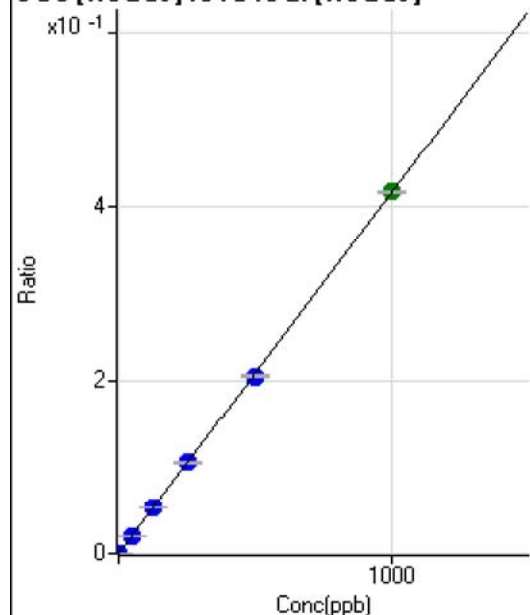


Calibration for 011CALS.d

Batch Folder: D:\P8072018MS.b\
 Analysis File: P8072018MS.batch.bin
 DA Date-Time: 2018-07-21 02:23:07
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-07-20 11:35:30
2			
3	005CALS.d	S02	2018-07-20 11:43:15
4	006CALS.d	S03	2018-07-20 11:46:57
5	007CALS.d	S04	2018-07-20 11:50:39
6	008CALS.d	S05	2018-07-20 11:54:15
7	009CALS.d	S06	2018-07-20 11:57:45
8	010CALS.d	S07	2018-07-20 12:01:12
9	011CALS.d	S08	2018-07-20 12:04:34

9 Be [NoGas] ISTD : 6 Li [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	70.37	0.0000	P	35.2
2	☐	0.100					
3	☐	1.000	0.967	1133.41	0.0004	P	8.5
4	☐	50.000	48.919	53666.99	0.0204	P	1.4
5	☐	125.000	128.025	138711.14	0.0533	P	1.0
6	☐	250.000	253.027	273636.12	0.1053	P	0.8
7	☐	500.000	490.832	523129.87	0.2043	P	0.5
8	☐	1000.000	1003.503	1052301.41	0.4176	A	0.8
9	☐			511.14	0.0002	P	12.0

$$y = 4.1609\text{E-}004 * x + 2.6593\text{E-}005$$

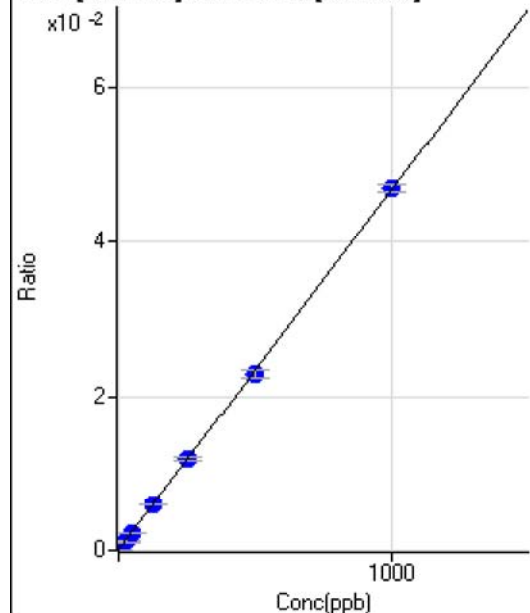
$$R = 0.9999$$

$$DL = 0.06752$$

$$BEC = 0.06391$$

Weight: <None>

Min Conc: 0

10 B [NoGas] ISTD : 6 Li [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	111.12	0.0000	P	32.5
2	☐	2.500					
3	☐	25.000	23.268	2983.79	0.0011	P	4.5
4	☐	50.000	47.202	5926.45	0.0023	P	4.4
5	☐	125.000	127.113	15592.30	0.0060	P	2.0
6	☐	250.000	253.476	30928.68	0.0119	P	3.9
7	☐	500.000	490.366	58876.97	0.0230	P	4.5
8	☐	1000.000	1003.867	118480.18	0.0470	P	2.2
9	☐			5531.88	0.0021	P	9.5

$$y = 4.6796\text{E-}005 * x + 4.1624\text{E-}005$$

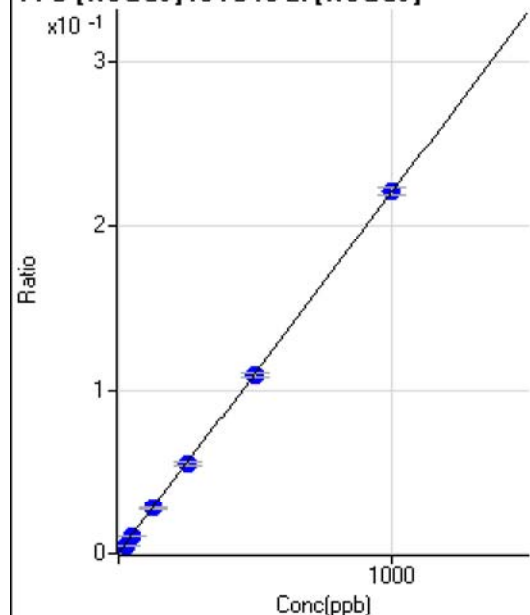
$$R = 0.9999$$

$$DL = 0.8682$$

$$BEC = 0.8895$$

Weight: <None>

Min Conc: 0

11 B [NoGas] ISTD: 6 Li [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	472.25	0.0002	P	9.6
2	☐	2.500					
3	☐	25.000	22.627	13609.72	0.0052	P	2.0
4	☐	50.000	48.479	28540.36	0.0108	P	1.9
5	☐	125.000	124.642	71802.26	0.0276	P	2.0
6	☐	250.000	248.795	142607.32	0.0549	P	3.6
7	☐	500.000	494.862	279133.66	0.1090	P	2.5
8	☐	1000.000	1003.050	556204.49	0.2207	P	2.2
9	☐			26266.64	0.0101	P	9.7

$$y = 2.1988\text{E-}004 * x + 1.7726\text{E-}004$$

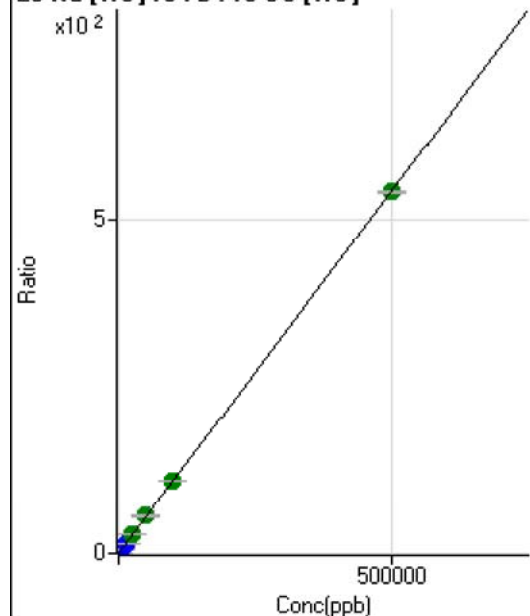
$$R = 1.0000$$

$$DL = 0.2317$$

$$BEC = 0.8062$$

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	2919.89	0.0629	P	1.6
2	☐	50.000					
3	☐	500.000	507.873	27830.83	0.6141	P	1.6
4	☐	5000.000	4992.314	253940.84	5.4807	P	0.8
5	☐	12500.000	13281.770	641350.05	14.4766	P	5.5
6	☐	25000.000	26407.944	1321388.10	28.7214	A	1.4
7	☐	50000.000	51735.757	2559847.58	56.2078	A	0.8
8	☐	100000.00	99923.972	4970256.23	108.5028	A	1.0
9	☐	500000.00	499751.75	27200173.53	542.4055	A	0.4

$$y = 0.0011 * x + 0.0629$$

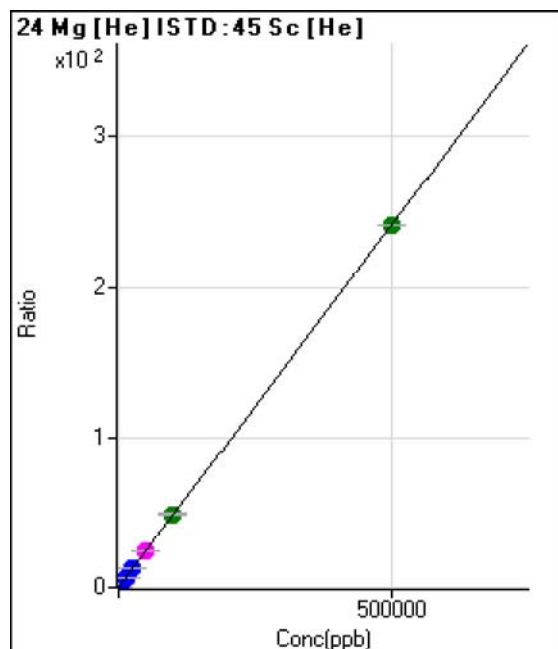
$$R = 1.0000$$

$$DL = 2.858$$

$$BEC = 57.96$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.12	0.0029	P	16.8
2	☐	50.000					
3	☐	500.000	504.226	11160.38	0.2465	P	7.1
4	☐	5000.000	5052.386	113205.97	2.4432	P	0.3
5	☐	12500.000	13404.181	286982.30	6.4770	P	5.3
6	☐	25000.000	26106.536	580247.79	12.6121	P	0.8
7	☐	50000.000	51128.928	1124787.65	24.6977	M	0.8
8	☐	100000.00	101378.58	2242948.18	48.9677	A	1.9
9	☐	500000.00	499532.93	12099278.14	241.2722	A	0.1

$$y = 4.8299\text{E-}004 * x + 0.0029$$

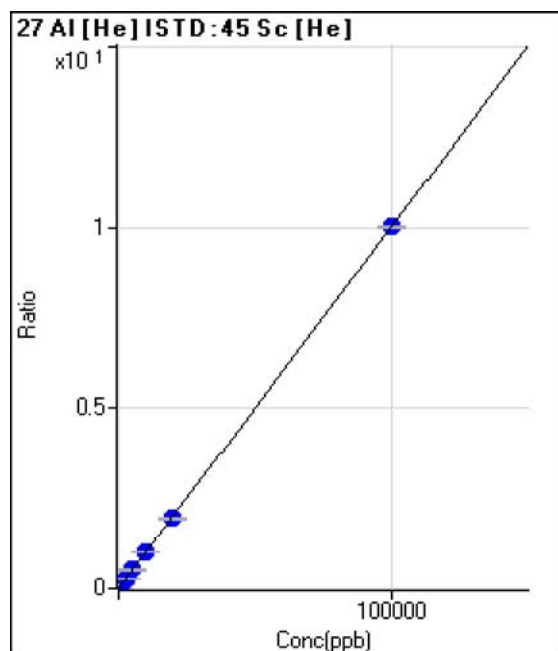
$$R = 1.0000$$

$$DL = 3.06$$

$$BEC = 6.063$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7.78	0.0002	P	63.0
2	☐	2.000					
3	☐	20.000	21.590	105.56	0.0023	P	37.9
4	☐	1000.000	992.582	4619.71	0.0997	P	3.9
5	☐	2500.000	2649.909	11785.06	0.2660	P	4.8
6	☐	5000.000	5053.506	23327.07	0.5070	P	1.8
7	☐	10000.000	9872.400	45105.91	0.9904	P	0.6
8	☐	20000.000	19425.387	89261.97	1.9486	P	1.2
9	☐	100000.00	100121.33	503607.20	10.0426	P	0.6

$$y = 1.0030\text{E-}004 * x + 1.6577\text{E-}004$$

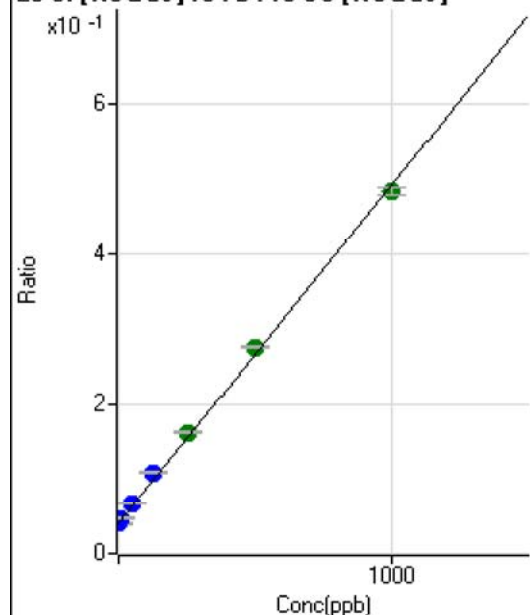
$$R = 1.0000$$

$$DL = 3.124$$

$$BEC = 1.653$$

Weight: <None>

Min Conc: 0

28 Si [No Gas] ISTD : 45 Sc [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	274316.14	0.0404	P	4.4
2	☐	1.000					
3	☐	10.000	15.053	325327.91	0.0472	P	1.4
4	☐	50.000	59.145	459266.80	0.0672	P	1.3
5	☐	125.000	151.048	737605.71	0.1087	P	1.3
6	☐	250.000	269.964	1109583.73	0.1625	A	1.0
7	☐	500.000	520.378	1840305.95	0.2757	A	1.2
8	☐	1000.000	981.056	3233068.69	0.4840	A	2.2
9	☐			490724.10	0.0717	P	0.7

$$y = 4.5211\text{E-}004 * x + 0.0404$$

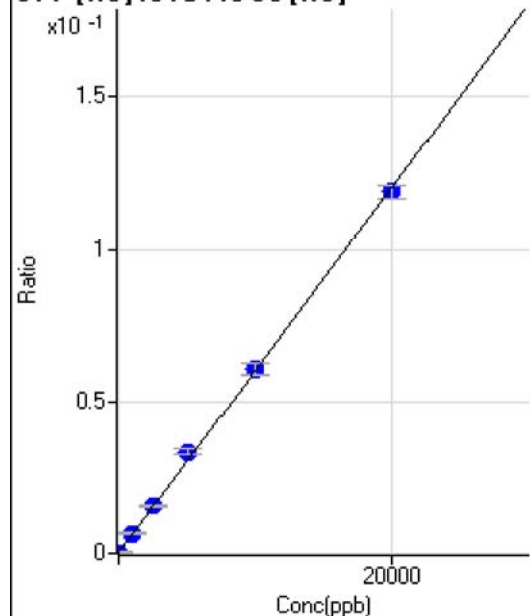
$$R = 0.9993$$

$$DL = 11.69$$

$$BEC = 89.38$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-15.746	0.00	0.0000	P	
2	☐	0.000					
3	☐	0.000	15.746	8.33	0.0002	P	173.2
4	☐	1000.000	1062.184	300.02	0.0065	P	9.3
5	☐	2500.000	2570.201	688.94	0.0155	P	5.0
6	☐	5000.000	5580.273	1547.38	0.0336	P	5.4
7	☐	10000.000	10074.535	2761.51	0.0606	P	5.8
8	☐	20000.000	19805.780	5456.86	0.1191	P	4.0
9	☐			5.55	0.0001	P	86.6

$$y = 6.0104\text{E-}006 * x + 9.4642\text{E-}005$$

$$R = 0.9995$$

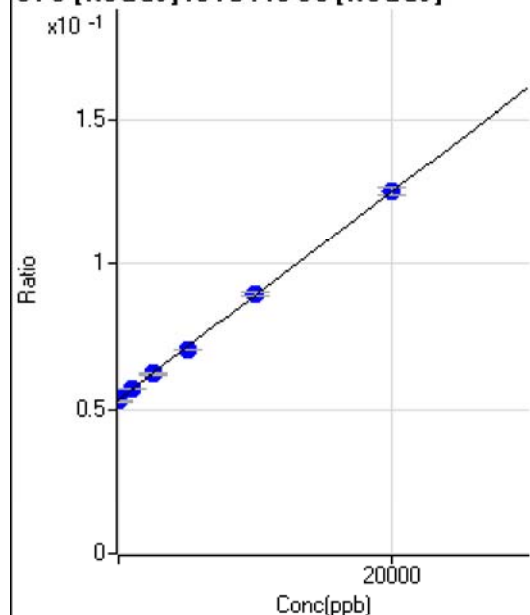
$$DL = 81.82$$

$$BEC = 15.75$$

Weight: <None>

Min Conc: 0

34 S [NoGas] ISTD:45 Sc [NoGas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	92.890	364318.61	0.0537	P	3.7
2	☐	0.000					
3	☐	0.000	-92.890	365118.53	0.0530	P	1.5
4	☐	1000.000	1043.186	390401.18	0.0571	P	0.7
5	☐	2500.000	2510.702	423145.58	0.0624	P	1.2
6	☐	5000.000	4782.575	481730.06	0.0705	P	0.2
7	☐	10000.000	10093.661	598389.30	0.0896	P	1.4
8	☐	20000.000	20004.029	837017.86	0.1253	P	2.2
9	☐			352634.01	0.0515	P	0.9

