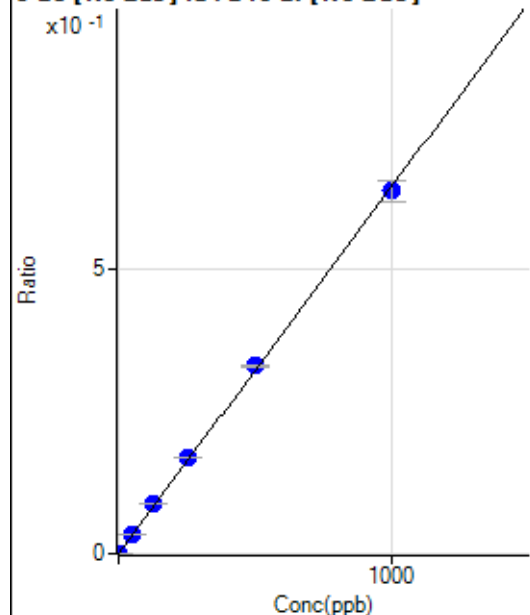


Batch Folder: D:\ICP-MS Data\P7122018-MS.b\
Analysis File: P7122018-MS.batch.bin
DA Date-Time: 2018-12-21 00:47:10
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

Level	Standard Data File	Sample Name	Acq. Date-Time
1	003CALB.d	S00	2018-12-20 12:11:43
2	004CALS.d	S01	2018-12-20 12:15:17
3	005CALS.d	S02	2018-12-20 12:20:14
4	006CALS.d	S03	2018-12-20 12:24:09
5	007CALS.d	S04	2018-12-20 12:28:17
6	008CALS.d	S05	2018-12-20 12:32:05
7	009CALS.d	S06	2018-12-20 12:35:52
8	010CALS.d	S07	2018-12-20 12:39:36
9	011CALS.d	S08	2018-12-20 12:43:22

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	0.0000	P	29.3
2	☐	0.100	0.105	470.39	0.0001	P	11.7
3	☐	1.000	1.024	4161.79	0.0007	P	5.8
4	☐	50.000	53.268	216853.20	0.0343	P	5.0
5	☐	125.000	135.050	497592.23	0.0868	P	0.3
6	☐	250.000	263.505	868975.53	0.1694	P	0.7
7	☐	500.000	512.900	1685414.64	0.3297	P	0.8
8	☐	1000.000	988.754	3367027.27	0.6356	P	6.1
9	☐			412.98	0.0001	P	7.3

$$y = 6.4285E-004 * x + 7.9508E-006$$

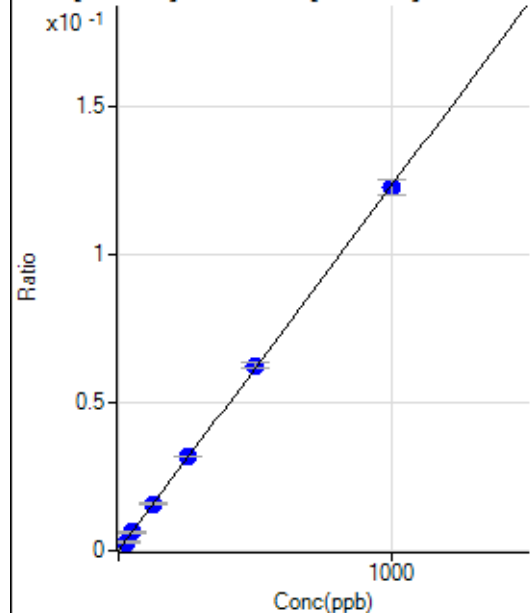
$$R = 0.9997$$

$$DL = 0.01086$$

$$BEC = 0.01237$$

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	486.14	0.0001	P	5.3
2	☐	2.500	2.089	2080.79	0.0003	P	5.9
3	☐	25.000	22.825	18053.14	0.0029	P	4.8
4	☐	50.000	49.523	39146.08	0.0062	P	4.1
5	☐	125.000	128.398	91107.58	0.0159	P	2.8
6	☐	250.000	256.987	162868.70	0.0318	P	1.5
7	☐	500.000	507.659	320210.13	0.0626	P	3.3
8	☐	1000.000	994.078	649951.10	0.1226	P	4.3
9	☐			22395.21	0.0044	P	9.2

$$y = 1.2325E-004 * x + 7.7303E-005$$

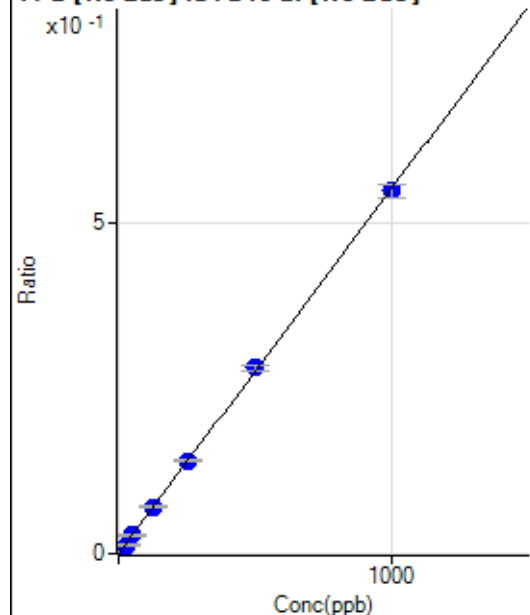
$$R = 0.9999$$

$$DL = 0.09915$$

$$BEC = 0.6272$$

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	1805.75	0.0003	P	8.0
2	☐	2.500	2.335	9789.63	0.0016	P	4.2
3	☐	25.000	22.895	80635.16	0.0129	P	2.9
4	☐	50.000	49.934	176157.71	0.0278	P	5.1
5	☐	125.000	127.943	405916.56	0.0708	P	2.1
6	☐	250.000	254.712	722002.78	0.1408	P	1.3
7	☐	500.000	508.383	1434480.53	0.2806	P	3.5
8	☐	1000.000	994.319	2908823.92	0.5486	P	3.8
9	☐			101511.04	0.0200	P	9.1

