<= 0.005 %	< 0.005
ACS – Extractable Organic Substances	<= 5 ppm	1
ACS – Free Chlorine (as Cl ₂)	<= 0.5 ppm	< 0.5
Phosphate (PO ₄)	<= 0.05 ppm	< 0.03
Sulfate (SO ₄)	<= 0.5 ppm	< 0.3
Sulfite (SO ₃)	<= 0.8 ppm	0.3
Ammonium (NH ₄)	<= 3 ppm	< 1
Trace Impurities – Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities – Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities – Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities – Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities – Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities – Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities – Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities – Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities – Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities – Gallium (Ga)	<= 1.0 ppb	< 0.2

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

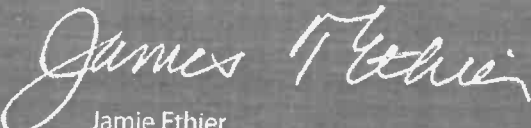
Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

M612 S

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

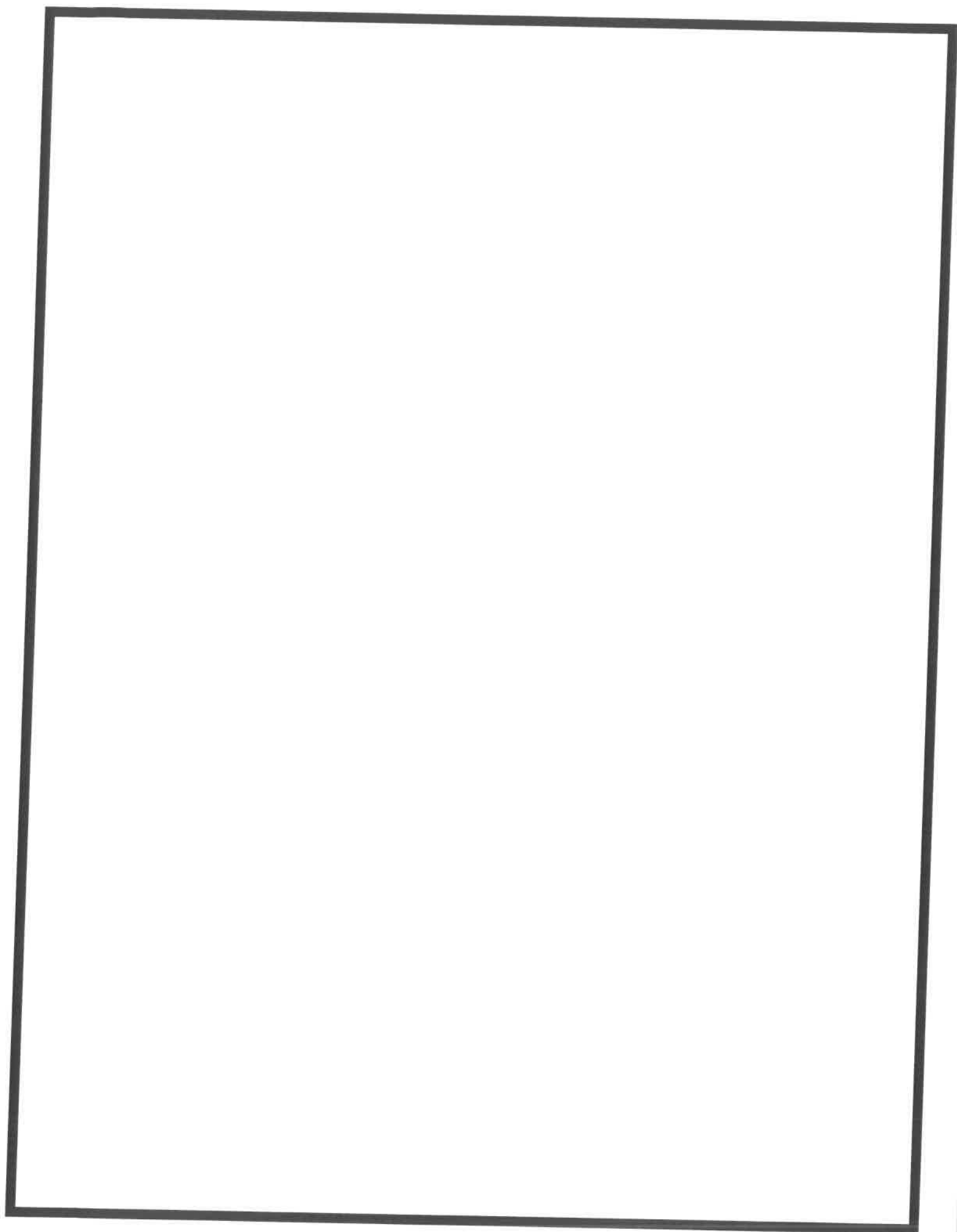
Phone: 215-295-5006
Fax: 215-295-0781

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%
Titrateable 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



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**TM



Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
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For Microelectronic Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC



Jamie Croak
Director Quality Operations, Bioscience Production



CERTIFIED WEIGHT REPORT:

Part Number: 58111
Lot Number: 122223
Description: Sodium (Na)

Solvent: 24002546 Nitric Acid

Lot #

<i>Aleah O Brady</i>	
Formulated By:	Aleah O Brady
	122223
<i>Pedro L Rentas</i>	
Reviewed By:	Pedro L Rentas
	122223

