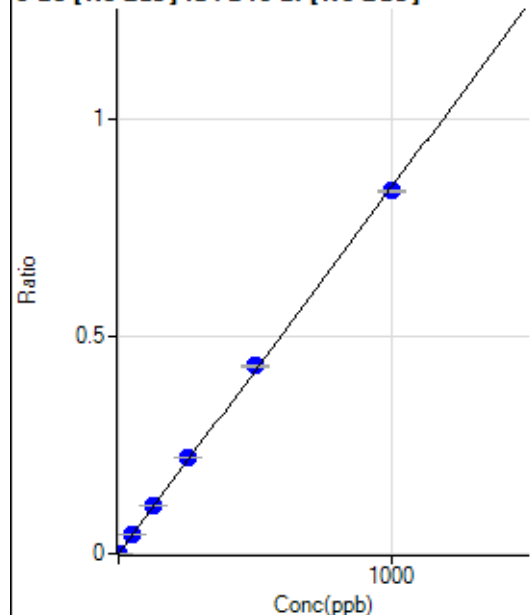


Batch Folder: D:\ICP-MS Data\P7072819-MS.b\
Analysis File: P7072819-MS.batch.bin
DA Date-Time: 2019-07-28 19:37:56
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	002CALB.d	S00	2019-07-28 14:18:25
2	003CALS.d	S01	2019-07-28 14:22:02
3	004CALS.d	S02	2019-07-28 14:26:43
4	005CALS.d	S03	2019-07-28 14:30:40
5	006CALS.d	S04	2019-07-28 14:34:50
6	007CALS.d	S05	2019-07-28 14:38:41
7	008CALS.d	S06	2019-07-28 14:42:29
8	009CALS.d	S07	2019-07-28 14:46:15
9	010CALS.d	S08	2019-07-28 14:50:03

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	187.78	0.0001	P	18.4
2	☐	0.100	0.106	434.46	0.0002	P	4.1
3	☐	1.000	1.010	2563.59	0.0009	P	5.3
4	☐	50.000	53.226	125010.45	0.0449	P	0.9
5	☐	125.000	131.749	295190.64	0.1109	P	1.7
6	☐	250.000	260.330	562445.88	0.2192	P	0.3
7	☐	500.000	511.839	1067201.27	0.4308	P	0.7
8	☐	1000.000	990.493	2016703.81	0.8337	P	0.3
9	☐			435.57	0.0002	P	7.8

$$y = 8.4161\text{E-}004 * x + 6.7790\text{E-}005$$

$$R = 0.9998$$

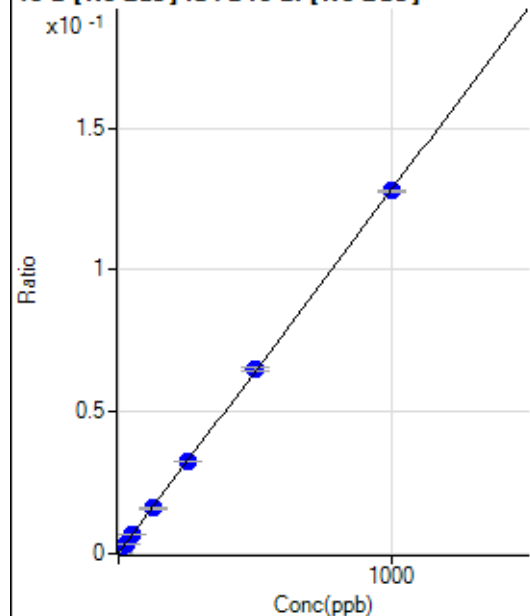
$$DL = 0.04447$$

$$BEC = 0.08055$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	725.05	0.0003	P	1.8
2	☐	2.500	2.394	1569.59	0.0006	P	5.2
3	☐	25.000	22.857	8897.41	0.0032	P	1.0
4	☐	50.000	50.355	18678.85	0.0067	P	1.4
5	☐	125.000	124.131	42934.16	0.0161	P	3.5
6	☐	250.000	252.326	83500.09	0.0325	P	1.8
7	☐	500.000	504.721	160581.17	0.0648	P	1.8
8	☐	1000.000	997.203	309200.00	0.1278	P	0.6
9	☐			13284.11	0.0058	P	7.5

$$y = 1.2792\text{E-}004 * x + 2.6167\text{E-}004$$

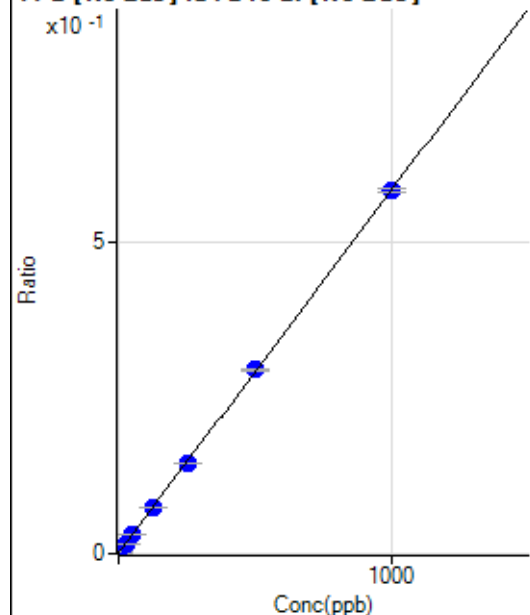
$$R = 1.0000$$

$$DL = 0.1084$$

$$BEC = 2.046$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	3036.54	0.0011	P	4.7
2	☐	2.500	2.224	6610.05	0.0024	P	2.6
3	☐	25.000	22.765	40134.76	0.0144	P	3.4
4	☐	50.000	49.600	83637.10	0.0300	P	0.6
5	☐	125.000	124.531	196075.97	0.0737	P	2.2
6	☐	250.000	247.877	373682.03	0.1456	P	1.4
7	☐	500.000	505.189	732326.73	0.2956	P	1.1
8	☐	1000.000	998.072	1410287.16	0.5830	P	1.1
9	☐			61398.22	0.0269	P	7.9

$$y = 5.8303E-004 * x + 0.0011$$

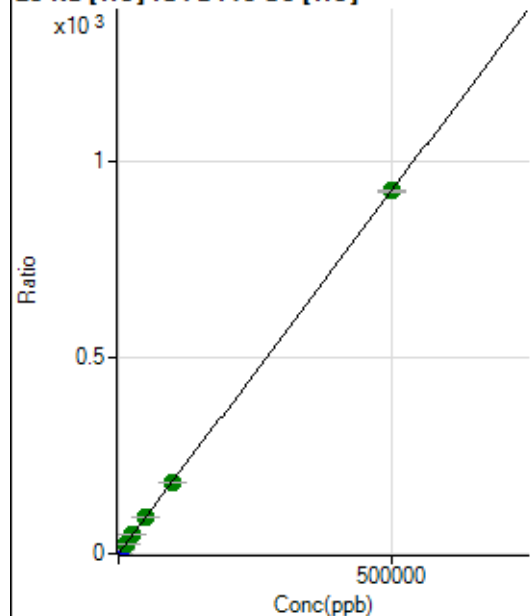
$$R = 1.0000$$

$$DL = 0.2653$$

$$BEC = 1.88$$

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	14682.72	0.0520	P	0.7
2	☐	50.000	42.794	38032.45	0.1310	P	1.3
3	☐	500.000	477.320	265868.98	0.9334	P	1.8
4	☐	5000.000	5046.440	2581339.23	9.3708	P	0.7
5	☐	12500.000	12765.145	6114609.82	23.6242	A	1.9
6	☐	25000.000	25423.394	11734395.84	46.9991	A	0.2
7	☐	50000.000	50796.754	23331563.02	93.8538	A	0.4
8	☐	100000.00	99158.462	45709047.55	183.1591	A	0.2
9	☐	500000.00	500060.39	222377535.5	923.4692	A	0.8

$$y = 0.0018 * x + 0.0520$$

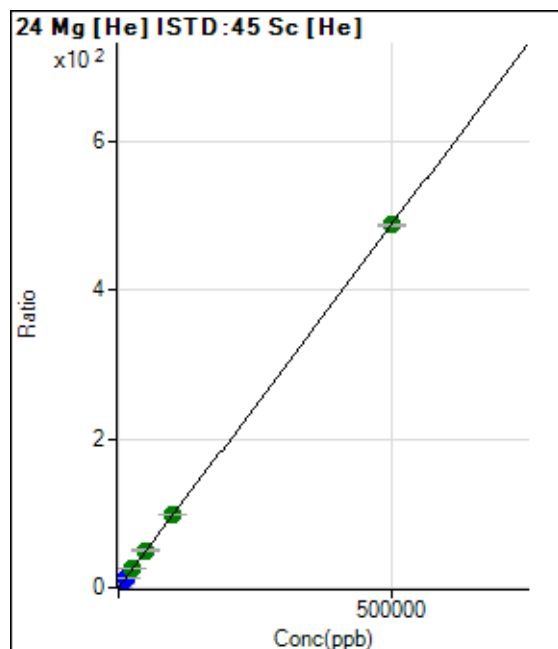
$$R = 1.0000$$

$$DL = 0.6175$$

$$BEC = 28.14$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	344.46	0.0012	P	17.3
2	☐	50.000	50.208	14577.03	0.0502	P	1.2
3	☐	500.000	507.320	141336.27	0.4962	P	0.8
4	☐	5000.000	5141.310	1382097.66	5.0174	P	0.8
5	☐	12500.000	12999.217	3283066.48	12.6840	P	1.8
6	☐	25000.000	25822.332	6290508.73	25.1949	A	0.1
7	☐	50000.000	51548.563	12502963.65	50.2948	A	0.6
8	☐	100000.00	99671.881	24268977.63	97.2465	A	0.4
9	☐	500000.00	499855.75	117440256.7	487.6875	A	0.4

$$y = 9.7565E-004 * x + 0.0012$$

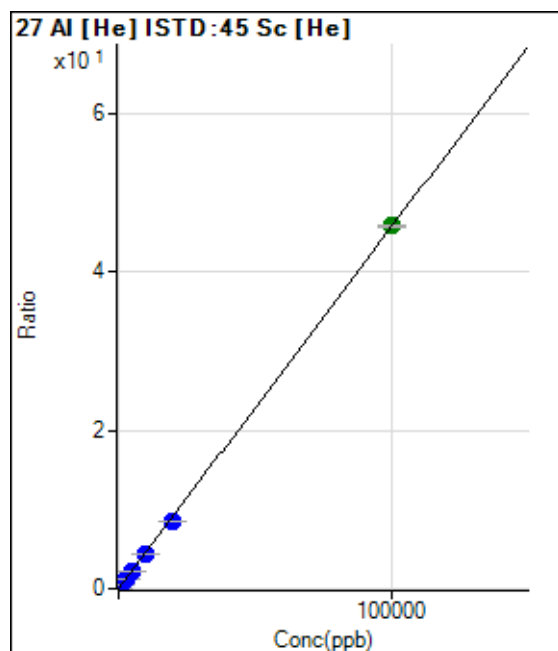
$$R = 1.0000$$

$$DL = 0.6475$$

$$BEC = 1.251$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	208.34	0.0007	P	10.4
2	☐	2.000	2.348	525.03	0.0018	P	5.9
3	☐	20.000	19.027	2680.92	0.0094	P	5.1
4	☐	1000.000	969.523	122011.13	0.4429	P	0.1
5	☐	2500.000	2456.552	290164.08	1.1211	P	2.0
6	☐	5000.000	4845.994	551998.59	2.2108	P	0.8
7	☐	10000.000	9655.927	1094910.54	4.4045	P	0.9
8	☐	20000.000	18669.204	2125064.91	8.5151	P	0.7
9	☐	100000.00	100309.65	11016715.96	45.7486	A	0.5

$$y = 4.5607E-004 * x + 7.3726E-004$$

$$R = 0.9999$$

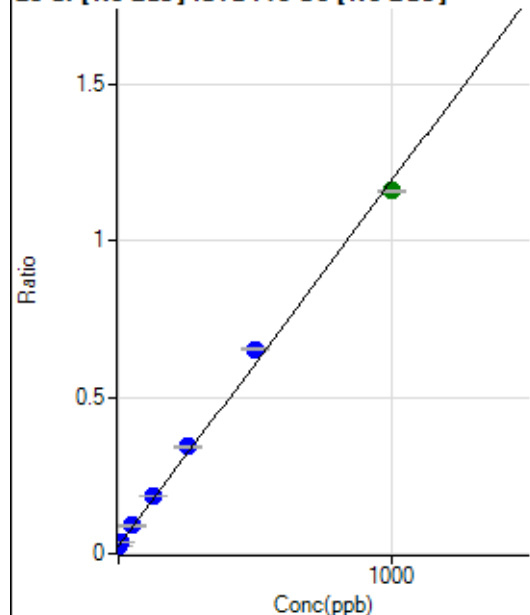
$$DL = 0.5024$$

$$BEC = 1.617$$

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	165513.08	0.0249	P	0.6
2	☒	1.000		173046.35	0.0264	P	0.5
3	☐	10.000	9.202	236680.29	0.0357	P	0.9
4	☐	50.000	55.264	578751.04	0.0894	P	0.9
5	☐	125.000	137.313	1120063.98	0.1850	P	2.2
6	☐	250.000	271.723	1977976.50	0.3417	P	0.4
7	☐	500.000	539.171	3691591.79	0.6536	P	0.5
8	☐	1000.000	973.189	6555835.00	1.1596	A	0.8
9	☐			390721.59	0.0723	P	1.0

$$y = 0.0012 * x + 0.0249$$

$$R = 0.9985$$

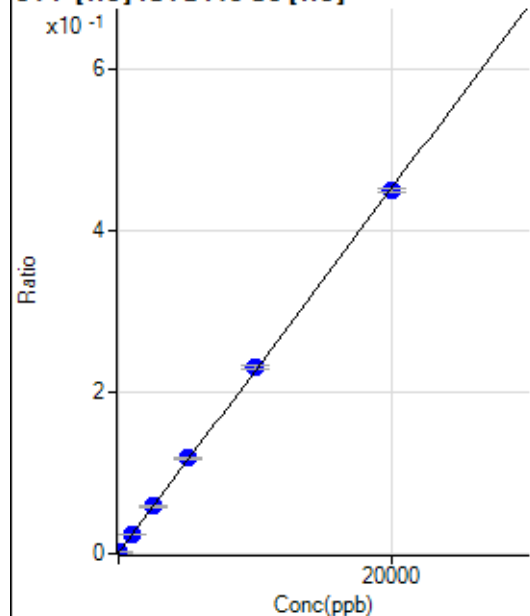
$$DL = 0.3978$$

$$BEC = 21.39$$

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	-26.264	108.34	0.0004	P	21.0
2	☒	0.000		108.34	0.0004	P	7.2
3	☐	0.000	26.264	447.25	0.0016	P	19.8
4	☐	1000.000	1042.583	6760.12	0.0245	P	1.1
5	☐	2500.000	2541.788	15116.57	0.0584	P	3.8
6	☐	5000.000	5192.507	29544.10	0.1183	P	2.1
7	☐	10000.000	10170.152	57380.81	0.2308	P	2.1
8	☐	20000.000	19859.444	112256.90	0.4498	P	1.1
9	☐			158.34	0.0007	P	33.4

