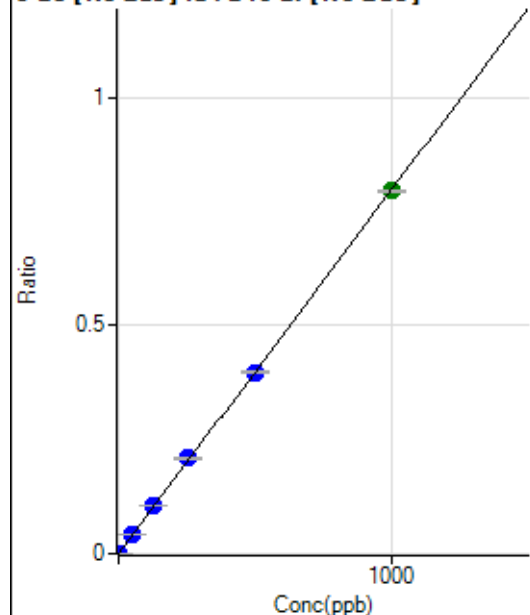


Batch Folder: D:\P8101518 MS.b\
Analysis File: P8101518 MS.batch.bin
DA Date-Time: 2018-10-15 16:56:28
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-10-15 14:05:46
2			
3	005CALS.d	S02	2018-10-15 14:12:29
4	006CALS.d	S03	2018-10-15 14:16:45
5	007CALS.d	S04	2018-10-15 14:20:27
6	008CALS.d	S05	2018-10-15 14:24:02
7	009CALS.d	S06	2018-10-15 14:27:31
8	010CALS.d	S07	2018-10-15 14:30:57
9	011CALS.d	S08	2018-10-15 14:34:18

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	125.93	0.0001	P	25.4
2	☐	0.100					
3	☐	1.000	1.173	1827.96	0.0010	P	2.2
4	☐	50.000	52.705	77294.00	0.0421	P	0.6
5	☐	125.000	130.573	188368.44	0.1042	P	0.9
6	☐	250.000	261.678	368696.04	0.2088	P	1.5
7	☐	500.000	497.965	696880.22	0.3973	P	1.4
8	☐	1000.000	997.266	1391746.07	0.7956	A	0.7
9	☐			1016.73	0.0006	P	1.2

$$y = 7.9768\text{E-}004 * x + 6.9335\text{E-}005$$

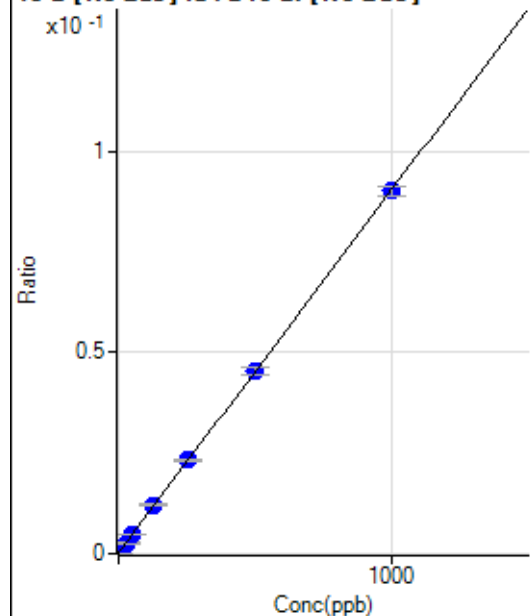
$$R = 0.9999$$

$$DL = 0.06624$$

$$BEC = 0.08692$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	380.58	0.0002	P	4.8
2	☐	2.500					
3	☐	25.000	26.405	4709.33	0.0026	P	3.2
4	☐	50.000	50.913	8805.85	0.0048	P	1.2
5	☐	125.000	132.202	21909.11	0.0121	P	2.2
6	☐	250.000	255.300	40992.95	0.0232	P	2.5
7	☐	500.000	499.974	79386.25	0.0453	P	3.7
8	☐	1000.000	997.707	157660.78	0.0901	P	2.8
9	☐			8186.00	0.0048	P	9.3

$$y = 9.0120\text{E-}005 * x + 2.0946\text{E-}004$$

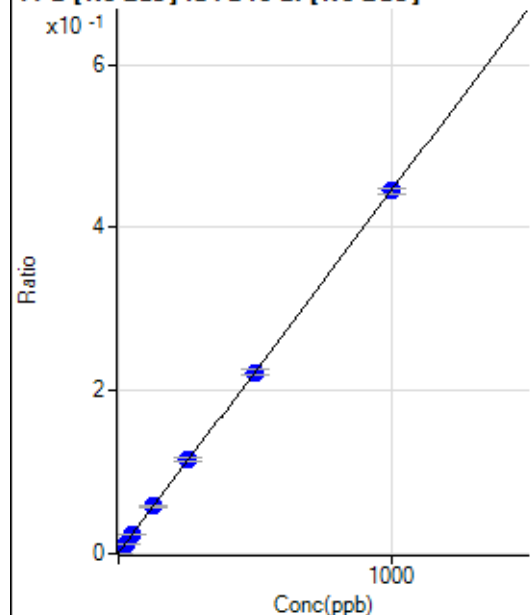
$$R = 1.0000$$

$$DL = 0.3381$$

$$BEC = 2.324$$

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	1944.65	0.0011	P	6.0
2	☐	2.500					
3	☐	25.000	25.538	22604.62	0.0124	P	0.7
4	☐	50.000	52.084	44475.48	0.0242	P	0.6
5	☐	125.000	128.960	105564.20	0.0584	P	2.8
6	☐	250.000	257.893	204373.91	0.1158	P	2.6
7	☐	500.000	497.726	390069.12	0.2224	P	2.8
8	☐	1000.000	998.551	778684.11	0.4451	P	1.9
9	☐			39377.65	0.0231	P	7.2

$$y = 4.4469\text{E-}004 * x + 0.0011$$

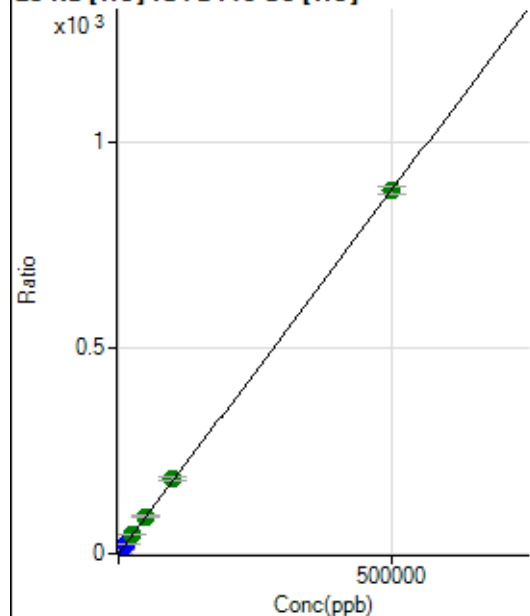
$$R = 1.0000$$

$$DL = 0.4317$$

$$BEC = 2.406$$

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	3647.86	0.0873	P	8.5
2	☐	50.000					
3	☐	500.000	488.707	40430.79	0.9517	P	2.2
4	☐	5000.000	5157.484	372683.93	9.2103	P	1.2
5	☐	12500.000	12856.229	890219.10	22.8286	P	1.1
6	☐	25000.000	26151.336	1737690.08	46.3462	A	2.0
7	☐	50000.000	51285.255	3206540.41	90.8054	A	2.5
8	☐	100000.00	102725.71	6386059.87	181.7981	A	3.7
9	☐	500000.00	499258.29	34882050.09	883.2221	A	2.2

$$y = 0.0018 * x + 0.0873$$

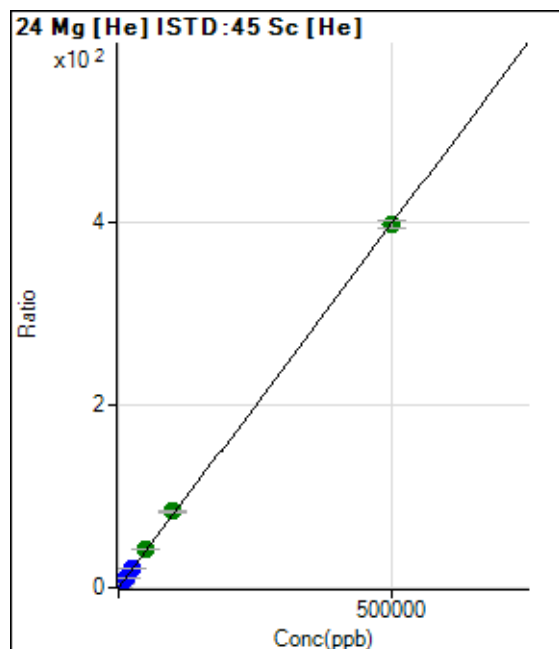
$$R = 1.0000$$

$$DL = 12.63$$

$$BEC = 49.34$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	547.26	0.0131	P	11.1
2	☐	50.000					
3	☐	500.000	510.946	17859.08	0.4205	P	4.2
4	☐	5000.000	5252.227	169967.37	4.2005	P	1.3
5	☐	12500.000	12999.376	404675.15	10.3771	P	0.8
6	☐	25000.000	25785.548	771345.09	20.5711	P	1.5
7	☐	50000.000	52944.091	1491061.17	42.2238	A	2.6
8	☐	100000.00	104951.84	2939907.97	83.6881	A	3.5
9	☐	500000.00	498660.92	15702149.83	397.5805	A	2.2

$$y = 7.9727\text{E-}004 * x + 0.0131$$

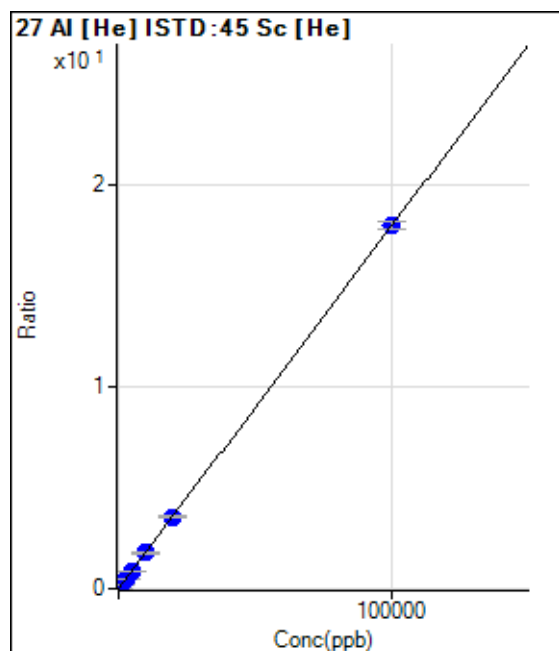
$$R = 0.9999$$

$$DL = 5.454$$

$$BEC = 16.43$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	8.33	0.0002	P	47.0
2	☐	2.000					
3	☐	20.000	20.045	161.71	0.0038	P	7.3
4	☐	1000.000	1011.373	7365.49	0.1820	P	1.6
5	☐	2500.000	2477.242	17375.90	0.4456	P	0.7
6	☐	5000.000	4911.759	33120.90	0.8833	P	1.2
7	☐	10000.000	9832.042	62436.44	1.7679	P	1.3
8	☐	20000.000	19790.956	124998.76	3.5583	P	3.6
9	☐	100000.00	100063.47	710559.74	17.9903	P	2.0

$$y = 1.7979\text{E-}004 * x + 2.0006\text{E-}004$$

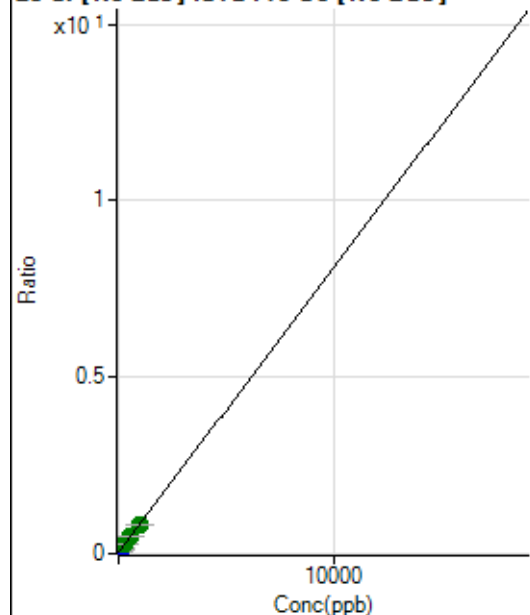
$$R = 1.0000$$

$$DL = 1.57$$

$$BEC = 1.113$$

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	199100.36	0.0350	P	0.3
2	☐	1.000					
3	☐	10.000	18.488	276544.72	0.0499	P	0.8
4	☐	50.000	62.159	470557.66	0.0851	P	0.8
5	☐	125.000	155.203	854035.17	0.1600	P	1.4
6	☐	250.000	290.870	1373358.38	0.2694	A	2.1
7	☐	500.000	542.205	2371255.96	0.4720	A	1.3
8	☐	1000.000	964.212	4076937.37	0.8121	A	0.1
9	☐			591634.81	0.1159	P	4.4

$$y = 8.0596E-004 * x + 0.0350$$

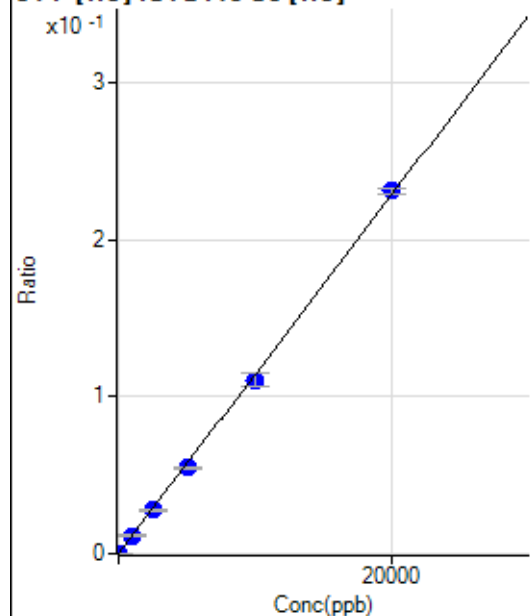
$$R = 0.9976$$

$$DL = 0.4399$$

$$BEC = 43.37$$

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	0.027	2.78	0.0001	P	173.2
2	☐	0.000					
3	☐	0.000	-0.027	2.78	0.0001	P	173.2
4	☐	1000.000	980.113	455.58	0.0113	P	13.6
5	☐	2500.000	2436.717	1088.98	0.0279	P	5.6
6	☐	5000.000	4787.799	2055.80	0.0548	P	2.7
7	☐	10000.000	9661.977	3903.48	0.1106	P	7.6
8	☐	20000.000	20230.966	8133.21	0.2314	P	1.8
9	☐			2.78	0.0001	P	173.2

$$y = 1.1435E-005 * x + 6.5940E-005$$

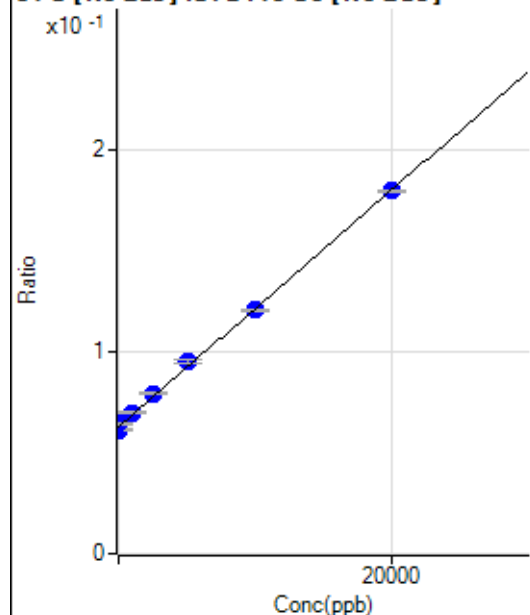
$$R = 0.9997$$

$$DL = 29.96$$

$$BEC = 5.766$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-258.994	349350.63	0.0613	P	0.4
2	☐	0.000					
3	☐	0.000	258.994	357087.41	0.0644	P	0.8
4	☐	1000.000	1205.314	386890.96	0.0699	P	1.1
5	☐	2500.000	2834.497	424197.59	0.0795	P	1.2
6	☐	5000.000	5508.019	485260.91	0.0952	P	1.8
7	☐	10000.000	9821.048	605410.34	0.1205	P	0.9
8	☐	20000.000	19910.394	902141.34	0.1797	P	0.7
9	☐			316049.19	0.0619	P	2.3

