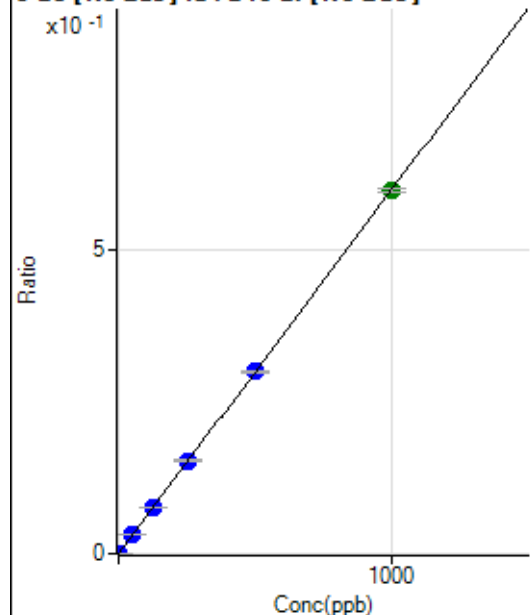


Batch Folder: D:\P8070618MS.b\
Analysis File: P8070618MS.batch.bin
DA Date-Time: 2018-07-06 20:44:50
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-07-06 14:40:47
2	004CALS.d	S01	2018-07-06 14:44:07
3	005CALS.d	S02	2018-07-06 14:48:12
4	006CALS.d	S03	2018-07-06 14:51:53
5	007CALS.d	S04	2018-07-06 14:55:35
6	008CALS.d	S05	2018-07-06 14:59:11
7	009CALS.d	S06	2018-07-06 15:02:41
8	010CALS.d	S07	2018-07-06 15:06:07
9	011CALS.d	S08	2018-07-06 15:09:28

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	68.52	0.0000	P	35.2
2	☐	0.100	0.081	153.71	0.0001	P	25.7
3	☐	1.000	1.075	1207.50	0.0007	P	4.2
4	☐	50.000	50.896	55273.05	0.0305	P	2.2
5	☐	125.000	127.420	139063.30	0.0763	P	2.4
6	☐	250.000	256.245	274160.78	0.1533	P	1.4
7	☐	500.000	501.238	545491.50	0.2999	P	1.1
8	☐	1000.000	997.473	1081797.69	0.5967	A	1.1
9	☐			418.54	0.0002	P	17.2

$$y = 5.9821\text{E-}004 * x + 3.7533\text{E-}005$$

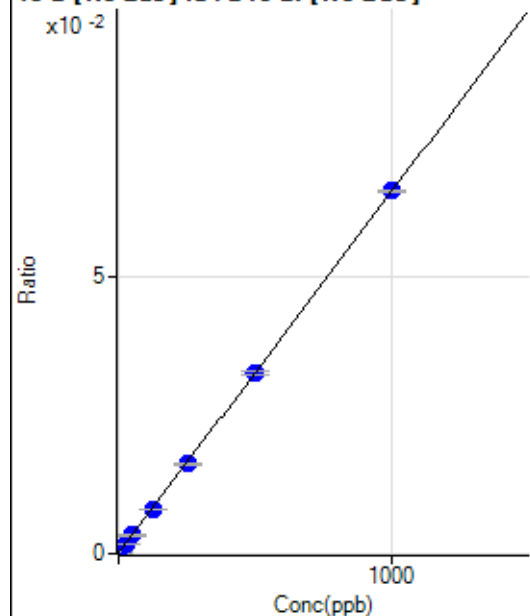
$$R = 1.0000$$

$$DL = 0.06633$$

$$BEC = 0.06274$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	119.45	0.0001	P	27.2
2	☐	2.500	2.917	458.36	0.0003	P	13.3
3	☐	25.000	25.101	3017.12	0.0017	P	7.3
4	☐	50.000	50.174	6057.11	0.0033	P	5.1
5	☐	125.000	118.940	14282.74	0.0078	P	0.2
6	☐	250.000	247.356	28991.34	0.0162	P	2.6
7	☐	500.000	498.600	59326.22	0.0326	P	2.7
8	☐	1000.000	1002.106	118730.10	0.0655	P	0.5
9	☐			5615.26	0.0032	P	7.6

$$y = 6.5287\text{E-}005 * x + 6.5340\text{E-}005$$

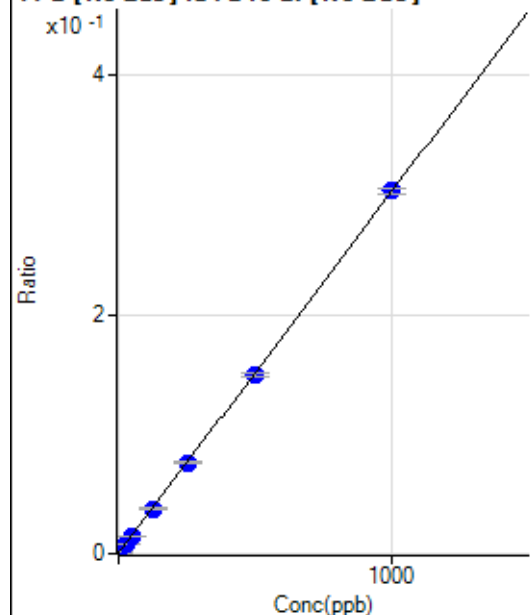
$$R = 1.0000$$

$$DL = 0.8178$$

$$BEC = 1.001$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	513.92	0.0003	P	14.3
2	☐	2.500	2.527	1869.65	0.0010	P	6.0
3	☐	25.000	25.364	14060.23	0.0079	P	5.7
4	☐	50.000	48.992	27346.33	0.0151	P	1.7
5	☐	125.000	122.262	67841.25	0.0372	P	5.1
6	☐	250.000	251.205	136174.05	0.0762	P	0.9
7	☐	500.000	493.922	271890.02	0.1495	P	3.2
8	☐	1000.000	1003.122	549905.06	0.3033	P	1.7
9	☐			26328.14	0.0152	P	9.7

$$y = 3.0209\text{E-}004 * x + 2.8095\text{E-}004$$

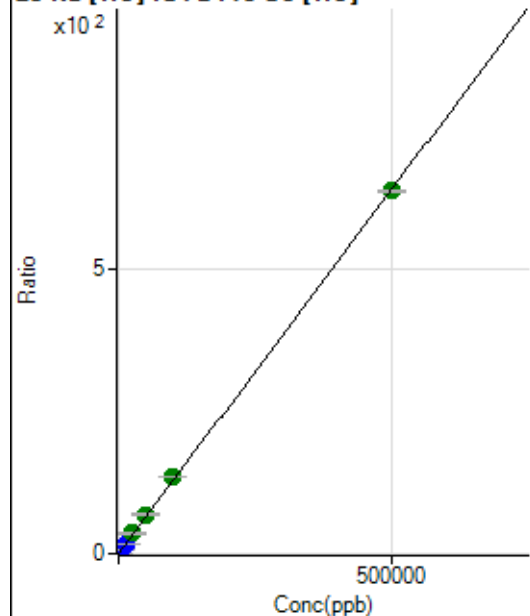
$$R = 1.0000$$

$$DL = 0.3984$$

$$BEC = 0.93$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4284.17	0.0868	P	4.4
2	☐	50.000	53.710	7438.37	0.1555	P	7.4
3	☐	500.000	505.771	36670.35	0.7338	P	3.3
4	☐	5000.000	5253.092	337753.41	6.8074	P	1.9
5	☐	12500.000	13473.968	847307.13	17.3250	P	0.8
6	☐	25000.000	27711.843	1709998.30	35.5406	A	0.5
7	☐	50000.000	54004.429	3290977.27	69.1788	A	0.6
8	☐	100000.00	105839.86	6468850.28	135.4958	A	0.9
9	☐	500000.00	498269.10	30983184.72	637.5607	A	0.7

$$y = 0.0013 * x + 0.0868$$

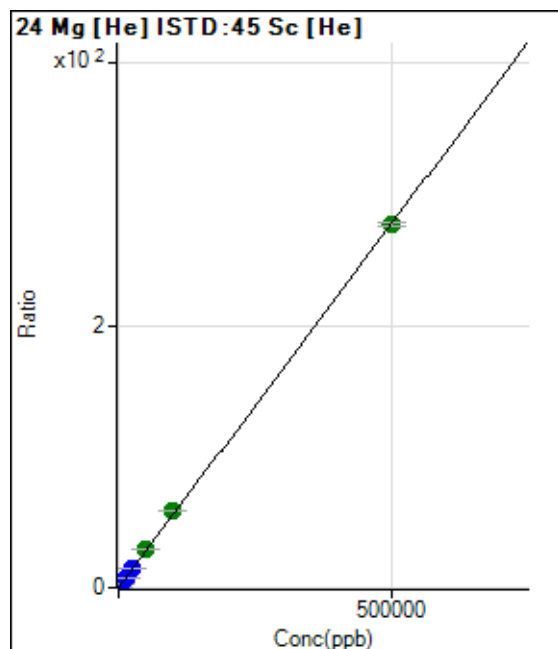
$$R = 0.9999$$

$$DL = 9.04$$

$$BEC = 67.81$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	186.12	0.0038	P	23.2
2	☐	50.000	53.425	1602.95	0.0334	P	0.4
3	☐	500.000	483.741	13609.81	0.2723	P	1.3
4	☐	5000.000	5166.008	142460.23	2.8711	P	1.5
5	☐	12500.000	13244.423	359713.81	7.3550	P	0.5
6	☐	25000.000	26844.138	717046.78	14.9035	P	0.9
7	☐	50000.000	53651.825	1416863.24	29.7829	A	0.8
8	☐	100000.00	105539.11	2796942.05	58.5827	A	0.4
9	☐	500000.00	498414.53	13443820.09	276.6460	A	0.9

$$y = 5.5504\text{E-}004 * x + 0.0038$$

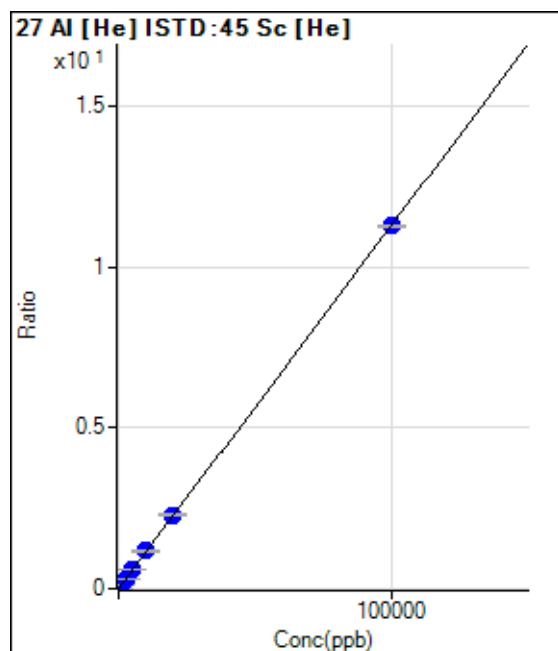
$$R = 0.9999$$

$$DL = 4.721$$

$$BEC = 6.791$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.78	0.0006	P	75.6
2	☐	2.000	1.244	33.33	0.0007	P	66.4
3	☐	20.000	20.631	144.45	0.0029	P	34.7
4	☐	1000.000	1032.965	5818.13	0.1173	P	3.1
5	☐	2500.000	2598.027	14382.76	0.2941	P	0.8
6	☐	5000.000	5320.385	28944.41	0.6017	P	3.3
7	☐	10000.000	10367.508	55746.83	1.1719	P	1.3
8	☐	20000.000	20311.869	109582.29	2.2954	P	1.8
9	☐	100000.00	99882.076	548417.23	11.2852	P	0.8

$$y = 1.1298\text{E-}004 * x + 5.6310\text{E-}004$$

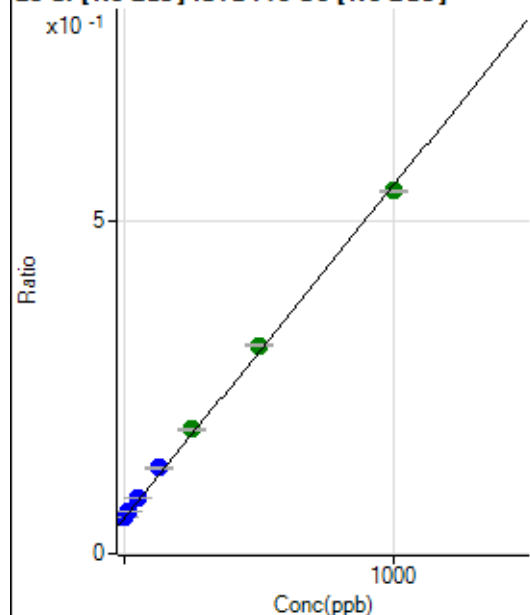
$$R = 1.0000$$

$$DL = 11.3$$

$$BEC = 4.984$$

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	312016.49	0.0538	P	1.3
2	☐	1.000	3.578	320819.85	0.0556	P	1.5
3	☐	10.000	18.750	365619.93	0.0632	P	2.8
4	☐	50.000	59.112	494435.07	0.0833	P	1.0
5	☐	125.000	151.000	764089.08	0.1292	P	2.6
6	☐	250.000	267.412	1081607.42	0.1873	A	1.4
7	☐	500.000	517.741	1810940.58	0.3123	A	1.1
8	☐	1000.000	982.981	3094729.98	0.5446	A	0.6
9	☐			438666.79	0.0768	P	2.0

$$y = 4.9934\text{E-}004 * x + 0.0538$$

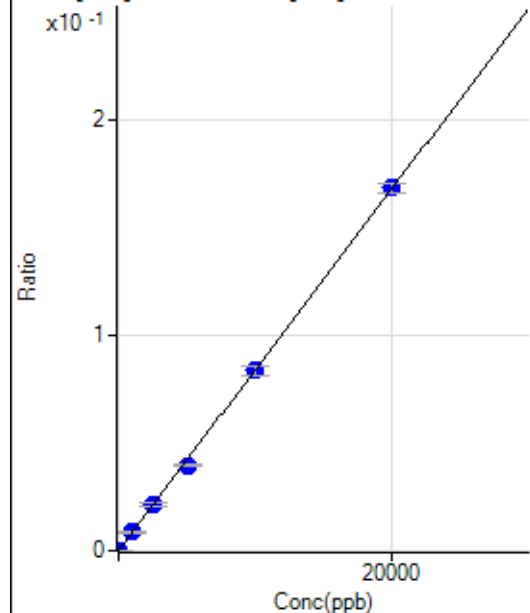
$$R = 0.9994$$

$$DL = 4.089$$

$$BEC = 107.7$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.169	2.78	0.0001	P	173.
2	☐	0.000	-6.565	0.00	0.0000	P	
3	☐	0.000	6.396	5.56	0.0001	P	173.
4	☐	1000.000	1030.493	430.58	0.0087	P	6.0
5	☐	2500.000	2530.513	1038.98	0.0212	P	10.8
6	☐	5000.000	4730.608	1908.55	0.0397	P	3.4
7	☐	10000.000	9962.799	3970.19	0.0835	P	6.1
8	☐	20000.000	20080.610	8030.40	0.1682	P	2.9
9	☐			13.89	0.0003	P	91.5

$$y = 8.3727\text{E-}006 * x + 5.4965\text{E-}005$$

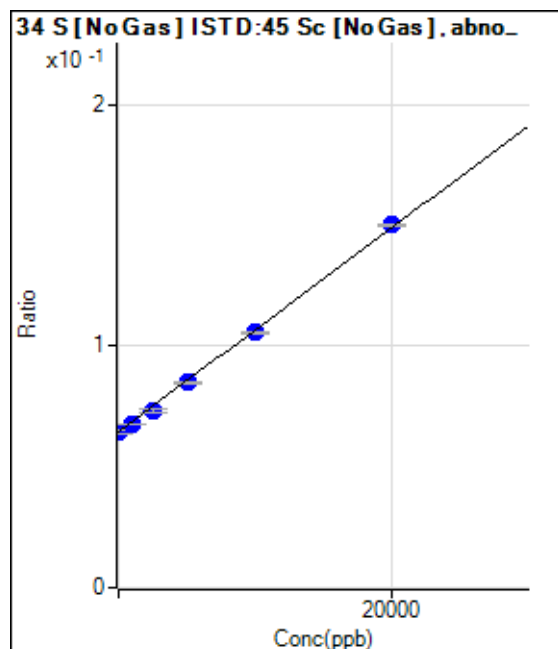
$$R = 0.9999$$

$$DL = 34.11$$

$$BEC = 6.565$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	1.639	374829.63	0.0646	P	0.4
2	☐	0.000	50.875	374218.69	0.0648	P	1.2
3	☐	0.000	-52.513	372784.05	0.0644	P	2.9
4	☐	1000.000	722.693	401605.56	0.0677	P	0.5
5	☐	2500.000	2088.723	434315.77	0.0734	P	2.6
6	☐	5000.000	4781.869	489645.84	0.0848	P	1.6
7	☐	10000.000	9691.547	611887.58	0.1055	P	0.5
8	☐	20000.000	20274.034	853396.01	0.1502	P	0.3
9	☐			355169.71	0.0622	P	2.0

