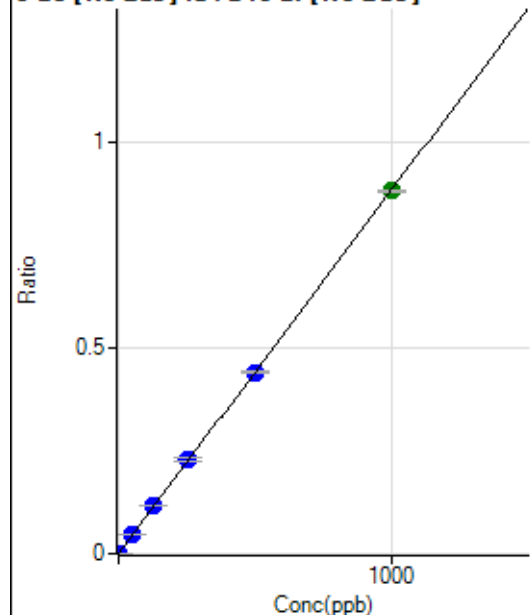


Batch Folder: D:\P8092518- MS.b\
Analysis File: P8092518- MS.batch.bin
DA Date-Time: 2018-09-25 17:35:27
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-09-25 15:52:14
2	004CALS.d	S01	2018-09-25 15:55:35
3	005CALS.d	S02	2018-09-25 15:59:40
4	006CALS.d	S03	2018-09-25 16:03:25
5	007CALS.d	S04	2018-09-25 16:07:09
6	008CALS.d	S05	2018-09-25 16:10:46
7	009CALS.d	S06	2018-09-25 16:14:18
8	010CALS.d	S07	2018-09-25 16:17:45
9	011CALS.d	S08	2018-09-25 16:21:08

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	218.53	0.0002	P	6.2
2	☐	0.100	0.118	359.28	0.0003	P	8.0
3	☐	1.000	0.989	1372.33	0.0010	P	5.3
4	☐	50.000	52.245	62368.50	0.0464	P	2.6
5	☐	125.000	131.882	155172.24	0.1168	P	2.5
6	☐	250.000	258.397	306779.30	0.2286	P	3.8
7	☐	500.000	498.560	596783.90	0.4410	P	0.4
8	☐	1000.000	997.648	1184069.32	0.8823	A	0.5
9	☐			737.08	0.0006	P	9.0

$$y = 8.8418\text{E-}004 * x + 1.6711\text{E-}004$$

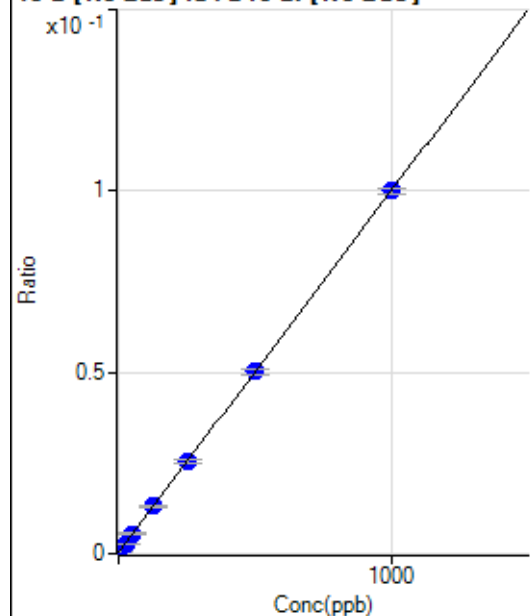
$$R = 0.9999$$

$$DL = 0.03506$$

$$BEC = 0.189$$

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	433.36	0.0003	P	9.8
2	☐	2.500	1.991	702.83	0.0005	P	3.7
3	☐	25.000	23.863	3572.84	0.0027	P	6.1
4	☐	50.000	51.721	7388.33	0.0055	P	6.1
5	☐	125.000	127.357	17327.81	0.0130	P	2.5
6	☐	250.000	253.360	34369.72	0.0256	P	4.1
7	☐	500.000	498.956	67816.64	0.0501	P	3.5
8	☐	1000.000	999.331	134275.35	0.1000	P	1.6
9	☐			7177.08	0.0055	P	6.3

$$y = 9.9781\text{E-}005 * x + 3.3146\text{E-}004$$

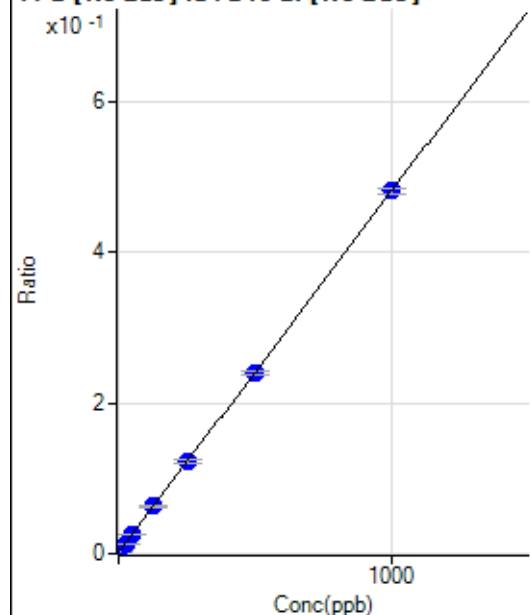
$$R = 1.0000$$

$$DL = 0.9791$$

$$BEC = 3.322$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2064.13	0.0016	P	2.5
2	☐	2.500	2.509	3689.53	0.0028	P	3.7
3	☐	25.000	23.716	17074.61	0.0130	P	2.3
4	☐	50.000	50.036	34431.10	0.0256	P	3.5
5	☐	125.000	127.467	83398.09	0.0628	P	3.7
6	☐	250.000	249.924	163109.15	0.1215	P	3.9
7	☐	500.000	497.843	325510.95	0.2406	P	2.4
8	☐	1000.000	1000.820	646892.75	0.4820	P	1.4
9	☐			35205.67	0.0269	P	9.2

$$y = 4.8001\text{E-}004 * x + 0.0016$$

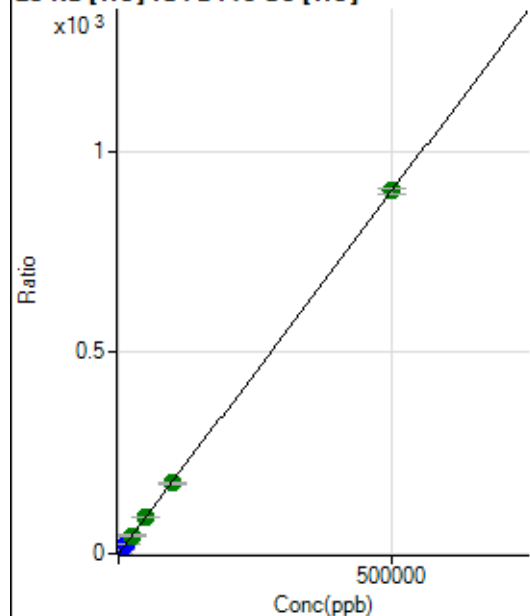
$$R = 1.0000$$

$$DL = 0.2442$$

$$BEC = 3.289$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7819.09	0.1969	P	3.0
2	☐	50.000	45.584	11118.75	0.2791	P	1.6
3	☐	500.000	474.987	41968.61	1.0525	P	3.4
4	☐	5000.000	4964.959	358915.34	9.1401	P	1.6
5	☐	12500.000	12310.800	862845.58	22.3719	P	0.3
6	☐	25000.000	24970.501	1692545.17	45.1752	A	3.6
7	☐	50000.000	49179.875	3171312.33	88.7825	A	0.6
8	☐	100000.00	96845.283	6128990.89	174.6402	A	2.0
9	☐	500000.00	500719.53	32084085.79	902.1214	A	1.5

$$y = 0.0018 * x + 0.1969$$

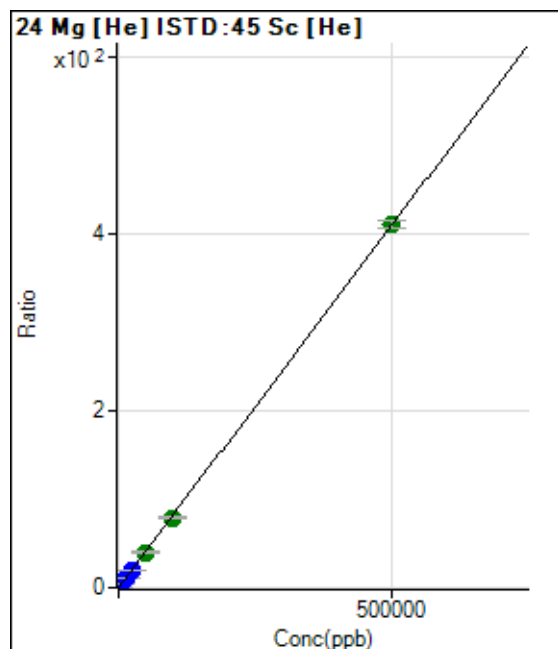
$$R = 1.0000$$

$$DL = 9.858$$

$$BEC = 109.3$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	302.80	0.0076	P	20.2
2	☐	50.000	45.982	1802.98	0.0453	P	6.2
3	☐	500.000	471.578	15709.29	0.3936	P	3.4
4	☐	5000.000	4875.411	156996.73	3.9978	P	1.2
5	☐	12500.000	12143.535	383610.52	9.9462	P	0.4
6	☐	25000.000	24066.137	738363.44	19.7040	P	2.5
7	☐	50000.000	49065.695	1434670.84	40.1642	A	0.5
8	☐	100000.00	96186.485	2762717.90	78.7291	A	3.1
9	☐	500000.00	500913.01	14579898.76	409.9675	A	2.0

$$y = 8.1843\text{E-}004 * x + 0.0076$$

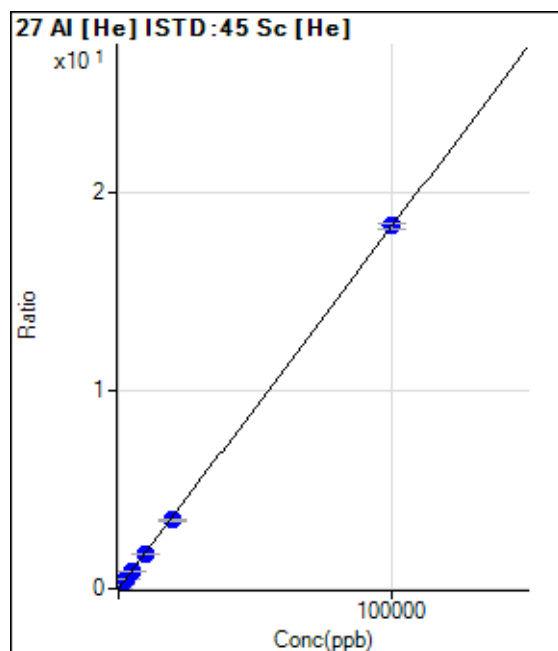
$$R = 1.0000$$

$$DL = 5.65$$

$$BEC = 9.315$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	23.34	0.0006	P	32.3
2	☐	2.000	1.128	31.68	0.0008	P	35.9
3	☐	20.000	15.205	134.20	0.0034	P	19.4
4	☐	1000.000	949.242	6827.59	0.1739	P	2.4
5	☐	2500.000	2404.104	16949.42	0.4395	P	0.6
6	☐	5000.000	4787.939	32774.21	0.8746	P	2.6
7	☐	10000.000	9496.370	61949.29	1.7342	P	0.8
8	☐	20000.000	18880.791	120981.73	3.4473	P	2.3
9	☐	100000.00	100287.71	651130.02	18.3083	P	1.6

$$y = 1.8255\text{E-}004 * x + 5.8989\text{E-}004$$

$$R = 0.9999$$

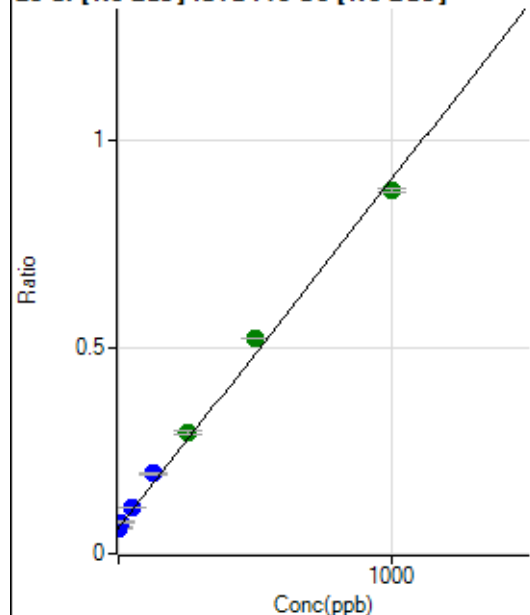
$$DL = 3.134$$

$$BEC = 3.231$$

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	260417.43	0.0624	P	1.2
2	☐	1.000	2.242	271133.38	0.0643	P	1.3
3	☐	10.000	16.115	318437.79	0.0760	P	3.8
4	☐	50.000	59.423	481431.05	0.1125	P	1.2
5	☐	125.000	156.666	808040.16	0.1946	P	2.9
6	☐	250.000	273.801	1238707.72	0.2934	A	4.3
7	☐	500.000	544.570	2174029.91	0.5219	A	0.7
8	☐	1000.000	967.273	3540727.94	0.8786	A	1.1
9	☐			537027.66	0.1357	P	3.0

$$y = 8.4385E-004 * x + 0.0624$$

$$R = 0.9979$$

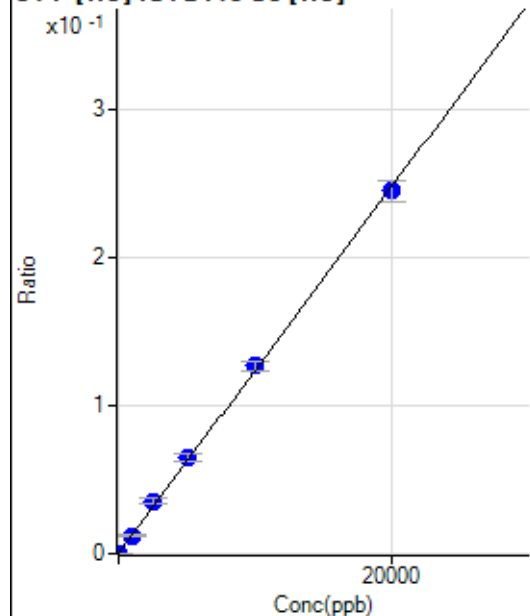
$$DL = 2.758$$

$$BEC = 73.93$$

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	-1.903	5.55	0.0001	P	86.7
2	☐	0.000	-7.670	2.78	0.0001	P	173.
3	☐	0.000	9.573	11.11	0.0003	P	115.
4	☐	1000.000	981.187	483.36	0.0123	P	11.5
5	☐	2500.000	2852.483	1366.80	0.0354	P	9.1
6	☐	5000.000	5273.450	2453.11	0.0654	P	7.6
7	☐	10000.000	10220.051	4520.36	0.1265	P	4.7
8	☐	20000.000	19778.492	8586.33	0.2447	P	5.8
9	☐			11.11	0.0003	P	42.4

$$y = 1.2366E-005 * x + 1.6475E-004$$

$$R = 0.9997$$

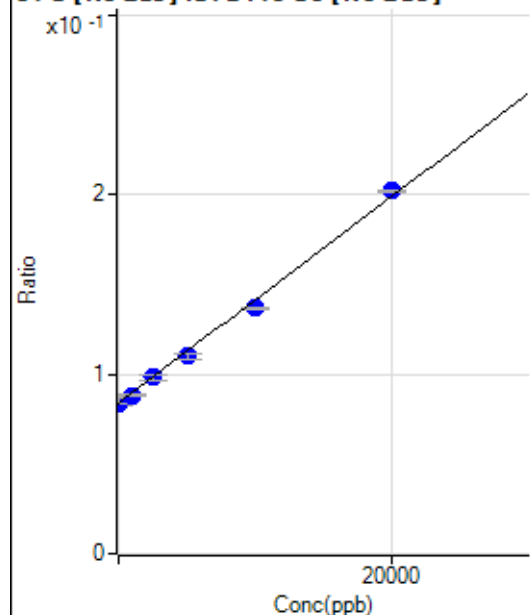
$$DL = 46.08$$

$$BEC = 13.32$$

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	-174.253	346531.88	0.0830	P	2.1
2	☐	0.000	11.667	354712.49	0.0841	P	1.0
3	☐	0.000	162.586	356059.77	0.0850	P	3.6
4	☐	1000.000	664.648	375833.41	0.0878	P	1.2
5	☐	2500.000	2494.911	408443.74	0.0984	P	3.2
6	☐	5000.000	4547.214	465187.10	0.1102	P	2.7
7	☐	10000.000	9185.836	569903.04	0.1368	P	1.2
8	☐	20000.000	20537.682	814295.27	0.2021	P	0.5
9	☐			316028.99	0.0799	P	2.2