$$y = 5.5147\text{E-}004 * x + 2.8719\text{E-}004$$

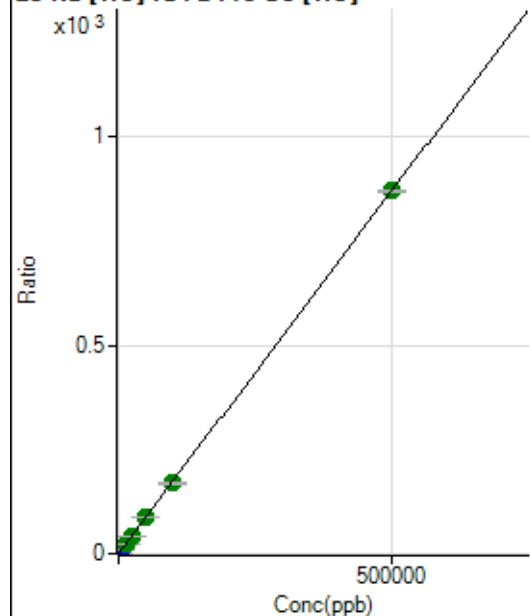
$$R = 0.9999$$

$$DL = 0.1255$$

$$BEC = 0.5208$$

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	9861.99	0.0246	P	1.5
2	☐	50.000	43.585	40697.95	0.1004	P	1.2
3	☐	500.000	436.948	318354.60	0.7842	P	0.6
4	☐	5000.000	4939.844	3287594.82	8.6118	P	0.2
5	☐	12500.000	12439.369	7274955.89	21.6487	A	0.6
6	☐	25000.000	25087.941	13499982.94	43.6365	A	0.2
7	☐	50000.000	49691.624	27297256.51	86.4065	A	1.2
8	☐	100000.00	97860.106	57005523.50	170.1406	A	2.6
9	☐	500000.00	500456.60	294831620.4	869.9976	A	0.2

$$y = 0.0017 * x + 0.0246$$

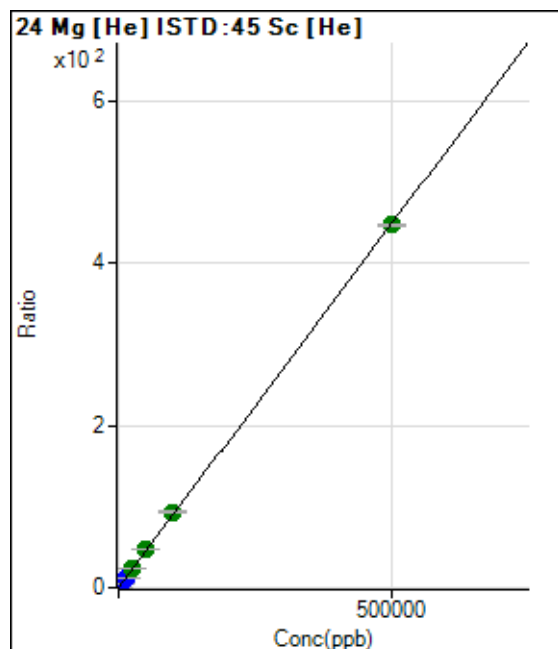
$$R = 1.0000$$

$$DL = 0.6462$$

$$BEC = 14.16$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	155.56	0.0004	P	10.3
2	☐	50.000	44.915	16498.65	0.0407	P	4.6
3	☐	500.000	469.422	171157.72	0.4216	P	0.3
4	☐	5000.000	5343.636	1830618.38	4.7953	P	0.1
5	☐	12500.000	13586.436	4096887.42	12.1916	P	0.6
6	☐	25000.000	27159.819	7539817.96	24.3712	A	0.3
7	☐	50000.000	53531.560	15175053.29	48.0348	A	1.0
8	☐	100000.00	104114.22	31300142.37	93.4232	A	2.8
9	☐	500000.00	498685.44	151643311.7	447.4761	A	0.2

$$y = 8.9731\text{E-}004 * x + 3.8820\text{E-}004$$

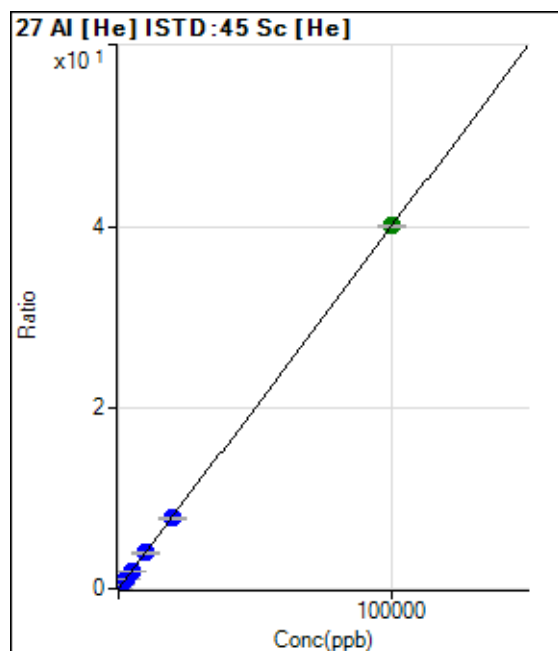
$$R = 0.9999$$

$$DL = 0.1342$$

$$BEC = 0.4326$$

Weight: <None>

Min Conc: 0



	R _j ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	41.67	0.0001	P	19.2
2	☐	2.000	1.727	322.24	0.0008	P	8.8
3	☐	20.000	16.271	2683.69	0.0066	P	9.7
4	☐	1000.000	995.732	152096.79	0.3984	P	0.2
5	☐	2500.000	2492.832	335129.88	0.9973	P	1.2
6	☐	5000.000	4994.755	618163.01	1.9981	P	0.5
7	☐	10000.000	9820.638	1241101.22	3.9286	P	1.0
8	☐	20000.000	19396.222	2599722.15	7.7590	P	2.4
9	☐	100000.00	100139.17	13575098.22	40.0577	A	0.3

