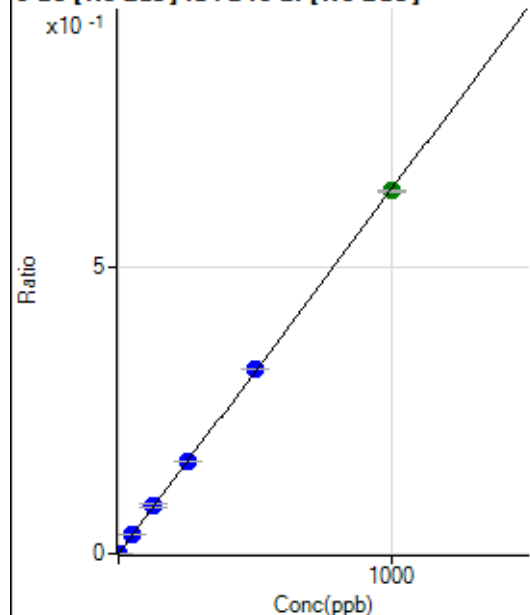


Calibration for 003CALB.d

Batch Folder: D:\ICP-MS Data\P7102119MS .b\
 Analysis File: P7102119MS .batch.bin
 DA Date-Time: 2019-10-21 23:49:12
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-10-21 11:49:26
2	004CALS.d	S01	2019-10-21 11:52:59
3	005CALS.d	S02	2019-10-21 11:57:55
4	006CALS.d	S03	2019-10-21 12:01:49
5	007CALS.d	S04	2019-10-21 12:05:57
6	008CALS.d	S05	2019-10-21 12:09:44
7	009CALS.d	S06	2019-10-21 12:13:29
8	010CALS.d	S07	2019-10-21 12:17:12
9	011CALS.d	S08	2019-10-21 12:20:57

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-391.89	-0.0001	P	-6.9
2	☐	0.100	0.095	21.05	0.0000	P	393.
3	☐	1.000	0.956	3794.58	0.0006	P	2.2
4	☐	50.000	51.566	224654.01	0.0328	P	0.4
5	☐	125.000	131.917	551943.06	0.0840	P	4.1
6	☐	250.000	252.137	1068925.58	0.1606	P	0.1
7	☐	500.000	505.437	2145430.89	0.3219	P	0.2
8	☐	1000.000	995.804	4169788.88	0.6343	A	0.7
9	☐			60.67	0.0000	P	19.5

$$y = 6.3705E-004 * x - 5.7251E-005$$

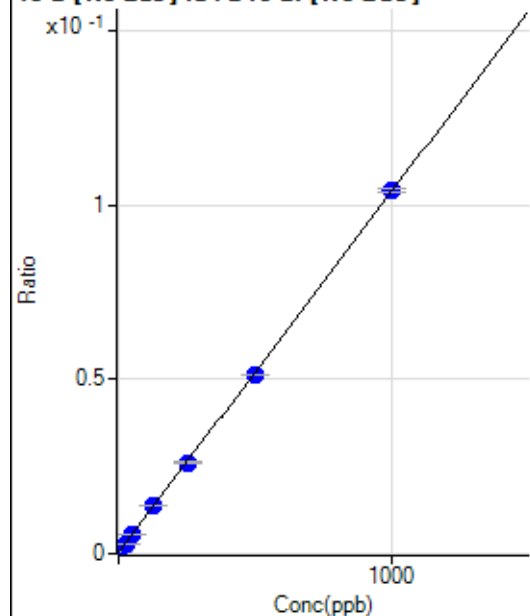
$$R = 1.0000$$

$$DL = 0.01848$$

$$BEC = -0.08987$$

Weight: <None>

Min Conc: 0

10 B [No Gas] ISTD:6 Li [No Gas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2105.78	0.0003	P	4.7
2	☐	2.500	2.466	3833.96	0.0006	P	1.7
3	☐	25.000	24.158	19293.49	0.0028	P	1.6
4	☐	50.000	50.462	37834.67	0.0055	P	2.5
5	☐	125.000	131.559	91454.74	0.0139	P	1.8
6	☐	250.000	249.646	173823.08	0.0261	P	1.2
7	☐	500.000	493.065	341682.40	0.0513	P	0.8
8	☐	1000.000	1002.734	683327.81	0.1040	P	1.0
9	☐			32647.53	0.0052	P	5.1

$$y = 1.0336E-004 * x + 3.0748E-004$$

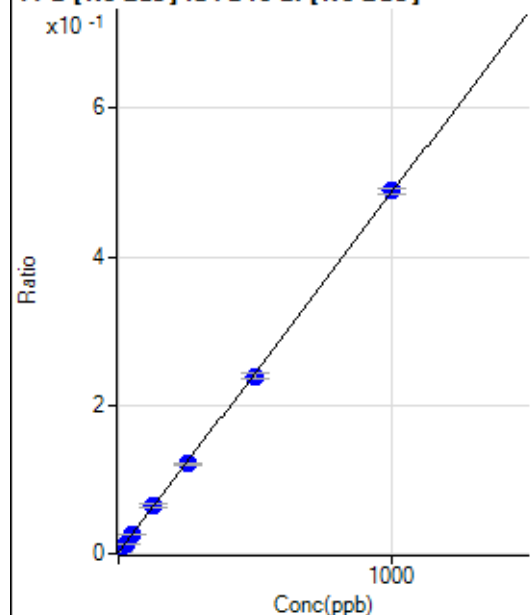
$$R = 0.9999$$

$$DL = 0.4187$$

$$BEC = 2.975$$

Weight: <None>

Min Conc: 0

11 B [No Gas] ISTD:6 Li [No Gas]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9784.06	0.0014	P	1.7
2	☐	2.500	2.623	18406.41	0.0027	P	1.4
3	☐	25.000	24.656	92064.10	0.0134	P	1.2
4	☐	50.000	51.407	180551.71	0.0264	P	1.7
5	☐	125.000	130.573	425525.49	0.0647	P	4.6
6	☐	250.000	245.570	802110.21	0.1205	P	1.6
7	☐	500.000	490.712	1595104.29	0.2393	P	2.6
8	☐	1000.000	1004.993	3212406.88	0.4887	P	1.9
9	☐			152841.47	0.0241	P	6.9

$$y = 4.8484\text{E-}004 * x + 0.0014$$

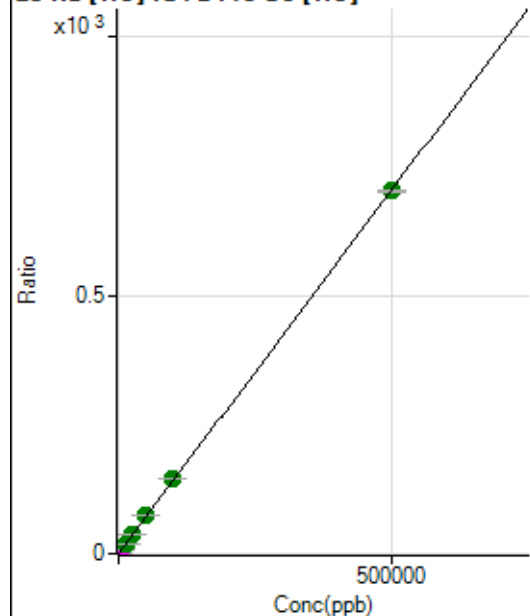
$$R = 0.9999$$

$$DL = 0.1533$$

$$BEC = 2.946$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9953.68	0.0178	P	0.9
2	☐	50.000	52.783	52412.06	0.0920	P	0.7
3	☐	500.000	523.885	424422.72	0.7547	P	1.3
4	☐	5000.000	5321.772	4189352.65	7.5036	M	1.9
5	☐	12500.000	13302.903	10225796.24	18.7303	A	0.5
6	☐	25000.000	26019.294	19910266.94	36.6177	A	0.9
7	☐	50000.000	52050.778	40833070.71	73.2348	A	0.8
8	☐	100000.00	103124.43	84162884.52	145.0773	A	1.2
9	☐	500000.00	499095.75	410927656.4	702.0683	A	0.8

$$y = 0.0014 * x + 0.0178$$

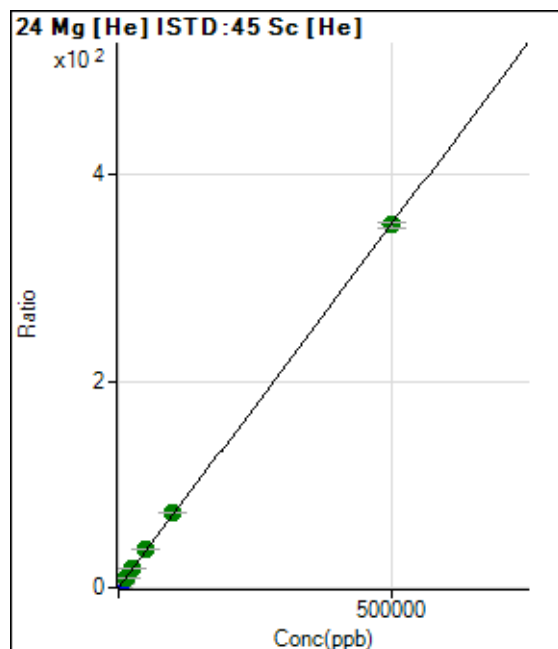
$$R = 1.0000$$

$$DL = 0.3523$$

$$BEC = 12.65$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	169.45	0.0003	P	15.6
2	☐	50.000	53.881	21783.21	0.0383	P	0.3
3	☐	500.000	549.918	217974.29	0.3876	P	2.0
4	☐	5000.000	5387.607	2118867.49	3.7951	P	1.9
5	☐	12500.000	13436.281	5166953.20	9.4643	A	0.8
6	☐	25000.000	26304.902	10075014.72	18.5285	A	0.3
7	☐	50000.000	52480.229	20611450.29	36.9655	A	0.2
8	☐	100000.00	103122.58	42138448.51	72.6362	A	1.0
9	☐	500000.00	499034.88	205749633.7	351.5028	A	1.4

$$y = 7.0436\text{E-}004 * x + 3.0294\text{E-}004$$

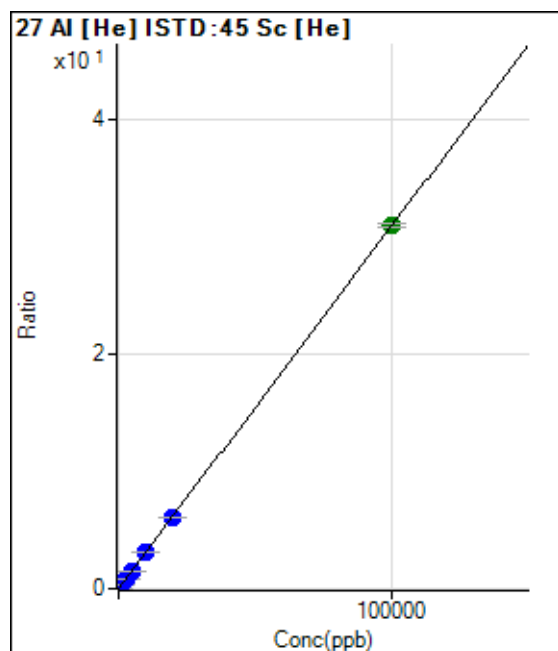
$$R = 1.0000$$

$$DL = 0.2012$$

$$BEC = 0.4301$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	41.67	0.0001	P	111.
2	☐	2.000	2.283	444.47	0.0008	P	23.7
3	☐	20.000	20.111	3539.48	0.0063	P	3.6
4	☐	1000.000	1015.461	175423.77	0.3142	P	2.5
5	☐	2500.000	2542.287	429411.03	0.7866	P	1.4
6	☐	5000.000	4960.297	834506.23	1.5346	P	1.1
7	☐	10000.000	9927.207	1712439.64	3.0712	P	0.5
8	☐	20000.000	19670.296	3530269.00	6.0854	P	1.2
9	☐	100000.00	100073.99	18120779.75	30.9597	A	1.1

$$y = 3.0937\text{E-}004 * x + 7.4286\text{E-}005$$

$$R = 1.0000$$

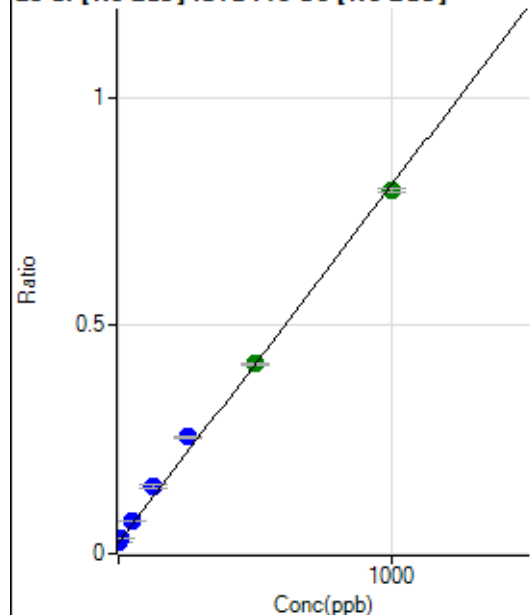
$$DL = 0.8038$$

$$BEC = 0.2401$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	340658.21	0.0241	P	3.5
2	☐	1.000	1.528	357327.39	0.0253	P	2.1
3	☐	10.000	11.395	463203.68	0.0330	P	0.3
4	☐	50.000	59.380	984548.98	0.0707	P	0.8
5	☐	125.000	157.379	1963885.96	0.1475	P	3.7
6	☐	250.000	295.178	3449323.34	0.2556	P	1.3
7	☐	500.000	499.923	5718031.42	0.4161	A	1.1
8	☐	1000.000	984.213	11036113.35	0.7959	A	1.1
9	☐			732417.75	0.0524	P	1.1

$$y = 7.8417\text{E-}004 * x + 0.0241$$

$$R = 0.9986$$

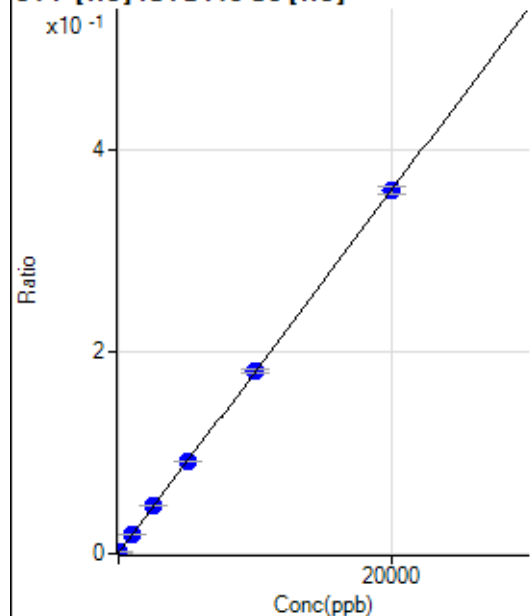
$$DL = 3.253$$

$$BEC = 30.74$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-22.468	105.56	0.0002	P	5.2
2	☐	0.000	-12.602	208.34	0.0004	P	21.0
3	☐	0.000	35.070	686.15	0.0012	P	7.4
4	☐	1000.000	1041.101	10759.87	0.0193	P	3.3
5	☐	2500.000	2616.939	25954.03	0.0475	P	1.5
6	☐	5000.000	5062.590	49711.69	0.0914	P	0.9
7	☐	10000.000	10001.813	100372.80	0.1800	P	2.0
8	☐	20000.000	19966.774	208135.64	0.3588	P	2.2
9	☐			283.35	0.0005	P	21.6