$$y = 4.2204\text{E-}006 * x + 0.0646$$

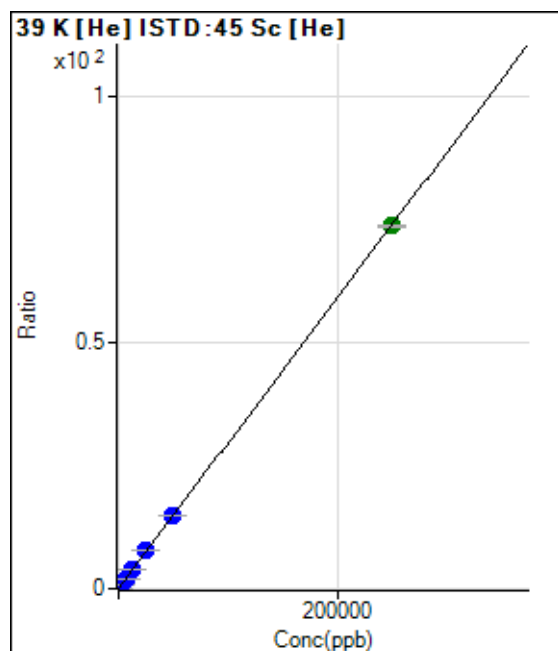
$$R = 0.9996$$

$$DL = 679.2$$

$$BEC = 1.531\text{E}+04$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2464.23	0.0499	P	7.8
2	☐	50.000	48.137	3067.12	0.0641	P	7.5
3	☐	500.000	473.963	9481.33	0.1897	P	2.4
4	☐	2500.000	2606.904	40634.62	0.8189	P	0.8
5	☐	6250.000	6588.478	97486.50	1.9933	P	1.1
6	☐	12500.000	13211.926	189905.60	3.9470	P	1.4
7	☐	25000.000	25849.963	365114.75	7.6749	P	0.4
8	☐	50000.000	50688.203	716215.29	15.0014	P	0.4
9	☐	250000.00	249732.28	3582182.11	73.7134	A	0.8

$$y = 2.9497\text{E-}004 * x + 0.0499$$

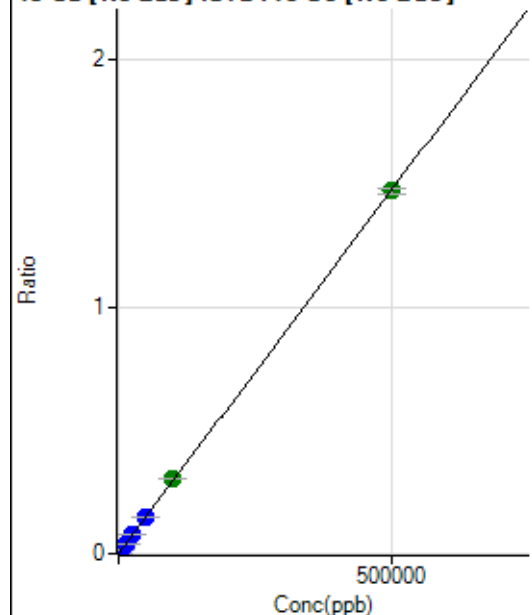
$$R = 1.0000$$

$$DL = 39.57$$

$$BEC = 169.2$$

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	786.17	0.0001	P	14.3
2	☐	50.000	37.539	1419.58	0.0002	P	10.4
3	☐	500.000	470.802	8817.04	0.0015	P	5.2
4	☐	5000.000	5087.730	89756.22	0.0151	P	1.4
5	☐	12500.000	12763.473	223196.75	0.0377	P	2.5
6	☐	25000.000	26012.942	443411.23	0.0768	P	1.1
7	☐	50000.000	51066.662	873186.65	0.1506	P	0.6
8	☐	100000.00	103524.40	1733864.40	0.3051	A	1.1
9	☐	500000.00	499130.37	8399375.97	1.4707	A	1.8

$$y = 2.9462\text{E-}006 * x + 1.3548\text{E-}004$$

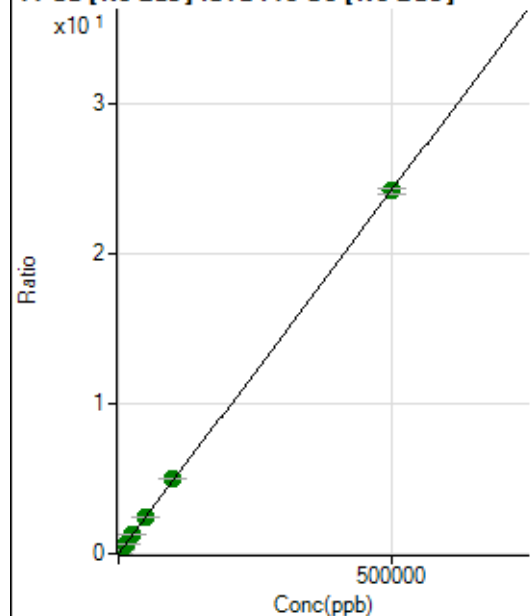
$$R = 1.0000$$

$$DL = 19.66$$

$$BEC = 45.98$$

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	19633.96	0.0034	P	1.1
2	☐	50.000	50.964	33761.31	0.0058	P	1.8
3	☐	500.000	477.784	153306.38	0.0265	P	2.4
4	☐	5000.000	5156.861	1499563.15	0.2527	A	0.6
5	☐	12500.000	12758.598	3667566.19	0.6202	A	2.9
6	☐	25000.000	25717.040	7198708.75	1.2466	A	0.9
7	☐	50000.000	50803.094	14259985.39	2.4594	A	1.1
8	☐	100000.00	102058.11	28054078.75	4.9372	A	0.2
9	☐	500000.00	499464.20	137922500.3	24.1492	A	1.5

$$y = 4.8343\text{E-}005 * x + 0.0034$$

$$R = 1.0000$$

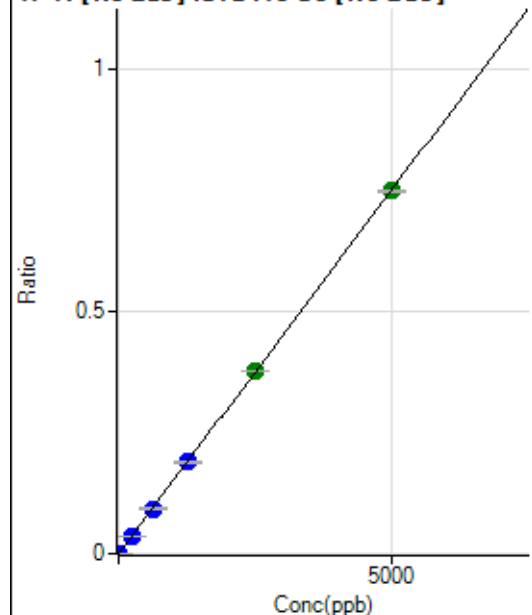
$$DL = 2.352$$

$$BEC = 70.03$$

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	80.56	0.0000	P	39.6
2	☐	0.500	0.605	602.82	0.0001	P	6.5
3	☐	5.000	4.877	4309.19	0.0007	P	4.6
4	☐	250.000	244.001	216892.71	0.0365	P	0.7
5	☐	625.000	618.570	547777.21	0.0926	P	3.0
6	☐	1250.000	1258.089	1087871.08	0.1884	P	0.9
7	☐	2500.000	2516.614	2184965.65	0.3768	A	0.7
8	☐	5000.000	4990.774	4246149.62	0.7473	A	0.4
9	☐			2208.63	0.0004	P	7.4

$$y = 1.4973\text{E-}004 * x + 1.3906\text{E-}005$$

$$R = 1.0000$$

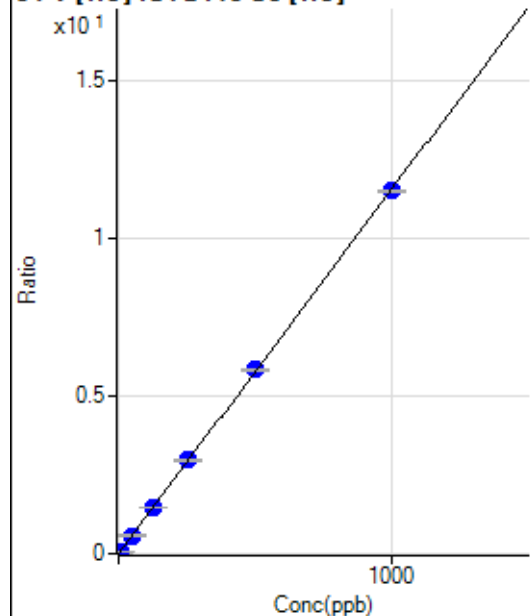
$$DL = 0.1103$$

$$BEC = 0.09288$$

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	7.78	0.0002	P	65.6
2	☐	0.500	0.456	257.79	0.0054	P	22.0
3	☐	5.000	4.687	2708.09	0.0542	P	2.8
4	☐	50.000	50.121	28672.86	0.5779	P	2.2
5	☐	125.000	125.858	70962.23	1.4509	P	0.6
6	☐	250.000	256.384	142198.43	2.9555	P	1.1
7	☐	500.000	504.289	276538.68	5.8132	P	1.0
8	☐	1000.000	996.148	548219.04	11.4829	P	0.9
9	☐			244.45	0.0050	P	9.5

$$y = 0.0115 * x + 1.5761\text{E-}004$$

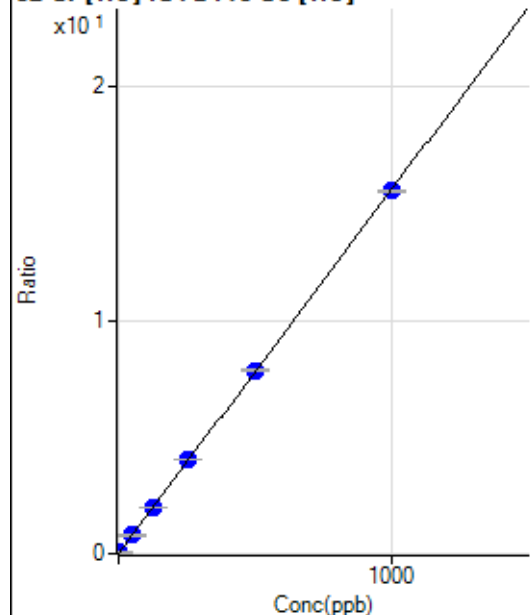
$$R = 1.0000$$

$$DL = 0.0269$$

$$BEC = 0.01367$$

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	438.90	0.0089	P	4.8
2	☐	0.200	0.209	581.14	0.0121	P	7.1
3	☐	2.000	2.087	2069.08	0.0414	P	5.5
4	☐	50.000	49.952	39070.19	0.7874	P	1.7
5	☐	125.000	127.351	97506.74	1.9938	P	1.0
6	☐	250.000	257.948	193854.82	4.0292	P	1.1
7	☐	500.000	502.336	372875.64	7.8382	P	0.8
8	☐	1000.000	996.553	741972.86	15.5409	P	0.5
9	☐			24356.30	0.5012	P	1.3

$$y = 0.0156 * x + 0.0089$$

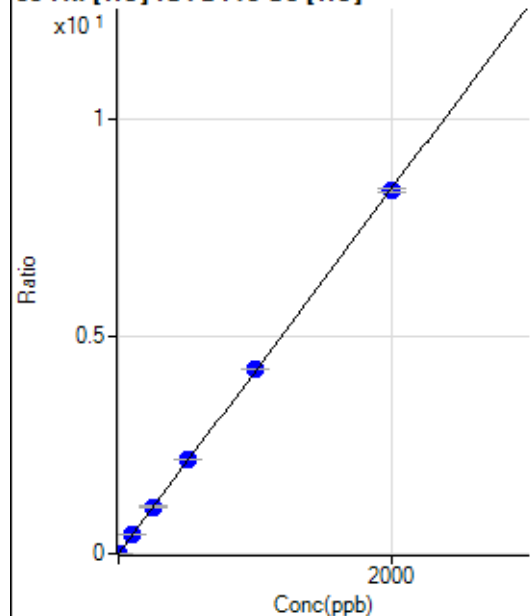
$$R = 1.0000$$

$$DL = 0.08176$$

$$BEC = 0.5703$$

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	35.56	0.0007	P	5.3
2	☐	0.100	0.106	55.56	0.0012	P	23.4
3	☐	1.000	1.096	266.68	0.0053	P	10.8
4	☐	100.000	101.951	21306.46	0.4294	P	1.1
5	☐	250.000	257.487	52982.37	1.0833	P	0.8
6	☐	500.000	518.755	104976.09	2.1818	P	0.9
7	☐	1000.000	1011.479	202352.98	4.2535	P	0.2
8	☐	2000.000	1988.538	399194.97	8.3616	P	1.1
9	☐			1874.61	0.0386	P	2.2

$$y = 0.0042 * x + 7.1993E-004$$

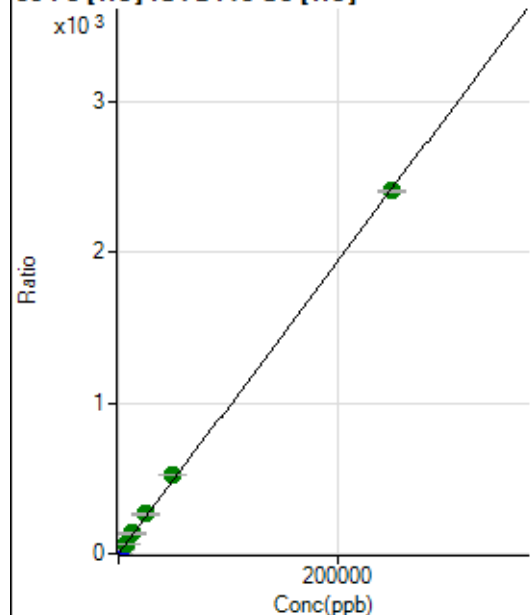
$$R = 0.9999$$

$$DL = 0.02736$$

$$BEC = 0.1712$$

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	1194.54	0.0242	P	9.0
2	☐	5.000	5.704	3800.65	0.0793	P	4.0
3	☐	50.000	51.725	26204.70	0.5244	P	2.8
4	☐	2500.000	2723.785	1307918.18	26.3626	P	2.3
5	☐	6250.000	6951.306	3288612.52	67.2417	A	0.4
6	☐	12500.000	13863.654	6450899.62	134.0825	A	1.5
7	☐	25000.000	27129.433	12480933.50	262.3595	A	0.7
8	☐	50000.000	53688.868	24787430.65	519.1830	A	0.5
9	☐	250000.00	248961.32	116991997.9	2407.422	A	0.7