$$y = 4.0002\text{E-}004 * x + 1.0393\text{E-}004$$

$$R = 1.0000$$

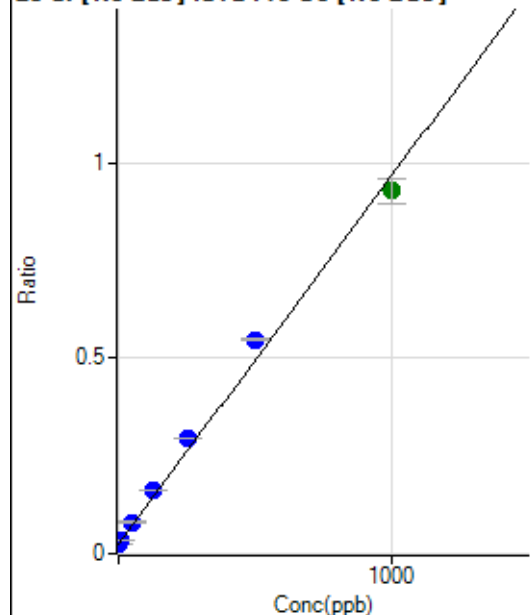
$$DL = 0.1497$$

$$BEC = 0.2598$$

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	250172.51	0.0247	P	3.1
2	☐	1.000	1.399	261764.14	0.0260	P	1.1
3	☐	10.000	10.120	346844.23	0.0343	P	0.5
4	☐	50.000	59.491	830322.41	0.0808	P	5.0
5	☐	125.000	148.391	1491531.40	0.1646	P	0.3
6	☐	250.000	286.869	2383224.75	0.2951	P	0.2
7	☐	500.000	556.093	4435550.45	0.5488	P	0.9
8	☐	1000.000	959.336	7803616.93	0.9289	A	6.8
9	☐			344012.72	0.0423	P	1.1

$$y = 9.4247\text{E-}004 * x + 0.0247$$

$$R = 0.9967$$

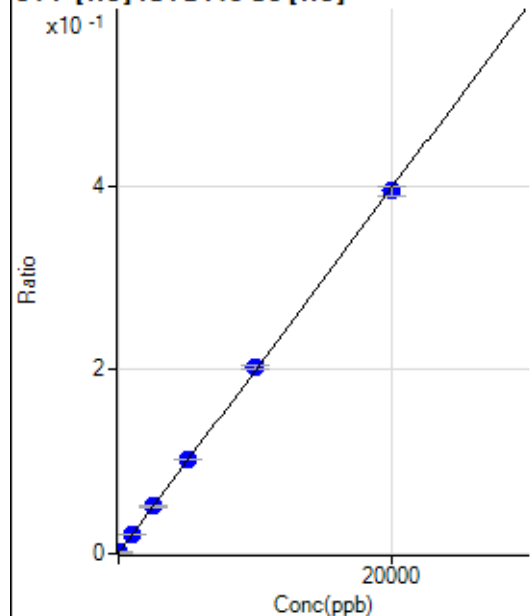
$$DL = 2.41$$

$$BEC = 26.22$$

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	-12.721	133.34	0.0003	P	25.8
2	☐	0.000	-10.518	152.79	0.0004	P	23.1
3	☐	0.000	23.240	425.03	0.0010	P	11.4
4	☐	1000.000	1014.701	7913.52	0.0207	P	4.9
5	☐	2500.000	2561.764	17288.39	0.0514	P	4.0
6	☐	5000.000	5159.285	31868.31	0.1030	P	0.7
7	☐	10000.000	10212.295	64230.68	0.2033	P	1.8
8	☐	20000.000	19845.576	132200.14	0.3946	P	2.6
9	☐			194.45	0.0006	P	17.4

$$y = 1.9852\text{E-}005 * x + 5.8594\text{E-}004$$

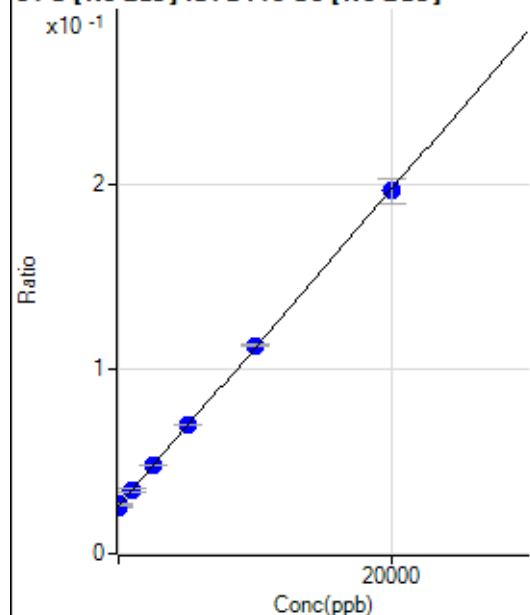
$$R = 0.9999$$

$$DL = 14.72$$

$$BEC = 29.51$$

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	-88.058	254493.94	0.0251	P	1.1
2	☐	0.000	8.192	261081.07	0.0260	P	0.9
3	☐	0.000	79.866	269125.58	0.0266	P	0.6
4	☐	1000.000	965.394	351099.73	0.0342	P	4.4
5	☐	2500.000	2583.043	434995.68	0.0480	P	0.8
6	☐	5000.000	5082.558	560312.09	0.0694	P	0.6
7	☐	10000.000	10153.656	911328.27	0.1128	P	0.5
8	☐	20000.000	19893.882	1647564.71	0.1961	P	6.6
9	☐			202958.63	0.0250	P	1.2