$$y = 5.8684\text{E-}006 * x + 0.0629$$

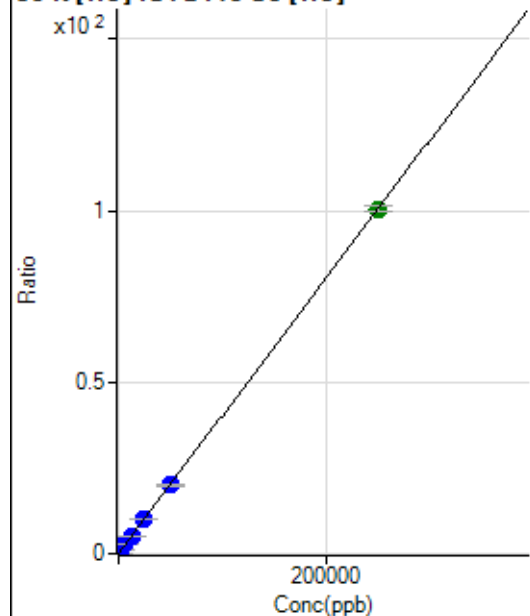
$$R = 0.9993$$

$$DL = 195.6$$

$$BEC = 1.071\text{E}+04$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2253.06	0.0539	P	5.7
2	☐	50.000					
3	☐	500.000	492.914	10699.01	0.2518	P	0.3
4	☐	2500.000	2582.266	44128.29	1.0907	P	2.4
5	☐	6250.000	6311.876	100927.55	2.5881	P	0.5
6	☐	12500.000	12506.079	190296.74	5.0750	P	1.5
7	☐	25000.000	24511.664	349466.99	9.8952	P	1.5
8	☐	50000.000	49702.664	702925.68	20.0093	P	3.4
9	☐	250000.00	250105.64	3968495.70	100.4703	A	1.8

$$y = 4.0150\text{E-}004 * x + 0.0539$$

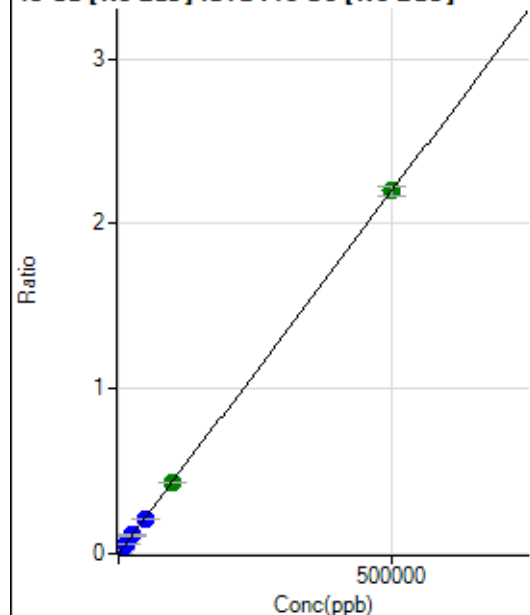
$$R = 1.0000$$

$$DL = 22.97$$

$$BEC = 134.3$$

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	408.36	0.0001	P	25.5
2	☐	50.000					
3	☐	500.000	471.455	11886.14	0.0021	P	2.6
4	☐	5000.000	4959.779	120950.92	0.0219	P	1.0
5	☐	12500.000	12497.458	293372.18	0.0550	P	2.0
6	☐	25000.000	25376.551	568731.01	0.1116	P	2.5
7	☐	50000.000	48847.564	1078691.59	0.2147	P	0.7
8	☐	100000.00	97636.641	2153853.34	0.4290	A	1.1
9	☐	500000.00	500569.58	11229525.34	2.1993	A	3.0

$$y = 4.3935E-006 * x + 7.1683E-005$$

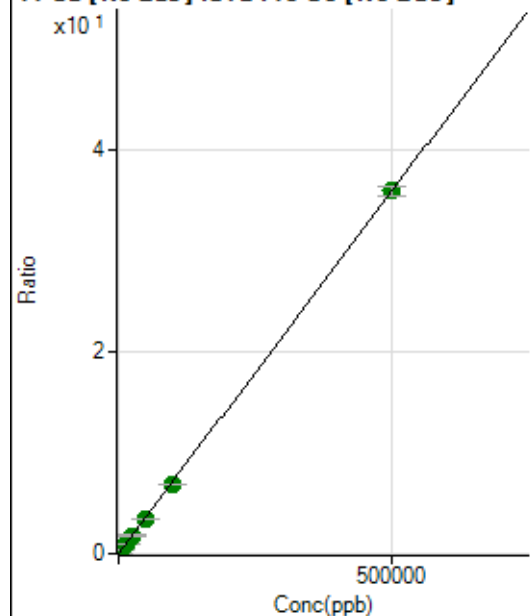
$$R = 1.0000$$

$$DL = 12.5$$

$$BEC = 16.32$$

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	11474.72	0.0020	P	2.4
2	☐	50.000					
3	☐	500.000	478.480	201149.19	0.0363	P	1.6
4	☐	5000.000	4967.250	1978323.57	0.3576	A	0.2
5	☐	12500.000	12477.466	4776786.39	0.8952	A	1.4
6	☐	25000.000	25096.646	9168803.59	1.7985	A	2.0
7	☐	50000.000	48400.147	17417647.79	3.4665	A	0.9
8	☐	100000.00	96293.619	34614217.44	6.8948	A	0.5
9	☐	500000.00	500897.34	183091342.9	35.8567	A	2.6

$$y = 7.1581E-005 * x + 0.0020$$

$$R = 1.0000$$

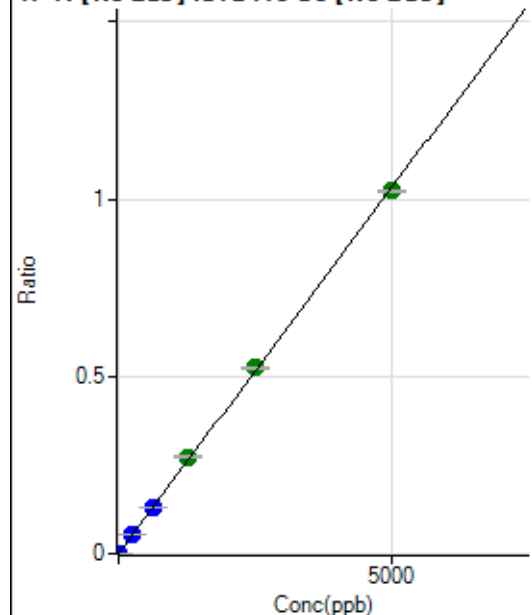
$$DL = 2.022$$

$$BEC = 28.15$$

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	108.34	0.0000	P	13.2
2	☐	0.500					
3	☐	5.000	5.250	6112.71	0.0011	P	3.8
4	☐	250.000	253.094	288932.84	0.0522	P	0.9
5	☐	625.000	639.211	703719.54	0.1319	P	0.7
6	☐	1250.000	1324.469	1392913.68	0.2732	A	1.9
7	☐	2500.000	2538.703	2631249.37	0.5237	A	0.8
8	☐	5000.000	4960.100	5136499.94	1.0231	A	0.5
9	☐			1922.44	0.0004	P	2.1

$$y = 2.0627\text{E-}004 * x + 1.9019\text{E-}005$$

$$R = 0.9998$$

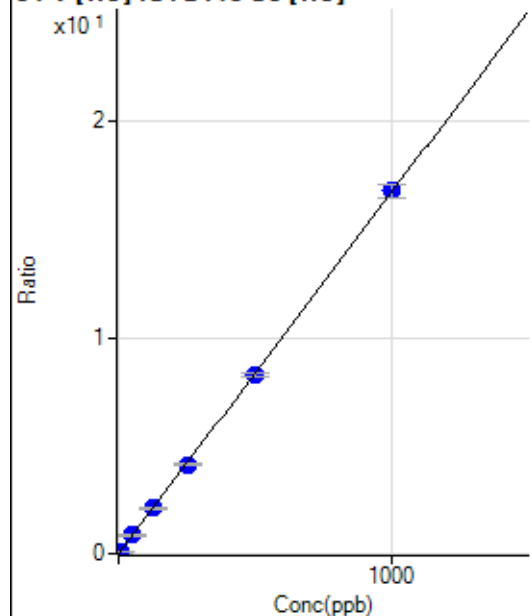
$$DL = 0.03652$$

$$BEC = 0.09221$$

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	89.5
2	☐	0.500					
3	☐	5.000	4.781	3401.58	0.0801	P	2.6
4	☐	50.000	50.585	34205.26	0.8454	P	2.0
5	☐	125.000	125.104	81517.62	2.0904	P	1.6
6	☐	250.000	246.661	154526.71	4.1214	P	1.9
7	☐	500.000	493.667	291273.59	8.2483	P	2.1
8	☐	1000.000	1003.960	589218.47	16.7742	P	3.8
9	☐			314.46	0.0080	P	12.3

$$y = 0.0167 * x + 1.8721\text{E-}004$$

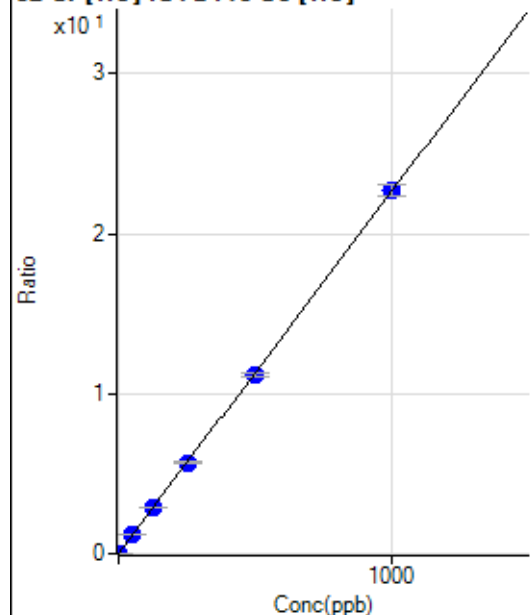
$$R = 1.0000$$

$$DL = 0.03008$$

$$BEC = 0.0112$$

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	361.12	0.0086	P	10.1
2	☐	0.200					
3	☐	2.000	2.017	2305.79	0.0543	P	1.7
4	☐	50.000	51.126	47141.45	1.1652	P	2.2
5	☐	125.000	126.145	111613.66	2.8622	P	1.3
6	☐	250.000	249.841	212217.81	5.6604	P	2.3
7	☐	500.000	495.808	396364.96	11.2245	P	2.2
8	☐	1000.000	1001.936	796544.67	22.6737	P	3.3
9	☐			47395.65	1.2000	P	2.2

$$y = 0.0226 * x + 0.0086$$

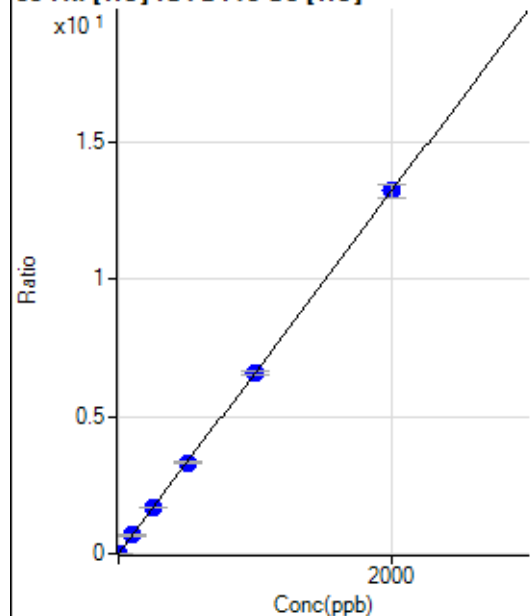
$$R = 1.0000$$

$$DL = 0.1157$$

$$BEC = 0.3821$$

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	0.0009	P	23.2
2	☐	0.100					
3	☐	1.000	1.162	362.24	0.0085	P	17.6
4	☐	100.000	101.659	27140.99	0.6707	P	2.6
5	☐	250.000	252.764	64982.63	1.6664	P	1.0
6	☐	500.000	499.184	123353.06	3.2900	P	2.1
7	☐	1000.000	994.745	231501.21	6.5553	P	1.8
8	☐	2000.000	2002.403	463534.72	13.1949	P	3.4
9	☐			4018.42	0.1017	P	1.7

$$y = 0.0066 * x + 8.7553E-004$$

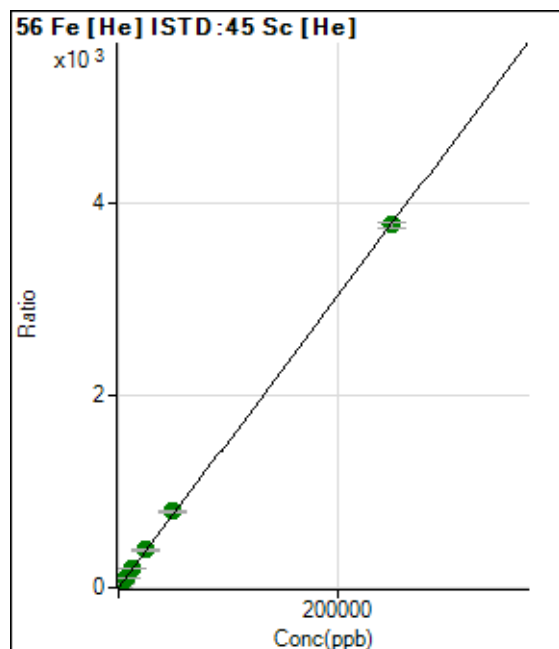
$$R = 1.0000$$

$$DL = 0.09254$$

$$BEC = 0.1329$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1422.34	0.0340	P	2.8
2	☐	5.000					
3	☐	50.000	50.975	34181.36	0.8046	P	1.6
4	☐	2500.000	2684.816	1643370.76	40.6208	A	2.7
5	☐	6250.000	6620.947	3904423.15	100.1239	A	1.1
6	☐	12500.000	12943.612	7338097.67	195.7046	A	1.7
7	☐	25000.000	25948.362	13854424.85	392.2994	A	1.6
8	☐	50000.000	52391.212	27824180.95	792.0399	A	3.4
9	☐	250000.00	249393.61	148903644.0	3,770.155	A	1.8

