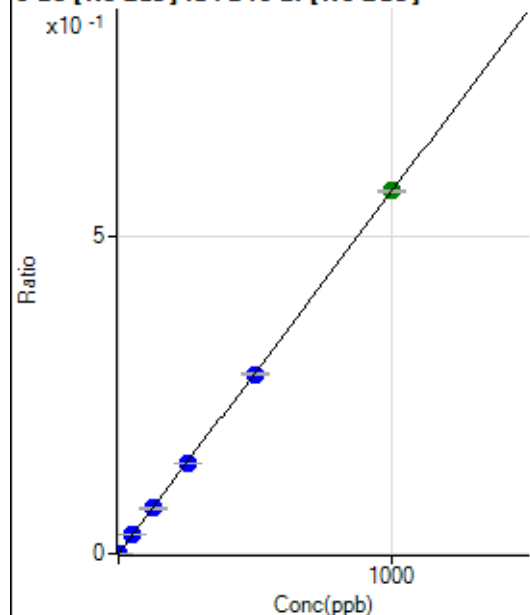


Batch Folder: D:\P8070918- MS .b\
Analysis File: P8070918- MS .batch.bin
DA Date-Time: 2018-07-09 15:15:52
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-07-09 13:32:04
2			
3	005CALS.d	S02	2018-07-09 13:39:38
4	006CALS.d	S03	2018-07-09 13:43:19
5	007CALS.d	S04	2018-07-09 13:47:01
6	008CALS.d	S05	2018-07-09 13:50:37
7	009CALS.d	S06	2018-07-09 13:54:06
8	010CALS.d	S07	2018-07-09 13:57:32
9	011CALS.d	S08	2018-07-09 14:00:53

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	148.15	0.0001	P	4.6
2	☐	0.100					
3	☐	1.000	1.008	1529.76	0.0006	P	1.9
4	☐	50.000	50.600	68661.91	0.0290	P	0.6
5	☐	125.000	125.457	169658.06	0.0718	P	1.7
6	☐	250.000	250.215	333470.79	0.1432	P	0.3
7	☐	500.000	495.563	657322.36	0.2836	P	0.6
8	☐	1000.000	1002.078	1276798.44	0.5734	A	0.8
9	☐			548.18	0.0002	P	10.1

$$y = 5.7215\text{E-}004 * x + 6.4147\text{E-}005$$

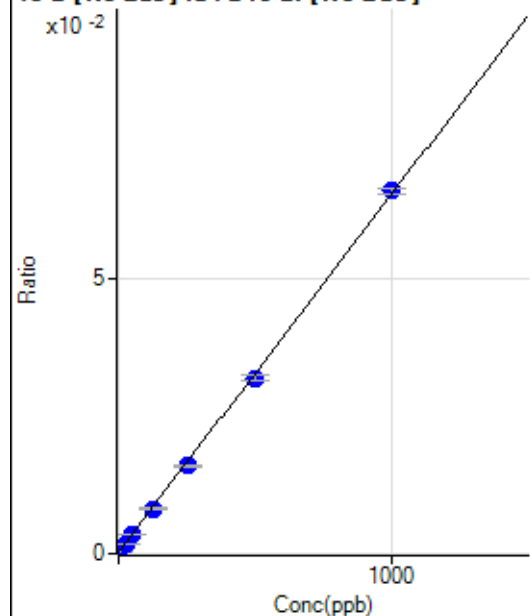
$$R = 1.0000$$

$$DL = 0.0155$$

$$BEC = 0.1121$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	669.50	0.0003	P	21.5
2	☐	2.500					
3	☐	25.000	21.265	4000.74	0.0017	P	8.5
4	☐	50.000	50.541	8483.43	0.0036	P	2.5
5	☐	125.000	121.156	19335.89	0.0082	P	1.9
6	☐	250.000	241.029	37249.13	0.0160	P	3.5
7	☐	500.000	486.295	74133.52	0.0320	P	2.7
8	☐	1000.000	1009.642	147192.50	0.0661	P	1.8
9	☐			7229.91	0.0032	P	6.4

$$y = 6.5178\text{E-}005 * x + 2.9101\text{E-}004$$

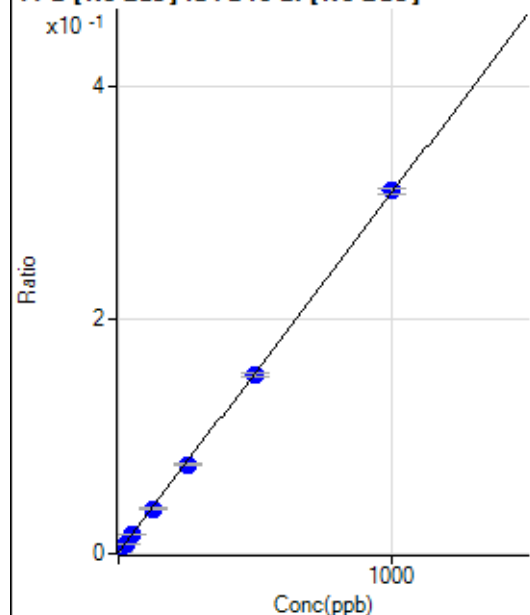
$$R = 0.9998$$

$$DL = 2.874$$

$$BEC = 4.465$$

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	3156.06	0.0014	P	7.7
2	☐	2.500					
3	☐	25.000	23.011	20095.34	0.0084	P	4.1
4	☐	50.000	48.113	38149.10	0.0161	P	1.7
5	☐	125.000	121.067	90927.31	0.0385	P	1.8
6	☐	250.000	243.470	177030.75	0.0760	P	2.0
7	☐	500.000	492.164	353021.27	0.1523	P	2.5
8	☐	1000.000	1006.186	690277.15	0.3100	P	1.5
9	☐			33754.80	0.0151	P	8.7

$$y = 3.0672\text{E-}004 * x + 0.0014$$

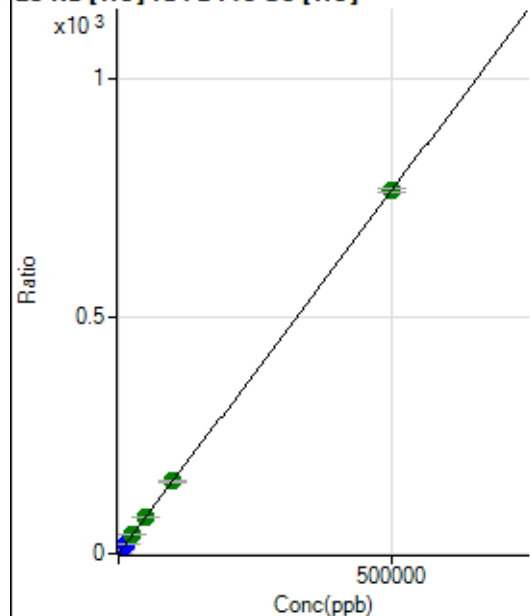
$$R = 0.9999$$

$$DL = 1.024$$

$$BEC = 4.446$$

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	5604.11	0.1262	P	4.5
2	☐	50.000					
3	☐	500.000	516.548	39890.24	0.9154	P	4.4
4	☐	5000.000	5139.330	345492.59	7.9782	P	3.1
5	☐	12500.000	12831.679	832165.16	19.7309	P	1.1
6	☐	25000.000	26120.592	1666843.68	40.0341	A	0.7
7	☐	50000.000	51006.159	3358859.80	78.0551	A	1.2
8	☐	100000.00	99355.495	6465566.86	151.9247	A	1.7
9	☐	500000.00	499962.55	33771838.60	763.9852	A	1.0

$$y = 0.0015 * x + 0.1262$$

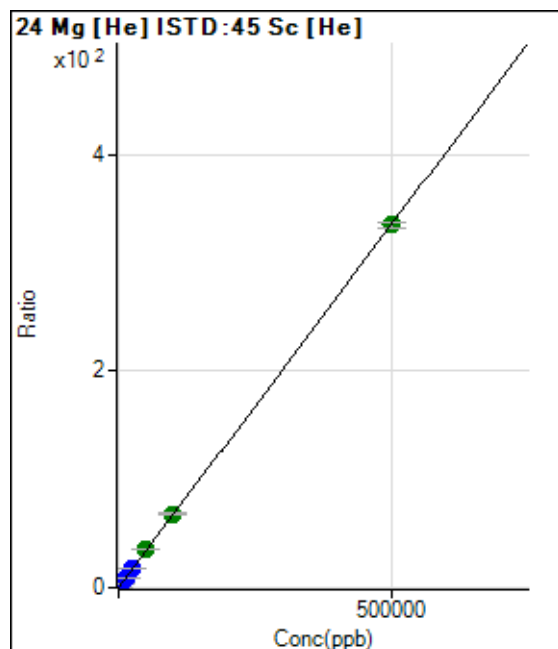
$$R = 1.0000$$

$$DL = 11.13$$

$$BEC = 82.6$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	266.68	0.0060	P	21.4
2	☐	50.000					
3	☐	500.000	505.016	15027.89	0.3446	P	3.0
4	☐	5000.000	5236.702	152347.53	3.5175	P	2.4
5	☐	12500.000	12936.437	366118.86	8.6806	P	1.2
6	☐	25000.000	25952.874	724897.06	17.4088	P	0.3
7	☐	50000.000	52519.783	1515715.79	35.2233	A	1.3
8	☐	100000.00	101791.54	2904892.15	68.2626	A	2.2
9	☐	500000.00	499328.78	14800137.49	334.8323	A	1.6

$$y = 6.7055\text{E-}004 * x + 0.0060$$

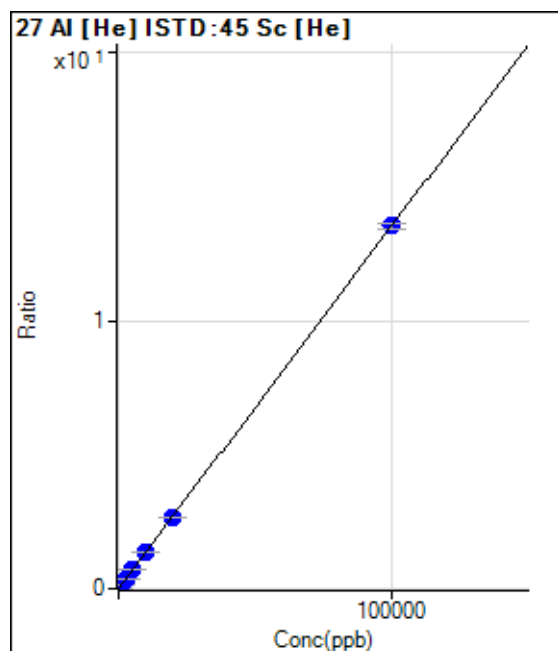
$$R = 1.0000$$

$$DL = 5.743$$

$$BEC = 8.952$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.22	0.0005	P	43.0
2	☐	2.000					
3	☐	20.000	17.071	122.23	0.0028	P	13.2
4	☐	1000.000	1038.836	6109.95	0.1411	P	2.5
5	☐	2500.000	2525.668	14432.92	0.3422	P	2.7
6	☐	5000.000	5146.549	29027.83	0.6968	P	1.8
7	☐	10000.000	9963.383	58033.52	1.3486	P	1.1
8	☐	20000.000	19579.079	112771.66	2.6496	P	1.1
9	☐	100000.00	100079.48	598543.21	13.5414	P	1.8

$$y = 1.3530\text{E-}004 * x + 5.0013\text{E-}004$$

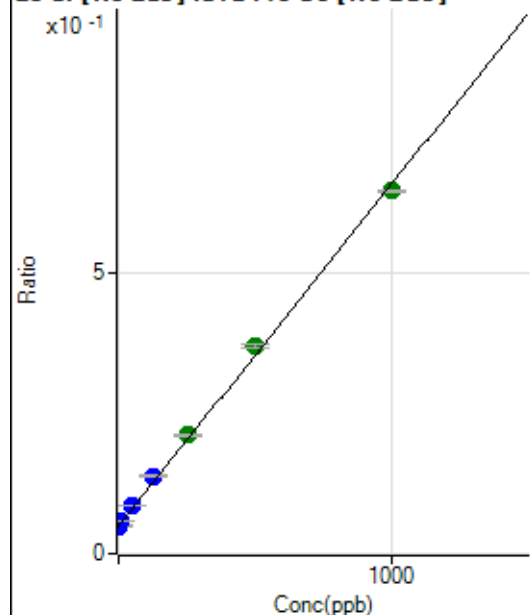
$$R = 1.0000$$

$$DL = 4.764$$

$$BEC = 3.696$$

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	297231.48	0.0494	P	6.4
2	☐	1.000					
3	☐	10.000	14.775	358296.19	0.0584	P	1.9
4	☐	50.000	61.133	529836.56	0.0867	P	1.7
5	☐	125.000	146.837	853581.86	0.1390	P	1.3
6	☐	250.000	266.090	1279284.77	0.2117	A	2.3
7	☐	500.000	524.653	2225254.43	0.3695	A	1.6
8	☐	1000.000	980.317	3794808.03	0.6475	A	0.9
9	☐			486462.98	0.0822	P	0.6

$$y = 6.1011\text{E-}004 * x + 0.0494$$

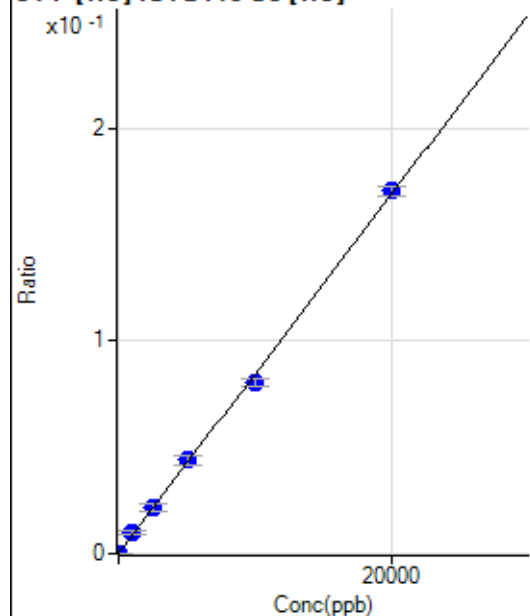
$$R = 0.9993$$

$$DL = 15.45$$

$$BEC = 80.92$$

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	-3.721	5.55	0.0001	P	86.6
2	☐	0.000					
3	☐	0.000	3.721	8.33	0.0002	P	101.
4	☐	1000.000	1170.545	433.36	0.0100	P	12.9
5	☐	2500.000	2575.693	922.29	0.0219	P	16.6
6	☐	5000.000	5187.224	1825.20	0.0439	P	9.0
7	☐	10000.000	9504.411	3456.15	0.0803	P	5.1
8	☐	20000.000	20183.000	7252.20	0.1704	P	2.5
9	☐			2.78	0.0001	P	173.

