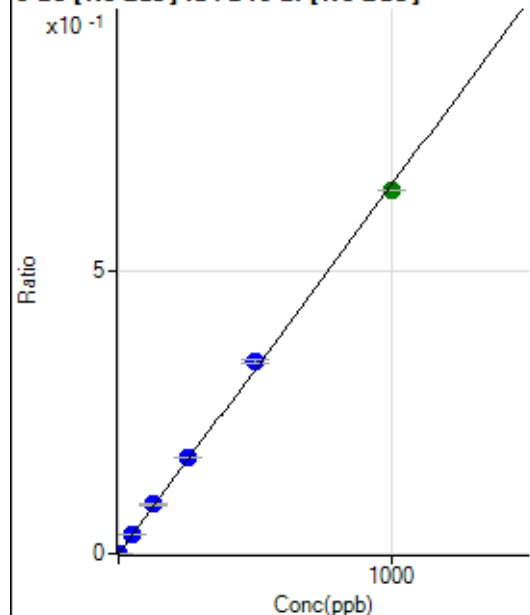


Batch Folder: D:\ICP-MS Data\P7032219 .b.b\
Analysis File: P7032219 .b.batch.bin
DA Date-Time: 2019-03-22 16:44:15
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-03-22 11:20:30
2			
3	005CAL.S.d	S02	2019-03-22 11:28:55
4	006CAL.S.d	S03	2019-03-22 11:32:50
5	007CAL.S.d	S04	2019-03-22 11:37:01
6	008CAL.S.d	S05	2019-03-22 11:40:48
7	009CAL.S.d	S06	2019-03-22 11:44:33
8	010CAL.S.d	S07	2019-03-22 11:48:17
9	011CAL.S.d	S08	2019-03-22 11:52:03

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	173.33	0.0000	P	16.7
2	☐	0.100					
3	☐	1.000	1.004	5883.46	0.0007	P	1.3
4	☐	50.000	53.495	304969.22	0.0349	P	0.4
5	☐	125.000	133.093	726168.74	0.0868	P	1.2
6	☐	250.000	261.708	1363424.67	0.1706	P	0.6
7	☐	500.000	523.419	2634093.82	0.3413	P	1.9
8	☐	1000.000	984.177	4994983.95	0.6416	A	0.1
9	☐			938.93	0.0001	P	2.3

$$y = 6.5194\text{E-}004 * x + 2.0130\text{E-}005$$

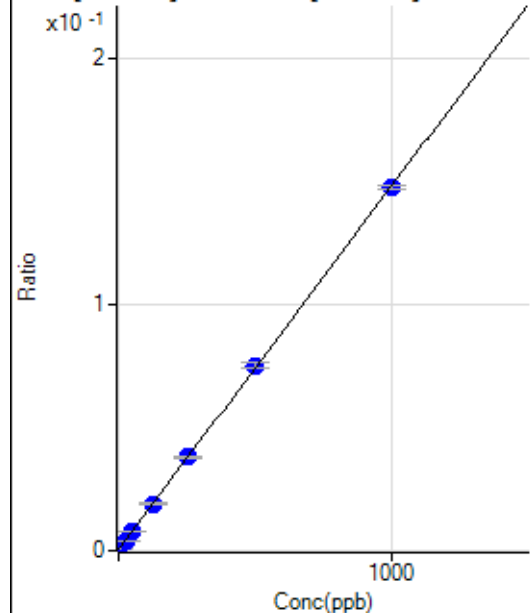
$$R = 0.9995$$

$$DL = 0.01549$$

$$BEC = 0.03088$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3700.61	0.0004	P	3.3
2	☐	2.500					
3	☐	25.000	23.742	34314.72	0.0039	P	3.3
4	☐	50.000	50.689	69145.07	0.0079	P	0.7
5	☐	125.000	125.952	159146.65	0.0190	P	1.9
6	☐	250.000	253.686	302633.68	0.0379	P	1.7
7	☐	500.000	507.462	581433.89	0.0753	P	3.2
8	☐	1000.000	995.225	1146979.02	0.1473	P	1.1
9	☐			35657.37	0.0048	P	9.9

$$y = 1.4761\text{E-}004 * x + 4.2974\text{E-}004$$

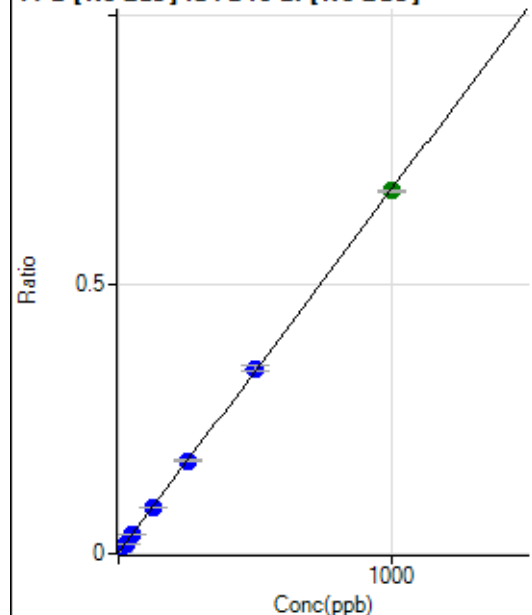
$$R = 0.9999$$

$$DL = 0.2859$$

$$BEC = 2.911$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	17074.29	0.0020	P	2.5
2	☐	2.500					
3	☐	25.000	23.922	157984.20	0.0181	P	1.8
4	☐	50.000	49.657	309913.96	0.0355	P	1.2
5	☐	125.000	125.540	724760.43	0.0866	P	1.4
6	☐	250.000	252.004	1373348.48	0.1719	P	2.3
7	☐	500.000	507.247	2654819.11	0.3440	P	2.7
8	☐	1000.000	995.852	5242159.41	0.6734	A	0.7
9	☐			162958.86	0.0222	P	9.6

$$y = 6.7421\text{E-}004 * x + 0.0020$$

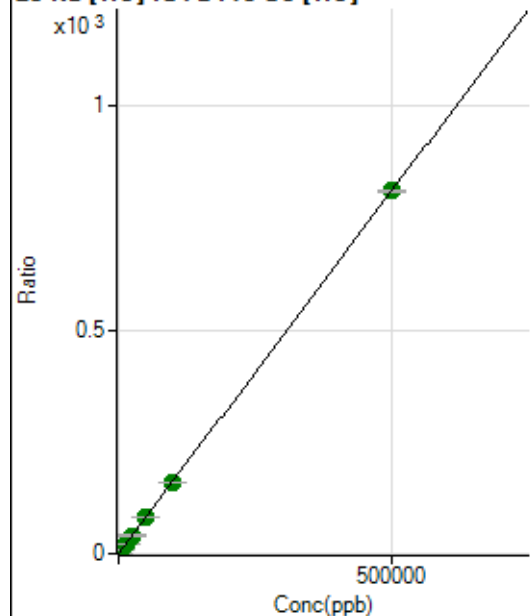
$$R = 1.0000$$

$$DL = 0.2238$$

$$BEC = 2.941$$

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	19877.85	0.0317	P	1.0
2	☐	50.000					
3	☐	500.000	460.153	510100.91	0.7767	P	1.7
4	☐	5000.000	4977.029	5060022.81	8.0894	A	1.1
5	☐	12500.000	12517.325	11795682.47	20.2969	A	0.1
6	☐	25000.000	25103.734	22703274.29	40.6740	A	0.6
7	☐	50000.000	49596.535	45674315.95	80.3272	A	0.7
8	☐	100000.00	98627.853	95114523.65	159.7075	A	0.7
9	☐	500000.00	500309.42	515938550.42	810.0192	A	0.5

$$y = 0.0016 * x + 0.0317$$

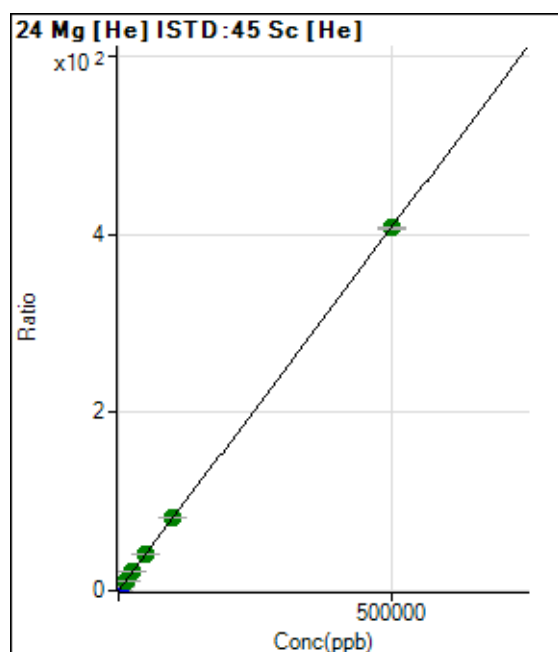
$$R = 1.0000$$

$$DL = 0.593$$

$$BEC = 19.58$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	197.23	0.0003	P	32.7
2	☐	50.000					
3	☐	500.000	496.145	266267.78	0.4054	P	1.5
4	☐	5000.000	5221.278	2666837.06	4.2634	P	1.4
5	☐	12500.000	13100.907	6216545.06	10.6970	A	0.5
6	☐	25000.000	26079.232	11885652.09	21.2937	A	0.6
7	☐	50000.000	51462.471	23892301.75	42.0187	A	0.6
8	☐	100000.00	101179.76	49200072.28	82.6122	A	0.8
9	☐	500000.00	499546.60	259799089.14	407.8735	A	0.9

$$y = 8.1649\text{E-}004 * x + 3.1452\text{E-}004$$

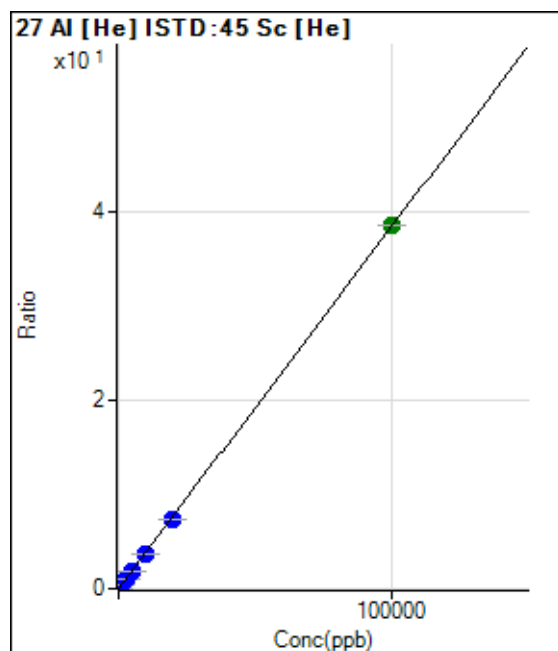
$$R = 1.0000$$

$$DL = 0.3784$$

$$BEC = 0.3852$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	33.34	0.0001	P	43.4
2	☐	2.000					
3	☐	20.000	17.628	4478.63	0.0068	P	3.4
4	☐	1000.000	979.560	235139.96	0.3759	P	1.8
5	☐	2500.000	2444.792	545199.98	0.9381	P	0.1
6	☐	5000.000	4895.849	1048582.30	1.8786	P	0.5
7	☐	10000.000	9583.838	2090983.73	3.6774	P	0.6
8	☐	20000.000	18903.592	4319857.73	7.2534	P	0.2
9	☐	100000.00	100267.69	24504159.58	38.4728	A	0.1

$$y = 3.8370\text{E-}004 * x + 5.3182\text{E-}005$$

$$R = 0.9999$$

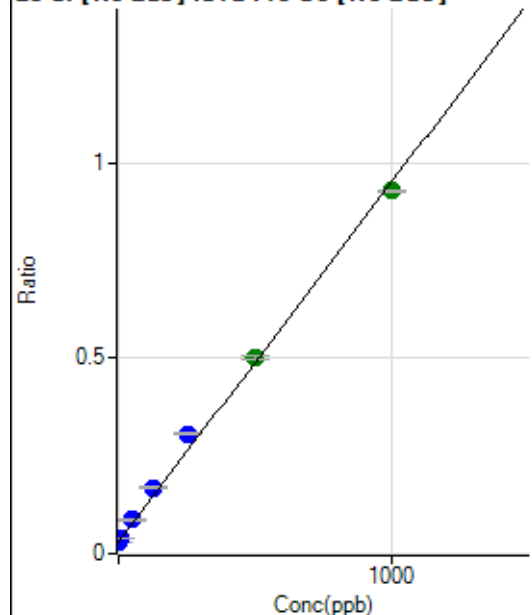
$$DL = 0.1804$$

$$BEC = 0.1386$$

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	375982.78	0.0299	P	0.6
2	☐	1.000					
3	☐	10.000	11.272	507703.08	0.0402	P	1.8
4	☐	50.000	61.484	1084194.48	0.0865	P	0.9
5	☐	125.000	150.512	2020204.56	0.1685	P	1.9
6	☐	250.000	301.089	3464081.76	0.3073	P	1.4
7	☐	500.000	514.377	5575647.48	0.5038	A	2.2
8	☐	1000.000	976.263	10660835.92	0.9293	A	0.5
9	☐			725530.48	0.0648	P	1.2

$$y = 9.2131E-004 * x + 0.0299$$

$$R = 0.9983$$

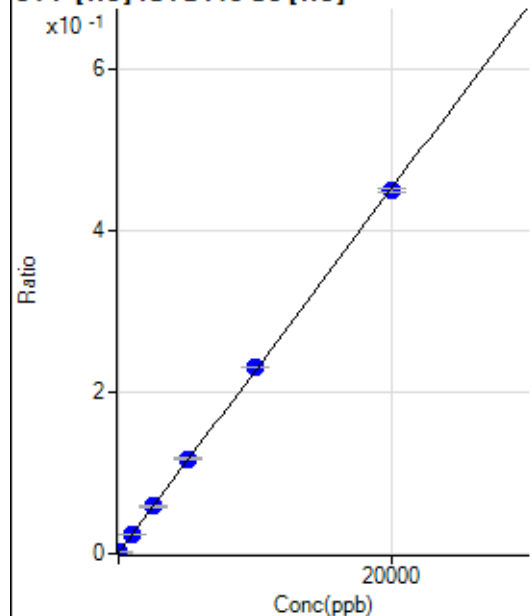
$$DL = 0.6198$$

$$BEC = 32.41$$

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	-23.201	291.68	0.0005	P	13.0
2	☐	0.000					
3	☐	0.000	23.201	991.75	0.0015	P	10.4
4	☐	1000.000	993.175	14618.71	0.0234	P	1.3
5	☐	2500.000	2560.828	34103.72	0.0587	P	2.5
6	☐	5000.000	5157.284	65419.21	0.1172	P	1.2
7	☐	10000.000	10176.359	130951.71	0.2303	P	0.6
8	☐	20000.000	19865.237	267201.40	0.4486	P	0.9
9	☐			550.03	0.0009	P	18.8

