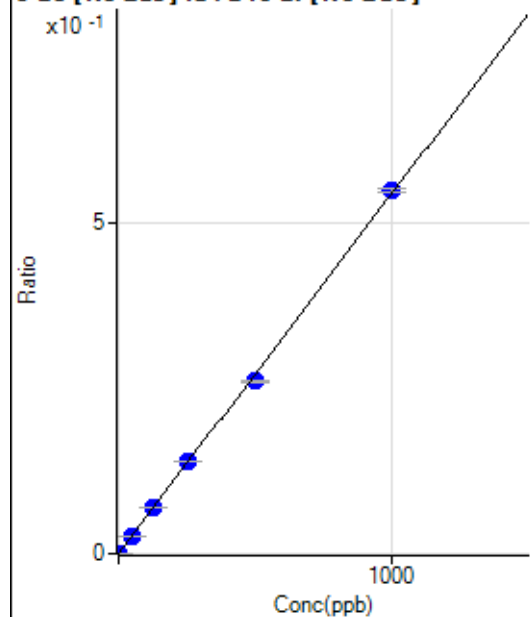


Calibration for 003CALB.d

Batch Folder: D:\ICP-MS Data\P7011720MS.b\
 Analysis File: P7011720MS.batch.bin
 DA Date-Time: 2020-01-20 01:35:44
 Calibration Title:
 Calibration Method: External Calibration
 VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2020-01-17 14:48:16
2	004CALS.d	S02	2020-01-17 14:51:56
3	005CALS.d	S03	2020-01-17 14:56:42
4	006CALS.d	S04	2020-01-17 15:00:44
5	007CALS.d	S05	2020-01-17 15:04:41
6	008CALS.d	S06	2020-01-17 15:08:35
7	009CALS.d	S07	2020-01-17 15:12:26
8	010CALS.d	S08	2020-01-17 15:16:17

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	146.30	0.0000	P	26.1
2	☐	1.000	0.996	2215.03	0.0006	P	2.4
3	☐	50.000	48.924	100613.92	0.0267	P	1.1
4	☐	125.000	127.035	253104.94	0.0692	P	0.3
5	☐	250.000	255.767	502985.77	0.1392	P	0.9
6	☐	500.000	479.462	912573.55	0.2610	P	0.9
7	☐	1000.000	1008.626	1887550.50	0.5489	P	1.0
8	☐			1127.85	0.0004	P	7.7

$$y = 5.4418\text{E-}004 * x + 3.8229\text{E-}005$$

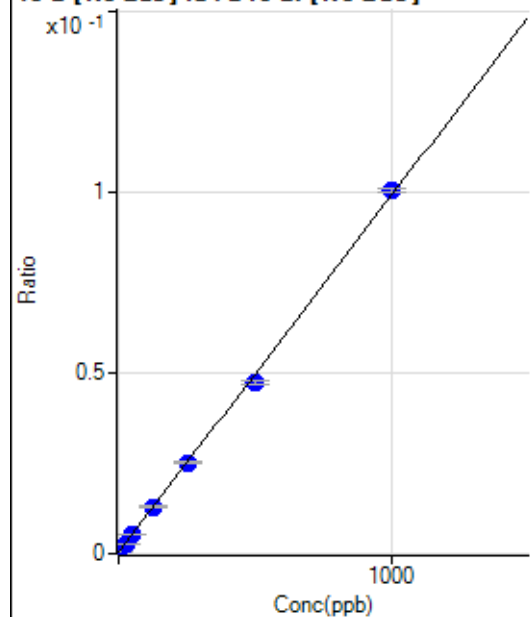
$$R = 0.9997$$

$$DL = 0.05496$$

$$BEC = 0.07025$$

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	1514.03	0.0004	P	2.0
2	☐	25.000	22.601	10028.72	0.0026	P	4.2
3	☐	50.000	47.693	19265.64	0.0051	P	2.0
4	☐	125.000	127.266	47431.37	0.0130	P	1.3
5	☐	250.000	251.681	91214.64	0.0252	P	1.1
6	☐	500.000	473.877	165006.84	0.0472	P	2.2
7	☐	1000.000	1012.533	345141.03	0.1004	P	1.2
8	☐			9789.60	0.0032	P	4.3

$$y = 9.8742\text{E-}005 * x + 3.9606\text{E-}004$$

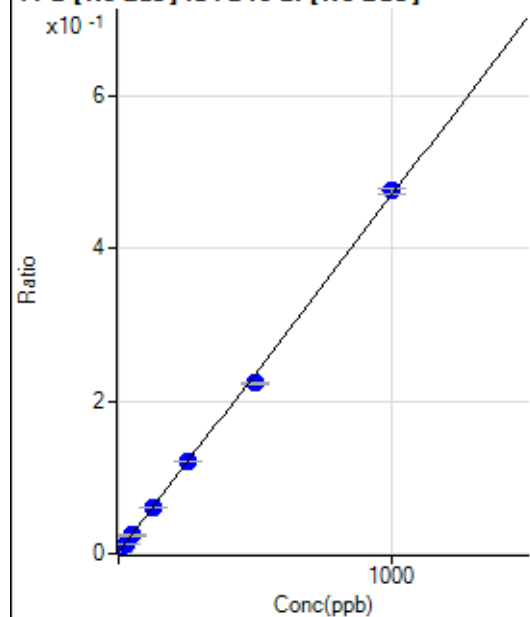
$$R = 0.9995$$

$$DL = 0.237$$

$$BEC = 4.011$$

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6676.78	0.0017	P	3.7
2	☐	25.000	22.962	47659.63	0.0125	P	0.5
3	☐	50.000	47.538	90521.47	0.0240	P	1.6
4	☐	125.000	125.461	221188.47	0.0604	P	0.5
5	☐	250.000	252.537	433181.50	0.1199	P	0.3
6	☐	500.000	474.731	782860.34	0.2239	P	1.4
7	☐	1000.000	1012.117	1634254.14	0.4753	P	1.4
8	☐			45043.67	0.0146	P	10.1

$$y = 4.6787E-004 * x + 0.0017$$

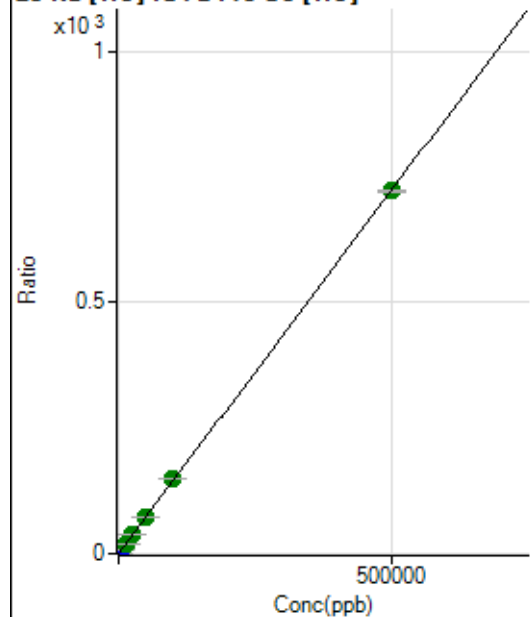
R = 0.9995

DL = 0.4163

BEC = 3.732

Weight: <None>

Min Conc: 0

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	7863.48	0.0263	P	0.9
2	☐	500.000	497.384	222731.89	0.7461	P	2.6
3	☐	5000.000	4908.170	2157524.35	7.1288	P	1.1
4	☐	12500.000	13451.043	5495139.45	19.4908	A	6.0
5	☐	25000.000	26491.711	11267744.96	38.3615	A	0.2
6	☐	50000.000	49632.066	20434174.07	71.8470	A	0.5
7	☐	100000.00	103953.67	42072256.49	150.4538	A	0.6
8	☐	500000.00	499148.61	192428826.5	722.3257	A	0.6

$$y = 0.0014 * x + 0.0263$$

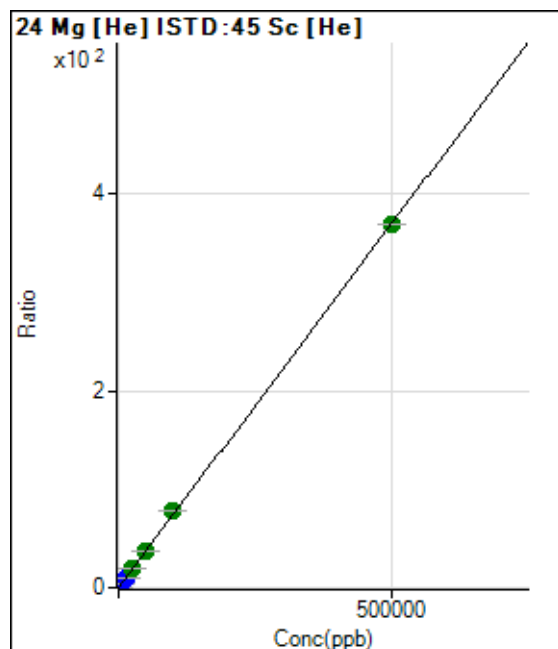
R = 1.0000

DL = 0.4792

BEC = 18.19

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	427.80	0.0014	P	8.2
2	☐	500.000	512.811	113581.51	0.3805	P	2.4
3	☐	5000.000	5107.462	1142919.36	3.7764	P	1.1
4	☐	12500.000	14008.683	2919701.80	10.3552	P	5.8
5	☐	25000.000	27164.058	5897542.14	20.0784	A	0.0
6	☐	50000.000	50916.657	10703533.92	37.6339	A	0.2
7	☐	100000.00	106084.56	21925207.26	78.4085	A	0.6
8	☐	500000.00	498544.41	98162026.50	368.4753	A	0.1

$$y = 7.3910\text{E-}004 * x + 0.0014$$

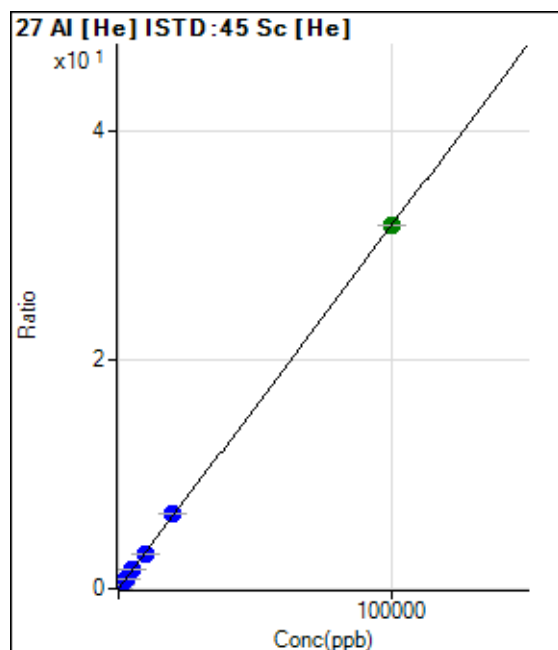
$$R = 0.9999$$

$$DL = 0.4755$$

$$BEC = 1.938$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	25.00	0.0001	P	58.1
2	☐	20.000	19.217	1847.41	0.0062	P	4.8
3	☐	1000.000	973.377	93601.19	0.3093	P	1.0
4	☐	2500.000	2687.164	240613.40	0.8536	P	6.8
5	☐	5000.000	5202.053	485377.08	1.6525	P	0.6
6	☐	10000.000	9748.847	880751.54	3.0967	P	0.2
7	☐	20000.000	20461.785	1817506.79	6.4996	P	0.4
8	☐	100000.00	99918.243	8455096.20	31.7383	A	0.1

$$y = 3.1764\text{E-}004 * x + 8.3927\text{E-}005$$

$$R = 1.0000$$

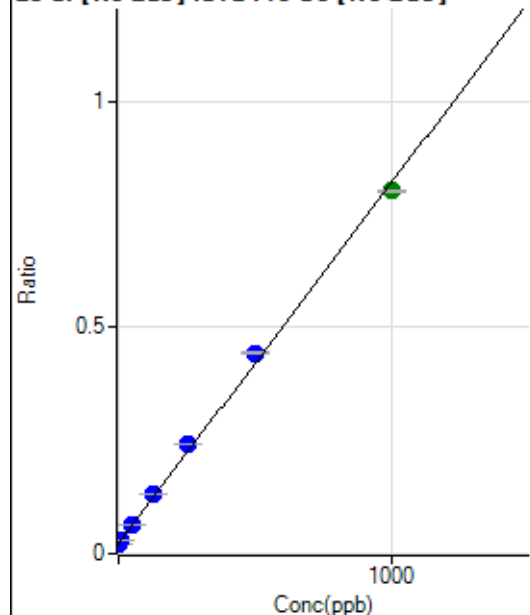
$$DL = 0.4604$$

$$BEC = 0.2642$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	167495.16	0.0222	P	0.6
2	☐	10.000	9.444	223894.85	0.0297	P	0.5
3	☐	50.000	53.029	484595.99	0.0645	P	0.5
4	☐	125.000	139.368	980931.16	0.1334	P	0.4
5	☐	250.000	276.697	1787824.39	0.2429	P	0.6
6	☐	500.000	528.013	3213731.26	0.4434	P	0.6
7	☐	1000.000	977.378	5820013.80	0.8019	A	0.2
8	☐			267461.70	0.0403	P	0.7

$$y = 7.9775\text{E-}004 * x + 0.0222$$

$$R = 0.9989$$

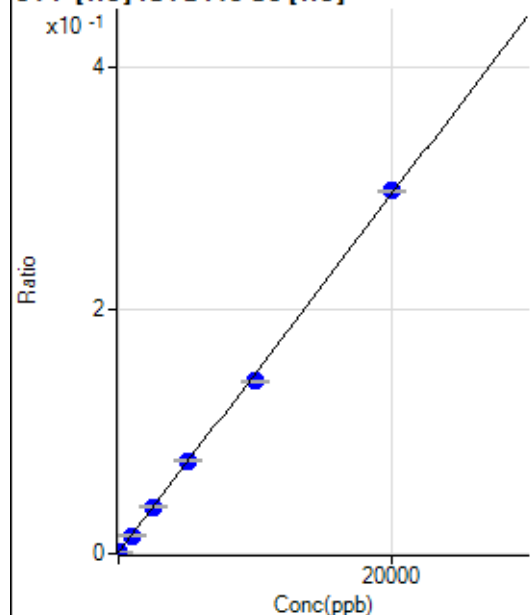
$$DL = 0.48$$

$$BEC = 27.8$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	-23.080	191.67	0.0006	P	17.0
2	☐	0.000	23.080	394.47	0.0013	P	8.5
3	☐	1000.000	927.270	4423.05	0.0146	P	6.6
4	☐	2500.000	2550.916	10860.00	0.0385	P	3.1
5	☐	5000.000	5128.261	22434.34	0.0764	P	3.0
6	☐	10000.000	9551.872	40219.19	0.1414	P	0.3
7	☐	20000.000	20189.271	83277.47	0.2978	P	0.5
8	☐			275.01	0.0010	P	16.3

$$y = 1.4702\text{E-}005 * x + 9.8194\text{E-}004$$

$$R = 0.9996$$

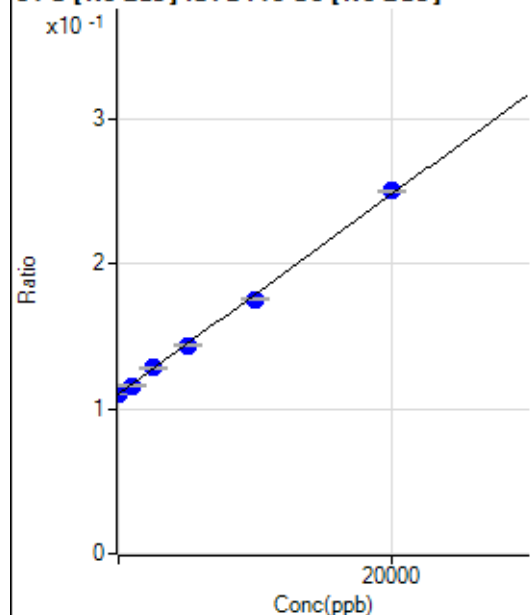
$$DL = 22.6$$

$$BEC = 66.79$$

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	4.168	833399.07	0.1103	P	1.2
2	☐	0.000	-4.168	831098.38	0.1103	P	0.9
3	☐	1000.000	826.831	871895.84	0.1160	P	0.7
4	☐	2500.000	2605.482	943660.60	0.1283	P	0.9
5	☐	5000.000	4847.136	1058032.74	0.1438	P	1.0
6	☐	10000.000	9423.492	1270762.33	0.1753	P	0.8
7	☐	20000.000	20321.943	1818385.89	0.2505	P	0.5
8	☐			757382.29	0.1141	P	0.7

