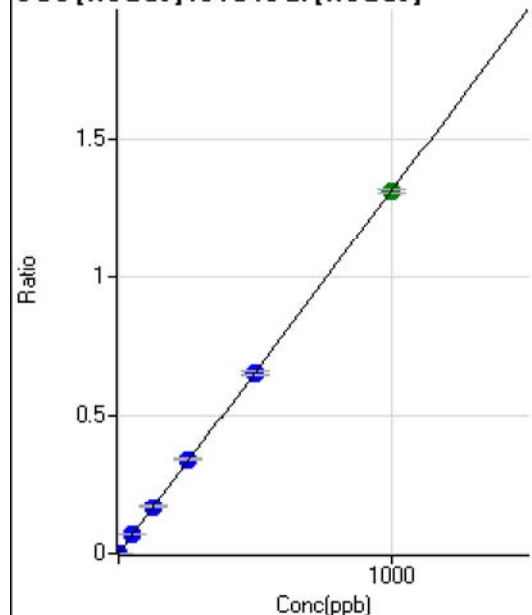


Batch Folder: D:\P8100418-MS.b\
Analysis File: P8100418-MS.batch.bin
DA Date-Time: 2018-10-05 11:38:22
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-10-04 13:52:45
2	004CALS.d	S01	2018-10-04 13:56:10
3	005CALS.d	S02	2018-10-04 14:00:18
4	006CALS.d	S03	2018-10-04 14:04:06
5	007CALS.d	S04	2018-10-04 14:07:53
6	008CALS.d	S05	2018-10-04 14:11:32
7	009CALS.d	S06	2018-10-04 14:15:06
8	010CALS.d	S07	2018-10-04 14:18:36
9	011CALS.d	S08	2018-10-04 14:22:02

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	94.45	0.0001	P	21.0
2	☐	0.100	0.110	248.16	0.0002	P	9.8
3	☐	1.000	1.014	1472.34	0.0014	P	5.1
4	☐	50.000	50.766	71746.91	0.0667	P	0.9
5	☐	125.000	129.386	177790.27	0.1699	P	2.1
6	☐	250.000	260.938	352839.35	0.3425	P	2.2
7	☐	500.000	497.089	677238.88	0.6524	P	1.4
8	☐	1000.000	998.134	1319866.68	1.3099	A	1.1
9	☐			781.53	0.0008	P	6.9

$$y = 0.0013 * x + 9.0089E-005$$

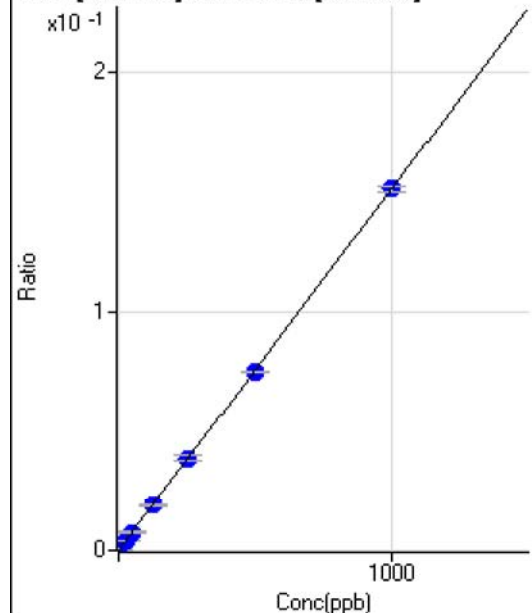
$$R = 0.9999$$

$$DL = 0.04329$$

$$BEC = 0.06865$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	100.01	0.0001	P	44.6
2	☐	2.500	2.726	536.15	0.0005	P	5.5
3	☐	25.000	24.769	3972.94	0.0038	P	5.5
4	☐	50.000	49.692	8188.80	0.0076	P	4.4
5	☐	125.000	125.810	20011.97	0.0191	P	3.7
6	☐	250.000	256.711	40084.97	0.0389	P	4.5
7	☐	500.000	493.113	77528.99	0.0747	P	0.9
8	☐	1000.000	1001.685	152765.84	0.1516	P	1.3
9	☐			6765.79	0.0067	P	12.1

$$y = 1.5126E-004 * x + 9.5566E-005$$

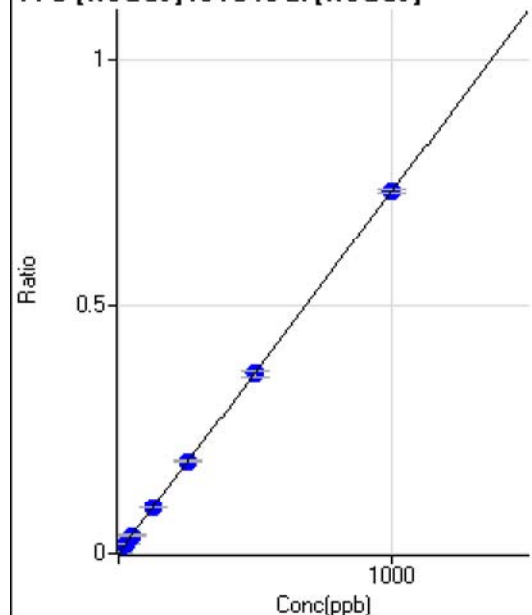
$$R = 0.9999$$

$$DL = 0.8461$$

$$BEC = 0.6318$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	538.92	0.0005	P	18.0
2	☐	2.500	2.512	2483.65	0.0024	P	5.9
3	☐	25.000	24.467	19074.48	0.0184	P	2.1
4	☐	50.000	49.645	39641.86	0.0369	P	3.1
5	☐	125.000	126.274	97310.47	0.0930	P	2.4
6	☐	250.000	255.698	193395.21	0.1877	P	2.8
7	☐	500.000	495.986	377395.50	0.3636	P	3.4
8	☐	1000.000	1000.454	738588.99	0.7330	P	1.2
9	☐			33147.72	0.0330	P	6.9

$$y = 7.3214\text{E-}004 * x + 5.1450\text{E-}004$$

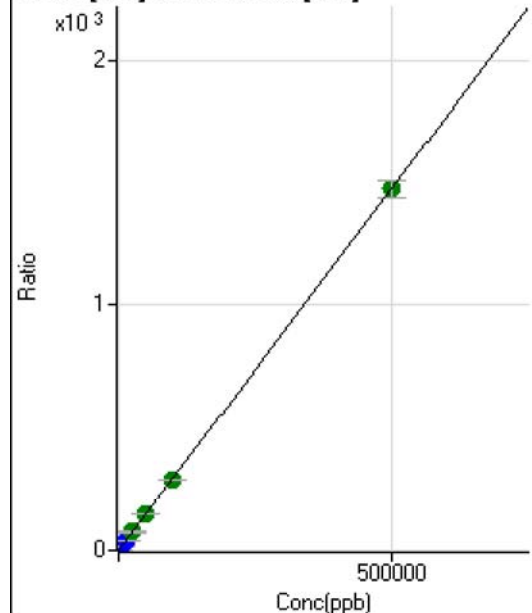
$$R = 1.0000$$

$$DL = 0.3802$$

$$BEC = 0.7027$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	4806.58	0.2083	P	3.7
2	☐	50.000	45.402	8105.44	0.3422	P	3.3
3	☐	500.000	498.724	38458.53	1.6799	P	1.8
4	☐	5000.000	5047.084	343118.98	15.1013	P	2.7
5	☐	12500.000	12414.904	836016.89	36.8425	P	0.2
6	☐	25000.000	25140.062	1667253.27	74.3923	A	0.9
7	☐	50000.000	49958.428	3093889.83	147.6270	A	1.7
8	☐	100000.00	97829.509	5958764.24	288.8863	A	1.4
9	☐	500000.00	500432.91	33215261.51	1,476.899	A	4.8

$$y = 0.0030 * x + 0.2083$$

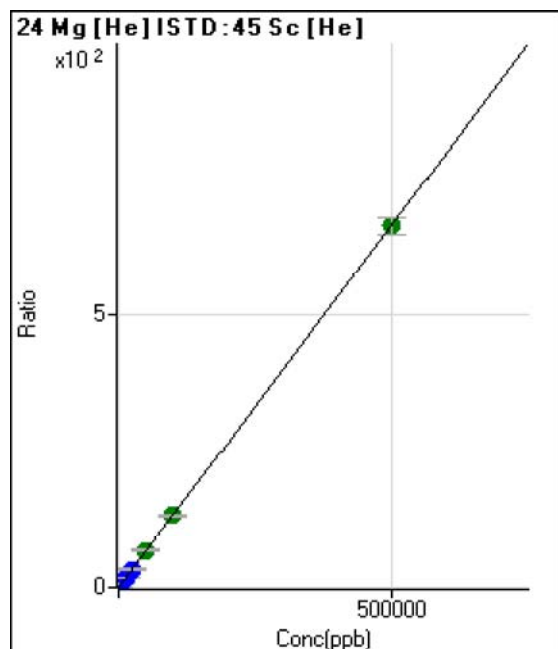
$$R = 1.0000$$

$$DL = 7.748$$

$$BEC = 70.58$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	233.34	0.0102	P	27.8
2	☐	50.000	47.187	1730.75	0.0731	P	2.7
3	☐	500.000	503.289	15598.08	0.6811	P	0.8
4	☐	5000.000	5119.898	155294.90	6.8352	P	3.3
5	☐	12500.000	12588.507	381008.44	16.7912	P	1.0
6	☐	25000.000	25078.867	749450.32	33.4413	P	0.9
7	☐	50000.000	51174.825	1429816.72	68.2283	A	1.9
8	☐	100000.00	100259.51	2756779.29	133.6601	A	2.3
9	☐	500000.00	499823.25	14986109.02	666.2945	A	4.5

$$y = 0.0013 * x + 0.0102$$

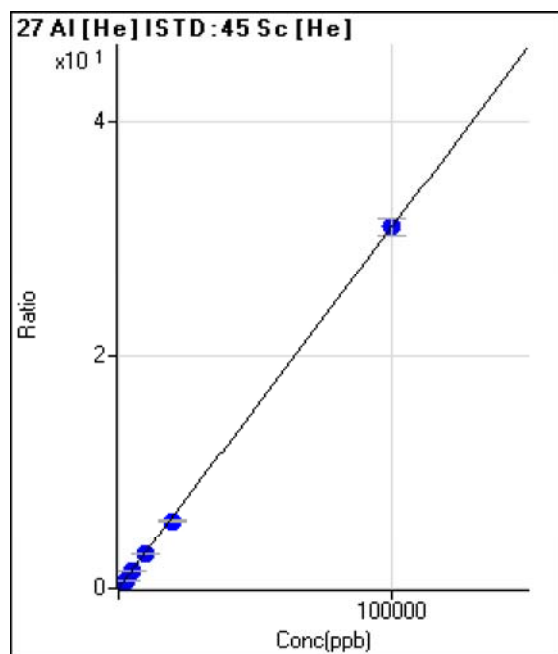
$$R = 1.0000$$

$$DL = 6.372$$

$$BEC = 7.629$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	19.17	0.0008	P	35.9
2	☐	2.000	-0.271	17.50	0.0007	P	1.4
3	☐	20.000	21.315	170.04	0.0074	P	15.7
4	☐	1000.000	964.101	6800.92	0.2994	P	4.0
5	☐	2500.000	2354.849	16566.37	0.7301	P	0.3
6	☐	5000.000	4763.349	33077.50	1.4759	P	1.1
7	☐	10000.000	9568.986	62114.18	2.9641	P	2.3
8	☐	20000.000	18779.338	119972.92	5.8163	P	1.2
9	☐	100000.00	100303.05	698549.40	31.0622	P	5.0

$$y = 3.0968E-004 * x + 8.2278E-004$$

$$R = 0.9999$$

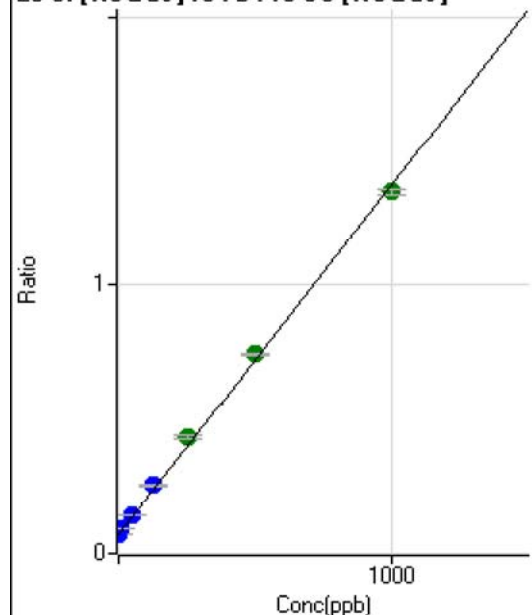
$$DL = 2.863$$

$$BEC = 2.657$$

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	216144.54	0.0705	P	0.2
2	☐	1.000	0.969	224490.50	0.0718	P	0.6
3	☐	10.000	17.461	280799.35	0.0933	P	5.4
4	☐	50.000	55.380	438002.89	0.1428	P	3.1
5	☐	125.000	142.930	767299.84	0.2569	P	2.3
6	☐	250.000	282.244	1292950.33	0.4386	A	3.2
7	☐	500.000	514.971	2200962.18	0.7421	A	0.8
8	☐	1000.000	981.869	3876182.86	1.3509	A	1.6
9	☐			328299.13	0.1100	P	2.0

$$y = 0.0013 * x + 0.0705$$

$$R = 0.9992$$

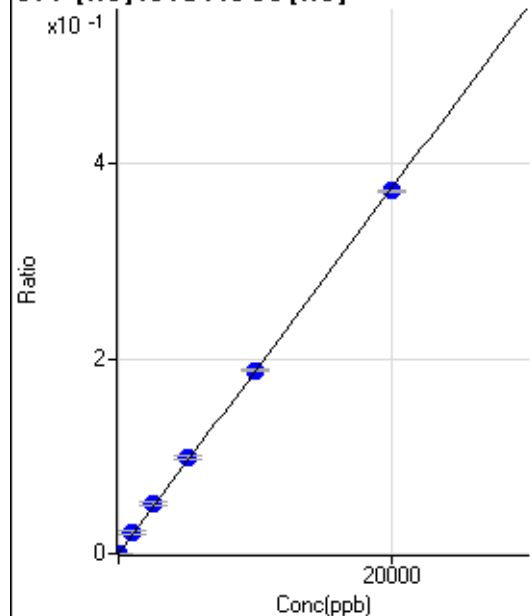
$$DL = 0.3682$$

$$BEC = 54.1$$

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	-8.797	0.00	0.0000	P	
2	☐	0.000	-8.797	0.00	0.0000	P	
3	☐	0.000	17.594	11.11	0.0005	P	116.
4	☐	1000.000	1174.790	502.82	0.0222	P	18.0
5	☐	2500.000	2745.666	1169.55	0.0516	P	7.0
6	☐	5000.000	5270.749	2214.16	0.0988	P	3.6
7	☐	10000.000	10047.551	3945.18	0.1882	P	1.2
8	☐	20000.000	19869.090	7674.63	0.3720	P	0.3
9	☐			2.78	0.0001	P	173.