$$y = 8.4328\text{E-}006 * x + 1.5667\text{E-}004$$

$$R = 0.9995$$

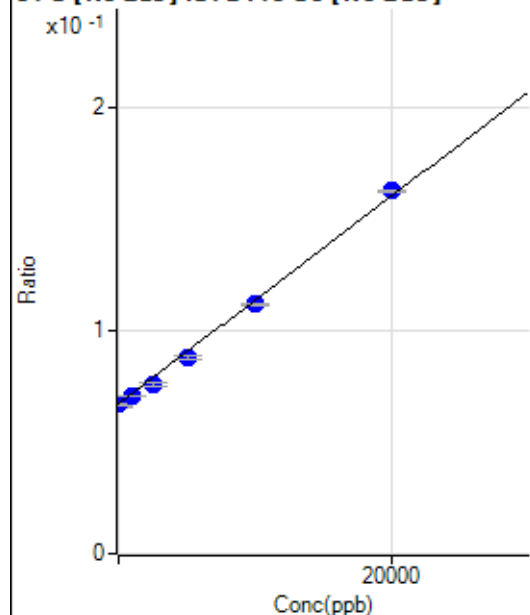
$$DL = 53.18$$

$$BEC = 18.58$$

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	87.671	407288.87	0.0676	P	6.3
2	☐	0.000					
3	☐	0.000	-87.671	410145.07	0.0668	P	1.1
4	☐	1000.000	792.700	433659.19	0.0709	P	0.5
5	☐	2500.000	1828.199	465348.01	0.0758	P	1.6
6	☐	5000.000	4397.588	530112.71	0.0877	P	1.5
7	☐	10000.000	9537.219	672595.88	0.1117	P	1.2
8	☐	20000.000	20476.334	953188.02	0.1626	P	0.8
9	☐			368799.27	0.0623	P	0.7

$$y = 4.6586E-006 * x + 0.0672$$

$$R = 0.9988$$

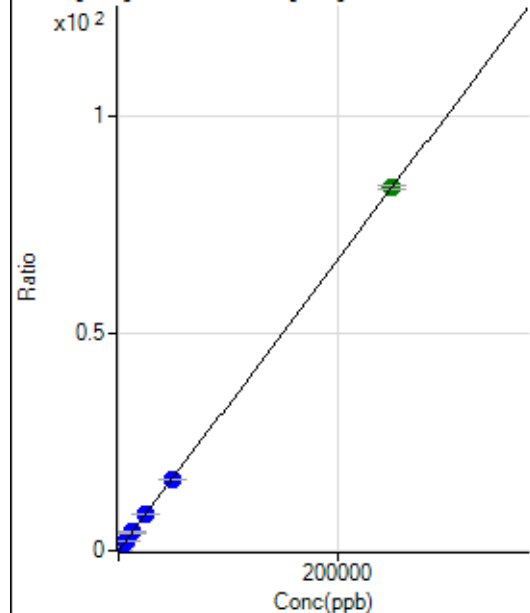
$$DL = 1597$$

$$BEC = 1.443E+04$$

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	2247.51	0.0506	P	2.9
2	☐	50.000					
3	☐	500.000	478.016	9125.64	0.2097	P	10.3
4	☐	2500.000	2514.024	38445.17	0.8874	P	1.3
5	☐	6250.000	6217.587	89414.02	2.1201	P	1.6
6	☐	12500.000	12519.486	175593.68	4.2176	P	1.3
7	☐	25000.000	24715.939	356179.92	8.2770	P	1.0
8	☐	50000.000	48855.609	694145.28	16.3116	P	2.0
9	☐	250000.00	250257.02	3684237.49	83.3453	A	1.2

$$y = 3.3284E-004 * x + 0.0506$$

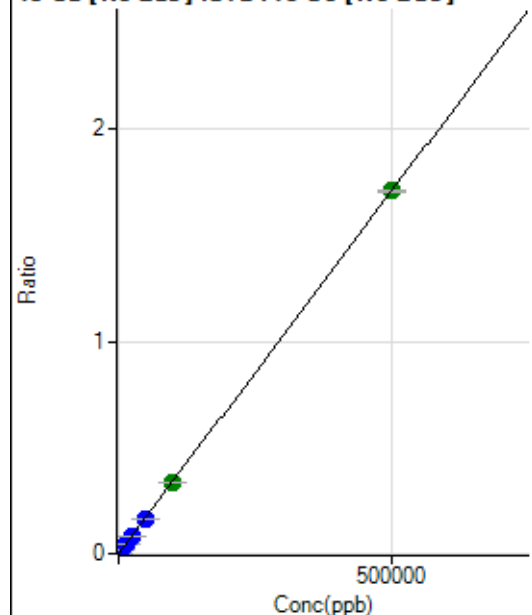
$$R = 1.0000$$

$$DL = 13.1$$

$$BEC = 152.1$$

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	488.92	0.0001	P	20.9
2	☐	50.000					
3	☐	500.000	473.120	10415.45	0.0017	P	3.2
4	☐	5000.000	4850.351	101762.19	0.0166	P	0.8
5	☐	12500.000	11997.593	252185.17	0.0411	P	1.1
6	☐	25000.000	24253.737	500989.87	0.0829	P	1.7
7	☐	50000.000	48573.779	999537.34	0.1660	P	1.8
8	☐	100000.00	98332.201	1968601.98	0.3359	A	1.0
9	☐	500000.00	500527.57	10113918.80	1.7094	A	0.7

$$y = 3.4150E-006 * x + 8.1524E-005$$

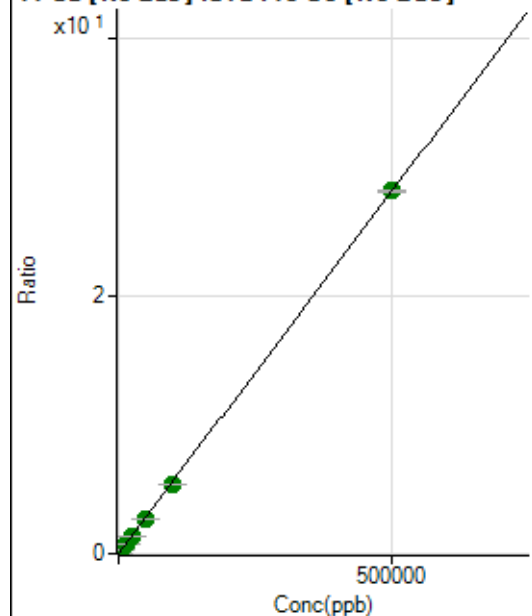
$$R = 1.0000$$

$$DL = 14.96$$

$$BEC = 23.87$$

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	19848.20	0.0033	P	7.8
2	☐	50.000					
3	☐	500.000	464.427	180451.88	0.0294	P	1.6
4	☐	5000.000	4895.999	1702604.46	0.2785	A	1.9
5	☐	12500.000	12022.658	4171461.68	0.6791	A	2.0
6	☐	25000.000	24013.340	8176867.20	1.3531	A	1.5
7	☐	50000.000	48013.428	16275146.54	2.7023	A	1.6
8	☐	100000.00	96160.731	31699578.49	5.4087	A	1.4
9	☐	500000.00	501028.85	166659784.2	28.1674	A	0.4

$$y = 5.6213E-005 * x + 0.0033$$

$$R = 1.0000$$

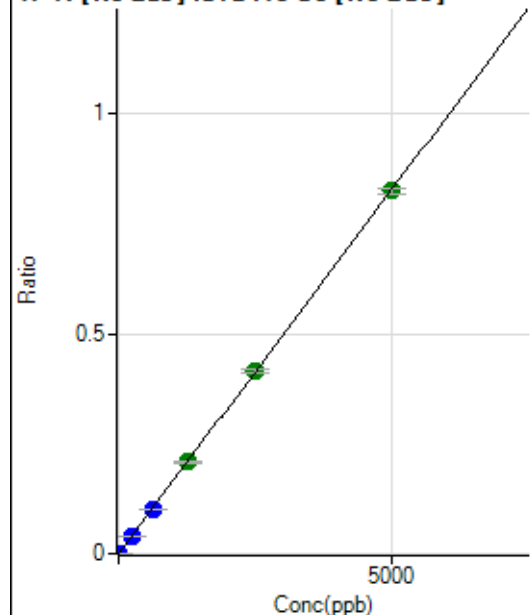
$$DL = 13.72$$

$$BEC = 58.68$$

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	136.12	0.0000	P	13.0
2	☐	0.500					
3	☐	5.000	4.819	5031.69	0.0008	P	3.2
4	☐	250.000	249.614	252712.88	0.0413	P	0.7
5	☐	625.000	615.959	626355.91	0.1020	P	1.4
6	☐	1250.000	1264.051	1264272.29	0.2092	A	2.0
7	☐	2500.000	2519.351	2511416.74	0.4170	A	1.8
8	☐	5000.000	4987.961	4838453.02	0.8256	A	1.6
9	☐			2769.84	0.0005	P	6.7

$$y = 1.6551\text{E-}004 * x + 2.2434\text{E-}005$$

$$R = 1.0000$$

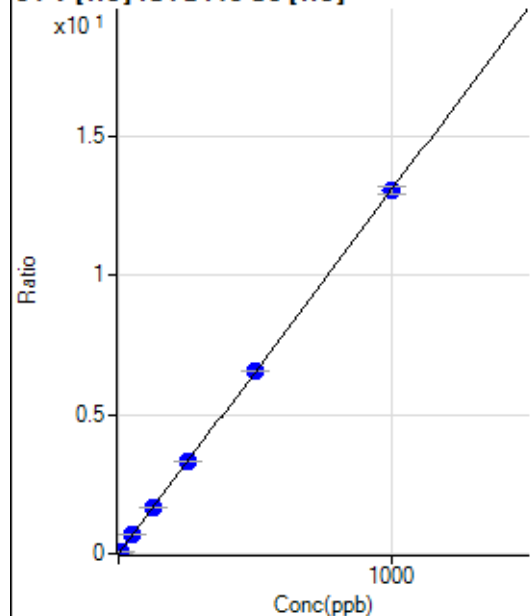
$$DL = 0.05279$$

$$BEC = 0.1355$$

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	10.00	0.0002	P	0.7
2	☐	0.500					
3	☐	5.000	4.869	2779.22	0.0638	P	4.7
4	☐	50.000	51.019	28842.14	0.6659	P	2.1
5	☐	125.000	125.887	69281.55	1.6427	P	1.3
6	☐	250.000	253.701	137813.83	3.3103	P	1.2
7	☐	500.000	502.296	282036.72	6.5539	P	0.8
8	☐	1000.000	997.766	553988.04	13.0184	P	2.3
9	☐			193.34	0.0044	P	12.9

$$y = 0.0130 * x + 2.2524\text{E-}004$$

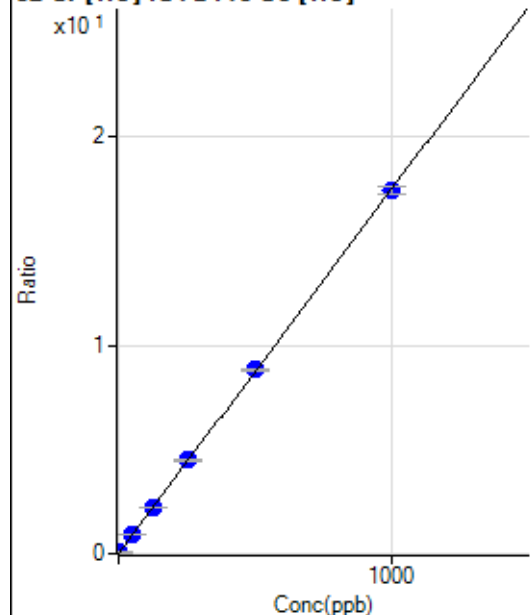
$$R = 1.0000$$

$$DL = 0.0003599$$

$$BEC = 0.01726$$

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	325.56	0.0073	P	14.4
2	☐	0.200					
3	☐	2.000	2.254	2033.53	0.0468	P	12.8
4	☐	50.000	51.787	39557.05	0.9133	P	2.4
5	☐	125.000	127.073	94079.11	2.2304	P	0.9
6	☐	250.000	256.970	187464.98	4.5028	P	1.5
7	☐	500.000	504.309	379977.77	8.8298	P	0.8
8	☐	1000.000	995.754	741613.93	17.4273	P	2.2
9	☐			29719.50	0.6724	P	2.0

$$y = 0.0175 * x + 0.0073$$

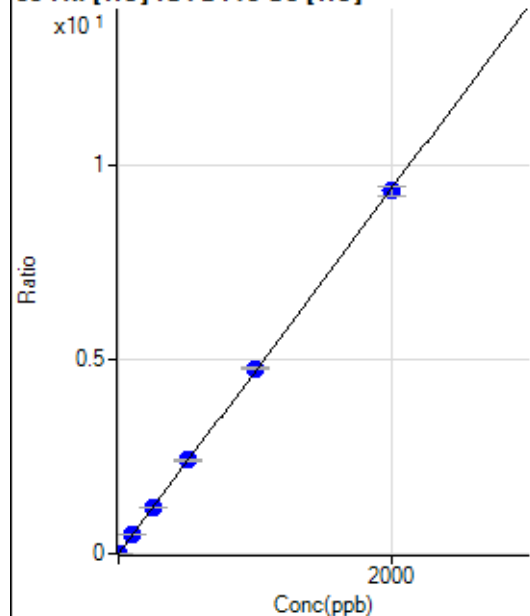
$$R = 1.0000$$

$$DL = 0.1809$$

$$BEC = 0.4194$$

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	32.22	0.0007	P	21.0
2	☐	0.100					
3	☐	1.000	1.063	248.90	0.0057	P	15.8
4	☐	100.000	105.092	21434.45	0.4949	P	2.4
5	☐	250.000	255.863	50774.38	1.2039	P	1.2
6	☐	500.000	512.676	100404.54	2.4115	P	0.6
7	☐	1000.000	1013.639	205142.79	4.7671	P	0.9
8	☐	2000.000	1989.024	398026.03	9.3537	P	2.4
9	☐			1919.06	0.0434	P	4.5

$$y = 0.0047 * x + 7.2524E-004$$

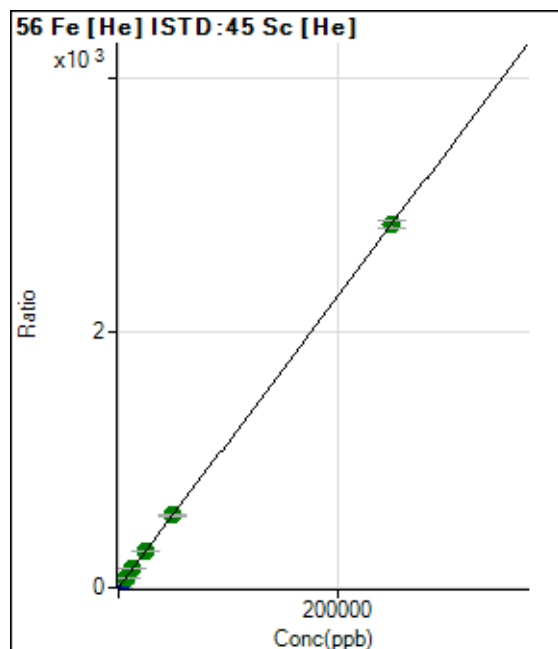
$$R = 0.9999$$

$$DL = 0.09722$$

$$BEC = 0.1542$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1074.16	0.0242	P	8.1
2	☐	5.000					
3	☐	50.000	54.257	27916.83	0.6415	P	9.2
4	☐	2500.000	2630.655	1297377.21	29.9543	P	2.3
5	☐	6250.000	6614.490	3175141.56	75.2800	A	0.9
6	☐	12500.000	13080.257	6196907.95	148.8437	A	1.2
7	☐	25000.000	25539.847	12505266.72	290.6017	A	1.2
8	☐	50000.000	50252.813	24330808.18	571.7715	A	2.4
9	☐	250000.00	249856.02	125649606.5	2,842.740	A	2.0