$$y = 6.9002\text{E-}006 * x + 0.1103$$

$$R = 0.9993$$

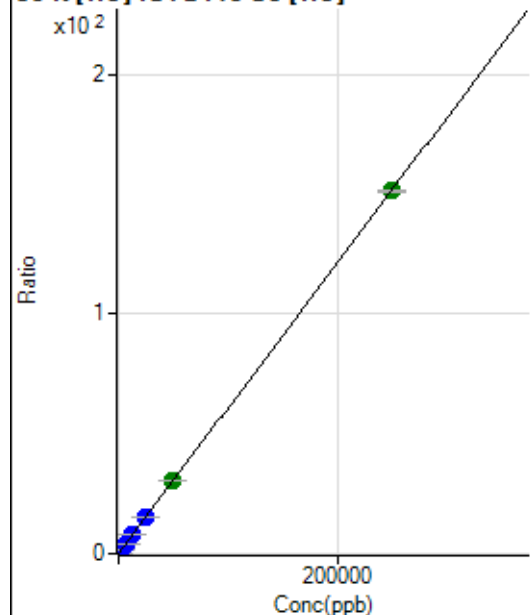
$$DL = 495.6$$

$$BEC = 1.599\text{E}+04$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	26349.28	0.0882	P	2.1
2	☐	500.000	481.358	113272.23	0.3794	P	0.9
3	☐	2500.000	2417.626	469334.25	1.5507	P	0.7
4	☐	6250.000	6667.893	1162150.84	4.1218	P	6.0
5	☐	12500.000	13098.640	2353334.58	8.0120	P	0.3
6	☐	25000.000	24477.498	4236459.17	14.8954	P	0.1
7	☐	50000.000	50614.885	8586872.85	30.7068	A	0.4
8	☐	250000.00	249889.75	40293431.11	151.2544	A	0.8

$$y = 6.0493\text{E-}004 * x + 0.0882$$

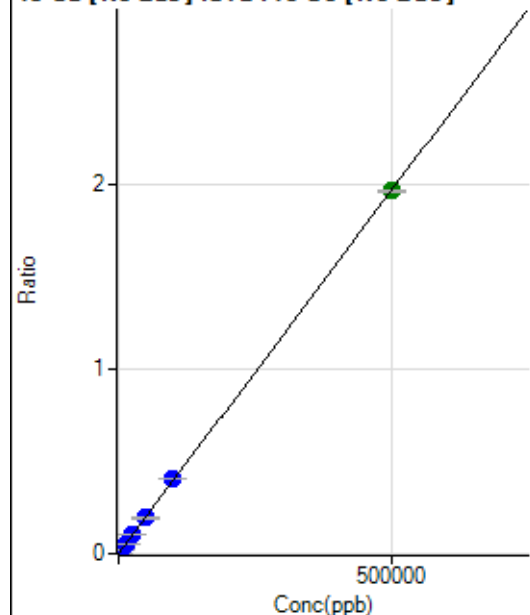
$$R = 1.0000$$

$$DL = 9.118$$

$$BEC = 145.8$$

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	130.56	0.0000	P	41.0
2	☐	500.000	483.094	14424.25	0.0019	P	1.3
3	☐	5000.000	4863.794	143642.21	0.0191	P	1.0
4	☐	12500.000	12916.615	373153.92	0.0507	P	0.9
5	☐	25000.000	26049.023	752855.36	0.1023	P	0.4
6	☐	50000.000	48973.048	1393675.87	0.1923	P	1.0
7	☐	100000.00	103085.33	2937630.30	0.4047	P	0.1
8	☐	500000.00	499424.14	13013299.25	1.9608	A	0.6

$$y = 3.9261\text{E-}006 * x + 1.7281\text{E-}005$$

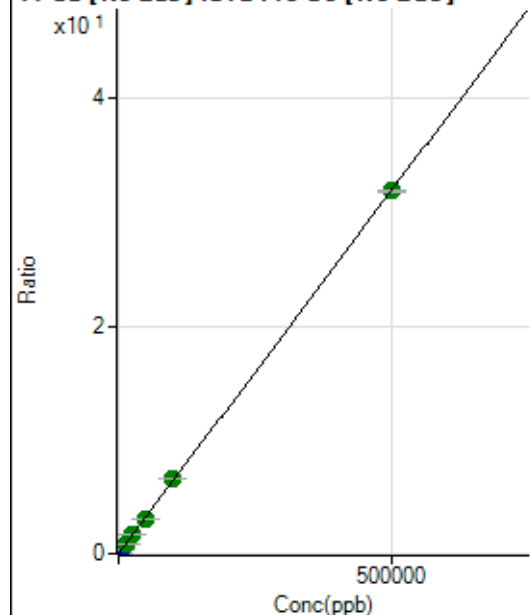
$$R = 1.0000$$

$$DL = 5.415$$

$$BEC = 4.402$$

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	11994.21	0.0016	P	0.9
2	☐	500.000	488.891	246982.92	0.0328	P	0.9
3	☐	5000.000	4841.121	2332560.86	0.3104	P	0.9
4	☐	12500.000	12691.467	5966280.56	0.8111	A	0.2
5	☐	25000.000	25873.521	12157937.25	1.6519	A	0.7
6	☐	50000.000	48647.530	22500804.67	3.1045	A	0.8
7	☐	100000.00	103087.43	47734879.88	6.5768	A	0.2
8	☐	500000.00	499470.89	211444950.5	31.8595	A	0.3

$$y = 6.3783\text{E-}005 * x + 0.0016$$

$$R = 1.0000$$

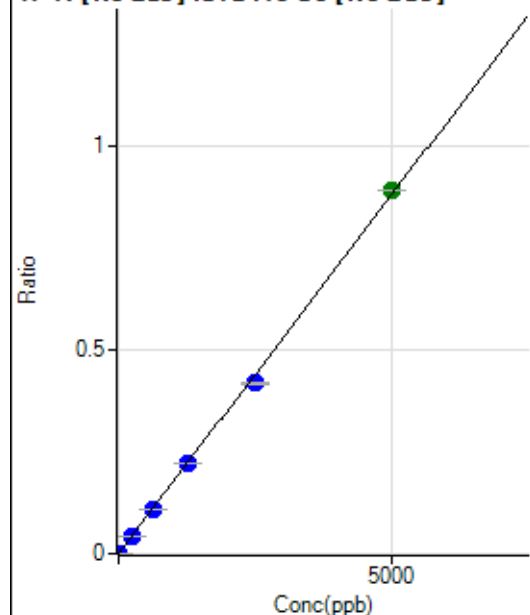
$$DL = 0.6831$$

$$BEC = 24.89$$

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	113.89	0.0000	P	11.4
2	☐	5.000	5.038	6785.18	0.0009	P	3.3
3	☐	250.000	235.437	310988.25	0.0414	P	0.6
4	☐	625.000	622.843	805046.47	0.1094	P	0.2
5	☐	1250.000	1263.903	1634466.39	0.2221	P	0.5
6	☐	2500.000	2382.064	3033242.23	0.4185	P	1.4
7	☐	5000.000	5056.490	6447988.29	0.8884	A	0.0
8	☐			1675.18	0.0003	P	6.6

$$y = 1.7569\text{E-}004 * x + 1.5081\text{E-}005$$

R = 0.9996

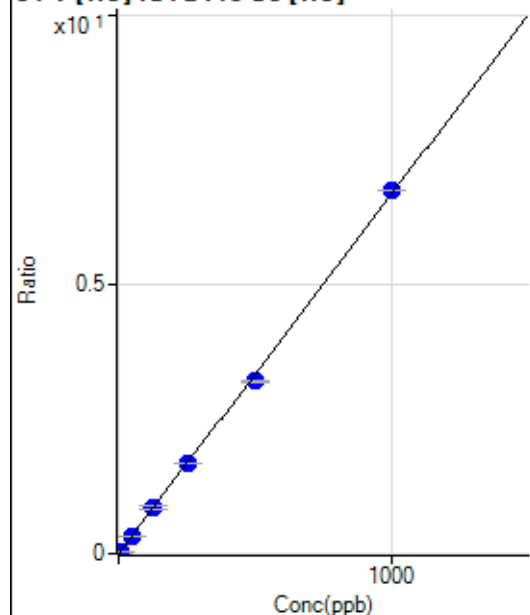
DL = 0.02938

BEC = 0.08584

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	11.11	0.0000	P	16.7
2	☐	5.000	4.952	9867.89	0.0331	P	0.7
3	☐	50.000	46.428	93693.00	0.3096	P	1.4
4	☐	125.000	129.062	242622.10	0.8605	P	5.8
5	☐	250.000	253.565	496564.20	1.6906	P	0.2
6	☐	500.000	479.050	908359.68	3.1939	P	0.7
7	☐	1000.000	1009.255	1881624.90	6.7288	P	0.2
8	☐			948.94	0.0036	P	5.1

$$y = 0.0067 * x + 3.7173\text{E-}005$$

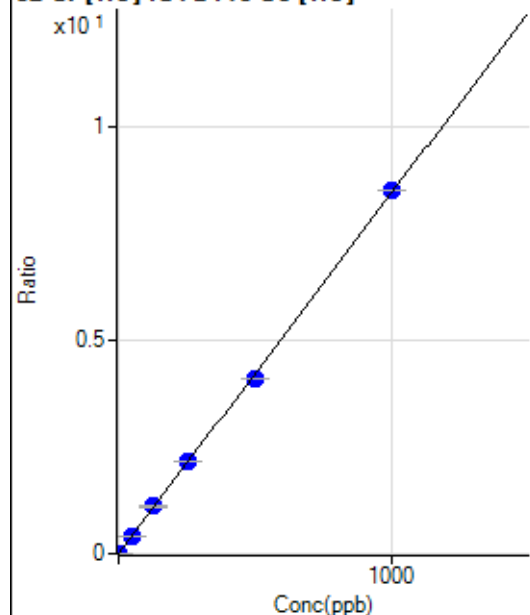
R = 0.9997

DL = 0.002793

BEC = 0.005576

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	695.58	0.0023	P	5.7
2	☐	2.000	1.865	5403.29	0.0181	P	1.8
3	☐	50.000	47.583	122460.07	0.4046	P	1.0
4	☐	125.000	131.581	314334.38	1.1148	P	5.7
5	☐	250.000	256.778	638346.25	2.1733	P	0.6
6	☐	500.000	484.000	1164478.13	4.0944	P	0.5
7	☐	1000.000	1005.604	2378121.37	8.5043	P	0.1
8	☐			61853.46	0.2322	P	1.4

$$y = 0.0085 * x + 0.0023$$

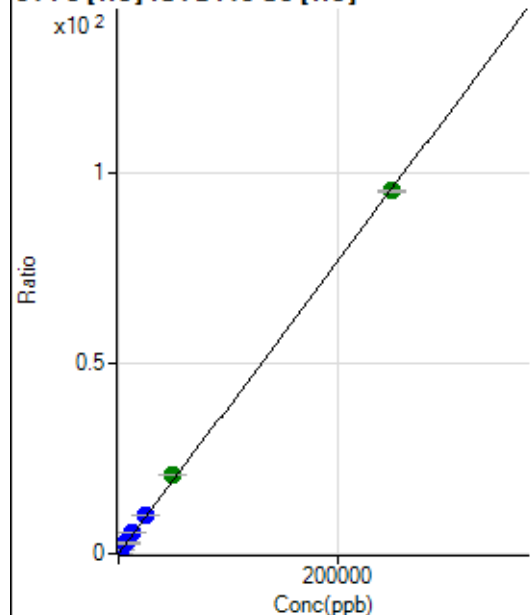
$$R = 0.9998$$

$$DL = 0.04735$$

$$BEC = 0.2755$$

Weight: <None>

Min Conc: 0

54 Fe [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	487.19	0.0016	P	13.6
2	☐	50.000	54.341	6691.89	0.0224	P	2.6
3	☐	2500.000	2639.818	306041.10	1.0112	P	1.0
4	☐	6250.000	7271.051	784537.63	2.7824	P	5.7
5	☐	12500.000	14296.028	1606380.73	5.4690	P	0.4
6	☐	25000.000	26669.742	2901269.55	10.2012	P	0.7
7	☐	50000.000	54058.489	5781510.99	20.6757	A	0.4
8	☐	250000.00	248904.60	25358674.03	95.1922	A	0.7

$$y = 3.8244E-004 * x + 0.0016$$

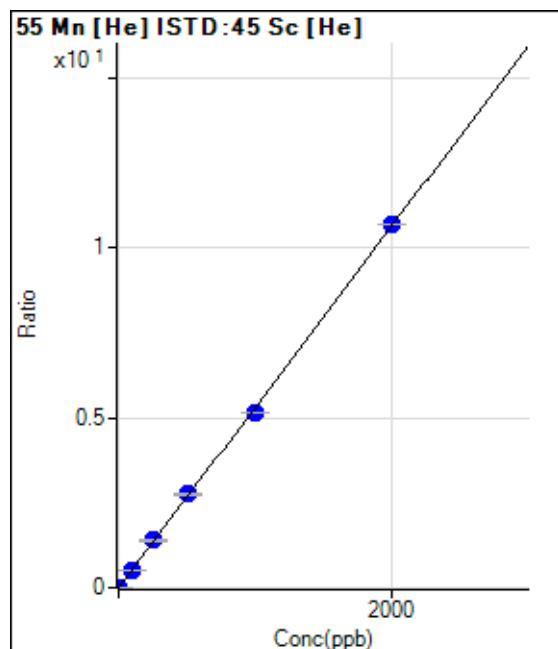
$$R = 0.9998$$

$$DL = 1.745$$

$$BEC = 4.269$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	85.56	0.0003	P	24.9
2	☐	1.000	0.963	1610.11	0.0054	P	2.3
3	☐	100.000	94.610	152014.41	0.5023	P	0.9
4	☐	250.000	262.813	393271.74	1.3947	P	5.7
5	☐	500.000	517.323	806320.21	2.7451	P	0.3
6	☐	1000.000	968.774	1462026.75	5.1405	P	0.4
7	☐	2000.000	2009.950	2982251.00	10.6648	P	0.1
8	☐			12127.40	0.0455	P	1.6

$$y = 0.0053 * x + 2.8582E-004$$

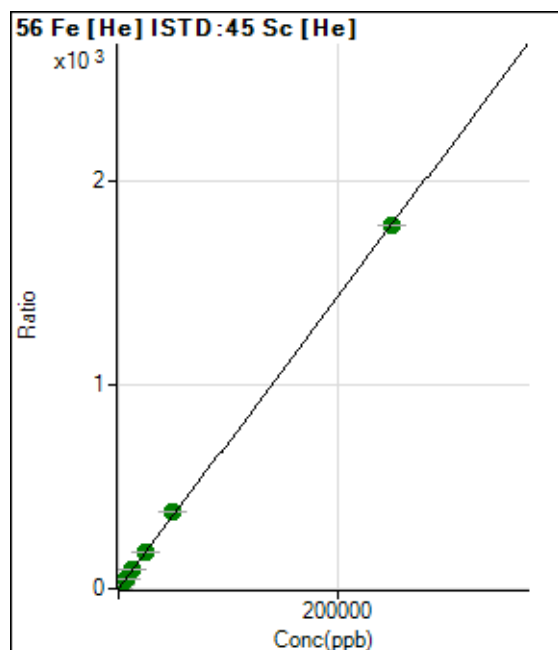
$$R = 0.9998$$

$$DL = 0.04022$$

$$BEC = 0.05387$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	3304.17	0.0111	P	2.7
2	☐	50.000	52.667	115438.14	0.3867	P	2.8
3	☐	2500.000	2513.597	5428824.95	17.9376	A	1.1
4	☐	6250.000	6992.419	14063712.93	49.8797	A	5.9
5	☐	12500.000	13669.968	28639040.45	97.5028	A	0.2
6	☐	25000.000	25560.999	51850095.60	182.3074	A	0.8
7	☐	50000.000	53037.134	105773456.9	378.2622	A	0.4
8	☐	250000.00	249259.27	473573188.3	1,777.682	A	0.2