$$y = 2.2534E-005 * x + 9.8817E-004$$

$$R = 0.9999$$

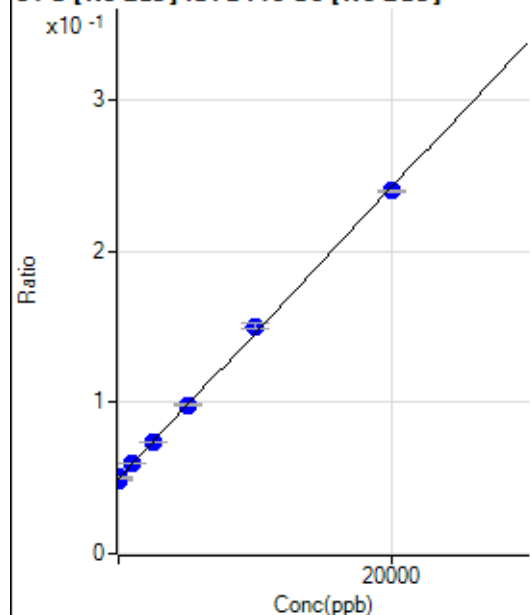
$$DL = 14.52$$

$$BEC = 43.85$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-86.109	615964.43	0.0489	P	0.9
2	☐	0.000					
3	☐	0.000	86.109	638113.07	0.0506	P	1.6
4	☐	1000.000	1057.899	751445.94	0.0600	P	0.2
5	☐	2500.000	2531.982	889358.42	0.0742	P	0.3
6	☐	5000.000	5067.573	1112116.07	0.0986	P	0.3
7	☐	10000.000	10467.532	1668399.01	0.1507	P	2.1
8	☐	20000.000	19742.448	2755695.09	0.2402	P	0.4
9	☐			506739.37	0.0452	P	1.1

$$y = 9.6475\text{E-}006 * x + 0.0498$$

$$R = 0.9996$$

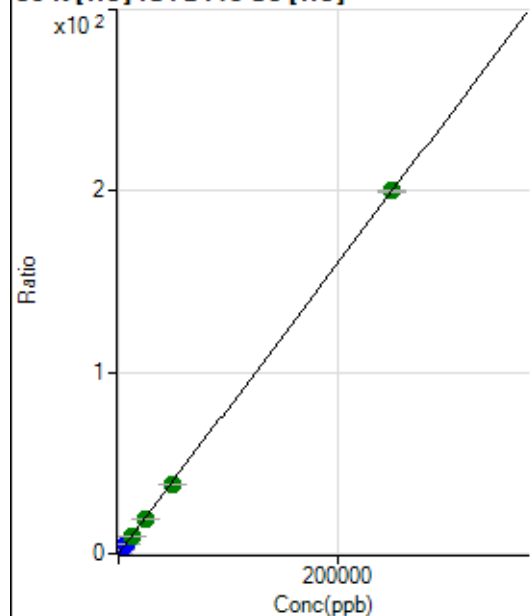
$$DL = 197$$

$$BEC = 5157$$

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	28389.32	0.0453	P	2.6
2	☐	50.000					
3	☐	500.000	450.420	265924.72	0.4049	P	1.5
4	☐	2500.000	2431.855	1242799.03	1.9869	P	1.1
5	☐	6250.000	6019.901	2819431.62	4.8516	P	0.6
6	☐	12500.000	12003.359	5374524.43	9.6288	A	0.3
7	☐	25000.000	23752.474	10808802.41	19.0093	A	0.7
8	☐	50000.000	47798.383	22755336.27	38.2076	A	0.1
9	☐	250000.00	250596.44	127463211.18	200.1219	A	0.4

$$y = 7.9840\text{E-}004 * x + 0.0453$$

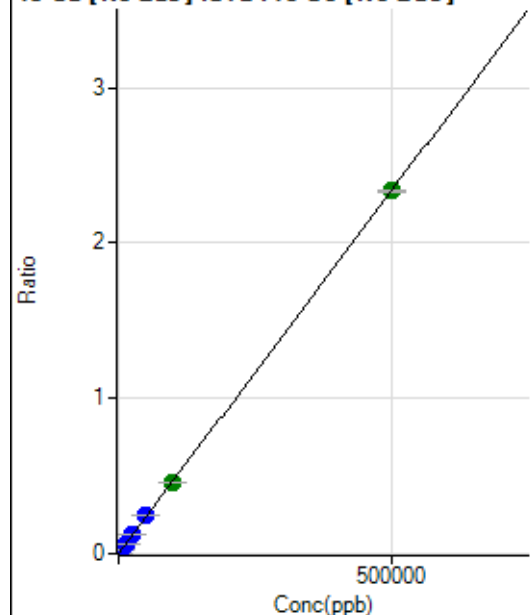
$$R = 1.0000$$

$$DL = 4.4$$

$$BEC = 56.7$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	238.90	0.0000	P	15.8
2	☐	50.000					
3	☐	500.000	485.563	28837.39	0.0023	P	1.8
4	☐	5000.000	5147.663	301444.97	0.0241	P	0.1
5	☐	12500.000	12779.276	715436.39	0.0597	P	1.8
6	☐	25000.000	25937.329	1365496.83	0.1211	P	1.3
7	☐	50000.000	52256.748	2700586.17	0.2440	P	2.1
8	☐	100000.00	98985.120	5301754.15	0.4622	A	0.3
9	☐	500000.00	499921.99	26149141.04	2.3340	A	0.4

$$y = 4.6688\text{E-}006 * x + 1.8975\text{E-}005$$

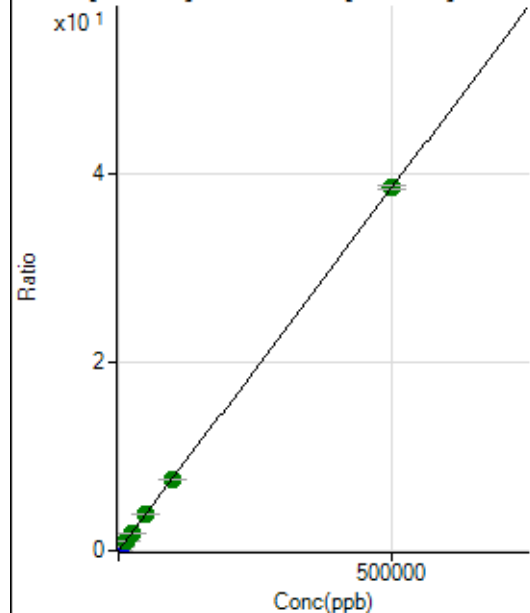
$$R = 1.0000$$

$$DL = 1.931$$

$$BEC = 4.064$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	26501.68	0.0021	P	1.0
2	☐	50.000					
3	☐	500.000	476.935	488852.79	0.0388	P	2.5
4	☐	5000.000	5021.235	4862263.91	0.3880	P	0.7
5	☐	12500.000	12458.524	11502493.92	0.9595	A	1.1
6	☐	25000.000	24883.204	21582033.99	1.9142	A	0.7
7	☐	50000.000	50746.968	43187153.40	3.9017	A	2.0
8	☐	100000.00	98526.741	86877955.41	7.5734	A	0.9
9	☐	500000.00	500226.64	430663554.07	38.4419	A	1.0

$$y = 7.6845\text{E-}005 * x + 0.0021$$

$$R = 1.0000$$

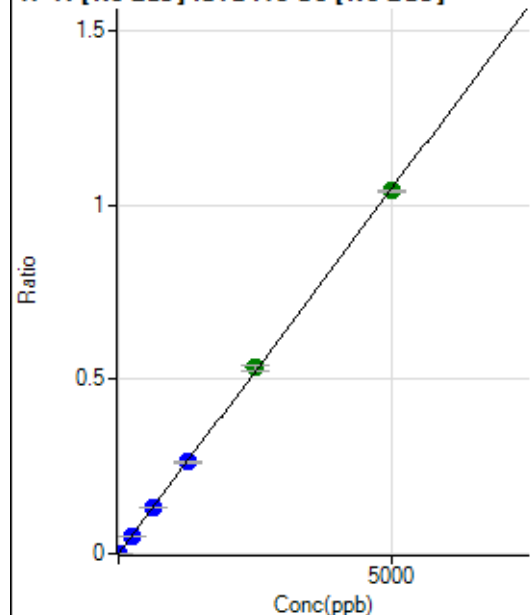
$$DL = 0.8335$$

$$BEC = 27.39$$

Weight: <None>

Min Conc: 0

47 Ti [No Gas] ISTD :45 Sc [No Gas]



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	283.34	0.0000	P	24.0
2	☐	0.500					
3	☐	5.000	4.982	13423.20	0.0011	P	3.2
4	☐	250.000	248.992	652742.05	0.0521	P	0.8
5	☐	625.000	628.051	1574492.93	0.1313	P	1.4
6	☐	1250.000	1254.789	2958207.66	0.2624	P	0.9
7	☐	2500.000	2550.309	5902001.65	0.5333	A	2.6
8	☐	5000.000	4973.318	11929226.14	1.0399	A	0.5
9	☐			4962.12	0.0004	P	1.6

$$y = 2.0909\text{E-}004 * x + 2.2497\text{E-}005$$

$$R = 0.9999$$

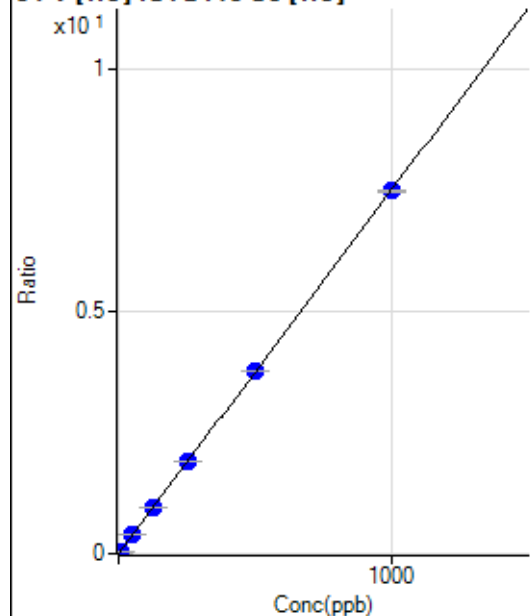
$$DL = 0.07735$$

$$BEC = 0.1076$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	7.78	0.0000	P	24.6
2	☐	0.500					
3	☐	5.000	4.933	24308.08	0.0370	P	2.2
4	☐	50.000	50.594	237337.74	0.3794	P	1.0
5	☐	125.000	125.969	548990.96	0.9447	P	0.7
6	☐	250.000	254.198	1064073.93	1.9063	P	0.5
7	☐	500.000	502.353	2142168.79	3.7673	P	0.4
8	☐	1000.000	997.623	4455648.06	7.4816	P	0.7
9	☐			882.26	0.0014	P	12.7

$$y = 0.0075 * x + 1.2404\text{E-}005$$

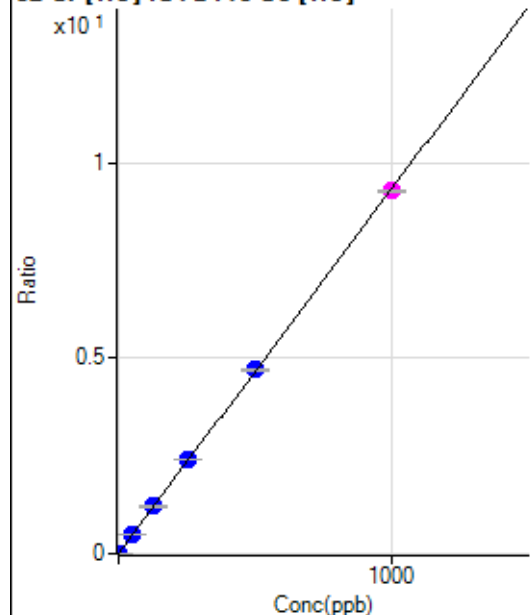
$$R = 1.0000$$

$$DL = 0.001219$$

$$BEC = 0.001654$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3100.37	0.0049	P	3.6
2	☐	0.200					
3	☐	2.000	1.829	14437.28	0.0220	P	2.6
4	☐	50.000	51.572	303615.88	0.4854	P	1.0
5	☐	125.000	129.206	702324.86	1.2086	P	1.4
6	☐	250.000	257.796	1343301.16	2.4066	P	0.6
7	☐	500.000	504.328	2674357.53	4.7033	P	1.3
8	☐	1000.000	995.283	5525064.02	9.2772	M	0.6
9	☐			40775.45	0.0640	P	2.2

$$y = 0.0093 * x + 0.0049$$

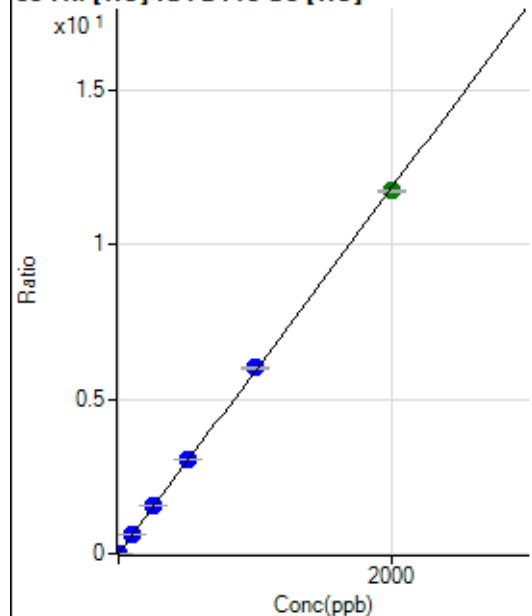
$$R = 0.9999$$

$$DL = 0.0569$$

$$BEC = 0.5307$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	84.44	0.0001	P	11.5
2	☐	0.100					
3	☐	1.000	0.983	3901.69	0.0059	P	2.9
4	☐	100.000	103.747	383502.75	0.6131	P	0.6
5	☐	250.000	259.270	890290.21	1.5320	P	0.5
6	☐	500.000	518.128	1708769.33	3.0614	P	0.1
7	☐	1000.000	1017.500	3418367.17	6.0118	P	0.4
8	☐	2000.000	1985.372	6986027.25	11.7302	A	0.4
9	☐			29414.12	0.0462	P	0.6

$$y = 0.0059 * x + 1.3467E-004$$

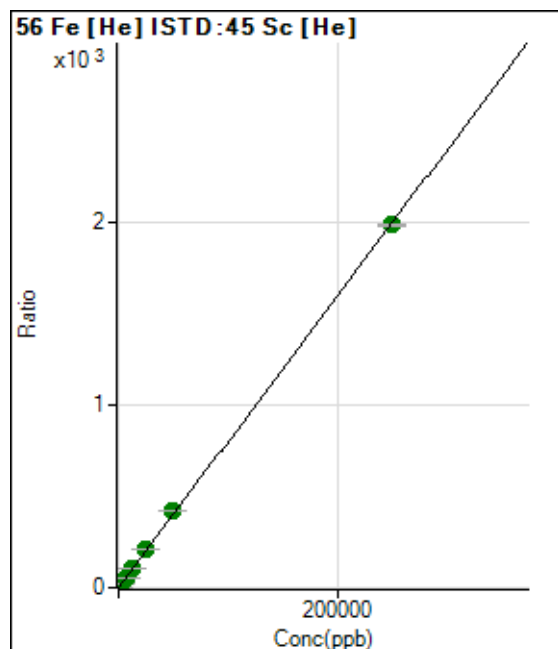
$$R = 0.9999$$

$$DL = 0.007888$$

$$BEC = 0.02279$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9770.18	0.0156	P	1.3
2	☐	5.000					
3	☐	50.000	53.299	289001.43	0.4400	P	1.3
4	☐	2500.000	2738.430	13649989.65	21.8223	A	0.9
5	☐	6250.000	6881.288	31851899.32	54.8128	A	1.1
6	☐	12500.000	13756.420	61154031.46	109.5611	A	0.6
7	☐	25000.000	26805.605	121382614.75	213.4747	A	0.8
8	☐	50000.000	52828.340	250547020.42	420.6997	A	0.8
9	☐	250000.00	249172.78	1263759302.3	1,984.235	A	0.8