$$y = 0.0114 * x + 0.0242$$

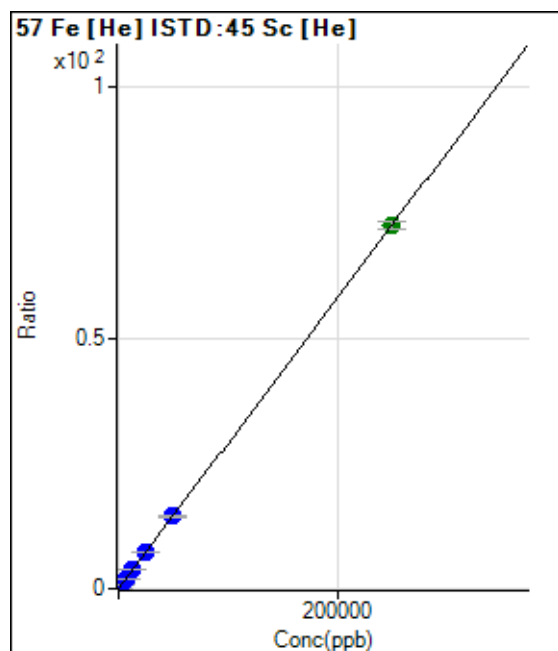
$$R = 1.0000$$

$$DL = 0.5162$$

$$BEC = 2.126$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	29.63	0.0007	P	57.1
2	☐	5.000					
3	☐	50.000	59.237	775.97	0.0178	P	8.2
4	☐	2500.000	2576.452	32356.56	0.7470	P	1.7
5	☐	6250.000	6386.175	78047.50	1.8505	P	1.0
6	☐	12500.000	12918.339	155834.98	3.7426	P	0.7
7	☐	25000.000	25465.972	317473.30	7.3771	P	0.5
8	☐	50000.000	49901.645	615101.01	14.4551	P	2.5
9	☐	250000.00	249947.98	3200148.07	72.4003	A	2.0

$$y = 2.8966E-004 * x + 6.6755E-004$$

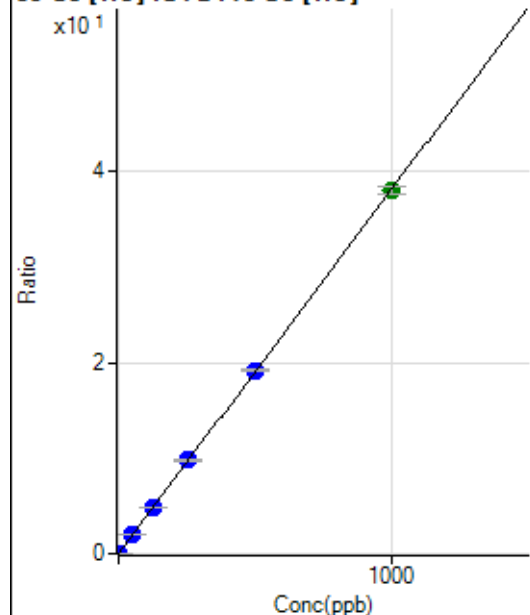
$$R = 1.0000$$

$$DL = 3.951$$

$$BEC = 2.305$$

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	100.00	0.0023	P	19.9
2	☐	0.100					
3	☐	1.000	1.025	1802.37	0.0413	P	0.8
4	☐	50.000	51.725	85426.58	1.9720	P	1.6
5	☐	125.000	128.023	205726.41	4.8775	P	0.3
6	☐	250.000	256.973	407526.81	9.7881	P	1.2
7	☐	500.000	503.638	825450.66	19.1813	P	0.6
8	☐	1000.000	995.974	1614204.65	37.9300	A	2.1
9	☐			20294.98	0.4592	P	1.8

$$y = 0.0381 * x + 0.0023$$

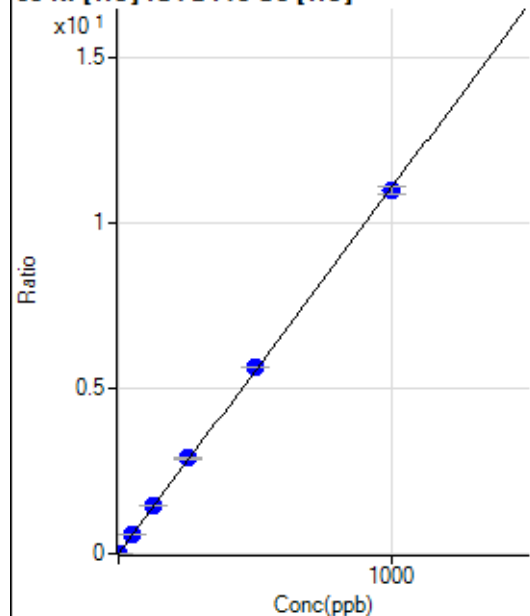
$$R = 1.0000$$

$$DL = 0.03535$$

$$BEC = 0.05912$$

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	120.00	0.0027	P	22.2
2	☐	0.100					
3	☐	1.000	1.160	676.70	0.0155	P	5.5
4	☐	50.000	52.871	25420.06	0.5870	P	3.5
5	☐	125.000	130.363	60879.40	1.4434	P	1.5
6	☐	250.000	261.166	120304.91	2.8890	P	1.2
7	☐	500.000	509.588	242464.74	5.6344	P	0.9
8	☐	1000.000	991.600	466456.17	10.9614	P	2.2
9	☐			15695.68	0.3551	P	1.7

$$y = 0.0111 * x + 0.0027$$

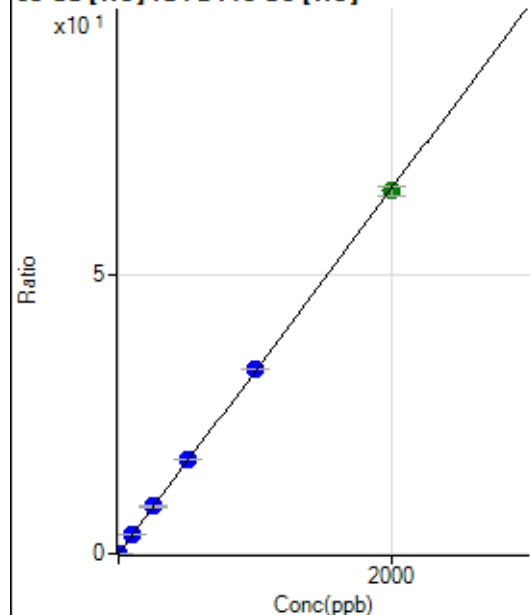
$$R = 0.9999$$

$$DL = 0.1624$$

$$BEC = 0.2443$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	354.46	0.0080	P	7.8
2	☐	0.200					
3	☐	2.000	2.175	3447.15	0.0791	P	3.5
4	☐	100.000	104.692	148492.64	3.4286	P	2.5
5	☐	250.000	258.152	356072.57	8.4426	P	1.2
6	☐	500.000	517.785	704682.76	16.9257	P	1.0
7	☐	1000.000	1011.448	1422470.10	33.0552	P	0.8
8	☐	2000.000	1988.576	2765078.99	64.9811	A	2.6
9	☐			5002.09	0.1132	P	3.1

$$y = 0.0327 * x + 0.0080$$

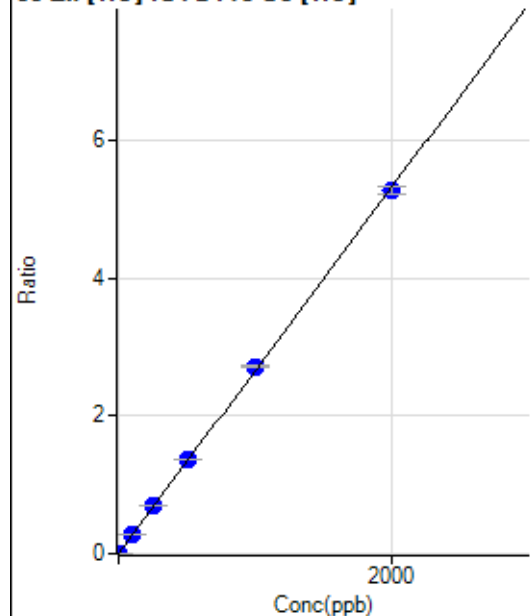
$$R = 0.9999$$

$$DL = 0.05703$$

$$BEC = 0.2444$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	96.67	0.0022	P	26.7
2	☐	0.200					
3	☐	2.000	1.873	311.12	0.0072	P	14.7
4	☐	100.000	106.108	12314.53	0.2843	P	3.0
5	☐	250.000	261.647	29434.78	0.6979	P	1.2
6	☐	500.000	518.045	57446.33	1.3796	P	0.2
7	☐	1000.000	1023.417	117194.12	2.7233	P	0.7
8	☐	2000.000	1982.019	224350.43	5.2721	P	2.3
9	☐			1723.47	0.0390	P	4.9

$$y = 0.0027 * x + 0.0022$$

$$R = 0.9998$$

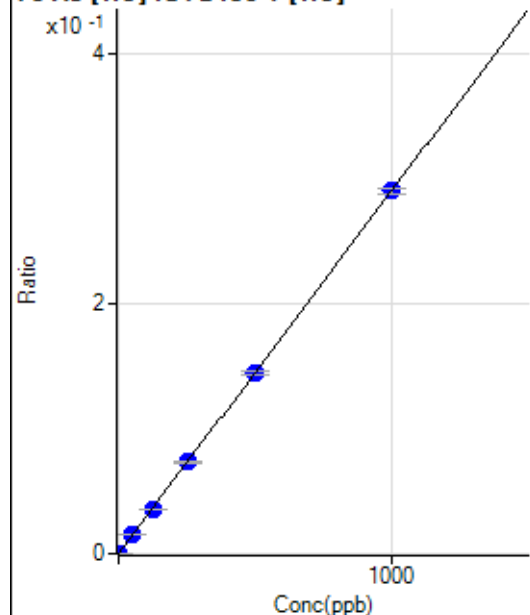
$$DL = 0.6567$$

$$BEC = 0.8198$$

Weight: <None>

Min Conc: 0

75 As [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	24.4
2	☐	0.100					
3	☐	1.000	1.160	101.85	0.0004	P	18.0
4	☐	50.000	51.619	4288.98	0.0150	P	4.7
5	☐	125.000	123.413	10029.04	0.0359	P	1.5
6	☐	250.000	252.771	20006.55	0.0734	P	1.9
7	☐	500.000	498.202	41026.69	0.1447	P	1.5
8	☐	1000.000	1000.323	80350.29	0.2906	P	1.6
9	☐			138.27	0.0005	P	4.5

$$y = 2.9051\text{E-}004 * x + 1.4749\text{E-}005$$

$$R = 1.0000$$

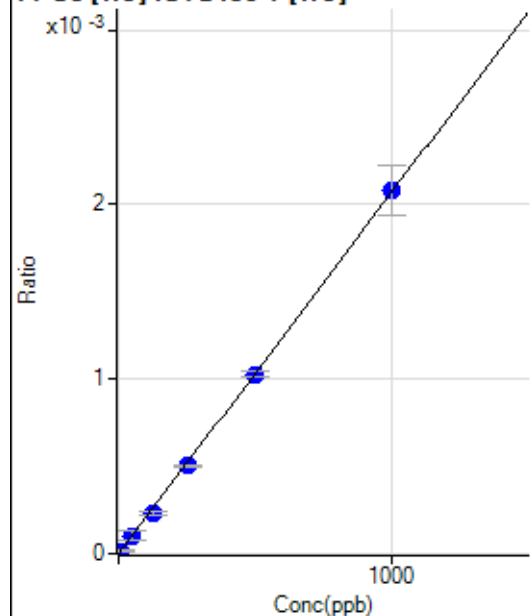
$$DL = 0.03715$$

$$BEC = 0.05077$$

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	5.465	3.33	0.0000	P	99.8
4	☐	50.000	48.667	28.89	0.0001	P	51.9
5	☐	125.000	113.342	65.56	0.0002	P	9.6
6	☐	250.000	242.646	136.67	0.0005	P	3.5
7	☐	500.000	496.876	291.12	0.0010	P	3.6
8	☐	1000.000	1004.922	574.47	0.0021	P	13.9
9	☐			1.11	0.0000	P	173.