$$y = 0.0097 * x + 0.0242$$

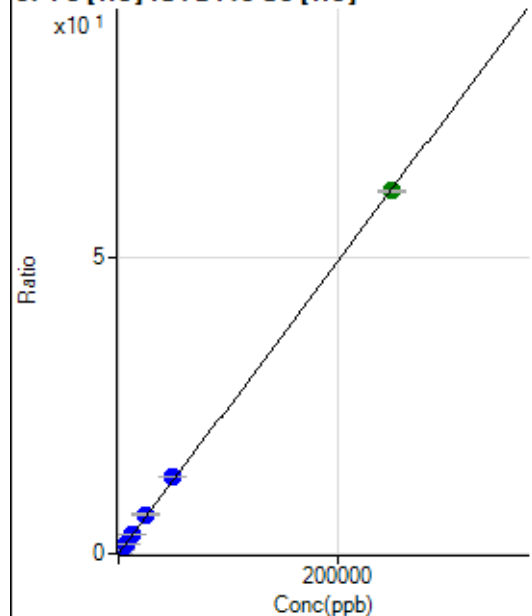
$$R = 0.9999$$

$$DL = 0.6781$$

$$BEC = 2.501$$

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	44.44	0.0009	P	43.6
2	☐	5.000	4.538	96.30	0.0020	P	19.4
3	☐	50.000	53.688	707.45	0.0141	P	8.0
4	☐	2500.000	2661.509	32614.63	0.6573	P	1.9
5	☐	6250.000	6775.792	81778.34	1.6721	P	0.3
6	☐	12500.000	13626.137	161734.28	3.3617	P	1.6
7	☐	25000.000	26980.496	316603.76	6.6554	P	1.1
8	☐	50000.000	52850.078	622380.43	13.0360	P	0.6
9	☐	250000.00	249160.86	2986504.81	61.4545	A	0.5

$$y = 2.4664E-004 * x + 9.0052E-004$$

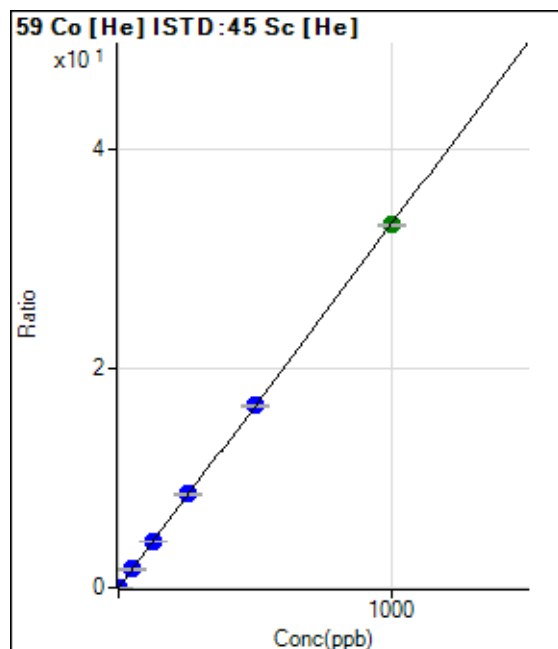
$$R = 0.9999$$

$$DL = 4.774$$

$$BEC = 3.651$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	175.56	0.0036	P	14.2
2	☐	0.100	0.101	331.12	0.0069	P	10.6
3	☐	1.000	0.949	1753.48	0.0351	P	5.6
4	☐	50.000	50.612	83591.18	1.6850	P	2.9
5	☐	125.000	126.502	205710.81	4.2062	P	0.7
6	☐	250.000	256.341	409902.70	8.5196	P	0.8
7	☐	500.000	501.555	792823.69	16.6660	P	1.0
8	☐	1000.000	997.419	1582255.06	33.1394	A	0.5
9	☐			18245.49	0.3755	P	1.7

$$y = 0.0332 * x + 0.0036$$

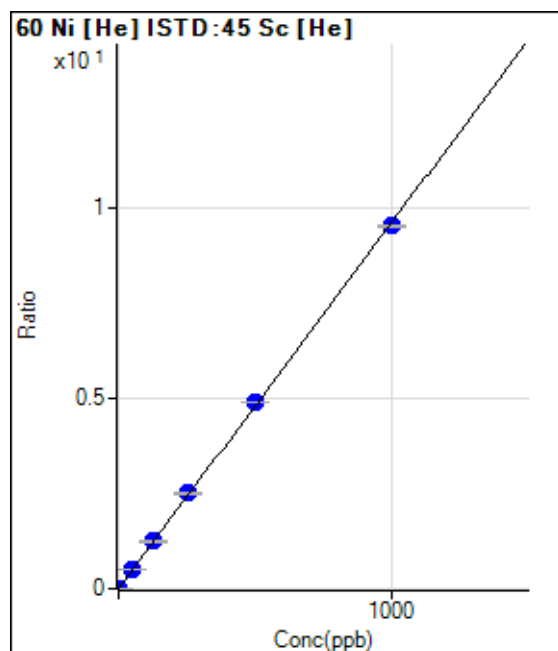
$$R = 1.0000$$

$$DL = 0.04561$$

$$BEC = 0.107$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	45.56	0.0009	P	11.1
2	☐	0.100	0.137	107.78	0.0022	P	4.6
3	☐	1.000	1.095	573.36	0.0115	P	7.1
4	☐	50.000	51.496	24632.02	0.4965	P	3.8
5	☐	125.000	128.859	60697.44	1.2411	P	1.5
6	☐	250.000	260.978	120891.39	2.5127	P	1.4
7	☐	500.000	510.286	233686.47	4.9122	P	0.6
8	☐	1000.000	991.555	455669.06	9.5442	P	0.6
9	☐			13057.44	0.2687	P	1.8

$$y = 0.0096 * x + 9.2234E-004$$

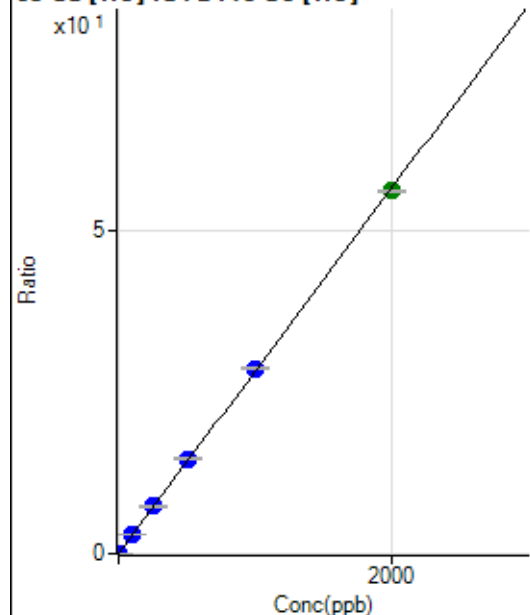
$$R = 0.9999$$

$$DL = 0.03181$$

$$BEC = 0.09583$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	301.12	0.0061	P	2.8
2	☐	0.200	0.256	638.92	0.0133	P	4.6
3	☐	2.000	1.979	3100.40	0.0620	P	1.3
4	☐	100.000	102.325	143723.90	2.8968	P	2.1
5	☐	250.000	257.996	356756.65	7.2946	P	0.5
6	☐	500.000	518.550	705104.63	14.6553	P	1.0
7	☐	1000.000	1015.635	1365201.82	28.6981	P	0.9
8	☐	2000.000	1986.429	2679512.63	56.1232	A	0.5
9	☐			5452.27	0.1122	P	1.6

$$y = 0.0283 * x + 0.0061$$

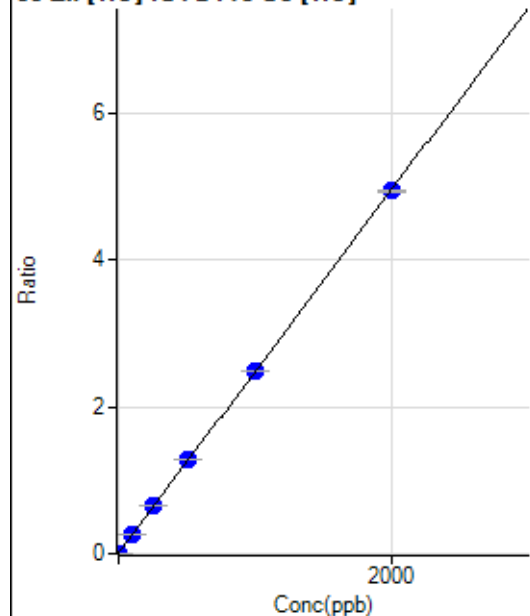
$$R = 0.9999$$

$$DL = 0.01823$$

$$BEC = 0.2158$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	277.78	0.0056	P	9.1
2	☐	0.200	-0.151	251.12	0.0053	P	12.8
3	☐	2.000	1.572	475.57	0.0095	P	11.5
4	☐	100.000	102.867	12902.82	0.2601	P	2.5
5	☐	250.000	259.138	31621.79	0.6466	P	0.8
6	☐	500.000	515.187	61579.35	1.2799	P	0.7
7	☐	1000.000	1002.697	118250.66	2.4857	P	0.8
8	☐	2000.000	1993.570	235689.08	4.9365	P	0.3
9	☐			1476.77	0.0304	P	3.3

$$y = 0.0025 * x + 0.0056$$

$$R = 1.0000$$

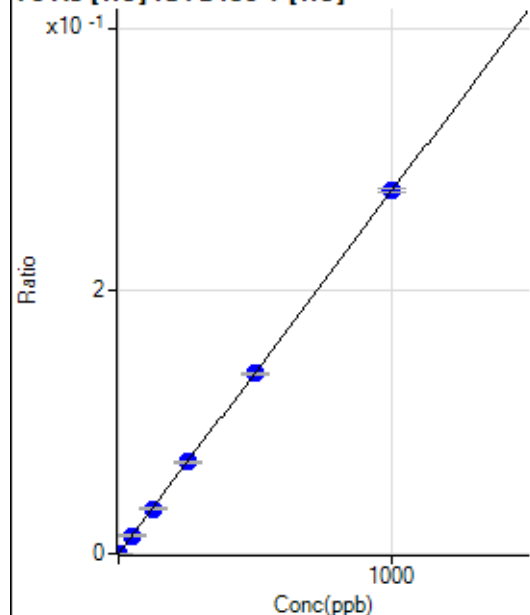
$$DL = 0.6222$$

$$BEC = 2.274$$

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	3.70	0.0000	P	0.7
2	☐	0.100	0.096	11.73	0.0000	P	76.5
3	☐	1.000	0.914	86.42	0.0003	P	8.4
4	☐	50.000	49.787	4520.54	0.0137	P	2.5
5	☐	125.000	124.277	11148.41	0.0343	P	0.7
6	☐	250.000	252.672	22127.64	0.0697	P	0.6
7	☐	500.000	496.699	42554.82	0.1370	P	1.1
8	☐	1000.000	1001.084	84409.97	0.2760	P	1.2
9	☐			141.98	0.0004	P	8.0

$$y = 2.7571\text{E-}004 * x + 1.1442\text{E-}005$$

$$R = 1.0000$$

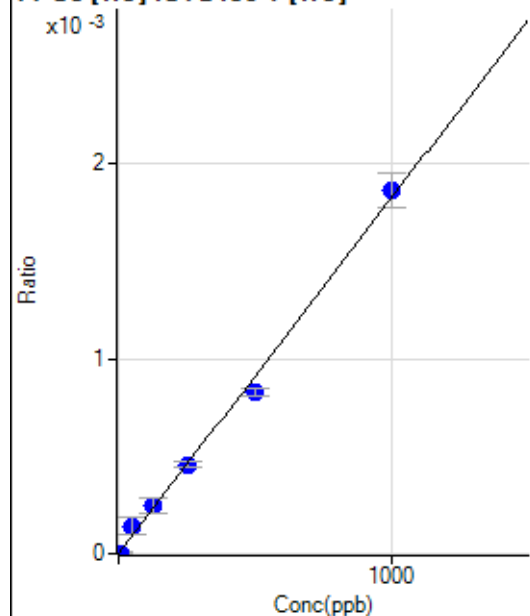
$$DL = 0.0008416$$

$$BEC = 0.0415$$

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	1.905	1.11	0.0000	P	173.
3	☐	5.000	0.000	0.00	0.0000	P	
4	☐	50.000	77.720	46.67	0.0001	P	61.1
5	☐	125.000	134.737	80.00	0.0002	P	29.6
6	☐	250.000	251.184	145.56	0.0005	P	7.5
7	☐	500.000	454.816	257.78	0.0008	P	4.2
8	☐	1000.000	1019.717	568.91	0.0019	P	9.6
9	☐			2.22	0.0000	P	173.

$$y = 1.8242\text{E-}006 * x + 0.0000\text{E+}000$$

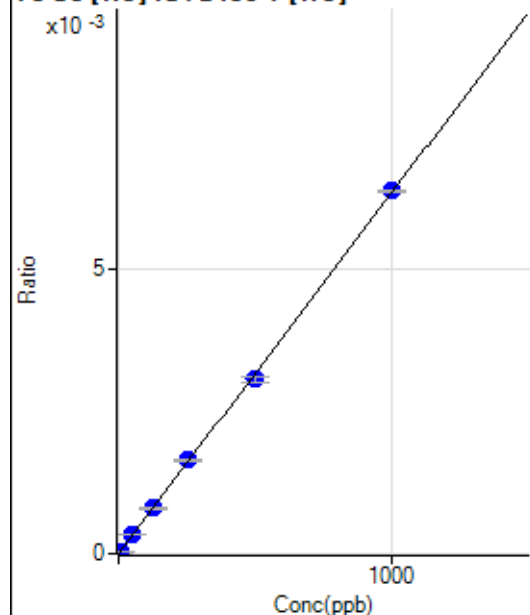
$$R = 0.9981$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.23	0.0000	P	86.6
2	☐	0.500	0.307	1.85	0.0000	P	100.
3	☐	5.000	5.911	13.58	0.0000	P	27.7
4	☐	50.000	53.522	112.96	0.0003	P	2.1
5	☐	125.000	125.929	261.11	0.0008	P	5.1
6	☐	250.000	259.523	524.09	0.0017	P	2.5
7	☐	500.000	483.528	954.36	0.0031	P	3.6
8	☐	1000.000	1005.559	1952.01	0.0064	P	0.4
9	☐			0.62	0.0000	P	173.

$$y = 6.3435E-006 * x + 3.7994E-006$$

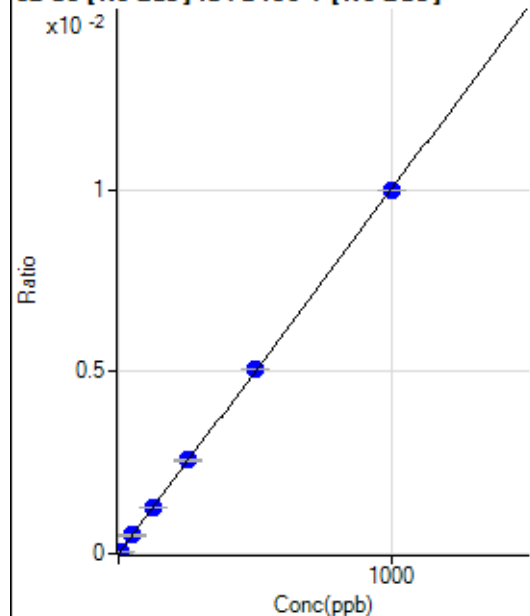
$$R = 0.9998$$

$$DL = 1.556$$

$$BEC = 0.5989$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-52.06	0.0000	P	-64.
2	☐	0.500	1.197	74.65	0.0000	P	41.0
3	☐	5.000	5.328	504.83	0.0000	P	15.4
4	☐	50.000	50.144	5345.44	0.0005	P	2.9
5	☐	125.000	126.587	13488.41	0.0013	P	2.6
6	☐	250.000	257.021	26927.54	0.0026	P	1.7
7	☐	500.000	505.445	53267.29	0.0051	P	0.4
8	☐	1000.000	995.315	103719.80	0.0100	P	0.2
9	☐			118.89	0.0000	P	45.9