$$y = 0.0151 * x + 0.0340$$

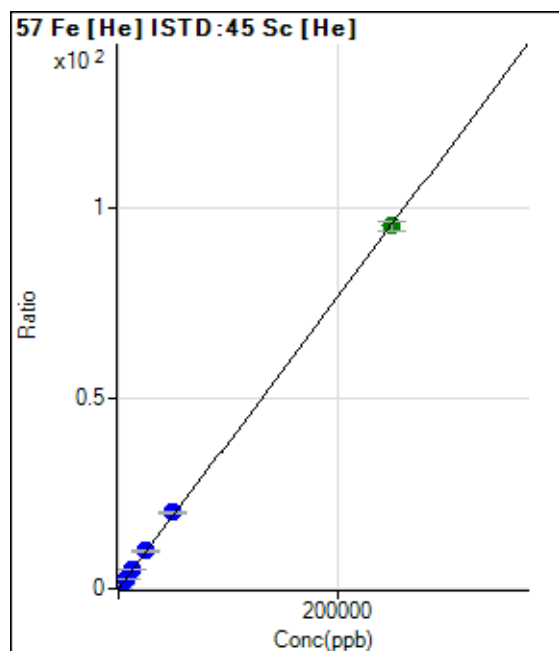
$$R = 0.9999$$

$$DL = 0.1879$$

$$BEC = 2.25$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	48.15	0.0012	P	29.4
2	☐	5.000					
3	☐	50.000	47.310	818.56	0.0193	P	5.7
4	☐	2500.000	2609.978	40460.93	1.0000	P	1.4
5	☐	6250.000	6593.033	98435.89	2.5242	P	0.8
6	☐	12500.000	12958.628	185989.34	4.9602	P	1.6
7	☐	25000.000	25971.762	351027.38	9.9402	P	2.0
8	☐	50000.000	52274.252	702739.53	20.0058	P	3.8
9	☐	250000.00	249415.36	3769675.49	95.4490	A	2.5

$$y = 3.8269E-004 * x + 0.0012$$

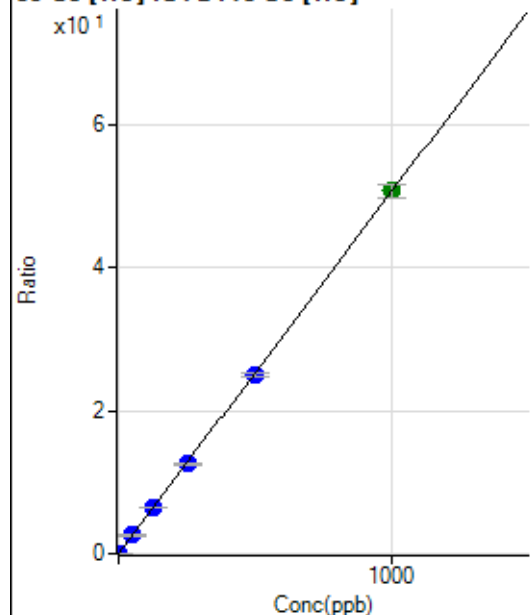
$$R = 1.0000$$

$$DL = 2.654$$

$$BEC = 3.012$$

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	75.56	0.0018	P	35.3
2	☐	0.100					
3	☐	1.000	0.999	2228.00	0.0524	P	4.3
4	☐	50.000	50.496	103612.56	2.5606	P	1.2
5	☐	125.000	125.539	248148.73	6.3633	P	0.4
6	☐	250.000	247.135	469624.69	12.5250	P	1.8
7	☐	500.000	495.771	887245.13	25.1242	P	1.9
8	☐	1000.000	1002.739	1784893.15	50.8141	A	3.9
9	☐			24331.44	0.6160	P	2.0

$$y = 0.0507 * x + 0.0018$$

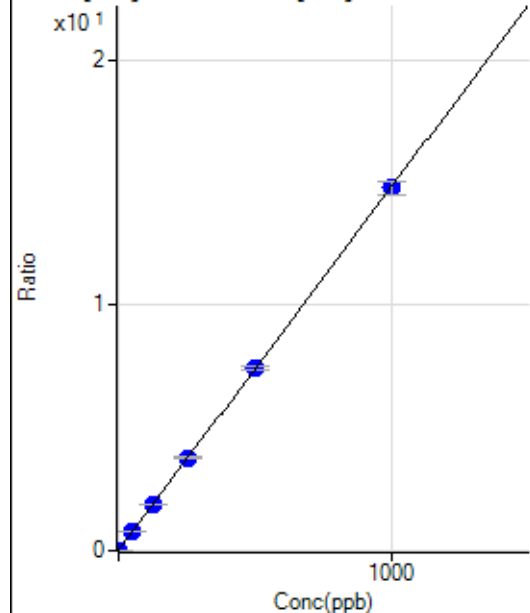
$$R = 1.0000$$

$$DL = 0.0377$$

$$BEC = 0.03564$$

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	665.58	0.0159	P	1.8
2	☐	0.100					
3	☐	1.000	0.823	1193.41	0.0281	P	6.0
4	☐	50.000	51.733	31617.18	0.7814	P	2.0
5	☐	125.000	126.641	73701.50	1.8899	P	0.2
6	☐	250.000	254.195	141636.86	3.7774	P	1.6
7	☐	500.000	503.410	263616.59	7.4652	P	2.2
8	☐	1000.000	996.955	518784.33	14.7685	P	3.7
9	☐			24665.33	0.6245	P	1.5

$$y = 0.0148 * x + 0.0159$$

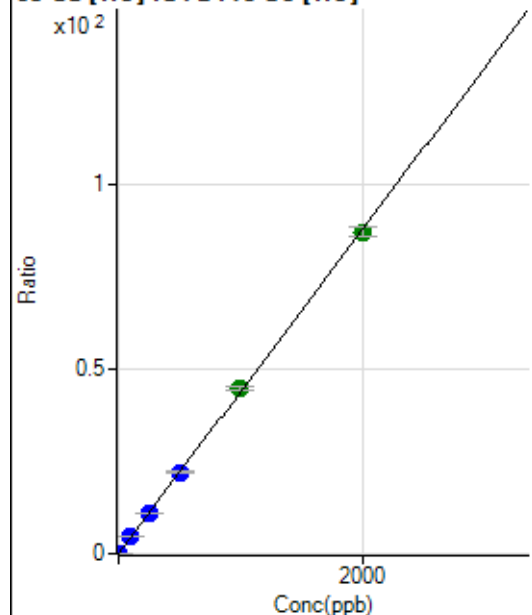
$$R = 1.0000$$

$$DL = 0.05888$$

$$BEC = 1.076$$

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	372.23	0.0089	P	6.8
2	☐	0.200					
3	☐	2.000	1.939	3993.98	0.0940	P	2.9
4	☐	100.000	101.888	181342.33	4.4818	P	1.6
5	☐	250.000	254.288	435681.74	11.1723	P	0.5
6	☐	500.000	504.071	830051.20	22.1379	P	1.8
7	☐	1000.000	1017.074	1576967.51	44.6589	A	2.5
8	☐	2000.000	1989.815	3069147.90	87.3628	A	3.2
9	☐			8250.38	0.2089	P	4.5

$$y = 0.0439 * x + 0.0089$$

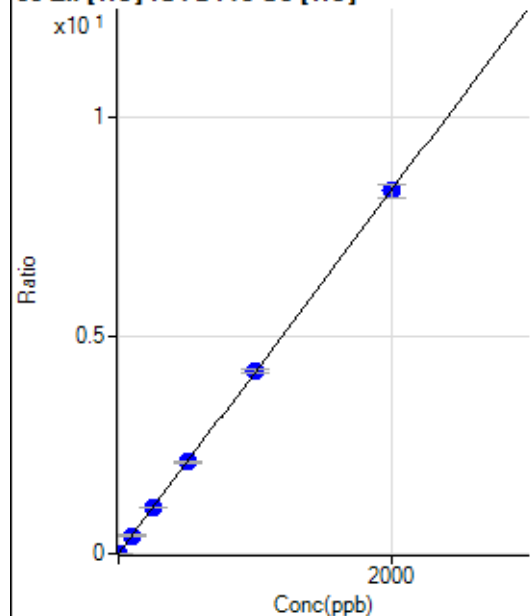
$$R = 0.9999$$

$$DL = 0.04114$$

$$BEC = 0.2027$$

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	143.34	0.0034	P	12.8
2	☐	0.200					
3	☐	2.000	1.305	376.68	0.0089	P	4.8
4	☐	100.000	99.712	16953.90	0.4189	P	0.5
5	☐	250.000	253.651	41348.28	1.0603	P	1.2
6	☐	500.000	503.917	78855.86	2.1031	P	1.8
7	☐	1000.000	1004.289	147907.00	4.1881	P	1.5
8	☐	2000.000	1996.435	292344.15	8.3221	P	3.6
9	☐			2583.62	0.0654	P	1.5

$$y = 0.0042 * x + 0.0034$$

$$R = 1.0000$$

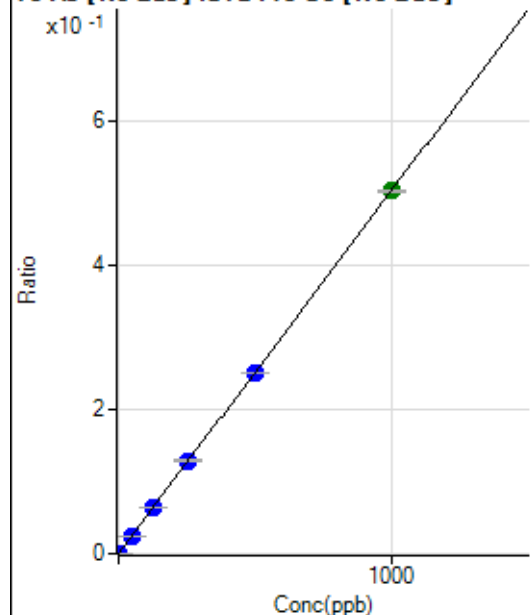
$$DL = 0.317$$

$$BEC = 0.8235$$

Weight: <None>

Min Conc: 0

75 As [No Gas] ISTD:45 Sc [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	180.57	0.0000	P	17.6
2	☐	0.100					
3	☐	1.000	0.982	2919.89	0.0005	P	4.7
4	☐	50.000	49.586	138424.24	0.0250	P	0.6
5	☐	125.000	126.370	339998.98	0.0637	P	0.7
6	☐	250.000	255.756	657213.23	0.1289	P	2.0
7	☐	500.000	498.086	1261289.48	0.2510	P	1.0
8	☐	1000.000	999.367	2528363.88	0.5036	A	0.8
9	☐			4645.44	0.0009	P	3.9

$$y = 5.0392\text{E-}004 * x + 3.1706\text{E-}005$$

$$R = 1.0000$$

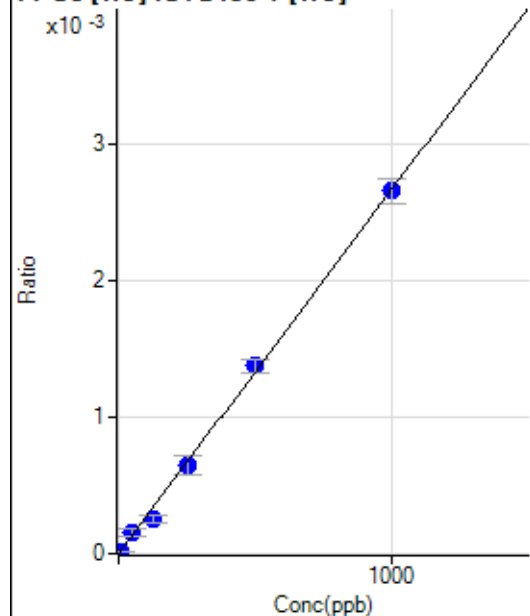
$$DL = 0.03318$$

$$BEC = 0.06292$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500					
3	☐	5.000	5.420	4.44	0.0000	P	43.7
4	☐	50.000	55.977	44.45	0.0001	P	37.2
5	☐	125.000	93.532	73.34	0.0002	P	21.0
6	☐	250.000	242.129	183.34	0.0006	P	21.7
7	☐	500.000	516.427	371.13	0.0014	P	7.6
8	☐	1000.000	997.387	710.03	0.0027	P	7.2
9	☐			2.22	0.0000	P	86.6

$$y = 2.6685\text{E-}006 * x + 0.0000\text{E+}000$$

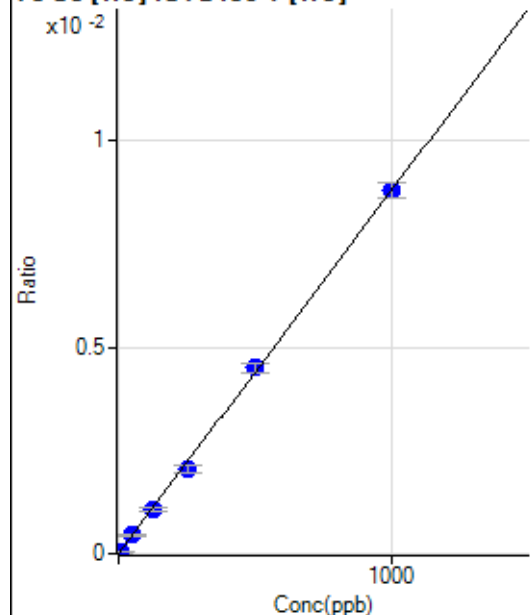
$$R = 0.9992$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1.23	0.0000	P	173.2
2	☐	0.500					
3	☐	5.000	4.556	13.58	0.0000	P	34.0
4	☐	50.000	49.929	132.72	0.0004	P	12.9
5	☐	125.000	120.305	312.35	0.0011	P	8.9
6	☐	250.000	234.590	586.44	0.0021	P	9.2
7	☐	500.000	511.474	1211.79	0.0045	P	5.7
8	☐	1000.000	998.708	2340.96	0.0088	P	4.3
9	☐			1.23	0.0000	P	86.6

$$y = 8.7931\text{E-}006 * x + 4.0824\text{E-}006$$

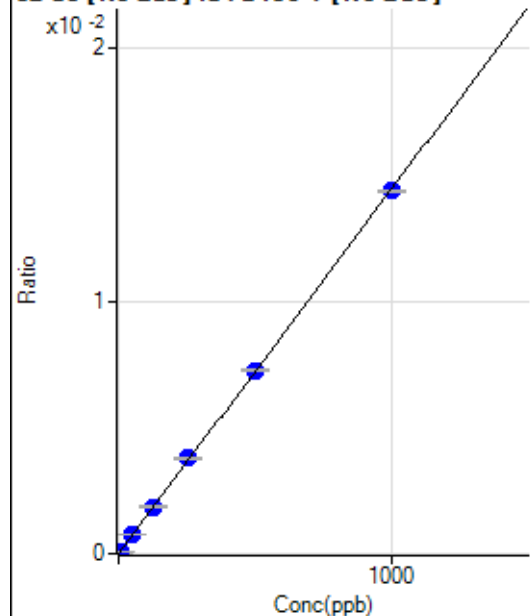
$$R = 0.9998$$

$$DL = 2.412$$

$$BEC = 0.4643$$

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	3.29	0.0000	P	1334.
2	☐	0.500					
3	☐	5.000	5.107	749.42	0.0001	P	10.3
4	☐	50.000	51.928	7559.64	0.0008	P	1.7
5	☐	125.000	128.496	18468.49	0.0019	P	2.0
6	☐	250.000	261.849	36429.54	0.0038	P	2.5
7	☐	500.000	502.244	69375.52	0.0073	P	1.1
8	☐	1000.000	995.382	138555.37	0.0144	P	0.5
9	☐			172.51	0.0000	P	26.5

$$y = 1.4437\text{E-}005 * x + 3.5082\text{E-}007$$

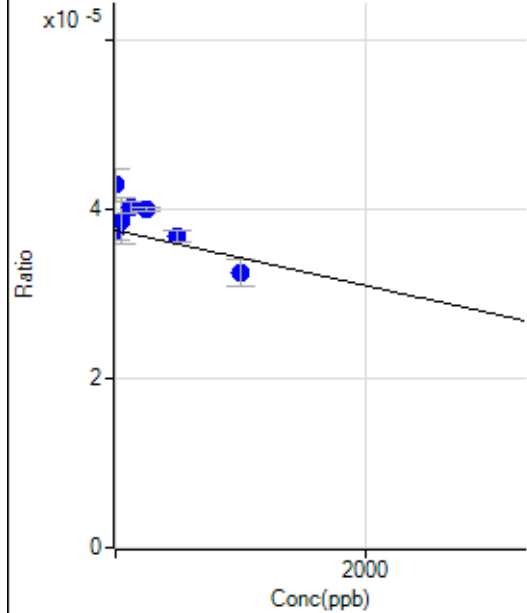
$$R = 0.9999$$

$$DL = 0.9725$$

$$BEC = 0.0243$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	377.79	0.0000	P	6.7
2	☐	0.100					
3	☐	1.000	-1639.359	433.35	0.0000	P	9.2
4	☐	50.000	-357.794	390.01	0.0000	P	14.2
5	☐	125.000	-816.329	400.01	0.0000	P	3.0
6	☐	250.000	-727.640	384.46	0.0000	P	1.2
7	☐	500.000	210.170	352.24	0.0000	P	3.4
8	☐	1000.000	1529.021	313.34	0.0000	P	10.0
9	☐			315.57	0.0000	P	4.4