$$y = 3.5976E-006 * x + 0.0533$$

$$R = 0.9999$$

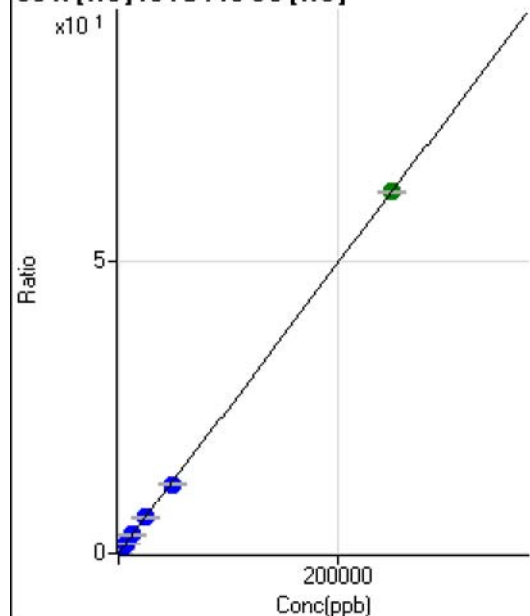
$$DL = 1162$$

$$BEC = 1.482E+04$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1652.95	0.0356	P	2.8
2	☐	50.000					
3	☐	500.000	489.969	7110.46	0.1568	P	1.3
4	☐	2500.000	2464.145	29899.37	0.6452	P	1.2
5	☐	6250.000	6436.842	72144.09	1.6281	P	4.7
6	☐	12500.000	12524.832	144192.57	3.1342	P	1.5
7	☐	25000.000	24453.976	277143.99	6.0855	P	0.9
8	☐	50000.000	48135.223	547108.47	11.9442	P	1.6
9	☐	250000.00	250422.02	3108599.37	61.9895	A	0.8

$$y = 2.4740E-004 * x + 0.0356$$

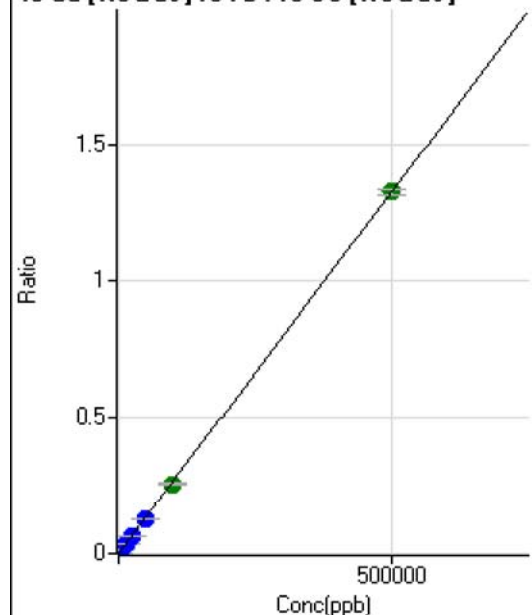
$$R = 1.0000$$

$$DL = 12.29$$

$$BEC = 143.9$$

Weight: <None>

Min Conc: 0

43 Ca [NoGas] ISTD:45 Sc [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	436.14	0.0001	P	26.5
2	☐	50.000					
3	☐	500.000	459.816	8853.14	0.0013	P	1.6
4	☐	5000.000	4700.205	85759.10	0.0125	P	1.5
5	☐	12500.000	12249.055	221037.53	0.0326	P	1.4
6	☐	25000.000	24086.396	437041.17	0.0640	P	1.0
7	☐	50000.000	47906.766	849179.99	0.1272	P	1.6
8	☐	100000.00	96327.737	1708593.55	0.2557	A	1.3
9	☐	500000.00	500998.76	9106100.55	1.3298	A	1.4

$$y = 2.6541\text{E-}006 * x + 6.4534\text{E-}005$$

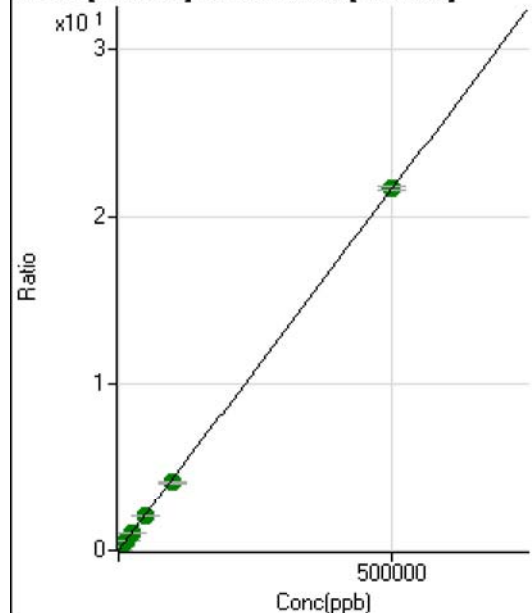
$$R = 1.0000$$

$$DL = 19.32$$

$$BEC = 24.31$$

Weight: <None>

Min Conc: 0

44 Ca [NoGas] ISTD:45 Sc [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	14330.45	0.0021	P	7.6
2	☐	50.000					
3	☐	500.000	448.464	148427.09	0.0215	P	2.4
4	☐	5000.000	4700.180	1407326.06	0.2058	A	1.0
5	☐	12500.000	12208.106	3603597.91	0.5311	A	1.5
6	☐	25000.000	23976.917	7109864.05	1.0410	A	0.8
7	☐	50000.000	47697.437	13809689.37	2.0688	A	1.7
8	☐	100000.00	94731.844	27435427.00	4.1067	A	2.1
9	☐	500000.00	501345.38	148777151.9	21.7248	A	1.0

$$y = 4.3329\text{E-}005 * x + 0.0021$$

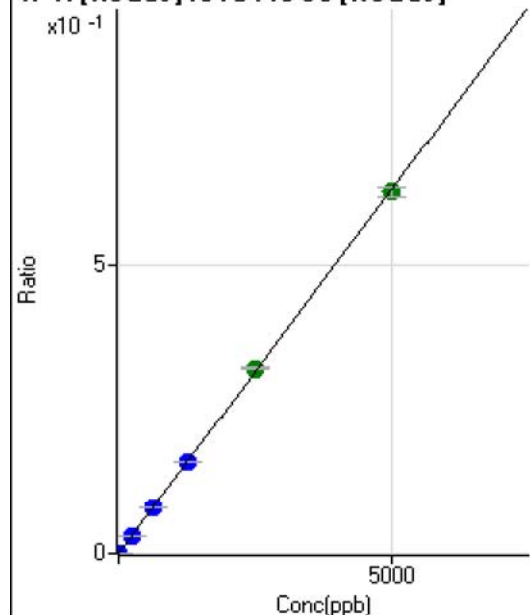
$$R = 0.9999$$

$$DL = 11.19$$

$$BEC = 48.77$$

Weight: <None>

Min Conc: 0

47 Ti [NoGas] ISTD : 45 Sc [NoGas]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	133.34	0.0000	P	8.7
2	☐	0.500					
3	☐	5.000	4.744	4270.26	0.0006	P	3.1
4	☐	250.000	245.823	212851.94	0.0311	P	1.3
5	☐	625.000	635.715	545908.82	0.0805	P	1.3
6	☐	1250.000	1262.682	1091263.08	0.1598	P	0.2
7	☐	2500.000	2543.246	2148119.38	0.3218	A	1.5
8	☐	5000.000	4974.076	4204232.91	0.6294	A	2.5
9	☐			2494.78	0.0004	P	7.9

$$y = 1.2652E-004 * x + 1.9607E-005$$

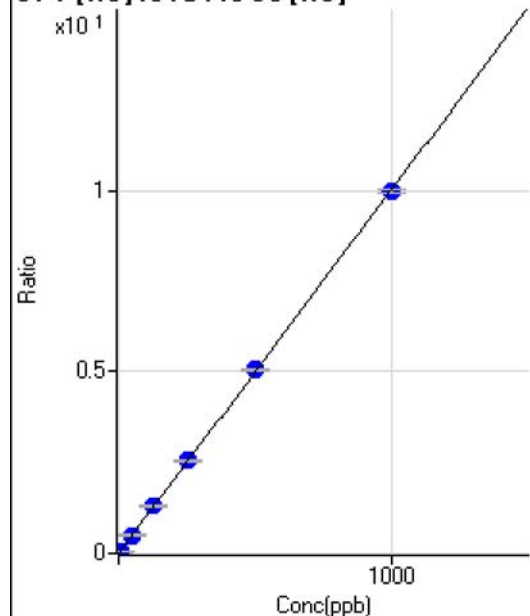
$$R = 0.9999$$

$$DL = 0.04042$$

$$BEC = 0.155$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4.44	0.0001	P	116.2
2	☐	0.500					
3	☐	5.000	4.965	2256.89	0.0498	P	5.1
4	☐	50.000	49.747	23088.12	0.4983	P	1.7
5	☐	125.000	131.261	58255.24	1.3147	P	4.7
6	☐	250.000	257.589	118692.78	2.5799	P	1.6
7	☐	500.000	504.479	230104.86	5.0526	P	1.0
8	☐	1000.000	995.094	456520.34	9.9663	P	1.2
9	☐			214.45	0.0043	P	3.1

$$y = 0.0100 * x + 9.6002E-005$$

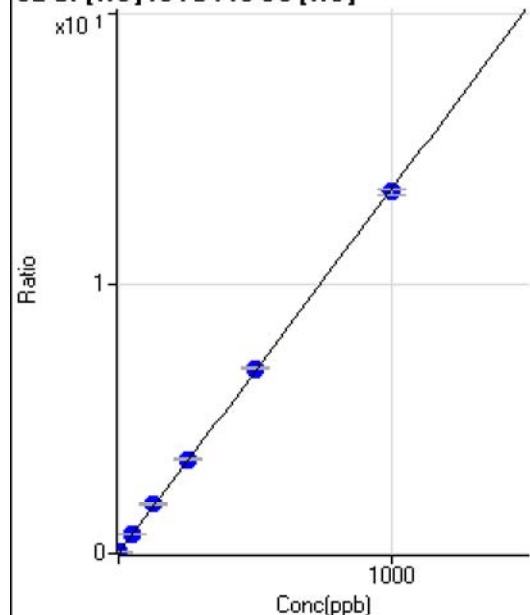
$$R = 0.9999$$

$$DL = 0.03341$$

$$BEC = 0.009585$$

Weight: <None>

Min Conc: 0

52 Cr [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	412.23	0.0089	P	5.5
2	☐	0.200					
3	☐	2.000	2.316	1820.15	0.0402	P	5.6
4	☐	50.000	50.240	31866.33	0.6878	P	1.1
5	☐	125.000	133.842	80525.70	1.8174	P	5.3
6	☐	250.000	259.709	161860.65	3.5183	P	1.2
7	☐	500.000	506.656	312193.54	6.8552	P	1.2
8	☐	1000.000	993.127	615116.61	13.4287	P	1.3
9	☐			25439.99	0.5073	P	1.0

$$y = 0.0135 * x + 0.0089$$

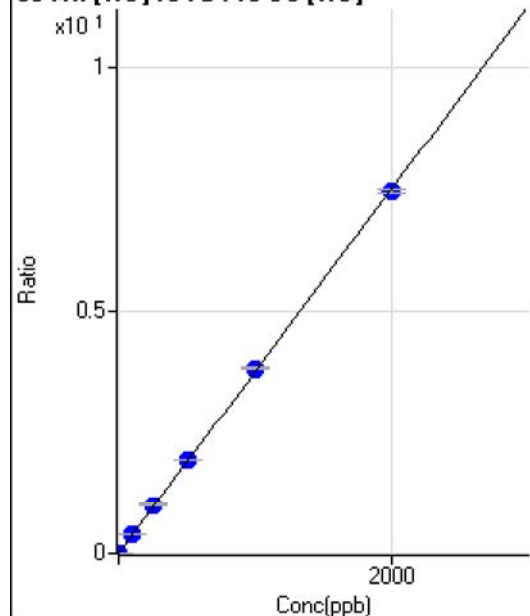
$$R = 0.9999$$

$$DL = 0.1088$$

$$BEC = 0.6574$$

Weight: <None>

Min Conc: 0

55 Mn [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	70.00	0.0015	P	15.4
2	☐	0.100					
3	☐	1.000	1.104	256.68	0.0057	P	12.6
4	☐	100.000	100.203	17522.29	0.3782	P	0.6
5	☐	250.000	265.894	44351.58	1.0010	P	5.0
6	☐	500.000	516.967	89472.72	1.9448	P	0.8
7	☐	1000.000	1014.780	173794.61	3.8160	P	0.3
8	☐	2000.000	1986.371	342100.08	7.4682	P	1.2
9	☐			1763.48	0.0352	P	2.9

$$y = 0.0038 * x + 0.0015$$

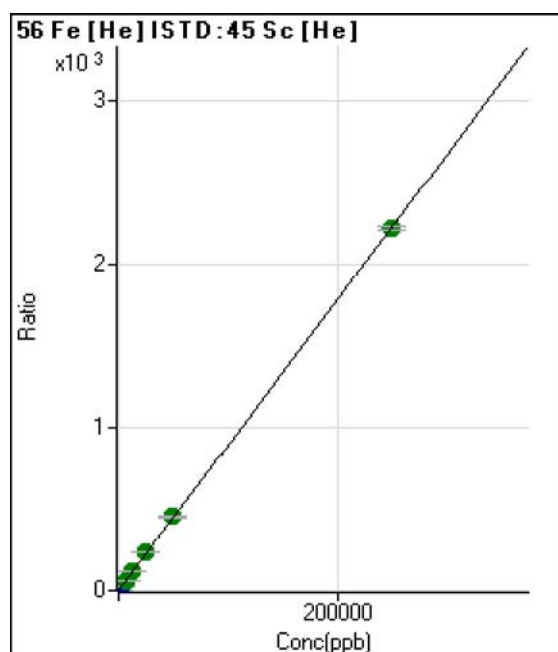
$$R = 0.9999$$

$$DL = 0.1854$$

$$BEC = 0.4003$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	859.31	0.0185	P	7.3
2	☐	5.000					
3	☐	50.000	54.196	22654.08	0.4999	P	3.6
4	☐	2500.000	2602.551	1071851.69	23.1337	P	1.1
5	☐	6250.000	6921.410	2724777.84	61.4926	A	5.1
6	☐	12500.000	13371.607	5465027.67	118.7815	A	0.4
7	☐	25000.000	26138.324	10573538.08	232.1719	A	0.9
8	☐	50000.000	51120.271	20799077.08	454.0547	A	1.0
9	☐	250000.00	249600.72	111170861.7	2,216.903	A	1.0