$$y = 0.0071 * x + 0.0111$$

$$R = 0.9999$$

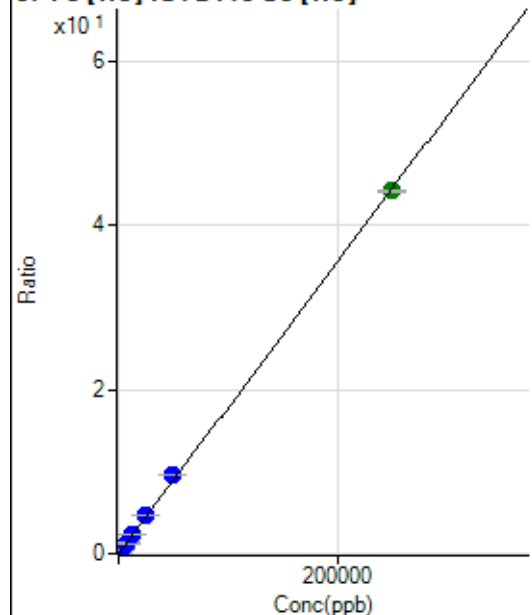
$$DL = 0.1264$$

$$BEC = 1.551$$

Weight: <None>

Min Conc: 0

57 Fe [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	75.93	0.0003	P	14.4
2	☐	50.000	54.722	2974.46	0.0100	P	4.3
3	☐	2500.000	2550.198	137011.54	0.4527	P	1.0
4	☐	6250.000	7129.891	356733.24	1.2652	P	5.9
5	☐	12500.000	13826.993	720627.33	2.4534	P	0.3
6	☐	25000.000	25867.494	1305329.97	4.5896	P	0.5
7	☐	50000.000	53866.002	2672497.77	9.5570	P	0.2
8	☐	250000.00	249051.20	11771164.50	44.1863	A	0.4

$$y = 1.7742\text{E-}004 * x + 2.5400\text{E-}004$$

$$R = 0.9999$$

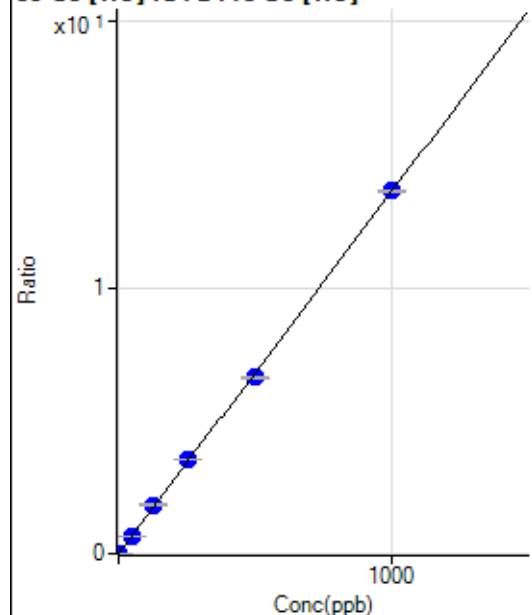
$$DL = 0.619$$

$$BEC = 1.432$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	85.56	0.0003	P	10.9
2	☐	1.000	0.964	4001.72	0.0134	P	6.0
3	☐	50.000	48.833	201214.94	0.6648	P	0.3
4	☐	125.000	134.296	515378.96	1.8278	P	5.7
5	☐	250.000	260.409	1040970.81	3.5440	P	0.5
6	☐	500.000	487.916	1888435.46	6.6400	P	1.1
7	☐	1000.000	1002.336	3814438.73	13.6405	P	0.6
8	☐			7613.19	0.0286	P	2.9

$$y = 0.0136 * x + 2.8666\text{E-}004$$

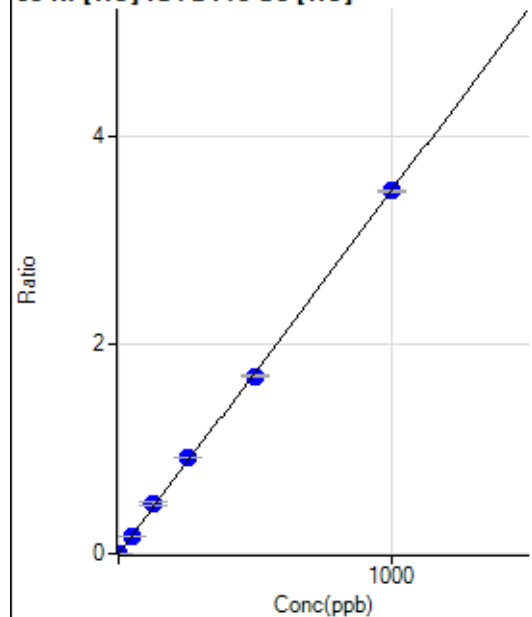
$$R = 0.9998$$

$$DL = 0.006873$$

$$BEC = 0.02107$$

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	114.45	0.0004	P	36.4
2	☐	1.000	1.108	1264.52	0.0042	P	2.9
3	☐	50.000	49.740	52440.29	0.1733	P	0.4
4	☐	125.000	137.089	134473.27	0.4769	P	5.4
5	☐	250.000	265.435	271097.07	0.9230	P	0.2
6	☐	500.000	489.878	484361.10	1.7031	P	0.7
7	☐	1000.000	999.704	971742.64	3.4751	P	0.2
8	☐			18558.63	0.0697	P	1.4

$$y = 0.0035 * x + 3.8429E-004$$

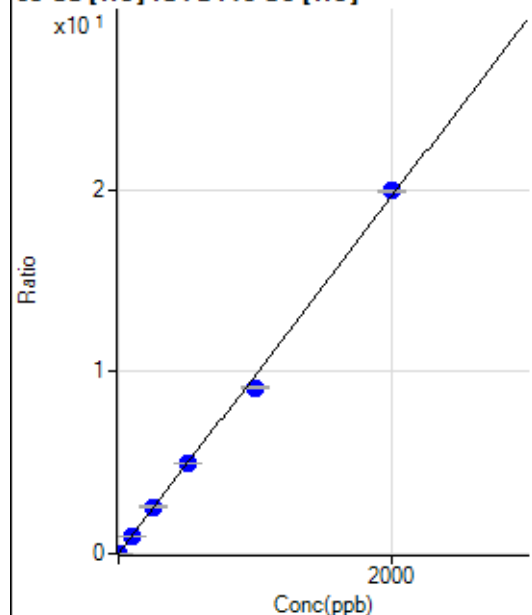
$$R = 0.9997$$

$$DL = 0.1208$$

$$BEC = 0.1106$$

Weight: <None>

Min Conc: 0

63 Cu [He] ISTD:45 Sc [He]

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	883.38	0.0030	P	7.6
2	☐	2.000	1.897	6437.07	0.0216	P	4.4
3	☐	100.000	94.804	282262.40	0.9326	P	1.1
4	☐	250.000	260.403	720864.36	2.5565	P	5.6
5	☐	500.000	504.304	1453450.52	4.9483	P	0.3
6	☐	1000.000	930.469	2595874.15	9.1274	P	0.9
7	☐	2000.000	2032.649	5574797.42	19.9357	P	0.4
8	☐			11265.61	0.0423	P	2.5

$$y = 0.0098 * x + 0.0030$$

$$R = 0.9991$$

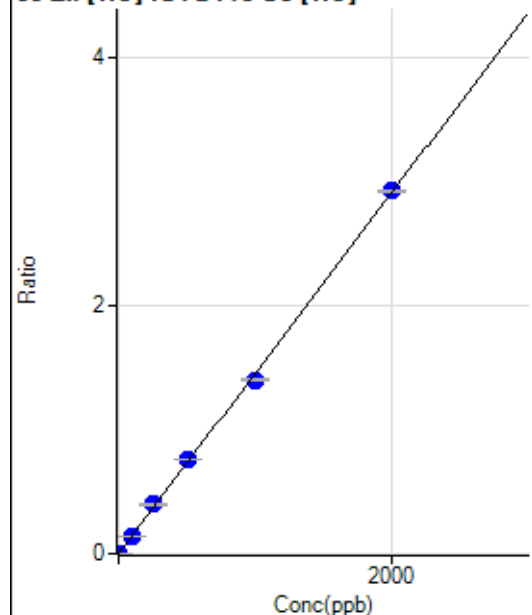
$$DL = 0.06898$$

$$BEC = 0.3014$$

Weight: <None>

Min Conc: 0

66 Zn [He] ISTD:45 Sc [He]



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	186.67	0.0006	P	16.9
2	☐	2.000	2.149	1118.95	0.0037	P	7.7
3	☐	100.000	97.622	43132.62	0.1425	P	0.7
4	☐	250.000	272.078	111667.42	0.3961	P	6.0
5	☐	500.000	518.804	221664.24	0.7547	P	0.7
6	☐	1000.000	963.645	398524.89	1.4012	P	0.6
7	☐	2000.000	2010.836	817455.91	2.9232	P	0.3
8	☐			13266.21	0.0498	P	2.1

$$y = 0.0015 * x + 6.2420E-004$$

$$R = 0.9996$$

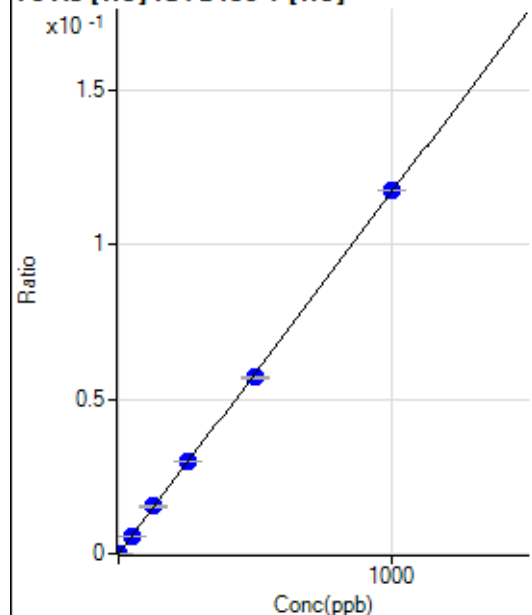
$$DL = 0.2173$$

$$BEC = 0.4295$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	4.32	0.0000	P	67.4
2	☐	1.000	1.029	234.57	0.0001	P	10.6
3	☐	50.000	49.001	10992.50	0.0057	P	1.8
4	☐	125.000	131.719	27986.21	0.0154	P	5.8
5	☐	250.000	255.718	56635.63	0.0299	P	0.2
6	☐	500.000	487.456	104690.02	0.0571	P	0.5
7	☐	1000.000	1004.052	212781.60	0.1175	P	0.1
8	☐			135.18	0.0001	P	8.3

$$y = 1.1705E-004 * x + 2.2725E-006$$

$$R = 0.9998$$

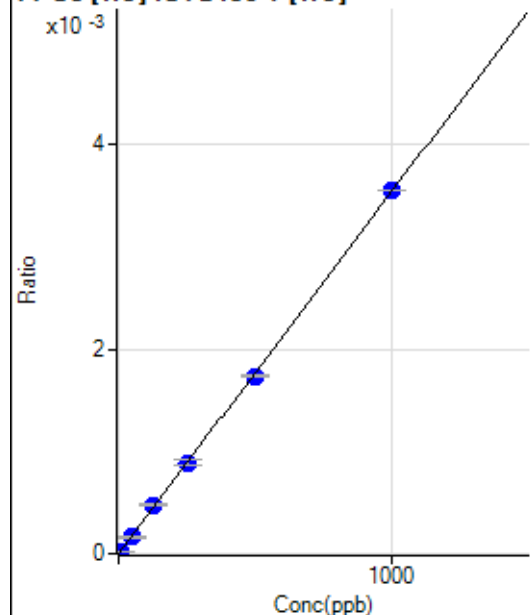
$$DL = 0.03923$$

$$BEC = 0.01942$$

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	☐	5.000	6.569	44.44	0.0000	P	28.0
3	☐	50.000	47.216	320.01	0.0002	P	11.0
4	☐	125.000	135.120	867.82	0.0005	P	4.7
5	☐	250.000	251.356	1682.35	0.0009	P	5.2
6	☐	500.000	490.829	3185.96	0.0017	P	1.2
7	☐	1000.000	1003.113	6424.85	0.0035	P	0.2
8	☐			6.67	0.0000	P	50.1

$$y = 3.5375\text{E-}006 * x + 0.0000\text{E+}000$$

$$R = 0.9999$$

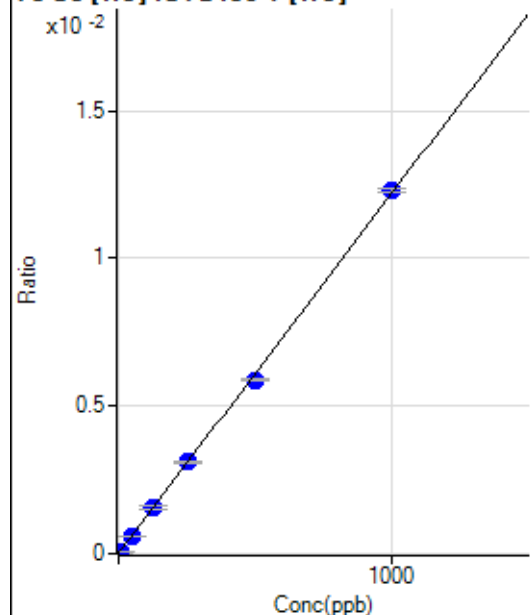
$$DL = 0$$

$$BEC = 0$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	22.84	0.0000	P	28.1
2	☐	5.000	5.597	153.09	0.0001	P	13.7
3	☐	50.000	48.173	1146.35	0.0006	P	6.5
4	☐	125.000	125.880	2802.14	0.0015	P	6.9
5	☐	250.000	253.661	5864.81	0.0031	P	2.4
6	☐	500.000	482.564	10799.77	0.0059	P	1.1
7	☐	1000.000	1007.781	22233.16	0.0123	P	0.9
8	☐			31.48	0.0000	P	6.0

$$y = 1.2173\text{E-}005 * x + 1.1961\text{E-}005$$

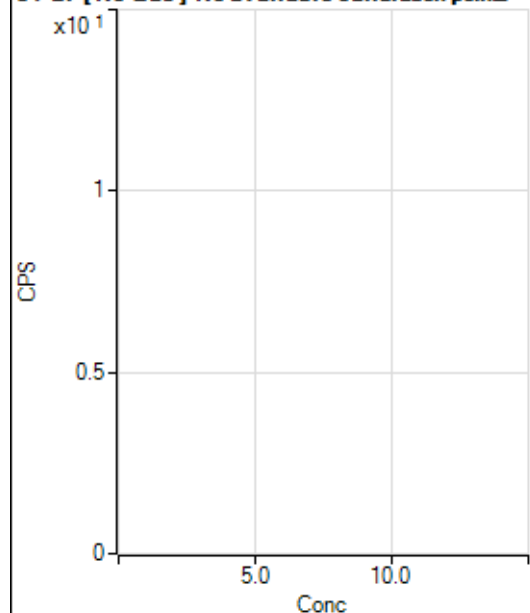
$$R = 0.9998$$

$$DL = 0.8283$$

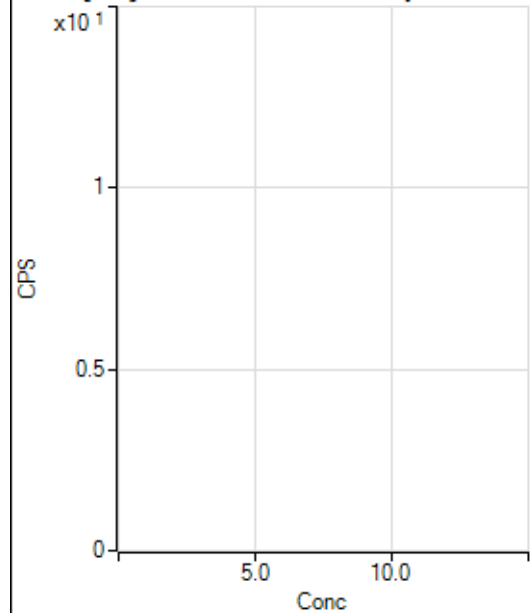
$$BEC = 0.9826$$

Weight: <None>

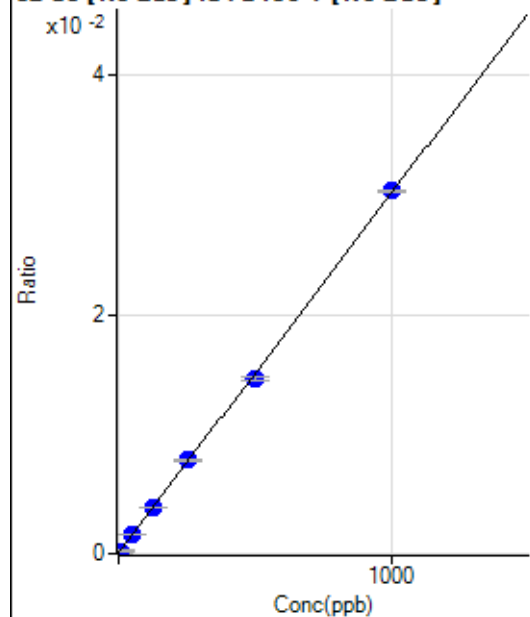
Min Conc: 0

81 Br [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			40652.71		P	2.1
2	☐			41676.76		P	2.2
3	☐			40689.07		P	0.7
4	☐			40629.29		P	3.4
5	☐			40565.62		P	0.8
6	☐			38973.26		P	1.5
7	☐			40120.35		P	3.6
8	☐			37173.27		P	1.5

