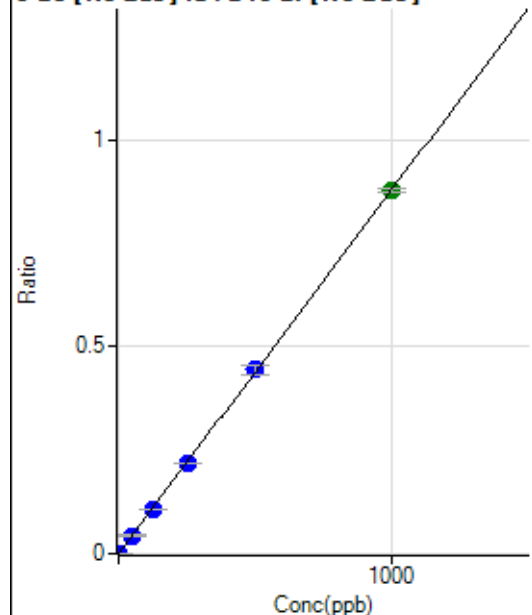


Batch Folder: D:\P8101417MS.b\
Analysis File: P8101417MS.batch.bin
DA Date-Time: 2017-10-15 23:37:51
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2017-10-14 15:41:58
2	004CALS.d	S01	2017-10-14 15:45:06
3	005CALS.d	S02	2017-10-14 15:48:54
4	006CALS.d	S03	2017-10-14 15:52:22
5	007CALS.d	S04	2017-10-14 15:55:49
6	008CALS.d	S05	2017-10-14 15:59:13
7	009CALS.d	S06	2017-10-14 16:02:31
8	010CALS.d	S07	2017-10-14 16:05:42
9	011CALS.d	S08	2017-10-14 16:08:50

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	46.30	0.0000	P	13.6
2	☐	0.100	0.108	187.04	0.0001	P	7.7
3	☐	1.000	0.921	1246.39	0.0008	P	11.6
4	☐	50.000	49.956	63663.07	0.0439	P	2.3
5	☐	125.000	123.473	156591.79	0.1084	P	0.7
6	☐	250.000	247.743	317572.48	0.2175	P	0.7
7	☐	500.000	505.722	625590.19	0.4439	P	5.5
8	☐	1000.000	997.896	1257102.72	0.8759	A	1.0
9	☐			359.28	0.0003	P	12.4

$$y = 8.7775\text{E-}004 * x + 3.1124\text{E-}005$$

$$R = 1.0000$$

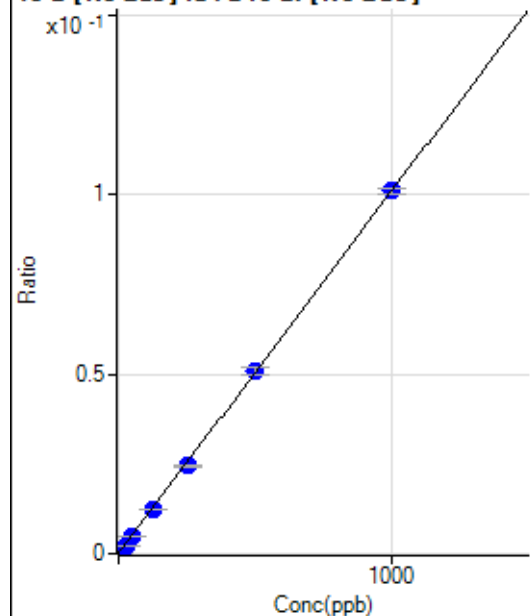
$$DL = 0.01446$$

$$BEC = 0.03546$$

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	136.12	0.0001	P	9.8
2	☐	2.500	2.247	472.25	0.0003	P	16.8
3	☐	25.000	20.452	3194.94	0.0022	P	3.4
4	☐	50.000	47.866	7138.20	0.0049	P	2.4
5	☐	125.000	121.180	17786.67	0.0123	P	2.0
6	☐	250.000	241.789	35739.93	0.0245	P	1.9
7	☐	500.000	503.412	71724.11	0.0509	P	3.6
8	☐	1000.000	1001.045	145024.86	0.1011	P	1.7
9	☐			5292.92	0.0037	P	9.9

$$y = 1.0086\text{E-}004 * x + 9.1559\text{E-}005$$

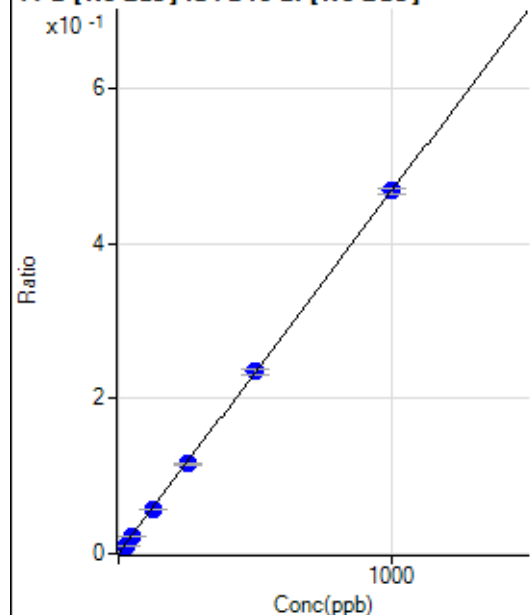
$$R = 1.0000$$

$$DL = 0.2665$$

$$BEC = 0.9078$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	555.59	0.0004	P	7.8
2	☐	2.500	2.209	2086.35	0.0014	P	4.6
3	☐	25.000	21.758	15631.24	0.0105	P	2.6
4	☐	50.000	49.126	33849.09	0.0233	P	1.6
5	☐	125.000	120.792	82062.36	0.0568	P	2.6
6	☐	250.000	247.152	169153.07	0.1158	P	2.3
7	☐	500.000	501.435	330896.26	0.2347	P	3.5
8	☐	1000.000	1000.646	671506.41	0.4679	P	1.6
9	☐			23840.16	0.0167	P	9.9

$$y = 4.6723\text{E-}004 * x + 3.7351\text{E-}004$$

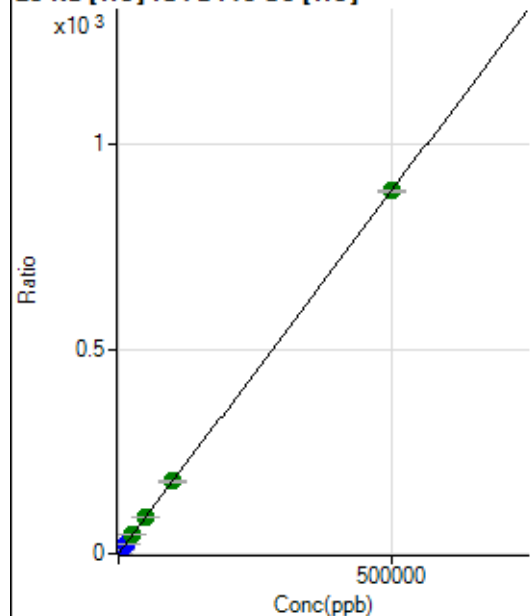
$$R = 1.0000$$

$$DL = 0.1861$$

$$BEC = 0.7994$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	8294.44	0.2162	P	0.7
2	☐	50.000	49.007	11741.49	0.3031	P	1.0
3	☐	500.000	452.882	38982.09	1.0193	P	2.0
4	☐	5000.000	5110.480	351917.69	9.2794	P	1.2
5	☐	12500.000	12545.282	856983.19	22.4649	P	0.6
6	☐	25000.000	26030.293	1751260.72	46.3802	A	0.9
7	☐	50000.000	50532.245	3386399.12	89.8337	A	1.9
8	☐	100000.00	99629.588	6774849.20	176.9065	A	0.9
9	☐	500000.00	499967.15	33312618.45	886.8942	A	0.5

$$y = 0.0018 * x + 0.2162$$

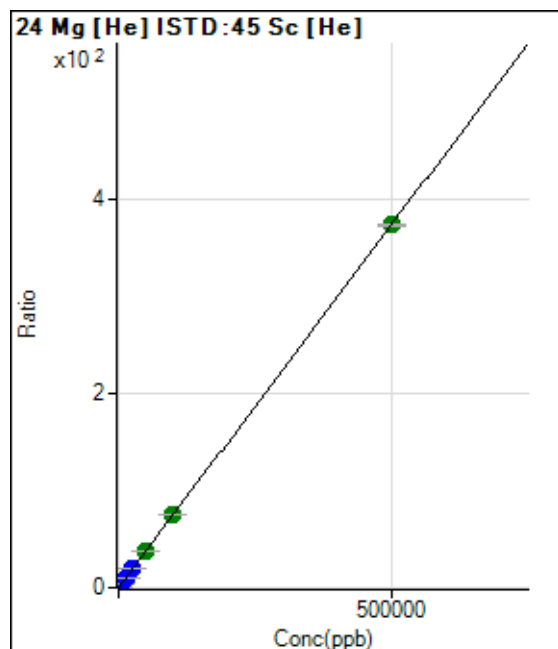
$$R = 1.0000$$

$$DL = 2.462$$

$$BEC = 121.9$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	119.45	0.0031	P	34.8
2	☐	50.000	44.975	1425.13	0.0368	P	15.5
3	☐	500.000	456.941	13206.61	0.3454	P	2.7
4	☐	5000.000	5101.528	145055.09	3.8247	P	0.6
5	☐	12500.000	12594.666	360037.47	9.4379	P	1.0
6	☐	25000.000	25456.633	720139.48	19.0729	P	1.2
7	☐	50000.000	50784.224	1434207.45	38.0460	A	1.8
8	☐	100000.00	100185.23	2874241.71	75.0527	A	0.9
9	☐	500000.00	499858.36	14064336.42	374.4511	A	0.8

$$y = 7.4911\text{E-}004 * x + 0.0031$$

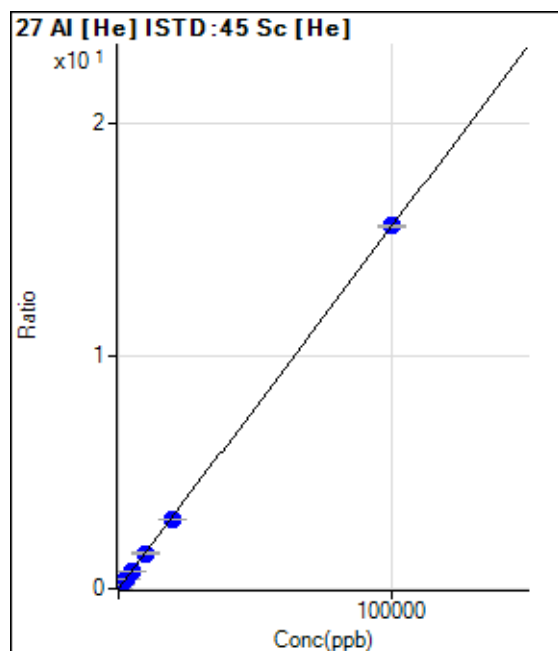
$$R = 1.0000$$

$$DL = 4.329$$

$$BEC = 4.149$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	8.33	0.0002	P	2.0
2	☐	2.000	2.747	25.00	0.0006	P	33.2
3	☐	20.000	14.465	94.45	0.0025	P	13.5
4	☐	1000.000	957.833	5665.25	0.1494	P	3.4
5	☐	2500.000	2513.275	14938.99	0.3916	P	3.7
6	☐	5000.000	4783.801	28142.79	0.7452	P	3.1
7	☐	10000.000	9743.155	57210.82	1.5176	P	2.6
8	☐	20000.000	19171.130	114346.86	2.9859	P	1.2
9	☐	100000.00	100202.35	586140.25	15.6054	P	0.7

$$y = 1.5574\text{E-}004 * x + 2.1715\text{E-}004$$

$$R = 1.0000$$

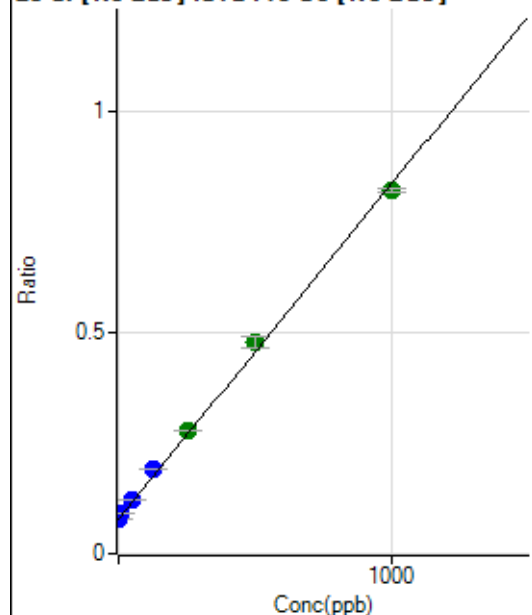
$$DL = 0.08245$$

$$BEC = 1.394$$

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	385205.27	0.0780	P	0.7
2	☐	1.000	1.244	387736.40	0.0789	P	0.2
3	☐	10.000	15.709	438754.43	0.0899	P	0.5
4	☐	50.000	60.332	600637.24	0.1238	P	0.1
5	☐	125.000	151.467	921326.02	0.1931	P	0.7
6	☐	250.000	262.996	1366069.89	0.2778	A	0.4
7	☐	500.000	527.352	2263789.00	0.4787	A	5.2
8	☐	1000.000	979.193	4030253.52	0.8219	A	1.1
9	☐			390011.84	0.0808	P	1.1

$$y = 7.5975\text{E-}004 * x + 0.0780$$

$$R = 0.9991$$

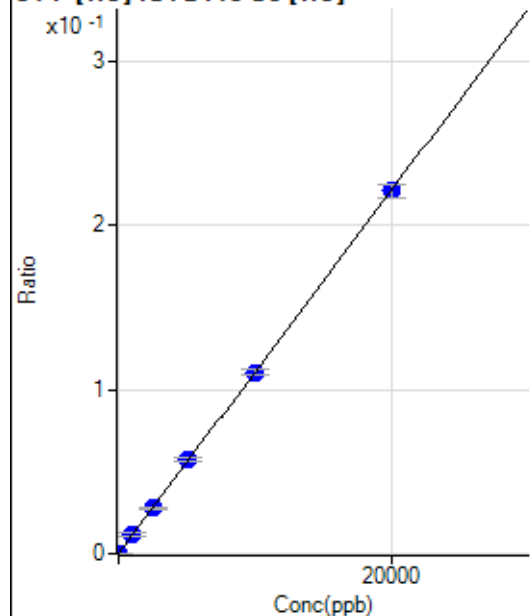
$$DL = 2.153$$

$$BEC = 102.7$$

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	-10.833	0.00	0.0000	P	
2	☐	0.000	2.156	5.55	0.0001	P	86.6
3	☐	0.000	8.677	8.33	0.0002	P	99.4
4	☐	1000.000	1047.634	444.48	0.0117	P	11.3
5	☐	2500.000	2495.445	1058.43	0.0277	P	2.1
6	☐	5000.000	5161.738	2161.37	0.0573	P	5.3
7	☐	10000.000	9990.638	4173.01	0.1107	P	3.8
8	☐	20000.000	19962.434	8469.55	0.2211	P	3.4
9	☐			11.11	0.0003	P	114.6