$$y = 1.8717E-005 * x + 1.6465E-004$$

$$R = 0.9998$$

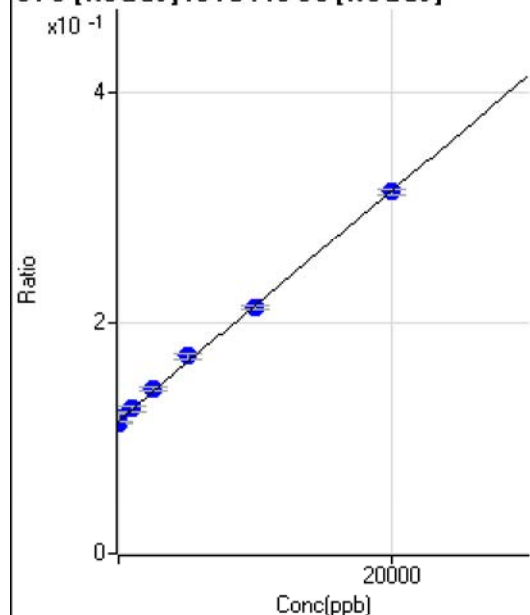
$$DL = 30.69$$

$$BEC = 8.797$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-30.541	352574.52	0.1151	P	0.7
2	☐	0.000	-232.942	353453.63	0.1131	P	0.6
3	☐	0.000	263.483	355138.63	0.1180	P	5.0
4	☐	1000.000	1072.940	386747.39	0.1261	P	3.7
5	☐	2500.000	2820.818	428495.85	0.1435	P	2.4
6	☐	5000.000	5547.941	503046.82	0.1706	P	3.3
7	☐	10000.000	9796.052	631614.22	0.2130	P	1.6
8	☐	20000.000	19921.239	900495.18	0.3138	P	1.2
9	☐			327889.91	0.1098	P	1.3

$$y = 9.9620\text{E-}006 * x + 0.1154$$

$$R = 0.9993$$

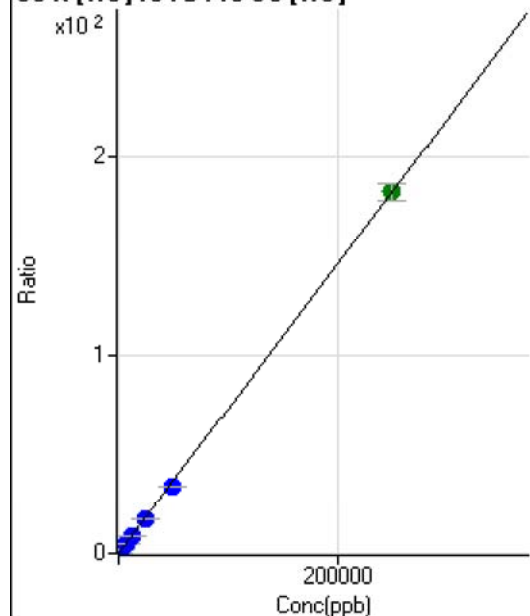
$$DL = 741.3$$

$$BEC = 1.158\text{E}+04$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2236.39	0.0970	P	3.5
2	☐	50.000	42.297	3025.45	0.1278	P	5.1
3	☐	500.000	488.686	10354.23	0.4524	P	4.7
4	☐	2500.000	2441.427	42568.20	1.8726	P	1.1
5	☐	6250.000	6048.053	102015.41	4.4957	P	0.3
6	☐	12500.000	12026.402	198198.57	8.8437	P	1.0
7	☐	25000.000	23752.705	364052.87	17.3722	P	2.0
8	☐	50000.000	46358.035	697424.74	33.8129	P	1.9
9	☐	250000.00	250882.46	4106135.86	182.5623	A	4.5

$$y = 7.2729\text{E-}004 * x + 0.0970$$

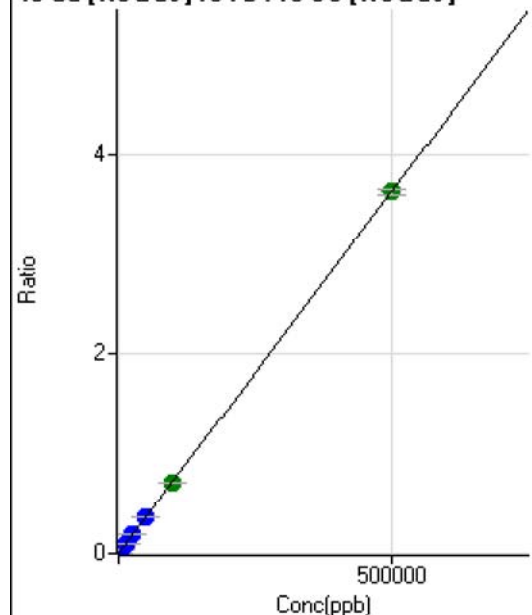
$$R = 0.9999$$

$$DL = 14.1$$

$$BEC = 133.4$$

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	450.03	0.0001	P	2.2
2	☐	50.000	50.458	1600.17	0.0005	P	5.7
3	☐	500.000	480.002	10901.90	0.0036	P	4.6
4	☐	5000.000	5010.809	111674.46	0.0364	P	3.0
5	☐	12500.000	12853.027	278146.02	0.0931	P	2.2
6	☐	25000.000	25892.577	552640.01	0.1875	P	3.3
7	☐	50000.000	49583.172	1064355.10	0.3589	P	1.1
8	☐	100000.00	97946.038	2033615.76	0.7088	A	1.6
9	☐	500000.00	500398.93	10809475.94	3.6204	A	1.4

$$y = 7.2347\text{E-}006 * x + 1.4689\text{E-}004$$

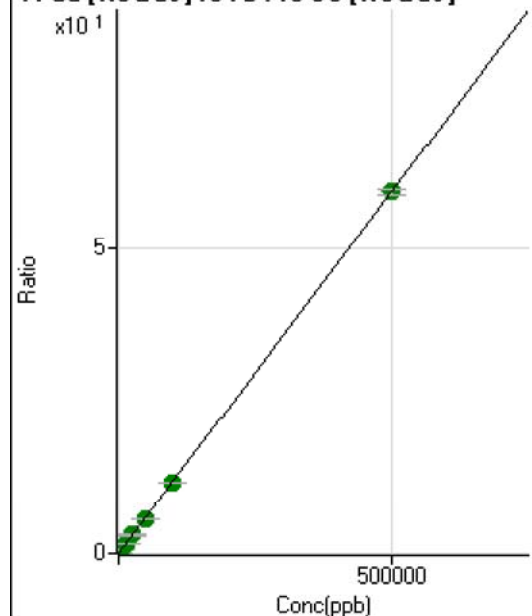
$$R = 1.0000$$

$$DL = 1.354$$

$$BEC = 20.3$$

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	11502.50	0.0038	P	0.5
2	☐	50.000	46.042	28752.50	0.0092	P	0.2
3	☐	500.000	491.245	186036.18	0.0618	P	5.6
4	☐	5000.000	5020.736	1832512.13	0.5973	A	3.1
5	☐	12500.000	12640.946	4473818.63	1.4981	A	2.8
6	☐	25000.000	25462.412	8883904.89	3.0138	A	3.5
7	☐	50000.000	48786.873	17116712.36	5.7712	A	1.1
8	☐	100000.00	97260.026	33002421.22	11.5015	A	0.8
9	☐	500000.00	500642.46	176718109.5	59.1881	A	1.3

$$y = 1.1822\text{E-}004 * x + 0.0038$$

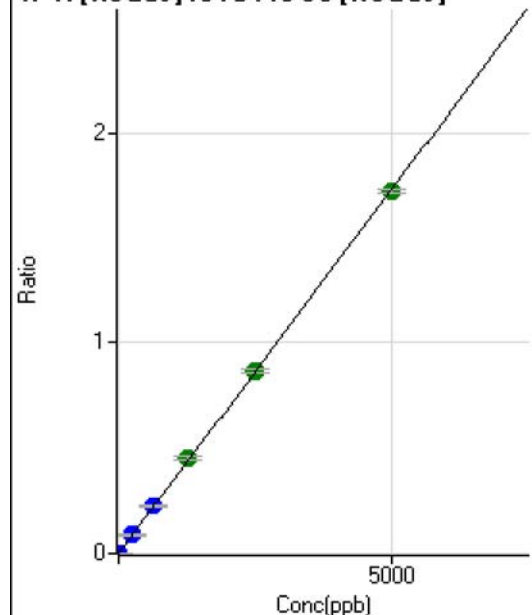
$$R = 1.0000$$

$$DL = 0.5185$$

$$BEC = 31.76$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.34	0.0000	P	55.6
2	☐	0.500	0.517	644.49	0.0002	P	10.7
3	☐	5.000	5.351	5656.96	0.0019	P	4.8
4	☐	250.000	253.833	269665.34	0.0879	P	3.2
5	☐	625.000	647.199	669120.36	0.2241	P	2.8
6	☐	1250.000	1318.813	1345782.93	0.4566	A	3.6
7	☐	2500.000	2511.070	2578042.85	0.8693	A	1.7
8	☐	5000.000	4974.295	4940855.71	1.7220	A	1.2
9	☐			1200.11	0.0004	P	10.0

$$y = 3.4617\text{E-}004 * x + 2.7203\text{E-}005$$

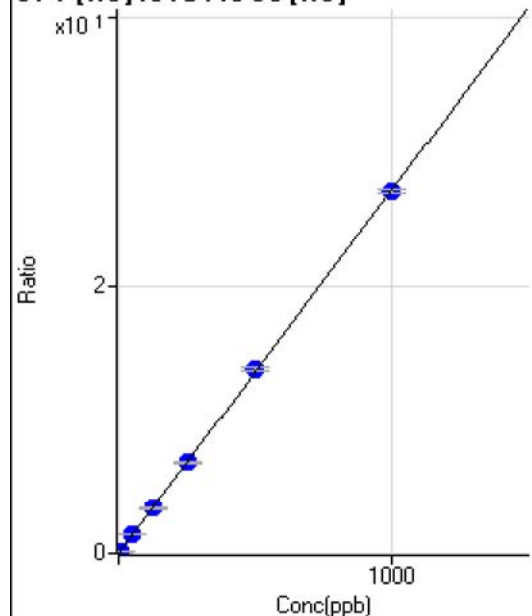
$$R = 0.9999$$

$$DL = 0.1311$$

$$BEC = 0.07858$$

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	21.11	0.0009	P	30.7
2	☐	0.500	0.450	311.12	0.0131	P	7.1
3	☐	5.000	4.980	3115.95	0.1361	P	2.6
4	☐	50.000	51.335	31683.82	1.3946	P	3.2
5	☐	125.000	124.882	76954.23	3.3913	P	1.2
6	☐	250.000	251.060	152773.18	6.8170	P	1.2
7	☐	500.000	505.865	287822.81	13.7348	P	2.1
8	☐	1000.000	996.751	558205.47	27.0619	P	1.2
9	☐			370.01	0.0164	P	14.0

$$y = 0.0271 * x + 9.0930\text{E-}004$$

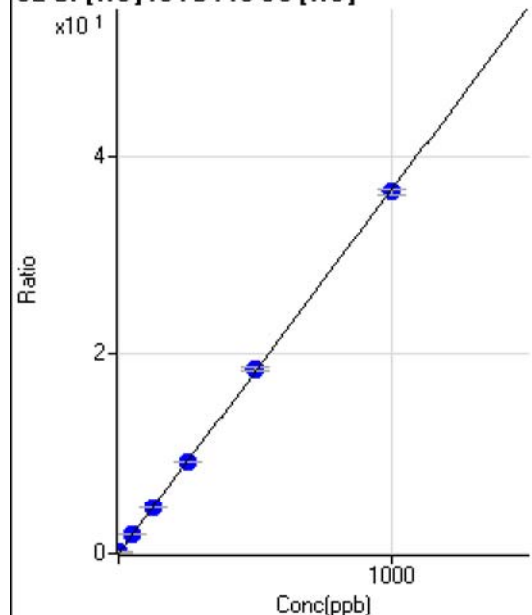
$$R = 1.0000$$

$$DL = 0.03086$$

$$BEC = 0.03349$$

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	442.24	0.0192	P	15.3
2	☐	0.200	0.192	621.13	0.0262	P	9.9
3	☐	2.000	2.166	2251.33	0.0984	P	9.8
4	☐	50.000	51.282	43026.19	1.8940	P	3.5
5	☐	125.000	127.225	105973.82	4.6702	P	0.8
6	☐	250.000	252.299	207135.96	9.2426	P	0.8
7	☐	500.000	507.509	389196.35	18.5724	P	2.3
8	☐	1000.000	995.329	750935.01	36.4058	P	1.4
9	☐			39009.96	1.7344	P	4.6

$$y = 0.0366 * x + 0.0192$$

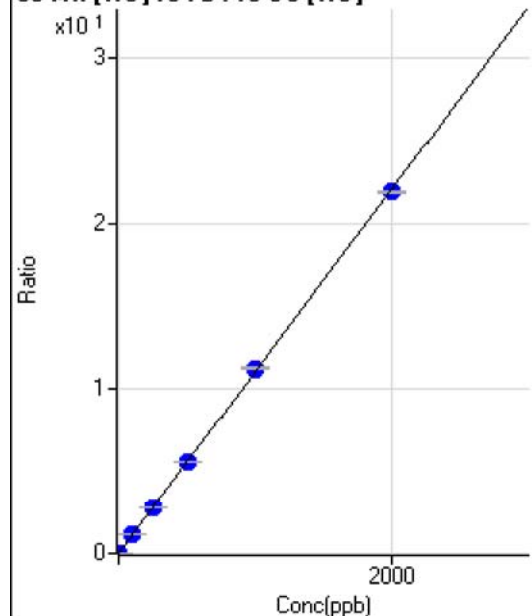
$$R = 1.0000$$

$$DL = 0.2409$$

$$BEC = 0.526$$

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	52.22	0.0023	P	37.1
2	☐	0.100	0.118	84.45	0.0036	P	19.9
3	☐	1.000	0.982	300.01	0.0131	P	2.5
4	☐	100.000	103.577	26014.39	1.1452	P	3.7
5	☐	250.000	254.959	63892.07	2.8156	P	0.8
6	☐	500.000	505.661	125090.28	5.5820	P	1.5
7	☐	1000.000	1016.696	235156.73	11.2210	P	1.6
8	☐	2000.000	1989.438	452869.07	21.9547	P	0.8
9	☐			3151.52	0.1400	P	2.8

$$y = 0.0110 * x + 0.0023$$

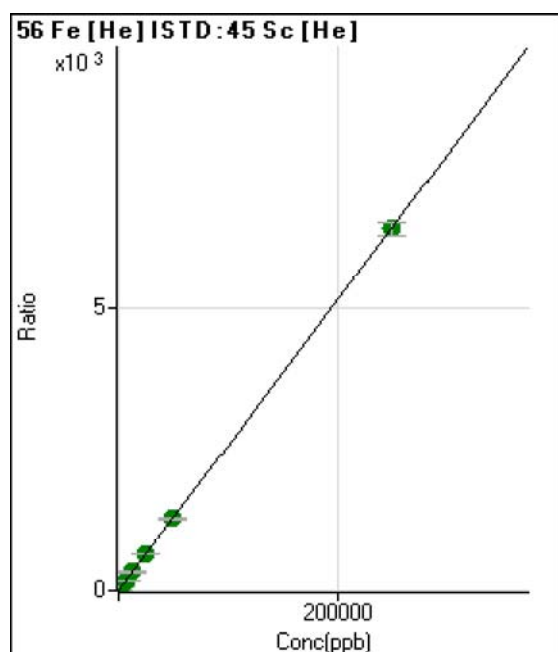
$$R = 0.9999$$

$$DL = 0.2281$$

$$BEC = 0.2052$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1214.91	0.0529	P	15.2
2	☐	5.000	4.715	4124.79	0.1741	P	3.7
3	☐	50.000	51.354	31432.27	1.3733	P	3.1
4	☐	2500.000	2594.320	1516703.10	66.7568	A	3.0
5	☐	6250.000	6368.118	3716418.43	163.7868	A	1.4
6	☐	12500.000	12611.792	7268470.24	324.3211	A	0.7
7	☐	25000.000	25364.773	13669182.36	652.2195	A	1.2
8	☐	50000.000	49788.826	26407137.40	1,280.198	A	1.0
9	☐	250000.00	249996.27	144593393.9	6,427.834	A	3.9

$$y = 0.0257 * x + 0.0529$$

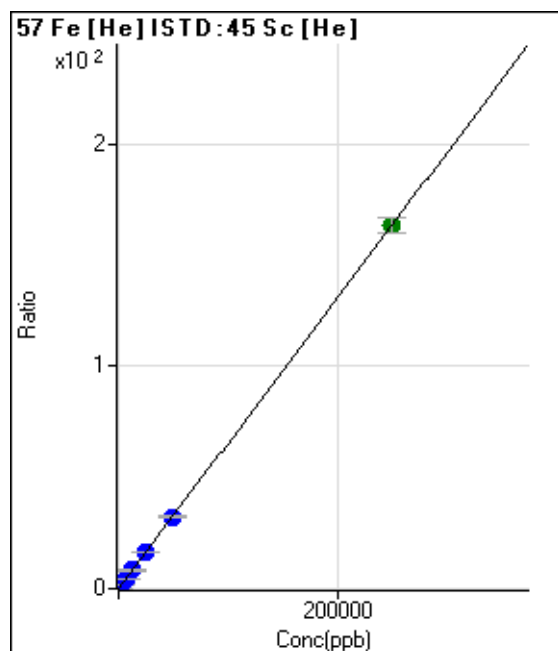
$$R = 1.0000$$

$$DL = 0.9379$$

$$BEC = 2.057$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	27.78	0.0012	P	86.6
2	☐	5.000	4.750	101.86	0.0043	P	21.6
3	☐	50.000	55.399	855.61	0.0374	P	2.8
4	☐	2500.000	2537.533	37651.41	1.6575	P	4.0
5	☐	6250.000	6265.981	92836.81	4.0912	P	0.2
6	☐	12500.000	12621.266	184650.25	8.2394	P	1.1
7	☐	25000.000	25318.355	346348.28	16.5272	P	1.9
8	☐	50000.000	49684.348	668961.78	32.4315	P	1.2
9	☐	250000.00	250024.45	3670939.20	163.1987	A	4.2