$$y = -3.2629E-009 * x + 3.7507E-005$$

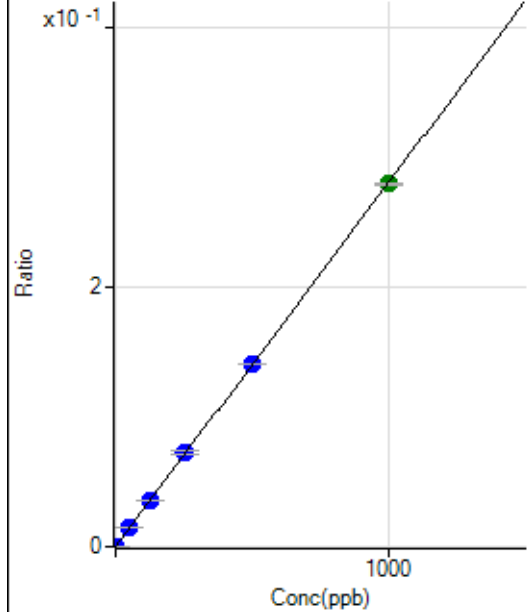
$$R = -0.8382$$

$$DL = -2295$$

$$BEC = -1.149E+04$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	530.60	0.0001	P	5.3
2	☐	0.100					
3	☐	1.000	1.035	3467.29	0.0003	P	5.7
4	☐	50.000	51.094	144908.49	0.0144	P	0.9
5	☐	125.000	127.218	355538.86	0.0357	P	1.1
6	☐	250.000	258.560	698984.08	0.0725	P	2.3
7	☐	500.000	501.505	1345622.82	0.1406	P	0.7
8	☐	1000.000	996.775	2694763.06	0.2795	A	0.3
9	☐			13668.53	0.0014	P	4.5

$$y = 2.8034E-004 * x + 5.2677E-005$$

$$R = 1.0000$$

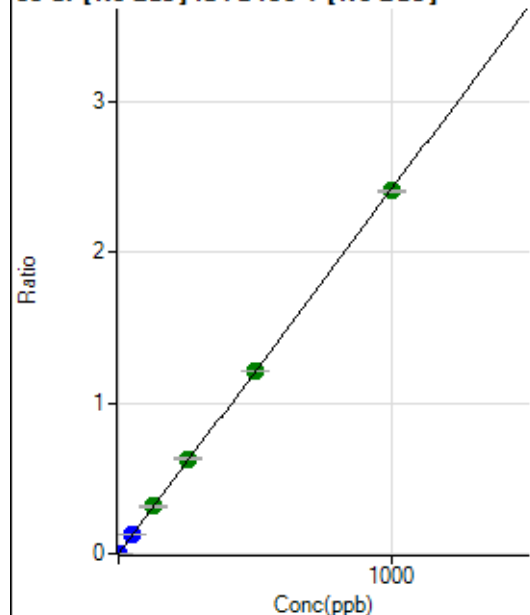
$$DL = 0.02995$$

$$BEC = 0.1879$$

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	177.79	0.0000	P	28.5
2	☐	0.100					
3	☐	1.000	1.019	25071.19	0.0025	P	3.1
4	☐	50.000	51.023	1242230.60	0.1232	P	0.9
5	☐	125.000	129.478	3112739.63	0.3127	A	2.0
6	☐	250.000	260.709	6068131.91	0.6297	A	1.8
7	☐	500.000	502.291	11606996.35	1.2131	A	0.4
8	☐	1000.000	995.566	23182374.82	2.4045	A	0.7
9	☐			112738.24	0.0119	P	3.4

$$y = 0.0024 * x + 1.7688E-005$$

$$R = 0.9999$$

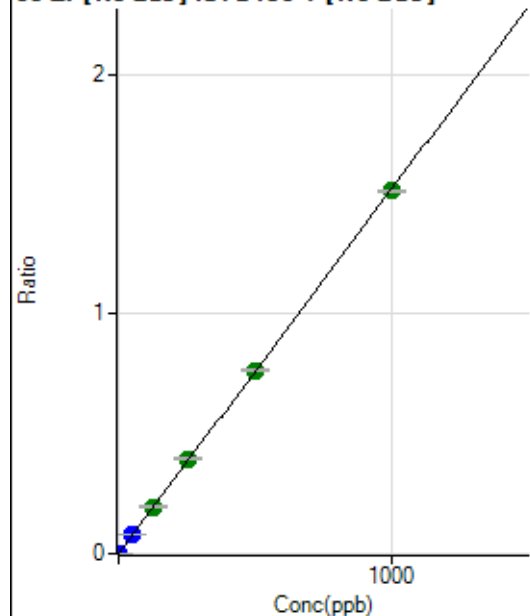
$$DL = 0.006251$$

$$BEC = 0.007324$$

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	913.97	0.0001	P	2.9
2	☐	0.100					
3	☐	1.000	0.946	15473.30	0.0015	P	1.2
4	☐	50.000	50.563	776616.14	0.0771	P	1.0
5	☐	125.000	129.063	1956274.05	0.1965	A	1.9
6	☐	250.000	260.368	3819856.94	0.3964	A	1.8
7	☐	500.000	503.200	7328759.97	0.7660	A	0.5
8	☐	1000.000	995.272	14606504.66	1.5150	A	0.7
9	☐			7135.51	0.0008	P	7.2

$$y = 0.0015 * x + 9.0754E-005$$

$$R = 0.9999$$

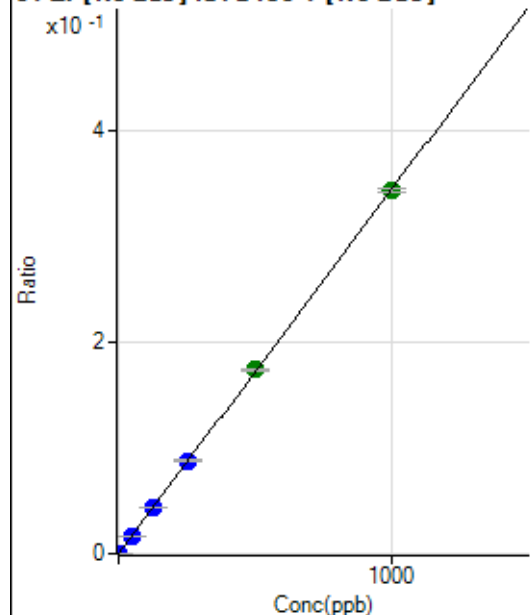
$$DL = 0.005134$$

$$BEC = 0.05962$$

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	186.12	0.0000	P	24.8
2	☐	0.100					
3	☐	1.000	0.944	3470.05	0.0003	P	5.5
4	☐	50.000	49.583	171955.40	0.0171	P	1.3
5	☐	125.000	125.226	428607.78	0.0431	P	1.7
6	☐	250.000	254.694	843741.45	0.0876	P	2.1
7	☐	500.000	504.695	1659802.93	0.1735	A	1.1
8	☐	1000.000	996.471	3302198.12	0.3425	A	1.2
9	☐			1608.52	0.0002	P	2.3

$$y = 3.4371\text{E-}004 * x + 1.8456\text{E-}005$$

$$R = 1.0000$$

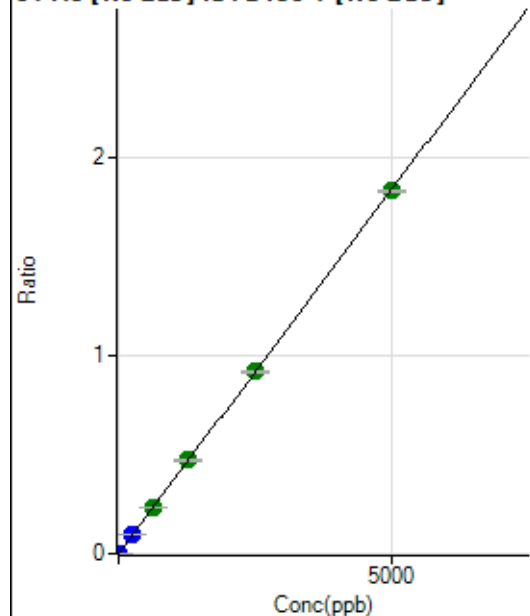
$$DL = 0.04$$

$$BEC = 0.0537$$

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	405.58	0.0000	P	33.5
2	☐	0.500					
3	☐	5.000	5.048	19147.61	0.0019	P	4.4
4	☐	250.000	253.896	939814.72	0.0932	P	1.1
5	☐	625.000	639.586	2337339.03	0.2348	A	2.4
6	☐	1250.000	1293.053	4574640.99	0.4747	A	1.9
7	☐	2500.000	2504.463	8796542.12	0.9194	A	0.7
8	☐	5000.000	4984.987	17643713.59	1.8300	A	0.6
9	☐			26654.94	0.0028	P	2.9

$$y = 3.6710\text{E-}004 * x + 4.0259\text{E-}005$$

$$R = 1.0000$$

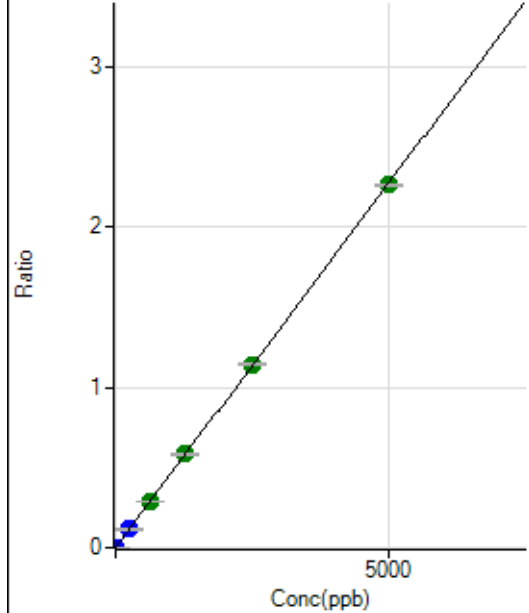
$$DL = 0.1102$$

$$BEC = 0.1097$$

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	297.24	0.0000	P	16.7
2	☐	0.500					
3	☐	5.000	4.868	22675.38	0.0022	P	2.0
4	☐	250.000	252.206	1155613.21	0.1147	P	1.4
5	☐	625.000	639.021	2891179.08	0.2905	A	1.9
6	☐	1250.000	1288.021	5640923.35	0.5854	A	2.6
7	☐	2500.000	2516.849	10944701.37	1.1439	A	0.4
8	☐	5000.000	4980.207	21823701.53	2.2635	A	0.4
9	☐			41372.54	0.0044	P	0.1

$$y = 4.5450\text{E-}004 * x + 2.9508\text{E-}005$$

$$R = 1.0000$$

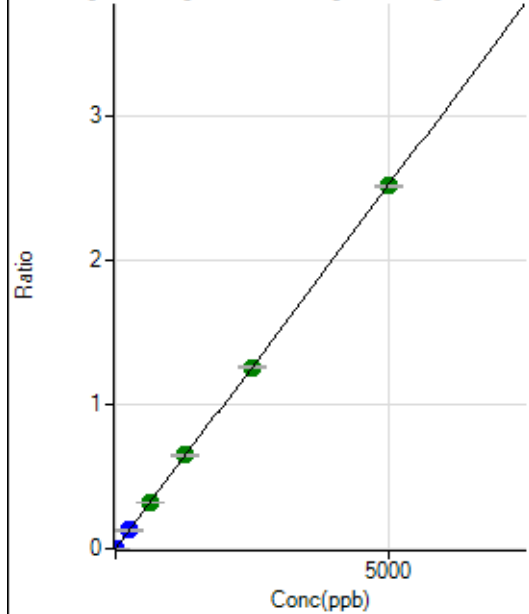
$$DL = 0.03254$$

$$BEC = 0.06492$$

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	372.25	0.0000	P	10.1
2	☐	0.500					
3	☐	5.000	4.963	25711.49	0.0025	P	1.0
4	☐	250.000	251.772	1281458.41	0.1271	P	0.8
5	☐	625.000	635.776	3195021.21	0.3210	A	1.9
6	☐	1250.000	1288.898	6270428.66	0.6507	A	2.0
7	☐	2500.000	2498.847	12069664.77	1.2615	A	0.6
8	☐	5000.000	4989.416	24284342.73	2.5188	A	0.9
9	☐			47941.67	0.0051	P	2.9

$$y = 5.0483\text{E-}004 * x + 3.6990\text{E-}005$$

$$R = 1.0000$$

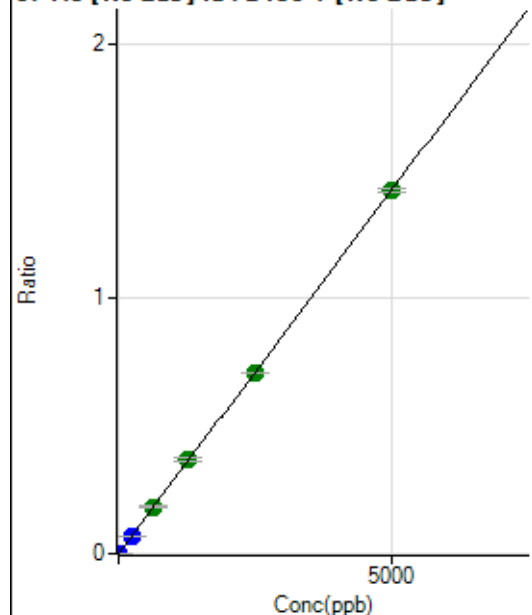
$$DL = 0.02215$$

$$BEC = 0.07327$$

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	161.12	0.0000	P	11.7
2	☐	0.500					
3	☐	5.000	4.970	14480.53	0.0014	P	0.7
4	☐	250.000	250.734	720017.10	0.0714	P	0.3
5	☐	625.000	641.164	1817811.46	0.1826	A	2.7
6	☐	1250.000	1297.288	3560508.94	0.3695	A	2.7
7	☐	2500.000	2489.400	6784048.42	0.7091	A	0.8
8	☐	5000.000	4991.421	13707175.31	1.4217	A	0.9
9	☐			26281.88	0.0028	P	2.5

$$y = 2.8483\text{E-}004 * x + 1.6014\text{E-}005$$

$$R = 0.9999$$

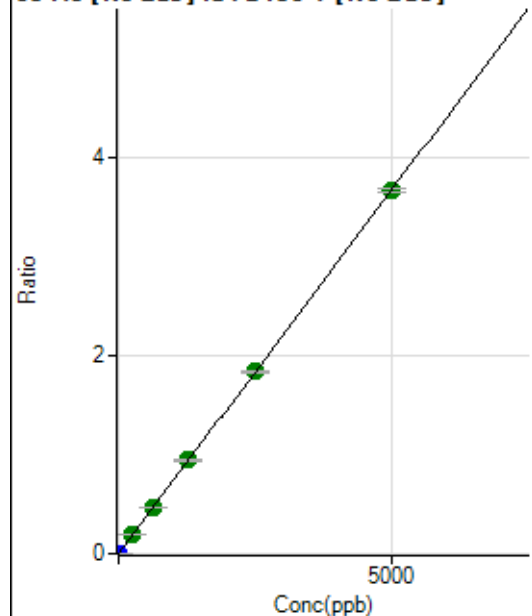
$$DL = 0.01979$$

$$BEC = 0.05622$$

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	383.36	0.0000	P	19.2
2	☐	0.500					
3	☐	5.000	5.037	37784.24	0.0037	P	1.7
4	☐	250.000	252.923	1871733.29	0.1857	A	0.9
5	☐	625.000	633.088	4626187.60	0.4648	A	1.8
6	☐	1250.000	1286.456	9100085.79	0.9444	A	2.3
7	☐	2500.000	2499.559	17555143.10	1.8349	A	0.9
8	☐	5000.000	4989.949	35315774.75	3.6630	A	0.9
9	☐			68138.62	0.0072	P	2.4

