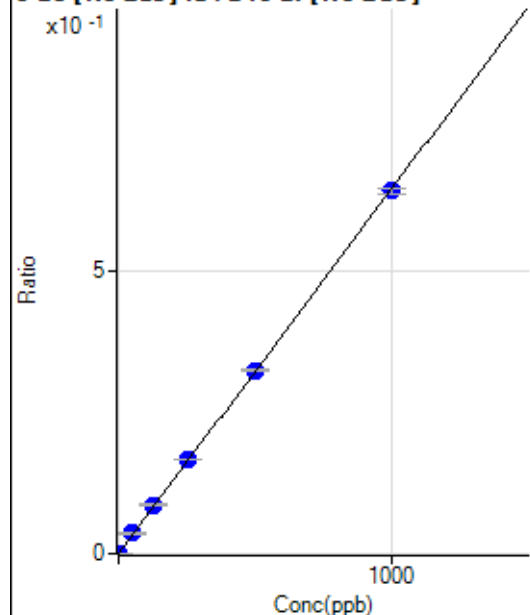


Batch Folder: D:\P8102118-MS.b\
Analysis File: P8102118-MS.batch.bin
DA Date-Time: 2018-10-21 20:35:28
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-10-21 12:43:05
2			
3	005CAL.S.d	S02	2018-10-21 12:49:48
4	006CAL.S.d	S03	2018-10-21 12:54:05
5	007CAL.S.d	S04	2018-10-21 12:57:48
6	008CAL.S.d	S05	2018-10-21 13:01:23
7	009CAL.S.d	S06	2018-10-21 13:04:54
8	010CAL.S.d	S07	2018-10-21 13:08:22
9	011CAL.S.d	S08	2018-10-21 13:11:46

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	96.30	0.0001	P	17.4
2	☐	0.100					
3	☐	1.000	1.093	1351.95	0.0008	P	8.0
4	☐	50.000	56.781	61044.44	0.0368	P	8.1
5	☐	125.000	134.256	147031.96	0.0869	P	0.9
6	☐	250.000	256.815	272356.86	0.1661	P	0.7
7	☐	500.000	503.334	490280.35	0.3255	P	0.7
8	☐	1000.000	995.133	936951.59	0.6435	P	1.3
9	☐			740.78	0.0005	P	13.2

$$y = 6.4655\text{E-}004 * x + 5.3917\text{E-}005$$

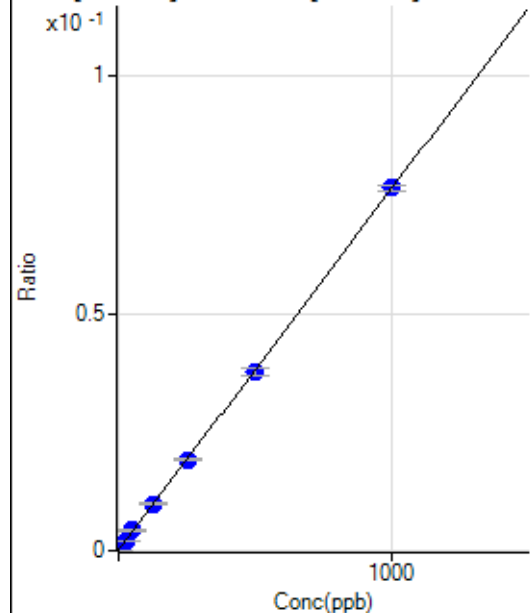
$$R = 0.9999$$

$$DL = 0.04354$$

$$BEC = 0.08339$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	138.90	0.0001	P	14.0
2	☐	2.500					
3	☐	25.000	25.291	3564.48	0.0020	P	0.4
4	☐	50.000	56.034	7232.69	0.0043	P	4.5
5	☐	125.000	128.665	16732.68	0.0099	P	2.9
6	☐	250.000	249.670	31332.42	0.0191	P	1.9
7	☐	500.000	492.658	56665.75	0.0376	P	4.6
8	☐	1000.000	1002.987	111441.43	0.0765	P	1.5
9	☐			4723.22	0.0032	P	16.4

$$y = 7.6226\text{E-}005 * x + 7.7794\text{E-}005$$

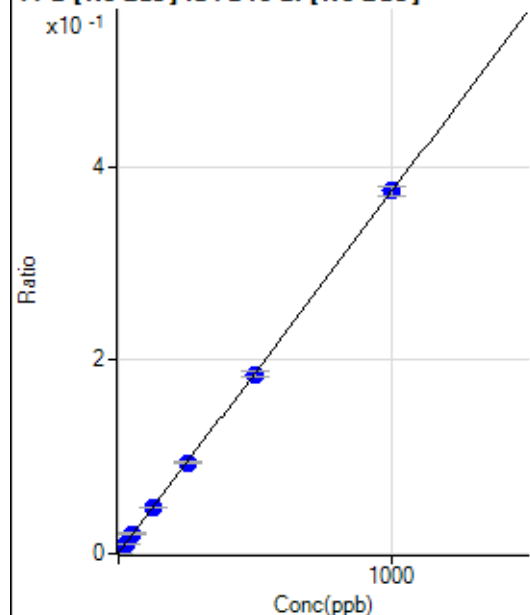
$$R = 0.9999$$

$$DL = 0.4285$$

$$BEC = 1.021$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	708.38	0.0004	P	24.3
2	☐	2.500					
3	☐	25.000	25.468	17625.38	0.0099	P	3.0
4	☐	50.000	54.387	34445.06	0.0207	P	6.0
5	☐	125.000	127.714	81473.07	0.0481	P	2.3
6	☐	250.000	249.819	153751.15	0.0938	P	1.9
7	☐	500.000	494.795	279127.56	0.1853	P	2.8
8	☐	1000.000	1002.078	545910.10	0.3749	P	2.8
9	☐			22671.70	0.0156	P	9.6

$$y = 3.7377\text{E-}004 * x + 3.9722\text{E-}004$$

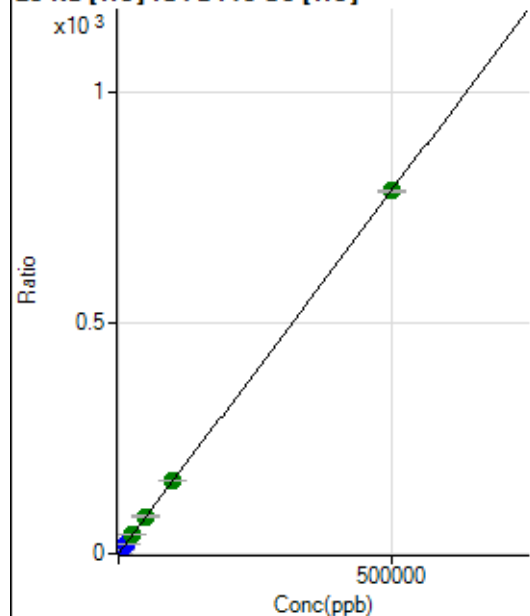
$$R = 1.0000$$

$$DL = 0.7761$$

$$BEC = 1.063$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	4045.19	0.0869	P	7.3
2	☐	50.000					
3	☐	500.000	458.630	38745.48	0.8075	P	2.6
4	☐	5000.000	4828.128	342892.98	7.6721	P	0.1
5	☐	12500.000	12355.252	809107.18	19.4976	P	1.1
6	☐	25000.000	25302.035	1447973.93	39.8375	A	1.0
7	☐	50000.000	51532.330	2610574.21	81.0465	A	0.7
8	☐	100000.00	100410.38	5084707.53	157.8360	A	0.7
9	☐	500000.00	499754.96	28210090.56	785.2238	A	0.8

$$y = 0.0016 * x + 0.0869$$

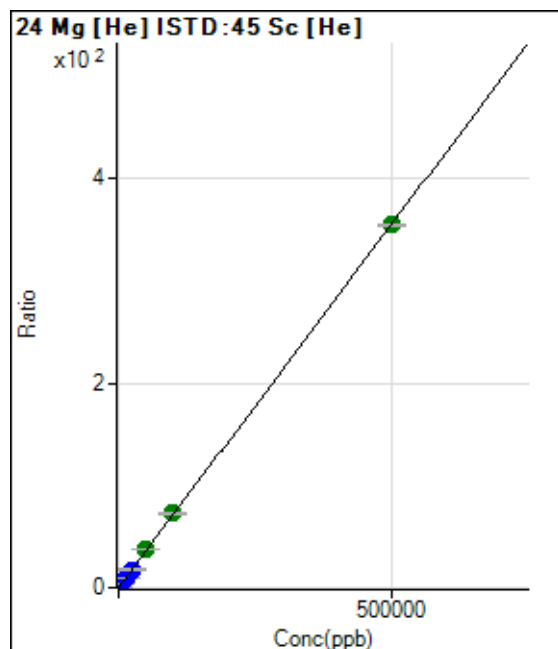
$$R = 1.0000$$

$$DL = 12.13$$

$$BEC = 55.33$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	425.03	0.0091	P	22.8
2	☐	50.000					
3	☐	500.000	459.923	16115.34	0.3358	P	0.5
4	☐	5000.000	4896.355	155876.41	3.4877	P	0.2
5	☐	12500.000	12414.308	366373.41	8.8289	P	1.2
6	☐	25000.000	25118.233	648935.96	17.8544	P	0.9
7	☐	50000.000	52512.141	1202007.49	37.3165	A	0.2
8	☐	100000.00	102275.99	2340839.12	72.6713	A	2.1
9	☐	500000.00	499290.89	12744040.82	354.7315	A	0.8

$$y = 7.1045\text{E-}004 * x + 0.0091$$

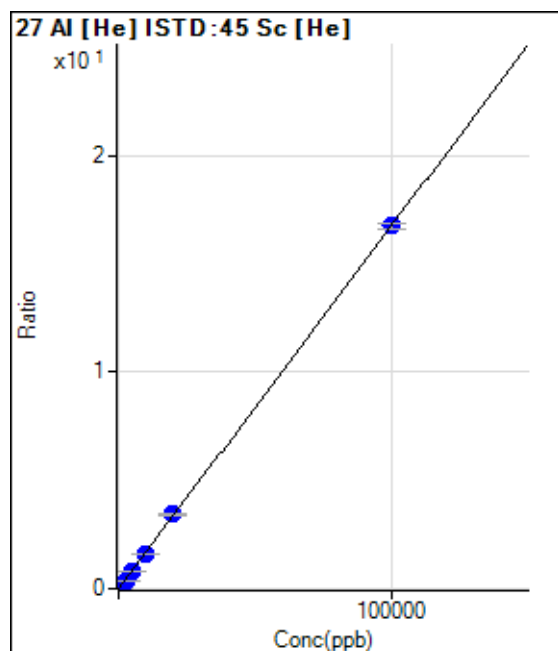
$$R = 1.0000$$

$$DL = 8.74$$

$$BEC = 12.78$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	10.00	0.0002	P	28.1
2	☐	2.000					
3	☐	20.000	19.039	163.38	0.0034	P	16.3
4	☐	1000.000	929.989	6974.37	0.1560	P	1.3
5	☐	2500.000	2327.512	16193.36	0.3902	P	1.1
6	☐	5000.000	4703.056	28653.48	0.7883	P	0.3
7	☐	10000.000	9637.071	52022.51	1.6150	P	0.1
8	☐	20000.000	20431.299	110294.53	3.4237	P	0.8
9	☐	100000.00	99969.893	601788.96	16.7513	P	1.4

$$y = 1.6756\text{E-}004 * x + 2.1565\text{E-}004$$

$$R = 1.0000$$

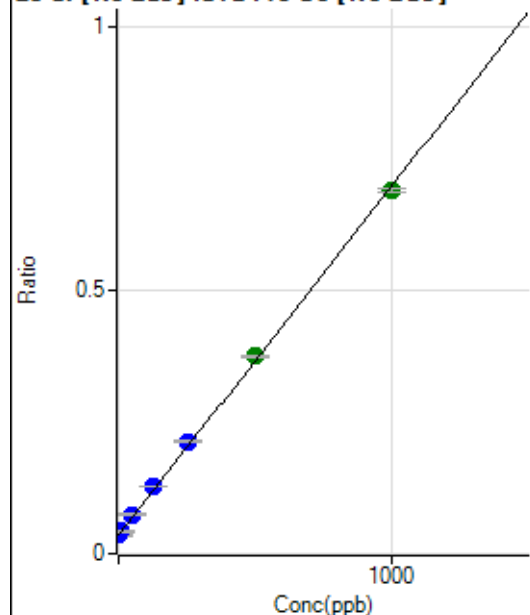
$$DL = 1.087$$

$$BEC = 1.287$$

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	189684.72	0.0353	P	12.1
2	☐	1.000					
3	☐	10.000	10.353	233962.90	0.0422	P	1.1
4	☐	50.000	59.083	377608.70	0.0745	P	5.8
5	☐	125.000	138.420	648810.14	0.1271	P	0.6
6	☐	250.000	268.916	1029990.69	0.2136	P	0.3
7	☐	500.000	512.412	1610114.28	0.3749	A	1.0
8	☐	1000.000	986.930	2873958.07	0.6894	A	1.0
9	☐			194018.39	0.0456	P	5.1

$$y = 6.6267\text{E-}004 * x + 0.0353$$

$$R = 0.9996$$

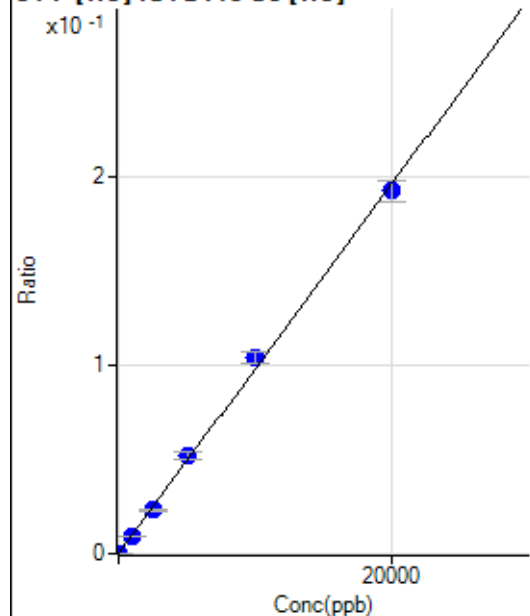
$$DL = 19.37$$

$$BEC = 53.34$$

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	0.296	5.55	0.0001	P	86.7
2	☐	0.000					
3	☐	0.000	-0.296	5.55	0.0001	P	86.6
4	☐	1000.000	928.920	411.14	0.0092	P	6.1
5	☐	2500.000	2378.485	969.52	0.0234	P	4.6
6	☐	5000.000	5334.195	1897.42	0.0523	P	7.8
7	☐	10000.000	10576.198	3333.90	0.1035	P	5.9
8	☐	20000.000	19647.095	6190.52	0.1921	P	6.2
9	☐			19.44	0.0005	P	66.4