$$y = 1.0032E-005 * x - 4.9078E-006$$

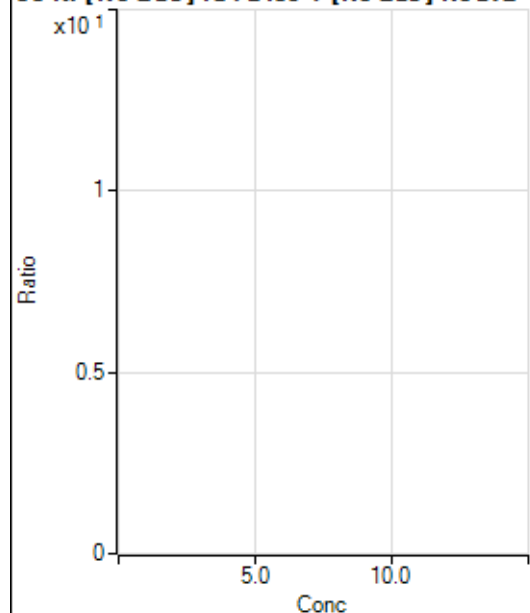
$$R = 1.0000$$

$$DL = 0.9462$$

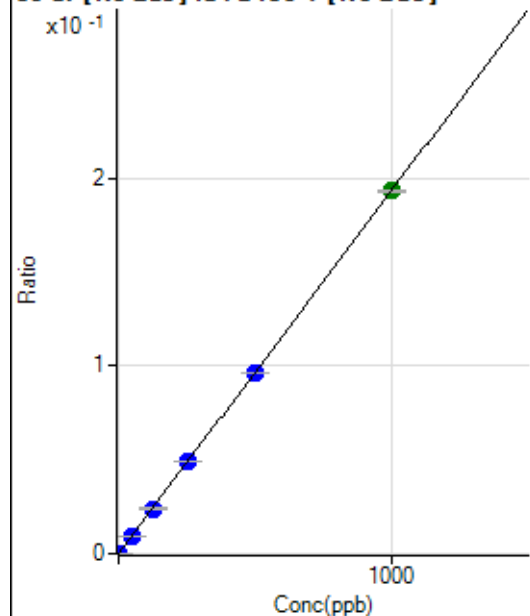
$$BEC = -0.4892$$

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	☐			350.01	0.0000	P	5.8
2	☐			308.90	0.0000	P	14.6
3	☐			321.12	0.0000	P	25.4
4	☐			350.01	0.0000	P	13.8
5	☐			362.23	0.0000	P	3.9
6	☐			327.79	0.0000	P	8.0
7	☐			346.68	0.0000	P	10.1
8	☐			311.12	0.0000	P	6.4
9	☐			292.23	0.0000	P	17.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	555.59	0.0001	P	22.8
2	☐	0.100	0.085	722.27	0.0001	P	14.7
3	☐	1.000	1.025	2603.15	0.0003	P	8.8
4	☐	50.000	49.545	103358.74	0.0096	P	0.9
5	☐	125.000	124.121	256468.10	0.0240	P	1.3
6	☐	250.000	253.271	512912.33	0.0490	P	0.5
7	☐	500.000	499.427	1015872.17	0.0966	P	0.3
8	☐	1000.000	999.601	2009003.21	0.1933	A	0.5
9	☐			10412.75	0.0010	P	2.0

$$y = 1.9332E-004 * x + 5.2492E-005$$

$$R = 1.0000$$

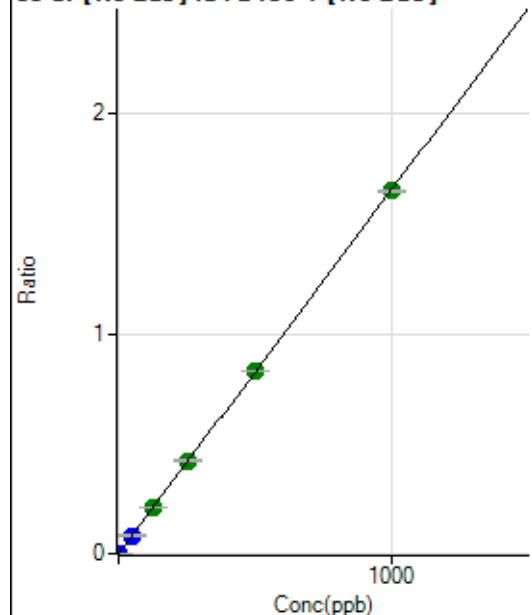
$$DL = 0.186$$

$$BEC = 0.2715$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	219.46	0.0000	P	43.3
2	☐	0.100	0.102	1991.91	0.0002	P	10.4
3	☐	1.000	1.048	18212.82	0.0018	P	3.6
4	☐	50.000	50.119	888935.82	0.0828	P	0.9
5	☐	125.000	128.040	2256122.16	0.2116	A	2.1
6	☐	250.000	256.041	4427372.54	0.4231	A	1.6
7	☐	500.000	501.529	8713871.38	0.8287	A	0.6
8	☐	1000.000	997.339	17126274.69	1.6478	A	0.5
9	☐			85612.97	0.0084	P	1.7

$$y = 0.0017 * x + 2.0800E-005$$

$$R = 1.0000$$

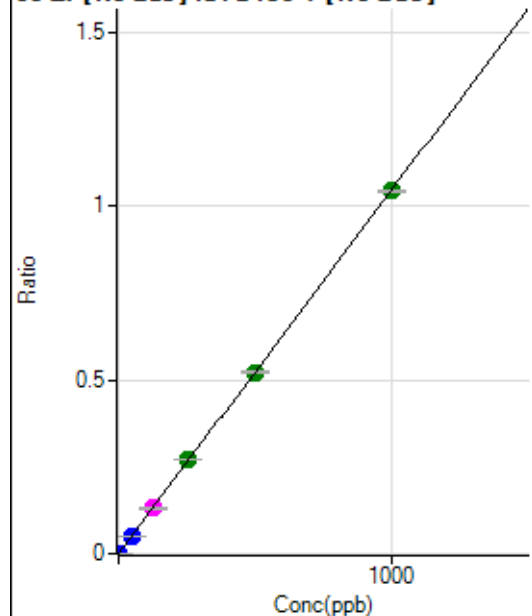
$$DL = 0.01635$$

$$BEC = 0.01259$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	988.97	0.0001	P	11.4
2	☐	0.100	0.090	1961.35	0.0002	P	1.8
3	☐	1.000	1.007	11902.91	0.0011	P	3.6
4	☐	50.000	48.994	550404.14	0.0513	P	0.8
5	☐	125.000	125.443	1398581.13	0.1312	M	2.4
6	☐	250.000	258.237	2824369.31	0.2699	A	0.8
7	☐	500.000	499.632	5490617.96	0.5221	A	0.7
8	☐	1000.000	998.120	10839580.97	1.0430	A	0.6
9	☐			3617.32	0.0004	P	6.2

$$y = 0.0010 * x + 9.3619E-005$$

$$R = 1.0000$$

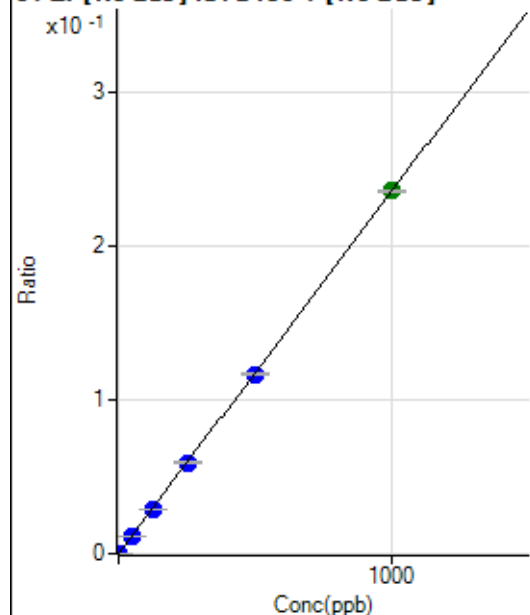
$$DL = 0.03077$$

$$BEC = 0.0896$$

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	219.45	0.0000	P	15.4
2	☐	0.100	0.090	438.92	0.0000	P	16.7
3	☐	1.000	1.086	2867.11	0.0003	P	7.3
4	☐	50.000	48.044	121434.51	0.0113	P	0.7
5	☐	125.000	122.137	306392.24	0.0287	P	2.0
6	☐	250.000	252.063	620286.30	0.0593	P	0.3
7	☐	500.000	496.389	1227281.88	0.1167	P	0.7
8	☐	1000.000	1001.746	2447677.24	0.2355	A	0.2
9	☐			800.06	0.0001	P	6.5

$$y = 2.3508\text{E-}004 * x + 2.0764\text{E-}005$$

$$R = 1.0000$$

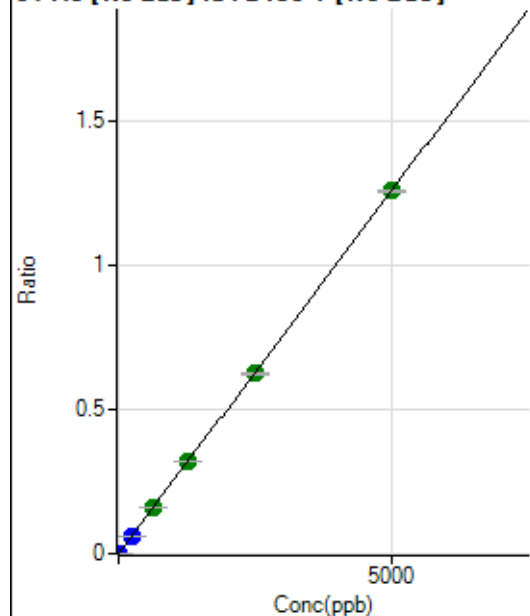
$$DL = 0.04087$$

$$BEC = 0.08833$$

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	419.47	0.0000	P	23.2
2	☐	0.500	0.475	1669.63	0.0002	P	2.4
3	☐	5.000	4.983	13457.22	0.0013	P	3.4
4	☐	250.000	246.809	667396.96	0.0622	P	0.6
5	☐	625.000	632.249	1698132.68	0.1592	A	1.6
6	☐	1250.000	1279.919	3373070.93	0.3223	A	0.3
7	☐	2500.000	2484.610	6579159.00	0.6257	A	0.7
8	☐	5000.000	4999.469	13083763.66	1.2589	A	0.2
9	☐			17258.87	0.0017	P	3.9

$$y = 2.5180\text{E-}004 * x + 3.9652\text{E-}005$$

$$R = 1.0000$$

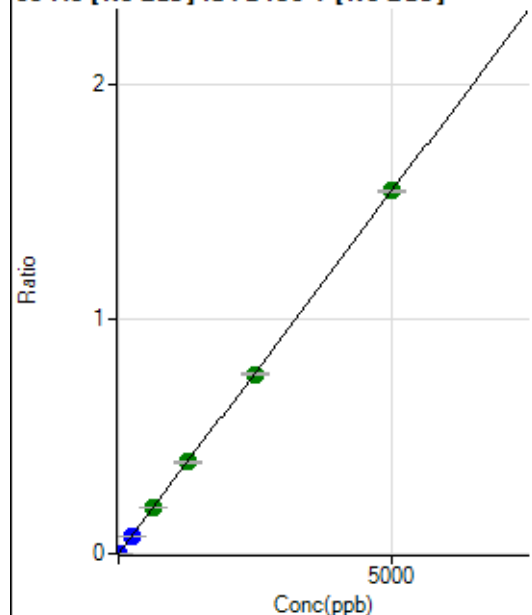
$$DL = 0.1095$$

$$BEC = 0.1575$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.34	0.0000	P	45.5
2	☐	0.500	0.502	1711.29	0.0002	P	4.3
3	☐	5.000	4.769	15414.87	0.0015	P	3.5
4	☐	250.000	245.779	816143.68	0.0760	P	0.4
5	☐	625.000	632.080	2085416.21	0.1956	A	1.7
6	☐	1250.000	1269.131	4108297.01	0.3926	A	1.4
7	☐	2500.000	2477.279	8059196.88	0.7664	A	1.0
8	☐	5000.000	5005.904	16095663.55	1.5487	A	0.4
9	☐			27353.69	0.0027	P	5.0

$$y = 3.0937\text{E-}004 * x + 7.8803\text{E-}006$$

$$R = 1.0000$$

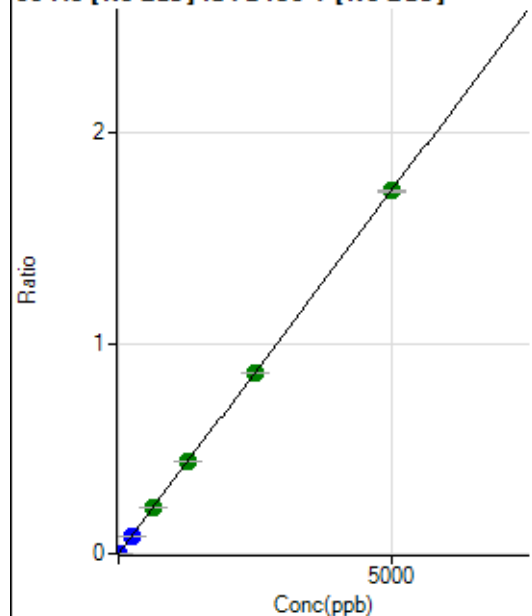
$$DL = 0.03476$$

$$BEC = 0.02547$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	202.79	0.0000	P	17.3
2	☐	0.500	0.466	1883.55	0.0002	P	7.4
3	☐	5.000	4.936	17898.66	0.0017	P	3.2
4	☐	250.000	246.006	911042.62	0.0849	P	1.0
5	☐	625.000	634.691	2335078.67	0.2190	A	2.4
6	☐	1250.000	1266.662	4572791.86	0.4370	A	1.0
7	☐	2500.000	2495.594	9053823.90	0.8610	A	0.6
8	☐	5000.000	4997.026	17917126.44	1.7240	A	0.7
9	☐			30657.85	0.0030	P	3.7

$$y = 3.4499\text{E-}004 * x + 1.9200\text{E-}005$$

$$R = 1.0000$$

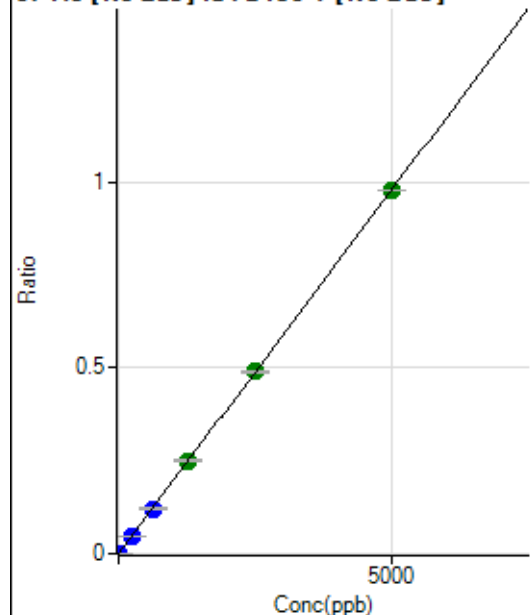
$$DL = 0.0289$$

$$BEC = 0.05565$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	77.78	0.0000	P	22.9
2	☐	0.500	0.461	1022.31	0.0001	P	6.2
3	☐	5.000	4.870	9973.50	0.0010	P	5.4
4	☐	250.000	244.224	512559.67	0.0478	P	0.7
5	☐	625.000	617.309	1287098.19	0.1207	P	2.5
6	☐	1250.000	1279.259	2617278.55	0.2501	A	1.4
7	☐	2500.000	2506.876	5154315.44	0.4902	A	0.9
8	☐	5000.000	4990.497	10141279.74	0.9758	A	0.1
9	☐			17375.77	0.0017	P	2.8

$$y = 1.9552E-004 * x + 7.3654E-006$$

$$R = 1.0000$$

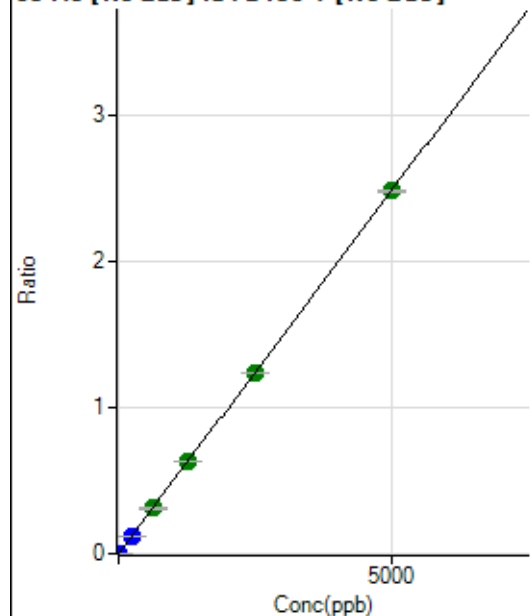
$$DL = 0.02587$$

$$BEC = 0.03767$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	175.01	0.0000	P	23.7
2	☐	0.500	0.494	2750.40	0.0003	P	3.5
3	☐	5.000	4.913	25586.31	0.0025	P	2.0
4	☐	250.000	246.000	1313400.82	0.1224	P	0.9
5	☐	625.000	624.469	3312329.85	0.3106	A	2.5
6	☐	1250.000	1269.708	6609296.98	0.6316	A	0.6
7	☐	2500.000	2493.911	13044814.53	1.2405	A	0.5
8	☐	5000.000	4998.384	25839812.38	2.4863	A	0.5
9	☐			42774.18	0.0042	P	2.5

