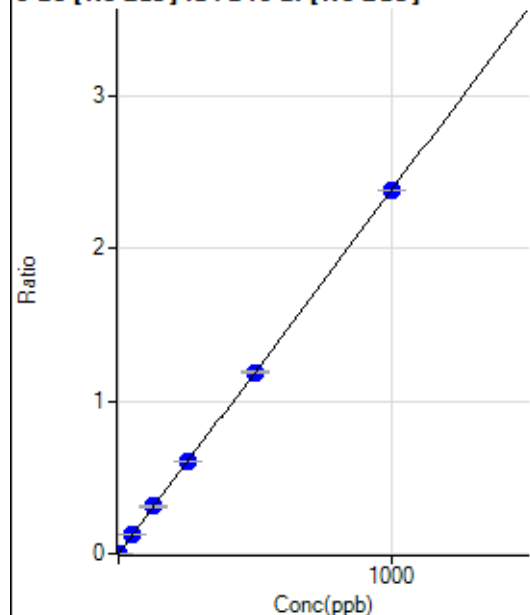


Batch Folder: D:\ICP-MS Data\P711072019MS.b\
Analysis File: P711072019MS.batch.bin
DA Date-Time: 2019-11-07 17:59:49
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2019-11-07 14:59:16
2	004CALS.d	S01	2019-11-07 15:02:50
3	005CALS.d	S02	2019-11-07 15:06:48
4	006CALS.d	S03	2019-11-07 15:10:42
5	007CALS.d	S04	2019-11-07 15:14:37
6	008CALS.d	S05	2019-11-07 15:18:30
7	009CALS.d	S06	2019-11-07 15:22:20
8	010CALS.d	S07	2019-11-07 15:26:09
9	011CALS.d	S08	2019-11-07 15:29:54

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	50.00	0.0001	P	44.2
2	☐	0.100	0.092	198.16	0.0003	P	30.2
3	☐	1.000	1.075	1790.90	0.0026	P	8.4
4	☐	50.000	50.988	82443.87	0.1215	P	2.6
5	☐	125.000	129.662	208721.67	0.3088	P	3.0
6	☐	250.000	254.935	418382.00	0.6072	P	0.4
7	☐	500.000	499.796	823540.55	1.1903	P	0.6
8	☐	1000.000	998.236	1675558.85	2.3773	P	0.1
9	☐			270.38	0.0004	P	4.6

$$y = 0.0024 * x + 7.3806E-005$$

$$R = 1.0000$$

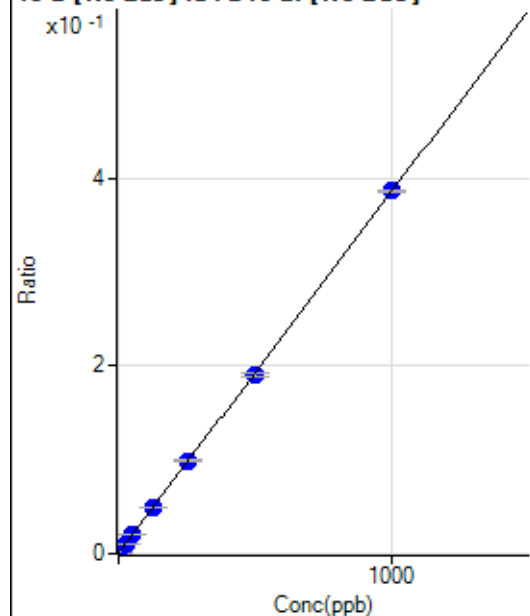
$$DL = 0.04109$$

$$BEC = 0.03099$$

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	433.36	0.0006	P	6.8
2	☐	2.500	3.020	1219.55	0.0018	P	9.4
3	☐	25.000	23.873	6685.10	0.0098	P	5.6
4	☐	50.000	51.385	13848.44	0.0204	P	5.2
5	☐	125.000	126.769	33407.23	0.0494	P	3.0
6	☐	250.000	254.464	67928.33	0.0986	P	1.7
7	☐	500.000	492.590	131613.92	0.1902	P	1.8
8	☐	1000.000	1002.325	272355.56	0.3864	P	0.4
9	☐			13297.98	0.0195	P	6.1

$$y = 3.8488E-004 * x + 6.4023E-004$$

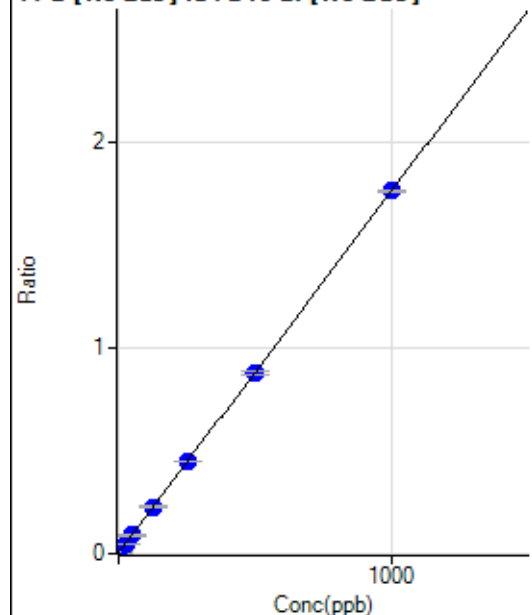
$$R = 0.9999$$

$$DL = 0.3386$$

$$BEC = 1.663$$

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	1833.52	0.0027	P	12.8
2	☐	2.500	2.769	5128.85	0.0076	P	2.8
3	☐	25.000	24.897	31625.58	0.0465	P	0.9
4	☐	50.000	50.217	61760.58	0.0910	P	5.2
5	☐	125.000	127.679	153553.55	0.2273	P	4.5
6	☐	250.000	252.350	307709.39	0.4466	P	0.7
7	☐	500.000	497.737	607565.39	0.8781	P	1.2
8	☐	1000.000	1000.200	1241798.78	1.7619	P	0.8
9	☐			59538.13	0.0872	P	7.2

$$y = 0.0018 * x + 0.0027$$

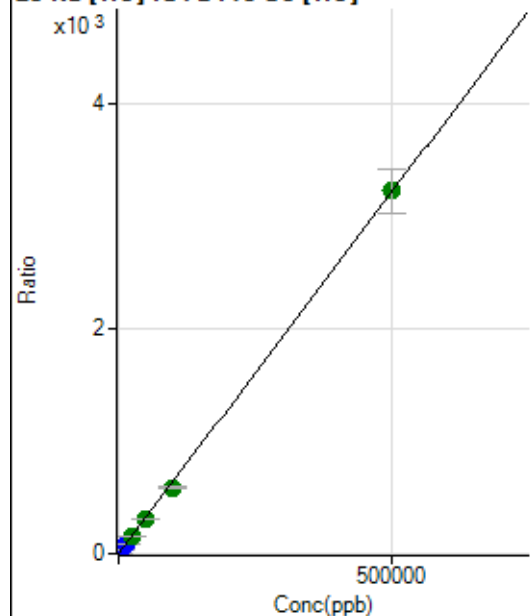
$$R = 1.0000$$

$$DL = 0.5892$$

$$BEC = 1.54$$

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	3533.90	0.1014	P	9.1
2	☐	50.000	50.612	14641.03	0.4272	P	2.2
3	☐	500.000	510.869	114669.75	3.3899	P	1.7
4	☐	5000.000	5010.669	1101218.77	32.3559	P	2.8
5	☐	12500.000	12106.957	2769322.33	78.0359	P	0.8
6	☐	25000.000	24284.406	5565617.05	156.4242	A	1.4
7	☐	50000.000	47346.435	11138821.60	304.8784	A	1.1
8	☐	100000.00	91606.347	23244000.00	589.7870	A	2.1
9	☐	500000.00	501989.57	127652348.6	3,231.493	A	12.2

$$y = 0.0064 * x + 0.1014$$

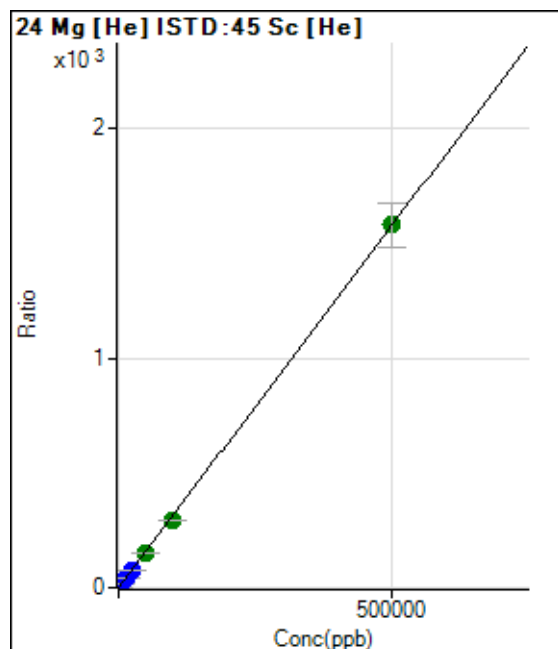
$$R = 0.9998$$

$$DL = 4.322$$

$$BEC = 15.75$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	136.12	0.0039	P	32.9
2	☐	50.000	54.215	5993.12	0.1749	P	4.3
3	☐	500.000	553.049	59137.08	1.7480	P	1.7
4	☐	5000.000	5085.320	545985.50	16.0412	P	2.5
5	☐	12500.000	12314.340	1378319.58	38.8390	P	1.4
6	☐	25000.000	24541.602	2753953.14	77.3994	P	0.9
7	☐	50000.000	48370.895	5573573.91	152.5486	A	0.8
8	☐	100000.00	92850.789	11540887.76	292.8224	A	1.7
9	☐	500000.00	501619.40	62472017.37	1,581.933	A	12.5

$$y = 0.0032 * x + 0.0039$$

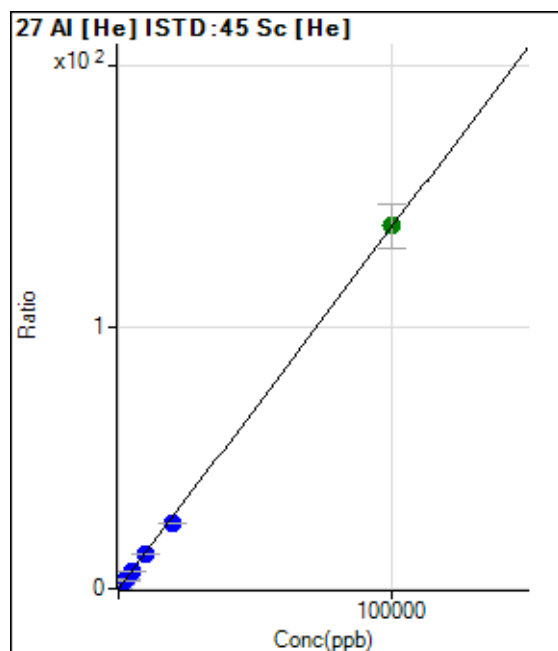
$$R = 0.9999$$

$$DL = 1.221$$

$$BEC = 1.235$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.22	0.0006	P	44.1
2	☐	2.000	2.305	130.56	0.0038	P	30.8
3	☐	20.000	19.743	944.51	0.0279	P	5.9
4	☐	1000.000	1000.434	47108.58	1.3833	P	2.3
5	☐	2500.000	2405.771	118017.02	3.3256	P	1.5
6	☐	5000.000	4820.553	237078.52	6.6630	P	0.7
7	☐	10000.000	9493.172	479376.79	13.1209	P	1.1
8	☐	20000.000	18032.588	982358.31	24.9230	P	1.1
9	☐	100000.00	100455.48	5484739.01	138.8377	A	12.1

$$y = 0.0014 * x + 6.3867E-004$$

$$R = 0.9998$$

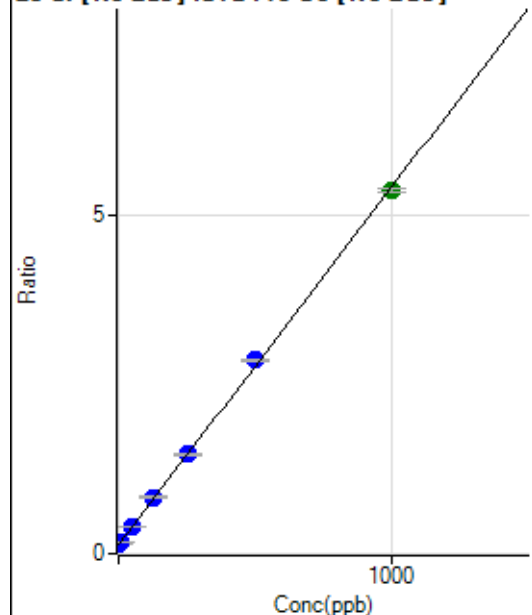
$$DL = 0.6118$$

$$BEC = 0.4621$$

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	125831.63	0.1292	P	0.4
2	☐	1.000	0.708	127618.35	0.1329	P	0.1
3	☐	10.000	6.979	159258.56	0.1661	P	1.3
4	☐	50.000	52.417	389844.33	0.4065	P	2.9
5	☐	125.000	133.011	805856.58	0.8330	P	3.6
6	☐	250.000	253.593	1479909.38	1.4711	P	1.0
7	☐	500.000	516.494	2864727.93	2.8622	P	0.6
8	☐	1000.000	989.763	5583770.61	5.3665	A	0.9
9	☐			617646.32	0.6051	P	0.7

$$y = 0.0053 * x + 0.1292$$

$$R = 0.9998$$

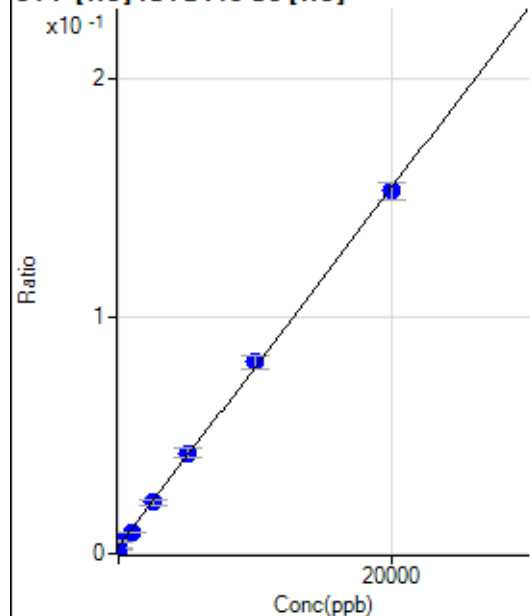
$$DL = 0.3216$$

$$BEC = 24.41$$

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	-191.349	55.56	0.0016	P	22.6
2	☐	0.000	-79.814	83.34	0.0024	P	30.5
3	☐	0.000	271.162	172.23	0.0051	P	19.1
4	☐	1000.000	763.411	300.01	0.0088	P	2.4
5	☐	2500.000	2456.725	766.72	0.0216	P	9.6
6	☐	5000.000	5207.988	1508.47	0.0424	P	8.6
7	☐	10000.000	10289.492	2953.22	0.0808	P	7.4
8	☐	20000.000	19820.496	6020.89	0.1528	P	5.1
9	☐			97.22	0.0025	P	15.1