$$y = 9.7735\text{E-}006 * x + 1.1870\text{E-}004$$

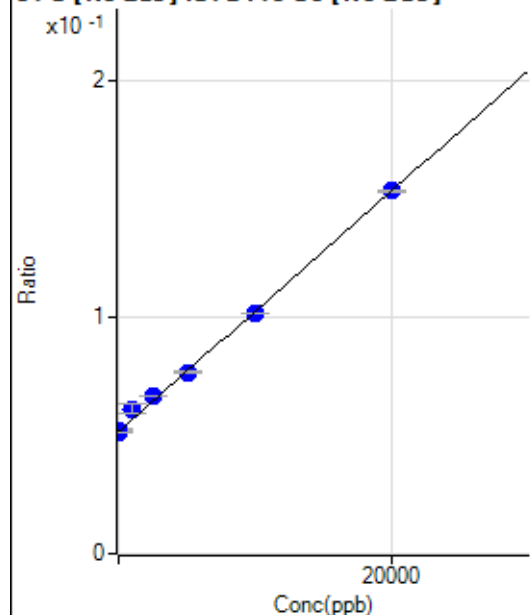
$$R = 0.9991$$

$$DL = 31.57$$

$$BEC = 12.15$$

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	102.875	280359.72	0.0523	P	1.3
2	☐	0.000					
3	☐	0.000	-102.875	283819.24	0.0512	P	0.9
4	☐	1000.000	1881.299	310637.69	0.0613	P	6.4
5	☐	2500.000	2954.232	340888.80	0.0668	P	0.7
6	☐	5000.000	4920.250	370305.75	0.0768	P	0.9
7	☐	10000.000	9863.285	437838.89	0.1019	P	0.3
8	☐	20000.000	19987.451	639889.33	0.1535	P	0.6
9	☐			228844.57	0.0538	P	3.0

$$y = 5.0910\text{E-}006 * x + 0.0517$$

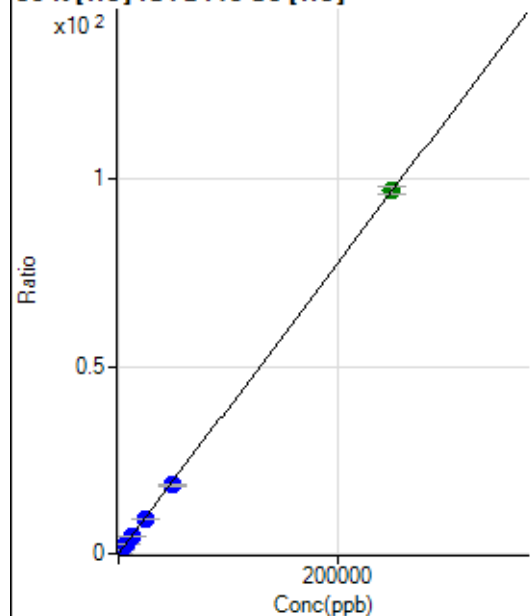
$$R = 0.9988$$

$$DL = 333.4$$

$$BEC = 1.016\text{E}+04$$

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	2261.39	0.0485	P	1.4
2	☐	50.000					
3	☐	500.000	486.737	11352.31	0.2366	P	2.3
4	☐	2500.000	2428.289	44100.59	0.9867	P	0.5
5	☐	6250.000	6189.199	101251.66	2.4399	P	2.0
6	☐	12500.000	11985.264	170079.76	4.6794	P	0.8
7	☐	25000.000	23910.613	299136.10	9.2871	P	0.8
8	☐	50000.000	47096.094	587763.45	18.2456	P	1.0
9	☐	250000.00	250717.72	3481985.63	96.9213	A	2.3

$$y = 3.8638\text{E-}004 * x + 0.0485$$

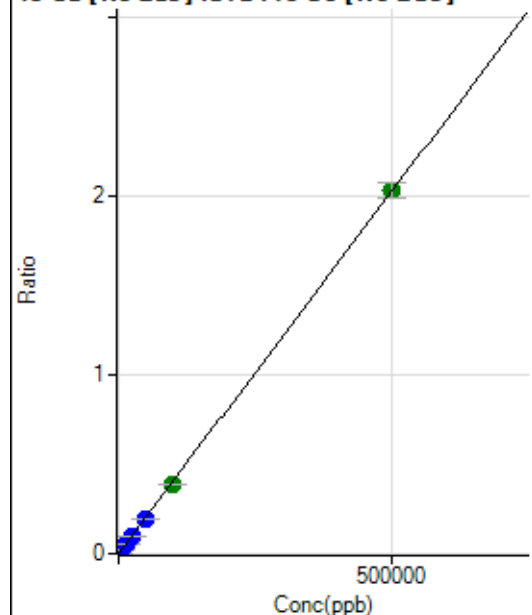
$$R = 0.9999$$

$$DL = 5.326$$

$$BEC = 125.5$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	330.58	0.0001	P	6.9
2	☐	50.000					
3	☐	500.000	441.831	10254.19	0.0018	P	2.0
4	☐	5000.000	5049.912	103897.06	0.0205	P	6.1
5	☐	12500.000	12067.886	249709.33	0.0489	P	0.6
6	☐	25000.000	23614.512	461300.99	0.0956	P	0.4
7	☐	50000.000	47757.288	830450.64	0.1934	P	0.9
8	☐	100000.00	95458.987	1611074.43	0.3864	A	1.4
9	☐	500000.00	501212.11	8630256.36	2.0288	A	4.2

$$y = 4.0476\text{E-}006 * x + 6.1568\text{E-}005$$

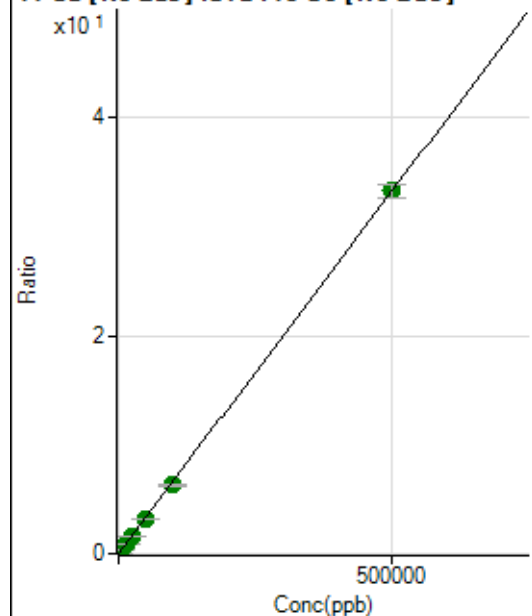
$$R = 1.0000$$

$$DL = 3.171$$

$$BEC = 15.21$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	13154.01	0.0025	P	1.6
2	☐	50.000					
3	☐	500.000	447.956	178475.60	0.0322	P	0.4
4	☐	5000.000	5083.414	1722460.61	0.3400	A	7.1
5	☐	12500.000	12018.728	4087275.74	0.8006	A	1.4
6	☐	25000.000	23475.485	7530670.13	1.5614	A	0.3
7	☐	50000.000	47406.871	13531418.70	3.1506	A	0.3
8	☐	100000.00	94543.140	26184986.00	6.2807	A	0.7
9	☐	500000.00	501438.16	141683171.2	33.3012	A	3.5

$$y = 6.6406\text{E-}005 * x + 0.0025$$

$$R = 0.9999$$

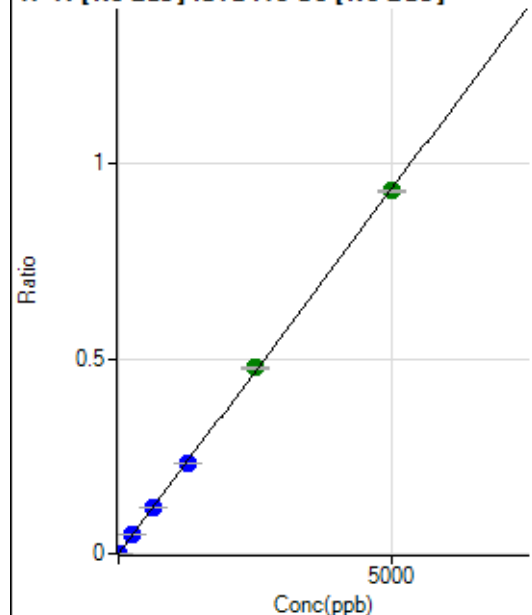
$$DL = 1.794$$

$$BEC = 36.91$$

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	111.12	0.0000	P	34.0
2	☐	0.500					
3	☐	5.000	4.851	5148.44	0.0009	P	1.9
4	☐	250.000	263.729	250147.54	0.0494	P	7.4
5	☐	625.000	636.041	607976.99	0.1191	P	0.7
6	☐	1250.000	1242.414	1121780.72	0.2326	P	0.6
7	☐	2500.000	2549.049	2049342.67	0.4772	A	0.9
8	☐	5000.000	4975.306	3882861.42	0.9313	A	0.8
9	☐			1608.50	0.0004	P	10.3

$$y = 1.8719\text{E-}004 * x + 2.0732\text{E-}005$$

$$R = 0.9999$$

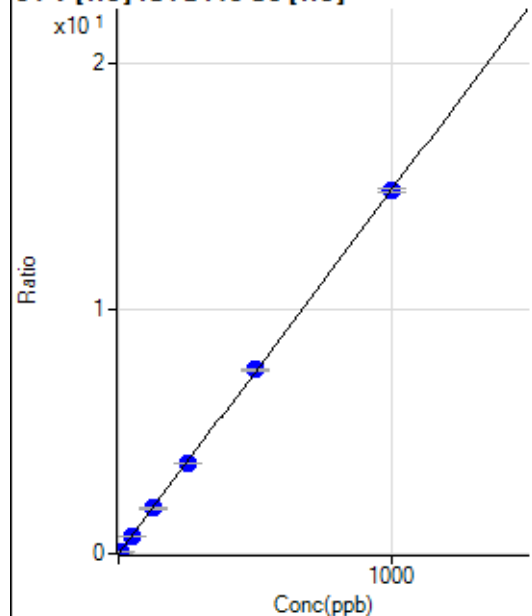
$$DL = 0.1131$$

$$BEC = 0.1108$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	11.11	0.0002	P	44.9
2	☐	0.500					
3	☐	5.000	4.621	3304.89	0.0689	P	6.3
4	☐	50.000	49.189	32670.40	0.7310	P	0.7
5	☐	125.000	124.358	76676.23	1.8477	P	0.8
6	☐	250.000	247.965	133909.52	3.6841	P	0.7
7	☐	500.000	505.505	241904.48	7.5101	P	0.7
8	☐	1000.000	997.879	477567.99	14.8249	P	1.1
9	☐			213.34	0.0059	P	21.3

$$y = 0.0149 * x + 2.3732\text{E-}004$$

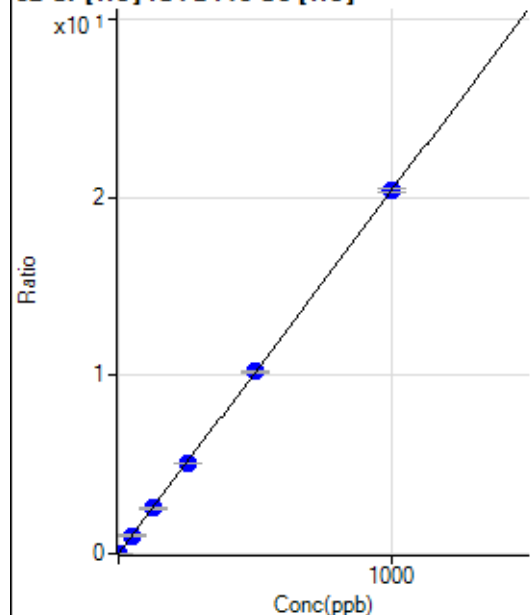
$$R = 1.0000$$

$$DL = 0.02152$$

$$BEC = 0.01597$$

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	388.90	0.0084	P	10.0
2	☐	0.200					
3	☐	2.000	1.976	2333.57	0.0486	P	2.3
4	☐	50.000	49.551	45493.96	1.0180	P	1.7
5	☐	125.000	124.223	105378.35	2.5394	P	1.1
6	☐	250.000	249.240	184885.63	5.0866	P	0.8
7	☐	500.000	501.187	329186.45	10.2201	P	0.8
8	☐	1000.000	999.716	656446.95	20.3776	P	1.0
9	☐			30857.47	0.8589	P	1.5

$$y = 0.0204 * x + 0.0084$$

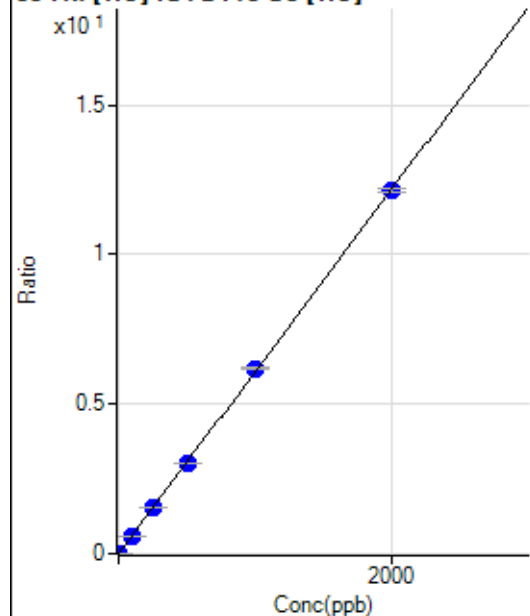
$$R = 1.0000$$

$$DL = 0.1228$$

$$BEC = 0.4106$$

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	36.67	0.0008	P	37.2
2	☐	0.100					
3	☐	1.000	0.962	318.90	0.0066	P	6.3
4	☐	100.000	99.012	26972.96	0.6035	P	0.5
5	☐	250.000	250.754	63376.28	1.5272	P	0.5
6	☐	500.000	496.800	109951.87	3.0250	P	1.2
7	☐	1000.000	1016.633	199367.01	6.1894	P	0.6
8	☐	2000.000	1992.439	390737.99	12.1296	P	1.2
9	☐			2462.48	0.0686	P	5.1

$$y = 0.0061 * x + 7.9060E-004$$

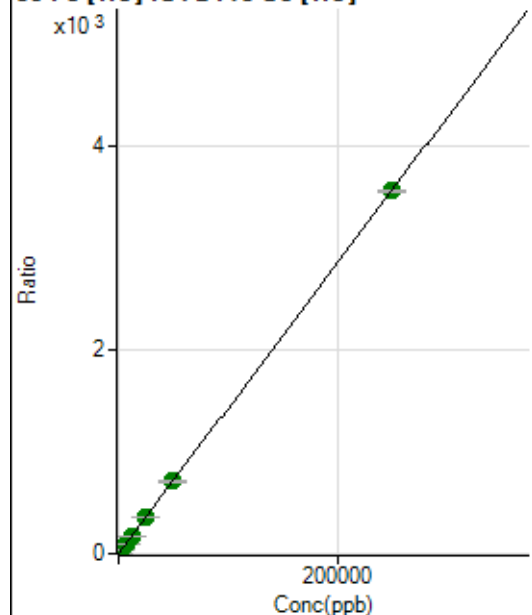
$$R = 0.9999$$

$$DL = 0.1451$$

$$BEC = 0.1299$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1333.44	0.0286	P	1.9
2	☐	5.000					
3	☐	50.000	46.597	33234.52	0.6926	P	1.5
4	☐	2500.000	2479.524	1580422.10	35.3611	A	0.4
5	☐	6250.000	6242.226	3692427.86	88.9785	A	1.1
6	☐	12500.000	12363.626	6404231.80	176.2067	A	1.0
7	☐	25000.000	25433.874	11674695.98	362.4539	A	0.7
8	☐	50000.000	49745.679	22836657.45	708.8900	A	0.8
9	☐	250000.00	250014.69	127989003.7	3,562.664	A	0.6