$$y = 0.0080 * x + 0.0156$$

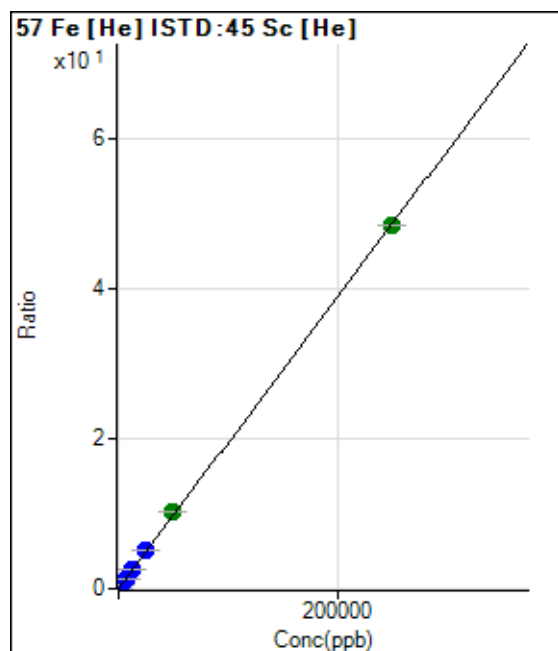
$$R = 0.9999$$

$$DL = 0.07754$$

$$BEC = 1.956$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	238.90	0.0004	P	12.2
2	☐	5.000					
3	☐	50.000	54.851	7231.61	0.0110	P	1.1
4	☐	2500.000	2751.685	333738.18	0.5335	P	0.5
5	☐	6250.000	6884.202	775252.14	1.3342	P	1.9
6	☐	12500.000	13727.101	1484766.55	2.6600	P	0.3
7	☐	25000.000	26814.351	2954405.04	5.1957	P	0.2
8	☐	50000.000	52529.949	6061715.99	10.1782	A	0.6
9	☐	250000.00	249232.84	30757139.11	48.2898	A	0.1

$$y = 1.9375E-004 * x + 3.8113E-004$$

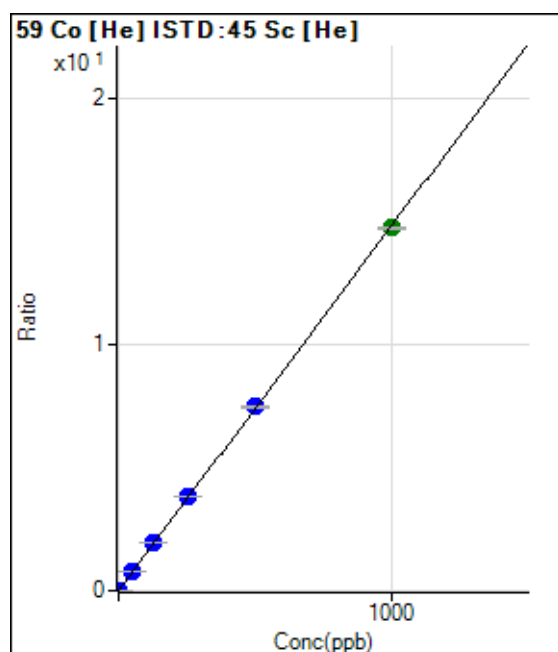
$$R = 0.9999$$

$$DL = 0.7184$$

$$BEC = 1.967$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	121.11	0.0002	P	12.0
2	☐	0.100					
3	☐	1.000	0.976	9622.16	0.0146	P	2.0
4	☐	50.000	52.634	487859.18	0.7799	P	1.1
5	☐	125.000	130.298	1121727.05	1.9304	P	1.6
6	☐	250.000	259.591	2146624.08	3.8458	P	0.5
7	☐	500.000	504.101	4246543.72	7.4680	P	0.5
8	☐	1000.000	994.758	8776435.22	14.7366	A	0.7
9	☐			102042.17	0.1602	P	0.9

$$y = 0.0148 * x + 1.9322E-004$$

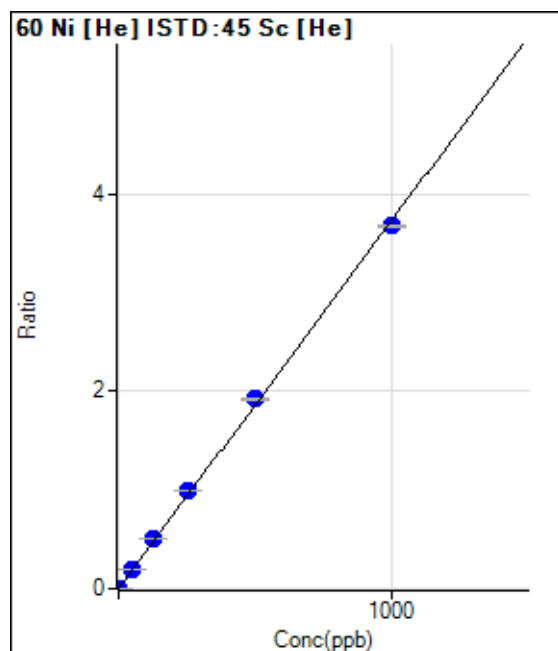
$$R = 0.9999$$

$$DL = 0.00471$$

$$BEC = 0.01304$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	158.89	0.0003	P	17.1
2	☐	0.100					
3	☐	1.000	1.011	2643.62	0.0040	P	6.1
4	☐	50.000	54.210	126703.27	0.2026	P	1.4
5	☐	125.000	135.858	294783.20	0.5073	P	1.0
6	☐	250.000	268.030	558475.30	1.0005	P	0.2
7	☐	500.000	515.310	1093678.63	1.9234	P	0.4
8	☐	1000.000	986.270	2192319.45	3.6810	P	0.3
9	☐			26454.17	0.0415	P	0.6

$$y = 0.0037 * x + 2.5329E-004$$

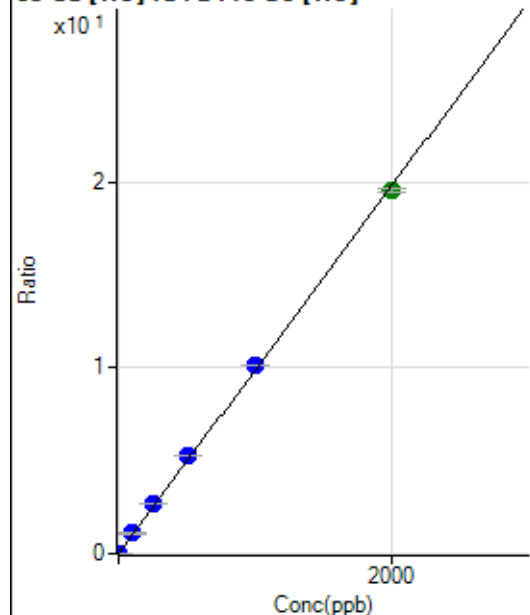
$$R = 0.9996$$

$$DL = 0.03487$$

$$BEC = 0.06787$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1642.34	0.0026	P	2.9
2	☐	0.200					
3	☐	2.000	2.036	14936.70	0.0227	P	3.0
4	☐	100.000	109.909	681241.66	1.0891	P	1.4
5	☐	250.000	271.641	1562033.12	2.6879	P	0.9
6	☐	500.000	536.789	2963366.93	5.3091	P	0.6
7	☐	1000.000	1026.960	5774213.73	10.1547	P	0.2
8	☐	2000.000	1974.122	11623762.05	19.5179	A	1.2
9	☐			18475.20	0.0290	P	0.4

$$y = 0.0099 * x + 0.0026$$

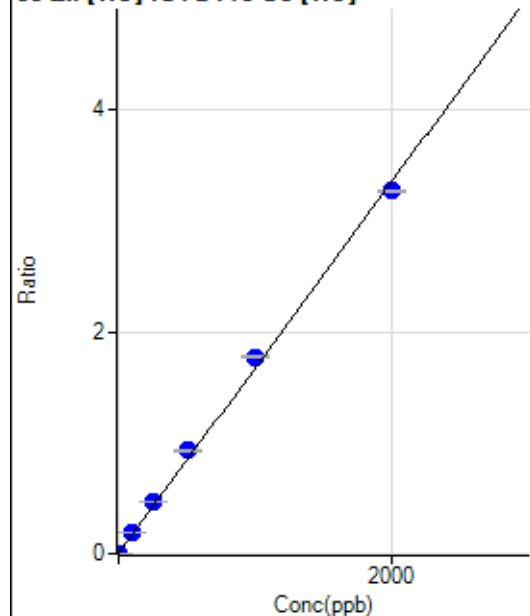
$$R = 0.9997$$

$$DL = 0.02285$$

$$BEC = 0.265$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	455.57	0.0007	P	8.0
2	☐	0.200					
3	☐	2.000	2.160	2850.33	0.0043	P	5.1
4	☐	100.000	111.442	117078.52	0.1872	P	0.9
5	☐	250.000	278.534	271210.38	0.4667	P	1.2
6	☐	500.000	553.926	517686.94	0.9275	P	0.2
7	☐	1000.000	1059.223	1008061.62	1.7728	P	0.4
8	☐	2000.000	1952.768	1946197.98	3.2678	P	0.5
9	☐			11495.78	0.0181	P	1.5

$$y = 0.0017 * x + 7.2627E-004$$

$$R = 0.9989$$

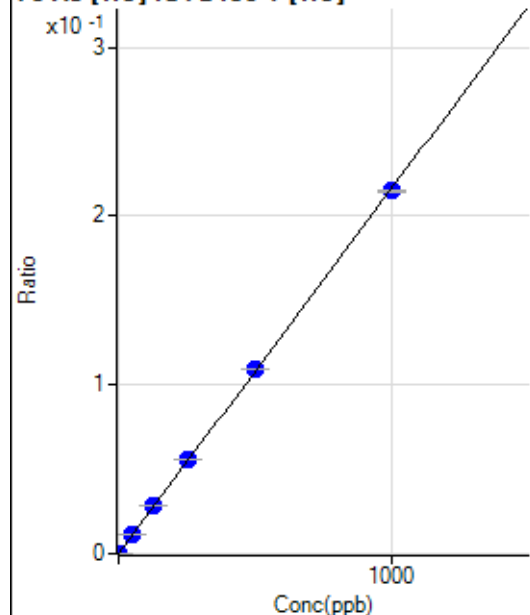
$$DL = 0.1043$$

$$BEC = 0.4341$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.86	0.0000	P	4.0
2	☐	0.100					
3	☐	1.000	0.945	671.01	0.0002	P	5.0
4	☐	50.000	52.090	34070.12	0.0113	P	0.4
5	☐	125.000	130.047	79819.29	0.0281	P	1.1
6	☐	250.000	258.296	152648.25	0.0558	P	0.9
7	☐	500.000	506.681	305161.63	0.1095	P	0.6
8	☐	1000.000	993.851	614817.76	0.2148	P	0.6
9	☐			810.52	0.0003	P	5.1

$$y = 2.1612\text{E-}004 * x + 1.0287\text{E-}005$$

$$R = 0.9999$$

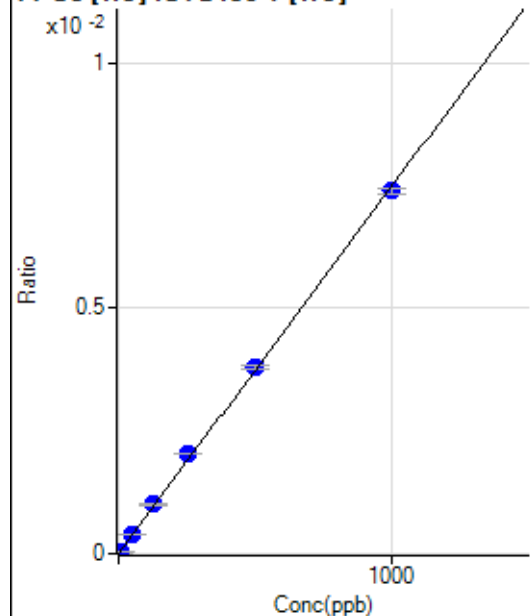
$$DL = 0.005696$$

$$BEC = 0.0476$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.11	0.0000	P	173.
2	☐	0.500					
3	☐	5.000	5.171	122.22	0.0000	P	11.6
4	☐	50.000	52.481	1188.96	0.0004	P	2.7
5	☐	125.000	133.940	2846.99	0.0010	P	5.1
6	☐	250.000	270.871	5544.49	0.0020	P	0.6
7	☐	500.000	510.508	10650.73	0.0038	P	2.0
8	☐	1000.000	988.286	21174.57	0.0074	P	1.6
9	☐			5.56	0.0000	P	34.6

$$y = 7.4855\text{E-}006 * x + 3.7466\text{E-}007$$

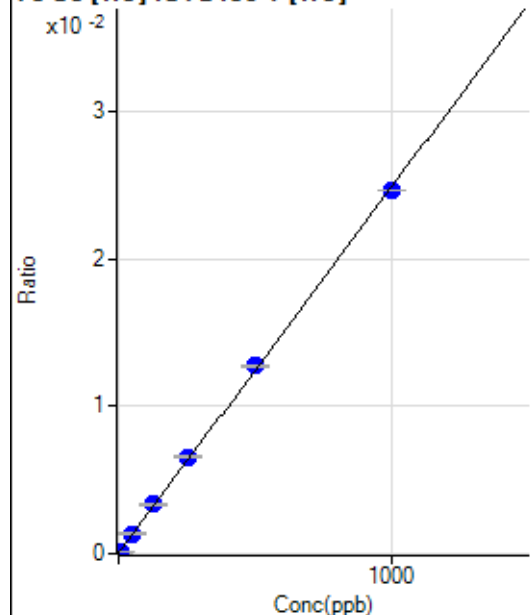
$$R = 0.9997$$

$$DL = 0.2601$$

$$BEC = 0.05005$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	119.76	0.0000	P	12.3
2	☐	0.500					
3	☐	5.000	4.463	471.62	0.0002	P	2.1
4	☐	50.000	53.292	4123.46	0.0014	P	1.8
5	☐	125.000	132.449	9453.77	0.0033	P	2.1
6	☐	250.000	263.109	17980.96	0.0066	P	1.3
7	☐	500.000	511.905	35549.04	0.0128	P	0.9
8	☐	1000.000	989.677	70487.42	0.0246	P	0.2
9	☐			112.96	0.0000	P	10.7