$$y = 6.5273E-004 * x + 0.0012$$

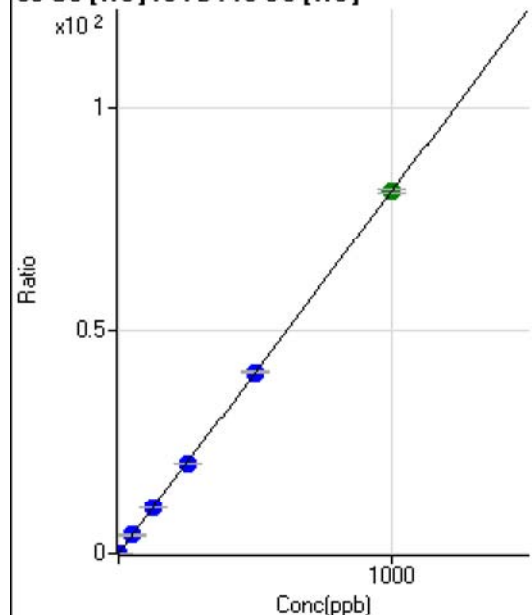
$$R = 1.0000$$

$$DL = 4.799$$

$$BEC = 1.848$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	70.00	0.0030	P	9.8
2	☐	0.100	0.095	254.45	0.0107	P	11.0
3	☐	1.000	1.021	1965.73	0.0859	P	6.2
4	☐	50.000	51.402	94854.60	4.1766	P	4.7
5	☐	125.000	125.907	232035.32	10.2258	P	0.7
6	☐	250.000	248.375	452032.98	20.1694	P	0.5
7	☐	500.000	500.595	851844.20	40.6479	P	1.7
8	☐	1000.000	999.925	1674726.69	81.1901	A	1.2
9	☐			23165.04	1.0294	P	2.2

$$y = 0.0812 * x + 0.0030$$

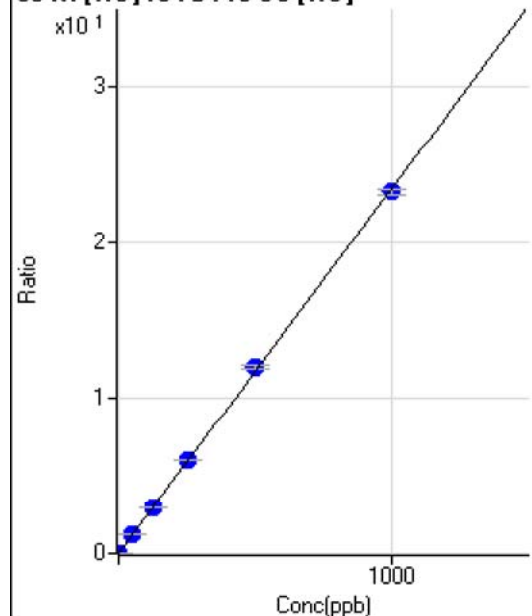
$$R = 1.0000$$

$$DL = 0.01098$$

$$BEC = 0.0373$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	237.78	0.0104	P	22.8
2	☐	0.100	0.040	267.79	0.0113	P	17.0
3	☐	1.000	1.188	875.60	0.0382	P	1.3
4	☐	50.000	51.993	27964.94	1.2309	P	3.3
5	☐	125.000	127.794	68311.14	3.0105	P	1.1
6	☐	250.000	255.913	134878.83	6.0182	P	0.4
7	☐	500.000	509.583	250930.94	11.9734	P	1.5
8	☐	1000.000	993.281	481185.38	23.3287	P	1.6
9	☐			19266.89	0.8565	P	4.4

$$y = 0.0235 * x + 0.0104$$

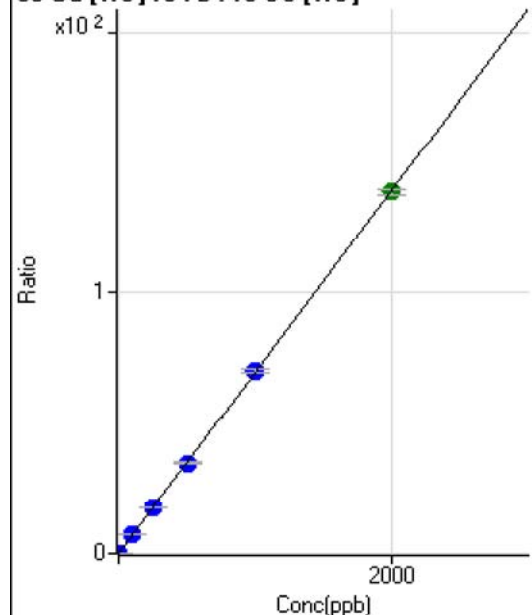
$$R = 0.9999$$

$$DL = 0.3023$$

$$BEC = 0.4411$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD: ⁴⁵Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	236.67	0.0102	P	19.4
2	☐	0.200	0.197	568.91	0.0240	P	9.5
3	☐	2.000	2.124	3618.32	0.1582	P	5.6
4	☐	100.000	102.772	162825.01	7.1670	P	3.2
5	☐	250.000	252.284	398893.90	17.5788	P	0.5
6	☐	500.000	501.265	782513.15	34.9173	P	1.1
7	☐	1000.000	1006.081	1468482.41	70.0716	P	1.7
8	☐	2000.000	1996.219	2867557.04	139.0228	A	1.4
9	☐			6986.31	0.3106	P	4.8

$$y = 0.0696 * x + 0.0102$$

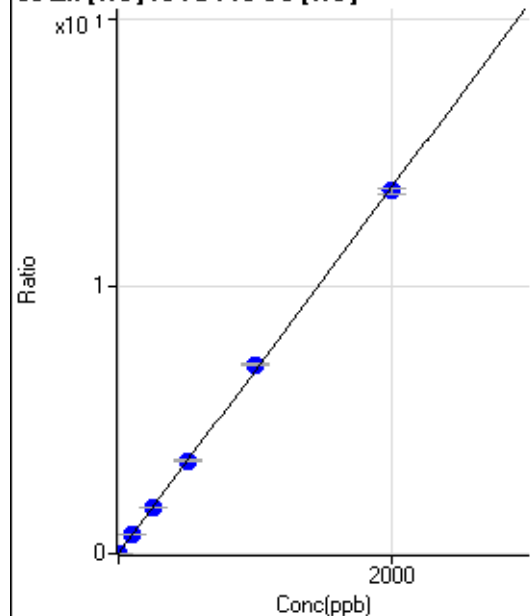
$$R = 1.0000$$

$$DL = 0.08548$$

$$BEC = 0.1471$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD: ⁴⁵Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	204.45	0.0089	P	7.4
2	☐	0.200	0.136	232.23	0.0098	P	12.2
3	☐	2.000	2.168	543.35	0.0237	P	2.6
4	☐	100.000	104.382	16449.94	0.7238	P	1.8
5	☐	250.000	253.396	39585.43	1.7445	P	1.8
6	☐	500.000	505.367	77775.35	3.4704	P	1.5
7	☐	1000.000	1032.116	148347.59	7.0784	P	1.4
8	☐	2000.000	1981.956	280201.91	13.5845	P	1.4
9	☐			2096.86	0.0933	P	5.8

$$y = 0.0068 * x + 0.0089$$

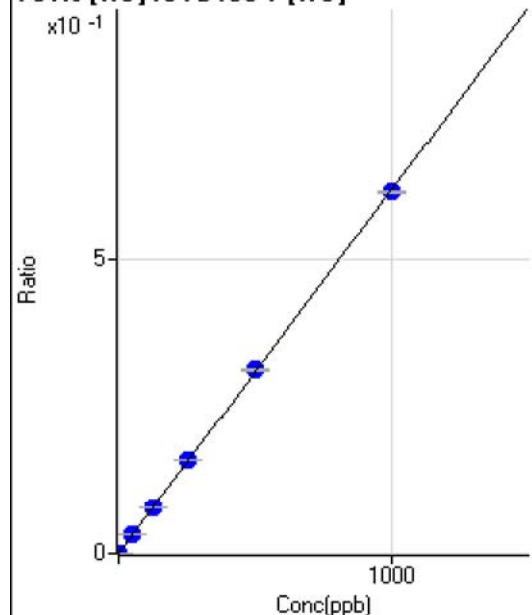
$$R = 0.9998$$

$$DL = 0.2872$$

$$BEC = 1.295$$

Weight: <None>

Min Conc: 0

75 As [He] ISTD:89 Y [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1.85	0.0000	P	99.0
2	☐	0.100	0.085	11.11	0.0001	P	32.8
3	☐	1.000	0.918	100.62	0.0006	P	6.8
4	☐	50.000	51.427	5472.12	0.0319	P	3.8
5	☐	125.000	126.613	13441.18	0.0786	P	0.4
6	☐	250.000	257.363	26987.47	0.1598	P	0.6
7	☐	500.000	504.074	50696.75	0.3129	P	0.9
8	☐	1000.000	995.849	99098.09	0.6181	P	0.8
9	☐			169.14	0.0010	P	24.0

$$y = 6.2068\text{E-}004 * x + 1.0764\text{E-}005$$

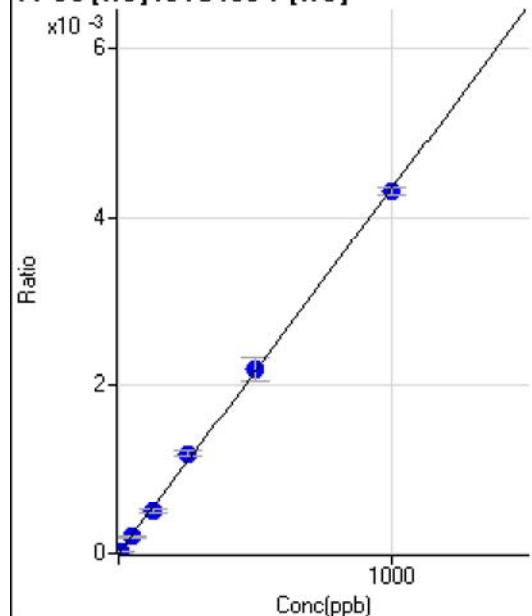
$$R = 1.0000$$

$$DL = 0.05152$$

$$BEC = 0.01734$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	1.453	1.11	0.0000	P	173.
3	☐	5.000	4.423	3.33	0.0000	P	1.3
4	☐	50.000	44.854	33.33	0.0002	P	12.3
5	☐	125.000	115.159	85.56	0.0005	P	8.4
6	☐	250.000	275.629	202.23	0.0012	P	5.8
7	☐	500.000	505.222	355.57	0.0022	P	11.5
8	☐	1000.000	992.472	691.14	0.0043	P	2.0
9	☐			1.11	0.0000	P	173.

$$y = 4.3429\text{E-}006 * x + 0.0000\text{E+}000$$

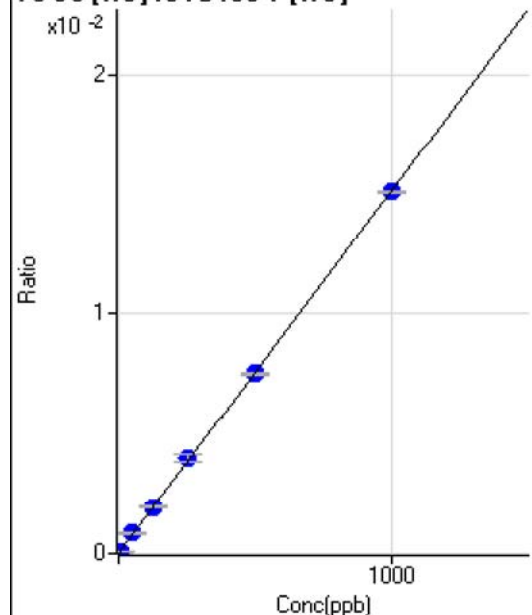
$$R = 0.9995$$

$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1.85	0.0000	P	98.7
2	☐	0.500	0.462	3.09	0.0000	P	92.0
3	☐	5.000	6.578	19.14	0.0001	P	13.6
4	☐	50.000	56.674	148.77	0.0009	P	11.5
5	☐	125.000	128.040	333.34	0.0019	P	2.9
6	☐	250.000	262.507	673.48	0.0040	P	7.4
7	☐	500.000	495.271	1216.73	0.0075	P	1.5
8	☐	1000.000	998.516	2425.55	0.0151	P	0.4
9	☐			3.70	0.0000	P	52.4

$$y = 1.5140\text{E-}005 * x + 1.0685\text{E-}005$$

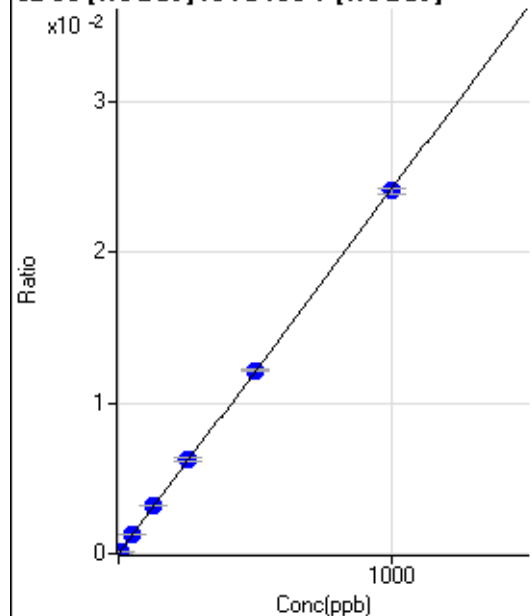
$$R = 0.9999$$

$$DL = 2.089$$

$$BEC = 0.7058$$

Weight: <None>

Min Conc: 0

82 Se [NoGas] ISTD:89 Y [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	14.07	0.0000	P	160.
2	☐	0.500	0.639	102.01	0.0000	P	46.5
3	☐	5.000	5.284	718.48	0.0001	P	11.9
4	☐	50.000	51.669	7089.84	0.0013	P	3.4
5	☐	125.000	131.545	17765.75	0.0032	P	1.6
6	☐	250.000	258.867	34769.74	0.0063	P	4.4
7	☐	500.000	502.546	67810.31	0.0121	P	1.3
8	☐	1000.000	995.607	132688.51	0.0240	P	1.3
9	☐			85.35	0.0000	P	108.