$$y = 5.7471\text{E-}006 * x + 0.0840$$

$$R = 0.9985$$

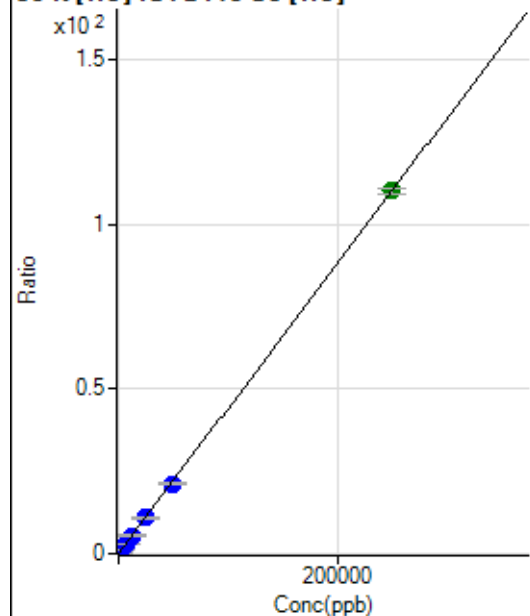
$$DL = 996.6$$

$$BEC = 1.462\text{E}+04$$

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	3058.81	0.0770	P	4.9
2	☐	50.000	54.970	4028.54	0.1011	P	1.6
3	☐	500.000	510.647	12016.77	0.3013	P	1.7
4	☐	2500.000	2624.192	48275.54	1.2297	P	4.0
5	☐	6250.000	6378.949	111041.66	2.8791	P	0.5
6	☐	12500.000	12443.206	207744.34	5.5430	P	1.5
7	☐	25000.000	24450.601	386411.90	10.8176	P	0.4
8	☐	50000.000	48025.132	743125.85	21.1735	P	1.5
9	☐	250000.00	250448.26	3915494.40	110.0941	A	1.6

$$y = 4.3928\text{E-}004 * x + 0.0770$$

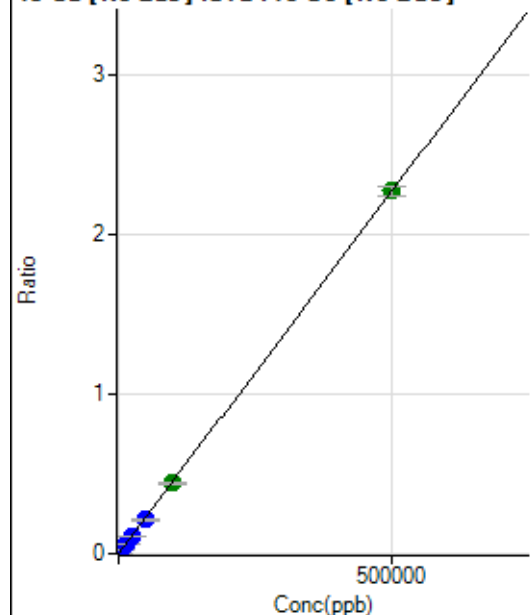
$$R = 1.0000$$

$$DL = 25.94$$

$$BEC = 175.2$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	480.59	0.0001	P	18.6
2	☐	50.000	53.062	1500.16	0.0004	P	5.0
3	☐	500.000	478.041	9561.95	0.0023	P	4.3
4	☐	5000.000	4683.838	91298.73	0.0213	P	2.5
5	☐	12500.000	12159.752	229284.97	0.0552	P	3.6
6	☐	25000.000	23400.201	448242.17	0.1062	P	3.5
7	☐	50000.000	46693.471	881934.92	0.2117	P	1.1
8	☐	100000.00	97098.420	1773921.37	0.4402	A	0.6
9	☐	500000.00	501002.64	8986024.51	2.2707	A	2.4

$$y = 4.5321\text{E-}006 * x + 1.1528\text{E-}004$$

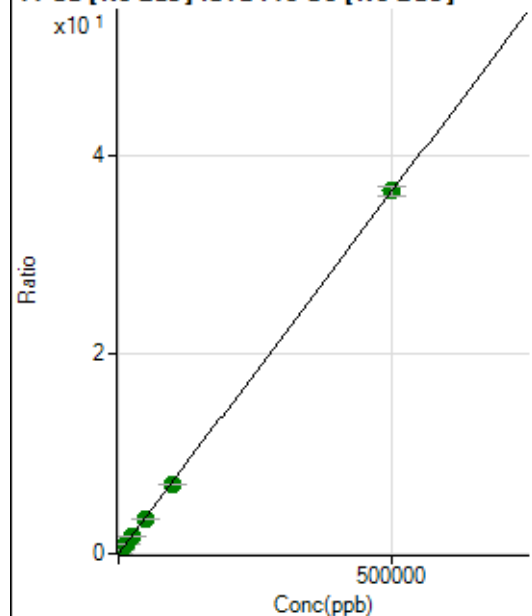
$$R = 1.0000$$

$$DL = 14.17$$

$$BEC = 25.44$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13159.57	0.0032	P	2.7
2	☐	50.000	48.985	28301.64	0.0067	P	0.9
3	☐	500.000	473.523	157272.58	0.0375	P	3.7
4	☐	5000.000	4819.210	1510213.73	0.3530	A	1.0
5	☐	12500.000	12230.501	3699374.00	0.8910	A	3.7
6	☐	25000.000	23470.746	7206880.54	1.7070	A	3.6
7	☐	50000.000	46812.980	14168456.22	3.4015	A	0.9
8	☐	100000.00	95120.265	27840252.01	6.9083	A	0.6
9	☐	500000.00	501379.68	144050607.3	36.4003	A	2.4

$$y = 7.2594\text{E-}005 * x + 0.0032$$

$$R = 0.9999$$

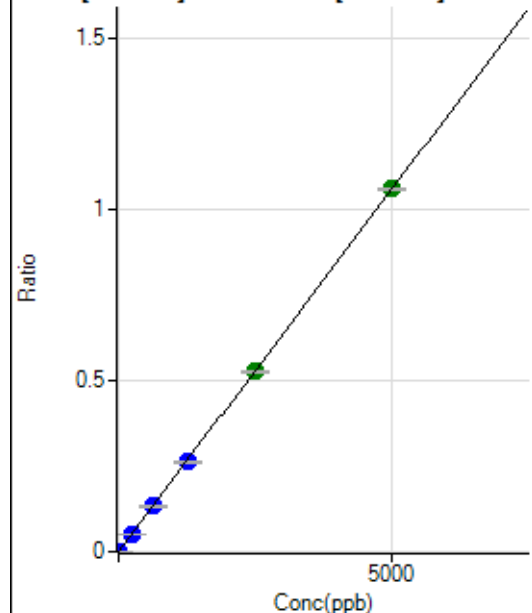
$$DL = 3.58$$

$$BEC = 43.43$$

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	88.89	0.0000	P	31.3
2	☐	0.500	0.534	566.71	0.0001	P	8.5
3	☐	5.000	4.865	4403.67	0.0011	P	6.1
4	☐	250.000	246.728	223493.53	0.0522	P	1.6
5	☐	625.000	632.528	555965.03	0.1339	P	3.3
6	☐	1250.000	1238.085	1106490.04	0.2621	P	3.3
7	☐	2500.000	2484.514	2190414.46	0.5259	A	1.1
8	☐	5000.000	5009.944	4273265.29	1.0604	A	0.6
9	☐			2305.85	0.0006	P	8.5

$$y = 2.1165E-004 * x + 2.1356E-005$$

$$R = 1.0000$$

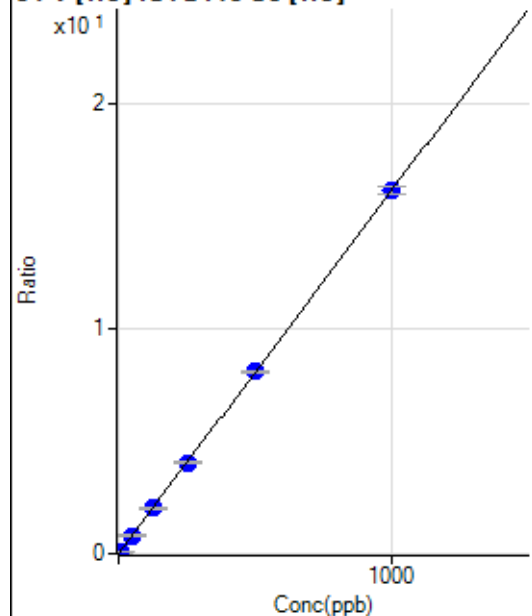
$$DL = 0.09473$$

$$BEC = 0.1009$$

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	24.44	0.0006	P	37.3
2	☐	0.500	0.499	345.57	0.0087	P	9.4
3	☐	5.000	4.785	3105.95	0.0779	P	2.2
4	☐	50.000	50.255	31877.45	0.8118	P	2.1
5	☐	125.000	125.410	78101.74	2.0250	P	1.5
6	☐	250.000	249.287	150826.82	4.0246	P	1.9
7	☐	500.000	500.830	288802.39	8.0850	P	0.3
8	☐	1000.000	999.700	566356.15	16.1378	P	2.0
9	☐			295.56	0.0083	P	6.0

$$y = 0.0161 * x + 6.1962E-004$$

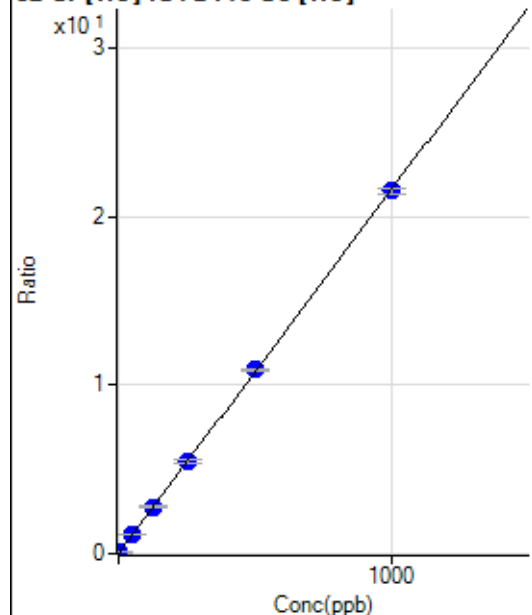
$$R = 1.0000$$

$$DL = 0.04292$$

$$BEC = 0.03839$$

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	566.69	0.0143	P	6.7
2	☐	0.200	0.248	782.26	0.0196	P	2.3
3	☐	2.000	2.055	2340.24	0.0587	P	2.9
4	☐	50.000	51.525	44271.09	1.1273	P	0.6
5	☐	125.000	128.151	107316.30	2.7825	P	1.2
6	☐	250.000	253.544	205757.08	5.4911	P	2.8
7	☐	500.000	504.609	389862.71	10.9144	P	0.8
8	☐	1000.000	996.339	755844.27	21.5363	P	1.6
9	☐			35627.67	1.0018	P	1.8

$$y = 0.0216 * x + 0.0143$$

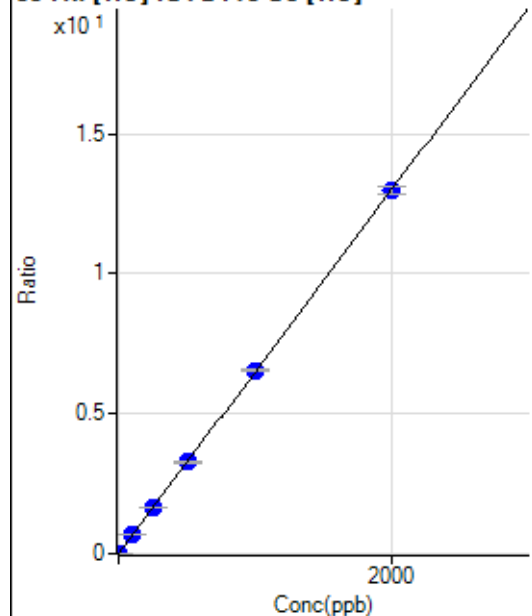
$$R = 1.0000$$

$$DL = 0.1332$$

$$BEC = 0.6612$$

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	53.33	0.0013	P	29.0
2	☐	0.100	0.060	68.89	0.0017	P	24.4
3	☐	1.000	1.214	367.79	0.0092	P	4.8
4	☐	100.000	102.101	26101.28	0.6647	P	1.8
5	☐	250.000	256.241	64261.48	1.6661	P	0.7
6	☐	500.000	502.814	122479.86	3.2681	P	1.9
7	☐	1000.000	1006.987	233737.03	6.5438	P	1.2
8	☐	2000.000	1994.918	454914.69	12.9624	P	2.1
9	☐			2389.14	0.0672	P	5.4

$$y = 0.0065 * x + 0.0013$$

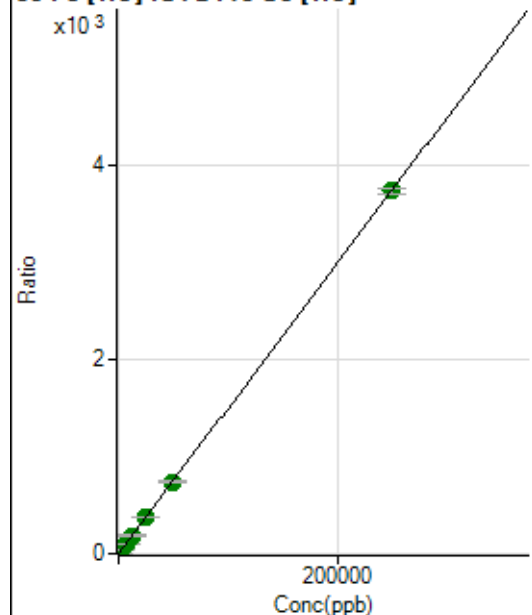
$$R = 1.0000$$

$$DL = 0.1788$$

$$BEC = 0.2056$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1279.73	0.0322	P	4.0
2	☐	5.000	5.261	4408.22	0.1106	P	1.3
3	☐	50.000	50.678	31407.98	0.7875	P	1.7
4	☐	2500.000	2566.816	1503483.28	38.2847	A	1.0
5	☐	6250.000	6388.259	3673086.45	95.2345	A	0.4
6	☐	12500.000	12492.966	6977942.69	186.2110	A	2.4
7	☐	25000.000	24977.143	13297503.07	372.2588	A	0.2
8	☐	50000.000	49627.124	25957094.79	739.6098	A	1.8
9	☐	250000.00	250073.08	132541768.7	3,726.793	A	1.7