$$y = 0.0089 * x + 0.0185$$

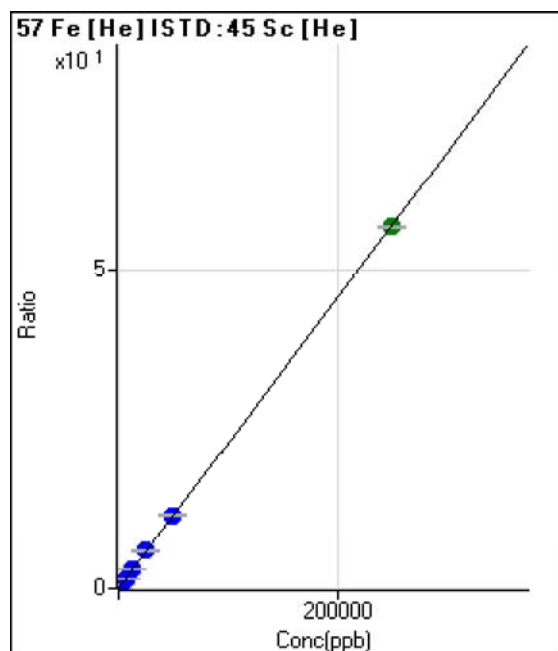
$$R = 1.0000$$

$$DL = 0.4581$$

$$BEC = 2.083$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16.67	0.0004	P	31.1
2	☐	5.000					
3	☐	50.000	47.828	509.29	0.0112	P	9.3
4	☐	2500.000	2584.871	27232.60	0.5878	P	0.9
5	☐	6250.000	6817.780	68674.54	1.5496	P	4.2
6	☐	12500.000	13222.864	138256.07	3.0052	P	1.3
7	☐	25000.000	25920.498	268268.65	5.8906	P	1.0
8	☐	50000.000	50748.459	528247.61	11.5326	P	1.6
9	☐	250000.00	249707.07	2845597.29	56.7444	A	0.3

$$y = 2.2724E-004 * x + 3.5728E-004$$

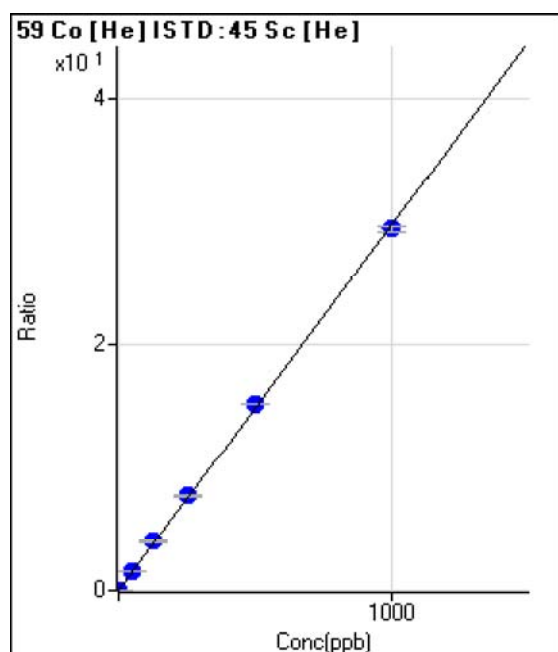
$$R = 1.0000$$

$$DL = 1.465$$

$$BEC = 1.572$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	72.23	0.0016	P	7.2
2	☐	0.100					
3	☐	1.000	1.050	1485.66	0.0328	P	4.8
4	☐	50.000	50.869	70156.68	1.5142	P	1.7
5	☐	125.000	135.453	178524.75	4.0295	P	5.4
6	☐	250.000	260.340	356245.87	7.7433	P	0.7
7	☐	500.000	509.797	690475.81	15.1613	P	0.9
8	☐	1000.000	991.166	1350155.76	29.4758	P	1.4
9	☐			18165.39	0.3623	P	1.9

$$y = 0.0297 * x + 0.0016$$

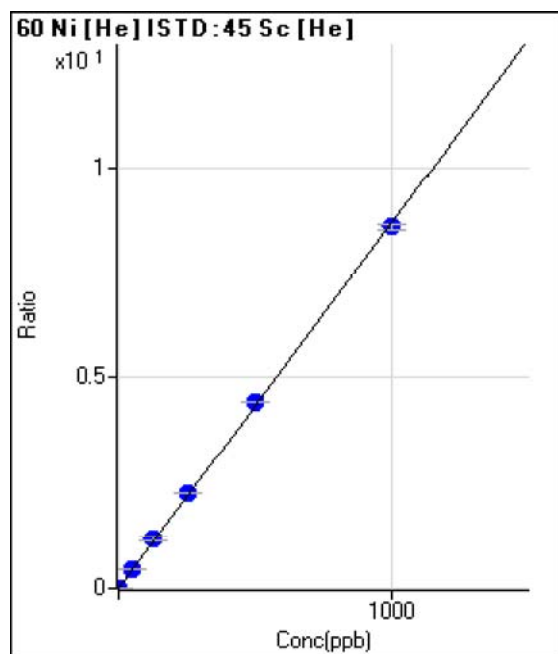
$$R = 0.9998$$

$$DL = 0.01134$$

$$BEC = 0.05232$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	144.45	0.0031	P	12.5
2	☐	0.100					
3	☐	1.000	1.098	573.36	0.0127	P	10.8
4	☐	50.000	50.678	20553.18	0.4436	P	1.3
5	☐	125.000	136.939	52874.61	1.1933	P	4.9
6	☐	250.000	263.712	105595.40	2.2951	P	0.2
7	☐	500.000	509.043	201633.51	4.4274	P	1.0
8	☐	1000.000	990.524	394485.76	8.6122	P	1.4
9	☐			13624.61	0.2717	P	2.6

$$y = 0.0087 * x + 0.0031$$

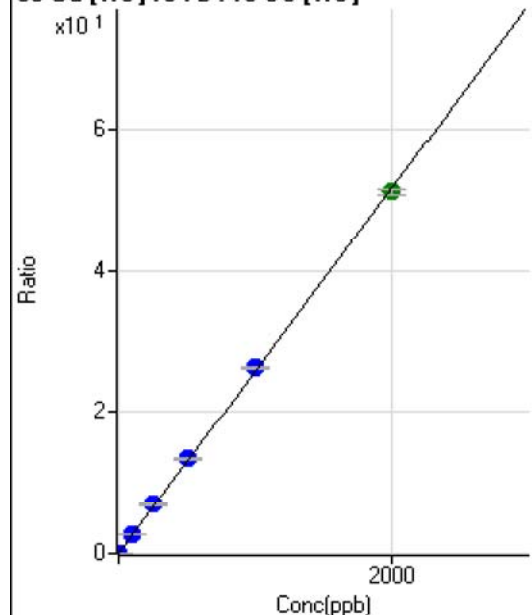
$$R = 0.9998$$

$$DL = 0.1349$$

$$BEC = 0.3586$$

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	615.58	0.0133	P	6.8
2	☐	0.200					
3	☐	2.000	2.084	3041.50	0.0671	P	3.7
4	☐	100.000	102.096	122903.53	2.6525	P	0.7
5	☐	250.000	269.952	309780.90	6.9917	P	5.1
6	☐	500.000	520.972	620220.34	13.4808	P	0.4
7	☐	1000.000	1016.106	1196861.20	26.2804	P	0.8
8	☐	2000.000	1984.105	2349929.01	51.3039	A	1.8
9	☐			6042.53	0.1205	P	3.6

$$y = 0.0259 * x + 0.0133$$

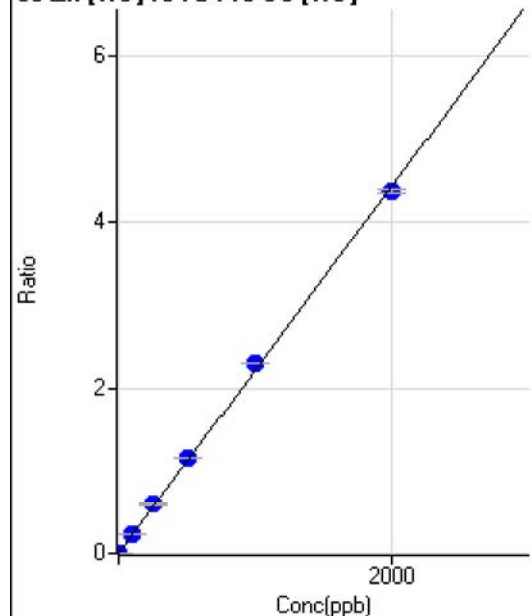
$$R = 0.9999$$

$$DL = 0.1045$$

$$BEC = 0.5128$$

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	60.00	0.0013	P	16.4
2	☐	0.200					
3	☐	2.000	2.171	276.67	0.0061	P	9.2
4	☐	100.000	104.672	10791.03	0.2329	P	0.6
5	☐	250.000	268.169	26346.31	0.5946	P	4.8
6	☐	500.000	522.700	53264.33	1.1578	P	1.9
7	☐	1000.000	1035.986	104451.62	2.2935	P	0.6
8	☐	2000.000	1973.827	200111.48	4.3685	P	1.0
9	☐			1793.48	0.0358	P	2.1

$$y = 0.0022 * x + 0.0013$$

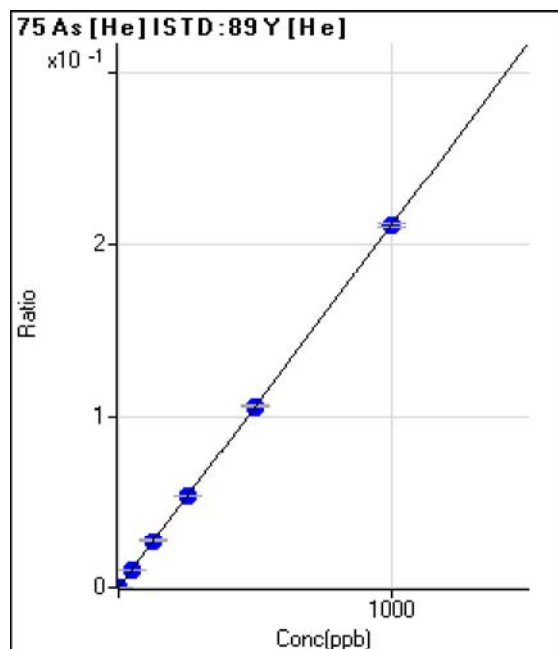
$$R = 0.9997$$

$$DL = 0.2873$$

$$BEC = 0.5851$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	5.56	0.0000	P	34.0
2	☐	0.100					
3	☐	1.000	0.903	69.75	0.0002	P	16.6
4	☐	50.000	49.100	3571.48	0.0104	P	2.1
5	☐	125.000	127.995	9014.75	0.0270	P	5.6
6	☐	250.000	254.387	18450.66	0.0537	P	1.4
7	☐	500.000	499.712	35933.05	0.1055	P	1.0
8	☐	1000.000	998.718	71102.46	0.2109	P	1.2
9	☐			112.35	0.0003	P	4.4

$$y = 2.1118\text{E-}004 * x + 1.6191\text{E-}005$$

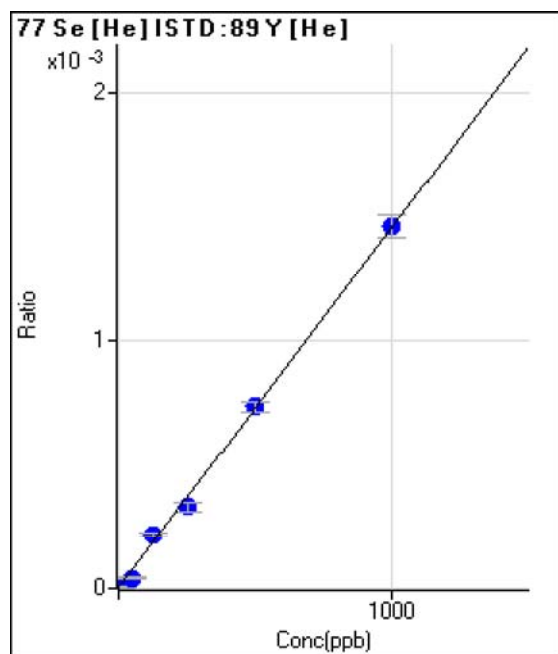
$$R = 1.0000$$

$$DL = 0.07821$$

$$BEC = 0.07667$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.2
2	☐	0.500					
3	☐	5.000	0.014	1.11	0.0000	P	173.2
4	☐	50.000	26.610	14.45	0.0000	P	26.7
5	☐	125.000	146.620	72.22	0.0002	P	7.3
6	☐	250.000	224.551	113.34	0.0003	P	12.6
7	☐	500.000	502.436	250.01	0.0007	P	5.2
8	☐	1000.000	1003.637	493.35	0.0015	P	6.2
9	☐			0.00	0.0000	P	

$$y = 1.4552\text{E-}006 * x + 3.2865\text{E-}006$$

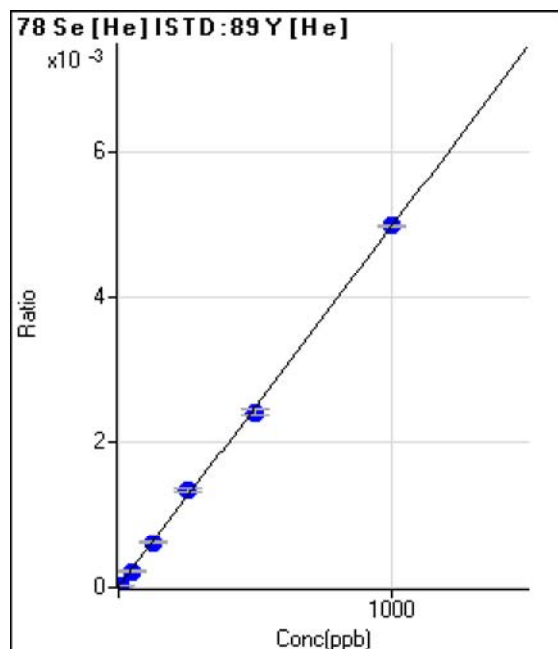
$$R = 0.9991$$

$$DL = 11.74$$

$$BEC = 2.259$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2.47	0.0000	P	116.4
2	☐	0.500					
3	☐	5.000	2.985	7.41	0.0000	P	75.2
4	☐	50.000	43.775	77.16	0.0002	P	12.1
5	☐	125.000	122.828	205.56	0.0006	P	3.3
6	☐	250.000	268.993	460.51	0.0013	P	4.2
7	☐	500.000	485.235	821.64	0.0024	P	4.0
8	☐	1000.000	1003.227	1679.75	0.0050	P	0.6
9	☐			1.23	0.0000	P	173.2

$$y = 4.9598\text{E-}006 * x + 7.2252\text{E-}006$$

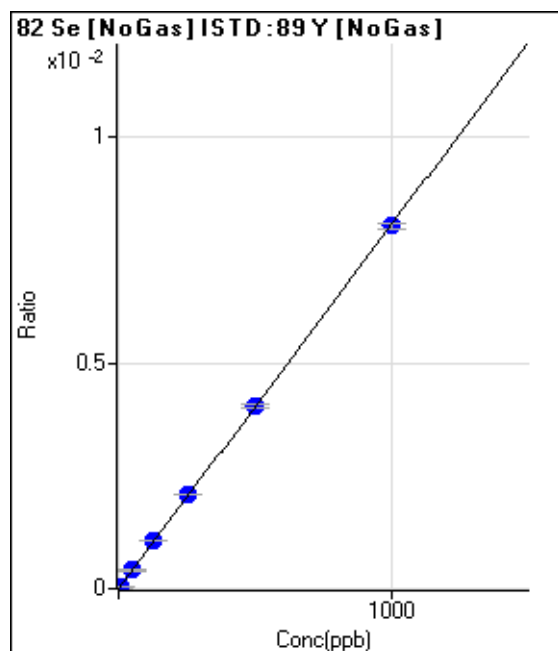
$$R = 0.9996$$

$$DL = 5.089$$

$$BEC = 1.457$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-21.98	0.0000	P	-327.
2	☐	0.500					
3	☐	5.000	5.316	516.23	0.0000	P	12.1
4	☐	50.000	50.820	5040.34	0.0004	P	3.6
5	☐	125.000	130.569	13085.31	0.0011	P	1.3
6	☐	250.000	258.386	25933.56	0.0021	P	1.1
7	☐	500.000	501.302	49826.64	0.0040	P	1.3
8	☐	1000.000	996.514	98827.65	0.0080	P	1.5
9	☐			87.65	0.0000	P	38.9

$$y = 8.0687\text{E-}006 * x - 1.8223\text{E-}006$$

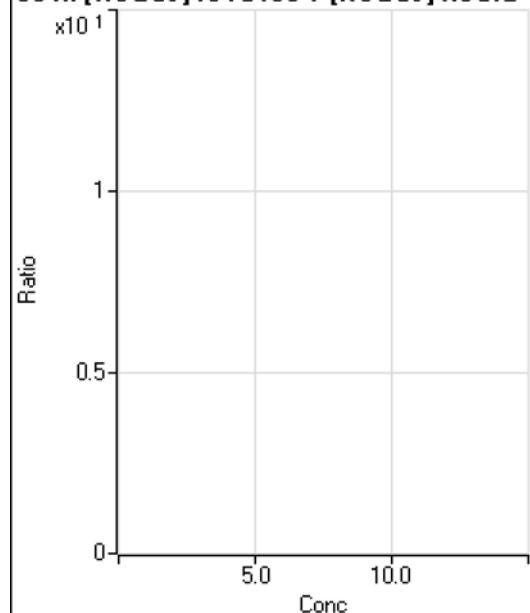
$$R = 1.0000$$

$$DL = 2.221$$

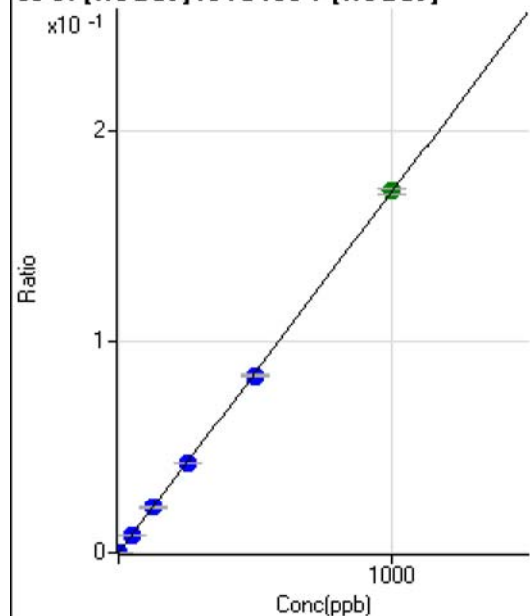
$$BEC = -0.2259$$

Weight: <None>

Min Conc: 0

83 Kr [NoGas] ISTD:89 Y [NoGas] No av.

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			346.68	0.0000	P	15.9
2	☐						
3	☐			331.12	0.0000	P	18.4
4	☐			353.34	0.0000	P	11.4
5	☐			308.90	0.0000	P	19.5
6	☐			340.01	0.0000	P	10.8
7	☐			337.79	0.0000	P	17.9
8	☐			303.34	0.0000	P	10.5
9	☐			311.12	0.0000	P	6.2