$$y = 7.3408\text{E-}004 * x + 3.8101\text{E-}005$$

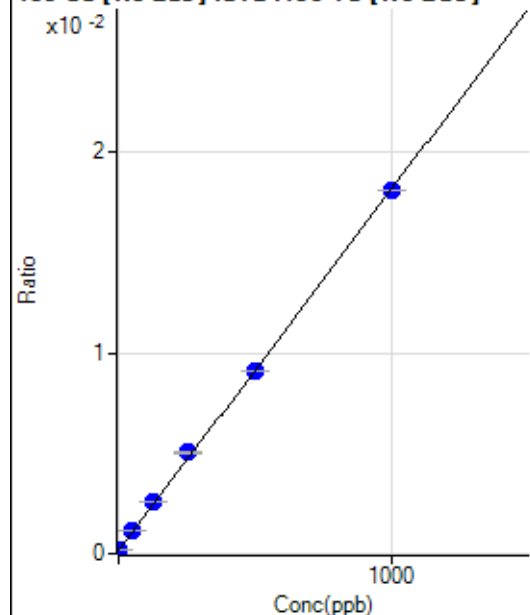
$$R = 1.0000$$

$$DL = 0.02993$$

$$BEC = 0.0519$$

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	2492.01	0.0002	P	4.0
2	☐	0.100					
3	☐	1.000	1.564	2883.79	0.0002	P	3.7
4	☐	50.000	53.435	15754.25	0.0011	P	4.1
5	☐	125.000	134.319	35804.18	0.0026	P	1.1
6	☐	250.000	270.866	69044.07	0.0051	P	1.2
7	☐	500.000	497.071	128308.19	0.0091	P	0.4
8	☐	1000.000	994.911	256432.86	0.0181	P	0.0
9	☐			2594.82	0.0002	P	4.1

$$y = 1.7972\text{E-}005 * x + 1.8308\text{E-}004$$

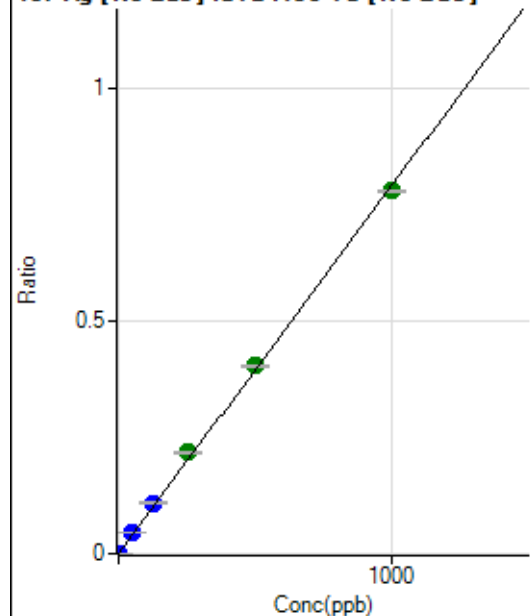
$$R = 0.9997$$

$$DL = 1.209$$

$$BEC = 10.19$$

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	136.12	0.0000	P	49.0
2	☐	0.100					
3	☐	1.000	1.136	12397.87	0.0009	P	3.0
4	☐	50.000	55.987	609991.18	0.0443	P	0.5
5	☐	125.000	138.255	1507161.89	0.1093	P	1.3
6	☐	250.000	275.725	2979914.22	0.2180	A	1.6
7	☐	500.000	510.143	5677159.20	0.4034	A	0.3
8	☐	1000.000	986.541	11073404.59	0.7801	A	0.4
9	☐			1869.72	0.0001	P	9.7

$$y = 7.9068\text{E-}004 * x + 9.9803\text{E-}006$$

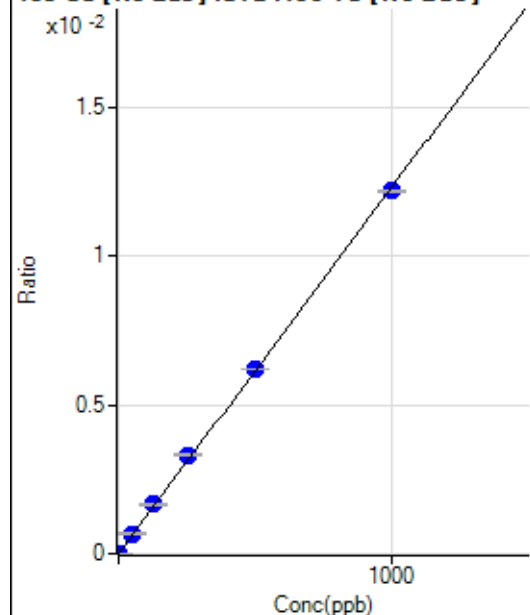
$$R = 0.9995$$

$$DL = 0.01855$$

$$BEC = 0.01262$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5.56	0.0000	P	115.0
2	☐	0.100					
3	☐	1.000	1.157	200.00	0.0000	P	12.7
4	☐	50.000	54.676	9275.61	0.0007	P	2.5
5	☐	125.000	134.467	22820.94	0.0017	P	1.7
6	☐	250.000	268.177	45117.15	0.0033	P	1.9
7	☐	500.000	505.562	87582.09	0.0062	P	0.2
8	☐	1000.000	991.257	173197.58	0.0122	P	0.5
9	☐			66.67	0.0000	P	29.3

$$y = 1.2308\text{E-}005 * x + 4.0986\text{E-}007$$

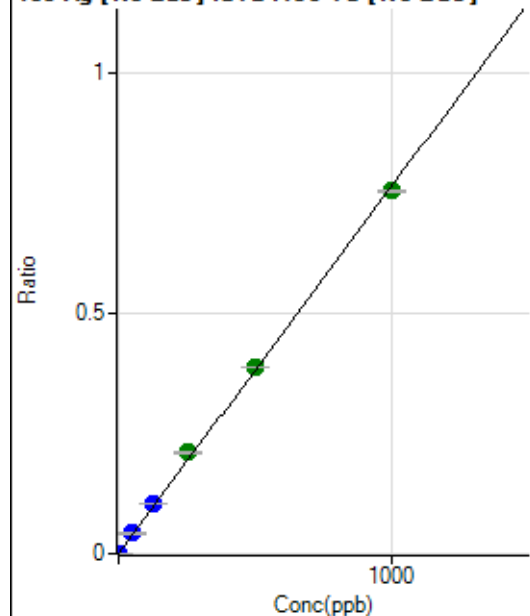
$$R = 0.9998$$

$$DL = 0.1149$$

$$BEC = 0.0333$$

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	86.12	0.0000	P	29.2
2	☐	0.100					
3	☐	1.000	1.085	11396.96	0.0008	P	4.1
4	☐	50.000	55.053	579038.69	0.0420	P	0.9
5	☐	125.000	136.197	1433387.53	0.1040	P	1.1
6	☐	250.000	275.598	2875331.53	0.2104	A	2.2
7	☐	500.000	507.411	5451619.22	0.3873	A	0.7
8	☐	1000.000	988.243	10708936.52	0.7544	A	0.7
9	☐			1766.86	0.0001	P	3.7

$$y = 7.6336\text{E-}004 * x + 6.3198\text{E-}006$$

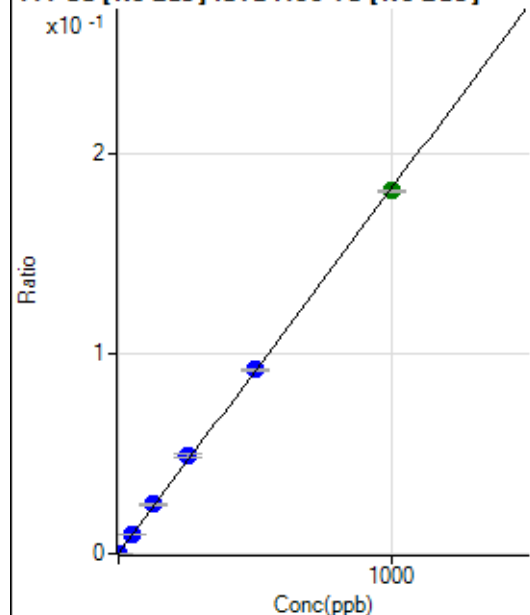
$$R = 0.9996$$

$$DL = 0.007244$$

$$BEC = 0.008279$$

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	2503.40	0.0002	P	3.8
2	☐	0.100					
3	☐	1.000	1.137	5345.48	0.0004	P	3.3
4	☐	50.000	53.983	138311.92	0.0100	P	1.0
5	☐	125.000	134.287	340480.90	0.0247	P	2.1
6	☐	250.000	267.572	670102.62	0.0490	P	2.4
7	☐	500.000	502.805	1294499.47	0.0920	P	0.3
8	☐	1000.000	992.844	2575643.22	0.1814	A	0.5
9	☐			3117.62	0.0002	P	2.6

$$y = 1.8256\text{E-}004 * x + 1.8392\text{E-}004$$

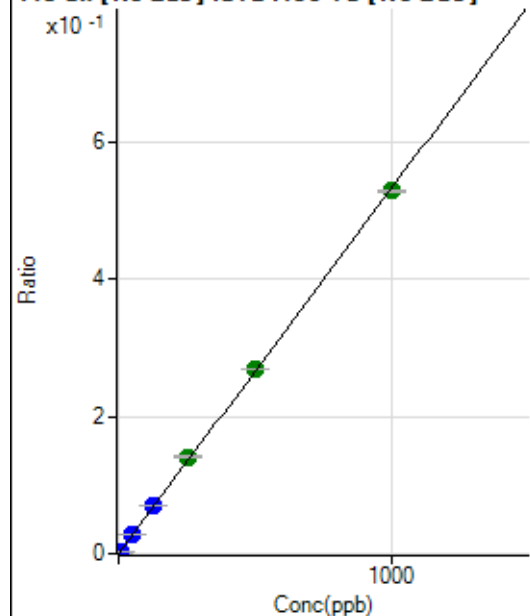
$$R = 0.9998$$

$$DL = 0.1143$$

$$BEC = 1.007$$

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	802.85	0.0001	P	21.5
2	☐	0.500					
3	☐	5.000	5.163	38372.79	0.0028	P	1.2
4	☐	50.000	52.539	386587.36	0.0281	P	0.8
5	☐	125.000	130.976	963042.58	0.0699	P	2.2
6	☐	250.000	265.023	1931118.66	0.1413	A	2.3
7	☐	500.000	504.431	3784611.24	0.2689	A	0.6
8	☐	1000.000	993.154	7514564.06	0.5294	A	0.8
9	☐			18933.56	0.0014	P	4.4

$$y = 5.3296\text{E-}004 * x + 5.8924\text{E-}005$$

$$R = 0.9999$$

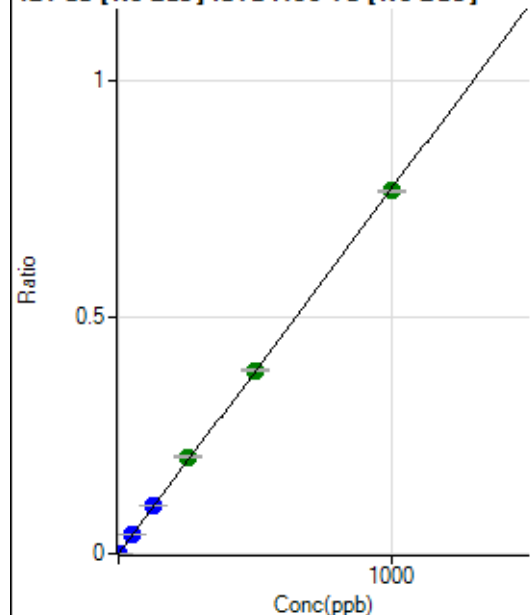
$$DL = 0.07127$$

$$BEC = 0.1106$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	397.25	0.0000	P	10.2
2	☐	0.200					
3	☐	2.000	2.058	22094.23	0.0016	P	1.4
4	☐	50.000	51.989	553309.41	0.0402	P	0.3
5	☐	125.000	131.543	1400211.36	0.1016	P	2.2
6	☐	250.000	264.832	2794418.97	0.2045	A	2.3
7	☐	500.000	502.010	5454654.24	0.3876	A	0.6
8	☐	1000.000	994.369	10897391.73	0.7677	A	0.7
9	☐			29850.99	0.0022	P	3.2

$$y = 7.7197\text{E-}004 * x + 2.9175\text{E-}005$$

$$R = 0.9999$$

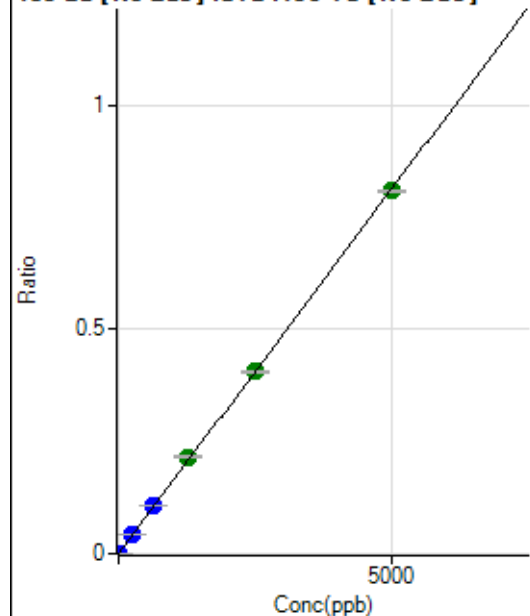
$$DL = 0.01156$$

$$BEC = 0.03779$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	72.23	0.0000	P	40.0
2	☐	1.000					
3	☐	10.000	10.399	23129.50	0.0017	P	3.3
4	☐	250.000	263.681	590049.94	0.0428	P	1.0
5	☐	625.000	664.369	1487586.34	0.1079	P	1.7
6	☐	1250.000	1324.449	2940195.51	0.2151	A	1.6
7	☐	2500.000	2495.983	5705585.54	0.4054	A	0.3
8	☐	5000.000	4977.791	11477067.62	0.8085	A	0.3
9	☐			3450.62	0.0003	P	4.1

$$y = 1.6242\text{E-}004 * x + 5.2969\text{E-}006$$

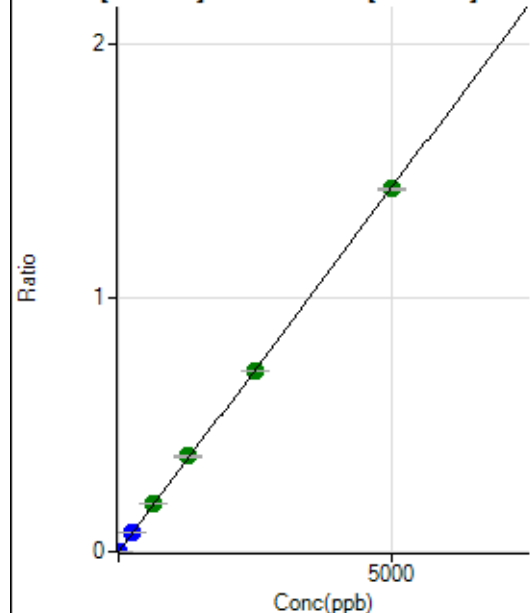
$$R = 0.9999$$

$$DL = 0.03916$$

$$BEC = 0.03261$$

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	36.11	0.0000	P	34.9
2	☐	1.000					
3	☐	10.000	10.550	41410.32	0.0030	P	2.4
4	☐	250.000	263.956	1044619.36	0.0758	P	0.7
5	☐	625.000	662.369	2623049.19	0.1903	A	1.5
6	☐	1250.000	1314.856	5162053.28	0.3777	A	2.1
7	☐	2500.000	2489.197	10063707.78	0.7150	A	0.2
8	☐	5000.000	4983.817	20323128.06	1.4316	A	0.5
9	☐			5971.11	0.0004	P	11.3