$$y = 7.5569E-006 * x + 0.0030$$

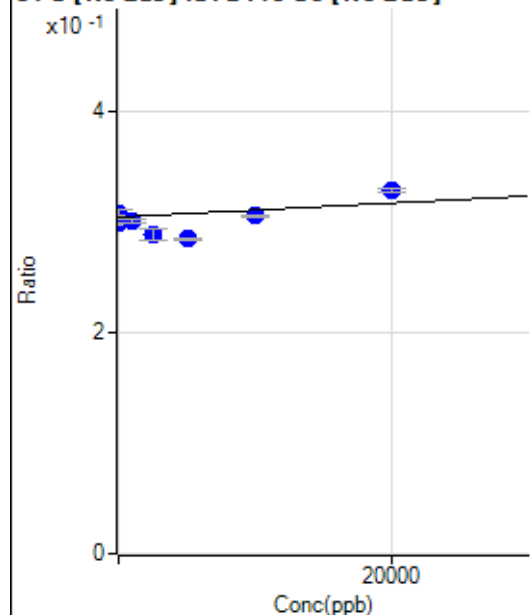
$$R = 0.9995$$

$$DL = 274.4$$

$$BEC = 402.1$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-9342.675	290213.42	0.2979	P	0.9
2	☐	0.000	3014.606	293576.77	0.3058	P	0.7
3	☐	0.000	6328.070	295191.96	0.3079	P	2.0
4	☐	1000.000	-6402.240	287540.95	0.2998	P	1.0
5	☐	2500.000	-24179.19	279089.33	0.2885	P	3.7
6	☐	5000.000	-31509.04	285547.92	0.2838	P	0.8
7	☐	10000.000	1278.934	304925.47	0.3047	P	0.6
8	☐	20000.000	37192.805	340721.63	0.3275	P	1.0
9	☐			289347.17	0.2835	P	0.3

$$y = 6.3501\text{E-}007 * x + 0.3039$$

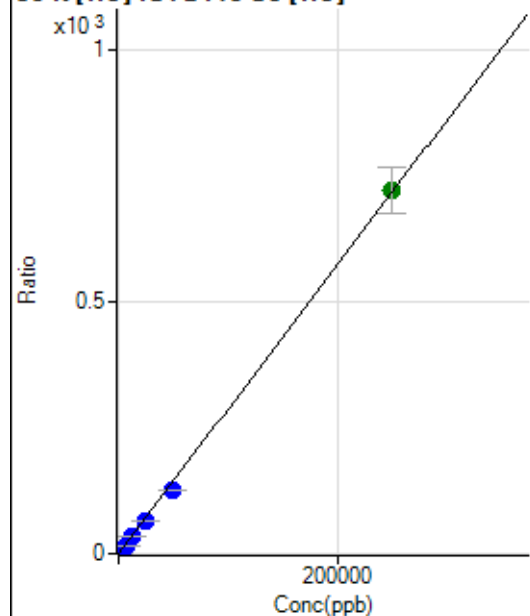
$$R = 0.6258$$

$$DL = 1.73\text{E}+04$$

$$BEC = 4.785\text{E}+05$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	11235.25	0.3221	P	3.4
2	☐	50.000	51.128	16059.27	0.4685	P	2.4
3	☐	500.000	497.766	59124.15	1.7477	P	1.3
4	☐	2500.000	2378.142	242764.31	7.1329	P	2.8
5	☐	6250.000	5798.205	600721.56	16.9275	P	1.1
6	☐	12500.000	11582.164	1191682.73	33.4922	P	1.0
7	☐	25000.000	22501.871	2366355.87	64.7650	P	0.3
8	☐	50000.000	43506.814	4924028.06	124.9209	P	0.8
9	☐	250000.00	251606.86	28467644.73	720.8966	A	12.6

$$y = 0.0029 * x + 0.3221$$

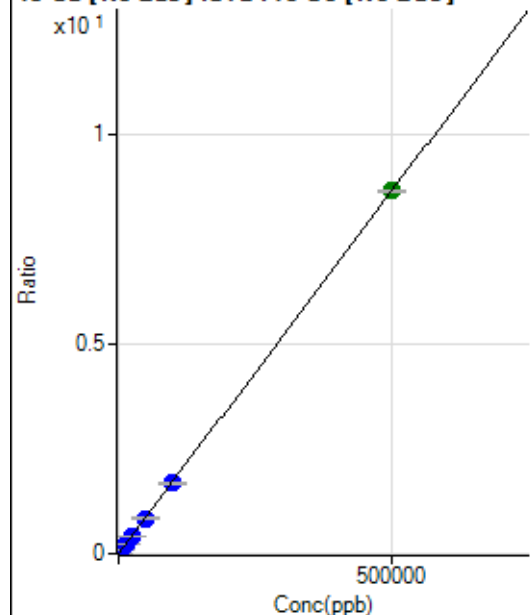
$$R = 0.9996$$

$$DL = 11.51$$

$$BEC = 112.5$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	83.34	0.0001	P	40.0
2	☐	50.000	57.582	1036.19	0.0011	P	3.4
3	☐	500.000	512.326	8558.39	0.0089	P	6.3
4	☐	5000.000	5035.235	83388.42	0.0870	P	3.5
5	☐	12500.000	12628.987	210867.70	0.2180	P	4.1
6	☐	25000.000	24770.431	430060.33	0.4275	P	1.3
7	☐	50000.000	49079.860	847693.26	0.8470	P	0.6
8	☐	100000.00	97216.797	1745425.10	1.6776	P	1.6
9	☐	500000.00	500656.54	8818367.56	8.6389	A	0.5

$$y = 1.7255E-005 * x + 8.5569E-005$$

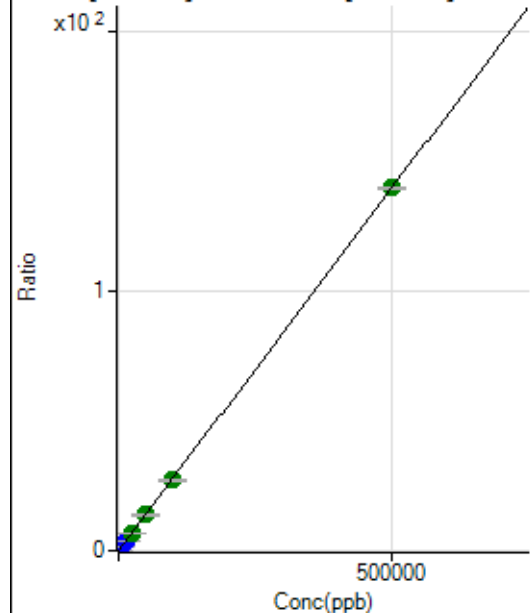
$$R = 1.0000$$

$$DL = 5.951$$

$$BEC = 4.959$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3197.72	0.0033	P	8.2
2	☐	50.000	58.101	18712.51	0.0195	P	2.7
3	☐	500.000	517.178	141473.33	0.1475	P	1.2
4	☐	5000.000	5081.029	1362446.79	1.4205	P	1.8
5	☐	12500.000	12685.155	3426088.70	3.5416	P	3.7
6	☐	25000.000	24532.618	6887327.76	6.8462	A	0.2
7	☐	50000.000	49099.755	13710511.59	13.6988	A	1.0
8	☐	100000.00	96998.548	28154517.99	27.0594	A	0.9
9	☐	500000.00	500708.22	142568028.1	139.6673	A	0.7

$$y = 2.7893E-004 * x + 0.0033$$

$$R = 1.0000$$

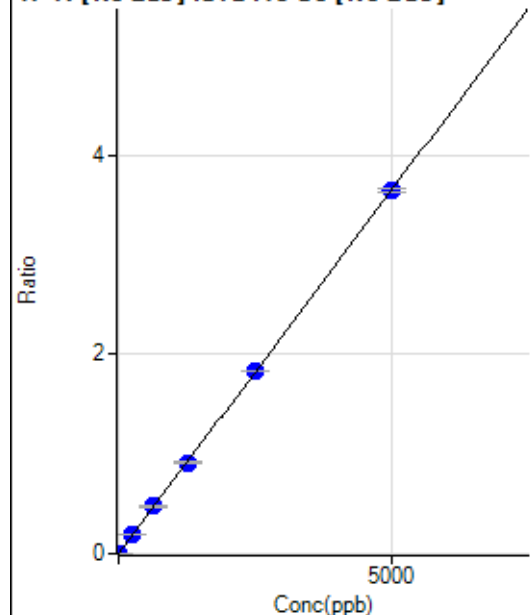
$$DL = 2.888$$

$$BEC = 11.77$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	33.34	0.0000	P	65.9
2	☐	0.500	0.650	488.92	0.0005	P	4.5
3	☐	5.000	5.772	4075.73	0.0042	P	6.9
4	☐	250.000	255.707	179159.24	0.1868	P	2.3
5	☐	625.000	650.559	459689.28	0.4752	P	3.6
6	☐	1250.000	1255.798	922737.29	0.9172	P	0.4
7	☐	2500.000	2508.269	1833579.49	1.8320	P	0.4
8	☐	5000.000	4990.935	3792744.92	3.6452	P	1.2
9	☐			1739.06	0.0017	P	8.0

$$y = 7.3037\text{E-}004 * x + 3.4191\text{E-}005$$

$$R = 1.0000$$

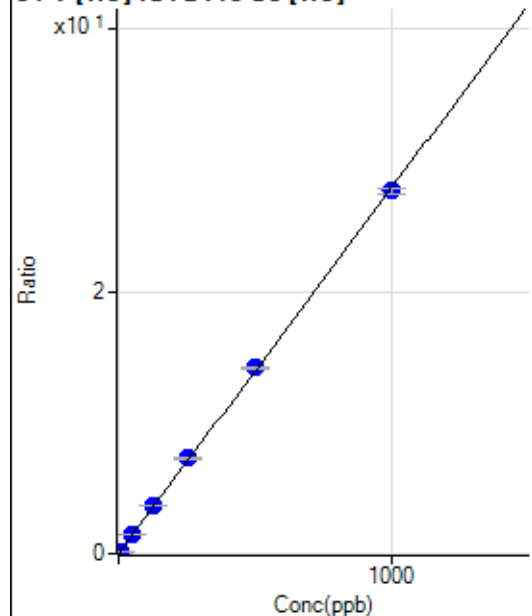
$$DL = 0.09252$$

$$BEC = 0.04681$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	3.33	0.0001	P	100.4
2	☐	0.500	0.595	572.24	0.0167	P	3.5
3	☐	5.000	5.908	5576.70	0.1649	P	1.0
4	☐	50.000	53.099	50391.49	1.4810	P	4.0
5	☐	125.000	130.114	128782.28	3.6289	P	0.8
6	☐	250.000	261.282	259272.05	7.2871	P	1.5
7	☐	500.000	508.274	517923.43	14.1755	P	0.7
8	☐	1000.000	992.244	1090718.07	27.6730	P	1.3
9	☐			373.34	0.0095	P	15.1

$$y = 0.0279 * x + 9.6123\text{E-}005$$

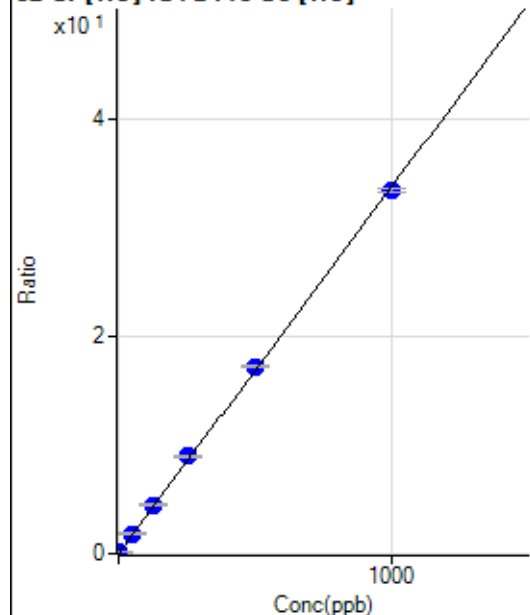
$$R = 0.9999$$

$$DL = 0.01038$$

$$BEC = 0.003447$$

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	463.35	0.0133	P	3.7
2	☒	0.200					
3	☐	2.000	2.292	3060.36	0.0905	P	2.0
4	☐	50.000	54.429	62817.73	1.8460	P	3.5
5	☐	125.000	133.064	159470.19	4.4937	P	0.8
6	☐	250.000	265.369	318393.41	8.9485	P	1.1
7	☐	500.000	510.882	628950.12	17.2151	P	1.4
8	☐	1000.000	989.487	1313723.24	33.3302	P	1.1
9	☐			55553.44	1.4062	P	12.0

$$y = 0.0337 * x + 0.0133$$

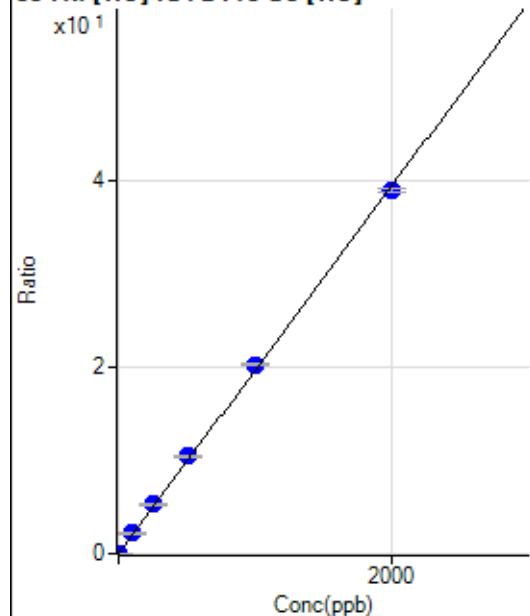
$$R = 0.9998$$

$$DL = 0.04422$$

$$BEC = 0.3945$$

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	46.67	0.0013	P	55.4
2	☐	0.100	0.114	122.23	0.0036	P	12.4
3	☐	1.000	1.272	891.15	0.0263	P	8.6
4	☐	100.000	110.243	73811.02	2.1684	P	2.1
5	☐	250.000	267.766	186838.59	5.2648	P	0.8
6	☐	500.000	531.474	371747.63	10.4485	P	1.9
7	☐	1000.000	1028.450	738641.37	20.2176	P	1.3
8	☐	2000.000	1975.174	1530391.31	38.8274	P	1.2
9	☐			7397.55	0.1873	P	13.0