$$y = 2.4843\text{E-}005 * x + 3.9882\text{E-}005$$

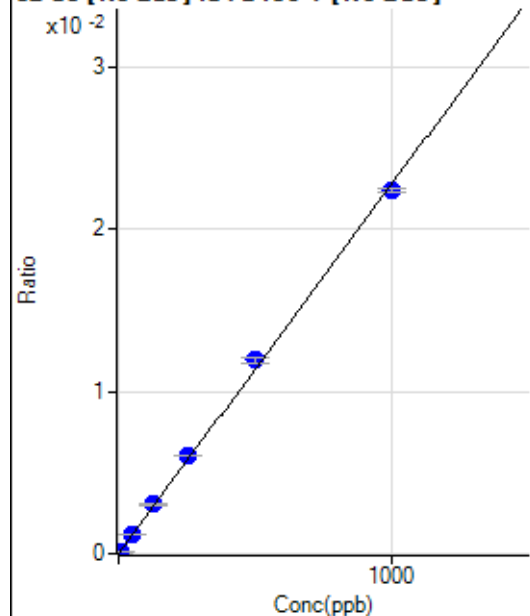
$$R = 0.9998$$

$$DL = 0.5947$$

$$BEC = 1.605$$

Weight: <None>

Min Conc: 0

82 Se [No Gas] ISTD:89 Y [No Gas]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	43.91	0.0000	P	170.
2	☐	0.500					
3	☐	5.000	5.320	2270.79	0.0001	P	4.9
4	☐	50.000	53.552	22423.48	0.0012	P	1.6
5	☐	125.000	133.065	53491.51	0.0030	P	0.7
6	☐	250.000	264.430	101806.79	0.0060	P	0.6
7	☐	500.000	525.339	198225.68	0.0119	P	2.8
8	☐	1000.000	982.536	379291.00	0.0223	P	1.0
9	☐			202.60	0.0000	P	13.2

$$y = 2.2730\text{E-}005 * x + 2.4061\text{E-}006$$

$$R = 0.9994$$

$$DL = 0.5399$$

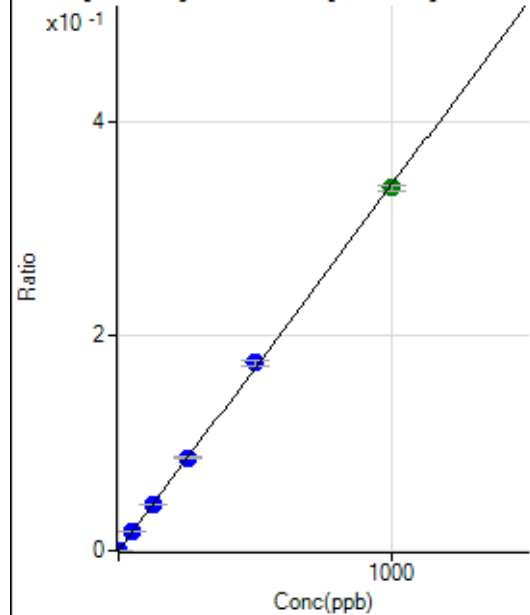
$$BEC = 0.1059$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			698.92		P	3.6
2	☐						
3	☐			701.14		P	8.0
4	☐			678.92		P	6.7
5	☐			655.58		P	8.4
6	☐			620.02		P	7.6
7	☐			624.47		P	1.1
8	☐			655.58		P	2.1
9	☐			678.92		P	7.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1111.20	0.0001	P	6.2
2	☐	0.100					
3	☐	1.000	0.797	6112.66	0.0003	P	3.0
4	☐	50.000	50.642	318202.20	0.0173	P	0.4
5	☐	125.000	126.403	761772.97	0.0431	P	0.9
6	☐	250.000	254.114	1466256.03	0.0866	P	1.2
7	☐	500.000	513.303	2902414.22	0.1749	P	2.6
8	☐	1000.000	992.113	5738691.75	0.3379	A	1.2
9	☐			21647.71	0.0013	P	1.9

$$y = 3.4055E-004 * x + 6.0385E-005$$

$$R = 0.9999$$

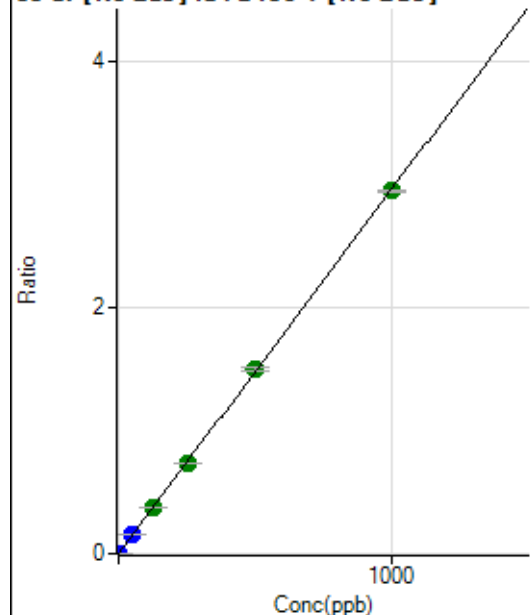
$$DL = 0.03295$$

$$BEC = 0.1773$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	116.67	0.0000	P	32.3
2	☐	0.100					
3	☐	1.000	0.833	45412.26	0.0025	P	2.2
4	☐	50.000	50.677	2752195.72	0.1497	P	0.8
5	☐	125.000	124.416	6494127.14	0.3675	A	0.3
6	☐	250.000	249.192	12461803.32	0.7360	A	0.2
7	☐	500.000	508.224	24915252.99	1.5011	A	2.5
8	☐	1000.000	996.129	49963588.61	2.9422	A	0.7
9	☐			177317.39	0.0110	P	1.1

$$y = 0.0030 * x + 6.3308E-006$$

$$R = 0.9999$$

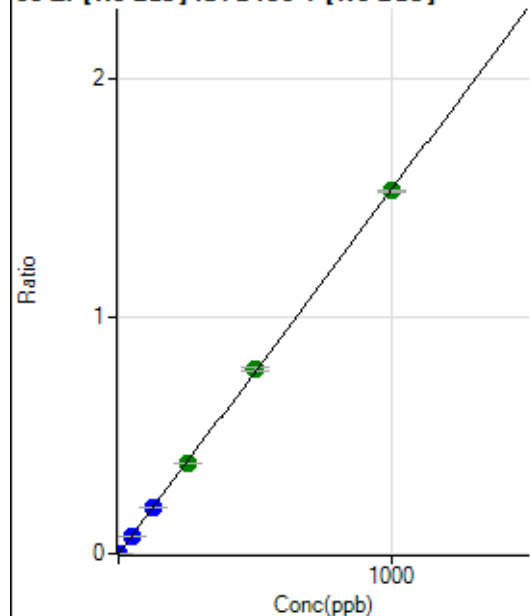
$$DL = 0.00208$$

$$BEC = 0.002143$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1422.35	0.0001	P	6.7
2	☐	0.100					
3	☐	1.000	0.911	27124.00	0.0015	P	4.5
4	☐	50.000	49.431	1394456.32	0.0758	P	0.7
5	☐	125.000	125.697	3406062.32	0.1927	P	1.4
6	☐	250.000	250.122	6492418.11	0.3835	A	0.4
7	☐	500.000	506.443	12884837.62	0.7763	A	2.9
8	☐	1000.000	996.690	25944482.18	1.5278	A	0.7
9	☐			8819.76	0.0005	P	8.1

$$y = 0.0015 * x + 7.7264E-005$$

$$R = 1.0000$$

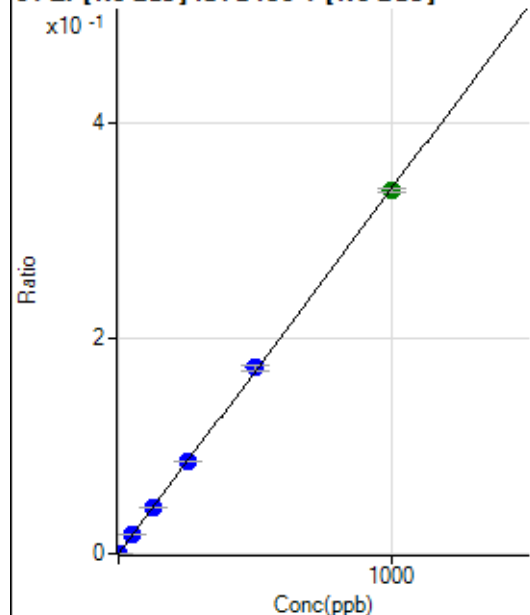
$$DL = 0.01009$$

$$BEC = 0.05041$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	266.68	0.0000	P	21.3
2	☐	0.100					
3	☐	1.000	0.935	6087.67	0.0003	P	3.6
4	☐	50.000	50.300	312901.60	0.0170	P	0.3
5	☐	125.000	127.335	760929.58	0.0431	P	0.6
6	☐	250.000	252.713	1446662.26	0.0854	P	1.2
7	☐	500.000	509.224	2857325.87	0.1722	P	2.7
8	☐	1000.000	994.403	5708625.30	0.3362	A	1.1
9	☐			1964.11	0.0001	P	4.0

$$y = 3.3804\text{E-}004 * x + 1.4506\text{E-}005$$

$$R = 0.9999$$

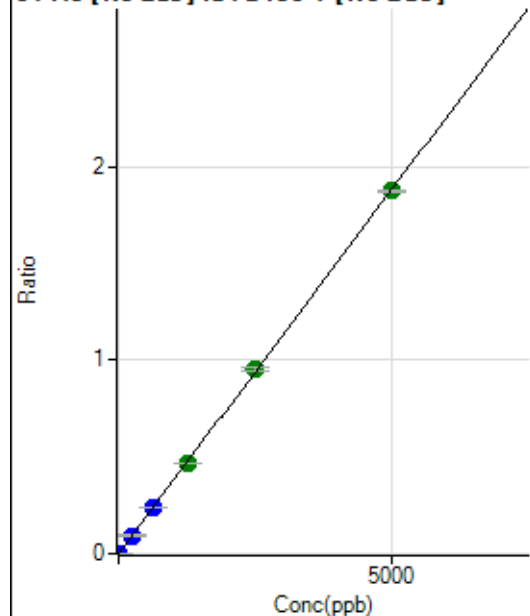
$$DL = 0.02743$$

$$BEC = 0.04291$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	575.03	0.0000	P	18.4
2	☐	0.500					
3	☐	5.000	4.687	32994.74	0.0018	P	2.8
4	☐	250.000	249.960	1726766.51	0.0939	P	1.3
5	☐	625.000	629.691	4180250.96	0.2366	P	1.2
6	☐	1250.000	1236.224	7862673.61	0.4644	A	0.8
7	☐	2500.000	2531.992	15786093.93	0.9511	A	2.5
8	☐	5000.000	4986.864	31811699.67	1.8732	A	0.5
9	☐			15775.87	0.0010	P	4.8

$$y = 3.7562\text{E-}004 * x + 3.1270\text{E-}005$$

$$R = 1.0000$$

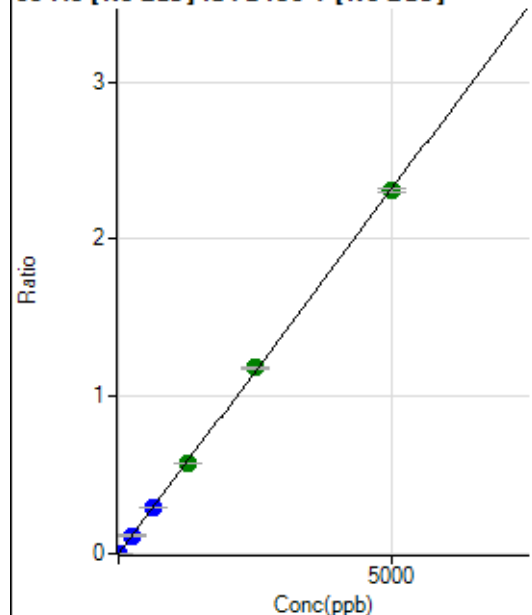
$$DL = 0.04607$$

$$BEC = 0.08325$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	300.02	0.0000	P	6.4
2	☐	0.500					
3	☐	5.000	4.817	41413.82	0.0022	P	1.9
4	☐	250.000	250.009	2130496.79	0.1159	P	0.5
5	☐	625.000	633.617	5189064.74	0.2936	P	1.5
6	☐	1250.000	1249.160	9801603.69	0.5789	A	0.2
7	☐	2500.000	2546.386	19588649.22	1.1801	A	1.6
8	☐	5000.000	4975.939	39160036.29	2.3060	A	1.0
9	☐			22721.68	0.0014	P	5.2

$$y = 4.6342\text{E-}004 * x + 1.6306\text{E-}005$$

$$R = 0.9999$$

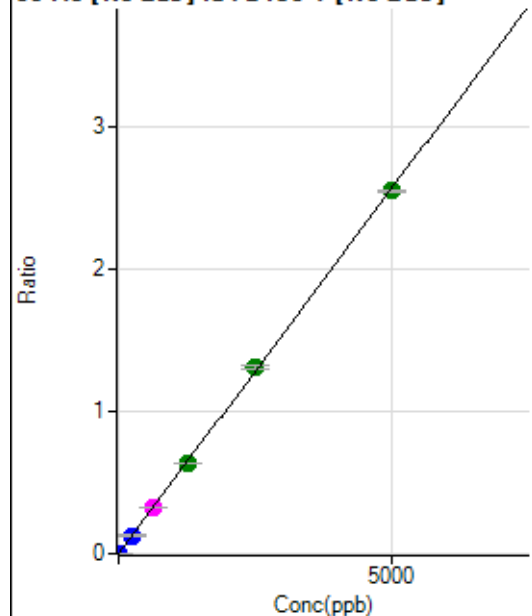
$$DL = 0.006784$$

$$BEC = 0.03519$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	397.25	0.0000	P	9.5
2	☐	0.500					
3	☐	5.000	4.814	45835.75	0.0025	P	0.8
4	☐	250.000	249.893	2354850.27	0.1281	P	0.6
5	☐	625.000	629.150	5697896.48	0.3224	M	1.1
6	☐	1250.000	1247.504	10824363.96	0.6393	A	0.6
7	☐	2500.000	2557.741	21756846.49	1.3107	A	2.1
8	☐	5000.000	4971.241	43263088.47	2.5475	A	0.3
9	☐			34484.52	0.0021	P	3.9