$$y = 0.0149 * x + 0.0322$$

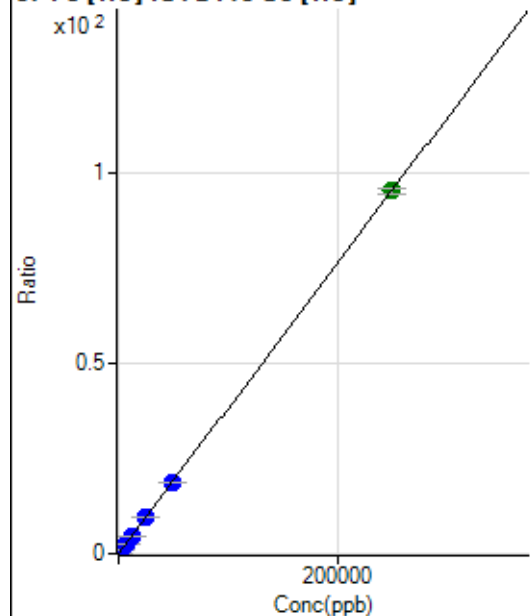
$$R = 1.0000$$

$$DL = 0.2623$$

$$BEC = 2.162$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	46.30	0.0012	P	37.0
2	☐	5.000	3.426	98.15	0.0025	P	18.0
3	☐	50.000	49.944	803.75	0.0201	P	4.8
4	☐	2500.000	2499.386	37333.90	0.9507	P	2.7
5	☐	6250.000	6236.682	91427.76	2.3706	P	0.7
6	☐	12500.000	12320.426	175417.12	4.6819	P	3.4
7	☐	25000.000	24766.053	336138.56	9.4101	P	0.1
8	☐	50000.000	48884.409	651849.05	18.5730	P	1.6
9	☐	250000.00	250255.83	3381428.61	95.0767	A	1.6

$$y = 3.7991E-004 * x + 0.0012$$

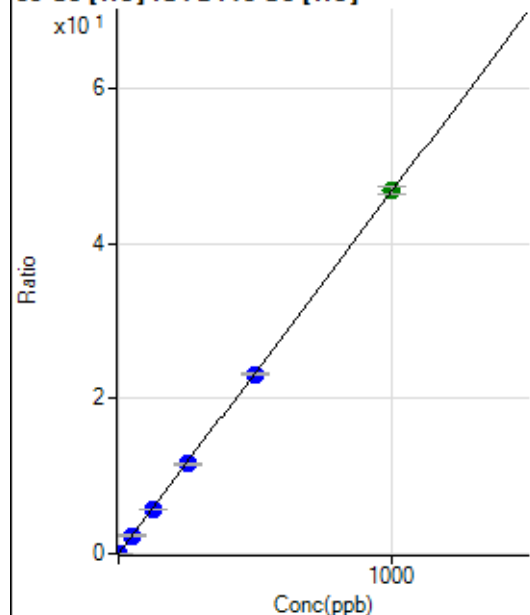
$$R = 1.0000$$

$$DL = 3.39$$

$$BEC = 3.056$$

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	184.45	0.0047	P	11.6
2	☐	0.100	0.101	372.23	0.0093	P	7.5
3	☐	1.000	0.986	2022.40	0.0507	P	2.3
4	☐	50.000	50.259	92306.44	2.3505	P	1.1
5	☐	125.000	124.633	224542.88	5.8219	P	0.3
6	☐	250.000	247.484	433039.63	11.5560	P	2.4
7	☐	500.000	495.795	826757.15	23.1460	P	0.9
8	☐	1000.000	1002.765	1642771.90	46.8089	A	2.1
9	☐			20586.50	0.5788	P	0.1

$$y = 0.0467 * x + 0.0047$$

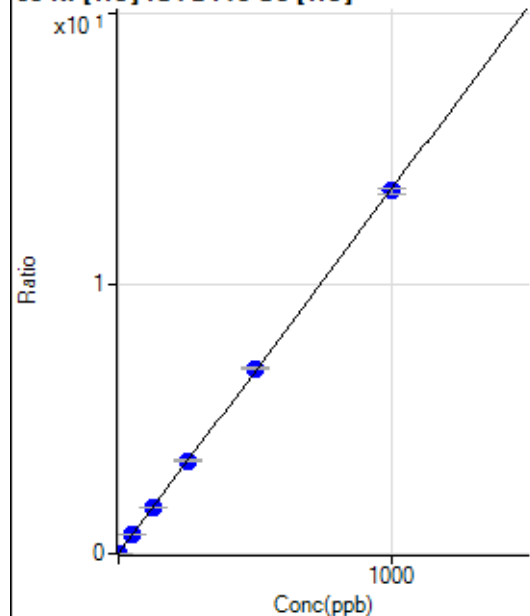
$$R = 1.0000$$

$$DL = 0.03459$$

$$BEC = 0.09963$$

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	403.35	0.0102	P	14.8
2	☐	0.100	0.207	516.69	0.0130	P	6.1
3	☐	1.000	1.071	982.27	0.0246	P	2.5
4	☐	50.000	52.286	28091.86	0.7155	P	2.7
5	☐	125.000	127.984	66978.05	1.7366	P	0.4
6	☐	250.000	254.459	129014.34	3.4427	P	2.1
7	☐	500.000	506.898	244601.85	6.8479	P	1.0
8	☐	1000.000	994.949	471402.28	13.4314	P	1.4
9	☐			17903.90	0.5034	P	1.3

$$y = 0.0135 * x + 0.0102$$

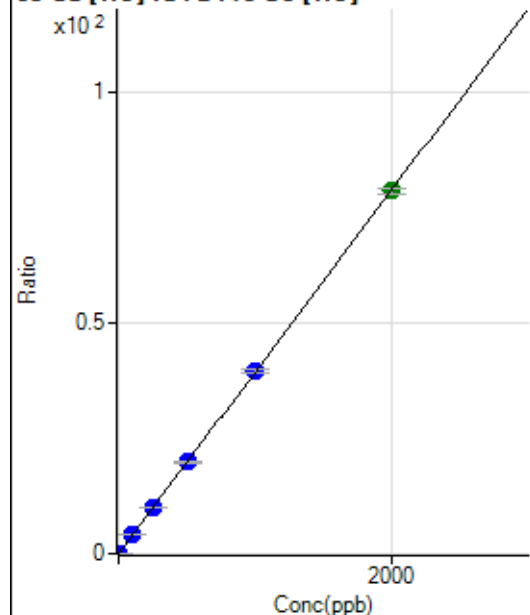
$$R = 1.0000$$

$$DL = 0.3351$$

$$BEC = 0.7545$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	560.02	0.0141	P	9.8
2	☐	0.200	0.263	974.49	0.0245	P	6.5
3	☐	2.000	1.968	3647.21	0.0915	P	6.3
4	☐	100.000	101.446	157241.96	4.0040	P	0.8
5	☐	250.000	251.743	382412.38	9.9151	P	0.8
6	☐	500.000	502.697	741464.99	19.7851	P	2.0
7	☐	1000.000	1005.116	1412505.66	39.5453	P	1.1
8	☐	2000.000	1996.478	2756369.06	78.5354	A	1.4
9	☐			6265.98	0.1762	P	1.9

$$y = 0.0393 * x + 0.0141$$

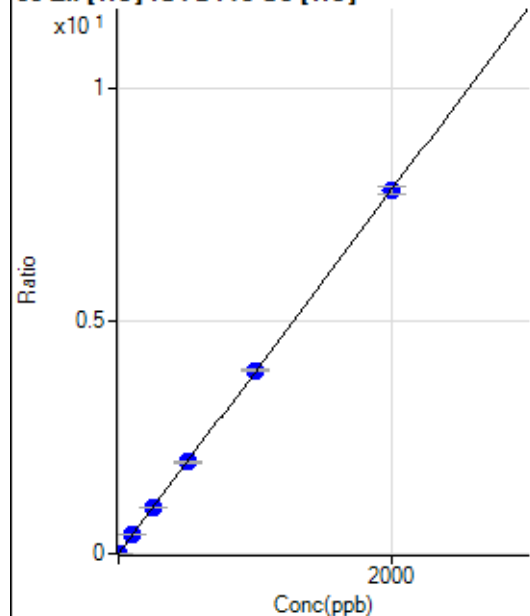
$$R = 1.0000$$

$$DL = 0.1051$$

$$BEC = 0.3586$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	120.00	0.0030	P	18.3
2	☐	0.200	0.153	144.45	0.0036	P	13.1
3	☐	2.000	2.110	448.90	0.0113	P	11.6
4	☐	100.000	102.119	15775.83	0.4018	P	2.4
5	☐	250.000	253.138	38238.27	0.9914	P	0.1
6	☐	500.000	504.140	73868.76	1.9715	P	3.2
7	☐	1000.000	1005.821	140388.10	3.9304	P	1.1
8	☐	2000.000	1995.556	273557.38	7.7949	P	2.3
9	☐			2480.27	0.0697	P	0.7

$$y = 0.0039 * x + 0.0030$$

$$R = 1.0000$$

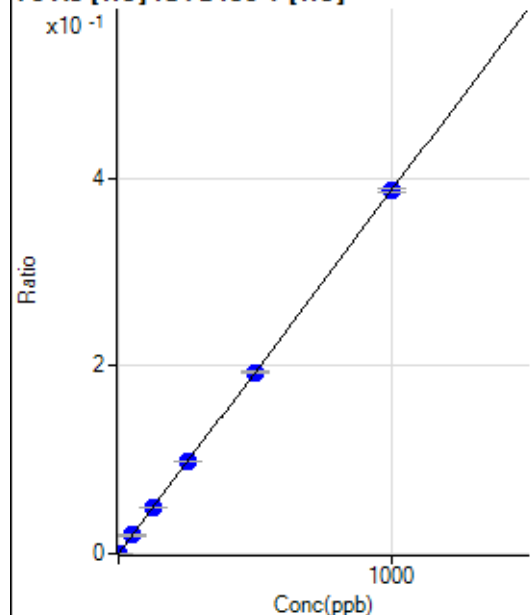
$$DL = 0.4264$$

$$BEC = 0.7754$$

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	11.73	0.0000	P	46.6
2	☐	0.100	0.039	16.05	0.0001	P	18.0
3	☐	1.000	0.898	109.26	0.0004	P	14.3
4	☐	50.000	50.769	5480.15	0.0197	P	2.6
5	☐	125.000	125.666	13370.15	0.0486	P	0.7
6	☐	250.000	254.199	26482.85	0.0983	P	1.5
7	☐	500.000	500.104	50773.67	0.1934	P	1.5
8	☐	1000.000	998.776	99559.94	0.3861	P	0.9
9	☐			188.28	0.0007	P	12.0

$$y = 3.8658\text{E-}004 * x + 4.2137\text{E-}005$$

$$R = 1.0000$$

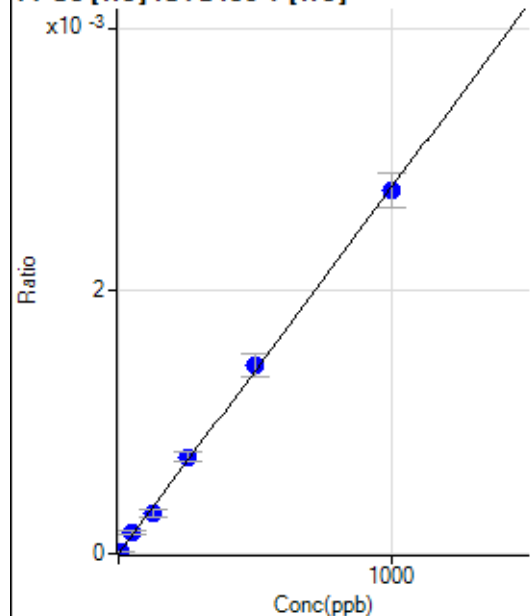
$$DL = 0.1523$$

$$BEC = 0.109$$

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	0.00	0.0000	P	
2	☐	0.500	0.000	0.00	0.0000	P	
3	☐	5.000	5.671	4.44	0.0000	P	42.2
4	☐	50.000	55.800	43.33	0.0002	P	21.1
5	☐	125.000	110.221	84.45	0.0003	P	18.9
6	☐	250.000	263.282	197.78	0.0007	P	9.5
7	☐	500.000	514.933	377.79	0.0014	P	12.1
8	☐	1000.000	990.767	712.25	0.0028	P	9.7
9	☐			1.11	0.0000	P	173.

$$y = 2.7891\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9996$$

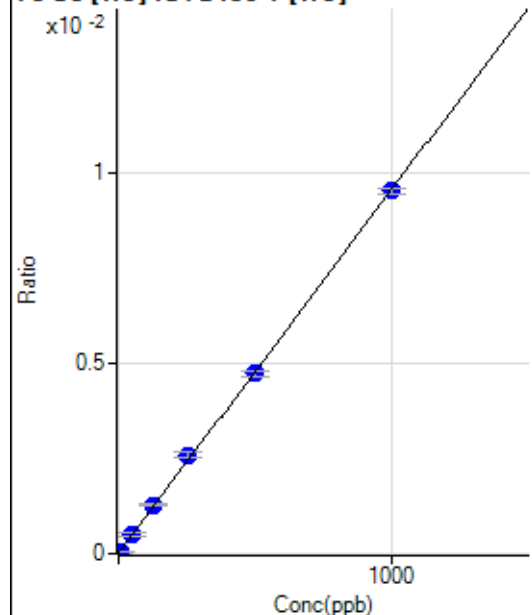
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3.08	0.0000	P	32.7
2	☐	0.500	0.001	3.09	0.0000	P	69.1
3	☐	5.000	2.773	10.50	0.0000	P	53.0
4	☐	50.000	50.664	138.27	0.0005	P	18.7
5	☐	125.000	131.482	348.77	0.0013	P	3.6
6	☐	250.000	269.221	696.32	0.0026	P	6.2
7	☐	500.000	495.205	1245.75	0.0047	P	3.3
8	☐	1000.000	996.760	2460.12	0.0095	P	1.5
9	☐			4.32	0.0000	P	98.8

$$y = 9.5606\text{E-}006 * x + 1.0958\text{E-}005$$

$$R = 0.9998$$

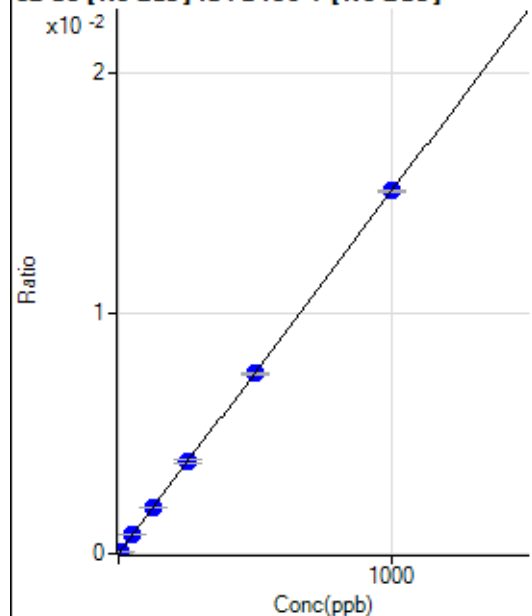
$$DL = 1.124$$

$$BEC = 1.146$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	24.32	0.0000	P	107.
2	☐	0.500	0.367	64.03	0.0000	P	10.4
3	☐	5.000	5.180	578.05	0.0001	P	0.9
4	☐	50.000	51.096	5569.54	0.0008	P	0.6
5	☐	125.000	127.446	13745.45	0.0019	P	2.6
6	☐	250.000	252.145	27751.18	0.0038	P	4.0
7	☐	500.000	496.414	54626.78	0.0075	P	1.3
8	☐	1000.000	1000.895	108501.17	0.0151	P	0.6
9	☐			129.30	0.0000	P	44.8