$$y = 1.7941\text{E-}005 * x + 5.9189\text{E-}004$$

$$R = 1.0000$$

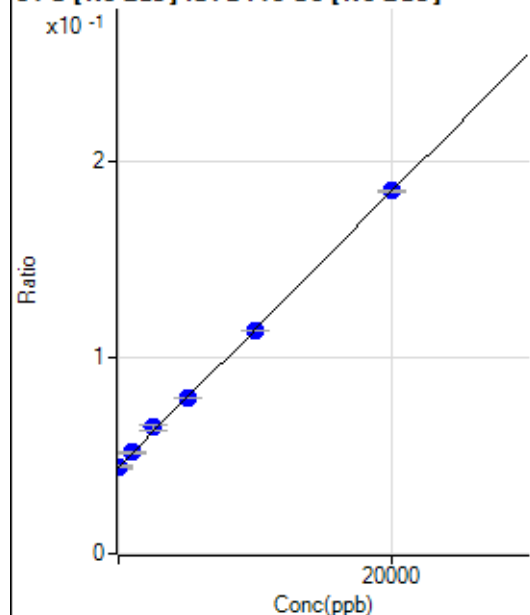
$$DL = 9.838$$

$$BEC = 32.99$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-9.711	625158.34	0.0442	P	3.3
2	☐	0.000	-29.479	622760.88	0.0441	P	1.4
3	☐	0.000	39.190	624967.97	0.0446	P	0.5
4	☐	1000.000	1058.767	720780.43	0.0517	P	1.2
5	☐	2500.000	2856.650	856552.09	0.0644	P	4.5
6	☐	5000.000	4991.016	1070796.52	0.0793	P	0.3
7	☐	10000.000	9858.653	1559648.52	0.1135	P	0.3
8	☐	20000.000	20025.400	2563389.99	0.1849	P	0.6
9	☐			524997.22	0.0375	P	0.8

$$y = 7.0193\text{E-}006 * x + 0.0443$$

$$R = 0.9998$$

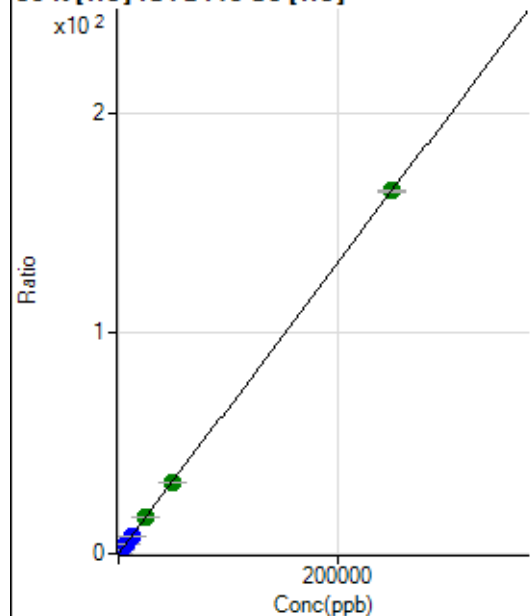
$$DL = 326.6$$

$$BEC = 6312$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29883.83	0.0534	P	4.2
2	☐	50.000	49.824	49093.27	0.0862	P	0.1
3	☐	500.000	500.903	215279.43	0.3829	P	3.0
4	☐	2500.000	2495.518	946146.52	1.6948	P	2.4
5	☐	6250.000	6290.049	2287698.29	4.1905	P	1.1
6	☐	12500.000	12290.556	4424614.07	8.1370	P	0.5
7	☐	25000.000	24538.356	9028625.98	16.1925	A	0.6
8	☐	50000.000	49055.572	18748850.59	32.3176	A	0.8
9	☐	250000.00	250244.56	96369563.96	164.6410	A	0.3

$$y = 6.5771\text{E-}004 * x + 0.0534$$

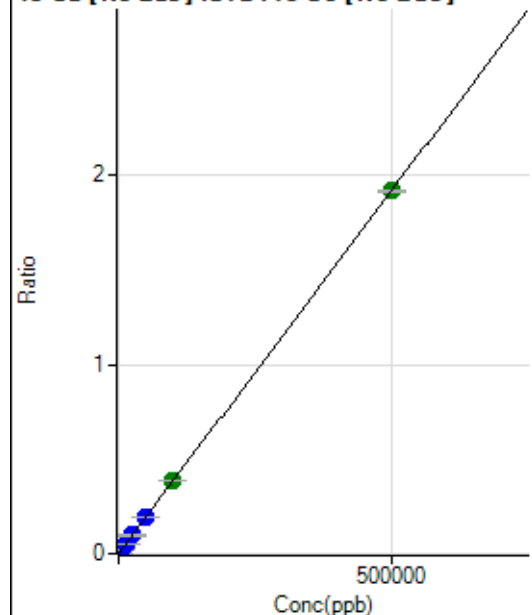
$$R = 1.0000$$

$$DL = 10.3$$

$$BEC = 81.26$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	277.79	0.0000	P	17.0
2	☐	50.000	48.831	2925.40	0.0002	P	1.9
3	☐	500.000	512.686	27877.06	0.0020	P	2.9
4	☐	5000.000	5097.451	273013.84	0.0196	P	1.3
5	☐	12500.000	13200.568	674858.89	0.0507	P	5.3
6	☐	25000.000	25271.877	1310225.04	0.0971	P	1.0
7	☐	50000.000	50504.905	2665602.62	0.1940	P	0.6
8	☐	100000.00	100046.75	5328334.75	0.3843	A	0.1
9	☐	500000.00	499908.06	26862185.32	1.9200	A	0.5

$$y = 3.8407\text{E-}006 * x + 1.9585\text{E-}005$$

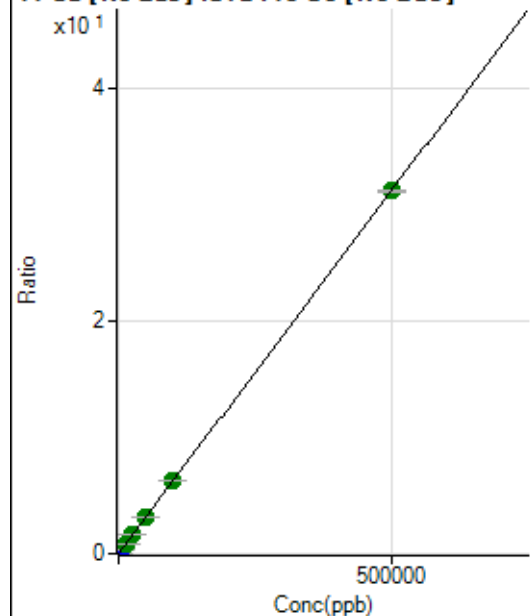
$$R = 1.0000$$

$$DL = 2.603$$

$$BEC = 5.099$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	17334.01	0.0012	P	1.1
2	☐	50.000	52.644	63680.95	0.0045	P	0.8
3	☐	500.000	508.343	461567.13	0.0329	P	0.3
4	☐	5000.000	5124.032	4468194.15	0.3208	P	1.7
5	☐	12500.000	13318.262	11069695.56	0.8317	A	4.4
6	☐	25000.000	25291.012	21301318.36	1.5783	A	0.9
7	☐	50000.000	50656.536	43420596.46	3.1601	A	0.2
8	☐	100000.00	100448.01	86871001.94	6.2650	A	0.3
9	☐	500000.00	499808.48	436067098.6	31.1684	A	0.4

$$y = 6.2358\text{E-}005 * x + 0.0012$$

$$R = 1.0000$$

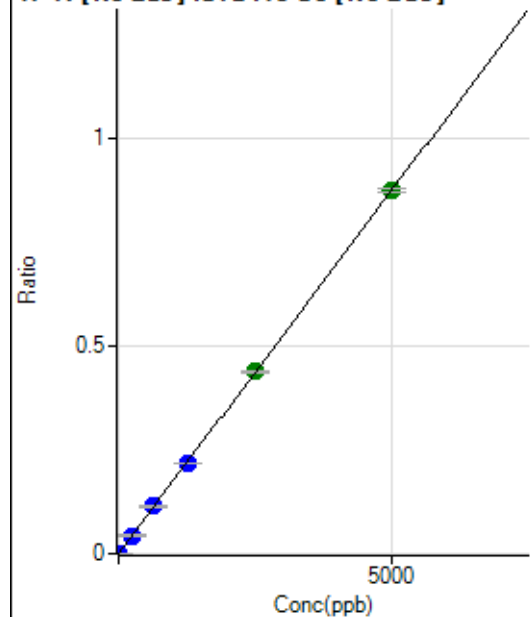
$$DL = 0.6777$$

$$BEC = 19.66$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.12	0.0000	P	23.0
2	☐	0.500	0.530	1497.37	0.0001	P	3.0
3	☐	5.000	5.150	12831.17	0.0009	P	1.8
4	☐	250.000	251.190	613078.59	0.0440	P	1.5
5	☐	625.000	651.166	1517958.31	0.1141	P	4.7
6	☐	1250.000	1236.945	2924168.01	0.2167	P	0.5
7	☐	2500.000	2505.099	6028999.18	0.4388	A	0.5
8	☐	5000.000	4997.384	12136657.04	0.8753	A	1.1
9	☐			3083.78	0.0002	P	2.8

$$y = 1.7515\text{E-}004 * x + 1.3211\text{E-}005$$

$$R = 1.0000$$

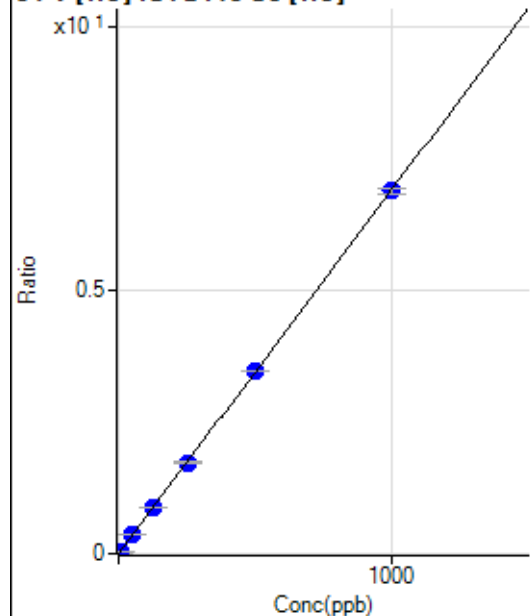
$$DL = 0.05205$$

$$BEC = 0.07543$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20.00	0.0000	P	43.4
2	☐	0.500	0.564	2233.54	0.0039	P	6.6
3	☐	5.000	5.381	20872.75	0.0371	P	2.5
4	☐	50.000	50.949	196047.36	0.3512	P	2.2
5	☐	125.000	127.915	481298.04	0.8816	P	0.3
6	☐	250.000	250.562	938932.63	1.7268	P	0.6
7	☐	500.000	503.018	1932916.05	3.4666	P	0.4
8	☐	1000.000	997.937	3989665.56	6.8774	P	1.5
9	☐			1551.22	0.0027	P	9.6

$$y = 0.0069 * x + 3.5688\text{E-}005$$

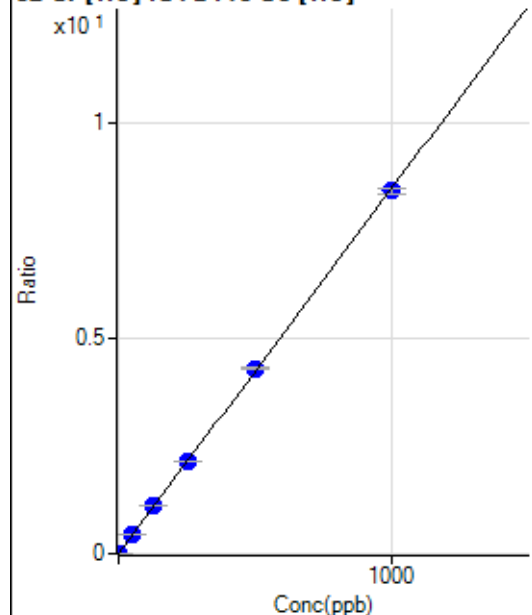
$$R = 1.0000$$

$$DL = 0.006737$$

$$BEC = 0.005178$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	872.26	0.0016	P	4.9
2	☐	0.200	0.205	1876.82	0.0033	P	3.5
3	☐	2.000	2.037	10582.84	0.0188	P	4.2
4	☐	50.000	52.323	248493.79	0.4451	P	1.5
5	☐	125.000	130.720	605775.43	1.1096	P	0.5
6	☐	250.000	255.113	1176685.27	2.1640	P	0.2
7	☐	500.000	508.143	2402432.22	4.3088	P	0.7
8	☐	1000.000	993.819	4887757.53	8.4255	P	1.4
9	☐			180182.37	0.3078	P	0.4

$$y = 0.0085 * x + 0.0016$$

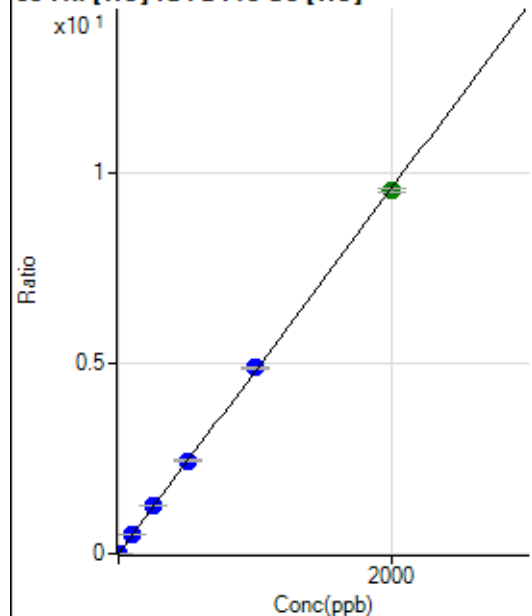
$$R = 0.9999$$

$$DL = 0.02681$$

$$BEC = 0.184$$

Weight: <None>

Min Conc: 0

55 Mn [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	55.55	0.0001	P	19.3
2	☐	0.100	0.110	357.79	0.0006	P	10.9
3	☐	1.000	1.065	2932.57	0.0052	P	4.1
4	☐	100.000	104.338	280007.29	0.5015	P	1.7
5	☐	250.000	261.655	686569.83	1.2575	P	0.2
6	☐	500.000	509.582	1331683.98	2.4490	P	0.6
7	☐	1000.000	1019.511	2731831.83	4.8996	P	0.8
8	☐	2000.000	1986.175	5537556.44	9.5452	A	0.9
9	☐			21589.33	0.0369	P	1.2

$$y = 0.0048 * x + 9.9339E-005$$

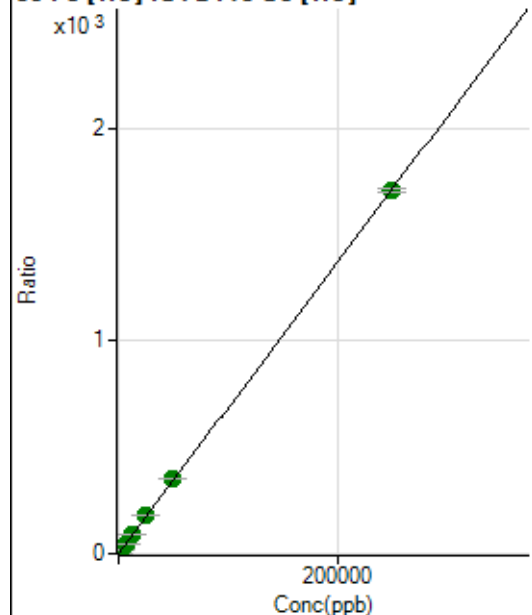
$$R = 0.9999$$

$$DL = 0.01195$$

$$BEC = 0.02067$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	6210.74	0.0111	P	3.4
2	☐	5.000	5.724	28580.26	0.0502	P	2.8
3	☐	50.000	56.908	224709.06	0.3996	P	2.4
4	☐	2500.000	2717.991	10366764.35	18.5681	A	1.8
5	☐	6250.000	6829.638	25462252.89	46.6401	A	1.1
6	☐	12500.000	13226.154	49107119.62	90.3120	A	0.3
7	☐	25000.000	26271.596	100015652.2	179.3791	A	0.7
8	☐	50000.000	51471.980	203875569.3	351.4334	A	1.3
9	☐	250000.00	249525.46	997167592.6	1,703.633	A	1.1