$$y = 2.0675\text{E-}006 * x + 0.0000\text{E+}000$$

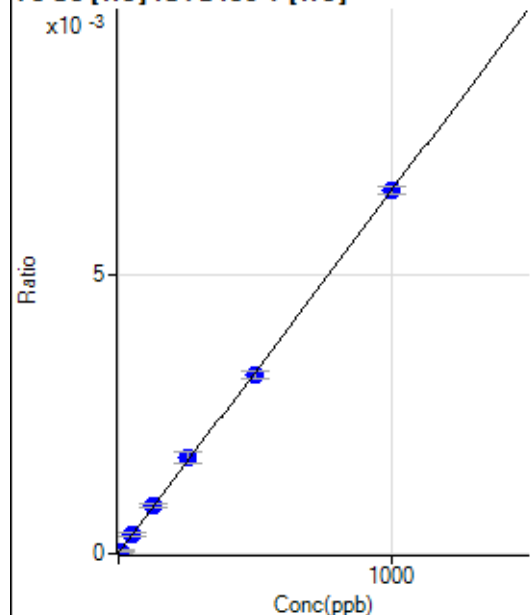
$$R = 0.9999$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2.47	0.0000	P	86.6
2	☐	0.500					
3	☐	5.000	5.916	13.58	0.0000	P	46.5
4	☐	50.000	50.500	96.30	0.0003	P	21.9
5	☐	125.000	133.237	245.07	0.0009	P	7.6
6	☐	250.000	264.137	471.00	0.0017	P	10.6
7	☐	500.000	491.444	910.53	0.0032	P	5.1
8	☐	1000.000	999.685	1803.84	0.0065	P	2.2
9	☐			3.08	0.0000	P	34.9

$$y = 6.5180\text{E-}006 * x + 8.3956\text{E-}006$$

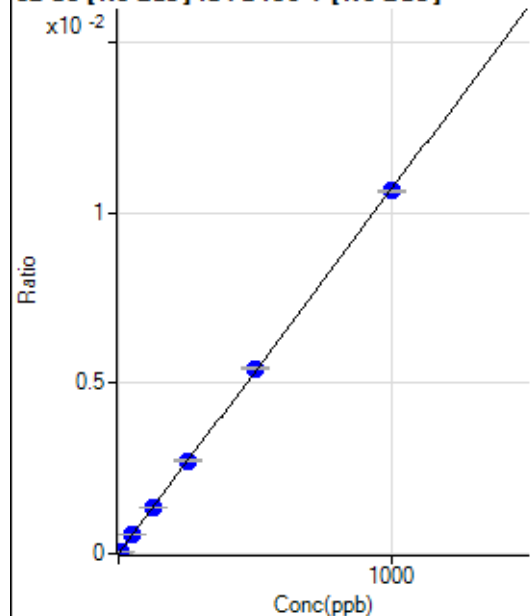
$$R = 0.9998$$

$$DL = 3.347$$

$$BEC = 1.288$$

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	56.63	0.0000	P	84.6
2	☐	0.500					
3	☐	5.000	4.269	521.38	0.0001	P	8.2
4	☐	50.000	50.648	5584.89	0.0005	P	0.8
5	☐	125.000	126.703	13882.62	0.0014	P	1.0
6	☐	250.000	254.362	27512.96	0.0027	P	1.0
7	☐	500.000	506.807	54744.60	0.0054	P	1.1
8	☐	1000.000	995.264	104807.35	0.0106	P	0.9
9	☐			90.94	0.0000	P	31.0

$$y = 1.0681\text{E-}005 * x + 5.6483\text{E-}006$$

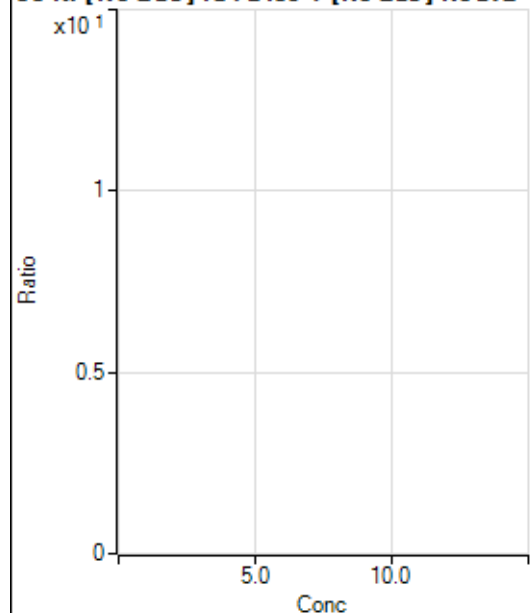
$$R = 1.0000$$

$$DL = 1.343$$

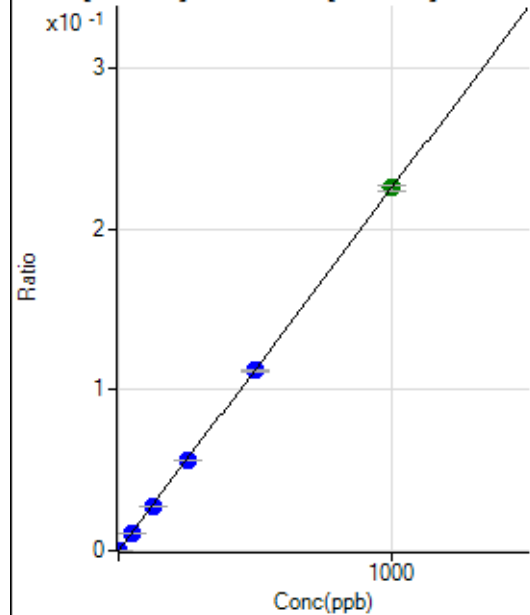
$$BEC = 0.5288$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			280.01	0.0000	P	11.6
2	☐						
3	☐			347.79	0.0000	P	5.5
4	☐			352.23	0.0000	P	10.8
5	☐			314.46	0.0000	P	5.4
6	☐			334.46	0.0000	P	8.3
7	☐			335.57	0.0000	P	4.0
8	☐			348.90	0.0000	P	13.8
9	☐			333.35	0.0000	P	11.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	522.26	0.0001	P	22.1
2	☐	0.100					
3	☐	1.000	0.986	2792.10	0.0003	P	2.7
4	☐	50.000	49.543	114412.52	0.0112	P	0.4
5	☐	125.000	123.310	283923.59	0.0278	P	1.1
6	☐	250.000	248.756	566086.65	0.0560	P	0.3
7	☐	500.000	498.437	1133330.53	0.1122	P	1.2
8	☐	1000.000	1001.327	2220120.88	0.2253	A	1.6
9	☐			10660.17	0.0011	P	1.5

$$y = 2.2496E-004 * x + 5.2614E-005$$

$$R = 1.0000$$

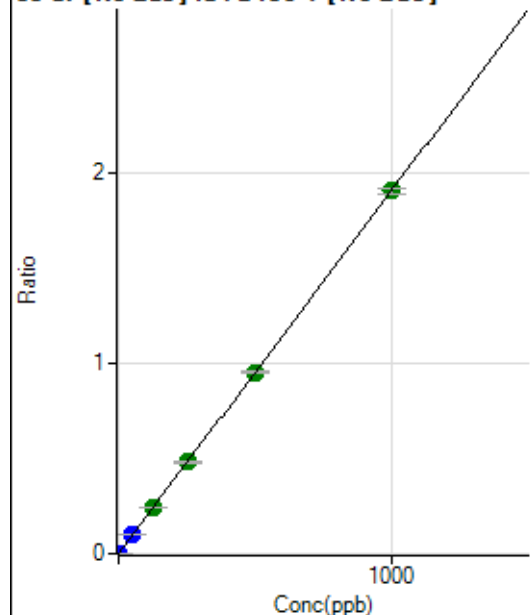
$$DL = 0.1549$$

$$BEC = 0.2339$$

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	130.56	0.0000	P	54.2
2	☐	0.100					
3	☐	1.000	1.022	19937.52	0.0020	P	0.3
4	☐	50.000	50.674	985632.41	0.0965	P	0.9
5	☐	125.000	127.061	2470794.43	0.2419	A	1.1
6	☐	250.000	251.706	4842209.01	0.4791	A	0.1
7	☐	500.000	499.147	9598640.15	0.9501	A	1.0
8	☐	1000.000	999.708	18750035.84	1.9029	A	1.6
9	☐			87138.93	0.0089	P	0.1

$$y = 0.0019 * x + 1.3315E-005$$

$$R = 1.0000$$

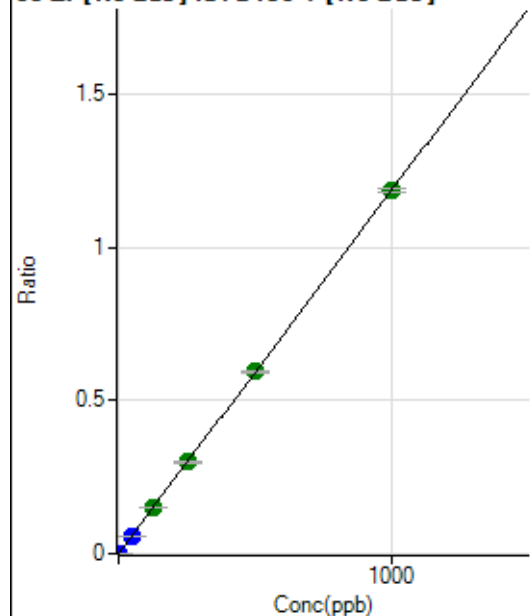
$$DL = 0.01137$$

$$BEC = 0.006996$$

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	866.73	0.0001	P	7.5
2	☐	0.100					
3	☐	1.000	1.100	14157.85	0.0014	P	4.0
4	☐	50.000	49.839	604677.49	0.0592	P	0.6
5	☐	125.000	126.593	1534345.85	0.1502	A	0.6
6	☐	250.000	251.709	3017172.46	0.2985	A	1.1
7	☐	500.000	500.968	6001949.96	0.5941	A	1.1
8	☐	1000.000	998.898	11671969.10	1.1845	A	1.2
9	☐			3408.91	0.0003	P	6.4

$$y = 0.0012 * x + 8.6846E-005$$

$$R = 1.0000$$

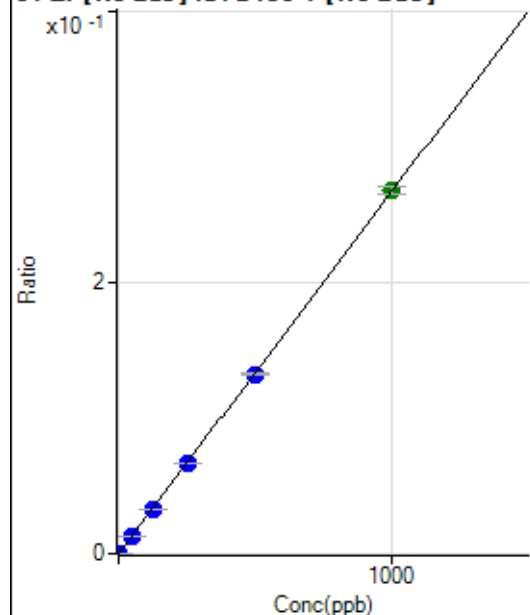
$$DL = 0.01648$$

$$BEC = 0.07324$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	152.79	0.0000	P	35.9
2	☐	0.100					
3	☐	1.000	1.108	3161.63	0.0003	P	12.3
4	☐	50.000	49.203	134242.84	0.0131	P	0.8
5	☐	125.000	122.418	333716.71	0.0327	P	0.5
6	☐	250.000	248.277	669391.77	0.0662	P	0.8
7	☐	500.000	495.210	1334538.05	0.1321	P	1.0
8	☐	1000.000	1003.188	2636525.41	0.2676	A	2.3
9	☐			772.28	0.0001	P	20.3

$$y = 2.6672\text{E-}004 * x + 1.5130\text{E-}005$$

$$R = 1.0000$$

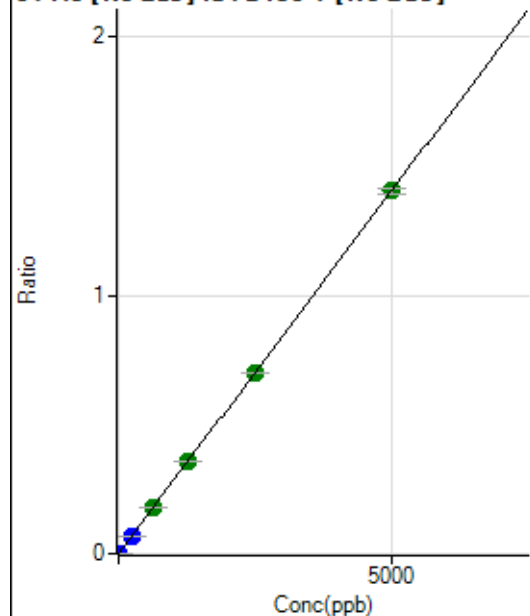
$$DL = 0.06113$$

$$BEC = 0.05673$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	530.59	0.0001	P	27.5
2	☐	0.500					
3	☐	5.000	5.020	14892.11	0.0015	P	1.9
4	☐	250.000	249.783	717445.46	0.0702	P	0.3
5	☐	625.000	632.843	1816606.83	0.1778	A	0.5
6	☐	1250.000	1263.983	3588889.01	0.3551	A	0.2
7	☐	2500.000	2490.332	7067907.27	0.6996	A	0.5
8	☐	5000.000	5000.369	13841051.70	1.4047	A	1.4
9	☐			19284.00	0.0020	P	3.3

$$y = 2.8090\text{E-}004 * x + 5.3452\text{E-}005$$

$$R = 1.0000$$

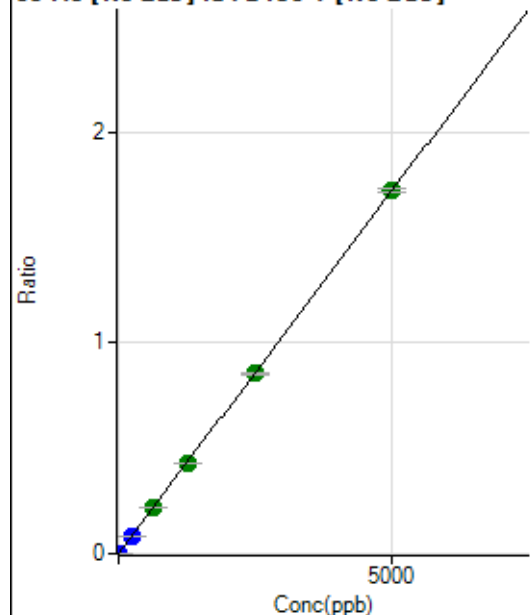
$$DL = 0.1571$$

$$BEC = 0.1903$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	294.46	0.0000	P	10.2
2	☐	0.500					
3	☐	5.000	4.850	17264.40	0.0017	P	1.2
4	☐	250.000	249.213	875569.50	0.0857	P	0.8
5	☐	625.000	631.112	2216535.34	0.2170	A	1.0
6	☐	1250.000	1251.852	4349363.51	0.4304	A	0.3
7	☐	2500.000	2484.672	8629062.52	0.8541	A	0.9
8	☐	5000.000	5006.477	16958704.89	1.7210	A	1.0
9	☐			31055.98	0.0032	P	1.7

$$y = 3.4375\text{E-}004 * x + 2.9515\text{E-}005$$

$$R = 1.0000$$

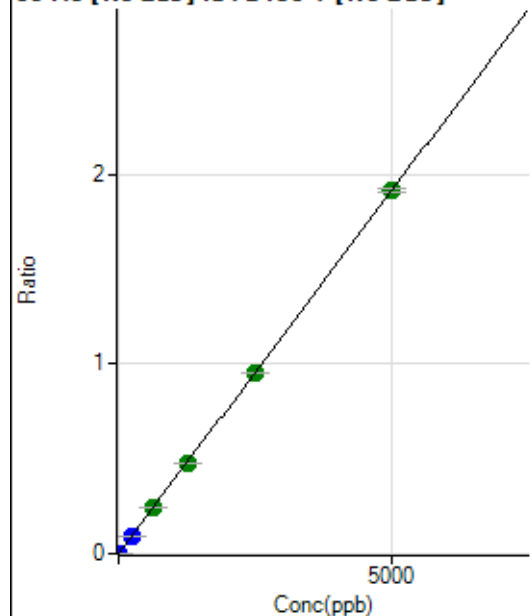
$$DL = 0.02624$$

$$BEC = 0.08586$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	405.58	0.0000	P	27.6
2	☐	0.500					
3	☐	5.000	4.901	19473.06	0.0019	P	2.3
4	☐	250.000	250.465	978401.26	0.0958	P	0.8
5	☐	625.000	634.910	2479114.12	0.2427	A	1.5
6	☐	1250.000	1254.654	4846211.14	0.4795	A	0.4
7	☐	2500.000	2494.705	9632597.87	0.9534	A	0.3
8	☐	5000.000	5000.222	18830306.85	1.9110	A	1.2
9	☐			35647.86	0.0036	P	2.0

