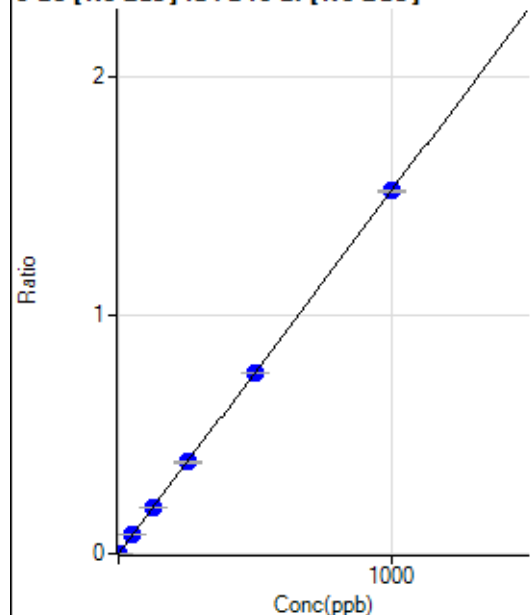


Batch Folder: D:\P8040719MM.b\
Analysis File: P8040719MM.batch.bin
DA Date-Time: 2019-04-08 03:23:25
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-04-07 21:09:28
2			
3	005CALS.d	S02	2019-04-07 21:17:15
4	006CALS.d	S03	2019-04-07 21:21:09
5	007CALS.d	S04	2019-04-07 21:25:03
6	008CALS.d	S05	2019-04-07 21:28:54
7	009CALS.d	S06	2019-04-07 21:32:40
8	010CALS.d	S07	2019-04-07 21:36:21
9	011CALS.d	S08	2019-04-07 21:39:55

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	26.67	0.0001	P	33.8
2	☐	0.100					
3	☐	1.000	0.822	265.56	0.0014	P	9.3
4	☐	50.000	52.226	15100.32	0.0795	P	3.8
5	☐	125.000	125.849	39529.85	0.1913	P	1.0
6	☐	250.000	251.712	81434.61	0.3826	P	1.4
7	☐	500.000	499.124	161695.30	0.7585	P	0.1
8	☐	1000.000	999.793	315413.41	1.5192	P	0.5
9	☐			65.56	0.0003	P	13.2

$$y = 0.0015 * x + 1.3999E-004$$

$$R = 1.0000$$

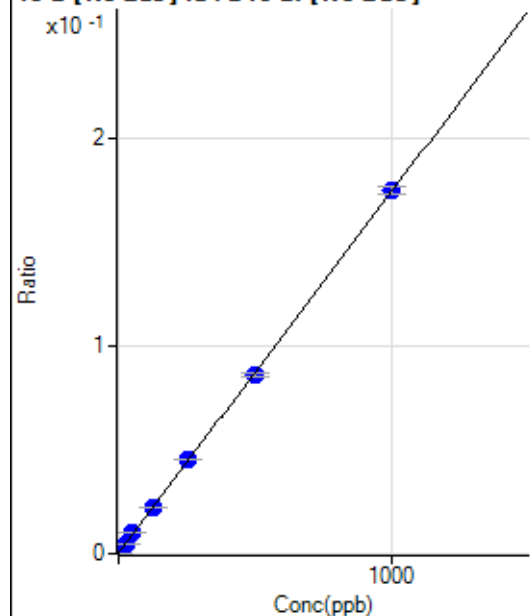
$$DL = 0.09341$$

$$BEC = 0.09214$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	63.89	0.0003	P	42.2
2	☐	2.500					
3	☐	25.000	24.469	877.84	0.0046	P	12.7
4	☐	50.000	55.490	1900.21	0.0100	P	5.0
5	☐	125.000	126.218	4606.51	0.0223	P	3.4
6	☐	250.000	257.023	9589.74	0.0450	P	0.6
7	☐	500.000	491.751	18309.59	0.0859	P	1.8
8	☐	1000.000	1001.955	36260.73	0.1746	P	2.0
9	☐			588.93	0.0028	P	6.4

$$y = 1.7397E-004 * x + 3.3540E-004$$

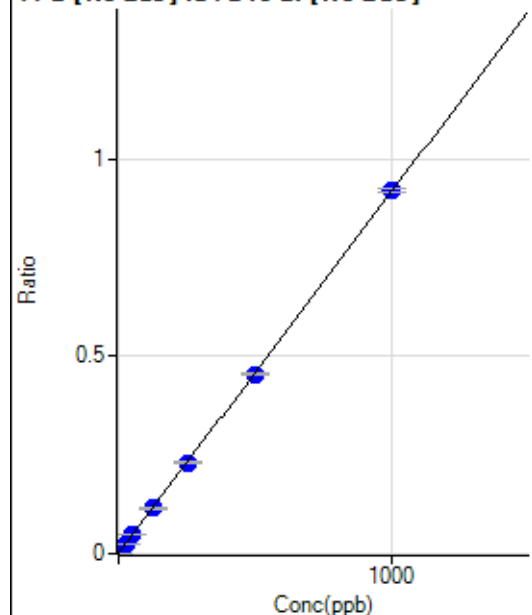
$$R = 0.9999$$

$$DL = 2.443$$

$$BEC = 1.928$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	391.69	0.0021	P	5.8
2	☐	2.500					
3	☐	25.000	24.323	4648.16	0.0243	P	4.5
4	☐	50.000	50.887	9239.48	0.0486	P	1.8
5	☐	125.000	122.948	23664.84	0.1145	P	1.1
6	☐	250.000	249.325	48993.41	0.2302	P	1.9
7	☐	500.000	495.195	97027.61	0.4551	P	1.2
8	☐	1000.000	1002.800	190928.94	0.9196	P	1.0
9	☐			2853.20	0.0137	P	10.7

$$y = 9.1495E-004 * x + 0.0021$$

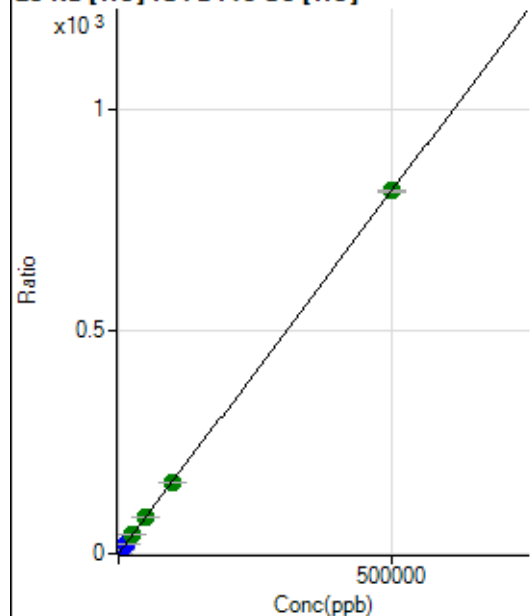
$$R = 1.0000$$

$$DL = 0.3883$$

$$BEC = 2.244$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	8350.03	0.1878	P	5.2
2	☐	50.000					
3	☐	500.000	492.194	44442.73	0.9902	P	1.7
4	☐	5000.000	5274.341	392046.70	8.7859	P	1.0
5	☐	12500.000	12532.954	955860.85	20.6188	P	2.6
6	☐	25000.000	25965.929	1909072.67	42.5170	A	0.3
7	☐	50000.000	50801.307	3738751.51	83.0032	A	2.5
8	☐	100000.00	98434.623	7260470.91	160.6542	A	1.1
9	☐	500000.00	500181.08	38217733.49	815.5745	A	0.9

$$y = 0.0016 * x + 0.1878$$

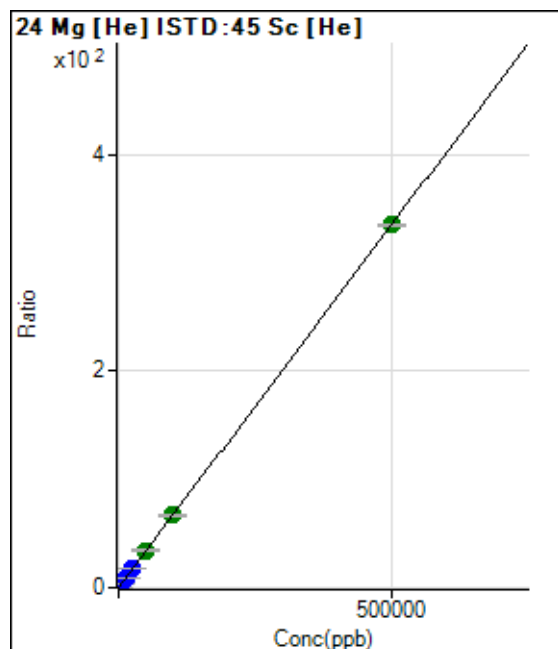
$$R = 1.0000$$

$$DL = 18.05$$

$$BEC = 115.2$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	25.00	0.0006	P	57.6
2	☐	50.000					
3	☐	500.000	513.801	15481.28	0.3449	P	0.3
4	☐	5000.000	5234.274	156535.29	3.5082	P	1.9
5	☐	12500.000	12474.567	387557.56	8.3601	P	2.6
6	☐	25000.000	25374.825	763460.40	17.0049	P	1.4
7	☐	50000.000	51228.560	1546502.34	34.3303	A	1.8
8	☐	100000.00	99517.329	3013983.21	66.6899	A	0.9
9	☐	500000.00	499953.21	15699786.64	335.0332	A	0.9

$$y = 6.7013\text{E-}004 * x + 5.6198\text{E-}004$$

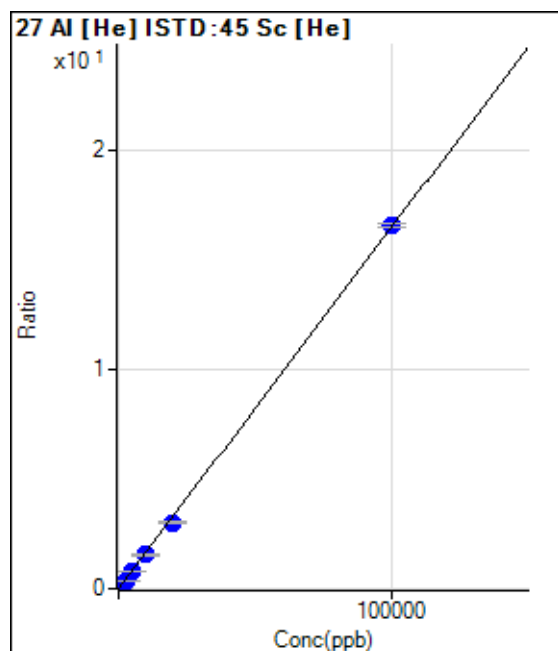
$$R = 1.0000$$

$$DL = 1.45$$

$$BEC = 0.8386$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	85.02	0.0019	P	17.7
2	☐	2.000					
3	☐	20.000	18.871	225.06	0.0050	P	4.3
4	☐	1000.000	974.832	7253.75	0.1626	P	2.9
5	☐	2500.000	2296.277	17631.31	0.3804	P	3.7
6	☐	5000.000	4672.200	34659.11	0.7720	P	1.4
7	☐	10000.000	9329.562	69343.91	1.5396	P	2.9
8	☐	20000.000	18336.442	136668.84	3.0241	P	0.9
9	☐	100000.00	100421.49	775696.45	16.5531	P	1.1

$$y = 1.6482\text{E-}004 * x + 0.0019$$

$$R = 0.9998$$

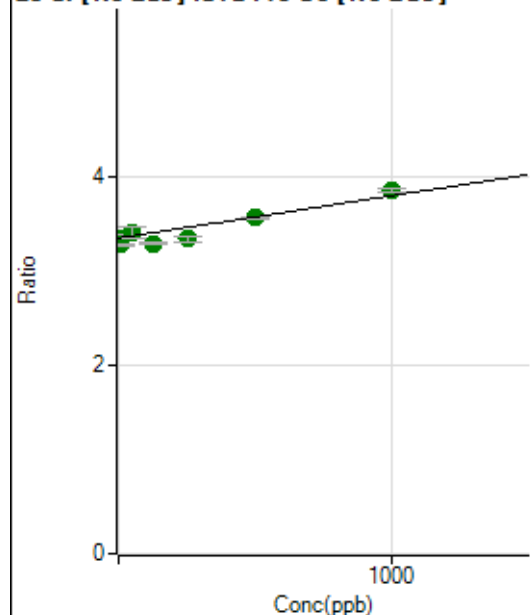
$$DL = 6.153$$

$$BEC = 11.56$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	5306532.84	3.3535	A	2.0
2	☐	1.000					
3	☐	10.000	-157.113	5244422.51	3.2828	A	0.6
4	☐	50.000	120.836	5285508.75	3.4078	A	3.9
5	☐	125.000	-130.845	5444192.53	3.2946	A	0.8
6	☐	250.000	-20.205	5604413.49	3.3444	A	1.6
7	☐	500.000	471.796	5948438.59	3.5656	A	0.3
8	☐	1000.000	1111.763	6445364.21	3.8533	A	1.1
9	☐			5720833.46	3.4541	A	0.6

$$y = 4.4963\text{E-}004 * x + 3.3535$$

$$R = 0.9522$$

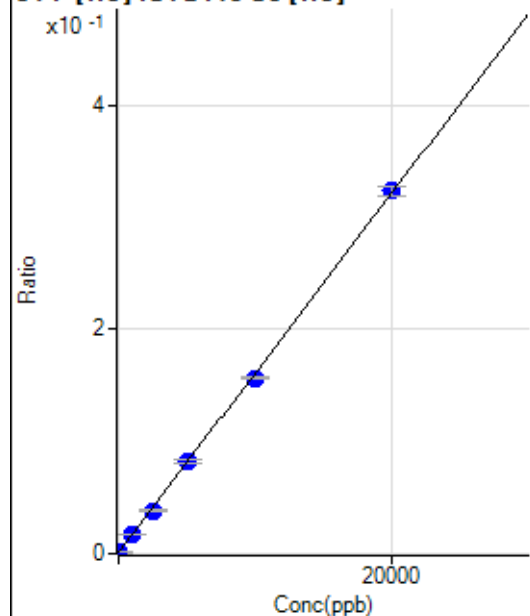
$$DL = 449.5$$

$$BEC = 7458$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	-23.063	25.00	0.0006	P	115.4
2	☐	0.000					
3	☐	0.000	23.063	58.34	0.0013	P	1.1
4	☐	1000.000	1019.367	769.51	0.0172	P	3.1
5	☐	2500.000	2327.081	1769.64	0.0382	P	3.2
6	☐	5000.000	5078.148	3689.56	0.0822	P	2.3
7	☐	10000.000	9718.302	7049.27	0.1564	P	1.8
8	☐	20000.000	20141.959	14605.34	0.3232	P	3.0
9	☐			61.12	0.0013	P	27.7

$$y = 1.6001\text{E-}005 * x + 9.3070\text{E-}004$$

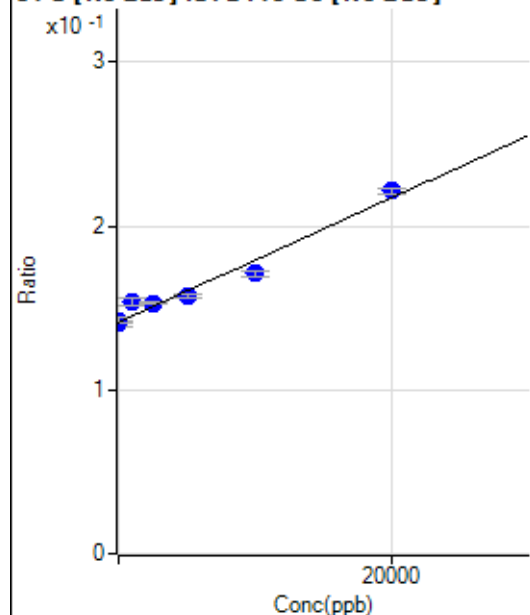
$$R = 0.9998$$

$$DL = 62.05$$

$$BEC = 58.16$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	-259.921	222091.13	0.1404	P	2.3
2	☐	0.000					
3	☐	0.000	259.921	227359.22	0.1423	P	2.2
4	☐	1000.000	3287.037	238674.06	0.1538	P	2.4
5	☐	2500.000	3106.802	253064.55	0.1531	P	1.2
6	☐	5000.000	4275.940	264087.38	0.1576	P	1.6
7	☐	10000.000	7792.923	285177.83	0.1710	P	1.7
8	☐	20000.000	21094.352	370470.98	0.2215	P	1.5
9	☐			224997.03	0.1358	P	0.8