$$y = 1.1071\text{E-}005 * x + 1.1993\text{E-}004$$

$$R = 1.0000$$

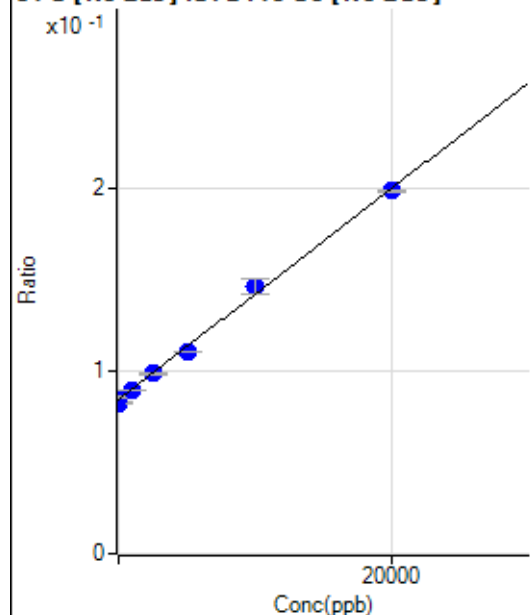
$$DL = 30.64$$

$$BEC = 10.83$$

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	-325.932	407469.76	0.0825	P	1.5
2	☐	0.000	119.006	417866.43	0.0851	P	0.5
3	☐	0.000	206.926	417536.06	0.0856	P	0.7
4	☐	1000.000	856.624	433296.62	0.0893	P	0.7
5	☐	2500.000	2439.625	469878.60	0.0985	P	0.9
6	☐	5000.000	4572.526	544725.94	0.1108	P	0.2
7	☐	10000.000	10729.033	691875.68	0.1463	P	5.4
8	☐	20000.000	19757.068	972796.30	0.1984	P	0.6
9	☐			379131.09	0.0786	P	0.8

$$y = 5.7700\text{E-}006 * x + 0.0844$$

$$R = 0.9986$$

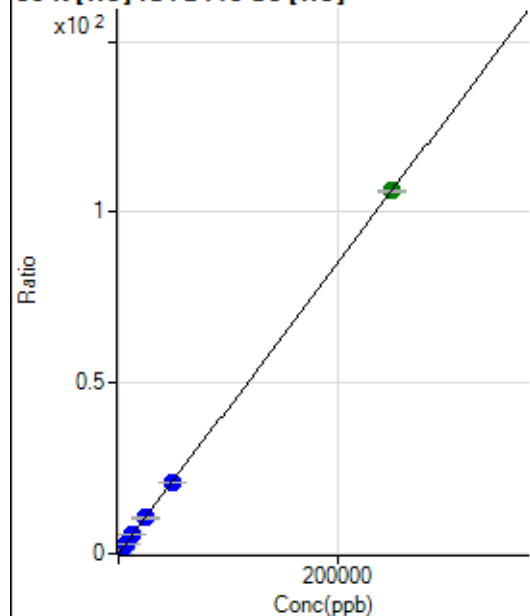
$$DL = 397.6$$

$$BEC = 1.463\text{E}+04$$

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	2528.13	0.0660	P	11.8
2	☐	50.000	64.777	3620.08	0.0934	P	3.5
3	☐	500.000	482.400	10345.89	0.2706	P	3.1
4	☐	2500.000	2466.509	42186.28	1.1124	P	2.0
5	☐	6250.000	6231.530	103371.79	2.7098	P	0.6
6	☐	12500.000	12647.559	205092.78	5.4318	P	1.2
7	☐	25000.000	24480.196	394011.20	10.4520	P	1.8
8	☐	50000.000	48787.420	795211.81	20.7646	P	0.9
9	☐	250000.00	250287.94	3990886.94	106.2537	A	0.7

$$y = 4.2426\text{E-}004 * x + 0.0660$$

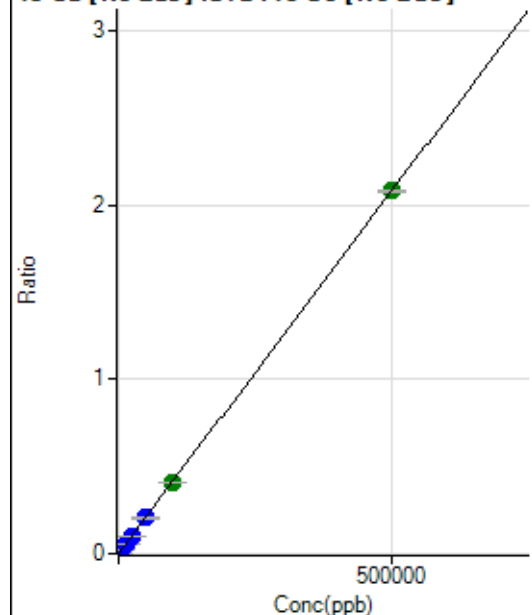
$$R = 1.0000$$

$$DL = 54.84$$

$$BEC = 155.5$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1772.42	0.0004	P	3.4
2	☐	50.000	49.164	2767.07	0.0006	P	4.8
3	☐	500.000	435.987	10598.85	0.0022	P	3.0
4	☐	5000.000	4801.211	98617.36	0.0203	P	1.2
5	☐	12500.000	12231.923	244529.30	0.0512	P	1.5
6	☐	25000.000	24168.678	496183.37	0.1009	P	0.3
7	☐	50000.000	49920.061	984033.43	0.2080	P	4.9
8	☐	100000.00	97617.670	1993102.28	0.4065	A	0.8
9	☐	500000.00	500534.78	10048434.08	2.0827	A	0.5

$$y = 4.1602\text{E-}006 * x + 3.5892\text{E-}004$$

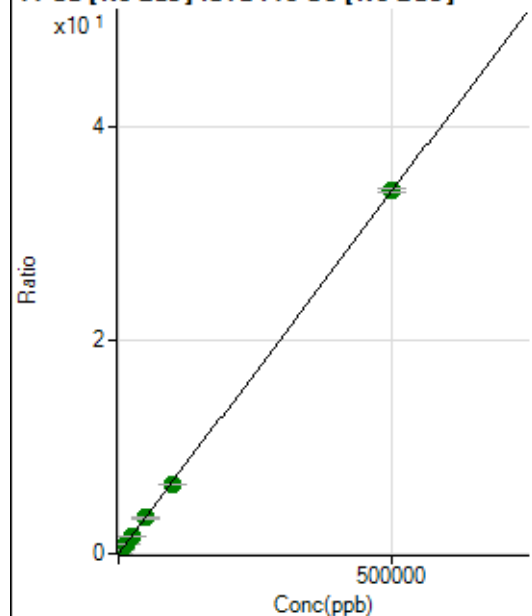
$$R = 1.0000$$

$$DL = 8.906$$

$$BEC = 86.27$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	18179.12	0.0037	P	2.9
2	☐	50.000	52.726	35623.98	0.0073	P	0.7
3	☐	500.000	443.240	164453.57	0.0337	P	0.6
4	☐	5000.000	4785.649	1590360.38	0.3279	A	0.9
5	☐	12500.000	12031.555	3907043.84	0.8188	A	1.3
6	☐	25000.000	23792.357	7944281.86	1.6156	A	0.2
7	☐	50000.000	49304.468	15814118.75	3.3440	A	5.5
8	☐	100000.00	96096.091	31940543.77	6.5141	A	1.1
9	☐	500000.00	500924.62	163749923.1	33.9408	A	1.1

$$y = 6.7749\text{E-}005 * x + 0.0037$$

$$R = 1.0000$$

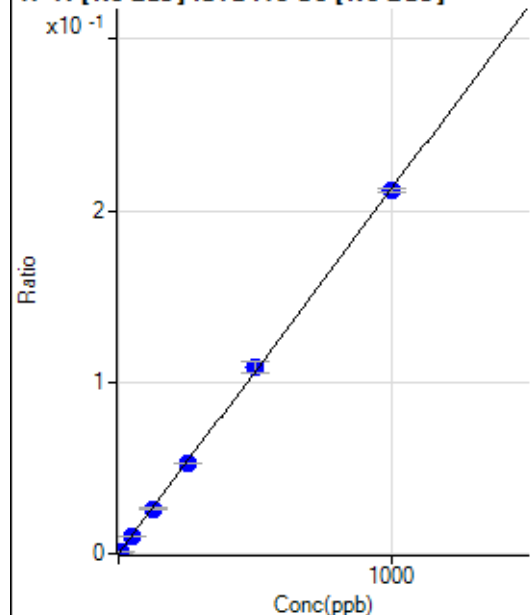
$$DL = 4.734$$

$$BEC = 54.34$$

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	147.23	0.0000	P	13.9
2	☐	0.500	0.477	644.49	0.0001	P	14.6
3	☐	5.000	4.547	4862.18	0.0010	P	3.9
4	☐	50.000	48.854	50519.85	0.0104	P	1.4
5	☐	125.000	123.711	125643.57	0.0263	P	1.0
6	☐	250.000	246.658	258009.93	0.0525	P	0.2
7	☐	500.000	512.802	515637.08	0.1091	P	5.9
8	☐	1000.000	994.655	1037032.08	0.2115	P	0.9
9	☐			894.52	0.0002	P	1.4

$$y = 2.1260E-004 * x + 2.9806E-005$$

$$R = 0.9999$$

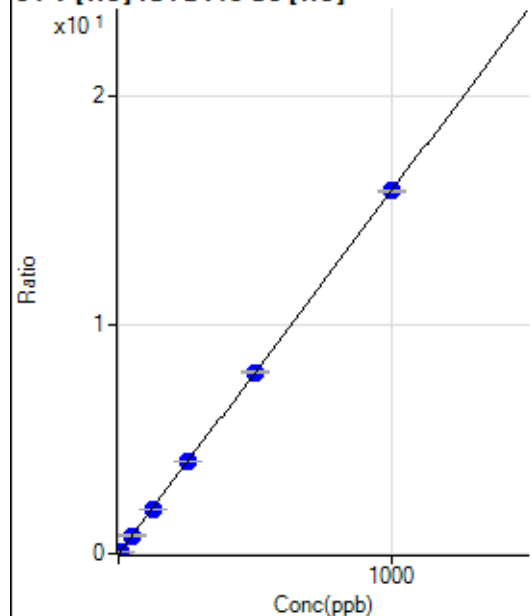
$$DL = 0.05855$$

$$BEC = 0.1402$$

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	11.11	0.0003	P	17.8
2	☐	0.500	0.417	267.79	0.0069	P	18.6
3	☐	5.000	4.384	2670.30	0.0699	P	4.5
4	☐	50.000	49.988	30092.56	0.7935	P	2.8
5	☐	125.000	123.980	75059.62	1.9676	P	0.3
6	☐	250.000	253.299	151774.84	4.0196	P	0.9
7	☐	500.000	498.648	298306.56	7.9127	P	1.2
8	☐	1000.000	999.983	607690.35	15.8678	P	0.6
9	☐			130.00	0.0035	P	9.9

$$y = 0.0159 * x + 2.8975E-004$$

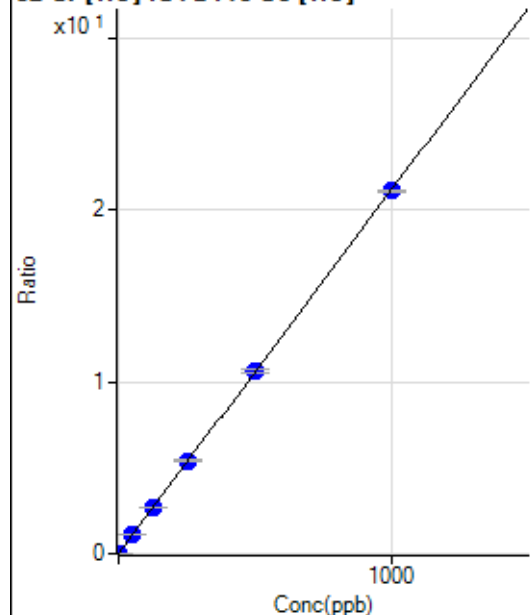
$$R = 1.0000$$

$$DL = 0.009752$$

$$BEC = 0.01826$$

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	426.68	0.0111	P	16.7
2	☐	0.200	0.252	637.80	0.0165	P	9.3
3	☐	2.000	2.001	2045.74	0.0535	P	4.4
4	☐	50.000	50.271	40769.30	1.0750	P	0.2
5	☐	125.000	125.344	101617.45	2.6637	P	0.6
6	☐	250.000	254.893	204083.72	5.4052	P	1.4
7	☐	500.000	503.009	401684.78	10.6560	P	2.0
8	☐	1000.000	997.216	808622.20	21.1145	P	0.5
9	☐			12145.44	0.3234	P	0.9

$$y = 0.0212 * x + 0.0111$$

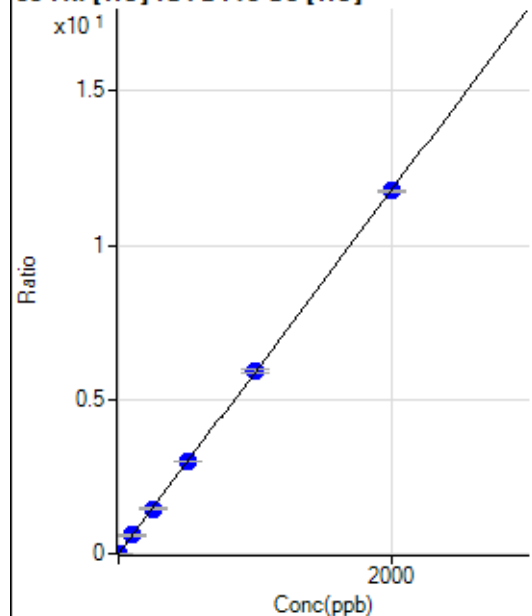
$$R = 1.0000$$

$$DL = 0.2632$$

$$BEC = 0.5257$$

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	27.78	0.0007	P	59.0
2	☐	0.100	0.058	41.11	0.0011	P	17.4
3	☐	1.000	1.038	261.12	0.0068	P	15.7
4	☐	100.000	100.607	22495.03	0.5931	P	1.4
5	☐	250.000	248.520	55854.57	1.4641	P	0.5
6	☐	500.000	508.826	113163.63	2.9970	P	0.7
7	☐	1000.000	1003.018	222685.04	5.9070	P	1.5
8	☐	2000.000	1996.439	450248.56	11.7568	P	0.5
9	☐			1690.13	0.0450	P	3.5