$$y = 3.8217\text{E-}004 * x + 4.1000\text{E-}005$$

$$R = 1.0000$$

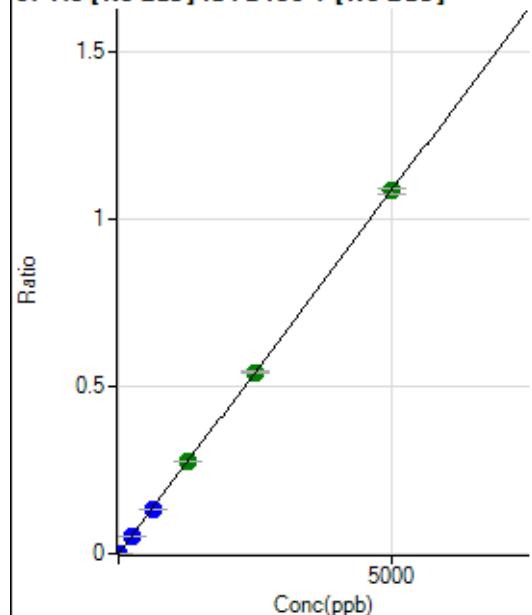
$$DL = 0.08883$$

$$BEC = 0.1073$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	241.68	0.0000	P	42.0
2	☐	0.500					
3	☐	5.000	4.977	11241.21	0.0011	P	0.3
4	☐	250.000	246.571	547002.20	0.0535	P	1.1
5	☐	625.000	619.042	1372759.73	0.1344	P	0.6
6	☐	1250.000	1278.460	2804463.48	0.2775	A	0.1
7	☐	2500.000	2494.777	5470416.44	0.5415	A	0.7
8	☐	5000.000	4996.413	10685526.02	1.0844	A	1.3
9	☐			19826.39	0.0020	P	0.4

$$y = 2.1703\text{E-}004 * x + 2.4591\text{E-}005$$

$$R = 1.0000$$

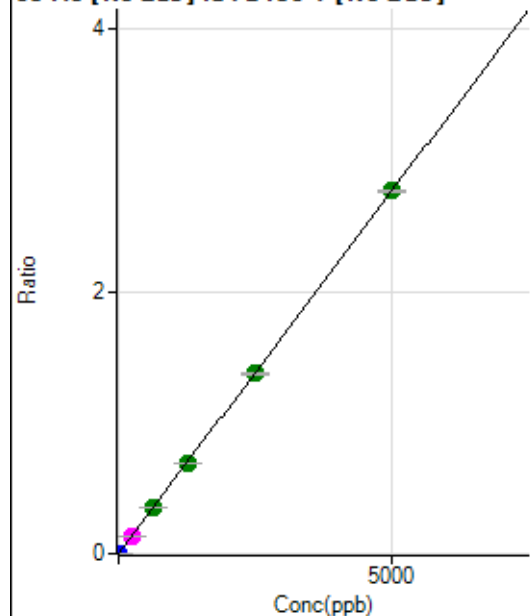
$$DL = 0.1427$$

$$BEC = 0.1133$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	436.14	0.0000	P	19.5
2	☐	0.500					
3	☐	5.000	4.896	27963.22	0.0027	P	0.9
4	☐	250.000	249.144	1406686.00	0.1377	M	1.7
5	☐	625.000	628.311	3546364.53	0.3472	A	1.2
6	☐	1250.000	1248.016	6968482.44	0.6895	A	0.1
7	☐	2500.000	2485.865	13874596.49	1.3733	A	0.9
8	☐	5000.000	5007.193	27259454.43	2.7662	A	0.7
9	☐			50849.10	0.0052	P	2.3

$$y = 5.5245\text{E-}004 * x + 4.3413\text{E-}005$$

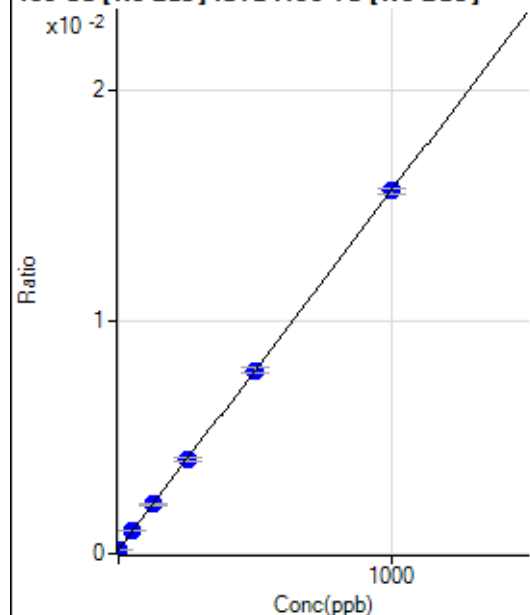
$$R = 1.0000$$

$$DL = 0.04602$$

$$BEC = 0.07858$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2041.92	0.0002	P	7.8
2	☐	0.100					
3	☐	1.000	0.038	2072.48	0.0002	P	6.0
4	☐	50.000	52.049	11424.81	0.0010	P	4.3
5	☐	125.000	125.896	25221.75	0.0021	P	2.6
6	☐	250.000	252.124	48005.81	0.0041	P	2.9
7	☐	500.000	499.910	93034.24	0.0079	P	2.4
8	☐	1000.000	999.300	179424.18	0.0156	P	1.5
9	☐			1894.68	0.0002	P	5.2

$$y = 1.5464\text{E-}005 * x + 1.7677\text{E-}004$$

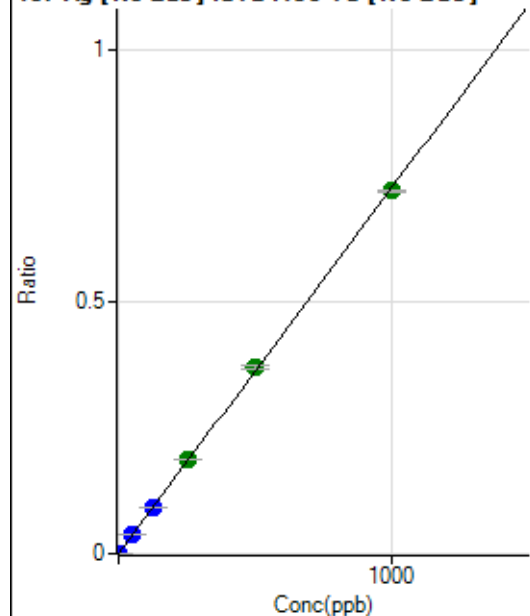
$$R = 1.0000$$

$$DL = 2.673$$

$$BEC = 11.43$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.34	0.0000	P	6.0
2	☐	0.100					
3	☐	1.000	1.058	9120.16	0.0008	P	1.4
4	☐	50.000	52.551	444353.47	0.0382	P	0.7
5	☐	125.000	127.988	1104428.32	0.0930	P	0.6
6	☐	250.000	259.323	2219101.52	0.1884	A	0.8
7	☐	500.000	508.932	4349630.52	0.3697	A	2.2
8	☐	1000.000	992.702	8278396.19	0.7211	A	0.8
9	☐			2989.94	0.0003	P	107.

$$y = 7.2639\text{E-}004 * x + 1.1509\text{E-}005$$

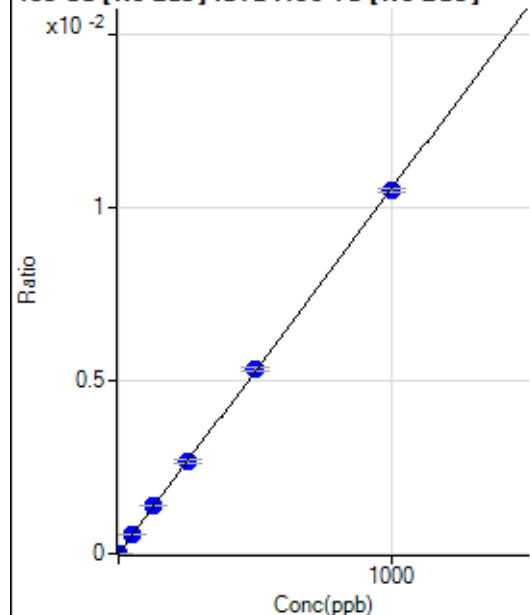
$$R = 0.9999$$

$$DL = 0.002851$$

$$BEC = 0.01584$$

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	13.89	0.0000	P	41.5
2	☐	0.100					
3	☐	1.000	0.870	120.84	0.0000	P	36.1
4	☐	50.000	52.876	6486.41	0.0006	P	3.2
5	☐	125.000	129.356	16178.01	0.0014	P	0.4
6	☐	250.000	252.983	31361.74	0.0027	P	2.5
7	☐	500.000	508.157	62911.33	0.0053	P	2.1
8	☐	1000.000	994.488	120115.06	0.0105	P	1.2
9	☐			34.72	0.0000	P	24.9

$$y = 1.0520\text{E-}005 * x + 1.1853\text{E-}006$$

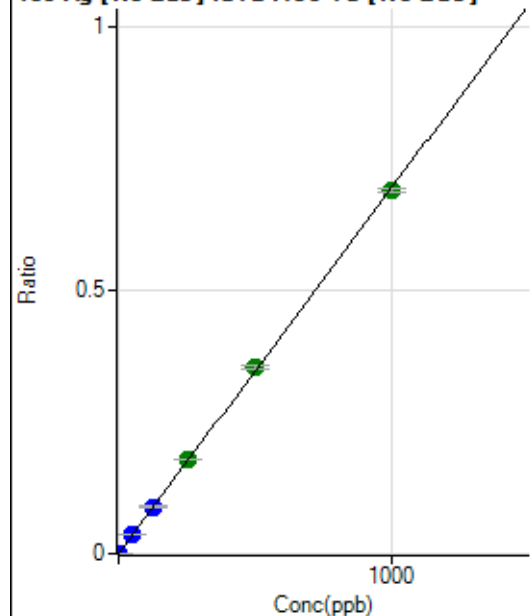
$$R = 0.9999$$

$$DL = 0.1401$$

$$BEC = 0.1127$$

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	119.45	0.0000	P	15.8
2	☐	0.100					
3	☐	1.000	1.009	8302.95	0.0007	P	3.7
4	☐	50.000	52.764	426098.48	0.0366	P	1.1
5	☐	125.000	128.339	1057696.98	0.0890	P	0.9
6	☐	250.000	257.524	2104699.20	0.1787	A	1.4
7	☐	500.000	510.552	4167751.92	0.3542	A	1.5
8	☐	1000.000	992.288	7902969.97	0.6884	A	1.2
9	☐			1225.12	0.0001	P	15.9

$$y = 6.9376\text{E-}004 * x + 1.0384\text{E-}005$$

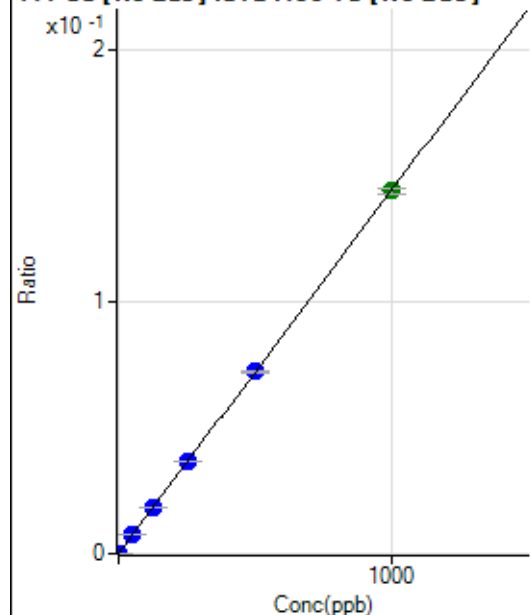
$$R = 0.9999$$

$$DL = 0.007115$$

$$BEC = 0.01497$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1030.69	0.0001	P	7.3
2	☐	0.100					
3	☐	1.000	0.948	2639.31	0.0002	P	7.1
4	☐	50.000	51.442	87273.07	0.0075	P	0.7
5	☐	125.000	126.696	217840.36	0.0183	P	0.6
6	☐	250.000	252.566	429628.70	0.0365	P	1.1
7	☐	500.000	501.088	850371.10	0.0723	P	1.2
8	☐	1000.000	998.530	1652253.93	0.1439	A	1.4
9	☐			1302.21	0.0001	P	3.5

$$y = 1.4405\text{E-}004 * x + 8.9236\text{E-}005$$

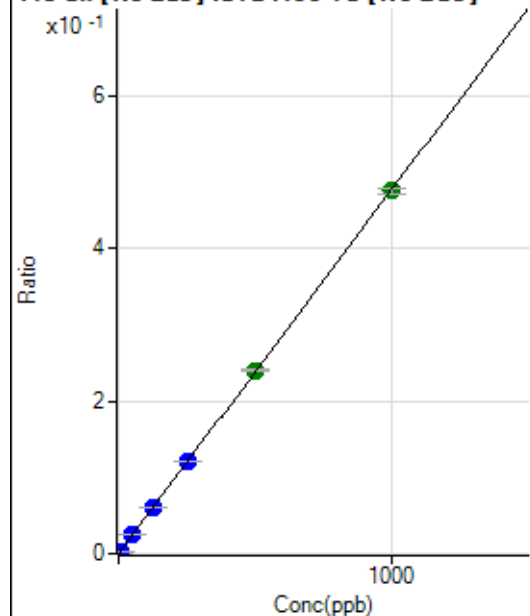
$$R = 1.0000$$

$$DL = 0.1353$$

$$BEC = 0.6195$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1658.52	0.0001	P	1.8
2	☐	0.500					
3	☐	5.000	4.758	28158.52	0.0024	P	2.0
4	☐	50.000	50.901	283791.35	0.0244	P	1.3
5	☐	125.000	124.710	707222.11	0.0595	P	0.9
6	☐	250.000	252.034	1415757.34	0.1202	P	0.9
7	☐	500.000	504.525	2829221.12	0.2404	A	1.0
8	☐	1000.000	997.221	5454245.26	0.4751	A	1.5
9	☐			14450.07	0.0013	P	3.2

$$y = 4.7629\text{E-}004 * x + 1.4351\text{E-}004$$

$$R = 1.0000$$

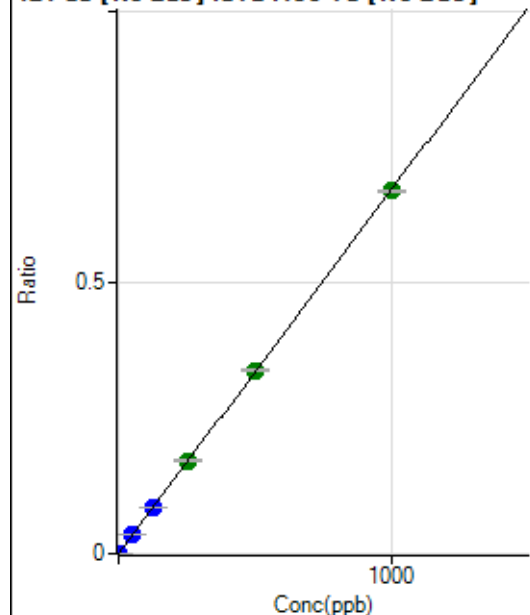
$$DL = 0.01603$$

$$BEC = 0.3013$$

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	252.79	0.0000	P	33.4
2	☐	0.200					
3	☐	2.000	1.993	15888.01	0.0014	P	2.2
4	☐	50.000	50.791	397081.55	0.0341	P	1.7
5	☐	125.000	125.826	1003716.76	0.0845	P	0.7
6	☐	250.000	255.104	2017840.78	0.1713	A	1.6
7	☐	500.000	504.177	3983179.64	0.3385	A	1.6
8	☐	1000.000	996.492	7681287.76	0.6691	A	0.7
9	☐			21223.26	0.0019	P	4.6