$$y = 3.7995\text{E-}006 * x + 0.1413$$

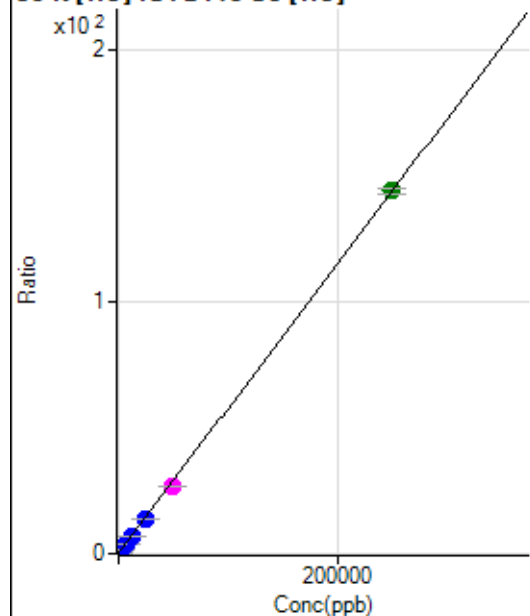
$$R = 0.9810$$

$$DL = 2500$$

$$BEC = 3.72\text{E}+04$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	7613.58	0.1711	P	4.3
2	☐	50.000					
3	☐	500.000	465.044	19664.49	0.4381	P	2.8
4	☐	2500.000	2437.541	70072.34	1.5703	P	2.1
5	☐	6250.000	5803.386	162376.01	3.5024	P	2.1
6	☐	12500.000	11797.385	311715.24	6.9432	P	1.8
7	☐	25000.000	23629.370	618648.34	13.7350	P	2.8
8	☐	50000.000	46752.845	1220678.08	27.0086	M	0.6
9	☐	250000.00	250833.48	6755106.92	144.1565	A	1.5

$$y = 5.7403\text{E-}004 * x + 0.1711$$

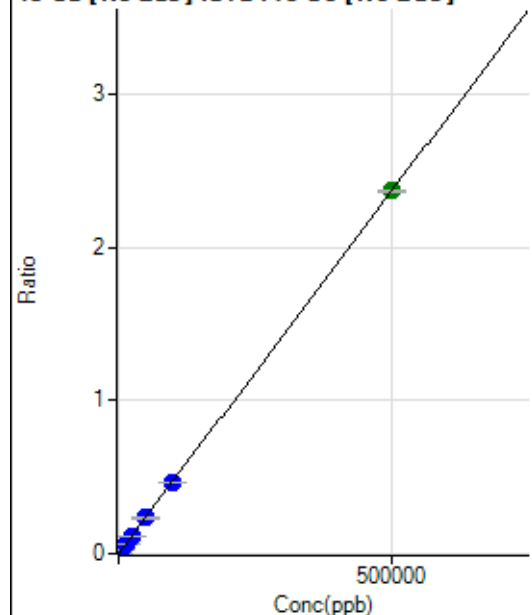
$$R = 0.9999$$

$$DL = 38.15$$

$$BEC = 298.1$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	1733.47	0.0011	P	6.4
2	☐	50.000					
3	☐	500.000	474.027	5334.43	0.0033	P	2.9
4	☐	5000.000	5173.257	39649.26	0.0256	P	5.1
5	☐	12500.000	12212.211	97279.97	0.0589	P	1.0
6	☐	25000.000	24674.104	197454.44	0.1178	P	1.4
7	☐	50000.000	49008.378	388613.75	0.2329	P	0.7
8	☐	100000.00	97246.707	771378.58	0.4612	P	0.9
9	☐	500000.00	500671.60	3924885.43	2.3697	A	0.5

$$y = 4.7309\text{E-}006 * x + 0.0011$$

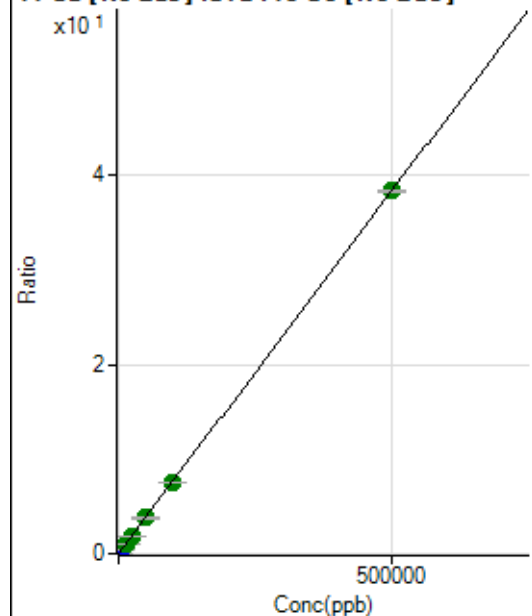
$$R = 1.0000$$

$$DL = 44.44$$

$$BEC = 231.7$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	32047.73	0.0203	P	2.2
2	☐	50.000					
3	☐	500.000	470.344	89841.06	0.0562	P	1.4
4	☐	5000.000	5201.608	648712.94	0.4182	P	3.7
5	☐	12500.000	12432.763	1605374.05	0.9715	A	0.8
6	☐	25000.000	24721.865	3203817.10	1.9118	A	1.4
7	☐	50000.000	48923.863	6278538.24	3.7635	A	0.4
8	☐	100000.00	97409.810	12500876.20	7.4733	A	0.3
9	☐	500000.00	500639.25	63475922.38	38.3251	A	0.5

$$y = 7.6512\text{E-}005 * x + 0.0203$$

$$R = 1.0000$$

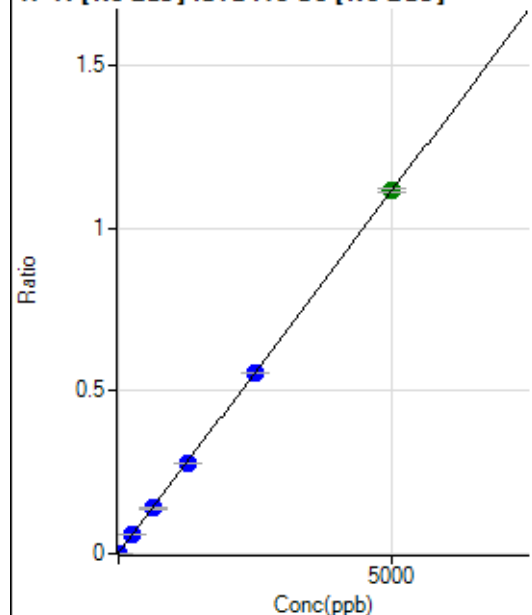
$$DL = 17.53$$

$$BEC = 264.7$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	1989.13	0.0013	P	3.3
2	☐	0.500					
3	☐	5.000	4.983	3778.47	0.0024	P	0.7
4	☐	250.000	260.195	91747.65	0.0591	P	3.5
5	☐	625.000	619.666	229903.59	0.1391	P	0.8
6	☐	1250.000	1240.889	464809.69	0.2773	P	0.8
7	☐	2500.000	2495.776	928470.80	0.5566	P	0.4
8	☐	5000.000	5004.546	1864566.79	1.1147	A	1.1
9	☐			2394.77	0.0014	P	3.6

$$y = 2.2249E-004 * x + 0.0013$$

$$R = 1.0000$$

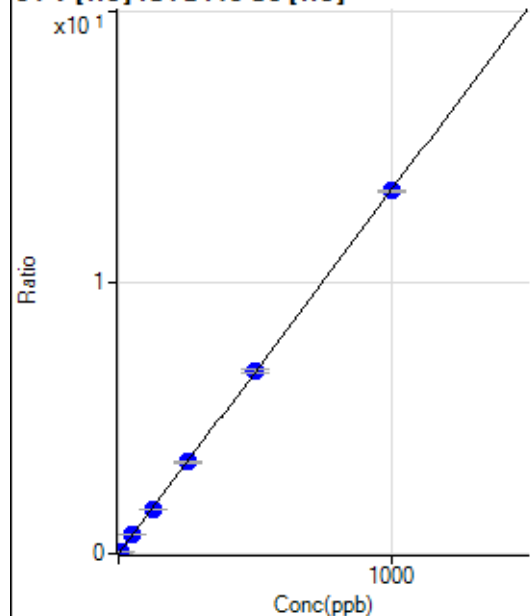
$$DL = 0.554$$

$$BEC = 5.648$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	12.22	0.0003	P	85.8
2	☐	0.500					
3	☐	5.000	5.030	3039.27	0.0677	P	3.6
4	☐	50.000	51.535	30837.46	0.6910	P	1.0
5	☐	125.000	122.108	75879.84	1.6370	P	3.2
6	☐	250.000	251.685	151486.74	3.3738	P	0.8
7	☐	500.000	504.347	304544.31	6.7605	P	1.9
8	☐	1000.000	997.690	604402.13	13.3732	P	0.8
9	☐			144.45	0.0031	P	14.6

$$y = 0.0134 * x + 2.7785E-004$$

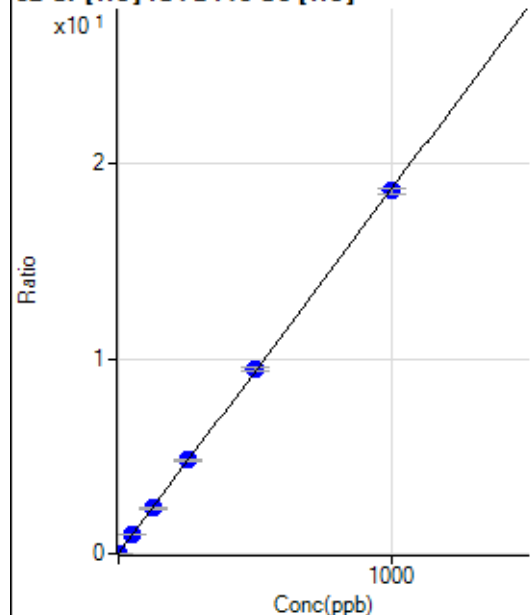
$$R = 1.0000$$

$$DL = 0.05337$$

$$BEC = 0.02073$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	525.57	0.0118	P	13.6
2	☐	0.200					
3	☐	2.000	1.958	2172.43	0.0484	P	2.5
4	☐	50.000	52.558	44341.43	0.9937	P	1.3
5	☐	125.000	124.507	108361.91	2.3379	P	3.5
6	☐	250.000	255.392	214726.55	4.7831	P	2.1
7	☐	500.000	507.520	427628.81	9.4933	P	2.2
8	☐	1000.000	994.826	840458.30	18.5972	P	1.4
9	☐			6954.07	0.1484	P	2.8

$$y = 0.0187 * x + 0.0118$$

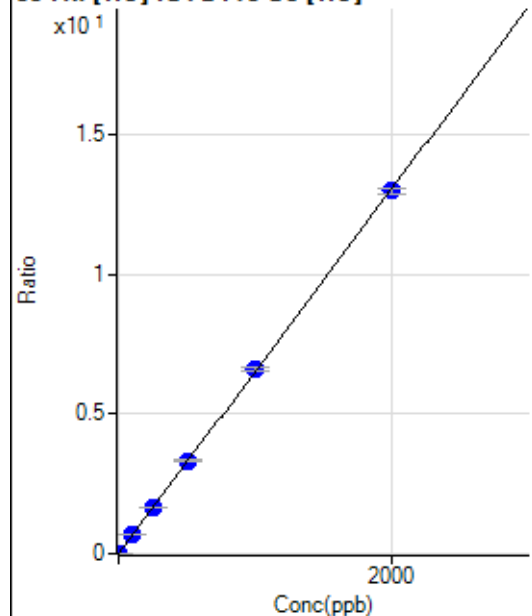
$$R = 0.9999$$

$$DL = 0.2578$$

$$BEC = 0.6331$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	12.22	0.0003	P	13.5
2	☐	0.100					
3	☐	1.000	1.091	331.12	0.0074	P	29.3
4	☐	100.000	104.909	30541.36	0.6844	P	0.5
5	☐	250.000	250.890	75865.82	1.6364	P	2.2
6	☐	500.000	510.987	149625.61	3.3326	P	1.2
7	☐	1000.000	1012.146	297308.38	6.6009	P	2.9
8	☐	2000.000	1990.824	586726.92	12.9832	P	1.9
9	☐			2406.92	0.0514	P	4.5

$$y = 0.0065 * x + 2.7402E-004$$

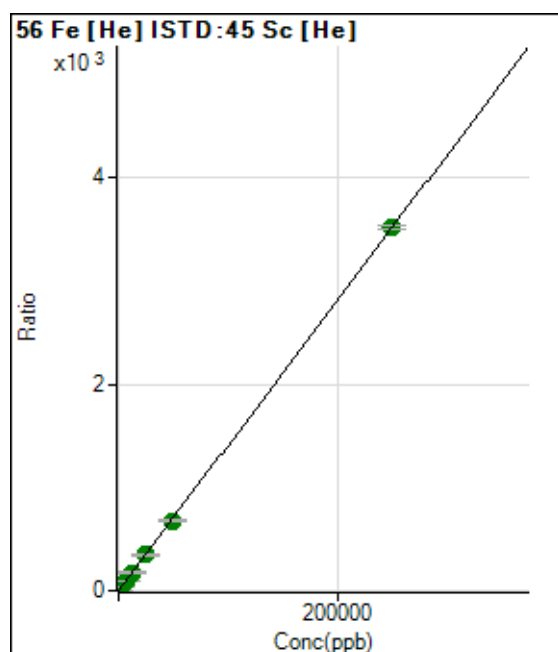
$$R = 1.0000$$

$$DL = 0.01699$$

$$BEC = 0.04202$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	624.10	0.0141	P	27.3
2	☐	5.000					
3	☐	50.000	51.382	32978.45	0.7346	P	0.5
4	☐	2500.000	2607.871	1632503.84	36.5845	A	1.0
5	☐	6250.000	6114.000	3975094.21	85.7513	A	2.8
6	☐	12500.000	12541.754	7896903.99	175.8884	A	1.2
7	☐	25000.000	24688.767	15596242.01	346.2272	A	2.1
8	☐	50000.000	48365.277	30650917.58	678.2453	A	1.7
9	☐	250000.00	250358.30	164515196.2	3,510.814	A	1.1

$$y = 0.0140 * x + 0.0141$$

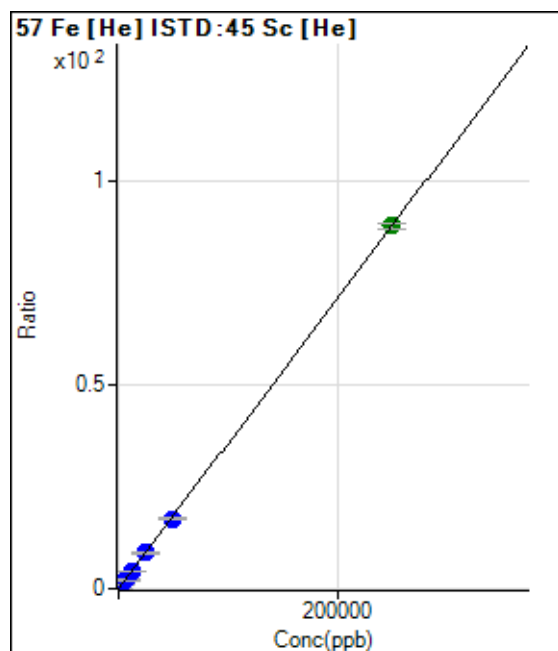
$$R = 1.0000$$

$$DL = 0.8238$$

$$BEC = 1.005$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	40.74	0.0009	P	56.8
2	☐	5.000					
3	☐	50.000	51.680	866.72	0.0193	P	13.7
4	☐	2500.000	2521.551	40113.98	0.8990	P	1.1
5	☐	6250.000	6020.209	99437.47	2.1450	P	2.6
6	☐	12500.000	12305.117	196814.92	4.3834	P	0.6
7	☐	25000.000	24557.644	394007.51	8.7472	P	2.4
8	☐	50000.000	48160.056	775187.81	17.1533	P	1.7
9	☐	250000.00	250427.49	4179381.37	89.1916	A	1.4