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

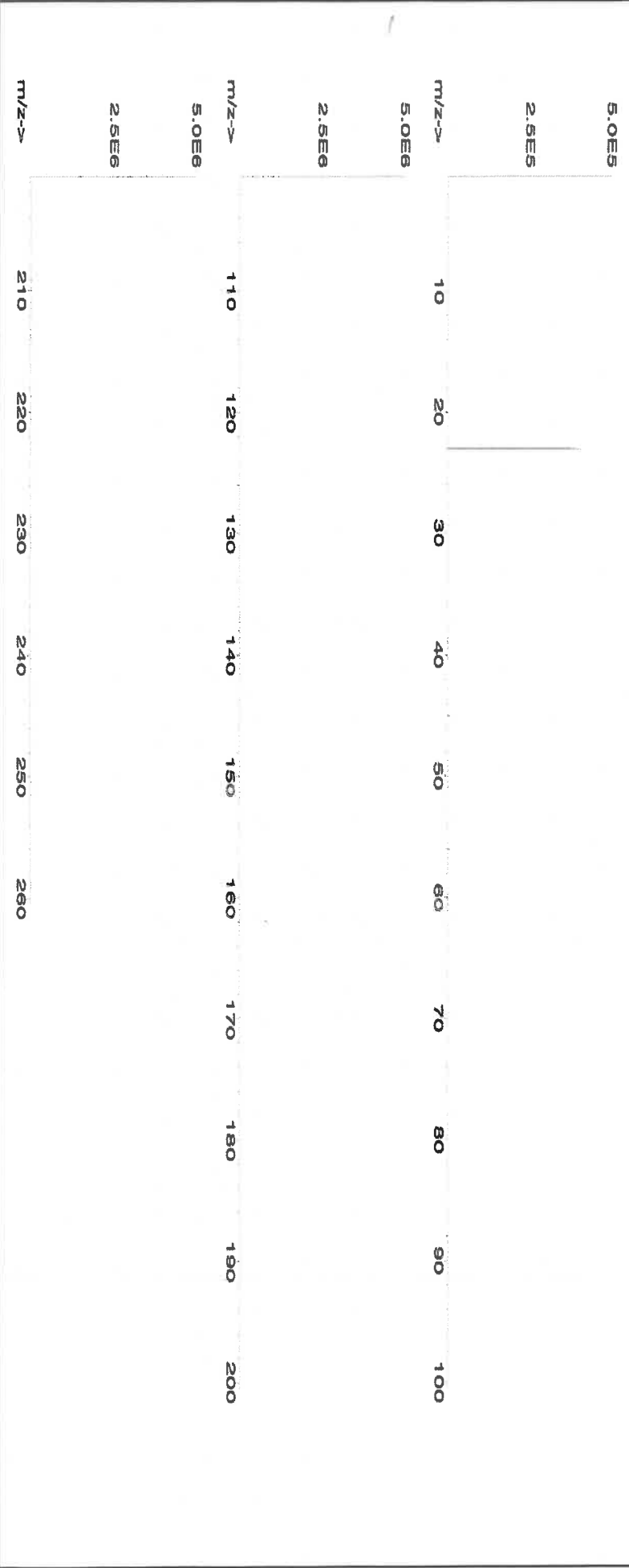
Expanded

SDS Information

Compound	Lot	Nominal	Purity	Uncertainty	Assay	Target	Actual	Actual	Uncertainty	(Solvent Safety Info. On Attached pg.)	NIST
RM#	Number	Conc. (µg/mL)	(%)	Purity (%)	(%)	Weight (g)	Weight (g)	Conc. (µg/mL)	+/- (µg/mL)	CAS#	SRM

1. Sodium nitrate (Na)	IND36 NAV01201511	10000	99.999	0.10	26.9	111.5406	111.5479	10000.7	20.0	7631-99-4	5 mg/m3	or-trat 3430 mg/kg 3152a
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[1] Spectrum No.1 [8.935 sec]:58111.D# [Count] [Linear]





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	Li	<0.02	Ni	<0.02	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Tc	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<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	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.02	Tm	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Ti	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<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	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 certified (+/-) 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).



Refine your results. Redefine your industry.

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

A: 4/11/22
Certificate of Analysis
M5738 M5739 M5740 M5741 M5742
M5743

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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Custom Grade Solution
Catalog Number: 6020ISS
Lot Number: S2-MEB709511
Matrix: 7% (v/v) HNO₃
Value / Analyte(s): 10 µg/mL ea:
Bismuth, Holmium,
Indium, 6-Lithium,
Rhodium, Scandium,
Terbium, Yttrium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
6-Lithium, Li6	10.00 ± 0.03 µg/mL	Bismuth, Bi	10.00 ± 0.05 µg/mL
Holmium, Ho	10.00 ± 0.05 µg/mL	Indium, In	10.00 ± 0.04 µg/mL
Rhodium, Rh	10.00 ± 0.07 µg/mL	Scandium, Sc	10.00 ± 0.04 µg/mL
Terbium, Tb	10.00 ± 0.04 µg/mL	Yttrium, Y	10.00 ± 0.04 µg/mL

Density: 1.035 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Bi	ICP Assay	3106	180815
Bi	Calculated		See Sec. 4.2
Ho	ICP Assay	3123a	090408
Ho	EDTA	928	928
In	ICP Assay	3124a	110516
In	EDTA	928	928
In	Calculated		See Sec. 4.2
Li6	Gravimetric		See Sec. 4.2
Rh	ICP Assay	3144	070619
Sc	ICP Assay	3148a	100701
Sc	EDTA	928	928
Tb	ICP Assay	3157a	100518
Tb	EDTA	928	928
Tb	Calculated		See Sec. 4.2
Y	ICP Assay	3167a	120314
Y	EDTA	928	928
Y	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:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

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:

$$w_i = (1/u_{char i}^2) / (\sum(1/(u_{char i}^2)))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i^2)(u_{char i}^2)]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Lithium Li6	95.6 ± 0.3
Lithium Li7	4.4 ± 0.1

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit www.inorganicventures.com/TCT

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

September 03, 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

- **September 03, 2026**

- The date after which this CRM/RM should not be used.
- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____
- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Director, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





**QATS LABORATORY INORGANIC REFERENCE MATERIAL
 INTERFERENCE CHECK SAMPLE SET FOR ICP-MS (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 an 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-0803" and for the ICSAB mixture use "ICSA-0803+ICSB-0803".**

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 the Contracting Officer, Ross Miller at miller.ross@epa.gov. If directed by Ross Miller, 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

This interference check sample set is to be used to verify elemental isobaric correction factors of inductively coupled plasma-mass spectrometers (ICP-MS). This reference material set consists of two (2) concentrated solutions. The ICSA solution contains several interferent elements and species; for a complete listing refer to the CLP SOW. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for the ICP-MS ICS 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-0803, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, 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 1% v/v HNO₃. Analyze this ICSAB solution by ICP-MS.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS 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-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803							
Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20.0	[100000]			[100000]		
Sb	2.0	(1.5)	-2.5	5.5	(22.0)	18.0	26.0
As	1.0	(0.1)	-1.9	2.1	19.0	16.2	21.9
Ba	10.0	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1.0	(0)	-2.0	2.0	19.0	16.2	21.9
Cd	1.0	(0.7)	-1.3	2.7	20.0	17.0	23.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2.0	(21.0)	17.0	25.0	40.0	34.0	46.0
Co	1.0	(1.0)	-1.0	3.0	20.0	17.0	23.0
Cu	2.0	(8.0)	4.0	12.0	(25.0)	21.0	29.0
Fe	200	[100000]			[100000]		
Pb	1.0	(4.0)	2.0	6.0	25.0	21.3	28.8
Mg	500	[100000]			[100000]		
Mn	1.0	(7.0)	5.0	9.0	27.0	23.0	31.1
Mo		[2000]			[2000]		
Ni	1.0	(6.0)	4.0	8.0	24.0	20.4	27.6
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5.0	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1.0	(0)	-2.0	2.0	18.0	15.3	20.7
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1.0	(0)	-2.0	2.0	21.0	17.9	24.2
Ti		[2000]			[2000]		
V	5.0	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	5.0	(11.0)	1.0	21.0	(29.0)	19.0	39.0

[] Indicates analytes that do not require ICP-MS determination in the ICS.

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 2 times the associated CLP SOW CRQL. The acceptance ranges for all other analytes were determined using the certified value ± 15 percent of the listed certified value.