$$y = 1.5049\text{E-}005 * x + 3.4385\text{E-}006$$

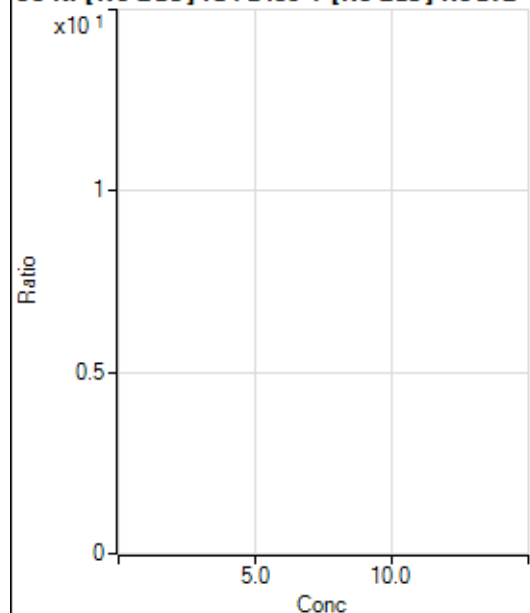
$$R = 1.0000$$

$$DL = 0.7378$$

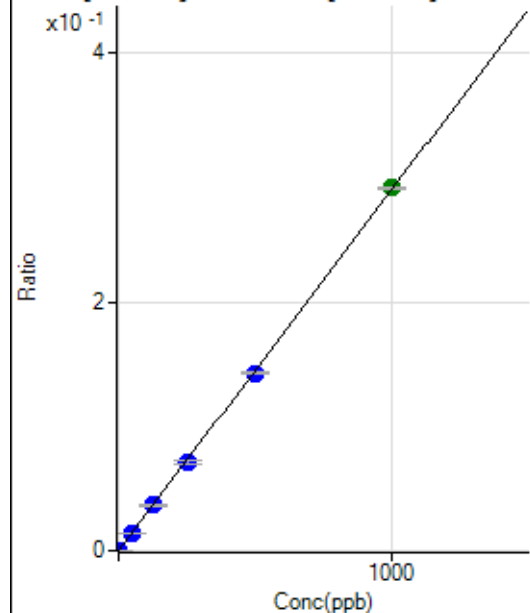
$$BEC = 0.2285$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] ISTD:89 Y [No Gas] No av_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			330.01	0.0000	P	6.5
2	☐			357.79	0.0001	P	2.2
3	☐			346.68	0.0000	P	2.7
4	☐			384.46	0.0001	P	0.3
5	☐			362.24	0.0001	P	6.2
6	☐			322.23	0.0000	P	10.1
7	☐			331.12	0.0000	P	6.8
8	☐			358.90	0.0000	P	10.4
9	☐			348.90	0.0001	P	16.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	541.70	0.0001	P	8.6
2	☐	0.100	0.090	730.61	0.0001	P	10.8
3	☐	1.000	1.066	2739.30	0.0004	P	4.7
4	☐	50.000	49.733	104640.26	0.0145	P	0.9
5	☐	125.000	125.423	260979.30	0.0365	P	2.8
6	☐	250.000	246.438	523200.46	0.0716	P	4.3
7	☐	500.000	491.087	1042393.15	0.1426	P	1.2
8	☐	1000.000	1005.307	2102030.80	0.2919	A	0.3
9	☐			9798.35	0.0014	P	4.0

$$y = 2.9027E-004 * x + 7.6206E-005$$

$$R = 0.9999$$

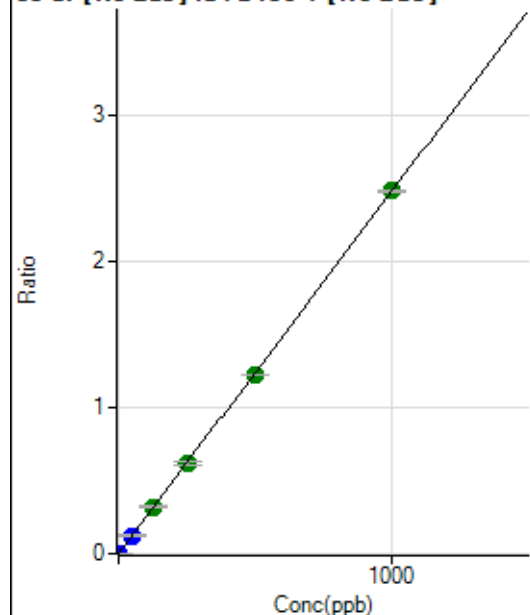
$$DL = 0.0675$$

$$BEC = 0.2625$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	177.79	0.0000	P	10.2
2	☐	0.100	0.111	2147.48	0.0003	P	2.8
3	☐	1.000	1.054	18724.70	0.0026	P	1.1
4	☐	50.000	50.422	900787.38	0.1249	P	1.3
5	☐	125.000	128.925	2284406.86	0.3194	A	3.8
6	☐	250.000	251.343	4549623.10	0.6227	A	4.0
7	☐	500.000	494.104	8946365.65	1.2240	A	1.0
8	☐	1000.000	1002.101	17877621.06	2.4825	A	0.4
9	☐			82326.48	0.0118	P	2.9

$$y = 0.0025 * x + 2.5034E-005$$

$$R = 1.0000$$

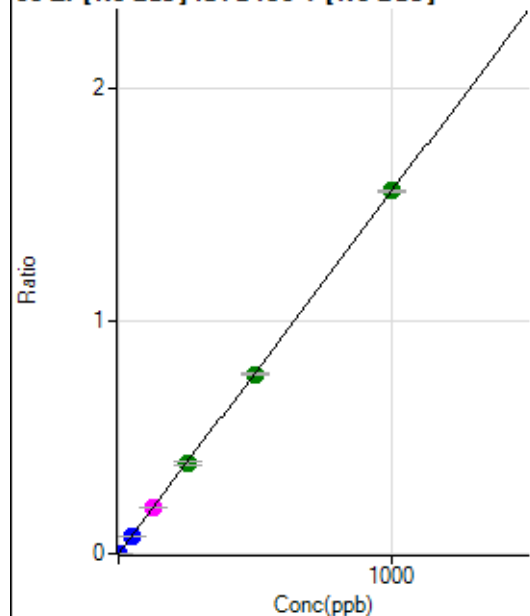
$$DL = 0.003101$$

$$BEC = 0.01011$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	519.48	0.0001	P	8.1
2	☐	0.100	0.092	1544.60	0.0002	P	8.3
3	☐	1.000	0.914	10626.79	0.0015	P	2.1
4	☐	50.000	48.531	545396.65	0.0756	P	2.5
5	☐	125.000	126.853	1413528.41	0.1976	M	3.4
6	☐	250.000	251.545	2862581.60	0.3918	A	4.2
7	☐	500.000	495.971	5645486.89	0.7724	A	1.2
8	☐	1000.000	1001.470	11231831.76	1.5596	A	0.7
9	☐			3219.97	0.0005	P	2.8

$$y = 0.0016 * x + 7.3079E-005$$

$$R = 1.0000$$

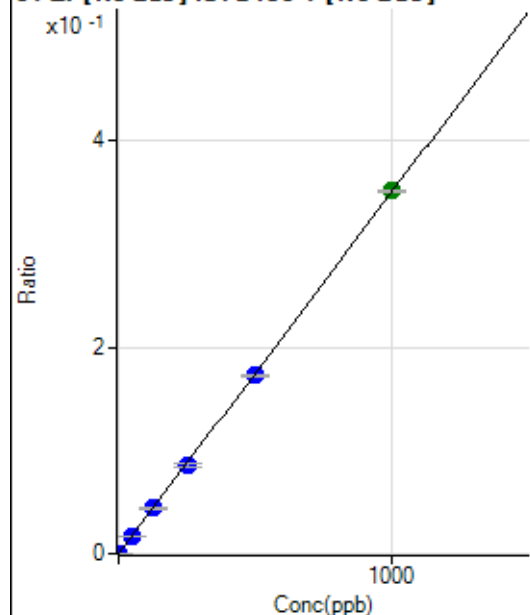
$$DL = 0.01135$$

$$BEC = 0.04693$$

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	119.45	0.0000	P	18.7
2	☐	0.100	0.071	297.24	0.0000	P	18.3
3	☐	1.000	0.912	2386.44	0.0003	P	5.5
4	☐	50.000	48.133	121505.71	0.0169	P	1.4
5	☐	125.000	125.324	313652.17	0.0439	P	3.3
6	☐	250.000	245.135	626609.42	0.0858	P	4.0
7	☐	500.000	492.830	1259945.58	0.1724	P	1.2
8	☐	1000.000	1004.854	2531176.40	0.3515	A	0.5
9	☐			833.40	0.0001	P	6.9

$$y = 3.4976\text{E-}004 * x + 1.6837\text{E-}005$$

$$R = 0.9999$$

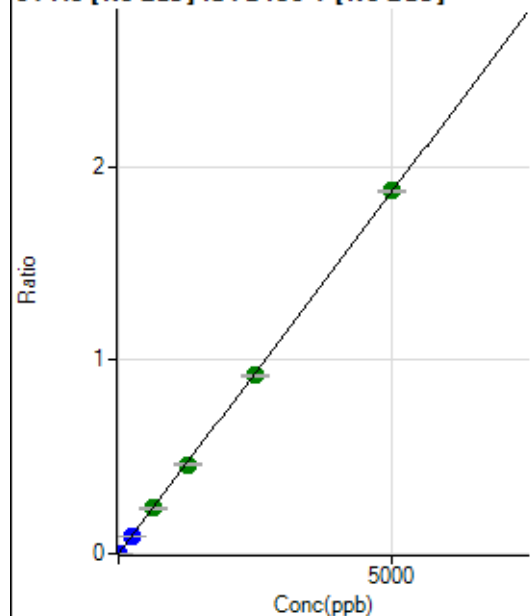
$$DL = 0.02698$$

$$BEC = 0.04814$$

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	325.02	0.0000	P	4.7
2	☐	0.500	0.457	1544.61	0.0002	P	6.6
3	☐	5.000	4.694	12770.45	0.0018	P	0.6
4	☐	250.000	248.288	668490.12	0.0927	P	1.5
5	☐	625.000	633.533	1691771.57	0.2365	A	3.0
6	☐	1250.000	1236.056	3371273.86	0.4614	A	4.0
7	☐	2500.000	2469.198	6736063.17	0.9216	A	1.2
8	☐	5000.000	5017.906	13488051.52	1.8729	A	0.8
9	☐			19414.63	0.0028	P	1.2

$$y = 3.7324\text{E-}004 * x + 4.5755\text{E-}005$$

$$R = 1.0000$$

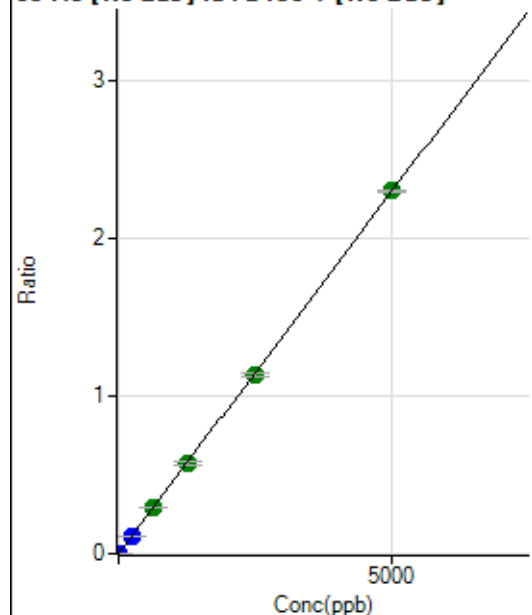
$$DL = 0.01731$$

$$BEC = 0.1226$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	222.23	0.0000	P	35.2
2	☐	0.500	0.497	1855.77	0.0003	P	9.5
3	☐	5.000	4.999	16521.84	0.0023	P	4.2
4	☐	250.000	247.295	819112.22	0.1136	P	1.6
5	☐	625.000	636.755	2092173.61	0.2925	A	2.8
6	☐	1250.000	1242.165	4169170.41	0.5705	A	3.6
7	☐	2500.000	2471.392	8295500.88	1.1351	A	1.6
8	☐	5000.000	5014.929	16586629.01	2.3032	A	0.8
9	☐			32258.78	0.0046	P	2.9

$$y = 4.5927\text{E-}004 * x + 3.1361\text{E-}005$$

$$R = 1.0000$$

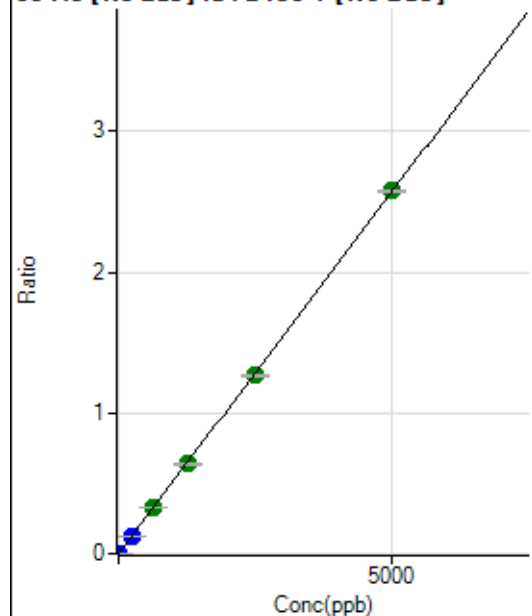
$$DL = 0.07207$$

$$BEC = 0.06828$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	325.02	0.0000	P	4.6
2	☐	0.500	0.513	2208.63	0.0003	P	11.0
3	☐	5.000	4.902	18196.23	0.0026	P	5.4
4	☐	250.000	246.205	912158.58	0.1265	P	1.1
5	☐	625.000	639.675	2350408.39	0.3286	A	3.5
6	☐	1250.000	1237.792	4646595.59	0.6358	A	3.3
7	☐	2500.000	2465.776	9256903.76	1.2666	A	1.4
8	☐	5000.000	5018.520	18564021.25	2.5778	A	0.5
9	☐			36469.46	0.0052	P	4.3

$$y = 5.1365\text{E-}004 * x + 4.5743\text{E-}005$$

$$R = 1.0000$$

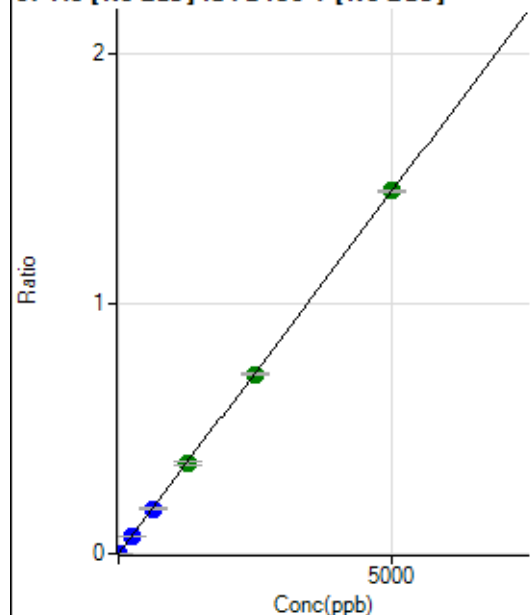
$$DL = 0.01222$$

$$BEC = 0.08906$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	219.46	0.0000	P	35.9
2	☐	0.500	0.475	1202.88	0.0002	P	5.1
3	☐	5.000	4.819	10137.55	0.0014	P	3.1
4	☐	250.000	244.556	511343.80	0.0709	P	2.0
5	☐	625.000	621.507	1289035.07	0.1802	P	2.7
6	☐	1250.000	1245.441	2638454.64	0.3611	A	3.5
7	☐	2500.000	2482.819	5260797.12	0.7198	A	0.6
8	☐	5000.000	5010.439	10460082.00	1.4525	A	0.3
9	☐			20104.50	0.0029	P	4.0

$$y = 2.8988E-004 * x + 3.0813E-005$$

$$R = 1.0000$$

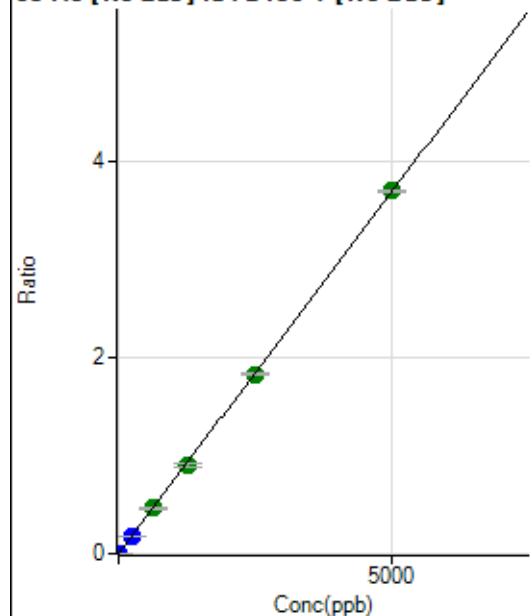
$$DL = 0.1143$$

$$BEC = 0.1063$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	372.25	0.0001	P	11.8
2	☐	0.500	0.482	2914.34	0.0004	P	5.8
3	☐	5.000	4.867	25875.61	0.0036	P	2.3
4	☐	250.000	248.076	1320000.33	0.1831	P	1.3
5	☐	625.000	627.383	3311324.62	0.4629	A	3.0
6	☐	1250.000	1230.613	6634811.39	0.9080	A	3.6
7	☐	2500.000	2474.515	13343590.05	1.8257	A	1.0
8	☐	5000.000	5017.387	26658130.80	3.7017	A	0.5
9	☐			51788.71	0.0074	P	2.3