81 Br [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			30.03		P	33.3
2	☐			16.68		P	69.3
3	☐			23.36		P	49.5
4	☐			26.69		P	57.3
5	☐			23.36		P	24.7
6	☐			26.69		P	94.4
7	☐			56.73		P	66.8
8	☐			30.03		P	33.3

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

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	845.43	0.0001	P	5.8
2	☐	5.000	6.098	3735.49	0.0002	P	5.8
3	☐	50.000	50.194	24703.18	0.0016	P	2.8
4	☐	125.000	126.227	59778.97	0.0039	P	2.3
5	☐	250.000	257.493	121068.40	0.0078	P	1.4
6	☐	500.000	483.765	223295.66	0.0146	P	1.4
7	☐	1000.000	1006.075	465159.25	0.0303	P	0.7
8	☐			1280.79	0.0001	P	2.9

$$y = 3.0085E-005 * x + 5.3276E-005$$

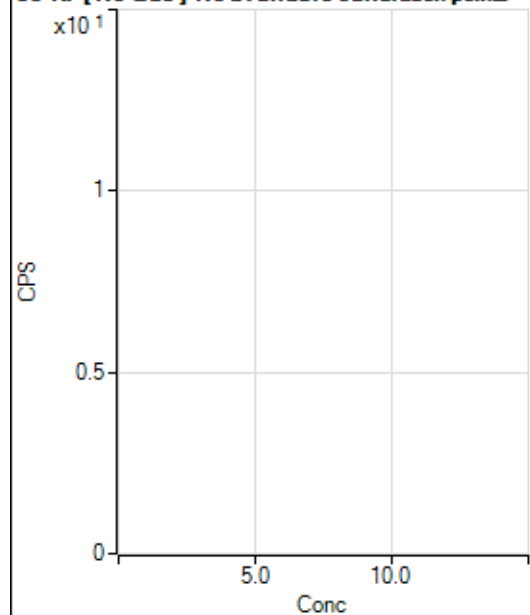
$$R = 0.9998$$

$$DL = 0.3067$$

$$BEC = 1.771$$

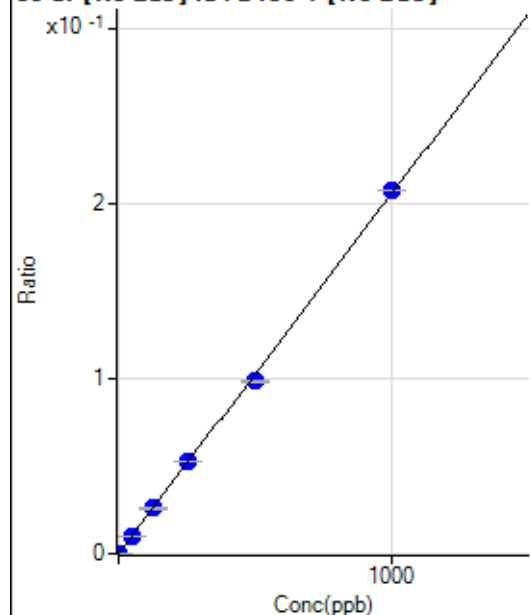
Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐			318.90		P	15.3
2	☐			314.45		P	8.2
3	☐			347.79		P	13.2
4	☐			311.12		P	5.9
5	☐			347.79		P	9.3
6	☐			314.46		P	4.3
7	☐			347.79		P	8.6
8	☐			330.01		P	11.1

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	611.15	0.0000	P	28.8
2	☐	1.000	0.858	3389.45	0.0002	P	3.9
3	☐	50.000	47.350	154347.68	0.0098	P	1.1
4	☐	125.000	125.564	401144.68	0.0258	P	0.3
5	☐	250.000	255.862	816652.29	0.0526	P	0.9
6	☐	500.000	479.842	1507870.49	0.0986	P	0.6
7	☐	1000.000	1008.675	3180199.96	0.2073	P	0.1
8	☐			6749.11	0.0005	P	6.6

$$y = 2.0549\text{E-}004 * x + 3.8518\text{E-}005$$

$$R = 0.9997$$

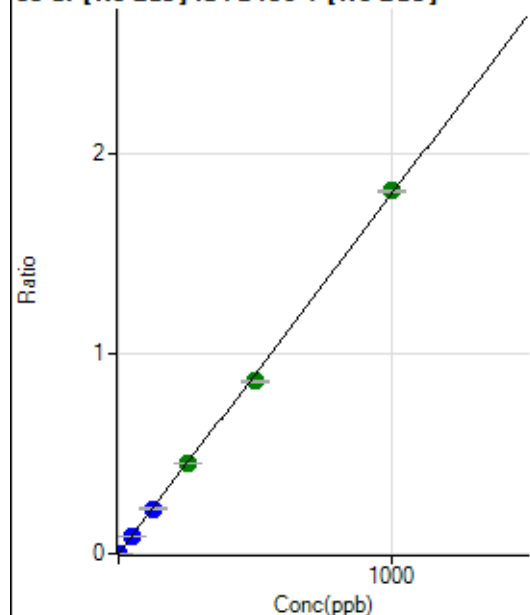
$$DL = 0.162$$

$$BEC = 0.1874$$

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	241.68	0.0000	P	15.2
2	☐	1.000	0.941	26890.09	0.0017	P	2.1
3	☐	50.000	47.370	1344311.14	0.0851	P	0.7
4	☐	125.000	125.677	3503703.07	0.2257	P	0.5
5	☐	250.000	253.231	7058393.30	0.4547	A	0.3
6	☐	500.000	479.874	13172365.14	0.8617	A	1.4
7	☐	1000.000	1009.302	27803118.33	1.8124	A	0.2
8	☐			53712.81	0.0039	P	1.6

$$y = 0.0018 * x + 1.5233\text{E-}005$$

$$R = 0.9997$$

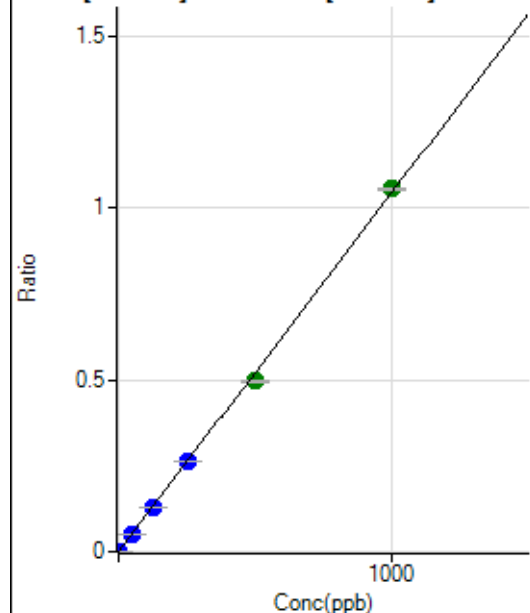
$$DL = 0.003864$$

$$BEC = 0.008483$$

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	822.29	0.0001	P	15.0
2	☐	1.000	0.732	12878.49	0.0008	P	0.8
3	☐	50.000	46.100	761115.20	0.0482	P	0.4
4	☐	125.000	123.859	2007766.91	0.1293	P	0.3
5	☐	250.000	253.236	4103443.10	0.2644	P	0.5
6	☐	500.000	475.475	7587308.77	0.4963	A	0.7
7	☐	1000.000	1011.791	16200922.59	1.0561	A	0.8
8	☐			5281.76	0.0004	P	6.4

$$y = 0.0010 * x + 5.1833E-005$$

$$R = 0.9996$$

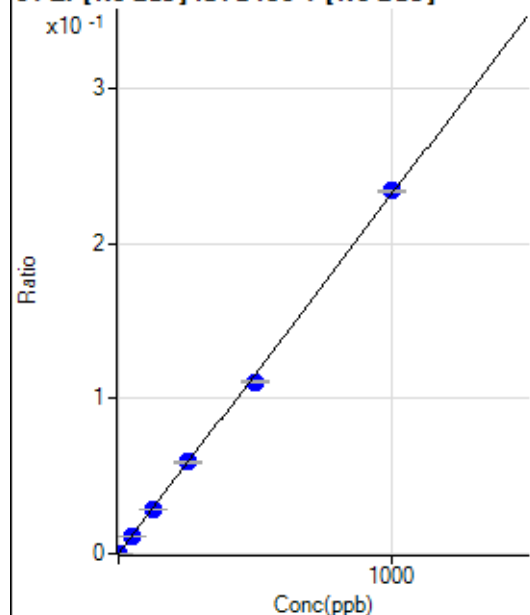
$$DL = 0.02229$$

$$BEC = 0.04966$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	141.67	0.0000	P	15.3
2	☐	1.000	0.694	2675.37	0.0002	P	4.0
3	☐	50.000	46.103	168683.76	0.0107	P	1.0
4	☐	125.000	124.827	448490.15	0.0289	P	0.7
5	☐	250.000	255.337	917086.66	0.0591	P	1.0
6	☐	500.000	477.133	1687646.89	0.1104	P	0.9
7	☐	1000.000	1010.316	3586006.55	0.2338	P	0.6
8	☐			1214.01	0.0001	P	12.8

$$y = 2.3137E-004 * x + 8.9255E-006$$

$$R = 0.9996$$

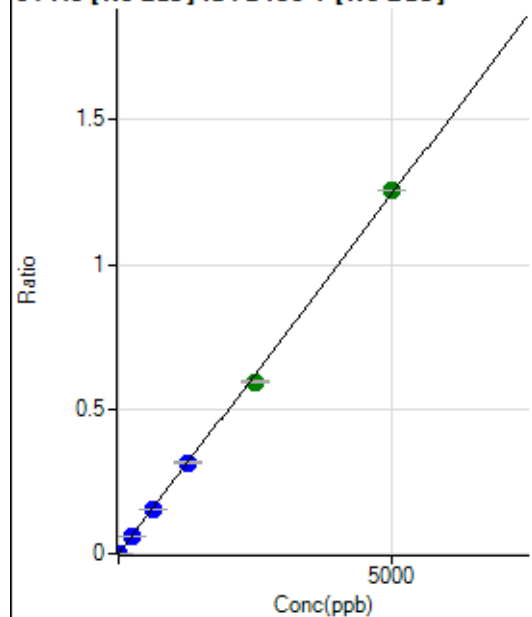
$$DL = 0.01773$$

$$BEC = 0.03858$$

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	272.24	0.0000	P	11.9
2	☐	5.000	4.578	18209.49	0.0012	P	3.1
3	☐	250.000	233.389	916194.14	0.0580	P	0.3
4	☐	625.000	622.431	2400169.87	0.1546	P	0.1
5	☐	1250.000	1270.242	4897072.07	0.3155	P	1.0
6	☐	2500.000	2391.771	9080830.15	0.5941	A	1.2
7	☐	5000.000	5050.206	19241792.79	1.2543	A	0.2
8	☐			13523.61	0.0010	P	5.2

$$y = 2.4837E-004 * x + 1.7160E-005$$

$$R = 0.9996$$

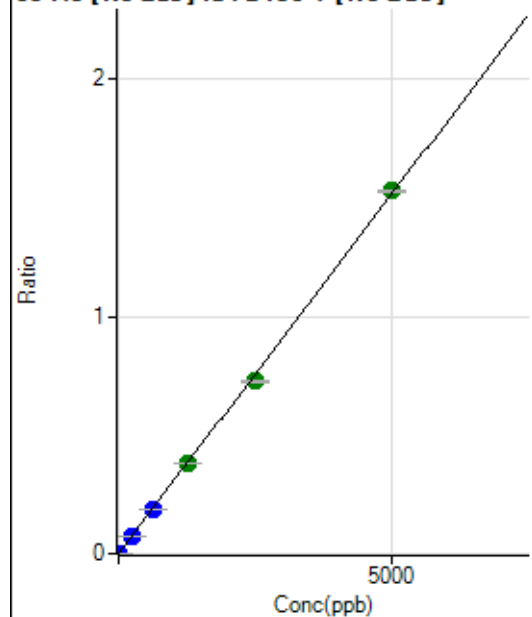
$$DL = 0.02465$$

$$BEC = 0.06909$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94.45	0.0000	P	22.5
2	☐	5.000	4.979	23865.33	0.0015	P	3.9
3	☐	250.000	235.177	1124573.12	0.0712	P	0.6
4	☐	625.000	618.765	2906818.12	0.1872	P	0.2
5	☐	1250.000	1262.891	5931667.02	0.3822	A	0.9
6	☐	2500.000	2398.148	11093045.39	0.7257	A	1.3
7	☐	5000.000	5049.224	23438945.66	1.5279	A	0.2
8	☐			20840.90	0.0015	P	1.7

$$y = 3.0260E-004 * x + 5.9543E-006$$

$$R = 0.9997$$

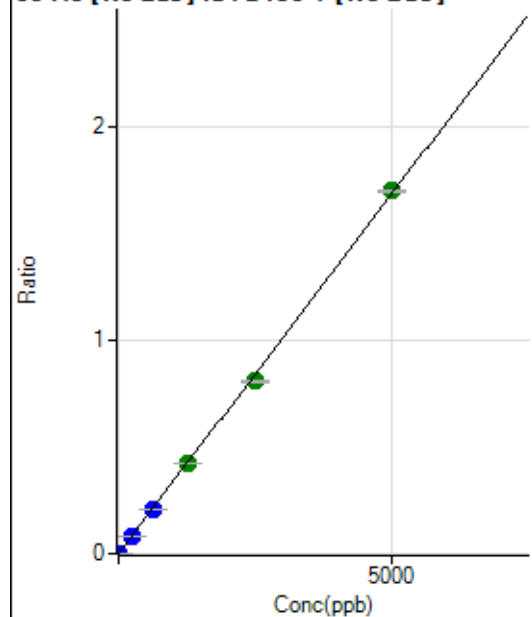
$$DL = 0.01328$$

$$BEC = 0.01968$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113.89	0.0000	P	21.0
2	☐	5.000	4.932	26283.56	0.0017	P	3.3
3	☐	250.000	234.188	1244672.88	0.0788	P	0.4
4	☐	625.000	621.024	3242630.00	0.2089	P	0.7
5	☐	1250.000	1261.810	6587268.20	0.4244	A	0.6
6	☐	2500.000	2402.682	12352986.73	0.8081	A	1.2
7	☐	5000.000	5046.994	26039796.94	1.6975	A	0.2
8	☐			24062.75	0.0017	P	0.8

$$y = 3.3633\text{E-}004 * x + 7.1759\text{E-}006$$

$$R = 0.9997$$

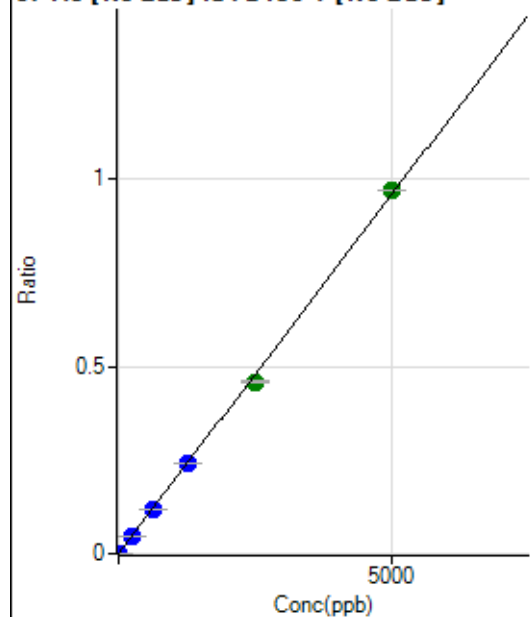
$$DL = 0.01343$$

$$BEC = 0.02134$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	38.89	0.0000	P	62.2
2	☐	5.000	4.881	14788.71	0.0009	P	1.3
3	☐	250.000	232.074	702457.87	0.0445	P	0.9
4	☐	625.000	618.453	1839143.55	0.1185	P	0.5
5	☐	1250.000	1251.384	3720643.05	0.2397	P	0.7
6	☐	2500.000	2393.505	7008611.62	0.4585	A	1.2
7	☐	5000.000	5054.616	14853126.03	0.9682	A	0.1
8	☐			12750.62	0.0009	P	2.6