$$y = 5.1245\text{E-}004 * x + 2.1594\text{E-}005$$

$$R = 0.9999$$

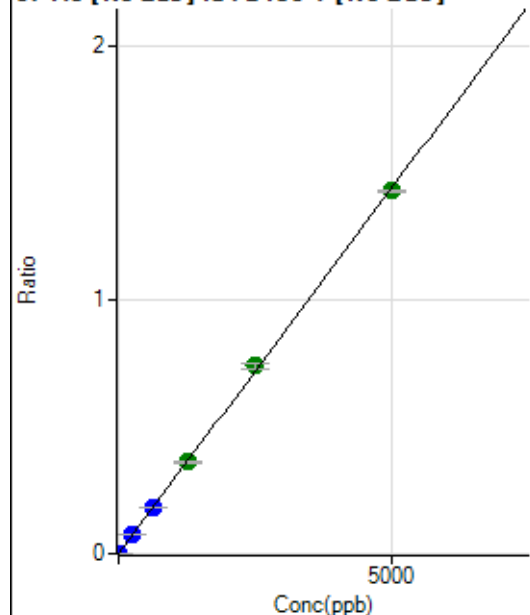
$$DL = 0.01206$$

$$BEC = 0.04214$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	175.01	0.0000	P	7.5
2	☐	0.500					
3	☐	5.000	4.819	25752.07	0.0014	P	1.1
4	☐	250.000	251.409	1332311.41	0.0725	P	0.5
5	☐	625.000	635.551	3236720.34	0.1832	P	1.5
6	☐	1250.000	1250.273	6100614.37	0.3603	A	0.9
7	☐	2500.000	2566.942	12277794.37	0.7397	A	2.7
8	☐	5000.000	4965.072	24298134.57	1.4308	A	0.6
9	☐			13320.65	0.0008	P	6.8

$$y = 2.8818\text{E-}004 * x + 9.5045\text{E-}006$$

$$R = 0.9999$$

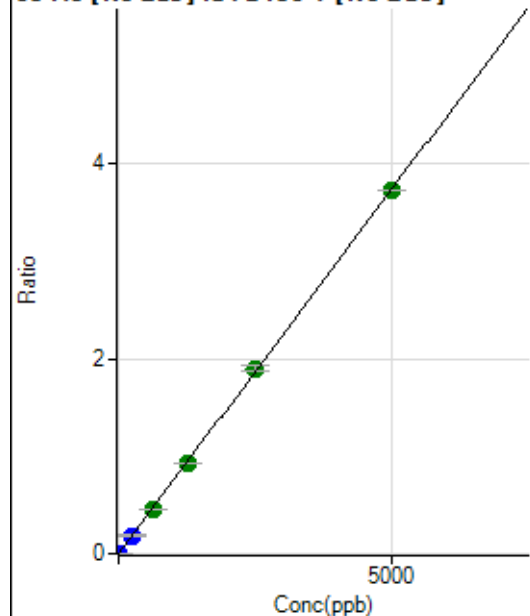
$$DL = 0.007444$$

$$BEC = 0.03298$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	488.92	0.0000	P	2.8
2	☐	0.500					
3	☐	5.000	4.764	66090.66	0.0036	P	2.0
4	☐	250.000	250.528	3444556.20	0.1873	P	0.8
5	☐	625.000	618.452	8172381.26	0.4624	A	0.4
6	☐	1250.000	1243.723	15745489.41	0.9300	A	0.7
7	☐	2500.000	2539.731	31517732.65	1.8990	A	2.9
8	☐	5000.000	4982.496	63267487.53	3.7255	A	0.2
9	☐			33724.42	0.0021	P	5.5

$$y = 7.4771\text{E-}004 * x + 2.6567\text{E-}005$$

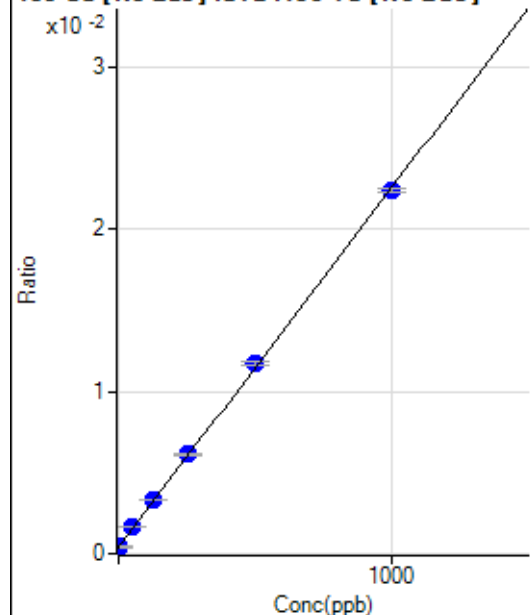
$$R = 1.0000$$

$$DL = 0.002964$$

$$BEC = 0.03553$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	9581.41	0.0004	P	2.6
2	☐	0.100					
3	☐	1.000	0.651	9856.62	0.0004	P	4.6
4	☐	50.000	54.918	38188.67	0.0016	P	1.4
5	☐	125.000	131.271	77327.87	0.0033	P	0.8
6	☐	250.000	257.517	140583.68	0.0061	P	1.3
7	☐	500.000	510.221	266216.64	0.0117	P	2.0
8	☐	1000.000	991.981	516964.06	0.0223	P	1.1
9	☐			7952.56	0.0004	P	2.6

$$y = 2.2109\text{E-}005 * x + 4.0452\text{E-}004$$

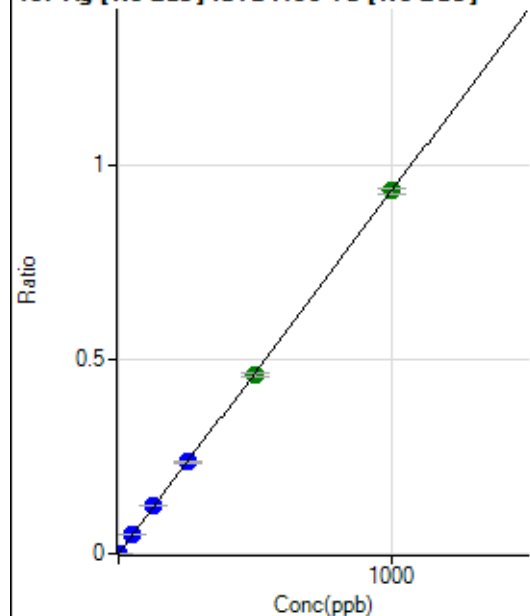
$$R = 0.9999$$

$$DL = 1.419$$

$$BEC = 18.3$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	252.79	0.0000	P	26.2
2	☐	0.100					
3	☐	1.000	1.126	24947.84	0.0011	P	1.6
4	☐	50.000	54.395	1197622.43	0.0508	P	0.7
5	☐	125.000	132.479	2890841.77	0.1236	P	1.2
6	☐	250.000	253.111	5445015.75	0.2362	P	1.2
7	☐	500.000	495.098	10524138.00	0.4620	A	2.3
8	☐	1000.000	1000.518	21604026.70	0.9336	A	1.6
9	☐			2244.72	0.0001	P	11.0

$$y = 9.3309\text{E-}004 * x + 1.0666\text{E-}005$$

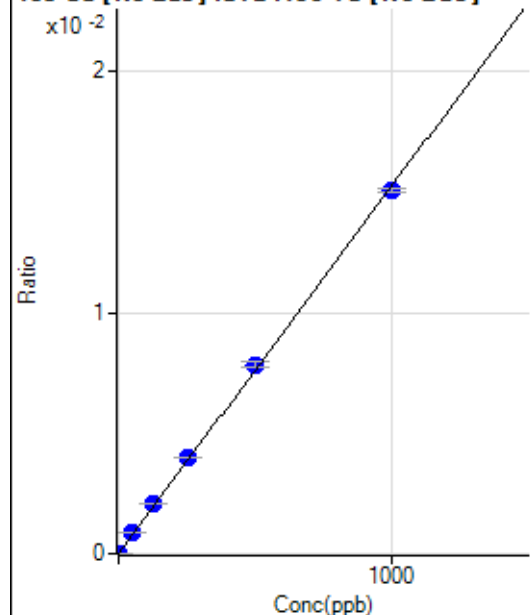
$$R = 0.9999$$

$$DL = 0.008998$$

$$BEC = 0.01143$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	11.11	0.0000	P	57.2
2	☐	0.100					
3	☐	1.000	1.144	420.85	0.0000	P	14.1
4	☐	50.000	56.045	20153.58	0.0009	P	2.3
5	☐	125.000	136.381	48598.71	0.0021	P	1.4
6	☐	250.000	261.051	91701.98	0.0040	P	1.1
7	☐	500.000	515.427	178897.68	0.0079	P	2.5
8	☐	1000.000	987.799	348288.04	0.0150	P	1.0
9	☐			84.72	0.0000	P	27.4

$$y = 1.5235\text{E-}005 * x + 4.6878\text{E-}007$$

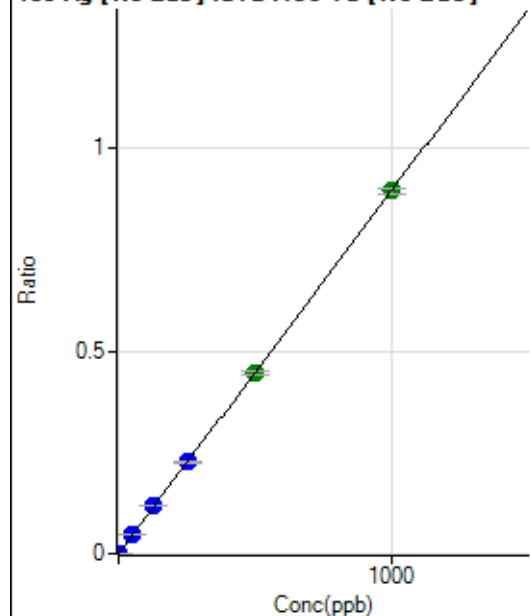
$$R = 0.9997$$

$$DL = 0.05284$$

$$BEC = 0.03077$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	194.46	0.0000	P	21.1
2	☐	0.100					
3	☐	1.000	1.111	23587.17	0.0010	P	2.7
4	☐	50.000	54.738	1156537.17	0.0490	P	1.0
5	☐	125.000	132.734	2779558.51	0.1189	P	1.7
6	☐	250.000	253.341	5230143.82	0.2269	P	1.4
7	☐	500.000	496.373	10125997.19	0.4445	A	2.1
8	☐	1000.000	999.774	20716993.17	0.8953	A	1.4
9	☐			2041.91	0.0001	P	15.1

$$y = 8.9547\text{E-}004 * x + 8.2045\text{E-}006$$

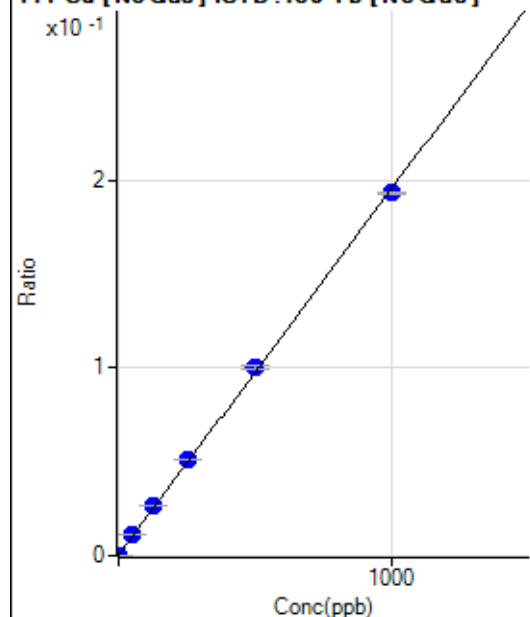
$$R = 1.0000$$

$$DL = 0.00581$$

$$BEC = 0.009162$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6740.87	0.0003	P	2.7
2	☐	0.100					
3	☐	1.000	0.994	11257.29	0.0005	P	1.9
4	☐	50.000	55.152	260606.37	0.0110	P	0.9
5	☐	125.000	134.817	621839.16	0.0266	P	1.5
6	☐	250.000	260.124	1176812.20	0.0510	P	0.7
7	☐	500.000	513.644	2289765.95	0.1005	P	2.6
8	☐	1000.000	989.163	4473711.16	0.1933	P	0.6
9	☐			6157.51	0.0003	P	4.0

$$y = 1.9514\text{E-}004 * x + 2.8459\text{E-}004$$

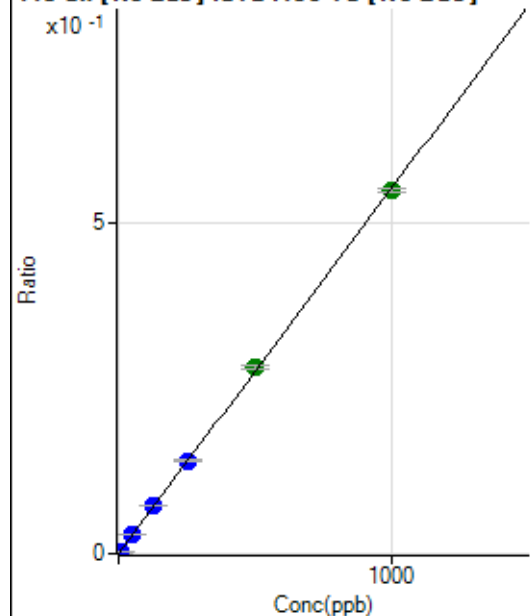
$$R = 0.9998$$

$$DL = 0.1198$$

$$BEC = 1.458$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	977.86	0.0000	P	11.1
2	☐	0.500					
3	☐	5.000	5.308	70064.24	0.0030	P	2.6
4	☐	50.000	52.587	687712.67	0.0292	P	0.2
5	☐	125.000	129.843	1681679.90	0.0719	P	1.3
6	☐	250.000	253.921	3241369.04	0.1406	P	1.4
7	☐	500.000	509.781	6429391.16	0.2822	A	2.4
8	☐	1000.000	993.393	12726531.97	0.5499	A	0.9
9	☐			8425.11	0.0004	P	1.3

$$y = 5.5355\text{E-}004 * x + 4.1298\text{E-}005$$

$$R = 0.9999$$

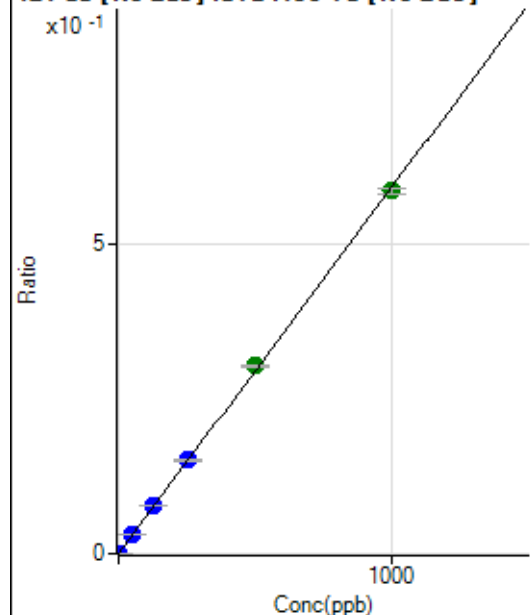
$$DL = 0.02487$$

$$BEC = 0.0746$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	102.78	0.0000	P	33.8
2	☐	0.200					
3	☐	2.000	1.950	27263.28	0.0012	P	2.1
4	☐	50.000	53.148	742929.22	0.0315	P	0.9
5	☐	125.000	131.410	1820625.80	0.0779	P	1.8
6	☐	250.000	256.571	3504378.94	0.1520	P	1.6
7	☐	500.000	512.667	6919853.80	0.3037	A	1.5
8	☐	1000.000	991.065	13587250.13	0.5872	A	1.3
9	☐			14449.70	0.0007	P	2.2