$$y = 2.4146\text{E-}005 * x + 2.5970\text{E-}006$$

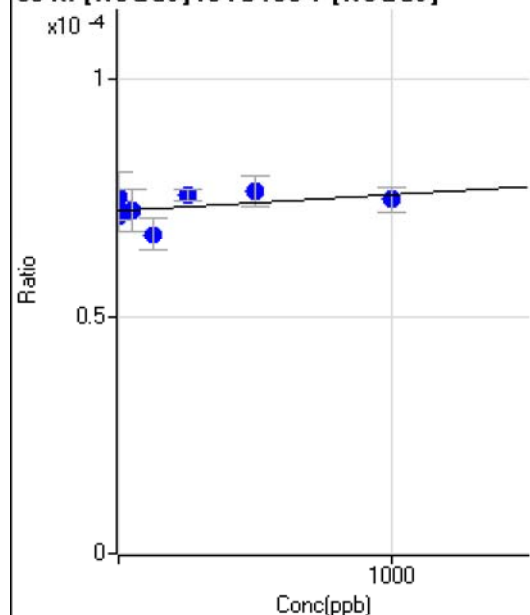
$$R = 0.9999$$

$$DL = 0.5166$$

$$BEC = 0.1076$$

Weight: <None>

Min Conc: 0

83 Kr [NoGas] ISTD:89 Y [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	393.35	0.0001	P	1.1
2	☐	0.100	-355.558	403.35	0.0001	P	8.9
3	☐	1.000	862.643	417.79	0.0001	P	13.4
4	☐	50.000	29.300	412.24	0.0001	P	12.6
5	☐	125.000	-1508.179	376.68	0.0001	P	10.3
6	☐	250.000	922.234	421.13	0.0001	P	3.2
7	☐	500.000	1169.538	427.79	0.0001	P	8.6
8	☐	1000.000	701.529	413.35	0.0001	P	6.8
9	☐			453.35	0.0001	P	21.3

$$y = 3.4252\text{E-}009 * x + 7.2502\text{E-}005$$

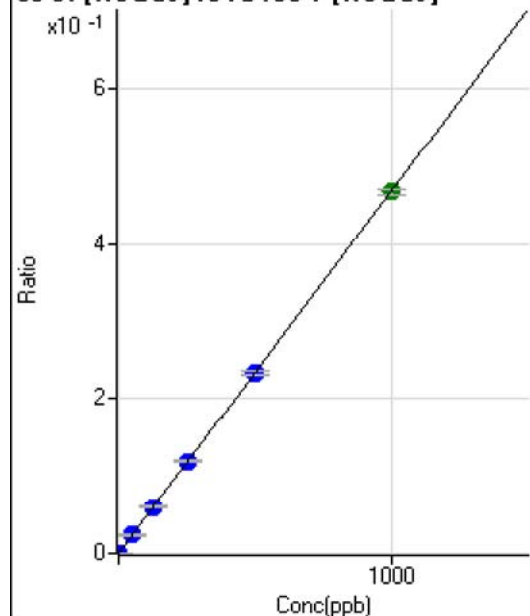
$$R = 0.4107$$

$$DL = 669.6$$

$$BEC = 2.117\text{E+}04$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	755.61	0.0001	P	9.4
2	☐	0.100	0.048	916.74	0.0002	P	11.1
3	☐	1.000	1.031	3436.74	0.0006	P	9.2
4	☐	50.000	50.180	134291.01	0.0237	P	1.5
5	☐	125.000	128.006	336303.39	0.0602	P	2.3
6	☐	250.000	255.981	668578.86	0.1202	P	3.1
7	☐	500.000	499.164	1308816.84	0.2343	P	1.9
8	☐	1000.000	998.538	2585670.22	0.4685	A	1.4
9	☐			12750.92	0.0023	P	1.6

$$y = 4.6906\text{E-}004 * x + 1.3929\text{E-}004$$

$$R = 1.0000$$

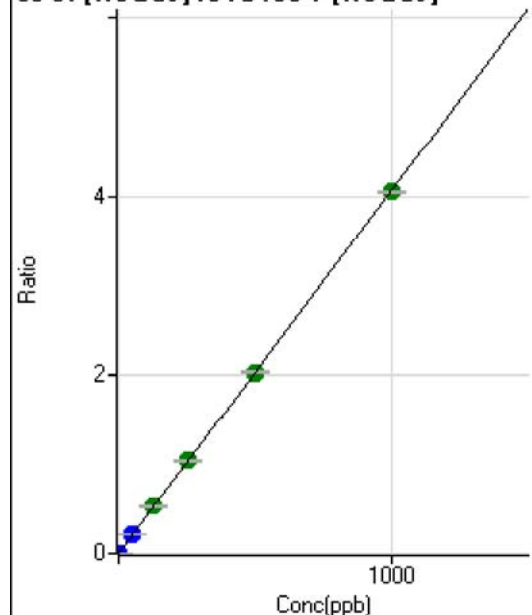
$$DL = 0.08393$$

$$BEC = 0.297$$

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	266.68	0.0000	P	5.6
2	☐	0.100	0.093	2422.55	0.0004	P	3.7
3	☐	1.000	1.033	23490.59	0.0042	P	1.1
4	☐	50.000	50.789	1171442.75	0.2065	P	1.5
5	☐	125.000	130.062	2955202.13	0.5288	A	2.2
6	☐	250.000	257.431	5821512.80	1.0467	A	3.0
7	☐	500.000	499.562	11347872.91	2.0311	A	1.3
8	☐	1000.000	997.689	22387385.22	4.0563	A	0.6
9	☐			102229.08	0.0184	P	0.6

$$y = 0.0041 * x + 4.9158E-005$$

$$R = 1.0000$$

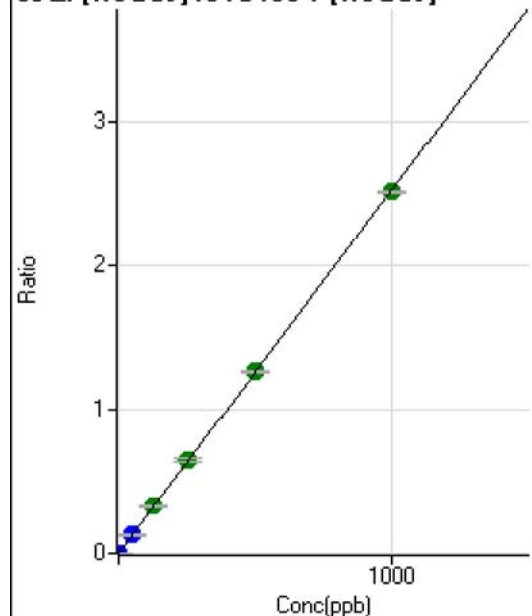
$$DL = 0.002027$$

$$BEC = 0.01209$$

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	494.48	0.0001	P	19.6
2	☐	0.100	0.082	1683.52	0.0003	P	7.3
3	☐	1.000	0.912	13231.93	0.0024	P	2.3
4	☐	50.000	50.255	720170.15	0.1270	P	1.8
5	☐	125.000	130.870	1846891.58	0.3305	A	2.6
6	☐	250.000	258.889	3635662.36	0.6537	A	3.6
7	☐	500.000	499.768	7050259.96	1.2619	A	1.8
8	☐	1000.000	997.147	13895551.35	2.5177	A	0.9
9	☐			3606.19	0.0007	P	2.1

$$y = 0.0025 * x + 9.1124E-005$$

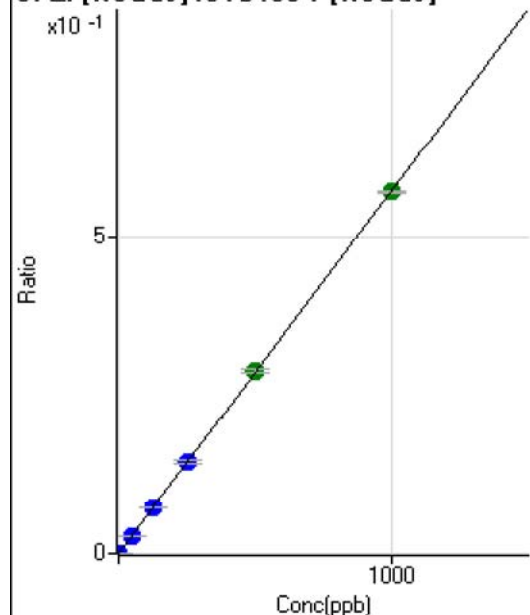
$$R = 0.9999$$

$$DL = 0.02126$$

$$BEC = 0.03609$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	94.45	0.0000	P	28.6
2	☐	0.100	0.101	425.03	0.0001	P	10.3
3	☐	1.000	0.917	2994.92	0.0005	P	1.8
4	☐	50.000	49.429	160437.61	0.0283	P	2.7
5	☐	125.000	126.204	403429.79	0.0722	P	2.9
6	☐	250.000	253.815	807390.34	0.1452	P	3.7
7	☐	500.000	500.558	1599513.83	0.2863	A	2.0
8	☐	1000.000	998.645	3152448.38	0.5712	A	0.9
9	☐			736.16	0.0001	P	2.7

$$y = 5.7195\text{E-}004 * x + 1.7415\text{E-}005$$

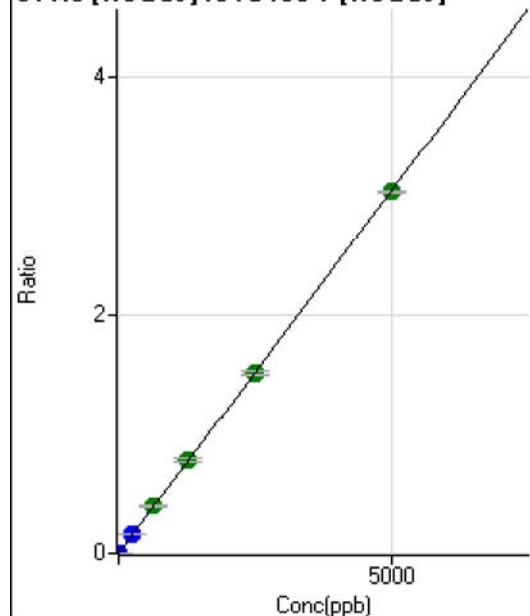
$$R = 1.0000$$

$$DL = 0.02609$$

$$BEC = 0.03045$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	213.90	0.0000	P	11.9
2	☐	0.500	0.509	1978.03	0.0003	P	2.6
3	☐	5.000	4.936	16816.68	0.0030	P	5.8
4	☐	250.000	253.015	874336.44	0.1542	P	1.2
5	☐	625.000	652.200	2220103.22	0.3973	A	2.4
6	☐	1250.000	1290.777	4372528.26	0.7863	A	3.6
7	☐	2500.000	2492.521	8481496.63	1.5182	A	2.3
8	☐	5000.000	4989.995	16774997.77	3.0395	A	0.8
9	☐			20313.20	0.0037	P	5.6

$$y = 6.0911\text{E-}004 * x + 3.9424\text{E-}005$$

$$R = 1.0000$$

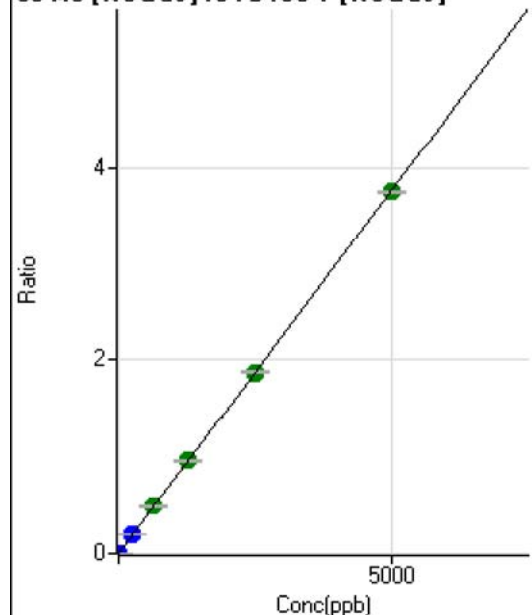
$$DL = 0.02304$$

$$BEC = 0.06472$$

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	100.01	0.0000	P	30.1
2	☐	0.500	0.473	2114.15	0.0004	P	3.9
3	☐	5.000	4.942	20605.36	0.0037	P	3.6
4	☐	250.000	252.876	1077291.67	0.1899	P	1.1
5	☐	625.000	649.959	2727554.70	0.4881	A	3.0
6	☐	1250.000	1283.538	5360855.28	0.9640	A	3.6
7	☐	2500.000	2498.201	10482091.81	1.8762	A	1.6
8	☐	5000.000	4989.251	20680260.70	3.7470	A	0.8
9	☐			32350.76	0.0058	P	0.6

$$y = 7.5102\text{E-}004 * x + 1.8435\text{E-}005$$

$$R = 1.0000$$

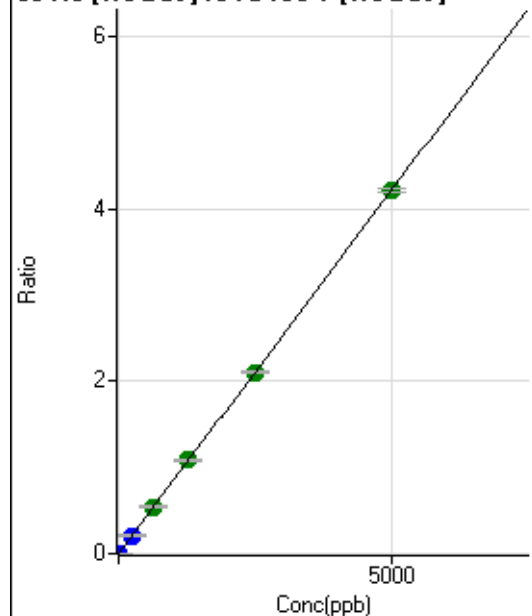
$$DL = 0.02217$$

$$BEC = 0.02455$$

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	152.78	0.0000	P	22.1
2	☐	0.500	0.496	2525.34	0.0004	P	4.1
3	☐	5.000	4.995	23421.01	0.0042	P	4.1
4	☐	250.000	250.404	1197651.42	0.2112	P	1.2
5	☐	625.000	645.506	3041647.53	0.5443	A	1.9
6	☐	1250.000	1283.550	6019310.25	1.0822	A	3.0
7	☐	2500.000	2493.736	11747589.15	2.1026	A	1.2
8	☐	5000.000	4992.161	23230422.57	4.2091	A	0.9
9	☐			38024.04	0.0069	P	2.8

$$y = 8.4314\text{E-}004 * x + 2.8163\text{E-}005$$

$$R = 1.0000$$

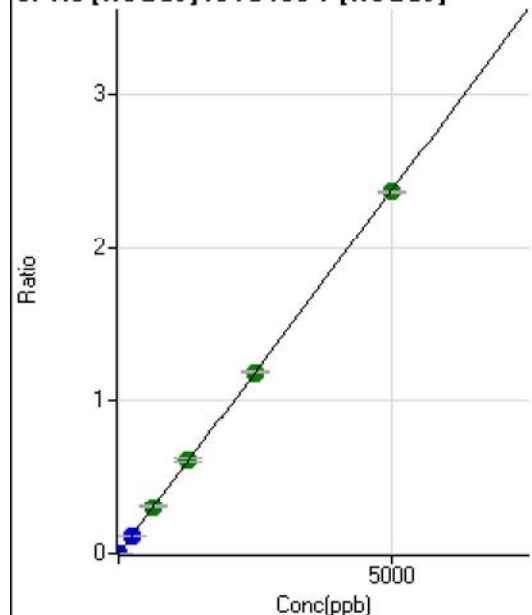
$$DL = 0.02217$$

$$BEC = 0.0334$$

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	88.89	0.0000	P	14.5
2	☐	0.500	0.487	1400.14	0.0002	P	9.2
3	☐	5.000	5.004	13209.78	0.0024	P	3.6
4	☐	250.000	248.588	669197.04	0.1180	P	1.5
5	☐	625.000	644.127	1708273.76	0.3057	A	2.3
6	☐	1250.000	1290.718	3406541.44	0.6125	A	3.6
7	☐	2500.000	2498.441	6624541.64	1.1857	A	1.3
8	☐	5000.000	4988.280	13065151.42	2.3673	A	0.8
9	☐			20040.54	0.0036	P	2.8

$$y = 4.7457\text{E-}004 * x + 1.6388\text{E-}005$$

$$R = 1.0000$$

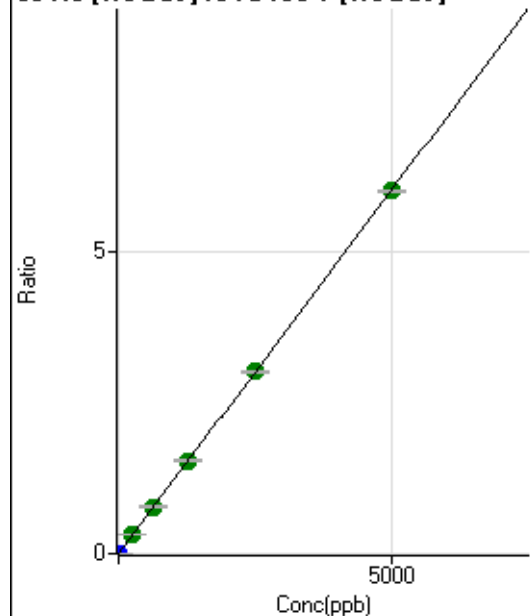
$$DL = 0.01504$$

$$BEC = 0.03453$$

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	172.23	0.0000	P	21.9
2	☐	0.500	0.472	3389.47	0.0006	P	1.4
3	☐	5.000	5.106	34057.70	0.0062	P	4.5
4	☐	250.000	253.292	1726182.63	0.3043	A	1.4
5	☐	625.000	642.834	4316162.90	0.7723	A	1.9
6	☐	1250.000	1276.785	8531703.92	1.5340	A	3.1
7	☐	2500.000	2501.541	16791225.03	3.0054	A	1.4
8	☐	5000.000	4990.139	33088152.82	5.9953	A	0.9
9	☐			52067.66	0.0094	P	2.0