$$y = 2.2601E-005 * x + 9.7733E-004$$

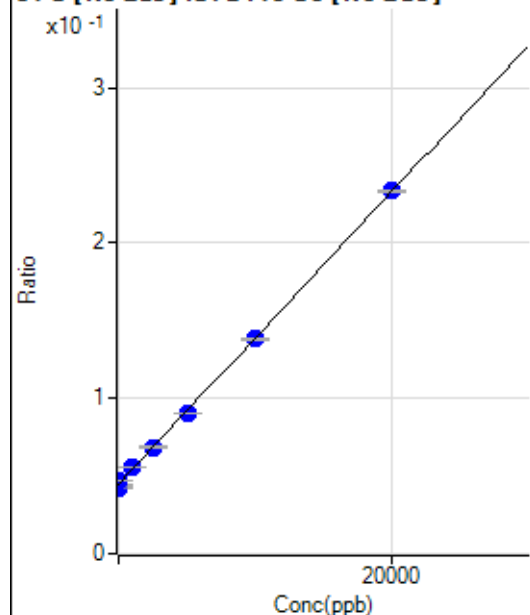
$$R = 0.9999$$

$$DL = 26$$

$$BEC = 43.24$$

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	-231.321	283113.51	0.0427	P	1.3
2	☒	0.000		293523.94	0.0449	P	1.1
3	☐	0.000	231.321	311968.69	0.0470	P	1.4
4	☐	1000.000	1136.406	359601.39	0.0555	P	0.7
5	☐	2500.000	2526.233	415320.25	0.0686	P	2.8
6	☐	5000.000	4890.153	525890.14	0.0909	P	0.2
7	☐	10000.000	9928.703	781027.25	0.1383	P	0.8
8	☐	20000.000	20053.011	1320453.76	0.2336	P	0.6
9	☐			211384.24	0.0391	P	0.8

$$y = 9.4110\text{E-}006 * x + 0.0448$$

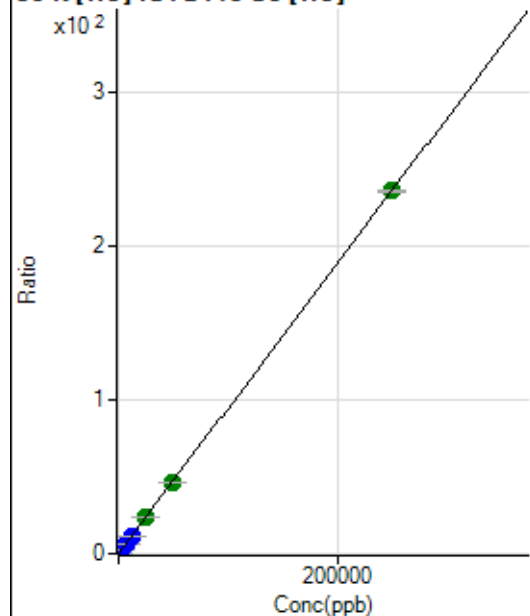
$$R = 0.9998$$

$$DL = 193.4$$

$$BEC = 4764$$

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	19830.71	0.0702	P	3.1
2	☐	50.000	45.212	32756.76	0.1128	P	1.4
3	☐	500.000	482.208	149565.75	0.5251	P	1.7
4	☐	2500.000	2517.064	673477.61	2.4449	P	0.6
5	☐	6250.000	6300.014	1556575.20	6.0138	P	1.8
6	☐	12500.000	12363.877	2929872.96	11.7347	P	0.3
7	☐	25000.000	24880.463	5852815.67	23.5432	A	0.4
8	☐	50000.000	48683.322	11479646.44	45.9996	A	0.3
9	☐	250000.00	250280.71	56879800.58	236.1934	A	0.3

$$y = 9.4343\text{E-}004 * x + 0.0702$$

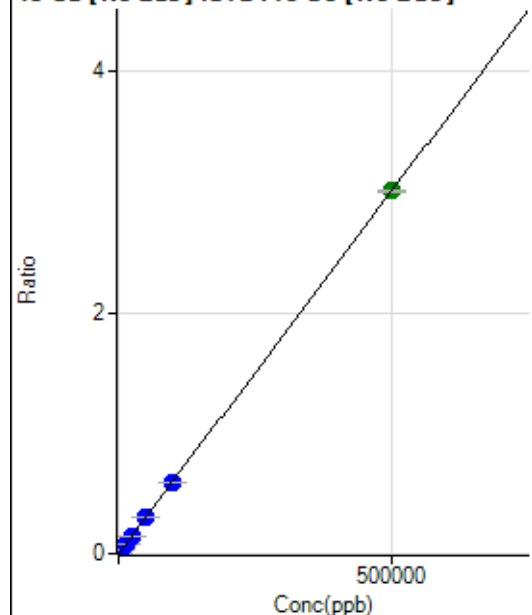
$$R = 1.0000$$

$$DL = 6.994$$

$$BEC = 74.38$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	469.47	0.0001	P	5.3
2	☐	50.000	46.292	2283.61	0.0003	P	4.6
3	☐	500.000	461.854	18893.39	0.0028	P	1.5
4	☐	5000.000	5012.035	195565.61	0.0302	P	0.9
5	☐	12500.000	12504.977	455492.74	0.0752	P	2.3
6	☐	25000.000	24832.919	864484.00	0.1494	P	0.5
7	☐	50000.000	49772.898	1690493.41	0.2993	P	0.5
8	☐	100000.00	97027.727	3298342.22	0.5834	P	0.2
9	☐	500000.00	500625.31	16255603.66	3.0096	A	0.6

$$y = 6.0116E-006 * x + 7.0730E-005$$

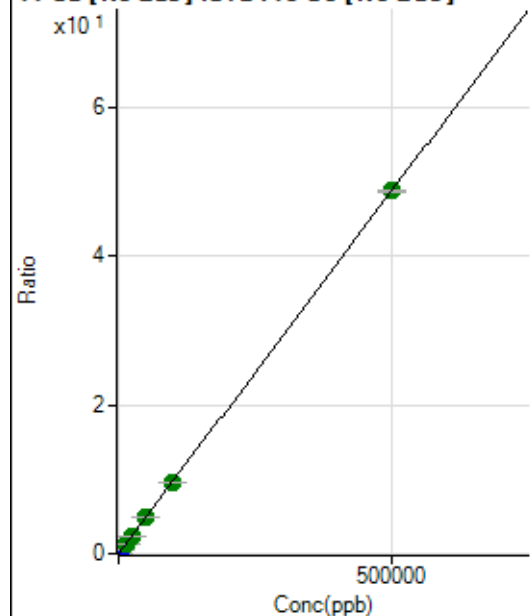
$$R = 1.0000$$

$$DL = 1.875$$

$$BEC = 11.77$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12063.95	0.0018	P	1.8
2	☐	50.000	46.639	41618.19	0.0064	P	2.0
3	☐	500.000	467.177	314006.82	0.0473	P	0.5
4	☐	5000.000	4989.985	3159212.79	0.4879	P	0.3
5	☐	12500.000	12494.666	7378072.13	1.2189	A	2.3
6	☐	25000.000	24954.788	14079418.72	2.4325	A	0.3
7	☐	50000.000	49965.574	27500271.45	4.8687	A	0.2
8	☐	100000.00	98241.628	54113198.43	9.5710	A	0.1
9	☐	500000.00	500357.64	263250930.8	48.7387	A	0.4

$$y = 9.7404E-005 * x + 0.0018$$

$$R = 1.0000$$

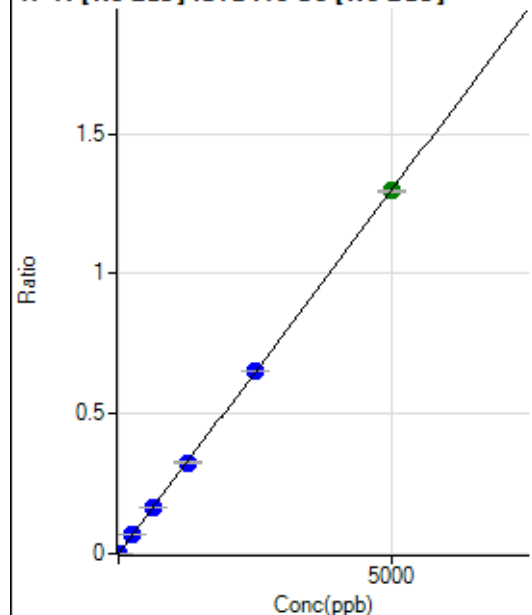
$$DL = 1.035$$

$$BEC = 18.66$$

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	77.78	0.0000	P	53.3
2	☐	0.500	0.530	977.85	0.0001	P	11.5
3	☐	5.000	4.962	8627.88	0.0013	P	0.7
4	☐	250.000	252.801	425135.50	0.0657	P	0.5
5	☐	625.000	635.388	998763.15	0.1650	P	2.2
6	☐	1250.000	1256.368	1888222.18	0.3262	P	0.3
7	☐	2500.000	2510.109	3681460.54	0.6518	P	0.2
8	☐	5000.000	4991.915	7328006.33	1.2962	A	0.9
9	☐			1972.43	0.0004	P	6.0

$$y = 2.5965E-004 * x + 1.1736E-005$$

$$R = 1.0000$$

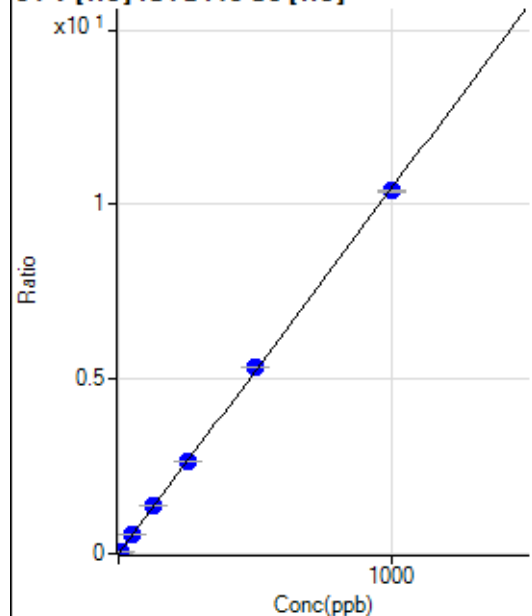
$$DL = 0.07227$$

$$BEC = 0.0452$$

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	92.23	0.0003	P	23.5
2	☐	0.500	0.520	1674.57	0.0058	P	0.7
3	☐	5.000	5.100	15289.24	0.0537	P	1.2
4	☐	50.000	51.264	147803.78	0.5365	P	0.5
5	☐	125.000	130.386	353133.38	1.3642	P	1.2
6	☐	250.000	254.275	664147.87	2.6601	P	0.2
7	☐	500.000	510.175	1326707.28	5.3368	P	0.7
8	☐	1000.000	993.107	2592499.33	10.3883	P	0.3
9	☐			520.02	0.0022	P	4.6

$$y = 0.0105 * x + 3.2605E-004$$

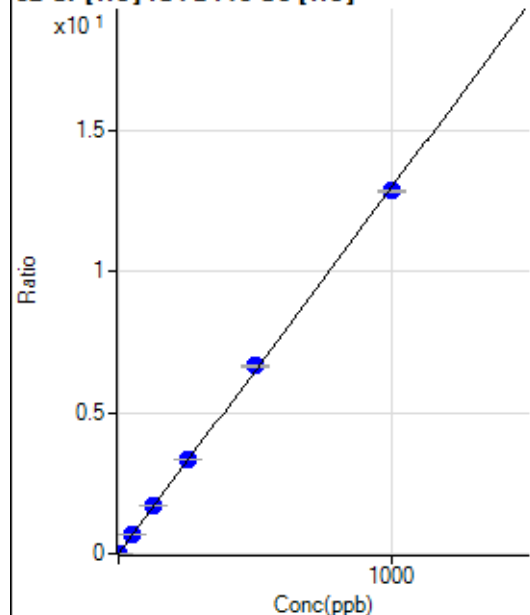
$$R = 0.9999$$

$$DL = 0.02195$$

$$BEC = 0.03117$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	810.03	0.0029	P	12.1
2	☐	0.200	0.210	1622.34	0.0056	P	4.1
3	☐	2.000	2.011	8240.20	0.0289	P	1.6
4	☐	50.000	51.716	185373.62	0.6729	P	0.9
5	☐	125.000	131.508	441770.89	1.7068	P	1.8
6	☐	250.000	257.046	832256.58	3.3334	P	0.2
7	☐	500.000	512.719	1652184.44	6.6461	P	0.5
8	☐	1000.000	990.980	3205034.50	12.8428	P	0.3
9	☐			46433.08	0.1928	P	0.4

$$y = 0.0130 * x + 0.0029$$

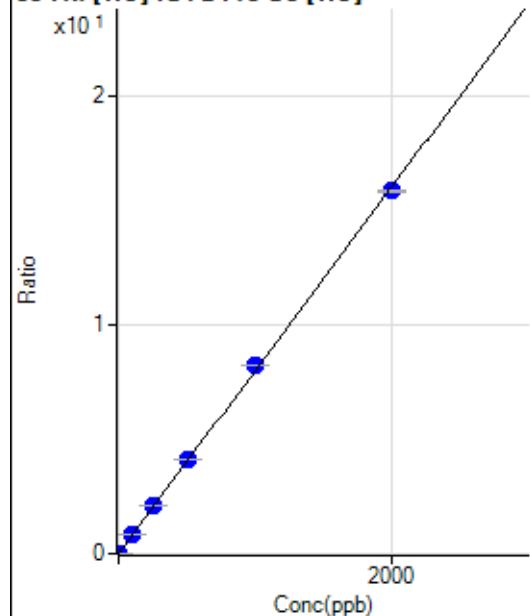
$$R = 0.9998$$

$$DL = 0.08057$$

$$BEC = 0.2213$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	130.00	0.0005	P	21.2
2	☐	0.100	0.087	336.68	0.0012	P	1.6
3	☐	1.000	1.036	2495.81	0.0088	P	2.7
4	☐	100.000	103.401	228431.78	0.8293	P	1.0
5	☐	250.000	261.875	543440.29	2.0995	P	1.5
6	☐	500.000	516.504	1033768.47	4.1404	P	0.5
7	☐	1000.000	1026.785	2046075.12	8.2305	P	0.3
8	☐	2000.000	1980.827	3962366.92	15.8775	P	0.2
9	☐			14336.05	0.0595	P	0.5