$$y = 0.0068 * x + 0.0111$$

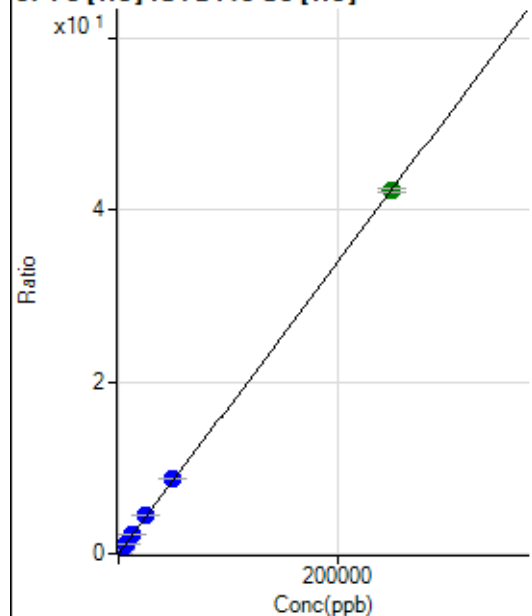
$$R = 1.0000$$

$$DL = 0.1648$$

$$BEC = 1.627$$

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	337.05	0.0006	P	3.3
2	☐	5.000	6.302	950.05	0.0017	P	12.1
3	☐	50.000	59.147	5962.47	0.0106	P	1.8
4	☐	2500.000	2683.957	253681.24	0.4544	P	2.4
5	☐	6250.000	6774.447	625648.73	1.1460	P	1.0
6	☐	12500.000	13140.193	1208393.26	2.2223	P	0.2
7	☐	25000.000	26162.829	2466716.52	4.4242	P	1.3
8	☐	50000.000	51371.166	5039416.72	8.6864	P	0.5
9	☐	250000.00	249562.52	24699427.87	42.1963	A	1.0

$$y = 1.6908E-004 * x + 6.0278E-004$$

$$R = 1.0000$$

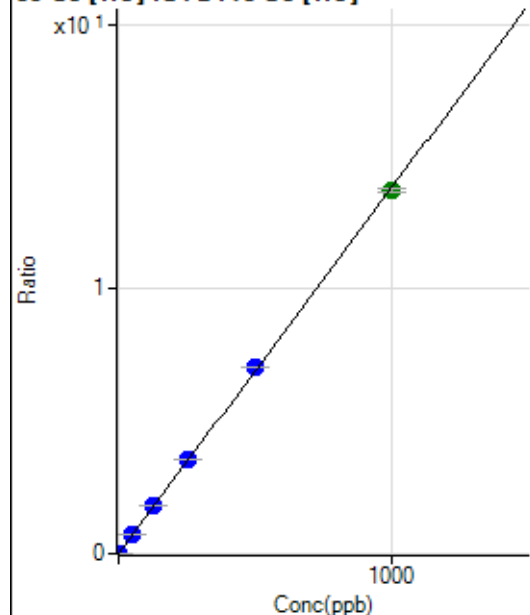
$$DL = 0.3524$$

$$BEC = 3.565$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	145.56	0.0003	P	24.5
2	☐	0.100	0.101	942.27	0.0017	P	3.4
3	☐	1.000	1.063	8401.43	0.0149	P	3.8
4	☐	50.000	53.108	409579.64	0.7336	P	2.3
5	☐	125.000	132.805	1001372.37	1.8342	P	0.6
6	☐	250.000	257.625	1934627.70	3.5579	P	0.2
7	☐	500.000	509.926	3926388.79	7.0420	P	0.9
8	☐	1000.000	992.000	7947262.73	13.6991	A	1.2
9	☐			16288.15	0.0278	P	0.9

$$y = 0.0138 * x + 2.5994E-004$$

$$R = 0.9999$$

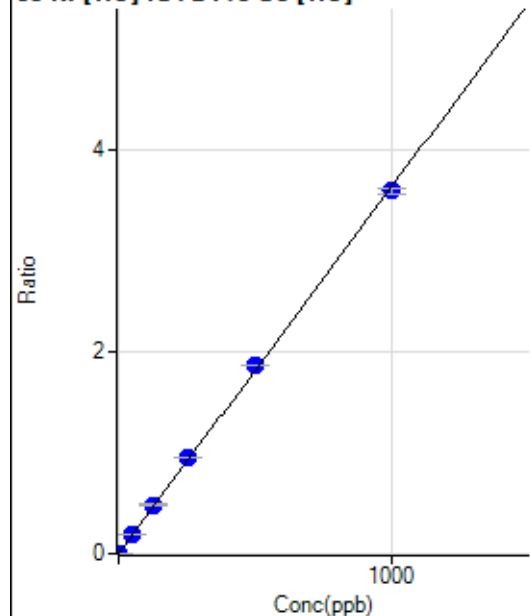
$$DL = 0.01382$$

$$BEC = 0.01882$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.89	0.0001	P	29.4
2	☐	0.100	0.129	305.56	0.0005	P	5.7
3	☐	1.000	1.085	2252.43	0.0040	P	6.3
4	☐	50.000	54.465	110392.89	0.1977	P	1.9
5	☐	125.000	133.671	264879.62	0.4852	P	0.7
6	☐	250.000	261.223	515533.36	0.9481	P	0.4
7	☐	500.000	513.385	1038846.35	1.8632	P	0.8
8	☐	1000.000	989.195	2082640.26	3.5900	P	1.4
9	☐			52857.24	0.0903	P	0.6

$$y = 0.0036 * x + 6.9429E-005$$

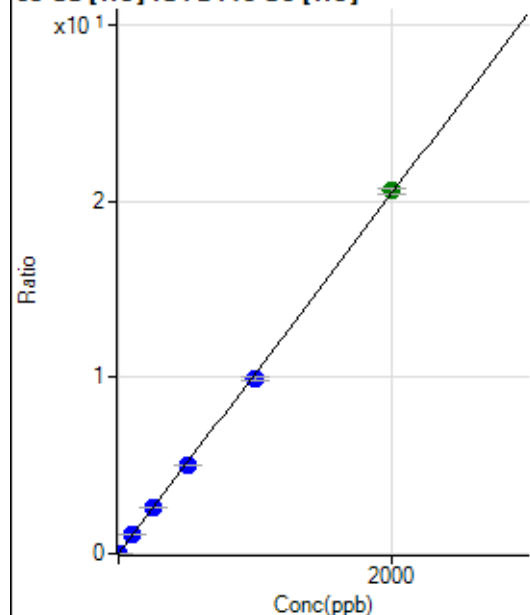
$$R = 0.9998$$

$$DL = 0.01686$$

$$BEC = 0.01913$$

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	948.94	0.0017	P	10.9
2	☐	0.200	0.203	2147.97	0.0038	P	4.7
3	☐	2.000	2.113	13102.73	0.0233	P	1.7
4	☐	100.000	102.997	588876.97	1.0547	P	1.4
5	☐	250.000	253.965	1418440.69	2.5982	P	1.1
6	☐	500.000	494.231	2748437.84	5.0545	P	0.4
7	☐	1000.000	971.684	5539851.24	9.9359	P	1.1
8	☐	2000.000	2014.955	11951464.96	20.6019	A	1.4
9	☐			20033.91	0.0342	P	0.5

$$y = 0.0102 * x + 0.0017$$

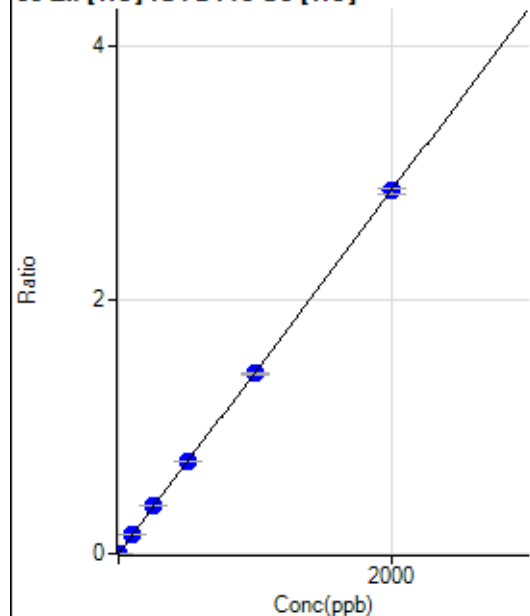
$$R = 0.9998$$

$$DL = 0.05448$$

$$BEC = 0.1659$$

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	461.13	0.0008	P	0.6
2	☒	0.200					
3	☐	2.000	2.174	2207.98	0.0039	P	3.6
4	☐	100.000	104.637	83856.11	0.1502	P	1.9
5	☐	250.000	262.218	204805.31	0.3751	P	1.1
6	☐	500.000	508.635	395241.89	0.7269	P	1.1
7	☐	1000.000	994.496	792006.88	1.4205	P	0.9
8	☐	2000.000	1998.834	1655718.40	2.8542	P	1.8
9	☐			17391.69	0.0297	P	3.7

$$y = 0.0014 * x + 8.2456E-004$$

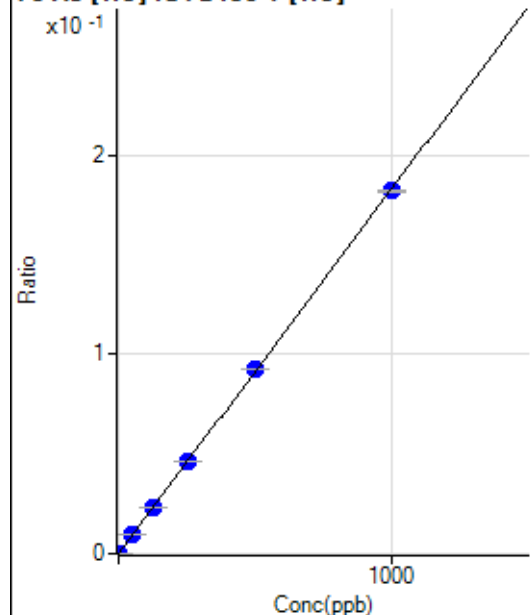
$$R = 1.0000$$

$$DL = 0.009561$$

$$BEC = 0.5776$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	8.03	0.0000	P	12.5
2	☐	0.100	0.109	62.96	0.0000	P	6.0
3	☐	1.000	1.006	508.04	0.0002	P	7.7
4	☐	50.000	51.700	25776.01	0.0095	P	2.8
5	☐	125.000	128.247	62298.09	0.0235	P	1.4
6	☐	250.000	253.223	121747.82	0.0464	P	0.5
7	☐	500.000	506.828	249004.17	0.0928	P	0.4
8	☐	1000.000	995.289	503695.71	0.1822	P	0.5
9	☐			230.25	0.0001	P	0.6

$$y = 1.8310E-004 * x + 2.9754E-006$$

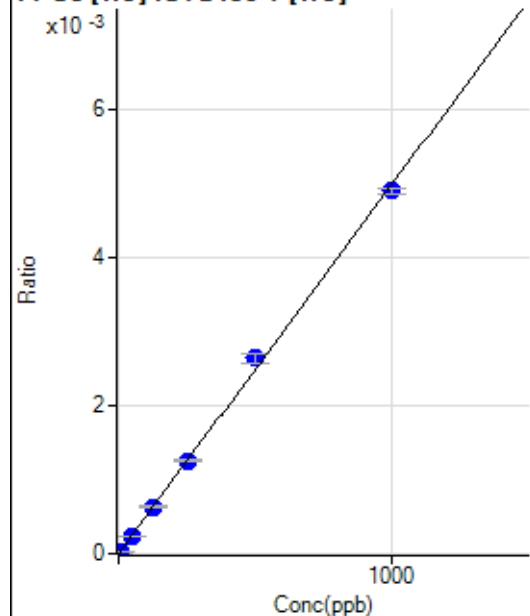
$$R = 1.0000$$

$$DL = 0.006086$$

$$BEC = 0.01625$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	0.245	3.33	0.0000	P	100.
3	☐	5.000	5.665	76.67	0.0000	P	22.5
4	☐	50.000	47.096	638.92	0.0002	P	4.8
5	☐	125.000	127.377	1684.57	0.0006	P	2.6
6	☐	250.000	252.922	3310.43	0.0013	P	2.1
7	☐	500.000	530.110	7090.72	0.0026	P	4.5
8	☐	1000.000	984.059	13558.73	0.0049	P	1.5
9	☐			13.33	0.0000	P	65.8

$$y = 4.9852E-006 * x + 0.0000E+000$$

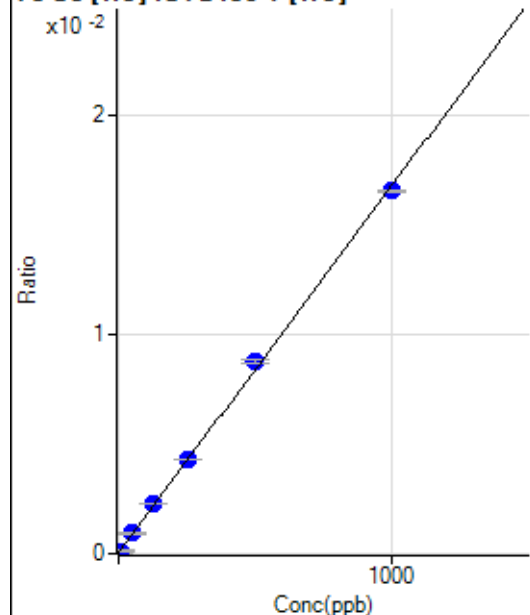
$$R = 0.9993$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	104.94	0.0000	P	11.9
2	☐	0.500	0.679	137.66	0.0001	P	7.9
3	☐	5.000	5.434	351.86	0.0001	P	12.6
4	☐	50.000	53.074	2521.23	0.0009	P	2.0
5	☐	125.000	133.435	6020.44	0.0023	P	1.4
6	☐	250.000	252.927	11203.79	0.0043	P	0.7
7	☐	500.000	522.264	23527.80	0.0088	P	1.7
8	☐	1000.000	986.926	45703.23	0.0165	P	0.7
9	☐			137.04	0.0000	P	11.2