$$y = 3.5615E-004 * x + 9.1815E-004$$

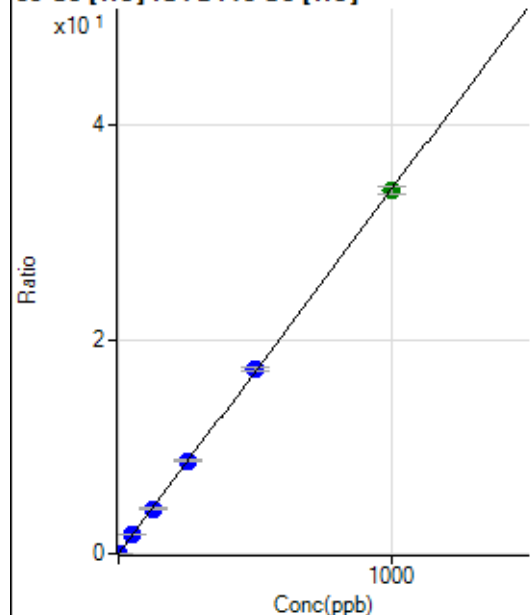
$$R = 1.0000$$

$$DL = 4.393$$

$$BEC = 2.578$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	27.78	0.0006	P	11.6
2	☐	0.100					
3	☐	1.000	0.991	1539.00	0.0343	P	2.7
4	☐	50.000	52.316	79364.62	1.7787	P	1.8
5	☐	125.000	123.596	194762.07	4.2013	P	2.6
6	☐	250.000	255.534	389937.21	8.6854	P	1.5
7	☐	500.000	505.367	773701.75	17.1764	P	2.4
8	☐	1000.000	995.993	1529716.83	33.8512	A	2.2
9	☐			18923.02	0.4038	P	0.5

$$y = 0.0340 * x + 6.2307E-004$$

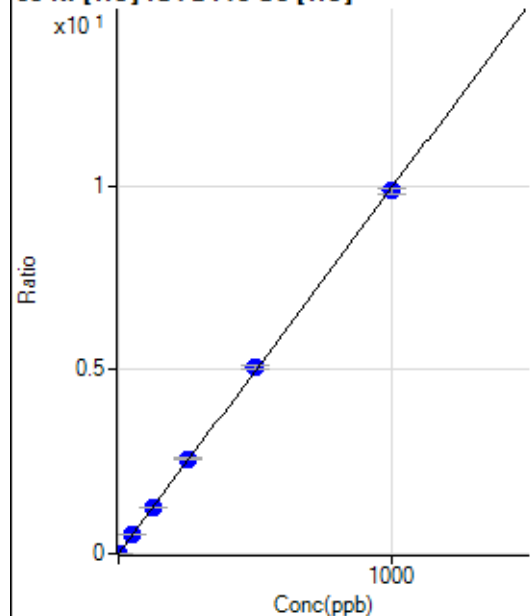
$$R = 1.0000$$

$$DL = 0.006371$$

$$BEC = 0.01833$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	28.89	0.0006	P	38.0
2	☐	0.100					
3	☐	1.000	1.093	516.68	0.0115	P	1.9
4	☐	50.000	52.843	23468.88	0.5260	P	2.2
5	☐	125.000	125.581	57912.37	1.2491	P	1.9
6	☐	250.000	259.570	115877.02	2.5811	P	1.9
7	☐	500.000	510.047	228413.95	5.0712	P	2.7
8	☐	1000.000	992.369	445865.95	9.8660	P	1.4
9	☐			5816.87	0.1241	P	2.0

$$y = 0.0099 * x + 6.4444E-004$$

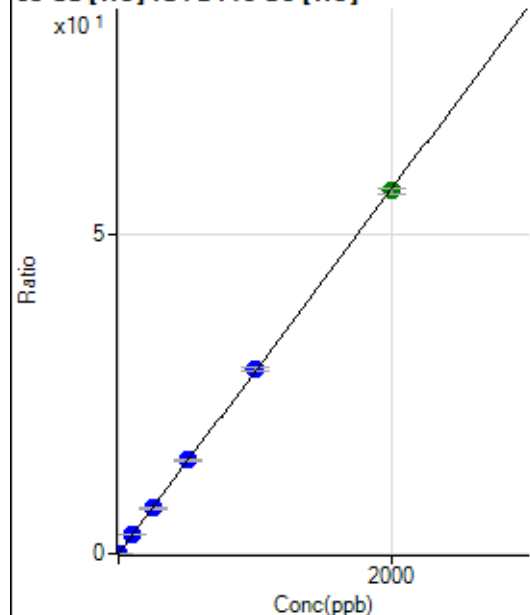
$$R = 0.9999$$

$$DL = 0.07393$$

$$BEC = 0.06482$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	411.12	0.0092	P	3.3
2	☐	0.200					
3	☐	2.000	1.855	2791.44	0.0622	P	1.7
4	☐	100.000	102.950	131522.82	2.9474	P	0.8
5	☐	250.000	248.460	329157.16	7.1003	P	2.5
6	☐	500.000	512.666	657318.53	14.6408	P	1.4
7	☐	1000.000	1013.935	1303885.56	28.9471	P	2.4
8	☐	2000.000	1989.911	2566983.42	56.8016	A	1.4
9	☐			5525.63	0.1179	P	3.1

$$y = 0.0285 * x + 0.0092$$

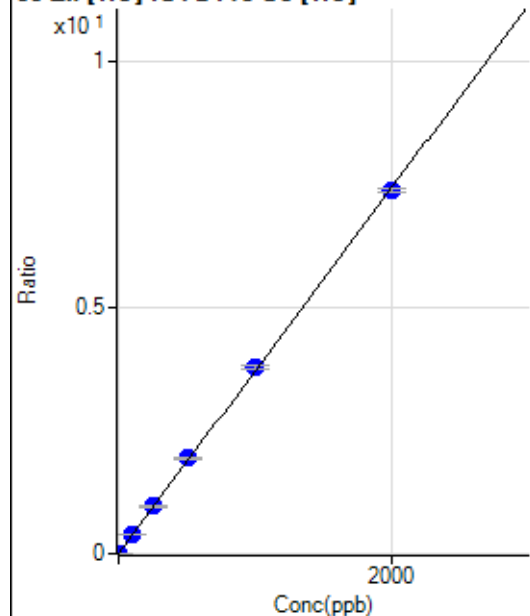
$$R = 0.9999$$

$$DL = 0.03175$$

$$BEC = 0.3238$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	132.23	0.0030	P	16.8
2	☐	0.200					
3	☐	2.000	2.097	483.35	0.0108	P	2.6
4	☐	100.000	104.385	17425.58	0.3906	P	2.7
5	☐	250.000	259.854	44858.14	0.9678	P	3.5
6	☐	500.000	521.625	87080.92	1.9397	P	2.0
7	☐	1000.000	1017.388	170287.48	3.7804	P	2.4
8	☐	2000.000	1984.449	333133.37	7.3710	P	0.9
9	☐			3202.64	0.0684	P	4.7

$$y = 0.0037 * x + 0.0030$$

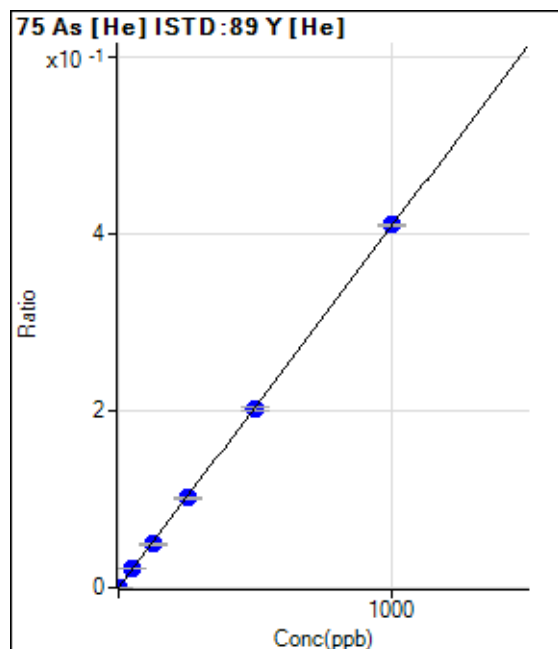
$$R = 0.9999$$

$$DL = 0.4043$$

$$BEC = 0.8028$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	6.79	0.0000	P	15.9
2	☐	0.100					
3	☐	1.000	1.030	148.15	0.0004	P	13.4
4	☐	50.000	51.088	7061.13	0.0209	P	2.1
5	☐	125.000	120.187	17434.53	0.0491	P	2.0
6	☐	250.000	249.209	35155.74	0.1018	P	1.6
7	☐	500.000	494.017	69885.24	0.2018	P	2.6
8	☐	1000.000	1003.737	140281.62	0.4100	P	0.4
9	☐			216.67	0.0006	P	2.3

$$y = 4.0849\text{E-}004 * x + 2.0088\text{E-}005$$

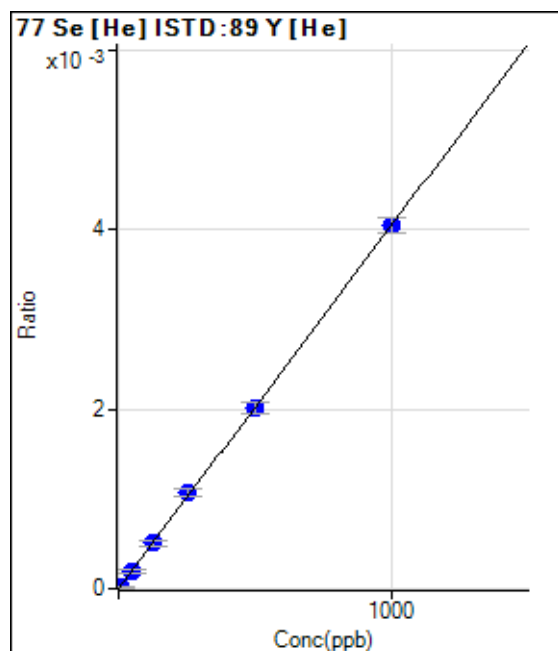
$$R = 1.0000$$

$$DL = 0.02343$$

$$BEC = 0.04918$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500					
3	☐	5.000	3.264	4.44	0.0000	P	42.5
4	☐	50.000	47.927	65.56	0.0002	P	15.6
5	☐	125.000	125.079	180.01	0.0005	P	15.3
6	☐	250.000	264.833	370.01	0.0011	P	7.4
7	☐	500.000	496.032	695.59	0.0020	P	6.5
8	☐	1000.000	998.378	1382.32	0.0040	P	4.3
9	☐			2.22	0.0000	P	173.2

$$y = 4.0466\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9999$$

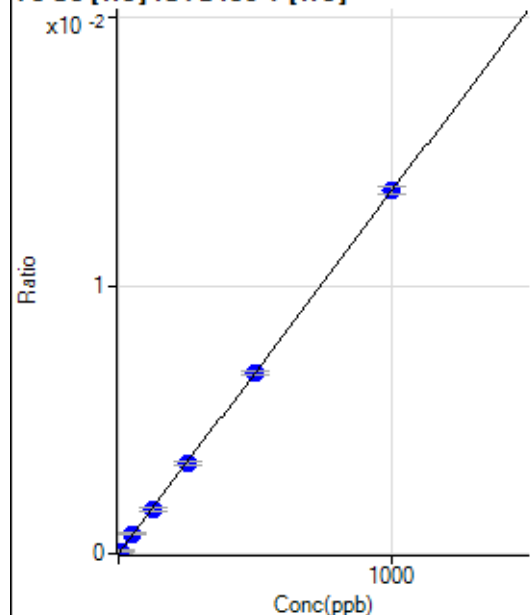
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	1.85	0.0000	P	0.3
2	☐	0.500					
3	☐	5.000	7.210	34.57	0.0001	P	21.4
4	☐	50.000	55.112	253.71	0.0008	P	1.8
5	☐	125.000	120.407	580.27	0.0016	P	8.4
6	☐	250.000	249.033	1164.26	0.0034	P	2.3
7	☐	500.000	498.366	2336.64	0.0067	P	2.9
8	☐	1000.000	1001.366	4633.54	0.0135	P	2.0
9	☐			9.87	0.0000	P	71.1

$$y = 1.3519\text{E-}005 * x + 5.4694\text{E-}006$$

$$R = 1.0000$$

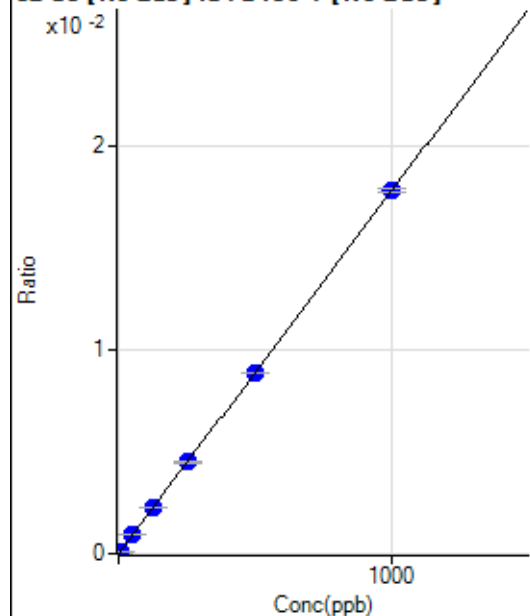
$$DL = 0.003445$$

$$BEC = 0.4046$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	-0.13	0.0000	P	-11797.
2	☐	0.500					
3	☐	5.000	5.690	292.81	0.0001	P	16.6
4	☐	50.000	52.936	2669.12	0.0009	P	3.0
5	☐	125.000	126.203	6874.98	0.0022	P	1.4
6	☐	250.000	253.374	13969.31	0.0045	P	1.9
7	☐	500.000	497.187	27680.97	0.0088	P	0.4
8	☐	1000.000	1000.262	55132.53	0.0178	P	1.1
9	☐			50.62	0.0000	P	63.0