$$y = 0.0080 * x + 4.6023E-004$$

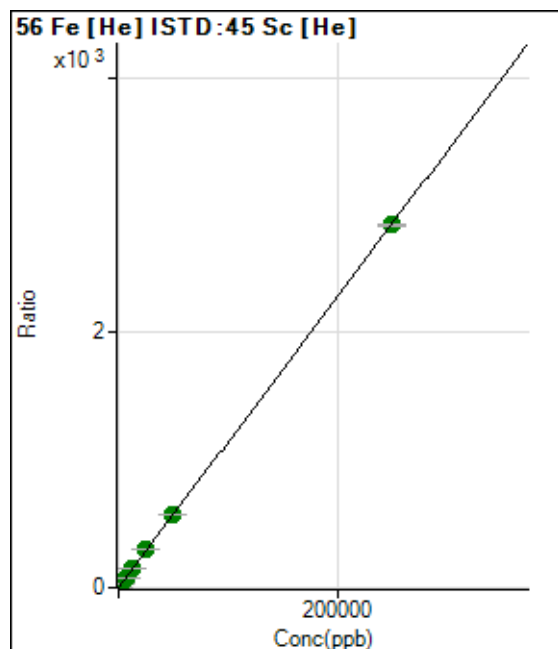
$$R = 0.9998$$

$$DL = 0.03658$$

$$BEC = 0.05742$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	5091.78	0.0180	P	4.4
2	☐	5.000	4.882	21380.82	0.0736	P	1.1
3	☐	50.000	52.233	174666.68	0.6132	P	1.2
4	☐	2500.000	2589.168	8132023.27	29.5209	A	0.8
5	☐	6250.000	6580.136	19412082.84	74.9968	A	1.7
6	☐	12500.000	12953.212	36855722.58	147.6162	A	0.5
7	☐	25000.000	25926.893	73447447.94	295.4476	A	0.4
8	☐	50000.000	50222.667	142820326.3	572.2911	A	0.3
9	☐	250000.00	249830.97	685510104.2	2,846.771	A	0.8

$$y = 0.0114 * x + 0.0180$$

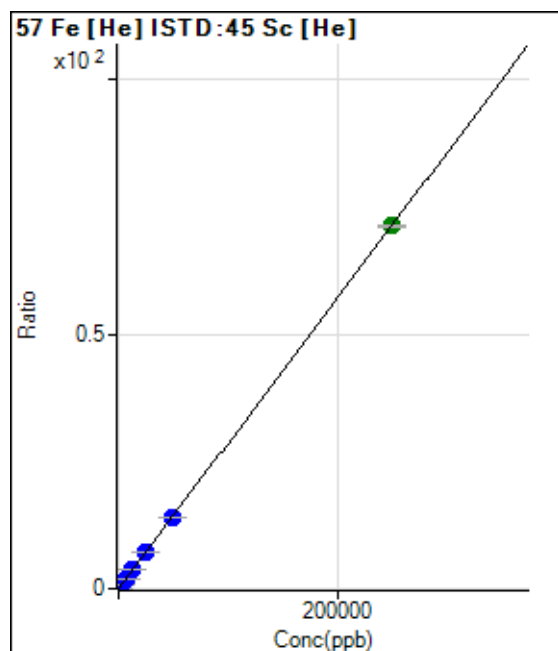
$$R = 1.0000$$

$$DL = 0.2086$$

$$BEC = 1.582$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	268.53	0.0010	P	10.9
2	☐	5.000	4.682	663.00	0.0023	P	3.0
3	☐	50.000	53.507	4610.11	0.0162	P	3.4
4	☐	2500.000	2598.139	204009.19	0.7406	P	0.6
5	☐	6250.000	6522.846	480846.69	1.8578	P	2.0
6	☐	12500.000	12832.689	912311.21	3.6540	P	0.4
7	☐	25000.000	25578.478	1810384.74	7.2824	P	0.3
8	☐	50000.000	49098.811	3488317.06	13.9780	P	0.5
9	☐	250000.00	250097.95	17145104.78	71.1966	A	0.4

$$y = 2.8467E-004 * x + 9.5062E-004$$

$$R = 1.0000$$

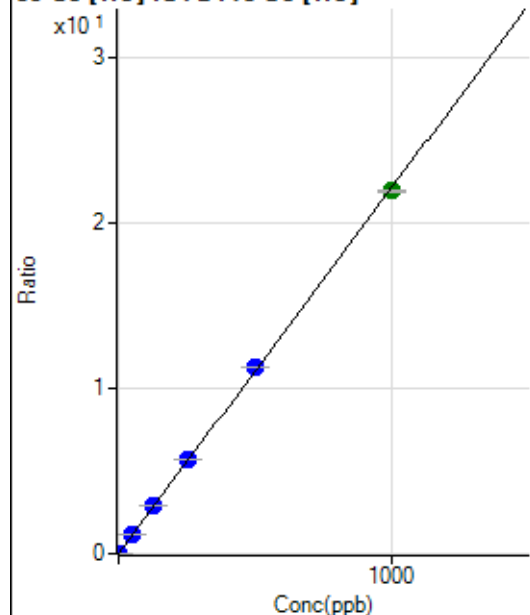
$$DL = 1.097$$

$$BEC = 3.339$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	398.90	0.0014	P	8.7
2	☐	0.100	0.092	997.83	0.0034	P	3.9
3	☐	1.000	0.979	6563.80	0.0231	P	4.3
4	☐	50.000	52.677	320967.41	1.1652	P	1.2
5	☐	125.000	131.959	754858.69	2.9168	P	2.5
6	☐	250.000	258.274	1425009.46	5.7075	P	0.1
7	☐	500.000	509.710	2799786.66	11.2625	P	0.6
8	☐	1000.000	992.073	5470250.19	21.9193	A	0.7
9	☐			61903.32	0.2571	P	1.4

$$y = 0.0221 * x + 0.0014$$

$$R = 0.9999$$

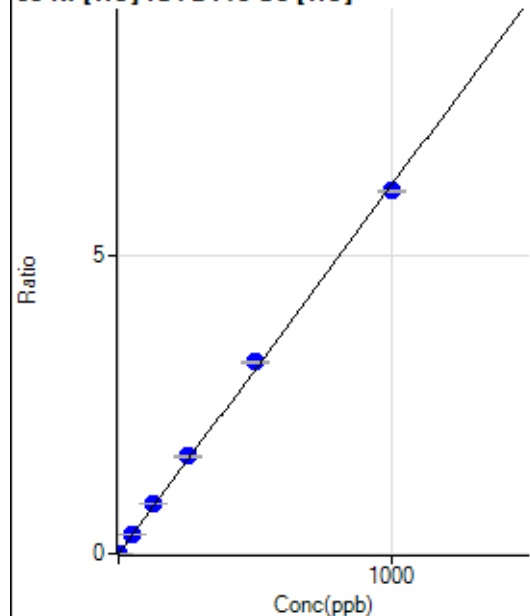
$$DL = 0.01667$$

$$BEC = 0.06393$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	141.32	0.0005	P	7.9
2	☐	0.100	0.088	302.19	0.0010	P	5.2
3	☐	1.000	1.052	1989.20	0.0070	P	5.2
4	☐	50.000	53.947	91695.55	0.3329	P	0.6
5	☐	125.000	135.548	216276.98	0.8356	P	2.1
6	☐	250.000	263.700	405767.08	1.6252	P	0.2
7	☐	500.000	520.039	796635.65	3.2045	P	0.5
8	☐	1000.000	985.039	1514688.68	6.0695	P	0.3
9	☐			24181.77	0.1004	P	2.1

$$y = 0.0062 * x + 5.0003E-004$$

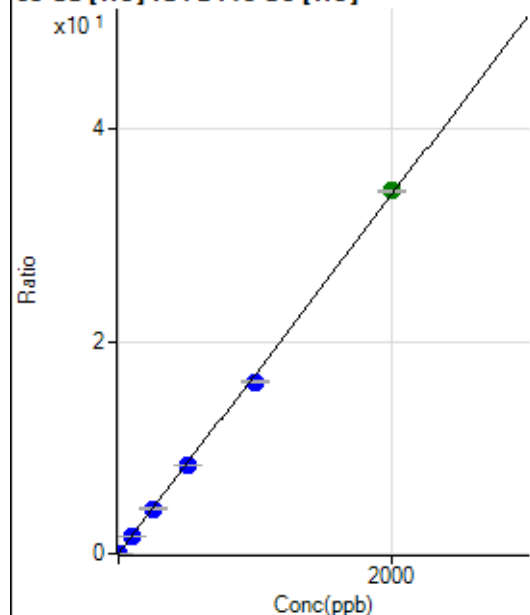
$$R = 0.9996$$

$$DL = 0.01927$$

$$BEC = 0.08116$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1087.84	0.0038	P	5.6
2	☐	0.200	0.146	1835.70	0.0063	P	5.4
3	☐	2.000	1.871	10104.73	0.0355	P	2.1
4	☐	100.000	100.216	467816.42	1.6983	P	0.8
5	☐	250.000	251.027	1099496.79	4.2481	P	2.0
6	☐	500.000	489.244	2066231.29	8.2758	P	0.3
7	☐	1000.000	959.408	4033495.04	16.2251	P	0.3
8	☐	2000.000	2022.846	8536285.71	34.2053	A	0.4
9	☐			9591.07	0.0398	P	2.5

$$y = 0.0169 * x + 0.0038$$

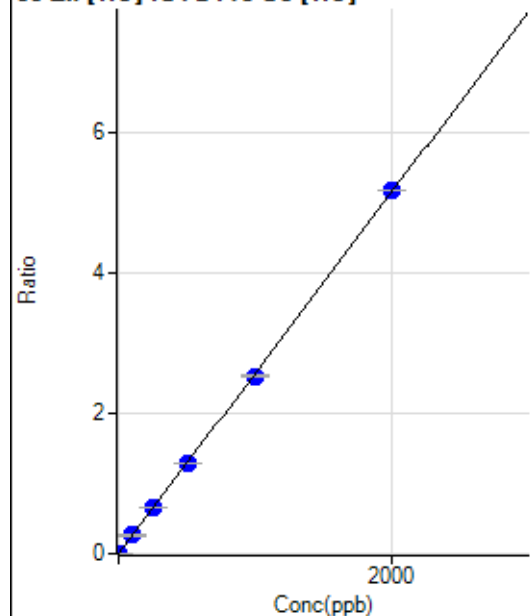
$$R = 0.9997$$

$$DL = 0.03846$$

$$BEC = 0.2276$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	566.69	0.0020	P	6.0
2	☒	0.200		457.79	0.0016	P	6.0
3	☐	2.000	1.569	1717.92	0.0060	P	2.8
4	☐	100.000	100.709	71738.46	0.2604	P	1.0
5	☐	250.000	253.356	168780.65	0.6521	P	2.3
6	☐	500.000	497.159	319020.85	1.2778	P	0.1
7	☐	1000.000	982.133	627009.16	2.5222	P	0.6
8	☐	2000.000	2009.189	1287153.30	5.1577	P	0.1
9	☐			10393.83	0.0432	P	1.8

$$y = 0.0026 * x + 0.0020$$

$$R = 0.9999$$

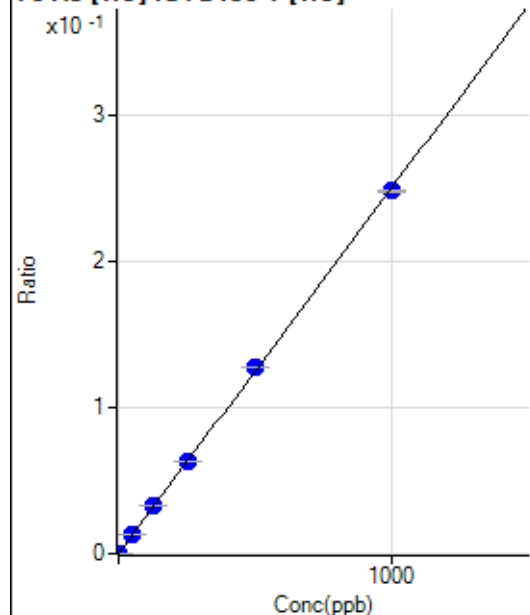
$$DL = 0.1418$$

$$BEC = 0.7813$$

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	21.61	0.0000	P	21.1
2	☒	0.100		48.15	0.0000	P	13.5
3	☐	1.000	0.996	437.67	0.0003	P	10.5
4	☐	50.000	52.898	21430.06	0.0132	P	0.8
5	☐	125.000	131.553	50711.55	0.0329	P	1.5
6	☐	250.000	254.070	95571.75	0.0636	P	0.6
7	☐	500.000	510.479	191147.57	0.1277	P	0.3
8	☐	1000.000	992.779	369046.57	0.2483	P	0.7
9	☐			491.99	0.0003	P	7.2

$$y = 2.5014\text{E-}004 * x + 1.3017\text{E-}005$$

$$R = 0.9999$$

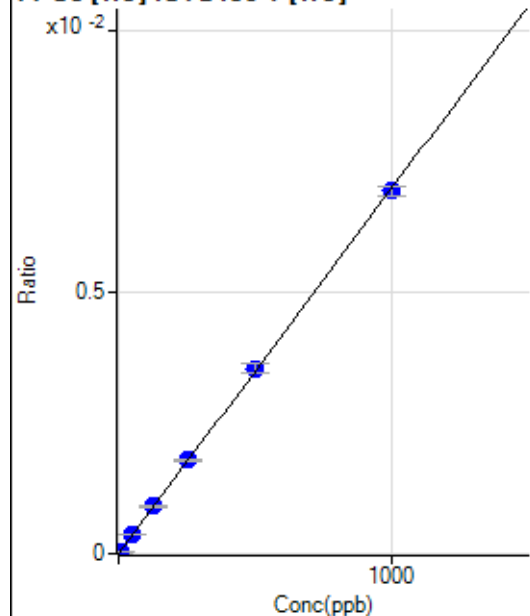
$$DL = 0.03294$$

$$BEC = 0.05204$$

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	0.00	0.0000	P	
2	☒	0.500		7.78	0.0000	P	99.4
3	☐	5.000	4.858	56.67	0.0000	P	45.8
4	☐	50.000	54.121	610.02	0.0004	P	3.6
5	☐	125.000	130.891	1405.65	0.0009	P	4.4
6	☐	250.000	256.372	2685.85	0.0018	P	2.7
7	☐	500.000	507.474	5293.26	0.0035	P	5.0
8	☐	1000.000	993.728	10289.34	0.0069	P	2.3
9	☐			4.45	0.0000	P	86.6

$$y = 6.9674\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9999$$

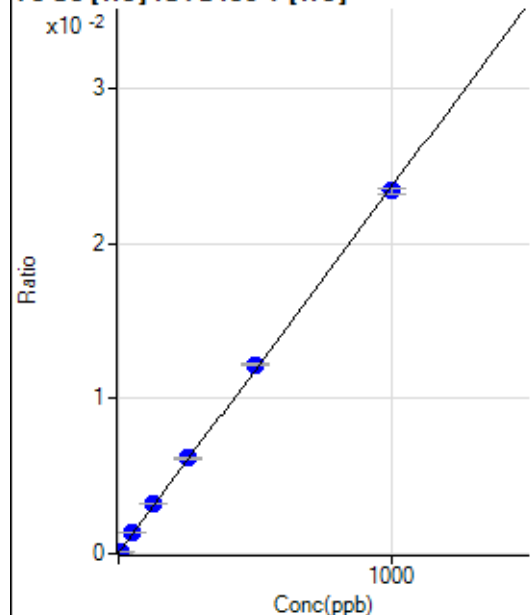
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.93	0.0000	P	2.8
2	☒	0.500		103.09	0.0001	P	17.2
3	☐	5.000	5.574	296.30	0.0002	P	2.2
4	☐	50.000	53.973	2135.36	0.0013	P	2.6
5	☐	125.000	134.104	4947.80	0.0032	P	1.6
6	☐	250.000	258.987	9261.05	0.0062	P	2.0
7	☐	500.000	514.796	18259.10	0.0122	P	0.8
8	☐	1000.000	989.015	34760.72	0.0234	P	1.3
9	☐			74.07	0.0001	P	7.3