$$y = 7.3777E-004 * x + 5.2433E-005$$

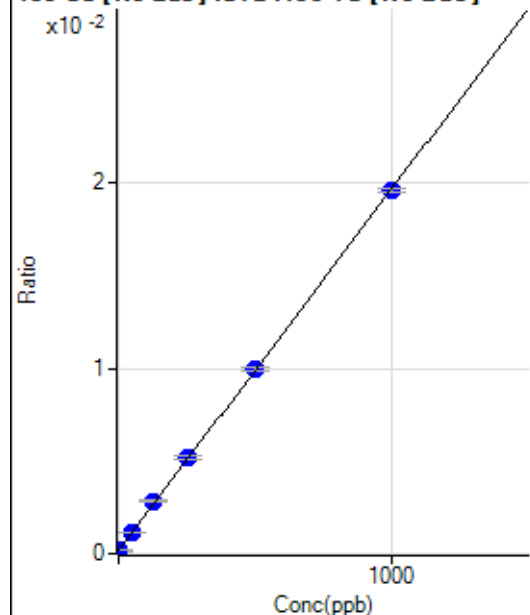
$$R = 1.0000$$

$$DL = 0.0252$$

$$BEC = 0.07107$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1402.92	0.0002	P	12.4
2	☐	0.100	0.085	1427.92	0.0002	P	2.0
3	☐	1.000	1.663	1691.85	0.0002	P	5.4
4	☐	50.000	50.848	10145.93	0.0012	P	3.0
5	☐	125.000	136.391	24840.49	0.0028	P	2.9
6	☐	250.000	259.802	47983.56	0.0052	P	4.3
7	☐	500.000	500.730	93500.67	0.0099	P	1.8
8	☐	1000.000	995.717	185495.74	0.0196	P	1.0
9	☐			1530.72	0.0002	P	4.7

$$y = 1.9489\text{E-}005 * x + 1.6428\text{E-}004$$

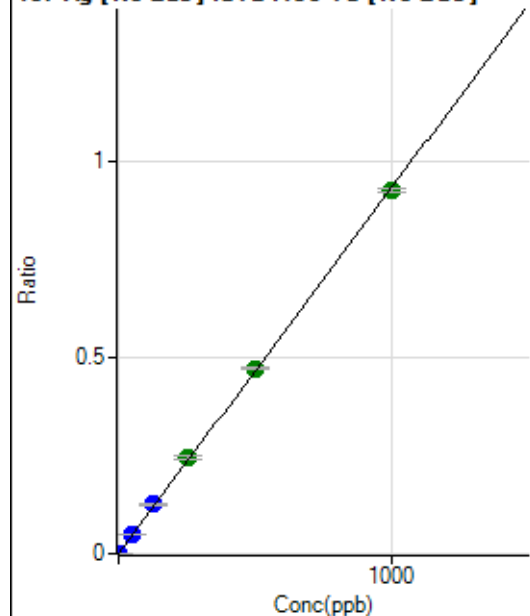
$$R = 0.9999$$

$$DL = 3.141$$

$$BEC = 8.429$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	58.33	0.0000	P	24.6
2	☐	0.100	0.113	961.19	0.0001	P	14.3
3	☐	1.000	1.039	8383.56	0.0010	P	3.5
4	☐	50.000	54.326	444415.12	0.0506	P	1.6
5	☐	125.000	134.589	1102965.49	0.1253	P	3.6
6	☐	250.000	262.945	2248138.18	0.2449	A	2.9
7	☐	500.000	506.986	4449167.72	0.4722	A	1.1
8	☐	1000.000	991.856	8755487.18	0.9237	A	1.0
9	☐			1119.54	0.0001	P	10.5

$$y = 9.3130\text{E-}004 * x + 6.8266\text{E-}006$$

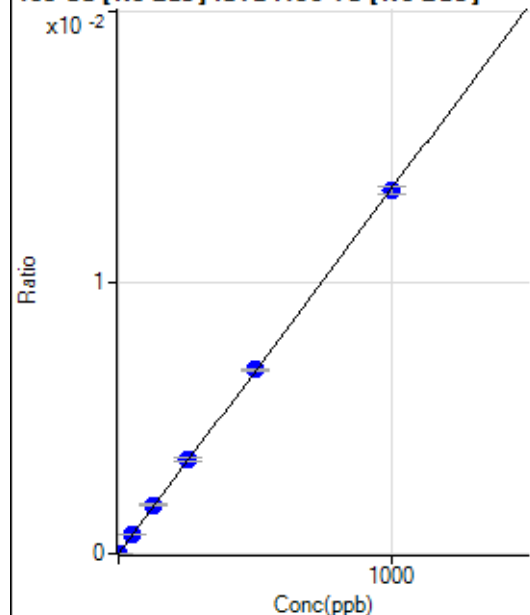
$$R = 0.9998$$

$$DL = 0.00541$$

$$BEC = 0.00733$$

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	19.45	0.0000	P	45.4
2	☐	0.100	0.035	23.61	0.0000	P	51.2
3	☐	1.000	1.043	140.28	0.0000	P	12.7
4	☐	50.000	53.270	6321.06	0.0007	P	2.1
5	☐	125.000	133.527	15841.58	0.0018	P	4.7
6	☐	250.000	260.026	32152.52	0.0035	P	4.5
7	☐	500.000	503.624	63916.25	0.0068	P	1.7
8	☐	1000.000	994.452	126927.76	0.0134	P	2.0
9	☐			38.89	0.0000	P	10.3

$$y = 1.3465\text{E-}005 * x + 2.2815\text{E-}006$$

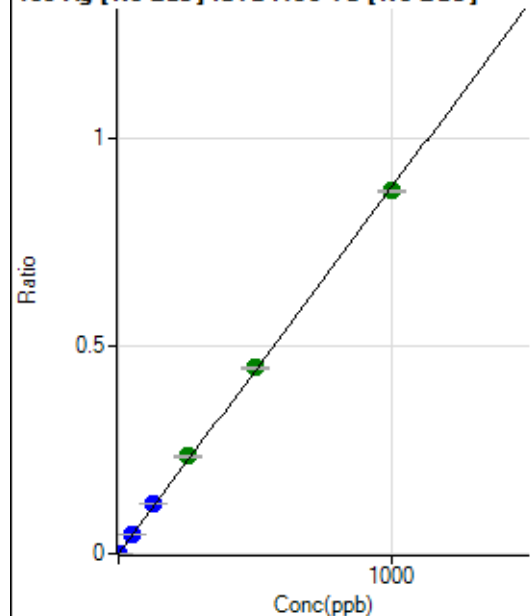
$$R = 0.9999$$

$$DL = 0.2308$$

$$BEC = 0.1694$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	25.00	0.0000	P	33.9
2	☐	0.100	0.100	786.17	0.0001	P	2.9
3	☐	1.000	1.088	8294.58	0.0010	P	4.0
4	☐	50.000	53.962	418488.60	0.0476	P	1.0
5	☐	125.000	136.157	1057883.27	0.1202	P	3.2
6	☐	250.000	265.579	2152740.26	0.2345	A	2.4
7	☐	500.000	507.294	4220427.83	0.4479	A	1.3
8	☐	1000.000	990.866	8292253.31	0.8748	A	0.8
9	☐			1033.42	0.0001	P	5.0

$$y = 8.8291\text{E-}004 * x + 2.9296\text{E-}006$$

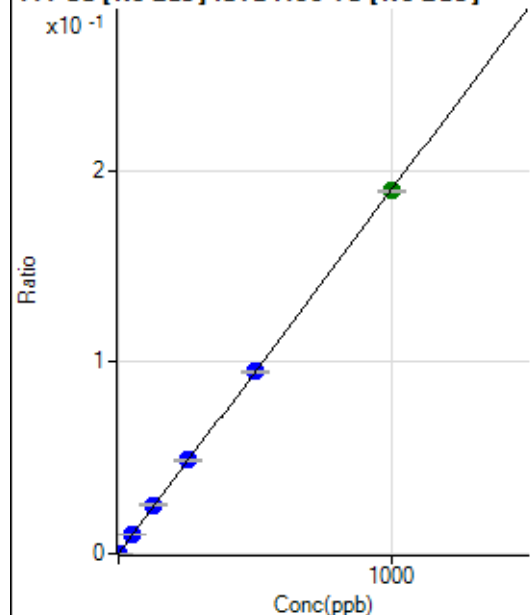
$$R = 0.9998$$

$$DL = 0.003375$$

$$BEC = 0.003318$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1026.77	0.0001	P	10.9
2	☐	0.100	0.112	1217.74	0.0001	P	3.3
3	☐	1.000	1.101	2833.47	0.0003	P	5.6
4	☐	50.000	52.545	88676.57	0.0101	P	2.2
5	☐	125.000	133.929	224859.13	0.0255	P	2.6
6	☐	250.000	256.536	448230.38	0.0488	P	3.1
7	☐	500.000	499.642	895023.56	0.0950	P	1.5
8	☐	1000.000	997.302	1795960.05	0.1895	A	0.8
9	☐			1535.97	0.0002	P	3.9

$$y = 1.8987\text{E-}004 * x + 1.2023\text{E-}004$$

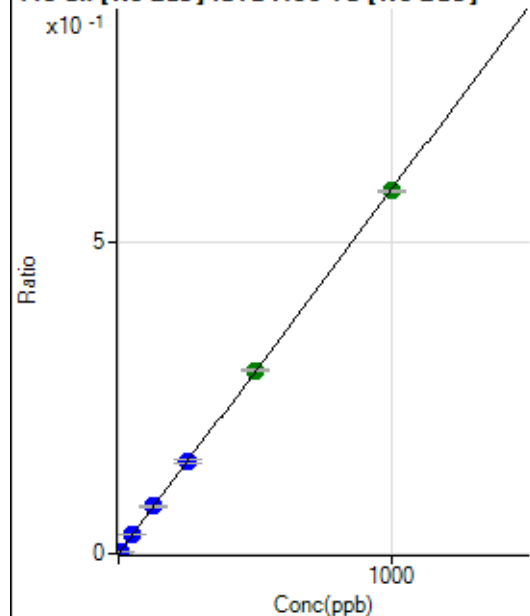
$$R = 0.9999$$

$$DL = 0.2063$$

$$BEC = 0.6332$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	938.97	0.0001	P	12.0
2	☐	0.500	0.555	3739.60	0.0004	P	6.3
3	☐	5.000	5.212	27184.01	0.0032	P	3.8
4	☐	50.000	51.691	266624.54	0.0304	P	1.3
5	☐	125.000	131.062	675756.96	0.0768	P	3.7
6	☐	250.000	253.465	1362609.35	0.1484	P	2.6
7	☐	500.000	503.755	2778520.53	0.2949	A	1.6
8	☐	1000.000	996.413	5527503.86	0.5832	A	0.7
9	☐			14658.62	0.0016	P	1.6

$$y = 5.8515\text{E-}004 * x + 1.0987\text{E-}004$$

$$R = 1.0000$$

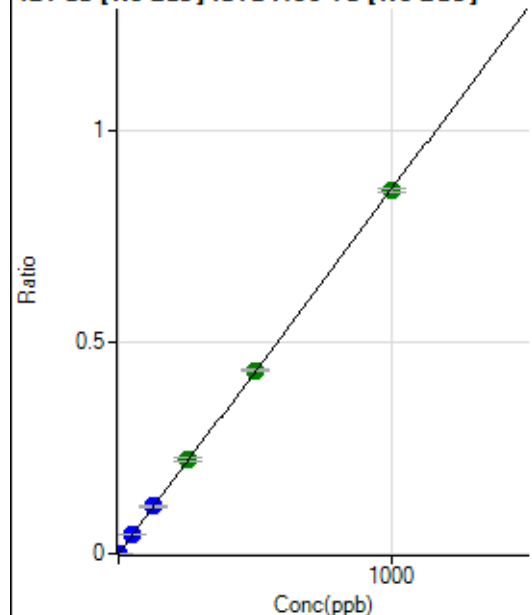
$$DL = 0.06771$$

$$BEC = 0.1878$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	241.68	0.0000	P	30.1
2	☐	0.200	0.193	1666.85	0.0002	P	15.1
3	☐	2.000	2.057	15459.62	0.0018	P	2.2
4	☐	50.000	50.999	385197.09	0.0439	P	1.8
5	☐	125.000	130.901	990111.40	0.1125	P	3.7
6	☐	250.000	257.270	2029876.59	0.2211	A	3.3
7	☐	500.000	502.969	4073469.19	0.4323	A	1.0
8	☐	1000.000	995.910	8112988.29	0.8559	A	1.0
9	☐			22798.22	0.0025	P	4.1

$$y = 8.5943\text{E-}004 * x + 2.8293\text{E-}005$$

$$R = 1.0000$$

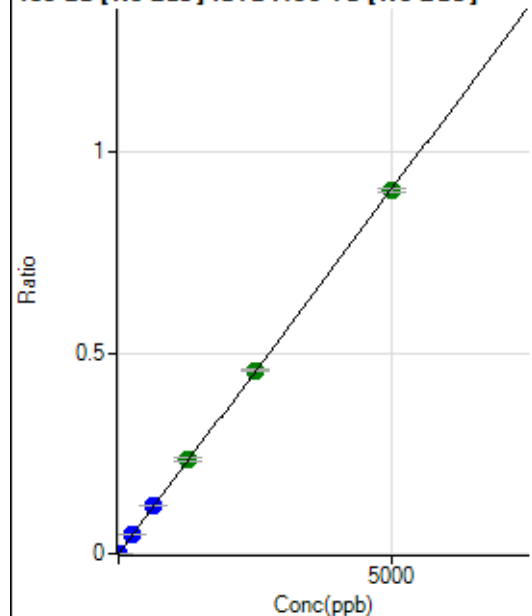
$$DL = 0.0297$$

$$BEC = 0.03292$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	105.56	0.0000	P	11.5
2	☐	1.000	1.045	1739.09	0.0002	P	11.9
3	☐	10.000	10.308	16202.21	0.0019	P	3.6
4	☐	250.000	258.096	411555.55	0.0469	P	0.7
5	☐	625.000	658.889	1052469.18	0.1196	P	3.1
6	☐	1250.000	1289.517	2148699.83	0.2341	A	2.7
7	☐	2500.000	2513.848	4299425.27	0.4563	A	0.7
8	☐	5000.000	4978.555	8564872.33	0.9036	A	1.0
9	☐			2033.59	0.0002	P	10.8

$$y = 1.8150\text{E-}004 * x + 1.2350\text{E-}005$$

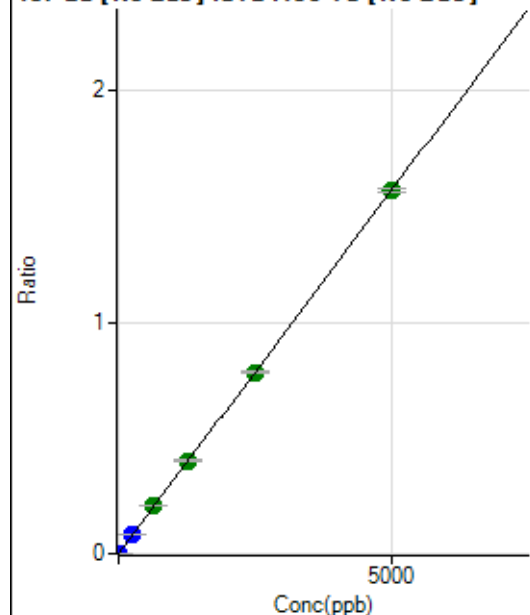
$$R = 0.9999$$

$$DL = 0.02352$$

$$BEC = 0.06805$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	286.13	0.0000	P	11.1
2	☐	1.000	1.005	3006.05	0.0003	P	6.4
3	☐	10.000	10.224	27924.94	0.0032	P	5.1
4	☐	250.000	258.777	714603.09	0.0814	P	1.1
5	☐	625.000	663.460	1835248.63	0.2085	A	2.8
6	☐	1250.000	1277.539	3686088.32	0.4015	A	2.7
7	☐	2500.000	2491.823	7379471.87	0.7831	A	0.7
8	☐	5000.000	4991.957	14870218.39	1.5688	A	0.9
9	☐			3258.89	0.0004	P	2.6