**QATS LABORATORY INORGANIC REFERENCE MATERIAL
 INTERFERENCE CHECK SAMPLE SET FOR ICP-MS (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 an 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-0803" and for the ICSAB mixture use "ICSA-0803+ICSB-0803".**

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 the Contracting Officer, Ross Miller at miller.ross@epa.gov. If directed by Ross Miller, return the chain of custody record with appropriate annotations and signatures to the address provided below.

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This interference check sample set is to be used to verify elemental isobaric correction factors of inductively coupled plasma-mass spectrometers (ICP-MS). This reference material set consists of two (2) concentrated solutions. The ICSA solution contains several interferent elements and species; for a complete listing refer to the CLP SOW. The ICSB solution contains the analytes: Ag, As, Sb, Ba, Be, Cd, Co, Cr, Cu, Mn, Ni, Pb, Tl, Se, V, and Zn. This instruction sheet provides the nominal values for the ICP-MS ICS 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-0803, Interferents: Pipet 10 mL of the ICSA solution into a 100 mL volumetric flask and dilute to volume with 1% v/v HNO₃. Analyze this solution by ICP-MS.

ICSB-0803, Analytes, mixed with ICSA-0803, 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 1% v/v HNO₃. Analyze this ICSAB solution by ICP-MS.

(D) "CERTIFIED VALUE" CONCENTRATIONS OF QATS ICP-MS 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-MS ICSA-0803, AND ICSA-0803 MIXED WITH ICSB-0803							
Element	CRQL	Part A (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)	Part A +Part B (µg/L)	Lower Limit (µg/L)	Upper Limit (µg/L)
Al	20.0	[100000]			[100000]		
Sb	2.0	(1.5)	-2.5	5.5	(22.0)	18.0	26.0
As	1.0	(0.1)	-1.9	2.1	19.0	16.2	21.9
Ba	10.0	(1.2)	-18.8	21.2	(22.0)	2.0	42.0
Be	1.0	(0)	-2.0	2.0	19.0	16.2	21.9
Cd	1.0	(0.7)	-1.3	2.7	20.0	17.0	23.0
Ca	500	[100000]			[100000]		
C		[200000]			[200000]		
Cl		[1000000]			[1000000]		
Cr	2.0	(21.0)	17.0	25.0	40.0	34.0	46.0
Co	1.0	(1.0)	-1.0	3.0	20.0	17.0	23.0
Cu	2.0	(8.0)	4.0	12.0	(25.0)	21.0	29.0
Fe	200	[100000]			[100000]		
Pb	1.0	(4.0)	2.0	6.0	25.0	21.3	28.8
Mg	500	[100000]			[100000]		
Mn	1.0	(7.0)	5.0	9.0	27.0	23.0	31.1
Mo		[2000]			[2000]		
Ni	1.0	(6.0)	4.0	8.0	24.0	20.4	27.6
P		[100000]			[100000]		
K	500	[100000]			[100000]		
Se	5.0	(0.3)	-9.7	10.3	(19.0)	9.0	29.0
Ag	1.0	(0)	-2.0	2.0	18.0	15.3	20.7
Na	500	[100000]			[100000]		
S		[100000]			[100000]		
Tl	1.0	(0)	-2.0	2.0	21.0	17.9	24.2
Ti		[2000]			[2000]		
V	5.0	(0.5)	-9.5	10.5	(19.0)	9.0	29.0
Zn	5.0	(11.0)	1.0	21.0	(29.0)	19.0	39.0

[] Indicates analytes that do not require ICP-MS determination in the ICS.

The acceptance ranges for all analytes in parentheses in the above table were determined using the listed certified value ± 2 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.



CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

57051
120523
Antimony (Sb)

Lot #
Solvent:

24002546
Nitric Acid

2.0%
60.0
Nitric Acid
(mL)

Expiration Date:

120526

Recommended Storage:

Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6U7B

Volume shown below was diluted to (mL):

3000.41

5E-05 Balance Uncertainty
0.058 Flask Uncertainty

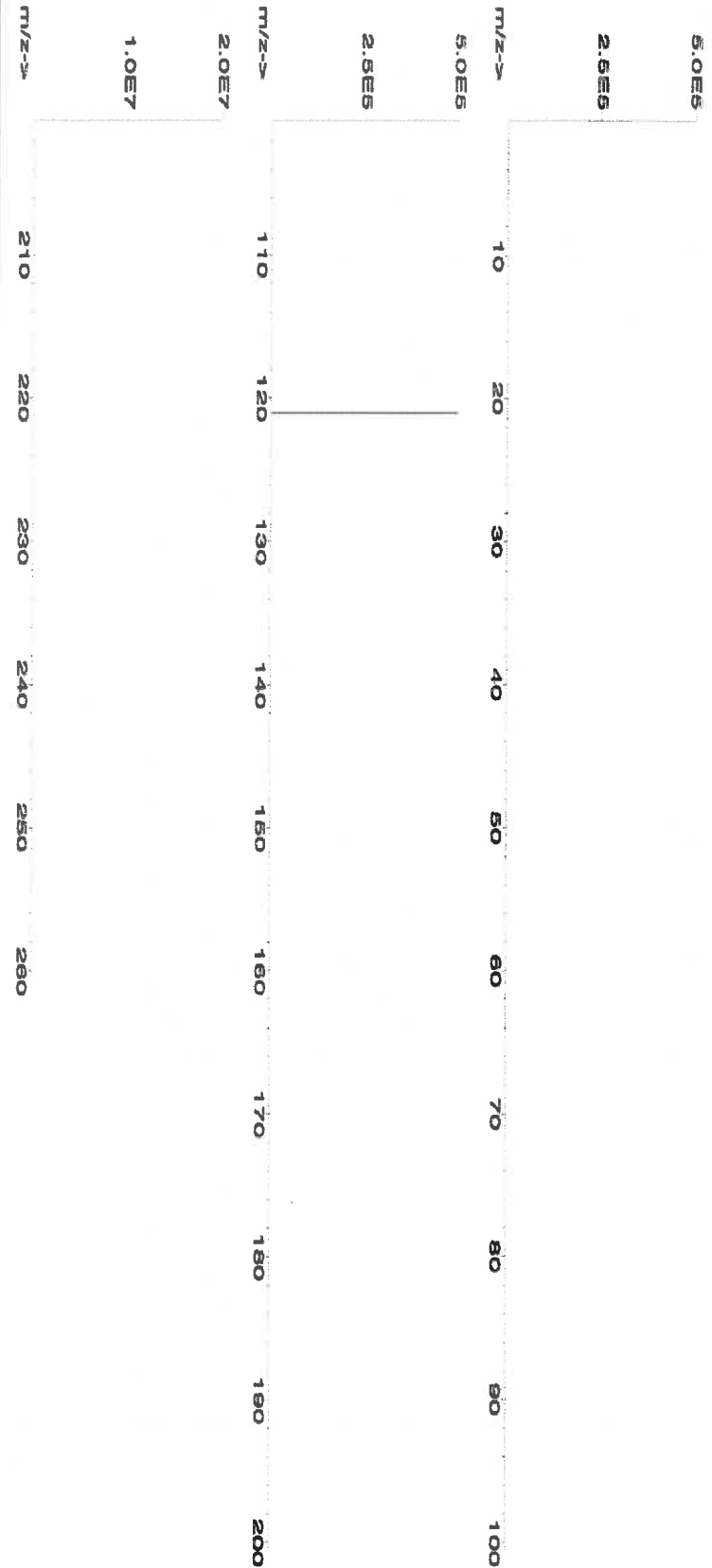
Formulated By:	Lawrence Barry	120523
Reviewed By:	Pedro L. Renteria	120523

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)	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 or-rel 7000 mg/kg 3102a

[1] Spectrum No.1 [17.964 sec]:58051.D# [Count] [Linear]





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	Pt	<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 certified (+/-) 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).