$$y = 0.0197 * x + 0.0013$$

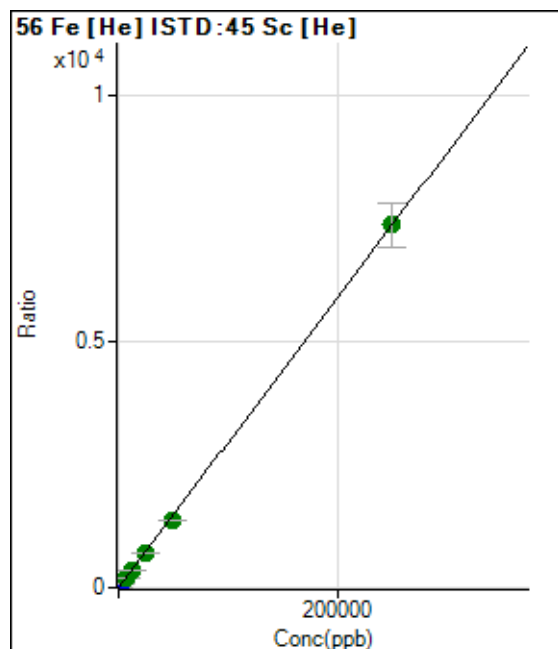
$$R = 0.9997$$

$$DL = 0.1128$$

$$BEC = 0.06788$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	2040.94	0.0586	P	9.8
2	☐	5.000	6.466	8508.27	0.2483	P	6.1
3	☐	50.000	57.609	59176.98	1.7494	P	0.9
4	☐	2500.000	2578.981	2578021.67	75.7507	P	3.1
5	☐	6250.000	6250.740	6512641.06	183.5154	A	0.1
6	☐	12500.000	12546.088	13103948.79	368.2814	A	0.9
7	☐	25000.000	24218.511	25971870.72	710.8626	A	1.1
8	☐	50000.000	46575.944	53880555.37	1,367.044	A	1.4
9	☐	250000.00	250759.84	290744699.0	7,359.763	A	12.1

$$y = 0.0293 * x + 0.0586$$

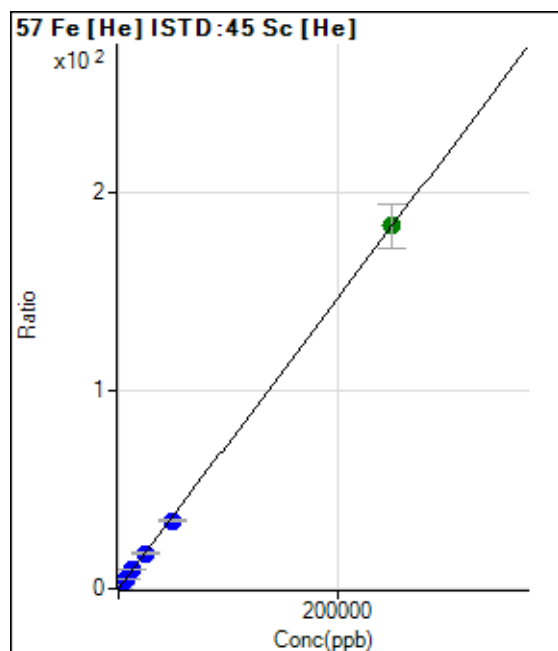
$$R = 0.9999$$

$$DL = 0.5838$$

$$BEC = 1.995$$

Weight: <None>

Min Conc: 0



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	188.90	0.0054	P	10.4
2	☐	5.000	5.328	318.53	0.0093	P	24.9
3	☐	50.000	58.232	1624.21	0.0480	P	9.3
4	☐	2500.000	2623.769	65499.93	1.9250	P	3.9
5	☐	6250.000	6370.893	165601.54	4.6664	P	0.3
6	☐	12500.000	12724.988	331439.35	9.3151	P	1.1
7	☐	25000.000	24419.055	652858.92	17.8705	P	1.9
8	☐	50000.000	46824.961	1350405.66	34.2628	P	1.6
9	☐	250000.00	250677.59	7243645.01	183.4026	A	12.4

$$y = 7.3161E-004 * x + 0.0054$$

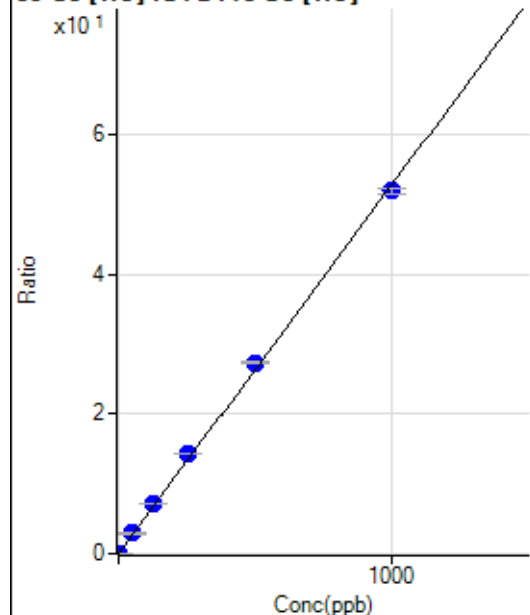
$$R = 0.9999$$

$$DL = 2.303$$

$$BEC = 7.403$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	36.66	0.0011	P	42.5
2	☐	0.100	0.106	227.78	0.0066	P	13.4
3	☐	1.000	1.153	2097.96	0.0620	P	1.9
4	☐	50.000	55.768	100314.82	2.9484	P	4.2
5	☐	125.000	135.618	254394.62	7.1684	P	0.4
6	☐	250.000	270.149	508052.10	14.2783	P	0.5
7	☐	500.000	517.227	998745.92	27.3363	P	1.0
8	☐	1000.000	984.733	2051226.13	52.0438	P	1.5
9	☐			4481.87	0.1133	P	10.6

$$y = 0.0528 * x + 0.0011$$

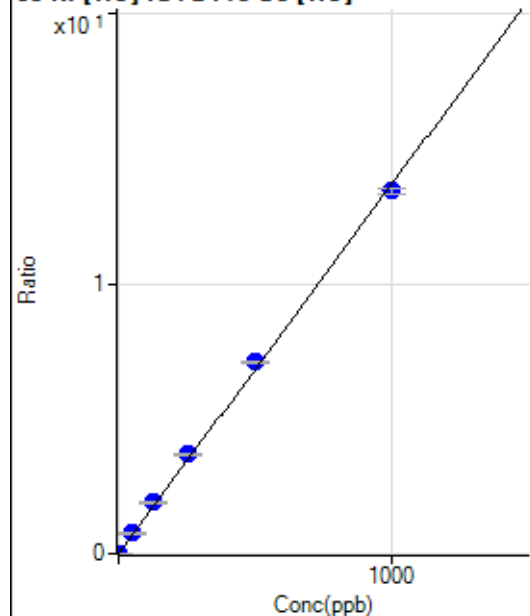
$$R = 0.9995$$

$$DL = 0.02542$$

$$BEC = 0.01994$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	22.22	0.0006	P	7.9
2	☐	0.100	0.100	68.89	0.0020	P	18.4
3	☐	1.000	1.091	525.57	0.0155	P	11.2
4	☐	50.000	55.913	26009.92	0.7646	P	4.9
5	☐	125.000	138.433	67145.48	1.8920	P	0.6
6	☐	250.000	269.311	130946.20	3.6802	P	1.1
7	☐	500.000	519.907	259552.03	7.1041	P	1.1
8	☐	1000.000	983.244	529505.39	13.4347	P	1.7
9	☐			15400.52	0.3898	P	12.0

$$y = 0.0137 * x + 6.3691E-004$$

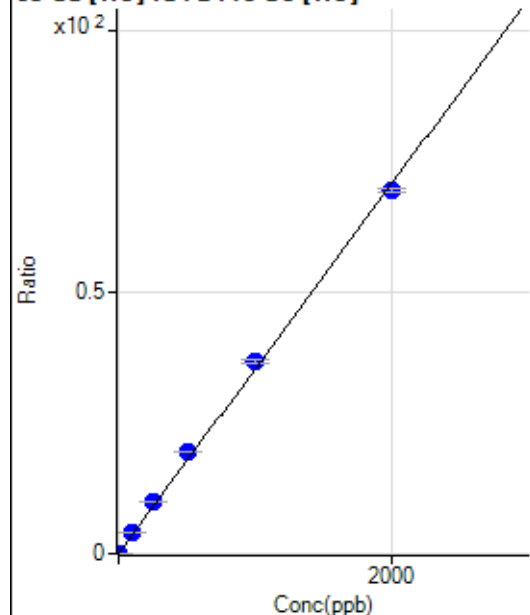
$$R = 0.9995$$

$$DL = 0.01112$$

$$BEC = 0.04662$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	276.67	0.0079	P	11.5
2	☐	0.200	0.226	545.57	0.0159	P	4.0
3	☐	2.000	2.455	3202.63	0.0947	P	1.3
4	☐	100.000	114.567	137979.06	4.0548	P	3.6
5	☐	250.000	278.347	349209.92	9.8401	P	0.7
6	☐	500.000	548.665	689873.98	19.3887	P	0.7
7	☐	1000.000	1040.664	1343347.28	36.7678	P	1.1
8	☐	2000.000	1963.230	2733674.30	69.3559	P	1.1
9	☐			5815.69	0.1469	P	9.0

$$y = 0.0353 * x + 0.0079$$

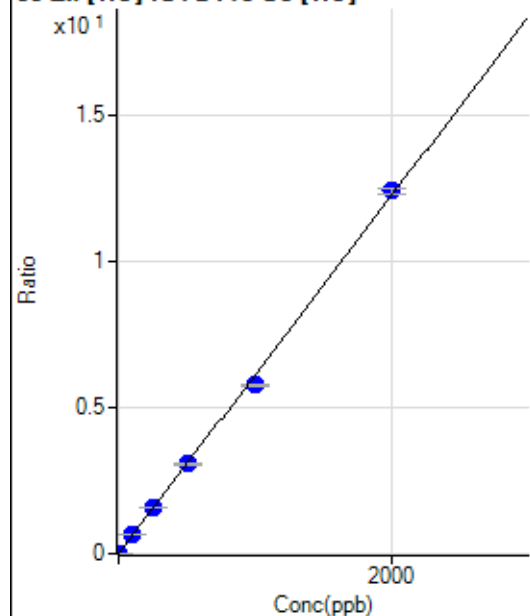
$$R = 0.9993$$

$$DL = 0.07731$$

$$BEC = 0.2247$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47.78	0.0014	P	3.3
2	☒	0.200					
3	☐	2.000	2.663	598.91	0.0177	P	10.5
4	☐	100.000	104.937	21960.10	0.6451	P	1.7
5	☐	250.000	253.500	55233.30	1.5564	P	0.6
6	☐	500.000	500.134	109206.08	3.0693	P	1.2
7	☐	1000.000	944.769	211783.94	5.7967	P	1.1
8	☐	2000.000	2026.897	490101.28	12.4347	P	1.4
9	☐			9721.15	0.2458	P	10.8

$$y = 0.0061 * x + 0.0014$$

$$R = 0.9994$$

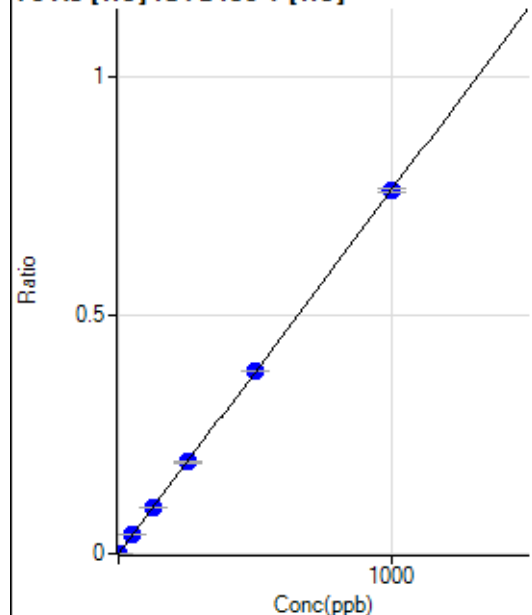
$$DL = 0.02239$$

$$BEC = 0.2233$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1.85	0.0000	P	100.2
2	☒	0.100					
3	☐	1.000	0.974	130.25	0.0008	P	6.0
4	☐	50.000	52.103	6936.89	0.0397	P	3.6
5	☐	125.000	126.978	17373.44	0.0967	P	0.6
6	☐	250.000	251.931	35100.43	0.1918	P	1.6
7	☐	500.000	502.426	69573.36	0.3826	P	0.4
8	☐	1000.000	997.952	143955.25	0.7599	P	1.1
9	☐			80.25	0.0004	P	36.5

$$y = 7.6141\text{E-}004 * x + 1.0407\text{E-}005$$

$$R = 1.0000$$

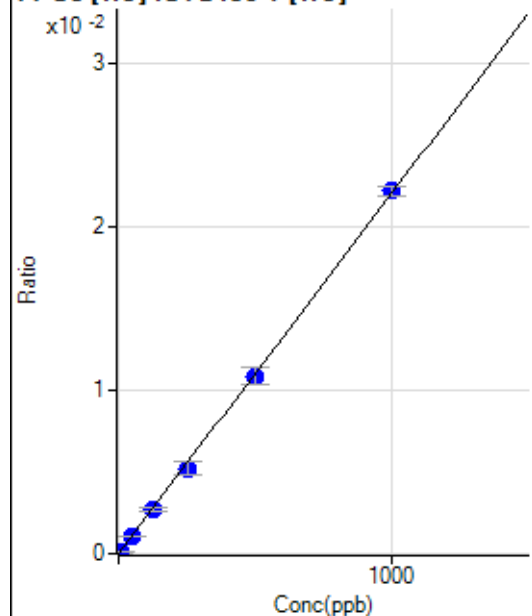
$$DL = 0.0411$$

$$BEC = 0.01367$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	0.287	1.11	0.0000	P	173.2
3	☐	5.000	5.229	20.00	0.0001	P	28.5
4	☐	50.000	47.767	184.45	0.0011	P	5.0
5	☐	125.000	122.157	484.46	0.0027	P	6.3
6	☐	250.000	237.186	957.83	0.0052	P	14.1
7	☐	500.000	492.400	1976.84	0.0109	P	9.4
8	☐	1000.000	1007.469	4212.89	0.0222	P	2.6
9	☐			0.00	0.0000	P	

$$y = 2.2073\text{E-}005 * x + 0.0000\text{E+}000$$

$$R = 0.9999$$

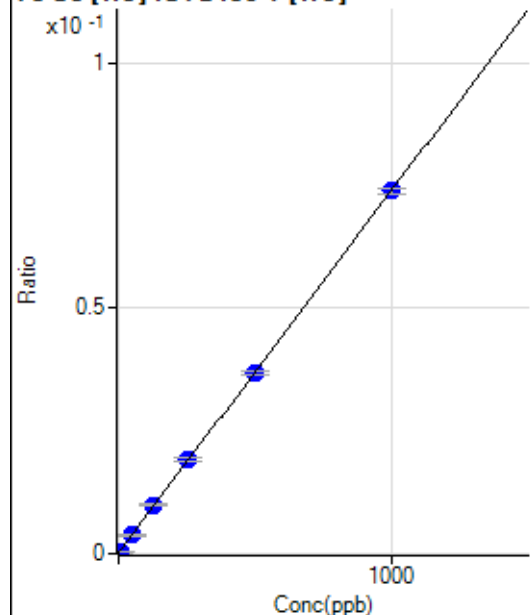
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	30.25	0.0002	P	30.0
2	☐	0.500	0.580	37.04	0.0002	P	18.9
3	☐	5.000	4.656	88.89	0.0005	P	9.1
4	☐	50.000	50.000	673.48	0.0039	P	11.8
5	☐	125.000	132.044	1780.37	0.0099	P	4.1
6	☐	250.000	256.670	3495.51	0.0191	P	3.1
7	☐	500.000	496.692	6694.19	0.0368	P	2.2
8	☐	1000.000	999.108	13995.72	0.0739	P	1.4
9	☐			43.21	0.0002	P	13.2