$$y = 4.9741E-004 * x + 1.6557E-005$$

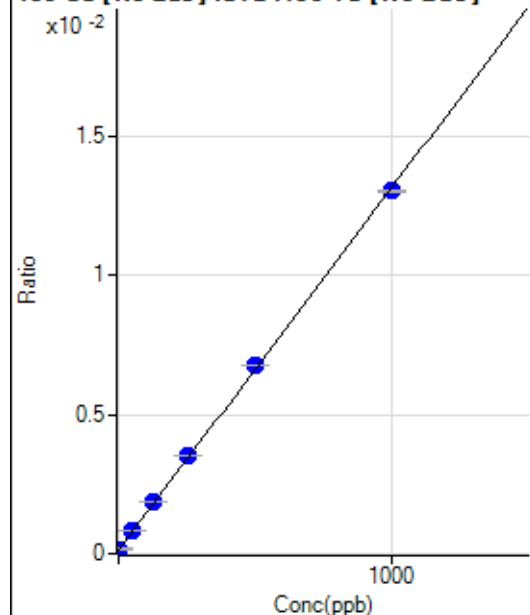
$$R = 1.0000$$

$$DL = 0.02367$$

$$BEC = 0.03329$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2003.02	0.0002	P	9.1
2	☐	0.100	0.444	2061.36	0.0002	P	8.0
3	☐	1.000	1.024	2147.51	0.0002	P	7.3
4	☐	50.000	53.133	11138.44	0.0008	P	3.9
5	☐	125.000	131.956	25088.14	0.0019	P	0.5
6	☐	250.000	259.530	46896.55	0.0035	P	1.1
7	☐	500.000	509.683	92394.25	0.0068	P	0.9
8	☐	1000.000	991.750	178308.97	0.0130	P	0.5
9	☐			2014.13	0.0002	P	6.4

$$y = 1.3001\text{E-}005 * x + 1.5394\text{E-}004$$

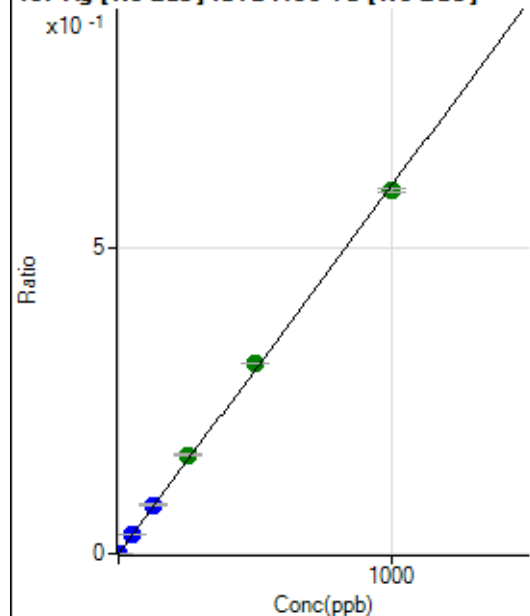
$$R = 0.9999$$

$$DL = 3.242$$

$$BEC = 11.84$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	69.45	0.0000	P	25.6
2	☐	0.100	0.112	938.97	0.0001	P	8.7
3	☐	1.000	1.050	8166.70	0.0006	P	3.4
4	☐	50.000	53.928	427182.30	0.0324	P	0.9
5	☐	125.000	132.703	1069584.85	0.0797	P	1.9
6	☐	250.000	268.349	2142461.96	0.1612	A	1.0
7	☐	500.000	515.665	4220709.64	0.3097	A	0.2
8	☐	1000.000	986.421	8096522.14	0.5925	A	1.1
9	☐			1030.64	0.0001	P	6.1

$$y = 6.0063\text{E-}004 * x + 5.3470\text{E-}006$$

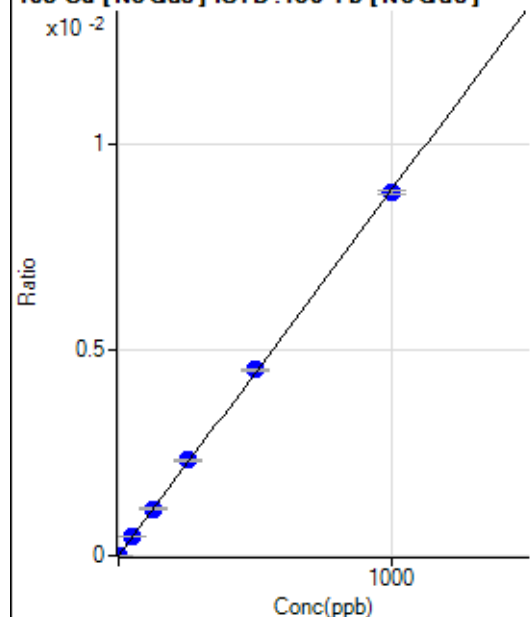
$$R = 0.9996$$

$$DL = 0.006834$$

$$BEC = 0.008902$$

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	9.72	0.0000	P	24.7
2	☐	0.100	0.062	16.67	0.0000	P	25.5
3	☐	1.000	0.857	106.95	0.0000	P	20.0
4	☐	50.000	52.764	6182.10	0.0005	P	4.2
5	☐	125.000	128.086	15253.36	0.0011	P	4.0
6	☐	250.000	260.844	30760.39	0.0023	P	2.4
7	☐	500.000	508.162	61432.53	0.0045	P	1.0
8	☐	1000.000	992.685	120340.68	0.0088	P	1.2
9	☐			29.16	0.0000	P	47.8

$$y = 8.8702\text{E-}006 * x + 7.4733\text{E-}007$$

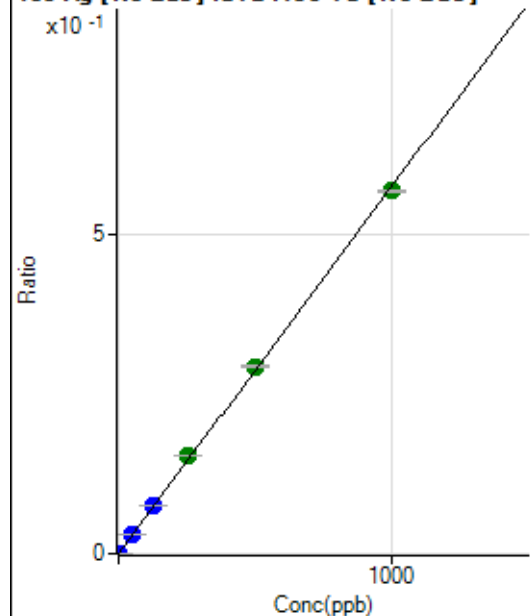
$$R = 0.9999$$

$$DL = 0.0625$$

$$BEC = 0.08425$$

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	63.89	0.0000	P	33.2
2	☐	0.100	0.109	872.29	0.0001	P	5.3
3	☐	1.000	1.087	8075.03	0.0006	P	4.5
4	☐	50.000	53.855	408041.69	0.0309	P	1.3
5	☐	125.000	132.443	1021080.59	0.0761	P	1.6
6	☐	250.000	268.637	2051254.38	0.1543	A	0.7
7	☐	500.000	510.872	3999501.31	0.2935	A	0.4
8	☐	1000.000	988.782	7762972.31	0.5681	A	0.8
9	☐			1047.32	0.0001	P	5.0

$$y = 5.7450\text{E-}004 * x + 4.9198\text{E-}006$$

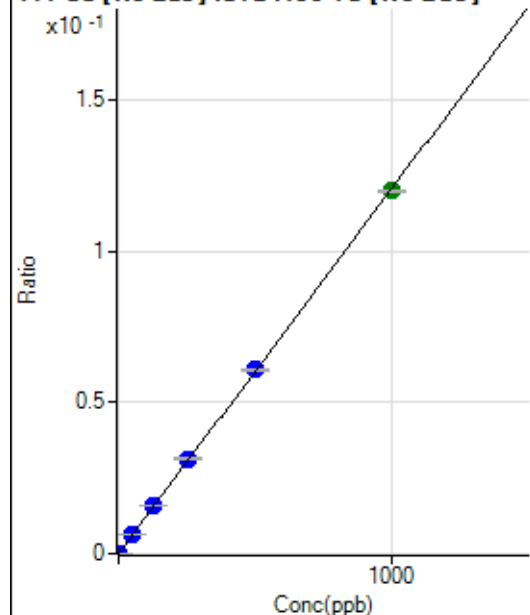
$$R = 0.9997$$

$$DL = 0.008535$$

$$BEC = 0.008564$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	602.43	0.0000	P	9.3
2	☐	0.100	0.099	751.19	0.0001	P	8.9
3	☐	1.000	1.012	2159.80	0.0002	P	4.1
4	☐	50.000	52.627	84168.79	0.0064	P	1.0
5	☐	125.000	130.789	211939.41	0.0158	P	1.7
6	☐	250.000	260.110	416836.74	0.0314	P	0.6
7	☐	500.000	503.725	827127.10	0.0607	P	0.7
8	☐	1000.000	994.755	1637484.50	0.1198	A	0.6
9	☐			958.84	0.0001	P	5.0

$$y = 1.2041\text{E-}004 * x + 4.6299\text{E-}005$$

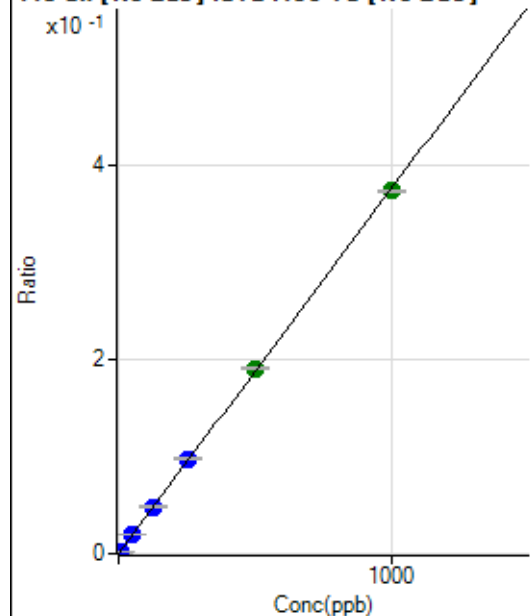
$$R = 0.9999$$

$$DL = 0.1075$$

$$BEC = 0.3845$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	783.39	0.0001	P	7.5
2	☐	0.500	0.522	3303.36	0.0003	P	6.5
3	☐	5.000	5.387	26724.70	0.0021	P	4.5
4	☐	50.000	51.677	256627.95	0.0195	P	0.3
5	☐	125.000	128.783	649596.30	0.0484	P	1.3
6	☐	250.000	260.386	1300013.54	0.0978	P	0.6
7	☐	500.000	506.453	2591695.87	0.1902	A	1.2
8	☐	1000.000	993.618	5098580.89	0.3731	A	0.8
9	☐			13613.07	0.0010	P	5.9

$$y = 3.7542\text{E-}004 * x + 6.0263\text{E-}005$$

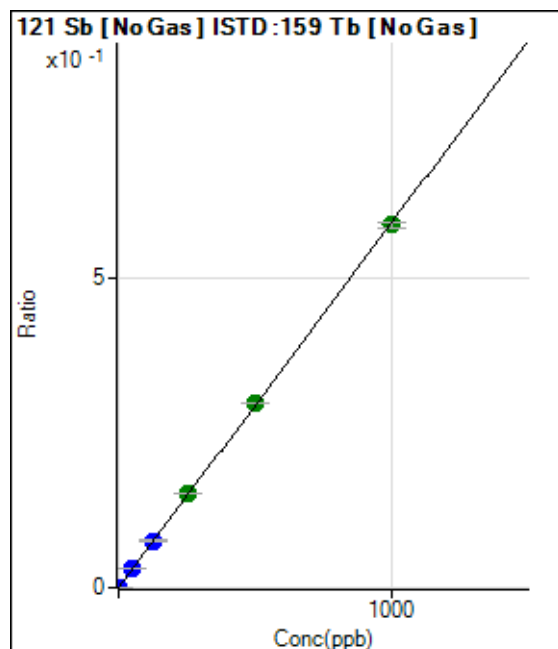
$$R = 0.9999$$

$$DL = 0.03615$$

$$BEC = 0.1605$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	122.23	0.0000	P	50.9
2	☐	0.200	0.191	1572.40	0.0001	P	9.5
3	☐	2.000	2.048	15559.62	0.0012	P	5.1
4	☐	50.000	51.535	399261.75	0.0303	P	0.8
5	☐	125.000	128.382	1011900.83	0.0754	P	2.2
6	☐	250.000	259.335	2024388.76	0.1523	A	0.4
7	☐	500.000	504.909	4041209.98	0.2966	A	0.5
8	☐	1000.000	994.712	7983988.20	0.5842	A	1.4
9	☐			21248.22	0.0016	P	3.1

$$y = 5.8733\text{E-}004 * x + 9.3775\text{E-}006$$

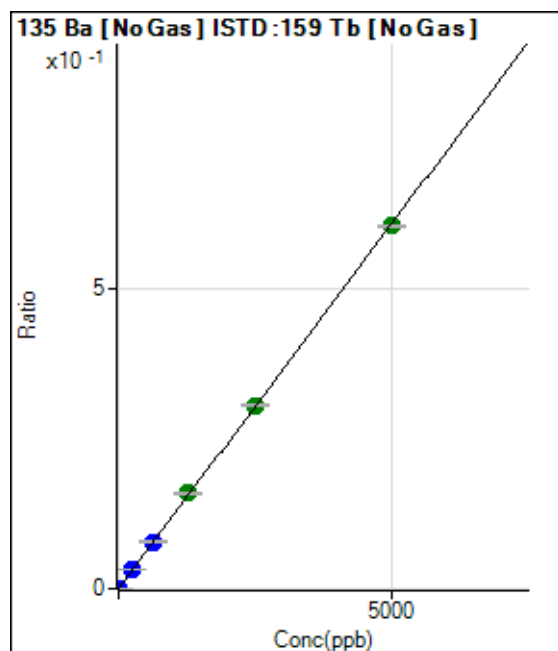
$$R = 0.9999$$

$$DL = 0.0244$$

$$BEC = 0.01597$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47.23	0.0000	P	19.3
2	☐	1.000	1.018	1647.40	0.0001	P	10.0
3	☐	10.000	9.876	15495.76	0.0012	P	0.6
4	☐	250.000	258.790	415699.42	0.0315	P	0.6
5	☐	625.000	642.356	1049913.56	0.0782	P	1.8
6	☐	1250.000	1307.786	2116806.67	0.1593	A	0.9
7	☐	2500.000	2515.097	4174476.00	0.3063	A	0.7
8	☐	5000.000	4975.396	8281817.81	0.6060	A	0.8
9	☐			1369.58	0.0001	P	8.0

$$y = 1.2180\text{E-}004 * x + 3.6266\text{E-}006$$

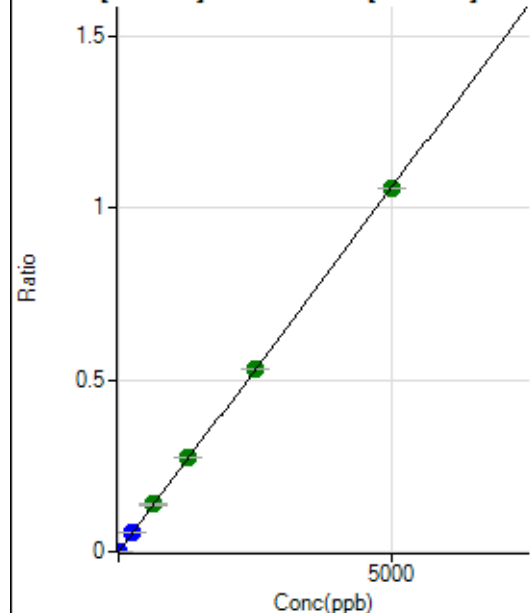
$$R = 0.9999$$

$$DL = 0.01727$$

$$BEC = 0.02978$$

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	80.56	0.0000	P	53.6
2	☐	1.000	0.992	2794.89	0.0002	P	1.5
3	☐	10.000	10.016	27345.78	0.0021	P	2.3
4	☐	250.000	258.291	722268.56	0.0548	P	1.1
5	☐	625.000	649.757	1848836.63	0.1378	A	1.3
6	☐	1250.000	1299.603	3662615.19	0.2756	A	0.8
7	☐	2500.000	2501.085	7226705.54	0.5303	A	0.2
8	☐	5000.000	4983.548	14441002.41	1.0567	A	0.1
9	☐			2286.42	0.0002	P	7.9