$$y = 0.0059 * x + 7.1863E-004$$

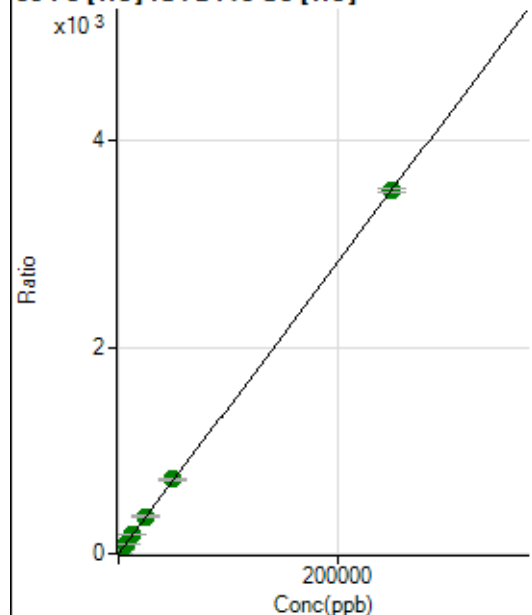
$$R = 1.0000$$

$$DL = 0.216$$

$$BEC = 0.122$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1418.63	0.0370	P	3.8
2	☐	5.000	4.579	3930.31	0.1014	P	3.2
3	☐	50.000	46.869	26644.59	0.6968	P	2.9
4	☐	2500.000	2625.730	1403478.17	37.0055	A	0.7
5	☐	6250.000	6500.631	3492943.13	91.5615	A	0.1
6	☐	12500.000	13005.498	6915302.87	183.1458	A	1.1
7	☐	25000.000	25771.034	13679568.36	362.8761	A	1.6
8	☐	50000.000	51014.328	27507535.34	718.2849	A	1.0
9	☐	250000.00	249687.23	132038146.4	3,515.467	A	1.1

$$y = 0.0141 * x + 0.0370$$

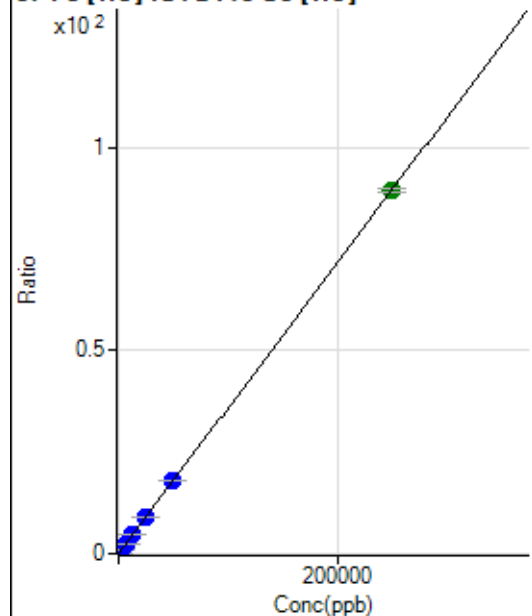
$$R = 1.0000$$

$$DL = 0.303$$

$$BEC = 2.626$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	40.74	0.0011	P	20.8
2	☐	5.000	3.856	94.45	0.0024	P	26.2
3	☐	50.000	49.180	713.00	0.0186	P	0.8
4	☐	2500.000	2557.767	34725.41	0.9156	P	0.7
5	☐	6250.000	6344.892	86586.39	2.2697	P	0.3
6	☐	12500.000	12982.599	175315.95	4.6431	P	0.9
7	☐	25000.000	25435.245	342893.68	9.0956	P	1.4
8	☐	50000.000	50532.251	691981.12	18.0691	P	0.8
9	☐	250000.00	249822.94	3355045.01	89.3264	A	1.0

$$y = 3.5755E-004 * x + 0.0011$$

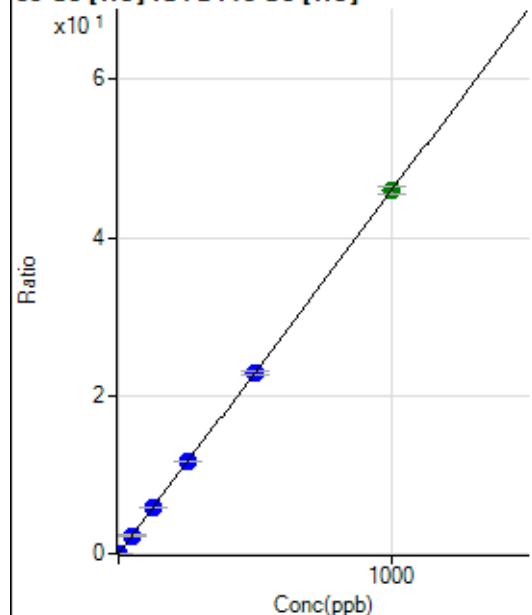
$$R = 1.0000$$

$$DL = 1.855$$

$$BEC = 2.969$$

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	56.67	0.0015	P	11.9
2	☐	0.100	0.095	226.67	0.0059	P	3.3
3	☐	1.000	0.925	1680.13	0.0439	P	5.0
4	☐	50.000	50.279	87643.34	2.3110	P	1.1
5	☐	125.000	124.752	218655.18	5.7317	P	0.2
6	☐	250.000	253.902	440418.00	11.6639	P	0.8
7	☐	500.000	498.882	863915.59	22.9166	P	1.5
8	☐	1000.000	999.601	1758320.63	45.9161	A	2.0
9	☐			2007.96	0.0535	P	1.2

$$y = 0.0459 * x + 0.0015$$

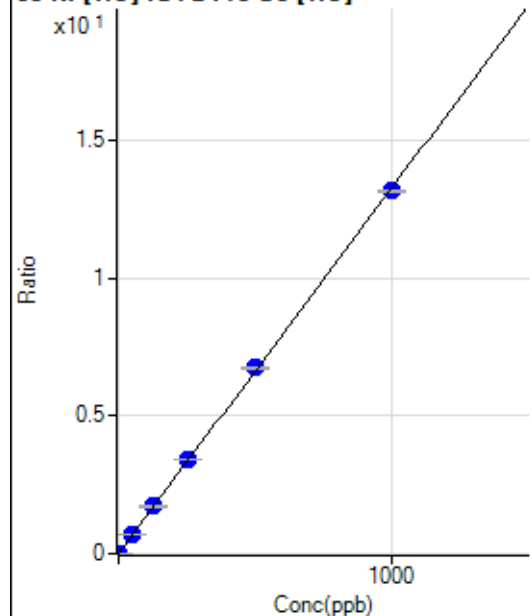
$$R = 1.0000$$

$$DL = 0.01154$$

$$BEC = 0.0322$$

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	65.56	0.0017	P	40.6
2	☐	0.100	0.089	112.23	0.0029	P	16.9
3	☐	1.000	0.973	560.02	0.0146	P	6.4
4	☐	50.000	51.832	26170.33	0.6901	P	1.7
5	☐	125.000	129.201	65520.18	1.7176	P	1.4
6	☐	250.000	258.840	129860.67	3.4392	P	0.9
7	☐	500.000	508.096	254432.74	6.7495	P	1.8
8	☐	1000.000	993.125	505170.25	13.1909	P	0.6
9	☐			5141.03	0.1369	P	1.9

$$y = 0.0133 * x + 0.0017$$

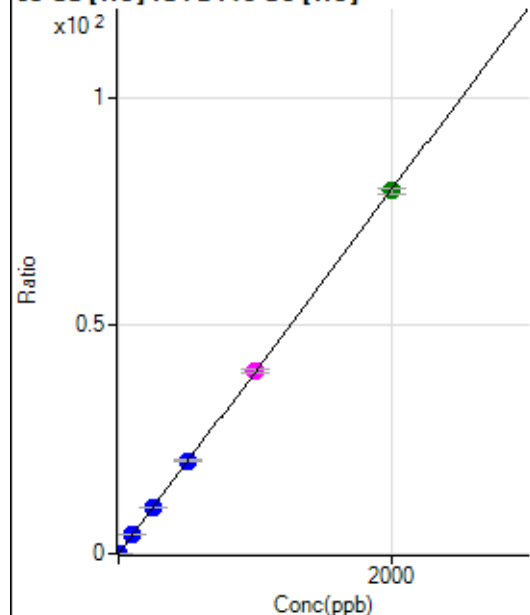
$$R = 0.9999$$

$$DL = 0.1573$$

$$BEC = 0.1293$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	106.67	0.0028	P	28.8
2	☐	0.200	0.198	414.46	0.0107	P	10.4
3	☐	2.000	1.843	2913.69	0.0762	P	2.8
4	☐	100.000	101.786	153864.84	4.0571	P	0.9
5	☐	250.000	252.022	383054.34	10.0414	P	0.7
6	☐	500.000	510.582	767955.09	20.3403	P	1.8
7	☐	1000.000	1005.087	1509371.28	40.0375	M	1.3
8	☐	2000.000	1994.469	3042589.92	79.4467	A	1.2
9	☐			3476.06	0.0925	P	7.0

$$y = 0.0398 * x + 0.0028$$

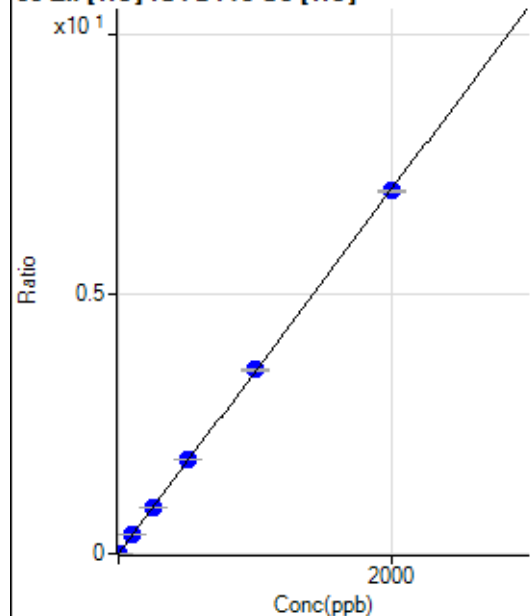
$$R = 1.0000$$

$$DL = 0.06055$$

$$BEC = 0.07006$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	70.00	0.0018	P	15.1
2	☐	0.200	0.667	161.11	0.0042	P	7.1
3	☐	2.000	2.406	392.23	0.0103	P	8.5
4	☐	100.000	102.547	13708.11	0.3615	P	1.4
5	☐	250.000	251.161	33670.96	0.8826	P	0.6
6	☐	500.000	515.900	68384.10	1.8111	P	1.2
7	☐	1000.000	1008.318	133376.78	3.5380	P	1.5
8	☐	2000.000	1991.593	267557.54	6.9864	P	0.6
9	☐			905.60	0.0241	P	4.5

$$y = 0.0035 * x + 0.0018$$

$$R = 1.0000$$

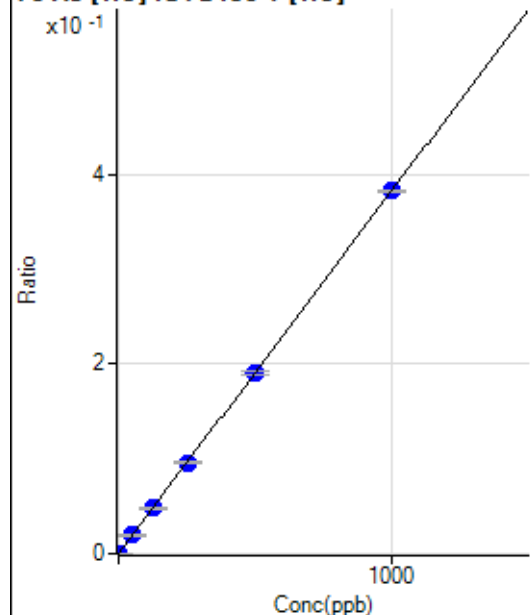
$$DL = 0.2354$$

$$BEC = 0.5192$$

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	4.32	0.0000	P	25.8
2	☐	0.100	0.030	7.41	0.0000	P	50.4
3	☐	1.000	0.804	82.72	0.0003	P	9.8
4	☐	50.000	50.578	4916.36	0.0193	P	1.2
5	☐	125.000	125.102	12238.83	0.0478	P	2.6
6	☐	250.000	250.939	24865.02	0.0959	P	0.9
7	☐	500.000	498.291	49050.17	0.1904	P	1.4
8	☐	1000.000	1000.578	99367.25	0.3824	P	0.5
9	☐			38.89	0.0002	P	14.2

$$y = 3.8217\text{E-}004 * x + 1.6860\text{E-}005$$

$$R = 1.0000$$

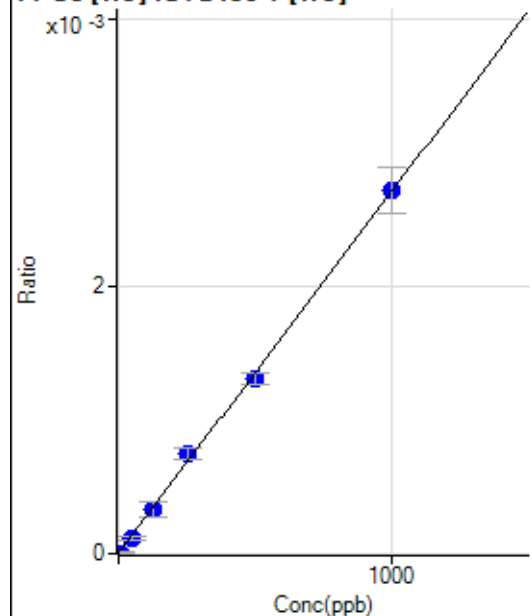
$$DL = 0.03414$$

$$BEC = 0.04412$$

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
2	☐	0.500	-1.598	0.00	0.0000	P	
3	☐	5.000	0.001	1.11	0.0000	P	173.2
4	☐	50.000	40.479	28.89	0.0001	P	18.7
5	☐	125.000	120.500	84.45	0.0003	P	37.8
6	☐	250.000	275.658	194.45	0.0008	P	12.3
7	☐	500.000	484.670	338.90	0.0013	P	6.7
8	☐	1000.000	1002.315	705.59	0.0027	P	12.8
9	☐			0.00	0.0000	P	

$$y = 2.7052\text{E-}006 * x + 4.3220\text{E-}006$$

$$R = 0.9994$$

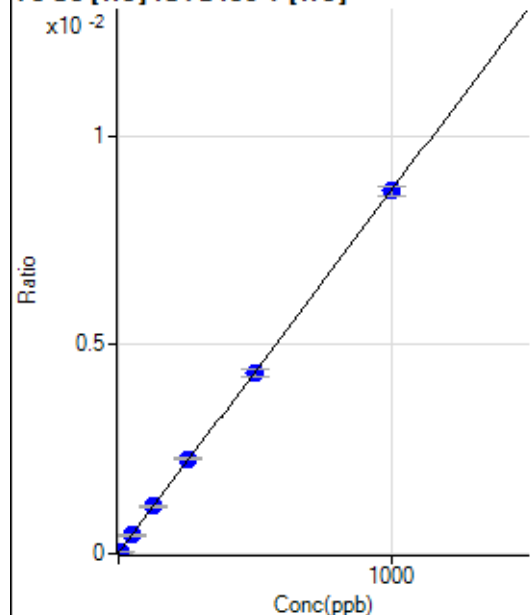
$$DL = 8.302$$

$$BEC = 1.598$$

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	4.94	0.0000	P	56.7
2	☐	0.500	-1.395	1.85	0.0000	P	100.3
3	☐	5.000	4.758	15.43	0.0001	P	18.5
4	☐	50.000	48.774	112.35	0.0004	P	7.2
5	☐	125.000	129.034	291.37	0.0011	P	3.2
6	☐	250.000	259.627	588.90	0.0023	P	3.4
7	☐	500.000	497.772	1117.34	0.0043	P	3.8
8	☐	1000.000	998.266	2255.14	0.0087	P	2.4
9	☐			0.62	0.0000	P	173.2