$$y = 1.7788\text{E-}005 * x - 1.8055\text{E-}007$$

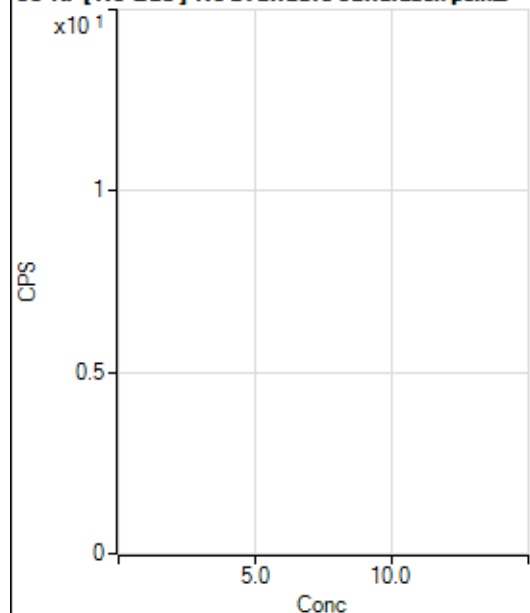
$$R = 1.0000$$

$$DL = 3.592$$

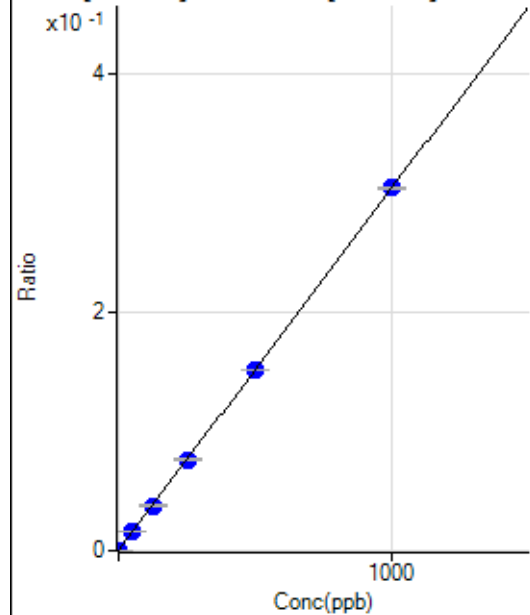
$$BEC = -0.01015$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐			421.13		P	8.9
2	☐						
3	☐			405.57		P	6.2
4	☐			430.02		P	15.3
5	☐			383.35		P	8.6
6	☐			418.90		P	21.0
7	☐			437.79		P	19.3
8	☐			391.12		P	7.9
9	☐			433.35		P	10.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	680.61	0.0002	P	23.7
2	☐	0.100					
3	☐	1.000	0.886	1472.37	0.0005	P	0.8
4	☐	50.000	52.845	46184.74	0.0163	P	3.9
5	☐	125.000	124.008	116133.22	0.0379	P	0.8
6	☐	250.000	250.412	236579.79	0.0763	P	1.9
7	☐	500.000	496.957	473382.34	0.1512	P	0.4
8	☐	1000.000	1001.400	943599.11	0.3045	P	0.9
9	☐			4614.86	0.0015	P	4.8

$$y = 3.0384\text{E-}004 * x + 2.3813\text{E-}004$$

$$R = 1.0000$$

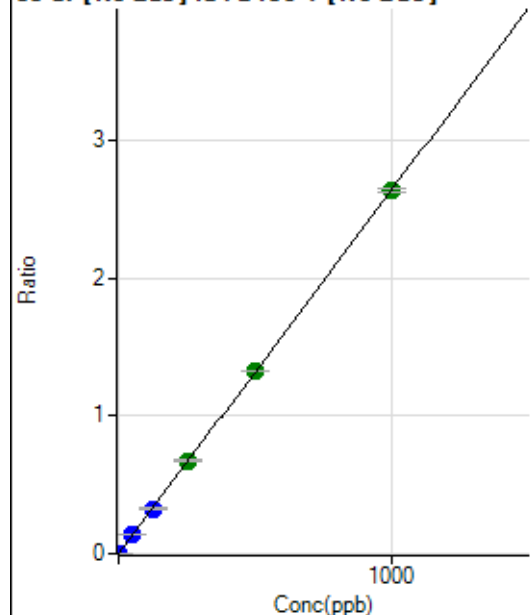
$$DL = 0.5567$$

$$BEC = 0.7837$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	50.00	0.0000	P	30.7
2	☐	0.100					
3	☐	1.000	0.994	7669.15	0.0026	P	2.6
4	☐	50.000	52.213	390948.50	0.1379	P	3.4
5	☐	125.000	124.131	1004111.50	0.3278	P	0.9
6	☐	250.000	255.542	2092002.74	0.6749	A	1.6
7	☐	500.000	501.223	4143335.94	1.3237	A	0.4
8	☐	1000.000	998.001	8167256.69	2.6357	A	0.9
9	☐			34706.43	0.0116	P	0.4

$$y = 0.0026 * x + 1.7515E-005$$

$$R = 1.0000$$

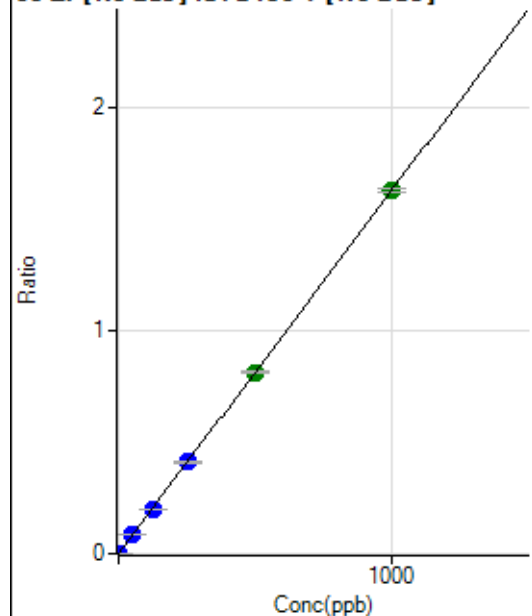
$$DL = 0.0061$$

$$BEC = 0.006632$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	147.23	0.0001	P	20.7
2	☐	0.100					
3	☐	1.000	0.973	4748.26	0.0016	P	2.9
4	☐	50.000	51.928	239981.52	0.0847	P	2.9
5	☐	125.000	123.791	617861.49	0.2017	P	0.6
6	☐	250.000	251.995	1272796.13	0.4106	P	1.4
7	☐	500.000	499.746	2548611.17	0.8142	A	0.8
8	☐	1000.000	999.683	5046918.91	1.6287	A	1.2
9	☐			1502.94	0.0005	P	15.0

$$y = 0.0016 * x + 5.1355E-005$$

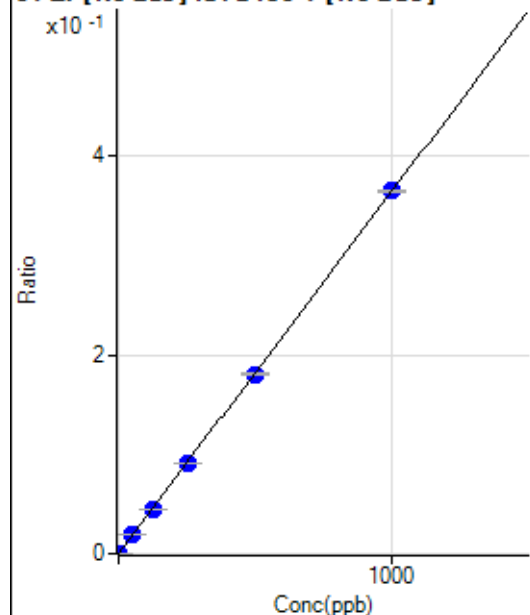
$$R = 1.0000$$

$$DL = 0.01957$$

$$BEC = 0.03152$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	58.33	0.0000	P	50.3
2	☐	0.100					
3	☐	1.000	0.933	1044.53	0.0004	P	11.4
4	☐	50.000	51.867	53612.15	0.0189	P	1.8
5	☐	125.000	122.448	136631.04	0.0446	P	0.3
6	☐	250.000	250.611	282955.40	0.0913	P	1.2
7	☐	500.000	495.139	564419.59	0.1803	P	0.7
8	☐	1000.000	1002.504	1131286.44	0.3651	P	0.6
9	☐			352.80	0.0001	P	15.1

$$y = 3.6415\text{E-}004 * x + 2.0276\text{E-}005$$

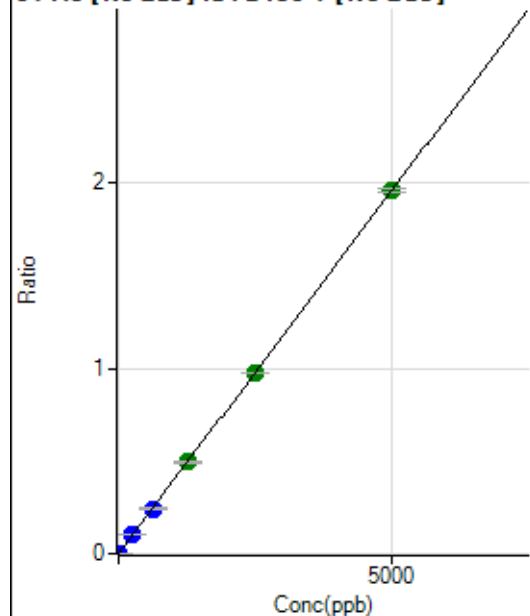
$$R = 1.0000$$

$$DL = 0.08409$$

$$BEC = 0.05568$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	58.33	0.0000	P	23.6
2	☐	0.500					
3	☐	5.000	5.008	5751.48	0.0020	P	3.1
4	☐	250.000	261.245	290227.33	0.1024	P	3.1
5	☐	625.000	621.734	746166.69	0.2436	P	0.8
6	☐	1250.000	1266.137	1537811.45	0.4961	A	1.7
7	☐	2500.000	2488.340	3051777.06	0.9750	A	0.4
8	☐	5000.000	5001.642	6072730.56	1.9597	A	0.9
9	☐			3033.81	0.0010	P	6.5

$$y = 3.9181\text{E-}004 * x + 2.0335\text{E-}005$$

$$R = 1.0000$$

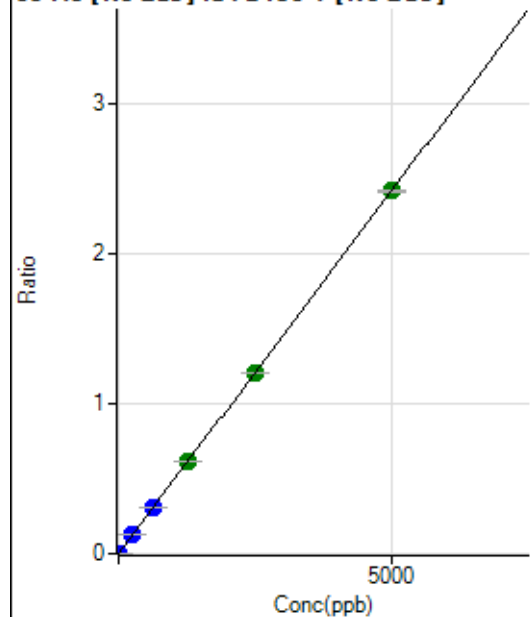
$$DL = 0.03679$$

$$BEC = 0.0519$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	36.11	0.0000	P	70.0
2	☐	0.500					
3	☐	5.000	5.179	7296.76	0.0025	P	4.1
4	☐	250.000	264.746	362774.99	0.1280	P	3.0
5	☐	625.000	626.127	926881.08	0.3026	P	0.5
6	☐	1250.000	1269.321	1901660.85	0.6135	A	1.5
7	☐	2500.000	2487.434	3762942.06	1.2022	A	0.7
8	☐	5000.000	5000.574	7489074.21	2.4168	A	0.6
9	☐			4806.64	0.0016	P	3.8

$$y = 4.8330E-004 * x + 1.2614E-005$$

$$R = 1.0000$$

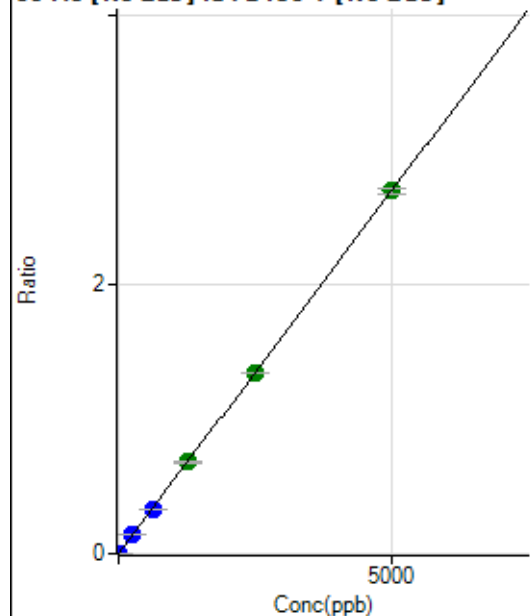
$$DL = 0.05481$$

$$BEC = 0.0261$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	47.23	0.0000	P	56.9
2	☐	0.500					
3	☐	5.000	4.935	7763.64	0.0027	P	2.5
4	☐	250.000	261.632	399692.95	0.1410	P	3.2
5	☐	625.000	617.664	1019441.45	0.3328	P	0.4
6	☐	1250.000	1262.482	2108526.15	0.6803	A	2.3
7	☐	2500.000	2490.220	4200079.13	1.3418	A	0.7
8	☐	5000.000	5002.105	8351903.57	2.6953	A	1.4
9	☐			5631.96	0.0019	P	2.6

$$y = 5.3883E-004 * x + 1.6543E-005$$

$$R = 1.0000$$

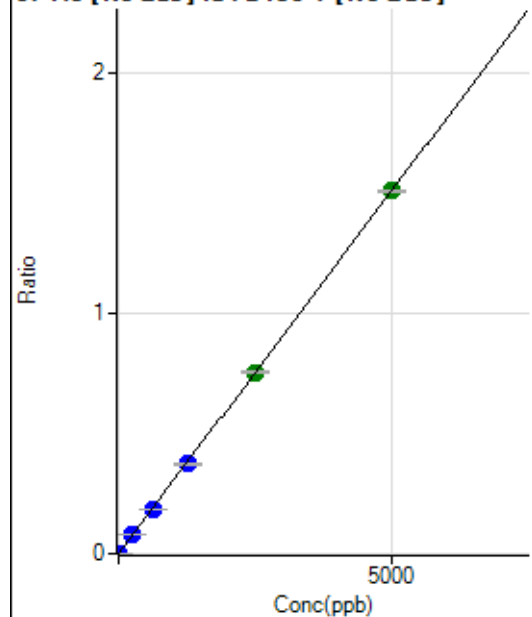
$$DL = 0.05245$$

$$BEC = 0.0307$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	16.66	0.0000	P	85.6
2	☐	0.500					
3	☐	5.000	5.200	4575.96	0.0016	P	1.5
4	☐	250.000	257.842	220909.87	0.0779	P	3.4
5	☐	625.000	614.682	568923.99	0.1857	P	0.1
6	☐	1250.000	1239.579	1161149.99	0.3746	P	1.2
7	☐	2500.000	2502.920	2367403.46	0.7563	A	0.8
8	☐	5000.000	5002.043	4683881.44	1.5115	A	0.4
9	☐			2869.88	0.0010	P	10.4

$$y = 3.0217\text{E-}004 * x + 5.7840\text{E-}006$$

$$R = 1.0000$$

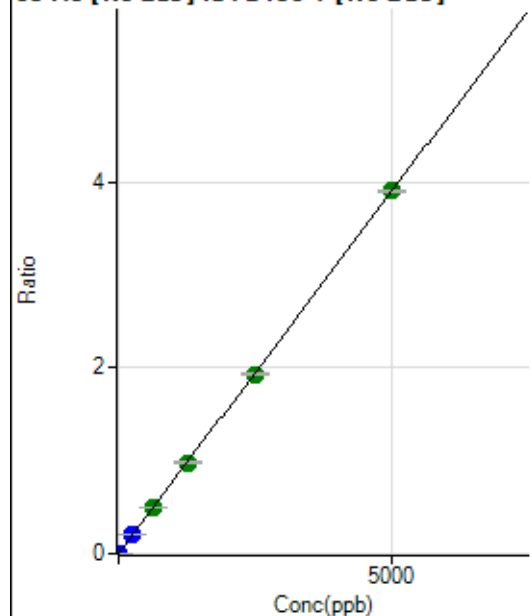
$$DL = 0.04914$$

$$BEC = 0.01914$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	80.56	0.0000	P	53.6
2	☐	0.500					
3	☐	5.000	4.870	11085.53	0.0038	P	3.8
4	☐	250.000	261.341	577078.64	0.2036	P	3.6
5	☐	625.000	628.163	1498610.40	0.4893	A	0.8
6	☐	1250.000	1255.226	3030765.95	0.9777	A	1.3
7	☐	2500.000	2477.143	6039194.58	1.9294	A	0.8
8	☐	5000.000	5009.160	12090152.35	3.9016	A	0.6
9	☐			6999.37	0.0023	P	1.6