$$y = 3.1427\text{E-}004 * x + 3.3493\text{E-}005$$

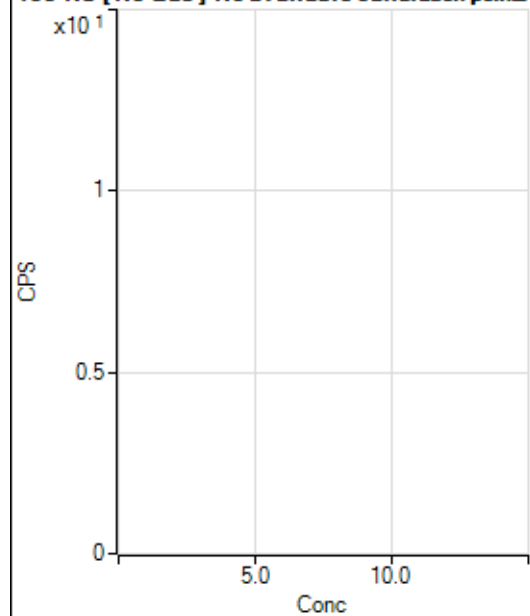
$$R = 1.0000$$

$$DL = 0.0354$$

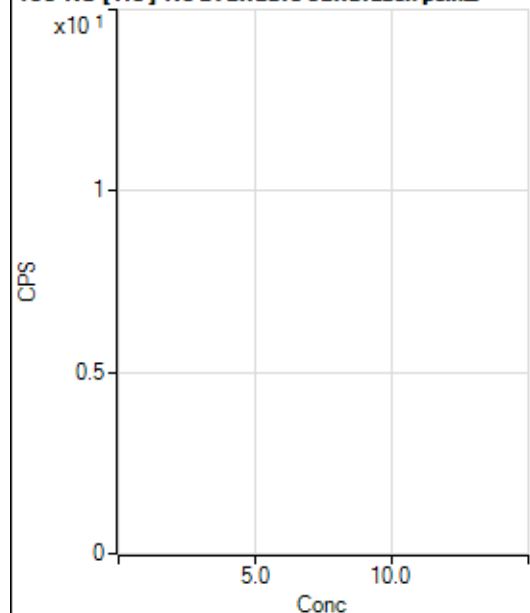
$$BEC = 0.1066$$

Weight: <None>

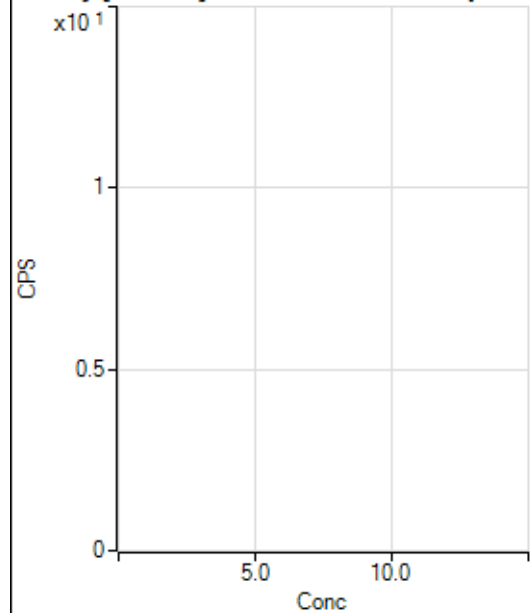
Min Conc: 0

150 Nd [No Gas] No available calibration points

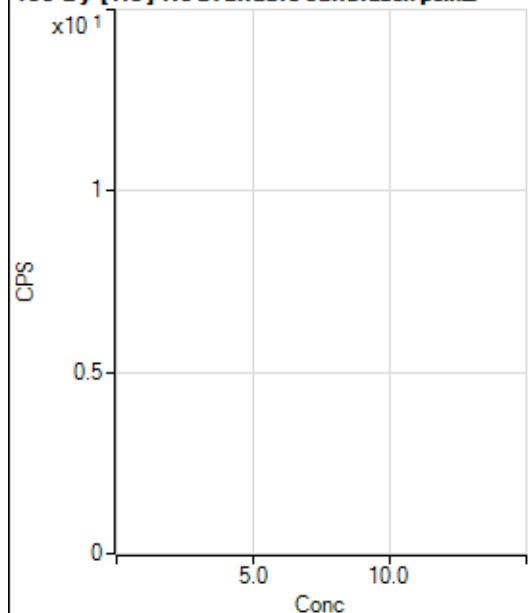
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			15.56		P	65.5
2	☐			15.56		P	49.5
3	☐			4.45		P	86.6
4	☐			20.00		P	33.4
5	☐			48.89		P	28.4
6	☐			108.89		P	9.4
7	☐			120.00		P	5.6
8	☐			346.69		P	23.6
9	☐			93.34		P	7.1

150 Nd [He] No available calibration points

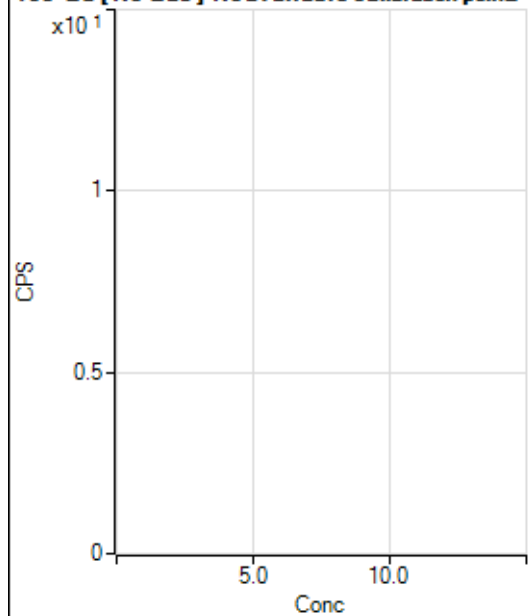
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐			0.00		P	
3	☐			1.11		P	173.
4	☐			0.00		P	
5	☐			2.22		P	173.
6	☐			2.22		P	86.6
7	☐			7.78		P	89.2
8	☐			6.67		P	50.0
9	☐			16.67		P	40.0

156 Dy [No Gas] No available calibration points

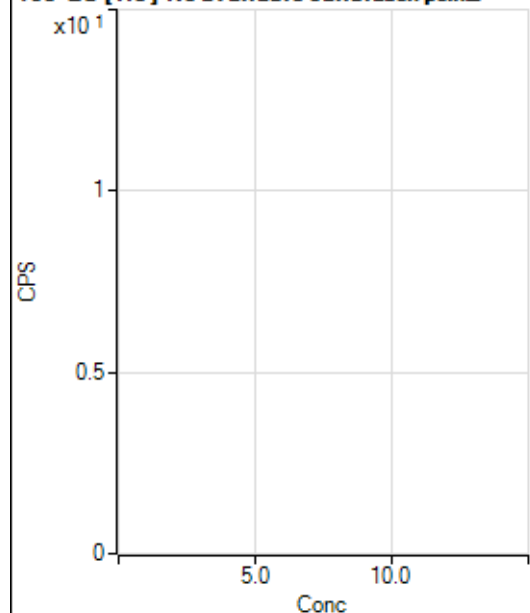
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			30.55		P	68.6
2	☐			11.11		P	86.6
3	☐			13.89		P	91.6
4	☐			11.11		P	114.
5	☐			30.56		P	31.5
6	☐			44.45		P	10.8
7	☐			44.44		P	21.7
8	☐			102.78		P	40.0
9	☐			97.23		P	21.6

156 Dy [He] No available calibration points

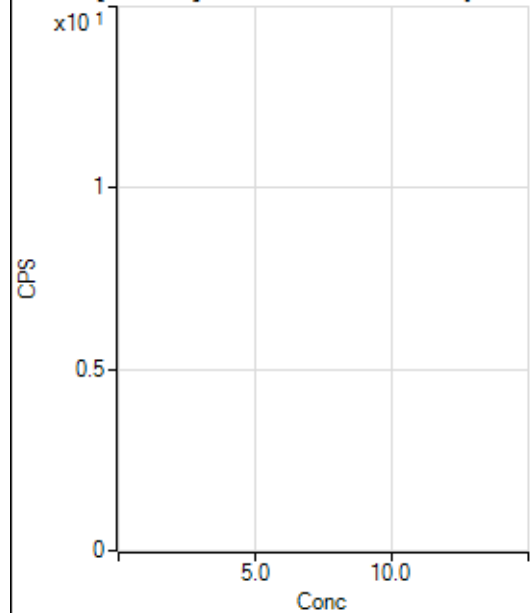
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐			1.11		P	173.
3	☐			3.33		P	173.
4	☐			0.00		P	
5	☐			2.22		P	86.6
6	☐			1.11		P	173.
7	☐			6.67		P	100.
8	☐			14.44		P	35.3
9	☐			13.33		P	50.0

160 Gd [No Gas] Noavailable calibration poin_

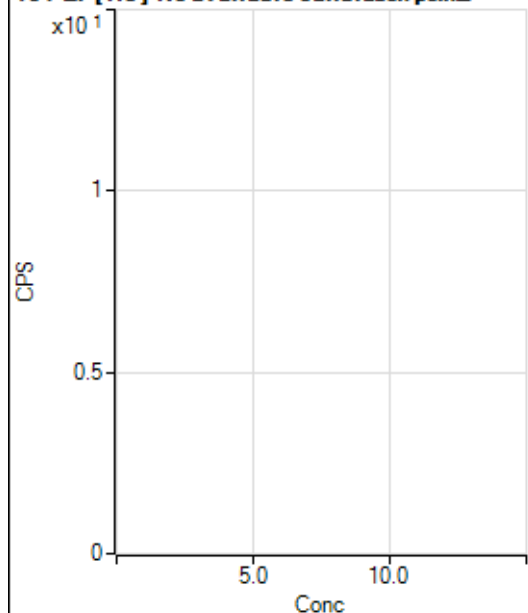
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			55.56		P	17.3
2	☐			75.00		P	22.2
3	☐			55.56		P	37.7
4	☐			55.56		P	45.8
5	☐			72.23		P	76.8
6	☐			72.22		P	29.0
7	☐			83.34		P	26.5
8	☐			80.56		P	31.6
9	☐			102.78		P	12.4

160 Gd [He] No available calibration points

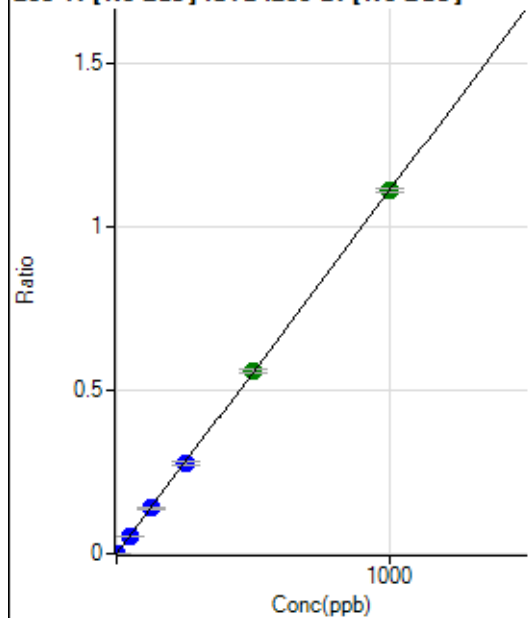
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	114.
2	☐			8.89		P	78.1
3	☐			10.00		P	0.0
4	☐			10.00		P	100.
5	☐			4.44		P	114.
6	☐			14.44		P	35.3
7	☐			17.78		P	10.8
8	☐			18.89		P	36.7
9	☐			24.45		P	43.8

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			38.89		P	24.7
2	☐			19.45		P	24.7
3	☐			55.56		P	8.7
4	☐			47.22		P	53.9
5	☐			36.11		P	13.3
6	☐			52.78		P	48.2
7	☐			25.00		P	57.7
8	☐			77.78		P	27.0
9	☐			47.22		P	27.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	99.0
2	☐			7.78		P	24.7
3	☐			5.56		P	91.6
4	☐			4.45		P	86.6
5	☐			5.56		P	34.7
6	☐			8.89		P	57.3
7	☐			5.56		P	34.7
8	☐			8.89		P	78.1
9	☐			7.78		P	107.

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	375.03	0.0001	P	7.3
2	☐	0.100	0.085	908.41	0.0002	P	11.6
3	☐	1.000	0.999	6535.35	0.0012	P	8.6
4	☐	50.000	49.248	311811.80	0.0549	P	1.2
5	☐	125.000	125.248	789348.34	0.1394	P	4.2
6	☐	250.000	248.568	1628484.45	0.2766	P	5.0
7	☐	500.000	503.117	3391353.37	0.5599	A	1.8
8	☐	1000.000	998.806	6797973.42	1.1114	A	0.9
9	☐			4798.35	0.0009	P	6.8

$$y = 0.0011 * x + 6.6782E-005$$

$$R = 1.0000$$

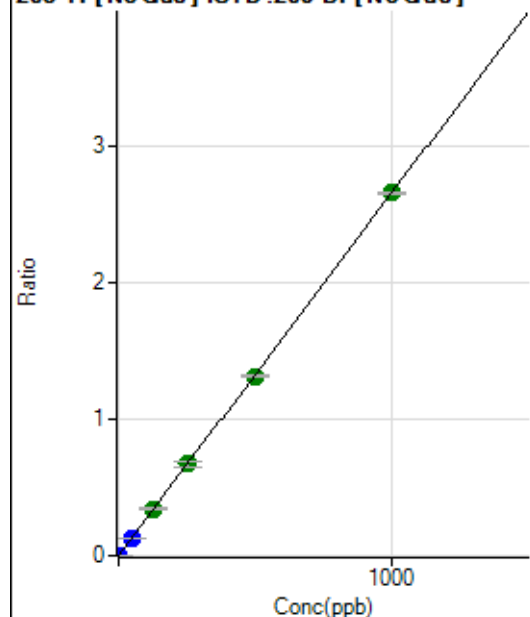
$$DL = 0.0132$$

$$BEC = 0.06002$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	886.19	0.0002	P	14.0
2	☐	0.100	0.113	2572.62	0.0005	P	4.2
3	☐	1.000	1.011	15749.33	0.0028	P	5.4
4	☐	50.000	49.628	748030.35	0.1316	P	1.6
5	☐	125.000	127.870	1918462.22	0.3389	A	4.3
6	☐	250.000	252.577	3939496.75	0.6692	A	4.9
7	☐	500.000	495.750	7956118.93	1.3134	A	0.7
8	☐	1000.000	1001.140	16221998.80	2.6522	A	0.7
9	☐			11475.17	0.0021	P	8.1

$$y = 0.0026 * x + 1.5800E-004$$

$$R = 1.0000$$

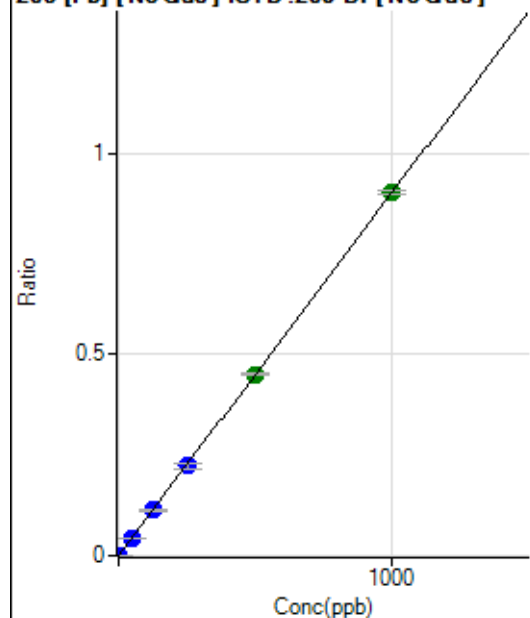
$$DL = 0.02504$$

$$BEC = 0.05964$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	600.04	0.0001	P	6.4
2	☐	0.100	0.081	1011.19	0.0002	P	7.2
3	☐	1.000	0.972	5456.90	0.0010	P	4.4
4	☐	50.000	49.006	251660.12	0.0443	P	1.4
5	☐	125.000	124.823	637709.40	0.1126	P	3.3
6	☐	250.000	246.837	1310429.96	0.2226	P	4.7
7	☐	500.000	499.405	2727506.08	0.4503	A	0.8
8	☐	1000.000	1001.160	5520364.53	0.9026	A	1.2
9	☐			31001.38	0.0055	P	4.4