$$y = 8.6742\text{E-}006 * x + 1.9185\text{E-}005$$

R = 0.9999

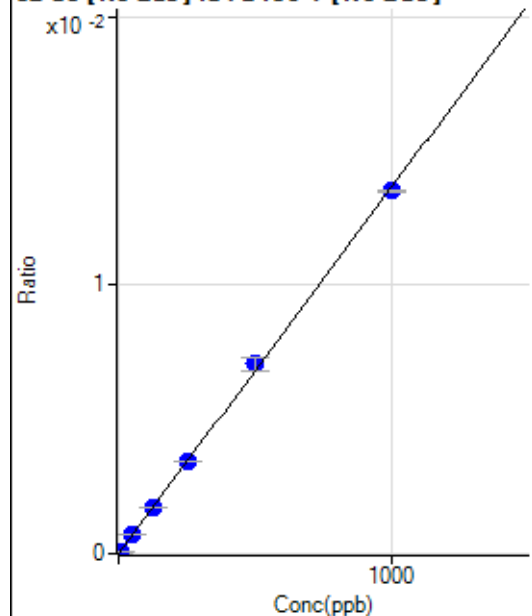
DL = 3.764

BEC = 2.212

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.61	0.0000	P	6117.
2	☐	0.500	0.418	50.62	0.0000	P	81.7
3	☐	5.000	4.106	487.55	0.0001	P	13.6
4	☐	50.000	51.193	5991.43	0.0007	P	0.3
5	☐	125.000	126.435	14784.24	0.0017	P	1.0
6	☐	250.000	252.640	30053.52	0.0034	P	0.9
7	☐	500.000	517.416	60712.54	0.0071	P	6.7
8	☐	1000.000	990.397	121616.11	0.0135	P	0.8
9	☐			71.19	0.0000	P	60.8

$$y = 1.3654\text{E-}005 * x + 6.6744\text{E-}008$$

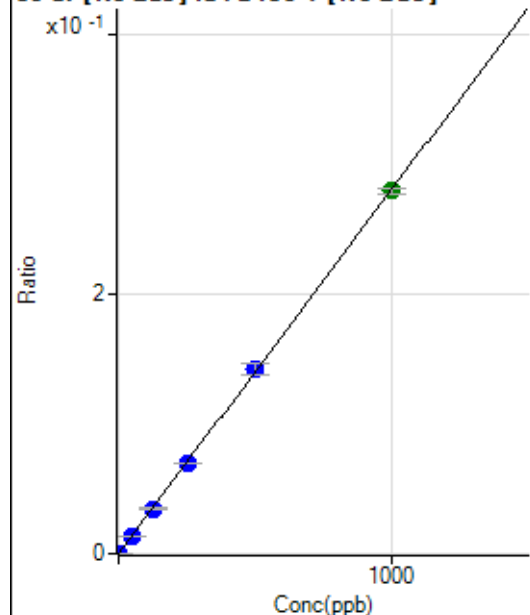
R = 0.9998

DL = 0.8972

BEC = 0.004888

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	455.59	0.0001	P	18.9
2	☐	0.100	0.130	786.17	0.0001	P	15.7
3	☐	1.000	0.938	2747.62	0.0003	P	3.3
4	☐	50.000	49.516	119425.09	0.0139	P	0.7
5	☐	125.000	123.555	297063.35	0.0347	P	1.1
6	☐	250.000	248.260	606773.28	0.0696	P	0.5
7	☐	500.000	507.777	1223808.69	0.1424	P	6.5
8	☐	1000.000	996.751	2513278.49	0.2795	A	1.8
9	☐			82482.59	0.0095	P	1.4

$$y = 2.8033\text{E-}004 * x + 5.3162\text{E-}005$$

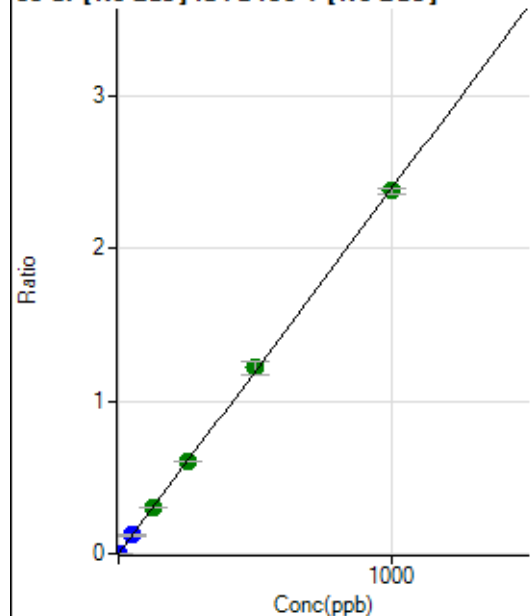
$$R = 1.0000$$

$$DL = 0.1074$$

$$BEC = 0.1896$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	300.02	0.0000	P	9.9
2	☐	0.100	0.099	2386.41	0.0003	P	5.4
3	☐	1.000	0.956	20165.64	0.0023	P	2.7
4	☐	50.000	50.200	1028723.67	0.1200	P	1.3
5	☐	125.000	125.868	2576862.62	0.3009	A	0.5
6	☐	250.000	251.641	5240827.72	0.6016	A	0.5
7	☐	500.000	510.800	10490592.33	1.2210	A	7.3
8	☐	1000.000	994.071	21370149.61	2.3762	A	1.3
9	☐			720620.55	0.0830	P	0.2

$$y = 0.0024 * x + 3.5006\text{E-}005$$

$$R = 0.9999$$

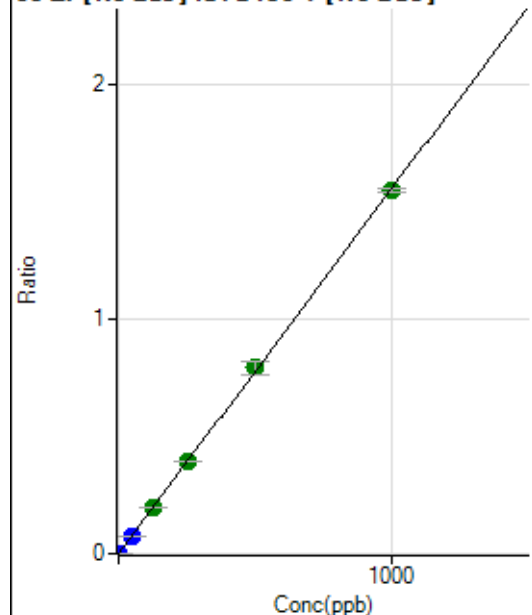
$$DL = 0.00435$$

$$BEC = 0.01464$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	563.93	0.0001	P	8.1
2	☐	0.100	0.081	1677.94	0.0002	P	9.0
3	☐	1.000	0.867	12264.40	0.0014	P	4.4
4	☐	50.000	49.185	654858.47	0.0764	P	0.9
5	☐	125.000	124.974	1661705.35	0.1940	A	0.5
6	☐	250.000	252.408	3413734.71	0.3918	A	0.3
7	☐	500.000	509.535	6797098.07	0.7909	A	6.7
8	☐	1000.000	994.674	13885012.29	1.5439	A	1.0
9	☐			1966.90	0.0002	P	10.0

$$y = 0.0016 * x + 6.5785E-005$$

$$R = 0.9999$$

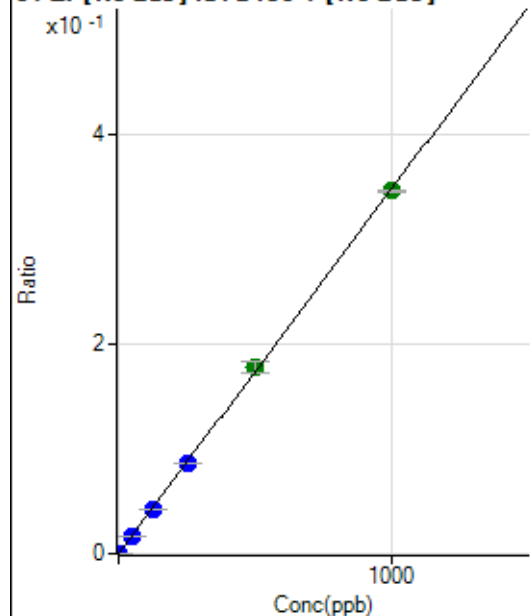
$$DL = 0.01026$$

$$BEC = 0.04238$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	113.89	0.0000	P	22.6
2	☐	0.100	0.067	319.47	0.0000	P	26.8
3	☐	1.000	0.893	2814.30	0.0003	P	1.0
4	☐	50.000	48.421	144450.87	0.0169	P	0.6
5	☐	125.000	122.604	365280.52	0.0427	P	0.6
6	☐	250.000	247.288	749417.05	0.0860	P	0.3
7	☐	500.000	511.759	1529990.05	0.1780	A	6.2
8	☐	1000.000	995.177	3112964.24	0.3461	A	0.5
9	☐			452.81	0.0001	P	15.1

$$y = 3.4780E-004 * x + 1.3292E-005$$

$$R = 0.9999$$

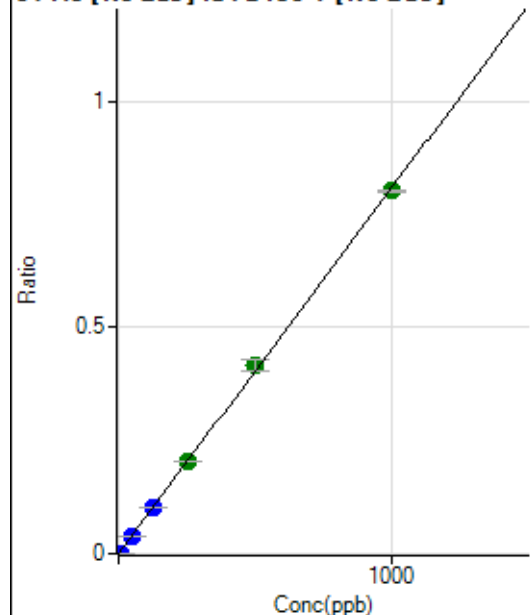
$$DL = 0.02595$$

$$BEC = 0.03822$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	213.90	0.0000	P	13.5
2	☐	0.500	0.184	1522.37	0.0002	P	6.5
3	☐	5.000	1.919	13676.86	0.0016	P	2.0
4	☐	50.000	49.675	343930.90	0.0401	P	0.8
5	☐	125.000	124.813	863141.13	0.1008	P	0.3
6	☐	250.000	251.643	1770212.41	0.2032	A	1.3
7	☐	500.000	514.204	3568916.40	0.4152	A	5.9
8	☐	1000.000	992.542	7206884.28	0.8013	A	0.7
9	☐			6674.20	0.0008	P	3.8

$$y = 8.0734\text{E-}004 * x + 2.4949\text{E-}005$$

$$R = 0.9998$$

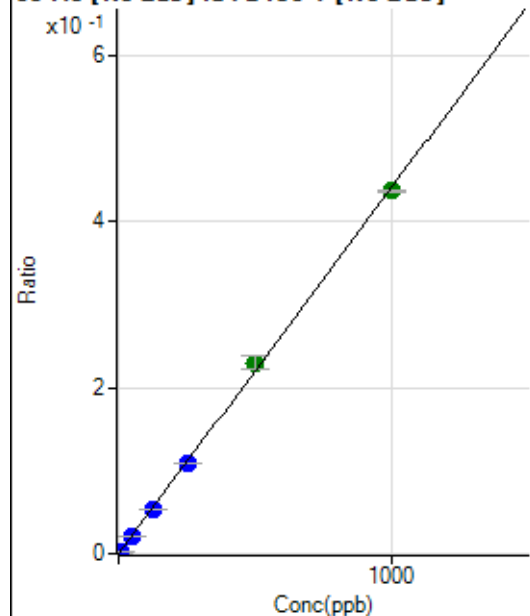
$$DL = 0.0125$$

$$BEC = 0.0309$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	69.45	0.0000	P	25.1
2	☐	0.500	0.404	1633.51	0.0002	P	19.1
3	☐	5.000	4.344	16713.72	0.0019	P	3.1
4	☐	50.000	48.579	183682.70	0.0214	P	2.1
5	☐	125.000	122.079	461132.39	0.0538	P	0.1
6	☐	250.000	245.093	941784.95	0.1081	P	0.4
7	☐	500.000	520.526	1972558.83	0.2296	A	7.0
8	☐	1000.000	991.403	3932387.59	0.4372	A	0.8
9	☐			11046.64	0.0013	P	1.2

$$y = 4.4102\text{E-}004 * x + 8.1036\text{E-}006$$

$$R = 0.9997$$

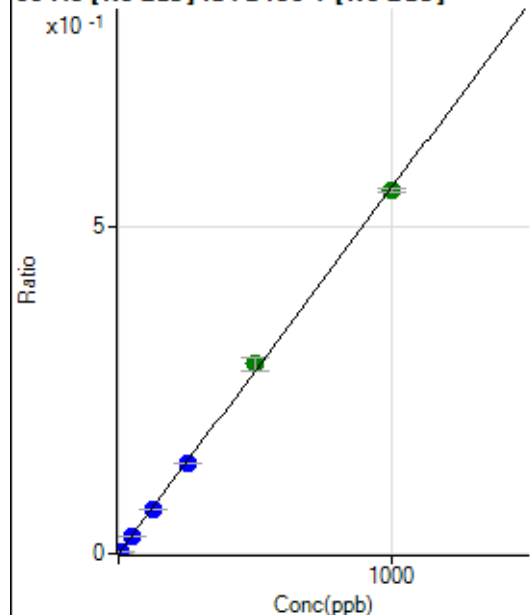
$$DL = 0.01385$$

$$BEC = 0.01837$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	88.89	0.0000	P	27.0
2	☐	0.500	0.380	1955.80	0.0002	P	6.4
3	☐	5.000	3.848	18822.09	0.0022	P	1.9
4	☐	50.000	49.240	236537.46	0.0276	P	0.5
5	☐	125.000	123.094	590681.67	0.0690	P	0.3
6	☐	250.000	248.075	1210976.07	0.1390	P	0.4
7	☐	500.000	517.964	2493765.29	0.2902	A	6.8
8	☐	1000.000	991.781	4997289.87	0.5557	A	1.2
9	☐			12984.53	0.0015	P	1.2

$$y = 5.6027\text{E-}004 * x + 1.0368\text{E-}005$$

$$R = 0.9998$$

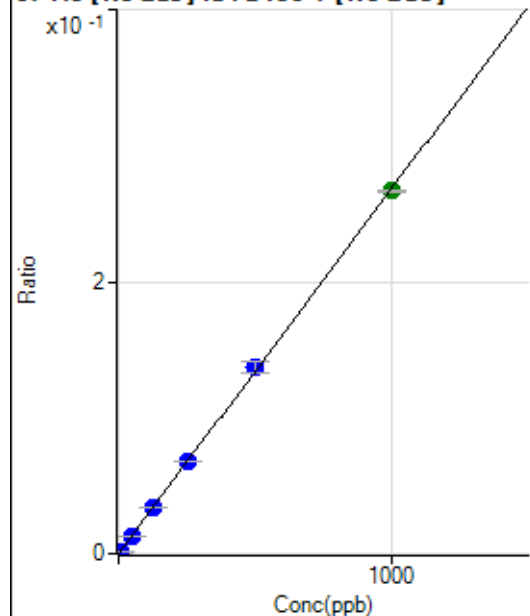
$$DL = 0.01497$$

$$BEC = 0.01851$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	52.78	0.0000	P	48.1
2	☐	0.500	0.441	1091.76	0.0001	P	3.1
3	☐	5.000	4.444	10421.09	0.0012	P	1.3
4	☐	50.000	49.269	113427.84	0.0132	P	0.4
5	☐	125.000	124.193	285604.08	0.0334	P	0.5
6	☐	250.000	250.840	586802.13	0.0674	P	0.1
7	☐	500.000	510.952	1179355.89	0.1372	P	5.9
8	☐	1000.000	994.454	2401320.30	0.2670	A	0.8
9	☐			6365.71	0.0007	P	5.3