$$y = 7.7889\text{E-}004 * x + 2.8266\text{E-}005$$

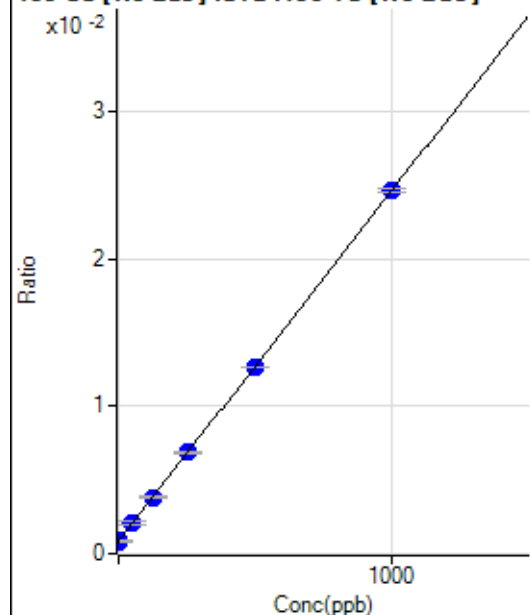
$$R = 1.0000$$

$$DL = 0.05835$$

$$BEC = 0.03629$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	2653.17	0.0008	P	3.6
2	☐	0.100					
3	☐	1.000	0.928	2725.39	0.0009	P	4.2
4	☐	50.000	53.446	6657.53	0.0021	P	9.5
5	☐	125.000	126.262	13143.09	0.0038	P	3.9
6	☐	250.000	253.560	23891.46	0.0069	P	2.0
7	☐	500.000	496.864	44859.11	0.0127	P	0.7
8	☐	1000.000	1000.348	87059.04	0.0247	P	0.9
9	☐			2892.12	0.0009	P	0.3

$$y = 2.3801\text{E-}005 * x + 8.4304\text{E-}004$$

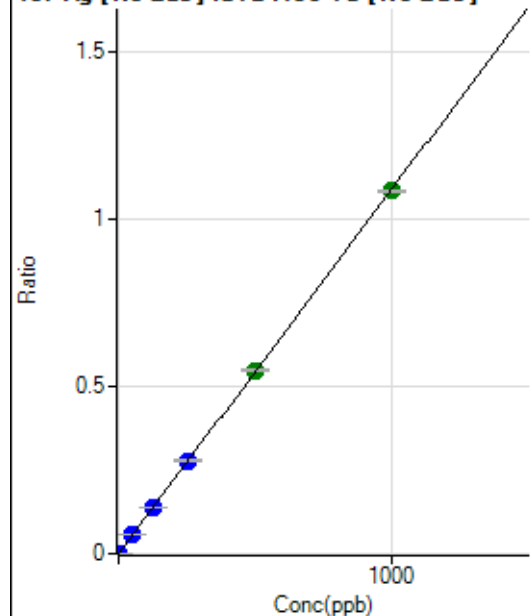
$$R = 1.0000$$

$$DL = 3.825$$

$$BEC = 35.42$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	125.01	0.0000	P	24.2
2	☐	0.100					
3	☐	1.000	1.099	3892.40	0.0012	P	7.7
4	☐	50.000	53.952	184888.95	0.0588	P	3.9
5	☐	125.000	127.742	474985.04	0.1391	P	0.4
6	☐	250.000	255.908	967436.84	0.2785	P	1.1
7	☐	500.000	502.961	1938132.57	0.5474	A	0.9
8	☐	1000.000	996.502	3829890.54	1.0845	A	0.5
9	☐			697.27	0.0002	P	15.5

$$y = 0.0011 * x + 3.9739\text{E-}005$$

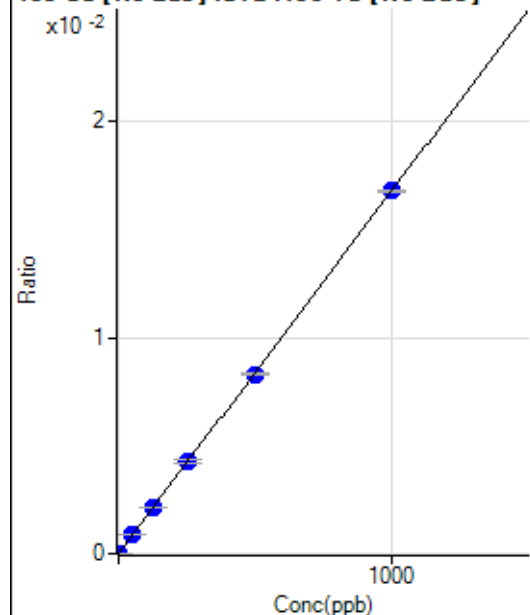
$$R = 1.0000$$

$$DL = 0.02647$$

$$BEC = 0.03652$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	9.72	0.0000	P	49.7
2	☐	0.100					
3	☐	1.000	0.973	61.11	0.0000	P	24.4
4	☐	50.000	53.170	2817.02	0.0009	P	2.4
5	☐	125.000	127.633	7322.98	0.0021	P	2.3
6	☐	250.000	255.019	14866.79	0.0043	P	2.7
7	☐	500.000	495.410	29432.35	0.0083	P	0.4
8	☐	1000.000	1000.552	59278.58	0.0168	P	0.7
9	☐			29.17	0.0000	P	28.6

$$y = 1.6773\text{E-}005 * x + 3.0939\text{E-}006$$

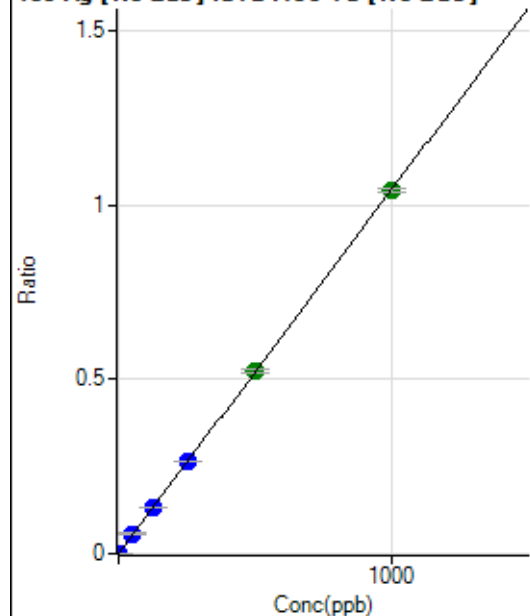
$$R = 1.0000$$

$$DL = 0.2749$$

$$BEC = 0.1845$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	116.68	0.0000	P	7.2
2	☐	0.100					
3	☐	1.000	1.071	3639.56	0.0012	P	3.2
4	☐	50.000	54.366	178681.20	0.0568	P	4.3
5	☐	125.000	127.364	454246.93	0.1330	P	0.3
6	☐	250.000	255.541	926665.72	0.2668	P	0.5
7	☐	500.000	501.962	1855333.64	0.5240	A	1.8
8	☐	1000.000	997.120	3675798.87	1.0409	A	1.1
9	☐			730.62	0.0002	P	12.1

$$y = 0.0010 * x + 3.7079\text{E-}005$$

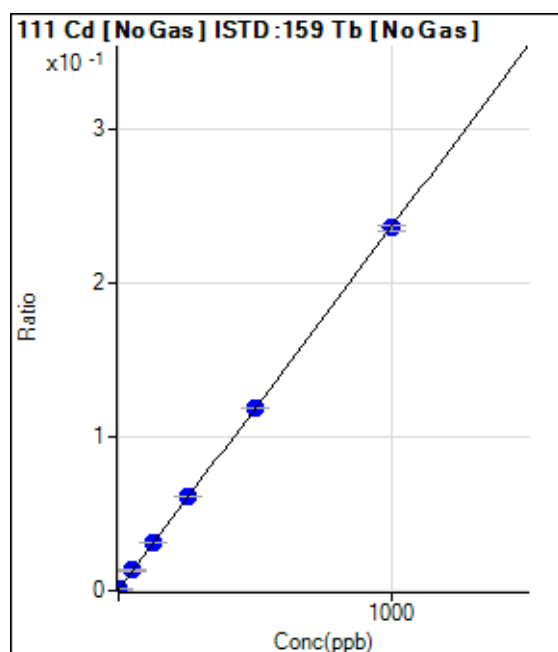
$$R = 1.0000$$

$$DL = 0.007661$$

$$BEC = 0.03552$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	1853.19	0.0006	P	3.7
2	☐	0.100					
3	☐	1.000	0.969	2574.75	0.0008	P	3.6
4	☐	50.000	53.900	41856.61	0.0133	P	4.4
5	☐	125.000	127.618	104837.05	0.0307	P	0.3
6	☐	250.000	257.029	212638.50	0.0612	P	0.2
7	☐	500.000	501.172	420665.43	0.1188	P	0.8
8	☐	1000.000	997.134	832686.20	0.2358	P	1.4
9	☐			2109.63	0.0006	P	0.4

$$y = 2.3589\text{E-}004 * x + 5.8885\text{E-}004$$

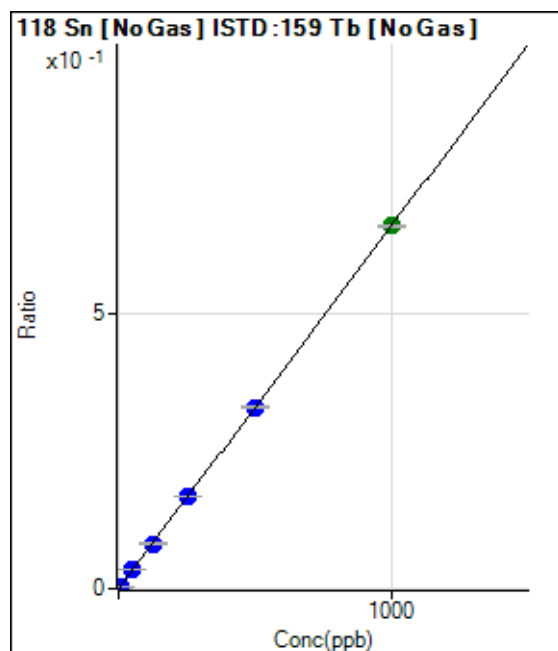
$$R = 1.0000$$

$$DL = 0.2741$$

$$BEC = 2.496$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	138.90	0.0000	P	15.7
2	☐	0.500					
3	☐	5.000	5.346	11263.60	0.0036	P	1.8
4	☐	50.000	52.605	109439.68	0.0348	P	5.0
5	☐	125.000	124.400	280798.28	0.0822	P	0.5
6	☐	250.000	253.752	582250.51	0.1676	P	1.0
7	☐	500.000	498.716	1166401.23	0.3294	P	0.9
8	☐	1000.000	999.647	2331764.72	0.6603	A	0.6
9	☐			1558.50	0.0005	P	10.0

$$y = 6.6049\text{E-}004 * x + 4.4166\text{E-}005$$

$$R = 1.0000$$

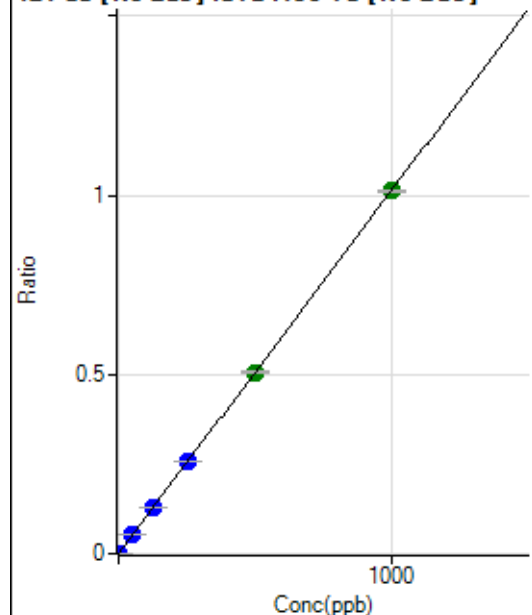
$$DL = 0.03149$$

$$BEC = 0.06687$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	27.78	0.0000	P	76.1
2	☐	0.200					
3	☐	2.000	1.987	6371.24	0.0020	P	3.4
4	☐	50.000	52.854	168510.40	0.0536	P	4.8
5	☐	125.000	124.948	432463.93	0.1266	P	0.4
6	☐	250.000	253.167	890982.18	0.2565	P	1.0
7	☐	500.000	499.689	1792644.46	0.5063	A	1.1
8	☐	1000.000	999.228	3575500.12	1.0125	A	0.8
9	☐			4000.80	0.0012	P	6.8

$$y = 0.0010 * x + 8.8550E-006$$

$$R = 1.0000$$

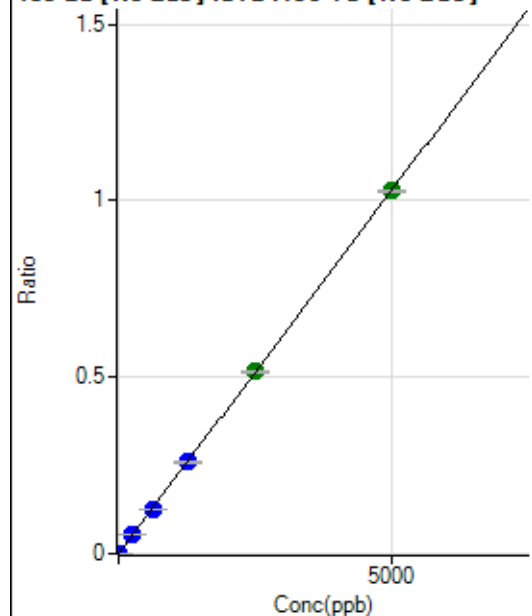
$$DL = 0.01996$$

$$BEC = 0.008739$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	36.11	0.0000	P	14.1
2	☐	1.000					
3	☐	10.000	10.393	6771.51	0.0021	P	5.4
4	☐	250.000	261.176	169105.53	0.0537	P	4.2
5	☐	625.000	620.435	436032.73	0.1277	P	0.3
6	☐	1250.000	1260.167	900447.73	0.2593	P	1.7
7	☐	2500.000	2502.566	1822995.27	0.5149	A	0.6
8	☐	5000.000	4996.186	3629850.38	1.0279	A	0.8
9	☐			580.60	0.0002	P	8.1

$$y = 2.0573E-004 * x + 1.1483E-005$$

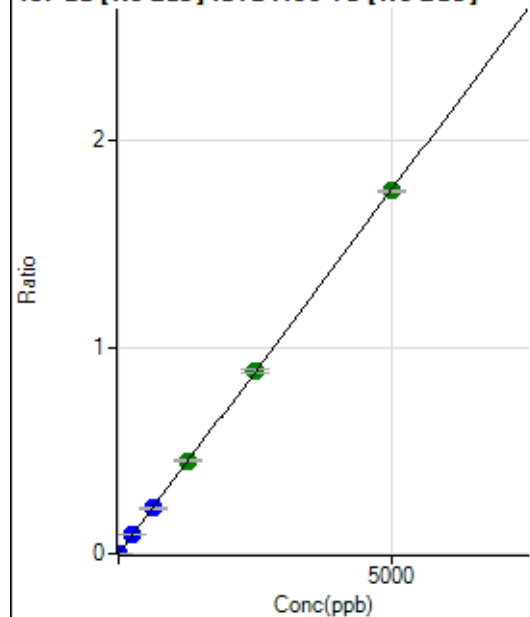
$$R = 1.0000$$

$$DL = 0.02357$$

$$BEC = 0.05581$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	50.00	0.0000	P	43.7
2	☐	1.000					
3	☐	10.000	10.305	11497.23	0.0036	P	4.8
4	☐	250.000	263.104	291972.34	0.0928	P	4.4
5	☐	625.000	623.202	750744.26	0.2198	P	0.9
6	☐	1250.000	1278.230	1565629.20	0.4508	A	1.4
7	☐	2500.000	2511.685	3136129.07	0.8858	A	1.1
8	☐	5000.000	4986.669	6210098.53	1.7586	A	0.9
9	☐			1133.44	0.0003	P	12.9