$$y = 8.5552E-006 * x + 0.0259$$

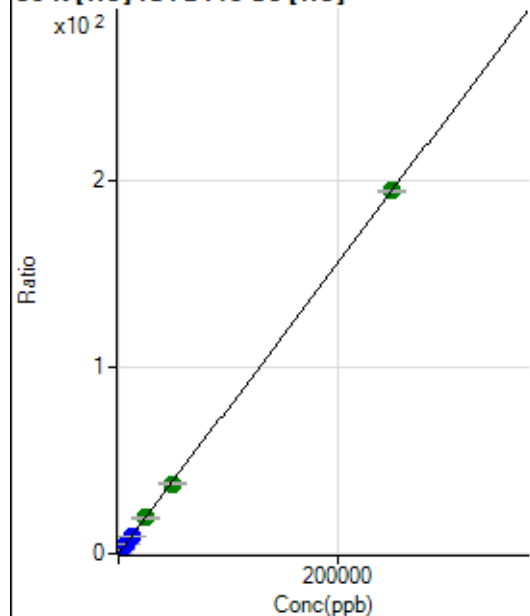
$$R = 0.9999$$

$$DL = 80.28$$

$$BEC = 3027$$

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	14304.75	0.0357	P	1.4
2	☐	50.000	45.494	28778.80	0.0710	P	2.2
3	☐	500.000	455.254	157791.54	0.3887	P	1.4
4	☐	2500.000	2528.579	762070.04	1.9962	P	0.4
5	☐	6250.000	6238.272	1637401.27	4.8725	P	0.1
6	☐	12500.000	12452.234	2997976.37	9.6905	P	0.1
7	☐	25000.000	24602.945	6037655.82	19.1114	A	1.0
8	☐	50000.000	48349.804	12571477.88	37.5234	A	2.9
9	☐	250000.00	250372.23	65799651.47	194.1602	A	0.6

$$y = 7.7534E-004 * x + 0.0357$$

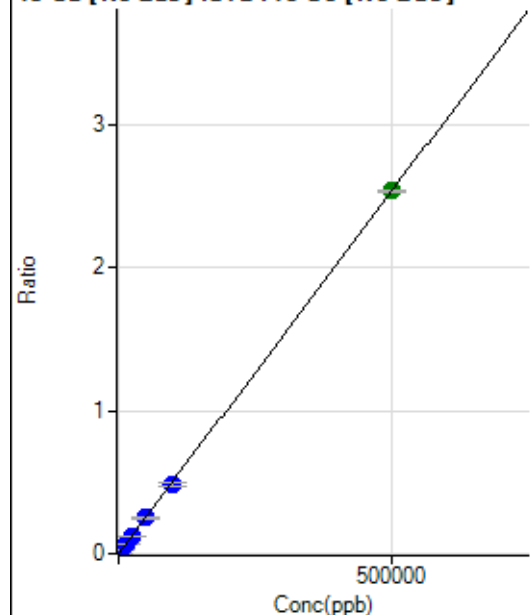
$$R = 1.0000$$

$$DL = 1.95$$

$$BEC = 46.06$$

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	4.4
2	☐	50.000	45.204	2436.42	0.0002	P	5.5
3	☐	500.000	427.333	22086.75	0.0022	P	2.2
4	☐	5000.000	4732.264	246935.82	0.0240	P	4.9
5	☐	12500.000	12527.900	576240.94	0.0636	P	0.5
6	☐	25000.000	24943.016	1022259.93	0.1266	P	0.2
7	☐	50000.000	49307.741	2022091.71	0.2502	P	1.2
8	☐	100000.00	96484.152	4114029.91	0.4896	P	6.3
9	☐	500000.00	500777.29	20642080.67	2.5409	A	0.2

$$y = 5.0739\text{E-}006 * x + 1.2900\text{E-}005$$

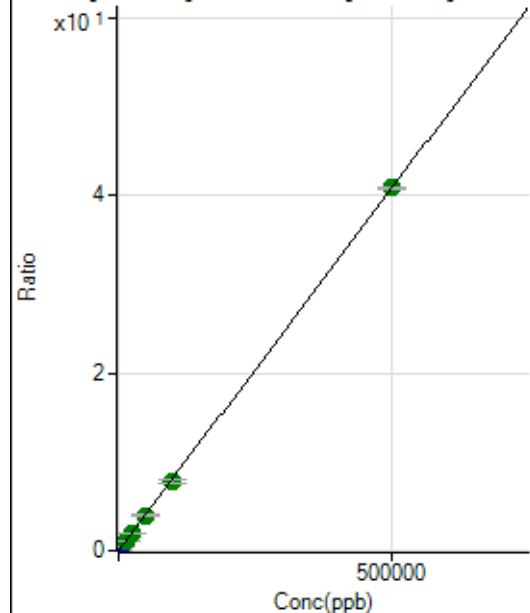
$$R = 1.0000$$

$$DL = 0.3355$$

$$BEC = 2.542$$

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	7083.10	0.0007	P	1.2
2	☐	50.000	45.529	44415.35	0.0044	P	0.7
3	☐	500.000	440.154	371002.71	0.0366	P	0.7
4	☐	5000.000	4741.815	3986529.65	0.3878	P	5.0
5	☐	12500.000	12469.347	9233398.30	1.0188	A	0.2
6	☐	25000.000	24834.003	16381530.92	2.0283	A	0.4
7	☐	50000.000	49070.068	32385119.13	4.0070	A	0.4
8	☐	100000.00	96189.272	65993856.33	7.8541	A	6.5
9	☐	500000.00	500866.84	332216232.4	40.8941	A	0.4

$$y = 8.1645\text{E-}005 * x + 6.9969\text{E-}004$$

$$R = 1.0000$$

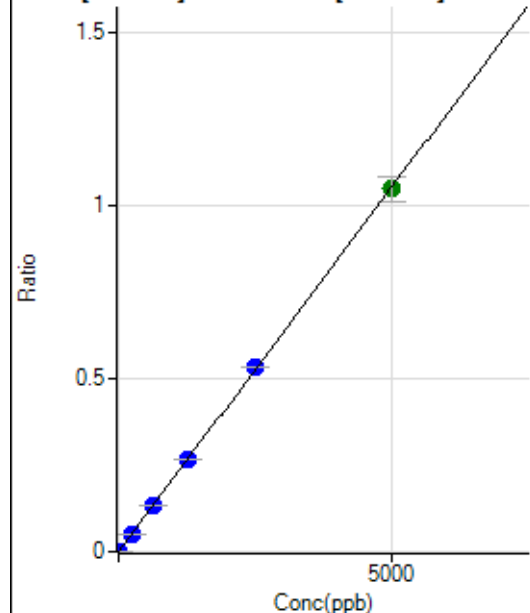
$$DL = 0.2991$$

$$BEC = 8.57$$

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	102.78	0.0000	P	38.8
2	☐	0.500	0.469	1094.53	0.0001	P	6.8
3	☐	5.000	4.763	10242.92	0.0010	P	2.6
4	☐	250.000	243.305	525862.48	0.0512	P	5.0
5	☐	625.000	642.836	1224947.35	0.1352	P	0.5
6	☐	1250.000	1267.221	2151778.52	0.2664	P	0.2
7	☐	2500.000	2526.744	4293313.85	0.5312	P	0.4
8	☐	5000.000	4980.428	8795789.78	1.0471	A	7.1
9	☐			4448.09	0.0005	P	9.0