$$y = 2.1203\text{E-}004 * x + 6.2027\text{E-}006$$

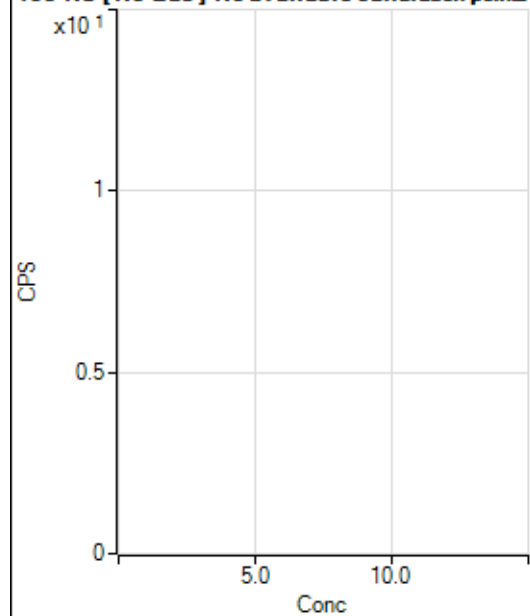
$$R = 0.9999$$

$$DL = 0.04704$$

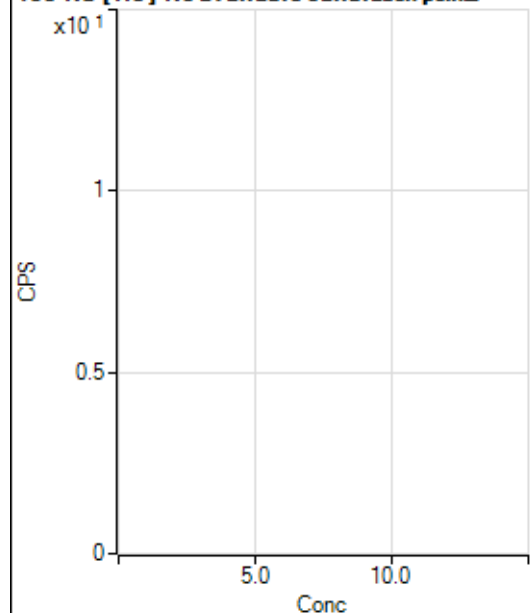
$$BEC = 0.02925$$

Weight: <None>

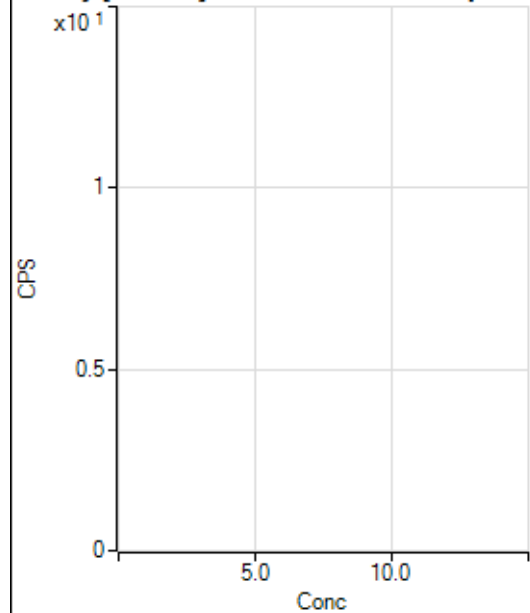
Min Conc: 0

150 Nd [No Gas] No available calibration points

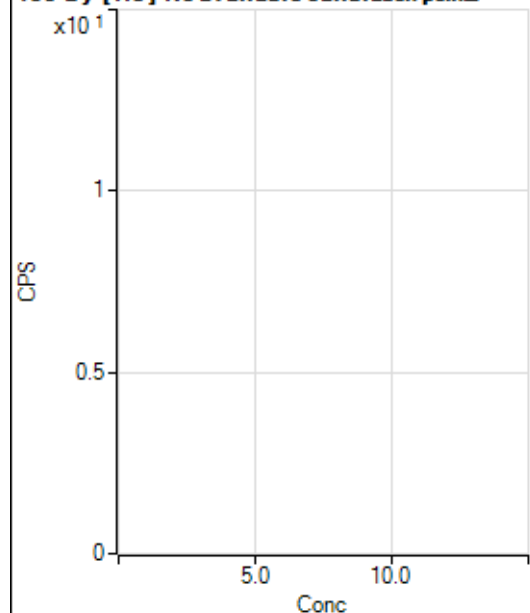
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐			15.55		P	24.8
3	☐			8.89		P	114.
4	☐			35.56		P	21.6
5	☐			64.45		P	23.9
6	☐			86.67		P	30.8
7	☐			171.12		P	19.2
8	☐			388.91		P	4.3
9	☐			77.78		P	32.5

150 Nd [He] No available calibration points

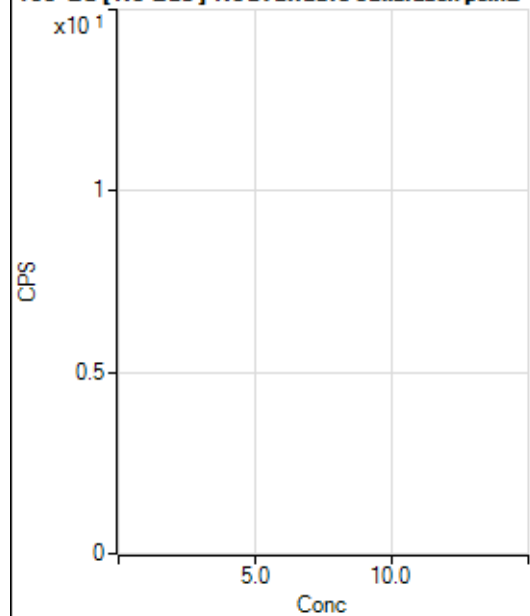
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐			0.00		P	
3	☐			0.00		P	
4	☐			1.11		P	173.
5	☐			3.33		P	100.
6	☐			1.11		P	173.
7	☐			1.11		P	173.
8	☐			18.89		P	36.7
9	☐			10.00		P	33.3

156 Dy [No Gas] No available calibration points

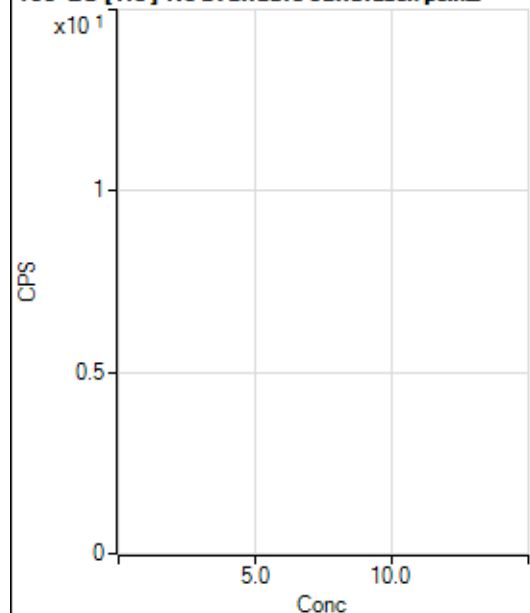
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			16.67		P	50.0
2	☐			13.89		P	69.3
3	☐			11.11		P	43.3
4	☐			38.89		P	32.7
5	☐			47.22		P	53.9
6	☐			33.33		P	25.0
7	☐			80.56		P	43.1
8	☐			138.90		P	36.7
9	☐			72.23		P	17.6

156 Dy [He] No available calibration points

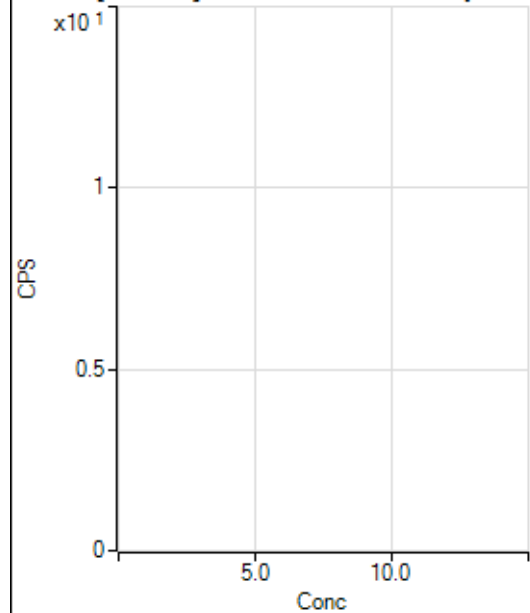
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐			1.11		P	173.
3	☐			1.11		P	173.
4	☐			0.00		P	
5	☐			3.33		P	100.
6	☐			3.33		P	0.0
7	☐			7.78		P	65.5
8	☐			13.33		P	109.
9	☐			8.89		P	142.

160 Gd [No Gas] Noavailable calibration poin_

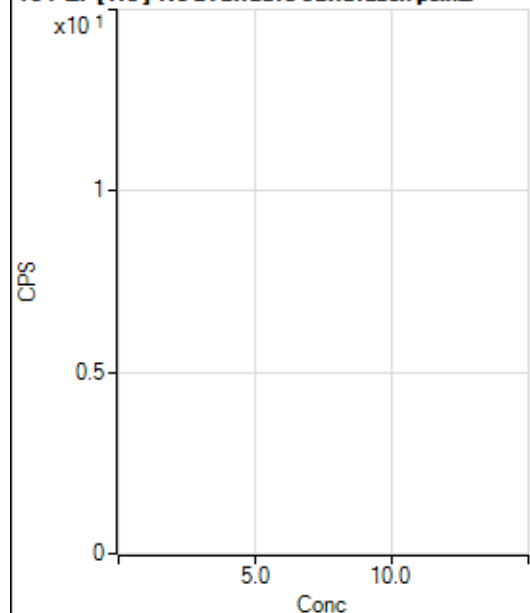
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			66.67		P	25.0
2	☐			72.23		P	17.6
3	☐			72.23		P	24.0
4	☐			66.67		P	12.5
5	☐			77.78		P	43.3
6	☐			80.56		P	23.9
7	☐			111.12		P	18.9
8	☐			138.90		P	24.2
9	☐			100.00		P	8.3

160 Gd [He] No available calibration points

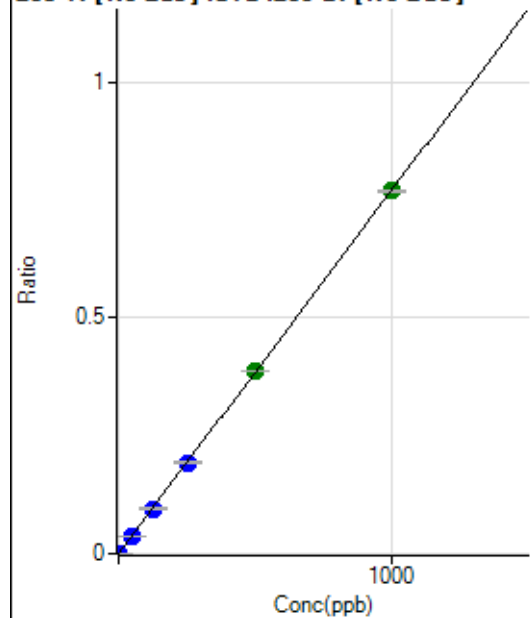
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	57.3
2	☐			8.89		P	78.1
3	☐			11.11		P	17.3
4	☐			4.44		P	43.4
5	☐			8.89		P	57.3
6	☐			10.00		P	66.7
7	☐			14.45		P	26.7
8	☐			25.56		P	39.8
9	☐			16.67		P	20.0

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			38.89		P	12.4
2	☐			69.45		P	36.7
3	☐			44.45		P	109.
4	☐			50.00		P	0.0
5	☐			41.67		P	40.0
6	☐			75.00		P	11.1
7	☐			72.22		P	63.6
8	☐			80.56		P	11.9
9	☐			77.78		P	22.3

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	78.1
2	☐			7.78		P	99.0
3	☐			11.11		P	62.5
4	☐			7.78		P	24.7
5	☐			4.44		P	43.4
6	☐			4.44		P	114.
7	☐			8.89		P	86.6
8	☐			13.34		P	43.3
9	☐			12.22		P	56.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	480.59	0.0001	P	5.7
2	☐	0.100	0.094	1047.32	0.0001	P	10.8
3	☐	1.000	0.979	6396.37	0.0008	P	2.7
4	☐	50.000	48.784	304228.31	0.0376	P	2.0
5	☐	125.000	123.569	777015.85	0.0952	P	1.6
6	☐	250.000	251.300	1567052.71	0.1936	P	0.5
7	☐	500.000	501.683	3197997.21	0.3864	A	0.3
8	☐	1000.000	999.073	6338281.43	0.7695	A	0.5
9	☐			3609.01	0.0005	P	9.3

$$y = 7.7015E-004 * x + 6.0436E-005$$

$$R = 1.0000$$

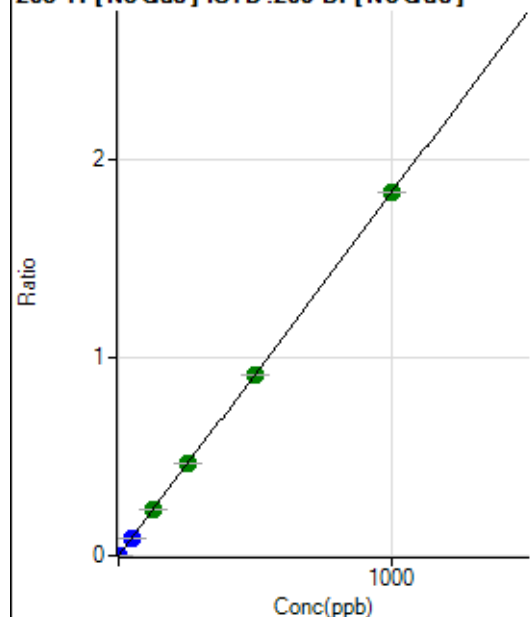
$$DL = 0.01351$$

$$BEC = 0.07847$$

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	861.19	0.0001	P	9.3
2	☐	0.100	0.105	2364.24	0.0003	P	5.4
3	☐	1.000	0.979	14945.52	0.0019	P	2.0
4	☐	50.000	49.223	730452.09	0.0903	P	1.6
5	☐	125.000	126.050	1886465.97	0.2312	A	1.5
6	☐	250.000	254.963	3784106.29	0.4675	A	0.5
7	☐	500.000	498.232	7560010.76	0.9135	A	0.5
8	☐	1000.000	999.551	15095028.29	1.8326	A	0.2
9	☐			8642.26	0.0011	P	6.5