$$y = 0.0012 * x + 3.1751\text{E-}005$$

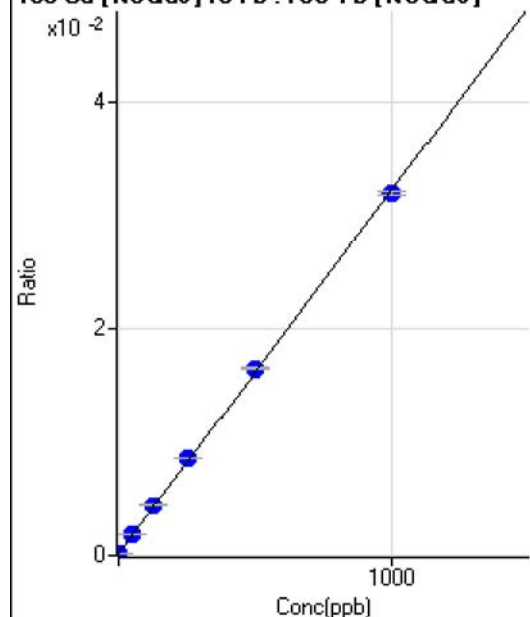
$$R = 1.0000$$

$$DL = 0.01738$$

$$BEC = 0.02643$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1133.43	0.0002	P	15.6
2	☐	0.100	0.380	1239.01	0.0002	P	1.1
3	☐	1.000	0.873	1325.14	0.0002	P	1.8
4	☐	50.000	54.111	13743.77	0.0019	P	1.0
5	☐	125.000	133.317	31897.01	0.0044	P	2.9
6	☐	250.000	264.458	61388.06	0.0087	P	1.7
7	☐	500.000	507.796	119882.28	0.0165	P	1.0
8	☐	1000.000	991.242	235348.62	0.0320	P	1.0
9	☐			1236.22	0.0002	P	15.1

$$y = 3.2151\text{E-}005 * x + 1.6159\text{E-}004$$

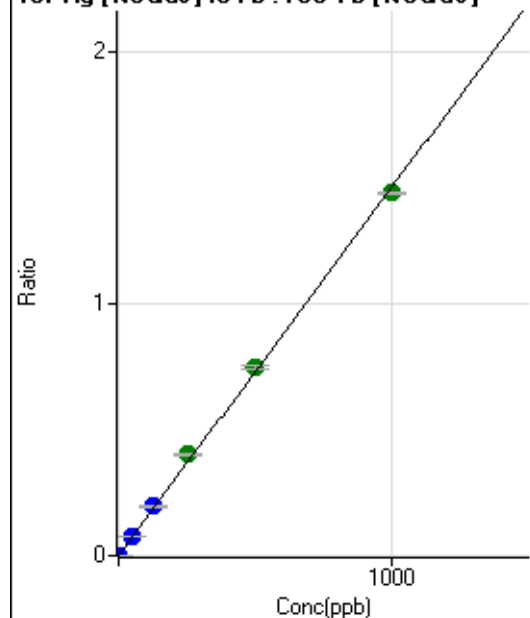
$$R = 0.9998$$

$$DL = 2.359$$

$$BEC = 5.026$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	44.45	0.0000	P	11.2
2	☐	0.100	0.106	1147.33	0.0002	P	5.9
3	☐	1.000	1.076	11010.49	0.0016	P	7.9
4	☐	50.000	53.427	564303.63	0.0781	P	1.7
5	☐	125.000	133.760	1401694.88	0.1955	P	2.4
6	☐	250.000	274.800	2844133.05	0.4015	A	3.0
7	☐	500.000	513.160	5451539.31	0.7498	A	1.5
8	☐	1000.000	985.954	10585241.38	1.4406	A	0.7
9	☐			1139.00	0.0002	P	7.8

$$y = 0.0015 * x + 6.3354\text{E-}006$$

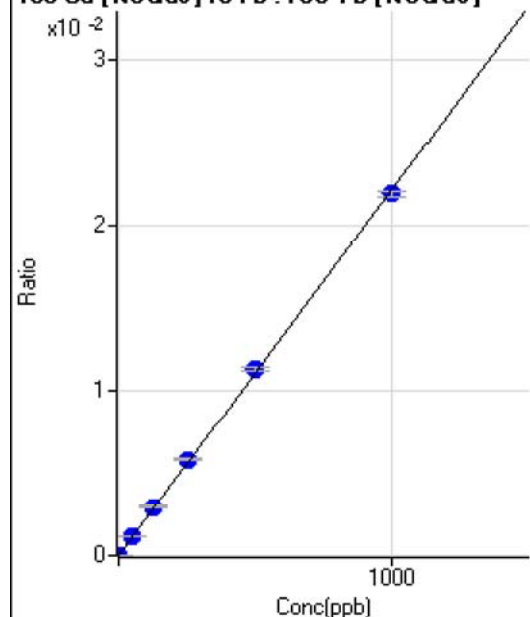
$$R = 0.9995$$

$$DL = 0.001452$$

$$BEC = 0.004336$$

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	4.17	0.0000	P	100.
2	☐	0.100	0.175	31.95	0.0000	P	41.5
3	☐	1.000	1.127	179.17	0.0000	P	10.2
4	☐	50.000	53.411	8557.07	0.0012	P	1.0
5	☐	125.000	132.128	20988.85	0.0029	P	3.0
6	☐	250.000	264.600	41514.06	0.0059	P	3.0
7	☐	500.000	507.922	81792.37	0.0113	P	1.9
8	☐	1000.000	991.327	161320.38	0.0220	P	1.4
9	☐			51.39	0.0000	P	49.6

$$y = 2.2148E-005 * x + 5.9542E-007$$

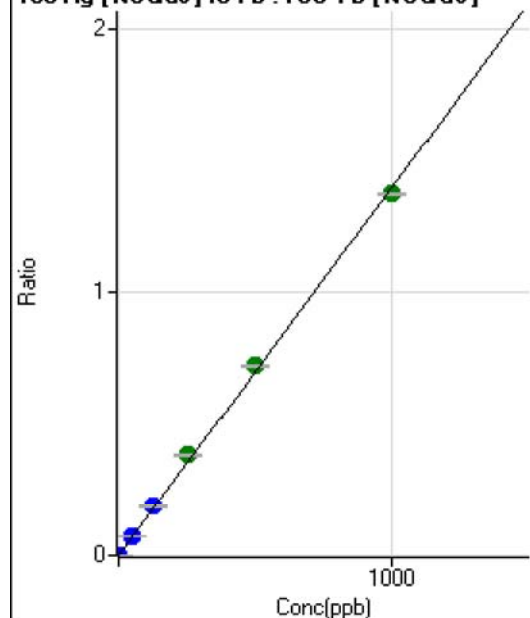
$$R = 0.9998$$

$$DL = 0.0807$$

$$BEC = 0.02688$$

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	27.78	0.0000	P	62.6
2	☐	0.100	0.101	1027.86	0.0001	P	8.4
3	☐	1.000	1.071	10443.41	0.0015	P	9.1
4	☐	50.000	52.880	533496.67	0.0738	P	1.4
5	☐	125.000	133.351	1334741.15	0.1861	P	2.5
6	☐	250.000	274.552	2713956.33	0.3832	A	3.4
7	☐	500.000	514.672	5222666.96	0.7183	A	1.1
8	☐	1000.000	985.338	10104328.26	1.3752	A	0.7
9	☐			1191.78	0.0002	P	1.3

$$y = 0.0014 * x + 3.9641E-006$$

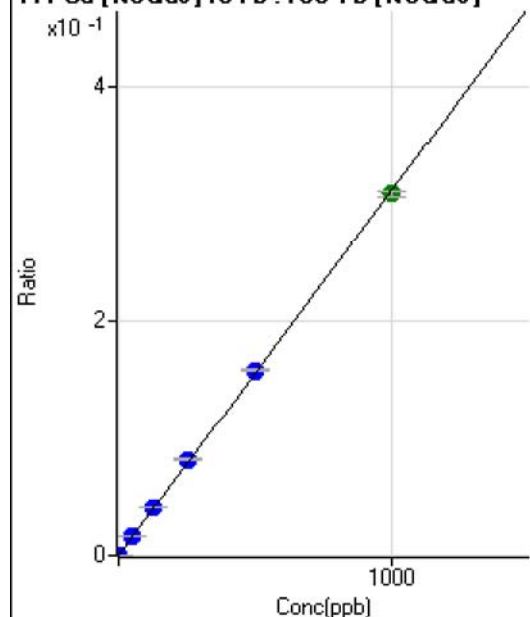
$$R = 0.9995$$

$$DL = 0.005332$$

$$BEC = 0.00284$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	800.21	0.0001	P	15.8
2	☐	0.100	0.123	1085.24	0.0002	P	7.0
3	☐	1.000	1.015	3002.41	0.0004	P	2.3
4	☐	50.000	52.517	119009.90	0.0165	P	1.3
5	☐	125.000	130.711	292642.30	0.0408	P	3.0
6	☐	250.000	264.886	584982.88	0.0826	P	2.7
7	☐	500.000	506.193	1146640.30	0.1577	P	1.4
8	☐	1000.000	992.342	2270803.56	0.3091	A	1.3
9	☐			1221.06	0.0002	P	12.8

$$y = 3.1133\text{E-}004 * x + 1.1408\text{E-}004$$

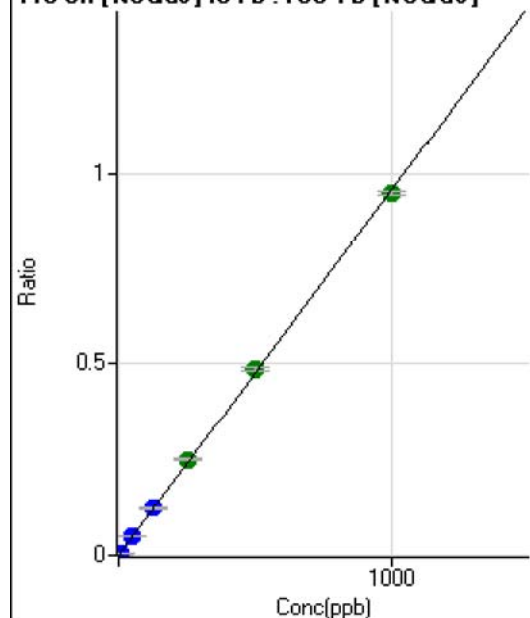
$$R = 0.9998$$

$$DL = 0.1738$$

$$BEC = 0.3664$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	883.41	0.0001	P	10.7
2	☐	0.500	0.481	4178.65	0.0006	P	5.9
3	☐	5.000	5.067	34665.36	0.0050	P	7.4
4	☐	50.000	51.467	356728.53	0.0494	P	1.5
5	☐	125.000	129.125	886586.13	0.1236	P	2.7
6	☐	250.000	264.631	1793764.86	0.2532	A	3.0
7	☐	500.000	509.877	3546478.94	0.4878	A	1.9
8	☐	1000.000	990.815	6963977.67	0.9478	A	1.1
9	☐			9356.43	0.0013	P	1.7

$$y = 9.5647\text{E-}004 * x + 1.2585\text{E-}004$$

$$R = 0.9998$$

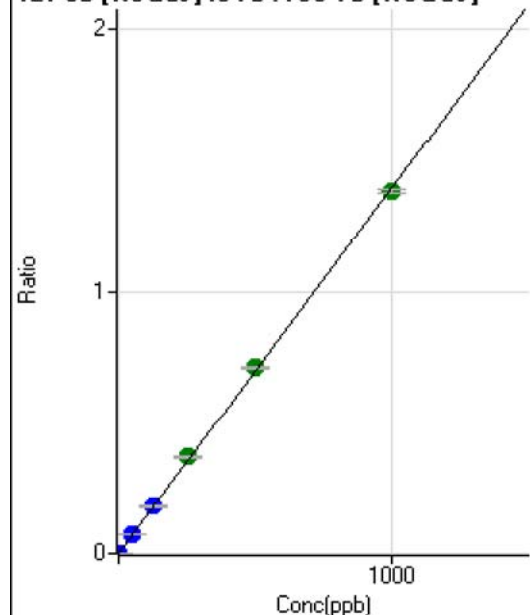
$$DL = 0.0422$$

$$BEC = 0.1316$$

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	197.23	0.0000	P	12.5
2	☐	0.200	0.206	2253.09	0.0003	P	2.6
3	☐	2.000	1.988	19545.64	0.0028	P	5.8
4	☐	50.000	50.623	510869.64	0.0707	P	1.5
5	☐	125.000	128.807	1289202.67	0.1798	P	3.1
6	☐	250.000	265.988	2629497.58	0.3712	A	3.0
7	☐	500.000	507.562	5150253.67	0.7084	A	1.5
8	☐	1000.000	991.715	10169101.88	1.3840	A	1.0
9	☐			27159.20	0.0038	P	3.4

$$y = 0.0014 * x + 2.8097E-005$$

$$R = 0.9998$$

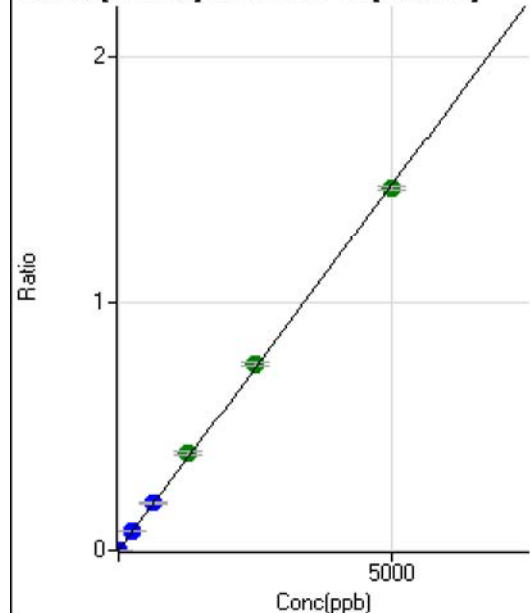
$$DL = 0.007535$$

$$BEC = 0.02013$$

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	50.00	0.0000	P	33.0
2	☐	1.000	1.007	2175.27	0.0003	P	11.4
3	☐	10.000	10.434	21576.62	0.0031	P	6.4
4	☐	250.000	257.339	550348.75	0.0761	P	1.7
5	☐	625.000	649.806	1378624.35	0.1922	P	2.9
6	☐	1250.000	1334.090	2795414.30	0.3947	A	3.5
7	☐	2500.000	2538.872	5460765.70	0.7511	A	2.0
8	☐	5000.000	4956.073	10773152.24	1.4662	A	1.0
9	☐			2972.69	0.0004	P	3.1

$$y = 2.9585E-004 * x + 7.1210E-006$$

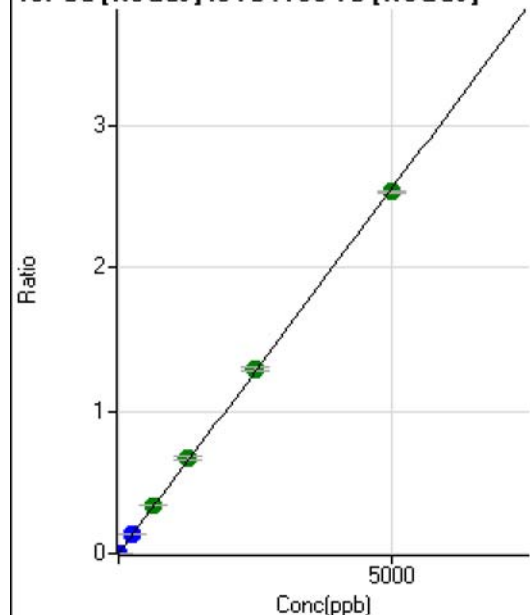
$$R = 0.9998$$

$$DL = 0.02385$$

$$BEC = 0.02407$$

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	63.89	0.0000	P	7.2
2	☐	1.000	1.036	3834.06	0.0005	P	4.7
3	☐	10.000	10.421	37156.01	0.0053	P	5.7
4	☐	250.000	257.630	950354.26	0.1315	P	1.6
5	☐	625.000	659.289	2413091.42	0.3364	A	2.1
6	☐	1250.000	1322.213	4778718.12	0.6747	A	3.7
7	☐	2500.000	2524.844	9367844.83	1.2884	A	1.5
8	☐	5000.000	4964.856	18615765.35	2.5336	A	0.8
9	☐			5284.66	0.0007	P	0.9