86 Sr [NoGas] ISTD:89 Y [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	577.82	0.0000	P	11.1
2	☐	0.100					
3	☐	1.000	0.978	2672.61	0.0002	P	5.8
4	☐	50.000	49.065	103806.53	0.0084	P	0.6
5	☐	125.000	125.052	265664.97	0.0214	P	0.7
6	☐	250.000	250.687	532374.68	0.0428	P	1.2
7	☐	500.000	491.615	1032933.06	0.0838	P	1.3
8	☐	1000.000	1004.061	2103861.85	0.1711	A	1.7
9	☐			10437.76	0.0008	P	1.4

$$y = 1.7039E-004 * x + 4.5969E-005$$

$$R = 0.9999$$

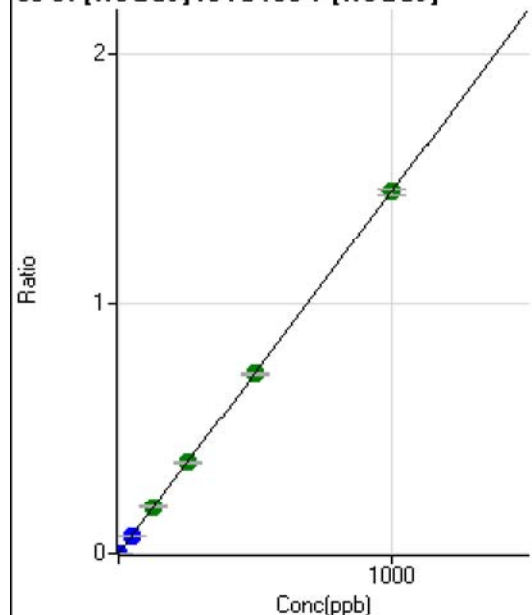
$$DL = 0.09019$$

$$BEC = 0.2698$$

Weight: <None>

Min Conc: 0

88 Sr [NoGas] ISTD:89 Y [NoGas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	344.63	0.0000	P	85.4
2	☐	0.100					
3	☐	1.000	0.988	18324.13	0.0015	P	2.4
4	☐	50.000	49.852	892120.31	0.0722	P	1.1
5	☐	125.000	129.846	2340569.11	0.1881	A	0.6
6	☐	250.000	252.267	4550275.80	0.3655	A	0.5
7	☐	500.000	496.809	8870145.51	0.7197	A	1.1
8	☐	1000.000	1000.431	17817581.48	1.4493	A	1.6
9	☐			86756.23	0.0070	P	0.4

$$y = 0.0014 * x + 2.7701E-005$$

$$R = 1.0000$$

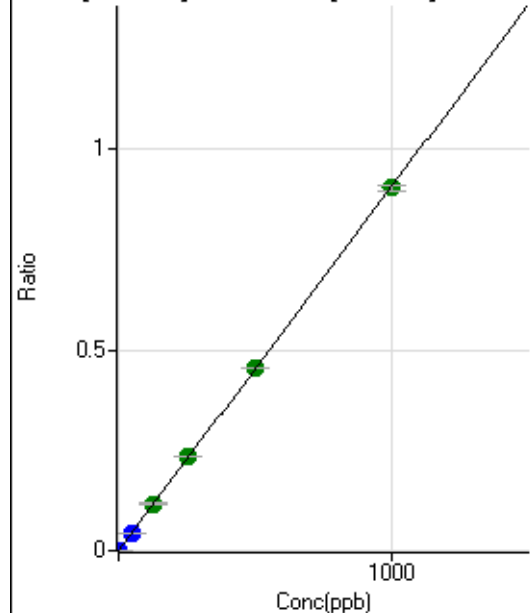
$$DL = 0.04899$$

$$BEC = 0.01912$$

Weight: <None>

Min Conc: 0

90 Zr [NoGas] ISTD:89 Y [NoGas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	869.52	0.0001	P	10.9
2	☐	0.100					
3	☐	1.000	0.943	11605.47	0.0009	P	2.9
4	☐	50.000	48.788	547098.73	0.0443	P	1.5
5	☐	125.000	129.368	1460107.41	0.1174	A	2.0
6	☐	250.000	257.328	2905872.59	0.2334	A	0.4
7	☐	500.000	501.648	5606796.00	0.4549	A	0.4
8	☐	1000.000	996.859	11112978.46	0.9039	A	1.8
9	☐			3497.84	0.0003	P	3.1

$$y = 9.0673E-004 * x + 6.8998E-005$$

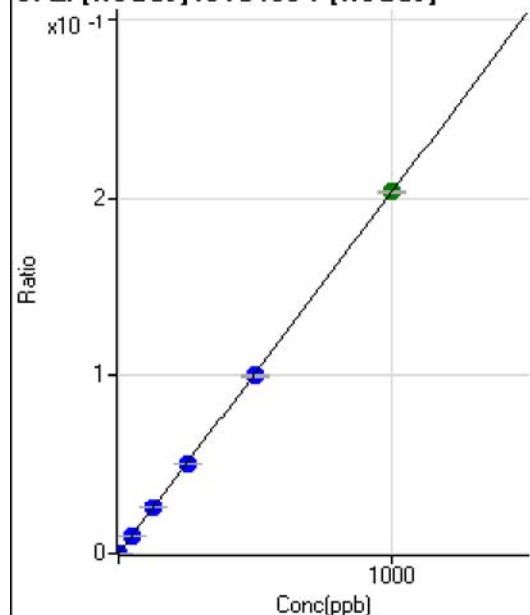
$$R = 1.0000$$

$$DL = 0.02477$$

$$BEC = 0.0761$$

Weight: <None>

Min Conc: 0

91 Zr [NoGas] ISTD:89 Y [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	208.34	0.0000	P	6.0
2	☐	0.100					
3	☐	1.000	0.899	2503.10	0.0002	P	4.0
4	☐	50.000	47.974	120595.63	0.0098	P	0.3
5	☐	125.000	125.645	317864.90	0.0256	P	1.3
6	☐	250.000	251.757	637186.24	0.0512	P	0.4
7	☐	500.000	493.659	1236569.92	0.1003	P	1.3
8	☐	1000.000	1002.752	2505630.44	0.2038	A	0.8
9	☐			772.28	0.0001	P	8.0

$$y = 2.0322\text{E-}004 * x + 1.6551\text{E-}005$$

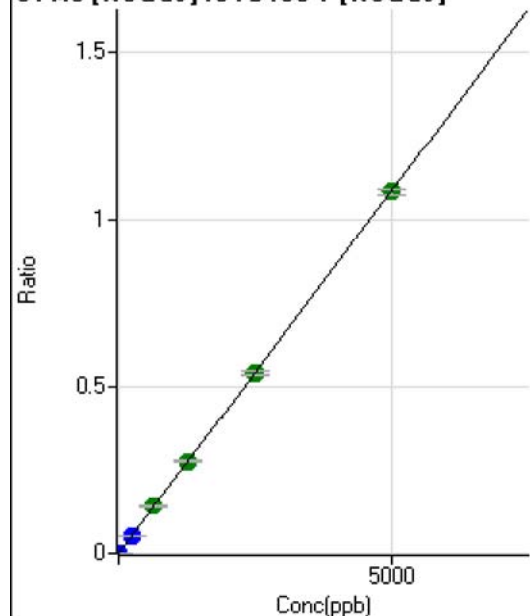
$$R = 1.0000$$

$$DL = 0.01468$$

$$BEC = 0.08145$$

Weight: <None>

Min Conc: 0

94 Mo [NoGas] ISTD:89 Y [NoGas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	469.51	0.0000	P	34.4
2	☐	0.500					
3	☐	5.000	4.810	13573.96	0.0011	P	1.6
4	☐	250.000	246.473	660580.02	0.0535	P	1.2
5	☐	625.000	650.307	1755276.97	0.1411	A	0.8
6	☐	1250.000	1281.712	3461606.06	0.2780	A	0.4
7	☐	2500.000	2491.678	6660654.10	0.5405	A	1.5
8	☐	5000.000	4993.246	13314786.93	1.0830	A	1.5
9	☐			18135.04	0.0015	P	4.9

$$y = 2.1689\text{E-}004 * x + 3.7480\text{E-}005$$

$$R = 1.0000$$

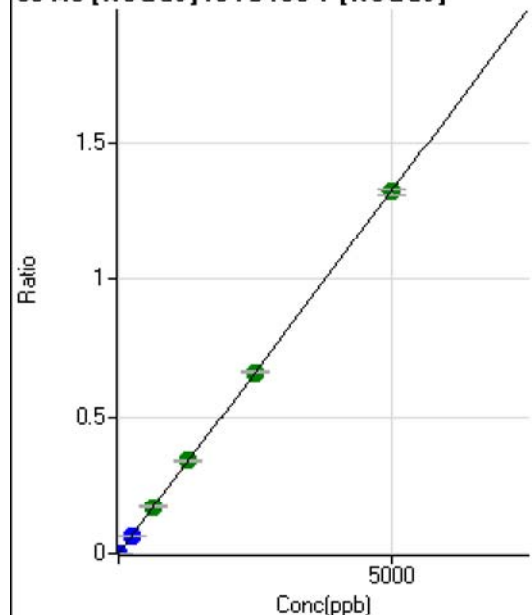
$$DL = 0.1786$$

$$BEC = 0.1728$$

Weight: <None>

Min Conc: 0

95 Mo [NoGas] ISTD : 89 Y [NoGas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	102.79	0.0000	P	19.9
2	☐	0.500					
3	☐	5.000	4.818	16135.25	0.0013	P	1.8
4	☐	250.000	246.972	808234.19	0.0655	P	1.2
5	☐	625.000	647.208	2133733.05	0.1715	A	1.1
6	☐	1250.000	1287.798	4248875.75	0.3413	A	1.0
7	☐	2500.000	2489.789	8131238.63	0.6598	A	1.1
8	☐	5000.000	4993.031	16266325.54	1.3231	A	1.4
9	☐			30120.51	0.0024	P	3.0

$$y = 2.6499\text{E-}004 * x + 8.1660\text{E-}006$$

$$R = 1.0000$$

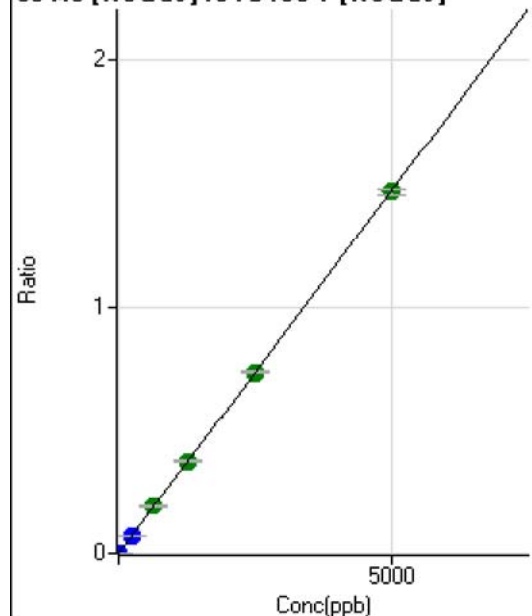
$$DL = 0.01843$$

$$BEC = 0.03082$$

Weight: <None>

Min Conc: 0

96 Mo [NoGas] ISTD : 89 Y [NoGas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.13	0.0000	P	12.1
2	☐	0.500					
3	☐	5.000	4.819	18073.80	0.0014	P	2.6
4	☐	250.000	248.255	903736.88	0.0732	P	1.5
5	☐	625.000	649.831	2382923.21	0.1915	A	1.7
6	☐	1250.000	1274.849	4678129.45	0.3758	A	1.5
7	☐	2500.000	2499.518	9079390.48	0.7367	A	1.3
8	☐	5000.000	4991.013	18085168.11	1.4710	A	1.4
9	☐			34478.17	0.0028	P	1.3

$$y = 2.9474\text{E-}004 * x + 1.8764\text{E-}005$$

$$R = 1.0000$$

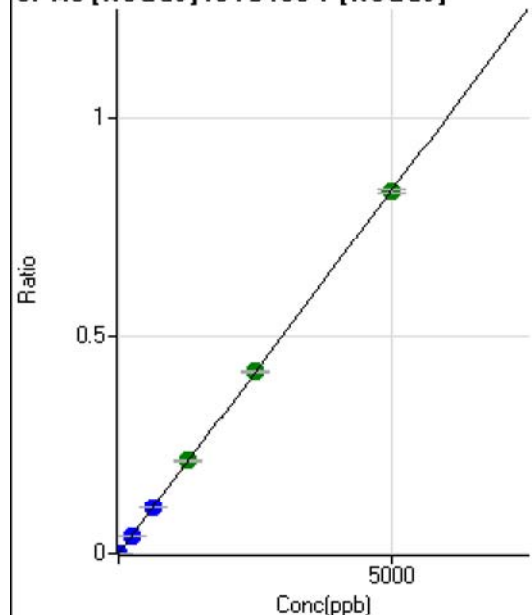
$$DL = 0.0232$$

$$BEC = 0.06366$$

Weight: <None>

Min Conc: 0

97 Mo [NoGas] ISTD : 89 Y [NoGas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	72.23	0.0000	P	17.8
2	☐	0.500					
3	☐	5.000	4.821	10168.13	0.0008	P	4.2
4	☐	250.000	247.946	510676.78	0.0414	P	1.4
5	☐	625.000	637.145	1322021.11	0.1063	P	0.9
6	☐	1250.000	1287.331	2673016.96	0.2147	A	0.8
7	☐	2500.000	2500.212	5138762.44	0.4170	A	1.6
8	☐	5000.000	4989.146	10229684.52	0.8321	A	1.1
9	☐			19395.11	0.0016	P	0.3