$$y = 0.0142 * x + 0.0286$$

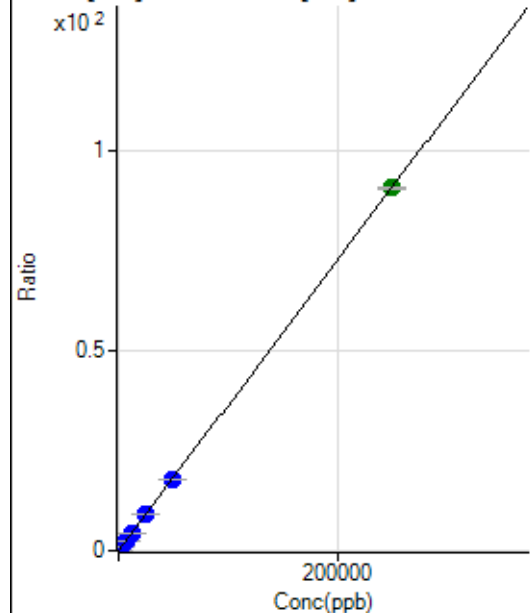
$$R = 1.0000$$

$$DL = 0.1166$$

$$BEC = 2.008$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	31.48	0.0007	P	57.9
2	☐	5.000					
3	☐	50.000	49.886	901.91	0.0188	P	8.9
4	☐	2500.000	2430.070	39463.70	0.8830	P	1.6
5	☐	6250.000	6125.401	92315.20	2.2246	P	1.6
6	☐	12500.000	12202.841	161063.15	4.4311	P	0.6
7	☐	25000.000	25038.243	292828.64	9.0912	P	1.0
8	☐	50000.000	49399.393	577802.41	17.9359	P	0.8
9	☐	250000.00	250134.96	3262598.34	90.8163	A	0.5

$$y = 3.6307E-004 * x + 6.8634E-004$$

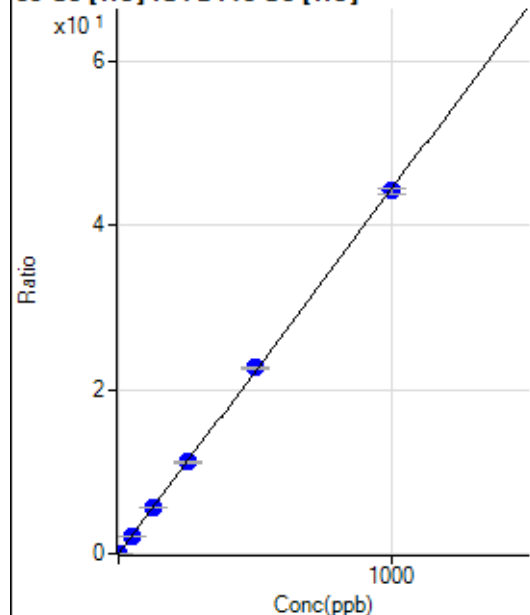
$$R = 1.0000$$

$$DL = 3.282$$

$$BEC = 1.89$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	78.89	0.0017	P	42.3
2	☐	0.100					
3	☐	1.000	0.946	2093.53	0.0436	P	6.1
4	☐	50.000	49.495	98209.18	2.1974	P	0.2
5	☐	125.000	125.199	230553.43	5.5559	P	1.1
6	☐	250.000	250.957	404696.22	11.1348	P	1.0
7	☐	500.000	509.672	728338.31	22.6121	P	0.7
8	☐	1000.000	994.925	1421873.61	44.1393	P	1.2
9	☐			2726.99	0.0759	P	0.5

$$y = 0.0444 * x + 0.0017$$

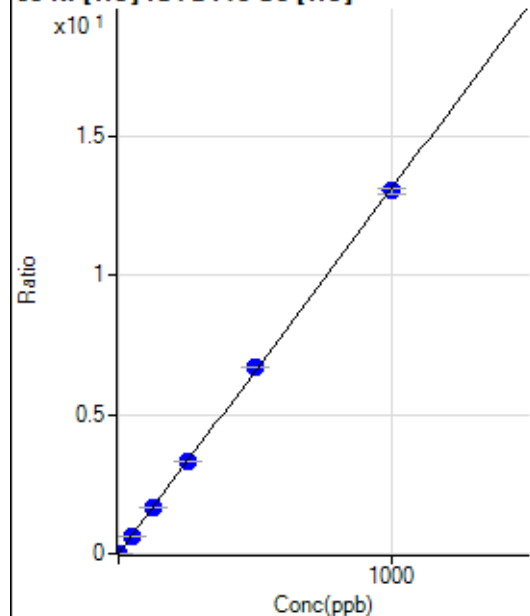
$$R = 0.9999$$

$$DL = 0.04822$$

$$BEC = 0.03801$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	205.56	0.0044	P	35.0
2	☐	0.100					
3	☐	1.000	0.966	821.15	0.0171	P	6.9
4	☐	50.000	49.465	29176.25	0.6528	P	0.5
5	☐	125.000	125.966	68701.66	1.6556	P	1.1
6	☐	250.000	252.182	120303.82	3.3099	P	0.9
7	☐	500.000	511.700	216183.65	6.7116	P	0.5
8	☐	1000.000	993.511	419642.50	13.0269	P	1.3
9	☐			12664.83	0.3525	P	0.4

$$y = 0.0131 * x + 0.0044$$

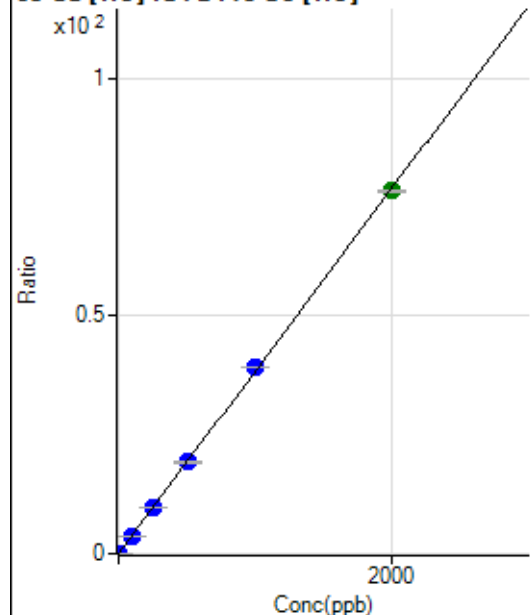
$$R = 0.9999$$

$$DL = 0.3557$$

$$BEC = 0.3391$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	352.23	0.0076	P	13.9
2	☐	0.200					
3	☐	2.000	1.877	3821.71	0.0796	P	4.0
4	☐	100.000	97.404	167489.33	3.7475	P	0.3
5	☐	250.000	249.163	397317.03	9.5745	P	1.0
6	☐	500.000	501.900	700656.73	19.2787	P	1.3
7	☐	1000.000	1022.467	1264784.37	39.2665	P	0.8
8	☐	2000.000	1988.526	2459893.91	76.3596	A	0.8
9	☐			7064.13	0.1967	P	2.8

$$y = 0.0384 * x + 0.0076$$

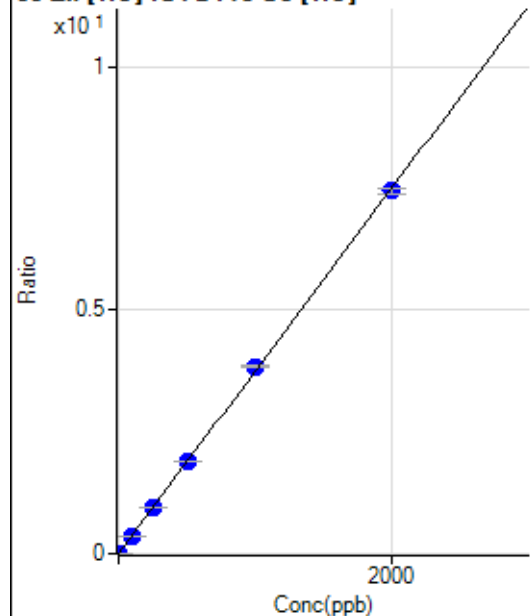
$$R = 0.9999$$

$$DL = 0.08207$$

$$BEC = 0.1971$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	85.56	0.0018	P	5.1
2	☐	0.200					
3	☐	2.000	2.197	483.35	0.0101	P	12.3
4	☐	100.000	97.496	16425.44	0.3675	P	1.2
5	☐	250.000	252.195	39328.01	0.9477	P	0.7
6	☐	500.000	504.142	68789.59	1.8926	P	1.0
7	☐	1000.000	1023.085	123651.40	3.8390	P	1.0
8	☐	2000.000	1987.273	240154.41	7.4552	P	1.4
9	☐			1516.78	0.0422	P	3.2

$$y = 0.0038 * x + 0.0018$$

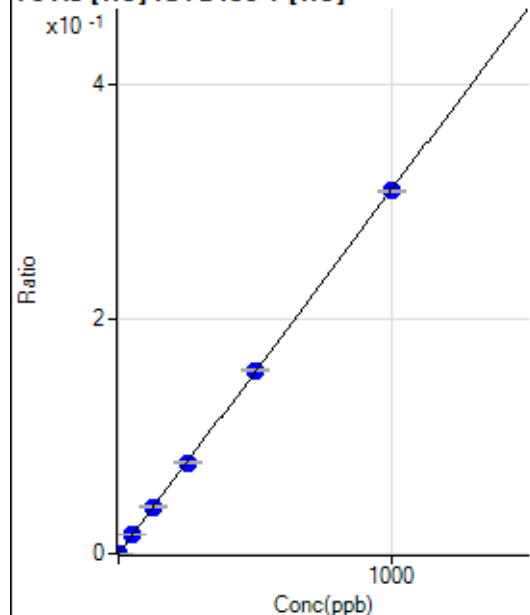
$$R = 0.9999$$

$$DL = 0.0743$$

$$BEC = 0.4899$$

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	1.85	0.0000	P	100.7
2	☐	0.100					
3	☐	1.000	0.981	116.67	0.0003	P	17.8
4	☐	50.000	50.981	5590.69	0.0158	P	1.3
5	☐	125.000	129.094	13293.51	0.0400	P	1.9
6	☐	250.000	250.240	23090.94	0.0776	P	1.0
7	☐	500.000	504.460	42029.74	0.1565	P	1.2
8	☐	1000.000	997.149	81912.28	0.3093	P	0.8
9	☐			51.85	0.0002	P	21.3

$$y = 3.1018\text{E-}004 * x + 5.0568\text{E-}006$$

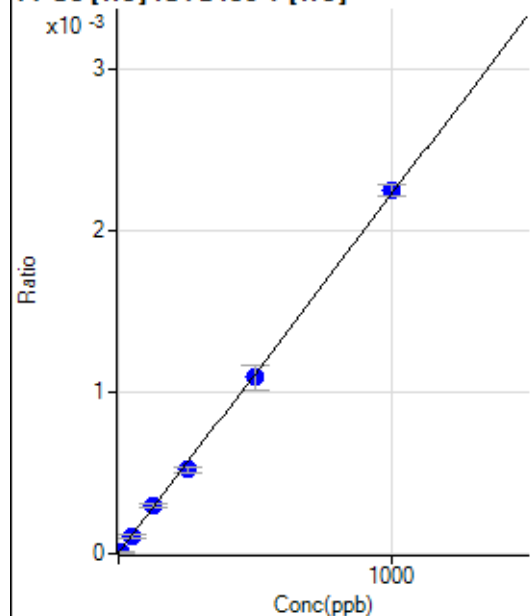
$$R = 1.0000$$

$$DL = 0.04924$$

$$BEC = 0.0163$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.2
2	☐	0.500					
3	☐	5.000	2.594	3.33	0.0000	P	100.0
4	☐	50.000	46.667	37.78	0.0001	P	13.6
5	☐	125.000	132.594	98.89	0.0003	P	11.2
6	☐	250.000	231.987	154.45	0.0005	P	7.1
7	☐	500.000	489.020	293.34	0.0011	P	13.4
8	☐	1000.000	1009.223	595.58	0.0022	P	3.0
9	☐			1.11	0.0000	P	173.2

$$y = 2.2253\text{E-}006 * x + 3.0542\text{E-}006$$

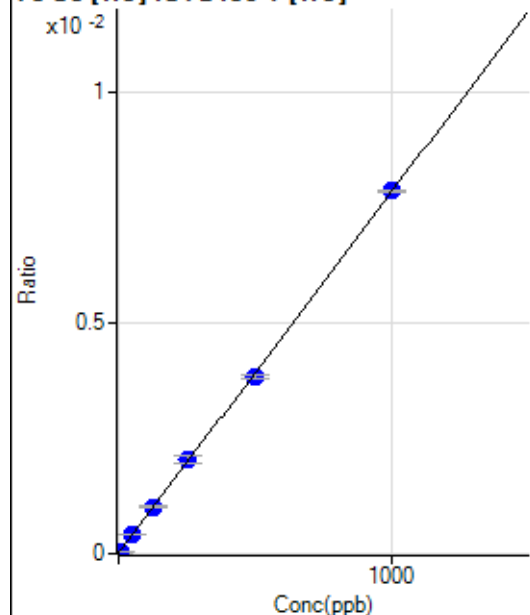
$$R = 0.9997$$

$$DL = 7.132$$

$$BEC = 1.373$$

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	4.32	0.0000	P	48.2
2	☐	0.500					
3	☐	5.000	3.709	15.43	0.0000	P	13.7
4	☐	50.000	51.097	145.68	0.0004	P	6.3
5	☐	125.000	128.288	337.66	0.0010	P	5.7
6	☐	250.000	259.781	609.28	0.0020	P	7.8
7	☐	500.000	487.703	1029.68	0.0038	P	2.9
8	☐	1000.000	1003.244	2085.37	0.0079	P	0.6
9	☐			3.09	0.0000	P	124.3

$$y = 7.8370\text{E-}006 * x + 1.1850\text{E-}005$$

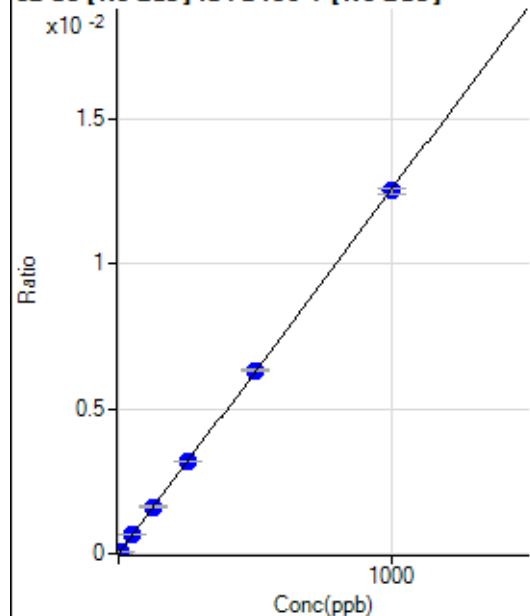
$$R = 0.9998$$

$$DL = 2.187$$

$$BEC = 1.512$$

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	-2.76	0.0000	P	-1377.
2	☐	0.500					
3	☐	5.000	5.276	706.54	0.0001	P	6.5
4	☐	50.000	53.959	6681.92	0.0007	P	5.5
5	☐	125.000	128.630	16294.11	0.0016	P	2.8
6	☐	250.000	253.262	30768.52	0.0032	P	0.8
7	☐	500.000	504.308	55790.84	0.0063	P	1.4
8	☐	1000.000	996.378	107923.50	0.0125	P	1.3
9	☐			100.00	0.0000	P	39.3