$$y = 6.7141\text{E-}004 * x + 2.1615\text{E-}005$$

$$R = 1.0000$$

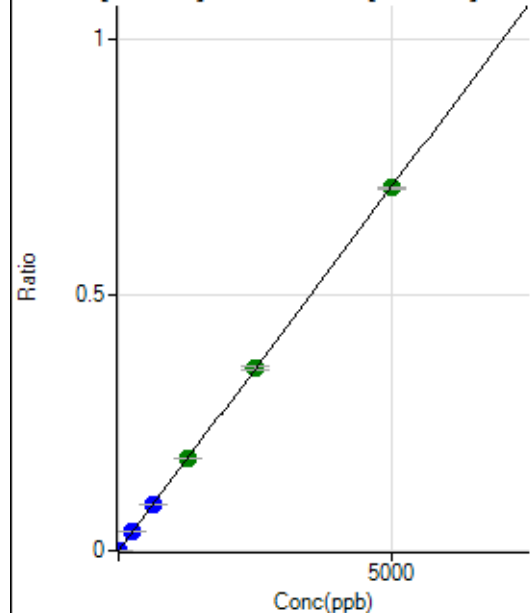
$$DL = 0.03228$$

$$BEC = 0.03219$$

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	36.11	0.0000	P	28.5
2	☐	1.000					
3	☐	10.000	9.849	16438.67	0.0014	P	2.0
4	☐	250.000	254.503	422045.45	0.0363	P	1.1
5	☐	625.000	627.358	1061834.85	0.0894	P	0.8
6	☐	1250.000	1274.375	2139108.45	0.1816	A	0.4
7	☐	2500.000	2512.698	4212663.38	0.3580	A	1.7
8	☐	5000.000	4987.038	8157909.03	0.7106	A	0.8
9	☐			1427.92	0.0001	P	6.0

$$y = 1.4249\text{E-}004 * x + 3.1379\text{E-}006$$

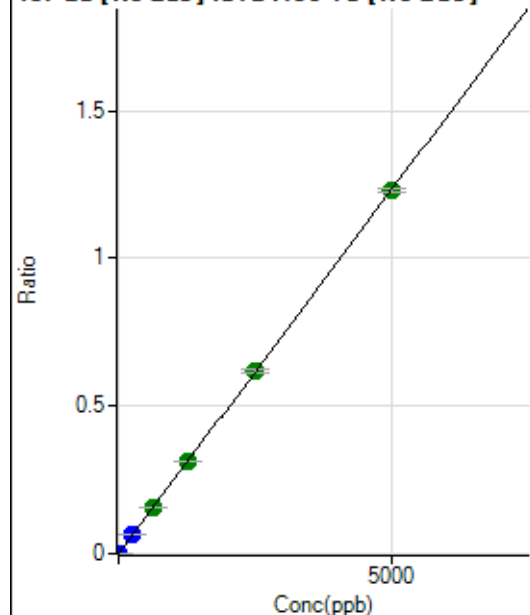
$$R = 1.0000$$

$$DL = 0.01886$$

$$BEC = 0.02202$$

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	66.67	0.0000	P	45.9
2	☐	1.000					
3	☐	10.000	10.089	29111.02	0.0025	P	0.8
4	☐	250.000	256.492	735277.22	0.0632	P	0.9
5	☐	625.000	640.217	1873216.30	0.1577	A	0.5
6	☐	1250.000	1268.114	3679689.88	0.3124	A	0.2
7	☐	2500.000	2513.553	7285010.93	0.6191	A	1.3
8	☐	5000.000	4986.468	14100515.77	1.2283	A	1.0
9	☐			2450.35	0.0002	P	2.4

$$y = 2.4632E-004 * x + 5.8400E-006$$

$$R = 1.0000$$

$$DL = 0.03265$$

$$BEC = 0.02371$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	100.
2	☐						
3	☐			13.33		P	86.6
4	☐			24.44		P	41.7
5	☐			37.78		P	50.9
6	☐			84.45		P	31.9
7	☐			177.79		P	8.7
8	☐			273.35		P	25.8
9	☐			104.45		P	3.7

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	☐			0.00		P	
5	☐			1.11		P	173.
6	☐			3.33		P	0.0
7	☐			4.45		P	86.6
8	☐			4.45		P	86.6
9	☐			14.44		P	70.5

156 Dy [No Gas] No available calibration points

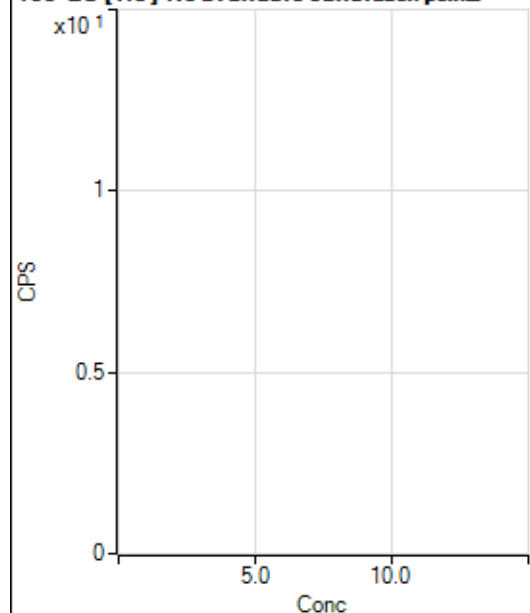
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			16.67		P	100.
2	☐						
3	☐			22.22		P	43.3
4	☐			16.67		P	50.0
5	☐			16.67		P	132.
6	☐			27.78		P	45.8
7	☐			61.11		P	39.4
8	☐			72.22		P	29.0
9	☐			75.00		P	22.2

156 Dy [He] No available calibration points

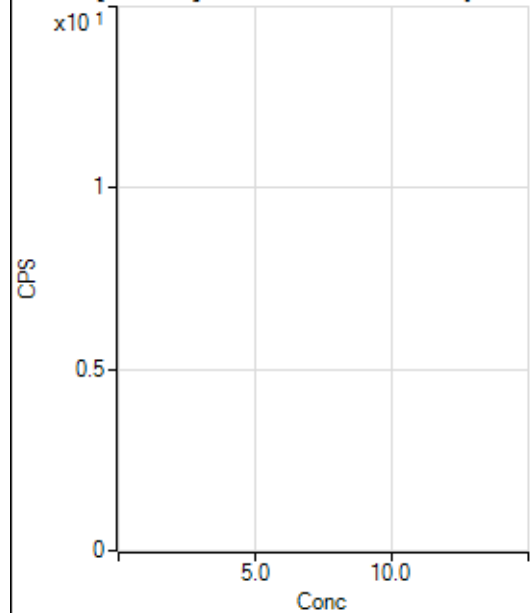
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			3.33		P	100.
2	☐						
3	☐			1.11		P	173.
4	☐			1.11		P	173.
5	☐			1.11		P	173.
6	☐			0.00		P	
7	☐			2.22		P	86.6
8	☐			7.78		P	24.7
9	☐			14.45		P	26.7

160 Gd [No Gas] Noavailable calibration poin...

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			97.23		P	50.2
2	☐						
3	☐			55.56		P	17.3
4	☐			69.45		P	30.2
5	☐			72.23		P	54.5
6	☐			83.34		P	0.0
7	☐			50.00		P	60.1
8	☐			86.12		P	36.6
9	☐			102.78		P	4.7

160 Gd [He] No available calibration points

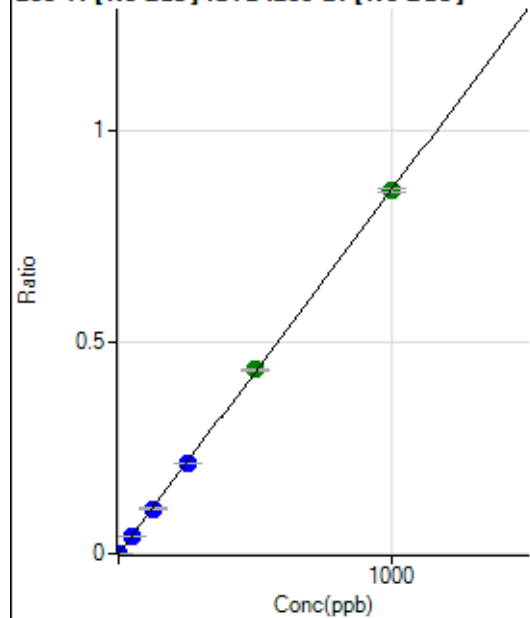
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	34.6
2	☐						
3	☐			4.44		P	43.4
4	☐			6.67		P	50.0
5	☐			5.55		P	69.3
6	☐			5.55		P	124.
7	☐			10.00		P	0.0
8	☐			12.22		P	41.7
9	☐			15.56		P	49.5

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			38.89		P	32.7
2	☐						
3	☐			66.67		P	12.5
4	☐			33.33		P	43.3
5	☐			38.89		P	44.6
6	☐			33.34		P	25.0
7	☐			52.78		P	9.1
8	☐			52.78		P	65.7
9	☐			66.67		P	66.1

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	65.5
2	☐						
3	☐			8.89		P	21.6
4	☐			7.78		P	49.5
5	☐			4.44		P	43.4
6	☐			6.67		P	50.0
7	☐			7.78		P	65.5
8	☐			8.89		P	94.4
9	☐			4.44		P	114.

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	438.92	0.0001	P	13.4
2	☐	0.100					
3	☐	1.000	0.949	6187.90	0.0009	P	6.4
4	☐	50.000	49.203	298325.79	0.0423	P	0.6
5	☐	125.000	123.379	751513.97	0.1060	P	1.6
6	☐	250.000	249.837	1505439.61	0.2146	P	1.0
7	☐	500.000	505.193	3038317.39	0.4339	A	1.0
8	☐	1000.000	997.687	5788905.77	0.8567	A	1.1
9	☐			3417.29	0.0005	P	3.6

$$y = 8.5866E-004 * x + 6.2985E-005$$

$$R = 1.0000$$

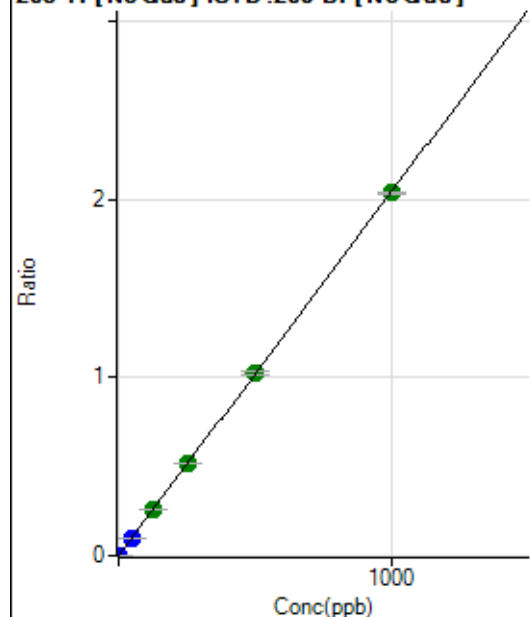
$$DL = 0.02943$$

$$BEC = 0.07335$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1005.65	0.0001	P	5.4
2	☐	0.100					
3	☐	1.000	0.997	15382.22	0.0022	P	5.2
4	☐	50.000	49.557	714381.71	0.1013	P	0.4
5	☐	125.000	126.380	1830347.52	0.2582	A	1.2
6	☐	250.000	253.771	3635857.72	0.5183	A	1.1
7	☐	500.000	503.945	7205842.26	1.0290	A	1.8
8	☐	1000.000	996.935	13754656.04	2.0355	A	0.5
9	☐			8628.35	0.0014	P	2.7

$$y = 0.0020 * x + 1.4461E-004$$

$$R = 1.0000$$

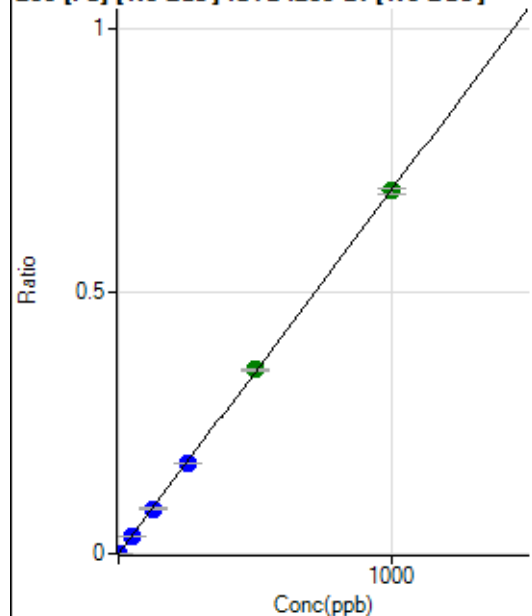
$$DL = 0.01141$$

$$BEC = 0.07083$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	401.87	0.0001	P	12.2
2	☐	0.100					
3	☐	1.000	1.003	5314.25	0.0008	P	2.5
4	☐	50.000	49.616	243019.92	0.0345	P	0.7
5	☐	125.000	123.937	609814.96	0.0860	P	0.9
6	☐	250.000	248.042	1207266.64	0.1721	P	0.7
7	☐	500.000	505.222	2454025.46	0.3504	A	1.8
8	☐	1000.000	998.030	4677213.01	0.6922	A	1.5
9	☐			25667.26	0.0041	P	1.4