$$y = 1.9155\text{E-}004 * x + 2.4537\text{E-}006$$

$$R = 0.9997$$

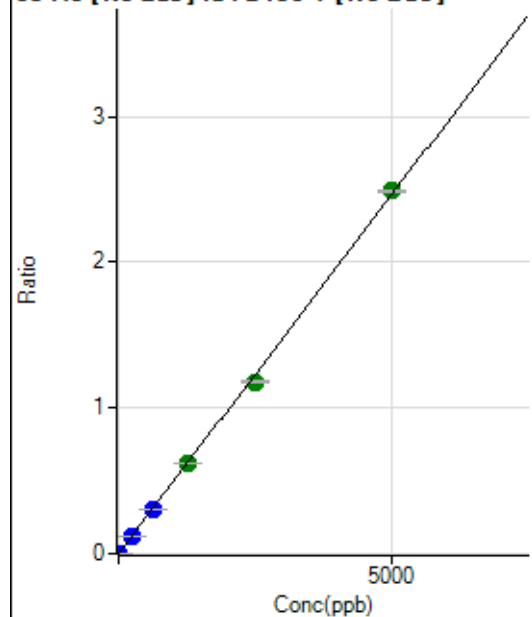
$$DL = 0.02389$$

$$BEC = 0.01281$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	122.23	0.0000	P	4.1
2	☐	5.000	4.916	38283.10	0.0024	P	1.8
3	☐	250.000	233.483	1815604.40	0.1149	P	0.2
4	☐	625.000	617.783	4719697.28	0.3040	P	0.9
5	☐	1250.000	1254.367	9581141.62	0.6173	A	0.8
6	☐	2500.000	2388.030	17963926.10	1.1752	A	1.0
7	☐	5000.000	5056.621	38172130.37	2.4884	A	0.7
8	☐			32694.30	0.0023	P	2.1

$$y = 4.9210\text{E-}004 * x + 7.7031\text{E-}006$$

$$R = 0.9996$$

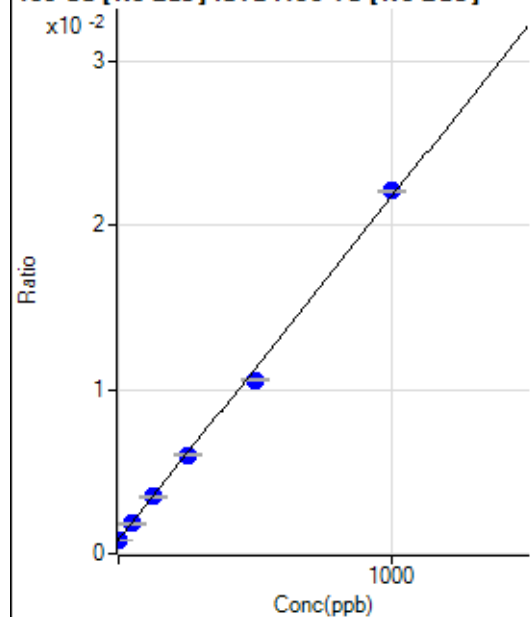
$$DL = 0.001925$$

$$BEC = 0.01565$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	16546.39	0.0009	P	1.5
2	☐	1.000	-0.953	16012.38	0.0008	P	3.1
3	☐	50.000	46.319	35180.84	0.0018	P	1.3
4	☐	125.000	125.277	65212.37	0.0035	P	0.9
5	☐	250.000	247.855	113858.56	0.0060	P	0.4
6	☐	500.000	466.518	197778.78	0.0106	P	1.4
7	☐	1000.000	1017.429	411616.39	0.0221	P	0.6
8	☐			14185.45	0.0009	P	3.3

$$y = 2.0887\text{E-}005 * x + 8.5001\text{E-}004$$

$$R = 0.9992$$

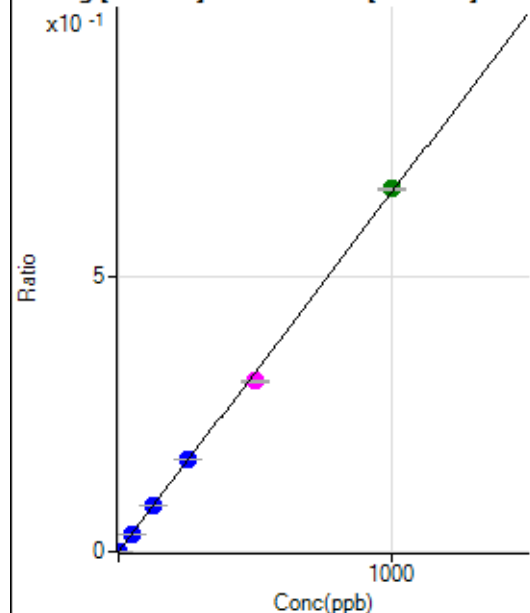
$$DL = 1.853$$

$$BEC = 40.7$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	172.23	0.0000	P	16.7
2	☐	1.000	0.970	12361.48	0.0006	P	2.8
3	☐	50.000	48.991	617901.90	0.0319	P	0.7
4	☐	125.000	128.767	1578009.83	0.0839	P	1.0
5	☐	250.000	257.079	3163818.74	0.1675	P	0.4
6	☐	500.000	474.552	5771146.96	0.3091	M	1.4
7	☐	1000.000	1010.534	12259976.49	0.6583	A	0.3
8	☐			1866.87	0.0001	P	9.5

$$y = 6.5141E-004 * x + 8.8450E-006$$

$$R = 0.9995$$

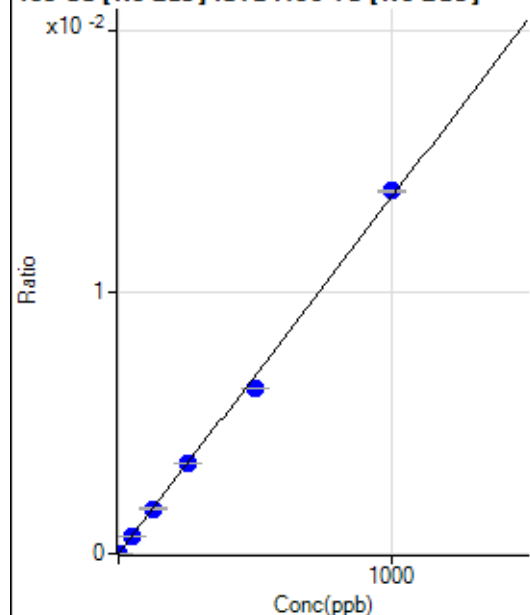
$$DL = 0.006812$$

$$BEC = 0.01358$$

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	38.89	0.0000	P	12.4
2	☐	1.000	0.927	281.95	0.0000	P	10.8
3	☐	50.000	47.388	12518.23	0.0006	P	1.3
4	☐	125.000	126.357	32377.58	0.0017	P	1.9
5	☐	250.000	252.211	64860.54	0.0034	P	0.3
6	☐	500.000	463.241	117700.28	0.0063	P	0.9
7	☐	1000.000	1017.788	257922.72	0.0138	P	0.2
8	☐			102.78	0.0000	P	13.1

$$y = 1.3605E-005 * x + 1.9978E-006$$

$$R = 0.9990$$

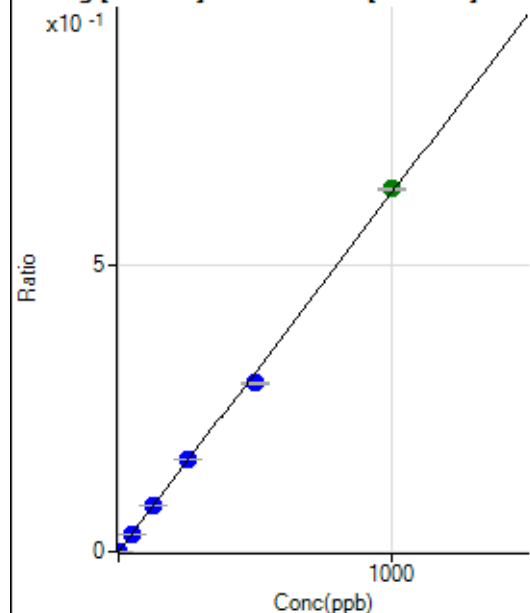
$$DL = 0.05445$$

$$BEC = 0.1468$$

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	25.00	0.0000	P	57.6
2	☐	1.000	1.001	12083.37	0.0006	P	1.3
3	☐	50.000	49.341	596859.32	0.0308	P	1.0
4	☐	125.000	129.343	1520507.89	0.0808	P	0.4
5	☐	250.000	256.986	3033876.37	0.1606	P	0.8
6	☐	500.000	471.402	5499744.48	0.2946	P	1.2
7	☐	1000.000	1012.043	11778623.27	0.6324	A	0.4
8	☐			1700.17	0.0001	P	2.3

$$y = 6.2492\text{E-}004 * x + 1.2830\text{E-}006$$

$$R = 0.9994$$

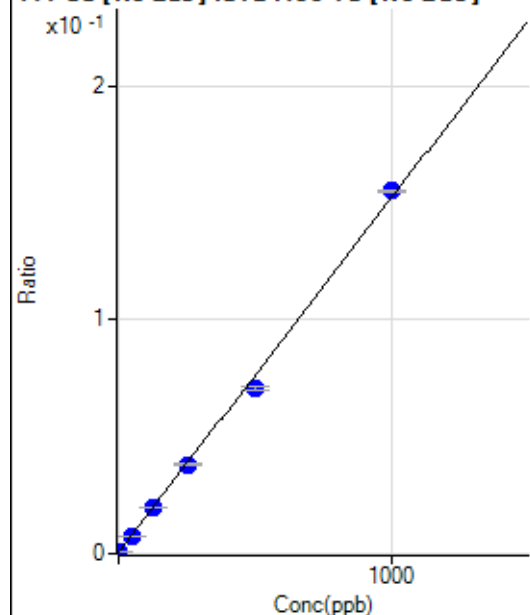
$$DL = 0.00355$$

$$BEC = 0.002053$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	11585.81	0.0006	P	1.5
2	☐	1.000	0.757	13692.16	0.0007	P	3.0
3	☐	50.000	47.325	150330.48	0.0078	P	0.7
4	☐	125.000	124.638	366477.85	0.0195	P	0.2
5	☐	250.000	248.162	721647.22	0.0382	P	0.6
6	☐	500.000	462.718	1320074.36	0.0707	P	1.6
7	☐	1000.000	1019.280	2887616.74	0.1550	P	0.9
8	☐			10564.85	0.0006	P	3.3

$$y = 1.5153\text{E-}004 * x + 5.9518\text{E-}004$$

$$R = 0.9990$$

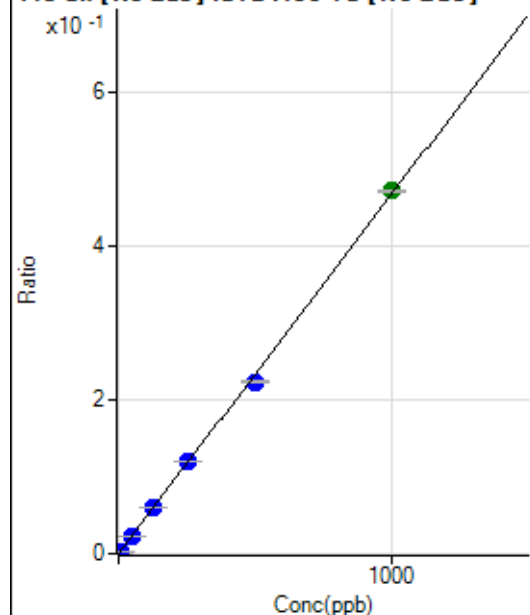
$$DL = 0.1793$$

$$BEC = 3.928$$

Weight: <None>

Min Conc: 0

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	1094.54	0.0001	P	4.1
2	☐	5.000	4.789	44198.45	0.0023	P	2.5
3	☐	50.000	47.338	428794.92	0.0222	P	0.5
4	☐	125.000	126.619	1112835.44	0.0592	P	0.6
5	☐	250.000	255.222	2251649.88	0.1192	P	0.5
6	☐	500.000	477.415	4161528.91	0.2229	P	0.8
7	☐	1000.000	1009.919	8780554.71	0.4715	A	0.4
8	☐			6454.54	0.0004	P	4.0

$$y = 4.6678\text{E-}004 * x + 5.6227\text{E-}005$$

$$R = 0.9996$$

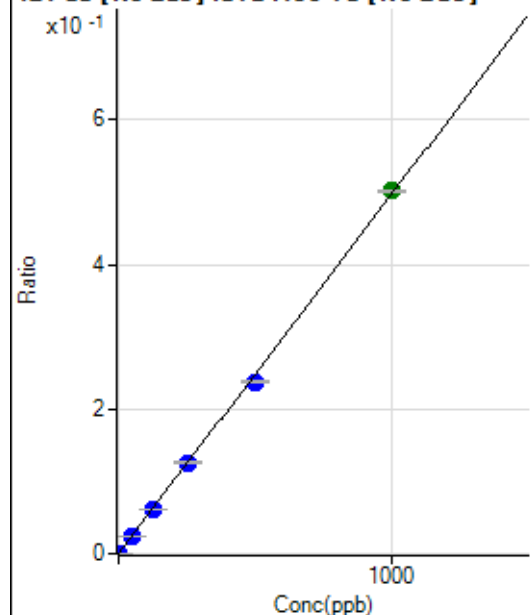
$$DL = 0.01483$$

$$BEC = 0.1205$$

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	44.45	0.0000	P	28.4
2	☐	2.000	1.862	17884.34	0.0009	P	0.8
3	☐	50.000	46.592	448060.05	0.0231	P	1.6
4	☐	125.000	125.106	1169135.49	0.0622	P	0.3
5	☐	250.000	253.751	2381459.54	0.1261	P	0.6
6	☐	500.000	478.306	4436061.51	0.2376	P	1.1
7	☐	1000.000	1010.067	9345149.86	0.5018	A	0.7
8	☐			13712.79	0.0008	P	8.5

$$y = 4.9678\text{E-}004 * x + 2.2821\text{E-}006$$

$$R = 0.9996$$

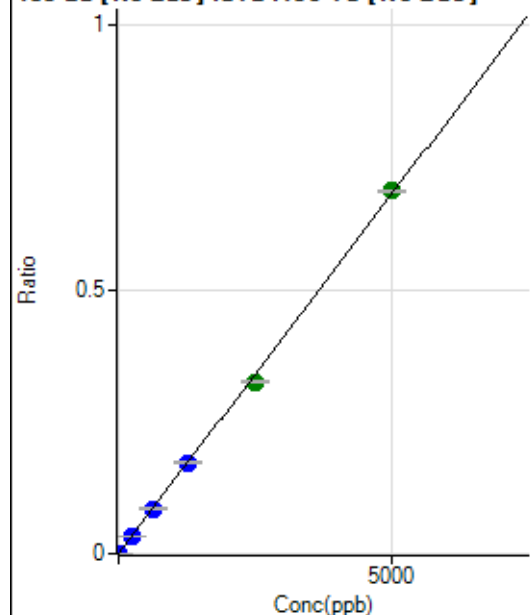
$$DL = 0.003909$$

$$BEC = 0.004594$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	55.56	0.0000	P	37.9
2	☐	10.000	9.503	24981.62	0.0013	P	1.5
3	☐	250.000	236.994	623933.40	0.0322	P	1.1
4	☐	625.000	627.985	1606624.59	0.0854	P	0.9
5	☐	1250.000	1270.751	3264942.04	0.1728	P	0.1
6	☐	2500.000	2391.347	6071802.17	0.3252	A	0.9
7	☐	5000.000	5049.417	12789522.07	0.6867	A	0.4
8	☐			4092.45	0.0002	P	11.2