$$y = 5.1030\text{E-}004 * x + 9.1037\text{E-}006$$

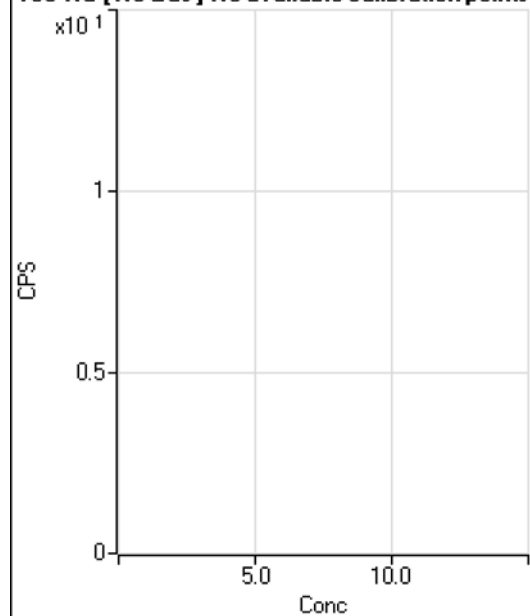
$$R = 0.9999$$

$$DL = 0.003867$$

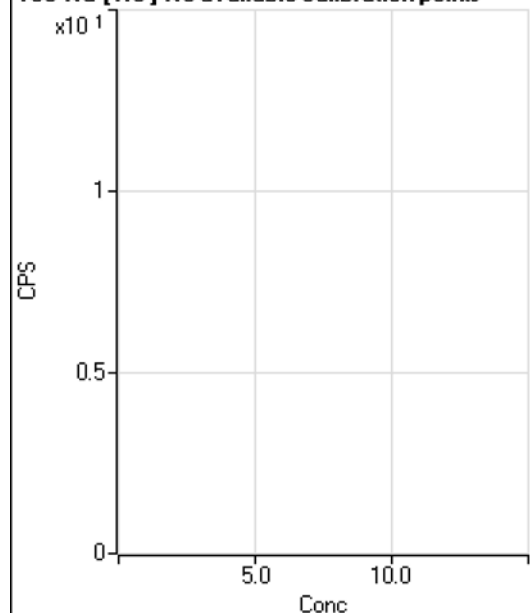
$$BEC = 0.01784$$

Weight: <None>

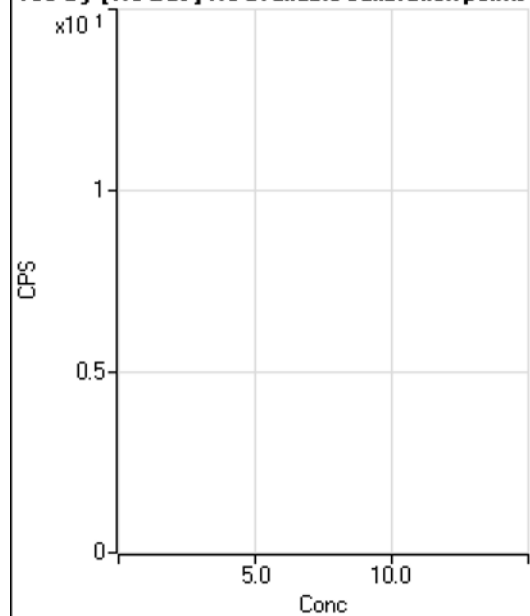
Min Conc: 0

150 Nd [No Gas] No available calibration points

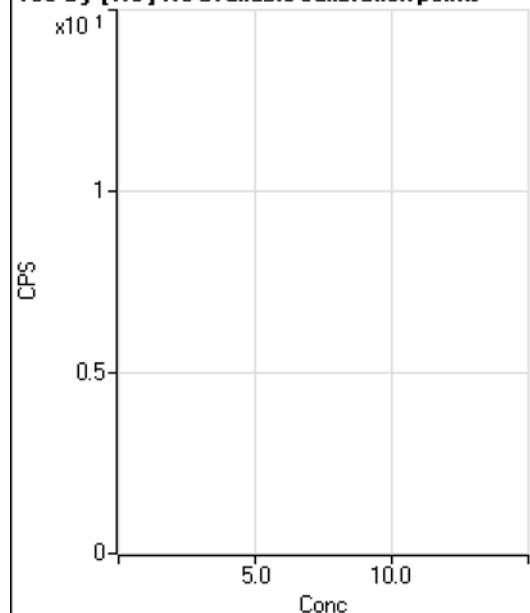
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	43.3
2	☐			6.67		P	100.
3	☐			4.45		P	86.6
4	☐			35.56		P	28.6
5	☐			82.22		P	28.5
6	☐			117.78		P	41.7
7	☐			231.12		P	11.7
8	☐			415.58		P	13.5
9	☐			115.56		P	24.0

150 Nd [He] No available calibration points

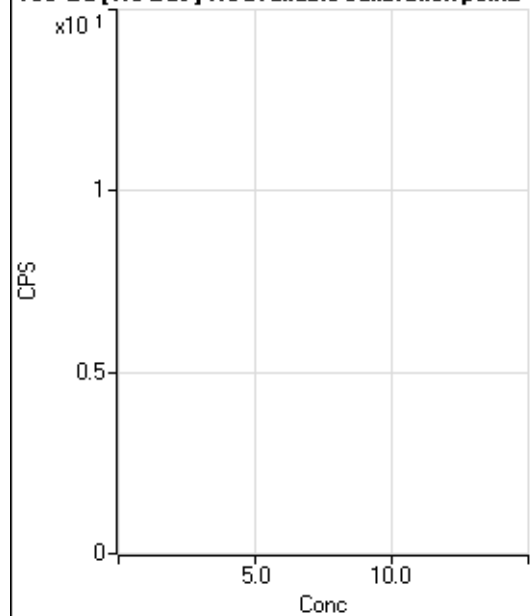
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐			0.00		P	
3	☐			0.00		P	
4	☐			1.11		P	173.
5	☐			0.00		P	
6	☐			1.11		P	173.
7	☐			4.44		P	43.4
8	☐			7.78		P	24.7
9	☐			16.66		P	91.7

156 Dy [No Gas] No available calibration points

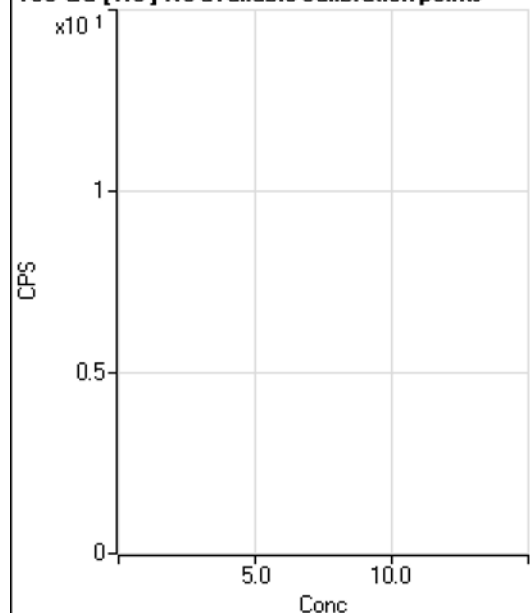
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			36.11		P	48.0
2	☐			38.89		P	24.7
3	☐			30.56		P	31.5
4	☐			50.00		P	16.7
5	☐			38.89		P	24.7
6	☐			52.78		P	48.2
7	☐			97.23		P	44.0
8	☐			138.90		P	21.1
9	☐			125.01		P	24.0

156 Dy [He] No available calibration points

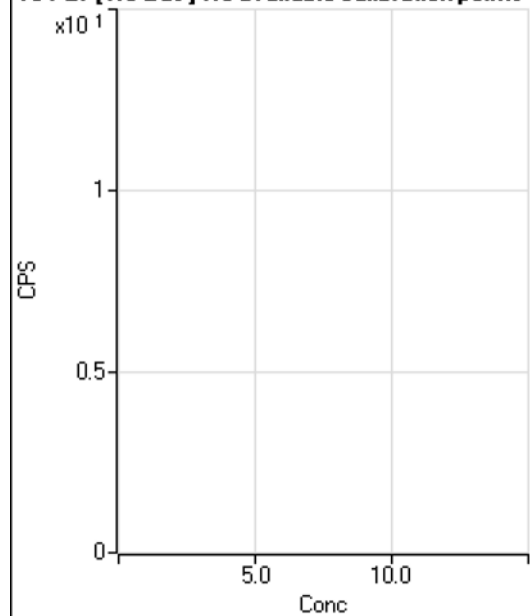
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			0.00		P	
2	☐			1.11		P	173.
3	☐			0.00		P	
4	☐			1.11		P	173.
5	☐			0.00		P	
6	☐			2.22		P	173.
7	☐			4.44		P	43.4
8	☐			10.00		P	115.
9	☐			14.44		P	53.3

160 Gd [No Gas] No available calibration poin_

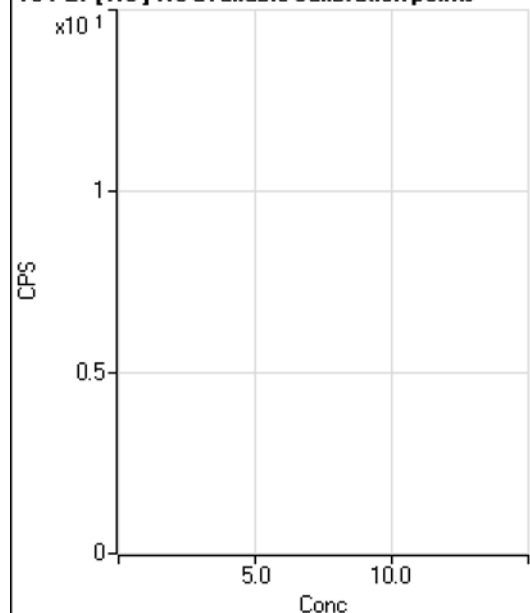
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			69.44		P	48.5
2	☐			38.89		P	32.7
3	☐			63.89		P	66.9
4	☐			47.22		P	36.7
5	☐			38.89		P	61.9
6	☐			50.01		P	28.9
7	☐			83.34		P	45.8
8	☐			102.78		P	47.5
9	☐			125.01		P	24.0

160 Gd [He] No available calibration points

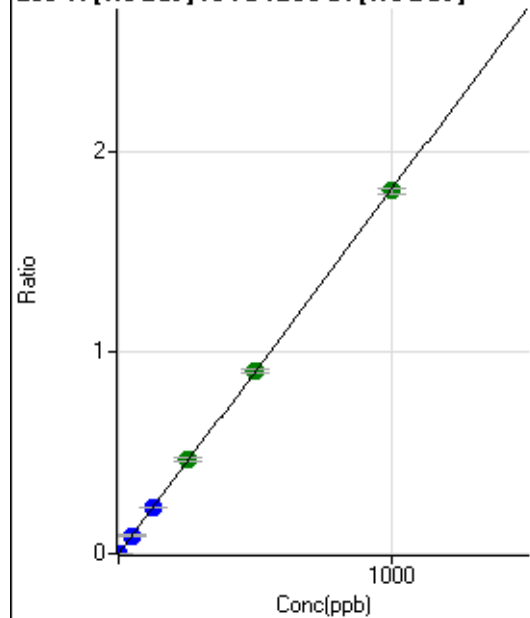
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐			6.67		P	100.
3	☐			5.55		P	69.3
4	☐			3.33		P	100.
5	☐			4.44		P	43.4
6	☐			8.89		P	43.3
7	☐			11.11		P	69.3
8	☐			16.67		P	72.1
9	☐			25.56		P	49.4

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			19.44		P	99.0
2	☐			22.22		P	21.6
3	☐			52.78		P	59.8
4	☐			22.22		P	78.1
5	☐			30.56		P	83.3
6	☐			16.67		P	86.6
7	☐			36.11		P	26.7
8	☐			44.44		P	60.3
9	☐			61.12		P	7.9

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			4.44		P	173.
2	☐			3.33		P	100.
3	☐			12.22		P	31.5
4	☐			3.33		P	100.
5	☐			4.44		P	114.
6	☐			4.44		P	114.
7	☐			7.78		P	49.5
8	☐			6.67		P	50.0
9	☐			7.78		P	65.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	105.56	0.0000	P	20.4
2	☐	0.100	0.094	925.09	0.0002	P	12.1
3	☐	1.000	0.996	8494.89	0.0018	P	8.6
4	☐	50.000	49.725	439521.30	0.0901	P	2.6
5	☐	125.000	127.103	1104084.37	0.2302	P	2.3
6	☐	250.000	260.254	2246513.37	0.4714	A	3.8
7	☐	500.000	501.751	4458050.36	0.9088	A	1.2
8	☐	1000.000	996.312	8884745.77	1.8046	A	1.5
9	☐			4245.38	0.0009	P	4.4

$$y = 0.0018 * x + 2.2735E-005$$

$$R = 0.9999$$

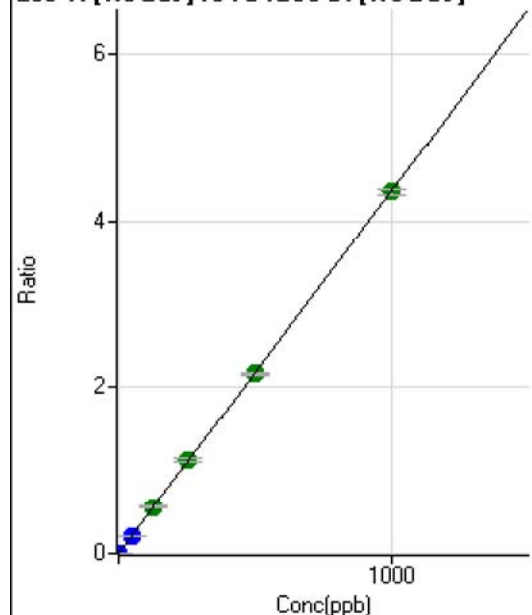
$$DL = 0.007679$$

$$BEC = 0.01255$$

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	238.90	0.0001	P	2.7
2	☐	0.100	0.093	2183.63	0.0005	P	5.1
3	☐	1.000	0.974	19994.33	0.0043	P	5.7
4	☐	50.000	49.652	1055846.69	0.2164	P	2.5
5	☐	125.000	129.564	2707337.39	0.5646	A	2.6
6	☐	250.000	259.040	5380102.38	1.1288	A	3.2
7	☐	500.000	496.617	10614830.97	2.1640	A	1.4
8	☐	1000.000	998.879	21428864.89	4.3526	A	1.6
9	☐			10129.51	0.0023	P	6.6

$$y = 0.0044 * x + 5.1424E-005$$

$$R = 0.9999$$

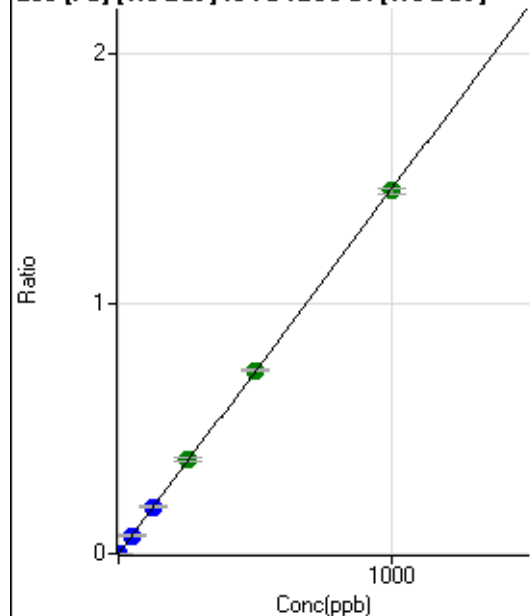
$$DL = 0.0009405$$

$$BEC = 0.0118$$

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	253.71	0.0001	P	4.3
2	☐	0.100	0.108	1014.89	0.0002	P	8.6
3	☐	1.000	1.053	7404.27	0.0016	P	7.2
4	☐	50.000	50.048	356541.49	0.0731	P	2.5
5	☐	125.000	127.636	893240.51	0.1863	P	2.7
6	☐	250.000	258.662	1798956.83	0.3775	A	3.5
7	☐	500.000	503.645	3604879.68	0.7349	A	1.5
8	☐	1000.000	995.680	7152556.30	1.4528	A	1.8
9	☐			7042.93	0.0016	P	2.5