$$y = 1.6716\text{E-}005 * x + 3.8943\text{E-}005$$

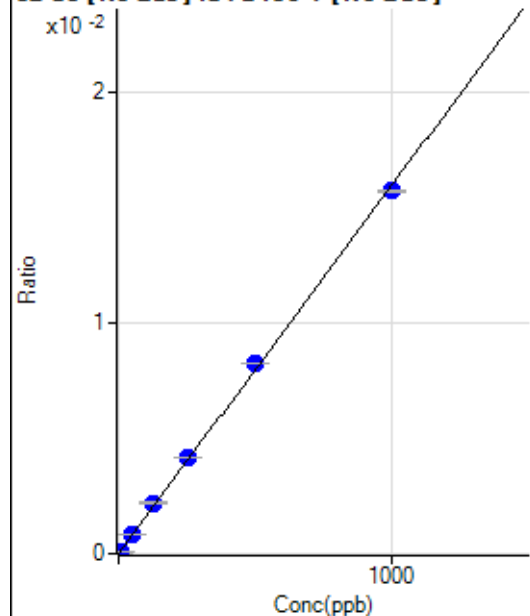
$$R = 0.9996$$

$$DL = 0.8347$$

$$BEC = 2.33$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71.84	0.0000	P	29.9
2	☐	0.500	0.610	282.45	0.0000	P	80.3
3	☐	5.000	5.921	2133.34	0.0001	P	5.1
4	☐	50.000	53.618	18605.12	0.0009	P	2.4
5	☐	125.000	137.044	45275.96	0.0022	P	3.9
6	☐	250.000	261.396	87762.68	0.0042	P	0.2
7	☐	500.000	518.554	177729.38	0.0083	P	0.3
8	☐	1000.000	986.183	338112.35	0.0157	P	0.7
9	☐			559.91	0.0000	P	11.5

$$y = 1.5908\text{E-}005 * x + 3.2867\text{E-}006$$

$$R = 0.9996$$

$$DL = 0.1854$$

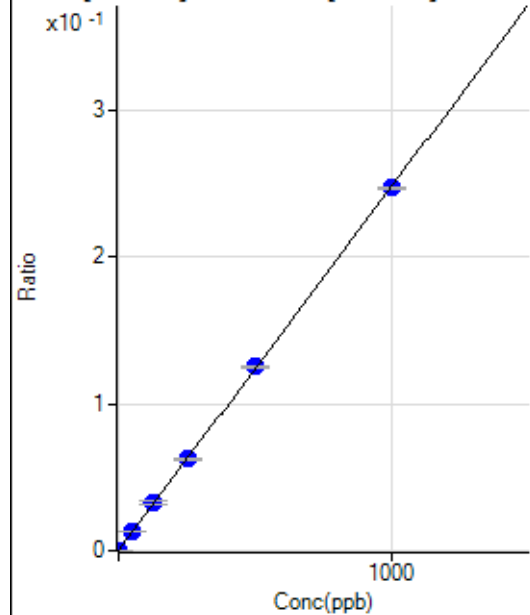
$$BEC = 0.2066$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2202.43		P	1.6
2	☐			2279.11		P	6.3
3	☐			2203.54		P	3.3
4	☐			2216.87		P	5.1
5	☐			2105.75		P	4.5
6	☐			2121.30		P	5.7
7	☐			2203.54		P	3.0
8	☐			2259.10		P	2.1
9	☐			2220.21		P	3.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	3444.98	0.0002	P	4.4
2	☐	0.100	0.110	4028.53	0.0002	P	1.7
3	☐	1.000	0.987	8805.88	0.0004	P	1.6
4	☐	50.000	50.781	276523.29	0.0127	P	1.0
5	☐	125.000	131.307	676654.01	0.0326	P	5.6
6	☐	250.000	250.955	1312904.93	0.0623	P	0.6
7	☐	500.000	504.639	2692831.59	0.1250	P	1.1
8	☐	1000.000	996.615	5317279.98	0.2468	P	0.4
9	☐			25376.04	0.0012	P	0.7

$$y = 2.4744\text{E-}004 * x + 1.5819\text{E-}004$$

$$R = 1.0000$$

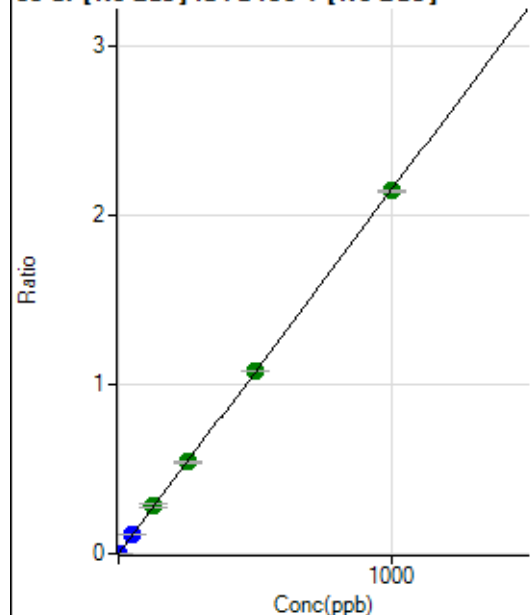
$$DL = 0.08359$$

$$BEC = 0.6393$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	211.12	0.0000	P	14.5
2	☐	0.100	0.102	4989.98	0.0002	P	5.0
3	☐	1.000	1.010	47666.28	0.0022	P	0.9
4	☐	50.000	50.928	2377147.47	0.1094	P	1.0
5	☐	125.000	131.719	5863125.39	0.2829	A	5.4
6	☐	250.000	251.158	11375071.26	0.5394	A	0.6
7	☐	500.000	503.092	23269483.33	1.0804	A	0.5
8	☐	1000.000	997.278	46149895.48	2.1417	A	0.6
9	☐			189063.41	0.0089	P	0.6

$$y = 0.0021 * x + 9.6761E-006$$

$$R = 1.0000$$

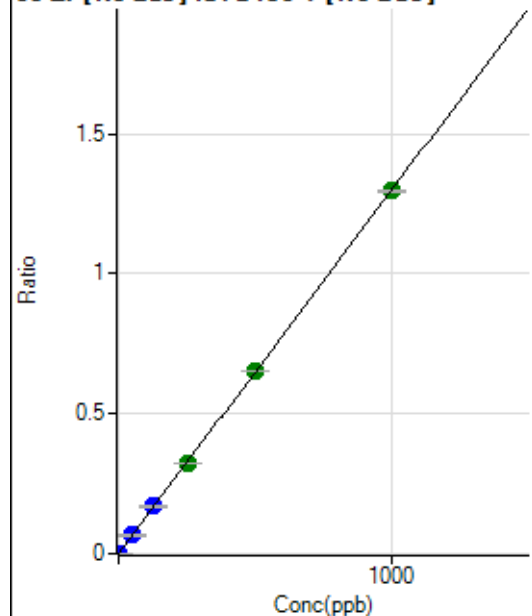
$$DL = 0.001963$$

$$BEC = 0.004506$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1325.13	0.0001	P	10.6
2	☐	0.100	0.085	3728.44	0.0002	P	3.6
3	☐	1.000	0.912	27251.77	0.0012	P	0.7
4	☐	50.000	50.233	1418941.67	0.0653	P	1.6
5	☐	125.000	130.732	3519836.54	0.1698	P	5.5
6	☐	250.000	248.897	6817795.12	0.3233	A	0.8
7	☐	500.000	502.434	14053510.73	0.6525	A	0.3
8	☐	1000.000	998.331	27937064.86	1.2965	A	0.3
9	☐			8630.72	0.0004	P	3.6

$$y = 0.0013 * x + 6.0775E-005$$

$$R = 1.0000$$

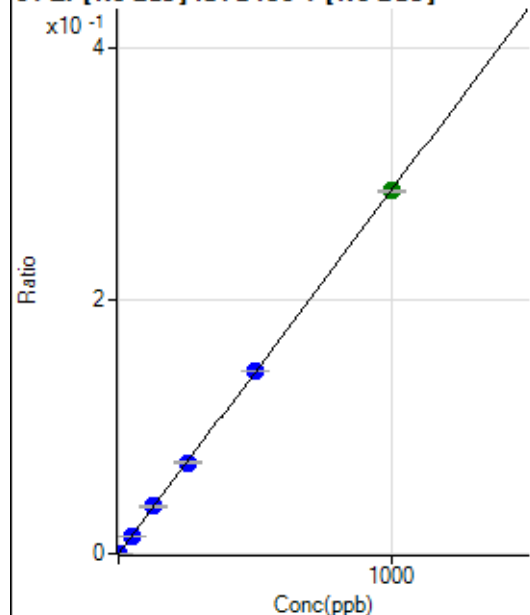
$$DL = 0.01483$$

$$BEC = 0.0468$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	258.34	0.0000	P	12.1
2	☐	0.100	0.087	802.84	0.0000	P	18.6
3	☐	1.000	0.865	5695.78	0.0003	P	5.2
4	☐	50.000	49.587	309653.40	0.0142	P	0.9
5	☐	125.000	131.180	780835.68	0.0377	P	5.1
6	☐	250.000	251.142	1520662.59	0.0721	P	1.1
7	☐	500.000	501.612	3101604.95	0.1440	P	0.6
8	☐	1000.000	998.157	6174670.23	0.2866	A	0.3
9	☐			1794.63	0.0001	P	3.4

$$y = 2.8707\text{E-}004 * x + 1.1868\text{E-}005$$

$$R = 1.0000$$

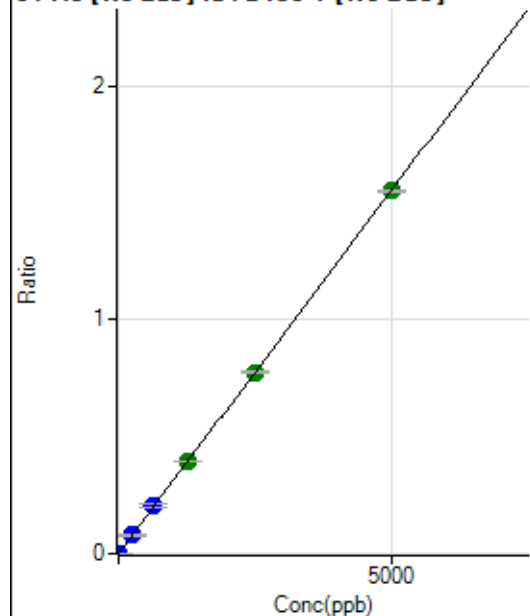
$$DL = 0.015$$

$$BEC = 0.04134$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	502.81	0.0000	P	0.8
2	☐	0.500	0.489	3800.65	0.0002	P	5.9
3	☐	5.000	4.881	33696.14	0.0015	P	0.9
4	☐	250.000	251.477	1698624.65	0.0782	P	1.5
5	☐	625.000	664.209	4278797.15	0.2064	P	5.0
6	☐	1250.000	1267.318	8304897.32	0.3938	A	1.1
7	☐	2500.000	2496.145	16704632.15	0.7756	A	0.4
8	☐	5000.000	4992.623	33428716.37	1.5514	A	0.4
9	☐			30163.41	0.0014	P	0.4

$$y = 3.1073\text{E-}004 * x + 2.3085\text{E-}005$$

$$R = 1.0000$$

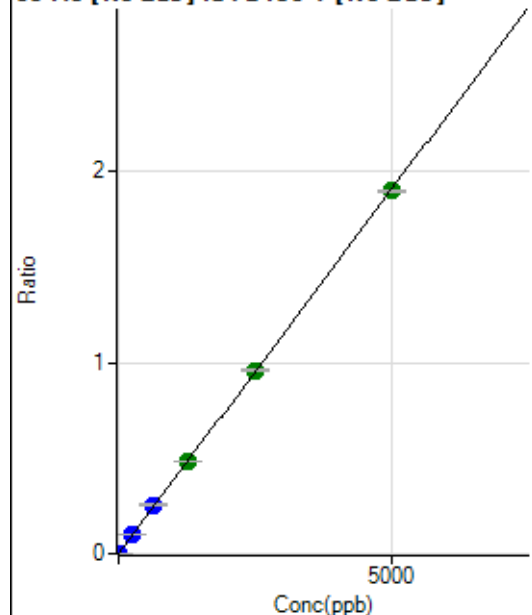
$$DL = 0.001736$$

$$BEC = 0.07429$$

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	125.01	0.0000	P	33.4
2	☐	0.500	0.507	4323.05	0.0002	P	6.1
3	☐	5.000	5.081	42528.24	0.0019	P	1.0
4	☐	250.000	252.768	2094853.56	0.0964	P	0.7
5	☐	625.000	665.887	5263539.79	0.2539	P	5.0
6	☐	1250.000	1270.755	10218838.08	0.4846	A	0.4
7	☐	2500.000	2517.997	20678208.10	0.9601	A	0.5
8	☐	5000.000	4980.564	40922669.32	1.8991	A	0.5
9	☐			45314.70	0.0021	P	1.7

$$y = 3.8131E-004 * x + 5.7164E-006$$

$$R = 1.0000$$

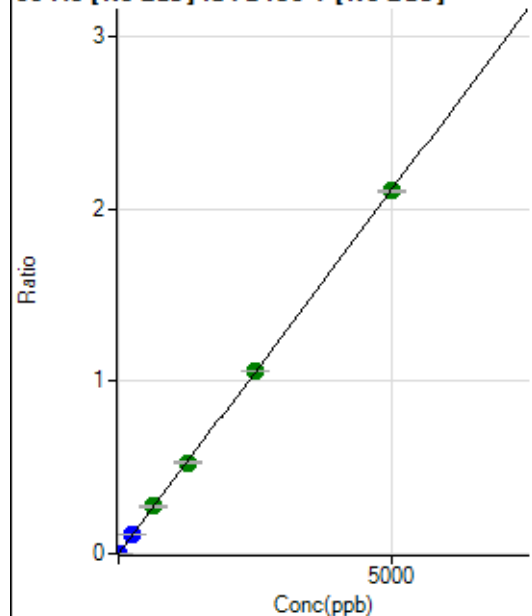
$$DL = 0.01501$$

$$BEC = 0.01499$$

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	288.91	0.0000	P	4.3
2	☐	0.500	0.528	5128.93	0.0002	P	2.8
3	☐	5.000	5.059	46972.92	0.0021	P	1.1
4	☐	250.000	253.521	2323428.68	0.1069	P	1.0
5	☐	625.000	653.240	5709234.63	0.2754	A	5.3
6	☐	1250.000	1254.698	11157006.32	0.5290	A	0.5
7	☐	2500.000	2511.192	22803221.69	1.0588	A	0.9
8	☐	5000.000	4989.524	45332723.23	2.1038	A	0.4
9	☐			68917.27	0.0032	P	0.7

$$y = 4.2164E-004 * x + 1.3266E-005$$

$$R = 1.0000$$

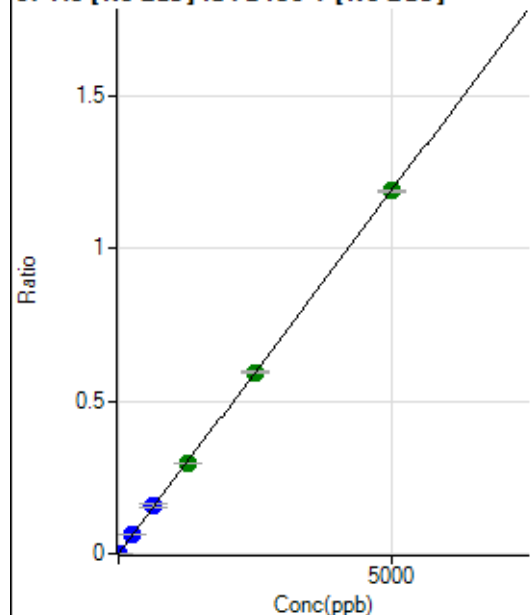
$$DL = 0.004088$$

$$BEC = 0.03146$$

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	80.56	0.0000	P	13.9
2	☐	0.500	0.508	2708.71	0.0001	P	4.7
3	☐	5.000	5.082	26558.93	0.0012	P	2.9
4	☐	250.000	253.976	1313928.01	0.0605	P	1.8
5	☐	625.000	657.527	3244090.50	0.1565	P	5.7
6	☐	1250.000	1250.812	6279534.43	0.2978	A	0.8
7	☐	2500.000	2496.812	12800785.35	0.5944	A	0.9
8	☐	5000.000	4997.126	25633612.90	1.1896	A	0.7
9	☐			27772.43	0.0013	P	2.6