$$y = 2.8726E-004 * x + 2.6510E-006$$

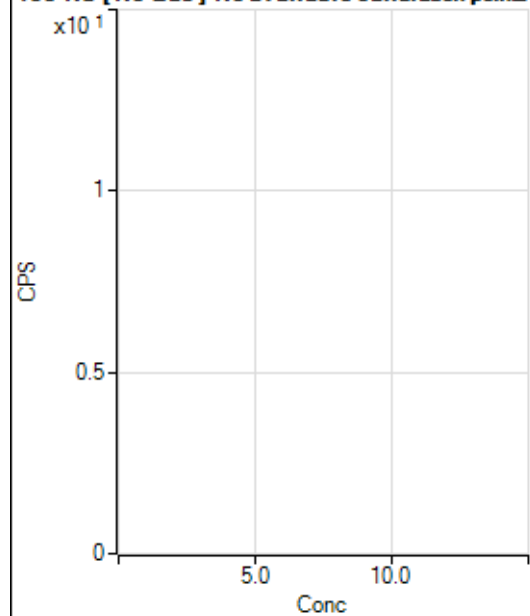
$$R = 0.9999$$

$$DL = 0.009654$$

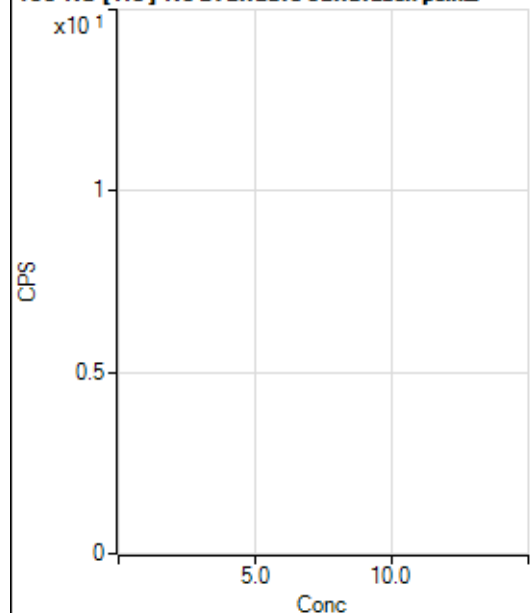
$$BEC = 0.009229$$

Weight: <None>

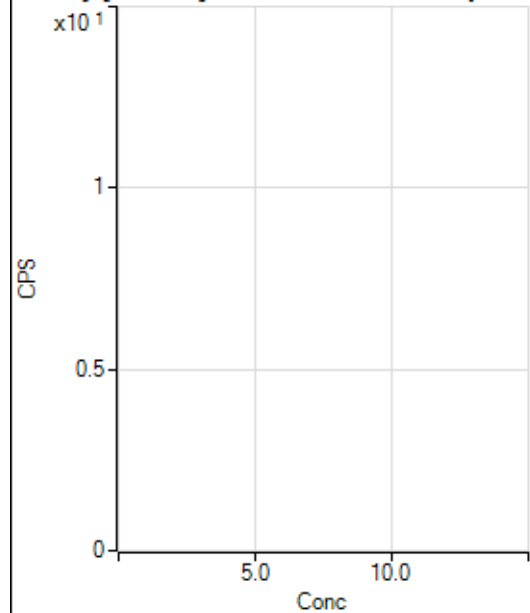
Min Conc: 0

150 Nd [No Gas] No available calibration points

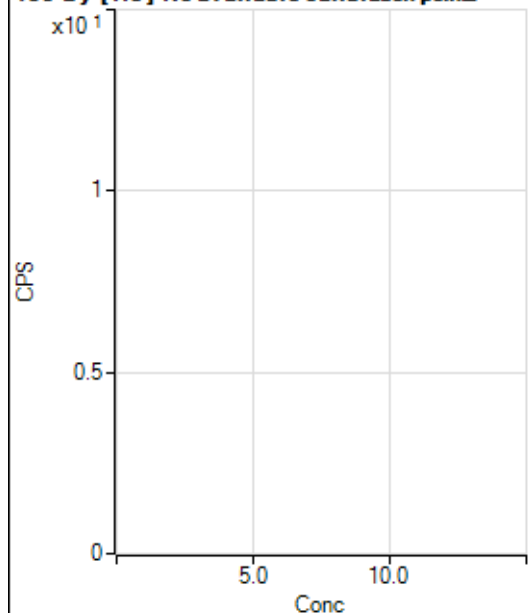
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			4.45		P	86.6
2	☐						
3	☐			11.11		P	124.9
4	☐			42.22		P	9.1
5	☐			93.34		P	24.7
6	☐			175.56		P	17.5
7	☐			295.57		P	15.4
8	☐			615.60		P	5.6
9	☐			111.12		P	22.7

150 Nd [He] No available calibration points

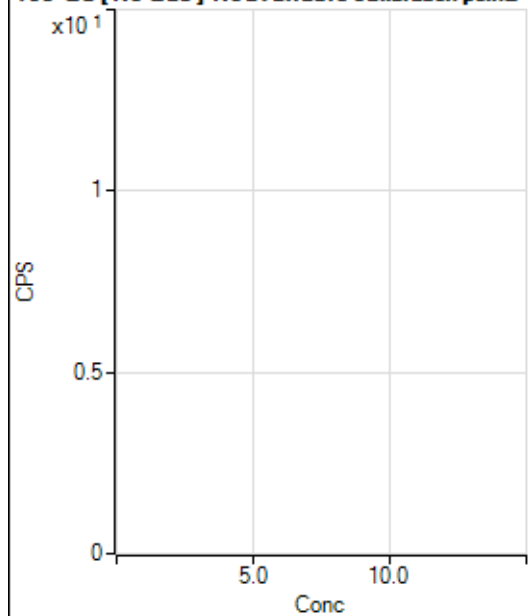
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐						
3	☐			0.00		P	
4	☐			1.11		P	173.2
5	☐			2.22		P	86.6
6	☐			7.78		P	99.0
7	☐			3.33		P	100.1
8	☐			12.22		P	41.7
9	☐			12.22		P	15.7

156 Dy [No Gas] No available calibration points

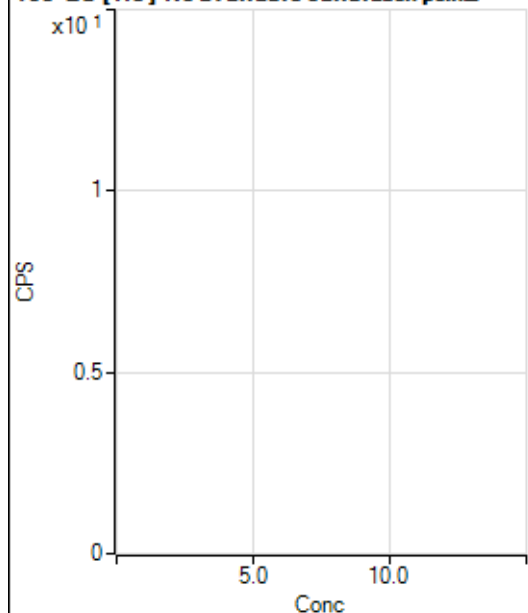
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			19.45		P	24.7
2	☐						
3	☐			13.89		P	69.3
4	☐			19.44		P	137.8
5	☐			30.55		P	15.7
6	☐			63.89		P	7.5
7	☐			94.45		P	39.8
8	☐			130.57		P	7.4
9	☐			147.23		P	11.8

156 Dy [He] No available calibration points

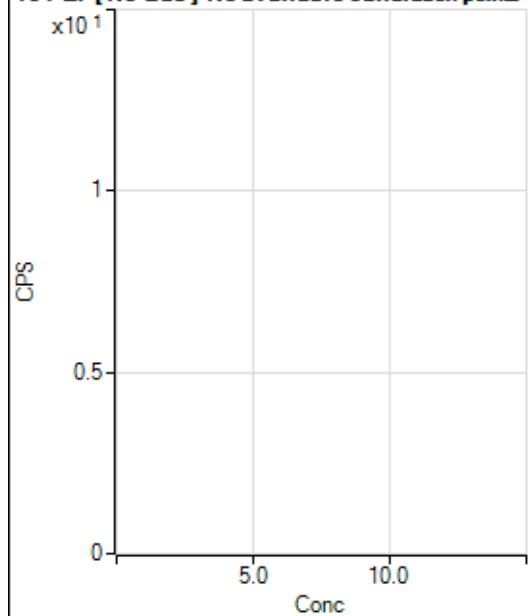
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.2
2	☐						
3	☐			1.11		P	173.2
4	☐			1.11		P	173.2
5	☐			6.67		P	100.0
6	☐			6.66		P	86.6
7	☐			11.11		P	17.3
8	☐			8.89		P	43.3
9	☐			21.11		P	39.7

160 Gd [No Gas] Noavailable calibration poin_

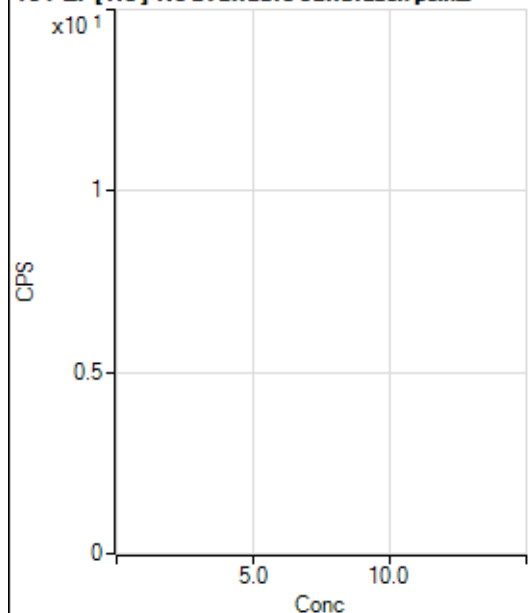
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			125.01		P	24.0
2	☐						
3	☐			94.45		P	5.1
4	☐			97.23		P	32.5
5	☐			119.45		P	33.0
6	☐			116.67		P	25.8
7	☐			125.01		P	30.6
8	☐			136.12		P	31.4
9	☐			127.78		P	22.9

160 Gd [He] No available calibration points

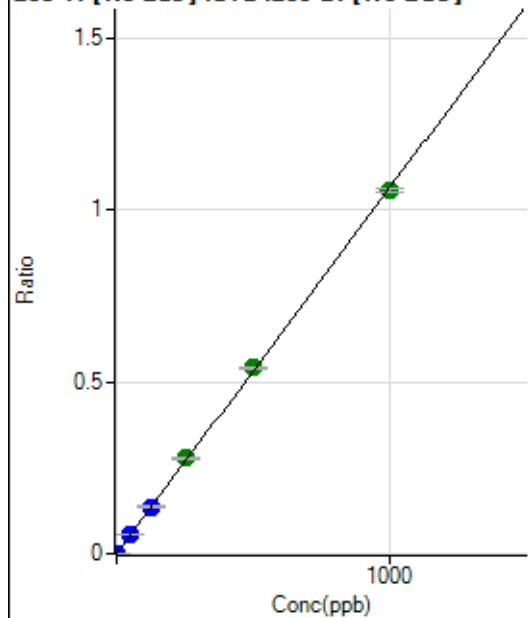
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			10.00		P	33.3
2	☐						
3	☐			14.44		P	35.3
4	☐			16.67		P	34.6
5	☐			11.11		P	17.3
6	☐			14.45		P	48.0
7	☐			14.45		P	48.0
8	☐			15.56		P	32.7
9	☐			31.11		P	6.2

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			44.45		P	10.8
2	☐						
3	☐			83.34		P	36.1
4	☐			47.22		P	10.2
5	☐			66.67		P	0.0
6	☐			58.34		P	14.3
7	☐			44.45		P	47.2
8	☐			66.67		P	33.1
9	☐			47.22		P	27.0

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			2.22		P	173.2
2	☐						
3	☐			20.00		P	50.0
4	☐			8.89		P	43.3
5	☐			4.44		P	43.4
6	☐			5.55		P	124.9
7	☐			16.67		P	60.0
8	☐			11.11		P	75.5
9	☐			13.34		P	86.6

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	291.69	0.0000	P	26.7
2	☐	0.100					
3	☐	1.000	1.018	10062.77	0.0011	P	2.0
4	☐	50.000	50.558	491155.39	0.0537	P	1.4
5	☐	125.000	128.488	1254856.75	0.1365	P	1.1
6	☐	250.000	261.621	2553337.12	0.2780	A	2.2
7	☐	500.000	508.257	5088708.88	0.5400	A	1.1
8	☐	1000.000	992.502	10077234.16	1.0545	A	1.0
9	☐			5645.95	0.0007	P	5.0

$$y = 0.0011 * x + 3.1968E-005$$

$$R = 0.9999$$

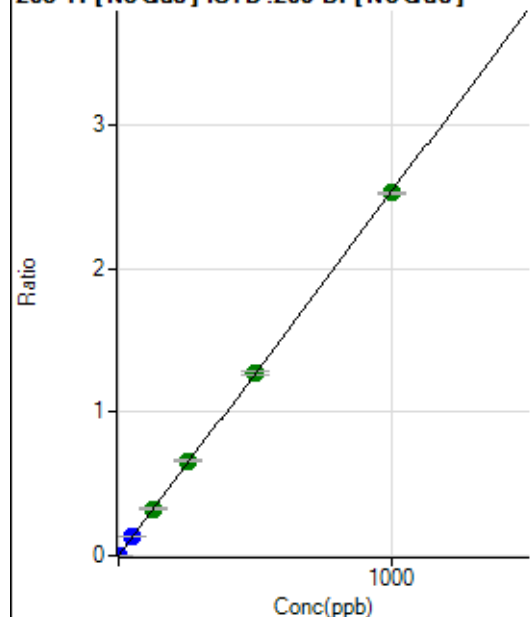
$$DL = 0.02407$$

$$BEC = 0.03009$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	605.60	0.0001	P	4.2
2	☐	0.100					
3	☐	1.000	1.034	24324.19	0.0027	P	2.4
4	☐	50.000	50.826	1179653.10	0.1291	P	0.8
5	☐	125.000	129.021	3010759.81	0.3276	A	1.0
6	☐	250.000	259.363	6048337.64	0.6585	A	1.8
7	☐	500.000	501.518	11997419.37	1.2732	A	1.5
8	☐	1000.000	996.356	24172441.17	2.5294	A	0.6
9	☐			12990.62	0.0015	P	3.3