$$y = 1.6677\text{E-}004 * x + 5.7427\text{E-}006$$

$$R = 1.0000$$

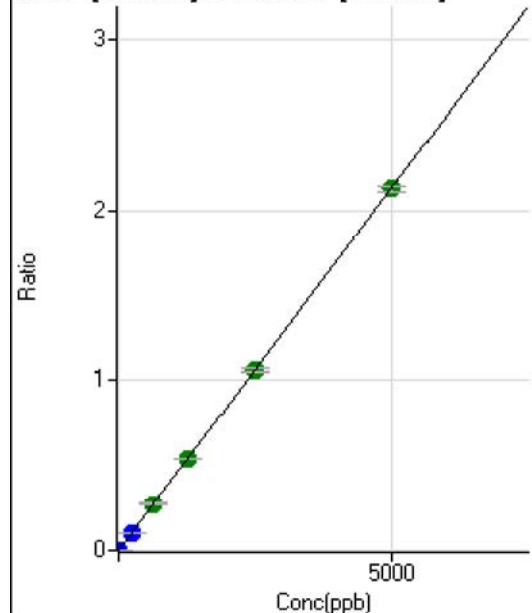
$$DL = 0.01842$$

$$BEC = 0.03443$$

Weight: <None>

Min Conc: 0

98 Mo [NoGas] ISTD : 89 Y [NoGas]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	158.35	0.0000	P	20.4
2	☐	0.500					
3	☐	5.000	4.706	25349.58	0.0020	P	3.7
4	☐	250.000	248.009	1305747.25	0.1057	P	0.7
5	☐	625.000	645.583	3424049.34	0.2752	A	1.2
6	☐	1250.000	1265.897	6719011.26	0.5397	A	1.0
7	☐	2500.000	2494.194	13104114.61	1.0633	A	1.6
8	☐	5000.000	4996.456	26187164.13	2.1300	A	1.3
9	☐			48175.63	0.0039	P	2.5

$$y = 4.2631\text{E-}004 * x + 1.2608\text{E-}005$$

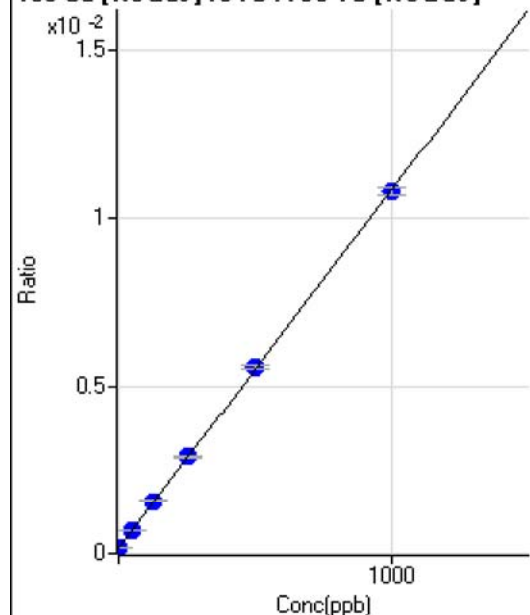
$$R = 1.0000$$

$$DL = 0.01812$$

$$BEC = 0.02957$$

Weight: <None>

Min Conc: 0

106 Cd [NoGas] ISTD:159 Tb [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	2592.04	0.0002	P	6.9
2	☐	0.100					
3	☐	1.000	0.269	2619.83	0.0002	P	4.8
4	☐	50.000	49.663	11155.10	0.0007	P	4.4
5	☐	125.000	131.622	25433.26	0.0016	P	1.4
6	☐	250.000	257.002	47386.82	0.0029	P	2.3
7	☐	500.000	503.597	89454.51	0.0055	P	2.1
8	☐	1000.000	995.641	174869.64	0.0108	P	2.2
9	☐			2669.83	0.0002	P	5.2

$$y = 1.0683\text{E-}005 * x + 1.5798\text{E-}004$$

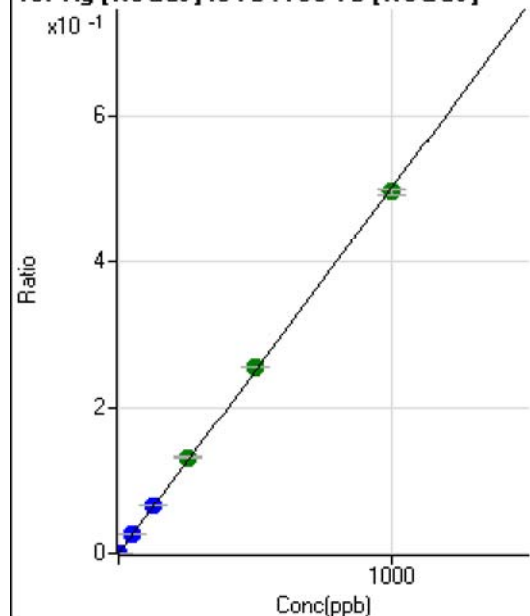
$$R = 0.9999$$

$$DL = 3.076$$

$$BEC = 14.79$$

Weight: <None>

Min Conc: 0

107 Ag [NoGas] ISTD:159 Tb [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	88.89	0.0000	P	9.8
2	☐	0.100					
3	☐	1.000	1.046	8625.39	0.0005	P	3.7
4	☐	50.000	51.234	416341.70	0.0257	P	0.7
5	☐	125.000	132.270	1078509.91	0.0663	P	0.5
6	☐	250.000	264.662	2166035.70	0.1327	A	1.5
7	☐	500.000	509.085	4123809.25	0.2553	A	0.8
8	☐	1000.000	990.821	8049345.58	0.4968	A	1.5
9	☐			1033.43	0.0001	P	9.0

$$y = 5.0144\text{E-}004 * x + 5.4142\text{E-}006$$

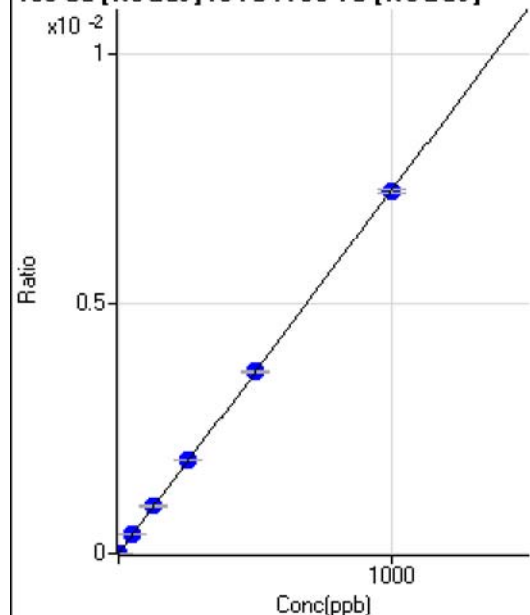
$$R = 0.9998$$

$$DL = 0.003162$$

$$BEC = 0.0108$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	6.94	0.0000	P	35.5
2	☐	0.100					
3	☐	1.000	1.008	126.39	0.0000	P	13.6
4	☐	50.000	51.669	6101.53	0.0004	P	4.8
5	☐	125.000	130.391	15442.47	0.0009	P	2.8
6	☐	250.000	257.776	30639.24	0.0019	P	1.0
7	☐	500.000	500.369	58859.96	0.0036	P	0.5
8	☐	1000.000	997.114	117630.73	0.0073	P	1.0
9	☐			55.56	0.0000	P	45.1

$$y = 7.2810E-006 * x + 4.2433E-007$$

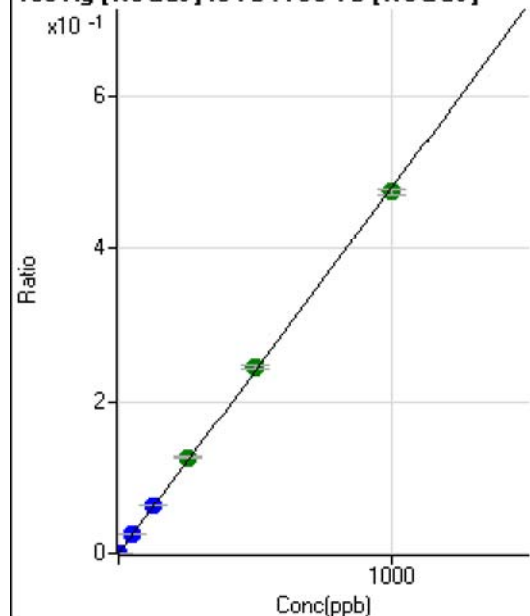
$$R = 1.0000$$

$$DL = 0.062$$

$$BEC = 0.05828$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	41.67	0.0000	P	19.8
2	☐	0.100					
3	☐	1.000	1.023	8030.53	0.0005	P	2.8
4	☐	50.000	51.497	400251.28	0.0247	P	0.7
5	☐	125.000	132.351	1032245.79	0.0635	P	0.6
6	☐	250.000	264.618	2071588.20	0.1269	A	0.8
7	☐	500.000	509.690	3949151.48	0.2445	A	1.4
8	☐	1000.000	990.507	7697105.55	0.4751	A	1.4
9	☐			980.64	0.0001	P	9.5

$$y = 4.7965E-004 * x + 2.5398E-006$$

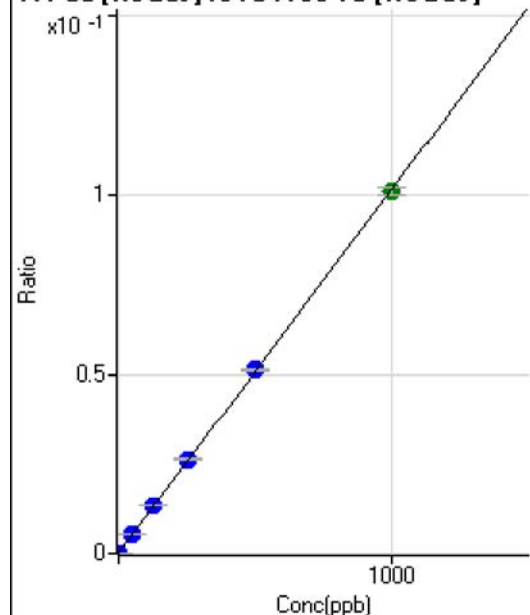
$$R = 0.9998$$

$$DL = 0.003151$$

$$BEC = 0.005295$$

Weight: <None>

Min Conc: 0

111 Cd [NoGas] ISTD:159 Tb [NoGas]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1826.24	0.0001	P	6.4
2	☐	0.100					
3	☐	1.000	0.911	3319.14	0.0002	P	2.1
4	☐	50.000	50.802	85413.81	0.0053	P	0.9
5	☐	125.000	131.318	218695.69	0.0135	P	0.7
6	☐	250.000	259.302	431697.44	0.0265	P	1.0
7	☐	500.000	504.167	829063.99	0.0513	P	1.0
8	☐	1000.000	994.761	1638727.29	0.1012	A	2.0
9	☐			2228.62	0.0001	P	4.3

$$y = 1.0158\text{E-}004 * x + 1.1131\text{E-}004$$

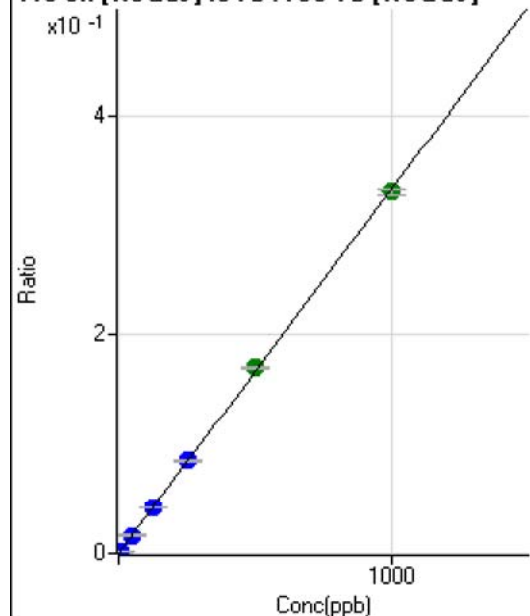
$$R = 0.9999$$

$$DL = 0.2092$$

$$BEC = 1.096$$

Weight: <None>

Min Conc: 0

118 Sn [NoGas] ISTD:159 Tb [NoGas]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1036.21	0.0001	P	2.3
2	☐	0.500					
3	☐	5.000	4.914	27646.13	0.0017	P	2.5
4	☐	50.000	49.724	269070.50	0.0166	P	1.3
5	☐	125.000	128.042	693702.19	0.0427	P	1.1
6	☐	250.000	255.836	1390301.68	0.0852	P	0.7
7	☐	500.000	509.154	2737571.68	0.1695	A	0.8
8	☐	1000.000	993.598	5356901.21	0.3306	A	1.4
9	☐			14461.23	0.0009	P	1.7

$$y = 3.3271\text{E-}004 * x + 6.3163\text{E-}005$$

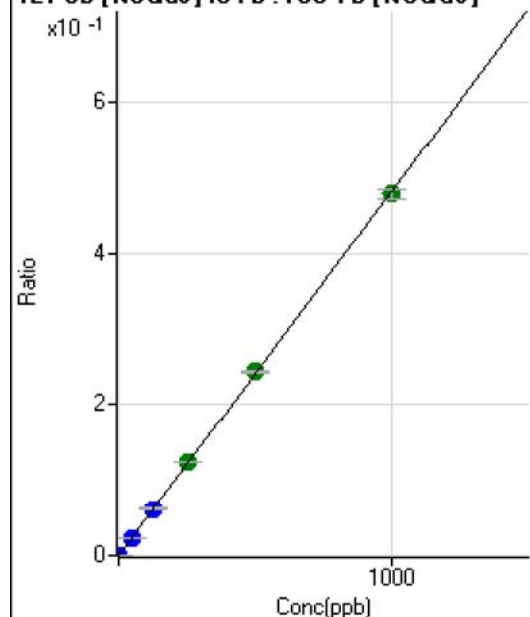
$$R = 0.9999$$

$$DL = 0.01332$$

$$BEC = 0.1898$$

Weight: <None>

Min Conc: 0

121 Sb [NoGas] ISTD : 159 Tb [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	69.45	0.0000	P	23.2
2	☐	0.200					
3	☐	2.000	1.903	14986.71	0.0009	P	2.4
4	☐	50.000	49.059	382726.13	0.0236	P	1.8
5	☐	125.000	128.550	1006313.42	0.0619	P	1.4
6	☐	250.000	257.727	2025126.09	0.1241	A	0.7
7	☐	500.000	504.778	3925632.64	0.2430	A	1.2
8	☐	1000.000	995.282	7762066.84	0.4792	A	2.3
9	☐			21707.41	0.0013	P	3.1

$$y = 4.8142\text{E-}004 * x + 4.2179\text{E-}006$$

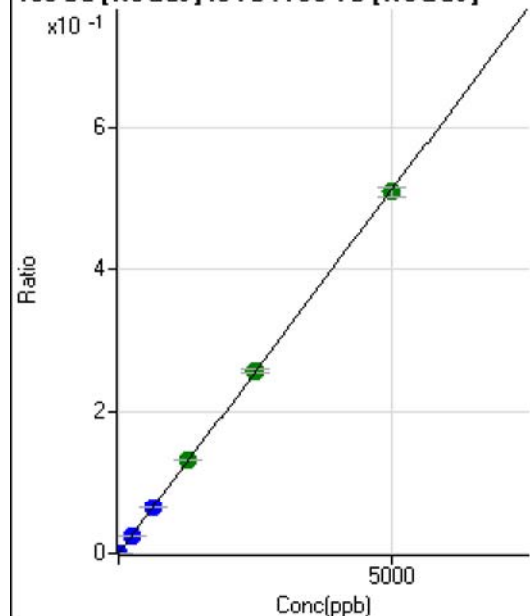
$$R = 0.9999$$

$$DL = 0.00609$$

$$BEC = 0.008761$$

Weight: <None>

Min Conc: 0

135 Ba [NoGas] ISTD : 159 Tb [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47.22	0.0000	P	86.8
2	☐	1.000					
3	☐	10.000	9.613	16096.48	0.0010	P	2.1
4	☐	250.000	249.326	414233.66	0.0256	P	1.1
5	☐	625.000	642.509	1071182.99	0.0659	P	0.7
6	☐	1250.000	1296.999	2170532.99	0.1330	A	0.2
7	☐	2500.000	2512.614	4161448.09	0.2576	A	1.9
8	☐	5000.000	4979.789	8270971.97	0.5106	A	2.6
9	☐			1564.05	0.0001	P	3.0