$$y = 2.3806E-004 * x + 3.6921E-006$$

$$R = 1.0000$$

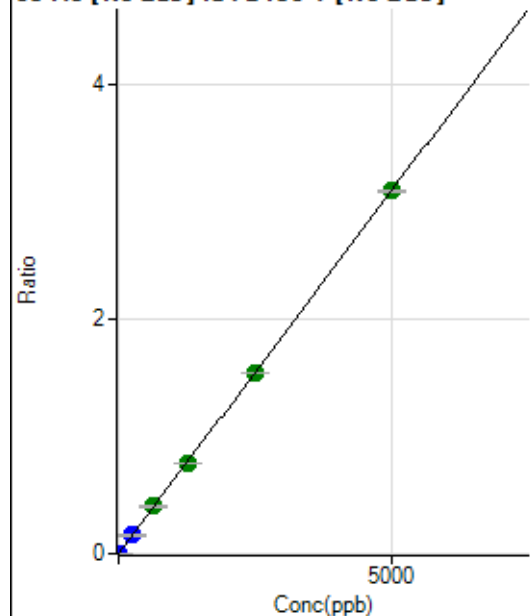
$$DL = 0.006486$$

$$BEC = 0.01551$$

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	169.45	0.0000	P	41.4
2	☐	0.500	0.521	7168.75	0.0003	P	0.5
3	☐	5.000	5.045	68484.81	0.0031	P	0.9
4	☐	250.000	253.136	3403951.16	0.1566	P	1.3
5	☐	625.000	655.233	8401846.37	0.4054	A	5.8
6	☐	1250.000	1244.393	16237227.79	0.7700	A	1.1
7	☐	2500.000	2496.488	33266906.30	1.5447	A	0.6
8	☐	5000.000	4999.222	66652270.94	3.0932	A	0.5
9	☐			71622.10	0.0034	P	0.8

$$y = 6.1873E-004 * x + 7.8100E-006$$

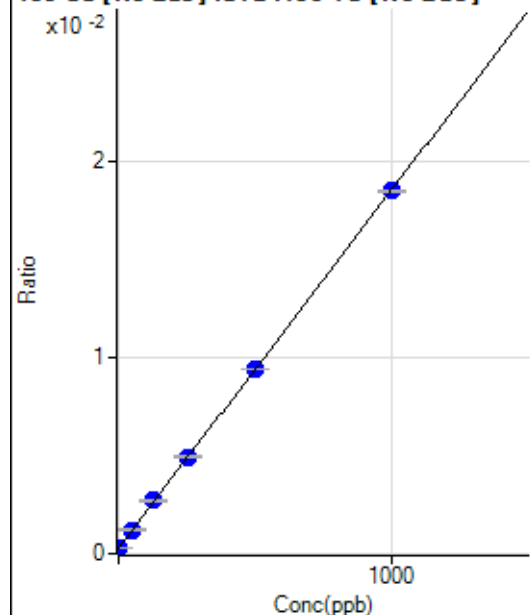
$$R = 1.0000$$

$$DL = 0.01568$$

$$BEC = 0.01262$$

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	7493.99	0.0003	P	3.6
2	☐	0.100	0.831	7949.84	0.0003	P	1.9
3	☐	1.000	1.540	8322.26	0.0003	P	0.2
4	☐	50.000	51.677	32989.86	0.0012	P	2.0
5	☐	125.000	133.059	70545.94	0.0027	P	5.6
6	☐	250.000	254.017	130337.64	0.0049	P	1.5
7	☐	500.000	500.036	254484.19	0.0094	P	0.3
8	☐	1000.000	997.886	495537.79	0.0185	P	0.4
9	☐			7694.07	0.0003	P	0.6

$$y = 1.8221\text{E-}005 * x + 2.8071\text{E-}004$$

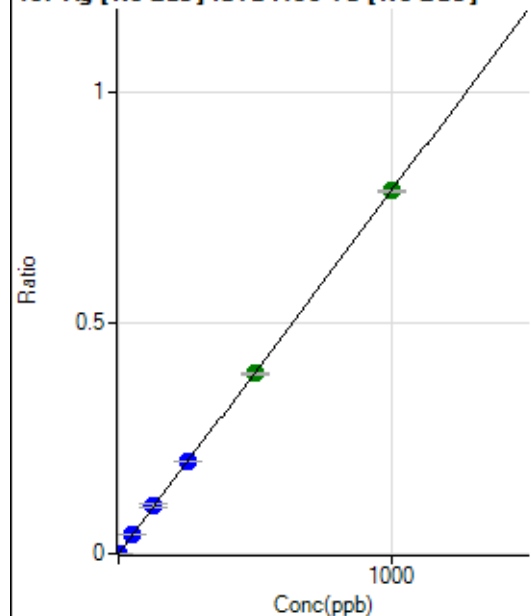
$$R = 1.0000$$

$$DL = 1.682$$

$$BEC = 15.41$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	158.34	0.0000	P	8.9
2	☐	0.100	0.101	2297.52	0.0001	P	8.5
3	☐	1.000	0.968	20685.28	0.0008	P	2.6
4	☐	50.000	52.643	1117441.02	0.0414	P	1.4
5	☐	125.000	133.128	2730105.20	0.1047	P	5.7
6	☐	250.000	253.810	5299868.39	0.1996	P	0.5
7	☐	500.000	496.496	10579163.78	0.3904	A	1.0
8	☐	1000.000	999.652	21098990.06	0.7861	A	0.9
9	☐			5126.14	0.0002	P	2.4

$$y = 7.8637\text{E-}004 * x + 5.9287\text{E-}006$$

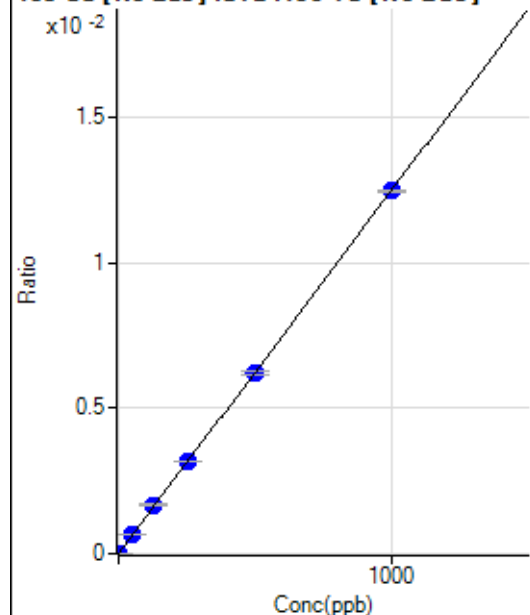
$$R = 1.0000$$

$$DL = 0.002005$$

$$BEC = 0.007539$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12.50	0.0000	P	33.6
2	☐	0.100	0.128	55.56	0.0000	P	11.4
3	☐	1.000	1.023	356.96	0.0000	P	17.7
4	☐	50.000	52.941	17857.42	0.0007	P	1.1
5	☐	125.000	133.402	43476.61	0.0017	P	4.6
6	☐	250.000	255.350	84690.96	0.0032	P	0.6
7	☐	500.000	496.977	168193.35	0.0062	P	1.5
8	☐	1000.000	998.977	334881.46	0.0125	P	0.6
9	☐			133.34	0.0000	P	25.1

$$y = 1.2489\text{E-}005 * x + 4.6886\text{E-}007$$

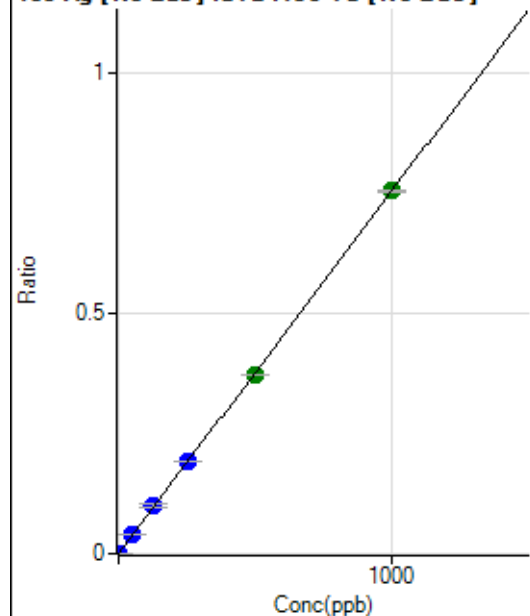
$$R = 0.9999$$

$$DL = 0.03788$$

$$BEC = 0.03754$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	108.34	0.0000	P	9.4
2	☐	0.100	0.097	2075.24	0.0001	P	13.3
3	☐	1.000	1.005	20560.26	0.0008	P	2.3
4	☐	50.000	52.644	1072842.36	0.0398	P	1.3
5	☐	125.000	133.323	2625921.93	0.1007	P	5.1
6	☐	250.000	253.721	5086682.10	0.1916	P	0.5
7	☐	500.000	492.917	10084447.45	0.3722	A	0.7
8	☐	1000.000	1001.439	20294169.90	0.7561	A	0.5
9	☐			4523.14	0.0002	P	4.0

$$y = 7.5503\text{E-}004 * x + 4.0606\text{E-}006$$

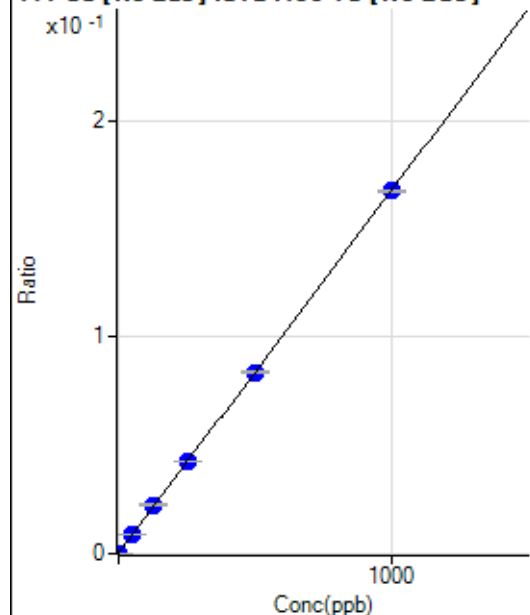
$$R = 0.9999$$

$$DL = 0.001516$$

$$BEC = 0.005378$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5274.55	0.0002	P	3.6
2	☒	0.100					
3	☐	1.000	1.069	10150.15	0.0004	P	0.7
4	☐	50.000	52.478	242418.88	0.0090	P	1.9
5	☐	125.000	132.844	585227.46	0.0224	P	4.9
6	☐	250.000	251.805	1124550.27	0.0424	P	0.4
7	☐	500.000	499.493	2271147.13	0.0838	P	0.2
8	☐	1000.000	998.698	4492605.88	0.1674	P	0.8
9	☐			6393.97	0.0002	P	0.3

$$y = 1.6741\text{E-}004 * x + 1.9757\text{E-}004$$

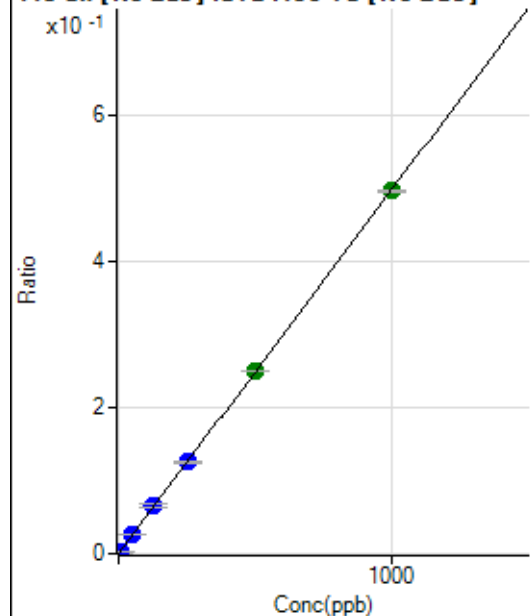
$$R = 1.0000$$

$$DL = 0.1278$$

$$BEC = 1.18$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2644.10	0.0001	P	96.3
2	☐	0.500	0.409	8108.25	0.0003	P	4.2
3	☐	5.000	5.142	71493.53	0.0027	P	0.8
4	☐	50.000	50.709	682366.47	0.0253	P	1.2
5	☐	125.000	131.776	1709480.11	0.0655	P	5.3
6	☐	250.000	251.671	3321359.86	0.1251	P	0.9
7	☐	500.000	502.128	6759964.47	0.2495	A	0.7
8	☐	1000.000	997.635	13300925.13	0.4956	A	0.7
9	☐			7027.04	0.0003	P	5.2

$$y = 4.9665\text{E-}004 * x + 9.8665\text{E-}005$$

$$R = 1.0000$$

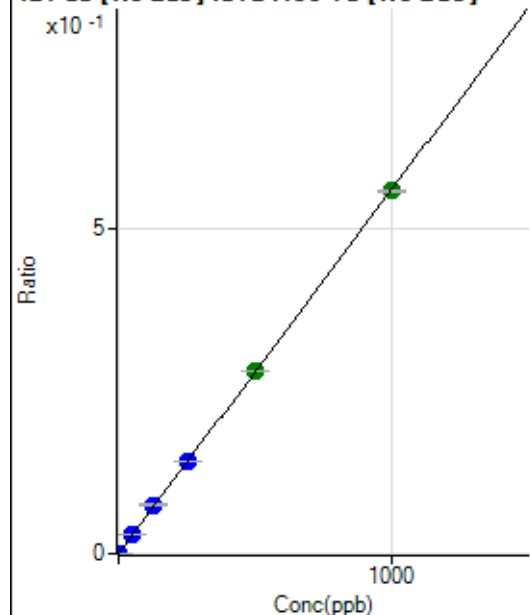
$$DL = 0.5736$$

$$BEC = 0.1987$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	100.00	0.0000	P	23.0
2	☐	0.200	0.187	2905.99	0.0001	P	8.8
3	☐	2.000	1.974	29857.84	0.0011	P	1.3
4	☐	50.000	50.560	763184.27	0.0283	P	0.6
5	☐	125.000	133.103	1941294.44	0.0744	P	5.3
6	☐	250.000	251.564	3735362.37	0.1407	P	0.2
7	☐	500.000	503.116	7623561.63	0.2813	A	0.4
8	☐	1000.000	997.010	14964130.72	0.5575	A	0.2
9	☐			14277.24	0.0006	P	4.8

$$y = 5.5920\text{E-}004 * x + 3.7502\text{E-}006$$

$$R = 1.0000$$

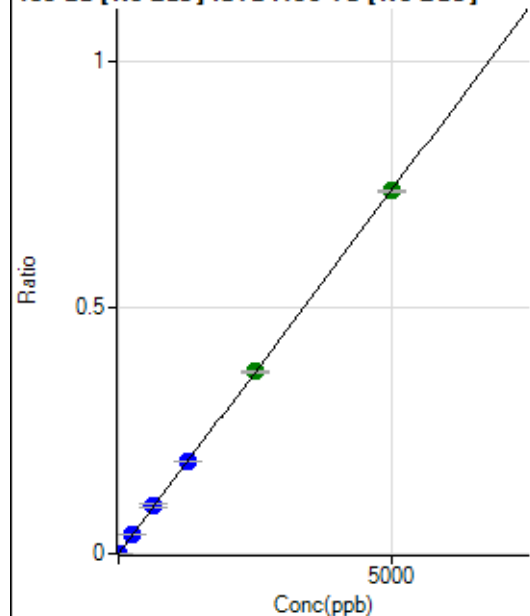
$$DL = 0.004637$$

$$BEC = 0.006706$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.67	0.0000	P	71.5
2	☐	1.000	1.033	4134.15	0.0002	P	5.0
3	☐	10.000	10.242	40738.68	0.0015	P	2.8
4	☐	250.000	253.495	1008705.81	0.0374	P	1.1
5	☐	625.000	657.297	2527299.32	0.0969	P	5.5
6	☐	1250.000	1263.894	4947747.29	0.1863	P	0.4
7	☐	2500.000	2502.416	9996667.41	0.3689	A	1.0
8	☐	5000.000	4991.106	19750094.54	0.7358	A	0.2
9	☐			3947.97	0.0002	P	6.3