$$y = 3.5265E-004 * x + 1.5858E-005$$

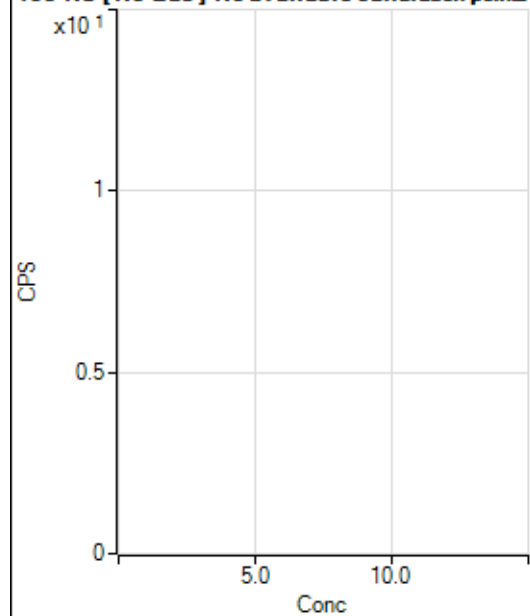
$$R = 1.0000$$

$$DL = 0.05889$$

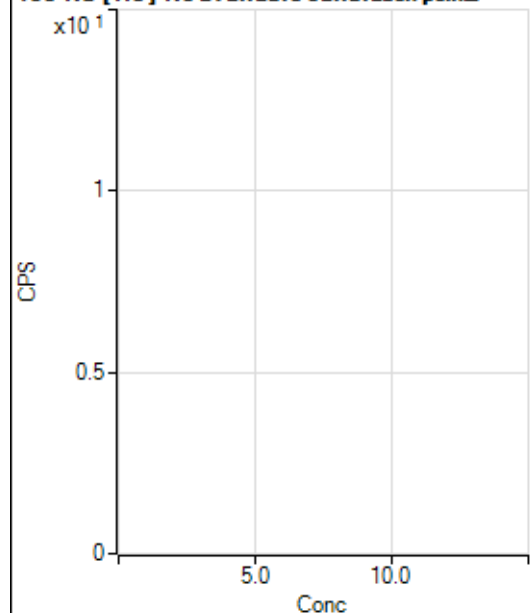
$$BEC = 0.04497$$

Weight: <None>

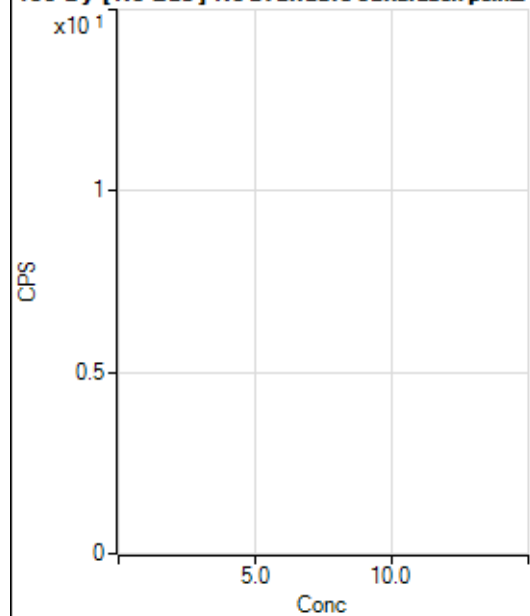
Min Conc: 0

150 Nd [No Gas] No available calibration points

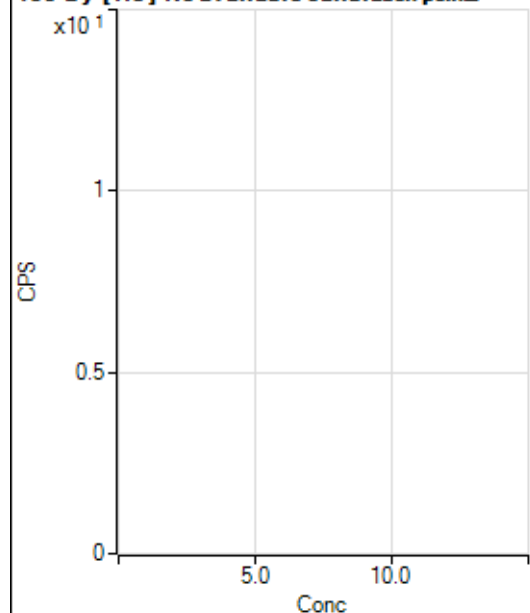
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐			2.22		P	173.2
2	☐						
3	☐			11.11		P	34.6
4	☐			4.45		P	86.6
5	☐			33.34		P	40.0
6	☐			42.22		P	39.7
7	☐			102.23		P	24.7
8	☐			131.12		P	16.3
9	☐			46.67		P	51.5

150 Nd [He] No available calibration points

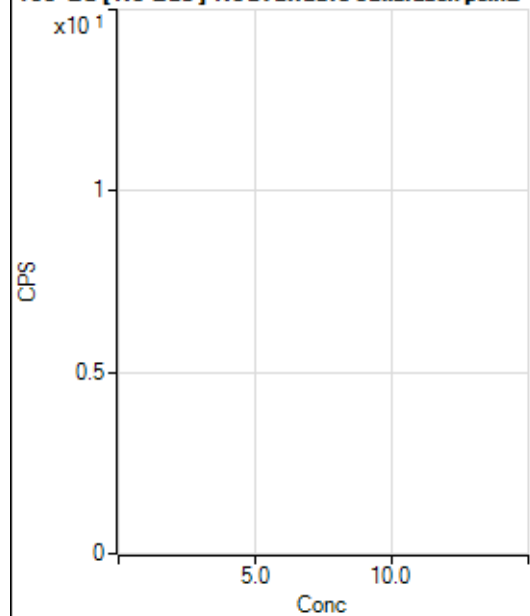
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐			0.00		P	
2	☐						
3	☐			0.00		P	
4	☐			2.22		P	86.6
5	☐			7.78		P	49.5
6	☐			3.33		P	0.0
7	☐			8.89		P	142.0
8	☐			18.89		P	73.5
9	☐			15.55		P	68.9

156 Dy [No Gas] No available calibration points

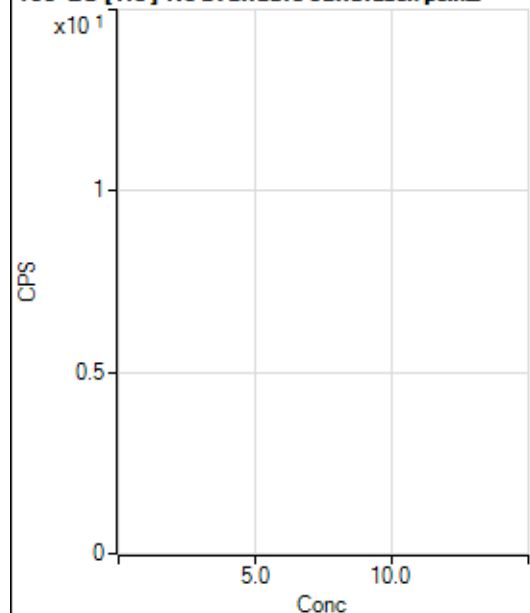
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐			5.55		P	86.6
2	☐						
3	☐			8.33		P	100.0
4	☐			13.89		P	34.7
5	☐			25.00		P	57.7
6	☐			30.56		P	56.8
7	☐			50.00		P	16.7
8	☐			125.01		P	29.1
9	☐			11.11		P	43.3

156 Dy [He] No available calibration points

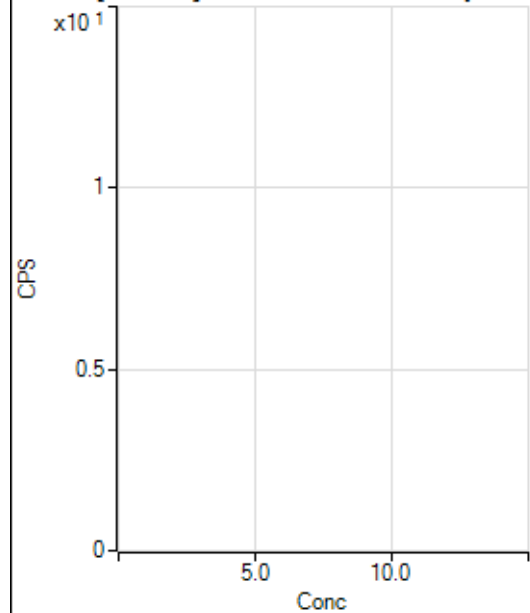
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐			1.11		P	173.2
2	☐						
3	☐			1.11		P	173.2
4	☐			5.56		P	34.7
5	☐			6.67		P	0.0
6	☐			4.44		P	43.4
7	☐			7.78		P	49.5
8	☐			6.67		P	132.3
9	☐			15.56		P	12.4

160 Gd [No Gas] Noavailable calibration poin_

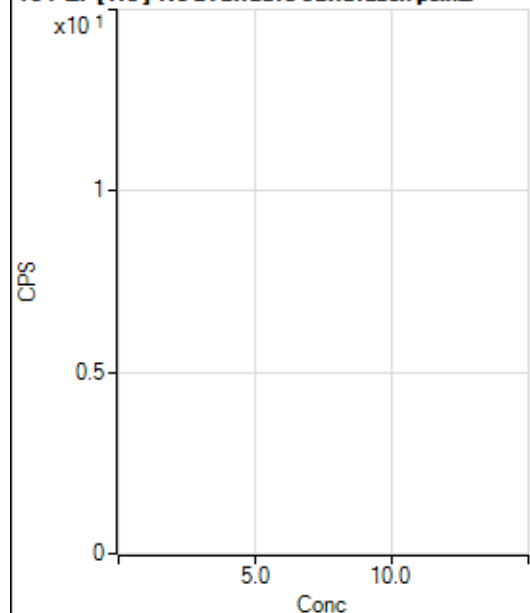
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐			30.56		P	56.8
2	☐						
3	☐			36.11		P	13.3
4	☐			52.78		P	32.9
5	☐			41.67		P	40.0
6	☐			33.33		P	25.0
7	☐			25.00		P	57.7
8	☐			41.67		P	40.0
9	☐			33.33		P	0.0

160 Gd [He] No available calibration points

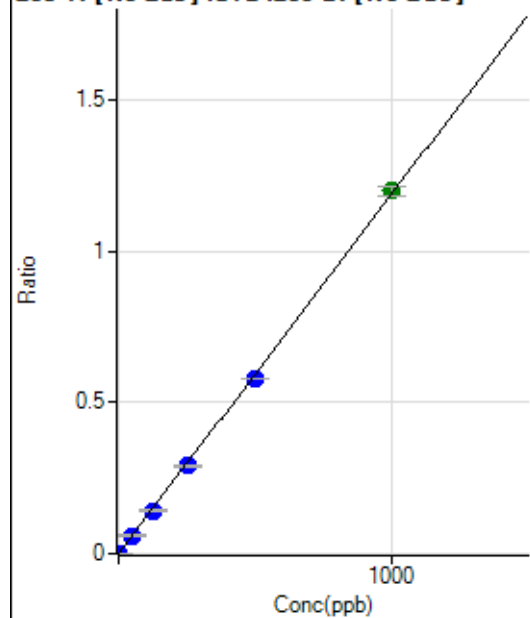
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐			16.66		P	34.6
2	☐						
3	☐			13.33		P	66.2
4	☐			14.45		P	48.0
5	☐			15.55		P	44.6
6	☐			15.55		P	24.8
7	☐			23.33		P	51.5
8	☐			21.11		P	18.2
9	☐			25.56		P	19.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐			13.89		P	34.7
2	☐						
3	☐			11.11		P	43.3
4	☐			25.00		P	33.3
5	☐			11.11		P	86.6
6	☐			19.44		P	65.5
7	☐			19.45		P	24.7
8	☐			25.00		P	57.7
9	☐			30.56		P	56.8

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐			5.55		P	69.3
2	☐						
3	☐			5.56		P	91.6
4	☐			5.56		P	91.6
5	☐			4.44		P	114.6
6	☐			4.45		P	86.6
7	☐			8.89		P	57.3
8	☐			3.33		P	100.1
9	☐			14.45		P	48.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	205.57	0.0001	P	27.0
2	☐	0.100					
3	☐	1.000	0.931	2175.30	0.0012	P	3.9
4	☐	50.000	50.404	104486.38	0.0601	P	2.4
5	☐	125.000	119.060	275522.36	0.1418	P	2.2
6	☐	250.000	244.528	576413.93	0.2912	P	1.0
7	☐	500.000	485.358	1152402.03	0.5778	P	0.0
8	☐	1000.000	1009.411	2330485.97	1.2016	A	2.5
9	☐			447.25	0.0003	P	17.3

$$y = 0.0012 * x + 1.1624E-004$$

$$R = 0.9998$$

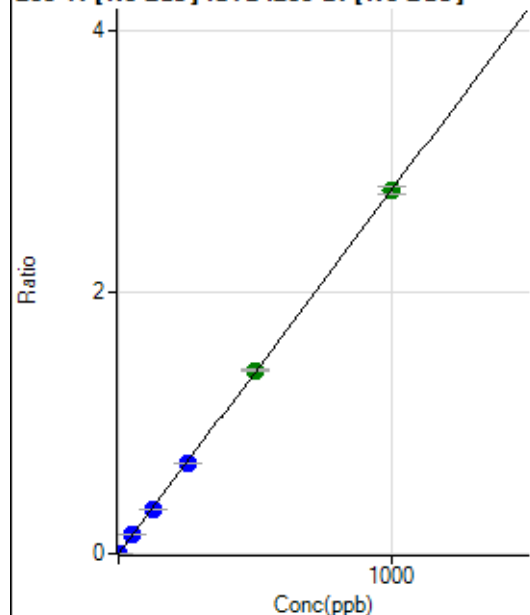
$$DL = 0.07897$$

$$BEC = 0.09765$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	552.82	0.0003	P	3.6
2	☐	0.100					
3	☐	1.000	0.922	5109.61	0.0029	P	0.4
4	☐	50.000	51.022	247068.52	0.1421	P	2.0
5	☐	125.000	120.835	653091.13	0.3362	P	1.9
6	☐	250.000	248.618	1368642.24	0.6914	P	1.0
7	☐	500.000	505.159	2800835.29	1.4045	A	0.7
8	☐	1000.000	998.236	5382204.50	2.7751	A	2.3
9	☐			1000.10	0.0006	P	22.4

$$y = 0.0028 * x + 3.1284E-004$$

$$R = 1.0000$$

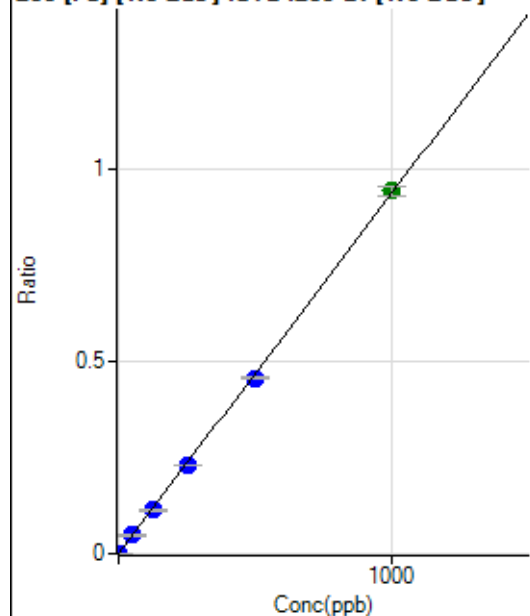
$$DL = 0.01217$$

$$BEC = 0.1125$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	711.15	0.0004	P	2.9
2	☐	0.100					
3	☐	1.000	0.921	2242.88	0.0013	P	1.0
4	☐	50.000	50.731	83052.41	0.0478	P	2.7
5	☐	125.000	120.418	219259.72	0.1129	P	2.1
6	☐	250.000	244.404	452677.24	0.2287	P	0.7
7	☐	500.000	488.374	910457.18	0.4565	P	0.3
8	☐	1000.000	1007.748	1826169.82	0.9416	A	2.9
9	☐			4665.82	0.0027	P	4.3