$$y = 2.6849\text{E-}004 * x + 6.1520\text{E-}006$$

$$R = 0.9999$$

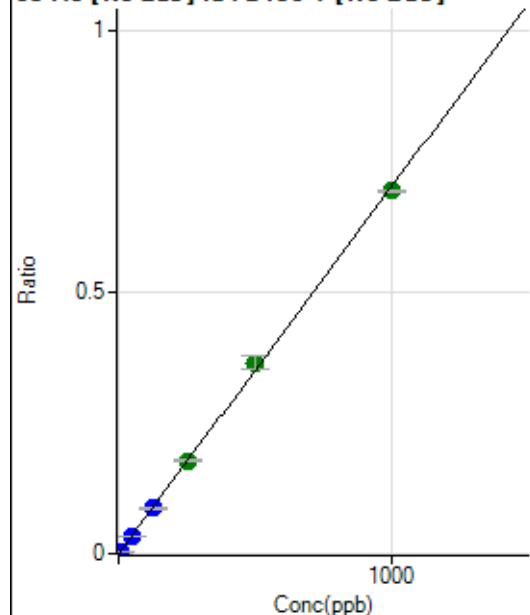
$$DL = 0.03304$$

$$BEC = 0.02291$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	102.78	0.0000	P	38.4
2	☐	0.500	0.467	2975.47	0.0003	P	8.9
3	☐	5.000	4.391	26869.24	0.0031	P	0.4
4	☐	50.000	49.338	296778.84	0.0346	P	0.6
5	☐	125.000	123.163	740076.61	0.0864	P	0.7
6	☐	250.000	253.180	1547606.51	0.1776	A	1.2
7	☐	500.000	521.218	3142905.21	0.3657	A	6.6
8	☐	1000.000	988.862	6239516.98	0.6938	A	0.6
9	☐			16374.41	0.0019	P	2.4

$$y = 7.0158\text{E-}004 * x + 1.1995\text{E-}005$$

$$R = 0.9997$$

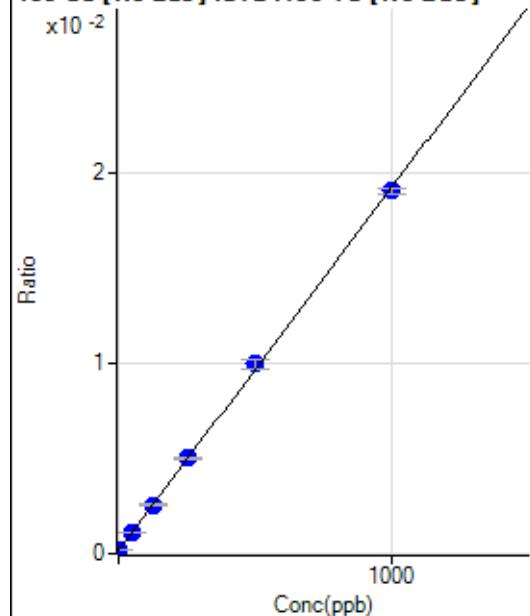
$$DL = 0.01968$$

$$BEC = 0.0171$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1561.28	0.0002	P	3.3
2	☐	0.100	1.030	1783.54	0.0002	P	8.6
3	☐	1.000	1.257	1830.77	0.0002	P	3.3
4	☐	50.000	50.585	11227.39	0.0011	P	1.2
5	☐	125.000	126.901	25814.27	0.0026	P	2.6
6	☐	250.000	254.469	51959.59	0.0050	P	2.1
7	☐	500.000	514.410	101404.73	0.0100	P	4.6
8	☐	1000.000	991.411	203176.36	0.0190	P	1.6
9	☐			1786.31	0.0002	P	7.0

$$y = 1.9043\text{E-}005 * x + 1.5550\text{E-}004$$

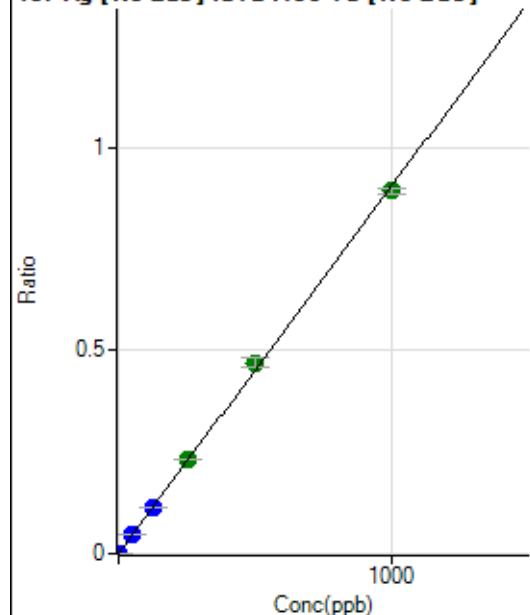
$$R = 0.9998$$

$$DL = 0.8079$$

$$BEC = 8.166$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	83.34	0.0000	P	35.7
2	☐	0.100	0.078	802.84	0.0001	P	12.1
3	☐	1.000	0.939	8744.86	0.0009	P	1.9
4	☐	50.000	51.268	464868.97	0.0463	P	0.6
5	☐	125.000	127.742	1158309.88	0.1154	P	0.6
6	☐	250.000	256.805	2410273.10	0.2320	A	0.7
7	☐	500.000	520.747	4791563.73	0.4705	A	5.9
8	☐	1000.000	987.519	9522606.03	0.8921	A	1.4
9	☐			1088.98	0.0001	P	6.1

$$y = 9.0341\text{E-}004 * x + 8.2949\text{E-}006$$

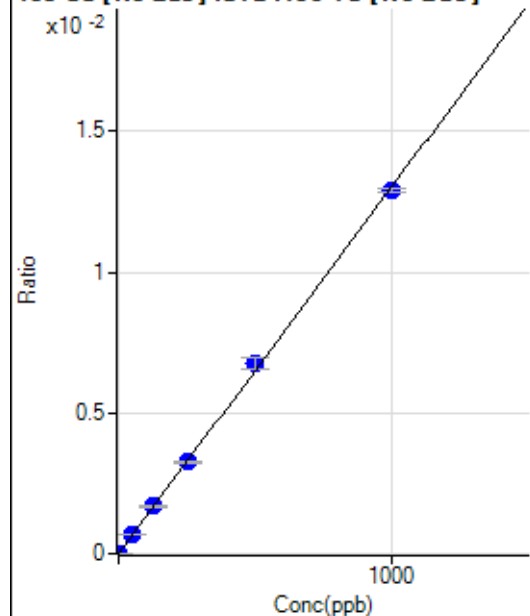
$$R = 0.9997$$

$$DL = 0.009833$$

$$BEC = 0.009182$$

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	5.56	0.0000	P	114.7
2	☐	0.100	0.125	22.22	0.0000	P	27.7
3	☐	1.000	0.991	137.50	0.0000	P	31.5
4	☐	50.000	50.828	6646.23	0.0007	P	3.7
5	☐	125.000	128.527	16799.66	0.0017	P	0.9
6	☐	250.000	249.250	33720.21	0.0032	P	1.9
7	☐	500.000	519.616	68920.94	0.0068	P	5.4
8	☐	1000.000	989.897	137577.83	0.0129	P	0.9
9	☐			20.83	0.0000	P	60.8

$$y = 1.3020\text{E-}005 * x + 5.5285\text{E-}007$$

$$R = 0.9997$$

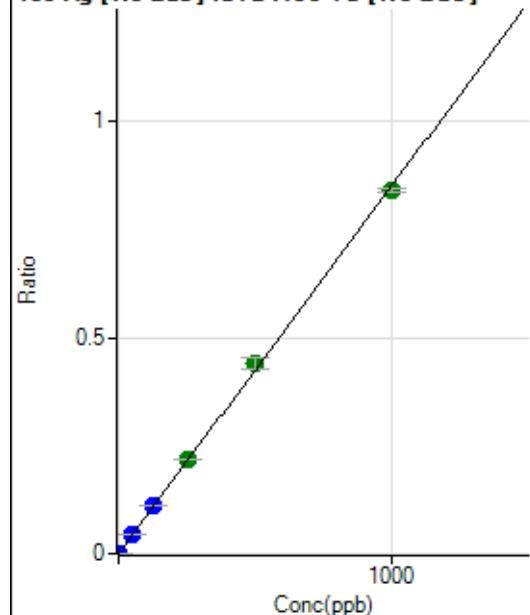
$$DL = 0.1461$$

$$BEC = 0.04246$$

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	50.00	0.0000	P	0.4
2	☐	0.100	0.088	811.17	0.0001	P	14.1
3	☐	1.000	0.923	8047.18	0.0008	P	2.1
4	☐	50.000	51.819	441710.87	0.0440	P	0.3
5	☐	125.000	129.793	1106415.09	0.1102	P	0.2
6	☐	250.000	257.834	2275038.46	0.2190	A	0.1
7	☐	500.000	520.169	4499925.49	0.4418	A	5.9
8	☐	1000.000	987.267	8950673.64	0.8385	A	0.9
9	☐			1047.31	0.0001	P	14.7

$$y = 8.4934\text{E-}004 * x + 4.9803\text{E-}006$$

$$R = 0.9997$$

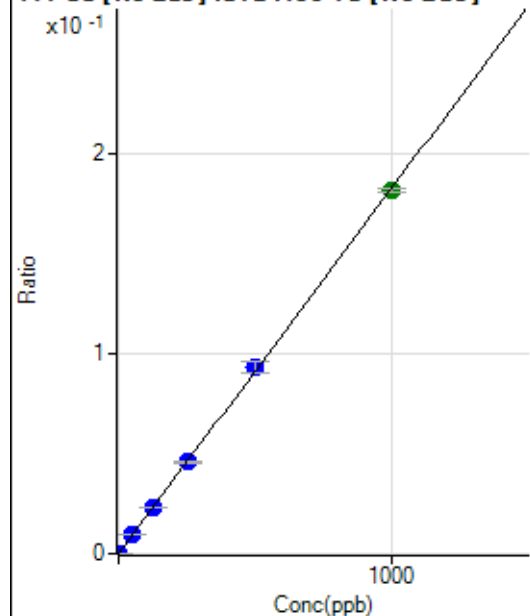
$$DL = 7.573\text{E-}05$$

$$BEC = 0.005864$$

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	319.48	0.0000	P	2.6
2	☐	0.100	0.117	542.55	0.0001	P	9.5
3	☐	1.000	0.934	2062.42	0.0002	P	3.6
4	☐	50.000	50.739	93143.20	0.0093	P	0.2
5	☐	125.000	127.424	233463.36	0.0233	P	0.8
6	☐	250.000	250.455	474661.20	0.0457	P	0.6
7	☐	500.000	512.368	951661.44	0.0934	P	5.9
8	☐	1000.000	993.362	1933386.42	0.1811	A	1.0
9	☐			483.65	0.0000	P	4.6

$$y = 1.8231\text{E-}004 * x + 3.1822\text{E-}005$$

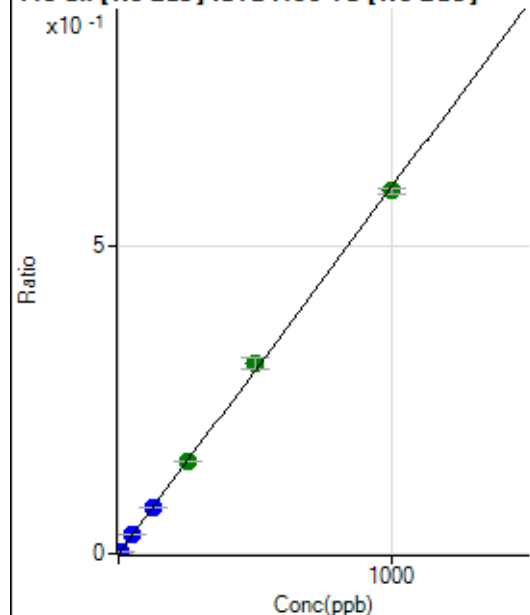
$$R = 0.9999$$

$$DL = 0.01385$$

$$BEC = 0.1746$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	813.95	0.0001	P	6.9
2	☐	0.500	0.412	3325.58	0.0003	P	3.9
3	☐	5.000	4.427	27710.35	0.0027	P	3.9
4	☐	50.000	50.009	299486.27	0.0298	P	0.6
5	☐	125.000	125.308	749279.05	0.0747	P	0.4
6	☐	250.000	252.591	1562580.52	0.1504	A	0.7
7	☐	500.000	519.362	3149092.78	0.3092	A	5.8
8	☐	1000.000	989.635	6287333.60	0.5891	A	1.8
9	☐			6135.01	0.0006	P	2.5

$$y = 5.9515\text{E-}004 * x + 8.1071\text{E-}005$$

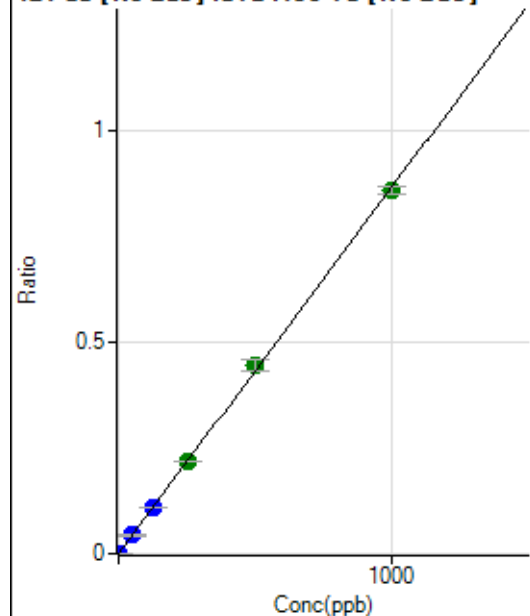
$$R = 0.9997$$

$$DL = 0.02814$$

$$BEC = 0.1362$$

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	111.12	0.0000	P	18.7
2	☐	0.200	0.184	1733.52	0.0002	P	10.4
3	☐	2.000	1.770	15726.59	0.0015	P	5.0
4	☐	50.000	50.060	434591.71	0.0433	P	0.7
5	☐	125.000	125.839	1092400.14	0.1088	P	0.7
6	☐	250.000	253.457	2277371.53	0.2192	A	1.0
7	☐	500.000	515.920	4544432.87	0.4462	A	6.1
8	☐	1000.000	991.068	9148934.67	0.8572	A	2.0
9	☐			10668.68	0.0010	P	4.3