M6030



CERTIFIED WEIGHT REPORT:

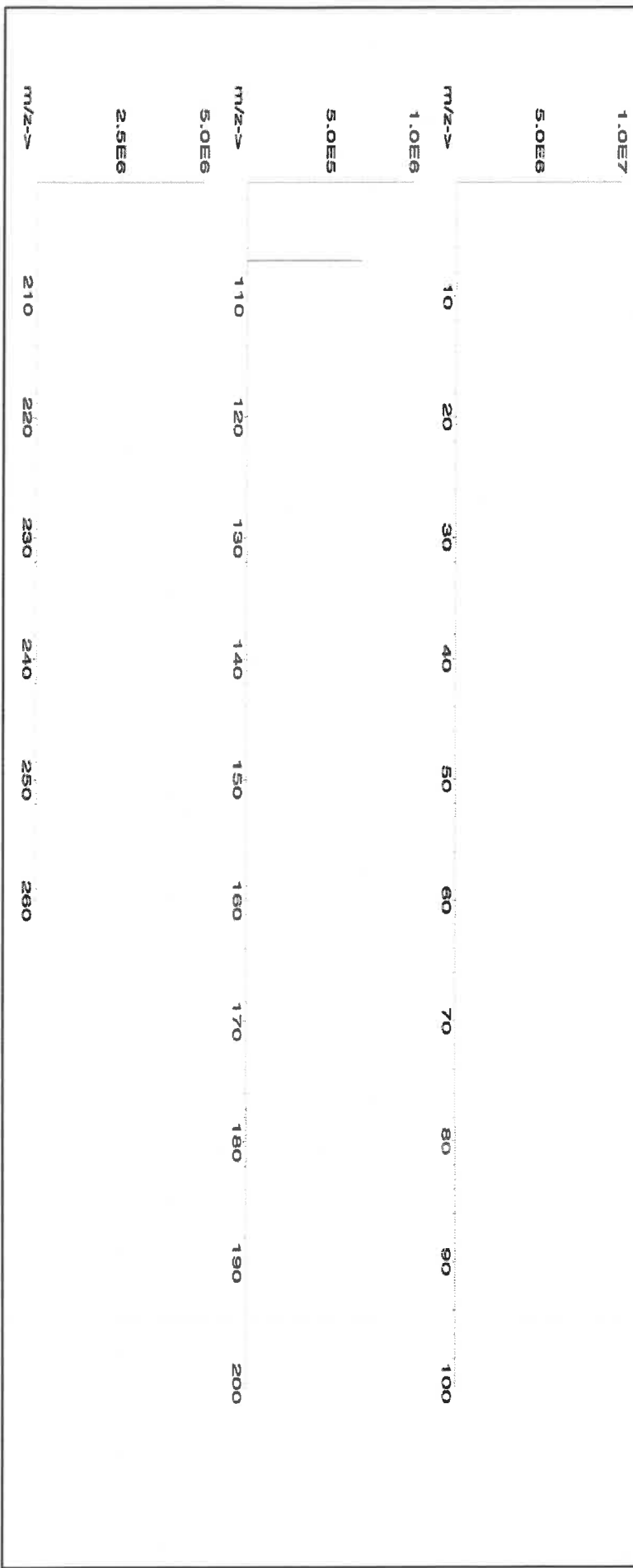
Part Number: **57047**
Lot Number: **122823**
Description: **Silver (Ag)**
Solvent: 24002546 Nitric Acid
Lot #

Expiration Date: 122826
Recommended Storage: Ambient (20 °C)
Nominal Concentration (µg/mL): 1000
NIST Test Number: 6UTB
Weight shown below was diluted to (mL): 4000.30
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Formulated By:	Benson Chan
Reviewed By:	Pedro L. Rentas
	122823

SDS Information									
Compound	RM#	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty Purity (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)
1. Silver nitrate (Ag)	IN035	J0612AGAI	1000.0	99.9996	0.10	63.7	6.27992	6.27998	1000.0
							2.0	7761-88-8	10 µg/mL
									NA
									3151

[1] Spectrum No. 1 [14.044 sec]:58147.D# [Count] [Linear]





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	Pt	<0.02	Se	<0.2	Tb	<0.02	W	<0.02
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<0.02	Te	<0.02	U	<0.02
As	<0.2	Ce	<0.02	Eu	<0.02	In	<0.02	Mg	<0.01	Os	<0.02	Rh	<0.02	Ag	T	Tl	<0.02	V	<0.02
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Rb	<0.02	Na	<0.2	Th	<0.02	Yb	<0.02
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Ru	<0.02	Sr	<0.02	Tm	<0.02	Y	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pt	<0.02	Sm	<0.02	S	<0.02	Sn	<0.02	Zn	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ta	<0.02	Ti	<0.02	Zr	<0.02

(T)= Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 meghom 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 certified (+/-) 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).



Certified Reference Material CRM



R: 03/16/23 MS473 MS474 MS475 MS476

CERTIFIED WEIGHT REPORT:

Part Number:
Lot Number:
Description:

56138
082922
Strontium (Sr)

Expiration Date:
Recommended Storage:
Nominal Concentration (µg/mL):

082925
Ambient (20 °C)
10000

NIST Test Number:
Weight shown below was diluted to (mL):

6UTB
5E-05 Balance Uncertainty
0.058 Flask Uncertainty

Lot #

Solvent: 20510011 Nitric Acid

2% 20.0 Nitric Acid
(mL)