$$y = 1.4743\text{E-}004 * x + 1.5757\text{E-}006$$

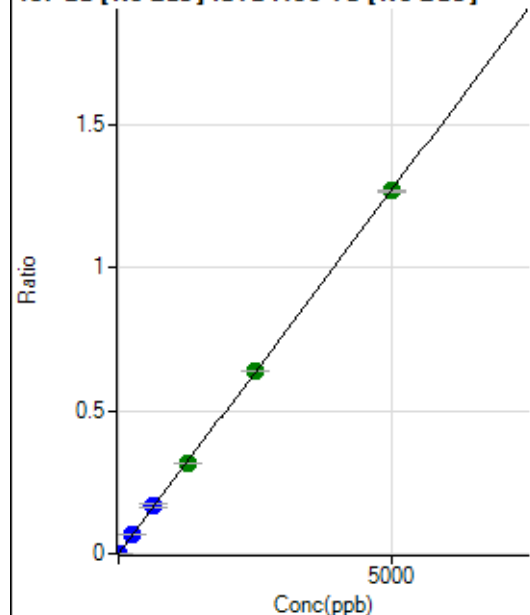
$$R = 1.0000$$

$$DL = 0.02293$$

$$BEC = 0.01069$$

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	86.11	0.0000	P	21.3
2	☐	1.000	1.124	7755.28	0.0003	P	3.0
3	☐	10.000	10.362	71023.68	0.0026	P	1.0
4	☐	250.000	254.368	1743917.27	0.0646	P	0.6
5	☐	625.000	664.312	4400797.80	0.1687	P	5.3
6	☐	1250.000	1246.217	8404837.25	0.3165	A	0.4
7	☐	2500.000	2510.192	17276393.79	0.6376	A	0.3
8	☐	5000.000	4990.716	34023485.14	1.2676	A	0.6
9	☐			6818.60	0.0003	P	3.8

$$y = 2.5400\text{E-}004 * x + 3.2294\text{E-}006$$

$$R = 1.0000$$

$$DL = 0.008114$$

$$BEC = 0.01271$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.45		P	86.6
2	☐			20.00		P	33.4
3	☐			13.33		P	50.0
4	☐			73.34		P	24.0
5	☐			195.57		P	23.2
6	☐			346.68		P	15.0
7	☐			655.59		P	8.6
8	☐			1235.67		P	7.3
9	☐			177.78		P	28.1

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	21.6
2	☐			8.89		P	43.3
3	☐			4.44		P	43.4
4	☐			7.78		P	49.5
5	☐			27.78		P	42.1
6	☐			40.00		P	38.2
7	☐			78.89		P	10.6
8	☐			117.78		P	11.8
9	☐			60.00		P	0.0

156 Dy [No Gas] No available calibration points

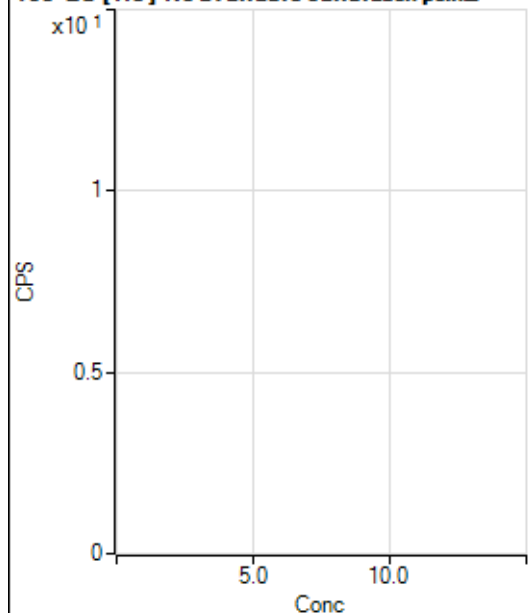
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			38.89		P	12.4
2	☐			36.11		P	53.3
3	☐			27.78		P	62.5
4	☐			63.89		P	32.8
5	☐			80.56		P	29.9
6	☐			91.67		P	9.1
7	☐			175.01		P	9.5
8	☐			297.24		P	14.4
9	☐			122.23		P	25.8

156 Dy [He] No available calibration points

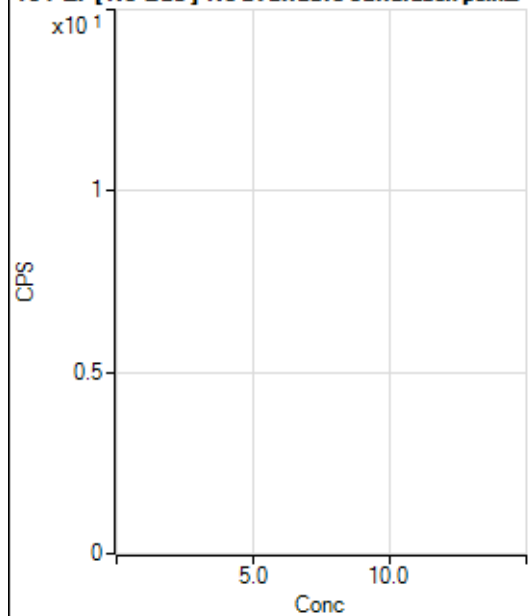
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			28.89		P	24.0
2	☐			21.11		P	24.1
3	☐			35.55		P	37.9
4	☐			42.22		P	4.6
5	☐			76.67		P	23.0
6	☐			87.78		P	11.0
7	☐			188.90		P	2.7
8	☐			332.23		P	8.4
9	☐			52.22		P	19.5

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			177.79		P	27.1
2	☐			183.34		P	18.2
3	☐			202.79		P	34.5
4	☐			152.78		P	30.0
5	☐			169.45		P	31.6
6	☐			180.56		P	11.6
7	☐			197.23		P	6.5
8	☐			269.46		P	4.7
9	☐			247.24		P	10.3

160 Gd [He] No available calibration points

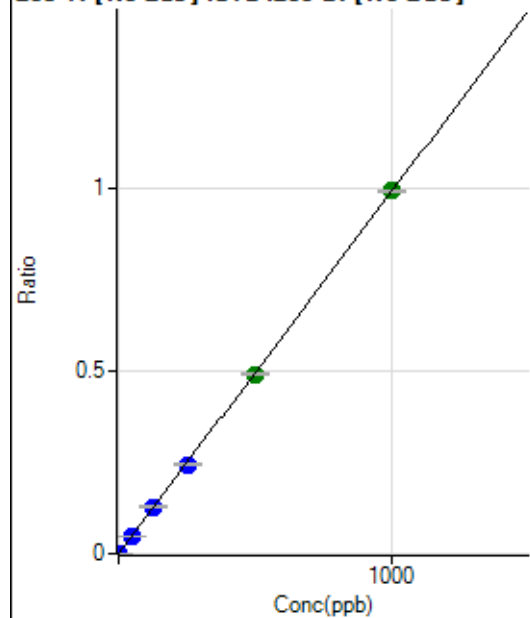
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			361.12		P	12.0
2	☐			410.01		P	9.2
3	☐			355.57		P	8.2
4	☐			386.68		P	4.5
5	☐			350.01		P	9.5
6	☐			375.57		P	3.7
7	☐			410.01		P	9.4
8	☐			397.79		P	7.6
9	☐			424.46		P	5.6

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			133.34		P	16.5
2	☐			150.01		P	28.9
3	☐			161.12		P	3.0
4	☐			180.57		P	7.0
5	☐			152.79		P	19.2
6	☐			183.34		P	13.6
7	☐			180.56		P	7.1
8	☐			169.46		P	24.3
9	☐			194.45		P	22.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			80.00		P	12.5
2	☐			62.22		P	17.2
3	☐			70.00		P	26.5
4	☐			66.67		P	5.0
5	☐			104.45		P	21.2
6	☐			80.00		P	11.0
7	☐			91.12		P	30.7
8	☐			95.56		P	11.2
9	☐			90.00		P	28.9

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	686.16	0.0000	P	5.4
2	☐	0.100	0.096	2280.85	0.0001	P	1.6
3	☐	1.000	0.958	16585.97	0.0010	P	1.6
4	☐	50.000	49.564	820720.77	0.0490	P	1.8
5	☐	125.000	129.287	2057657.06	0.1279	P	5.0
6	☐	250.000	246.386	3994403.47	0.2437	P	0.9
7	☐	500.000	496.534	8033975.53	0.4910	A	1.2
8	☐	1000.000	1002.122	15677925.70	0.9909	A	0.2
9	☐			4684.37	0.0003	P	5.9

$$y = 9.8877\text{E-}004 * x + 4.0424\text{E-}005$$

$$R = 1.0000$$

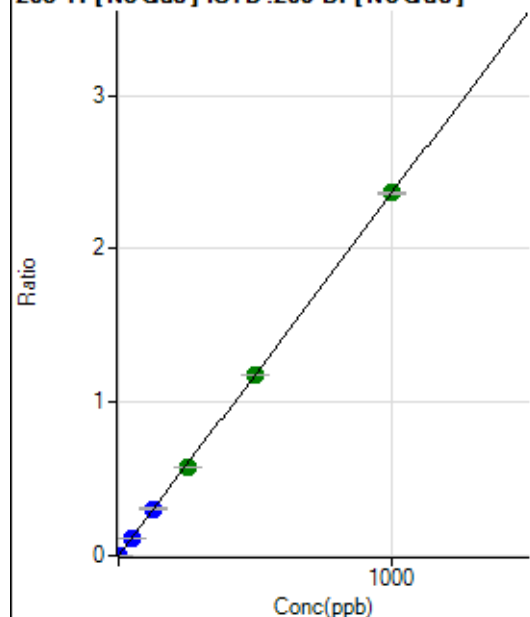
$$DL = 0.00668$$

$$BEC = 0.04088$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1264.02	0.0001	P	6.2
2	☐	0.100	0.097	5142.90	0.0003	P	3.1
3	☐	1.000	0.966	39537.78	0.0024	P	1.1
4	☐	50.000	49.779	1968583.07	0.1176	P	1.1
5	☐	125.000	129.886	4937482.19	0.3068	P	4.8
6	☐	250.000	244.038	9449241.53	0.5764	A	0.6
7	☐	500.000	498.841	19277925.08	1.1782	A	0.8
8	☐	1000.000	1001.471	37421720.28	2.3652	A	0.3
9	☐			10807.66	0.0008	P	3.0

$$y = 0.0024 * x + 7.4346E-005$$

$$R = 1.0000$$

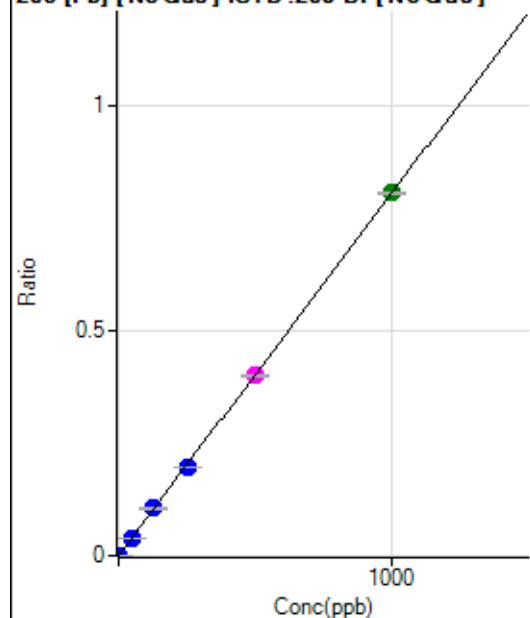
$$DL = 0.005898$$

$$BEC = 0.03148$$

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	920.43	0.0001	P	5.9
2	☐	0.100	0.103	2320.64	0.0001	P	4.1
3	☐	1.000	0.960	13874.25	0.0008	P	4.1
4	☐	50.000	49.691	669684.80	0.0400	P	1.7
5	☐	125.000	130.087	1684872.64	0.1047	P	4.5
6	☐	250.000	245.580	3239108.03	0.1976	P	0.8
7	☐	500.000	497.429	6547715.37	0.4002	M	0.8
8	☐	1000.000	1001.770	12749638.94	0.8058	A	0.4
9	☐			30084.63	0.0022	P	0.9

$$y = 8.0435E-004 * x + 5.4229E-005$$

$$R = 1.0000$$

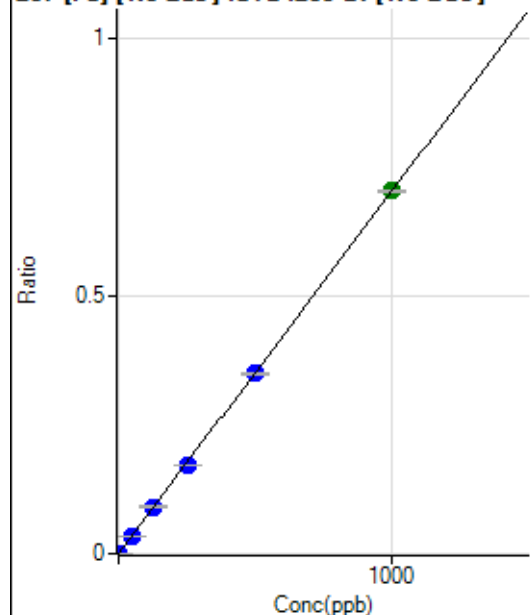
$$DL = 0.01185$$

$$BEC = 0.06742$$

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	864.87	0.0001	P	9.1
2	☐	0.100	0.091	1939.09	0.0001	P	3.0
3	☐	1.000	0.964	12207.79	0.0007	P	0.6
4	☐	50.000	49.428	580876.95	0.0347	P	1.6
5	☐	125.000	128.810	1454537.39	0.0904	P	4.8
6	☐	250.000	245.329	2821321.27	0.1721	P	0.3
7	☐	500.000	497.520	5709942.72	0.3490	P	1.1
8	☐	1000.000	1001.960	11118214.37	0.7027	A	0.4
9	☐			27005.73	0.0020	P	2.2

$$y = 7.0131\text{E-}004 * x + 5.0861\text{E-}005$$

$$R = 1.0000$$

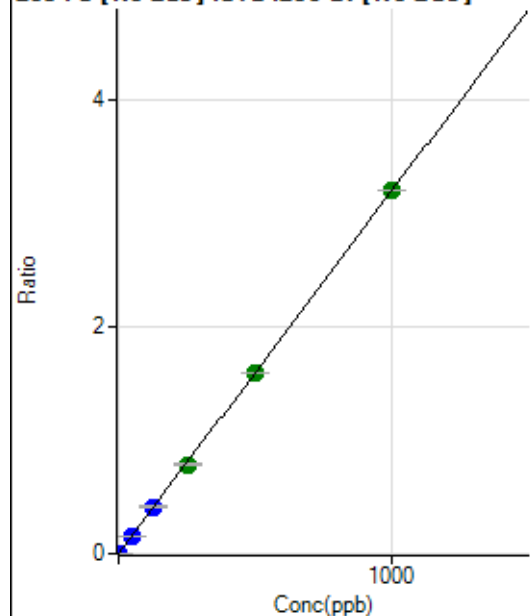
$$DL = 0.01977$$

$$BEC = 0.07252$$

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	3353.96	0.0002	P	1.6
2	☐	0.100	0.098	8636.50	0.0005	P	1.5
3	☐	1.000	0.966	55040.12	0.0033	P	0.7
4	☐	50.000	49.717	2656209.82	0.1587	P	1.8
5	☐	125.000	129.516	6650764.27	0.4132	P	4.4
6	☐	250.000	246.687	12899691.78	0.7869	A	0.5
7	☐	500.000	498.281	26004012.91	1.5892	A	0.8
8	☐	1000.000	1001.138	50515989.78	3.1928	A	0.0
9	☐			120456.17	0.0089	P	0.9