$$y = 8.6489\text{E-}004 * x + 1.1065\text{E-}005$$

$$R = 0.9998$$

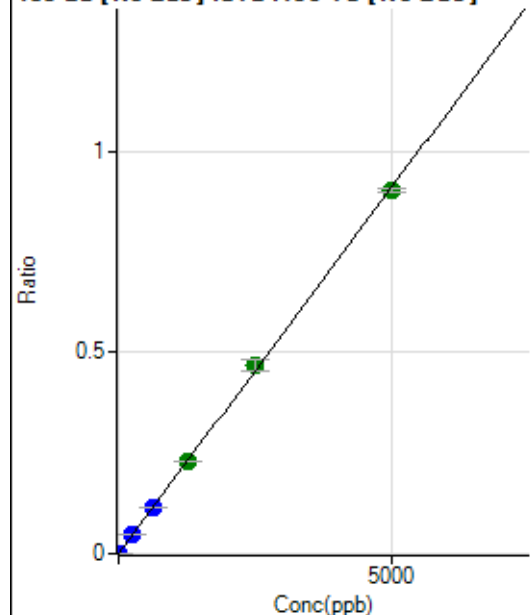
$$DL = 0.007193$$

$$BEC = 0.01279$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.11	0.0000	P	35.3
2	☐	1.000	0.935	1766.87	0.0002	P	11.0
3	☐	10.000	9.056	16841.92	0.0017	P	2.2
4	☐	250.000	250.018	456298.92	0.0455	P	0.4
5	☐	625.000	628.235	1146649.71	0.1143	P	0.5
6	☐	1250.000	1265.699	2391259.41	0.2302	A	0.4
7	☐	2500.000	2583.773	4785113.13	0.4699	A	6.2
8	☐	5000.000	4953.785	9616056.64	0.9009	A	1.2
9	☐			2847.66	0.0003	P	4.0

$$y = 1.8186E-004 * x + 3.5979E-006$$

$$R = 0.9998$$

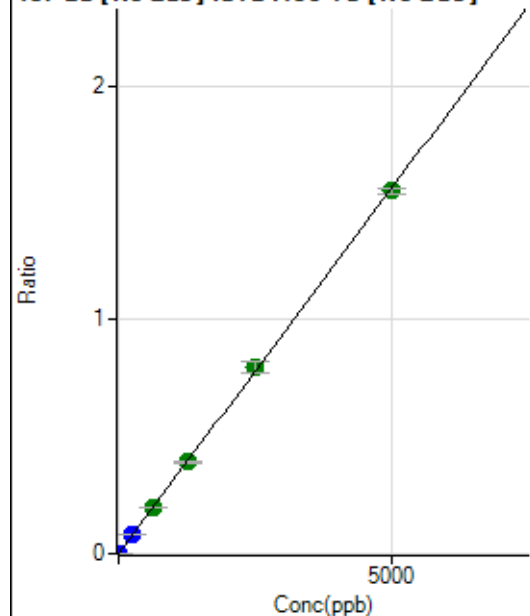
$$DL = 0.02097$$

$$BEC = 0.01978$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	44.45	0.0000	P	46.9
2	☐	1.000	0.847	2742.08	0.0003	P	9.7
3	☐	10.000	8.965	28637.62	0.0028	P	1.5
4	☐	250.000	252.088	790873.42	0.0788	P	0.5
5	☐	625.000	638.751	2004110.77	0.1997	A	0.8
6	☐	1250.000	1251.147	4063330.51	0.3911	A	0.6
7	☐	2500.000	2561.948	8156746.45	0.8009	A	6.0
8	☐	5000.000	4966.918	16573590.48	1.5528	A	1.6
9	☐			4475.97	0.0004	P	1.4

$$y = 3.1262E-004 * x + 4.4236E-006$$

$$R = 0.9999$$

$$DL = 0.01989$$

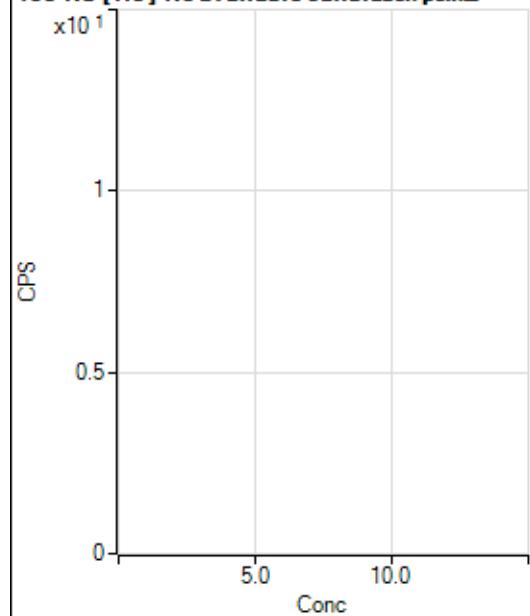
$$BEC = 0.01415$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

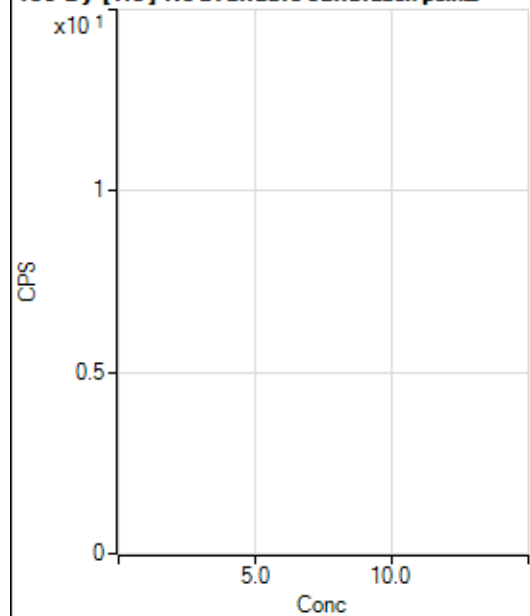
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	114.5
2	☐			13.33		P	NaN
3	☐			13.33		P	132.3
4	☐			22.22		P	45.8
5	☐			71.12		P	28.6
6	☐			111.11		P	12.5
7	☐			191.12		P	17.2
8	☐			353.35		P	9.8
9	☐			113.34		P	23.5

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	86.6
2	☐			0.00		P	
3	☐			2.22		P	173.2
4	☐			2.22		P	173.2
5	☐			0.00		P	
6	☐			4.44		P	43.4
7	☐			7.78		P	49.5
8	☐			3.33		P	100.1
9	☐			7.78		P	65.5

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.78		P	173.2
2	☐			8.33		P	173.2
3	☐			25.00		P	57.7
4	☐			13.89		P	34.7
5	☐			41.67		P	60.0
6	☐			50.00		P	28.9
7	☐			72.23		P	24.0
8	☐			147.23		P	27.9
9	☐			69.45		P	56.7

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	86.6
2	☐			4.44		P	114.6
3	☐			1.11		P	173.2
4	☐			3.33		P	100.1
5	☐			5.56		P	91.6
6	☐			7.78		P	24.7
7	☐			13.34		P	43.3
8	☐			21.11		P	24.1
9	☐			15.55		P	24.8

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

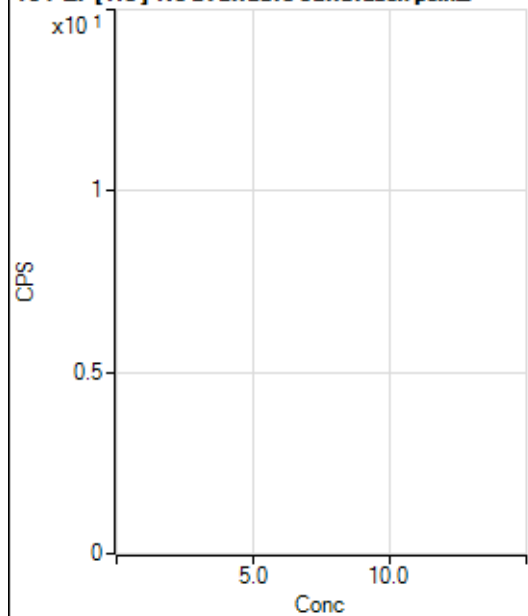
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			61.11		P	28.4
2	☐			69.45		P	42.1
3	☐			52.78		P	32.9
4	☐			61.12		P	34.3
5	☐			69.45		P	36.7
6	☐			88.90		P	14.3
7	☐			122.23		P	34.3
8	☐			144.45		P	24.0
9	☐			152.78		P	32.0

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	24.7
2	☐			8.89		P	21.6
3	☐			8.89		P	43.3
4	☐			11.11		P	17.3
5	☐			6.67		P	0.0
6	☐			14.44		P	35.3
7	☐			18.89		P	20.4
8	☐			18.89		P	10.2
9	☐			17.78		P	21.7

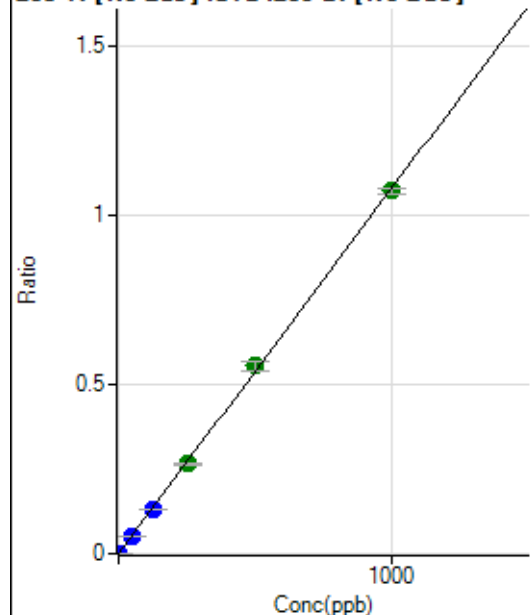
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			36.11		P	35.3
2	☐			47.22		P	10.2
3	☐			38.89		P	44.6
4	☐			50.00		P	33.3
5	☐			38.89		P	61.9
6	☐			44.45		P	10.8
7	☐			41.67		P	40.0
8	☐			52.78		P	36.5
9	☐			83.34		P	10.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	99.0
2	☐			2.22		P	86.6
3	☐			11.11		P	34.6
4	☐			6.67		P	50.0
5	☐			8.89		P	21.6
6	☐			6.67		P	50.0
7	☐			13.33		P	25.0
8	☐			6.67		P	100.0
9	☐			12.22		P	103.3

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	116.67	0.0000	P	20.2
2	☐	0.100	0.089	716.72	0.0001	P	18.0
3	☐	1.000	0.874	5901.67	0.0010	P	3.4
4	☐	50.000	48.383	316035.37	0.0522	P	1.0
5	☐	125.000	123.085	800459.57	0.1328	P	0.7
6	☐	250.000	245.802	1650778.76	0.2653	A	0.8
7	☐	500.000	515.272	3385858.54	0.5561	A	5.1
8	☐	1000.000	993.734	6786228.28	1.0724	A	1.4
9	☐			2286.42	0.0004	P	4.9

$$y = 0.0011 * x + 1.9050E-005$$

$$R = 0.9998$$

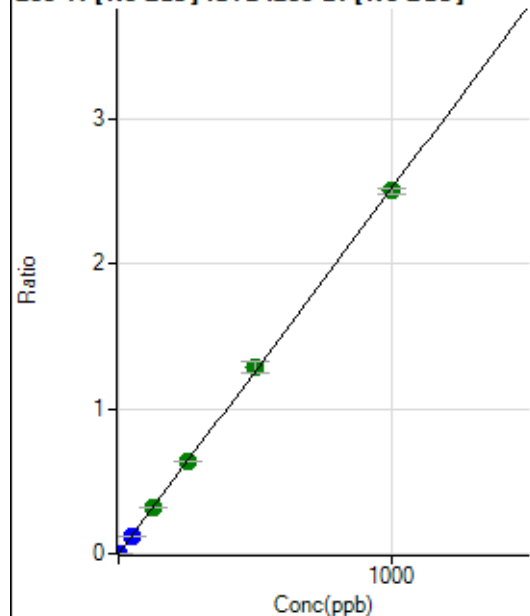
$$DL = 0.0107$$

$$BEC = 0.01765$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	250.01	0.0000	P	14.9
2	☐	0.100	0.081	1525.17	0.0002	P	5.6
3	☐	1.000	0.908	14241.91	0.0023	P	0.8
4	☐	50.000	49.522	753573.02	0.1245	P	0.5
5	☐	125.000	126.257	1912901.50	0.3175	A	0.5
6	☐	250.000	252.058	3943728.17	0.6337	A	0.2
7	☐	500.000	510.578	7815216.06	1.2837	A	5.5
8	☐	1000.000	994.064	15815798.79	2.4992	A	1.2
9	☐			5287.47	0.0009	P	6.2

$$y = 0.0025 * x + 4.0813E-005$$

$$R = 0.9999$$

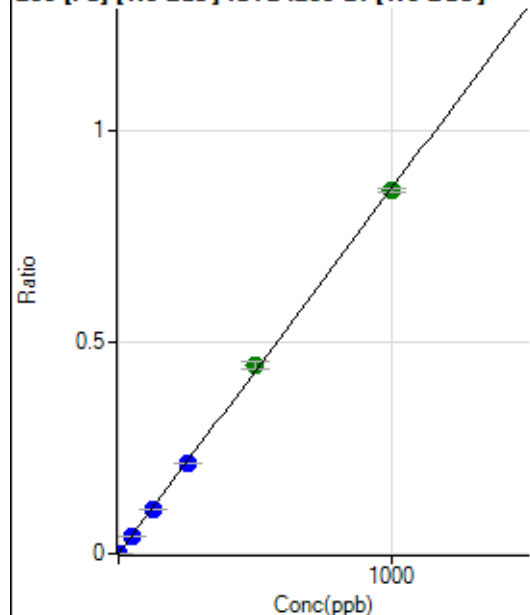
$$DL = 0.007236$$

$$BEC = 0.01623$$

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	542.62	0.0001	P	7.6
2	☐	0.100	0.088	1029.71	0.0002	P	6.3
3	☐	1.000	0.925	5443.93	0.0009	P	1.0
4	☐	50.000	49.143	257444.48	0.0425	P	0.7
5	☐	125.000	123.386	642904.48	0.1067	P	0.4
6	☐	250.000	245.707	1321654.34	0.2124	P	0.5
7	☐	500.000	515.629	2713492.97	0.4456	A	4.8
8	☐	1000.000	993.504	5432732.24	0.8585	A	1.2
9	☐			6314.71	0.0011	P	3.0

$$y = 8.6401\text{E-}004 * x + 8.8479\text{E-}005$$

$$R = 0.9998$$

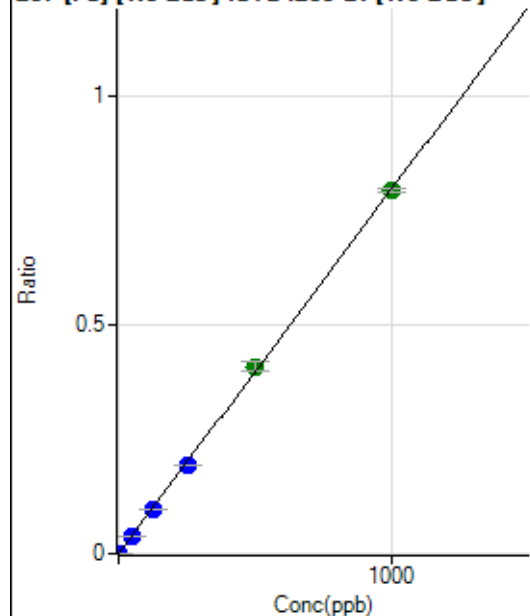
$$DL = 0.02342$$

$$BEC = 0.1024$$

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	435.21	0.0001	P	2.7
2	☐	0.100	0.088	877.84	0.0001	P	2.8
3	☐	1.000	0.935	4991.86	0.0008	P	1.9
4	☐	50.000	48.173	232144.76	0.0384	P	0.4
5	☐	125.000	121.747	583618.98	0.0969	P	0.3
6	☐	250.000	242.396	1199606.32	0.1928	P	0.6
7	☐	500.000	513.500	2485784.60	0.4083	A	5.5
8	☐	1000.000	995.649	5009548.67	0.7916	A	1.0
9	☐			5506.89	0.0009	P	1.2