Formulated By:	Lawrence Barry	082922
Reviewed By:	Pedro L. Rentas	082922

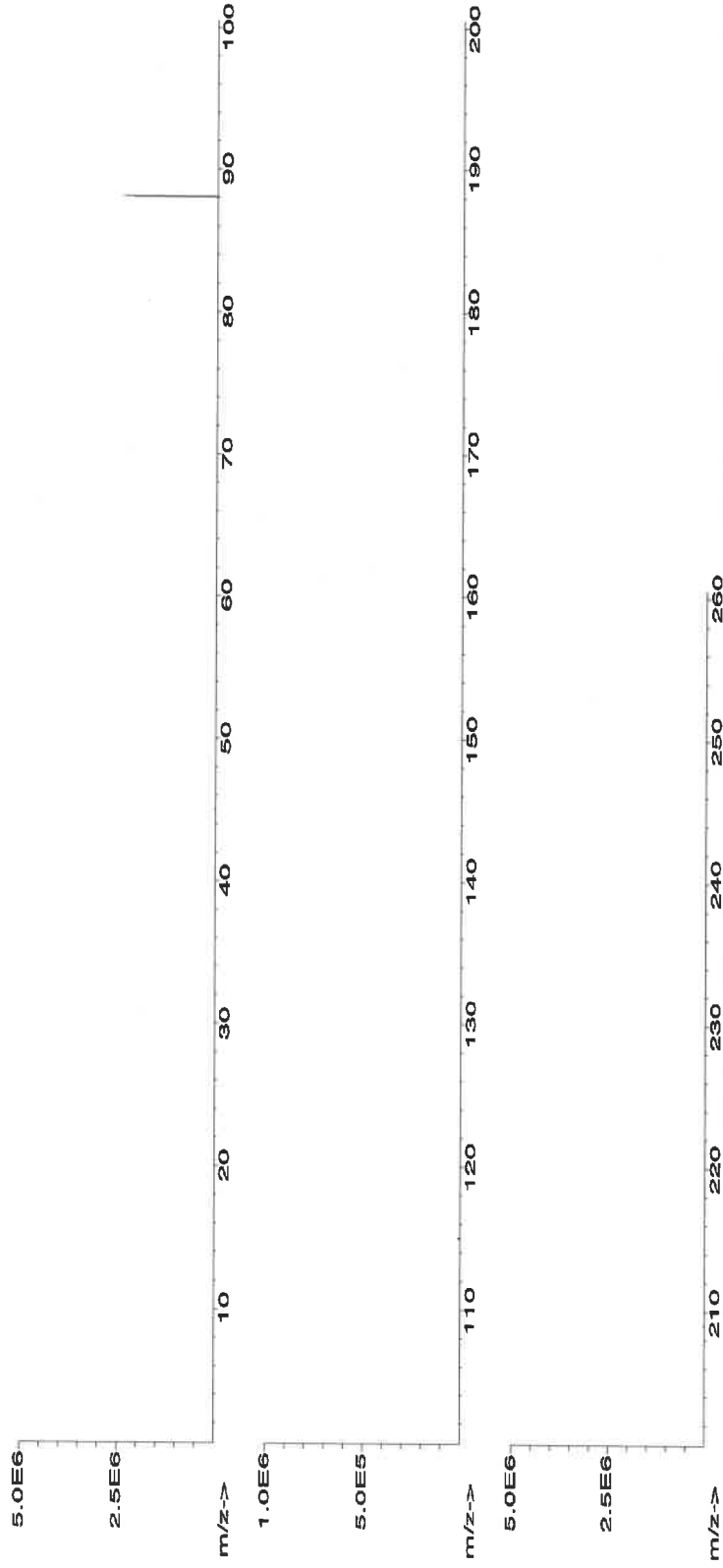
SDS Information

Expanded Uncertainty	(Solvent Safety Info. On Attached pg.)	NIST
+/- (µg/mL)	CAS#	LD50
Actual Conc. (µg/mL)	Actual Weight (g)	Actual Weight (g)

Compound

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

[1] Spectrum No.1 [14.495 sec]:58138.D# [Count] [Linear]





Instrumental Analysis by Inductively Coupled Plasma Mass Spectroscopy (ICP-MS):

Trace Metals Verification by ICP-MS ($\mu\text{g/mL}$)

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	<0.02	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:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * All Standards should be stored with caps tight and under appropriate laboratory conditions.
- * Uncertainty Reference: Taylor, B.N. and Kuyat, C.E., "Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Result," NIST Technical Note 1297, U.S. Government Printing Office, Washington, D.C. (1994).



CERTIFIED WEIGHT REPORT:

Part Number: 57081
Lot Number: 062724
Description: Thallium (TI)

Lot #

Solvent: 24002546 Nitric Acid

2% 40.0 Nitric Acid (mL)

Expiration Date:

062727

Recommended Storage: Ambient (20 °C)

Nominal Concentration (µg/mL):

1000

NIST Test Number:

6UTB

Weight shown below was diluted to (mL): 2000.1

5E-05 Balance Uncertainty
0.10 Flask Uncertainty

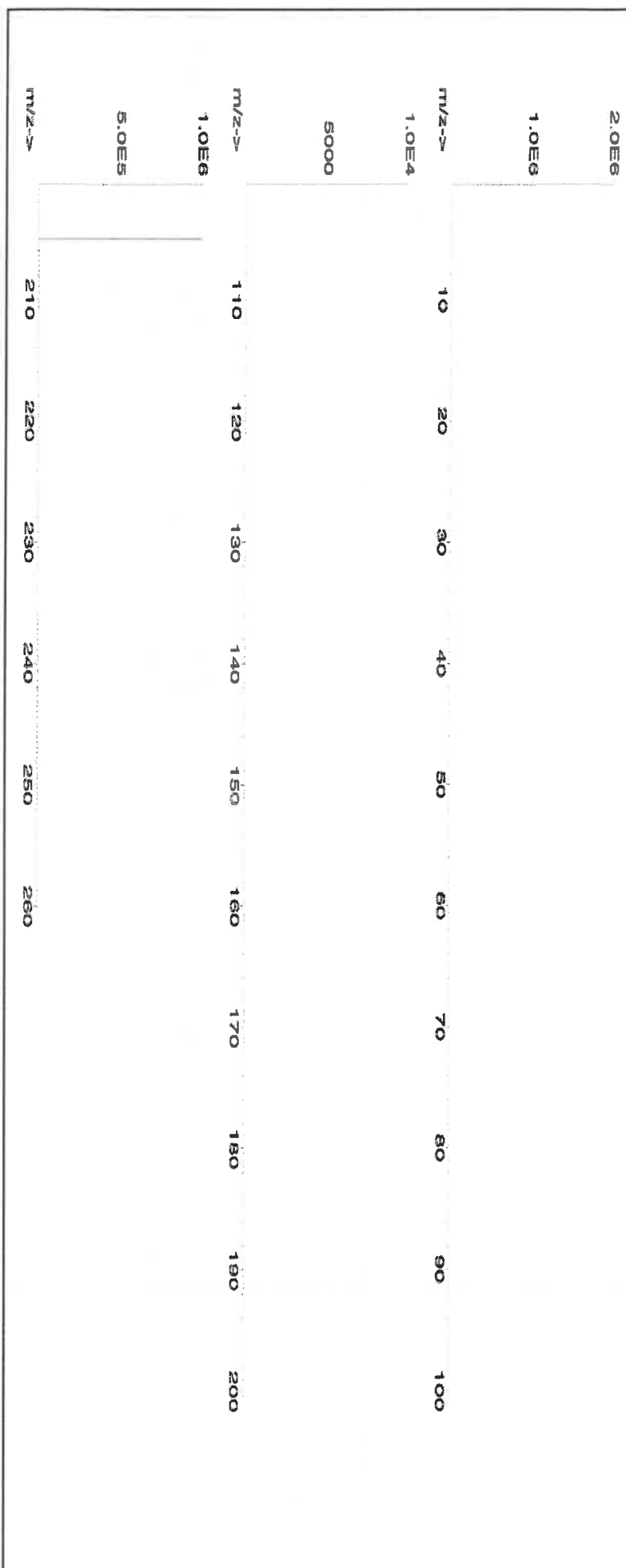
<i>Aleah O'Brady</i>	
Formulated By:	Aleah O'Brady
	062724
Reviewed By:	<i>Pedro L. Rendas</i>
	Pedro L. Rendas
	062724