$$y = 9.3399E-004 * x + 4.0236E-004$$

$$R = 0.9999$$

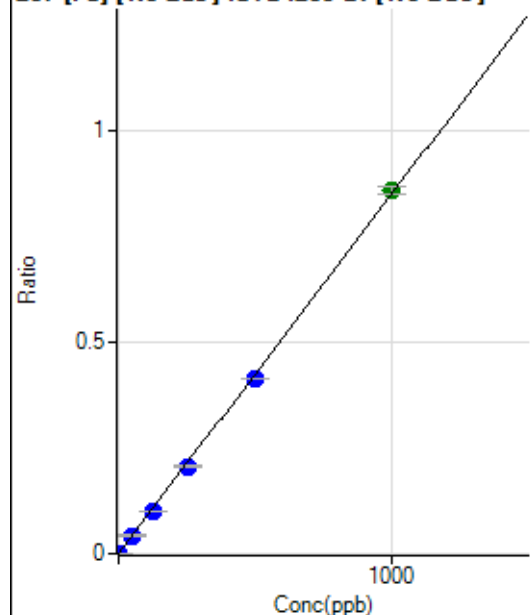
$$DL = 0.03784$$

$$BEC = 0.4308$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	585.22	0.0003	P	20.3
2	☐	0.100					
3	☐	1.000	0.867	1898.36	0.0011	P	5.5
4	☐	50.000	50.434	75070.13	0.0432	P	3.4
5	☐	125.000	118.806	196811.99	0.1013	P	1.8
6	☐	250.000	242.929	409386.11	0.2068	P	0.9
7	☐	500.000	485.766	824015.59	0.4132	P	0.6
8	☐	1000.000	1009.638	1664979.42	0.8585	A	2.2
9	☐			3985.94	0.0023	P	3.7

$$y = 8.4994\text{E-}004 * x + 3.3174\text{E-}004$$

$$R = 0.9998$$

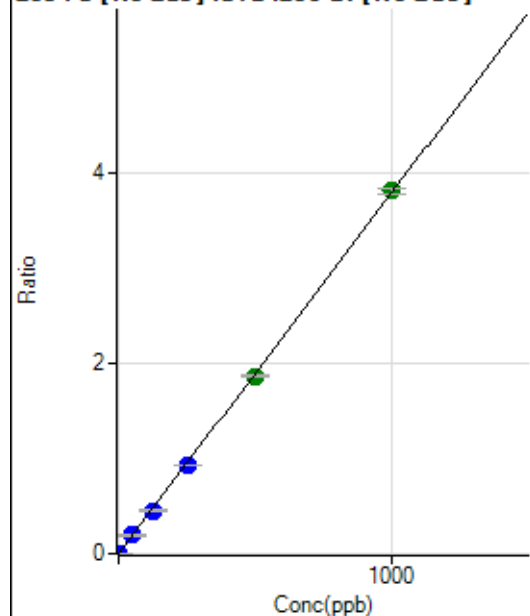
$$DL = 0.2379$$

$$BEC = 0.3903$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	2733.54	0.0015	P	3.9
2	☐	0.100					
3	☐	1.000	0.911	8895.97	0.0050	P	1.5
4	☐	50.000	50.354	334850.17	0.1927	P	3.3
5	☐	125.000	119.554	884563.21	0.4553	P	1.6
6	☐	250.000	244.169	1837713.48	0.9283	P	0.6
7	☐	500.000	492.718	3732699.84	1.8718	A	0.7
8	☐	1000.000	1005.762	7407642.44	3.8191	A	1.7
9	☐			17834.95	0.0102	P	2.4

$$y = 0.0038 * x + 0.0015$$

$$R = 0.9999$$

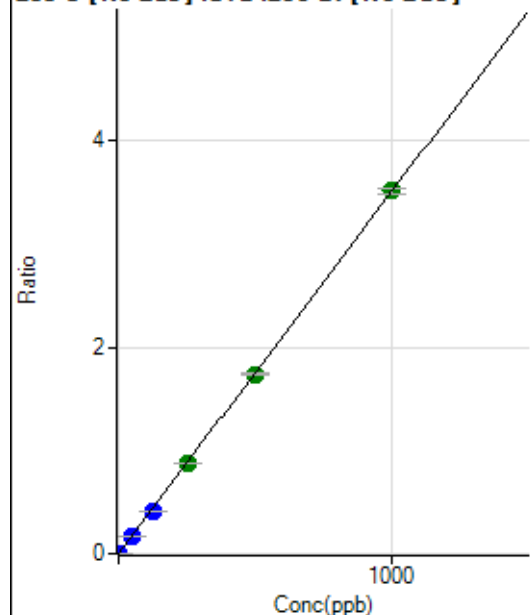
$$DL = 0.04818$$

$$BEC = 0.4075$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	0.000	0.000	27.78	0.0000	P	75.9
2	☐	0.100					
3	☐	1.000	0.899	5629.34	0.0032	P	4.9
4	☐	50.000	49.397	300977.62	0.1732	P	3.1
5	☐	125.000	117.862	802695.13	0.4132	P	1.5
6	☐	250.000	249.535	1731765.16	0.8748	A	1.1
7	☐	500.000	496.110	3468201.03	1.7392	A	0.9
8	☐	1000.000	1002.984	6819981.66	3.5160	A	1.5
9	☐			627.83	0.0004	P	23.4

$$y = 0.0035 * x + 1.5675E-005$$

$$R = 1.0000$$

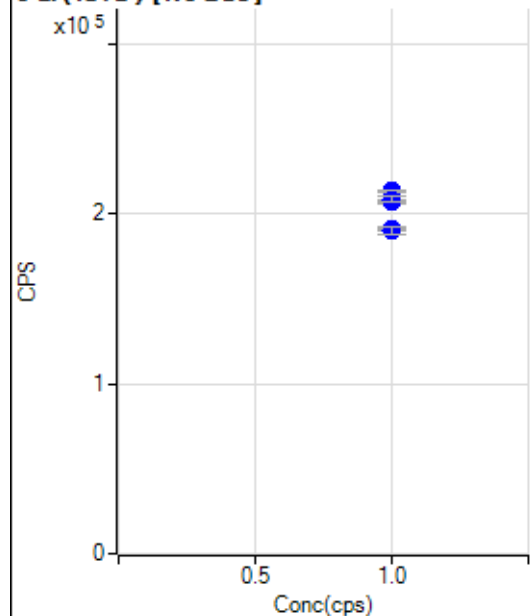
$$DL = 0.01018$$

$$BEC = 0.004472$$

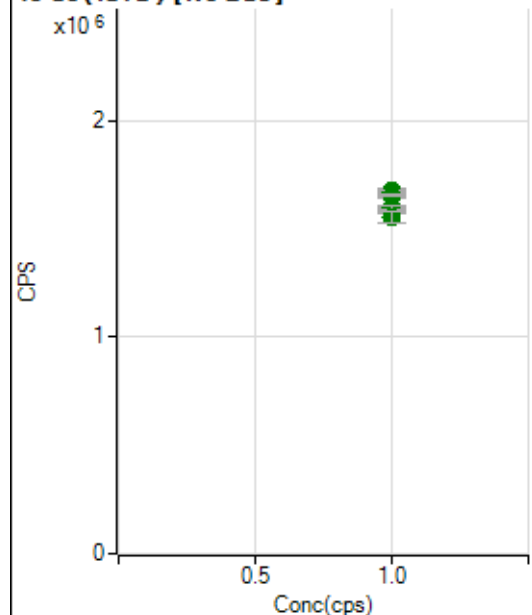
Weight: <None>

Min Conc: 0

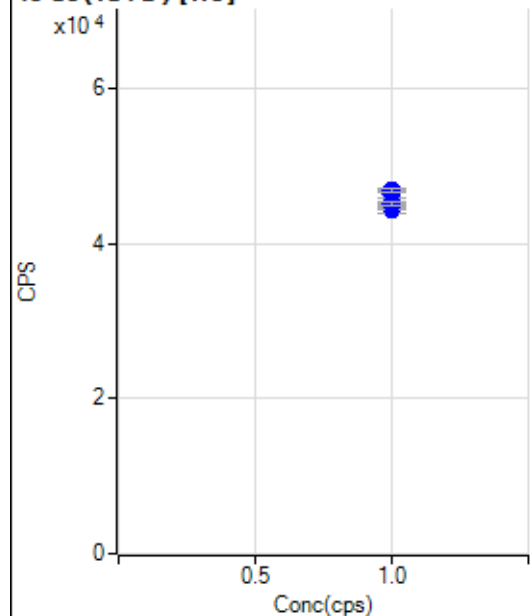
6 Li (ISTD) [No Gas]



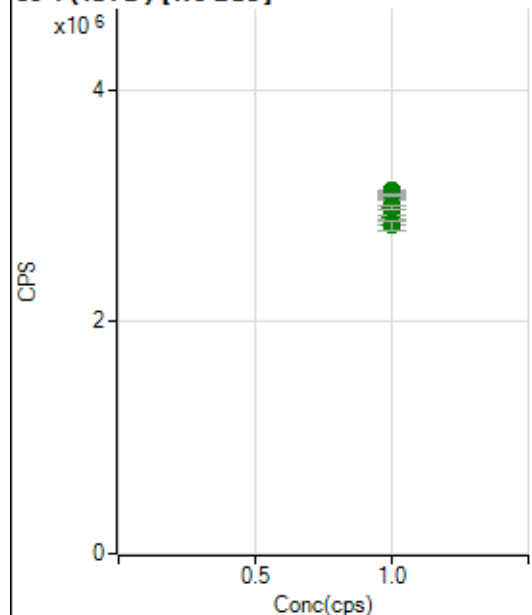
	R _j ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		190778.62		P	0.7
2	☐	1.000					
3	☐	1.000		191201.42		P	0.5
4	☐	1.000		190086.15		P	2.5
5	☐	1.000		206597.29		P	0.8
6	☐	1.000		212871.72		P	0.6
7	☐	1.000		213184.37		P	0.6
8	☐	1.000		207628.38		P	0.6
9	☐	1.000		208343.71		P	1.5

45 Sc (ISTD) [No Gas]

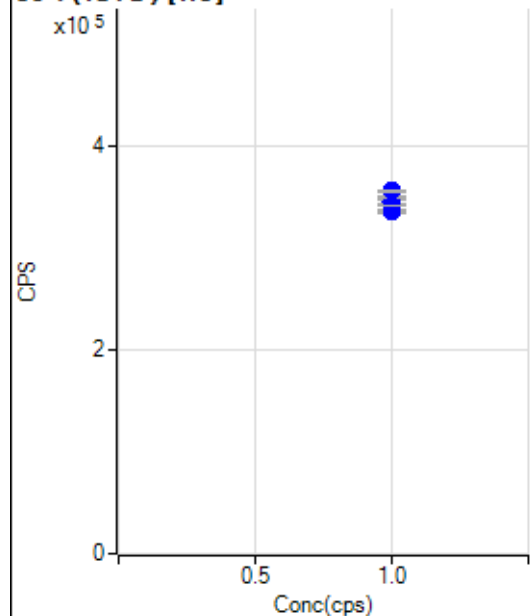
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		1582786.56		A	1.8
2	☐	1.000					
3	☐	1.000		1597587.29		A	0.8
4	☐	1.000		1552311.50		A	3.2
5	☐	1.000		1652520.52		A	0.8
6	☐	1.000		1676018.12		A	1.4
7	☐	1.000		1668274.97		A	0.6
8	☐	1.000		1672764.98		A	0.9
9	☐	1.000		1656281.73		A	0.9

45 Sc (ISTD) [He]

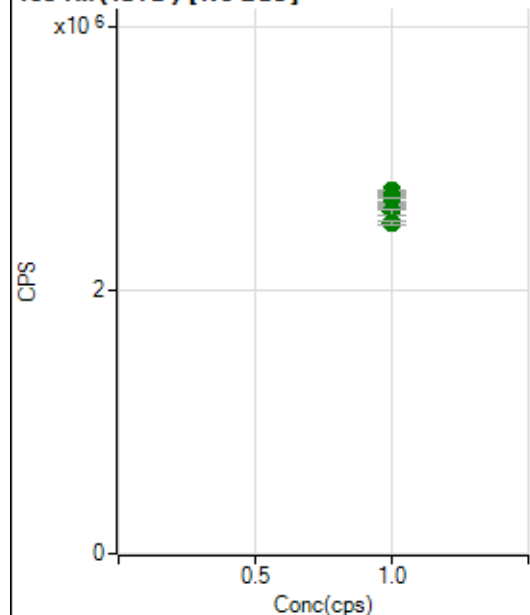
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		44498.47		P	2.9
2	☐	1.000					
3	☐	1.000		44889.49		P	1.1
4	☐	1.000		44624.09		P	0.8
5	☐	1.000		46375.37		P	2.3
6	☐	1.000		44902.71		P	1.5
7	☐	1.000		45060.00		P	2.2
8	☐	1.000		45197.11		P	1.2
9	☐	1.000		46862.53		P	1.1

89 Y (ISTD) [No Gas]

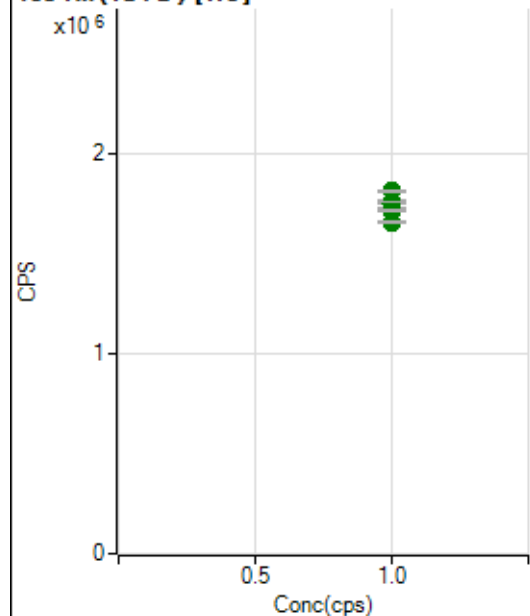
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		2864204.06		A	1.6
2	☐	1.000					
3	☐	1.000		2901544.68		A	1.2
4	☐	1.000		2836485.31		A	2.9
5	☐	1.000		3062899.47		A	0.7
6	☐	1.000		3100369.95		A	1.9
7	☐	1.000		3130084.81		A	0.4
8	☐	1.000		3098817.00		A	0.5
9	☐	1.000		2989880.72		A	1.4