$$y = 7.3770\text{E-}005 * x + 1.6970\text{E-}004$$

$$R = 0.9999$$

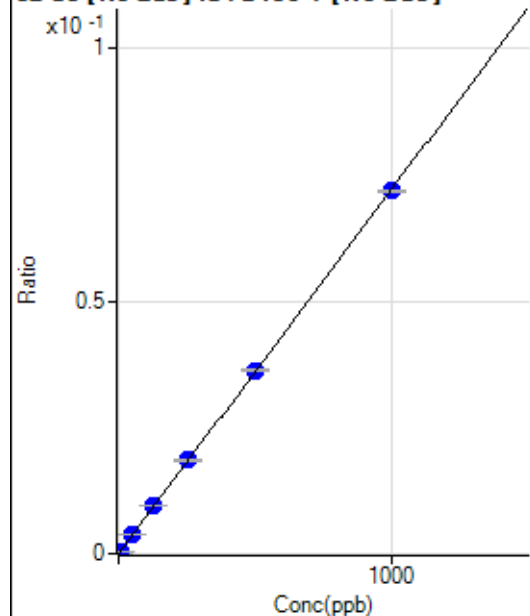
$$DL = 2.069$$

$$BEC = 2.3$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	-15.44	0.0000	P	-141.
2	☒	0.500					
3	☐	5.000	5.814	591.97	0.0004	P	4.8
4	☐	50.000	53.396	5581.45	0.0038	P	2.7
5	☐	125.000	131.959	13911.23	0.0095	P	3.3
6	☐	250.000	256.544	28005.84	0.0185	P	0.7
7	☐	500.000	502.185	55504.85	0.0362	P	1.0
8	☐	1000.000	996.228	111920.79	0.0718	P	0.5
9	☐			100.65	0.0001	P	59.2

$$y = 7.2127\text{E-}005 * x - 1.0522\text{E-}005$$

$$R = 1.0000$$

$$DL = 0.6174$$

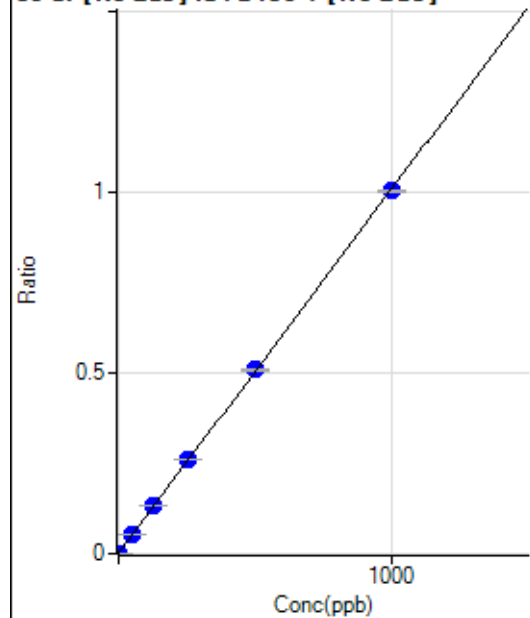
$$BEC = -0.1459$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			794.48		P	6.1
2	☐			783.37		P	8.6
3	☐			764.48		P	4.3
4	☐			794.48		P	5.5
5	☐			866.71		P	4.3
6	☐			781.14		P	5.3
7	☐			765.59		P	2.9
8	☐			811.15		P	5.2
9	☐			835.60		P	6.5

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	1227.88	0.0008	P	5.6
2	☐	0.100	0.137	1427.91	0.0010	P	10.5
3	☐	1.000	1.194	2961.54	0.0020	P	6.5
4	☐	50.000	52.417	78004.59	0.0537	P	2.0
5	☐	125.000	131.704	195496.23	0.1336	P	2.6
6	☐	250.000	257.154	393792.45	0.2600	P	0.5
7	☐	500.000	503.686	779465.67	0.5085	P	0.8
8	☐	1000.000	995.409	1564309.16	1.0041	P	0.9
9	☐			7785.80	0.0052	P	4.9

$$y = 0.0010 * x + 8.4134E-004$$

$$R = 0.9999$$

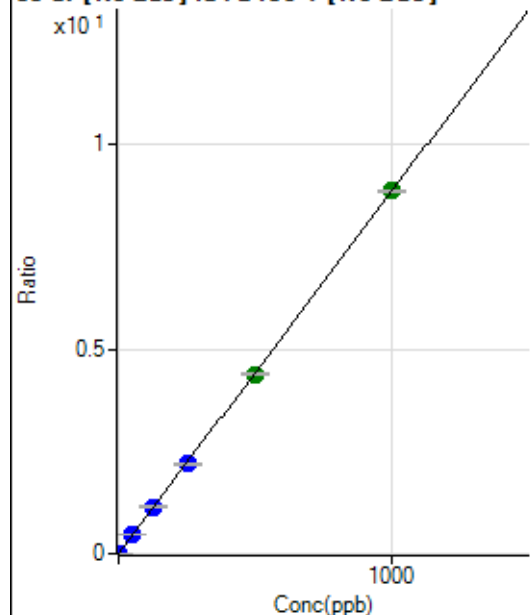
$$DL = 0.1392$$

$$BEC = 0.8347$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	88.90	0.0001	P	22.7
2	☐	0.100	0.115	1564.05	0.0011	P	14.0
3	☐	1.000	1.127	14524.48	0.0100	P	3.0
4	☐	50.000	51.491	662076.76	0.4556	P	1.9
5	☐	125.000	129.934	1682032.65	1.1494	P	2.9
6	☐	250.000	247.945	3321721.49	2.1934	P	1.1
7	☐	500.000	496.179	6728177.67	4.3892	A	0.7
8	☐	1000.000	1001.733	13804861.07	8.8613	A	0.6
9	☐			58423.00	0.0393	P	0.5

$$y = 0.0088 * x + 6.0995E-005$$

$$R = 1.0000$$

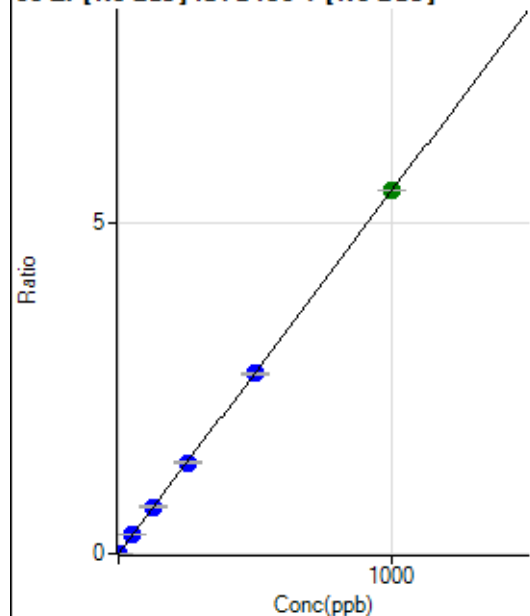
$$DL = 0.00469$$

$$BEC = 0.006895$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	141.67	0.0001	P	26.2
2	☐	0.100	0.084	816.72	0.0006	P	7.9
3	☐	1.000	0.963	7780.23	0.0054	P	1.7
4	☐	50.000	51.136	407187.37	0.2802	P	2.0
5	☐	125.000	129.063	1034370.26	0.7070	P	3.9
6	☐	250.000	251.949	2089979.26	1.3801	P	0.5
7	☐	500.000	496.160	4165700.13	2.7177	P	1.0
8	☐	1000.000	1000.868	8540137.26	5.4820	A	0.1
9	☐			2172.48	0.0015	P	3.4

$$y = 0.0055 * x + 9.7118E-005$$

$$R = 1.0000$$

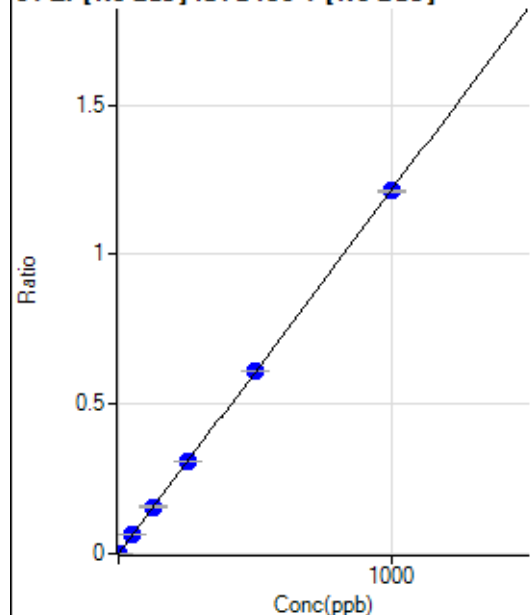
$$DL = 0.01392$$

$$BEC = 0.01773$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	36.11	0.0000	P	47.0
2	☐	0.100	0.093	200.01	0.0001	P	18.1
3	☐	1.000	0.925	1664.06	0.0011	P	10.8
4	☐	50.000	51.438	90886.57	0.0625	P	0.4
5	☐	125.000	128.920	229227.60	0.1567	P	3.5
6	☐	250.000	254.137	467653.65	0.3088	P	1.0
7	☐	500.000	500.616	932396.77	0.6083	P	0.2
8	☐	1000.000	998.096	1889205.10	1.2127	P	0.8
9	☐			530.59	0.0004	P	2.3

$$y = 0.0012 * x + 2.4613E-005$$

$$R = 1.0000$$

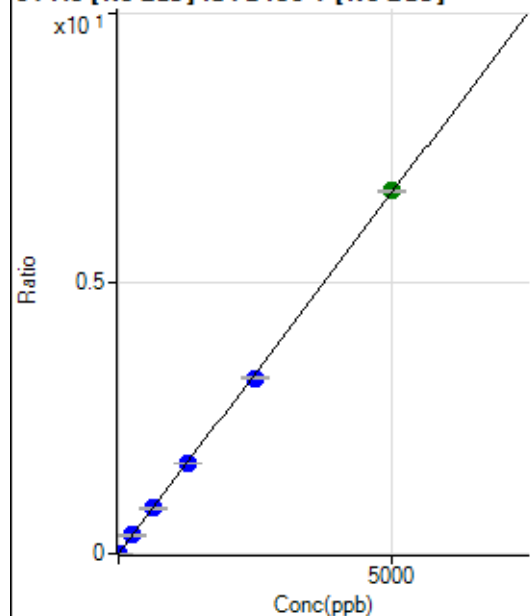
$$DL = 0.02857$$

$$BEC = 0.02026$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	75.00	0.0001	P	1.6
2	☐	0.500	0.500	1047.30	0.0007	P	3.4
3	☐	5.000	5.193	10101.15	0.0070	P	2.0
4	☐	250.000	255.545	495246.93	0.3408	P	2.4
5	☐	625.000	635.849	1240521.06	0.8479	P	3.7
6	☐	1250.000	1251.704	2527601.90	1.6690	P	0.5
7	☐	2500.000	2436.542	4979946.38	3.2489	P	1.0
8	☐	5000.000	5029.669	10447528.18	6.7064	A	0.8
9	☐			9008.75	0.0061	P	6.3

$$y = 0.0013 * x + 5.1372E-005$$

$$R = 0.9999$$

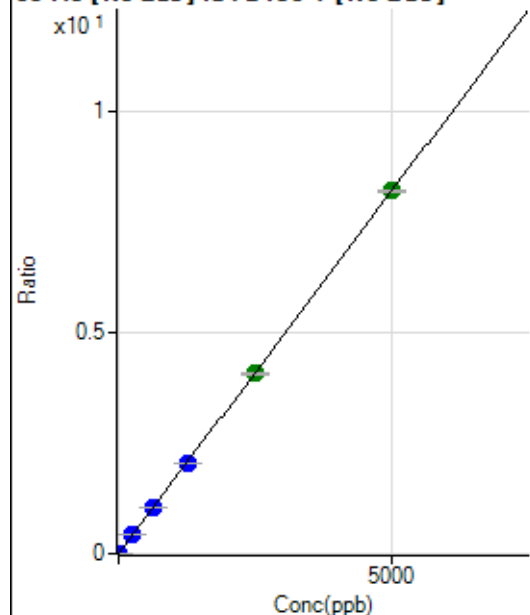
$$DL = 0.001808$$

$$BEC = 0.03853$$

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	25.00	0.0000	P	34.8
2	☐	0.500	0.550	1341.78	0.0009	P	8.3
3	☐	5.000	5.324	12678.35	0.0088	P	1.8
4	☐	250.000	260.076	620281.26	0.4268	P	2.2
5	☐	625.000	639.454	1535567.96	1.0494	P	3.0
6	☐	1250.000	1240.685	3083354.15	2.0360	P	0.5
7	☐	2500.000	2487.551	6257283.00	4.0821	A	0.8
8	☐	5000.000	5006.243	12798417.47	8.2154	A	0.5
9	☐			14430.01	0.0097	P	2.8

$$y = 0.0016 * x + 1.7182E-005$$

$$R = 1.0000$$

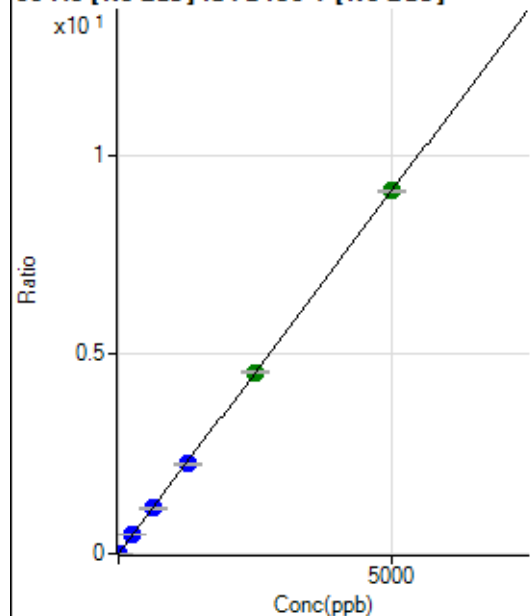
$$DL = 0.01093$$

$$BEC = 0.01047$$

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	63.89	0.0000	P	31.0
2	☐	0.500	0.514	1427.92	0.0010	P	8.6
3	☐	5.000	5.339	14135.40	0.0098	P	1.5
4	☐	250.000	258.041	682457.09	0.4696	P	2.7
5	☐	625.000	633.707	1687250.36	1.1533	P	4.0
6	☐	1250.000	1233.440	3399341.48	2.2447	P	0.1
7	☐	2500.000	2500.348	6974808.75	4.5502	A	0.5
8	☐	5000.000	5002.475	14181998.75	9.1036	A	0.8
9	☐			20877.12	0.0140	P	3.4