$$y = 2.3607\text{E-}005 * x + 4.5776\text{E-}005$$

$$R = 0.9998$$

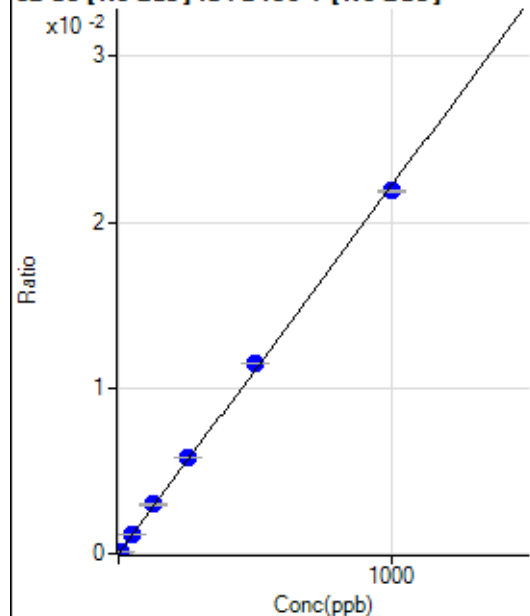
$$DL = 0.1617$$

$$BEC = 1.939$$

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	47.40	0.0000	P	113.
2	☐	0.500	0.583	198.11	0.0000	P	14.8
3	☐	5.000	5.364	1471.02	0.0001	P	4.3
4	☐	50.000	53.810	14034.84	0.0012	P	0.2
5	☐	125.000	134.510	33360.89	0.0030	P	2.9
6	☐	250.000	261.692	63268.59	0.0058	P	0.2
7	☐	500.000	518.530	122905.77	0.0115	P	0.3
8	☐	1000.000	986.431	235247.34	0.0219	P	0.5
9	☐			178.64	0.0000	P	19.0

$$y = 2.2172\text{E-}005 * x + 3.8647\text{E-}006$$

$$R = 0.9997$$

$$DL = 0.5913$$

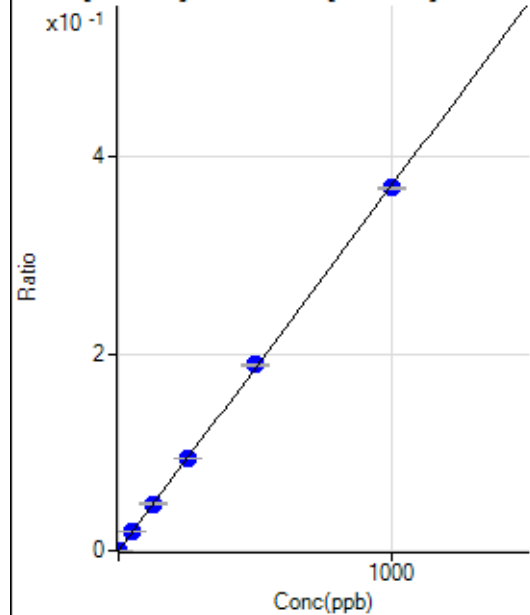
$$BEC = 0.1743$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			393.35		P	3.1
2	☐			375.57		P	4.9
3	☐			367.79		P	6.8
4	☐			360.01		P	6.1
5	☐			344.45		P	8.2
6	☐			343.34		P	9.7
7	☐			325.56		P	6.0
8	☐			342.23		P	5.4
9	☐			396.68		P	5.1

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	833.40	0.0001	P	24.4
2	☐	0.100	0.115	1302.89	0.0001	P	6.1
3	☐	1.000	0.970	5117.80	0.0004	P	4.1
4	☐	50.000	51.383	224040.82	0.0191	P	0.4
5	☐	125.000	128.338	532112.96	0.0476	P	1.4
6	☐	250.000	253.975	1026225.92	0.0942	P	0.4
7	☐	500.000	509.091	2016611.44	0.1887	P	0.3
8	☐	1000.000	993.975	3961545.58	0.3684	P	0.3
9	☐			16429.41	0.0016	P	3.5

$$y = 3.7053E-004 * x + 6.7909E-005$$

$$R = 0.9999$$

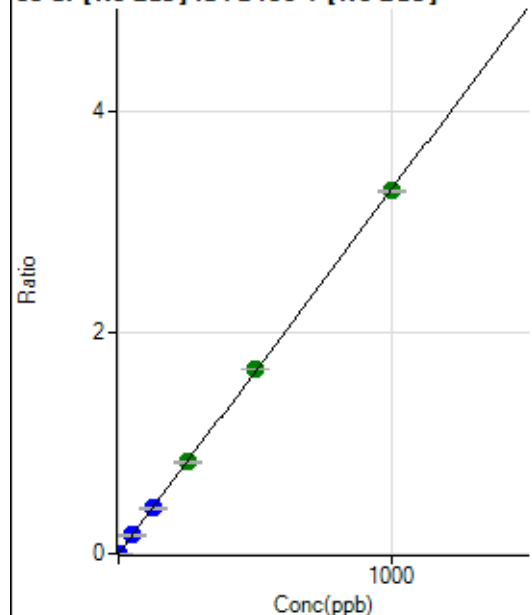
$$DL = 0.1339$$

$$BEC = 0.1833$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	2378.08	0.0002	P	4.5
2	☐	0.100	0.084	5545.77	0.0005	P	3.4
3	☐	1.000	0.936	39254.65	0.0033	P	0.6
4	☐	50.000	50.278	1943911.94	0.1658	P	0.7
5	☐	125.000	125.394	4616191.03	0.4132	P	2.3
6	☐	250.000	250.836	9004227.02	0.8263	A	0.6
7	☐	500.000	506.704	17836166.55	1.6690	A	0.3
8	☐	1000.000	996.376	35292743.15	3.2817	A	0.2
9	☐			138883.14	0.0139	P	0.6

$$y = 0.0033 * x + 1.9378E-004$$

$$R = 1.0000$$

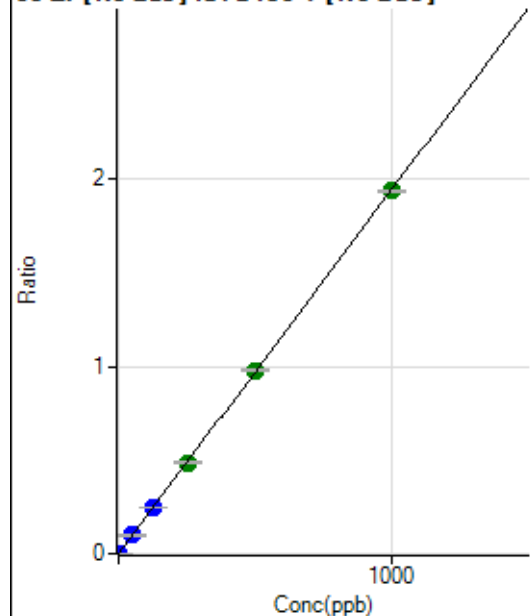
$$DL = 0.007999$$

$$BEC = 0.05884$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	1044.52	0.0001	P	10.2
2	☐	0.100	0.091	3086.58	0.0003	P	7.0
3	☐	1.000	0.899	21937.08	0.0018	P	3.7
4	☐	50.000	50.180	1144298.05	0.0976	P	0.2
5	☐	125.000	125.618	2728147.98	0.2442	P	2.0
6	☐	250.000	250.831	5311953.15	0.4875	A	0.7
7	☐	500.000	504.695	10481004.84	0.9807	A	0.6
8	☐	1000.000	997.359	20842764.88	1.9380	A	0.3
9	☐			6729.65	0.0007	P	1.3

$$y = 0.0019 * x + 8.5115E-005$$

$$R = 1.0000$$

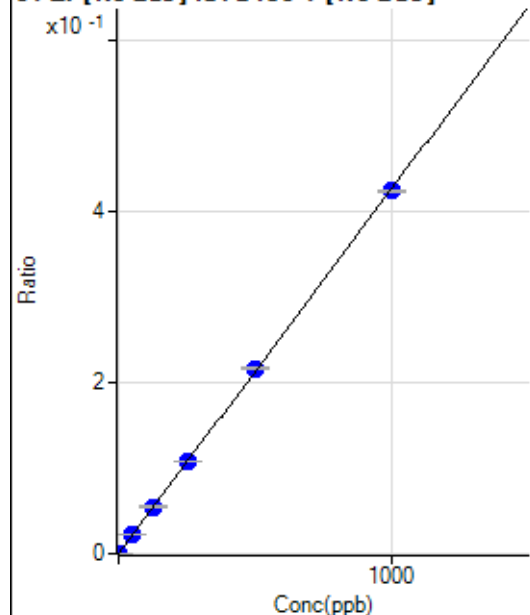
$$DL = 0.01338$$

$$BEC = 0.0438$$

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	241.68	0.0000	P	15.1
2	☐	0.100	0.071	588.93	0.0000	P	10.1
3	☐	1.000	0.883	4745.44	0.0004	P	3.7
4	☐	50.000	51.106	255589.22	0.0218	P	0.6
5	☐	125.000	127.736	608363.65	0.0545	P	2.4
6	☐	250.000	253.518	1177442.21	0.1081	P	0.6
7	☐	500.000	507.839	2312884.23	0.2164	P	0.6
8	☐	1000.000	994.804	4559243.59	0.4239	P	0.2
9	☐			1452.92	0.0001	P	4.4

$$y = 4.2613\text{E-}004 * x + 1.9695\text{E-}005$$

$$R = 0.9999$$

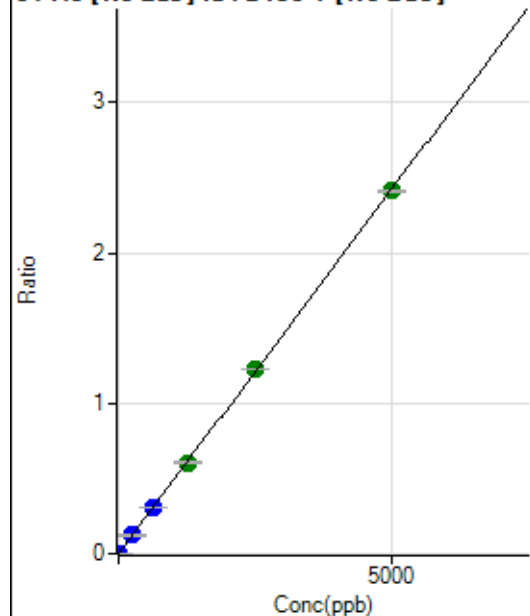
$$DL = 0.02096$$

$$BEC = 0.04622$$

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	441.70	0.0000	P	21.3
2	☐	0.500	0.473	3128.26	0.0003	P	1.3
3	☐	5.000	4.690	27658.21	0.0023	P	2.1
4	☐	250.000	251.582	1429901.35	0.1219	P	0.7
5	☐	625.000	628.248	3401757.11	0.3045	P	2.2
6	☐	1250.000	1253.161	6617551.63	0.6073	A	0.8
7	☐	2500.000	2536.493	13135805.76	1.2292	A	0.3
8	☐	5000.000	4980.479	25955521.41	2.4135	A	0.3
9	☐			13134.32	0.0013	P	4.1

$$y = 4.8458\text{E-}004 * x + 3.5990\text{E-}005$$

$$R = 1.0000$$

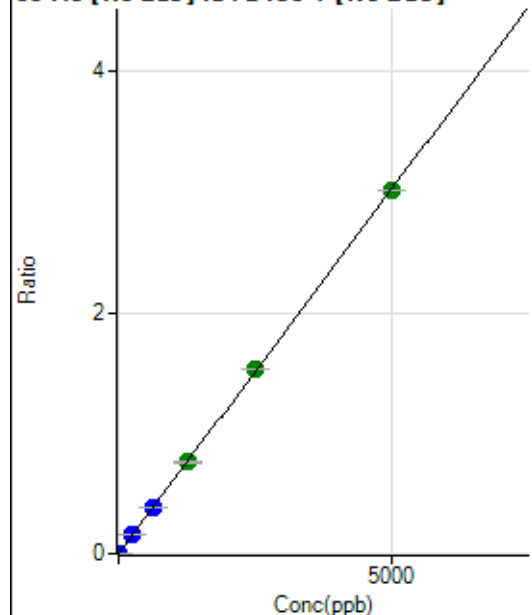
$$DL = 0.04735$$

$$BEC = 0.07427$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	252.79	0.0000	P	19.4
2	☐	0.500	0.445	3417.25	0.0003	P	3.2
3	☐	5.000	4.652	33938.47	0.0028	P	1.2
4	☐	250.000	251.136	1780525.23	0.1518	P	0.1
5	☐	625.000	627.751	4240527.40	0.3795	P	2.0
6	☐	1250.000	1255.786	8273140.03	0.7592	A	0.8
7	☐	2500.000	2538.627	16401709.05	1.5348	A	0.4
8	☐	5000.000	4978.840	32371236.14	3.0100	A	0.1
9	☐			18084.36	0.0018	P	2.2

$$y = 6.0456\text{E-}004 * x + 2.0599\text{E-}005$$

$$R = 1.0000$$

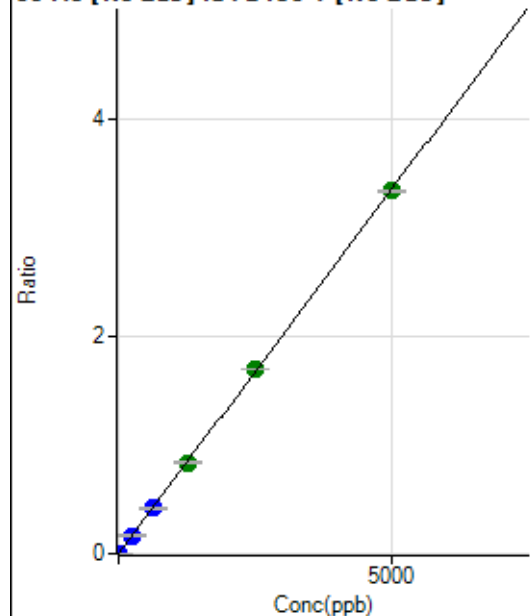
$$DL = 0.01978$$

$$BEC = 0.03407$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	386.13	0.0000	P	8.7
2	☐	0.500	0.482	4189.69	0.0004	P	3.6
3	☐	5.000	4.650	37767.57	0.0032	P	1.0
4	☐	250.000	250.572	1972775.46	0.1682	P	0.6
5	☐	625.000	625.984	4695392.64	0.4203	P	2.2
6	☐	1250.000	1253.426	9169360.88	0.8415	A	0.9
7	☐	2500.000	2535.750	18191975.58	1.7023	A	0.5
8	☐	5000.000	4981.117	35962240.39	3.3439	A	0.5
9	☐			29253.14	0.0029	P	1.7