$$y = 6.9353E-004 * x + 5.7808E-005$$

$$R = 1.0000$$

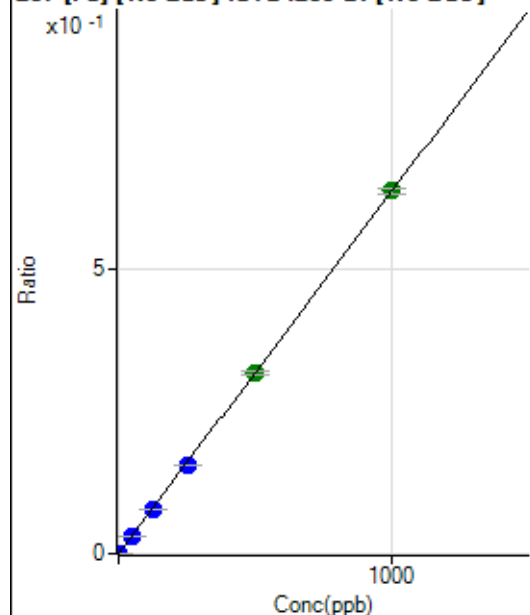
$$DL = 0.03046$$

$$BEC = 0.08335$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	366.68	0.0001	P	3.7
2	☐	0.100					
3	☐	1.000	1.019	4928.90	0.0007	P	1.7
4	☐	50.000	48.817	218717.26	0.0310	P	0.2
5	☐	125.000	121.719	547794.91	0.0773	P	1.6
6	☐	250.000	245.088	1091140.08	0.1555	P	0.5
7	☐	500.000	499.072	2217386.64	0.3167	A	1.9
8	☐	1000.000	1002.161	4295891.07	0.6358	A	1.6
9	☐			21893.49	0.0035	P	0.7

$$y = 6.3437\text{E-}004 * x + 5.2861\text{E-}005$$

$$R = 1.0000$$

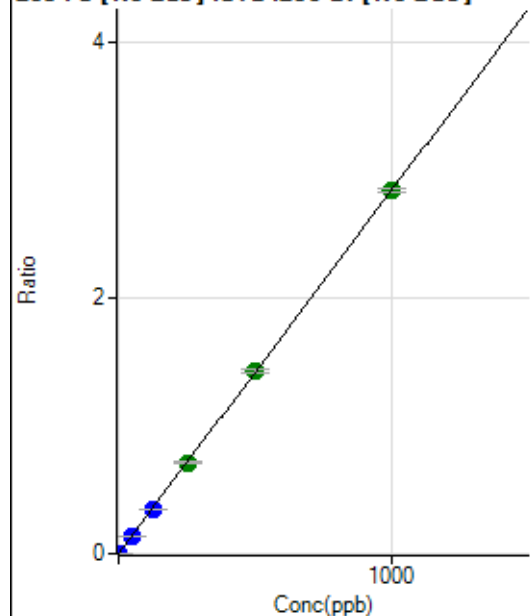
$$DL = 0.0093$$

$$BEC = 0.08333$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1588.97	0.0002	P	2.3
2	☐	0.100					
3	☐	1.000	0.989	21429.88	0.0030	P	1.5
4	☐	50.000	49.090	985229.69	0.1397	P	0.3
5	☐	125.000	122.882	2477523.09	0.3494	P	0.9
6	☐	250.000	250.946	5004920.70	0.7134	A	0.5
7	☐	500.000	502.330	9998744.85	1.4278	A	1.4
8	☐	1000.000	998.909	19183185.33	2.8390	A	1.1
9	☐			102433.36	0.0163	P	0.6

$$y = 0.0028 * x + 2.2911\text{E-}004$$

$$R = 1.0000$$

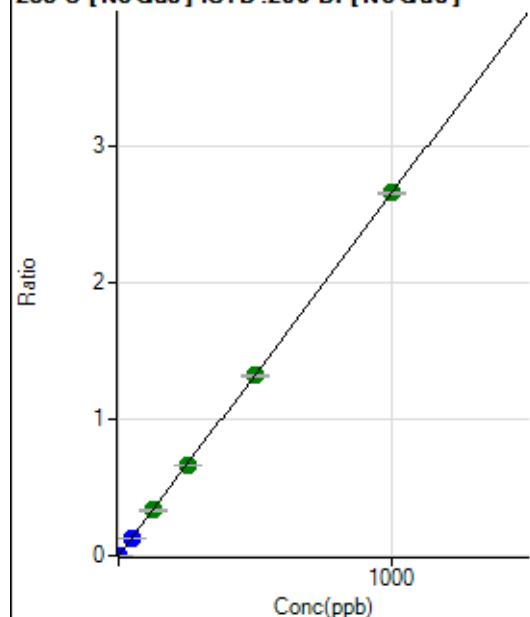
$$DL = 0.005591$$

$$BEC = 0.08062$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	144.45	0.0000	P	22.5
2	☐	0.100					
3	☐	1.000	0.971	18322.53	0.0026	P	3.3
4	☐	50.000	48.801	913537.48	0.1296	P	0.2
5	☐	125.000	124.882	2350492.46	0.3315	A	1.4
6	☐	250.000	250.237	4660558.22	0.6643	A	0.7
7	☐	500.000	496.845	9236264.96	1.3190	A	1.8
8	☐	1000.000	1001.593	17966591.72	2.6589	A	0.6
9	☐			1847.46	0.0003	P	10.3

$$y = 0.0027 * x + 2.0821E-005$$

$$R = 1.0000$$

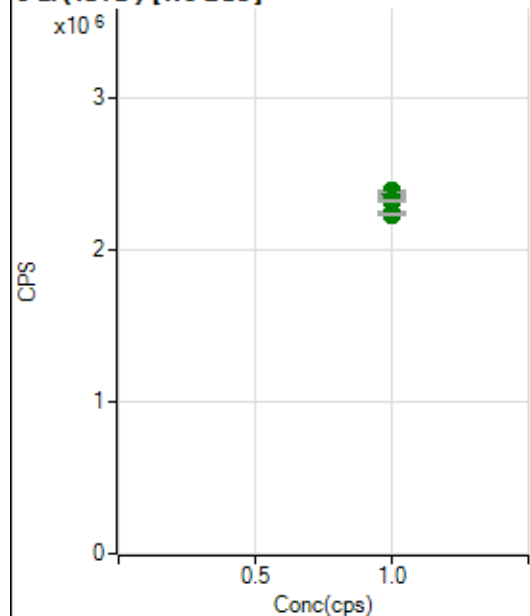
$$DL = 0.005289$$

$$BEC = 0.007843$$

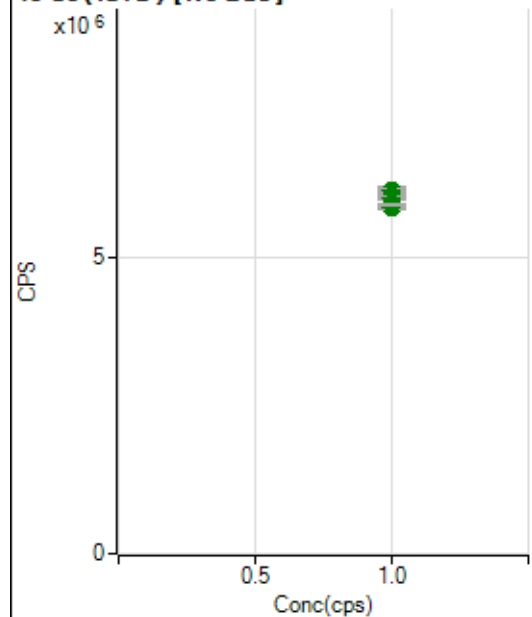
Weight: <None>

Min Conc: 0

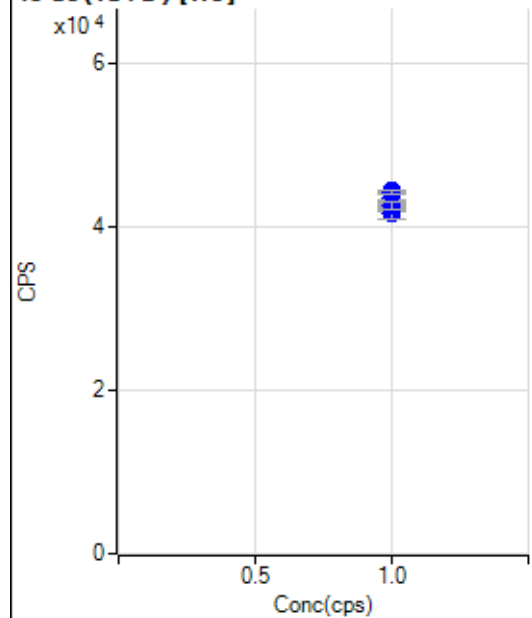
6 Li (ISTD) [No Gas]



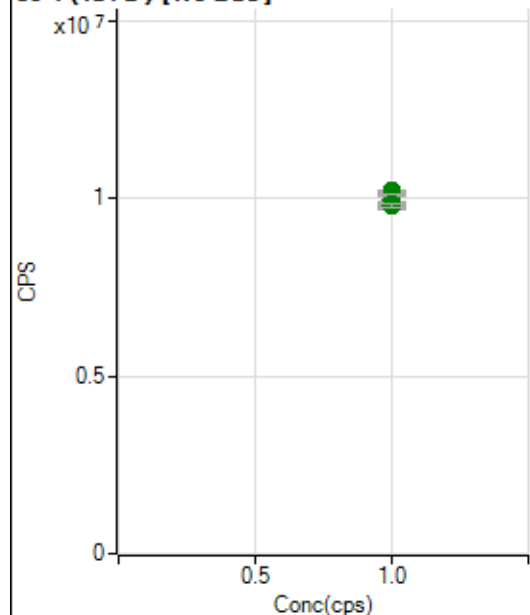
	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2311862.17		A	5.1
2	☐	1.000					
3	☐	1.000		2386485.45		A	0.7
4	☐	1.000		2366505.80		A	0.7
5	☐	1.000		2361726.65		A	1.0
6	☐	1.000		2328302.76		A	0.8
7	☐	1.000		2317816.96		A	0.5
8	☐	1.000		2226751.46		A	0.5
9	☐	1.000		2233233.14		A	0.4

45 Sc (ISTD) [No Gas]

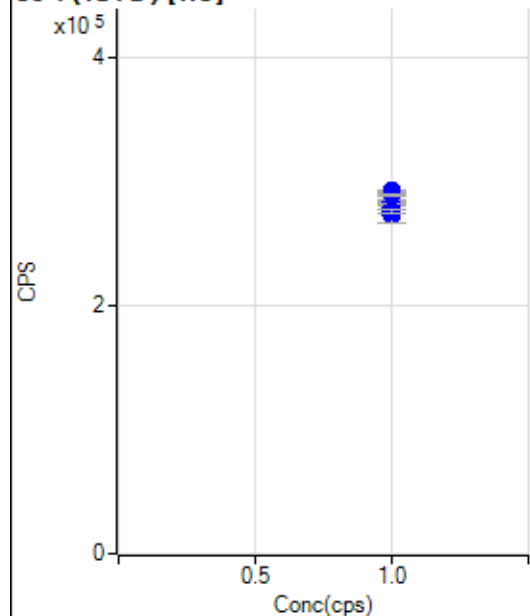
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6036033.55		A	6.1
2	☐	1.000					
3	☐	1.000		6137327.57		A	0.9
4	☐	1.000		6113780.60		A	0.8
5	☐	1.000		6143401.35		A	1.2
6	☐	1.000		6043375.61		A	1.1
7	☐	1.000		6023678.96		A	1.3
8	☐	1.000		5861369.23		A	1.1
9	☐	1.000		5916752.08		A	0.5

45 Sc (ISTD) [He]

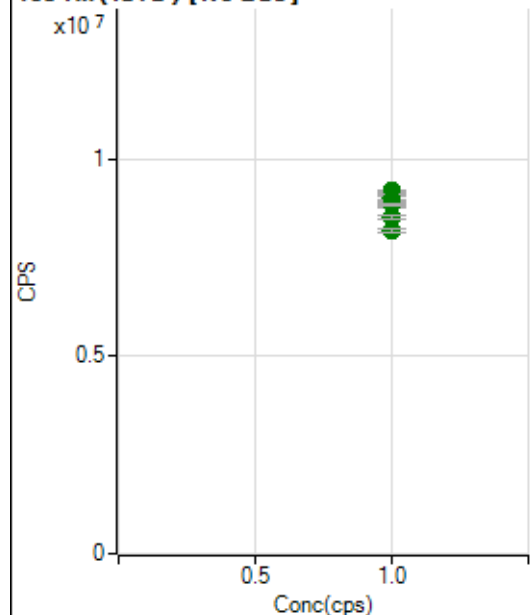
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		44398.97		P	0.7
2	☐	1.000					
3	☐	1.000		43632.53		P	4.3
4	☐	1.000		43334.69		P	3.4
5	☐	1.000		42178.92		P	1.0
6	☐	1.000		41641.96		P	3.5
7	☐	1.000		43035.88		P	1.2
8	☐	1.000		42567.86		P	2.1
9	☐	1.000		44208.36		P	1.4

89 Y (ISTD) [No Gas]

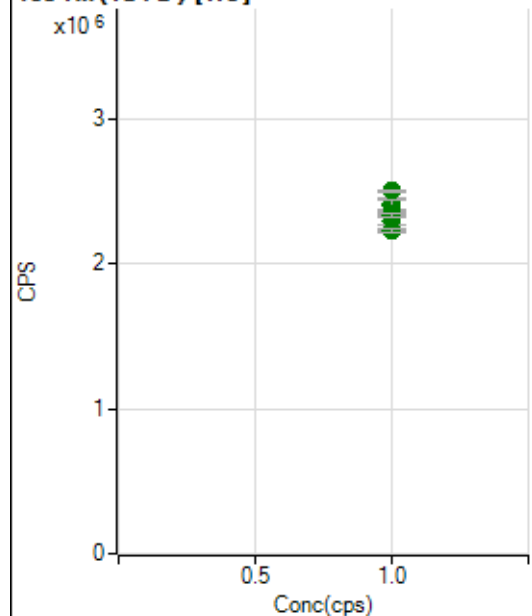
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9976877.84		A	5.4
2	☐	1.000					
3	☐	1.000		10174523.39		A	0.2
4	☐	1.000		10217378.60		A	0.4
5	☐	1.000		10216146.17		A	0.6
6	☐	1.000		10106496.17		A	0.9
7	☐	1.000		10103211.86		A	0.8
8	☐	1.000		9854730.83		A	1.2
9	☐	1.000		9814537.14		A	0.9

89 Y (ISTD) [He]

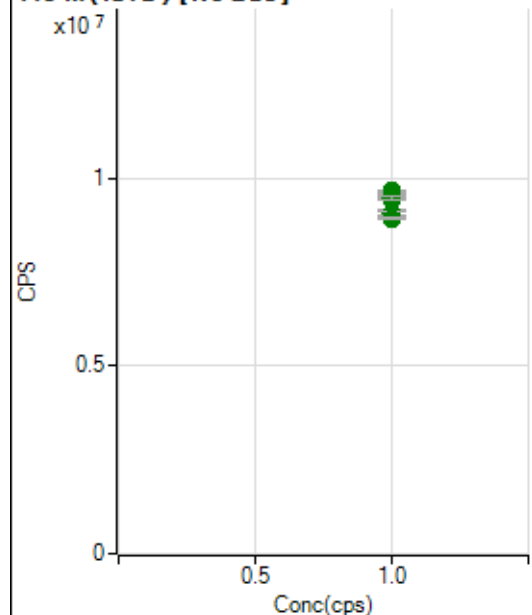
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		292692.69		P	0.7
2	☐	1.000					
3	☐	1.000		288815.16		P	3.5
4	☐	1.000		286003.39		P	3.4
5	☐	1.000		279604.42		P	1.0
6	☐	1.000		272529.96		P	4.2
7	☐	1.000		283460.03		P	1.0
8	☐	1.000		276505.45		P	1.0
9	☐	1.000		289754.86		P	0.7