$$y = 2.1023\text{E-}004 * x + 1.0172\text{E-}005$$

$$R = 1.0000$$

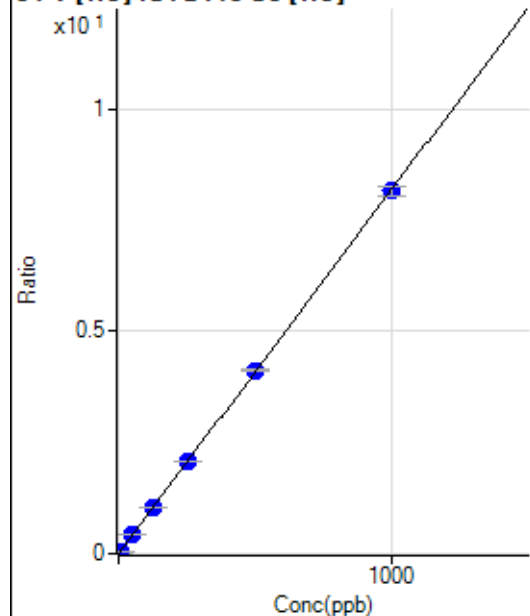
$$DL = 0.05637$$

$$BEC = 0.04838$$

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	3.33	0.0000	P	0.8
2	☐	0.500	0.494	1642.35	0.0041	P	5.1
3	☐	5.000	4.835	16058.93	0.0396	P	1.9
4	☐	50.000	50.982	159226.11	0.4171	P	0.9
5	☐	125.000	127.238	349805.14	1.0409	P	0.6
6	☐	250.000	254.570	644309.47	2.0826	P	0.5
7	☐	500.000	503.293	1300744.81	4.1174	P	1.2
8	☐	1000.000	996.883	2732406.59	8.1554	P	2.7
9	☐			460.02	0.0014	P	6.7

$$y = 0.0082 * x + 8.3148\text{E-}006$$

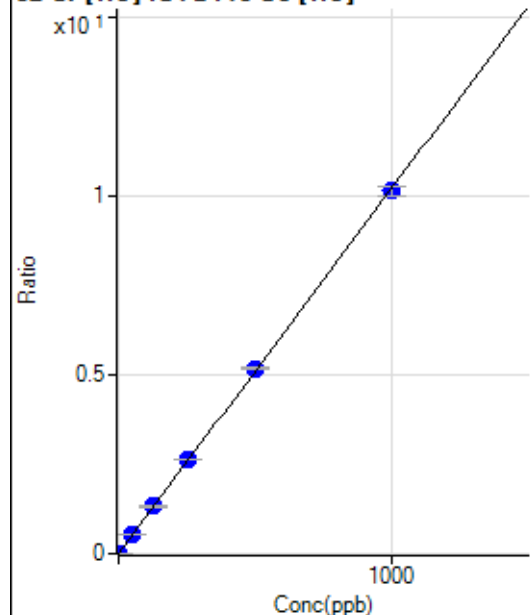
$$R = 1.0000$$

$$DL = 2.48\text{E-}05$$

$$BEC = 0.001016$$

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	1105.61	0.0028	P	7.9
2	☐	0.200	0.187	1890.15	0.0047	P	2.8
3	☐	2.000	1.856	8793.85	0.0217	P	2.4
4	☐	50.000	51.537	201469.51	0.5277	P	0.6
5	☐	125.000	128.858	442034.39	1.3154	P	0.6
6	☐	250.000	257.831	813388.79	2.6292	P	0.6
7	☐	500.000	507.315	1633482.58	5.1705	P	0.8
8	☐	1000.000	993.826	3392733.46	10.1264	P	2.8
9	☐			51750.57	0.1527	P	1.1

$$y = 0.0102 * x + 0.0028$$

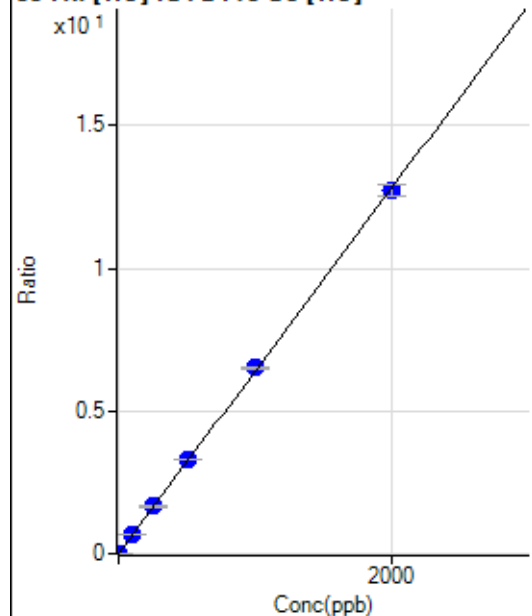
$$R = 0.9999$$

$$DL = 0.0646$$

$$BEC = 0.2711$$

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	67.78	0.0002	P	25.0
2	☐	0.100	0.101	330.01	0.0008	P	19.2
3	☐	1.000	0.939	2508.03	0.0062	P	2.8
4	☐	100.000	102.203	249723.52	0.6541	P	0.3
5	☐	250.000	258.304	555480.74	1.6530	P	0.5
6	☐	500.000	516.556	1022639.21	3.3055	P	0.6
7	☐	1000.000	1017.171	2056329.99	6.5089	P	0.6
8	☐	2000.000	1986.127	4257846.50	12.7091	P	3.0
9	☐			23671.48	0.0699	P	0.1