$$y = 6.7130\text{E-}004 * x + 3.1464\text{E-}005$$

$$R = 1.0000$$

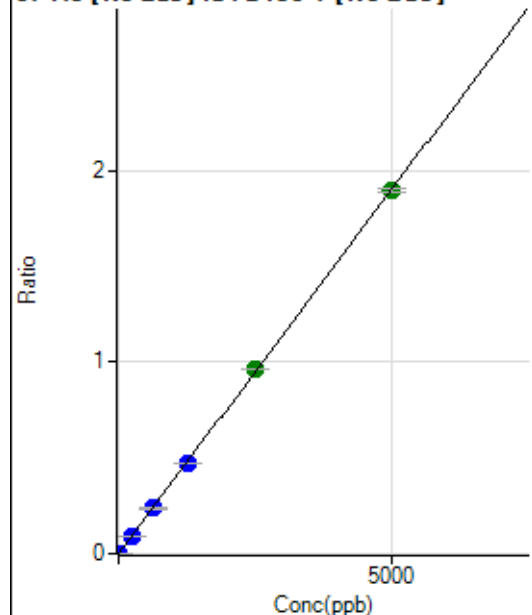
$$DL = 0.0123$$

$$BEC = 0.04687$$

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	166.68	0.0000	P	17.4
2	☐	0.500	0.480	2314.17	0.0002	P	5.8
3	☐	5.000	4.622	21199.84	0.0018	P	2.8
4	☐	250.000	249.986	1113839.14	0.0950	P	0.3
5	☐	625.000	625.379	2654677.30	0.2376	P	2.5
6	☐	1250.000	1237.359	5122956.19	0.4701	P	1.3
7	☐	2500.000	2538.676	10307676.97	0.9645	A	0.6
8	☐	5000.000	4983.776	20364089.00	1.8935	A	0.9
9	☐			11229.89	0.0011	P	5.3

$$y = 3.7993\text{E-}004 * x + 1.3582\text{E-}005$$

$$R = 1.0000$$

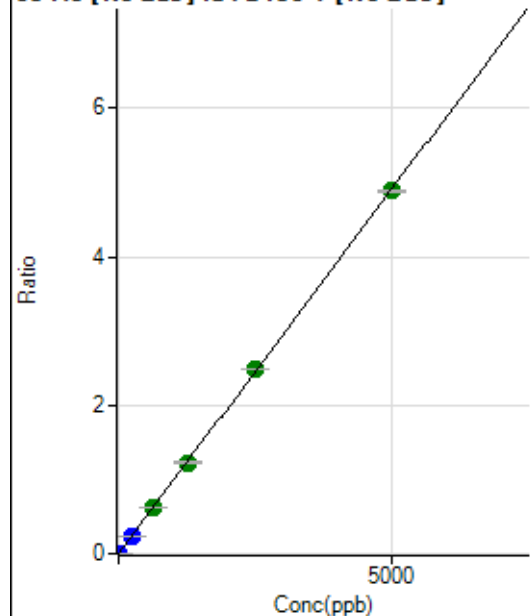
$$DL = 0.01865$$

$$BEC = 0.03575$$

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	444.47	0.0000	P	20.3
2	☐	0.500	0.450	5637.46	0.0005	P	2.7
3	☐	5.000	4.640	54959.82	0.0046	P	2.0
4	☐	250.000	249.224	2867012.80	0.2445	P	0.4
5	☐	625.000	629.229	6896910.22	0.6173	A	1.7
6	☐	1250.000	1251.541	13378320.96	1.2277	A	0.7
7	☐	2500.000	2536.847	26593830.80	2.4885	A	0.6
8	☐	5000.000	4980.702	52543712.98	4.8857	A	0.4
9	☐			27569.32	0.0028	P	2.3

$$y = 9.8092\text{E-}004 * x + 3.6221\text{E-}005$$

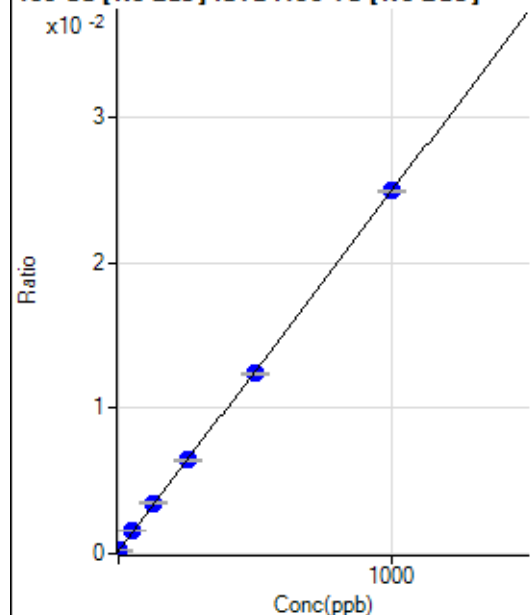
$$R = 1.0000$$

$$DL = 0.02249$$

$$BEC = 0.03693$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3189.38	0.0002	P	4.5
2	☒	0.100		3381.11	0.0002	P	4.9
3	☐	1.000	2.061	3909.05	0.0002	P	3.6
4	☐	50.000	54.941	24750.18	0.0016	P	0.9
5	☐	125.000	133.192	54759.39	0.0035	P	1.3
6	☐	250.000	253.242	100980.56	0.0065	P	1.3
7	☐	500.000	493.610	194574.18	0.0124	P	1.1
8	☐	1000.000	1001.112	395254.32	0.0250	P	0.4
9	☐			2989.35	0.0002	P	2.0

$$y = 2.4743\text{E-}005 * x + 1.9365\text{E-}004$$

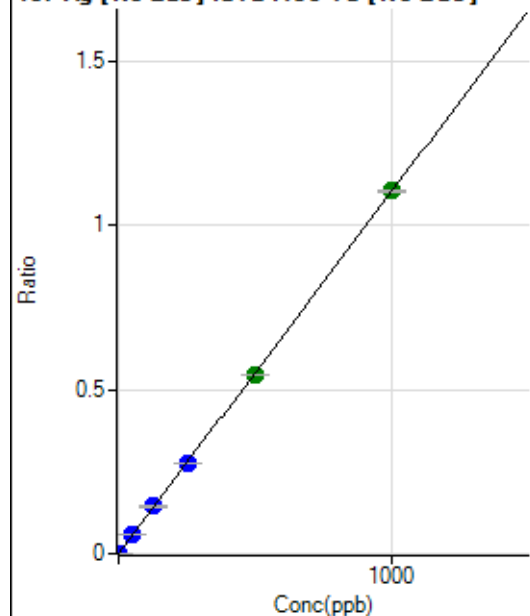
$$R = 0.9999$$

$$DL = 1.058$$

$$BEC = 7.826$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	125.01	0.0000	P	34.8
2	☐	0.100	0.117	2166.94	0.0001	P	7.0
3	☐	1.000	1.078	19108.08	0.0012	P	0.8
4	☐	50.000	54.050	949722.51	0.0596	P	0.4
5	☐	125.000	130.600	2259413.51	0.1440	P	2.2
6	☐	250.000	250.156	4311500.10	0.2758	P	0.4
7	☐	500.000	493.979	8540500.63	0.5446	A	0.6
8	☐	1000.000	1002.069	17491167.93	1.1047	A	0.3
9	☐			1886.32	0.0001	P	8.3

$$y = 0.0011 * x + 7.5924\text{E-}006$$

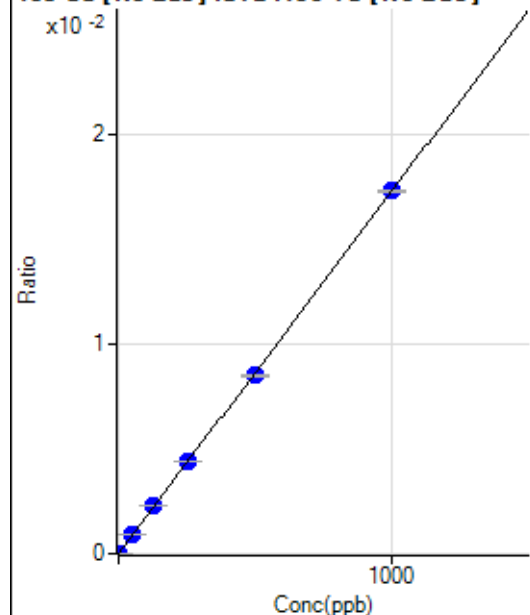
$$R = 1.0000$$

$$DL = 0.007184$$

$$BEC = 0.006887$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13.89	0.0000	P	16.9
2	☒	0.100		58.33	0.0000	P	45.2
3	☐	1.000	1.111	319.46	0.0000	P	19.7
4	☐	50.000	53.989	14855.27	0.0009	P	2.3
5	☐	125.000	131.971	35739.64	0.0023	P	2.0
6	☐	250.000	255.506	68919.46	0.0044	P	1.2
7	☐	500.000	491.639	133016.46	0.0085	P	0.8
8	☐	1000.000	1001.733	273620.17	0.0173	P	0.7
9	☐			62.50	0.0000	P	11.5

$$y = 1.7250E-005 * x + 8.4302E-007$$

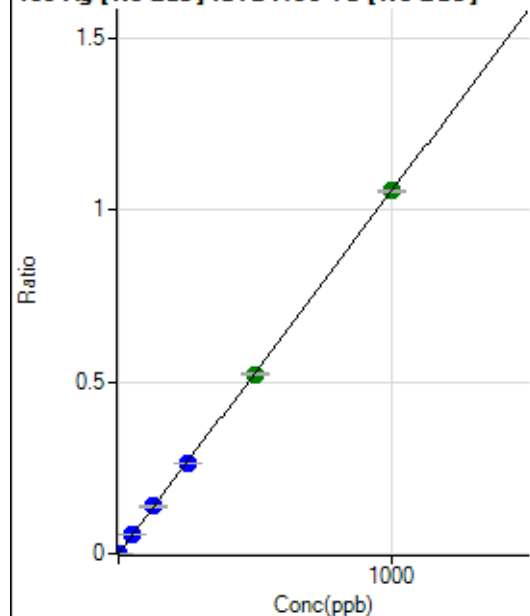
$$R = 0.9999$$

$$DL = 0.02483$$

$$BEC = 0.04887$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	130.56	0.0000	P	35.4
2	☐	0.100	0.105	1886.31	0.0001	P	10.1
3	☐	1.000	1.095	18579.63	0.0012	P	4.1
4	☐	50.000	54.100	909719.81	0.0571	P	1.1
5	☐	125.000	130.840	2166281.77	0.1380	P	2.1
6	☐	250.000	251.500	4148334.34	0.2654	P	0.3
7	☐	500.000	495.920	8205237.25	0.5232	A	1.1
8	☐	1000.000	1000.730	16717000.90	1.0558	A	0.7
9	☐			1769.64	0.0001	P	12.1

$$y = 0.0011 * x + 7.9330E-006$$

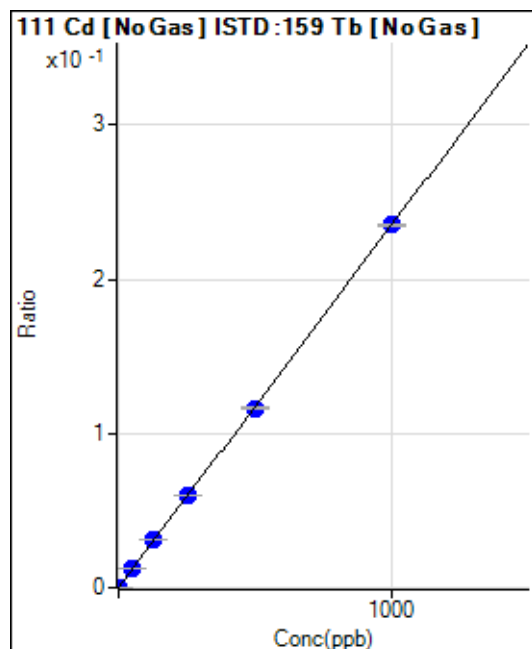
$$R = 1.0000$$

$$DL = 0.007978$$

$$BEC = 0.007519$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2332.57	0.0001	P	4.8
2	☒	0.100		2831.52	0.0002	P	4.3
3	☐	1.000	1.053	6217.45	0.0004	P	3.2
4	☐	50.000	54.150	205039.62	0.0129	P	1.1
5	☐	125.000	131.634	487646.02	0.0311	P	1.8
6	☐	250.000	254.073	935572.71	0.0598	P	0.5
7	☐	500.000	494.371	1824032.57	0.1163	P	1.0
8	☐	1000.000	1000.759	3725627.32	0.2353	P	0.4
9	☐			2671.05	0.0002	P	4.2

$$y = 2.3499\text{E-}004 * x + 1.4163\text{E-}004$$

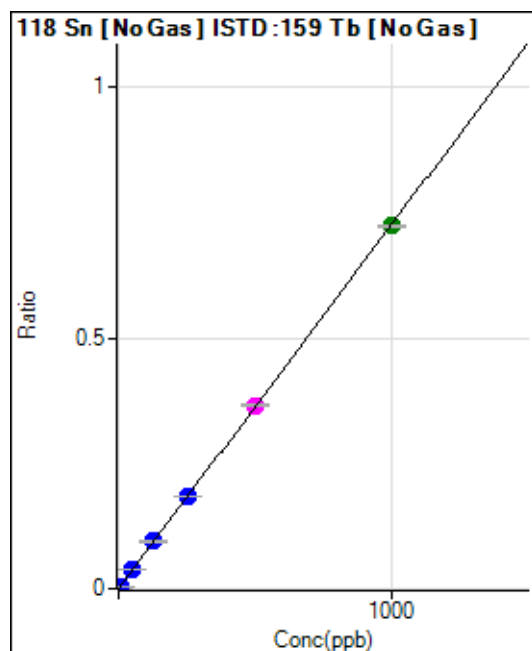
$$R = 0.9999$$

$$DL = 0.08764$$

$$BEC = 0.6027$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1063.98	0.0001	P	8.5
2	☐	0.500	0.496	6726.91	0.0004	P	1.1
3	☐	5.000	5.244	61862.09	0.0039	P	1.1
4	☐	50.000	53.119	615599.69	0.0386	P	1.0
5	☐	125.000	130.132	1483486.41	0.0945	P	2.2
6	☐	250.000	254.645	2891064.02	0.1849	P	0.7
7	☐	500.000	502.650	5724356.03	0.3650	M	1.0
8	☐	1000.000	996.715	11457847.65	0.7237	A	0.6
9	☐			5259.56	0.0004	P	2.0

$$y = 7.2597\text{E-}004 * x + 6.4607\text{E-}005$$

$$R = 1.0000$$

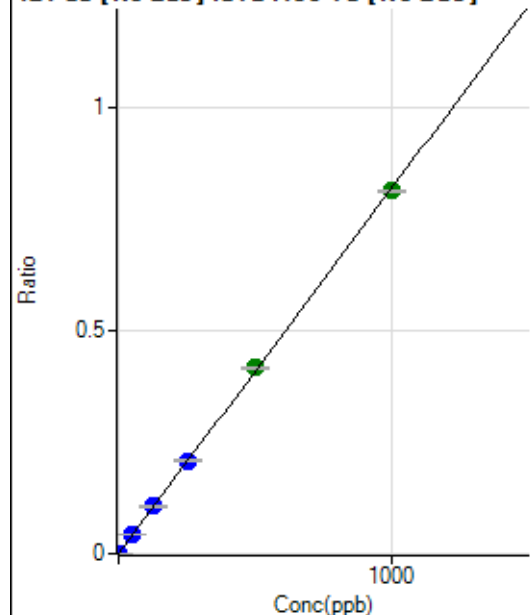
$$DL = 0.02267$$

$$BEC = 0.08899$$

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	411.14	0.0000	P	24.8
2	☐	0.200	0.174	2647.60	0.0002	P	5.7
3	☐	2.000	1.970	26178.11	0.0016	P	1.3
4	☐	50.000	52.720	688662.39	0.0432	P	0.4
5	☐	125.000	130.165	1673641.29	0.1067	P	2.1
6	☐	250.000	254.932	3265159.45	0.2089	P	0.5
7	☐	500.000	508.748	6536284.22	0.4168	A	0.5
8	☐	1000.000	993.611	12887781.88	0.8140	A	0.4
9	☐			19352.89	0.0013	P	4.4