$$y = 0.0015 * x + 5.4593E-005$$

$$R = 0.9999$$

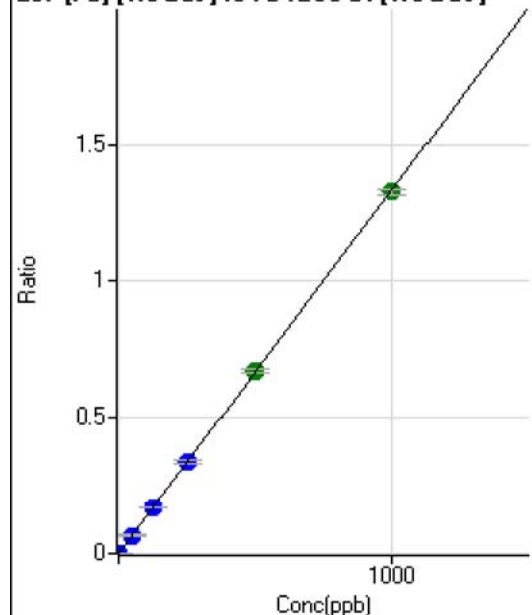
$$DL = 0.004848$$

$$BEC = 0.03742$$

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	218.53	0.0000	P	30.6
2	☐	0.100	0.101	864.87	0.0002	P	2.2
3	☐	1.000	1.037	6638.96	0.0014	P	7.0
4	☐	50.000	49.796	323720.21	0.0663	P	2.1
5	☐	125.000	126.651	808841.72	0.1687	P	2.3
6	☐	250.000	254.380	1614178.45	0.3387	P	4.0
7	☐	500.000	503.903	3290995.68	0.6710	A	2.0
8	☐	1000.000	996.757	6533880.29	1.3272	A	1.7
9	☐			6198.01	0.0014	P	3.9

$$y = 0.0013 * x + 4.7076E-005$$

$$R = 1.0000$$

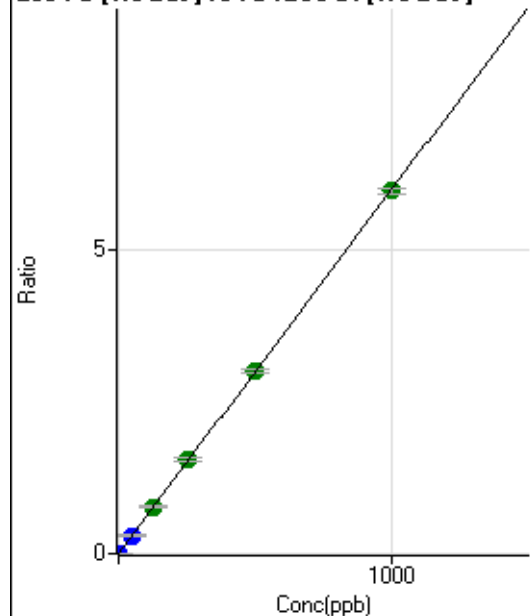
$$DL = 0.03247$$

$$BEC = 0.03536$$

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	1046.35	0.0002	P	10.7
2	☐	0.100	0.101	3957.78	0.0008	P	3.3
3	☐	1.000	1.032	29764.49	0.0064	P	7.0
4	☐	50.000	49.735	1452862.51	0.2978	P	2.3
5	☐	125.000	128.574	3689779.18	0.7695	A	2.3
6	☐	250.000	257.467	7342043.70	1.5406	A	3.6
7	☐	500.000	501.935	14730930.05	3.0032	A	1.6
8	☐	1000.000	996.732	29360009.74	5.9635	A	1.6
9	☐			28229.88	0.0063	P	1.5

$$y = 0.0060 * x + 2.2527E-004$$

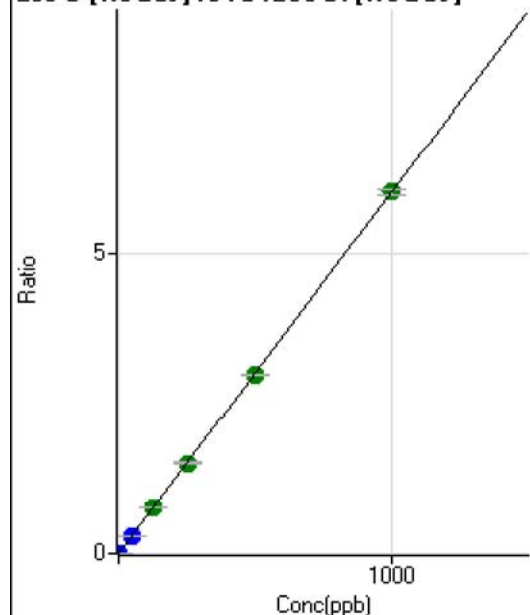
$$R = 1.0000$$

$$DL = 0.01207$$

$$BEC = 0.03765$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	108.34	0.0000	P	0.8
2	☐	0.100	0.095	2858.82	0.0006	P	1.4
3	☐	1.000	0.987	27918.29	0.0060	P	5.9
4	☐	50.000	48.414	1429638.24	0.2930	P	2.8
5	☐	125.000	126.680	3676566.66	0.7667	A	2.6
6	☐	250.000	251.690	7260276.46	1.5234	A	3.4
7	☐	500.000	494.362	14677656.58	2.9921	A	0.6
8	☐	1000.000	1002.266	29864917.34	6.0662	A	1.7
9	☐			4862.31	0.0011	P	6.5

$$y = 0.0061 * x + 2.3318E-005$$

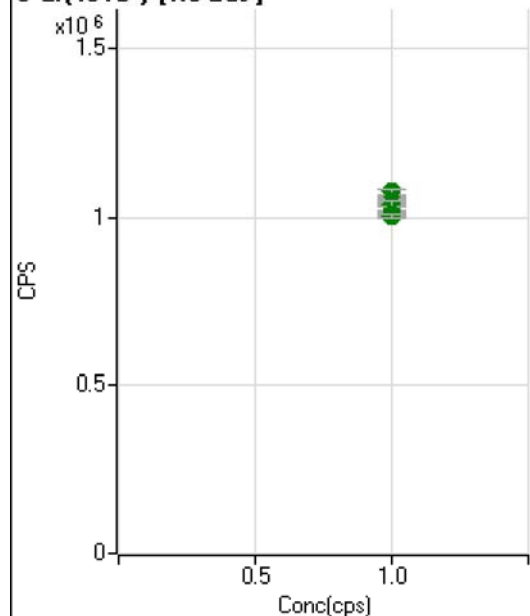
$$R = 1.0000$$

$$DL = 9.303E-05$$

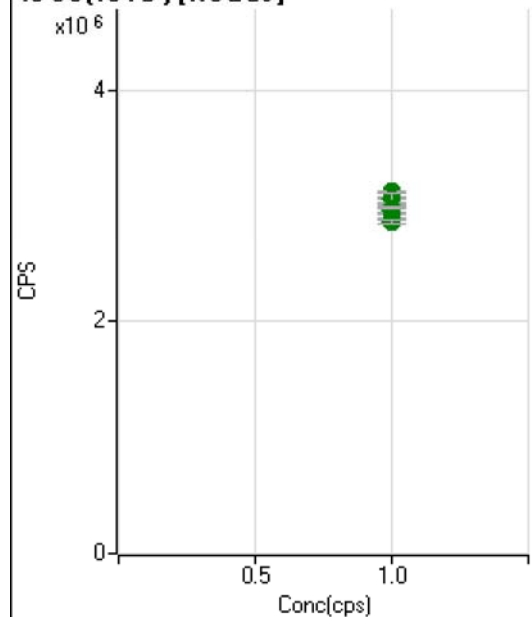
$$BEC = 0.003853$$

Weight: <None>

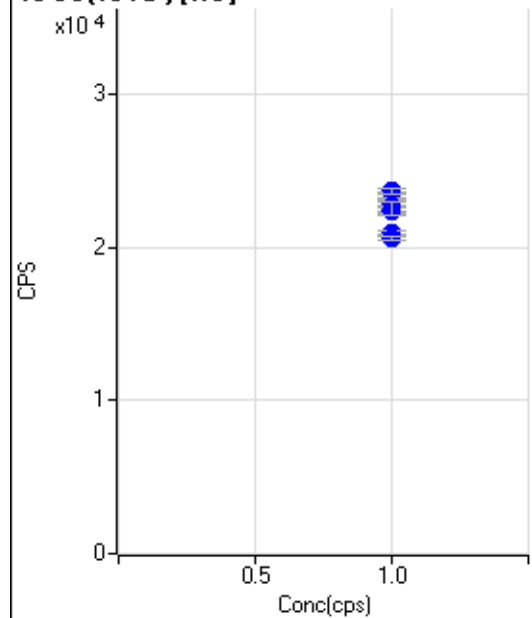
Min Conc: 0

6 Li(ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1048059.09		A	0.5
2	☐	1.000		1055613.32		A	1.2
3	☐	1.000		1035366.72		A	3.4
4	☐	1.000		1075572.68		A	1.3
5	☐	1.000		1046837.35		A	2.0
6	☐	1.000		1030452.06		A	2.2
7	☐	1.000		1038205.99		A	1.7
8	☐	1.000		1007609.83		A	0.5
9	☐	1.000		1003049.93		A	0.8

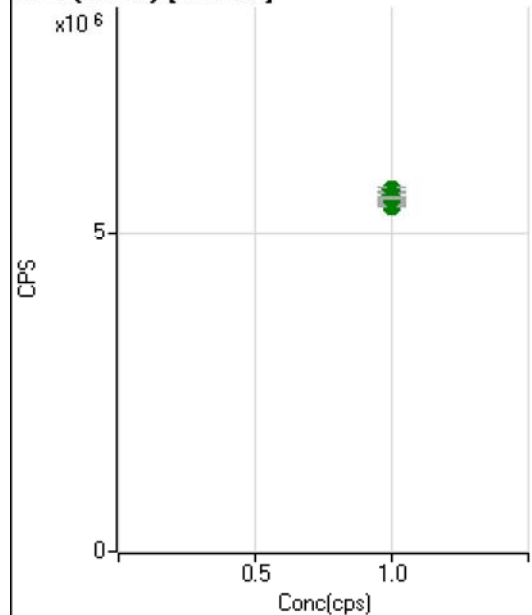
45 Sc(ISTD) [NoGas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		3063905.60		A	0.4
2	☐	1.000		3126244.82		A	0.5
3	☐	1.000		3014535.48		A	5.0
4	☐	1.000		3069751.20		A	2.7
5	☐	1.000		2987396.88		A	2.0
6	☐	1.000		2950123.31		A	3.5
7	☐	1.000		2966208.51		A	1.5
8	☐	1.000		2869531.81		A	1.0
9	☐	1.000		2985850.83		A	0.7

45 Sc(ISTD) [He]

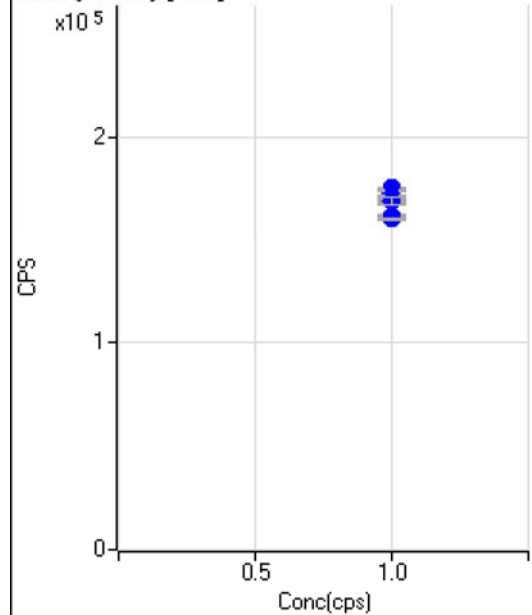
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		23074.74		P	4.2
2	☐	1.000		23691.32		P	1.4
3	☐	1.000		22900.01		P	2.5
4	☐	1.000		22734.23		P	3.2
5	☐	1.000		22691.84		P	0.6
6	☐	1.000		22412.52		P	1.3
7	☐	1.000		20960.29		P	1.5
8	☐	1.000		20628.65		P	1.1
9	☐	1.000		22516.12		P	3.6

89 Y (ISTD) [No Gas]

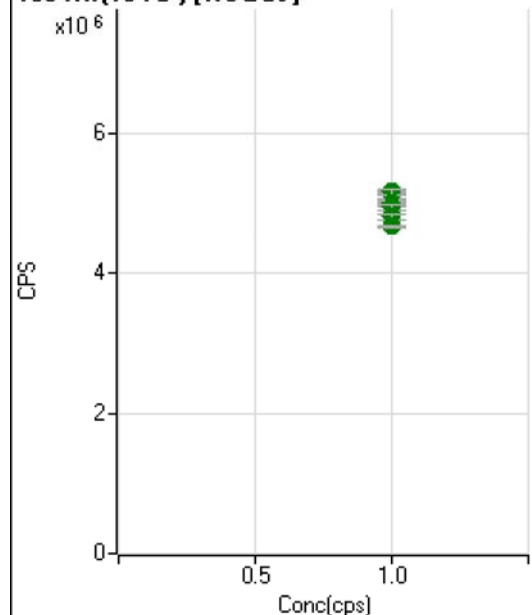


	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5425390.61		A	0.2
2	☐	1.000		5657648.46		A	0.3
3	☐	1.000		5528581.52		A	3.4
4	☐	1.000		5672434.36		A	1.2
5	☐	1.000		5589750.40		A	2.0
6	☐	1.000		5565583.32		A	3.3
7	☐	1.000		5587845.96		A	1.7
8	☐	1.000		5519274.01		A	0.8
9	☐	1.000		5546894.64		A	0.4

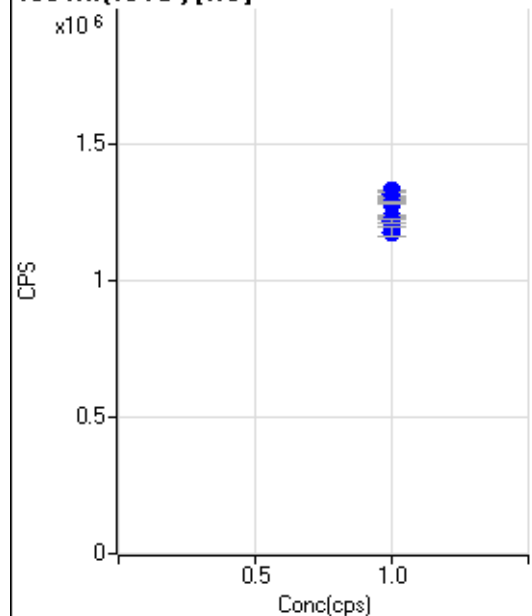
89 Y (ISTD) [He]