SDS Information

Compound	Lot Number	Nominal Conc. (µg/mL)	Purity (%)	Uncertainty (%)	Assay (%)	Target Weight (g)	Actual Weight (g)	Actual Conc. (µg/mL)	Expanded Uncertainty +/- (µg/mL)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Thallium nitrate (TI) 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

[1] Spectrum No.1 [14.044 sec]:57081.D# [Count] [Linear]





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	Pt	<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	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	Tm	<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	Sn	<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	Ti	<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			Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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- * Standards are certified (+/-) 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).



Certified Reference Material CRM

M6021



ANAB ISO 17034 Accredited
AR-1539 Certificate Number
https://absolutestandards.com

CERTIFIED WEIGHT REPORT:

Part Number: 57023
Lot Number: 062424
Description: Vanadium (V)

Lot # 24002546
Solvent: Nitric Acid

2.0%

40.0 (mL)

Nitric Acid

Formulated By: *Aleah O'Brady*

Aleah O'Brady

062424

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

Reviewed By: *Pedro L. Rentas*

Pedro L. Rentas

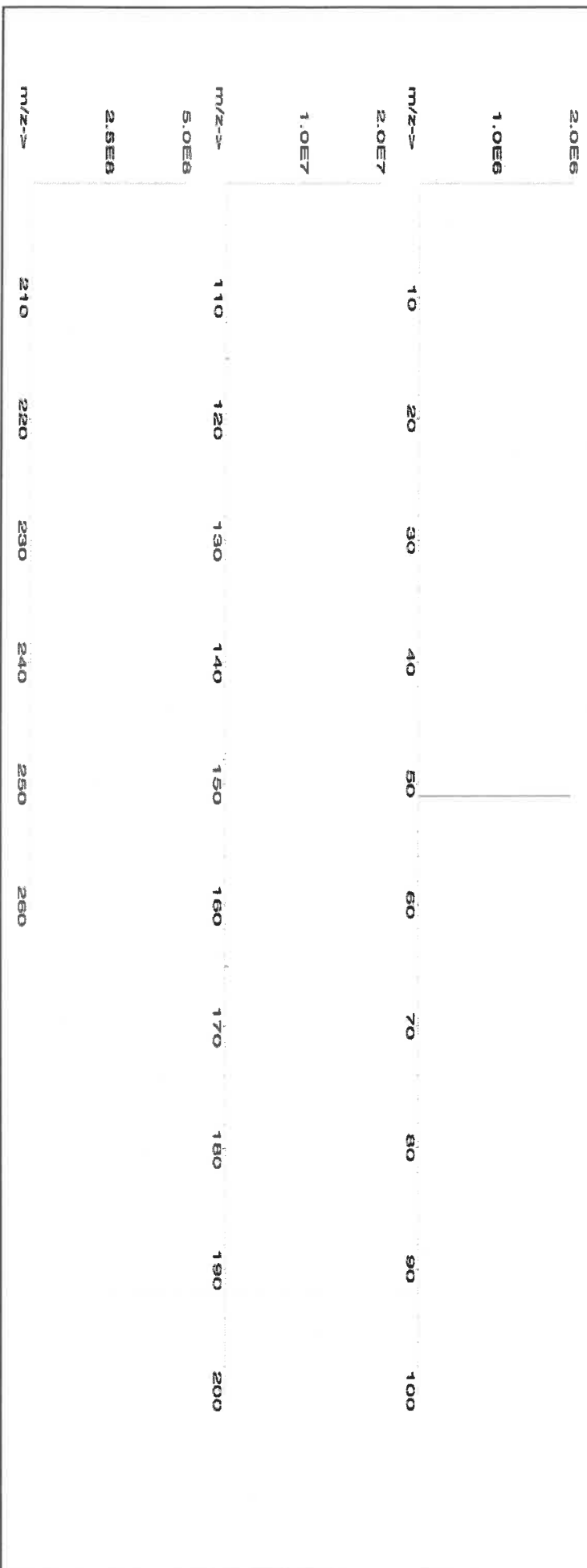
062424

SDS Information

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)	(Solvent Safety Info. On Attached pg.)	CAS#	OSHA PEL (TWA)	LD50	NIST SRM
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1. Ammonium metavanadate (V) 58123 021224 0.1000 200.0 0.084 1000 10000.3 10000.0 2.2 7803-55-6 0.05 mg/m3 or-at 58.1mg/kg 3165

[1] Spectrum No.1 [34.243 sec]:58023.D# [Count] [Linear]





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	Pt	<0.02	Se	<0.2
Sb	<0.02	Ca	<0.2	Er	<0.02	Ho	<0.02	Lu	<0.02	Nb	<0.02	Re	<0.02	Si	<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
Ba	<0.02	Cs	<0.02	Gd	<0.02	Ir	<0.02	Mn	<0.02	Pd	<0.02	Ru	<0.02	Na	<0.2
Be	<0.01	Cr	<0.02	Ga	<0.02	Fe	<0.2	Hg	<0.2	P	<0.02	Sr	<0.02	S	<0.02
Bi	<0.02	Co	<0.02	Ge	<0.02	La	<0.02	Mo	<0.02	Pr	<0.02	Sm	<0.02	Ta	<0.02
B	<0.02	Cu	<0.02	Au	<0.02	Pb	<0.02	Nd	<0.02	K	<0.2	Sc	<0.02	Ti	<0.02
														Tb	<0.02
														Te	<0.02
														Tl	<0.02
														Th	<0.02
														Tm	<0.02
														Sn	<0.02
														Ti	<0.02
														W	<0.02
														U	<0.02
														V	T
														Yb	<0.02
														Y	<0.02
														Zn	<0.02
														Zr	<0.02

(T) = Target analyte

Physical Characterization:

Homogeneity: No heterogeneity was observed in the preparation of this standard.