$$y = 7.9498\text{E-}004 * x + 7.0919\text{E-}005$$

$$R = 0.9998$$

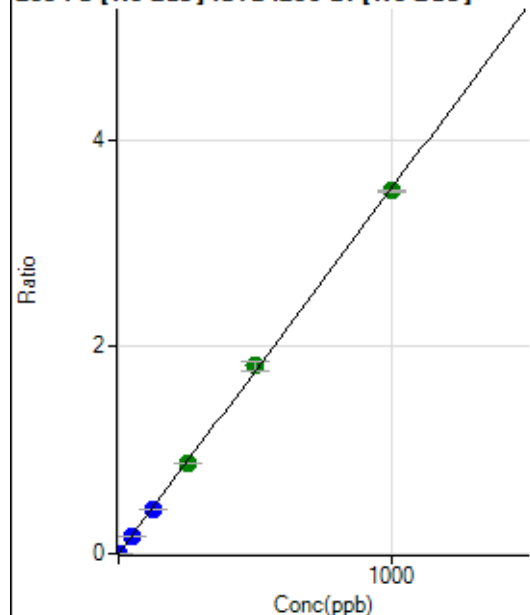
$$DL = 0.007137$$

$$BEC = 0.08921$$

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	2022.35	0.0003	P	3.1
2	☐	0.100	0.087	3965.19	0.0006	P	2.0
3	☐	1.000	0.909	21687.44	0.0035	P	0.8
4	☐	50.000	48.825	1044536.46	0.1726	P	0.5
5	☐	125.000	123.149	2620643.50	0.4349	P	0.2
6	☐	250.000	248.356	5456102.10	0.8768	A	0.3
7	☐	500.000	515.217	11072355.31	1.8185	A	5.3
8	☐	1000.000	993.092	22180700.50	3.5049	A	0.7
9	☐			24863.83	0.0043	P	0.8

$$y = 0.0035 * x + 3.2970E-004$$

$$R = 0.9998$$

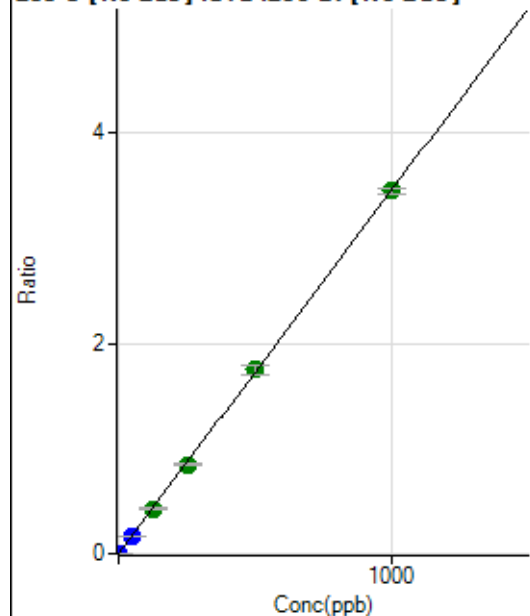
$$DL = 0.008593$$

$$BEC = 0.09343$$

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	119.45	0.0000	P	11.4
2	☐	0.100	0.084	1930.80	0.0003	P	7.6
3	☐	1.000	0.840	17894.24	0.0029	P	5.4
4	☐	50.000	48.119	1005197.56	0.1661	P	0.8
5	☐	125.000	123.495	2568978.53	0.4263	A	1.5
6	☐	250.000	245.746	5279390.35	0.8484	A	0.9
7	☐	500.000	505.970	10634601.80	1.7467	A	5.4
8	☐	1000.000	998.361	21809941.11	3.4465	A	1.5
9	☐			1608.52	0.0003	P	4.5

$$y = 0.0035 * x + 1.9479E-005$$

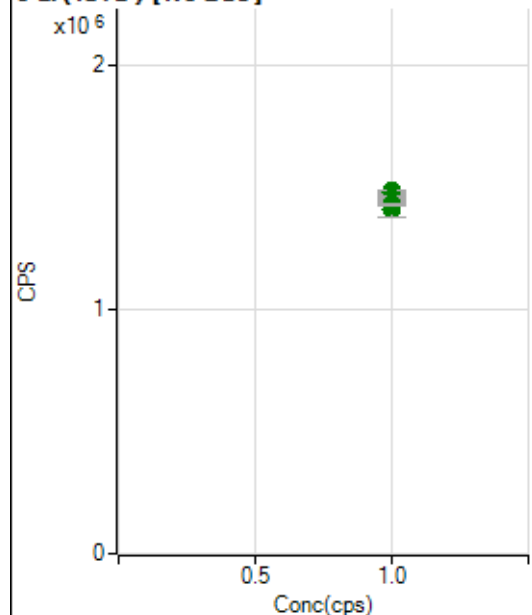
$$R = 1.0000$$

$$DL = 0.001929$$

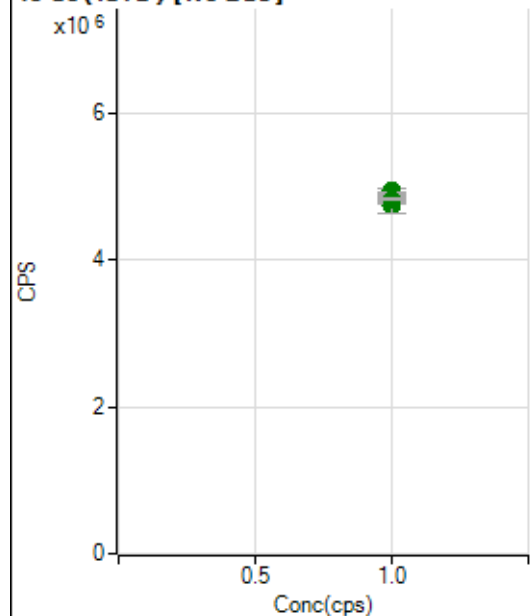
$$BEC = 0.005643$$

Weight: <None>

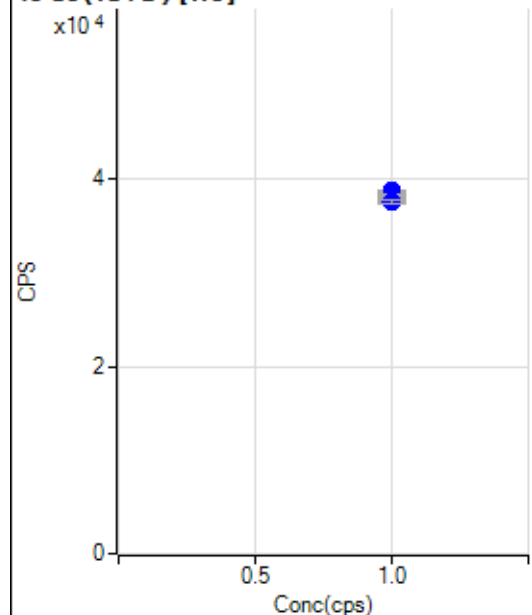
Min Conc: 0

6 Li (ISTD) [No Gas]

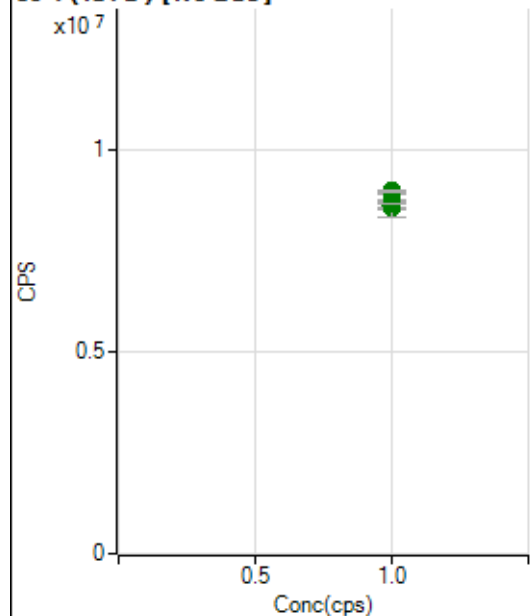
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		1487127.53		A	0.6
2	☐	1.000		1484514.13		A	0.6
3	☐	1.000		1483398.68		A	1.0
4	☐	1.000		1450988.08		A	0.6
5	☐	1.000		1444469.61		A	0.3
6	☐	1.000		1460241.70		A	0.7
7	☐	1.000		1411600.95		A	4.6
8	☐	1.000		1435183.82		A	0.3
9	☐	1.000		1427779.08		A	0.5

45 Sc (ISTD) [No Gas]

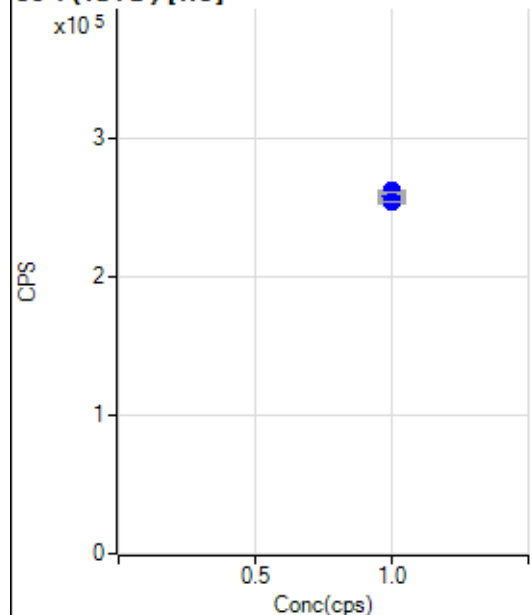
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		4938634.96		A	0.9
2	☐	1.000		4911409.75		A	0.4
3	☐	1.000		4878490.26		A	0.4
4	☐	1.000		4850165.26		A	0.3
5	☐	1.000		4771915.04		A	0.7
6	☐	1.000		4917267.21		A	0.3
7	☐	1.000		4737637.00		A	5.0
8	☐	1.000		4903511.70		A	0.6
9	☐	1.000		4824764.78		A	0.7

45 Sc (ISTD) [He]

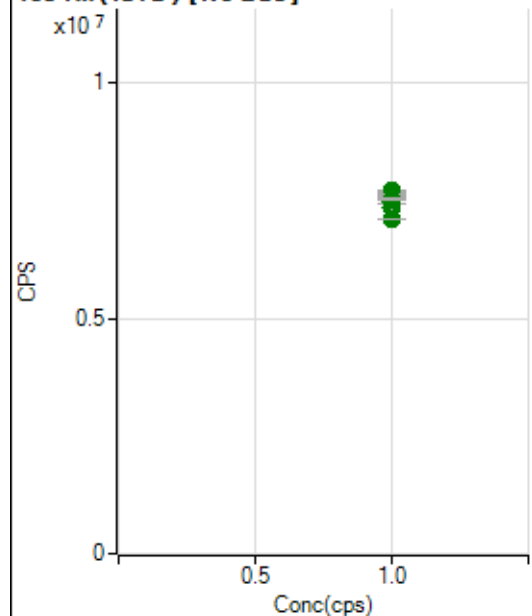
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		38370.17		P	2.0
2	☐	1.000		38742.40		P	0.6
3	☐	1.000		38239.82		P	1.4
4	☐	1.000		37925.56		P	0.4
5	☐	1.000		38148.50		P	0.5
6	☐	1.000		37761.93		P	1.5
7	☐	1.000		37705.04		P	1.9
8	☐	1.000		38297.87		P	0.7
9	☐	1.000		37561.45		P	0.8

89 Y (ISTD) [No Gas]

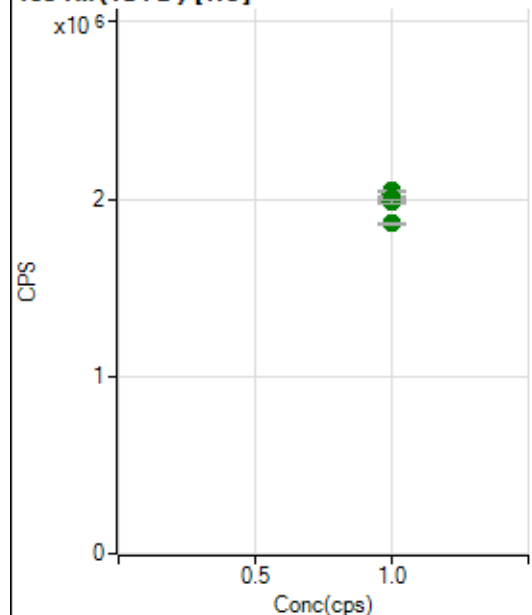
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		8571962.65		A	0.3
2	☐	1.000		8762563.27		A	0.4
3	☐	1.000		8688777.30		A	0.5
4	☐	1.000		8570821.88		A	0.6
5	☐	1.000		8563657.72		A	0.1
6	☐	1.000		8712175.91		A	0.1
7	☐	1.000		8618150.84		A	6.4
8	☐	1.000		8993728.76		A	0.7
9	☐	1.000		8683976.19		A	0.4

89 Y(ISTD) [He]

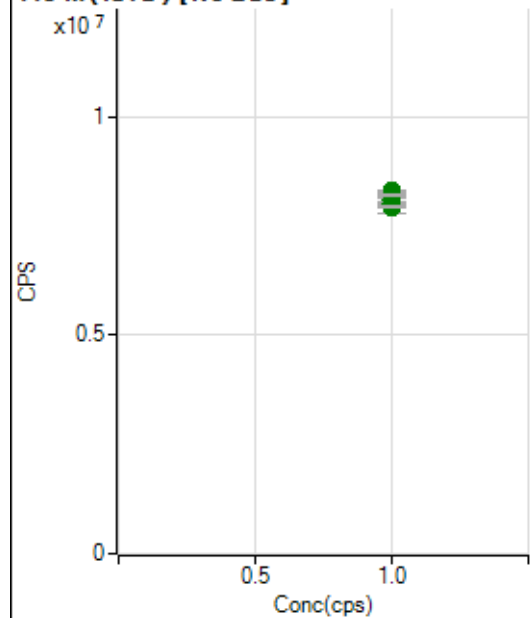
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		256598.02		P	0.9
2	☐	1.000		261461.22		P	0.5
3	☐	1.000		255268.21		P	0.5
4	☐	1.000		254149.64		P	1.2
5	☐	1.000		255910.71		P	0.5
6	☐	1.000		259238.06		P	0.8
7	☐	1.000		257574.56		P	1.0
8	☐	1.000		259849.90		P	0.2
9	☐	1.000		253545.44		P	0.3