$$y = 0.0018 * x + 1.0830E-004$$

$$R = 1.0000$$

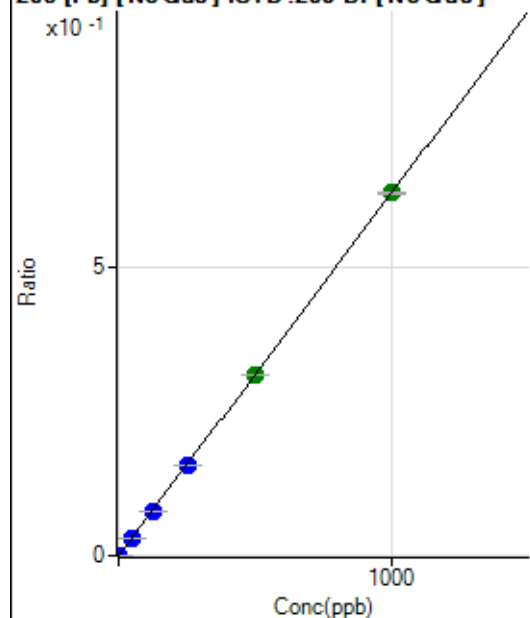
$$DL = 0.01657$$

$$BEC = 0.05908$$

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	240.75	0.0000	P	17.4
2	☐	0.100	0.104	753.75	0.0001	P	4.8
3	☐	1.000	0.987	5112.29	0.0007	P	3.3
4	☐	50.000	48.903	248864.84	0.0308	P	0.9
5	☐	125.000	122.721	629900.93	0.0772	P	1.6
6	☐	250.000	250.092	1273088.34	0.1573	P	0.5
7	☐	500.000	499.951	2601884.29	0.3144	A	0.2
8	☐	1000.000	1000.341	5181369.44	0.6290	A	0.6
9	☐			30206.92	0.0040	P	0.8

$$y = 6.2880E-004 * x + 3.0288E-005$$

$$R = 1.0000$$

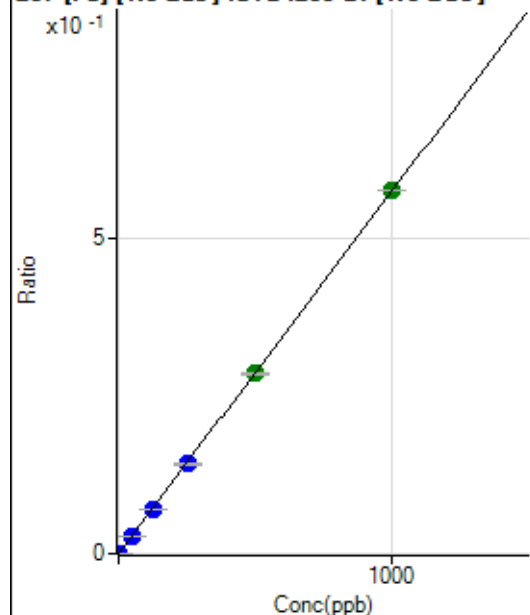
$$DL = 0.02518$$

$$BEC = 0.04817$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	229.64	0.0000	P	6.6
2	☐	0.100	0.093	646.34	0.0001	P	2.8
3	☐	1.000	0.963	4565.79	0.0006	P	3.2
4	☐	50.000	48.224	223814.87	0.0277	P	1.1
5	☐	125.000	121.758	569964.24	0.0699	P	1.6
6	☐	250.000	247.693	1149935.90	0.1421	P	0.7
7	☐	500.000	497.456	2361026.36	0.2853	A	1.3
8	☐	1000.000	1002.343	4734879.21	0.5748	A	0.2
9	☐			26030.87	0.0034	P	1.2

$$y = 5.7345\text{E-}004 * x + 2.8865\text{E-}005$$

$$R = 1.0000$$

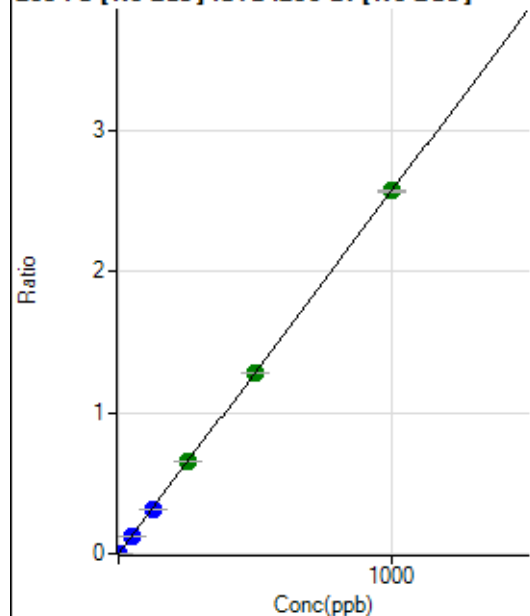
$$DL = 0.009968$$

$$BEC = 0.05034$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1057.46	0.0001	P	2.0
2	☐	0.100	0.097	3005.80	0.0004	P	1.3
3	☐	1.000	0.979	20805.45	0.0026	P	1.4
4	☐	50.000	48.511	1009654.54	0.1249	P	1.3
5	☐	125.000	122.390	2569233.48	0.3149	P	1.3
6	☐	250.000	252.599	5258813.63	0.6497	A	0.4
7	☐	500.000	498.693	10614067.42	1.2826	A	0.7
8	☐	1000.000	1000.404	21191631.66	2.5727	A	0.3
9	☐			119945.97	0.0158	P	2.1

$$y = 0.0026 * x + 1.3296\text{E-}004$$

$$R = 1.0000$$

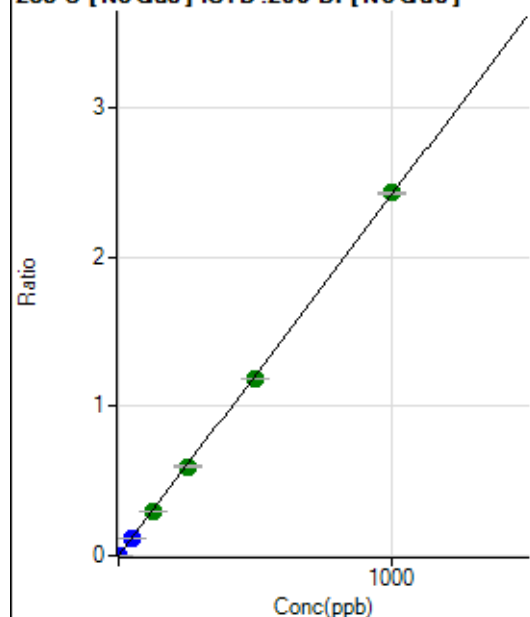
$$DL = 0.00314$$

$$BEC = 0.0517$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.22	0.0000	P	42.7
2	☐	0.100	0.097	1861.35	0.0002	P	10.8
3	☐	1.000	0.955	18139.03	0.0023	P	1.7
4	☐	50.000	47.533	929026.43	0.1149	P	1.1
5	☐	125.000	123.188	2429959.43	0.2978	A	1.2
6	☐	250.000	247.308	4839335.35	0.5978	A	0.8
7	☐	500.000	491.066	9824130.69	1.1871	A	0.5
8	☐	1000.000	1005.490	20021356.18	2.4307	A	0.4
9	☐			2005.83	0.0003	P	21.8

$$y = 0.0024 * x + 2.7901E-006$$

$$R = 0.9999$$

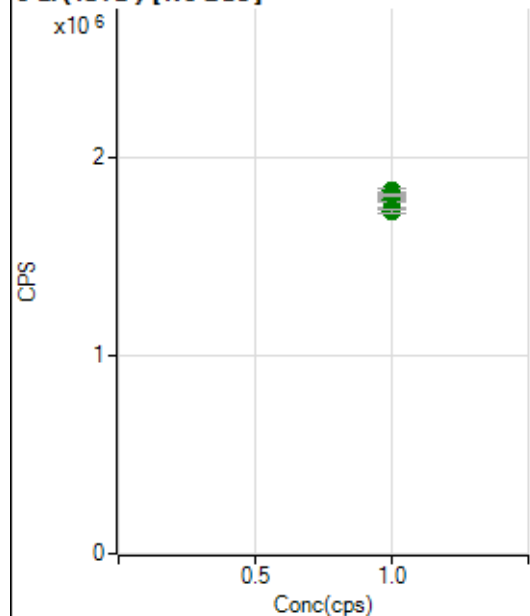
$$DL = 0.001477$$

$$BEC = 0.001154$$

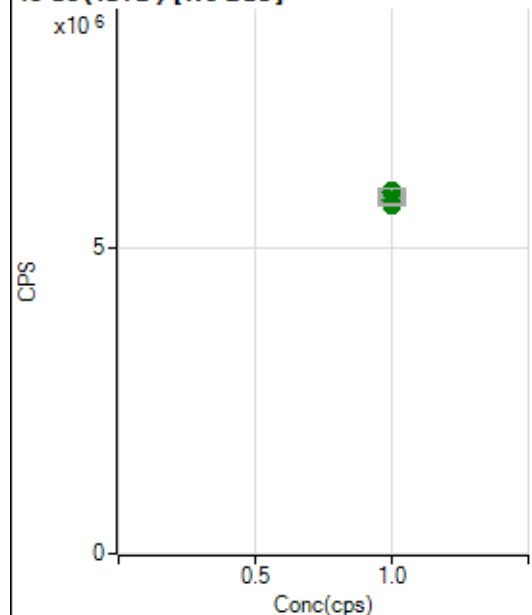
Weight: <None>

Min Conc: 0

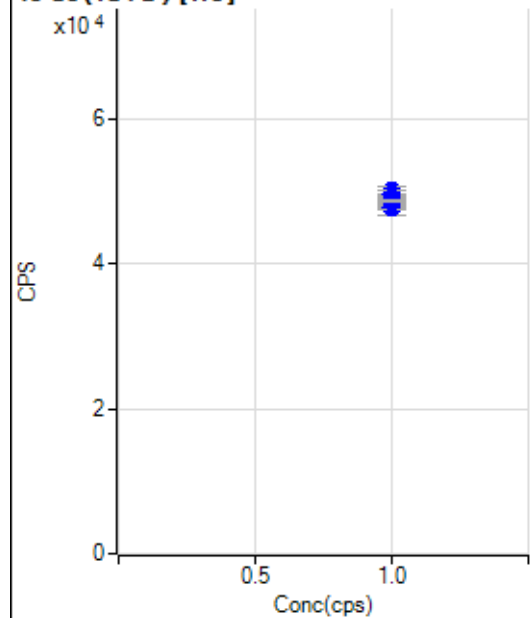
6 Li (ISTD) [No Gas]



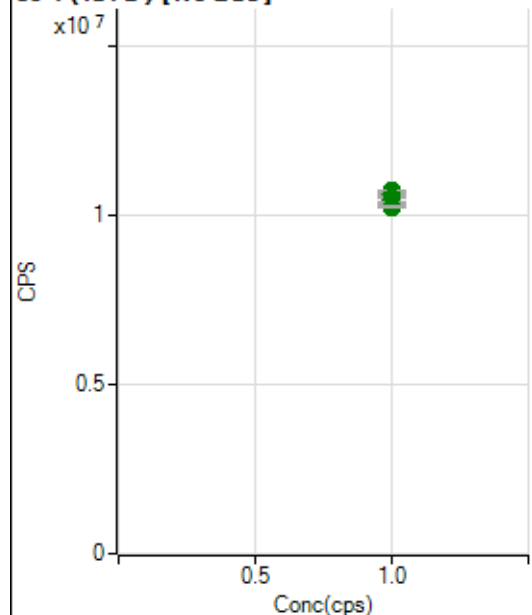
	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1831291.47		A	1.4
2	☐	1.000		1790653.79		A	0.9
3	☐	1.000		1772115.28		A	3.3
4	☐	1.000		1813302.52		A	1.0
5	☐	1.000		1823989.49		A	1.7
6	☐	1.000		1787963.44		A	1.3
7	☐	1.000		1819148.06		A	1.0
8	☐	1.000		1812923.06		A	0.5
9	☐	1.000		1728331.49		A	1.2

45 Sc (ISTD) [No Gas]

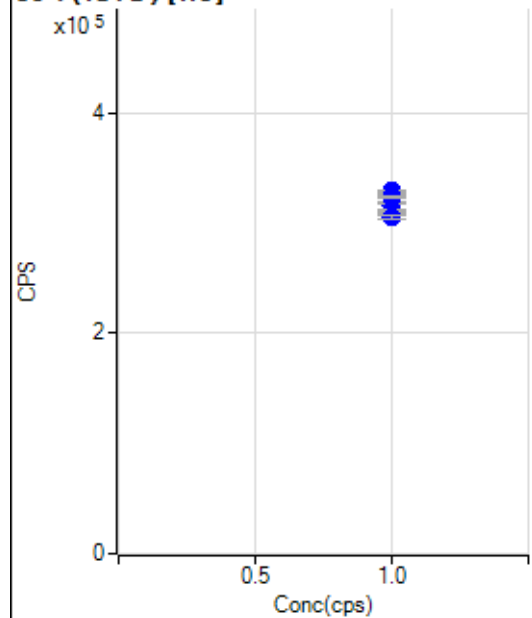
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5799627.17		A	0.7
2	☐	1.000		5772017.71		A	1.2
3	☐	1.000		5791518.79		A	2.9
4	☐	1.000		5934510.68		A	0.7
5	☐	1.000		5916221.14		A	2.3
6	☐	1.000		5775015.75		A	2.3
7	☐	1.000		5798631.42		A	1.0
8	☐	1.000		5682163.76		A	0.1
9	☐	1.000		5711803.38		A	0.9

45 Sc (ISTD) [He]

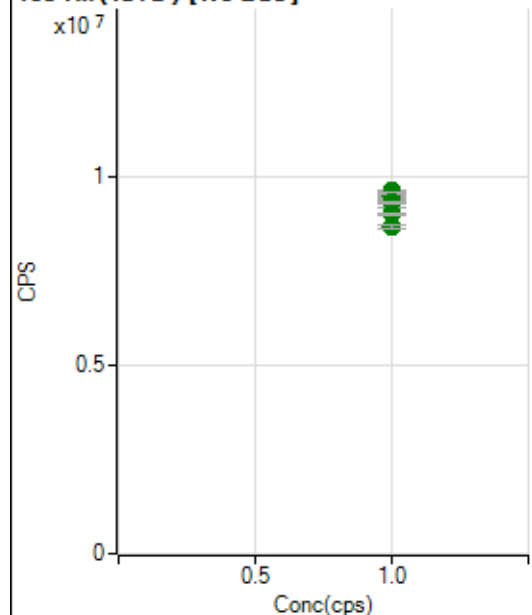
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		49387.82		P	0.4
2	☐	1.000		47965.92		P	5.1
3	☐	1.000		49994.26		P	2.1
4	☐	1.000		49627.52		P	1.9
5	☐	1.000		48908.41		P	0.8
6	☐	1.000		48114.55		P	0.7
7	☐	1.000		47573.77		P	0.9
8	☐	1.000		47744.42		P	0.9
9	☐	1.000		48598.33		P	0.9

89 Y (ISTD) [No Gas]

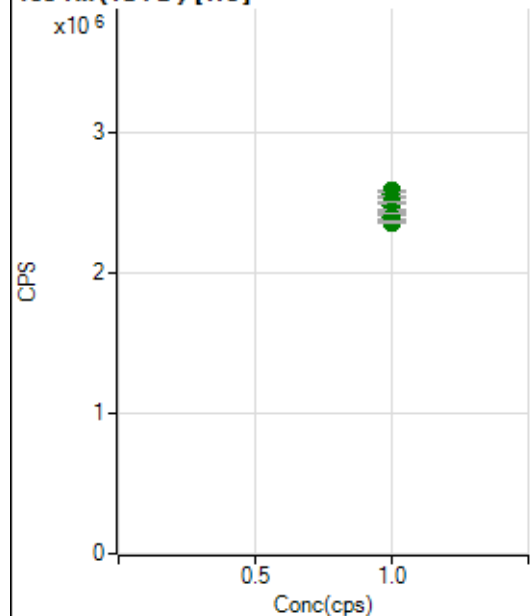
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10570658.25		A	0.9
2	☐	1.000		10477714.71		A	1.4
3	☐	1.000		10398924.85		A	2.6
4	☐	1.000		10732526.51		A	0.6
5	☐	1.000		10666007.34		A	1.6
6	☐	1.000		10465032.28		A	2.4
7	☐	1.000		10515847.00		A	0.4
8	☐	1.000		10393181.51		A	0.3
9	☐	1.000		10247366.17		A	0.6