$$y = 1.3600\text{E-}004 * x + 2.8554\text{E-}006$$

$$R = 0.9996$$

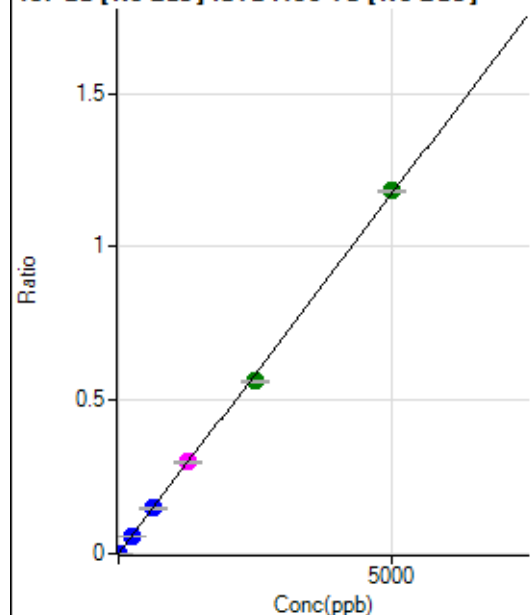
$$DL = 0.02385$$

$$BEC = 0.021$$

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	66.67	0.0000	P	76.1
2	☐	10.000	9.757	44149.01	0.0023	P	0.9
3	☐	250.000	238.842	1083085.77	0.0560	P	1.0
4	☐	625.000	628.707	2770574.34	0.1473	P	0.3
5	☐	1250.000	1271.428	5626763.28	0.2978	M	0.9
6	☐	2500.000	2397.750	10486560.48	0.5617	A	1.0
7	☐	5000.000	5045.863	22014559.17	1.1821	A	0.2
8	☐			7102.13	0.0004	P	1.2

$$y = 2.3426\text{E-}004 * x + 3.4251\text{E-}006$$

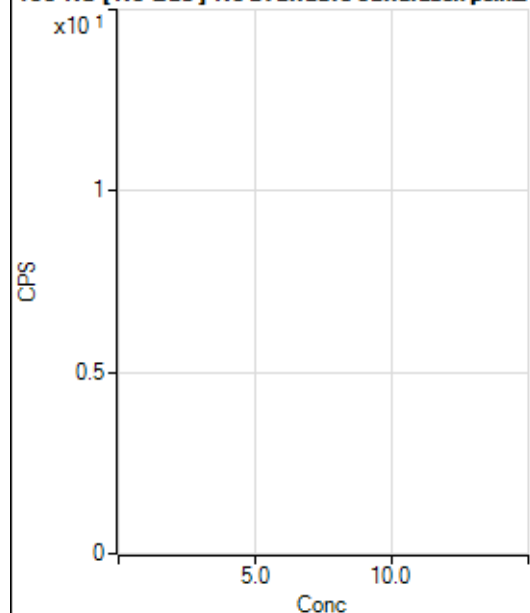
$$R = 0.9997$$

$$DL = 0.03337$$

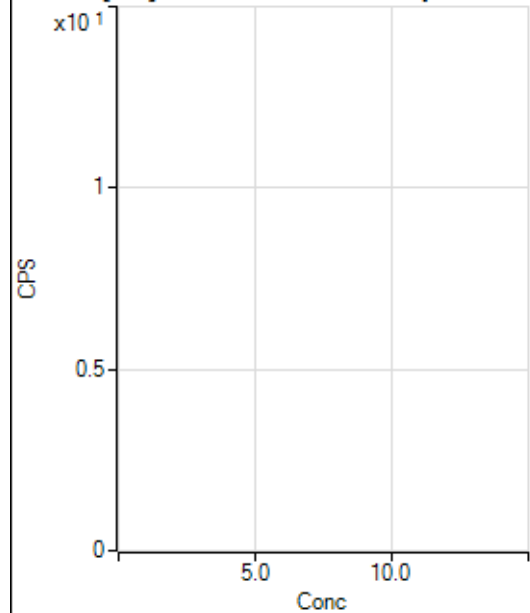
$$BEC = 0.01462$$

Weight: <None>

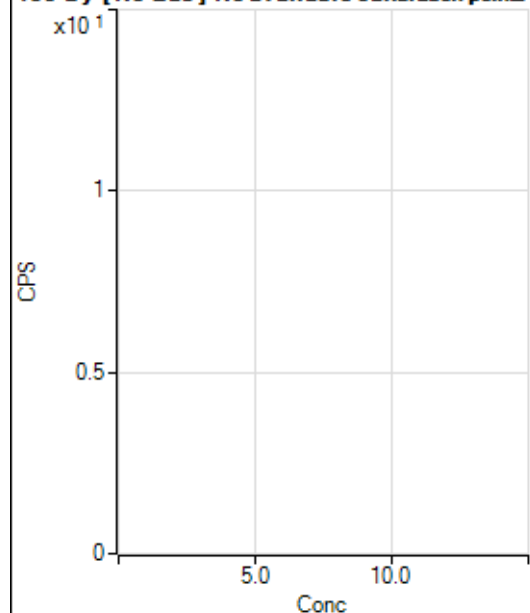
Min Conc: 0

150 Nd [No Gas] No available calibration points

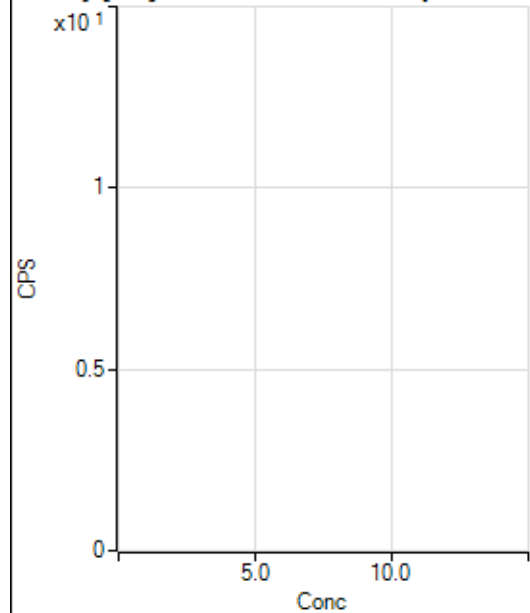
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			13.33		P	100.
2	☐			17.78		P	43.3
3	☐			257.79		P	13.3
4	☐			746.72		P	12.1
5	☐			1411.24		P	4.8
6	☐			2640.34		P	7.8
7	☐			5316.76		P	2.3
8	☐			108.89		P	3.5

150 Nd [He] No available calibration points

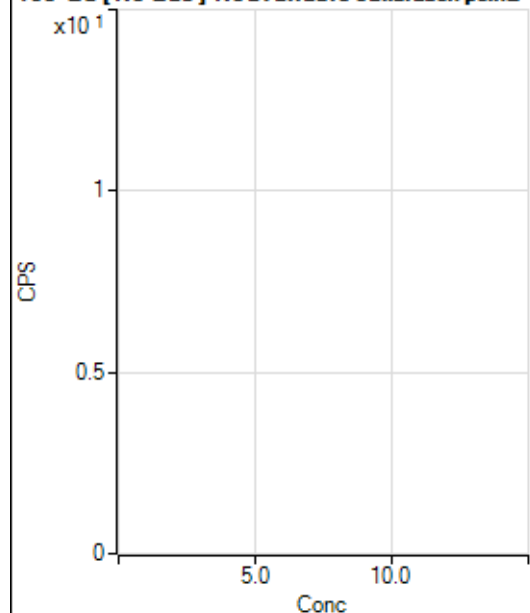
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			12.22		P	78.7
2	☐			11.11		P	45.8
3	☐			33.33		P	50.0
4	☐			45.56		P	4.2
5	☐			83.34		P	30.2
6	☐			172.23		P	14.7
7	☐			301.12		P	11.1
8	☐			55.55		P	35.2

156 Dy [No Gas] No available calibration points

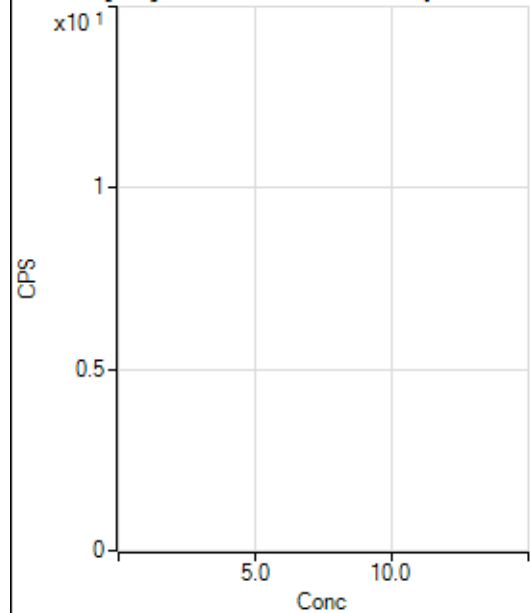
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			44.45		P	39.0
2	☐			36.11		P	13.3
3	☐			50.00		P	44.1
4	☐			108.34		P	13.3
5	☐			238.90		P	37.3
6	☐			425.02		P	13.6
7	☐			791.73		P	5.3
8	☐			480.59		P	13.5

156 Dy [He] No available calibration points

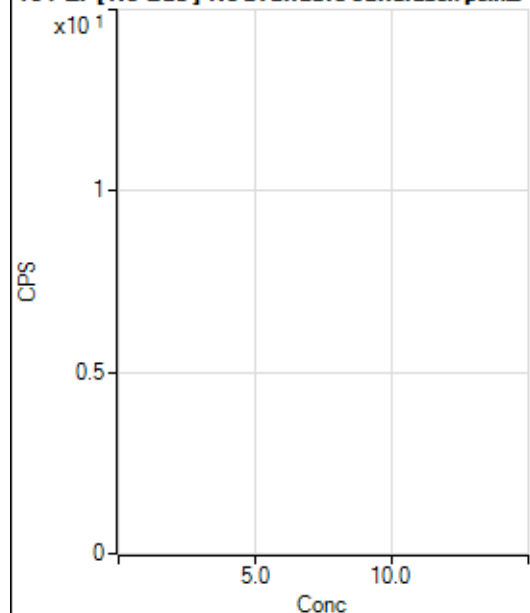
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			21.11		P	24.1
2	☐			24.45		P	15.8
3	☐			31.11		P	32.7
4	☐			58.89		P	35.9
5	☐			102.23		P	18.5
6	☐			133.34		P	16.4
7	☐			281.12		P	5.8
8	☐			222.23		P	8.3

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

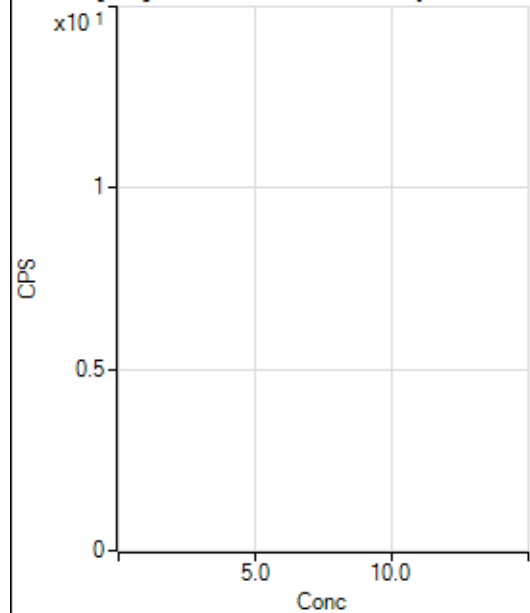
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			122.23		P	21.9
2	☐			113.90		P	23.5
3	☐			122.23		P	3.9
4	☐			205.56		P	27.6
5	☐			211.12		P	14.9
6	☐			261.13		P	1.8
7	☐			277.79		P	20.0
8	☐			533.37		P	2.7

160 Gd [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			260.01		P	12.2
2	☐			291.12		P	6.6
3	☐			304.46		P	9.9
4	☐			261.12		P	6.4
5	☐			293.34		P	6.3
6	☐			316.68		P	6.4
7	☐			295.56		P	11.3
8	☐			471.13		P	6.3

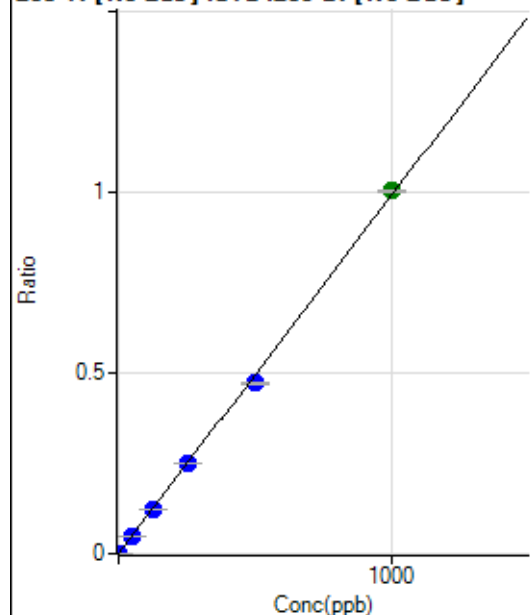
164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			105.56		P	43.5
2	☐			102.79		P	40.8
3	☐			119.45		P	29.0
4	☐			108.34		P	55.5
5	☐			88.89		P	14.3
6	☐			113.89		P	36.8
7	☐			150.01		P	24.2
8	☐			125.00		P	37.1

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			77.78		P	35.7
2	☐			62.22		P	27.0
3	☐			62.22		P	20.3
4	☐			52.22		P	20.5
5	☐			63.33		P	22.9
6	☐			78.89		P	35.2
7	☐			70.00		P	9.5
8	☐			97.78		P	8.6

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



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	713.94	0.0001	P	7.6
2	☐	1.000	0.895	12701.01	0.0009	P	5.3
3	☐	50.000	46.501	616718.32	0.0461	P	0.6
4	☐	125.000	123.983	1567459.29	0.1229	P	1.5
5	☐	250.000	250.131	3154744.54	0.2478	P	0.2
6	☐	500.000	475.285	5811882.81	0.4709	P	1.6
7	☐	1000.000	1012.627	12019341.67	1.0032	A	0.2
8	☐			4865.01	0.0005	P	8.6

$$y = 9.9059\text{E-}004 * x + 5.2679\text{E-}005$$

$$R = 0.9996$$

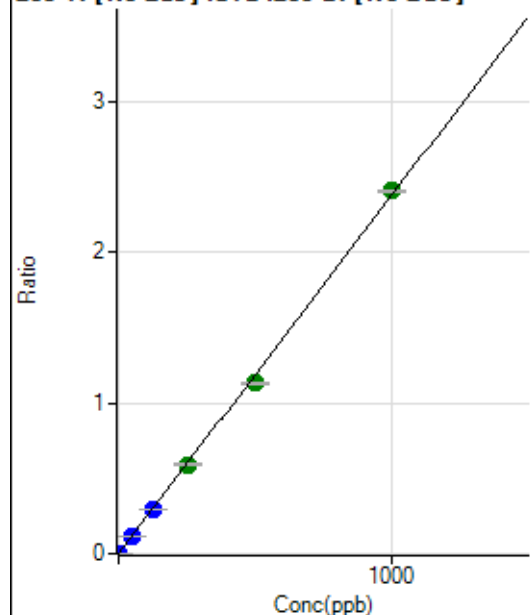
$$DL = 0.01215$$

$$BEC = 0.05318$$

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	1133.43	0.0001	P	5.9
2	☐	1.000	0.906	30196.27	0.0022	P	1.9
3	☐	50.000	46.594	1480382.85	0.1107	P	0.4
4	☐	125.000	123.904	3753638.71	0.2942	P	0.5
5	☐	250.000	248.714	7516919.52	0.5905	A	1.0
6	☐	500.000	475.458	13933439.46	1.1288	A	1.3
7	☐	1000.000	1012.900	28812225.64	2.4047	A	0.3
8	☐			11132.92	0.0012	P	3.7

$$y = 0.0024 * x + 8.3603\text{E-}005$$

$$R = 0.9996$$

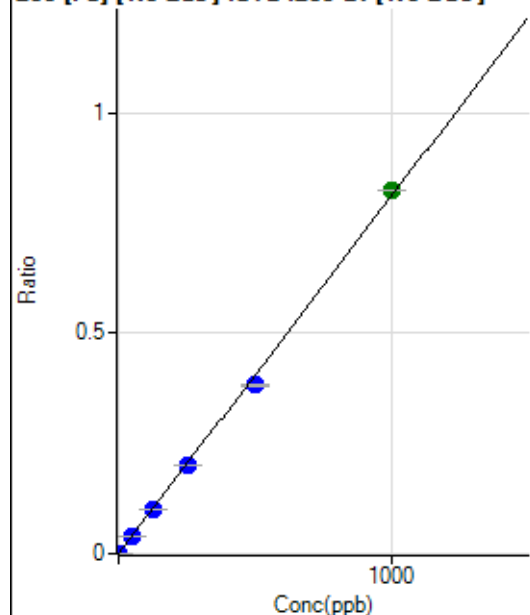
$$DL = 0.006225$$

$$BEC = 0.03522$$

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	842.65	0.0001	P	5.9
2	☐	1.000	0.924	10986.28	0.0008	P	0.9
3	☐	50.000	46.529	506079.60	0.0378	P	0.6
4	☐	125.000	123.364	1278690.94	0.1002	P	0.3
5	☐	250.000	248.353	2567713.80	0.2017	P	0.9
6	☐	500.000	472.888	4740431.99	0.3840	P	1.1
7	☐	1000.000	1014.346	9869119.09	0.8237	A	0.2
8	☐			40765.00	0.0042	P	0.8