89 Y (ISTD) [He]

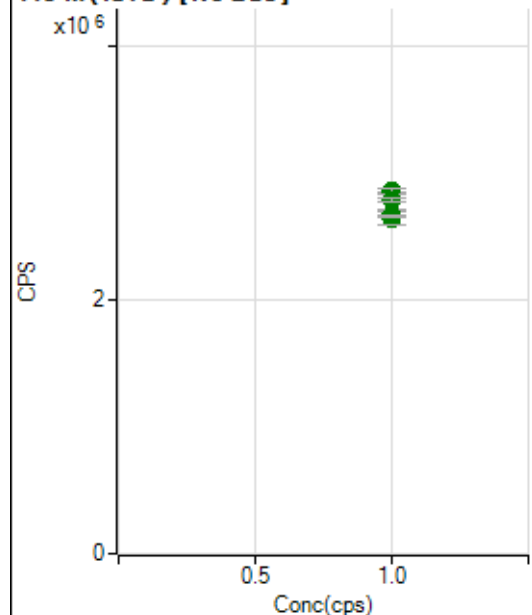
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		338248.41		P	0.3
2	☐	1.000					
3	☐	1.000		335686.94		P	0.8
4	☐	1.000		338038.95		P	0.1
5	☐	1.000		355050.88		P	1.7
6	☐	1.000		345311.40		P	1.0
7	☐	1.000		346401.57		P	2.1
8	☐	1.000		342118.58		P	0.5
9	☐	1.000		356557.69		P	0.8

103 Rh (ISTD) [No Gas]

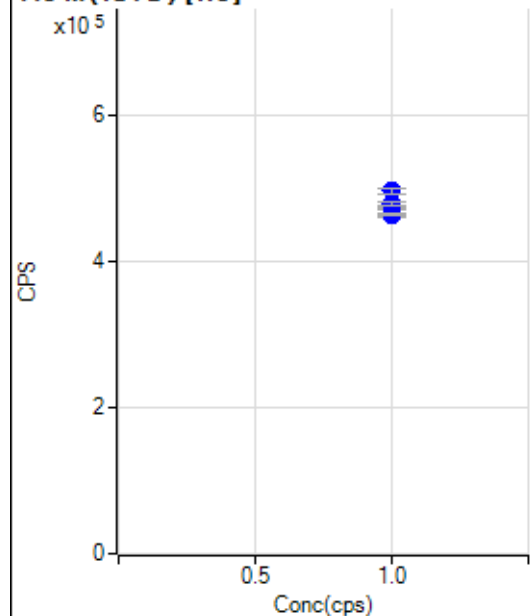
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		2644254.07		A	1.6
2	☐	1.000					
3	☐	1.000		2648015.59		A	1.0
4	☐	1.000		2590903.12		A	1.9
5	☐	1.000		2731197.50		A	0.1
6	☐	1.000		2750765.58		A	0.6
7	☐	1.000		2715010.89		A	0.6
8	☐	1.000		2697483.70		A	0.5
9	☐	1.000		2512017.50		A	1.1

103 Rh (ISTD) [He]

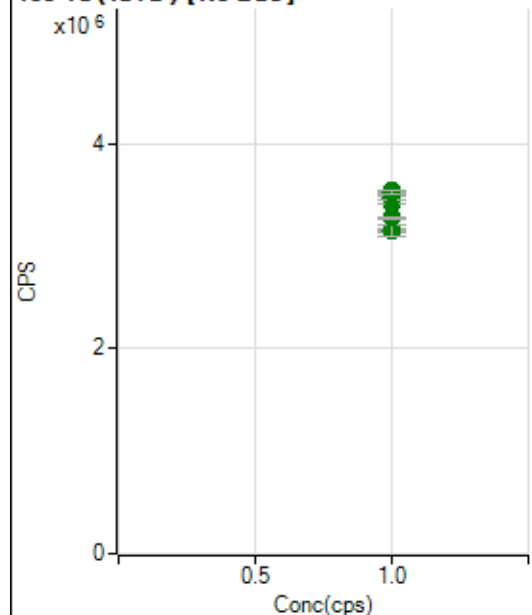
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		1714771.40		A	0.3
2	☐	1.000					
3	☐	1.000		1709020.74		A	0.1
4	☐	1.000		1714992.15		A	0.7
5	☐	1.000		1811925.06		A	0.4
6	☐	1.000		1759133.90		A	1.1
7	☐	1.000		1744225.91		A	1.7
8	☐	1.000		1714128.81		A	0.7
9	☐	1.000		1656619.66		A	0.4

115 In (ISTD) [No Gas]

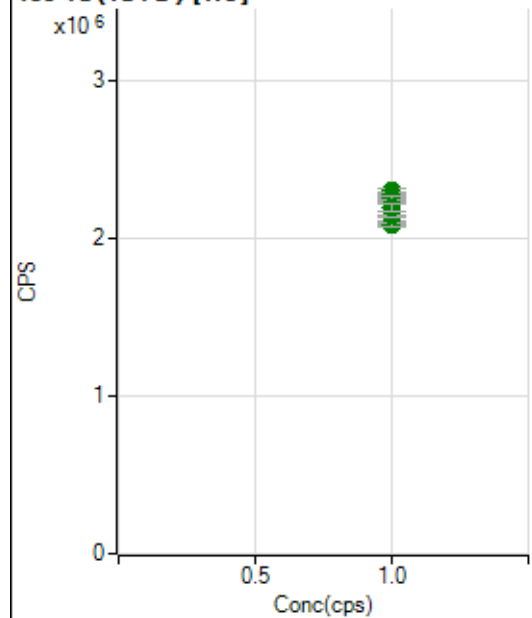
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		2678682.69		A	1.6
2	☐	1.000					
3	☐	1.000		2680500.38		A	2.1
4	☐	1.000		2630794.95		A	3.0
5	☐	1.000		2802639.48		A	0.4
6	☐	1.000		2857325.56		A	1.2
7	☐	1.000		2854665.72		A	1.4
8	☐	1.000		2793732.07		A	1.1
9	☐	1.000		2659654.65		A	0.8

115 In (ISTD) [He]

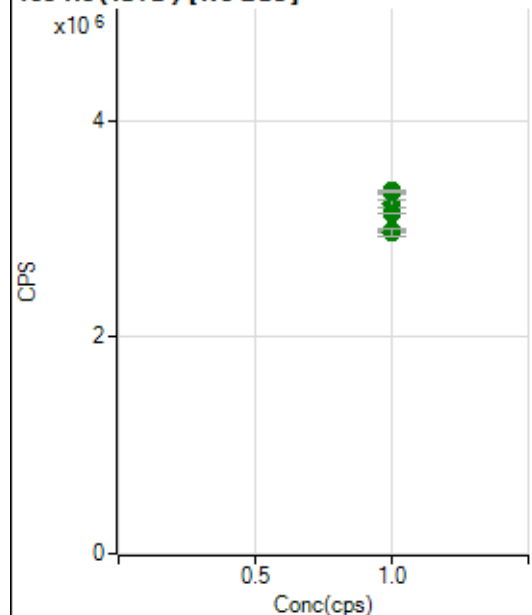
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		464395.11		P	0.4
2	☐	1.000					
3	☐	1.000		463066.80		P	0.7
4	☐	1.000		472606.30		P	0.5
5	☐	1.000		496191.04		P	1.6
6	☐	1.000		478956.94		P	1.0
7	☐	1.000		478742.06		P	1.3
8	☐	1.000		465235.48		P	0.5
9	☐	1.000		478514.50		P	0.8

159 Tb (ISTD) [No Gas]

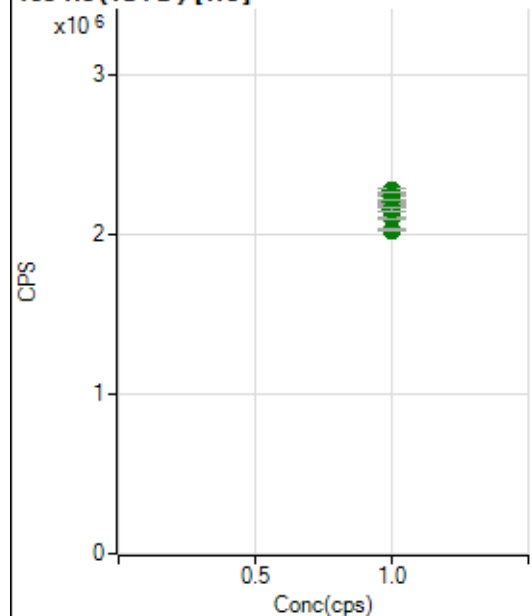
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		3146831.27		A	0.7
2	☐	1.000					
3	☐	1.000		3150664.53		A	0.9
4	☐	1.000		3149496.03		A	3.5
5	☐	1.000		3415667.59		A	0.5
6	☐	1.000		3473326.27		A	0.8
7	☐	1.000		3540724.67		A	0.8
8	☐	1.000		3531505.02		A	0.8
9	☐	1.000		3275385.34		A	0.4

159 Tb (ISTD) [He]

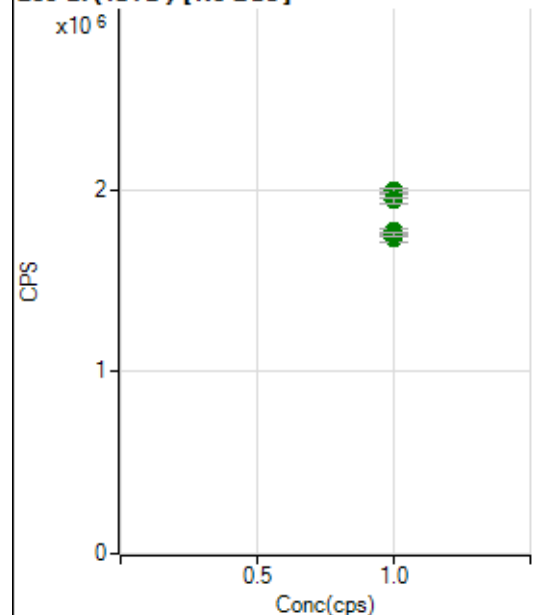
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		2098466.81		A	0.8
2	☐	1.000					
3	☐	1.000		2090011.50		A	1.0
4	☐	1.000		2144305.84		A	0.8
5	☐	1.000		2303748.70		A	1.9
6	☐	1.000		2251087.94		A	1.3
7	☐	1.000		2282562.48		A	1.7
8	☐	1.000		2258662.88		A	1.0
9	☐	1.000		2201409.65		A	2.4

165 Ho (ISTD) [No Gas]

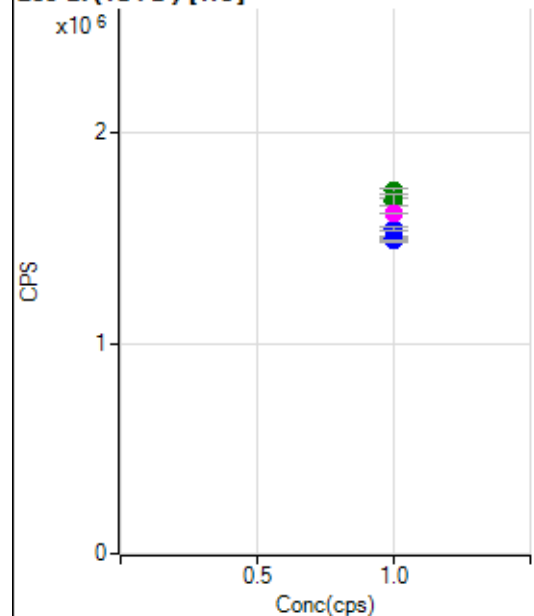
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		2980712.59		A	1.3
2	☐	1.000					
3	☐	1.000		2993172.07		A	0.4
4	☐	1.000		2964165.91		A	2.6
5	☐	1.000		3233145.17		A	1.7
6	☐	1.000		3342423.94		A	1.2
7	☐	1.000		3346341.94		A	1.1
8	☐	1.000		3352688.44		A	0.4
9	☐	1.000		3150626.29		A	0.2

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		2026737.35		A	0.8
2	☐	1.000					
3	☐	1.000		2028149.52		A	0.8
4	☐	1.000		2103621.57		A	0.9
5	☐	1.000		2273288.02		A	1.8
6	☐	1.000		2216261.89		A	2.8
7	☐	1.000		2238387.31		A	2.9
8	☐	1.000		2204585.89		A	0.9
9	☐	1.000		2155391.20		A	0.9

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		1767909.64		A	2.0
2	☐	1.000					
3	☐	1.000		1776954.94		A	0.8
4	☐	1.000		1738836.87		A	2.5
5	☐	1.000		1942982.88		A	1.6
6	☐	1.000		1979609.31		A	0.4
7	☐	1.000		1994305.53		A	1.1
8	☐	1.000		1940040.89		A	1.9
9	☐	1.000		1753759.94		A	1.0

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	De t	RSD
1	☐	1.000		1502347.86		P	0.6
2	☐	1.000					
3	☐	1.000		1496573.59		P	1.2
4	☐	1.000		1543823.40		P	1.3
5	☐	1.000		1724776.76		A	1.8
6	☐	1.000		1671941.09		A	1.8
7	☐	1.000		1681161.00		A	3.0
8	☐	1.000		1614969.51		M	0.1
9	☐	1.000		1487728.15		P	0.4

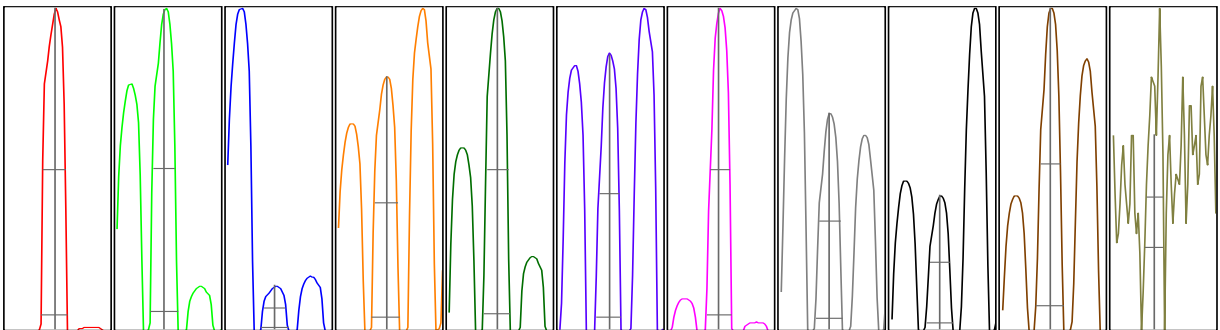
US EPA Tune Check Sample Report

Batch Folder D:\P8040719MM.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	1528	1.60	5.00	
24	30411	0.90	5.00	
25	4228	1.24	5.00	
26	5174	1.42	5.00	
59	23320	0.60	5.00	
113	3385	1.23	5.00	
115	39121	0.68	5.00	
206	7633	0.77	5.00	
207	6872	0.98	5.00	
208	16461	1.01	5.00	
220	1	32.02		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	1545	1556	1531	1498	1507
24	30705	30637	30407	30271	30036
25	4312	4239	4221	4183	4185
26	5233	5227	5222	5110	5080
59	23475	23410	23367	23207	23143
113	3423	3418	3400	3325	3361
115	39487	39216	39164	38810	38926
206	7719	7669	7582	7598	7596
207	6938	6905	6915	6783	6819
208	16564	16626	16551	16275	16287
220	1	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	2545	8.95	8.9 - 9.1		0.741	0.900	
24	50186	23.90	23.9 - 24.1		0.781	0.900	
25	6906	24.90	24.9 - 25.1		0.773	0.900	
26	8484	25.95	25.9 - 26.1		0.783	0.900	
59	39989	58.95	58.9 - 59.1		0.774	0.900	
113	6086	113.00	112.9 - 113.1		0.732	0.900	
115	71757	114.95	114.9 - 115.1		0.727	0.900	
206	13719	205.95	205.9 - 206.1		0.775	0.900	
207	12350	206.95	206.9 - 207.1		0.770	0.900	
208	29487	207.95	207.9 - 208.1		0.781	0.900	
220	1	219.75	-		0.530		

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	13.1	V	Deflect	16.2	V
Extract 2	-250.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-120	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	160	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	6978	1.06	
89	11580	1.31	
205	10566	0.60	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	6910	7026	7075	6904	6976
89	11412	11657	11800	11491	11540
205	10473	10628	10591	10529	10607

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	13.1	V	Deflect	3.2	V
Extract 2	-250.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-120	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			