$$y = 1.0253\text{E-}004 * x + 2.8948\text{E-}006$$

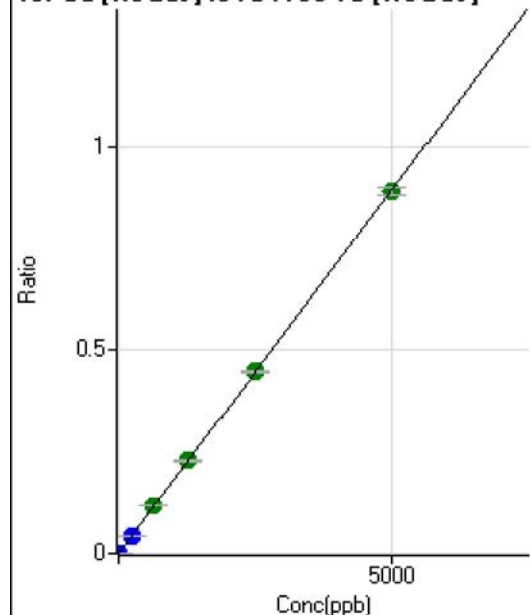
$$R = 0.9999$$

$$DL = 0.07352$$

$$BEC = 0.02823$$

Weight: <None>

Min Conc: 0

¹³⁷Ba [No Gas] ISTD : ¹⁵⁹Tb [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	80.56	0.0000	P	51.3
2	☐	1.000					
3	☐	10.000	9.795	28570.92	0.0018	P	1.7
4	☐	250.000	248.867	720409.12	0.0445	P	1.0
5	☐	625.000	655.724	1904764.80	0.1171	A	0.5
6	☐	1250.000	1283.528	3742486.93	0.2293	A	0.4
7	☐	2500.000	2505.622	7230806.32	0.4476	A	1.0
8	☐	5000.000	4985.024	14426888.51	0.8905	A	2.1
9	☐			2914.34	0.0002	P	8.6

$$y = 1.7864\text{E-}004 * x + 4.9462\text{E-}006$$

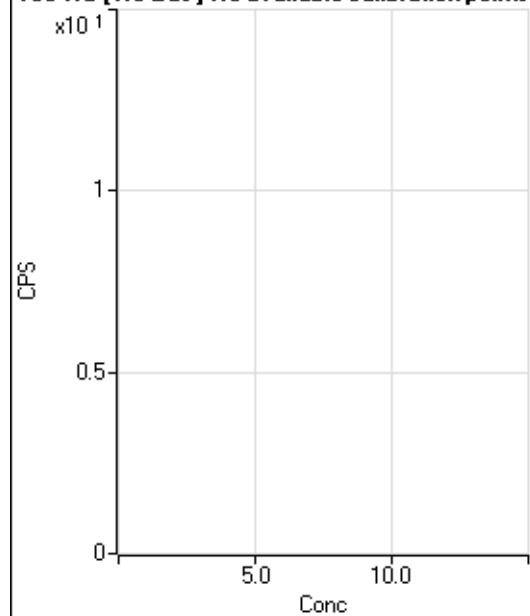
$$R = 1.0000$$

$$DL = 0.04263$$

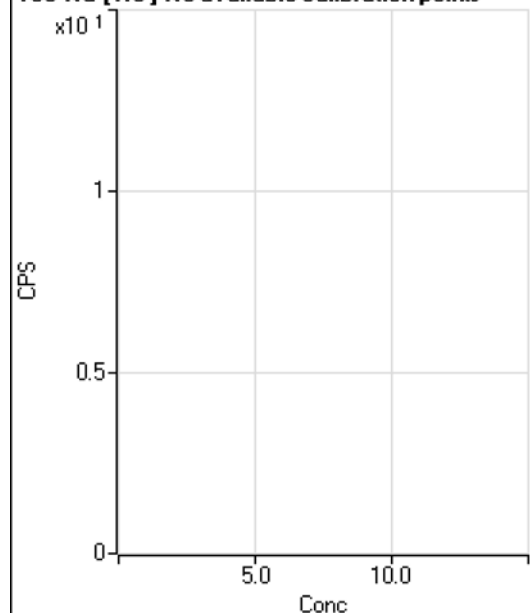
$$BEC = 0.02769$$

Weight: <None>

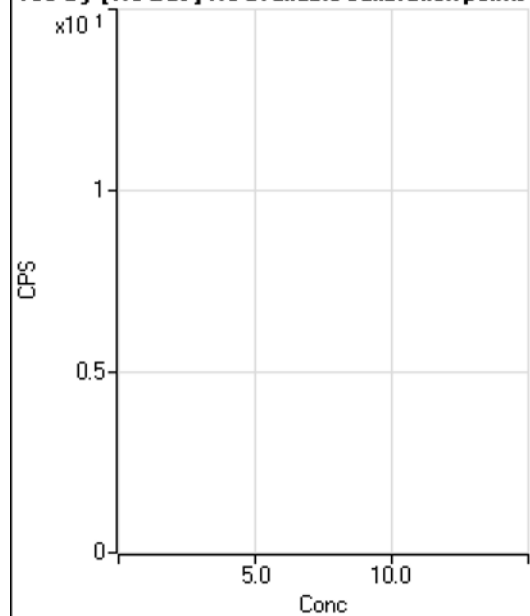
Min Conc: 0

¹⁵⁰Nd [No Gas] No available calibration points

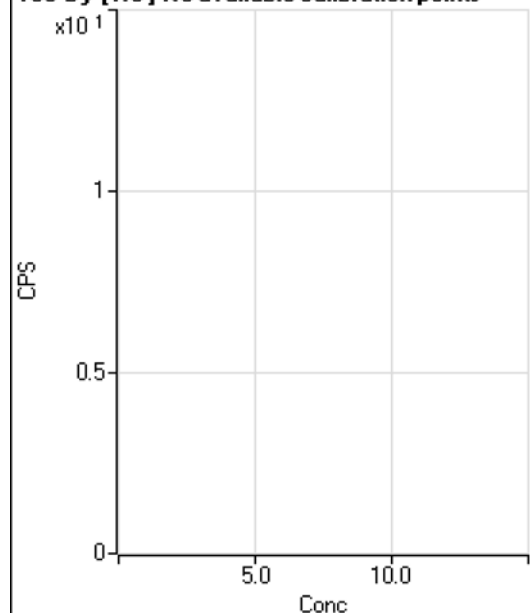
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			17.78		P	57.3
2	☐						
3	☐			6.67		P	100.0
4	☐			33.33		P	20.0
5	☐			31.11		P	49.5
6	☐			75.56		P	28.4
7	☐			213.34		P	6.3
8	☐			297.79		P	6.8
9	☐			97.78		P	28.4

150 Nd [He] No available calibration points

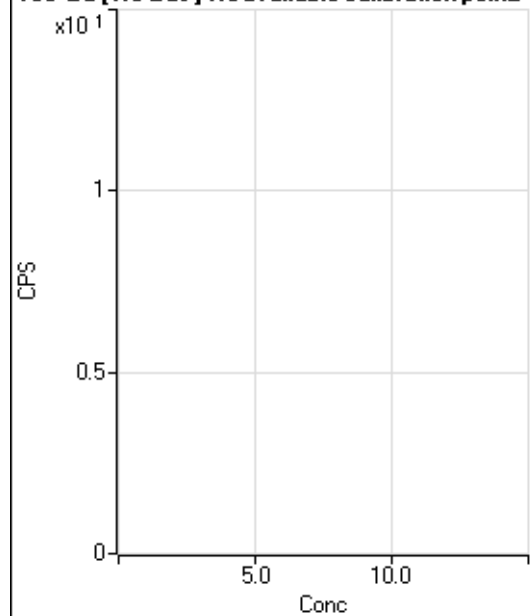
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.2
2	☐						
3	☐			0.00		P	
4	☐			2.22		P	86.6
5	☐			1.11		P	173.2
6	☐			0.00		P	
7	☐			8.89		P	57.3
8	☐			6.67		P	50.0
9	☐			15.55		P	44.6

156 Dy [No Gas] No available calibration points

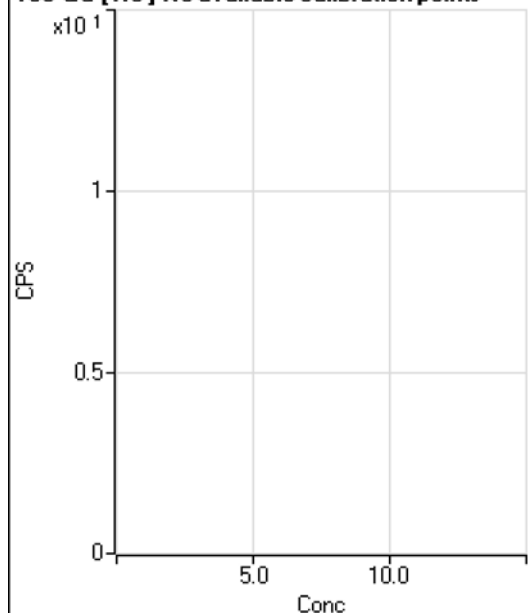
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			16.67		P	100.0
2	☐						
3	☐			16.66		P	86.6
4	☐			19.45		P	24.7
5	☐			22.22		P	78.1
6	☐			33.34		P	66.1
7	☐			130.56		P	43.4
8	☐			86.11		P	58.3
9	☐			116.67		P	25.8

156 Dy [He] No available calibration points

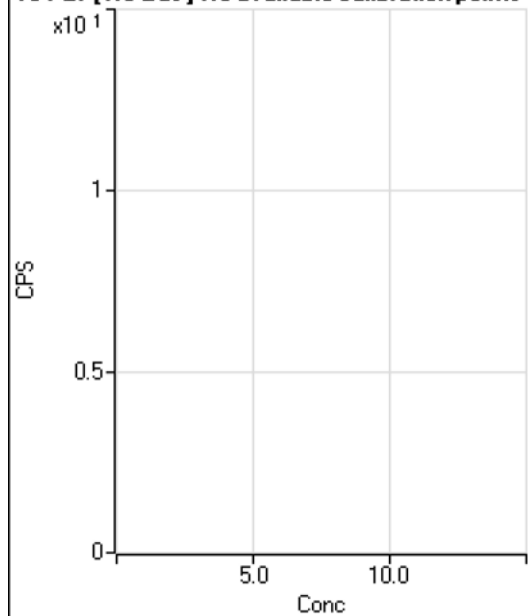
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			3.33		P	100.1
2	☐						
3	☐			4.44		P	43.4
4	☐			3.33		P	0.0
5	☐			4.45		P	86.6
6	☐			0.00		P	
7	☐			5.56		P	91.6
8	☐			11.11		P	17.3
9	☐			10.00		P	66.7

160 Gd [No Gas] No available calibration poin_

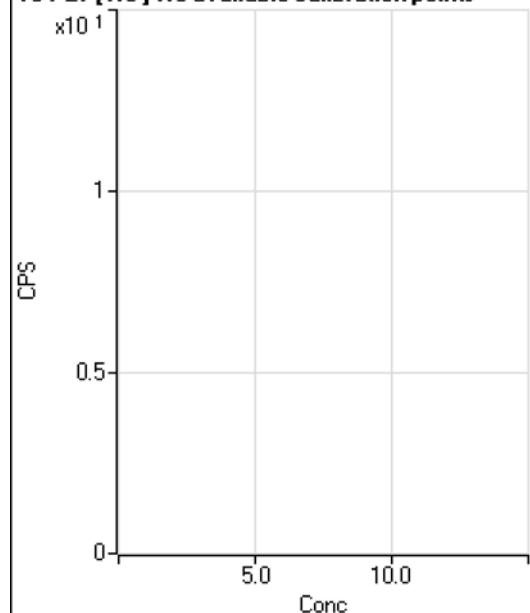
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			86.12		P	20.1
2	☐						
3	☐			105.56		P	24.1
4	☐			50.00		P	16.7
5	☐			100.01		P	28.9
6	☐			63.89		P	32.8
7	☐			113.90		P	42.9
8	☐			105.56		P	9.1
9	☐			125.01		P	11.5

160 Gd [He] No available calibration points

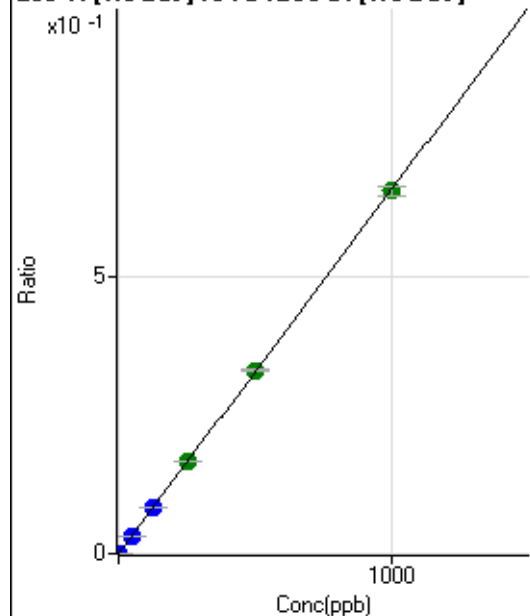
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			14.44		P	58.1
2	☐						
3	☐			5.55		P	124.9
4	☐			10.00		P	33.3
5	☐			11.11		P	62.5
6	☐			7.78		P	65.5
7	☐			20.00		P	28.9
8	☐			13.33		P	66.2
9	☐			20.00		P	28.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			30.56		P	56.8
2	☐						
3	☐			80.56		P	41.8
4	☐			50.00		P	44.1
5	☐			52.78		P	18.2
6	☐			25.00		P	33.3
7	☐			36.11		P	66.6
8	☐			61.11		P	15.7
9	☐			69.45		P	36.7

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			12.22		P	15.7
2	☐						
3	☐			16.67		P	52.9
4	☐			10.00		P	33.3
5	☐			10.00		P	0.0
6	☐			14.44		P	58.1
7	☐			11.11		P	17.3
8	☐			15.56		P	32.7
9	☐			8.89		P	108.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	208.35	0.0000	P	26.6
2	☐	0.100					
3	☐	1.000	0.967	7016.17	0.0007	P	3.5
4	☐	50.000	47.990	333579.74	0.0315	P	0.9
5	☐	125.000	126.325	872858.61	0.0828	P	1.2
6	☐	250.000	255.159	1752397.15	0.1673	A	0.8
7	☐	500.000	503.690	3409513.36	0.3302	A	1.6
8	☐	1000.000	996.800	6718066.99	0.6535	A	3.0
9	☐			4228.68	0.0004	P	3.4

$$y = 6.5557E-004 * x + 1.9615E-005$$

$$R = 1.0000$$

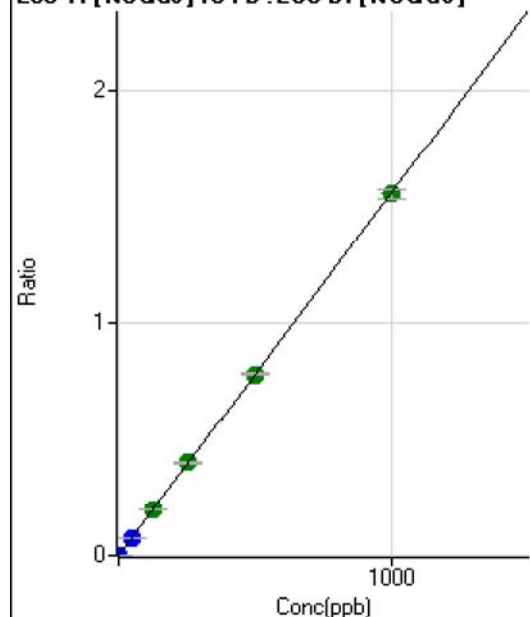
$$DL = 0.02388$$

$$BEC = 0.02992$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	458.37	0.0000	P	13.0
2	☐	0.100					
3	☐	1.000	0.962	16606.03	0.0015	P	2.0
4	☐	50.000	48.858	809116.87	0.0764	P	1.1
5	☐	125.000	129.051	2124594.21	0.2016	A	0.6
6	☐	250.000	257.301	4210188.59	0.4019	A	1.3
7	☐	500.000	499.512	8056098.36	0.7803	A	1.7
8	☐	1000.000	997.969	16026769.11	1.5589	A	2.4
9	☐			9940.51	0.0010	P	5.0