$$y = 5.9245\text{E-}004 * x + 4.3392\text{E-}006$$

$$R = 0.9998$$

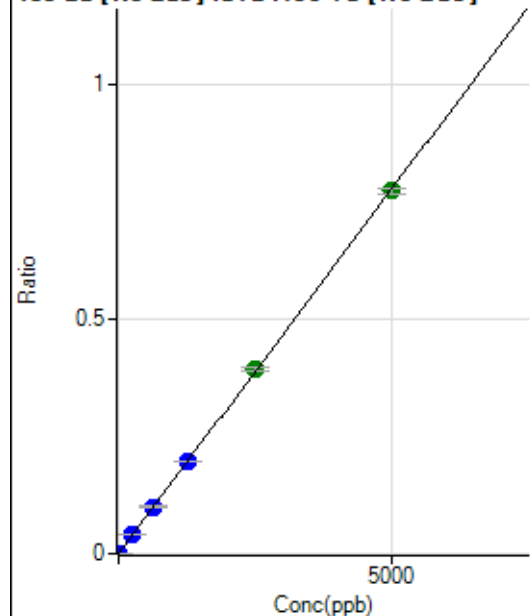
$$DL = 0.007427$$

$$BEC = 0.007324$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	52.78	0.0000	P	32.7
2	☐	1.000					
3	☐	10.000	10.059	36852.77	0.0016	P	0.4
4	☐	250.000	262.179	962204.79	0.0408	P	0.7
5	☐	625.000	644.292	2343725.72	0.1002	P	1.7
6	☐	1250.000	1269.334	4552313.21	0.1975	P	0.9
7	☐	2500.000	2526.571	8954129.37	0.3930	A	1.8
8	☐	5000.000	4978.860	17923311.86	0.7745	A	1.4
9	☐			3464.49	0.0002	P	2.8

$$y = 1.5556\text{E-}004 * x + 2.2273\text{E-}006$$

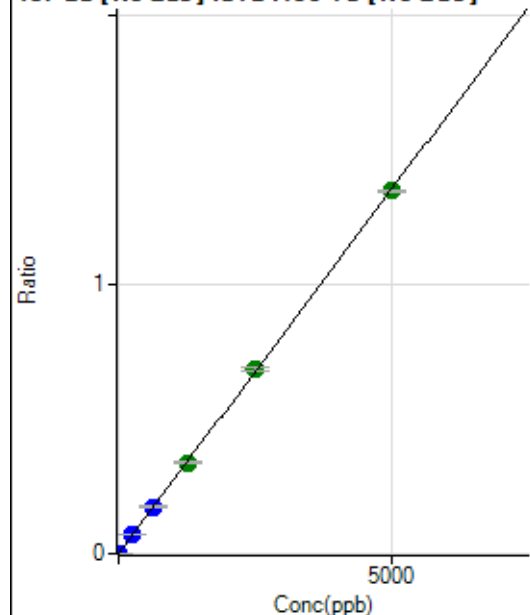
$$R = 1.0000$$

$$DL = 0.01403$$

$$BEC = 0.01432$$

Weight: <None>

Min Conc: 0

¹³⁷Ba [No Gas] ISTD : ¹⁵⁹Tb [No Gas]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	30.56	0.0000	P	41.6
2	☐	1.000					
3	☐	10.000	10.240	65151.61	0.0028	P	1.7
4	☐	250.000	262.055	1672053.52	0.0709	P	0.8
5	☐	625.000	646.188	4086571.71	0.1748	P	1.6
6	☐	1250.000	1249.993	7793828.65	0.3381	A	0.9
7	☐	2500.000	2532.461	15603092.36	0.6849	A	1.9
8	☐	5000.000	4980.520	31173665.98	1.3470	A	0.5
9	☐			5929.34	0.0003	P	6.8

$$y = 2.7045E-004 * x + 1.2894E-006$$

$$R = 1.0000$$

$$DL = 0.005945$$

$$BEC = 0.004768$$

Weight: <None>

Min Conc: 0

¹⁵⁰Nd [No Gas] No available calibration points

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			6.67		P	173.
2	☐						
3	☐			2.22		P	173.
4	☐			88.89		P	22.9
5	☐			266.68		P	19.8
6	☐			426.69		P	5.6
7	☐			886.73		P	12.5
8	☐			1577.92		P	1.0
9	☐			251.12		P	10.7

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			1.11		P	173.
2	☐						
3	☐			3.33		P	100.
4	☐			7.78		P	65.5
5	☐			28.89		P	24.0
6	☐			51.11		P	54.7
7	☐			98.89		P	33.9
8	☐			188.89		P	6.7
9	☐			121.12		P	13.9

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			16.67		P	50.0
2	☐						
3	☐			5.56		P	173.
4	☐			36.11		P	26.7
5	☐			47.22		P	36.7
6	☐			102.78		P	12.4
7	☐			175.01		P	17.2
8	☐			300.02		P	2.8
9	☐			150.01		P	16.7

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			6.67		P	50.0
2	☐						
3	☐			3.33		P	173.
4	☐			18.89		P	10.2
5	☐			50.00		P	11.5
6	☐			82.23		P	18.3
7	☐			165.56		P	3.1
8	☐			311.12		P	6.5
9	☐			92.23		P	15.0

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			152.79		P	62.7
2	☐						
3	☐			150.01		P	9.6
4	☐			175.01		P	20.8
5	☐			213.90		P	9.0
6	☐			216.68		P	23.4
7	☐			155.56		P	26.4
8	☐			175.01		P	14.3
9	☐			202.79		P	6.3

160 Gd [He] No available calibration points

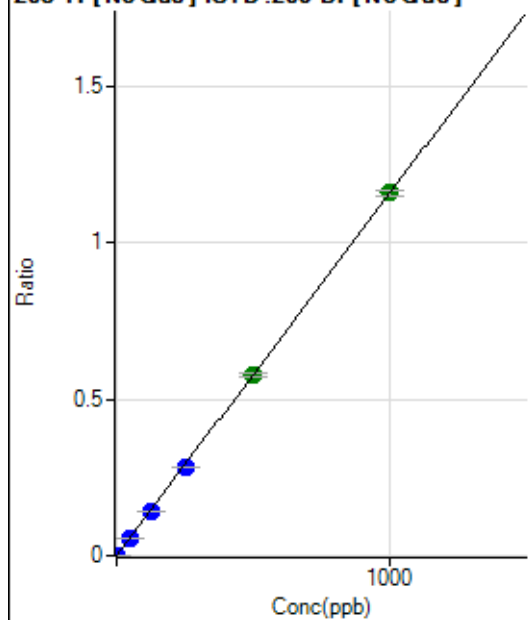
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			318.90		P	24.4
2	☐						
3	☐			306.68		P	2.9
4	☐			297.78		P	12.6
5	☐			322.23		P	7.3
6	☐			298.90		P	8.4
7	☐			311.12		P	12.6
8	☐			322.23		P	10.6
9	☐			356.68		P	4.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			66.67		P	12.5
2	☐						
3	☐			72.23		P	17.6
4	☐			77.78		P	24.7
5	☐			63.89		P	19.9
6	☐			69.45		P	38.6
7	☐			94.45		P	41.7
8	☐			97.23		P	21.6
9	☐			102.78		P	12.4

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			34.44		P	24.3
2	☐						
3	☐			32.22		P	6.0
4	☐			40.00		P	33.3
5	☐			31.11		P	34.4
6	☐			43.33		P	23.1
7	☐			41.11		P	20.4
8	☐			55.56		P	9.2
9	☐			65.55		P	20.6

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	605.60	0.0000	P	4.6
2	☐	0.100					
3	☐	1.000	0.878	16549.81	0.0011	P	3.8
4	☐	50.000	48.676	884451.83	0.0563	P	2.5
5	☐	125.000	123.024	2197141.17	0.1422	P	0.7
6	☐	250.000	245.103	4299180.05	0.2833	P	1.5
7	☐	500.000	499.282	8477193.59	0.5770	A	3.1
8	☐	1000.000	1001.896	16669335.79	1.1579	A	1.3
9	☐			3089.37	0.0003	P	9.5

$$y = 0.0012 * x + 3.8571E-005$$

$$R = 1.0000$$

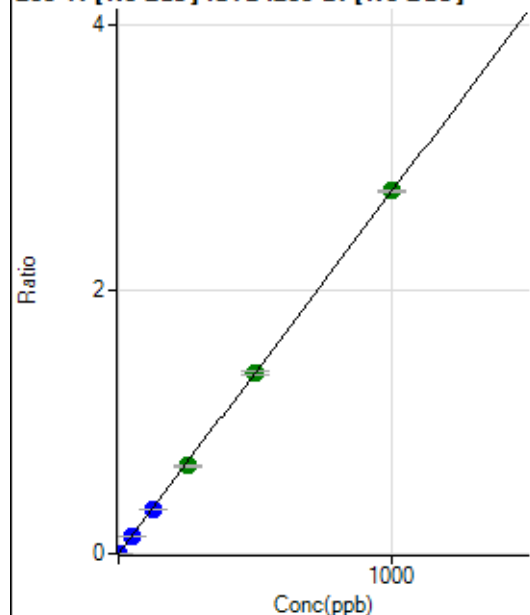
$$DL = 0.004576$$

$$BEC = 0.03337$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1238.99	0.0001	P	5.8
2	☐	0.100					
3	☐	1.000	0.916	40680.12	0.0026	P	1.0
4	☐	50.000	48.963	2109779.32	0.1343	P	1.4
5	☐	125.000	123.252	5219838.83	0.3379	P	1.0
6	☐	250.000	241.823	10058722.71	0.6628	A	0.2
7	☐	500.000	499.887	20130916.77	1.3701	A	2.2
8	☐	1000.000	1002.371	39550030.40	2.7472	A	0.6
9	☐			7791.53	0.0007	P	9.4

$$y = 0.0027 * x + 7.8868E-005$$

$$R = 1.0000$$

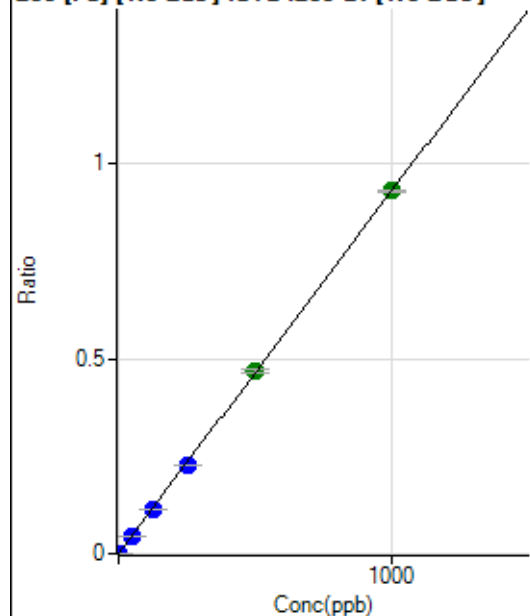
$$DL = 0.004979$$

$$BEC = 0.02878$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	920.43	0.0001	P	5.6
2	☐	0.100					
3	☐	1.000	0.911	14246.90	0.0009	P	2.2
4	☐	50.000	48.966	717091.00	0.0456	P	1.5
5	☐	125.000	122.739	1765961.90	0.1143	P	1.1
6	☐	250.000	244.597	3456005.55	0.2277	P	1.0
7	☐	500.000	501.733	6862940.20	0.4671	A	2.2
8	☐	1000.000	1000.819	13412370.32	0.9316	A	0.6
9	☐			13662.91	0.0012	P	1.5

$$y = 9.3083E-004 * x + 5.8609E-005$$

$$R = 1.0000$$

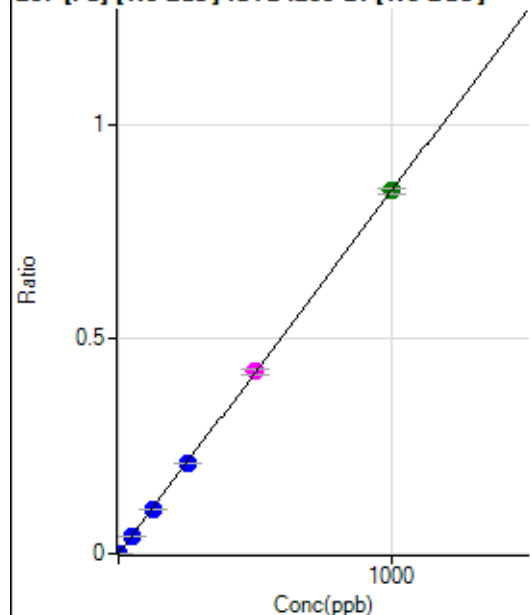
$$DL = 0.01065$$

$$BEC = 0.06296$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	792.64	0.0001	P	4.7
2	☐	0.100					
3	☐	1.000	0.891	12611.84	0.0008	P	2.3
4	☐	50.000	49.155	652870.70	0.0415	P	1.3
5	☐	125.000	122.441	1597778.46	0.1034	P	1.4
6	☐	250.000	247.229	3168276.75	0.2088	P	0.5
7	☐	500.000	501.442	6219025.66	0.4234	M	3.9
8	☐	1000.000	1000.334	12158506.41	0.8446	A	1.4
9	☐			11759.25	0.0010	P	4.1

$$y = 8.4426\text{E-}004 * x + 5.0469\text{E-}005$$

$$R = 1.0000$$

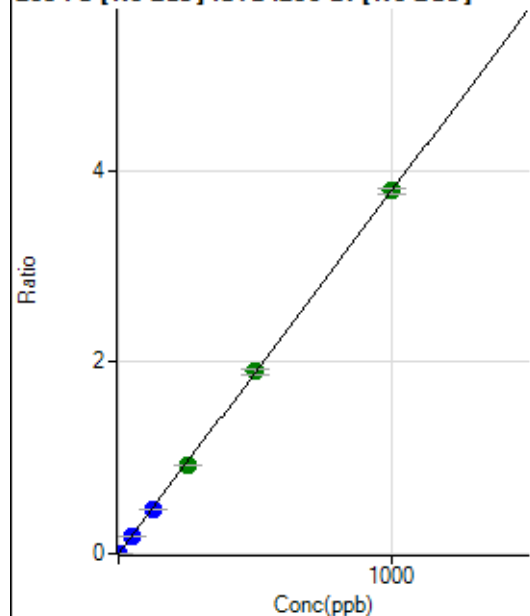
$$DL = 0.008474$$

$$BEC = 0.05978$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3694.76	0.0002	P	0.3
2	☐	0.100					
3	☐	1.000	0.905	57485.36	0.0037	P	2.0
4	☐	50.000	49.200	2927258.63	0.1863	P	1.4
5	☐	125.000	123.779	7235355.73	0.4683	P	1.1
6	☐	250.000	244.823	14053803.41	0.9261	A	0.2
7	☐	500.000	502.100	27900343.85	1.8990	A	2.7
8	☐	1000.000	1000.437	54468035.24	3.7836	A	1.3
9	☐			54263.15	0.0047	P	0.4