$$y = 0.0064 * x + 1.6944E-004$$

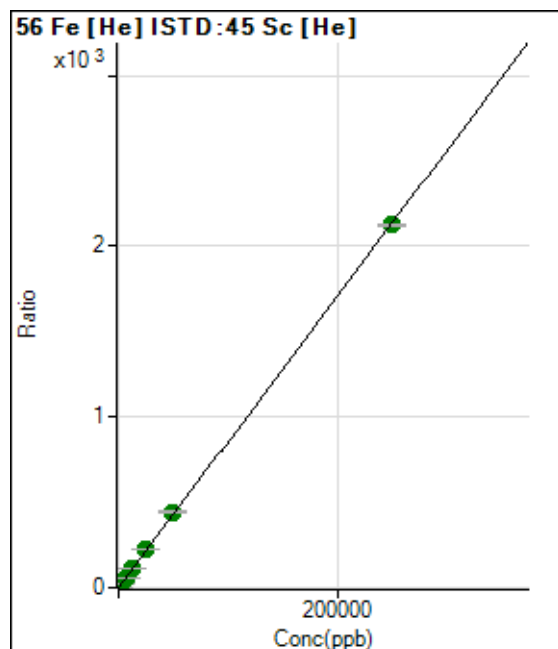
$$R = 0.9999$$

$$DL = 0.01989$$

$$BEC = 0.02648$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	4122.92	0.0103	P	2.8
2	☐	5.000	4.916	21152.72	0.0522	P	1.7
3	☐	50.000	51.605	182641.58	0.4499	P	1.2
4	☐	2500.000	2720.966	8852398.75	23.1887	A	0.8
5	☐	6250.000	6835.350	19570364.33	58.2367	A	0.3
6	☐	12500.000	13685.678	36070125.80	116.5908	A	0.0
7	☐	25000.000	26890.098	72367489.58	229.0717	A	1.1
8	☐	50000.000	52066.489	148588619.9	443.5351	A	3.3
9	☐	250000.00	249321.56	719737460.5	2,123.838	A	0.2

$$y = 0.0085 * x + 0.0103$$

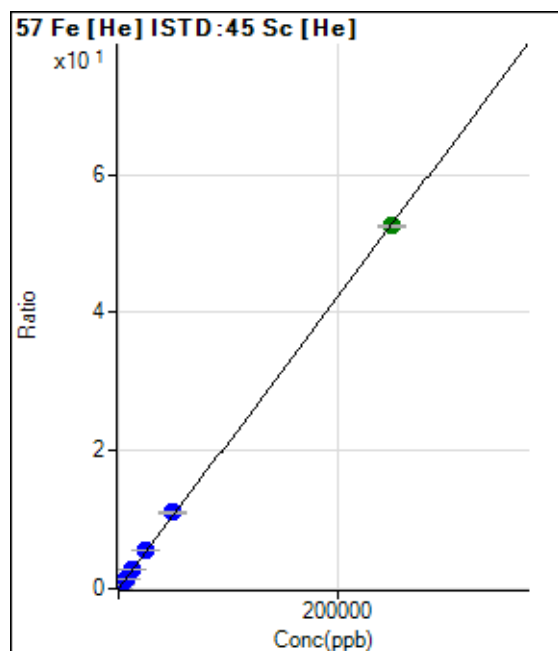
$$R = 0.9999$$

$$DL = 0.1026$$

$$BEC = 1.209$$

Weight: <None>

Min Conc: 0



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	138.89	0.0003	P	30.4
2	☐	5.000	5.570	616.70	0.0015	P	3.5
3	☐	50.000	52.478	4632.34	0.0114	P	2.6
4	☐	2500.000	2699.253	217357.33	0.5694	P	0.6
5	☐	6250.000	6812.820	482718.89	1.4365	P	0.7
6	☐	12500.000	13649.801	890310.55	2.8778	P	0.2
7	☐	25000.000	26708.534	1778815.68	5.6306	P	1.0
8	☐	50000.000	52223.123	3688628.09	11.0092	P	2.6
9	☐	250000.00	249310.96	17810492.30	52.5561	A	0.4

$$y = 2.1080E-004 * x + 3.4706E-004$$

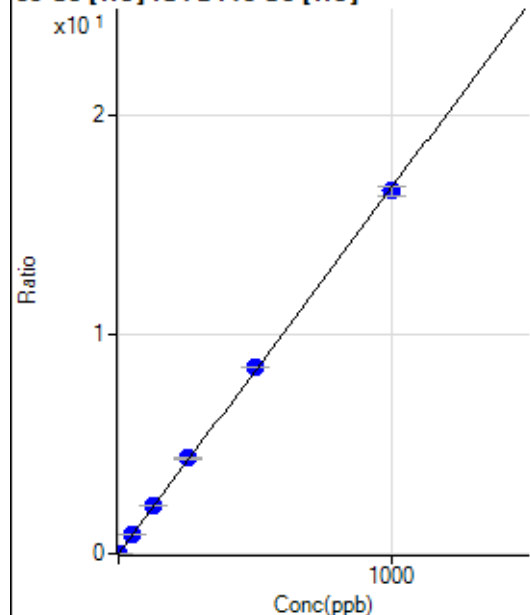
$$R = 0.9999$$

$$DL = 1.504$$

$$BEC = 1.646$$

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	165.56	0.0004	P	12.4
2	☐	0.100	0.086	750.03	0.0019	P	4.9
3	☐	1.000	0.958	6652.72	0.0164	P	0.9
4	☐	50.000	53.039	337896.68	0.8851	P	0.5
5	☐	125.000	131.253	735856.45	2.1897	P	0.3
6	☐	250.000	260.412	1343949.95	4.3441	P	0.3
7	☐	500.000	509.758	2686331.82	8.5032	P	0.9
8	☐	1000.000	991.585	5542004.57	16.5401	P	2.4
9	☐			64849.24	0.1914	P	0.7