$$y = 0.0016 * x + 4.2991E-005$$

$$R = 1.0000$$

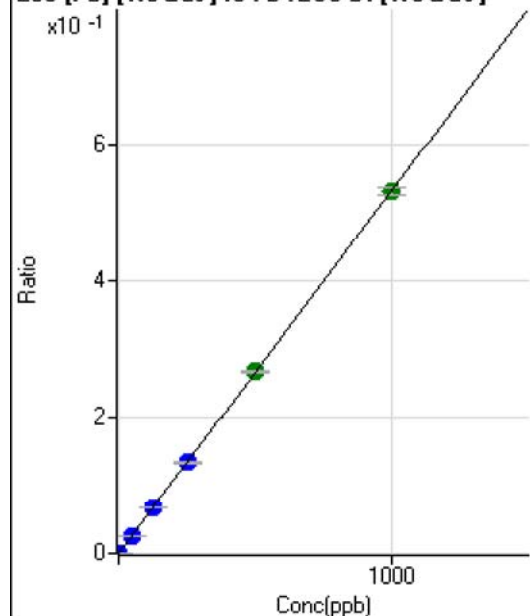
$$DL = 0.01075$$

$$BEC = 0.02752$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	325.94	0.0000	P	18.5
2	☐	0.100					
3	☐	1.000	0.980	5921.95	0.0006	P	2.2
4	☐	50.000	48.664	274457.11	0.0259	P	0.6
5	☐	125.000	126.066	706525.35	0.0670	P	0.9
6	☐	250.000	252.337	1405438.10	0.1342	P	1.3
7	☐	500.000	501.694	2754223.44	0.2667	A	0.9
8	☐	1000.000	998.502	5457975.76	0.5308	A	2.1
9	☐			32078.09	0.0033	P	1.1

$$y = 5.3161E-004 * x + 3.0391E-005$$

$$R = 1.0000$$

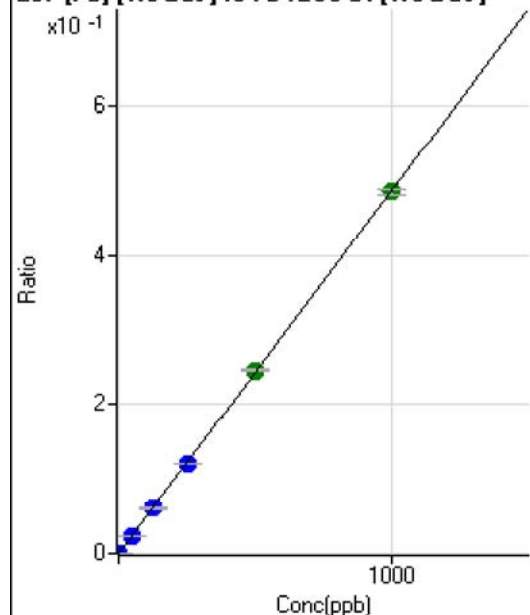
$$DL = 0.03166$$

$$BEC = 0.05717$$

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	298.16	0.0000	P	24.1
2	☐	0.100					
3	☐	1.000	0.935	5195.66	0.0005	P	3.8
4	☐	50.000	48.029	248265.53	0.0234	P	0.7
5	☐	125.000	124.518	639603.34	0.0607	P	0.6
6	☐	250.000	248.797	1270042.95	0.1212	P	1.2
7	☐	500.000	504.051	2536053.33	0.2456	A	1.2
8	☐	1000.000	998.434	5002309.72	0.4865	A	1.8
9	☐			27506.26	0.0028	P	0.6

$$y = 4.8723\text{E-}004 * x + 2.7998\text{E-}005$$

$$R = 1.0000$$

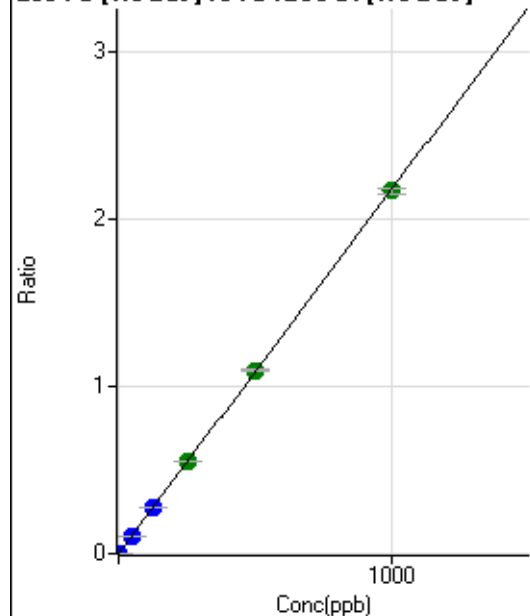
$$DL = 0.04159$$

$$BEC = 0.05746$$

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	1400.07	0.0001	P	6.3
2	☐	0.100					
3	☐	1.000	0.951	23637.07	0.0022	P	1.8
4	☐	50.000	48.541	1120768.16	0.1058	P	0.8
5	☐	125.000	126.124	2893746.99	0.2746	P	0.6
6	☐	250.000	254.384	5800208.75	0.5537	A	1.1
7	☐	500.000	504.362	11334296.64	1.0978	A	1.4
8	☐	1000.000	996.655	22302979.49	2.1691	A	1.8
9	☐			128299.63	0.0133	P	0.2

$$y = 0.0022 * x + 1.3120\text{E-}004$$

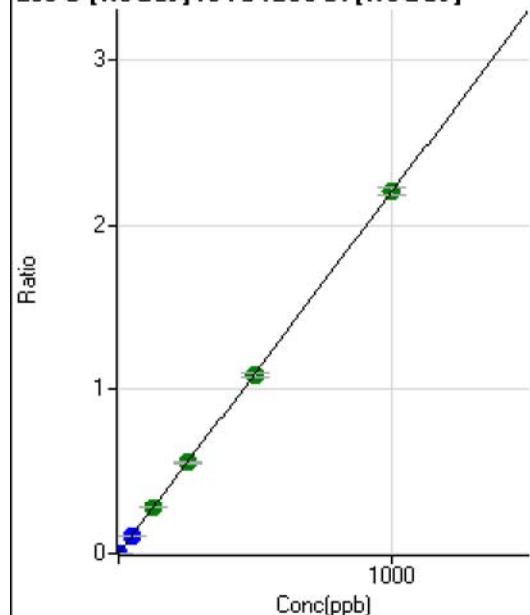
$$R = 1.0000$$

$$DL = 0.0114$$

$$BEC = 0.06029$$

Weight: <None>

Min Conc: 0

²³⁸U [No Gas] ISTD: ²⁰⁹Pb [No Gas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	125.01	0.0000	P	27.6
2	☐	0.100					
3	☐	1.000	0.929	22031.57	0.0021	P	5.1
4	☐	50.000	48.195	1122260.12	0.1059	P	0.4
5	☐	125.000	128.374	2972436.85	0.2821	A	0.8
6	☐	250.000	252.381	5808665.40	0.5545	A	1.4
7	☐	500.000	494.886	11226722.99	1.0874	A	1.9
8	☐	1000.000	1001.630	22627747.73	2.2008	A	2.2
9	☐			1997.49	0.0002	P	13.2

$$y = 0.0022 * x + 1.1800E-005$$

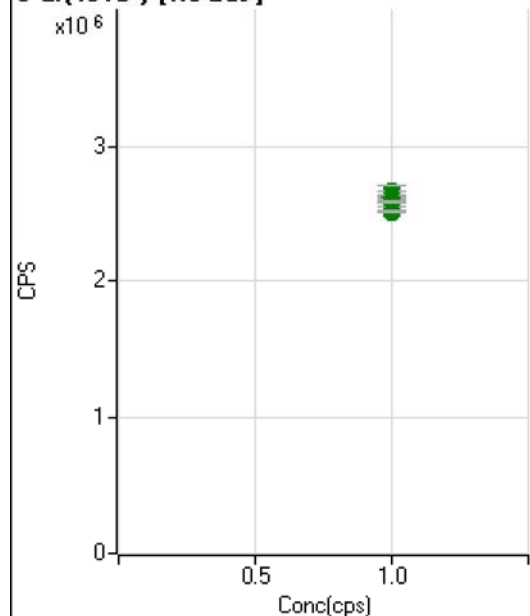
$$R = 1.0000$$

$$DL = 0.004441$$

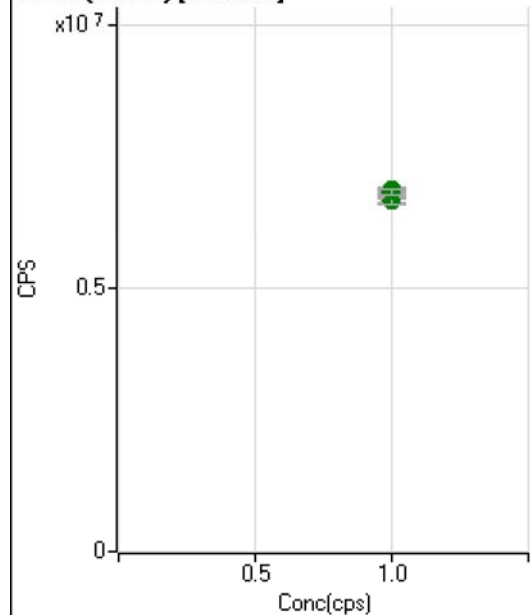
$$BEC = 0.00537$$

Weight: <None>

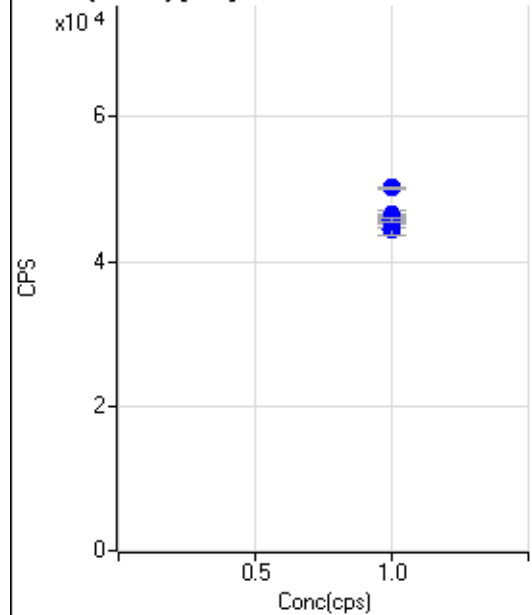
Min Conc: 0

⁶Li (ISTD) [No Gas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		2666111.16		A	3.2
2	☐	1.000					
3	☐	1.000		2640716.54		A	1.8
4	☐	1.000		2633366.75		A	1.0
5	☐	1.000		2602794.49		A	0.9
6	☐	1.000		2598469.30		A	0.3
7	☐	1.000		2561169.48		A	0.3
8	☐	1.000		2520039.18		A	0.6
9	☐	1.000		2596148.99		A	0.7

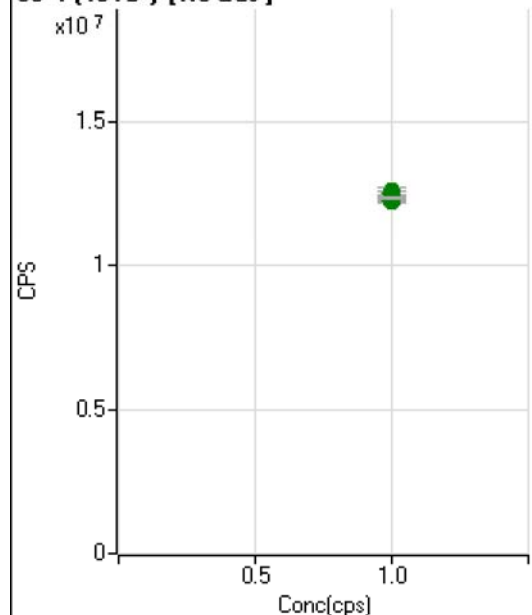
45 Sc(ISTD) [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6796253.10		A	4.2
2	☐	1.000					
3	☐	1.000		6890918.64		A	1.5
4	☐	1.000		6839817.51		A	1.0
5	☐	1.000		6786156.14		A	1.1
6	☐	1.000		6829942.25		A	0.6
7	☐	1.000		6676105.44		A	1.1
8	☐	1.000		6682686.26		A	2.2
9	☐	1.000		6848882.97		A	1.4

45 Sc(ISTD) [He]

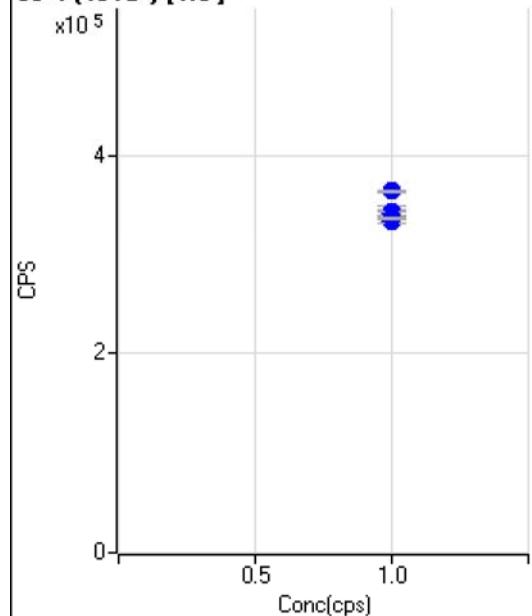
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		46437.80		P	2.6
2	☐	1.000					
3	☐	1.000		45335.41		P	2.5
4	☐	1.000		46336.35		P	1.0
5	☐	1.000		44357.91		P	3.6
6	☐	1.000		46008.50		P	0.7
7	☐	1.000		45543.70		P	0.7
8	☐	1.000		45811.18		P	1.3
9	☐	1.000		50147.98		P	0.5

89 Y (ISTD) [No Gas]

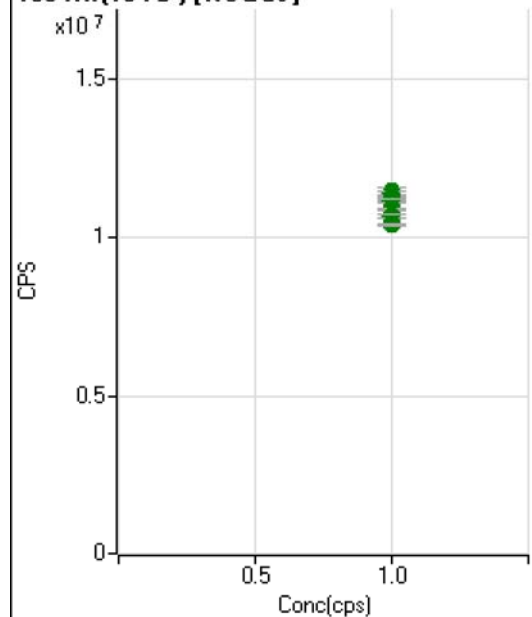


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12584771.20		A	2.0
2	☐	1.000					
3	☐	1.000		12580630.65		A	1.2
4	☐	1.000		12348866.34		A	0.7
5	☐	1.000		12441381.90		A	0.7
6	☐	1.000		12450475.92		A	0.6
7	☐	1.000		12324843.98		A	0.7
8	☐	1.000		12295505.23		A	1.3
9	☐	1.000		12364520.51		A	0.3

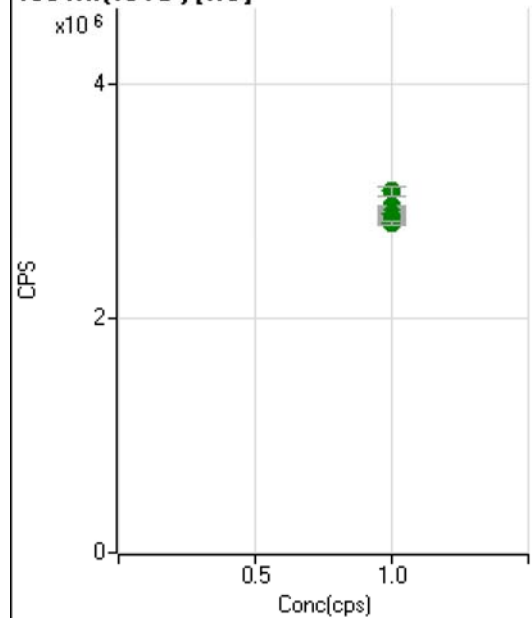
89 Y (ISTD) [He]