$$y = 0.0038 * x + 2.3524\text{E-}004$$

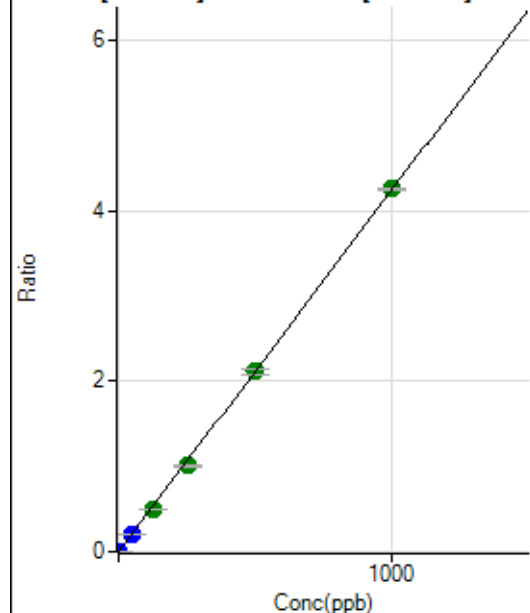
$$R = 1.0000$$

$$DL = 0.0005034$$

$$BEC = 0.0622$$

Weight: <None>

Min Conc: 0

232 Th [No Gas] ISTD :209 Bi [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	448.17	0.0000	P	3.1
2	☐	0.100					
3	☐	1.000	0.821	55166.57	0.0035	P	1.8
4	☐	50.000	45.821	3054449.66	0.1944	P	1.7
5	☐	125.000	116.463	7632794.27	0.4941	A	0.6
6	☐	250.000	237.059	15260363.88	1.0056	A	0.6
7	☐	500.000	499.887	31150940.05	2.1205	A	3.2
8	☐	1000.000	1004.568	61348351.37	4.2613	A	0.5
9	☐			17358.24	0.0015	P	5.4

$$y = 0.0042 * x + 2.8529E-005$$

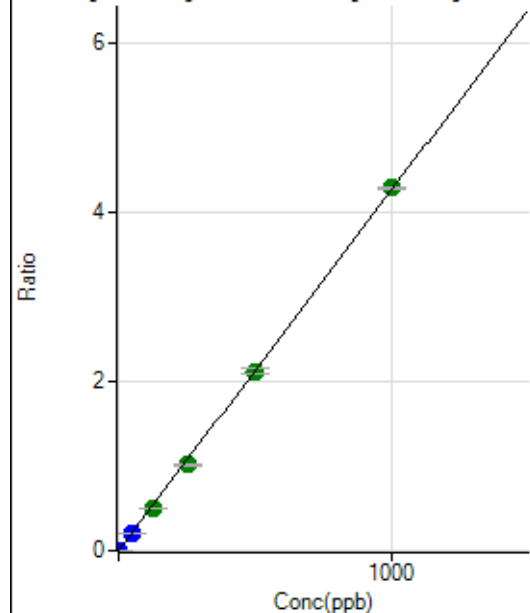
$$R = 0.9999$$

$$DL = 0.000623$$

$$BEC = 0.006726$$

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	136.12	0.0000	P	15.1
2	☐	0.100					
3	☐	1.000	0.849	56919.86	0.0036	P	1.5
4	☐	50.000	46.540	3112895.53	0.1981	P	2.3
5	☐	125.000	115.936	7624823.52	0.4935	A	0.2
6	☐	250.000	237.745	15358146.18	1.0120	A	0.5
7	☐	500.000	497.474	31111303.13	2.1177	A	2.8
8	☐	1000.000	1005.633	61629377.77	4.2808	A	0.4
9	☐			6999.41	0.0006	P	10.8

$$y = 0.0043 * x + 8.6743E-006$$

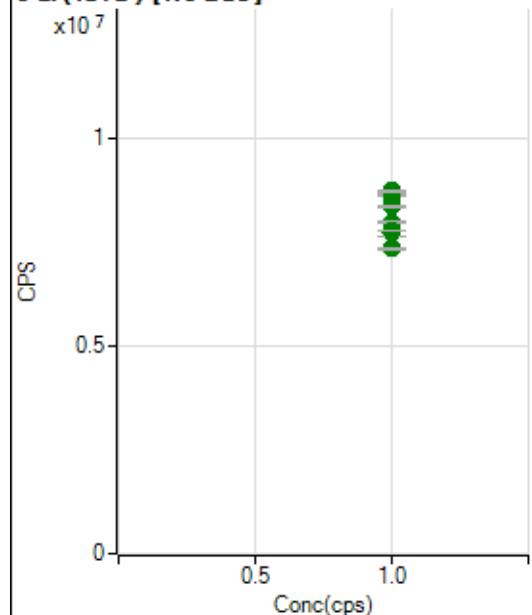
$$R = 0.9999$$

$$DL = 0.0009217$$

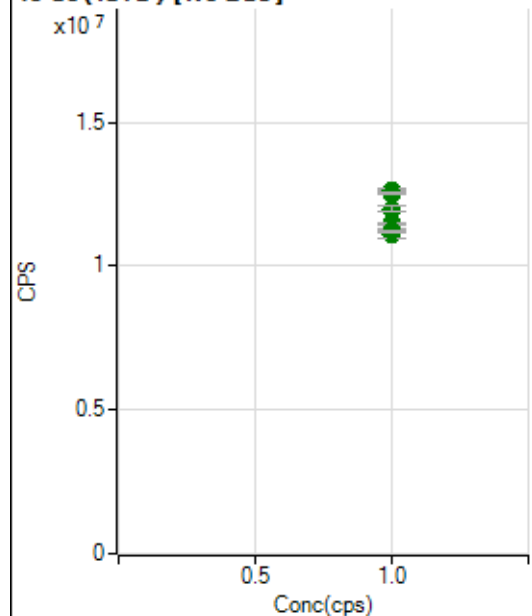
$$BEC = 0.002038$$

Weight: <None>

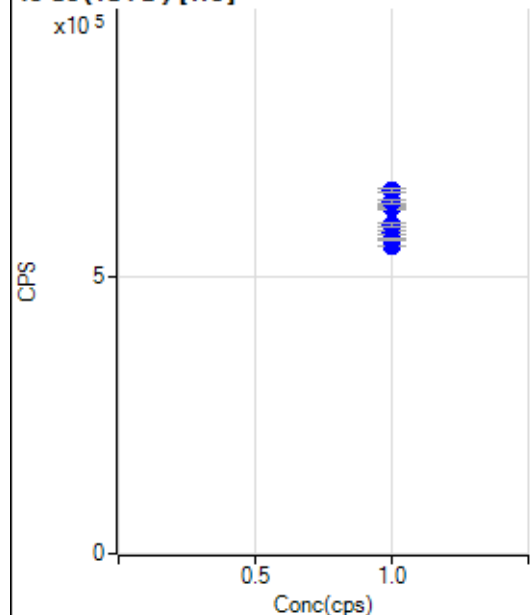
Min Conc: 0

6 Li (ISTD) [No Gas]

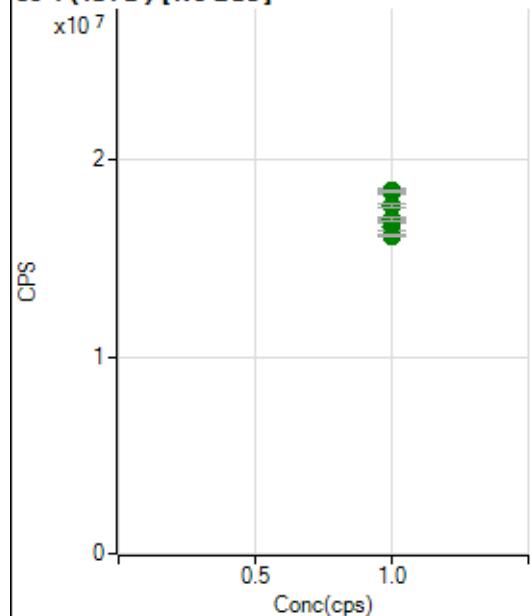
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8611576.00		A	0.2
2	☐	1.000					
3	☐	1.000		8724033.91		A	1.1
4	☐	1.000		8739395.54		A	0.4
5	☐	1.000		8367377.03		A	0.7
6	☐	1.000		7990197.21		A	0.3
7	☐	1.000		7720303.29		A	1.6
8	☐	1.000		7784596.66		A	0.3
9	☐	1.000		7357372.24		A	0.6

45 Sc (ISTD) [No Gas]

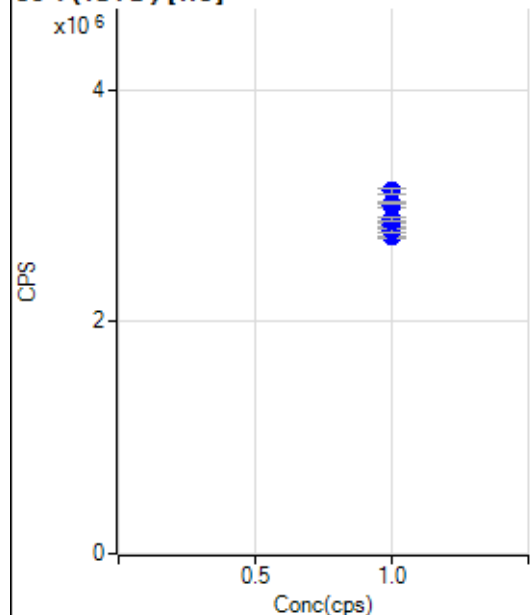
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12591277.71		A	0.4
2	☐	1.000					
3	☐	1.000		12617552.11		A	1.7
4	☐	1.000		12532863.99		A	0.7
5	☐	1.000		11989471.53		A	1.5
6	☐	1.000		11274407.28		A	0.2
7	☐	1.000		11070333.06		A	1.4
8	☐	1.000		11471739.84		A	0.3
9	☐	1.000		11203618.22		A	0.9

45 Sc (ISTD) [He]

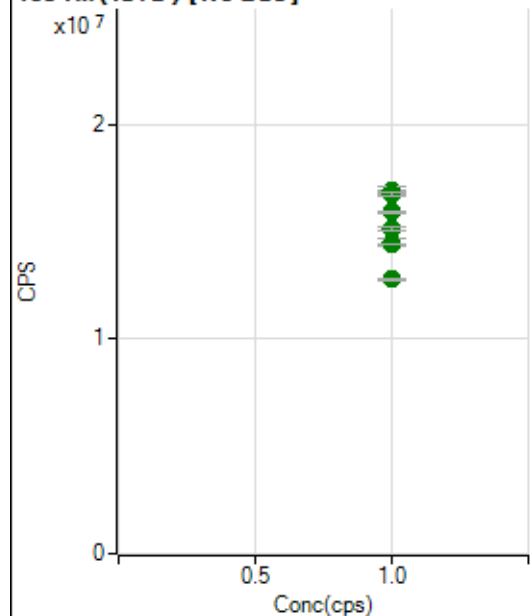
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		627091.90		P	0.6
2	☐	1.000					
3	☐	1.000		656856.47		P	1.1
4	☐	1.000		625537.25		P	0.8
5	☐	1.000		581165.61		P	1.6
6	☐	1.000		558174.06		P	0.2
7	☐	1.000		568621.54		P	0.7
8	☐	1.000		595570.82		P	0.7
9	☐	1.000		636921.52		P	1.1

89 Y (ISTD) [No Gas]

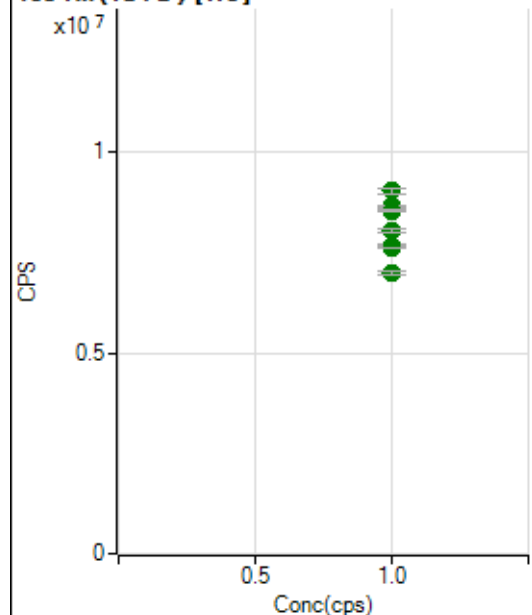
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		18406163.47		A	0.9
2	☐	1.000					
3	☐	1.000		18420563.75		A	1.9
4	☐	1.000		18386287.09		A	0.7
5	☐	1.000		17672166.41		A	0.7
6	☐	1.000		16931287.39		A	0.2
7	☐	1.000		16603092.39		A	2.0
8	☐	1.000		16982260.72		A	0.8
9	☐	1.000		16144394.48		A	1.0

89 Y(ISTD) [He]

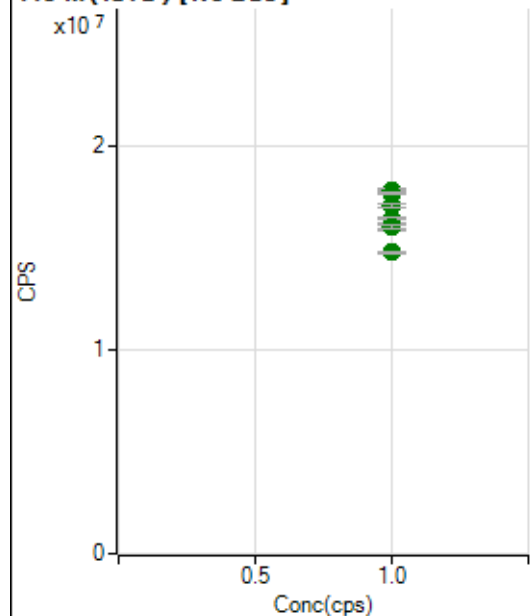
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3000685.06		P	1.1
2	☐	1.000					
3	☐	1.000		3128610.30		P	1.6
4	☐	1.000		3023553.01		P	0.4
5	☐	1.000		2839169.51		P	1.3
6	☐	1.000		2734038.71		P	0.5
7	☐	1.000		2786535.31		P	0.9
8	☐	1.000		2862213.36		P	0.6
9	☐	1.000		2885980.65		P	0.9