Certified by:

- * The certified value is the concentration calculated from gravimetric and volumetric measurements unless otherwise stated.
- * Purified acids, 18.2 megohm deionized water, calibrated Class A glassware and the highest purity raw materials are used in the preparation of all standards.
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SOP ID : M200.8-Trace Elements-22, MSFAM01.1-Metals ICPMS-2

SDG No : MJNKD0,MJNKG0

Matrix : SOIL

Pipette ID: ICP A

Balance ID : M SC-2

Filter paper ID : N/A

pH Strip ID : M6069

Hood ID : #3

Block ID: 1. HOT BLOCK #2 2. N/A

Start Digest Date: 12/16/2024 Time : 14:50 Temp : 96 °C

End Digest Date: 12/16/2024 Time : 15:25 Temp : 96 °C

Digestion tube ID: M6054

Block thermometer ID: MET-DIG. #2

Dig Technician Signature: *[Signature]*

Supervisor Signature: *[Signature]*

Temp : 1. 96°C 2. N/A

SJ 12/18/2024

Standard Name	MLS USED	STD REF. # FROM LOG
LCSS	1.00	MP83669
Spike Sol. B	1.00	MP83671
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	4.00	MP83498
1.4 HCL SOLN	10.00	MP83499 MP82128
Conc. HNO3	5.00	M6126
30% H2O2	3.00	M6125
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

HOT BLOCK #2 CELL #34 : 96

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
12/16/24 16:25	<i>slud. met digestion</i>	<i>AB. metal lab</i>
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	pH	Initial Weight (g)	Final Vol (ml)	Color Before	Color After	Texture	Artifact	Comment	Prep Pos
P5248-01	MJNKD0	N/A	1.13	500	Brown	Yellow	Medium	N/A	N/A	1
P5248-02	MJNKD0D	N/A	1.15	500	Brown	Yellow	Medium	N/A	N/A	2
P5248-03	MJNKD0S	N/A	1.31	500	Brown	Yellow	Medium	N/A	N/A	3
P5248-04	MJNKD1	N/A	1.29	500	Brown	Yellow	Medium	N/A	N/A	4
P5248-05	MJNKE0	N/A	1.39	500	Brown	Yellow	Medium	N/A	N/A	5
P5248-06	MJNKE1	N/A	1.23	500	Brown	Yellow	Medium	N/A	N/A	6
P5248-07	MJNKE2	N/A	1.12	500	Brown	Yellow	Medium	N/A	N/A	7
P5248-08	MJNKF0	N/A	1.26	500	Brown	Yellow	Medium	N/A	N/A	8
P5248-09	MJNKF1	N/A	1.25	500	Brown	Yellow	Medium	N/A	N/A	9
P5248-10	MJNKG1	N/A	1.24	500	Brown	Yellow	Medium	N/A	N/A	10
P5248-11	MJNKG2	N/A	1.28	500	Brown	Yellow	Medium	N/A	N/A	11
P5248-12	MJNLH6	N/A	1.06	500	Brown	Yellow	Medium	N/A	N/A	12
P5248-13	MJNLH7	N/A	1.16	500	Brown	Yellow	Medium	N/A	N/A	13
P5248-14	MJNLH8	N/A	1.30	500	Brown	Yellow	Medium	N/A	N/A	14
P5249-01	MJNKG0	N/A	1.25	500	Brown	Yellow	Medium	N/A	N/A	15
P5249-02	MJNKG0D	N/A	1.19	500	Brown	Yellow	Medium	N/A	N/A	16
P5249-03	MJNKG0S	N/A	1.48	500	Brown	Yellow	Medium	N/A	N/A	17
PB165675BL	PBS675	N/A	1.00	500	Colorless	Colorless	Fine	N/A	MP83671	18
PB165675BS	LCS675	N/A	1.00	500	Colorless	Colorless	Fine	N/A	MP83699	19

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB134060

Review By	Mohan Bera	Review On	12/24/2024 3:52:41 AM
Supervise By	Sarabjit Jaswal	Supervise On	12/24/2024 3:55:48 AM
STD. NAME	STD REF.#		
ICAL Standard	MP83619,MP83628,MP83627,MP83625,MP83623,MP83622,MP83621,MP83620,MP83636		
ICV Standard	MP83629		
CCV Standard	MP83632		
ICSA Standard	MP83630,MP83631		
CRI Standard			
LCS Standard	MP83669		
Chk Standard	MP83635,MP83634		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	TUNE	TUNE006	TUNE	12/21/24 15:35		Jaswal	OK
2	S00	S0	CAL1	12/21/24 16:08		Jaswal	OK
3	S02	S02	CAL3	12/21/24 16:14		Jaswal	OK
4	S03	S03	CAL4	12/21/24 16:18		Jaswal	OK
5	S04	S04	CAL5	12/21/24 16:21		Jaswal	OK
6	S05	S05	CAL6	12/21/24 16:24		Jaswal	OK
7	S06	S06	CAL7	12/21/24 16:26		Jaswal	OK
8	S07	S07	CAL8	12/21/24 16:29		Jaswal	OK
9	S08	S08	CAL9	12/21/24 16:32		Jaswal	OK
10	ICV006	ICV006	ICV	12/21/24 17:01	Inst. paused for calibration review	Jaswal	OK
11	ICB006	ICB006	ICB	12/21/24 17:08	Inst. paused for review	Jaswal	OK
12	ICSA006	ICSA006	ICSA	12/21/24 17:11		Jaswal	OK
13	ICSAB006	ICSAB006	ICSAB	12/21/24 17:20	Inst. paused for review	Jaswal	OK
14	CCV037	CCV037	CCV	12/21/24 17:23		Jaswal	OK
15	CCB037	CCB037	CCB	12/21/24 17:29	Inst. paused for review	Jaswal	OK
16	PB165675BL	PBS675	MB	12/21/24 17:32		Jaswal	OK
17	PB165675BS	LCS675	LCS	12/21/24 17:36		Jaswal	OK
18	PB165800BL	PBS800	MB	12/21/24 17:39		Jaswal	OK

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB134060

Review By	Mohan Bera	Review On	12/24/2024 3:52:41 AM
Supervise By	Sarabjit Jaswal	Supervise On	12/24/2024 3:55:48 AM
STD. NAME	STD REF.#		
ICAL Standard	MP83619,MP83628,MP83627,MP83625,MP83623,MP83622,MP83621,MP83620,MP83636		
ICV Standard	MP83629		
CCV Standard	MP83632		
ICSA Standard	MP83630,MP83631		
CRI Standard			
LCS Standard	MP83669		
Chk Standard	MP83635,MP83634		