$$y = 8.1918\text{E-}004 * x + 2.4976\text{E-}005$$

$$R = 0.9999$$

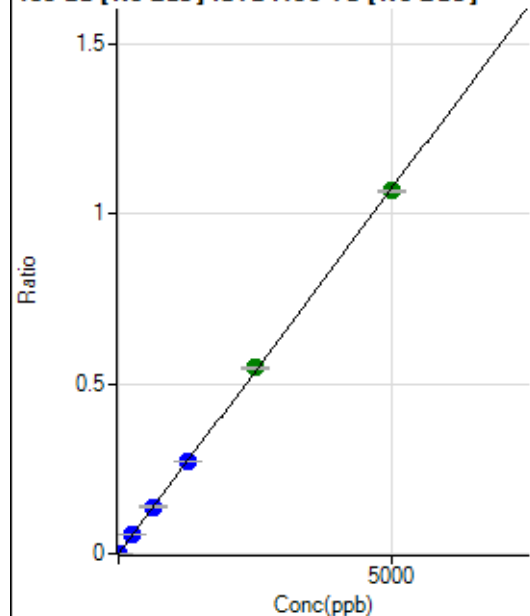
$$DL = 0.02271$$

$$BEC = 0.03049$$

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	227.79	0.0000	P	27.7
2	☐	1.000	1.006	3633.97	0.0002	P	1.6
3	☐	10.000	10.269	35401.62	0.0022	P	2.0
4	☐	250.000	262.153	896007.18	0.0562	P	0.8
5	☐	625.000	643.697	2166088.87	0.1380	P	2.3
6	☐	1250.000	1261.782	4229787.12	0.2706	P	0.8
7	☐	2500.000	2544.140	8555424.93	0.5455	A	0.5
8	☐	5000.000	4972.040	16880361.32	1.0661	A	0.8
9	☐			2906.00	0.0002	P	3.5

$$y = 2.1442\text{E-}004 * x + 1.3838\text{E-}005$$

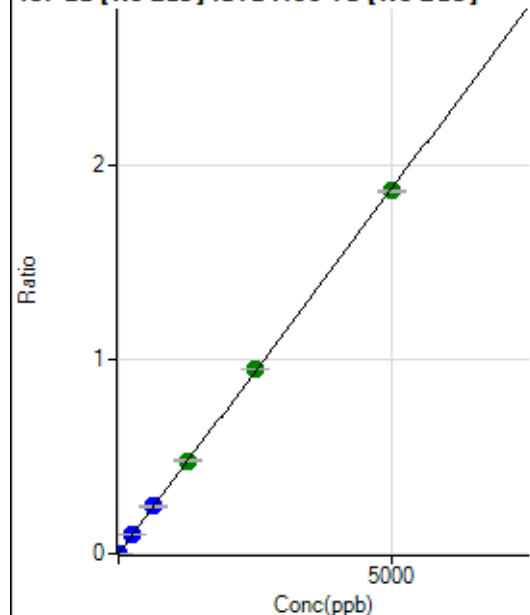
$$R = 0.9999$$

$$DL = 0.05371$$

$$BEC = 0.06453$$

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	386.14	0.0000	P	18.4
2	☐	1.000	1.021	6426.78	0.0004	P	2.8
3	☐	10.000	10.191	61380.72	0.0038	P	0.4
4	☐	250.000	261.505	1561798.56	0.0980	P	0.2
5	☐	625.000	647.300	3806177.78	0.2425	P	2.1
6	☐	1250.000	1275.643	7472004.07	0.4780	A	1.2
7	☐	2500.000	2531.327	14874349.46	0.9484	A	0.8
8	☐	5000.000	4974.562	29510796.49	1.8638	A	0.7
9	☐			5084.48	0.0004	P	2.4

$$y = 3.7467E-004 * x + 2.3439E-005$$

$$R = 1.0000$$

$$DL = 0.03447$$

$$BEC = 0.06256$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.
2	☐			4.45		P	86.6
3	☐			13.33		P	NaN
4	☐			73.34		P	24.1
5	☐			175.56		P	21.9
6	☐			260.01		P	19.4
7	☐			535.59		P	18.9
8	☐			931.18		P	9.5
9	☐			206.68		P	19.4

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.56		P	34.7
2	☐			7.78		P	65.5
3	☐			6.67		P	50.0
4	☐			21.11		P	48.2
5	☐			26.67		P	25.0
6	☐			41.11		P	16.9
7	☐			61.11		P	22.1
8	☐			97.78		P	2.0
9	☐			102.23		P	18.0

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			41.67		P	34.6
2	☐			16.67		P	50.0
3	☐			41.67		P	20.0
4	☐			58.33		P	24.7
5	☐			47.22		P	36.7
6	☐			75.00		P	40.1
7	☐			158.34		P	41.1
8	☐			219.45		P	5.8
9	☐			161.12		P	13.0

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			26.67		P	12.5
2	☐			30.00		P	40.1
3	☐			24.44		P	34.3
4	☐			42.22		P	36.5
5	☐			56.67		P	35.8
6	☐			102.23		P	18.0
7	☐			197.78		P	4.9
8	☐			306.67		P	13.4
9	☐			85.56		P	30.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			80.56		P	41.8
2	☐			80.56		P	79.0
3	☐			119.45		P	17.6
4	☐			102.78		P	47.5
5	☐			86.12		P	27.9
6	☐			111.12		P	18.9
7	☐			108.34		P	13.3
8	☐			136.12		P	30.8
9	☐			172.23		P	12.2

160 Gd [He] No available calibration points

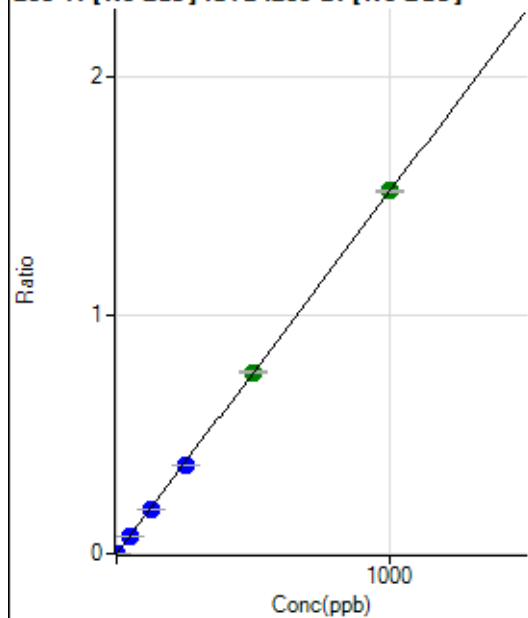
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			278.90		P	6.0
2	☐			273.34		P	3.2
3	☐			286.67		P	12.3
4	☐			252.23		P	19.9
5	☐			265.56		P	5.1
6	☐			241.12		P	10.0
7	☐			244.45		P	12.4
8	☐			263.34		P	8.8
9	☐			277.79		P	14.5

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			47.22		P	53.9
2	☐			58.34		P	0.0
3	☐			47.22		P	44.4
4	☐			83.34		P	26.5
5	☐			94.45		P	45.3
6	☐			88.89		P	21.7
7	☐			119.45		P	35.1
8	☐			86.12		P	20.1
9	☐			100.01		P	14.4

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			70.00		P	16.5
2	☐			63.34		P	9.1
3	☐			56.67		P	11.8
4	☐			86.67		P	15.4
5	☐			63.33		P	24.1
6	☐			90.00		P	13.4
7	☐			70.00		P	12.6
8	☐			66.67		P	26.0
9	☐			88.89		P	9.4

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1025.09	0.0001	P	17.1
2	☐	0.100	0.089	2397.55	0.0002	P	7.3
3	☐	1.000	0.920	15868.38	0.0015	P	1.3
4	☐	50.000	48.558	784480.06	0.0738	P	0.6
5	☐	125.000	121.405	1942556.64	0.1843	P	2.4
6	☐	250.000	242.860	3850632.25	0.3686	P	0.5
7	☐	500.000	500.073	7862628.13	0.7590	A	1.1
8	☐	1000.000	1002.270	15571006.08	1.5210	A	0.4
9	☐			3859.07	0.0004	P	6.7

$$y = 0.0015 * x + 9.2843E-005$$

$$R = 1.0000$$

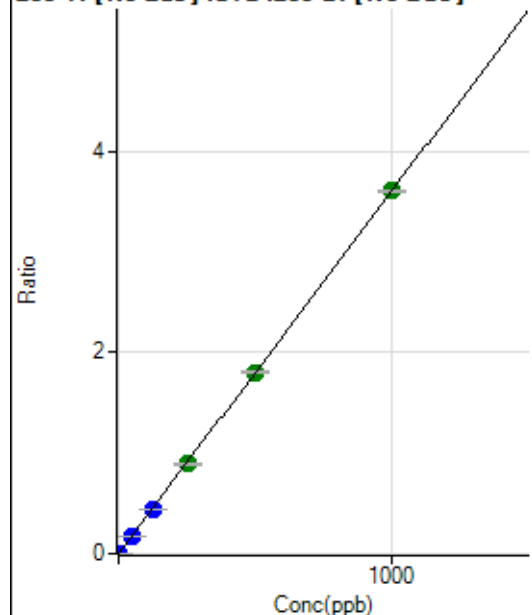
$$DL = 0.03135$$

$$BEC = 0.06118$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1969.69	0.0002	P	1.6
2	☐	0.100	0.089	5276.30	0.0005	P	3.0
3	☐	1.000	0.911	36888.27	0.0035	P	1.1
4	☐	50.000	48.860	1872660.07	0.1761	P	0.6
5	☐	125.000	121.879	4626891.73	0.4391	P	2.6
6	☐	250.000	247.073	9295349.60	0.8899	A	0.6
7	☐	500.000	499.263	18626520.38	1.7980	A	1.0
8	☐	1000.000	1001.548	36921857.42	3.6067	A	0.7
9	☐			9034.01	0.0010	P	8.4

$$y = 0.0036 * x + 1.7838E-004$$

$$R = 1.0000$$

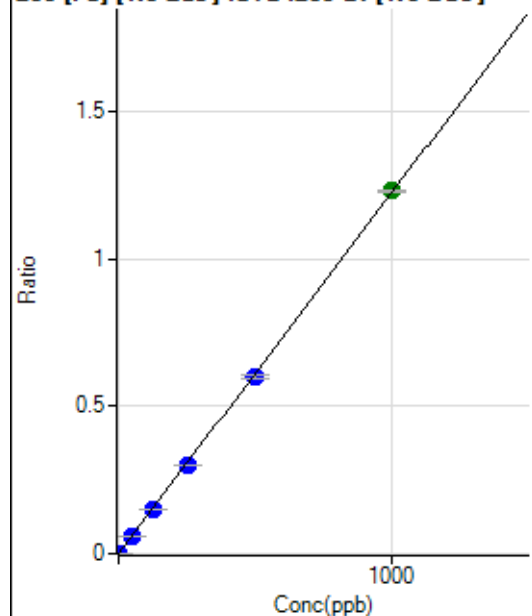
$$DL = 0.002321$$

$$BEC = 0.04954$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1589.04	0.0001	P	3.9
2	☐	0.100	0.095	2746.67	0.0003	P	4.1
3	☐	1.000	0.906	13340.37	0.0013	P	2.2
4	☐	50.000	49.122	639798.75	0.0602	P	0.6
5	☐	125.000	122.776	1582614.35	0.1502	P	2.7
6	☐	250.000	245.573	3136323.25	0.3002	P	0.5
7	☐	500.000	490.669	6212971.49	0.5998	P	1.3
8	☐	1000.000	1006.094	12587968.10	1.2296	A	0.5
9	☐			9891.02	0.0011	P	3.4

$$y = 0.0012 * x + 1.4391E-004$$

$$R = 0.9999$$

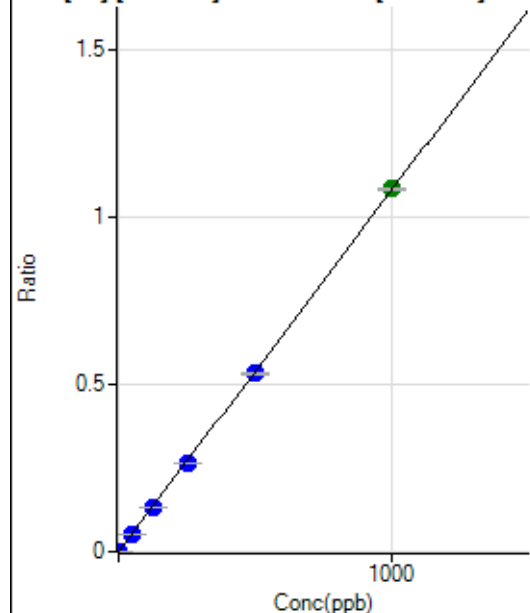
$$DL = 0.01395$$

$$BEC = 0.1178$$

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	1446.42	0.0001	P	7.7
2	☐	0.100	0.090	2407.70	0.0002	P	2.0
3	☐	1.000	0.907	11824.06	0.0011	P	1.4
4	☐	50.000	49.006	563155.93	0.0530	P	0.6
5	☐	125.000	123.307	1402259.55	0.1331	P	2.8
6	☐	250.000	245.493	2766013.66	0.2648	P	0.6
7	☐	500.000	492.916	5506337.97	0.5316	P	1.1
8	☐	1000.000	1004.930	11092496.20	1.0836	A	0.5
9	☐			8608.57	0.0010	P	2.5

$$y = 0.0011 * x + 1.3098E-004$$

$$R = 1.0000$$

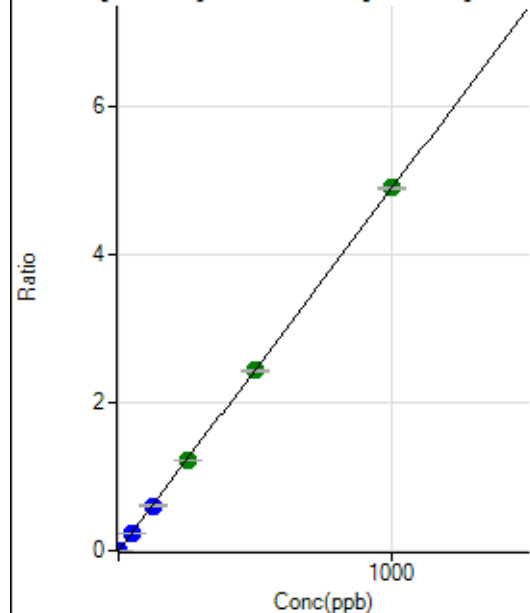
$$DL = 0.02797$$

$$BEC = 0.1215$$

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	5978.47	0.0005	P	2.3
2	☐	0.100	0.093	10505.61	0.0010	P	2.2
3	☐	1.000	0.907	53060.88	0.0050	P	0.6
4	☐	50.000	49.125	2560890.71	0.2409	P	0.4
5	☐	125.000	123.268	6359939.57	0.6035	P	2.9
6	☐	250.000	247.258	12640169.11	1.2101	A	0.2
7	☐	500.000	497.470	25215528.28	2.4341	A	0.8
8	☐	1000.000	1002.211	50194079.71	4.9032	A	0.3
9	☐			38978.68	0.0045	P	2.2