103 Rh(ISTD) [No Gas]

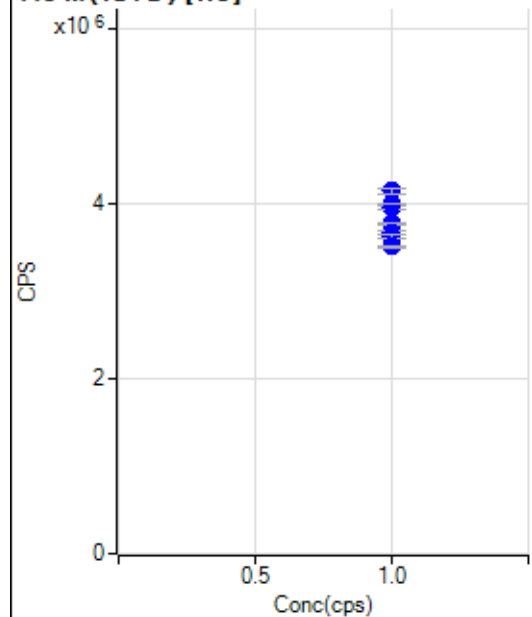
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		16779587.70		A	1.4
2	☐	1.000					
3	☐	1.000		16887650.73		A	2.2
4	☐	1.000		16741686.83		A	1.0
5	☐	1.000		15906979.18		A	0.8
6	☐	1.000		15096574.99		A	1.1
7	☐	1.000		14492186.09		A	2.1
8	☐	1.000		14437480.36		A	0.0
9	☐	1.000		12786857.58		A	0.5

103 Rh (ISTD) [He]

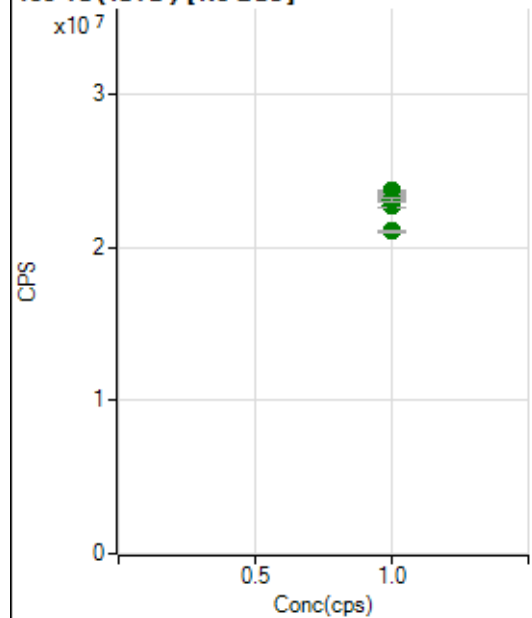
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		8664657.44		A	0.5
2	☐	1.000					
3	☐	1.000		9045578.20		A	1.7
4	☐	1.000		8543806.26		A	0.6
5	☐	1.000		8044195.30		A	1.1
6	☐	1.000		7682463.84		A	0.5
7	☐	1.000		7652406.41		A	0.7
8	☐	1.000		7622116.69		A	0.2
9	☐	1.000		6989134.48		A	1.1

115 In (ISTD) [No Gas]

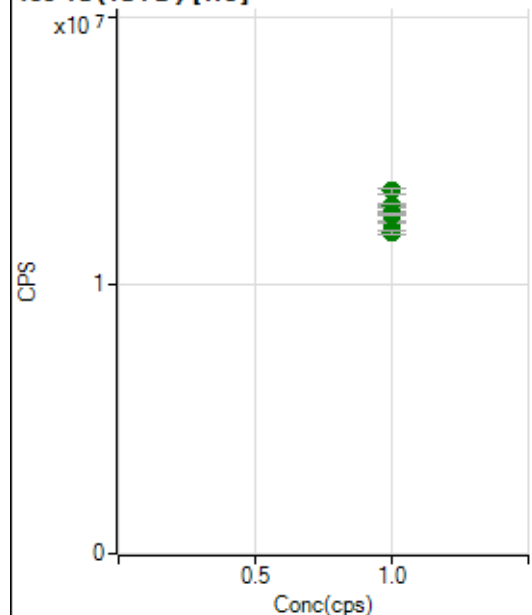
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		17750617.88		A	0.2
2	☐	1.000					
3	☐	1.000		17780522.97		A	1.7
4	☐	1.000		17657400.56		A	0.6
5	☐	1.000		17068980.41		A	0.7
6	☐	1.000		16433771.68		A	0.4
7	☐	1.000		15991238.51		A	2.5
8	☐	1.000		16018800.03		A	1.2
9	☐	1.000		14761973.75		A	1.0

115 In (ISTD) [He]

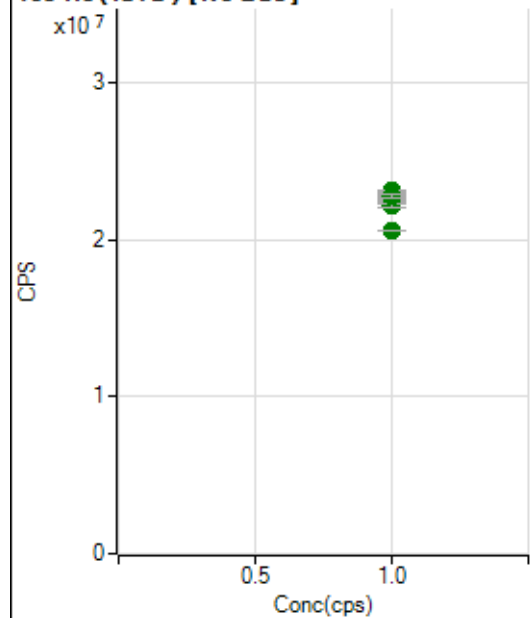
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		3944468.96		P	1.2
2	☐	1.000					
3	☐	1.000		4141006.77		P	1.6
4	☐	1.000		3994196.90		P	0.2
5	☐	1.000		3766067.78		P	0.7
6	☐	1.000		3642142.02		P	0.1
7	☐	1.000		3660946.16		P	1.0
8	☐	1.000		3614827.68		P	1.0
9	☐	1.000		3507038.50		P	0.8

159 Tb (ISTD) [No Gas]

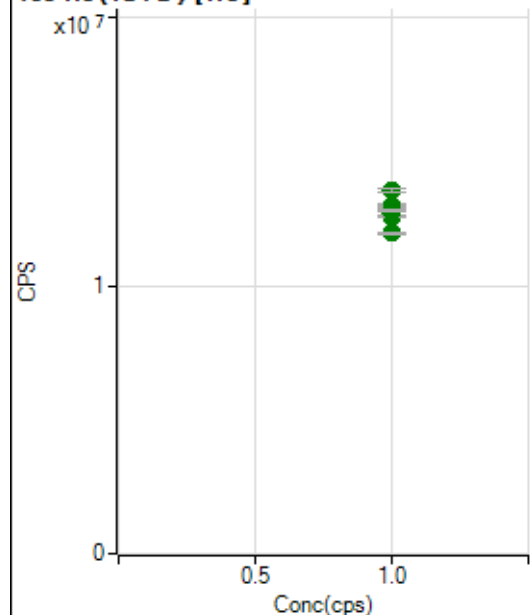
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		23686371.03		A	0.5
2	☐	1.000					
3	☐	1.000		23518790.20		A	1.5
4	☐	1.000		23591410.20		A	0.5
5	☐	1.000		23384375.48		A	0.3
6	☐	1.000		23054863.27		A	0.5
7	☐	1.000		22786524.38		A	1.7
8	☐	1.000		23142906.60		A	1.2
9	☐	1.000		21078458.30		A	0.7

159 Tb (ISTD) [He]

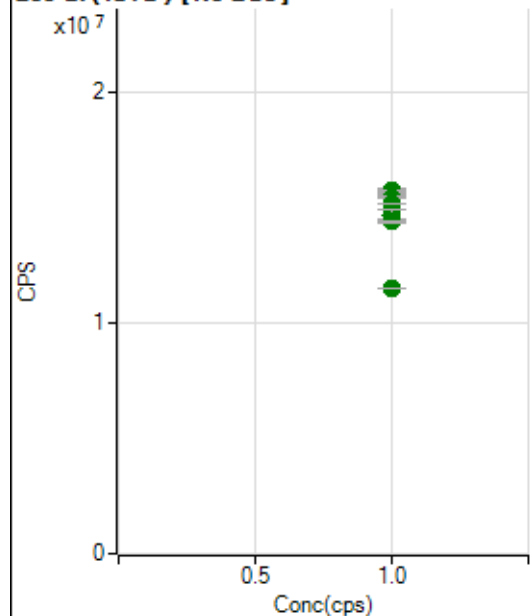
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12928151.75		A	0.3
2	☐	1.000					
3	☐	1.000		13518465.50		A	1.4
4	☐	1.000		12964259.95		A	0.8
5	☐	1.000		12661079.67		A	1.2
6	☐	1.000		12357812.60		A	0.0
7	☐	1.000		12708359.39		A	0.0
8	☐	1.000		12638055.78		A	0.5
9	☐	1.000		11977261.91		A	1.1

165 Ho (ISTD) [No Gas]

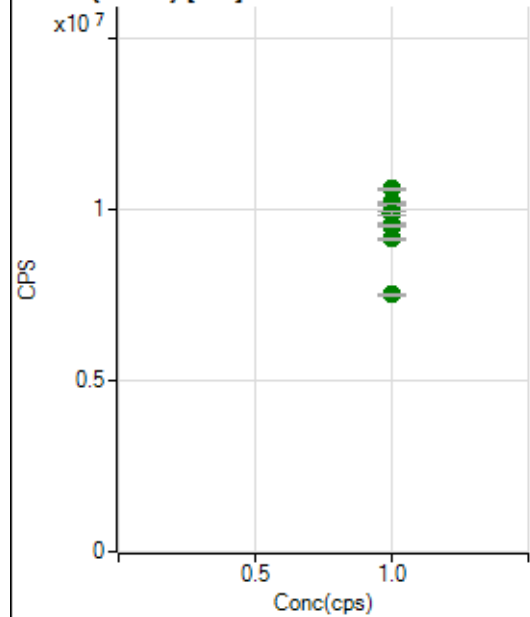
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		22807524.30		A	0.5
2	☐	1.000					
3	☐	1.000		22679284.54		A	2.1
4	☐	1.000		23119250.69		A	0.2
5	☐	1.000		22804021.00		A	1.0
6	☐	1.000		22531305.71		A	0.5
7	☐	1.000		22199922.02		A	1.1
8	☐	1.000		22812267.18		A	0.7
9	☐	1.000		20601971.29		A	0.3

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		12989764.25		A	0.7
2	☐	1.000					
3	☐	1.000		13544580.77		A	1.1
4	☐	1.000		12982495.64		A	0.2
5	☐	1.000		12735619.12		A	1.0
6	☐	1.000		12557170.78		A	0.4
7	☐	1.000		12800509.81		A	0.6
8	☐	1.000		12821145.22		A	0.9
9	☐	1.000		11971499.13		A	0.7

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		15706420.46		A	1.1
2	☐	1.000					
3	☐	1.000		15712321.16		A	1.8
4	☐	1.000		15714018.93		A	0.9
5	☐	1.000		15449659.91		A	0.4
6	☐	1.000		15175375.88		A	0.2
7	☐	1.000		14698894.36		A	2.7
8	☐	1.000		14396681.45		A	0.7
9	☐	1.000		11496211.50		A	0.5

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		10200705.75		A	0.3
2	☐	1.000					
3	☐	1.000		10594729.71		A	0.8
4	☐	1.000		10134818.39		A	0.8
5	☐	1.000		9880418.60		A	1.0
6	☐	1.000		9566798.12		A	1.0
7	☐	1.000		9502366.18		A	0.5
8	☐	1.000		9128465.70		A	0.4
9	☐	1.000		7510570.03		A	0.4

US EPA Tune Check Sample Report

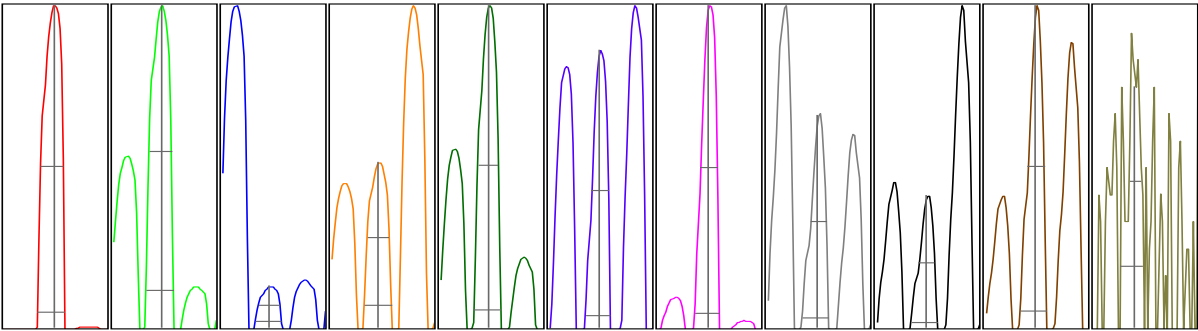
Batch Folder D:\ICP-MS Data\P7032219 .b.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	31433	1.02	5.00	
24	262052	0.91	5.00	
25	34647	1.12	5.00	
26	40487	1.22	5.00	
59	176121	1.37	5.00	
113	21716	1.89	5.00	
115	251694	3.10	5.00	
206	57823	1.32	5.00	
207	52630	1.39	5.00	
208	126925	0.70	5.00	
220	0	39.09		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	31962	31333	31192	31485	31193
24	264901	261270	259928	264267	259894
25	35258	34630	34350	34723	34275
26	41172	40513	40166	40694	39888
59	180149	175218	175106	176281	173848
113	21726	22092	22089	21569	21106
115	249974	258330	260435	248565	241167
206	59130	57527	57202	57810	57446
207	53839	52614	52095	52602	51998
208	128206	126400	126412	127501	126105
220	0	0	0	0	0

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	50913	9.00	8.9 - 9.1		0.787	0.900	
24	425150	23.95	23.9 - 24.1		0.799	0.900	
25	56497	24.90	24.9 - 25.1		0.760	0.900	
26	64546	25.90	25.9 - 26.1		0.791	0.900	
59	312211	58.95	58.9 - 59.1		0.778	0.900	
113	43589	113.00	112.9 - 113.1		0.722	0.900	
115	509978	115.00	114.9 - 115.1		0.713	0.900	
206	120954	206.00	205.9 - 206.1		0.764	0.900	
207	110354	207.00	206.9 - 207.1		0.769	0.900	
208	267398	208.00	207.9 - 208.1		0.764	0.900	
220	0	219.70	-		0.663		

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
RF Power	1600	W	Carrier Gas	0.80	L/min	S/C Temp		2 °C
RF Matching	1.80	V	Option Gas	0.0	%	Gas Switch		Dilution Gas
Smpl Depth	9.0	mm	Nebulizer Pump	0.10	rpm	Makeup/Dilution Gas		0.37 L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.3	V	Deflect	13.4	V
Extract 2	-120.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-60	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	160	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	45905	3.00	
89	41049	2.96	
205	55629	2.72	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	46316	46625	43485	46864	46235
89	41588	41325	38995	42188	41151
205	56236	56095	53002	56893	55917

Integration Time [sec] = 0.1

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
RF Power	1600	W	Carrier Gas	0.80	L/min	S/C Temp		2 °C
RF Matching	1.80	V	Option Gas	0.0	%	Gas Switch		Dilution Gas
Smpl Depth	9.0	mm	Nebulizer Pump	0.10	rpm	Makeup/Dilution Gas		0.37 L/min

Lenses Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Extract 1	0.0	V	Omega Lens	8.8	V	Deflect	1.4	V
Extract 2	-135.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-70	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	4.1	mL/min	OctP RF	200	V			