$$y = 0.0018 * x + 4.3866E-005$$

$$R = 1.0000$$

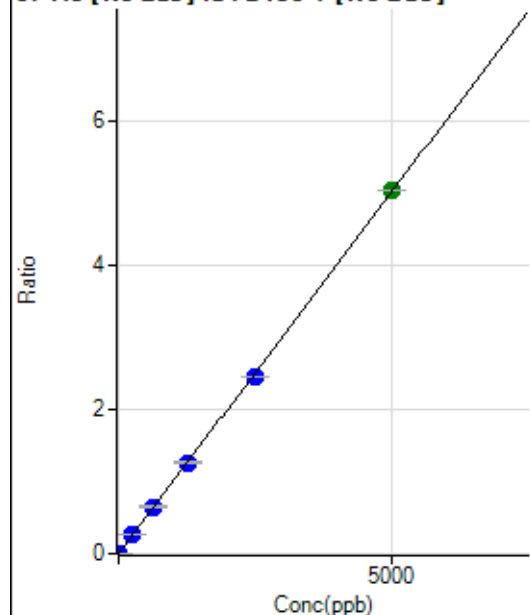
$$DL = 0.02245$$

$$BEC = 0.0241$$

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	22.22	0.0000	P	20.4
2	☐	0.500	0.586	877.84	0.0006	P	15.7
3	☐	5.000	5.527	8049.87	0.0056	P	1.5
4	☐	250.000	263.125	383541.99	0.2639	P	2.8
5	☐	625.000	647.914	950640.94	0.6499	P	4.5
6	☐	1250.000	1262.804	1918069.90	1.2666	P	1.1
7	☐	2500.000	2451.523	3769075.78	2.4588	P	0.4
8	☐	5000.000	5017.516	7839873.00	5.0325	A	0.0
9	☐			8744.69	0.0059	P	4.5

$$y = 0.0010 * x + 1.5190E-005$$

$$R = 0.9999$$

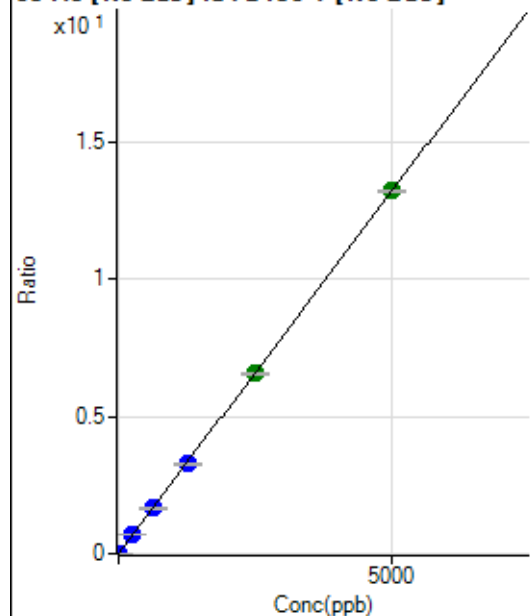
$$DL = 0.009267$$

$$BEC = 0.01514$$

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	27.78	0.0000	P	35.5
2	☐	0.500	0.535	2080.80	0.0014	P	8.2
3	☐	5.000	5.383	20573.96	0.0142	P	3.2
4	☐	250.000	257.024	984478.20	0.6774	P	1.9
5	☐	625.000	630.298	2430191.96	1.6611	P	4.0
6	☐	1250.000	1234.983	4928800.33	3.2547	P	0.6
7	☐	2500.000	2485.995	10042732.34	6.5515	A	1.2
8	☐	5000.000	5009.743	20567636.22	13.2025	A	0.6
9	☐			22579.70	0.0152	P	0.6

$$y = 0.0026 * x + 1.9078E-005$$

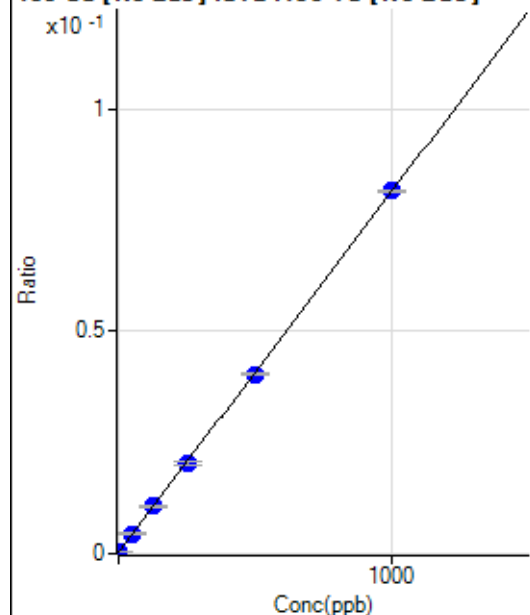
$$R = 1.0000$$

$$DL = 0.007709$$

$$BEC = 0.007239$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	497.25	0.0003	P	11.9
2	☐	0.100	-0.043	494.48	0.0003	P	3.6
3	☐	1.000	1.186	663.93	0.0004	P	14.7
4	☐	50.000	52.412	7960.94	0.0045	P	7.2
5	☐	125.000	129.310	18841.02	0.0108	P	3.8
6	☐	250.000	247.171	36974.43	0.0203	P	2.8
7	☐	500.000	494.704	73899.46	0.0404	P	1.5
8	☐	1000.000	1002.696	149820.39	0.0816	P	0.8
9	☐			608.37	0.0004	P	6.5

$$y = 8.1139\text{E-}005 * x + 2.8671\text{E-}004$$

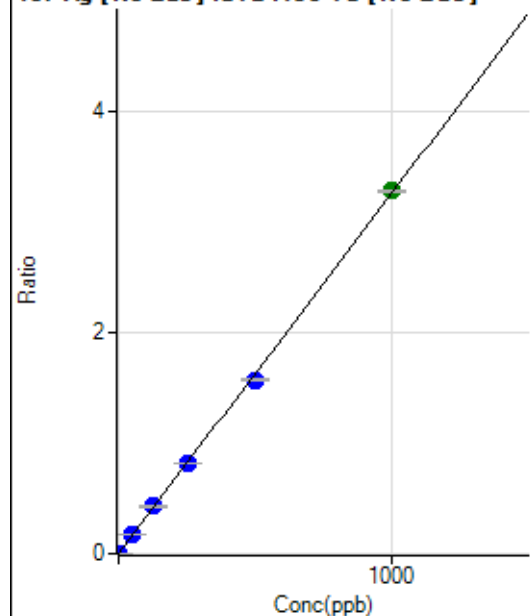
$$R = 1.0000$$

$$DL = 1.259$$

$$BEC = 3.534$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	30.56	0.0000	P	56.8
2	☐	0.100	0.094	566.70	0.0003	P	3.9
3	☐	1.000	1.047	5951.52	0.0034	P	2.2
4	☐	50.000	52.324	299641.00	0.1707	P	2.3
5	☐	125.000	131.689	750766.72	0.4296	P	4.2
6	☐	250.000	250.610	1486151.27	0.8176	P	1.2
7	☐	500.000	482.670	2878439.54	1.5746	P	0.8
8	☐	1000.000	1007.560	6031708.90	3.2869	A	0.5
9	☐			977.86	0.0006	P	6.7

$$y = 0.0033 * x + 1.7624\text{E-}005$$

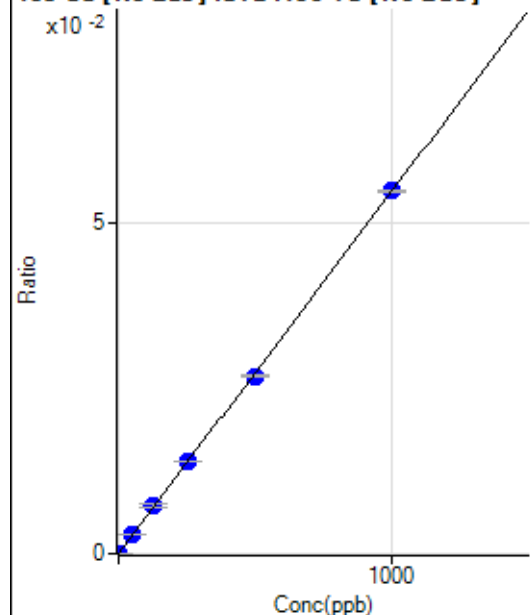
$$R = 0.9998$$

$$DL = 0.009204$$

$$BEC = 0.005402$$

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	2.78	0.0000	P	173.2
2	☐	0.100	0.044	6.94	0.0000	P	34.6
3	☐	1.000	0.674	66.67	0.0000	P	16.8
4	☐	50.000	53.609	5144.09	0.0029	P	3.7
5	☐	125.000	132.220	12628.05	0.0072	P	5.2
6	☐	250.000	254.593	25296.45	0.0139	P	0.5
7	☐	500.000	491.123	49069.81	0.0268	P	0.7
8	☐	1000.000	1002.207	100516.16	0.0548	P	0.6
9	☐			38.89	0.0000	P	6.0

$$y = 5.4651\text{E-}005 * x + 1.5992\text{E-}006$$

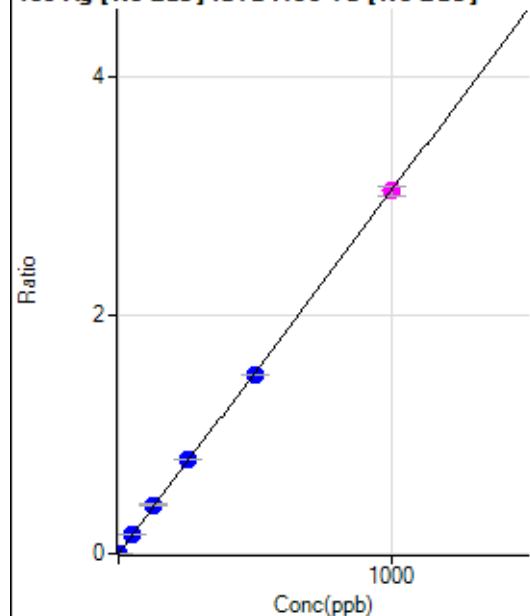
$$R = 0.9999$$

$$DL = 0.152$$

$$BEC = 0.02926$$

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	36.11	0.0000	P	12.1
2	☐	0.100	0.107	608.37	0.0003	P	8.2
3	☐	1.000	1.091	5806.99	0.0033	P	1.3
4	☐	50.000	53.668	287471.37	0.1638	P	3.0
5	☐	125.000	134.226	715829.45	0.4096	P	3.9
6	☐	250.000	258.350	1433016.13	0.7883	P	0.8
7	☐	500.000	494.626	2759051.71	1.5092	P	0.2
8	☐	1000.000	999.263	5595198.86	3.0490	M	2.3
9	☐			905.63	0.0005	P	5.5

$$y = 0.0031 * x + 2.0783\text{E-}005$$

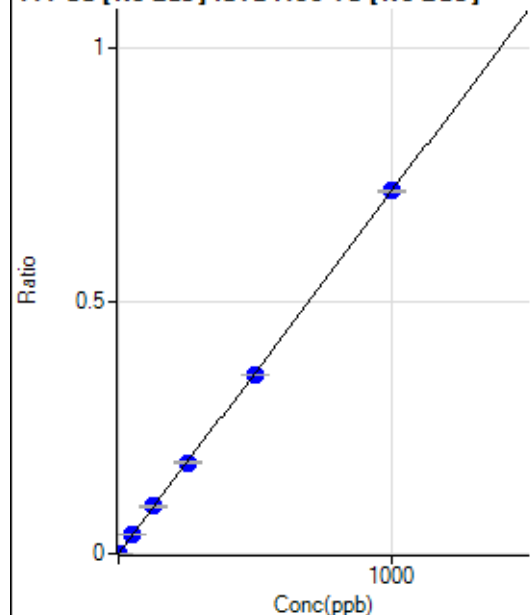
$$R = 0.9999$$

$$DL = 0.002482$$

$$BEC = 0.006811$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	354.47	0.0002	P	11.2
2	☐	0.100	0.090	469.06	0.0003	P	2.7
3	☐	1.000	1.052	1661.23	0.0010	P	2.0
4	☐	50.000	52.330	66169.83	0.0377	P	4.2
5	☐	125.000	131.354	164893.28	0.0943	P	3.8
6	☐	250.000	251.301	327751.04	0.1803	P	1.6
7	☐	500.000	494.659	648457.52	0.3547	P	0.1
8	☐	1000.000	1001.435	1317441.37	0.7179	P	0.3
9	☐			727.82	0.0004	P	4.3

$$y = 7.1668\text{E-}004 * x + 2.0436\text{E-}004$$

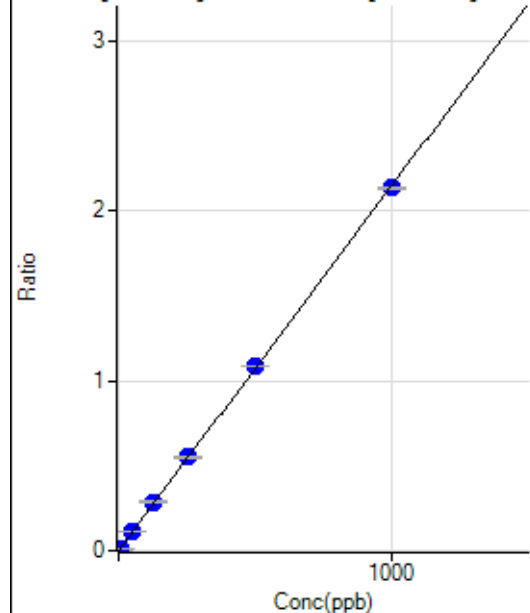
$$R = 1.0000$$

$$DL = 0.09548$$

$$BEC = 0.2852$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	330.58	0.0002	P	13.0
2	☐	0.500	0.557	2416.98	0.0014	P	9.4
3	☐	5.000	5.436	20546.38	0.0118	P	2.6
4	☐	50.000	52.621	198443.62	0.1130	P	2.3
5	☐	125.000	133.098	499282.20	0.2856	P	3.5
6	☐	250.000	256.391	999963.02	0.5501	P	0.9
7	☐	500.000	504.931	1980087.57	1.0831	P	0.5
8	☐	1000.000	994.791	3915616.54	2.1337	P	0.3
9	☐			2241.95	0.0013	P	4.5

$$y = 0.0021 * x + 1.9060\text{E-}004$$

$$R = 0.9999$$

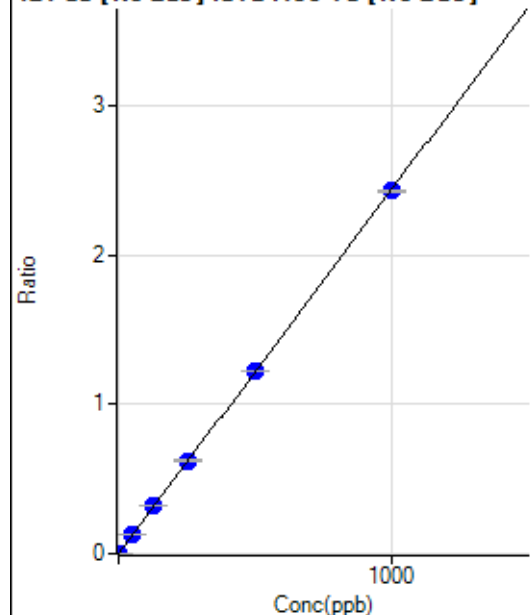
$$DL = 0.03471$$

$$BEC = 0.08887$$

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	33.34	0.0000	P	49.8
2	☐	0.200	0.215	950.07	0.0005	P	6.6
3	☐	2.000	2.183	9267.30	0.0053	P	0.8
4	☐	50.000	52.142	223261.70	0.1272	P	3.1
5	☐	125.000	131.718	561679.54	0.3213	P	3.3
6	☐	250.000	255.520	1133088.83	0.6233	P	1.1
7	☐	500.000	502.217	2239669.99	1.2251	P	0.4
8	☐	1000.000	996.564	4461206.09	2.4310	P	0.4
9	☐			4756.56	0.0028	P	5.2