$$y = 0.0167 * x + 4.1360E-004$$

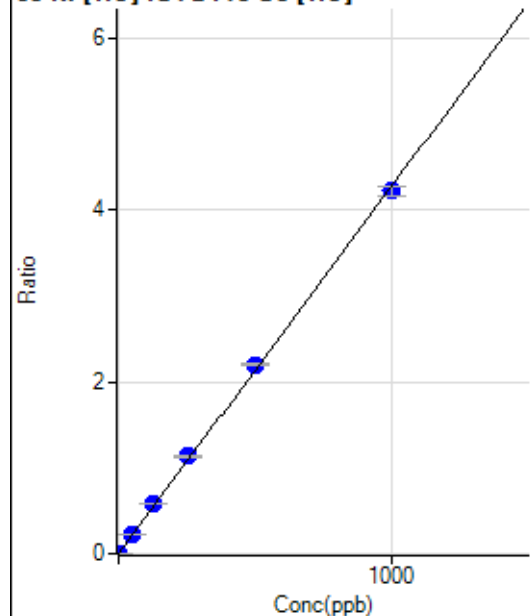
$$R = 0.9999$$

$$DL = 0.009219$$

$$BEC = 0.0248$$

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	68.89	0.0002	P	14.6
2	☐	0.100	0.098	240.01	0.0006	P	6.5
3	☐	1.000	1.051	1892.38	0.0047	P	4.3
4	☐	50.000	54.502	88925.31	0.2329	P	0.8
5	☐	125.000	134.491	193074.52	0.5746	P	0.2
6	☐	250.000	264.514	349546.02	1.1298	P	0.5
7	☐	500.000	513.776	693256.32	2.1944	P	0.8
8	☐	1000.000	988.072	1413969.62	4.2200	P	2.3
9	☐			25438.94	0.0751	P	1.5

$$y = 0.0043 * x + 1.7198E-004$$

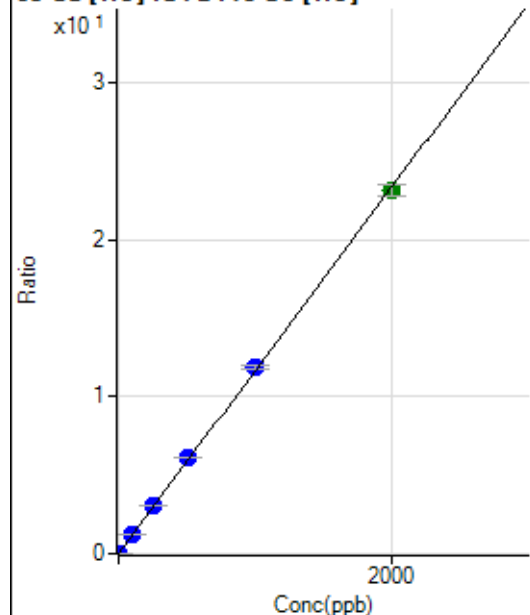
$$R = 0.9997$$

$$DL = 0.01766$$

$$BEC = 0.04027$$

Weight: <None>

Min Conc: 0

⁶³Cu [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	305.56	0.0008	P	9.0
2	☐	0.200	0.204	1274.52	0.0031	P	6.3
3	☐	2.000	1.967	9626.64	0.0237	P	2.0
4	☐	100.000	108.580	483873.07	1.2675	P	0.5
5	☐	250.000	266.859	1046473.98	3.1140	P	0.5
6	☐	500.000	526.405	1900179.33	6.1420	P	0.2
7	☐	1000.000	1019.498	3757673.83	11.8946	P	1.4
8	☐	2000.000	1981.113	7743501.90	23.1132	A	3.0
9	☐			10413.83	0.0307	P	2.7

$$y = 0.0117 * x + 7.6257E-004$$

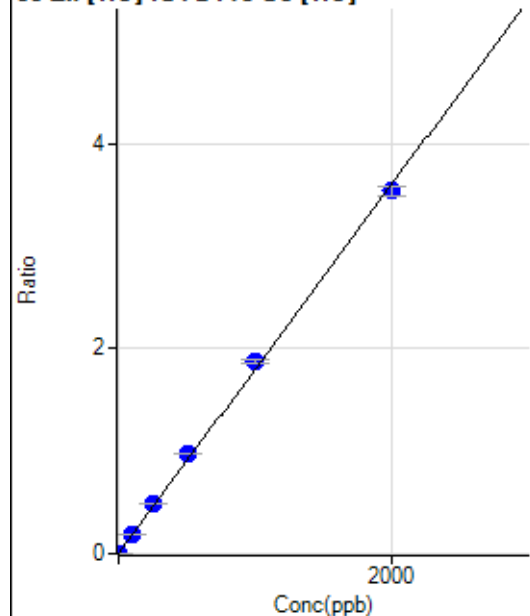
$$R = 0.9998$$

$$DL = 0.01769$$

$$BEC = 0.06536$$

Weight: <None>

Min Conc: 0

⁶⁶Zn [He] ISTD:45 Sc [He]

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	341.12	0.0009	P	10.3
2	☐	0.200	0.279	548.91	0.0014	P	10.7
3	☐	2.000	1.850	1696.79	0.0042	P	2.0
4	☐	100.000	108.672	74938.77	0.1963	P	0.3
5	☐	250.000	272.282	164851.93	0.4906	P	0.5
6	☐	500.000	540.975	301272.49	0.9738	P	0.6
7	☐	1000.000	1040.569	591504.38	1.8723	P	1.5
8	☐	2000.000	1966.253	1185144.82	3.5372	P	2.6
9	☐			9050.71	0.0267	P	1.2

$$y = 0.0018 * x + 8.5213E-004$$

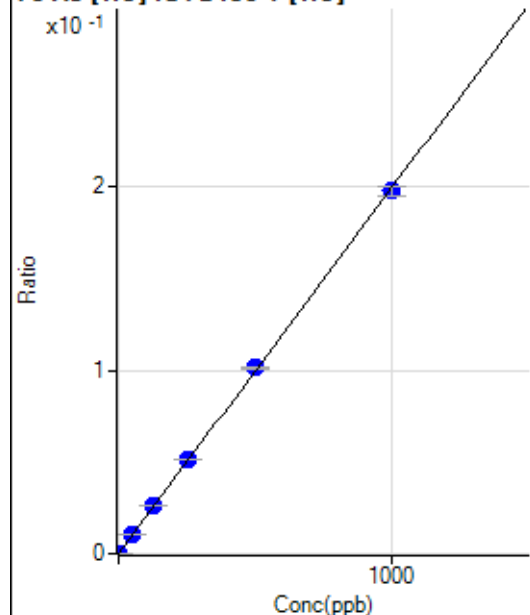
$$R = 0.9994$$

$$DL = 0.1462$$

$$BEC = 0.4738$$

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	15.43	0.0000	P	7.1
2	☐	0.100	0.057	39.51	0.0000	P	15.5
3	☐	1.000	0.976	425.94	0.0002	P	4.7
4	☐	50.000	53.863	21570.36	0.0107	P	1.6
5	☐	125.000	131.176	47114.87	0.0261	P	0.5
6	☐	250.000	258.292	86580.73	0.0514	P	0.3
7	☐	500.000	508.619	172956.85	0.1013	P	1.1
8	☐	1000.000	992.652	352758.48	0.1976	P	2.4
9	☐			414.83	0.0002	P	6.1