$$y = 9.0140E-004 * x + 1.0689E-004$$

$$R = 1.0000$$

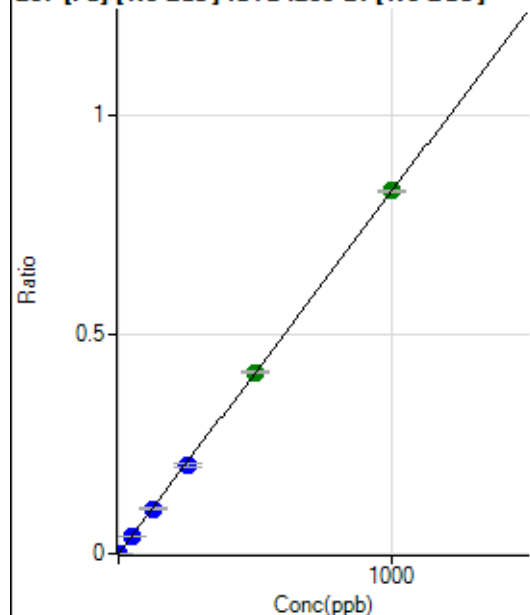
$$DL = 0.02294$$

$$BEC = 0.1186$$

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	518.55	0.0001	P	2.6
2	☐	0.100	0.101	990.81	0.0002	P	7.3
3	☐	1.000	0.971	4975.21	0.0009	P	3.7
4	☐	50.000	48.181	227126.88	0.0400	P	1.0
5	☐	125.000	123.036	577051.14	0.1019	P	3.2
6	☐	250.000	241.928	1179155.49	0.2003	P	4.5
7	☐	500.000	500.912	2511508.19	0.4146	A	0.8
8	☐	1000.000	1001.899	5071799.82	0.8292	A	0.3
9	☐			26342.67	0.0047	P	2.2

$$y = 8.2753E-004 * x + 9.2386E-005$$

$$R = 1.0000$$

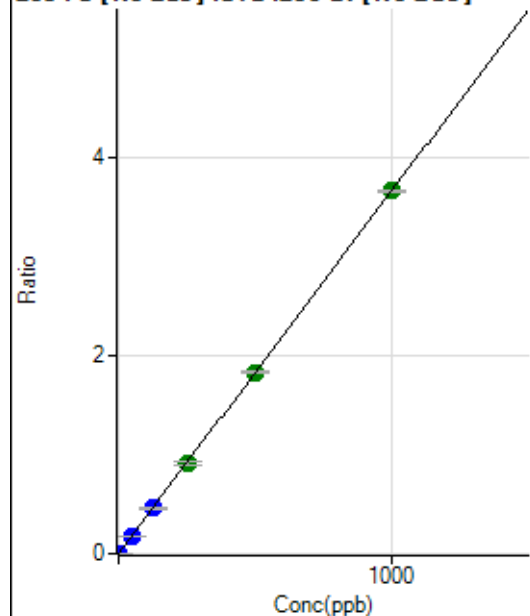
$$DL = 0.008783$$

$$BEC = 0.1116$$

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	2468.70	0.0004	P	3.1
2	☐	0.100	0.091	4346.74	0.0008	P	3.4
3	☐	1.000	0.975	22293.59	0.0040	P	3.1
4	☐	50.000	48.896	1021434.75	0.1797	P	1.3
5	☐	125.000	124.783	2593394.28	0.4580	P	3.1
6	☐	250.000	247.489	5344862.34	0.9079	A	4.6
7	☐	500.000	500.325	11115513.76	1.8350	A	0.6
8	☐	1000.000	1000.548	22442345.29	3.6692	A	0.7
9	☐			122125.89	0.0218	P	3.1

$$y = 0.0037 * x + 4.3972E-004$$

$$R = 1.0000$$

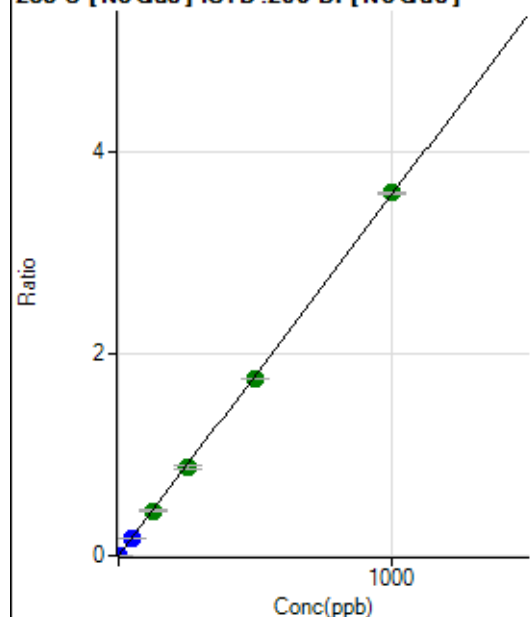
$$DL = 0.01123$$

$$BEC = 0.1199$$

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	1464.05	0.0003	P	11.5
2	☐	0.100	0.090	3283.93	0.0006	P	4.0
3	☐	1.000	0.979	20890.56	0.0038	P	4.6
4	☐	50.000	47.600	969561.45	0.1706	P	1.5
5	☐	125.000	124.024	2513894.26	0.4441	A	4.7
6	☐	250.000	243.727	5136544.47	0.8725	A	4.3
7	☐	500.000	491.255	10650839.91	1.7583	A	0.7
8	☐	1000.000	1006.183	22025705.88	3.6010	A	0.4
9	☐			3225.58	0.0006	P	8.6

$$y = 0.0036 * x + 2.6087E-004$$

$$R = 0.9999$$

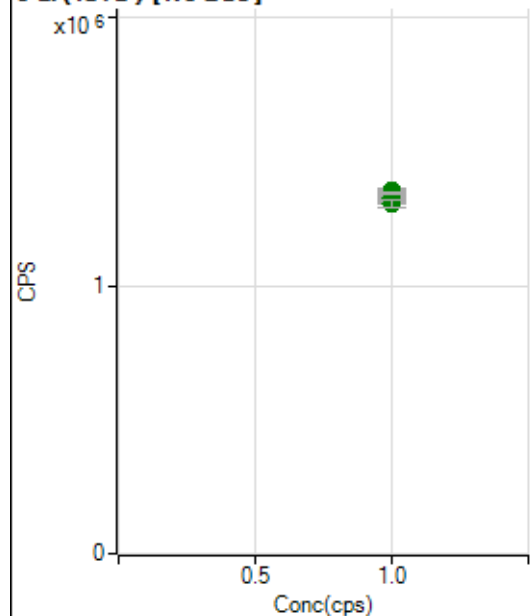
$$DL = 0.02518$$

$$BEC = 0.0729$$

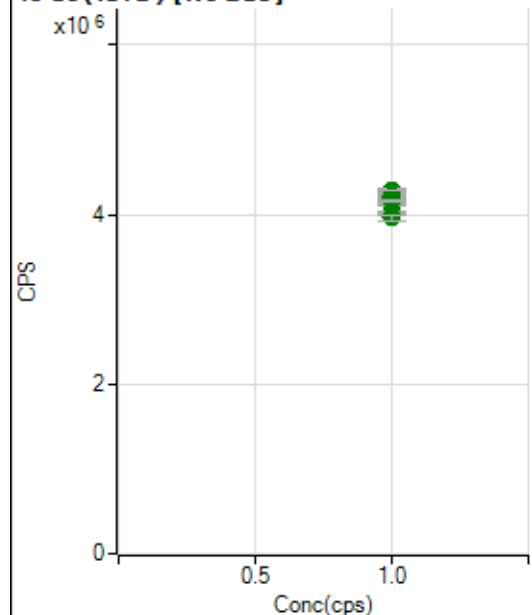
Weight: <None>

Min Conc: 0

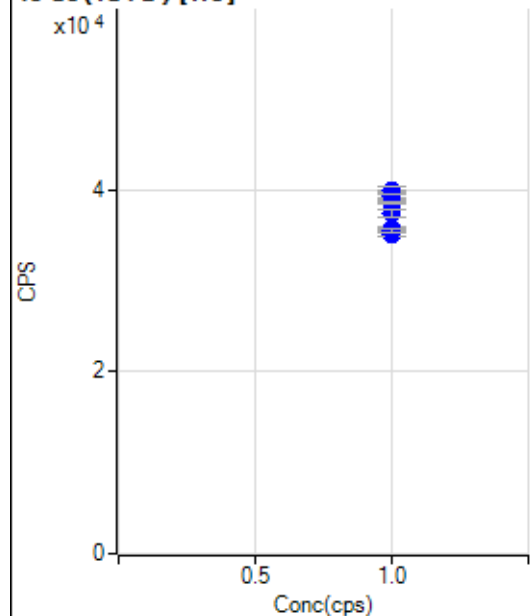
6 Li (ISTD) [No Gas]



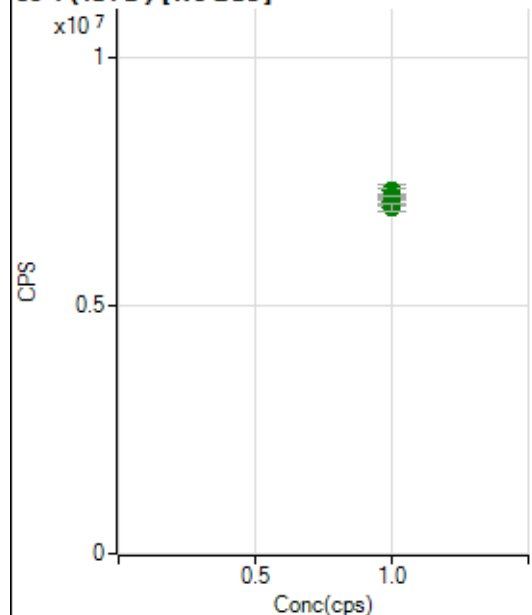
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1307584.22		A	0.3
2	☐	1.000		1325740.13		A	0.2
3	☐	1.000		1317584.06		A	2.0
4	☐	1.000		1345604.84		A	1.6
5	☐	1.000		1329326.81		A	2.3
6	☐	1.000		1342857.82		A	3.2
7	☐	1.000		1353293.94		A	0.5
8	☐	1.000		1342093.28		A	0.5
9	☐	1.000		1307192.60		A	2.0

45 Sc (ISTD) [No Gas]

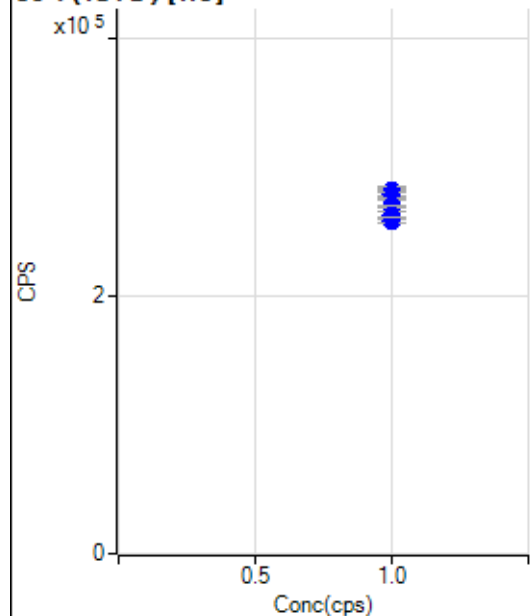
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4174722.62		A	1.6
2	☐	1.000		4218352.09		A	1.1
3	☐	1.000		4194438.38		A	3.5
4	☐	1.000		4278604.57		A	1.2
5	☐	1.000		4154842.85		A	2.9
6	☐	1.000		4225312.25		A	3.3
7	☐	1.000		4165563.77		A	0.8
8	☐	1.000		4030061.42		A	0.6
9	☐	1.000		3958583.77		A	1.9

45 Sc (ISTD) [He]

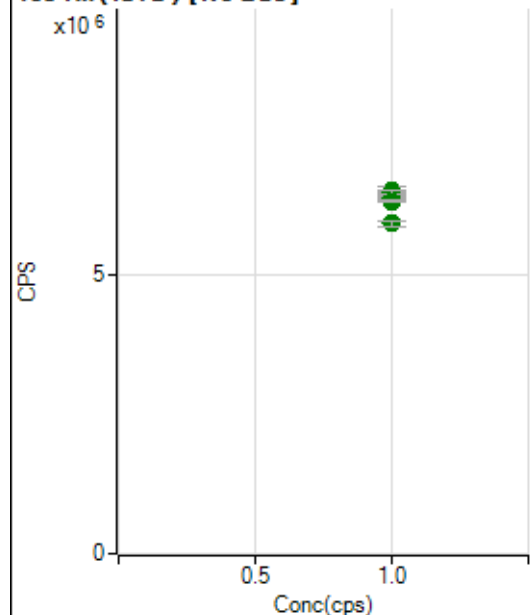
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		39725.03		P	2.9
2	☐	1.000		39846.52		P	0.4
3	☐	1.000		39894.46		P	2.2
4	☐	1.000		39274.91		P	1.7
5	☐	1.000		38568.55		P	0.4
6	☐	1.000		37487.83		P	2.4
7	☐	1.000		35721.11		P	0.9
8	☐	1.000		35101.70		P	1.4
9	☐	1.000		35569.58		P	1.3

89 Y (ISTD) [No Gas]

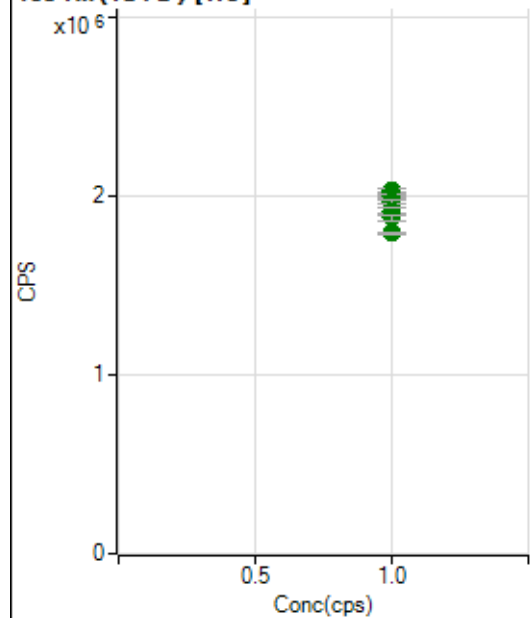
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7104312.46		A	1.1
2	☐	1.000		7141992.05		A	0.2
3	☐	1.000		7102904.41		A	2.1
4	☐	1.000		7210911.91		A	1.2
5	☐	1.000		7156903.23		A	2.6
6	☐	1.000		7313309.61		A	3.4
7	☐	1.000		7309532.46		A	1.4
8	☐	1.000		7201590.73		A	0.2
9	☐	1.000		6974777.25		A	1.8