103 Rh (ISTD) [No Gas]

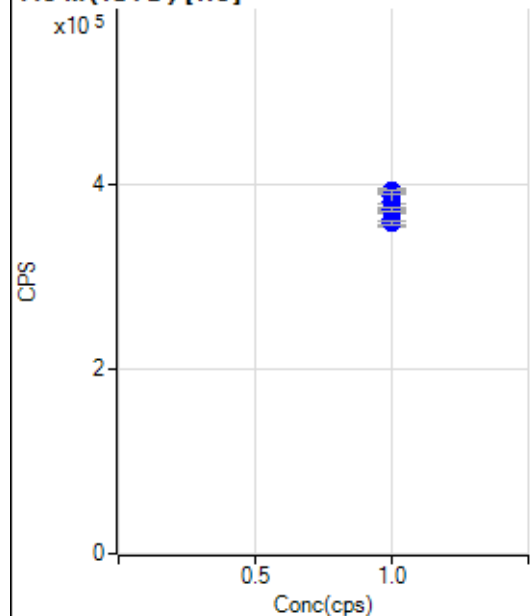
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8993655.32		A	5.1
2	☐	1.000					
3	☐	1.000		9189188.92		A	0.7
4	☐	1.000		9088119.65		A	1.1
5	☐	1.000		9073090.57		A	0.5
6	☐	1.000		8947962.18		A	0.7
7	☐	1.000		8845311.05		A	0.8
8	☐	1.000		8512575.54		A	1.0
9	☐	1.000		8201898.19		A	1.1

103 Rh (ISTD) [He]

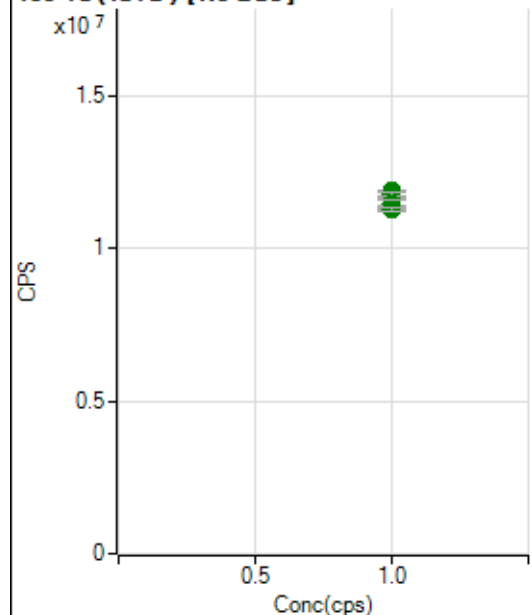
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2500547.34		A	0.6
2	☐	1.000					
3	☐	1.000		2413988.19		A	3.4
4	☐	1.000		2395890.90		A	3.7
5	☐	1.000		2342788.42		A	1.1
6	☐	1.000		2293035.35		A	4.4
7	☐	1.000		2335517.50		A	0.8
8	☐	1.000		2245621.79		A	1.3
9	☐	1.000		2226382.00		A	1.7

115 In (ISTD) [No Gas]

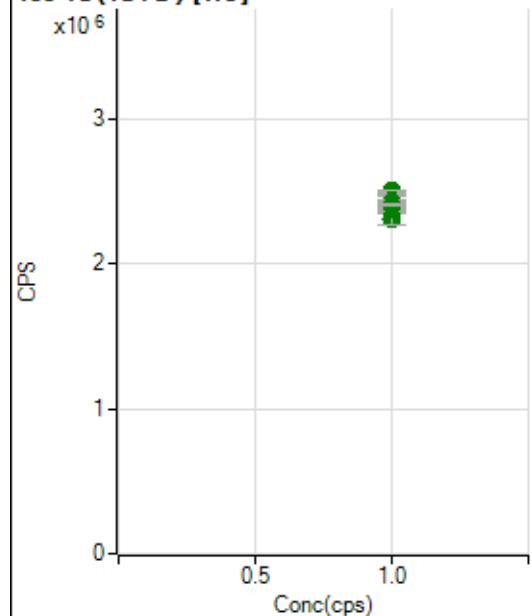
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		9439359.72		A	5.2
2	☐	1.000					
3	☐	1.000		9662954.76		A	0.5
4	☐	1.000		9590482.97		A	0.7
5	☐	1.000		9606655.07		A	0.9
6	☐	1.000		9510278.00		A	0.3
7	☐	1.000		9469340.23		A	1.2
8	☐	1.000		9060161.84		A	1.0
9	☐	1.000		8929045.79		A	0.9

115 In (ISTD) [He]

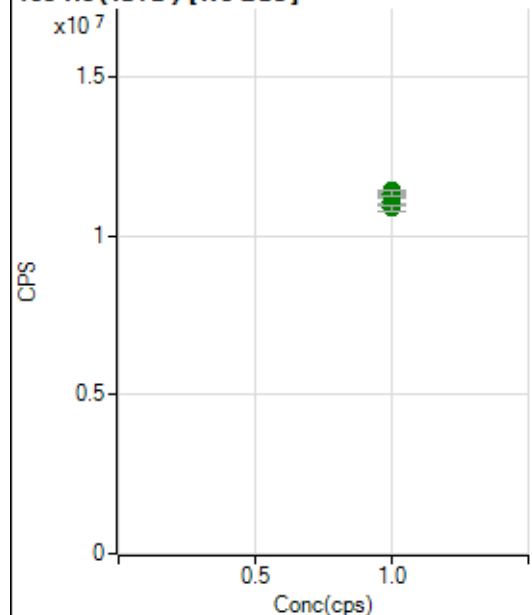
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		393264.44		P	1.0
2	☐	1.000					
3	☐	1.000		386857.98		P	3.5
4	☐	1.000		382465.74		P	3.7
5	☐	1.000		373572.26		P	1.1
6	☐	1.000		361673.84		P	3.8
7	☐	1.000		373937.00		P	0.9
8	☐	1.000		358378.67		P	0.9
9	☐	1.000		372779.81		P	1.0

159 Tb (ISTD) [No Gas]

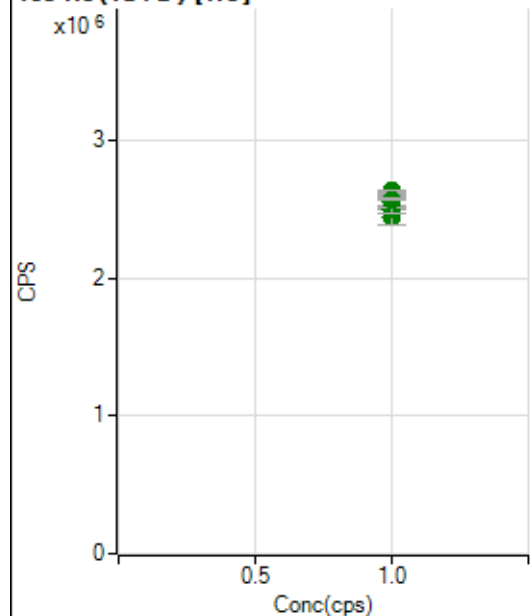
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11563469.13		A	5.4
2	☐	1.000					
3	☐	1.000		11686804.96		A	0.6
4	☐	1.000		11637486.49		A	0.6
5	☐	1.000		11878398.99		A	0.8
6	☐	1.000		11780219.68		A	0.7
7	☐	1.000		11767622.19		A	1.2
8	☐	1.000		11481131.63		A	1.4
9	☐	1.000		11259709.00		A	1.3

159 Tb (ISTD) [He]

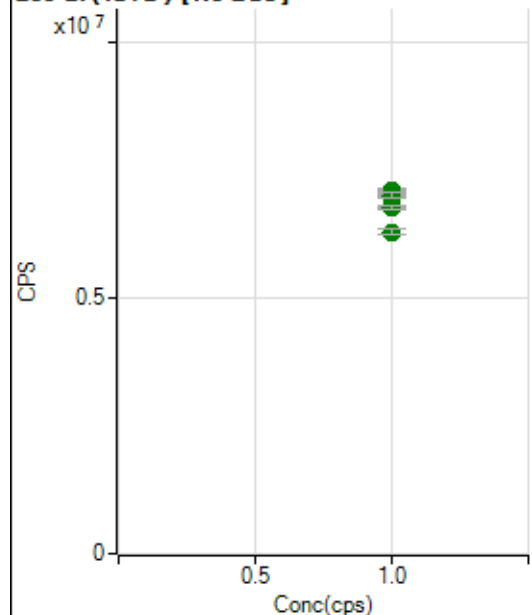
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2505317.72		A	0.7
2	☐	1.000					
3	☐	1.000		2446016.74		A	3.3
4	☐	1.000		2421153.21		A	3.7
5	☐	1.000		2384139.42		A	0.9
6	☐	1.000		2311190.73		A	3.8
7	☐	1.000		2434945.31		A	0.9
8	☐	1.000		2371990.97		A	0.9
9	☐	1.000		2409855.14		A	0.4

165 Ho (ISTD) [No Gas]

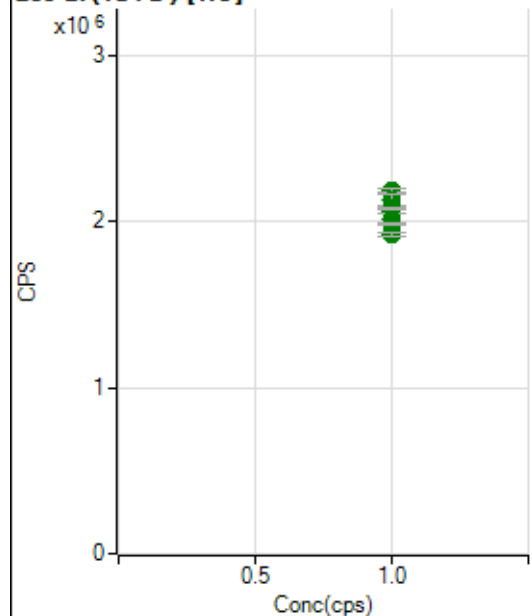
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11092667.61		A	6.0
2	☐	1.000					
3	☐	1.000		11271266.48		A	0.7
4	☐	1.000		11225119.96		A	0.3
5	☐	1.000		11433112.58		A	0.9
6	☐	1.000		11315918.05		A	0.3
7	☐	1.000		11344381.16		A	1.4
8	☐	1.000		10986809.97		A	0.4
9	☐	1.000		10885162.49		A	1.5

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2636857.67		A	0.8
2	☐	1.000					
3	☐	1.000		2558814.77		A	2.7
4	☐	1.000		2569093.59		A	3.7
5	☐	1.000		2531185.59		A	0.2
6	☐	1.000		2450193.33		A	4.6
7	☐	1.000		2577618.83		A	0.6
8	☐	1.000		2496347.55		A	1.5
9	☐	1.000		2578611.91		A	1.0

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6941078.44		A	5.6
2	☐	1.000					
3	☐	1.000		7053017.12		A	1.7
4	☐	1.000		7050598.85		A	0.6
5	☐	1.000		7090174.48		A	0.8
6	☐	1.000		7015722.88		A	0.5
7	☐	1.000		7003869.83		A	1.5
8	☐	1.000		6757359.27		A	0.9
9	☐	1.000		6290619.21		A	1.4

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2186105.49		A	1.1
2	☐	1.000					
3	☐	1.000		2133122.10		A	3.6
4	☐	1.000		2135744.52		A	3.4
5	☐	1.000		2060449.73		A	1.3
6	☐	1.000		2015806.44		A	3.2
7	☐	1.000		2083874.76		A	0.6
8	☐	1.000		1986786.93		A	0.9
9	☐	1.000		1925997.75		A	1.0

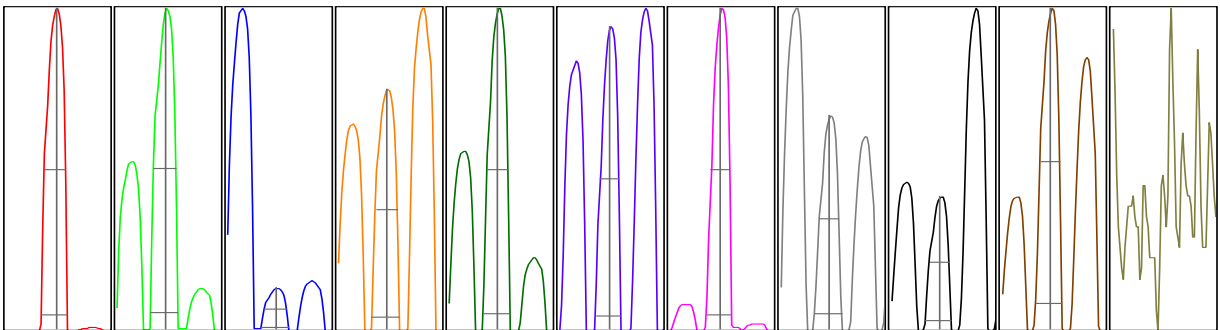
US EPA Tune Check Sample Report

Batch Folder D:\P8070918- MS .b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	7179	2.51	5.00	
24	118959	2.77	5.00	
25	15721	2.33	5.00	
26	18260	2.14	5.00	
59	69444	1.91	5.00	
113	8943	2.53	5.00	
115	115006	2.73	5.00	
206	24044	3.05	5.00	
207	21931	3.40	5.00	
208	52120	3.46	5.00	
220	1	10.00		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7273	6943	7246	7387	7045
24	121576	114144	119194	122329	117552
25	15960	15184	15790	16120	15551
26	18647	17635	18381	18479	18159
59	70900	67307	69999	69472	69540
113	9192	8619	8843	9111	8952
115	118669	110944	113325	117549	114542
206	24592	22927	23810	24783	24107
207	22426	20787	21756	22734	21953
208	53152	49499	51880	54324	51746
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	12563	9.00	8.9 - 9.1		0.740	0.900	
24	199809	23.95	23.9 - 24.1		0.785	0.900	
25	26411	24.95	24.9 - 25.1		0.785	0.900	
26	30887	25.95	25.9 - 26.1		0.783	0.900	
59	122887	58.95	58.9 - 59.1		0.775	0.900	
113	17151	113.00	112.9 - 113.1		0.728	0.900	
115	218424	115.00	114.9 - 115.1		0.726	0.900	
206	44531	205.95	205.9 - 206.1		0.777	0.900	
207	40268	206.95	206.9 - 207.1		0.734	0.900	
208	96711	207.95	207.9 - 208.1		0.747	0.900	
220			-				

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

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.9	V	Deflect	13.4	V
Extract 2	-210.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-100	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	180	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	8677	0.53	
89	8221	0.78	
205	12867	0.24	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	8703	8685	8721	8673	8600
89	8286	8257	8224	8225	8116
205	12901	12824	12867	12889	12852

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

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

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.9	V	Deflect	2.2	V
Extract 2	-210.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-100	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	190	V			