$$y = 0.0025 * x + 6.6435E-005$$

$$R = 0.9999$$

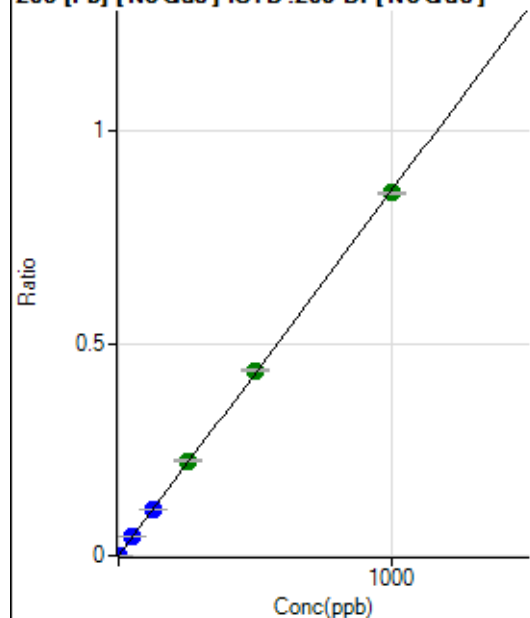
$$DL = 0.003304$$

$$BEC = 0.02617$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	379.65	0.0000	P	9.6
2	☐	0.100					
3	☐	1.000	0.988	8052.78	0.0009	P	2.8
4	☐	50.000	50.872	400022.49	0.0438	P	0.9
5	☐	125.000	127.549	1008084.69	0.1097	P	1.5
6	☐	250.000	259.482	2049294.98	0.2231	A	2.1
7	☐	500.000	506.326	4102070.43	0.4353	A	1.2
8	☐	1000.000	994.104	8167599.20	0.8546	A	0.3
9	☐			8412.32	0.0010	P	2.5

$$y = 8.5967E-004 * x + 4.1646E-005$$

$$R = 0.9999$$

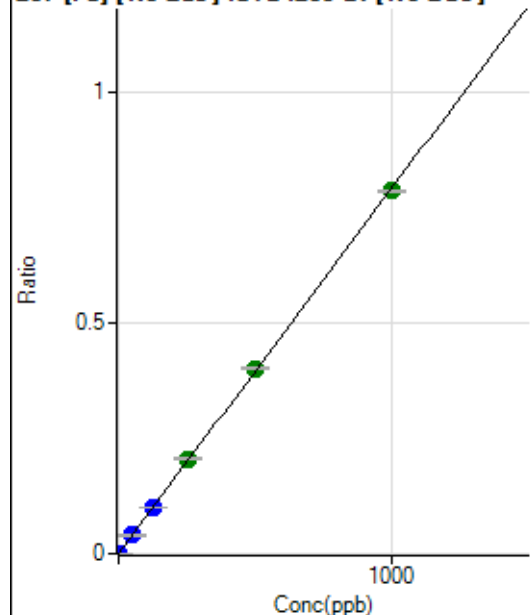
$$DL = 0.01397$$

$$BEC = 0.04844$$

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	370.39	0.0000	P	12.8
2	☐	0.100					
3	☐	1.000	1.009	7576.56	0.0008	P	1.0
4	☐	50.000	50.016	361615.60	0.0396	P	0.5
5	☐	125.000	126.555	919621.71	0.1001	P	1.7
6	☐	250.000	260.356	1890455.15	0.2058	A	2.3
7	☐	500.000	507.296	3778806.88	0.4010	A	0.7
8	☐	1000.000	993.568	7505107.86	0.7853	A	0.5
9	☐			7176.33	0.0008	P	2.2

$$y = 7.9037\text{E-}004 * x + 4.0613\text{E-}005$$

$$R = 0.9999$$

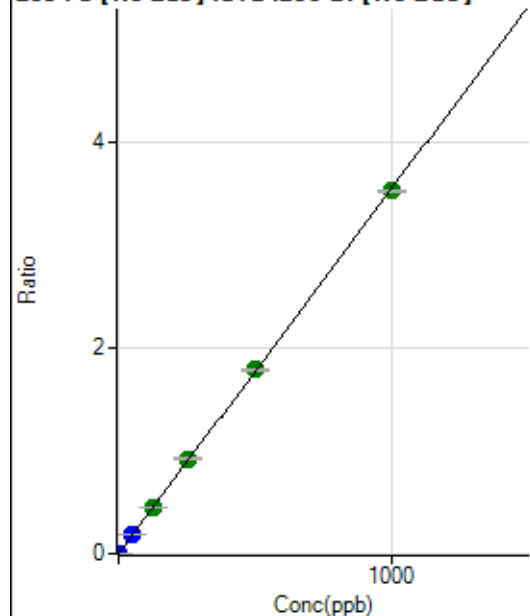
$$DL = 0.01975$$

$$BEC = 0.05138$$

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	1574.17	0.0002	P	9.4
2	☐	0.100					
3	☐	1.000	1.011	33959.68	0.0038	P	2.2
4	☐	50.000	50.473	1635683.04	0.1790	P	0.6
5	☐	125.000	127.732	4160501.39	0.4527	A	1.8
6	☐	250.000	259.804	8456048.85	0.9206	A	2.1
7	☐	500.000	505.294	16871415.48	1.7904	A	0.9
8	☐	1000.000	994.537	33674958.85	3.5237	A	0.5
9	☐			33575.99	0.0040	P	1.1

$$y = 0.0035 * x + 1.7264\text{E-}004$$

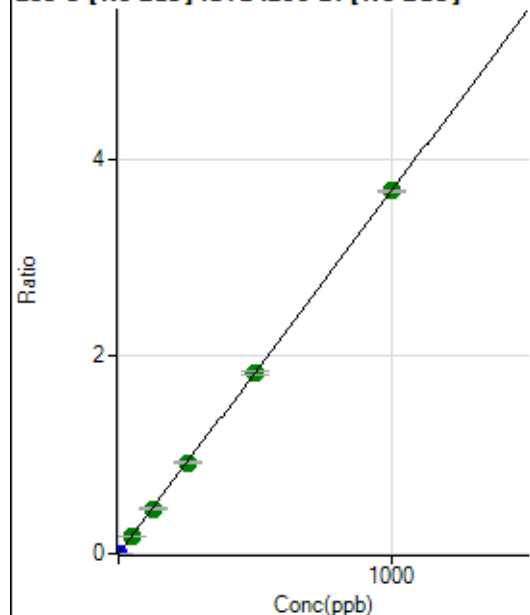
$$R = 0.9999$$

$$DL = 0.01368$$

$$BEC = 0.04873$$

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	175.01	0.0000	P	12.4
2	☐	0.100					
3	☐	1.000	0.986	32969.90	0.0036	P	1.0
4	☐	50.000	48.826	1641721.19	0.1797	A	1.3
5	☐	125.000	123.798	4186111.16	0.4555	A	1.6
6	☐	250.000	251.479	8498711.56	0.9253	A	1.9
7	☐	500.000	499.258	17308718.62	1.8369	A	1.6
8	☐	1000.000	1000.210	35167657.73	3.6800	A	0.8
9	☐			7844.48	0.0009	P	9.3

$$y = 0.0037 * x + 1.9197E-005$$

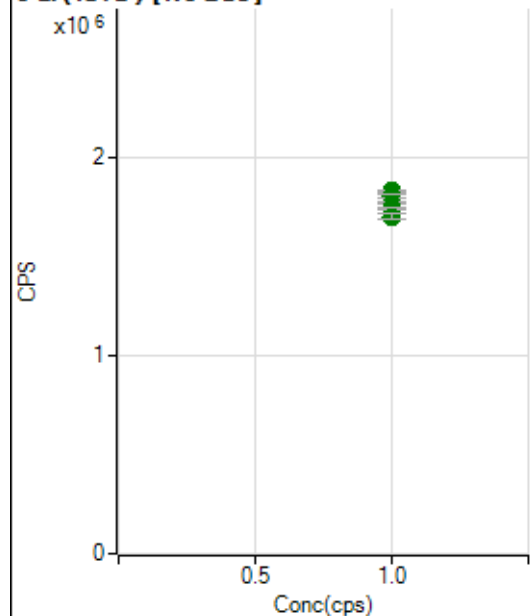
$$R = 1.0000$$

$$DL = 0.001942$$

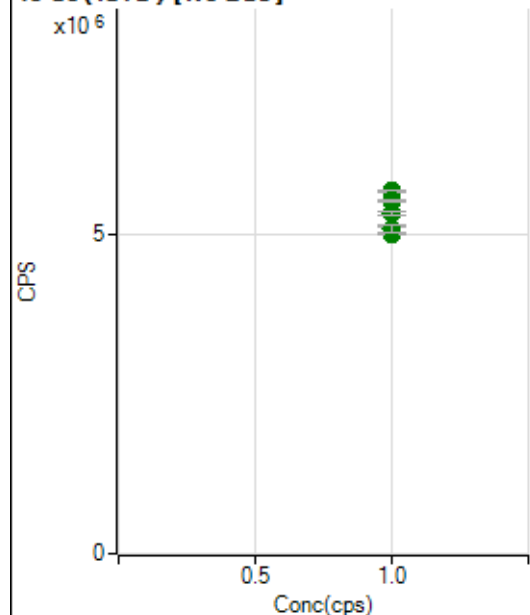
$$BEC = 0.005218$$

Weight: <None>

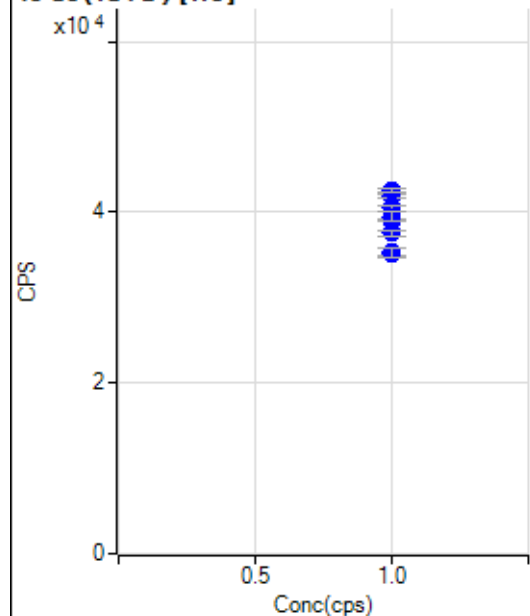
Min Conc: 0

6 Li (ISTD) [No Gas]

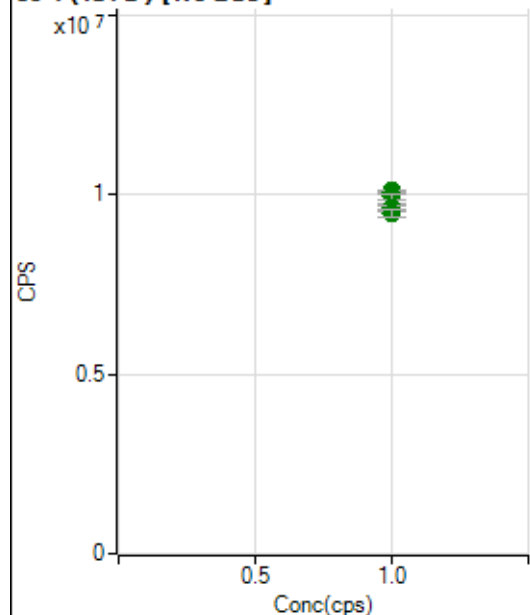
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		1817143.93		A	0.3
2	☐	1.000					
3	☐	1.000		1819087.00		A	0.5
4	☐	1.000		1835458.67		A	0.6
5	☐	1.000		1807433.95		A	1.1
6	☐	1.000		1765993.74		A	1.4
7	☐	1.000		1754297.91		A	1.3
8	☐	1.000		1749393.27		A	0.4
9	☐	1.000		1706680.41		A	1.9

45 Sc (ISTD) [No Gas]

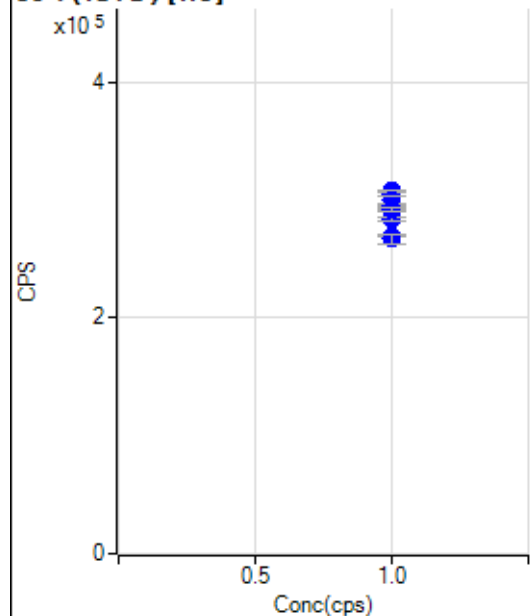
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5695545.05		A	0.7
2	☐	1.000					
3	☐	1.000		5546789.79		A	0.5
4	☐	1.000		5532637.10		A	0.7
5	☐	1.000		5336718.09		A	1.0
6	☐	1.000		5099369.17		A	1.8
7	☐	1.000		5024807.75		A	1.1
8	☐	1.000		5020439.39		A	0.8
9	☐	1.000		5108277.02		A	2.3

45 Sc (ISTD) [He]

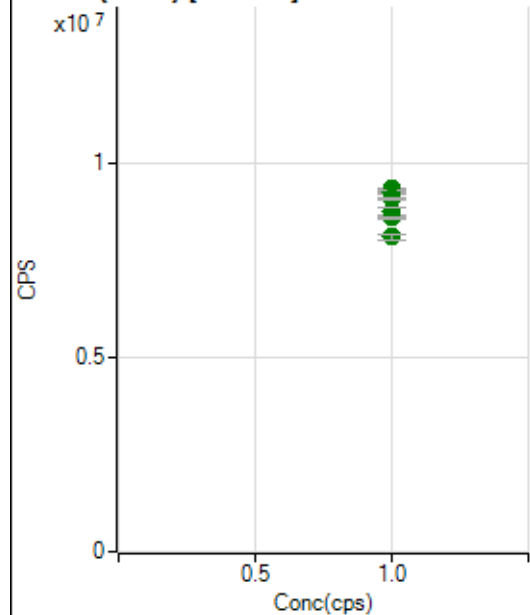
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		41813.36		P	1.2
2	☐	1.000					
3	☐	1.000		42487.62		P	1.2
4	☐	1.000		40469.52		P	1.8
5	☐	1.000		38997.48		P	0.6
6	☐	1.000		37504.48		P	2.2
7	☐	1.000		35324.49		P	2.3
8	☐	1.000		35155.31		P	3.2
9	☐	1.000		39506.73		P	2.4

89 Y (ISTD) [No Gas]

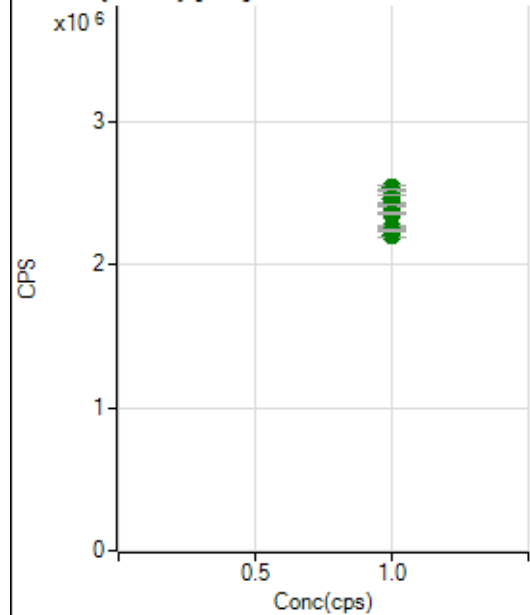
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		10069080.82		A	1.0
2	☐	1.000					
3	☐	1.000		10113499.57		A	0.7
4	☐	1.000		10079736.17		A	1.0
5	☐	1.000		9955220.75		A	1.4
6	☐	1.000		9639021.11		A	2.2
7	☐	1.000		9567767.22		A	0.8
8	☐	1.000		9641664.65		A	1.0
9	☐	1.000		9482018.96		A	2.4