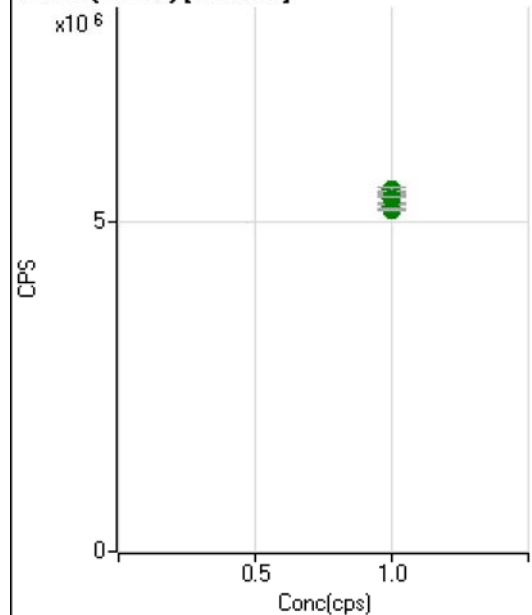
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		172556.10		P	2.1
2	☐	1.000		175280.49		P	0.8
3	☐	1.000		173365.23		P	1.3
4	☐	1.000		171451.05		P	2.4
5	☐	1.000		171013.60		P	0.6
6	☐	1.000		168939.96		P	0.8
7	☐	1.000		162036.85		P	0.6
8	☐	1.000		160332.02		P	1.0
9	☐	1.000		169055.52		P	2.6

103Rh(ISTD) [NoGas]

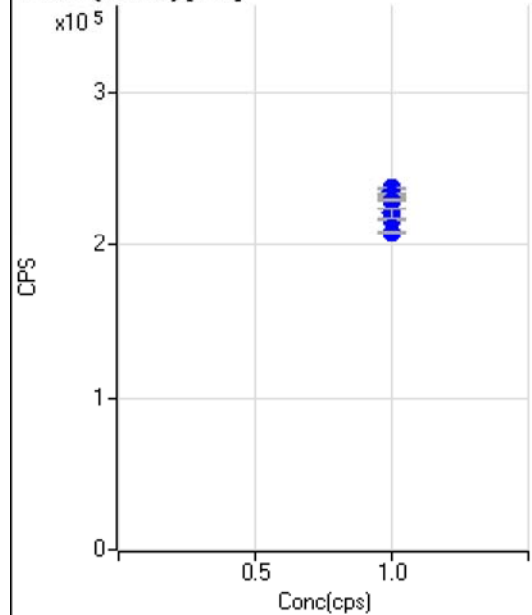
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5006102.28		A	0.2
2	☐	1.000		5179169.99		A	0.8
3	☐	1.000		5073996.16		A	4.1
4	☐	1.000		5177752.20		A	1.3
5	☐	1.000		5030900.76		A	2.1
6	☐	1.000		4985463.48		A	3.0
7	☐	1.000		4963619.56		A	1.8
8	☐	1.000		4817787.57		A	1.3
9	☐	1.000		4689372.98		A	0.4

103Rh(ISTD) [He]

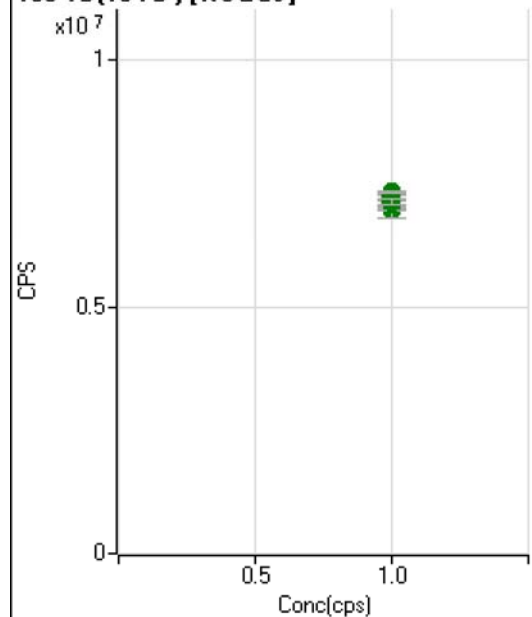
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1307814.92		P	2.6
2	☐	1.000		1331417.78		P	0.4
3	☐	1.000		1321437.90		P	1.8
4	☐	1.000		1317409.24		P	1.7
5	☐	1.000		1304227.14		P	0.5
6	☐	1.000		1287652.94		P	0.4
7	☐	1.000		1238011.69		P	0.9
8	☐	1.000		1220254.38		P	0.9
9	☐	1.000		1181394.17		P	3.2

115 In(ISTD) [NoGas]

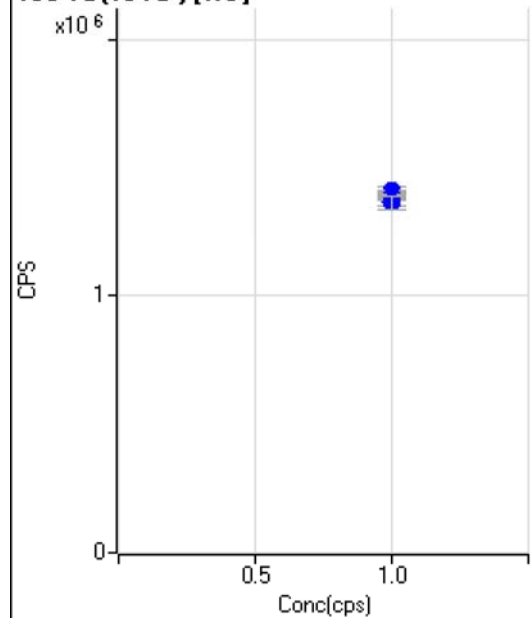
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5256648.91		A	0.2
2	☐	1.000		5431251.18		A	0.6
3	☐	1.000		5293861.30		A	4.0
4	☐	1.000		5484538.72		A	1.2
5	☐	1.000		5355856.79		A	2.2
6	☐	1.000		5296240.63		A	3.1
7	☐	1.000		5339855.81		A	1.7
8	☐	1.000		5229151.13		A	1.4
9	☐	1.000		5187634.51		A	1.0

115 In(ISTD) [He]

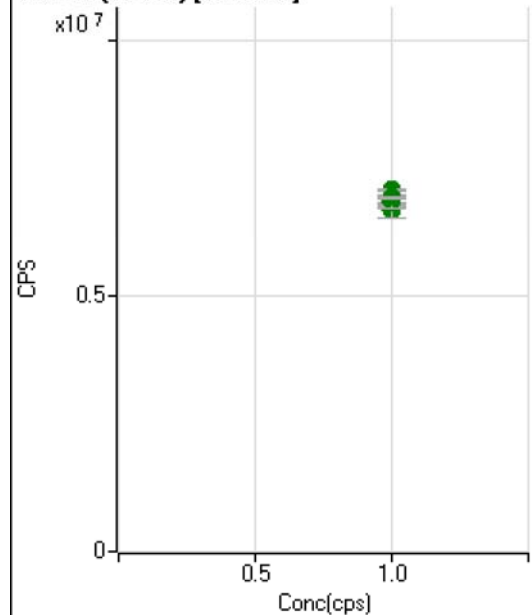
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		234812.38		P	3.0
2	☐	1.000		237648.46		P	0.4
3	☐	1.000		235658.05		P	2.2
4	☐	1.000		235154.73		P	2.0
5	☐	1.000		233480.81		P	0.6
6	☐	1.000		229570.45		P	0.3
7	☐	1.000		216999.27		P	0.4
8	☐	1.000		208328.98		P	0.9
9	☐	1.000		221540.78		P	2.8

159 Tb(ISTD) [NoGas]

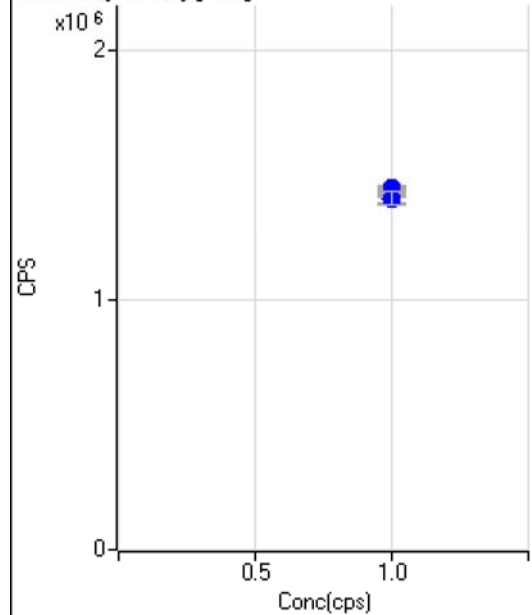
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7017306.21		A	0.4
2	☐	1.000		7128385.87		A	0.6
3	☐	1.000		6987682.18		A	4.9
4	☐	1.000		7229395.45		A	1.6
5	☐	1.000		7174618.37		A	2.6
6	☐	1.000		7087223.92		A	2.9
7	☐	1.000		7271759.33		A	1.7
8	☐	1.000		7347870.86		A	0.8
9	☐	1.000		7144660.31		A	1.3

159 Tb(ISTD) [He]

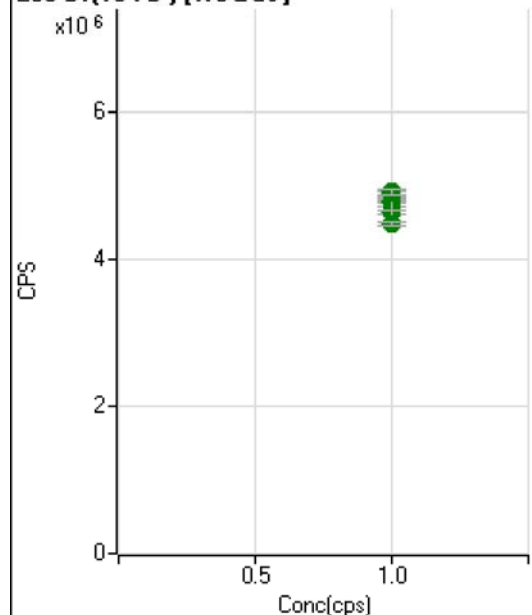
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1372979.02		P	2.5
2	☐	1.000		1398002.63		P	0.6
3	☐	1.000		1388072.84		P	2.1
4	☐	1.000		1411069.15		P	2.0
5	☐	1.000		1408827.88		P	0.5
6	☐	1.000		1410076.38		P	0.6
7	☐	1.000		1386720.67		P	0.3
8	☐	1.000		1390829.68		P	1.0
9	☐	1.000		1367060.28		P	3.6

165 Ho(ISTD) [NoGas]

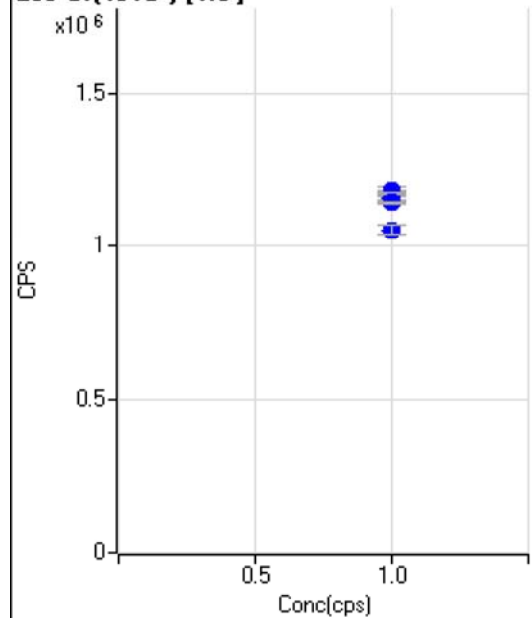
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6751822.81		A	0.5
2	☐	1.000		6830106.32		A	0.3
3	☐	1.000		6669968.42		A	4.0
4	☐	1.000		6906119.69		A	1.9
5	☐	1.000		6832777.58		A	1.9
6	☐	1.000		6856898.37		A	3.9
7	☐	1.000		7051965.09		A	1.5
8	☐	1.000		7083011.62		A	0.5
9	☐	1.000		6931295.90		A	0.8

165 Ho(ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1412028.90		P	2.3
2	☐	1.000		1432870.38		P	1.0
3	☐	1.000		1433666.49		P	2.1
4	☐	1.000		1449483.75		P	2.1
5	☐	1.000		1452933.83		P	0.2
6	☐	1.000		1447549.42		P	0.2
7	☐	1.000		1431088.68		P	0.7
8	☐	1.000		1438064.07		P	0.7
9	☐	1.000		1410405.36		P	3.7

209 Bi(ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		4646344.58		A	0.8
2	☐	1.000		4780466.11		A	0.6
3	☐	1.000		4664920.49		A	6.0
4	☐	1.000		4880729.93		A	2.4
5	☐	1.000		4797118.05		A	2.6
6	☐	1.000		4770045.97		A	3.8
7	☐	1.000		4905656.94		A	1.2
8	☐	1.000		4924003.75		A	1.5
9	☐	1.000		4492674.52		A	1.1

209 Bi(ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1158544.88		P	2.9
2	☐	1.000		1176214.48		P	0.5
3	☐	1.000		1169637.15		P	2.8
4	☐	1.000		1182342.68		P	2.4
5	☐	1.000		1181938.63		P	0.7
6	☐	1.000		1174752.31		P	0.5
7	☐	1.000		1145468.51		P	0.8
8	☐	1.000		1144397.45		P	0.8
9	☐	1.000		1053627.48		P	2.9

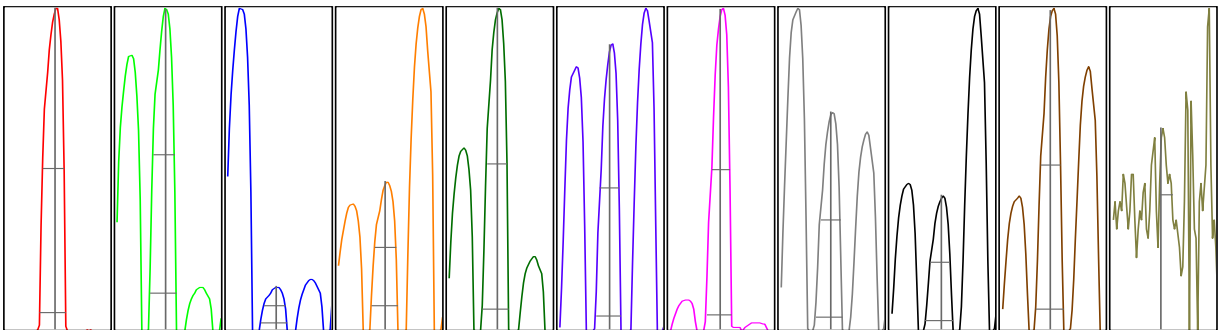
US EPA Tune Check Sample Report

Batch Folder D:\P8100418-MS.b
Report Comment
Instrument Name G8403A JP17141814

[No Gas]				
Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	5962	1.43	5.00	
24	54523	1.54	5.00	
25	7652	1.31	5.00	
26	9114	1.76	5.00	
59	60662	1.89	5.00	
113	8636	1.81	5.00	
115	102479	1.73	5.00	
206	27248	1.48	5.00	
207	24925	1.82	5.00	
208	59381	1.81	5.00	
220	1	12.62		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	6026	5829	6011	6022	5921
24	54904	53228	55082	55261	54139
25	7736	7517	7725	7709	7572
26	9198	8904	9230	9258	8980
59	61111	58948	61671	61525	60056
113	8715	8383	8716	8774	8591
115	103882	99459	102874	103628	102552
206	27363	26561	27561	27503	27255
207	25177	24174	25140	25304	24833
208	59654	57623	60245	60197	59184
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	10389	8.95	8.9 - 9.1		0.739	0.900	
24	94455	23.95	23.9 - 24.1		0.756	0.900	
25	12829	24.95	24.9 - 25.1		0.747	0.900	
26	15071	25.90	25.9 - 26.1		0.747	0.900	
59	108186	58.95	58.9 - 59.1		0.751	0.900	
113	16410	113.00	112.9 - 113.1		0.728	0.900	
115	193044	115.00	114.9 - 115.1		0.738	0.900	
206	49822	206.00	205.9 - 206.1		0.773	0.900	
207	45309	207.00	206.9 - 207.1		0.778	0.900	
208	107921	207.95	207.9 - 208.1		0.791	0.900	
220	1	219.95	-				

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	10.4	V	Deflect	13.8	V
Extract 2	-235.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-90	V	Cell Exit	-50	V			

Cell Parameters

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

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	7220	1.13	
89	2093	1.14	
205	11286	1.18	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	7290	7257	7256	7082	7216
89	2123	2089	2095	2057	2102
205	11379	11336	11371	11056	11290

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	10.4	V	Deflect	1.2	V
Extract 2	-235.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-90	V	Cell Exit	-60	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	Yes		OctP Bias	-18.0	V	Energy Discrimination	5.0	V
He Flow	5.0	mL/min	OctP RF	190	V			