$$y = 8.1198\text{E-}004 * x + 6.2187\text{E-}005$$

R = 0.9995

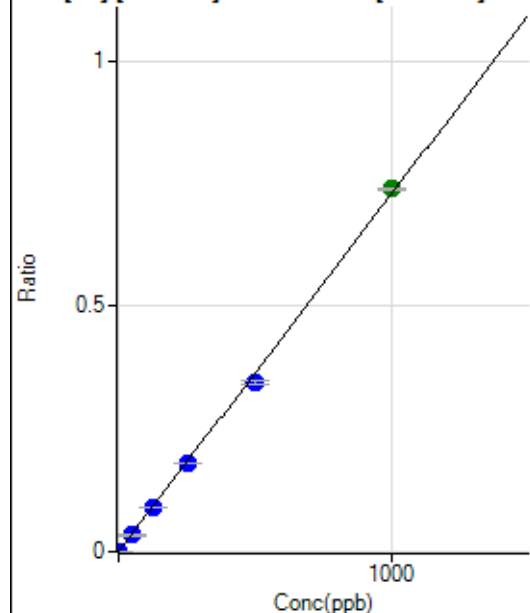
DL = 0.01358

BEC = 0.07659

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	916.73	0.0001	P	7.7
2	☐	1.000	0.869	9477.69	0.0007	P	1.0
3	☐	50.000	45.768	447243.50	0.0334	P	1.1
4	☐	125.000	123.166	1146698.59	0.0899	P	0.1
5	☐	250.000	248.183	2304703.28	0.1811	P	0.3
6	☐	500.000	473.393	4261960.80	0.3453	P	1.3
7	☐	1000.000	1014.199	8862307.08	0.7397	A	0.2
8	☐			37423.82	0.0039	P	1.1

$$y = 7.2924\text{E-}004 * x + 6.7651\text{E-}005$$

R = 0.9995

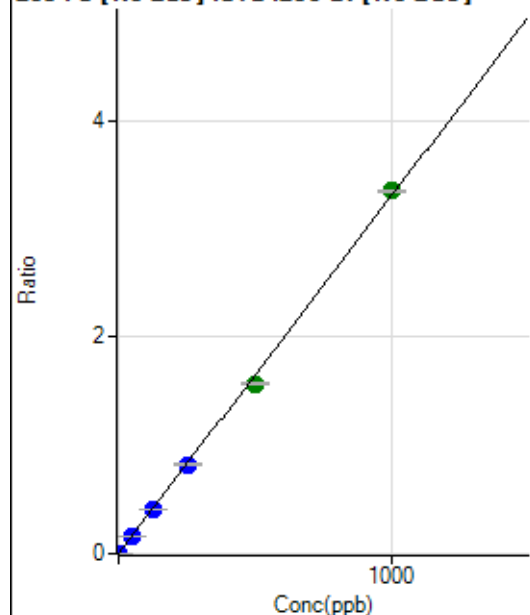
DL = 0.02148

BEC = 0.09277

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	3128.01	0.0002	P	1.1
2	☐	1.000	0.900	43315.60	0.0032	P	1.1
3	☐	50.000	46.026	2036236.64	0.1523	P	0.6
4	☐	125.000	123.263	5197195.64	0.4074	P	0.1
5	☐	250.000	249.442	10491215.53	0.8242	P	0.4
6	☐	500.000	473.419	19305093.84	1.5640	A	1.4
7	☐	1000.000	1013.846	40127839.62	3.3491	A	0.2
8	☐			166867.13	0.0174	P	1.0

$$y = 0.0033 * x + 2.3079E-004$$

$$R = 0.9995$$

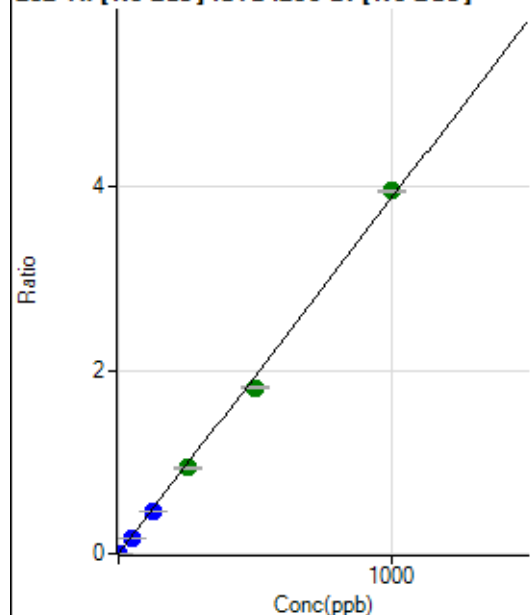
$$DL = 0.002319$$

$$BEC = 0.06987$$

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	2111.35	0.0002	P	2.6
2	☐	1.000	0.622	34668.71	0.0026	P	2.4
3	☐	50.000	42.659	2211803.70	0.1654	P	0.4
4	☐	125.000	117.597	5812947.70	0.4557	P	0.7
5	☐	250.000	241.225	11895641.70	0.9345	A	0.6
6	☐	500.000	466.736	22316816.24	1.8080	A	1.3
7	☐	1000.000	1020.118	47344465.87	3.9515	A	0.4
8	☐			11835.30	0.0012	P	3.3

$$y = 0.0039 * x + 1.5576E-004$$

$$R = 0.9992$$

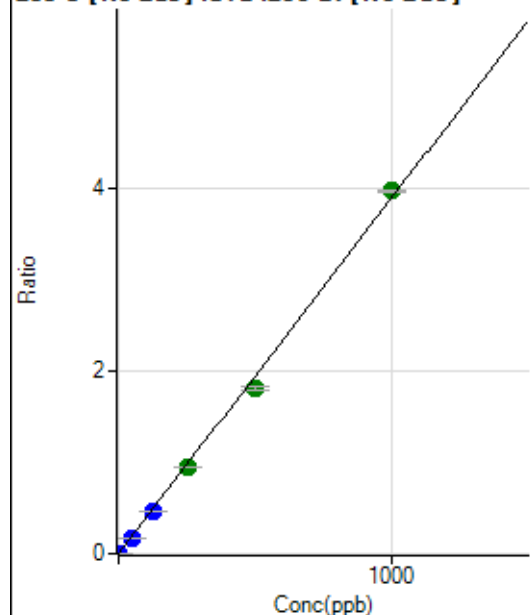
$$DL = 0.003091$$

$$BEC = 0.04021$$

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	2297.52	0.0002	P	1.5
2	☐	1.000	0.840	46509.10	0.0034	P	0.9
3	☐	50.000	43.440	2263707.17	0.1693	P	1.0
4	☐	125.000	118.931	5908448.40	0.4631	P	0.6
5	☐	250.000	241.959	11991746.01	0.9421	A	0.7
6	☐	500.000	465.621	22374914.04	1.8127	A	1.4
7	☐	1000.000	1020.286	47589943.42	3.9719	A	0.7
8	☐			9612.30	0.0010	P	2.8

$$y = 0.0039 * x + 1.6952E-004$$

$$R = 0.9991$$

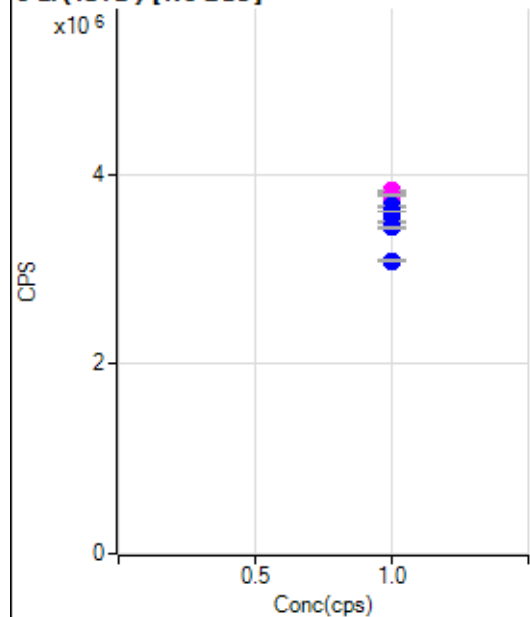
$$DL = 0.002025$$

$$BEC = 0.04355$$

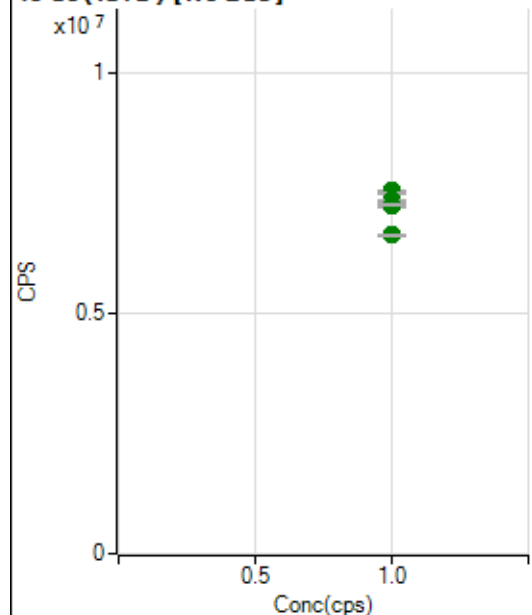
Weight: <None>

Min Conc: 0

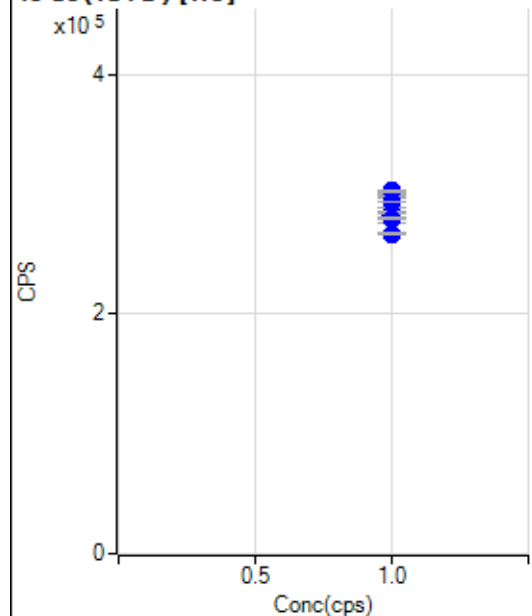
6 Li (ISTD) [No Gas]



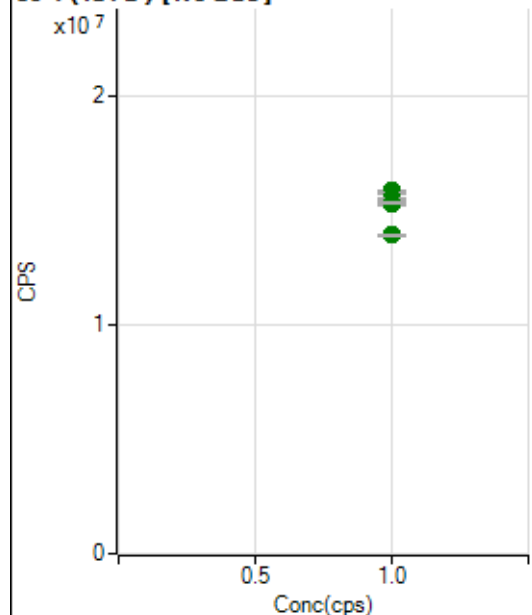
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	1.000		3823038.76		M	0.7
2	☐	1.000		3815936.23		M	0.5
3	☐	1.000		3773756.23		M	0.3
4	☐	1.000		3659231.54		P	0.4
5	☐	1.000		3612823.94		P	0.1
6	☐	1.000		3497254.22		P	0.9
7	☐	1.000		3438742.35		P	0.9
8	☐	1.000		3084871.20		P	0.5

45 Sc (ISTD) [No Gas]

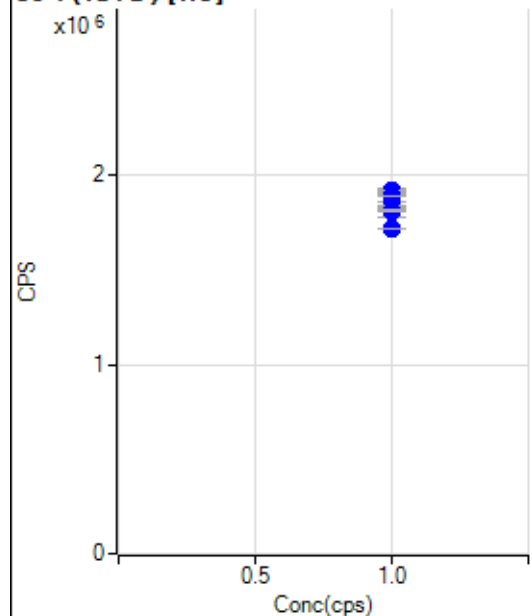
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		7553514.84		A	0.6
2	☐	1.000		7536446.18		A	0.5
3	☐	1.000		7515586.54		A	0.4
4	☐	1.000		7355848.86		A	0.5
5	☐	1.000		7360166.66		A	0.4
6	☐	1.000		7248095.04		A	1.0
7	☐	1.000		7257989.14		A	0.5
8	☐	1.000		6636861.22		A	0.6

45 Sc (ISTD) [He]

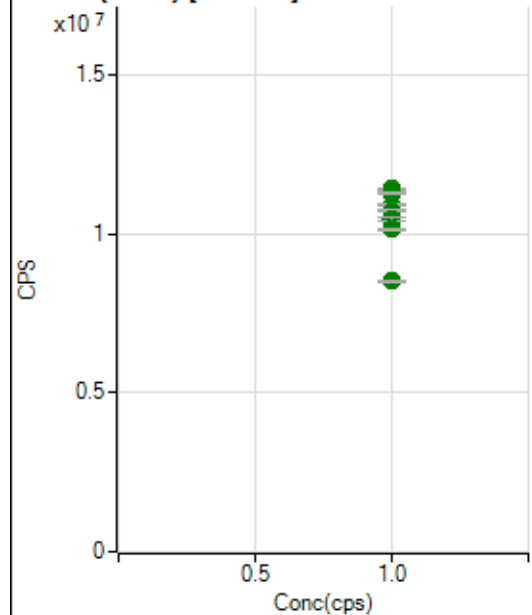
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		298700.03		P	1.3
2	☐	1.000		298547.50		P	0.2
3	☐	1.000		302656.90		P	0.3
4	☐	1.000		282463.37		P	4.7
5	☐	1.000		293726.00		P	0.2
6	☐	1.000		284415.11		P	0.7
7	☐	1.000		279635.96		P	0.9
8	☐	1.000		266400.76		P	0.6

89 Y (ISTD) [No Gas]

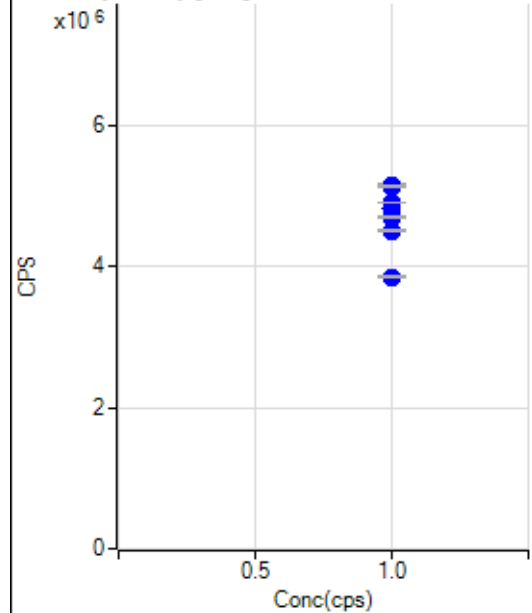
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		15868332.68		A	0.3
2	☐	1.000		15776230.74		A	0.4
3	☐	1.000		15800965.88		A	0.2
4	☐	1.000		15524213.52		A	0.4
5	☐	1.000		15521854.35		A	0.4
6	☐	1.000		15287316.16		A	0.9
7	☐	1.000		15340497.55		A	0.9
8	☐	1.000		13940167.01		A	0.3