89 Y (ISTD) [He]

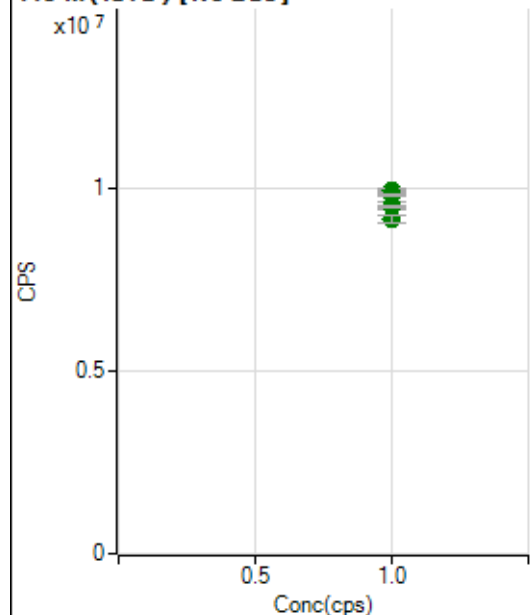
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		305060.60		P	0.9
2	☐	1.000					
3	☐	1.000		307414.00		P	0.3
4	☐	1.000		299059.04		P	2.7
5	☐	1.000		294379.84		P	1.4
6	☐	1.000		283618.78		P	1.1
7	☐	1.000		269229.85		P	0.8
8	☐	1.000		266448.98		P	2.6
9	☐	1.000		291298.02		P	1.1

103 Rh (ISTD) [No Gas]

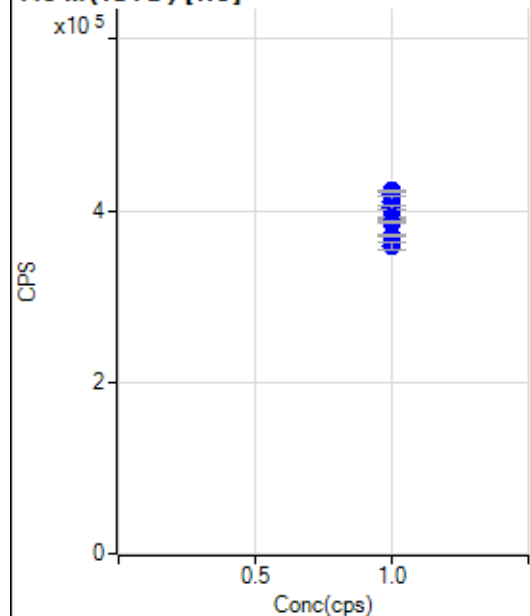
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		9304437.19		A	0.7
2	☐	1.000					
3	☐	1.000		9332479.20		A	0.4
4	☐	1.000		9239363.23		A	1.0
5	☐	1.000		9081722.69		A	0.9
6	☐	1.000		8755410.79		A	1.8
7	☐	1.000		8618887.43		A	0.5
8	☐	1.000		8598230.58		A	0.4
9	☐	1.000		8103564.33		A	1.9

103 Rh (ISTD) [He]

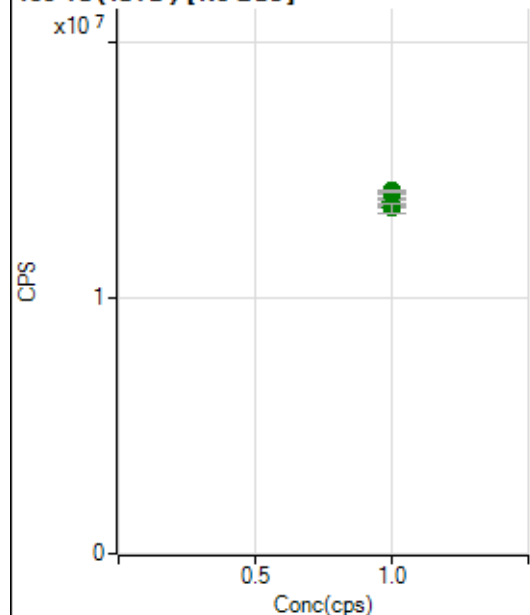
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		2539896.70		A	1.1
2	☐	1.000					
3	☐	1.000		2522999.25		A	0.3
4	☐	1.000		2458647.69		A	2.2
5	☐	1.000		2417089.03		A	0.1
6	☐	1.000		2361172.27		A	0.6
7	☐	1.000		2264494.65		A	0.8
8	☐	1.000		2211907.94		A	2.2
9	☐	1.000		2236946.29		A	0.7

115 In (ISTD) [No Gas]

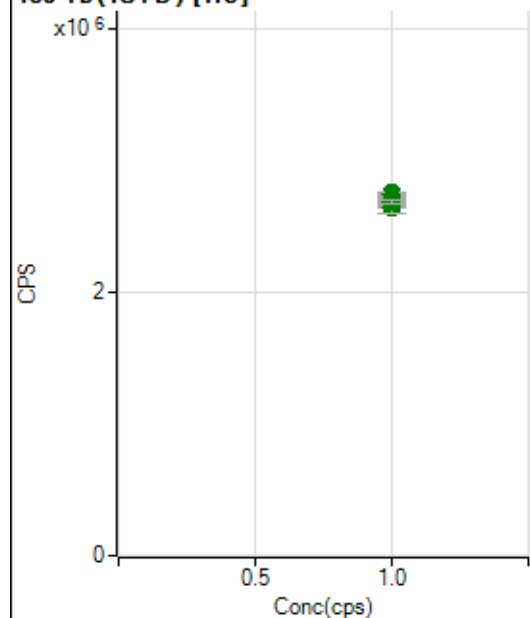
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		9845862.21		A	0.7
2	☐	1.000					
3	☐	1.000		9927892.47		A	0.6
4	☐	1.000		9955149.56		A	1.6
5	☐	1.000		9841739.60		A	0.8
6	☐	1.000		9552508.56		A	2.4
7	☐	1.000		9566535.58		A	1.6
8	☐	1.000		9536189.60		A	0.5
9	☐	1.000		9185265.98		A	2.1

115 In (ISTD) [He]

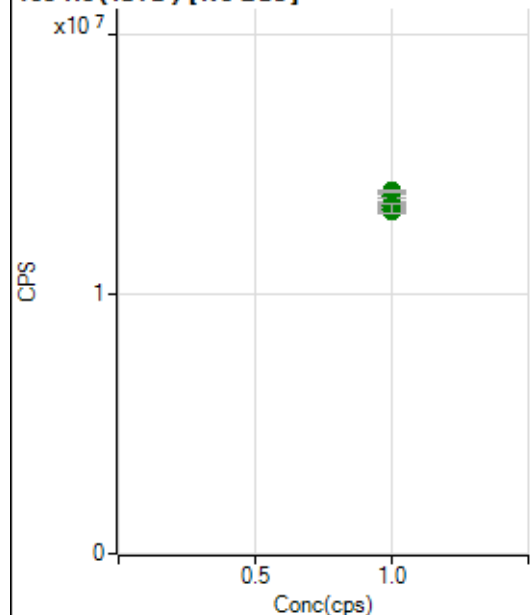
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		419538.03		P	1.4
2	☐	1.000					
3	☐	1.000		422938.97		P	0.3
4	☐	1.000		411317.58		P	2.6
5	☐	1.000		403705.39		P	1.5
6	☐	1.000		391284.71		P	0.2
7	☐	1.000		370994.15		P	0.9
8	☐	1.000		358758.35		P	2.8
9	☐	1.000		386657.72		P	0.6

159 Tb (ISTD) [No Gas]

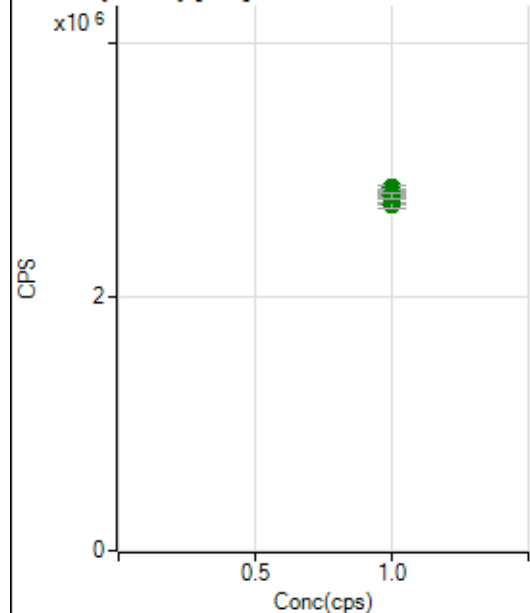
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		13612713.69		A	0.6
2	☐	1.000					
3	☐	1.000		13653937.57		A	0.6
4	☐	1.000		13776807.29		A	0.7
5	☐	1.000		13787648.27		A	1.5
6	☐	1.000		13670919.52		A	2.1
7	☐	1.000		14074308.95		A	0.4
8	☐	1.000		14195939.93		A	0.7
9	☐	1.000		13525449.52		A	2.8

159 Tb (ISTD) [He]

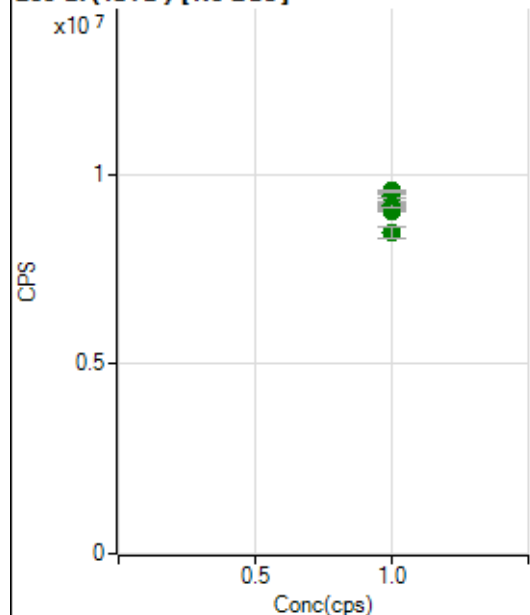
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		2756862.46		A	0.9
2	☐	1.000					
3	☐	1.000		2741783.53		A	1.1
4	☐	1.000		2732583.33		A	2.1
5	☐	1.000		2723066.59		A	0.8
6	☐	1.000		2699386.38		A	0.4
7	☐	1.000		2645983.47		A	0.6
8	☐	1.000		2642498.33		A	3.1
9	☐	1.000		2687600.17		A	1.0

165 Ho (ISTD) [No Gas]

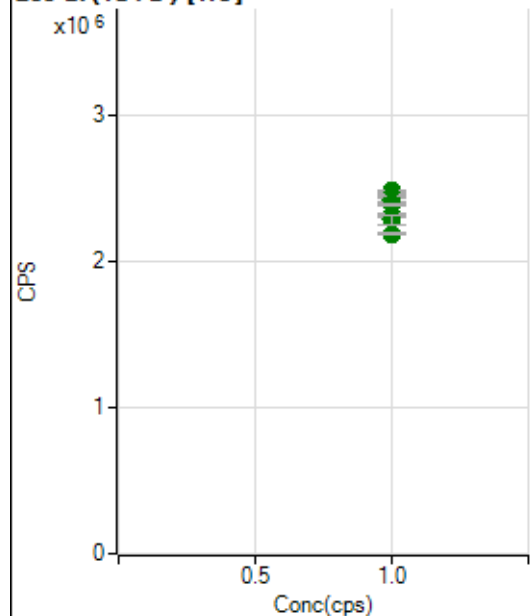
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		13159552.46		A	0.9
2	☐	1.000					
3	☐	1.000		13242339.62		A	0.7
4	☐	1.000		13417102.04		A	1.1
5	☐	1.000		13474378.08		A	1.2
6	☐	1.000		13381113.23		A	1.8
7	☐	1.000		13778966.97		A	1.0
8	☐	1.000		13986311.77		A	0.4
9	☐	1.000		13273802.47		A	2.7

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		2863526.38		A	1.4
2	☐	1.000					
3	☐	1.000		2841966.07		A	0.1
4	☐	1.000		2813605.51		A	2.3
5	☐	1.000		2823895.83		A	2.1
6	☐	1.000		2812642.15		A	0.2
7	☐	1.000		2741525.37		A	0.4
8	☐	1.000		2738113.50		A	3.1
9	☐	1.000		2802807.88		A	1.5

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		9115193.48		A	0.6
2	☐	1.000					
3	☐	1.000		9041251.33		A	0.6
4	☐	1.000		9138515.00		A	0.7
5	☐	1.000		9191029.66		A	0.9
6	☐	1.000		9187023.41		A	1.5
7	☐	1.000		9424019.23		A	1.1
8	☐	1.000		9556902.08		A	0.8
9	☐	1.000		8460315.09		A	3.1

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		2484956.47		A	0.9
2	☐	1.000					
3	☐	1.000		2451803.16		A	0.8
4	☐	1.000		2417771.23		A	2.4
5	☐	1.000		2396490.35		A	1.4
6	☐	1.000		2391741.87		A	0.9
7	☐	1.000		2316253.35		A	0.8
8	☐	1.000		2289492.66		A	2.7
9	☐	1.000		2190159.69		A	0.7

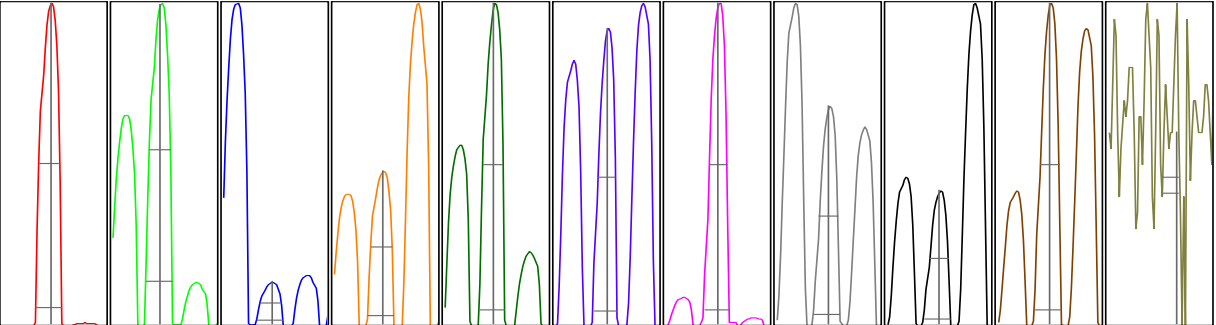
US EPA Tune Check Sample Report

Batch Folder D:\P8101518 MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	6704	0.97	5.00	
24	63835	1.54	5.00	
25	8563	0.98	5.00	
26	10175	0.85	5.00	
59	67966	0.98	5.00	
113	10644	1.25	5.00	
115	134001	1.69	5.00	
206	34792	1.00	5.00	
207	31949	1.05	5.00	
208	76384	0.98	5.00	
220	1	17.30		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	6751	6725	6590	6715	6737
24	63588	63376	65514	62959	63738
25	8609	8585	8447	8514	8662
26	10244	10195	10066	10104	10265
59	68458	68013	67153	67460	68748
113	10798	10766	10529	10510	10618
115	136161	136516	133510	132393	131427
206	35000	34612	34274	34941	35135
207	32193	31771	31489	31960	32332
208	76783	76316	75147	76592	77083
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	11963	8.95	8.9 - 9.1		0.737	0.900	
24	110825	23.90	23.9 - 24.1		0.750	0.900	
25	14818	24.95	24.9 - 25.1		0.750	0.900	
26	17366	25.95	25.9 - 26.1		0.738	0.900	
59	125013	58.95	58.9 - 59.1		0.728	0.900	
113	20987	113.05	112.9 - 113.1		0.688	0.900	
115	259035	115.05	114.9 - 115.1		0.735	0.900	
206	65945	206.05	205.9 - 206.1		0.762	0.900	
207	59707	207.05	206.9 - 207.1		0.780	0.900	
208	142805	208.05	207.9 - 208.1		0.773	0.900	
220	1	220.50	-		0.486		

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	10.3	V	Deflect	14.2	V
Extract 2	-210.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-95	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	8400	1.45	
89	2500	1.91	
205	15785	1.80	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	8511	8464	8203	8457	8366
89	2546	2549	2443	2497	2463
205	15970	16073	15344	15838	15700

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	10.3	V	Deflect	2.0	V
Extract 2	-210.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-95	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			