$$y = 1.2569\text{E-}005 * x - 2.7521\text{E-}007$$

$$R = 1.0000$$

$$DL = 0.9046$$

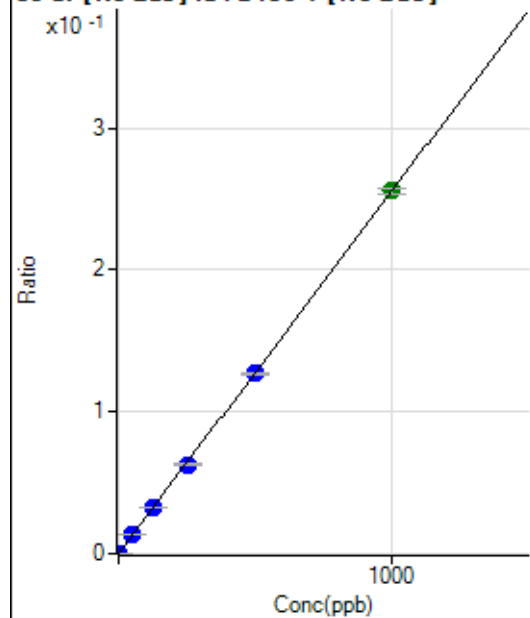
$$BEC = -0.0219$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			390.01		P	7.4
2	☐						
3	☐			384.46		P	1.0
4	☐			391.13		P	8.3
5	☐			411.13		P	11.5
6	☐			342.23		P	13.9
7	☐			307.79		P	6.6
8	☐			304.46		P	13.1
9	☐			333.34		P	7.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	666.71	0.0001	P	12.6
2	☐	0.100					
3	☐	1.000	1.006	3422.81	0.0003	P	6.6
4	☐	50.000	52.996	133822.42	0.0136	P	7.4
5	☐	125.000	126.126	325118.61	0.0323	P	0.6
6	☐	250.000	246.092	607755.62	0.0629	P	0.9
7	☐	500.000	497.669	1118585.70	0.1271	P	0.9
8	☐	1000.000	1001.852	2204082.27	0.2558	A	1.7
9	☐			12570.18	0.0015	P	3.0

$$y = 2.5522E-004 * x + 6.3039E-005$$

$$R = 1.0000$$

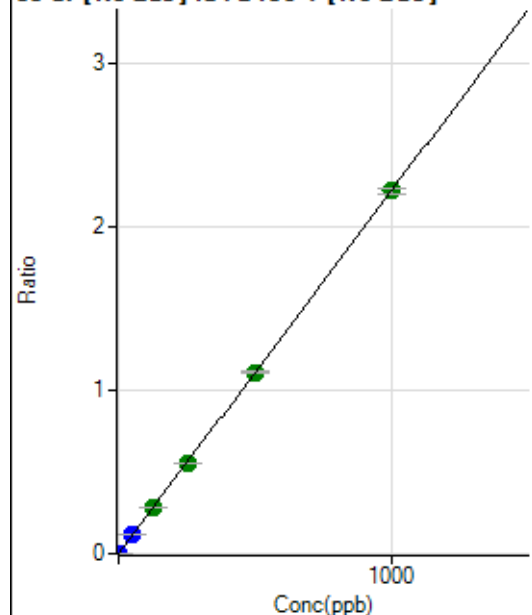
$$DL = 0.09306$$

$$BEC = 0.247$$

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	211.12	0.0000	P	9.1
2	☐	0.100					
3	☐	1.000	0.981	23498.85	0.0022	P	3.6
4	☐	50.000	53.359	1166415.38	0.1184	P	6.8
5	☐	125.000	128.330	2870295.14	0.2847	A	0.3
6	☐	250.000	248.733	5335159.97	0.5519	A	0.3
7	☐	500.000	499.776	9760775.91	1.1089	A	0.6
8	☐	1000.000	999.844	19117795.74	2.2183	A	1.4
9	☐			104000.45	0.0121	P	4.0

$$y = 0.0022 * x + 1.9952E-005$$

$$R = 1.0000$$

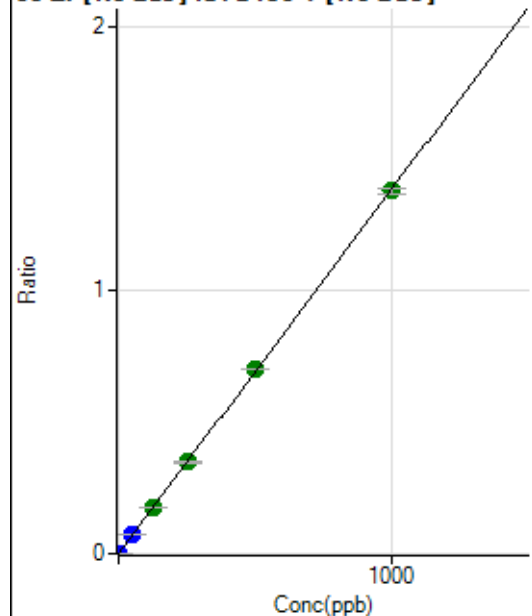
$$DL = 0.002459$$

$$BEC = 0.008993$$

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	869.51	0.0001	P	6.8
2	☐	0.100					
3	☐	1.000	0.942	14828.04	0.0014	P	2.6
4	☐	50.000	52.548	717543.90	0.0728	P	6.9
5	☐	125.000	127.776	1784311.54	0.1770	A	0.6
6	☐	250.000	251.638	3369257.89	0.3485	A	0.9
7	☐	500.000	505.766	6165465.72	0.7004	A	0.3
8	☐	1000.000	996.233	11888984.38	1.3795	A	1.3
9	☐			8105.52	0.0009	P	5.7

$$y = 0.0014 * x + 8.2114E-005$$

$$R = 1.0000$$

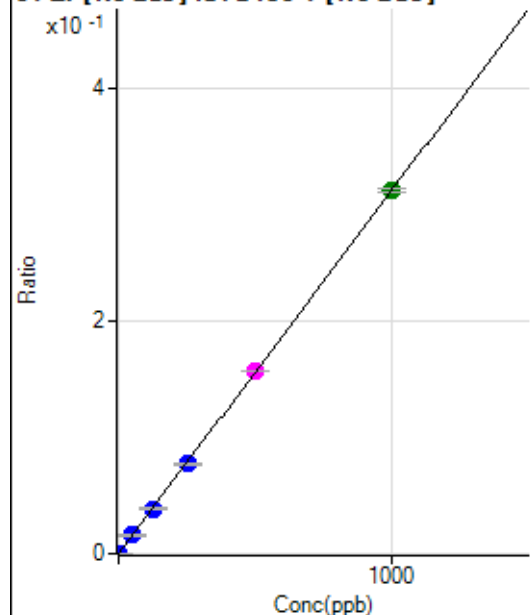
$$DL = 0.01201$$

$$BEC = 0.0593$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	200.01	0.0000	P	13.9
2	☐	0.100					
3	☐	1.000	0.957	3395.02	0.0003	P	3.8
4	☐	50.000	51.876	159499.57	0.0162	P	8.5
5	☐	125.000	124.277	391036.82	0.0388	P	0.4
6	☐	250.000	246.919	744902.87	0.0771	P	1.0
7	☐	500.000	502.243	1379531.03	0.1567	M	0.4
8	☐	1000.000	999.645	2688025.56	0.3119	A	1.0
9	☐			1811.31	0.0002	P	6.5

$$y = 3.1199\text{E-}004 * x + 1.8870\text{E-}005$$

$$R = 1.0000$$

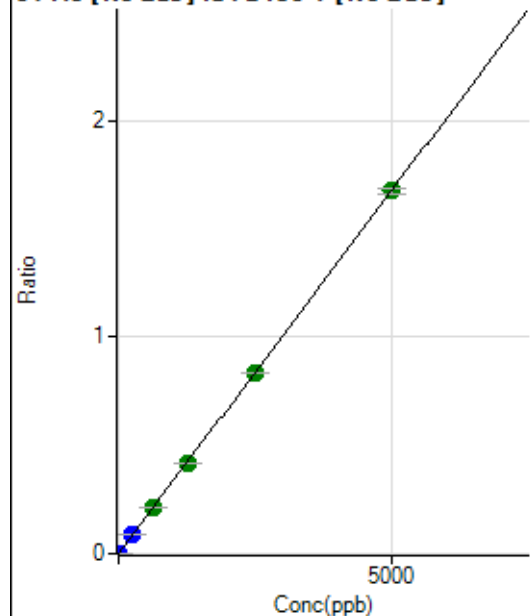
$$DL = 0.02521$$

$$BEC = 0.06048$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	361.13	0.0000	P	10.8
2	☐	0.500					
3	☐	5.000	4.819	17656.67	0.0017	P	3.2
4	☐	250.000	262.115	866231.56	0.0880	P	7.4
5	☐	625.000	640.042	2164492.34	0.2147	A	0.4
6	☐	1250.000	1252.523	4061775.05	0.4202	A	0.9
7	☐	2500.000	2494.893	7366901.47	0.8369	A	0.5
8	☐	5000.000	4999.437	14452655.36	1.6770	A	1.3
9	☐			19536.99	0.0023	P	3.3

$$y = 3.3543\text{E-}004 * x + 3.4096\text{E-}005$$

$$R = 1.0000$$

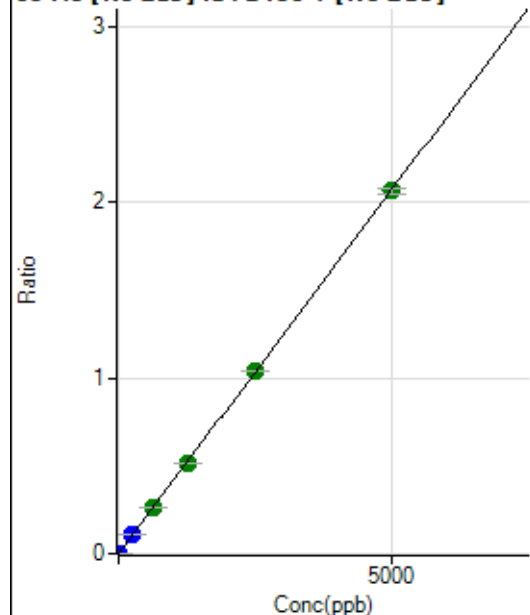
$$DL = 0.03284$$

$$BEC = 0.1016$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	172.23	0.0000	P	31.6
2	☐	0.500					
3	☐	5.000	4.798	21412.17	0.0020	P	2.6
4	☐	250.000	263.580	1074323.77	0.1091	P	7.2
5	☐	625.000	636.906	2656642.83	0.2635	A	0.2
6	☐	1250.000	1249.162	4996662.26	0.5169	A	0.6
7	☐	2500.000	2516.613	9166506.28	1.0413	A	0.6
8	☐	5000.000	4989.736	17793292.24	2.0646	A	1.3
9	☐			30142.71	0.0035	P	3.1

$$y = 4.1377\text{E-}004 * x + 1.6253\text{E-}005$$

$$R = 1.0000$$

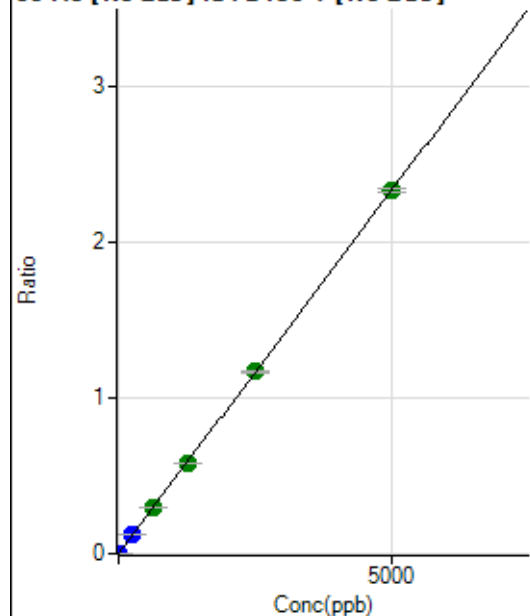
$$DL = 0.0372$$

$$BEC = 0.03928$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	280.57	0.0000	P	21.2
2	☐	0.500					
3	☐	5.000	4.667	23557.44	0.0022	P	2.3
4	☐	250.000	261.070	1198923.21	0.1217	P	7.3
5	☐	625.000	634.672	2982741.58	0.2959	A	1.0
6	☐	1250.000	1243.961	5606124.08	0.5799	A	0.8
7	☐	2500.000	2507.919	10291658.04	1.1692	A	0.7
8	☐	5000.000	4995.788	20071421.11	2.3290	A	1.2
9	☐			34881.94	0.0041	P	4.5

$$y = 4.6618\text{E-}004 * x + 2.6473\text{E-}005$$

$$R = 1.0000$$

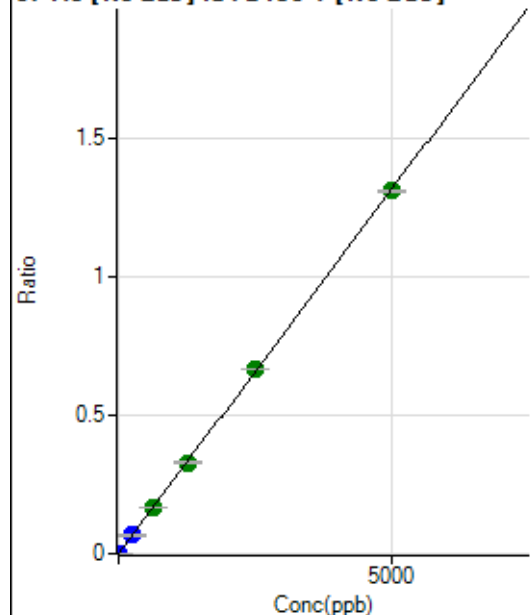
$$DL = 0.03605$$

$$BEC = 0.05679$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	150.01	0.0000	P	26.8
2	☐	0.500					
3	☐	5.000	4.772	13573.97	0.0013	P	3.4
4	☐	250.000	258.373	669330.52	0.0679	P	6.9
5	☐	625.000	639.360	1694725.84	0.1681	A	0.4
6	☐	1250.000	1252.930	3184787.42	0.3294	A	0.4
7	☐	2500.000	2530.859	5857674.57	0.6655	A	0.7
8	☐	5000.000	4981.624	11288955.98	1.3098	A	0.7
9	☐			18488.23	0.0022	P	4.5