$$y = 0.0032 * x + 1.9740\text{E-}004$$

$$R = 1.0000$$

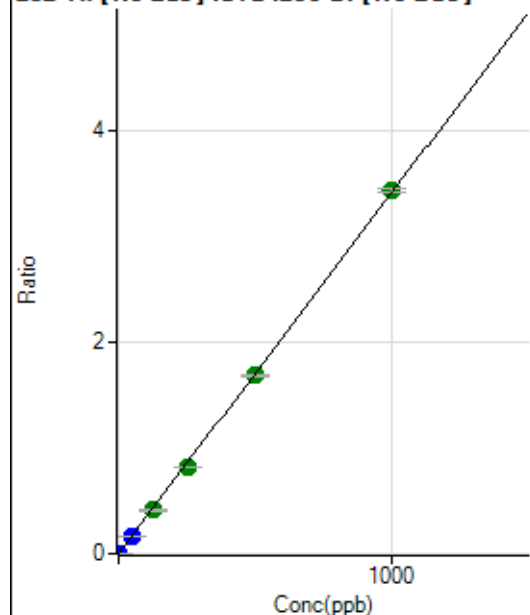
$$DL = 0.002881$$

$$BEC = 0.0619$$

Weight: <None>

Min Conc: 0

232 Th [No Gas] ISTD :209 Bi [No Gas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2079.86	0.0001	P	9.1
2	☐	0.100	0.079	6644.45	0.0004	P	3.3
3	☐	1.000	0.829	49427.62	0.0029	P	0.6
4	☐	50.000	46.402	2644084.09	0.1580	P	1.2
5	☐	125.000	121.788	6670692.05	0.4145	A	4.7
6	☐	250.000	238.930	13329482.01	0.8131	A	0.4
7	☐	500.000	494.882	27554746.68	1.6840	A	1.0
8	☐	1000.000	1005.908	54152624.36	3.4228	A	1.0
9	☐			11872.37	0.0009	P	3.7

$$y = 0.0034 * x + 1.2260E-004$$

$$R = 0.9999$$

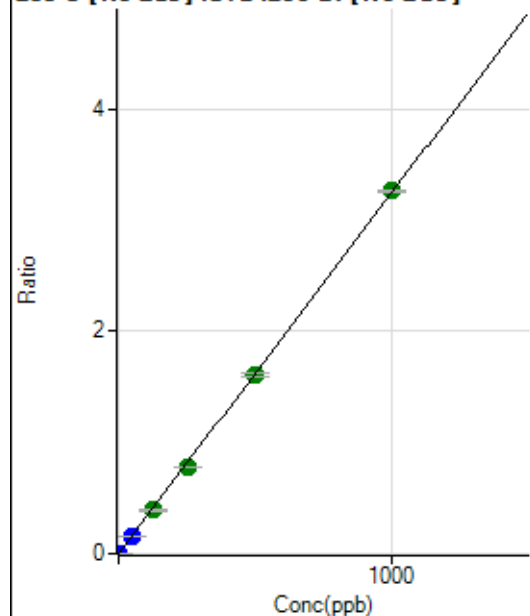
$$DL = 0.009791$$

$$BEC = 0.03603$$

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	2319.75	0.0001	P	6.2
2	☐	0.100	0.096	7608.15	0.0005	P	4.3
3	☐	1.000	0.898	51283.64	0.0031	P	2.1
4	☐	50.000	46.743	2543879.98	0.1520	P	1.5
5	☐	125.000	121.696	6366044.46	0.3956	A	4.7
6	☐	250.000	238.754	12720531.53	0.7760	A	0.9
7	☐	500.000	496.093	26379057.53	1.6122	A	1.3
8	☐	1000.000	1005.341	51687670.95	3.2670	A	0.6
9	☐			7227.33	0.0005	P	1.8

$$y = 0.0032 * x + 1.3660E-004$$

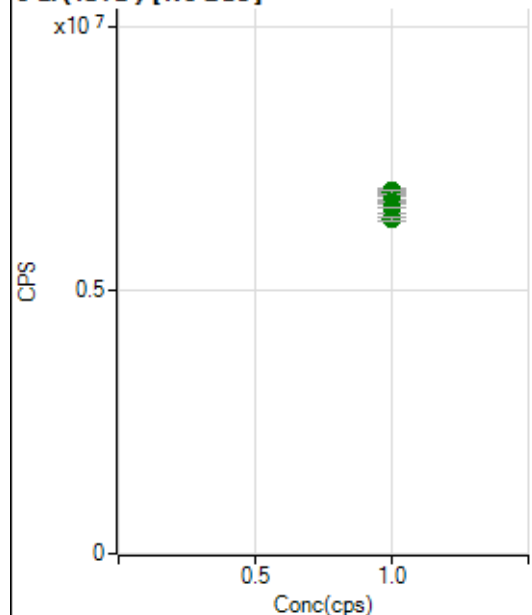
$$R = 0.9999$$

$$DL = 0.007764$$

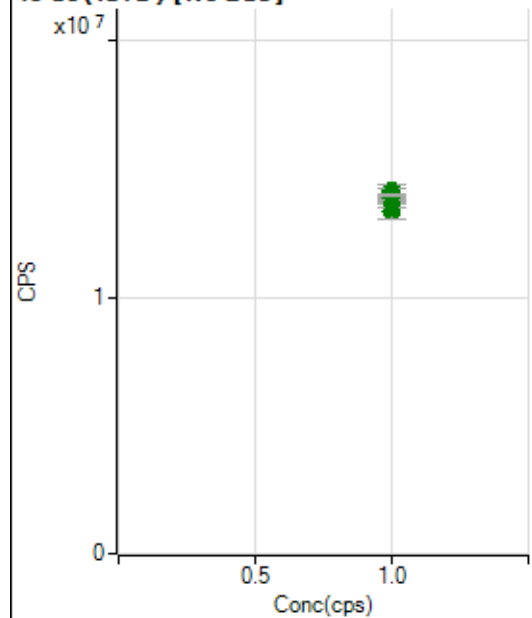
$$BEC = 0.04204$$

Weight: <None>

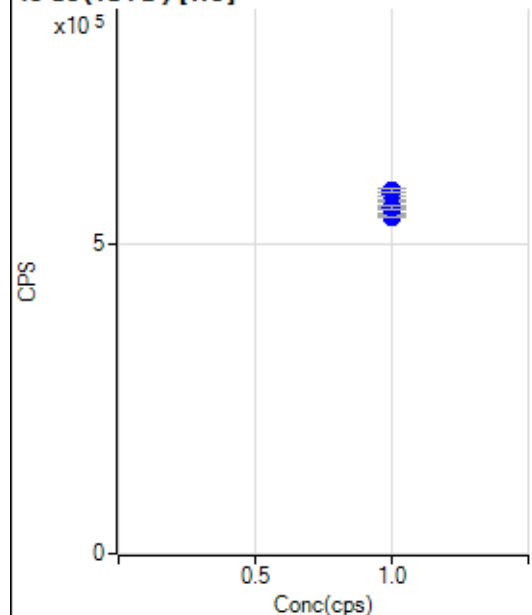
Min Conc: 0

6 Li (ISTD) [No Gas]

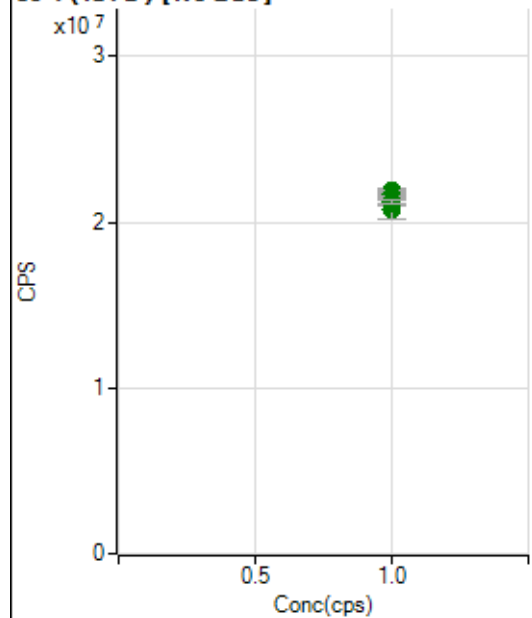
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6850319.69		A	2.1
2	☐	1.000		6817109.28		A	0.2
3	☐	1.000		6879407.05		A	0.3
4	☐	1.000		6850884.06		A	1.4
5	☐	1.000		6579328.03		A	4.2
6	☐	1.000		6657158.93		A	0.1
7	☐	1.000		6664216.57		A	0.3
8	☐	1.000		6573582.19		A	0.2
9	☐	1.000		6334598.17		A	1.2

45 Sc (ISTD) [No Gas]

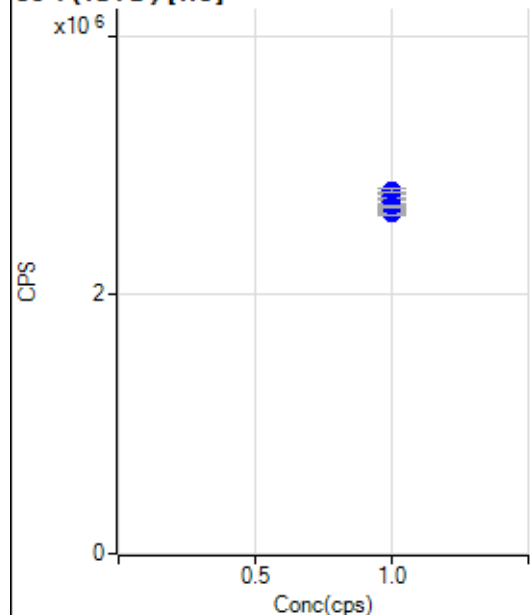
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14142151.70		A	3.5
2	☐	1.000		14122923.93		A	1.2
3	☐	1.000		14018480.87		A	0.3
4	☐	1.000		13932594.93		A	1.4
5	☐	1.000		13326574.43		A	4.5
6	☐	1.000		13496266.27		A	0.2
7	☐	1.000		13740428.95		A	0.5
8	☐	1.000		13866236.77		A	0.7
9	☐	1.000		13990752.57		A	0.8

45 Sc (ISTD) [He]

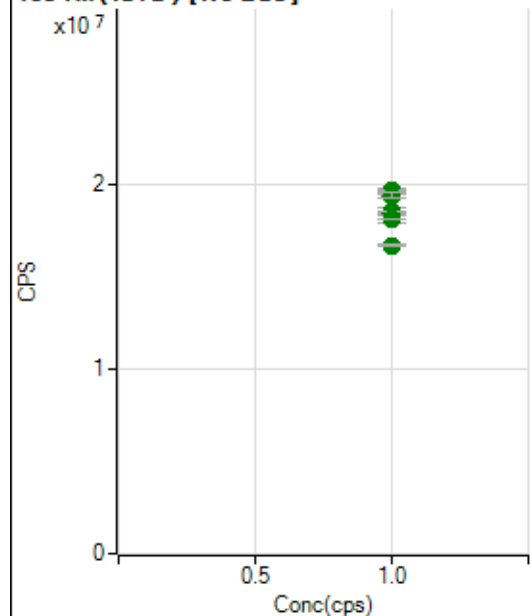
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		559252.09		P	0.8
2	☐	1.000		569420.43		P	0.2
3	☐	1.000		562450.53		P	2.0
4	☐	1.000		558417.24		P	1.6
5	☐	1.000		545958.82		P	0.7
6	☐	1.000		543755.92		P	0.8
7	☐	1.000		557593.28		P	1.1
8	☐	1.000		580178.41		P	1.3
9	☐	1.000		585345.99		P	1.1

89 Y (ISTD) [No Gas]

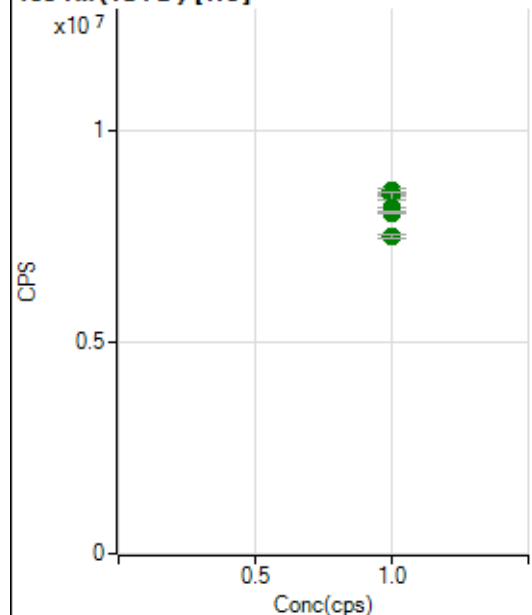
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		21779943.84		A	2.0
2	☐	1.000		21728047.45		A	0.8
3	☐	1.000		21884095.51		A	0.3
4	☐	1.000		21735476.06		A	1.8
5	☐	1.000		20764328.02		A	5.1
6	☐	1.000		21089450.38		A	0.7
7	☐	1.000		21536912.18		A	0.6
8	☐	1.000		21548043.57		A	0.0
9	☐	1.000		21223382.88		A	0.7

89 Y(ISTD) [He]

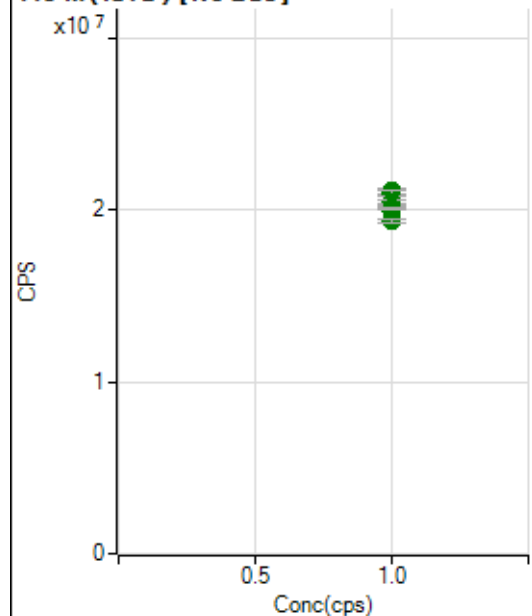
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2695941.83		P	0.8
2	☐	1.000		2736879.85		P	0.4
3	☐	1.000		2714906.63		P	1.7
4	☐	1.000		2722567.04		P	1.6
5	☐	1.000		2652735.24		P	0.5
6	☐	1.000		2625694.20		P	0.7
7	☐	1.000		2683071.07		P	0.5
8	☐	1.000		2763899.30		P	0.9
9	☐	1.000		2801918.95		P	1.1