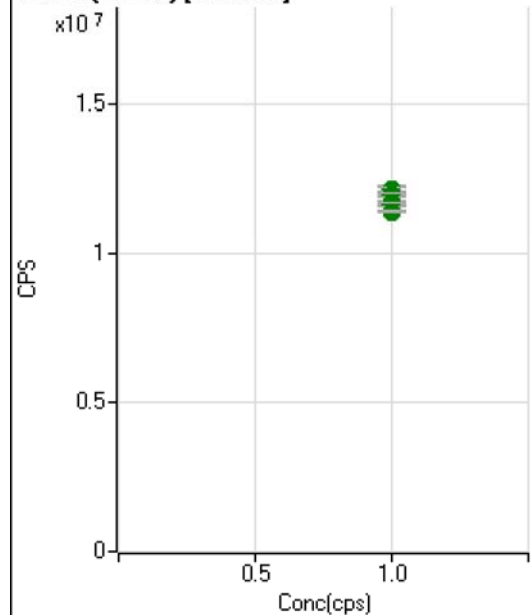
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		343341.76		P	2.9
2	☐	1.000					
3	☐	1.000		337305.45		P	0.8
4	☐	1.000		343901.46		P	0.2
5	☐	1.000		333432.12		P	1.3
6	☐	1.000		343354.78		P	0.5
7	☐	1.000		340468.48		P	1.0
8	☐	1.000		337093.96		P	0.4
9	☐	1.000		363780.01		P	0.7

103 Rh(ISTD) [NoGas]

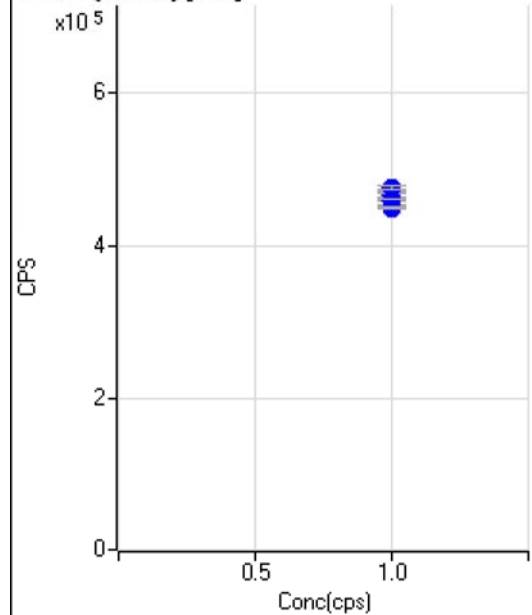
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11467097.05		A	2.3
2	☐	1.000					
3	☐	1.000		11445319.88		A	1.1
4	☐	1.000		11277939.40		A	0.5
5	☐	1.000		11208362.75		A	0.6
6	☐	1.000		11174531.93		A	1.0
7	☐	1.000		10923749.12		A	0.4
8	☐	1.000		10703281.05		A	1.4
9	☐	1.000		10428176.62		A	0.3

103 Rh(ISTD) [He]

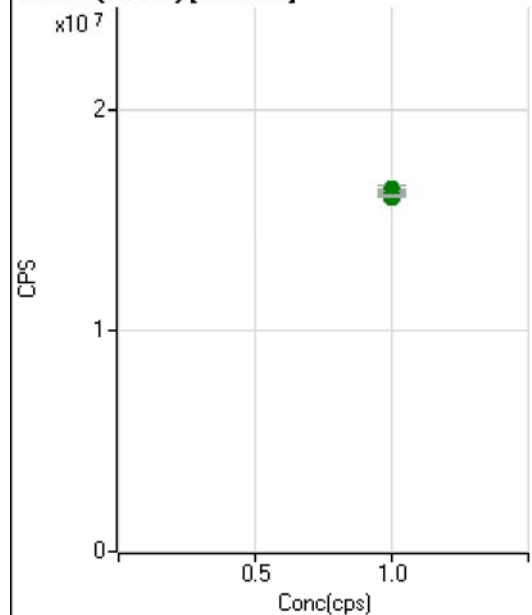
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3094937.66		A	2.9
2	☐	1.000					
3	☐	1.000		2916627.46		A	1.0
4	☐	1.000		2964460.68		A	0.9
5	☐	1.000		2836319.33		A	1.2
6	☐	1.000		2905100.89		A	0.7
7	☐	1.000		2862785.48		A	0.8
8	☐	1.000		2831564.54		A	0.6
9	☐	1.000		2826897.60		A	1.3

115 In(ISTD) [NoGas]

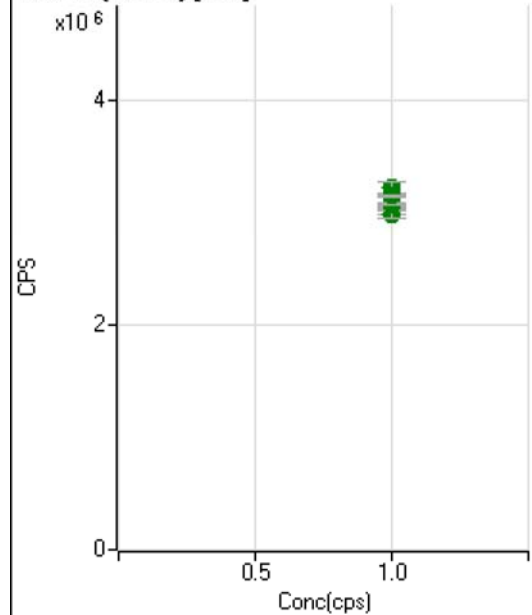
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12167893.34		A	2.8
2	☐	1.000					
3	☐	1.000		12164375.26		A	1.0
4	☐	1.000		12023448.51		A	0.3
5	☐	1.000		11972172.98		A	0.5
6	☐	1.000		12004826.93		A	0.9
7	☐	1.000		11755910.58		A	1.3
8	☐	1.000		11665601.57		A	1.2
9	☐	1.000		11441593.43		A	0.8

115 In(ISTD) [He]

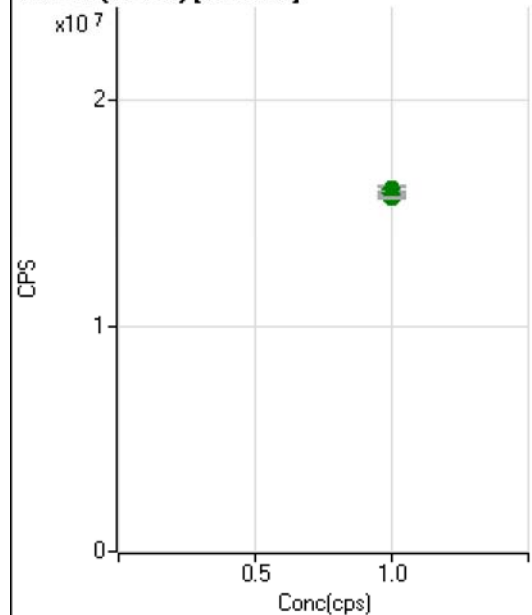
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		472301.33		P	2.8
2	☐	1.000					
3	☐	1.000		463561.37		P	0.5
4	☐	1.000		471636.42		P	0.3
5	☐	1.000		455226.56		P	2.0
6	☐	1.000		466824.39		P	0.7
7	☐	1.000		458936.48		P	1.5
8	☐	1.000		450309.11		P	0.7
9	☐	1.000		476497.28		P	1.2

159 Tb(ISTD) [No Gas]

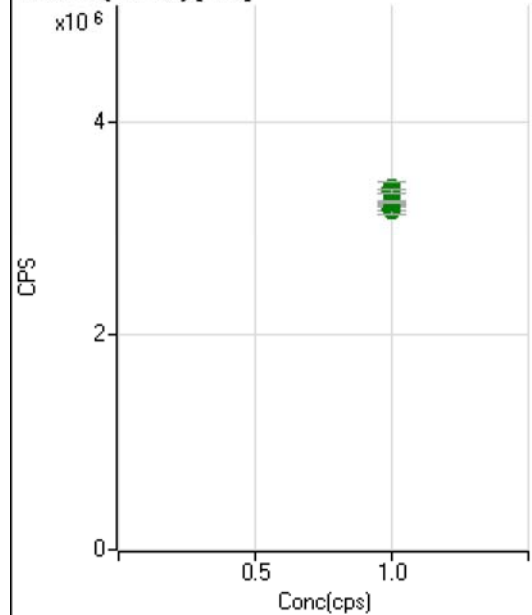
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16410301.84		A	2.2
2	☐	1.000					
3	☐	1.000		16284802.95		A	1.4
4	☐	1.000		16203092.68		A	0.7
5	☐	1.000		16259952.39		A	0.4
6	☐	1.000		16321574.48		A	0.5
7	☐	1.000		16154724.34		A	0.7
8	☐	1.000		16203434.90		A	1.6
9	☐	1.000		16118716.43		A	0.5

159 Tb(ISTD) [He]

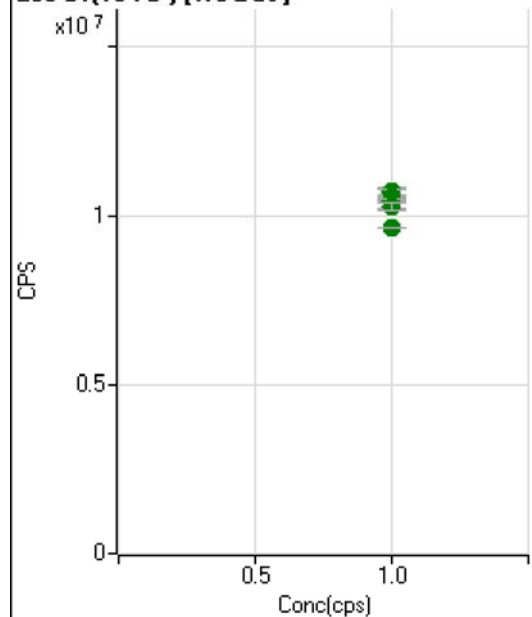
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3227365.82		A	3.0
2	☐	1.000					
3	☐	1.000		3021179.81		A	1.4
4	☐	1.000		3083783.70		A	0.9
5	☐	1.000		2994611.48		A	2.1
6	☐	1.000		3080522.94		A	0.4
7	☐	1.000		3079475.82		A	0.9
8	☐	1.000		3083682.28		A	0.5
9	☐	1.000		3160188.15		A	0.8

¹⁶⁵Ho(ISTD) [NoGas]

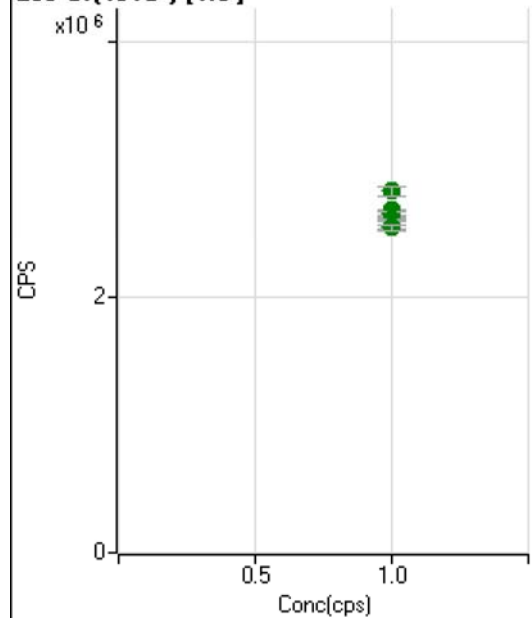
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16059442.02		A	2.7
2	☐	1.000					
3	☐	1.000		16039465.46		A	1.5
4	☐	1.000		15742543.41		A	0.3
5	☐	1.000		15900620.32		A	0.6
6	☐	1.000		15961085.43		A	0.7
7	☐	1.000		15865433.69		A	0.6
8	☐	1.000		15889630.56		A	1.4
9	☐	1.000		15721569.28		A	0.8

¹⁶⁵Ho(ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3377627.41		A	3.3
2	☐	1.000					
3	☐	1.000		3189867.80		A	1.7
4	☐	1.000		3250988.18		A	0.6
5	☐	1.000		3165850.19		A	2.5
6	☐	1.000		3241587.63		A	0.8
7	☐	1.000		3256847.52		A	0.1
8	☐	1.000		3251395.96		A	0.3
9	☐	1.000		3346283.60		A	1.3

209 Bi(ISTD) [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10672962.27		A	4.0
2	☐	1.000					
3	☐	1.000		10738772.89		A	1.7
4	☐	1.000		10596798.73		A	0.7
5	☐	1.000		10537930.61		A	0.6
6	☐	1.000		10475202.00		A	0.6
7	☐	1.000		10326666.10		A	1.7
8	☐	1.000		10284962.69		A	2.3
9	☐	1.000		9670630.55		A	0.4

209 Bi(ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2840036.17		A	2.9
2	☐	1.000					
3	☐	1.000		2670123.62		A	1.9
4	☐	1.000		2692762.63		A	0.0
5	☐	1.000		2597379.75		A	3.7
6	☐	1.000		2676378.78		A	0.3
7	☐	1.000		2619573.02		A	1.3
8	☐	1.000		2615238.73		A	0.5
9	☐	1.000		2555054.65		A	1.7

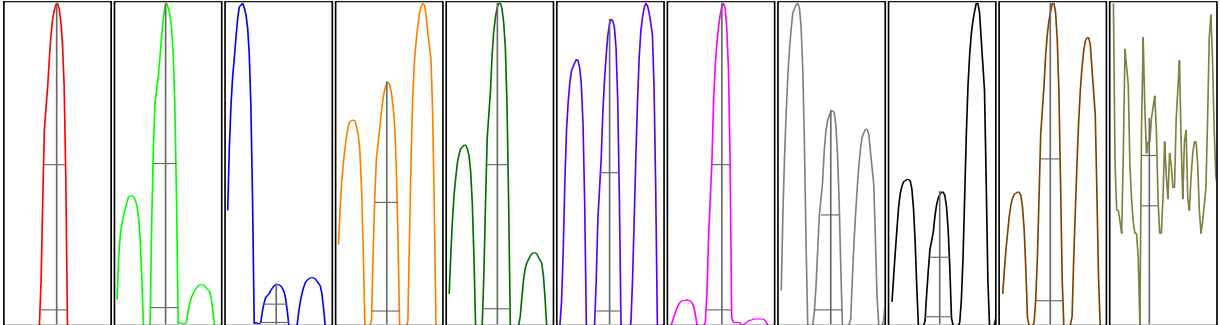
US EPA Tune Check Sample Report

Batch Folder D:\P8072018MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	6049	1.62	5.00	
24	104101	1.49	5.00	
25	13365	1.49	5.00	
26	15589	1.35	5.00	
59	64186	1.17	5.00	
113	9194	0.98	5.00	
115	121607	0.97	5.00	
206	29119	0.62	5.00	
207	26487	0.65	5.00	
208	63193	0.75	5.00	
220	1	53.03		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	5929	6003	6120	6020	6174
24	102153	103584	105484	103399	105887
25	13185	13238	13544	13242	13615
26	15379	15539	15773	15412	15842
59	63499	63556	64978	63898	64997
113	9287	9112	9127	9147	9297
115	123285	121670	122095	120662	120322
206	29163	28891	29187	29354	28998
207	26528	26321	26468	26757	26364
208	63312	62444	63281	63757	63171
220	1	0	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	10369	9.00	8.9 - 9.1		0.777	0.900	
24	172693	23.95	23.9 - 24.1		0.786	0.900	
25	22056	24.95	24.9 - 25.1		0.786	0.900	
26	25999	25.95	25.9 - 26.1		0.785	0.900	
59	111344	58.95	58.9 - 59.1		0.778	0.900	
113	17412	113.00	112.9 - 113.1		0.728	0.900	
115	229154	115.05	114.9 - 115.1		0.726	0.900	
206	52834	206.00	205.9 - 206.1		0.784	0.900	
207	48177	206.95	206.9 - 207.1		0.742	0.900	
208	115891	207.95	207.9 - 208.1		0.776	0.900	
220	1	219.65	-		0.479		

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	10.1	V	Deflect	13.4	V
Extract 2	-235.0	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	170	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	7401	1.48	
89	7472	1.59	
205	12564	1.42	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	7569	7455	7353	7314	7316
89	7658	7506	7452	7363	7381
205	12865	12553	12537	12440	12423

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	10.1	V	Deflect	1.6	V
Extract 2	-235.0	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			