$$y = 2.6293E-004 * x + 1.4200E-005$$

$$R = 1.0000$$

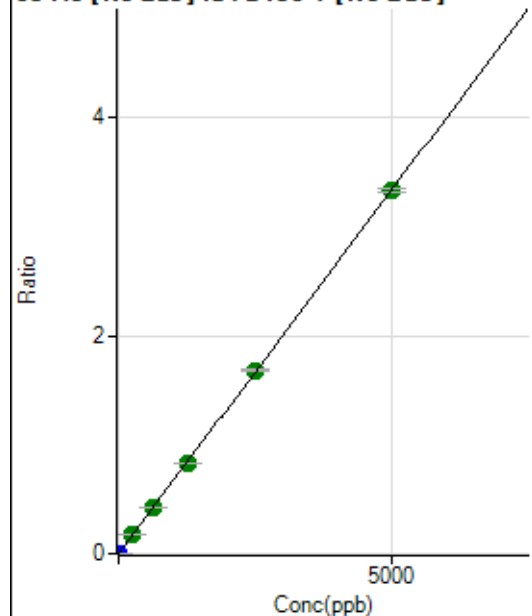
$$DL = 0.04346$$

$$BEC = 0.054$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	277.79	0.0000	P	15.9
2	☐	0.500					
3	☐	5.000	4.728	33979.94	0.0032	P	1.3
4	☐	250.000	263.581	1731061.04	0.1757	A	5.9
5	☐	625.000	631.367	4240871.41	0.4207	A	0.7
6	☐	1250.000	1238.613	7978388.37	0.8253	A	0.7
7	☐	2500.000	2520.547	14783417.00	1.6795	A	0.9
8	☐	5000.000	4991.099	28660999.25	3.3256	A	1.0
9	☐			47350.40	0.0055	P	3.6

$$y = 6.6630E-004 * x + 2.6202E-005$$

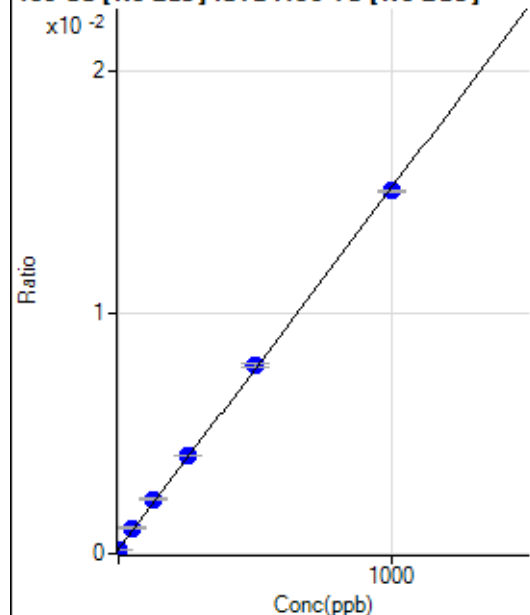
$$R = 1.0000$$

$$DL = 0.01881$$

$$BEC = 0.03933$$

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	2483.69	0.0002	P	5.3
2	☐	0.100					
3	☐	1.000	0.461	2617.06	0.0002	P	4.1
4	☐	50.000	59.144	14522.30	0.0011	P	6.4
5	☐	125.000	138.649	32186.54	0.0023	P	2.2
6	☐	250.000	260.152	58637.12	0.0041	P	0.9
7	☐	500.000	507.512	107027.64	0.0078	P	2.1
8	☐	1000.000	991.543	205743.41	0.0150	P	0.6
9	☐			1861.33	0.0001	P	3.9

$$y = 1.5001\text{E-}005 * x + 1.7271\text{E-}004$$

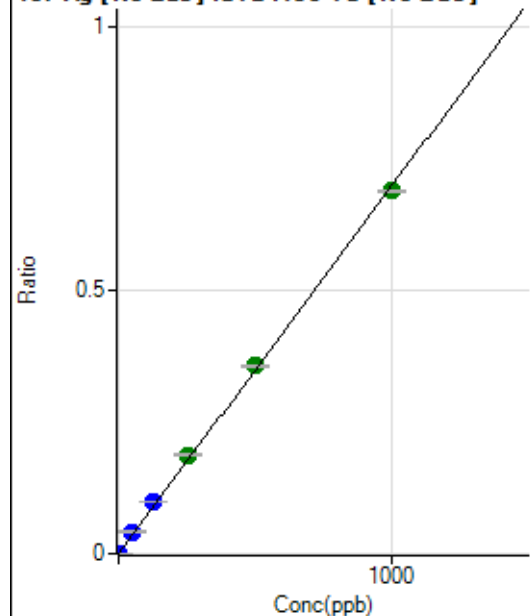
$$R = 0.9998$$

$$DL = 1.827$$

$$BEC = 11.51$$

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	108.34	0.0000	P	22.1
2	☐	0.100					
3	☐	1.000	1.095	11227.38	0.0008	P	3.9
4	☐	50.000	59.638	569491.50	0.0416	P	7.0
5	☐	125.000	139.701	1391494.84	0.0974	P	0.6
6	☐	250.000	269.054	2698640.08	0.1875	A	0.4
7	☐	500.000	510.876	4895635.70	0.3561	A	0.9
8	☐	1000.000	987.479	9411828.59	0.6883	A	0.4
9	☐			1641.85	0.0001	P	8.9

$$y = 6.9704\text{E-}004 * x + 7.5472\text{E-}006$$

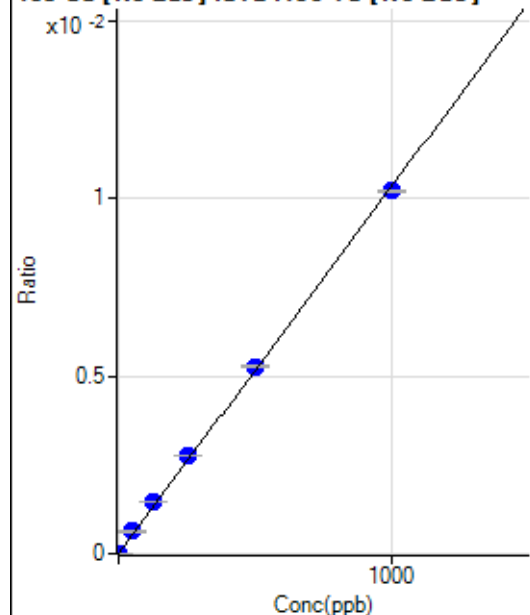
$$R = 0.9997$$

$$DL = 0.007166$$

$$BEC = 0.01083$$

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	15.28	0.0000	P	29.5
2	☐	0.100					
3	☐	1.000	0.829	140.28	0.0000	P	2.2
4	☐	50.000	60.633	8602.91	0.0006	P	7.0
5	☐	125.000	139.909	20688.37	0.0014	P	0.1
6	☐	250.000	266.188	39623.53	0.0028	P	0.3
7	☐	500.000	510.356	72570.49	0.0053	P	1.0
8	☐	1000.000	988.380	139771.64	0.0102	P	0.6
9	☐			50.00	0.0000	P	43.9

$$y = 1.0341\text{E-}005 * x + 1.0578\text{E-}006$$

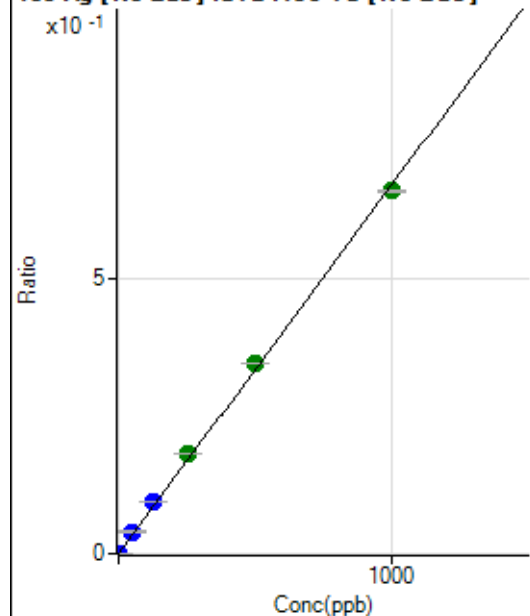
$$R = 0.9997$$

$$DL = 0.09043$$

$$BEC = 0.1023$$

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	72.23	0.0000	P	28.1
2	☐	0.100					
3	☐	1.000	1.120	10979.91	0.0008	P	2.0
4	☐	50.000	59.265	542802.52	0.0396	P	7.0
5	☐	125.000	139.096	1328860.72	0.0930	P	0.2
6	☐	250.000	270.727	2604548.41	0.1810	A	0.8
7	☐	500.000	515.977	4742807.79	0.3450	A	0.3
8	☐	1000.000	984.604	9001020.69	0.6583	A	0.8
9	☐			1391.80	0.0001	P	17.2

$$y = 6.6857\text{E-}004 * x + 5.0364\text{E-}006$$

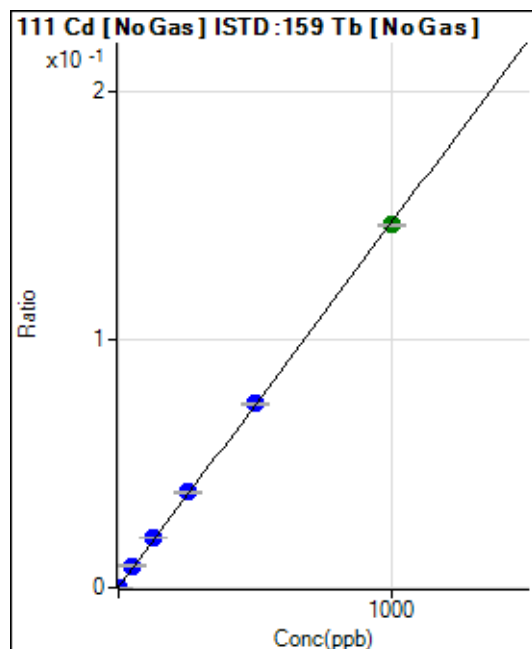
$$R = 0.9995$$

$$DL = 0.006349$$

$$BEC = 0.007533$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1737.61	0.0001	P	5.3
2	☐	0.100					
3	☐	1.000	1.071	4059.00	0.0003	P	2.1
4	☐	50.000	58.012	118727.33	0.0087	P	6.3
5	☐	125.000	137.330	290736.96	0.0203	P	0.4
6	☐	250.000	260.149	553047.87	0.0384	P	0.7
7	☐	500.000	504.048	1022238.10	0.0744	P	1.1
8	☐	1000.000	993.497	2002424.60	0.1464	A	0.7
9	☐			1763.78	0.0001	P	6.6

$$y = 1.4728\text{E-}004 * x + 1.2083\text{E-}004$$

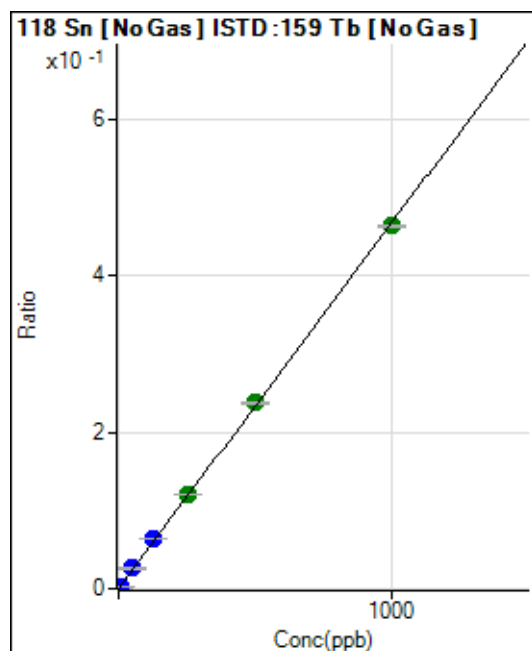
$$R = 0.9999$$

$$DL = 0.1306$$

$$BEC = 0.8204$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	591.71	0.0000	P	14.5
2	☐	0.500					
3	☐	5.000	5.201	36002.22	0.0025	P	2.4
4	☐	50.000	56.487	362081.70	0.0264	P	6.6
5	☐	125.000	134.272	896884.82	0.0628	P	0.1
6	☐	250.000	258.926	1741121.67	0.1210	A	1.0
7	☐	500.000	507.600	3260658.21	0.2372	A	0.7
8	☐	1000.000	992.484	6340360.78	0.4637	A	0.9
9	☐			9584.46	0.0007	P	4.9

$$y = 4.6717\text{E-}004 * x + 4.1169\text{E-}005$$

$$R = 0.9999$$

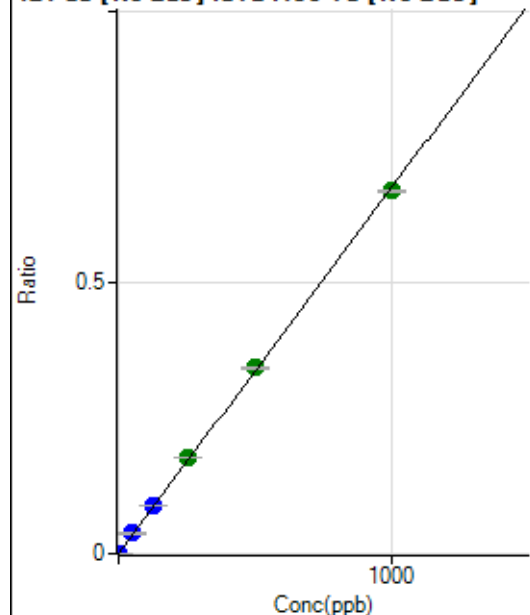
$$DL = 0.03839$$

$$BEC = 0.08813$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	105.56	0.0000	P	13.5
2	☐	0.200					
3	☐	2.000	2.047	20213.31	0.0014	P	2.2
4	☐	50.000	55.491	512361.95	0.0374	P	7.0
5	☐	125.000	133.083	1281670.99	0.0897	P	0.4
6	☐	250.000	262.697	2547565.12	0.1771	A	0.5
7	☐	500.000	507.835	4705508.83	0.3423	A	0.5
8	☐	1000.000	991.623	9138221.47	0.6683	A	0.3
9	☐			25199.76	0.0019	P	6.9

$$y = 6.7395E-004 * x + 7.3461E-006$$

$$R = 0.9999$$

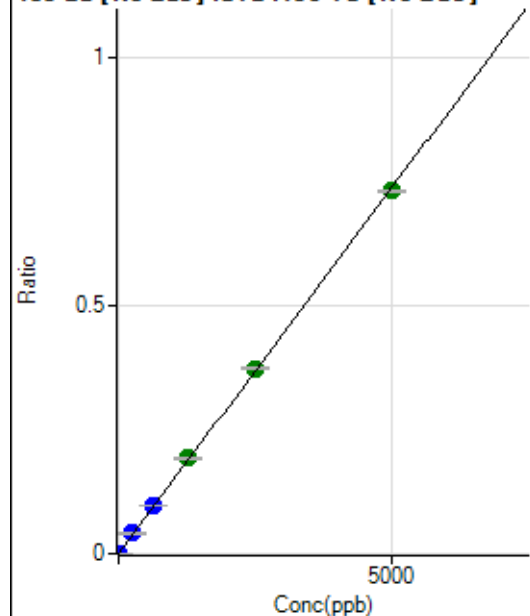
$$DL = 0.004404$$

$$BEC = 0.0109$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	86.11	0.0000	P	58.4
2	☐	1.000					
3	☐	10.000	10.151	21910.54	0.0015	P	0.3
4	☐	250.000	278.787	563509.13	0.0411	P	6.7
5	☐	625.000	663.364	1398464.06	0.0979	P	0.1
6	☐	1250.000	1302.193	2764323.50	0.1921	A	1.2
7	☐	2500.000	2536.730	5145197.29	0.3742	A	0.6
8	☐	5000.000	4962.351	10010430.43	0.7321	A	0.5
9	☐			3225.56	0.0002	P	5.1