$$y = 0.0024 * x + 1.9162E-005$$

$$R = 1.0000$$

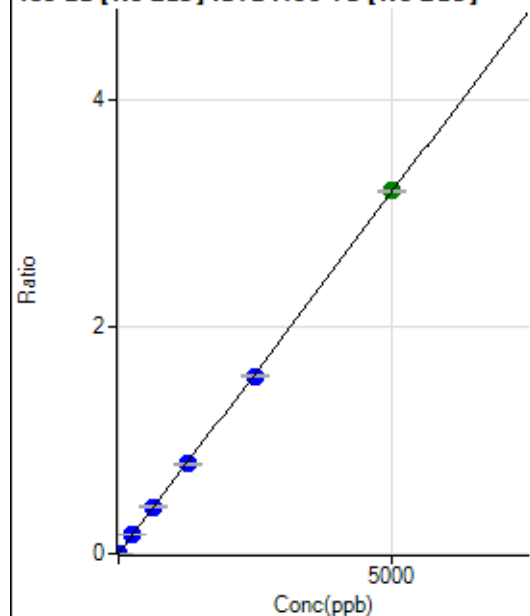
$$DL = 0.01172$$

$$BEC = 0.007855$$

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	41.67	0.0000	P	33.8
2	☐	1.000	1.142	1308.45	0.0007	P	10.2
3	☐	10.000	10.921	12075.20	0.0070	P	4.3
4	☐	250.000	257.570	287316.74	0.1637	P	2.7
5	☐	625.000	642.864	713994.65	0.4085	P	4.0
6	☐	1250.000	1243.189	1436177.29	0.7900	P	1.0
7	☐	2500.000	2454.193	2851035.89	1.5596	P	0.7
8	☐	5000.000	5021.993	5856583.33	3.1914	A	0.4
9	☐			1058.42	0.0006	P	6.3

$$y = 6.3547E-004 * x + 2.3941E-005$$

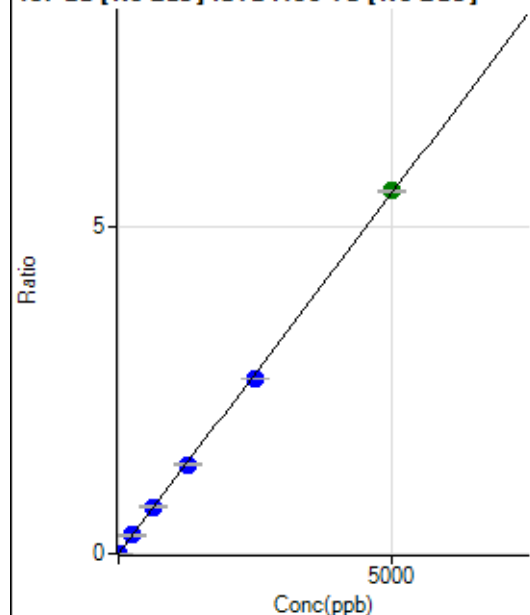
$$R = 0.9999$$

$$DL = 0.03821$$

$$BEC = 0.03767$$

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	27.78	0.0000	P	16.1
2	☐	1.000	1.175	2286.40	0.0013	P	10.8
3	☐	10.000	10.989	20999.90	0.0121	P	2.6
4	☐	250.000	257.894	498148.90	0.2839	P	3.4
5	☐	625.000	643.030	1236979.47	0.7078	P	3.8
6	☐	1250.000	1240.147	2481360.17	1.3650	P	0.7
7	☐	2500.000	2429.087	4887536.05	2.6735	P	0.6
8	☐	5000.000	5035.269	10170428.78	5.5420	A	0.8
9	☐			1972.45	0.0012	P	6.9

$$y = 0.0011 * x + 1.5982E-005$$

$$R = 0.9998$$

$$DL = 0.007014$$

$$BEC = 0.01452$$

Weight: <None>

Min Conc: 0

150 Nd [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			8.89		P	86.6
2	☐			6.67		P	100.0
3	☐			4.45		P	86.6
4	☐			24.45		P	15.8
5	☐			28.89		P	35.2
6	☐			135.56		P	12.4
7	☐			251.12		P	5.5
8	☐			411.13		P	8.9
9	☐			51.11		P	19.9

150 Nd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			11.11		P	34.6
2	☐			1.11		P	173.2
3	☐			5.56		P	91.6
4	☐			14.44		P	35.3
5	☐			11.11		P	75.5
6	☐			16.67		P	69.3
7	☐			24.44		P	47.9
8	☐			45.56		P	22.4
9	☐			28.89		P	37.1

156 Dy [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			22.22		P	21.6
2	☐			22.22		P	21.6
3	☐			16.67		P	50.0
4	☐			11.11		P	114.6
5	☐			30.56		P	83.3
6	☐			47.22		P	27.0
7	☐			75.00		P	50.9
8	☐			100.01		P	38.2
9	☐			41.67		P	40.0

156 Dy [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			7.78		P	24.7
2	☐			11.11		P	34.6
3	☐			15.56		P	32.7
4	☐			21.11		P	50.8
5	☐			24.44		P	67.3
6	☐			44.45		P	8.7
7	☐			65.56		P	20.6
8	☐			104.45		P	24.4
9	☐			30.00		P	22.2

160 Gd [No Gas] Noavailable calibration poin_

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			19.45		P	107.9
2	☐			11.11		P	43.3
3	☐			16.67		P	NaN
4	☐			11.11		P	43.3
5	☐			25.00		P	88.2
6	☐			22.22		P	43.3
7	☐			30.56		P	56.8
8	☐			36.11		P	53.3
9	☐			30.56		P	56.8

160 Gd [He] No available calibration points

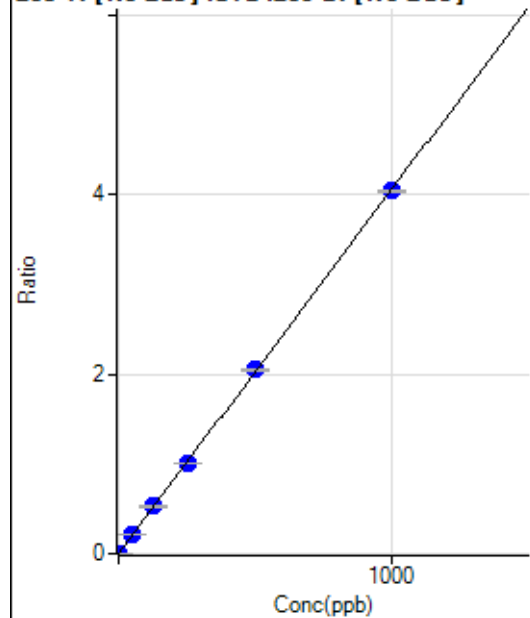
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			47.78		P	24.5
2	☐			34.44		P	40.3
3	☐			36.67		P	32.8
4	☐			41.11		P	32.8
5	☐			53.33		P	22.5
6	☐			47.78		P	50.5
7	☐			48.89		P	20.8
8	☐			56.67		P	11.8
9	☐			51.11		P	35.9

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			25.00		P	57.7
2	☐			25.00		P	66.7
3	☐			36.11		P	48.0
4	☐			8.33		P	0.0
5	☐			13.89		P	91.6
6	☐			30.56		P	78.7
7	☐			30.55		P	15.7
8	☐			38.89		P	32.7
9	☐			27.78		P	17.3

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐			32.22		P	26.0
2	☐			34.44		P	22.3
3	☐			28.89		P	17.6
4	☐			27.78		P	56.7
5	☐			30.00		P	44.4
6	☐			25.55		P	52.7
7	☐			31.11		P	27.0
8	☐			41.11		P	24.8
9	☐			27.78		P	18.3

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	458.37	0.0004	P	9.8
2	☐	0.100	0.100	894.51	0.0008	P	5.2
3	☐	1.000	1.069	5117.89	0.0048	P	3.5
4	☐	50.000	51.225	225431.69	0.2079	P	2.9
5	☐	125.000	130.512	560619.51	0.5290	P	2.9
6	☐	250.000	249.975	1114066.06	1.0129	P	0.2
7	☐	500.000	505.203	2205335.70	2.0467	P	0.8
8	☐	1000.000	996.655	4291322.41	4.0373	P	0.5
9	☐			1833.54	0.0021	P	4.4

$$y = 0.0041 * x + 4.2223E-004$$

$$R = 1.0000$$

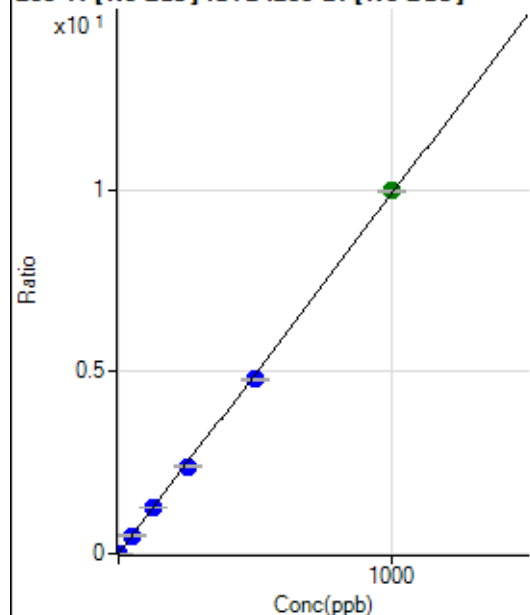
$$DL = 0.03077$$

$$BEC = 0.1042$$

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	605.60	0.0006	P	8.1
2	☐	0.100	0.107	1747.41	0.0016	P	9.7
3	☐	1.000	1.035	11625.04	0.0108	P	3.4
4	☐	50.000	50.079	537781.85	0.4960	P	2.9
5	☐	125.000	127.698	1339348.74	1.2639	P	2.8
6	☐	250.000	243.012	2644821.39	2.4047	P	0.3
7	☐	500.000	485.275	5173447.34	4.8014	P	0.9
8	☐	1000.000	1008.768	10608374.72	9.9802	A	0.7
9	☐			3920.21	0.0044	P	9.6

$$y = 0.0099 * x + 5.5781E-004$$

$$R = 0.9998$$

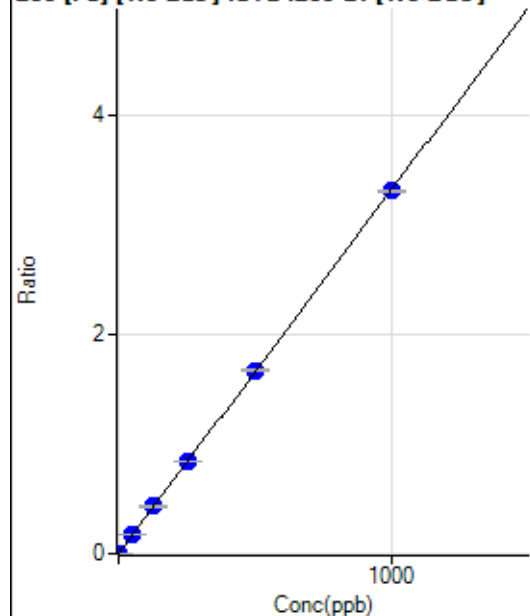
$$DL = 0.01363$$

$$BEC = 0.05638$$

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	581.51	0.0005	P	7.9
2	☐	0.100	0.117	998.22	0.0009	P	2.2
3	☐	1.000	1.074	4415.68	0.0041	P	3.0
4	☐	50.000	51.355	185499.13	0.1711	P	2.8
5	☐	125.000	131.121	461944.63	0.4360	P	3.6
6	☐	250.000	251.608	919565.27	0.8361	P	0.3
7	☐	500.000	503.777	1803272.03	1.6735	P	0.6
8	☐	1000.000	996.877	3519441.43	3.3110	P	0.3
9	☐			9963.27	0.0111	P	2.1

$$y = 0.0033 * x + 5.3573E-004$$

$$R = 1.0000$$

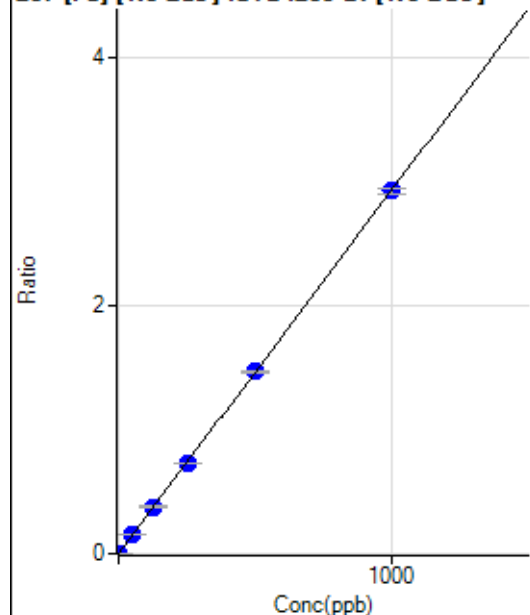
$$DL = 0.03832$$

$$BEC = 0.1613$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	550.03	0.0005	P	6.5
2	☐	0.100	0.107	885.24	0.0008	P	14.8
3	☐	1.000	1.034	3806.21	0.0035	P	5.3
4	☐	50.000	51.070	162737.08	0.1501	P	2.8
5	☐	125.000	128.930	400775.05	0.3781	P	2.2
6	☐	250.000	249.422	804028.52	0.7310	P	0.2
7	☐	500.000	501.720	1583861.03	1.4700	P	1.1
8	☐	1000.000	998.740	3109816.85	2.9257	P	1.3
9	☐			8929.19	0.0100	P	3.1

$$y = 0.0029 * x + 5.0647E-004$$

$$R = 1.0000$$

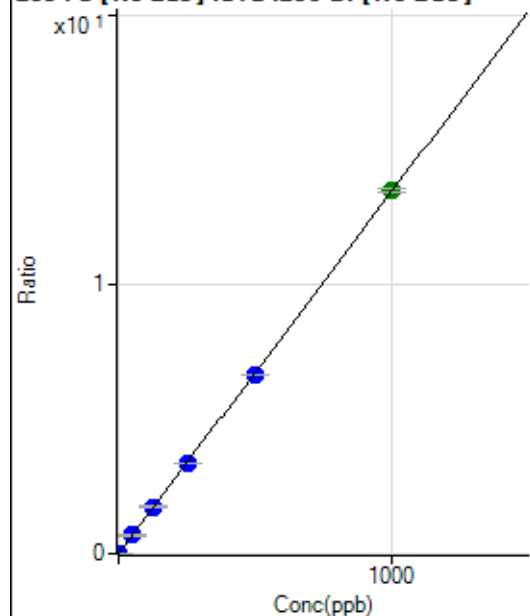
$$DL = 0.03397$$

$$BEC = 0.1729$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1946.41	0.0018	P	3.8
2	☐	0.100	0.109	3516.95	0.0033	P	2.3
3	☐	1.000	1.063	17290.07	0.0161	P	0.2
4	☐	50.000	50.729	739921.56	0.6825	P	3.3
5	☐	125.000	128.792	1833331.60	1.7299	P	2.5
6	☐	250.000	247.853	3659723.93	3.3274	P	0.1
7	☐	500.000	494.130	7146026.81	6.6319	P	0.6
8	☐	1000.000	1002.961	14306165.28	13.4593	A	1.0
9	☐			40020.87	0.0448	P	0.9