$$y = 0.0049 * x + 5.4141E-004$$

$$R = 1.0000$$

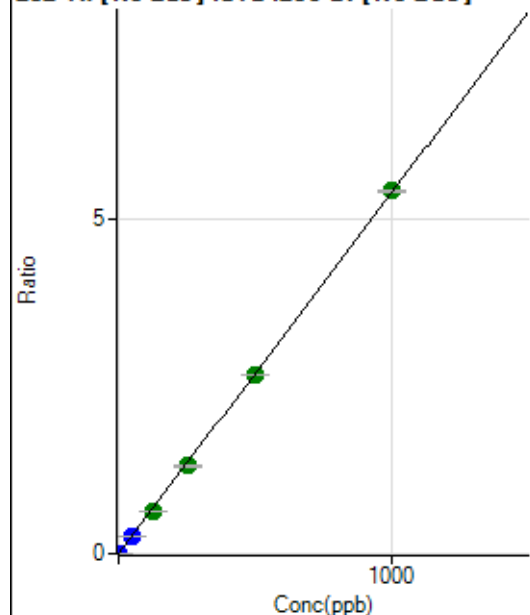
$$DL = 0.007531$$

$$BEC = 0.1107$$

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	2437.34	0.0002	P	3.4
2	☐	0.100	0.071	6377.69	0.0006	P	5.8
3	☐	1.000	0.800	48283.64	0.0045	P	1.4
4	☐	50.000	46.002	2636729.23	0.2480	P	1.0
5	☐	125.000	117.866	6692768.44	0.6350	A	2.2
6	☐	250.000	242.376	13637984.57	1.3056	A	0.7
7	☐	500.000	495.726	27661558.49	2.6702	A	0.6
8	☐	1000.000	1005.135	55421360.96	5.4138	A	0.8
9	☐			12986.41	0.0015	P	1.6

$$y = 0.0054 * x + 2.2073E-004$$

$$R = 0.9999$$

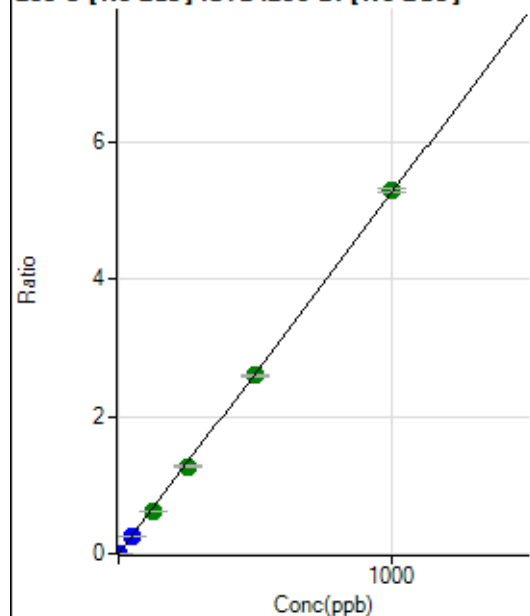
$$DL = 0.00416$$

$$BEC = 0.04098$$

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	4956.73	0.0004	P	8.0
2	☐	0.100	0.084	9367.66	0.0009	P	2.2
3	☐	1.000	0.837	51733.66	0.0049	P	0.9
4	☐	50.000	45.956	2575704.81	0.2422	P	0.9
5	☐	125.000	118.144	6555947.02	0.6221	A	2.3
6	☐	250.000	241.791	13293298.56	1.2726	A	0.9
7	☐	500.000	494.222	26941789.15	2.6008	A	1.1
8	☐	1000.000	1006.001	54190673.78	5.2935	A	0.9
9	☐			10321.22	0.0012	P	2.1

$$y = 0.0053 * x + 4.4889E-004$$

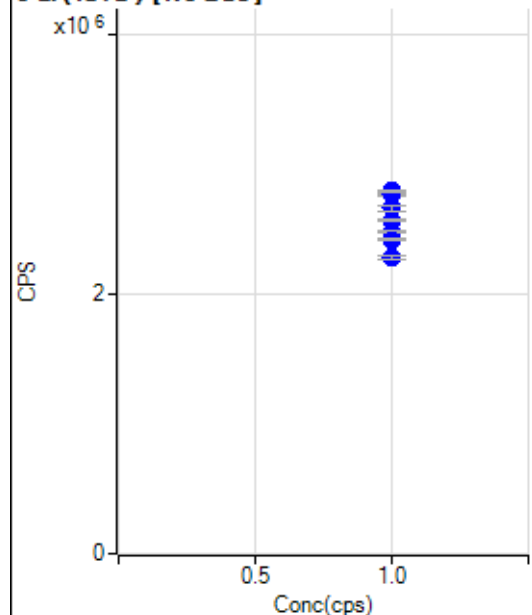
$$R = 0.9999$$

$$DL = 0.02052$$

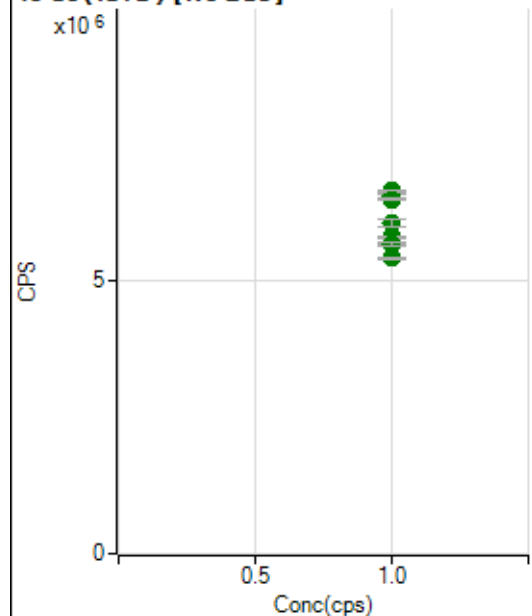
$$BEC = 0.08531$$

Weight: <None>

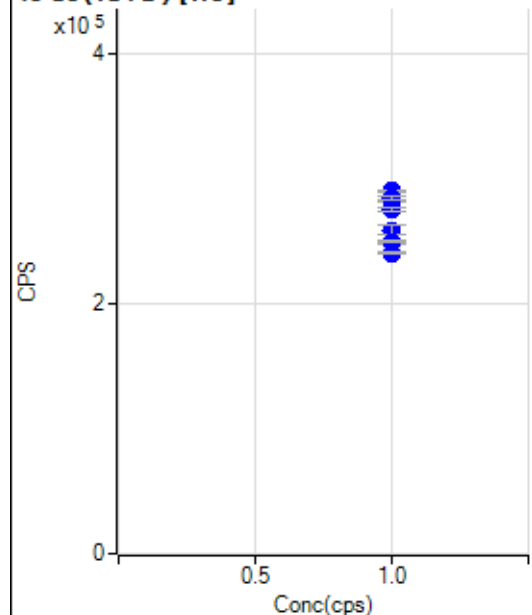
Min Conc: 0

6 Li (ISTD) [No Gas]

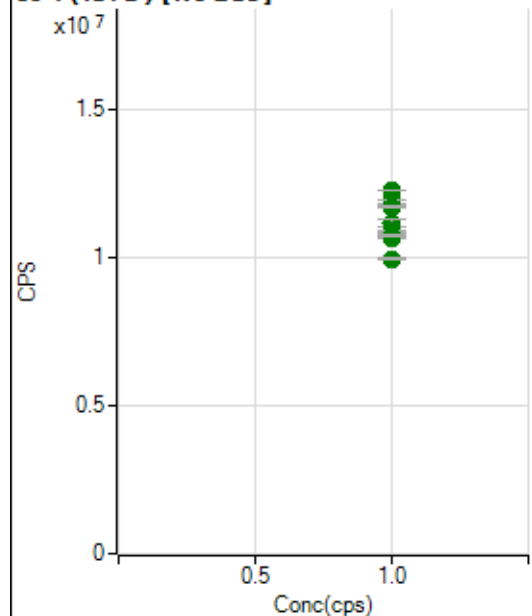
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2770719.87		P	0.2
2	☐	1.000		2763572.60		P	1.1
3	☐	1.000		2793189.11		P	0.1
4	☐	1.000		2786539.68		P	0.6
5	☐	1.000		2661044.83		P	1.7
6	☐	1.000		2566317.59		P	0.4
7	☐	1.000		2477096.84		P	0.7
8	☐	1.000		2419062.84		P	0.8
9	☐	1.000		2281153.72		P	1.0

45 Sc (ISTD) [No Gas]

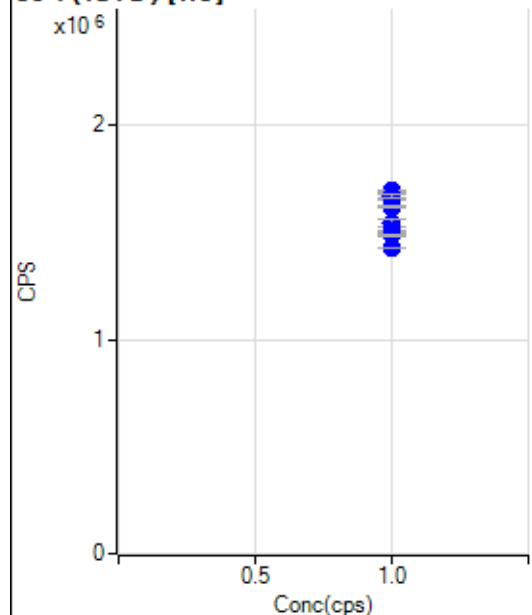
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6636636.48		A	0.4
2	☐	1.000		6542667.86		A	0.6
3	☐	1.000		6635473.07		A	0.4
4	☐	1.000		6475665.25		A	0.6
5	☐	1.000		6055251.00		A	2.1
6	☐	1.000		5787972.00		A	0.3
7	☐	1.000		5648461.93		A	0.6
8	☐	1.000		5653944.66		A	1.2
9	☐	1.000		5401361.58		A	1.1

45 Sc (ISTD) [He]

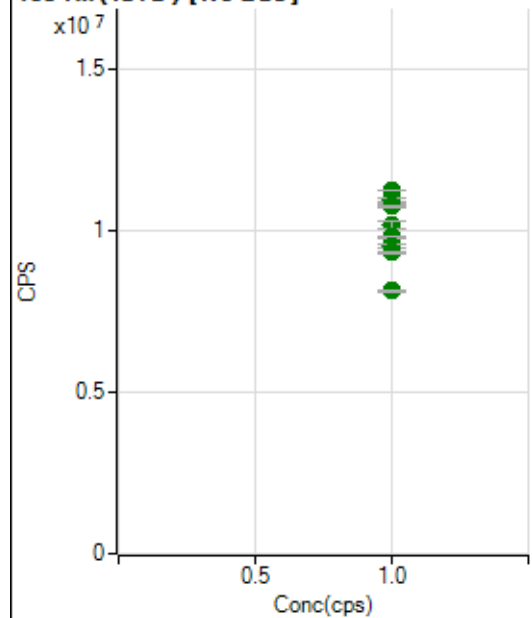
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		282554.94		P	0.8
2	☐	1.000		290335.85		P	0.8
3	☐	1.000		284861.71		P	1.2
4	☐	1.000		275479.86		P	1.2
5	☐	1.000		258918.43		P	2.8
6	☐	1.000		249673.87		P	0.5
7	☐	1.000		248598.86		P	0.6
8	☐	1.000		249556.77		P	0.7
9	☐	1.000		240819.09		P	1.2

89 Y (ISTD) [No Gas]

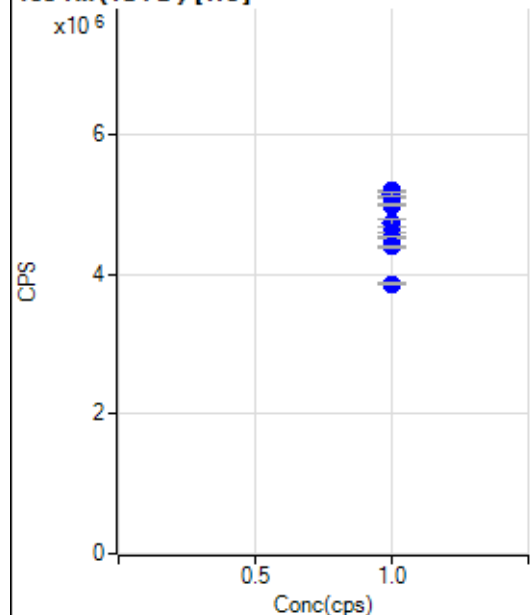
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12272547.04		A	0.1
2	☐	1.000		11799867.60		A	0.5
3	☐	1.000		11978973.85		A	0.3
4	☐	1.000		11725773.16		A	0.3
5	☐	1.000		11176091.64		A	2.1
6	☐	1.000		10897146.36		A	0.4
7	☐	1.000		10686915.39		A	0.7
8	☐	1.000		10754478.03		A	0.6
9	☐	1.000		9983720.13		A	0.8

89 Y (ISTD) [He]

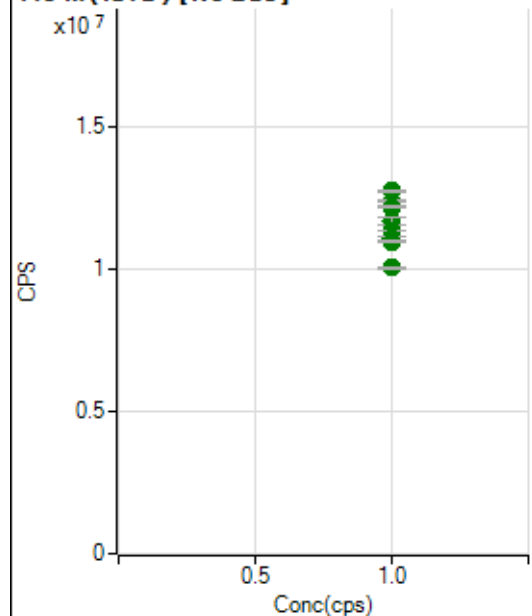
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1658765.67		P	0.5
2	☐	1.000		1692493.74		P	0.4
3	☐	1.000		1670750.17		P	1.3
4	☐	1.000		1617998.99		P	0.7
5	☐	1.000		1540684.89		P	2.2
6	☐	1.000		1503526.97		P	0.4
7	☐	1.000		1496812.86		P	0.5
8	☐	1.000		1485977.15		P	0.7
9	☐	1.000		1423704.87		P	0.2