$$y = 1.4753E-004 * x + 5.9673E-006$$

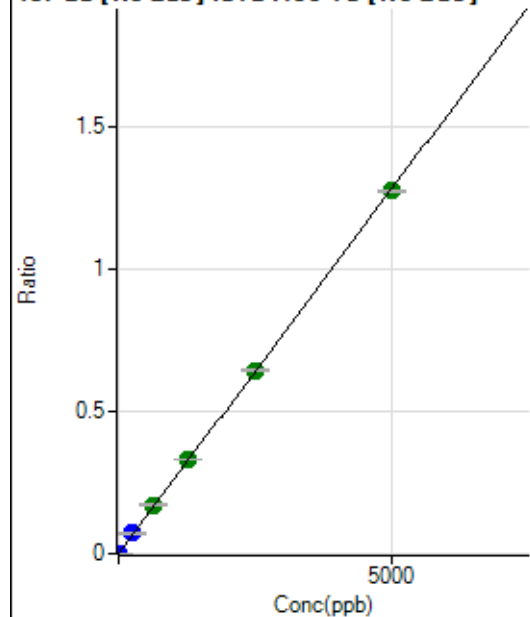
$$R = 0.9999$$

$$DL = 0.07085$$

$$BEC = 0.04045$$

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	113.90	0.0000	P	44.2
2	☐	1.000					
3	☐	10.000	10.048	37688.16	0.0026	P	2.8
4	☐	250.000	279.243	981498.02	0.0717	P	7.4
5	☐	625.000	672.048	2464357.63	0.1725	A	0.7
6	☐	1250.000	1289.409	4761224.28	0.3309	A	0.2
7	☐	2500.000	2513.262	8866607.92	0.6450	A	0.9
8	☐	5000.000	4976.174	17461018.45	1.2770	A	0.2
9	☐			5782.08	0.0004	P	8.5

$$y = 2.5662\text{E-}004 * x + 7.9592\text{E-}006$$

$$R = 0.9999$$

$$DL = 0.04108$$

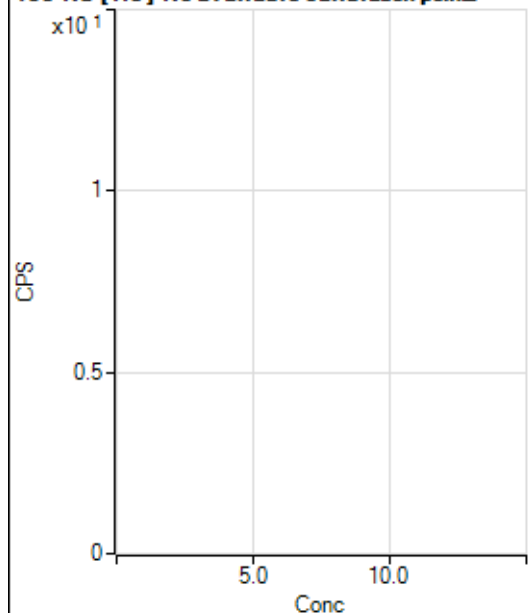
$$BEC = 0.03102$$

Weight: <None>

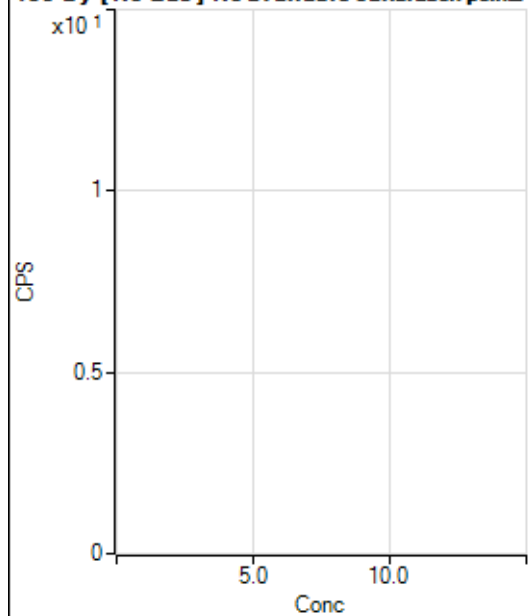
Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			8.89		P	114.5
2	☐						
3	☐			13.33		P	86.6
4	☐			33.33		P	40.0
5	☐			53.34		P	25.0
6	☐			173.34		P	17.6
7	☐			217.79		P	12.7
8	☐			437.80		P	11.8
9	☐			151.12		P	6.7

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.2
2	☐						
3	☐			1.11		P	173.2
4	☐			1.11		P	173.2
5	☐			3.33		P	173.2
6	☐			2.22		P	173.2
7	☐			10.00		P	66.7
8	☐			11.11		P	62.5
9	☐			20.00		P	28.9

156 Dy [No Gas] No available calibration points

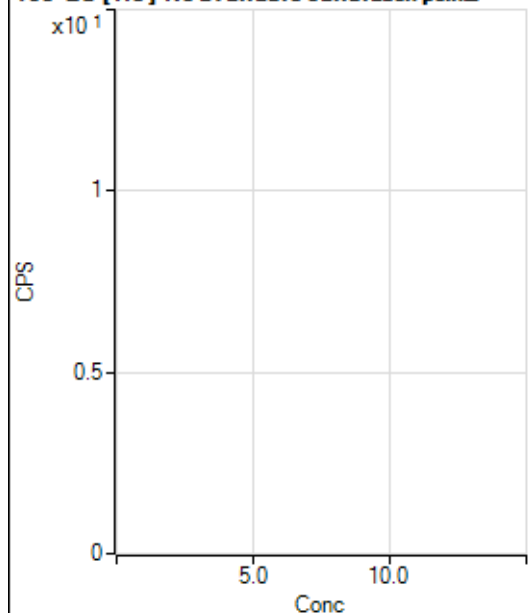
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			25.00		P	57.7
2	☐						
3	☐			38.89		P	75.3
4	☐			25.00		P	33.3
5	☐			27.78		P	69.3
6	☐			52.78		P	9.1
7	☐			111.12		P	37.0
8	☐			166.68		P	37.8
9	☐			111.12		P	34.6

156 Dy [He] No available calibration points

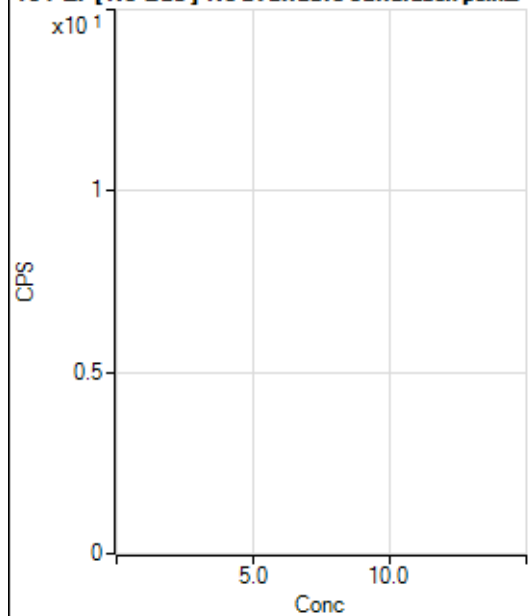
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	86.6
2	☐						
3	☐			0.00		P	
4	☐			0.00		P	
5	☐			0.00		P	
6	☐			3.33		P	100.1
7	☐			5.55		P	124.9
8	☐			15.56		P	32.7
9	☐			8.89		P	114.5

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			72.22		P	29.0
2	☐						
3	☐			94.45		P	13.5
4	☐			97.23		P	13.1
5	☐			91.67		P	31.5
6	☐			111.11		P	8.7
7	☐			100.00		P	25.0
8	☐			127.79		P	10.0
9	☐			136.12		P	46.0

160 Gd [He] No available calibration points

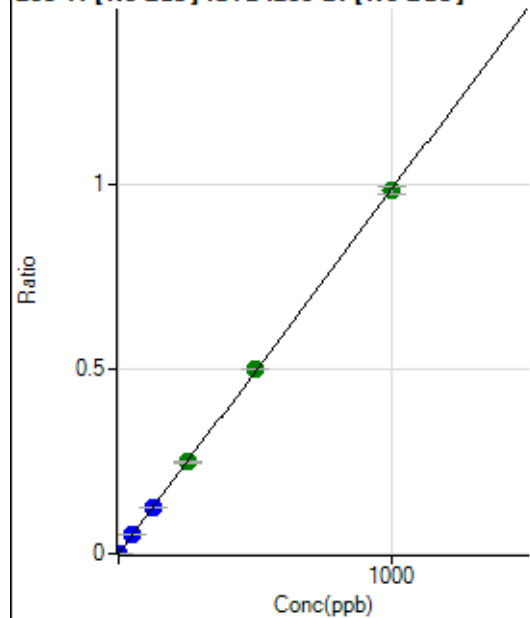
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	105.4
2	☐						
3	☐			14.44		P	35.3
4	☐			12.22		P	15.7
5	☐			5.56		P	34.7
6	☐			8.89		P	57.3
7	☐			14.44		P	13.4
8	☐			13.33		P	25.0
9	☐			28.89		P	37.1

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			61.12		P	7.9
2	☐						
3	☐			69.45		P	30.2
4	☐			30.56		P	83.3
5	☐			38.89		P	44.6
6	☐			30.56		P	56.8
7	☐			66.67		P	12.5
8	☐			83.34		P	20.0
9	☐			88.89		P	23.6

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			11.11		P	69.3
2	☐						
3	☐			10.00		P	57.8
4	☐			13.33		P	66.1
5	☐			14.44		P	13.4
6	☐			10.00		P	57.7
7	☐			6.67		P	50.0
8	☐			11.11		P	17.3
9	☐			8.89		P	21.6

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	225.01	0.0000	P	7.1
2	☐	0.100					
3	☐	1.000	0.993	9843.12	0.0010	P	2.9
4	☐	50.000	52.245	477564.85	0.0514	P	7.3
5	☐	125.000	127.245	1220476.43	0.1252	P	0.6
6	☐	250.000	251.798	2487442.70	0.2478	A	1.6
7	☐	500.000	505.535	4867606.01	0.4975	A	0.4
8	☐	1000.000	996.390	9472505.25	0.9805	A	2.0
9	☐			4820.60	0.0006	P	7.8

$$y = 9.8407E-004 * x + 2.3062E-005$$

$$R = 1.0000$$

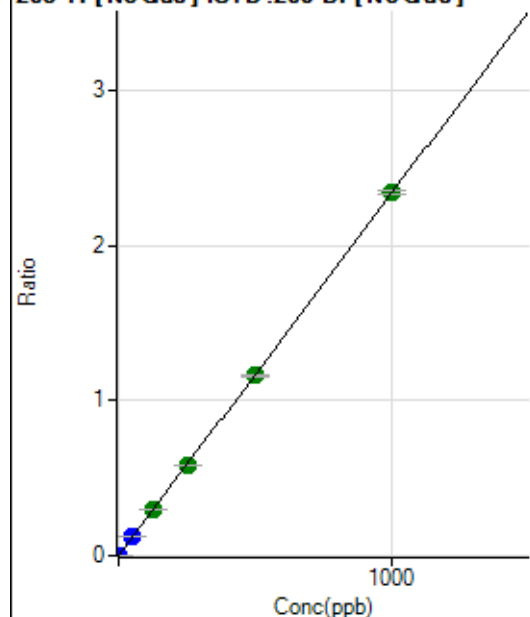
$$DL = 0.004981$$

$$BEC = 0.02344$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	466.70	0.0000	P	17.2
2	☐	0.100					
3	☐	1.000	0.993	23280.54	0.0024	P	2.2
4	☐	50.000	52.984	1149021.76	0.1237	P	6.8
5	☐	125.000	129.177	2938949.00	0.3016	A	0.5
6	☐	250.000	249.051	5835957.16	0.5814	A	1.7
7	☐	500.000	496.395	11337550.77	1.1588	A	0.3
8	☐	1000.000	1001.369	22584336.10	2.3375	A	0.9
9	☐			10894.05	0.0012	P	10.5

$$y = 0.0023 * x + 4.7934E-005$$

$$R = 1.0000$$

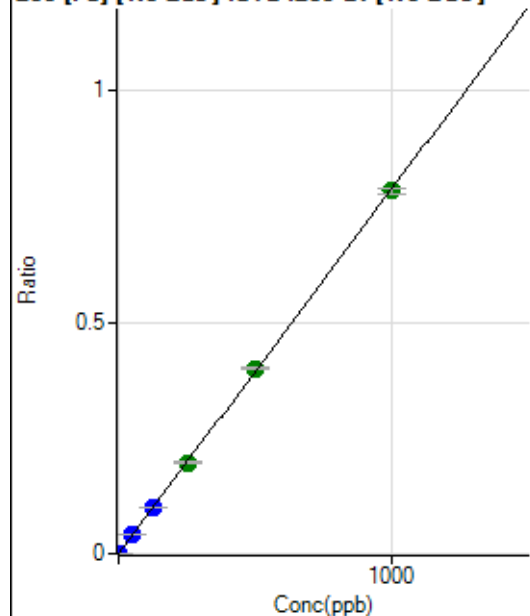
$$DL = 0.01063$$

$$BEC = 0.02053$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	424.10	0.0000	P	21.5
2	☐	0.100					
3	☐	1.000	0.983	8041.71	0.0008	P	1.7
4	☐	50.000	53.169	389153.49	0.0419	P	6.8
5	☐	125.000	128.624	987324.33	0.1013	P	0.5
6	☐	250.000	250.294	1978696.95	0.1971	A	0.6
7	☐	500.000	507.583	3910487.73	0.3997	A	0.7
8	☐	1000.000	995.523	7572760.82	0.7839	A	1.7
9	☐			14454.92	0.0017	P	1.0