89 Y (ISTD) [He]

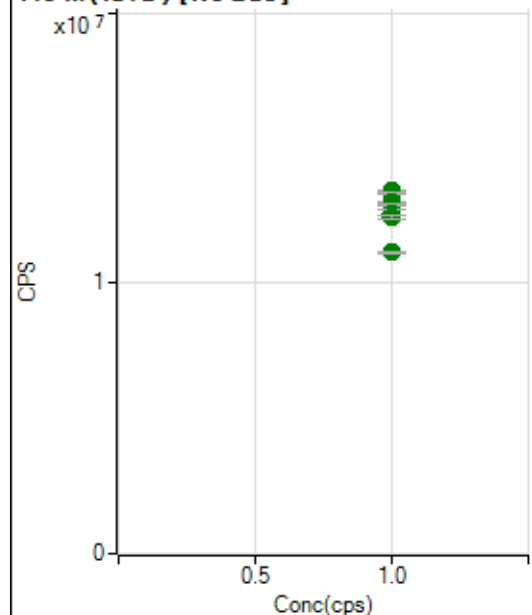
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		1916139.47		P	1.9
2	☐	1.000		1910927.47		P	0.5
3	☐	1.000		1915869.28		P	0.1
4	☐	1.000		1818047.99		P	4.4
5	☐	1.000		1892076.79		P	0.2
6	☐	1.000		1834846.78		P	0.6
7	☐	1.000		1810563.41		P	0.7
8	☐	1.000		1719046.61		P	0.2

103 Rh (ISTD) [No Gas]

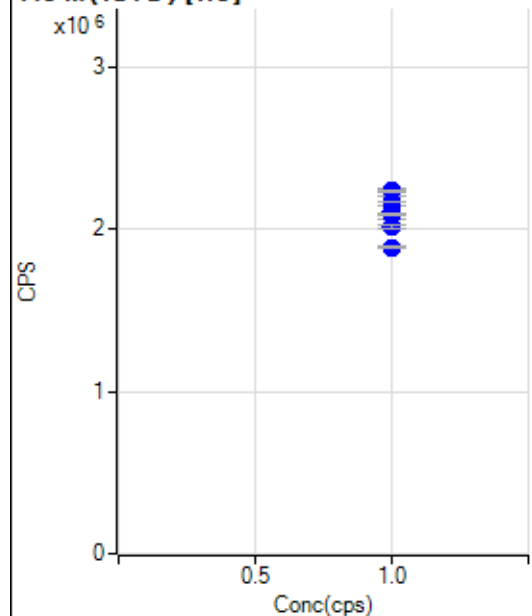
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		11413523.34		A	0.6
2	☐	1.000		11318888.80		A	0.5
3	☐	1.000		11267930.29		A	0.3
4	☐	1.000		10908443.04		A	0.6
5	☐	1.000		10730820.12		A	0.6
6	☐	1.000		10466647.20		A	0.7
7	☐	1.000		10152132.52		A	0.7
8	☐	1.000		8503351.49		A	0.5

103 Rh (ISTD) [He]

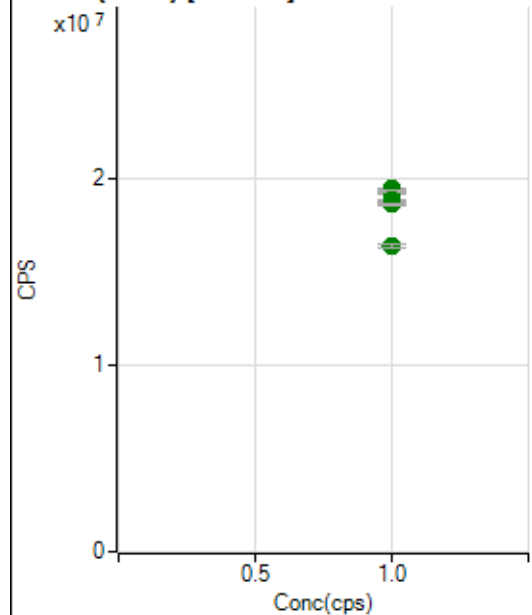
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		5141832.04		P	1.0
2	☐	1.000		5128842.88		P	0.4
3	☐	1.000		5133032.63		P	0.7
4	☐	1.000		4813142.81		P	4.3
5	☐	1.000		4911793.96		P	0.1
6	☐	1.000		4700543.30		P	0.9
7	☐	1.000		4503024.24		P	0.7
8	☐	1.000		3854490.50		P	0.1

115 In (ISTD) [No Gas]

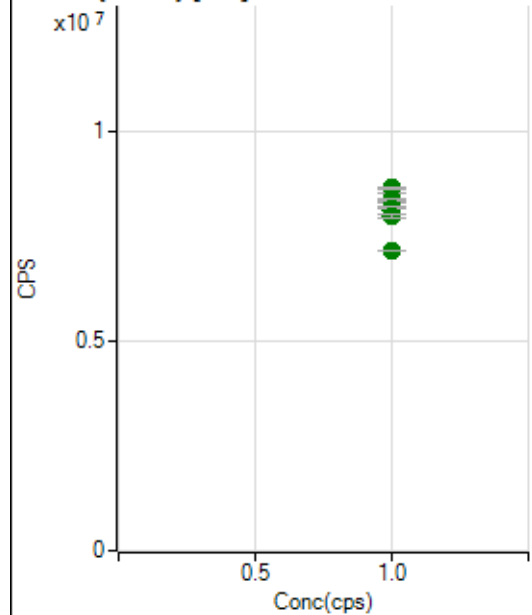
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		13423730.23		A	0.2
2	☐	1.000		13355771.08		A	0.3
3	☐	1.000		13319090.63		A	0.5
4	☐	1.000		12997677.57		A	0.3
5	☐	1.000		12886514.82		A	0.4
6	☐	1.000		12625317.41		A	1.3
7	☐	1.000		12433082.20		A	0.9
8	☐	1.000		11136774.54		A	0.2

115 In (ISTD) [He]

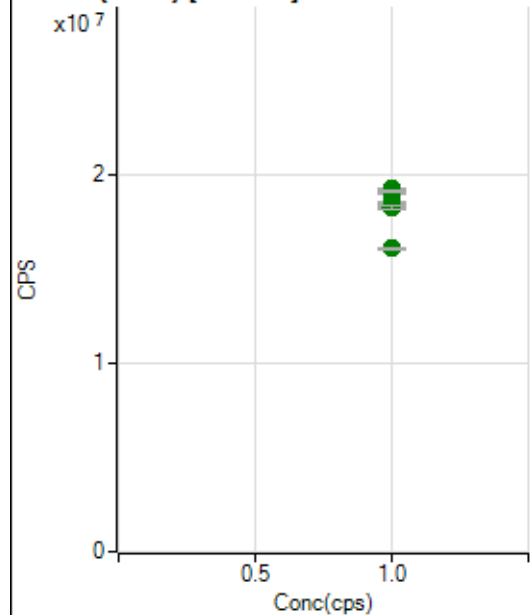
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2228394.10		P	1.6
2	☐	1.000		2236091.25		P	0.2
3	☐	1.000		2235155.07		P	0.3
4	☐	1.000		2103867.90		P	4.5
5	☐	1.000		2172615.90		P	0.1
6	☐	1.000		2088873.24		P	0.8
7	☐	1.000		2011472.55		P	1.2
8	☐	1.000		1889364.86		P	0.6

159 Tb (ISTD) [No Gas]

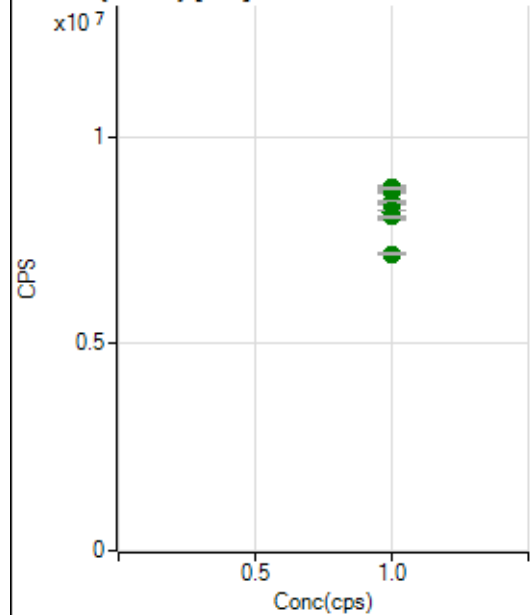
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		19465919.43		A	0.3
2	☐	1.000		19287477.63		A	0.8
3	☐	1.000		19356680.96		A	0.2
4	☐	1.000		18811103.19		A	0.5
5	☐	1.000		18891588.75		A	0.3
6	☐	1.000		18670995.83		A	1.4
7	☐	1.000		18624006.67		A	0.5
8	☐	1.000		16384427.67		A	0.9

159 Tb (ISTD) [He]

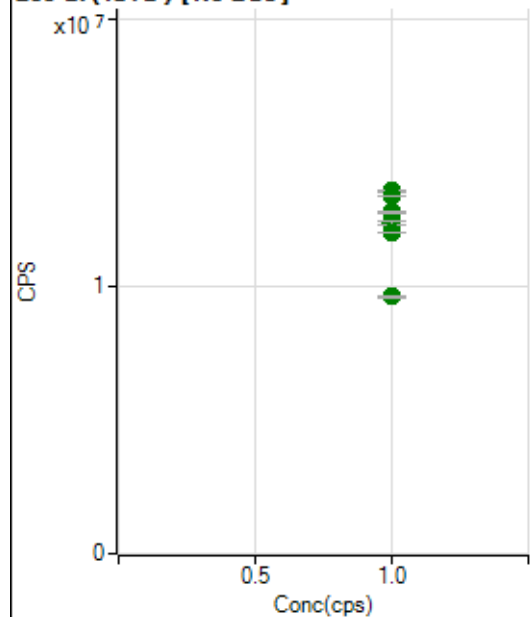
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8596124.11		A	1.8
2	☐	1.000		8516309.39		A	0.2
3	☐	1.000		8648230.01		A	0.3
4	☐	1.000		8111000.71		A	4.4
5	☐	1.000		8364056.27		A	0.7
6	☐	1.000		8173059.25		A	0.7
7	☐	1.000		7977007.94		A	0.7
8	☐	1.000		7152024.62		A	0.3

165 Ho (ISTD) [No Gas]

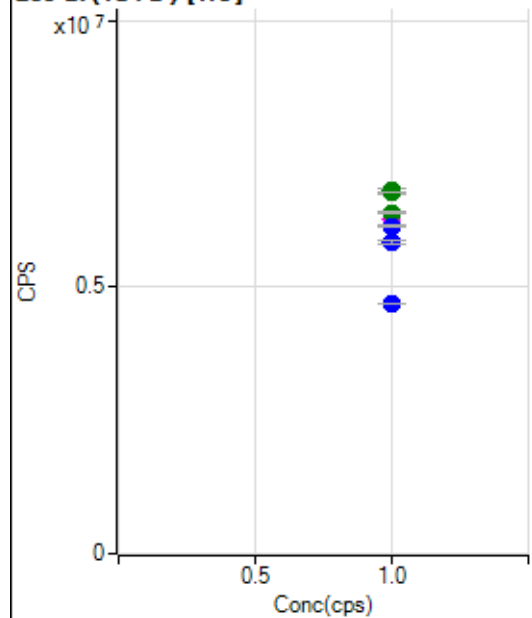
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		19262034.81		A	0.4
2	☐	1.000		19089542.44		A	0.5
3	☐	1.000		19163151.99		A	0.6
4	☐	1.000		18535405.10		A	0.7
5	☐	1.000		18518682.71		A	0.8
6	☐	1.000		18419529.40		A	1.0
7	☐	1.000		18270161.87		A	0.7
8	☐	1.000		16094069.80		A	0.8

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8729644.59		A	1.7
2	☐	1.000		8685506.47		A	0.6
3	☐	1.000		8760012.30		A	0.6
4	☐	1.000		8183012.10		A	4.5
5	☐	1.000		8424952.93		A	0.4
6	☐	1.000		8215000.64		A	0.3
7	☐	1.000		8061135.64		A	0.6
8	☐	1.000		7172784.20		A	0.1

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		13553524.66		A	0.7
2	☐	1.000		13517511.46		A	0.7
3	☐	1.000		13373135.35		A	0.1
4	☐	1.000		12757378.98		A	0.3
5	☐	1.000		12729537.45		A	0.7
6	☐	1.000		12344787.87		A	1.4
7	☐	1.000		11981565.10		A	0.2
8	☐	1.000		9612599.79		A	0.7

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6804342.26		A	1.8
2	☐	1.000		6773460.46		A	0.2
3	☐	1.000		6794844.35		A	0.1
4	☐	1.000		6264792.55		M	4.0
5	☐	1.000		6389292.75		A	0.7
6	☐	1.000		6139908.93		P	0.5
7	☐	1.000		5839759.08		P	1.3
8	☐	1.000		4693932.12		P	0.2

US EPA Tune Check Sample Report

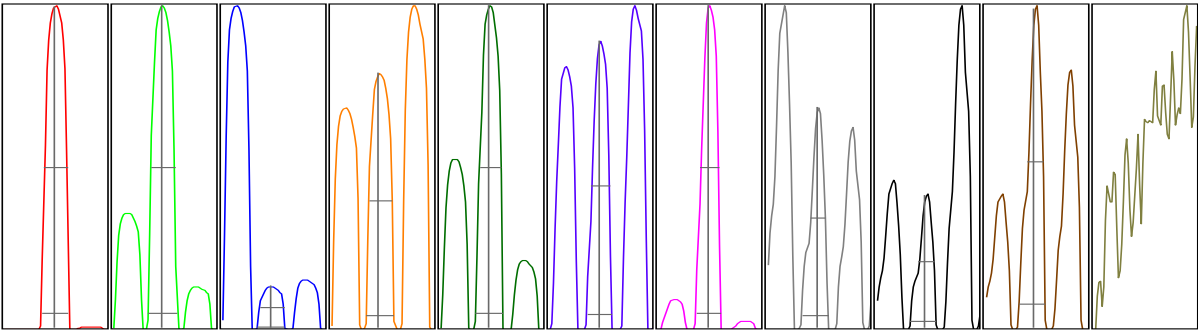
Batch Folder D:\ICP-MS Data\P7011720MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	9965	1.79	5.00	
24	167299	1.62	5.00	
25	22603	1.52	5.00	
26	25504	1.54	5.00	
59	79111	1.54	5.00	
113	10945	1.75	5.00	
115	134109	1.31	5.00	
206	37158	1.80	5.00	
207	34193	1.91	5.00	
208	82058	1.84	5.00	
220	101	2.92		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	10008	9658	10081	10094	9984
24	168444	162502	168339	169138	168070
25	22718	21991	22755	22815	22734
26	25632	24822	25724	25805	25538
59	79765	77006	79418	80070	79299
113	11011	10609	11080	11044	10982
115	135250	131086	134470	135431	134310
206	37186	35999	37616	37465	37525
207	34405	33039	34431	34670	34419
208	82576	79435	82381	83331	82566
220	103	99	103	104	97

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	15599	9.00	8.9 - 9.1		0.786	0.900	
24	258467	23.95	23.9 - 24.1		0.833	0.900	
25	34185	24.95	24.9 - 25.1		0.793	0.900	
26	39499	25.90	25.9 - 26.1		0.794	0.900	
59	129904	58.95	58.9 - 59.1		0.788	0.900	
113	21276	113.00	112.9 - 113.1		0.730	0.900	
115	260714	115.00	114.9 - 115.1		0.731	0.900	
206	79745	206.00	205.9 - 206.1		0.773	0.900	
207	71458	206.95	206.9 - 207.1		0.737	0.900	
208	171691	207.95	207.9 - 208.1		0.750	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	6.7	V	Deflect	13.0	V
Extract 2	-100.0	V	Cell Entrance	-30	V	Plate Bias	-35	V
Omega Bias	-50	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	18445	0.69	
89	33374	0.23	
205	28930	0.50	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	18371	18498	18362	18347	18647
89	33422	33457	33293	33291	33408
205	28779	29152	28844	28891	28982

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	7.2	V	Deflect	1.4	V
Extract 2	-105.0	V	Cell Entrance	-40	V	Plate Bias	-60	V
Omega Bias	-55	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			