89 Y (ISTD) [He]

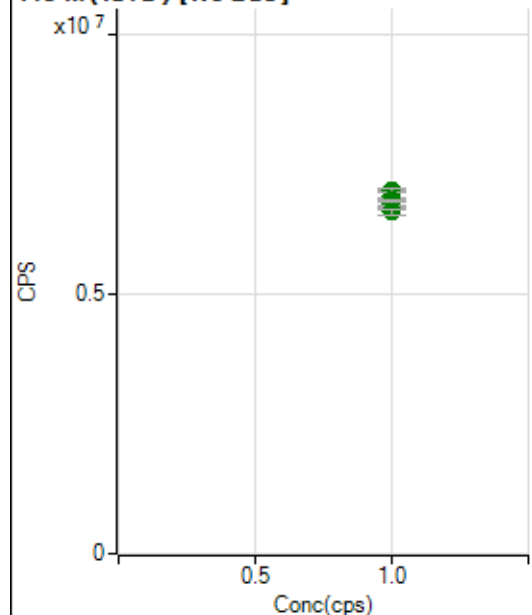
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		279779.13		P	2.7
2	☐	1.000		281072.34		P	0.4
3	☐	1.000		280184.05		P	2.9
4	☐	1.000		278690.03		P	1.3
5	☐	1.000		274994.15		P	1.0
6	☐	1.000		269389.54		P	0.4
7	☐	1.000		262621.46		P	2.0
8	☐	1.000		257840.18		P	0.7
9	☐	1.000		260468.75		P	0.2

103 Rh (ISTD) [No Gas]

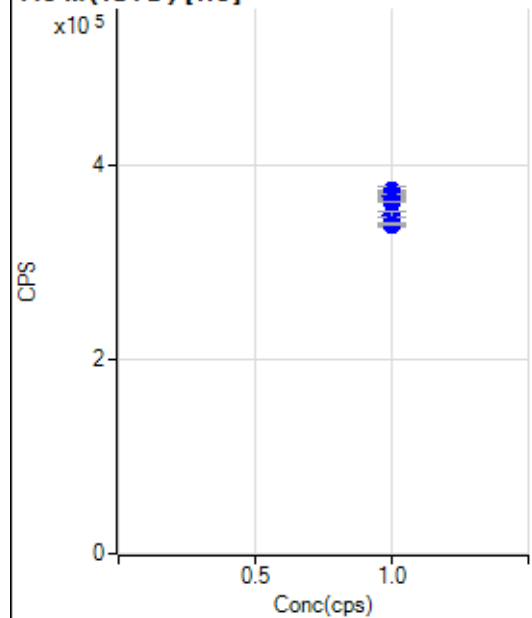
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6416381.05		A	1.4
2	☐	1.000		6473403.53		A	0.8
3	☐	1.000		6425580.57		A	2.2
4	☐	1.000		6515095.80		A	0.6
5	☐	1.000		6386930.92		A	2.0
6	☐	1.000		6496526.49		A	2.7
7	☐	1.000		6495099.10		A	1.0
8	☐	1.000		6327431.65		A	0.7
9	☐	1.000		5929558.25		A	1.8

103 Rh (ISTD) [He]

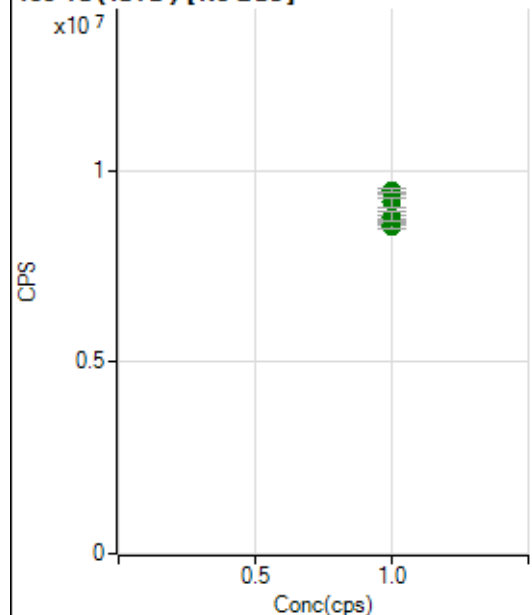
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2032088.88		A	1.8
2	☐	1.000		2020220.56		A	1.0
3	☐	1.000		2023183.63		A	2.0
4	☐	1.000		2015148.32		A	0.1
5	☐	1.000		2004475.65		A	0.7
6	☐	1.000		1968557.88		A	1.0
7	☐	1.000		1919810.72		A	1.5
8	☐	1.000		1880627.14		A	1.3
9	☐	1.000		1795906.43		A	0.7

115 In (ISTD) [No Gas]

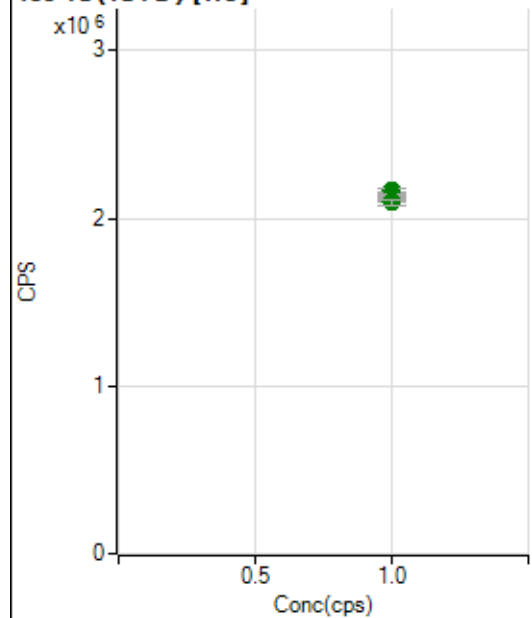
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6666925.89		A	0.8
2	☐	1.000		6807496.85		A	0.7
3	☐	1.000		6747662.59		A	2.2
4	☐	1.000		6817076.75		A	1.1
5	☐	1.000		6759152.08		A	2.0
6	☐	1.000		6900265.69		A	2.4
7	☐	1.000		6984806.79		A	0.9
8	☐	1.000		6795940.74		A	0.7
9	☐	1.000		6579075.46		A	1.6

115 In (ISTD) [He]

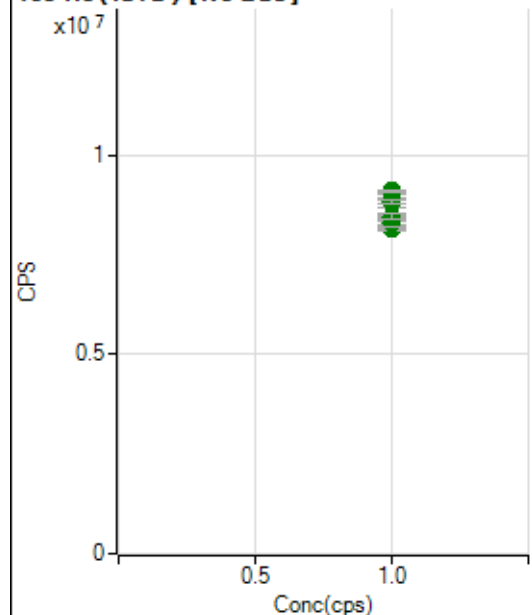
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		372793.12		P	2.8
2	☐	1.000		372560.30		P	0.8
3	☐	1.000		370286.57		P	3.4
4	☐	1.000		369966.43		P	0.6
5	☐	1.000		367658.05		P	0.6
6	☐	1.000		361438.16		P	0.3
7	☐	1.000		348578.61		P	2.0
8	☐	1.000		337169.86		P	0.5
9	☐	1.000		338631.05		P	1.0

159 Tb (ISTD) [No Gas]

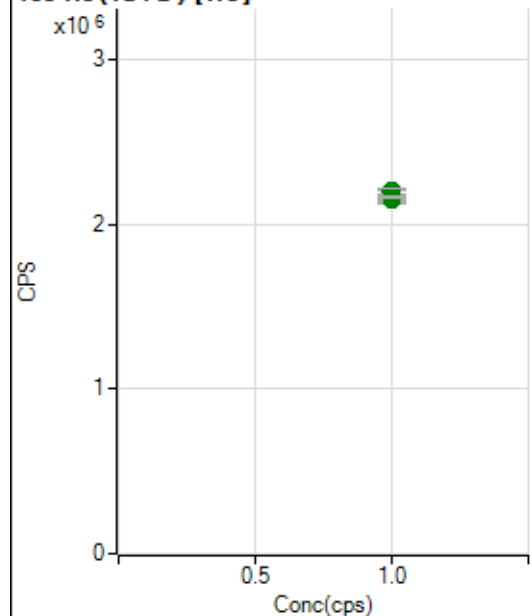
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8543369.46		A	0.8
2	☐	1.000		8605287.44		A	0.3
3	☐	1.000		8608613.55		A	2.4
4	☐	1.000		8783766.12		A	1.0
5	☐	1.000		8805624.73		A	3.1
6	☐	1.000		9184603.54		A	2.6
7	☐	1.000		9423386.46		A	0.8
8	☐	1.000		9479045.97		A	1.0
9	☐	1.000		9170139.80		A	2.3

159 Tb (ISTD) [He]

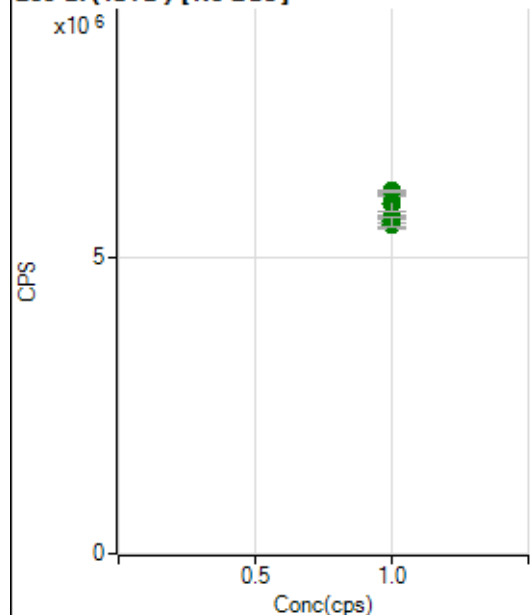
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2125684.17		A	2.4
2	☐	1.000		2112906.22		A	0.8
3	☐	1.000		2117296.88		A	2.2
4	☐	1.000		2120330.37		A	1.4
5	☐	1.000		2132356.22		A	1.7
6	☐	1.000		2162619.80		A	1.7
7	☐	1.000		2132980.71		A	1.3
8	☐	1.000		2140532.43		A	0.8
9	☐	1.000		2092557.68		A	1.5

165 Ho (ISTD) [No Gas]

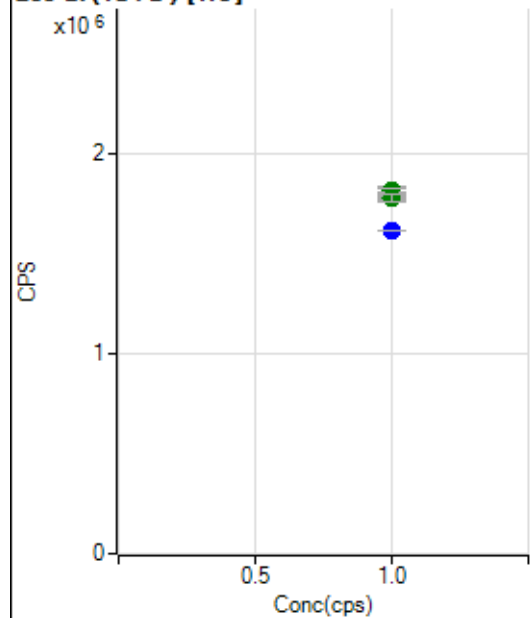
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8134916.94		A	0.9
2	☐	1.000		8300547.67		A	1.2
3	☐	1.000		8313069.63		A	2.6
4	☐	1.000		8461950.71		A	0.5
5	☐	1.000		8463056.61		A	1.7
6	☐	1.000		8799186.39		A	3.0
7	☐	1.000		9055123.90		A	0.9
8	☐	1.000		9100472.08		A	0.7
9	☐	1.000		8826390.99		A	1.5

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2158826.49		A	2.7
2	☐	1.000		2153268.21		A	0.2
3	☐	1.000		2158302.12		A	2.4
4	☐	1.000		2159169.05		A	0.9
5	☐	1.000		2169413.56		A	1.0
6	☐	1.000		2195288.11		A	1.1
7	☐	1.000		2202226.77		A	1.7
8	☐	1.000		2197456.93		A	1.7
9	☐	1.000		2162278.56		A	0.3

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5613884.08		A	1.3
2	☐	1.000		5631805.47		A	0.1
3	☐	1.000		5555564.22		A	2.8
4	☐	1.000		5683807.27		A	1.2
5	☐	1.000		5666547.14		A	3.4
6	☐	1.000		5894398.04		A	4.2
7	☐	1.000		6057654.35		A	0.6
8	☐	1.000		6116615.95		A	0.7
9	☐	1.000		5592734.29		A	2.7

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1805089.03		A	3.8
2	☐	1.000		1803739.19		A	1.1
3	☐	1.000		1809148.64		A	3.5
4	☐	1.000		1797325.70		A	1.2
5	☐	1.000		1812496.45		A	1.5
6	☐	1.000		1816400.68		A	1.0
7	☐	1.000		1785140.27		A	2.2
8	☐	1.000		1780276.88		A	1.8
9	☐	1.000		1618063.43		P	0.4

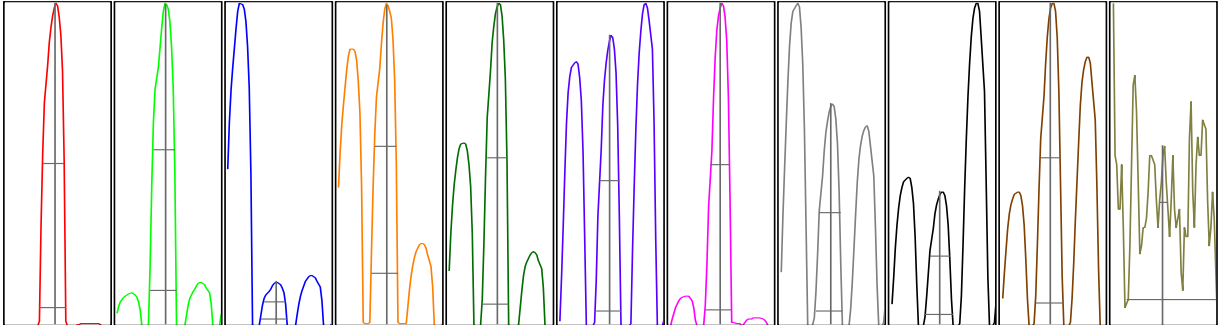
US EPA Tune Check Sample Report

Batch Folder D:\P8092518- MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	7431	1.68	5.00	
24	671155	1.59	5.00	
25	93308	2.01	5.00	
26	105877	1.64	5.00	
59	70126	1.66	5.00	
113	9595	1.69	5.00	
115	117018	2.10	5.00	
206	29033	1.86	5.00	
207	26380	1.36	5.00	
208	62796	1.64	5.00	
220	1	31.51		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7502	7501	7404	7523	7223
24	679308	674327	671098	678137	652905
25	95197	93234	93164	94596	90348
26	107070	106810	105419	107069	103015
59	71019	70370	70083	70986	68170
113	9693	9626	9631	9711	9313
115	118554	118336	116416	118811	112971
206	29330	29310	28949	29449	28127
207	26611	26541	26423	26574	25752
208	63059	63295	62676	63832	61117
220	1	1	1	2	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	12919	8.95	8.9 - 9.1		0.739	0.900	
24	1150946	23.95	23.9 - 24.1		0.759	0.900	
25	155397	24.95	24.9 - 25.1		0.750	0.900	
26	179704	25.95	25.9 - 26.1		0.750	0.900	
59	124570	58.95	58.9 - 59.1		0.751	0.900	
113	18103	113.00	112.9 - 113.1		0.731	0.900	
115	219532	115.00	114.9 - 115.1		0.754	0.900	
206	52803	206.00	205.9 - 206.1		0.775	0.900	
207	47542	206.95	206.9 - 207.1		0.775	0.900	
208	114373	207.95	207.9 - 208.1		0.788	0.900	
220	1	220.00	-		2.531		

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	11.4	V	Deflect	13.8	V
Extract 2	-250.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-110	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	10011	0.40	
89	117780	0.24	
205	15007	0.59	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	10036	9981	10068	9988	9980
89	117807	117575	118252	117677	117588
205	15152	14921	14955	15009	15000

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	11.4	V	Deflect	1.6	V
Extract 2	-250.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-110	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			