$$y = 7.8734E-004 * x + 4.3478E-005$$

$$R = 1.0000$$

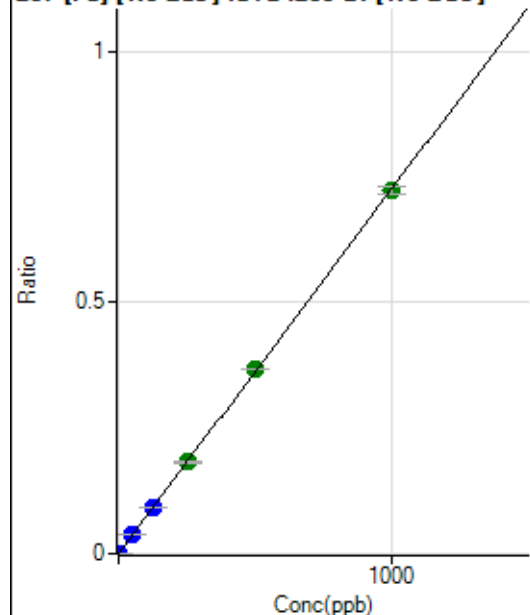
$$DL = 0.03566$$

$$BEC = 0.05522$$

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	409.28	0.0000	P	9.2
2	☐	0.100					
3	☐	1.000	0.982	7413.51	0.0008	P	0.8
4	☐	50.000	52.339	352707.70	0.0380	P	7.3
5	☐	125.000	125.768	888986.46	0.0912	P	0.5
6	☐	250.000	252.437	1837431.70	0.1831	A	2.1
7	☐	500.000	506.952	3596435.84	0.3676	A	0.6
8	☐	1000.000	995.702	6973993.10	0.7219	A	2.3
9	☐			12374.87	0.0014	P	5.1

$$y = 7.2501\text{E-}004 * x + 4.2004\text{E-}005$$

$$R = 1.0000$$

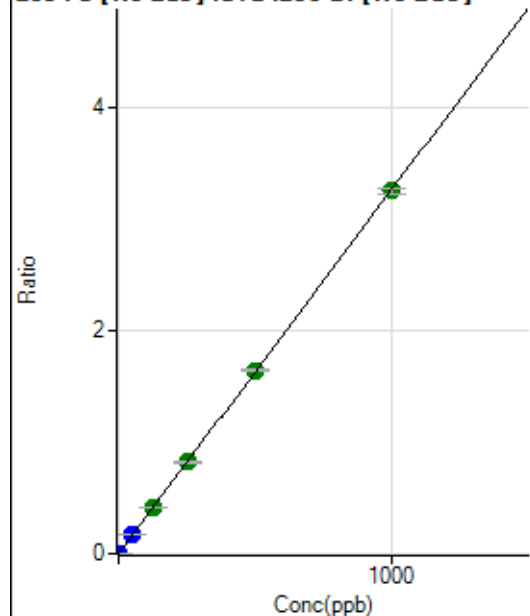
$$DL = 0.0159$$

$$BEC = 0.05794$$

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	1785.29	0.0002	P	3.6
2	☐	0.100					
3	☐	1.000	0.986	33392.44	0.0034	P	1.0
4	☐	50.000	52.255	1582552.24	0.1704	P	7.3
5	☐	125.000	127.814	4060309.00	0.4166	A	0.1
6	☐	250.000	251.174	8217187.77	0.8186	A	1.0
7	☐	500.000	503.902	16065970.12	1.6421	A	0.7
8	☐	1000.000	997.291	31394270.49	3.2497	A	1.9
9	☐			57502.67	0.0066	P	3.4

$$y = 0.0033 * x + 1.8302\text{E-}004$$

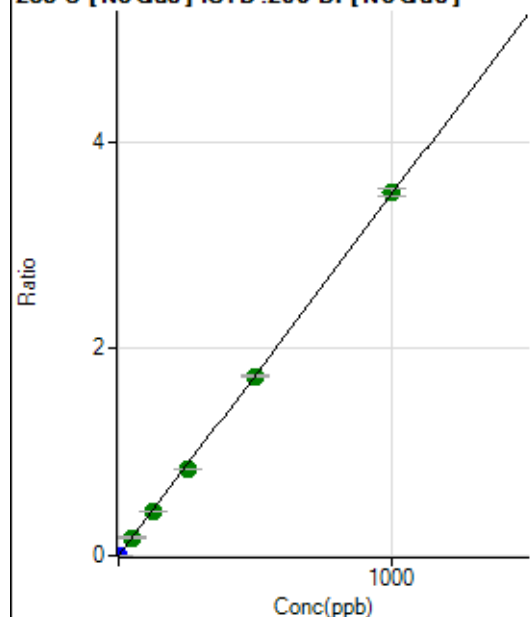
$$R = 1.0000$$

$$DL = 0.005988$$

$$BEC = 0.05617$$

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	111.12	0.0000	P	13.5
2	☐	0.100					
3	☐	1.000	0.930	32067.16	0.0033	P	1.6
4	☐	50.000	49.803	1615750.88	0.1740	A	7.2
5	☐	125.000	122.227	4161761.16	0.4271	A	1.1
6	☐	250.000	239.558	8402337.95	0.8370	A	0.8
7	☐	500.000	497.223	16997865.66	1.7373	A	0.3
8	☐	1000.000	1004.355	33900571.94	3.5092	A	2.0
9	☐			8403.20	0.0010	P	6.8

$$y = 0.0035 * x + 1.1365E-005$$

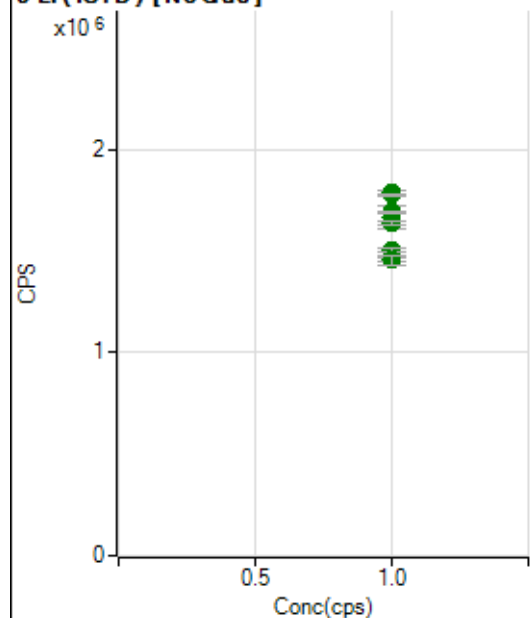
$$R = 0.9999$$

$$DL = 0.001317$$

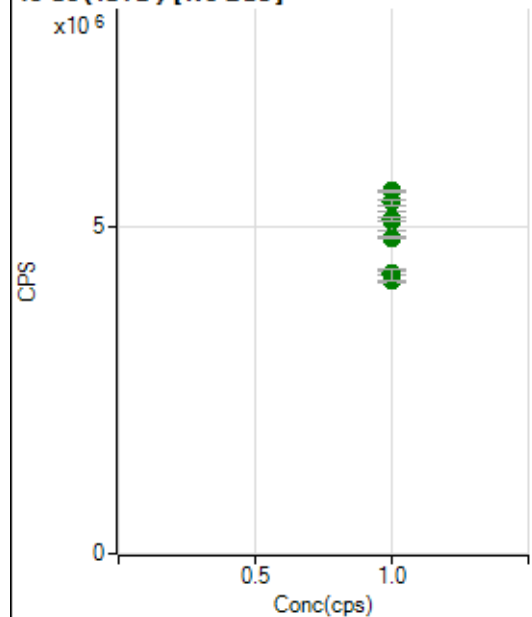
$$BEC = 0.003253$$

Weight: <None>

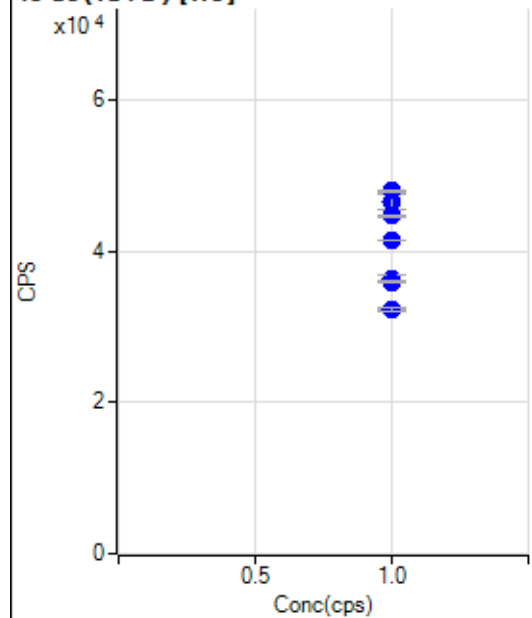
Min Conc: 0

6 Li (ISTD) [No Gas]

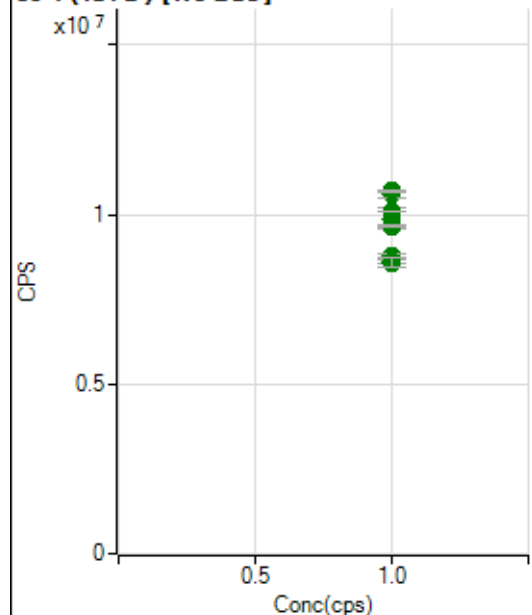
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		1785728.18		A	0.9
2	☐	1.000					
3	☐	1.000		1777260.48		A	0.5
4	☐	1.000		1666500.24		A	6.8
5	☐	1.000		1692806.69		A	0.6
6	☐	1.000		1639804.49		A	1.0
7	☐	1.000		1506397.88		A	1.3
8	☐	1.000		1456238.00		A	1.0
9	☐	1.000		1454526.07		A	3.4

45 Sc (ISTD) [No Gas]

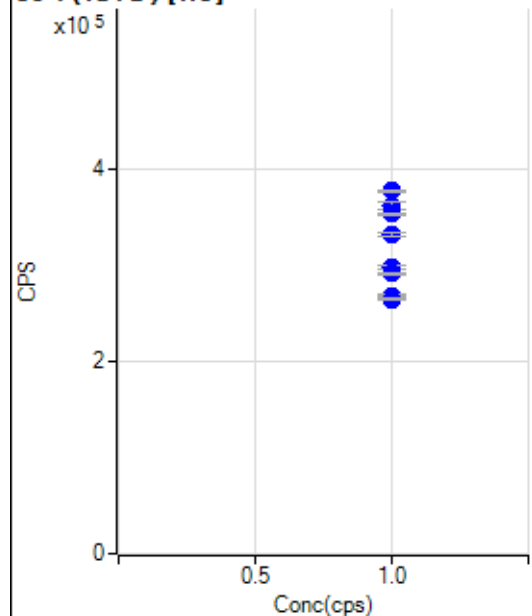
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		5366360.80		A	1.5
2	☐	1.000					
3	☐	1.000		5543083.50		A	0.7
4	☐	1.000		5080531.58		A	6.2
5	☐	1.000		5105955.97		A	1.2
6	☐	1.000		4823086.48		A	0.7
7	☐	1.000		4294977.40		A	1.1
8	☐	1.000		4169240.76		A	0.7
9	☐	1.000		4258068.33		A	3.6

45 Sc (ISTD) [He]

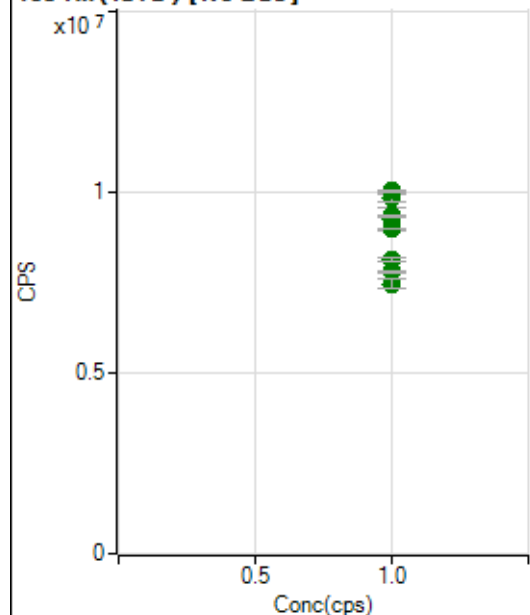
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		46620.84		P	4.2
2	☐	1.000					
3	☐	1.000		47986.10		P	0.4
4	☐	1.000		44693.28		P	0.5
5	☐	1.000		41497.86		P	0.2
6	☐	1.000		36350.46		P	2.2
7	☐	1.000		32211.50		P	1.0
8	☐	1.000		32217.10		P	1.4
9	☐	1.000		35925.97		P	0.9

89 Y (ISTD) [No Gas]

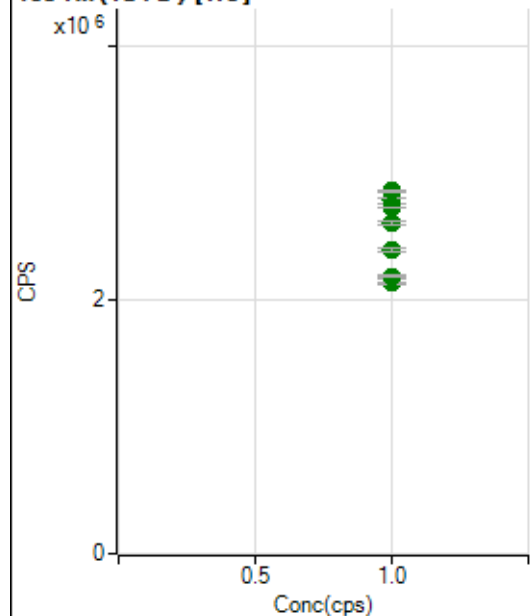
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		10587690.40		A	1.4
2	☐	1.000					
3	☐	1.000		10698154.70		A	0.2
4	☐	1.000		9879953.39		A	6.5
5	☐	1.000		10080367.56		A	0.1
6	☐	1.000		9667187.56		A	0.8
7	☐	1.000		8802936.19		A	1.0
8	☐	1.000		8618899.80		A	1.1
9	☐	1.000		8575556.19		A	3.4

89 Y (ISTD) [He]

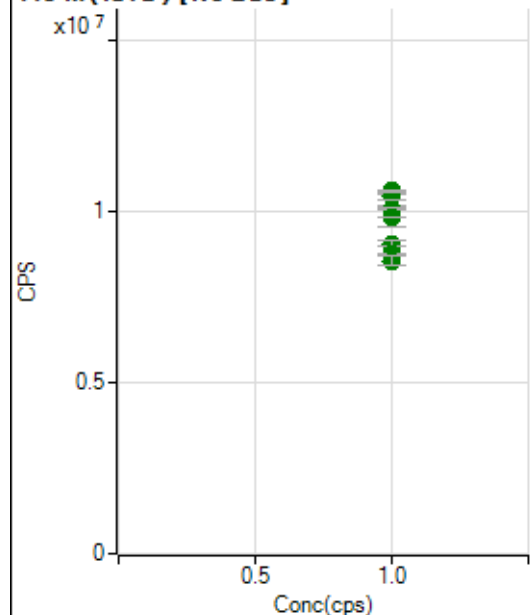
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		362078.18		P	2.6
2	☐	1.000					
3	☐	1.000		377138.97		P	0.2
4	☐	1.000		353430.15		P	0.6
5	☐	1.000		331937.02		P	0.9
6	☐	1.000		297455.90		P	1.0
7	☐	1.000		268609.31		P	0.9
8	☐	1.000		264831.40		P	0.4
9	☐	1.000		291377.57		P	1.0