89 Y (ISTD) [He]

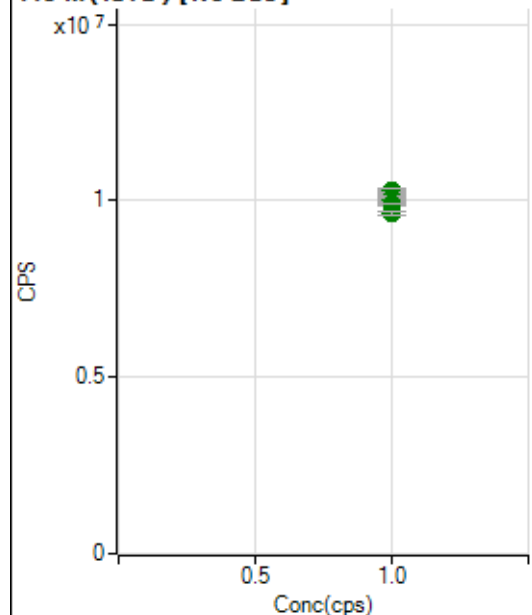
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		323373.63		P	0.7
2	☐	1.000		315045.81		P	4.5
3	☐	1.000		328291.13		P	1.0
4	☐	1.000		329059.98		P	0.5
5	☐	1.000		325247.99		P	0.8
6	☐	1.000		317590.48		P	0.6
7	☐	1.000		310729.52		P	0.4
8	☐	1.000		305835.17		P	1.0
9	☐	1.000		323177.06		P	0.8

103 Rh (ISTD) [No Gas]

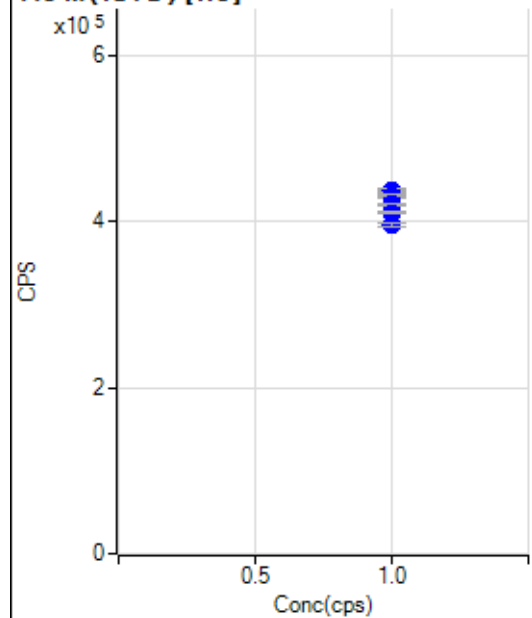
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9561769.31		A	1.1
2	☐	1.000		9509333.89		A	0.9
3	☐	1.000		9426267.57		A	2.6
4	☐	1.000		9648808.64		A	0.2
5	☐	1.000		9570729.55		A	0.6
6	☐	1.000		9323955.25		A	2.4
7	☐	1.000		9337168.00		A	0.9
8	☐	1.000		9028724.16		A	0.6
9	☐	1.000		8688538.21		A	1.2

103 Rh (ISTD) [He]

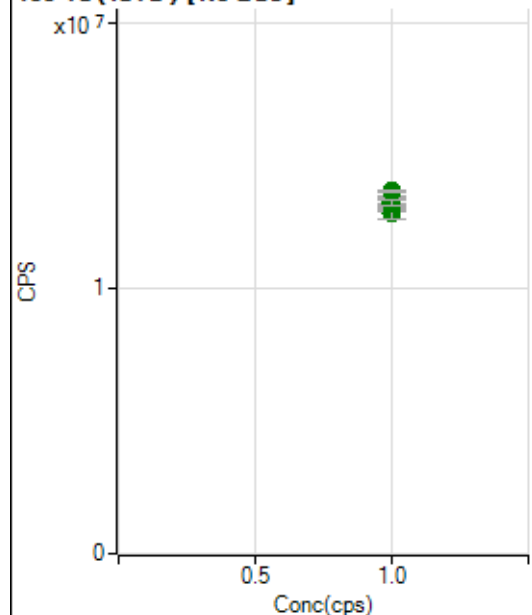
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2557660.22		A	0.7
2	☐	1.000		2470769.88		A	4.7
3	☐	1.000		2582553.94		A	0.5
4	☐	1.000		2561811.35		A	0.8
5	☐	1.000		2537920.26		A	0.5
6	☐	1.000		2503079.32		A	0.4
7	☐	1.000		2441651.06		A	0.4
8	☐	1.000		2401867.88		A	1.3
9	☐	1.000		2358034.65		A	0.8

115 In (ISTD) [No Gas]

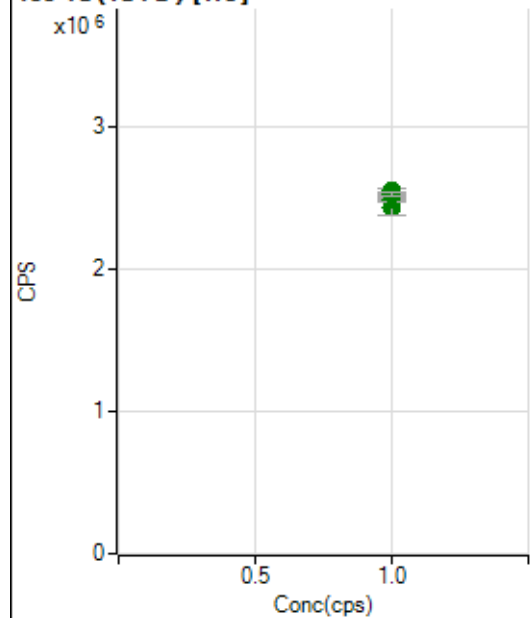
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10172358.84		A	0.9
2	☐	1.000		10070643.09		A	0.6
3	☐	1.000		10023690.38		A	3.3
4	☐	1.000		10268686.37		A	0.8
5	☐	1.000		10276710.04		A	1.1
6	☐	1.000		10089521.89		A	2.6
7	☐	1.000		10103975.87		A	0.7
8	☐	1.000		9925934.56		A	0.1
9	☐	1.000		9652528.68		A	1.3

115 In (ISTD) [He]

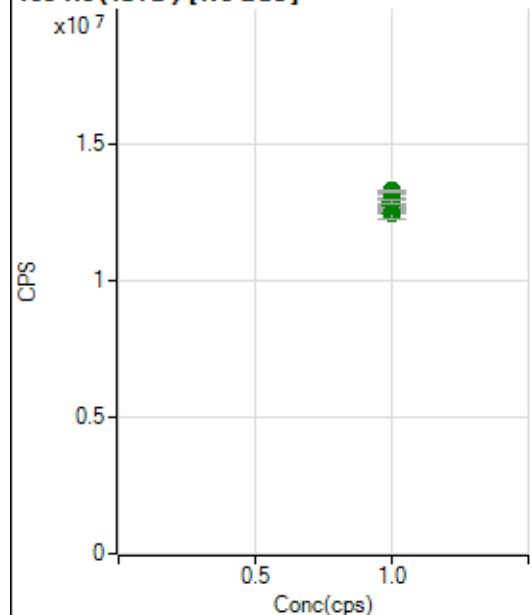
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		430331.14		P	0.7
2	☐	1.000		421947.81		P	4.7
3	☐	1.000		436538.87		P	0.4
4	☐	1.000		436332.45		P	1.2
5	☐	1.000		431162.78		P	0.7
6	☐	1.000		420617.98		P	0.5
7	☐	1.000		408934.29		P	0.3
8	☐	1.000		396332.49		P	0.9
9	☐	1.000		410490.21		P	1.0

159 Tb (ISTD) [No Gas]

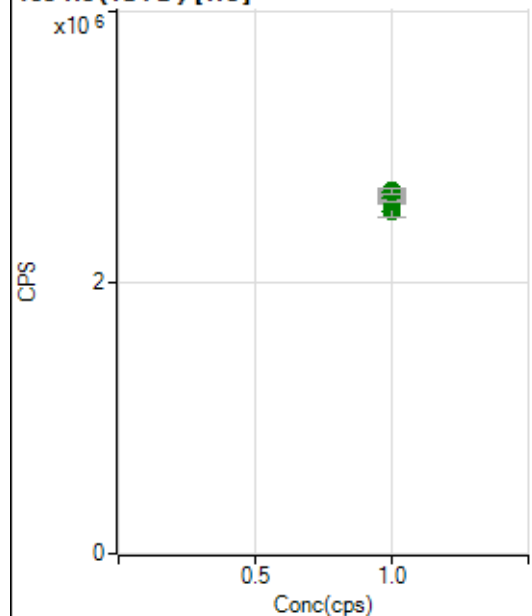
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		13006236.75		A	1.1
2	☐	1.000		12902572.86		A	0.6
3	☐	1.000		12845005.50		A	3.2
4	☐	1.000		13186623.27		A	0.4
5	☐	1.000		13420101.88		A	1.0
6	☐	1.000		13290360.08		A	2.1
7	☐	1.000		13627079.52		A	0.5
8	☐	1.000		13666271.46		A	0.7
9	☐	1.000		13217345.08		A	1.5

159 Tb (ISTD) [He]

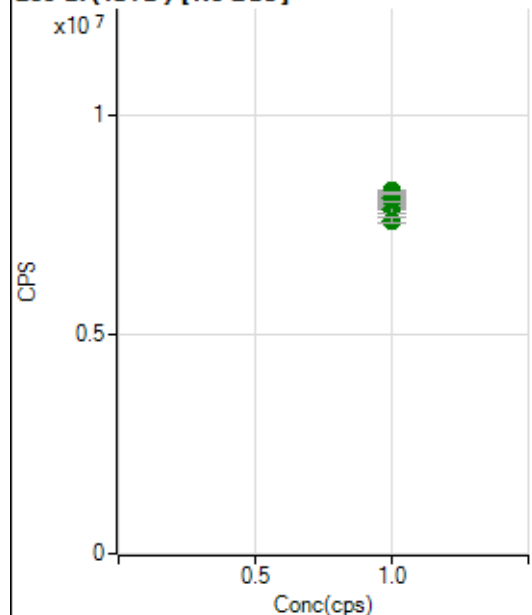
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2525454.11		A	0.7
2	☐	1.000		2437003.16		A	4.0
3	☐	1.000		2552933.96		A	1.1
4	☐	1.000		2550417.29		A	1.3
5	☐	1.000		2539944.91		A	0.6
6	☐	1.000		2504663.32		A	0.4
7	☐	1.000		2518297.17		A	1.6
8	☐	1.000		2491568.99		A	1.2
9	☐	1.000		2526075.47		A	1.2

165 Ho (ISTD) [No Gas]

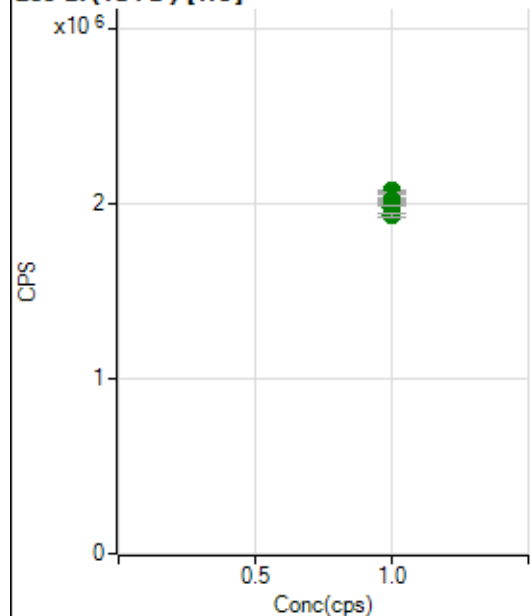
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12637917.73		A	1.4
2	☐	1.000		12481119.20		A	0.4
3	☐	1.000		12457117.81		A	2.9
4	☐	1.000		12751877.11		A	0.7
5	☐	1.000		12936729.11		A	1.4
6	☐	1.000		12832801.07		A	2.0
7	☐	1.000		13214872.78		A	0.1
8	☐	1.000		13291132.24		A	0.4
9	☐	1.000		12894632.58		A	1.6

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2630122.51		A	1.1
2	☐	1.000		2527430.39		A	4.2
3	☐	1.000		2633243.59		A	1.2
4	☐	1.000		2671683.94		A	0.6
5	☐	1.000		2653445.17		A	1.2
6	☐	1.000		2615089.86		A	1.5
7	☐	1.000		2613992.08		A	1.0
8	☐	1.000		2595587.91		A	0.5
9	☐	1.000		2664555.79		A	1.5

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7952707.45		A	0.8
2	☐	1.000		7877119.60		A	0.8
3	☐	1.000		7853987.52		A	2.7
4	☐	1.000		8085466.96		A	0.9
5	☐	1.000		8160509.25		A	1.0
6	☐	1.000		8094171.55		A	1.7
7	☐	1.000		8275764.39		A	0.3
8	☐	1.000		8237092.38		A	0.6
9	☐	1.000		7594340.16		A	1.7

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2069861.67		A	1.1
2	☐	1.000		1979976.36		A	5.0
3	☐	1.000		2062302.87		A	0.6
4	☐	1.000		2076142.19		A	0.6
5	☐	1.000		2062648.89		A	0.3
6	☐	1.000		2027474.50		A	0.6
7	☐	1.000		2008459.22		A	0.7
8	☐	1.000		1990332.82		A	0.3
9	☐	1.000		1936812.99		A	1.5

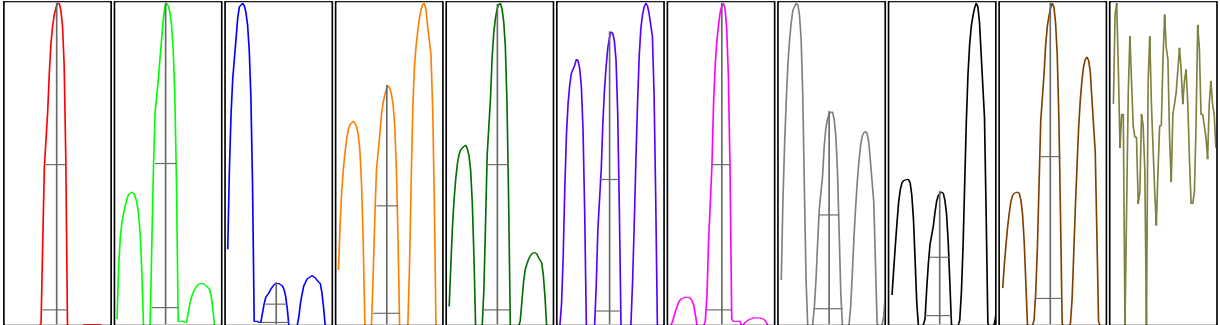
US EPA Tune Check Sample Report

Batch Folder D:\P8070618MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]					
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)	
9	5648	4.11	5.00		
24	96326	3.13	5.00		
25	12725	2.86	5.00		
26	14711	2.16	5.00		
59	60574	1.97	5.00		
113	8515	2.75	5.00		
115	107360	2.73	5.00		
206	24823	2.53	5.00		
207	22755	3.16	5.00		
208	54128	3.11	5.00		
220	1	10.73			

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	5718	5861	5287	5815	5560
24	96884	99531	92887	98810	93520
25	12745	13103	12337	13063	12378
26	14724	15074	14292	14952	14514
59	60779	61836	58830	60016	61411
113	8722	8677	8351	8185	8638
115	111067	108027	105467	103511	108727
206	25420	24126	24272	24812	25484
207	23369	21923	22076	22944	23462
208	55308	52545	52138	54758	55891
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	9900	9.00	8.9 - 9.1		0.737	0.900	
24	161260	23.95	23.9 - 24.1		0.784	0.900	
25	21288	24.95	24.9 - 25.1		0.788	0.900	
26	24998	25.95	25.9 - 26.1		0.781	0.900	
59	106772	58.95	58.9 - 59.1		0.772	0.900	
113	16309	113.00	112.9 - 113.1		0.726	0.900	
115	204184	115.05	114.9 - 115.1		0.724	0.900	
206	45711	205.95	205.9 - 206.1		0.777	0.900	
207	41570	206.95	206.9 - 207.1		0.735	0.900	
208	100441	207.95	207.9 - 208.1		0.748	0.900	
220			-				

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

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.6	V	Deflect	14.4	V
Extract 2	-230.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-90	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	8056	2.45	
89	7891	2.38	
205	10745	2.45	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	7723	8131	8244	8117	8064
89	7582	7932	8094	7910	7934
205	10287	10909	10919	10837	10774

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	8.6	V	Deflect	1.8	V
Extract 2	-230.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-90	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	180	V			