$$y = 0.0134 * x + 0.0018$$

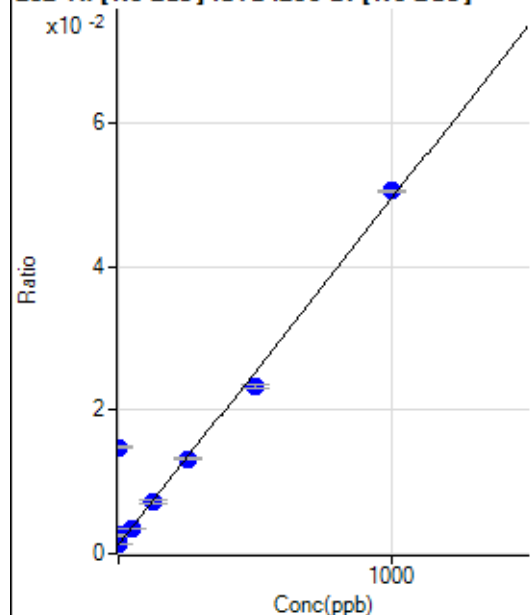
$$R = 1.0000$$

$$DL = 0.01523$$

$$BEC = 0.1336$$

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	1370.49	0.0013	P	2.3
2	☐	0.100	26.677	2748.51	0.0025	P	6.6
3	☐	1.000	280.037	15899.00	0.0148	P	1.8
4	☐	50.000	44.311	3685.82	0.0034	P	2.8
5	☐	125.000	123.534	7645.04	0.0072	P	6.6
6	☐	250.000	246.827	14478.74	0.0132	P	2.0
7	☐	500.000	456.551	25082.10	0.0233	P	2.3
8	☐	1000.000	1022.704	53766.91	0.0506	P	0.6
9	☐			1520.51	0.0017	P	6.5

$$y = 4.8226\text{E-}005 * x + 0.0013$$

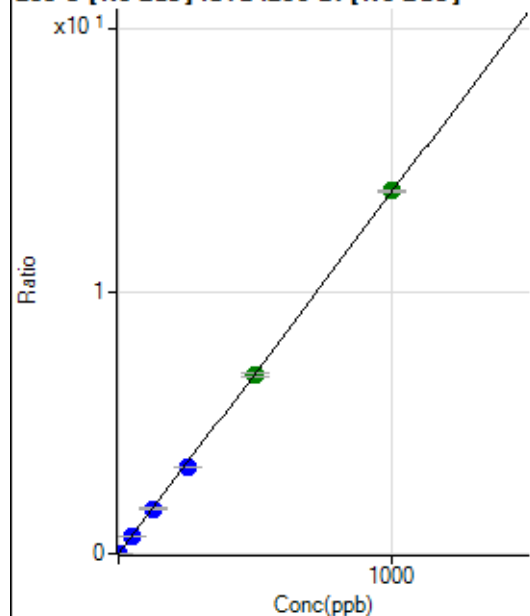
$$R = 0.9578$$

$$DL = 1.771$$

$$BEC = 26.17$$

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	1708.53	0.0016	P	3.4
2	☐	0.100	0.099	3172.74	0.0029	P	2.7
3	☐	1.000	1.032	16986.84	0.0158	P	0.7
4	☐	50.000	49.036	733671.45	0.6766	P	2.4
5	☐	125.000	124.165	1812791.61	1.7107	P	3.0
6	☐	250.000	239.093	3621642.25	3.2928	P	0.5
7	☐	500.000	496.297	7362174.39	6.8333	A	2.1
8	☐	1000.000	1004.731	14702877.07	13.8321	A	0.7
9	☐			2881.00	0.0032	P	6.4

$$y = 0.0138 * x + 0.0016$$

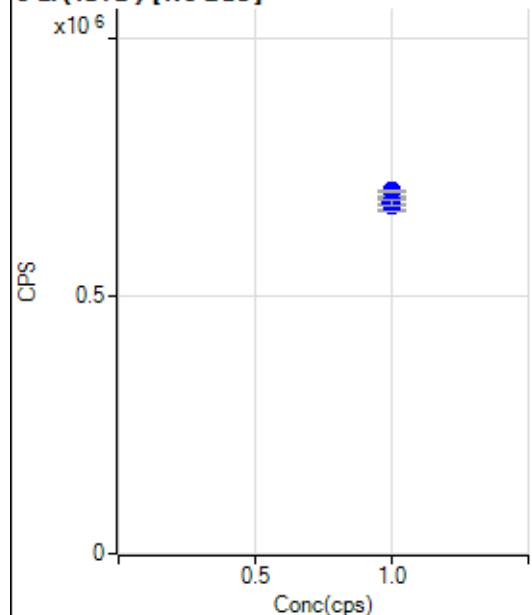
$$R = 0.9999$$

$$DL = 0.01163$$

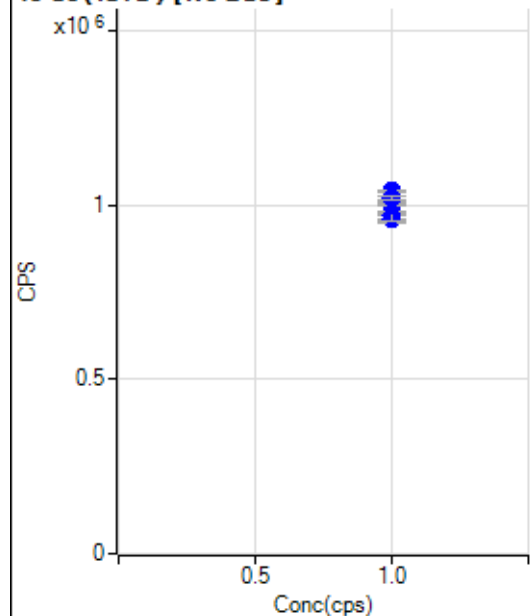
$$BEC = 0.1143$$

Weight: <None>

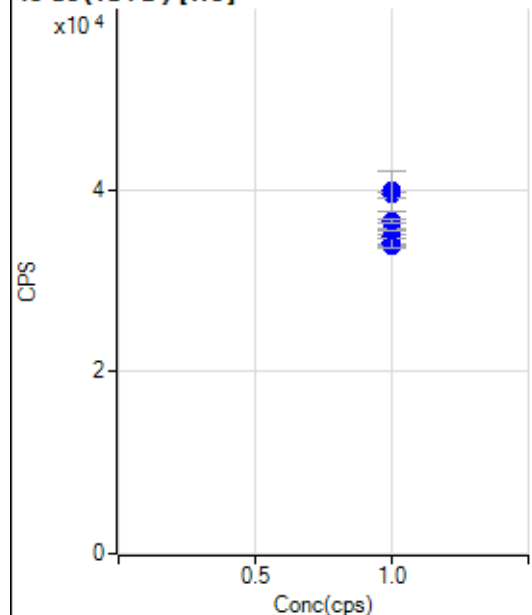
Min Conc: 0

6 Li (ISTD) [No Gas]

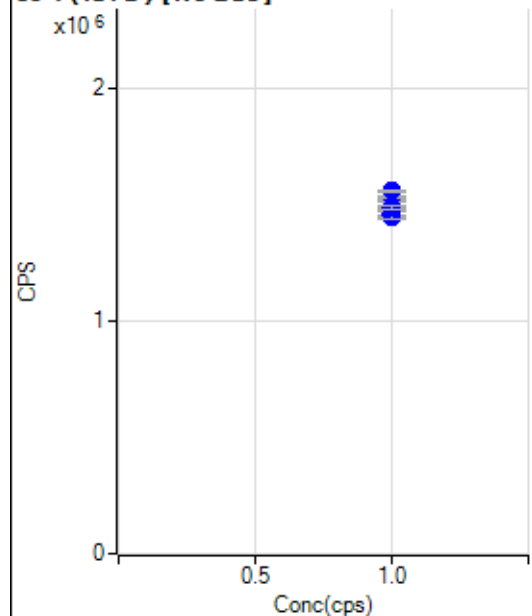
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		676839.44		P	0.3
2	☐	1.000		676678.64		P	0.5
3	☐	1.000		680150.79		P	0.4
4	☐	1.000		678860.90		P	2.7
5	☐	1.000		676233.15		P	3.2
6	☐	1.000		689065.03		P	0.5
7	☐	1.000		691898.49		P	0.5
8	☐	1.000		704825.11		P	0.4
9	☐	1.000		682977.52		P	1.8

45 Sc (ISTD) [No Gas]

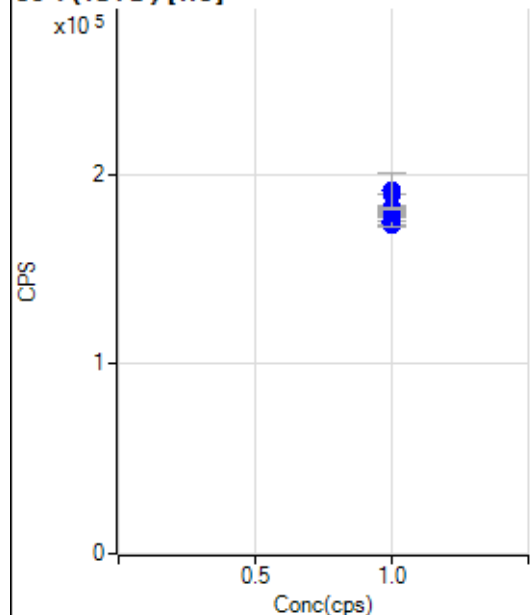
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		974157.47		P	0.4
2	☐	1.000		960144.52		P	0.2
3	☐	1.000		958871.70		P	0.6
4	☐	1.000		959280.72		P	2.0
5	☐	1.000		968157.64		P	3.3
6	☐	1.000		1006002.57		P	0.2
7	☐	1.000		1000869.29		P	0.2
8	☐	1.000		1040498.45		P	0.4
9	☐	1.000		1020754.01		P	1.2

45 Sc (ISTD) [He]

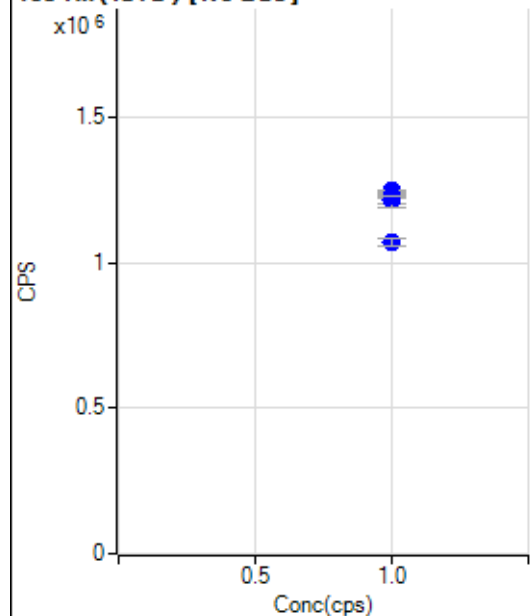
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		34873.41		P	0.8
2	☐	1.000		34286.53		P	2.2
3	☐	1.000		33828.89		P	0.6
4	☐	1.000		34054.97		P	3.2
5	☐	1.000		35488.26		P	0.3
6	☐	1.000		35582.86		P	0.9
7	☐	1.000		36538.57		P	1.3
8	☐	1.000		39420.34		P	1.7
9	☐	1.000		39857.81		P	11.0

89 Y (ISTD) [No Gas]

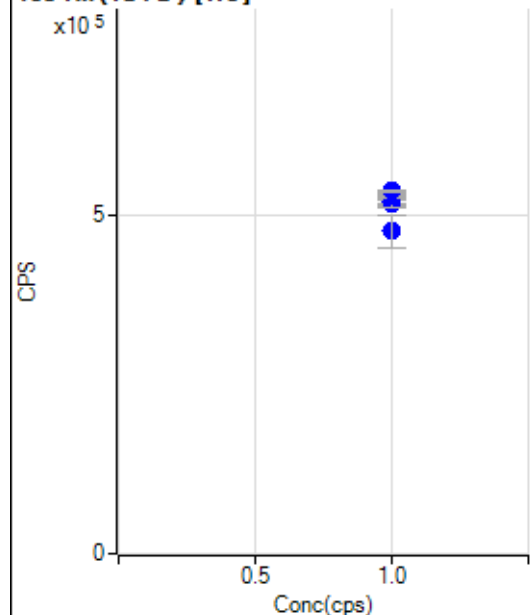
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1460165.43		P	1.6
2	☐	1.000		1457946.32		P	1.5
3	☐	1.000		1448278.09		P	0.5
4	☐	1.000		1453772.70		P	2.3
5	☐	1.000		1464290.13		P	3.3
6	☐	1.000		1514400.71		P	0.4
7	☐	1.000		1532862.29		P	0.3
8	☐	1.000		1557850.62		P	0.4
9	☐	1.000		1487139.75		P	1.1

89 Y (ISTD) [He]

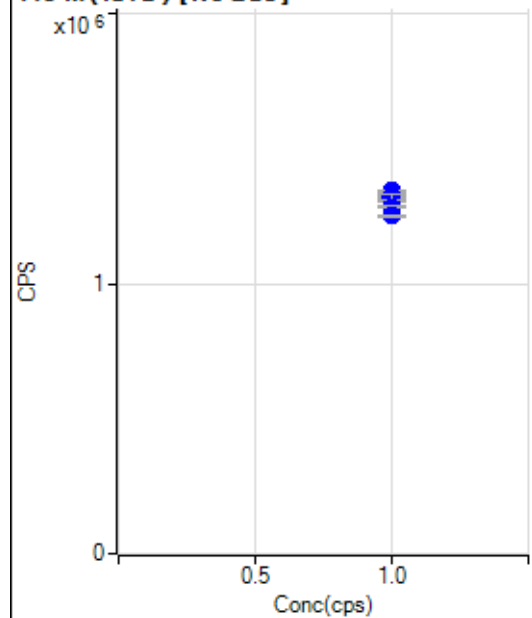
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		178163.61		P	0.4
2	☐	1.000		174522.14		P	0.9
3	☐	1.000		173174.21		P	0.5
4	☐	1.000		174943.79		P	3.1
5	☐	1.000		179676.35		P	0.7
6	☐	1.000		182973.96		P	0.2
7	☐	1.000		181864.18		P	0.4
8	☐	1.000		189450.22		P	0.2
9	☐	1.000		191318.71		P	9.7