103 Rh (ISTD) [No Gas]

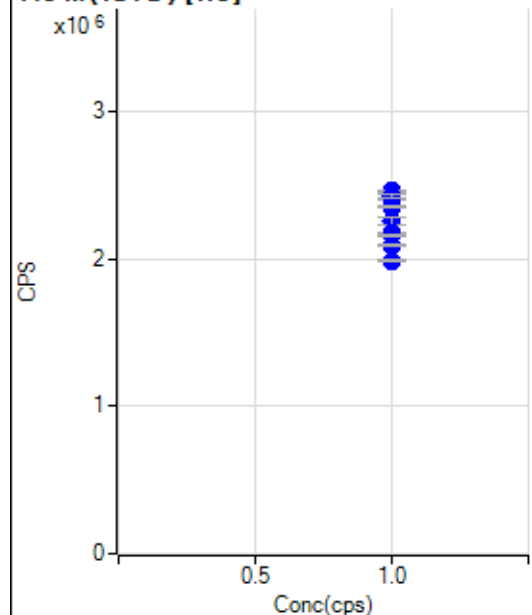
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11229277.59		A	0.1
2	☐	1.000		10859809.27		A	1.0
3	☐	1.000		10948120.38		A	0.7
4	☐	1.000		10761859.79		A	0.4
5	☐	1.000		10186239.64		A	2.4
6	☐	1.000		9793978.43		A	0.2
7	☐	1.000		9517635.28		A	1.2
8	☐	1.000		9315728.16		A	0.6
9	☐	1.000		8133733.43		A	0.7

103 Rh (ISTD) [He]

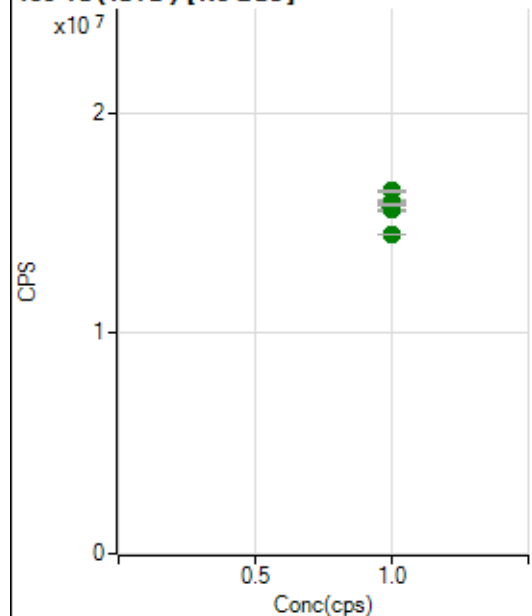
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5117783.88		P	0.4
2	☐	1.000		5196866.17		P	0.3
3	☐	1.000		5156724.54		P	1.0
4	☐	1.000		4997714.09		P	0.1
5	☐	1.000		4732703.50		P	2.3
6	☐	1.000		4594185.94		P	0.2
7	☐	1.000		4530189.38		P	0.4
8	☐	1.000		4400987.68		P	0.9
9	☐	1.000		3867362.27		P	0.4

115 In (ISTD) [No Gas]

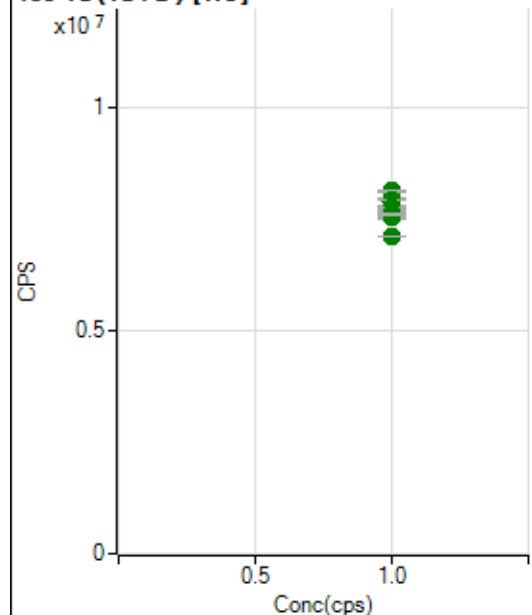
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		12773160.02		A	0.5
2	☐	1.000		12245107.22		A	0.6
3	☐	1.000		12396264.56		A	0.5
4	☐	1.000		12218255.40		A	0.4
5	☐	1.000		11708789.48		A	2.7
6	☐	1.000		11385844.49		A	0.4
7	☐	1.000		11104318.40		A	1.0
8	☐	1.000		10987066.76		A	0.9
9	☐	1.000		10064642.83		A	0.3

115 In (ISTD) [He]

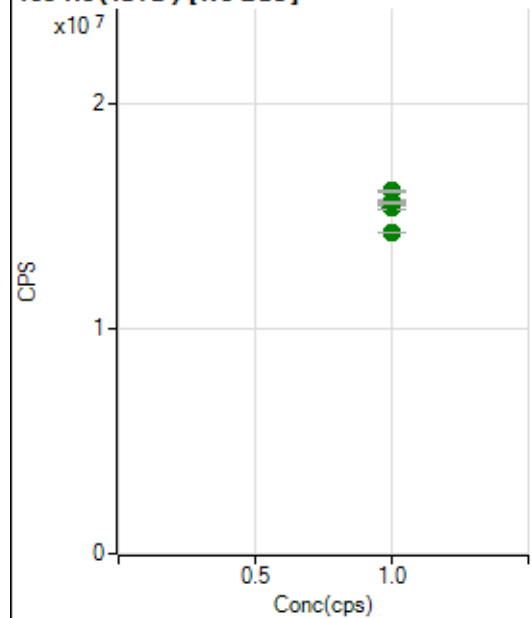
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2403152.55		P	0.6
2	☐	1.000		2458793.55		P	0.4
3	☐	1.000		2419241.31		P	1.1
4	☐	1.000		2349834.76		P	0.4
5	☐	1.000		2250956.66		P	2.3
6	☐	1.000		2171681.04		P	0.4
7	☐	1.000		2156905.49		P	0.4
8	☐	1.000		2088935.68		P	0.8
9	☐	1.000		1982558.67		P	0.5

159 Tb (ISTD) [No Gas]

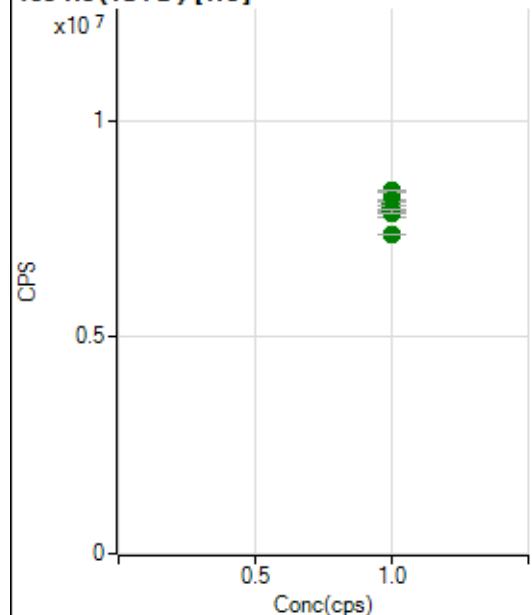
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16469658.78		A	0.4
2	☐	1.000		15833183.79		A	0.6
3	☐	1.000		15977521.85		A	0.5
4	☐	1.000		15936576.43		A	0.5
5	☐	1.000		15697140.60		A	2.2
6	☐	1.000		15633435.46		A	0.4
7	☐	1.000		15683429.35		A	1.2
8	☐	1.000		15833077.96		A	0.4
9	☐	1.000		14466336.45		A	0.2

159 Tb (ISTD) [He]

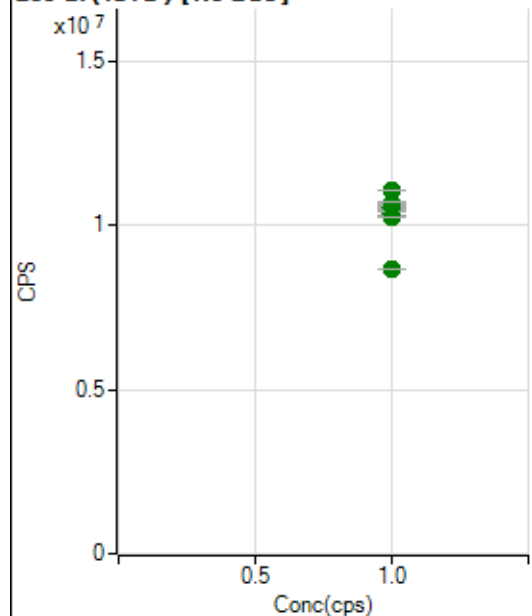
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8140109.74		A	0.8
2	☐	1.000		7950756.82		A	0.4
3	☐	1.000		7874794.88		A	1.2
4	☐	1.000		7753916.90		A	0.5
5	☐	1.000		7610912.46		A	2.2
6	☐	1.000		7566051.21		A	0.4
7	☐	1.000		7649376.69		A	0.4
8	☐	1.000		7611594.54		A	0.7
9	☐	1.000		7120575.94		A	0.2

165 Ho (ISTD) [No Gas]

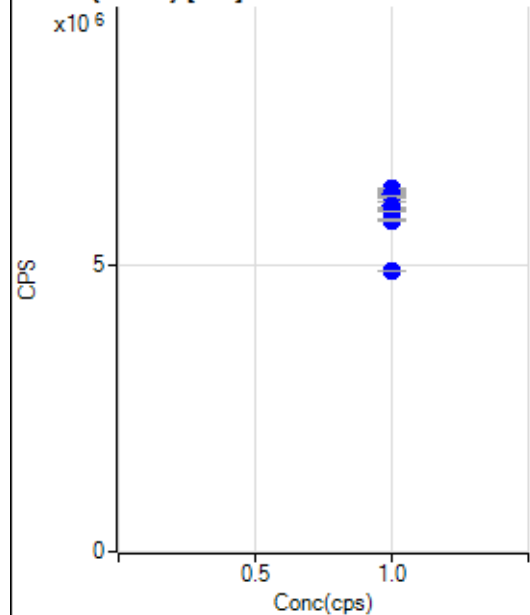
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		16149375.88		A	0.4
2	☐	1.000		15433655.38		A	1.2
3	☐	1.000		15595198.61		A	0.8
4	☐	1.000		15638484.20		A	0.6
5	☐	1.000		15512810.42		A	2.6
6	☐	1.000		15414306.59		A	1.0
7	☐	1.000		15398584.89		A	1.0
8	☐	1.000		15662725.35		A	0.5
9	☐	1.000		14276765.60		A	0.3

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8372743.35		A	0.3
2	☐	1.000		8163795.64		A	0.4
3	☐	1.000		8068168.42		A	1.0
4	☐	1.000		7987950.65		A	0.9
5	☐	1.000		7866462.94		A	2.1
6	☐	1.000		7856823.56		A	0.6
7	☐	1.000		7917133.08		A	0.6
8	☐	1.000		7891610.37		A	1.3
9	☐	1.000		7379072.04		A	0.1

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11042334.14		A	0.1
2	☐	1.000		10539685.89		A	0.6
3	☐	1.000		10660457.76		A	0.7
4	☐	1.000		10632732.06		A	0.5
5	☐	1.000		10543381.93		A	2.8
6	☐	1.000		10445679.71		A	0.6
7	☐	1.000		10360102.76		A	1.4
8	☐	1.000		10236997.14		A	0.3
9	☐	1.000		8667460.77		A	0.3

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6227954.35		P	0.3
2	☐	1.000		6315798.17		P	0.8
3	☐	1.000		6225358.45		P	1.3
4	☐	1.000		6178847.62		P	0.7
5	☐	1.000		6035005.19		P	1.4
6	☐	1.000		5977462.06		P	0.6
7	☐	1.000		5926002.20		P	0.5
8	☐	1.000		5761965.40		P	0.7
9	☐	1.000		4883915.79		P	0.3

US EPA Tune Check Sample Report

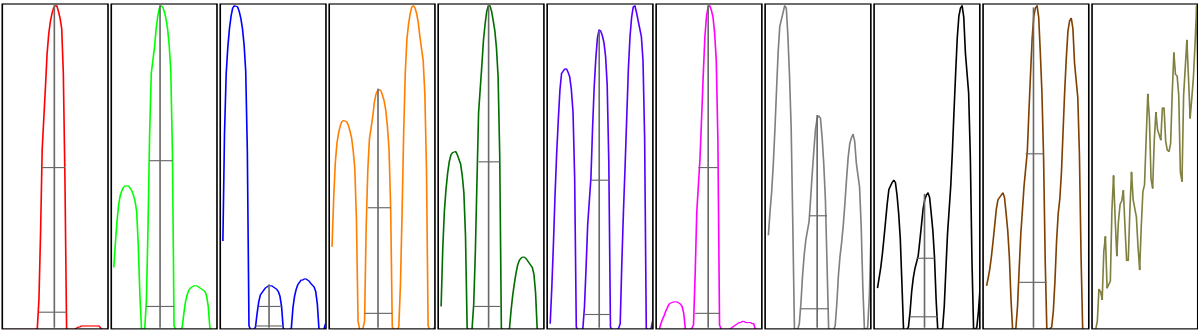
Batch Folder D:\ICP-MS Data\P7072819-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	9344	1.09	5.00	
24	146635	1.23	5.00	
25	19935	1.06	5.00	
26	23156	1.15	5.00	
59	90310	1.10	5.00	
113	14828	0.83	5.00	
115	186164	2.46	5.00	
206	43132	1.09	5.00	
207	40935	1.07	5.00	
208	94224	1.15	5.00	
220	111	4.00		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	9196	9289	9381	9400	9455
24	143959	145853	147405	147264	148693
25	19626	19876	19964	20002	20207
26	22767	23028	23293	23241	23453
59	88951	89801	90550	90637	91609
113	14904	14971	14858	14732	14674
115	190486	190380	187044	182543	180367
206	42413	42949	43430	43263	43606
207	40291	40755	41002	41199	41431
208	92868	93680	94306	94446	95818
220	113	109	114	113	103

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	14793	9.00	8.9 - 9.1		0.817	0.900	
24	228751	23.90	23.9 - 24.1		0.806	0.900	
25	30890	24.90	24.9 - 25.1		0.793	0.900	
26	35524	25.90	25.9 - 26.1		0.790	0.900	
59	146963	58.95	58.9 - 59.1		0.799	0.900	
113	27110	113.00	112.9 - 113.1		0.762	0.900	
115	342101	115.00	114.9 - 115.1		0.735	0.900	
206	82522	206.00	205.9 - 206.1		0.800	0.900	
207	74350	206.95	206.9 - 207.1		0.794	0.900	
208	178272	207.95	207.9 - 208.1		0.782	0.900	
220			-				

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

Tune Parameters

Plasma Paramters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
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	8.0	V	Deflect	14.2	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	180	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	24136	0.47	
89	47712	0.38	
205	38626	0.58	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	23961	24259	24163	24193	24106
89	47591	47991	47699	47756	47522
205	38601	38447	38541	38529	39012

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	8.1	V	Deflect	2.4	V
Extract 2	-115.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-60	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			