19	PB165800BS	LCS800	LCS	12/21/24 17:42		Jaswal	OK
20	PB165755BL	PBS755	MB	12/21/24 17:46	NOT USE	Jaswal	Not Ok
21	PB165755BS	LCS755	LCS	12/21/24 17:49	NOT USE	Jaswal	Not Ok
22	P5248-01	MJNKD0	SAM	12/21/24 17:53	As high	Jaswal	Dilution
23	P5248-02	MJNKD0D	DUP	12/21/24 17:56	As high	Jaswal	Dilution
24	P5248-01L	MJNKD0L	SD	12/21/24 17:59	As high	Jaswal	Dilution
25	P5248-03	MJNKD0S	MS	12/21/24 18:02	As high	Jaswal	Dilution
26	P5249-01	MJNKG0	SAM	12/21/24 18:05		Jaswal	OK
27	P5249-02	MJNKG0D	DUP	12/21/24 18:08		Jaswal	OK
28	P5249-01L	MJNKG0L	SD	12/21/24 18:11		Jaswal	OK
29	P5249-03	MJNKG0S	MS	12/21/24 18:15		Jaswal	OK
30	P5272-04	MJNKG0	SAM	12/21/24 18:18		Jaswal	OK
31	P5272-05	MJNKG0D	DUP	12/21/24 18:21		Jaswal	OK
32	P5272-04L	MJNKG0L	SD	12/21/24 18:24		Jaswal	OK
33	P5272-06	MJNKG0S	MS	12/21/24 18:27		Jaswal	OK
34	P5273-01	MJNKH1	SAM	12/21/24 18:30		Jaswal	OK
35	CCV038	CCV038	CCV	12/21/24 18:33		Jaswal	OK
36	CCB038	CCB038	CCB	12/21/24 18:39	Inst. paused for review	Jaswal	OK
37	P5273-02	MJNKH1D	DUP	12/21/24 18:43		Jaswal	OK
38	P5273-01L	MJNKH1L	SD	12/21/24 18:46		Jaswal	OK

Instrument ID: P7

Daily Analysis Runlog For Sequence/QC Batch ID # LB134060

Review By	Mohan Bera	Review On	12/24/2024 3:52:41 AM
Supervise By	Sarabjit Jaswal	Supervise On	12/24/2024 3:55:48 AM
STD. NAME	STD REF.#		
ICAL Standard	MP83619,MP83628,MP83627,MP83625,MP83623,MP83622,MP83621,MP83620,MP83636		
ICV Standard	MP83629		
CCV Standard	MP83632		
ICSA Standard	MP83630,MP83631		
CRI Standard			
LCS Standard	MP83669		
Chk Standard	MP83635,MP83634		

39	P5250-06	MJNBZ2	SAM	12/21/24 18:49	NOT USE	Jaswal	Not Ok
40	P5250-07	MJNBZ2D	DUP	12/21/24 18:52	NOT USE	Jaswal	Not Ok
41	P5250-06L	MJNBZ2L	SD	12/21/24 18:55	NOT USE	Jaswal	Not Ok
42	P5250-08	MJNBZ2S	MS	12/21/24 18:58	NOT USE	Jaswal	Not Ok
43	P5255-02	MJNL72	SAM	12/21/24 19:02	NOT USE	Jaswal	Not Ok
44	P5255-03	MJNL72D	DUP	12/21/24 19:05	NOT USE	Jaswal	Not Ok
45	P5255-02L	MJNL72L	SD	12/21/24 19:08	NOT USE	Jaswal	Not Ok
46	P5255-04	MJNL72S	MS	12/21/24 19:11	NOT USE	Jaswal	Not Ok
47	P5256-01	MJNL92	SAM	12/21/24 19:14	NOT USE	Jaswal	Not Ok
48	P5256-02	MJNL92D	DUP	12/21/24 19:17	NOT USE	Jaswal	Not Ok
49	P5256-01L	MJNL92L	SD	12/21/24 19:20	NOT USE	Jaswal	Not Ok
50	P5256-03	MJNL92S	MS	12/21/24 19:23	NOT USE	Jaswal	Not Ok
51	P5273-03	MJNKH1S	MS	12/21/24 19:27		Jaswal	OK
52	P5248-04	MJNKD1	SAM	12/21/24 19:30		Jaswal	OK
53	P5248-05	MJNKE0	SAM	12/21/24 19:33		Jaswal	OK
54	P5248-06	MJNKE1	SAM	12/21/24 19:36		Jaswal	OK
55	P5248-07	MJNKE2	SAM	12/21/24 19:39		Jaswal	OK
56	P5248-08	MJNKF0	SAM	12/21/24 19:42		Jaswal	OK
57	P5248-09	MJNKF1	SAM	12/21/24 19:45		Jaswal	OK
58	P5248-10	MJNKG1	SAM	12/21/24 19:48		Jaswal	OK

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ICSA Standard	MP83630,MP83631		
CRI Standard			
LCS Standard	MP83669		
Chk Standard	MP83635,MP83634		

59	P5248-11	MJNKG2	SAM	12/21/24 19:52		Jaswal	OK
60	P5248-12	MJNLH6	SAM	12/21/24 19:55	As high	Jaswal	Dilution
61	P5248-13	MJNLH7	SAM	12/21/24 19:58		Jaswal	OK
62	CCV039	CCV039	CCV	12/21/24 20:01		Jaswal	OK
63	CCB039	CCB039	CCB	12/21/24 20:04		Jaswal	OK
64	P5248-14	MJNLH8	SAM	12/21/24 20:07		Jaswal	OK
65	P5272-01	MJNKG6	SAM	12/21/24 20:10		Jaswal	OK
66	P5272-02	MJNKG7	SAM	12/21/24 20:13		Jaswal	OK
67	P5272-03	MJNKG8	SAM	12/21/24 20:16		Jaswal	OK
68	P5272-07	MJNKK0	SAM	12/21/24 20:19		Jaswal	OK
69	P5272-08	MJNKK1	SAM	12/21/24 20:22		Jaswal	OK
70	P5272-09	MJNKK2	SAM	12/21/24 20:25		Jaswal	OK
71	P5250-01	MJNBZ1	SAM	12/21/24 20:28	NOT USE	Jaswal	Not Ok
72	P5250-02	MJNBZ3	SAM	12/21/24 20:32	NOT USE	Jaswal	Not Ok
73	P5250-03	MJNBZ4	SAM	12/21/24 20:35	NOT USE	Jaswal	Not Ok
74	P5250-04	MJNBZ7	SAM	12/21/24 20:38	NOT USE	Jaswal	Not Ok
75	P5250-05	MJNBZ8	SAM	12/21/24 20:41	NOT USE	Jaswal	Not Ok
76	P5255-01	MJNL27	SAM	12/21/24 20:44	NOT USE	Jaswal	Not Ok
77	P5255-05	MJNL93	SAM	12/21/24 20:48	NOT USE	Jaswal	Not Ok
78	P5255-06	MJNL94	SAM	12/21/24 20:51	NOT USE	Jaswal	Not Ok

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CCV Standard	MP83632
ICSA Standard	MP83630,MP83631
CRI Standard	
LCS Standard	MP83669
Chk Standard	MP83635,MP83634

79	CCV040	CCV040	CCV	12/21/24 20:54		Jaswal	OK
80	CCB040	CCB040	CCB	12/21/24 20:56		Jaswal	OK