103 Rh(ISTD) [No Gas]

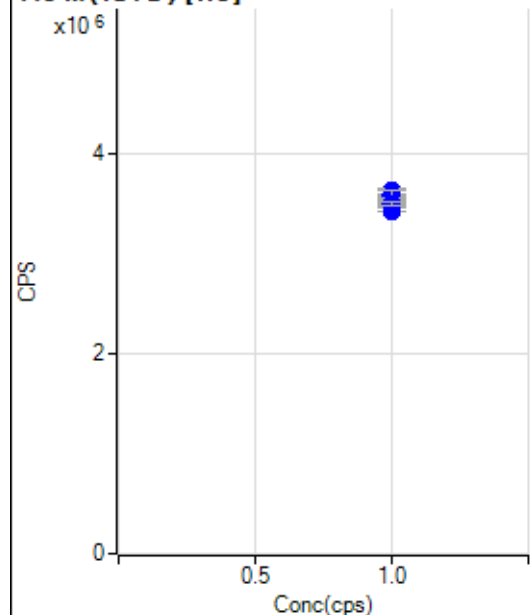
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		19616204.43		A	1.8
2	☐	1.000		19644780.99		A	1.0
3	☐	1.000		19655836.55		A	0.6
4	☐	1.000		19417485.68		A	1.6
5	☐	1.000		18345355.10		A	4.4
6	☐	1.000		18500058.57		A	0.5
7	☐	1.000		18441313.95		A	0.9
8	☐	1.000		18119113.60		A	0.2
9	☐	1.000		16721214.09		A	0.2

103 Rh (ISTD) [He]

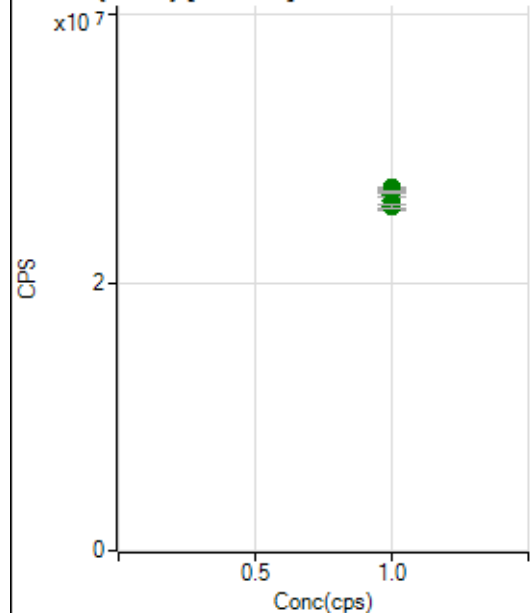
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8477725.08		A	0.6
2	☐	1.000		8562597.23		A	1.6
3	☐	1.000		8487961.47		A	1.0
4	☐	1.000		8427787.58		A	2.2
5	☐	1.000		8182236.62		A	0.1
6	☐	1.000		8039646.34		A	0.6
7	☐	1.000		8082563.98		A	0.1
8	☐	1.000		8059433.77		A	0.9
9	☐	1.000		7490095.24		A	1.2

115 In (ISTD) [No Gas]

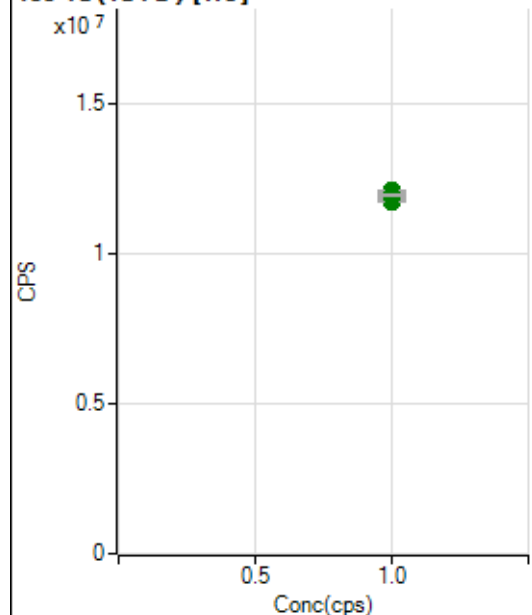
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		21060089.09		A	2.1
2	☐	1.000		21022458.73		A	1.5
3	☐	1.000		21082647.24		A	0.2
4	☐	1.000		20919386.59		A	1.6
5	☐	1.000		19930347.52		A	4.4
6	☐	1.000		20223761.80		A	0.6
7	☐	1.000		20465273.81		A	0.9
8	☐	1.000		20081846.02		A	0.3
9	☐	1.000		19318828.15		A	0.9

115 In (ISTD) [He]

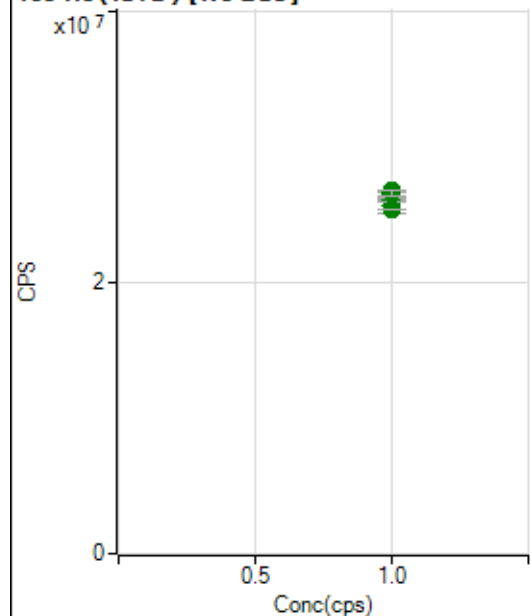
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3558541.24		P	1.2
2	☐	1.000		3636367.56		P	1.3
3	☐	1.000		3588524.44		P	1.4
4	☐	1.000		3597504.66		P	2.0
5	☐	1.000		3493486.64		P	0.2
6	☐	1.000		3429934.84		P	0.2
7	☐	1.000		3470389.40		P	0.5
8	☐	1.000		3497937.67		P	0.9
9	☐	1.000		3501516.12		P	1.0

159 Tb (ISTD) [No Gas]

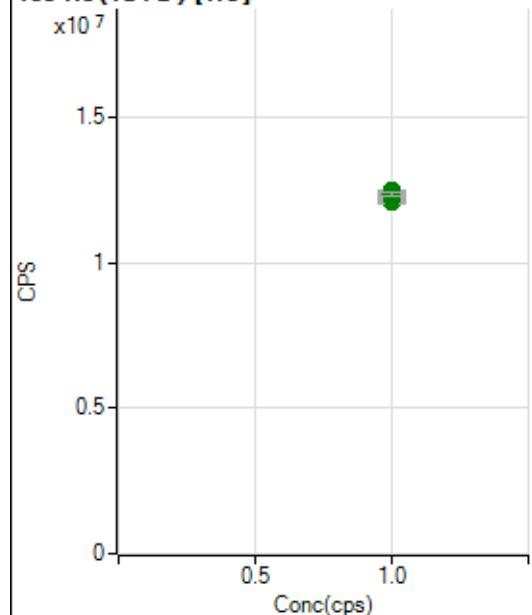
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		26709019.60		A	2.2
2	☐	1.000		26866471.54		A	1.5
3	☐	1.000		26952987.10		A	0.4
4	☐	1.000		26990093.49		A	0.8
5	☐	1.000		26125979.89		A	4.9
6	☐	1.000		26552594.61		A	0.8
7	☐	1.000		27096980.98		A	0.6
8	☐	1.000		26840014.88		A	0.5
9	☐	1.000		25753168.78		A	0.9

159 Tb (ISTD) [He]

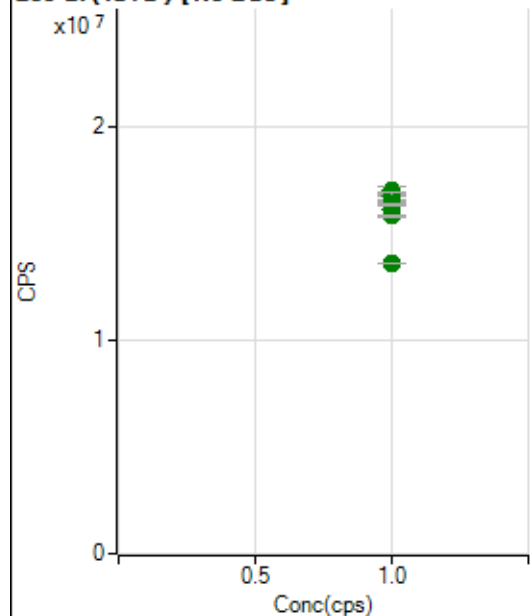
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11910860.52		A	1.3
2	☐	1.000		12013856.63		A	1.3
3	☐	1.000		12003545.79		A	1.6
4	☐	1.000		11955257.60		A	1.6
5	☐	1.000		11828051.63		A	0.3
6	☐	1.000		11744184.27		A	0.7
7	☐	1.000		11888325.38		A	0.4
8	☐	1.000		12086545.93		A	0.3
9	☐	1.000		11947427.46		A	1.0

165 Ho (ISTD) [No Gas]

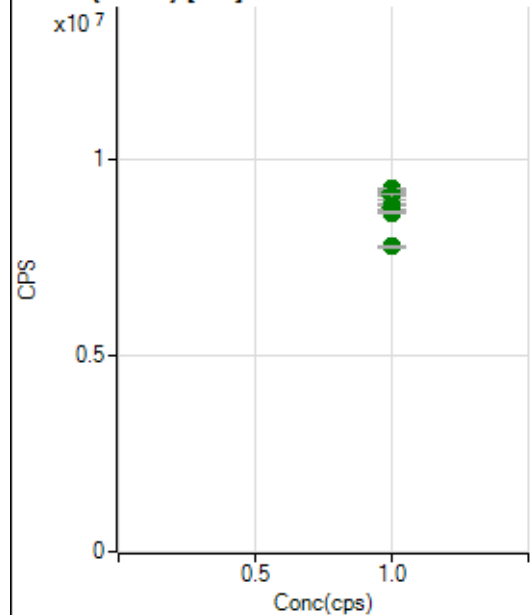
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		26408581.67		A	2.5
2	☐	1.000		26525515.52		A	1.0
3	☐	1.000		26734016.22		A	0.5
4	☐	1.000		26473960.14		A	1.4
5	☐	1.000		25702352.66		A	4.5
6	☐	1.000		26186171.25		A	1.2
7	☐	1.000		26804587.75		A	0.7
8	☐	1.000		26650532.37		A	1.5
9	☐	1.000		25421063.94		A	0.3

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12281436.07		A	1.2
2	☐	1.000		12270255.79		A	0.5
3	☐	1.000		12244135.10		A	1.0
4	☐	1.000		12321390.65		A	2.4
5	☐	1.000		12140572.60		A	0.1
6	☐	1.000		12083675.93		A	0.8
7	☐	1.000		12249362.18		A	0.3
8	☐	1.000		12487170.65		A	0.8
9	☐	1.000		12372758.57		A	0.8

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16988817.11		A	2.4
2	☐	1.000		16908095.72		A	0.7
3	☐	1.000		16787320.58		A	0.1
4	☐	1.000		16736134.89		A	1.9
5	☐	1.000		16117564.07		A	4.9
6	☐	1.000		16393260.04		A	0.1
7	☐	1.000		16363103.50		A	0.5
8	☐	1.000		15821643.93		A	0.7
9	☐	1.000		13588626.05		A	0.4

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9241706.25		A	0.7
2	☐	1.000		9152668.06		A	0.5
3	☐	1.000		9172631.60		A	2.0
4	☐	1.000		9046124.45		A	1.6
5	☐	1.000		8826406.32		A	0.6
6	☐	1.000		8765716.75		A	0.7
7	☐	1.000		8710966.54		A	0.4
8	☐	1.000		8636015.77		A	0.3
9	☐	1.000		7764970.93		A	0.5

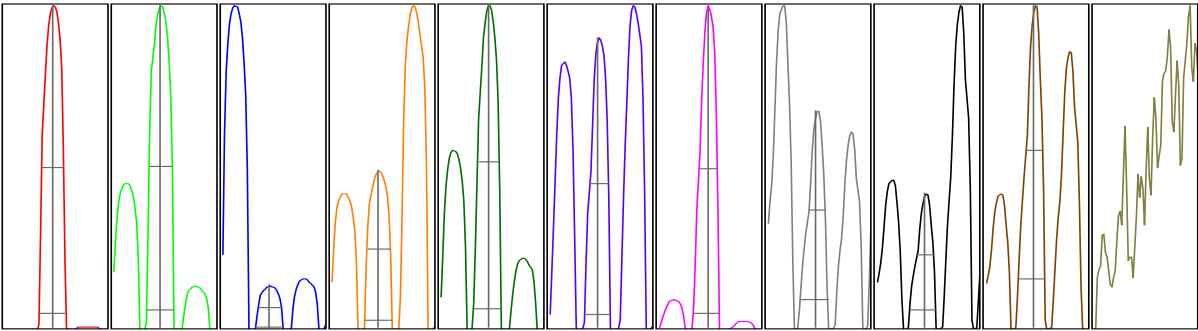
US EPA Tune Check Sample Report

Batch Folder D:\ICP-MS Data\P7102119MS .b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]				
Mass	Count	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	21192	1.86	5.00	
24	201206	1.81	5.00	
25	27018	1.65	5.00	
26	32083	1.50	5.00	
59	157687	1.78	5.00	
113	19980	1.57	5.00	
115	238688	2.08	5.00	
206	54611	1.65	5.00	
207	51480	1.35	5.00	
208	118028	1.67	5.00	
220	76	3.47		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	20683	21271	21429	21662	20916
24	196112	202837	203621	204752	198709
25	26400	27170	27321	27477	26721
26	31402	32335	32311	32587	31781
59	154596	158794	159516	160698	154833
113	19831	20230	20127	20216	19498
115	241134	242882	239534	239739	230150
206	53762	55005	55023	55679	53587
207	50593	51832	51919	52167	50887
208	117144	118069	119438	120249	115241
220	73	79	78	74	77

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	35397	8.95	8.9 - 9.1		0.781	0.900	
24	320254	23.90	23.9 - 24.1		0.787	0.900	
25	42701	24.90	24.9 - 25.1		0.788	0.900	
26	49933	25.90	25.9 - 26.1		0.789	0.900	
59	262899	58.95	58.9 - 59.1		0.803	0.900	
113	37018	112.95	112.9 - 113.1		0.738	0.900	
115	449646	115.00	114.9 - 115.1		0.753	0.900	
206	103396	205.95	205.9 - 206.1		0.791	0.900	
207	93767	206.95	206.9 - 207.1		0.746	0.900	
208	223769	207.95	207.9 - 208.1		0.760	0.900	
220			-				

X% = 5 Integration Time [sec] = 0.1 Acquisition Time [sec] = 268 Y Axis = Linear

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min	S/C Temp		2 °C
RF Matching	1.80	V	Option Gas	0.0	%	Gas Switch		Dilution Gas
Smpl Depth	9.0	mm	Nebulizer Pump	0.10	rpm	Makeup/Dilution Gas		0.37 L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.7	V	Deflect	13.4	V
Extract 2	-140.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-65	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination	5.0	V
He Flow	0.0	mL/min	OctP RF	200	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	37697	0.30	
89	29106	0.67	
205	43440	0.56	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	37775	37699	37663	37525	37821
89	29187	29003	29046	28892	29401
205	43411	43094	43546	43383	43766

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min	S/C Temp		2 °C
RF Matching	1.80	V	Option Gas	0.0	%	Gas Switch		Dilution Gas
Smpl Depth	9.0	mm	Nebulizer Pump	0.10	rpm	Makeup/Dilution Gas		0.37 L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	6.2	V	Deflect	2.2	V
Extract 2	-140.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-65	V	Cell Exit	-60	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	Yes		OctP Bias	-18.0	V	Energy Discrimination	5.0	V
He Flow	4.1	mL/min	OctP RF	200	V			