103 Rh (ISTD) [No Gas]

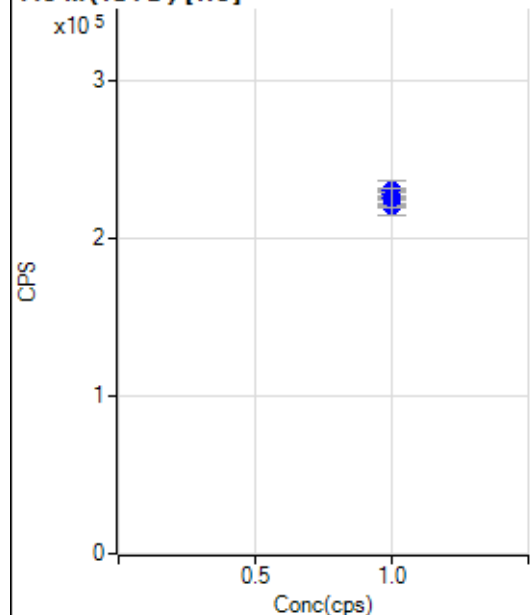
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1231791.76		P	0.2
2	☐	1.000		1239341.24		P	0.3
3	☐	1.000		1225249.74		P	0.1
4	☐	1.000		1215876.75		P	1.9
5	☐	1.000		1215452.83		P	4.0
6	☐	1.000		1249358.86		P	0.5
7	☐	1.000		1233894.13		P	0.6
8	☐	1.000		1233049.15		P	0.2
9	☐	1.000		1075782.34		P	2.5

103 Rh (ISTD) [He]

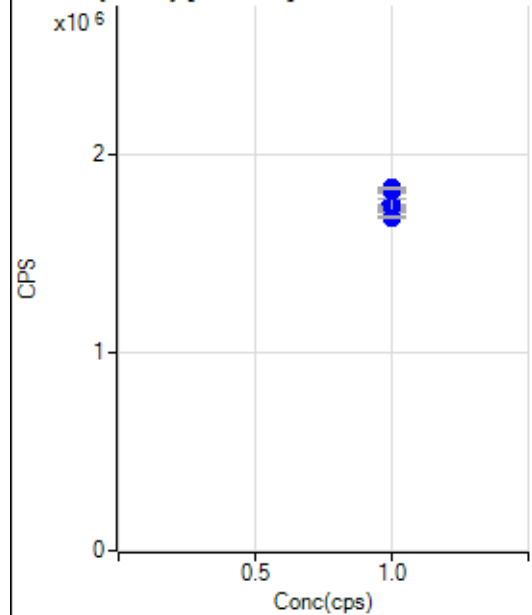
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		530503.38		P	0.5
2	☐	1.000		525581.68		P	0.5
3	☐	1.000		517305.40		P	0.2
4	☐	1.000		521905.93		P	3.1
5	☐	1.000		532925.93		P	0.5
6	☐	1.000		536815.98		P	0.7
7	☐	1.000		528748.74		P	0.5
8	☐	1.000		537155.59		P	0.4
9	☐	1.000		476938.75		P	10.5

115 In (ISTD) [No Gas]

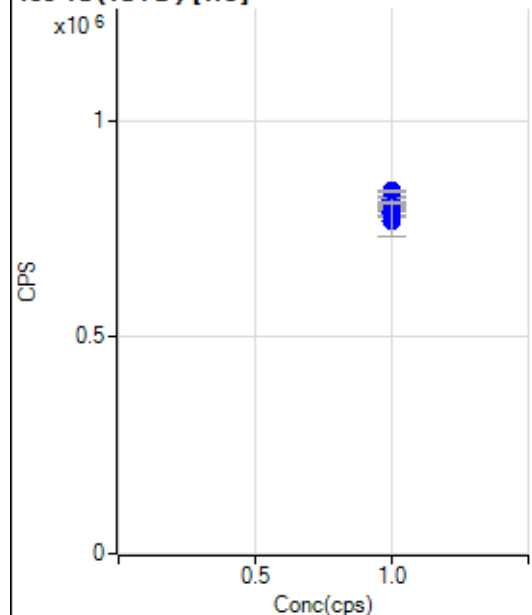
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1328298.62		P	0.5
2	☐	1.000		1331757.45		P	1.0
3	☐	1.000		1320109.45		P	0.2
4	☐	1.000		1318651.21		P	2.3
5	☐	1.000		1318414.79		P	4.5
6	☐	1.000		1343799.71		P	0.5
7	☐	1.000		1321455.16		P	1.3
8	☐	1.000		1284365.08		P	0.7
9	☐	1.000		1250515.91		P	0.5

115 In (ISTD) [He]

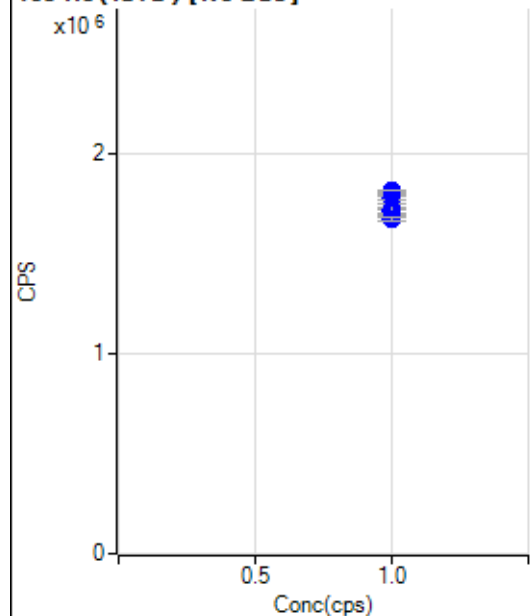
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		229803.27		P	0.6
2	☐	1.000		225545.01		P	0.6
3	☐	1.000		222184.00		P	0.4
4	☐	1.000		226178.94		P	4.4
5	☐	1.000		228874.92		P	1.3
6	☐	1.000		230344.60		P	1.1
7	☐	1.000		221541.95		P	0.2
8	☐	1.000		220548.73		P	0.5
9	☐	1.000		225848.96		P	9.9

159 Tb (ISTD) [No Gas]

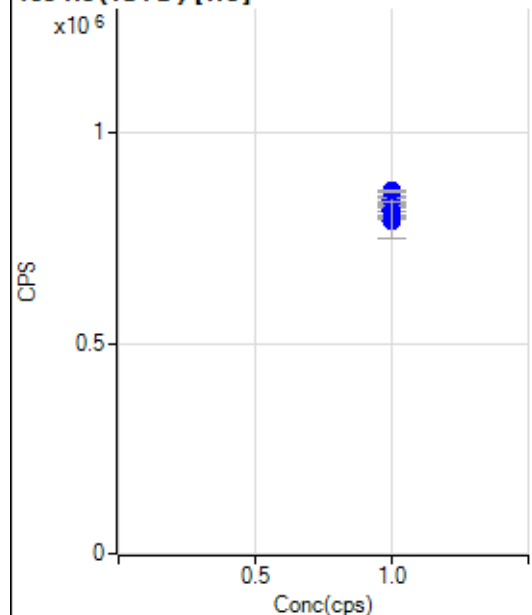
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1735961.80		P	1.3
2	☐	1.000		1745901.62		P	0.1
3	☐	1.000		1734008.93		P	0.3
4	☐	1.000		1756014.06		P	2.8
5	☐	1.000		1749477.49		P	3.9
6	☐	1.000		1817924.42		P	0.9
7	☐	1.000		1828116.55		P	0.6
8	☐	1.000		1835102.02		P	0.7
9	☐	1.000		1686628.50		P	0.3

159 Tb (ISTD) [He]

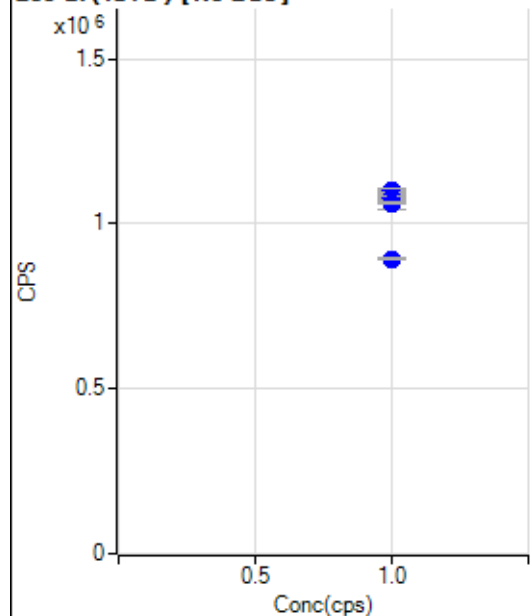
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		795772.10		P	0.8
2	☐	1.000		783878.83		P	1.5
3	☐	1.000		781851.04		P	0.4
4	☐	1.000		790665.56		P	3.7
5	☐	1.000		808627.61		P	0.7
6	☐	1.000		823327.77		P	0.3
7	☐	1.000		816484.77		P	1.0
8	☐	1.000		837386.11		P	0.6
9	☐	1.000		769477.92		P	9.9

165 Ho (ISTD) [No Gas]

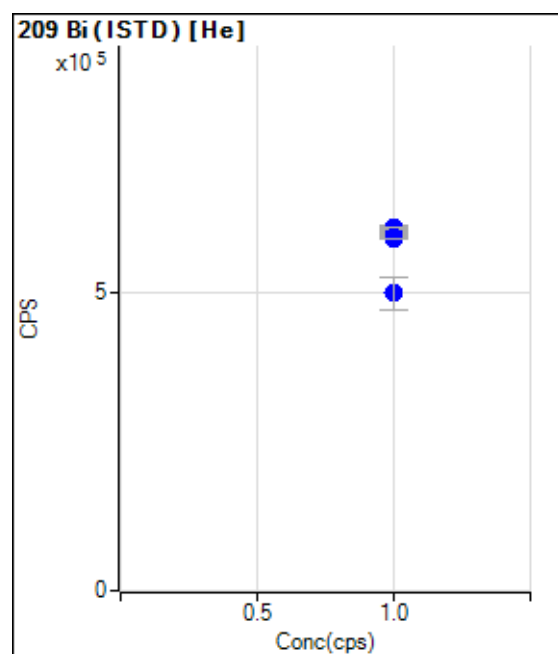
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1709268.70		P	0.7
2	☐	1.000		1707933.96		P	0.9
3	☐	1.000		1708164.47		P	1.3
4	☐	1.000		1714796.04		P	2.0
5	☐	1.000		1717690.53		P	3.4
6	☐	1.000		1776302.95		P	1.5
7	☐	1.000		1796503.58		P	0.5
8	☐	1.000		1811789.30		P	0.1
9	☐	1.000		1671794.74		P	1.0

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		817500.61		P	0.9
2	☐	1.000		804882.26		P	0.3
3	☐	1.000		802882.84		P	0.7
4	☐	1.000		811719.42		P	4.1
5	☐	1.000		829383.14		P	0.7
6	☐	1.000		847490.69		P	0.4
7	☐	1.000		840337.51		P	0.8
8	☐	1.000		861663.27		P	0.4
9	☐	1.000		791181.25		P	11.0

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1085750.19		P	0.6
2	☐	1.000		1078547.88		P	1.0
3	☐	1.000		1076698.15		P	0.8
4	☐	1.000		1084824.00		P	2.6
5	☐	1.000		1060318.79		P	3.1
6	☐	1.000		1099863.95		P	1.2
7	☐	1.000		1077574.43		P	1.3
8	☐	1.000		1062953.30		P	0.8
9	☐	1.000		893956.95		P	0.5



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		609297.01		P	0.8
2	☐	1.000		604081.63		P	0.7
3	☐	1.000		596788.80		P	1.2
4	☐	1.000		603638.88		P	3.6
5	☐	1.000		604619.89		P	0.6
6	☐	1.000		608444.28		P	0.8
7	☐	1.000		595293.58		P	0.3
8	☐	1.000		591818.39		P	0.3
9	☐	1.000		499037.53		P	10.6

US EPA Tune Check Sample Report

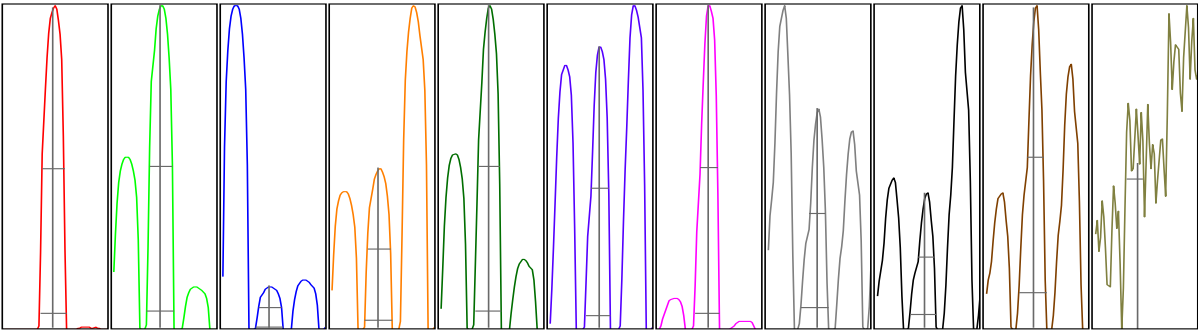
Batch Folder D:\ICP-MS Data\P711072019MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	7420	0.48	5.00	
24	59225	0.75	5.00	
25	7828	0.82	5.00	
26	9186	0.37	5.00	
59	40411	0.65	5.00	
113	5151	0.65	5.00	
115	59760	0.64	5.00	
206	13611	0.65	5.00	
207	12631	0.37	5.00	
208	29150	0.74	5.00	
220	59	5.14		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	7369	7424	7419	7420	7470
24	58639	59131	59031	59585	59741
25	7747	7778	7840	7886	7888
26	9145	9155	9205	9200	9225
59	40085	40269	40453	40461	40788
113	5104	5137	5151	5192	5170
115	59728	59402	59385	60034	60252
206	13513	13627	13553	13619	13744
207	12565	12600	12654	12681	12654
208	28806	29132	29150	29313	29346
220	57	61	56	63	56

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	12466	8.95	8.9 - 9.1		0.781	0.900	
24	94868	23.90	23.9 - 24.1		0.786	0.900	
25	12537	24.90	24.9 - 25.1		0.787	0.900	
26	14546	25.90	25.9 - 26.1		0.788	0.900	
59	68902	58.95	58.9 - 59.1		0.782	0.900	
113	9800	113.00	112.9 - 113.1		0.732	0.900	
115	116158	115.00	114.9 - 115.1		0.728	0.900	
206	27329	206.00	205.9 - 206.1		0.786	0.900	
207	24531	206.95	206.9 - 207.1		0.747	0.900	
208	58142	207.95	207.9 - 208.1		0.775	0.900	
220	58	219.80	-				

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	6.7	V	Deflect	13.4	V
Extract 2	-115.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-55	V	Cell Exit	-50	V			

Cell Parameters

ParameterName	Value	Unit	ParameterName	Value	Unit	ParameterName	Value	Unit
Use Gas	No		OctP Bias	-8.0	V	Energy Discrimination		5.0 V
He Flow	0.0	mL/min	OctP RF	170	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	8888	0.69	
89	7745	0.97	
205	11179	0.87	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	8981	8902	8890	8844	8823
89	7849	7696	7737	7786	7657
205	11322	11190	11201	11116	11065

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	6.9	V	Deflect	1.8	V
Extract 2	-130.0	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			