103 Rh (ISTD) [No Gas]

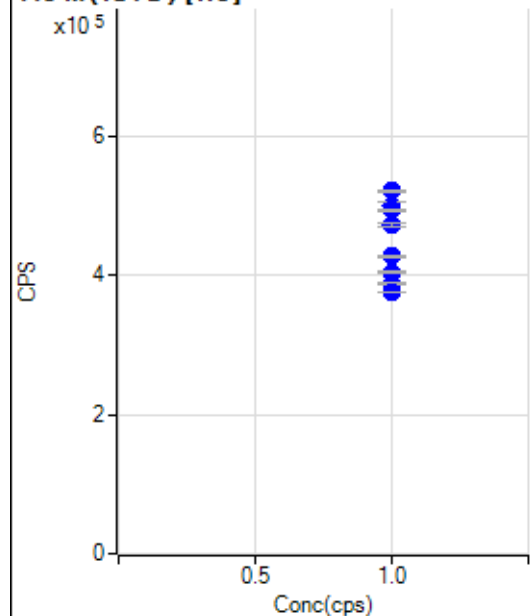
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		9826207.86		A	1.9
2	☐	1.000					
3	☐	1.000		10020607.86		A	0.6
4	☐	1.000		9235522.95		A	6.8
5	☐	1.000		9321296.47		A	0.2
6	☐	1.000		8969752.89		A	0.1
7	☐	1.000		8117288.46		A	0.9
8	☐	1.000		7791208.94		A	0.7
9	☐	1.000		7459943.75		A	3.4

103 Rh (ISTD) [He]

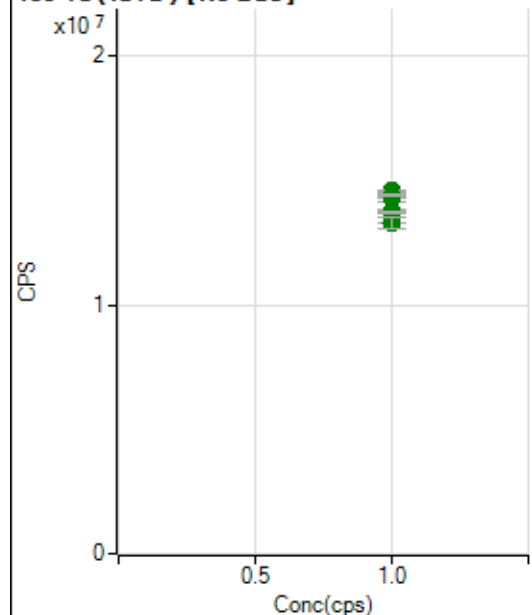
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		2782422.08		A	2.0
2	☐	1.000					
3	☐	1.000		2860447.60		A	0.5
4	☐	1.000		2725708.40		A	0.3
5	☐	1.000		2607146.11		A	1.3
6	☐	1.000		2399324.96		A	1.4
7	☐	1.000		2177367.19		A	1.2
8	☐	1.000		2131041.81		A	1.0
9	☐	1.000		2184907.60		A	0.8

115 In (ISTD) [No Gas]

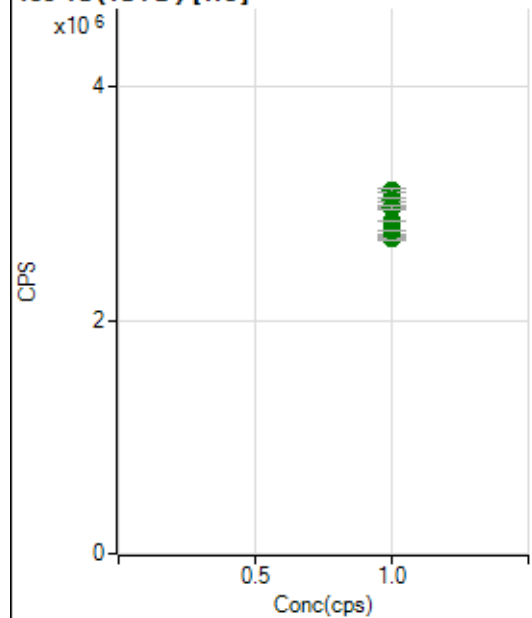
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		10421463.76		A	1.3
2	☐	1.000					
3	☐	1.000		10589037.50		A	0.7
4	☐	1.000		9843063.94		A	6.2
5	☐	1.000		10059993.75		A	0.7
6	☐	1.000		9818400.32		A	0.4
7	☐	1.000		9044407.48		A	1.9
8	☐	1.000		8735550.03		A	0.7
9	☐	1.000		8537899.69		A	3.4

115 In (ISTD) [He]

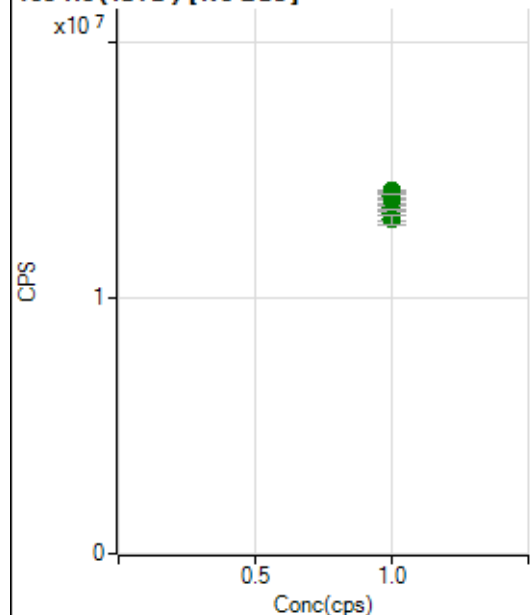
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		500652.58		P	2.5
2	☐	1.000					
3	☐	1.000		521497.52		P	0.3
4	☐	1.000		494162.53		P	0.7
5	☐	1.000		473048.32		P	0.8
6	☐	1.000		427735.12		P	0.9
7	☐	1.000		387812.15		P	0.7
8	☐	1.000		375361.36		P	0.3
9	☐	1.000		404314.61		P	0.7

159 Tb (ISTD) [No Gas]

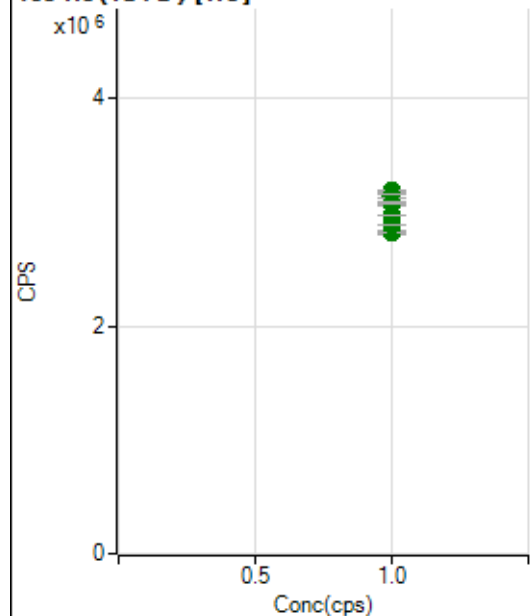
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		14390432.14		A	1.9
2	☐	1.000					
3	☐	1.000		14572034.09		A	0.5
4	☐	1.000		13737635.35		A	6.3
5	☐	1.000		14288716.18		A	0.2
6	☐	1.000		14388931.04		A	0.5
7	☐	1.000		13748574.79		A	1.2
8	☐	1.000		13673743.13		A	0.6
9	☐	1.000		13264148.69		A	3.4

159 Tb (ISTD) [He]

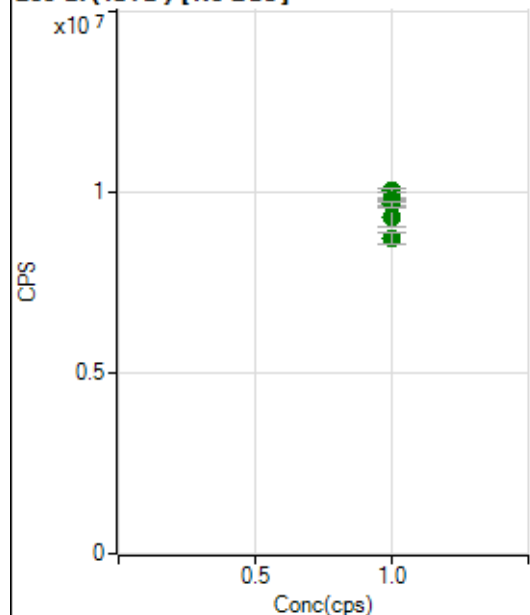
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		3012670.58		A	2.5
2	☐	1.000					
3	☐	1.000		3111339.82		A	0.9
4	☐	1.000		3030519.09		A	0.9
5	☐	1.000		2972152.70		A	1.1
6	☐	1.000		2853142.00		A	0.5
7	☐	1.000		2725228.64		A	0.4
8	☐	1.000		2698990.28		A	0.8
9	☐	1.000		2774057.46		A	0.1

165 Ho (ISTD) [No Gas]

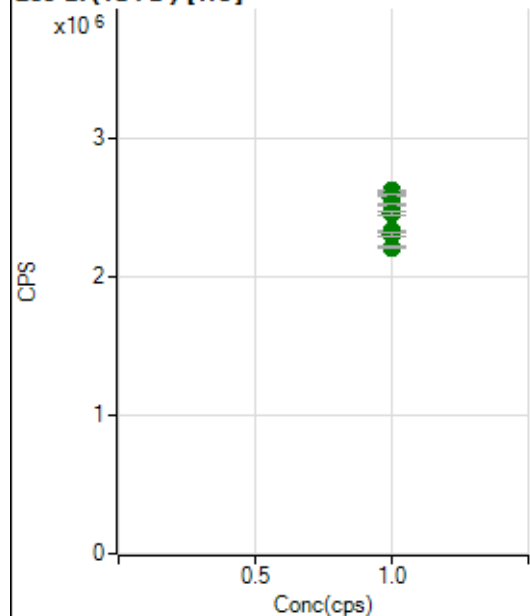
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		13977624.27		A	1.7
2	☐	1.000					
3	☐	1.000		14175705.70		A	0.4
4	☐	1.000		13317638.67		A	5.3
5	☐	1.000		13919781.56		A	0.2
6	☐	1.000		14052391.81		A	0.4
7	☐	1.000		13495575.65		A	1.2
8	☐	1.000		13395651.34		A	0.4
9	☐	1.000		13036541.18		A	3.0

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		3089663.39		A	2.3
2	☐	1.000					
3	☐	1.000		3184357.80		A	0.7
4	☐	1.000		3132902.52		A	1.1
5	☐	1.000		3074638.74		A	0.6
6	☐	1.000		2971688.12		A	0.2
7	☐	1.000		2814389.26		A	1.1
8	☐	1.000		2816528.95		A	0.4
9	☐	1.000		2888802.91		A	0.4

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		9757305.27		A	2.3
2	☐	1.000					
3	☐	1.000		9836675.55		A	0.4
4	☐	1.000		9311914.72		A	6.0
5	☐	1.000		9745162.35		A	0.4
6	☐	1.000		10038988.60		A	1.2
7	☐	1.000		9784042.98		A	0.2
8	☐	1.000		9662521.80		A	1.6
9	☐	1.000		8732198.97		A	3.4

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		2567116.38		A	3.3
2	☐	1.000					
3	☐	1.000		2618669.39		A	0.5
4	☐	1.000		2587224.09		A	0.8
5	☐	1.000		2522688.66		A	0.8
6	☐	1.000		2458369.04		A	0.9
7	☐	1.000		2331833.14		A	0.4
8	☐	1.000		2301901.44		A	1.2
9	☐	1.000		2212124.58		A	0.7

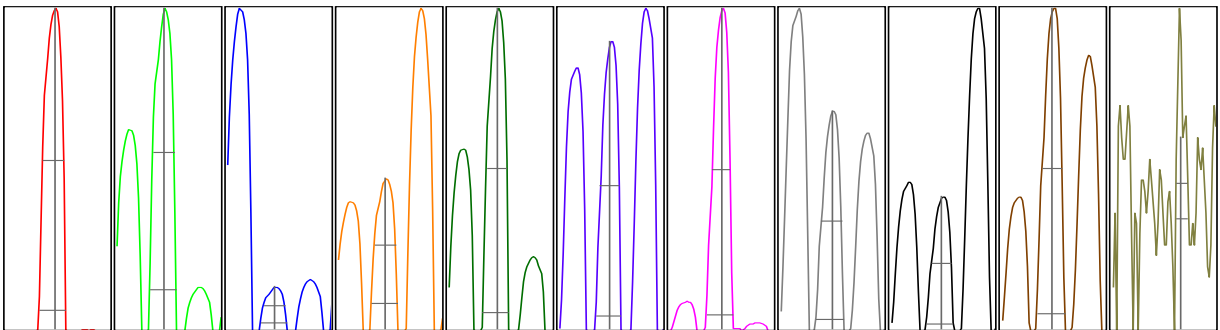
US EPA Tune Check Sample Report

Batch Folder D:\P8102118-MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	6283	0.98	5.00	
24	61641	0.73	5.00	
25	8570	0.80	5.00	
26	10199	1.04	5.00	
59	71115	0.92	5.00	
113	11274	0.58	5.00	
115	137385	0.91	5.00	
206	38960	0.84	5.00	
207	35287	0.48	5.00	
208	84957	0.58	5.00	
220	1	21.02		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	6249	6324	6331	6322	6191
24	61551	61836	61951	61970	60899
25	8535	8594	8613	8640	8469
26	10249	10181	10261	10282	10022
59	71427	71529	71020	71582	70016
113	11291	11291	11257	11356	11177
115	136459	137356	137384	139430	136297
206	38993	38999	38832	39437	38536
207	35232	35237	35276	35573	35117
208	84862	85277	84955	85496	84193
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	10914	8.95	8.9 - 9.1		0.763	0.900	
24	106868	23.90	23.9 - 24.1		0.753	0.900	
25	14413	24.90	24.9 - 25.1		0.740	0.900	
26	16918	25.90	25.9 - 26.1		0.741	0.900	
59	126511	58.95	58.9 - 59.1		0.735	0.900	
113	21296	113.00	112.9 - 113.1		0.720	0.900	
115	261799	115.05	114.9 - 115.1		0.767	0.900	
206	70122	206.05	205.9 - 206.1		0.798	0.900	
207	63426	207.00	206.9 - 207.1		0.778	0.900	
208	152236	208.00	207.9 - 208.1		0.815	0.900	
220	1	220.50	-		0.348		

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	10.6	V	Deflect	14.6	V
Extract 2	-240.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-105	V	Cell Exit	-50	V			

Cell Parameters

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

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	9383	1.33	
89	2978	0.91	
205	16735	0.87	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	9427	9583	9310	9304	9289
89	2984	3021	2958	2954	2972
205	16857	16925	16643	16609	16640

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	10.6	V	Deflect	1.2	V
Extract 2	-240.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-105	V	Cell Exit	-60	V			

Cell Parameters

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