103 Rh(ISTD) [No Gas]

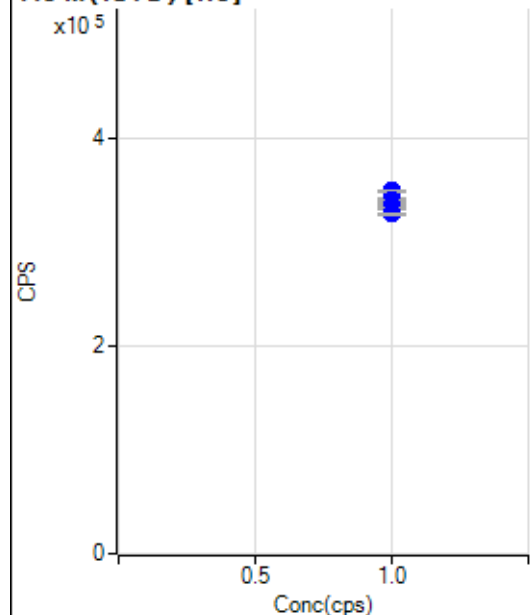
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		7613256.51		A	0.7
2	☐	1.000		7714989.58		A	0.6
3	☐	1.000		7714344.01		A	0.5
4	☐	1.000		7550625.08		A	0.9
5	☐	1.000		7489045.04		A	0.9
6	☐	1.000		7631272.31		A	0.6
7	☐	1.000		7359085.24		A	6.1
8	☐	1.000		7540627.86		A	1.0
9	☐	1.000		7116690.44		A	0.5

103 Rh (ISTD) [He]

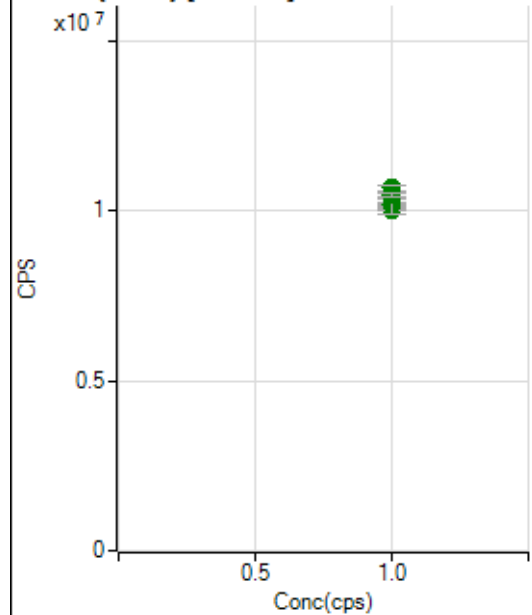
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		2027401.13		A	1.1
2	☐	1.000		2045636.39		A	0.8
3	☐	1.000		2003601.76		A	1.1
4	☐	1.000		1999999.62		A	1.1
5	☐	1.000		1996037.78		A	0.8
6	☐	1.000		2003342.99		A	0.6
7	☐	1.000		1991338.15		A	0.2
8	☐	1.000		1983806.46		A	0.7
9	☐	1.000		1860235.68		A	0.6

115 In (ISTD) [No Gas]

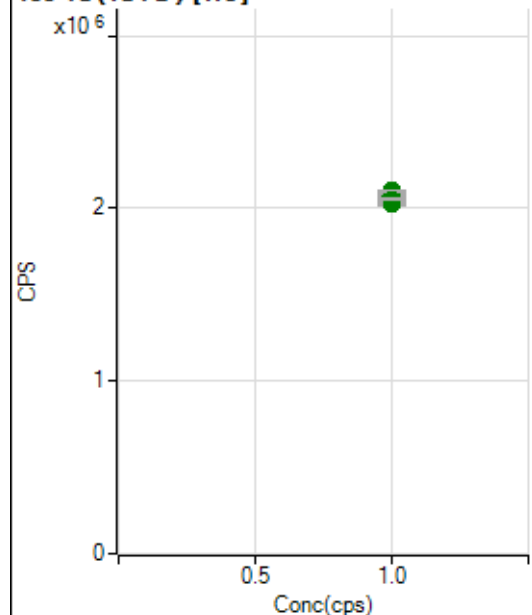
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		8185878.59		A	1.1
2	☐	1.000		8307665.97		A	0.3
3	☐	1.000		8200746.69		A	0.3
4	☐	1.000		8090981.30		A	1.2
5	☐	1.000		8036375.02		A	0.9
6	☐	1.000		8245544.57		A	0.1
7	☐	1.000		8019176.84		A	5.9
8	☐	1.000		8217700.95		A	0.2
9	☐	1.000		7943129.07		A	0.7

115 In (ISTD) [He]

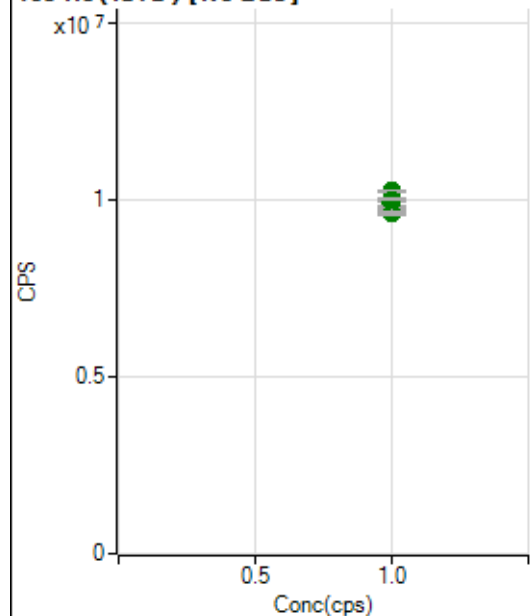
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		342156.81		P	0.6
2	☐	1.000		349770.34		P	0.5
3	☐	1.000		340198.90		P	1.0
4	☐	1.000		338008.92		P	0.6
5	☐	1.000		339546.71		P	0.8
6	☐	1.000		341030.68		P	0.6
7	☐	1.000		335596.94		P	0.5
8	☐	1.000		333240.65		P	0.6
9	☐	1.000		327686.56		P	0.7

159 Tb (ISTD) [No Gas]

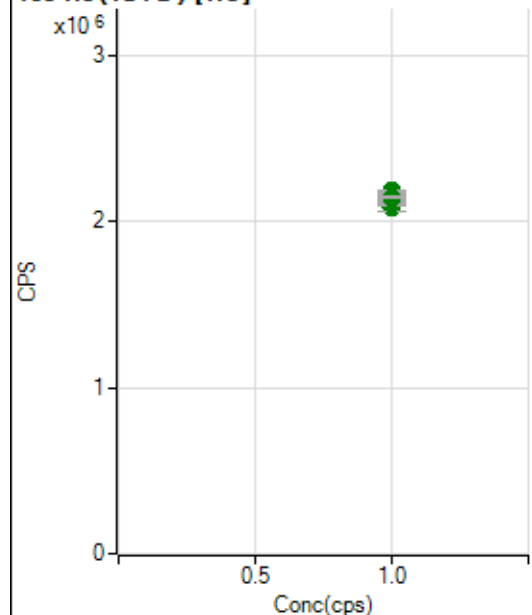
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		10039723.12		A	0.4
2	☐	1.000		10186352.14		A	1.0
3	☐	1.000		10202959.99		A	0.8
4	☐	1.000		10035033.67		A	0.3
5	☐	1.000		10036147.70		A	0.3
6	☐	1.000		10388625.96		A	0.4
7	☐	1.000		10208728.60		A	6.0
8	☐	1.000		10675092.62		A	1.3
9	☐	1.000		10447838.18		A	1.2

159 Tb (ISTD) [He]

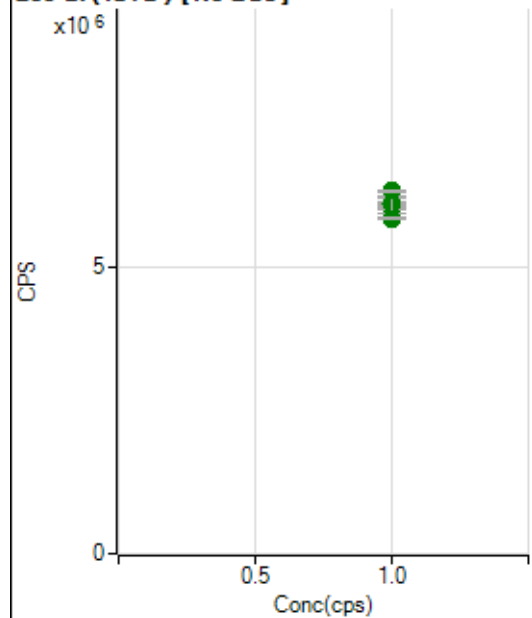
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2054599.15		A	0.3
2	☐	1.000		2059700.23		A	1.4
3	☐	1.000		2028249.52		A	1.3
4	☐	1.000		2026071.62		A	0.7
5	☐	1.000		2030333.25		A	0.9
6	☐	1.000		2066890.11		A	1.4
7	☐	1.000		2073399.10		A	1.2
8	☐	1.000		2100676.55		A	0.5
9	☐	1.000		2049158.96		A	0.5

165 Ho (ISTD) [No Gas]

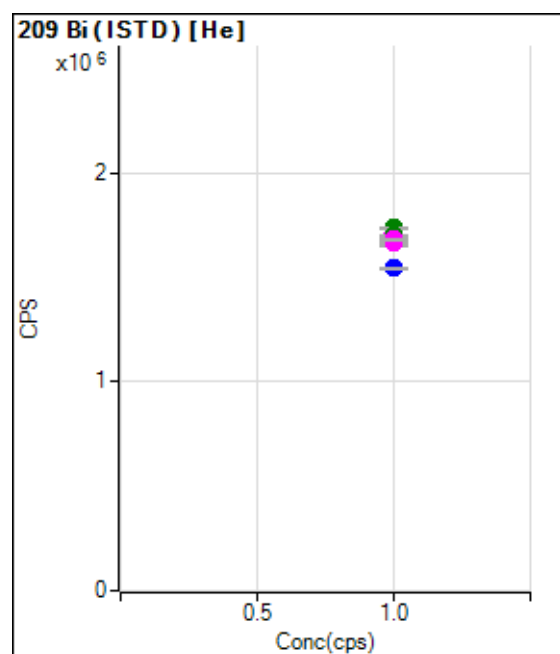
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9732398.65		A	0.6
2	☐	1.000		9899008.30		A	0.9
3	☐	1.000		9809423.13		A	0.4
4	☐	1.000		9659230.60		A	0.1
5	☐	1.000		9632605.51		A	0.8
6	☐	1.000		10027415.07		A	0.6
7	☐	1.000		9948783.38		A	6.0
8	☐	1.000		10270499.97		A	0.6
9	☐	1.000		10033649.01		A	0.6

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		2126808.23		A	0.3
2	☐	1.000		2157999.03		A	0.6
3	☐	1.000		2100233.63		A	0.5
4	☐	1.000		2081787.45		A	1.5
5	☐	1.000		2104517.11		A	0.4
6	☐	1.000		2155884.41		A	0.7
7	☐	1.000		2152153.63		A	1.3
8	☐	1.000		2186666.08		A	0.8
9	☐	1.000		2149397.62		A	0.9

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		6135639.77		A	1.7
2	☐	1.000		6244357.27		A	0.3
3	☐	1.000		6131070.26		A	0.4
4	☐	1.000		6050737.76		A	0.6
5	☐	1.000		6025579.91		A	0.2
6	☐	1.000		6222962.68		A	0.3
7	☐	1.000		6099354.77		A	5.0
8	☐	1.000		6328665.32		A	0.9
9	☐	1.000		5844114.71		A	0.6



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		1715532.08		M	2.5
2	☐	1.000		1737225.55		A	0.2
3	☐	1.000		1686854.78		M	1.9
4	☐	1.000		1670720.17		M	2.2
5	☐	1.000		1662513.31		M	1.1
6	☐	1.000		1699270.27		A	0.4
7	☐	1.000		1675919.28		M	0.8
8	☐	1.000		1684513.40		M	0.5
9	☐	1.000		1546394.33		P	0.6

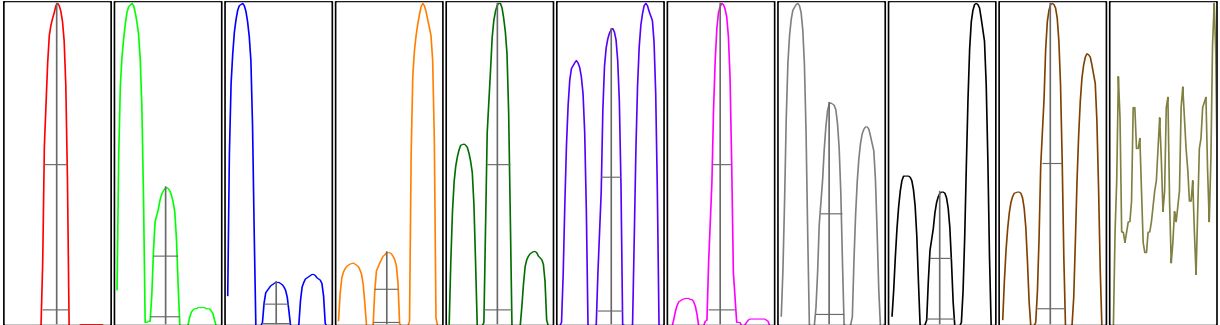
US EPA Tune Check Sample Report

Batch Folder D:\P8101417MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	6074	1.94	5.00	
24	30188	1.65	5.00	
25	4107	1.24	5.00	
26	4693	1.10	5.00	
59	65380	1.58	5.00	
113	8651	1.38	5.00	
115	110513	1.18	5.00	
206	24176	0.64	5.00	
207	21630	0.67	5.00	
208	51896	1.15	5.00	
220	1	15.14		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	6155	6162	5879	6125	6051
24	30283	30620	29344	30472	30218
25	4086	4167	4045	4152	4087
26	4665	4763	4628	4723	4686
59	65236	66740	63895	65257	65772
113	8730	8743	8528	8512	8739
115	111408	111253	108929	109283	111693
206	24293	23951	24085	24228	24323
207	21841	21435	21636	21653	21588
208	52672	51469	52117	52078	51143
220	2	1	1	1	1

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	9750	9.00	8.9 - 9.1		0.782	0.900	
24	47199	23.95	23.9 - 24.1		0.830	0.900	
25	6359	24.95	24.9 - 25.1		0.811	0.900	
26	7507	25.95	25.9 - 26.1		0.745	0.900	
59	105831	58.95	58.9 - 59.1		0.786	0.900	
113	15231	113.05	112.9 - 113.1		0.732	0.900	
115	194254	115.00	114.9 - 115.1		0.778	0.900	
206	41272	205.95	205.9 - 206.1		0.812	0.900	
207	36854	206.95	206.9 - 207.1		0.785	0.900	
208	88618	207.95	207.9 - 208.1		0.814	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
Plasma Mode		HMI	Aerosol Dilution		HMI-8			

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	9.2	V	Deflect	13.6	V
Extract 2	-250.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-105	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	190	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	8044	1.26	
89	1656	1.13	
205	11349	1.20	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	8182	8098	8038	7924	7975
89	1677	1673	1648	1634	1646
205	11519	11462	11315	11207	11242

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Plasma Mode		HMI	Aerosol Dilution		HMI-8			

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	9.2	V	Deflect	2.6	V
Extract 2	-250.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-105	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	5.0	mL/min	OctP RF	200	V			