$$y = 1.9909\text{E-}004 * x + 7.4333\text{E-}006$$

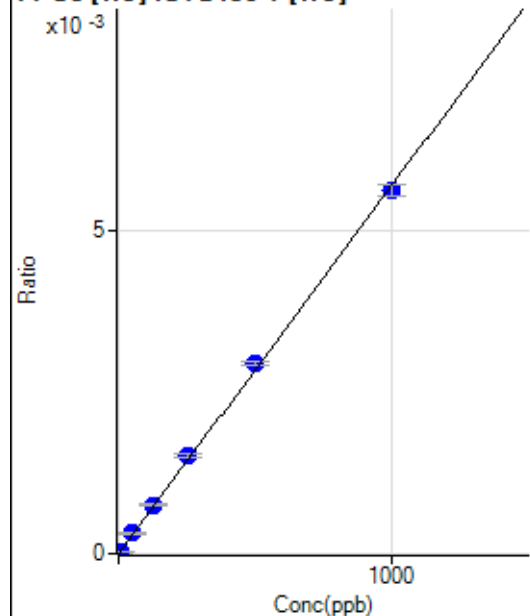
$$R = 0.9999$$

$$DL = 0.00792$$

$$BEC = 0.03734$$

Weight: <None>

Min Conc: 0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	0.00	0.0000	P	
2	☐	0.500	0.459	5.56	0.0000	P	91.5
3	☐	5.000	4.235	51.11	0.0000	P	37.0
4	☐	50.000	55.102	632.25	0.0003	P	13.1
5	☐	125.000	131.114	1350.08	0.0007	P	4.4
6	☐	250.000	266.217	2558.05	0.0015	P	2.7
7	☐	500.000	516.876	5038.73	0.0030	P	1.3
8	☐	1000.000	986.492	10049.20	0.0056	P	3.1
9	☐			5.56	0.0000	P	33.6

$$y = 5.7078\text{E-}006 * x + 0.0000\text{E+}000$$

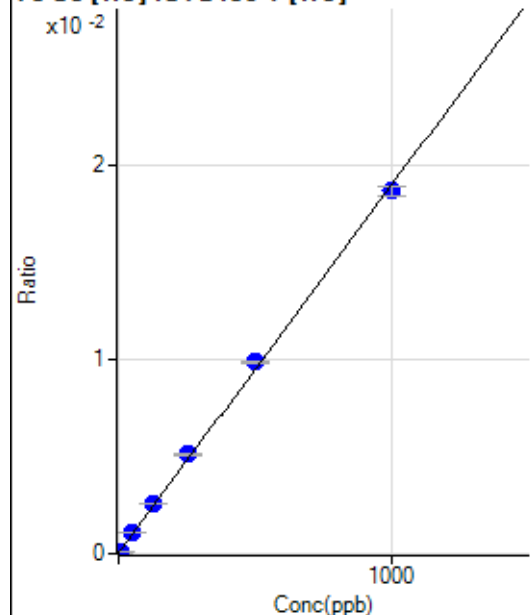
$$R = 0.9996$$

$$DL = 0$$

$$BEC = 0$$

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	61.73	0.0000	P	35.4
2	☐	0.500	0.345	76.55	0.0000	P	22.1
3	☐	5.000	5.642	288.28	0.0001	P	3.1
4	☐	50.000	54.013	2115.60	0.0011	P	1.1
5	☐	125.000	134.620	4650.79	0.0026	P	1.7
6	☐	250.000	268.057	8594.58	0.0051	P	2.5
7	☐	500.000	519.155	16839.51	0.0099	P	0.9
8	☐	1000.000	984.502	33324.68	0.0187	P	2.6
9	☐			60.50	0.0000	P	25.7

$$y = 1.8935\text{E-}005 * x + 2.9715\text{E-}005$$

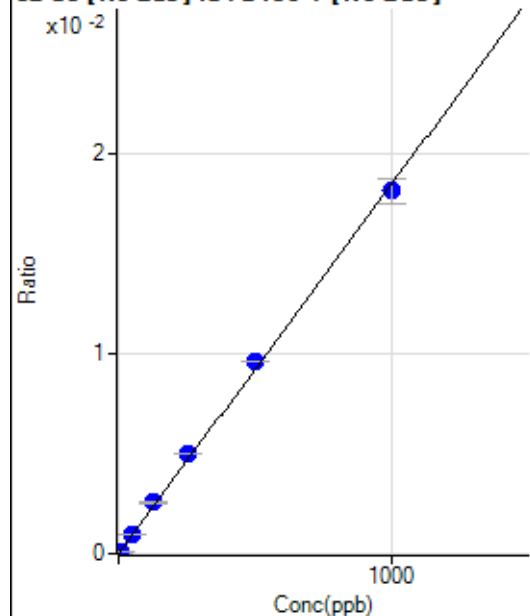
$$R = 0.9995$$

$$DL = 1.669$$

$$BEC = 1.569$$

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	-11.98	0.0000	P	-396.
2	☐	0.500	0.738	199.10	0.0000	P	32.6
3	☐	5.000	5.505	1580.21	0.0001	P	2.1
4	☐	50.000	52.198	15223.23	0.0010	P	5.7
5	☐	125.000	138.048	36505.05	0.0025	P	0.8
6	☐	250.000	268.722	64788.19	0.0049	P	0.3
7	☐	500.000	521.912	126381.70	0.0096	P	0.3
8	☐	1000.000	982.620	246463.42	0.0181	P	6.8
9	☐			214.57	0.0000	P	13.9

$$y = 1.8422\text{E-}005 * x - 7.7112\text{E-}007$$

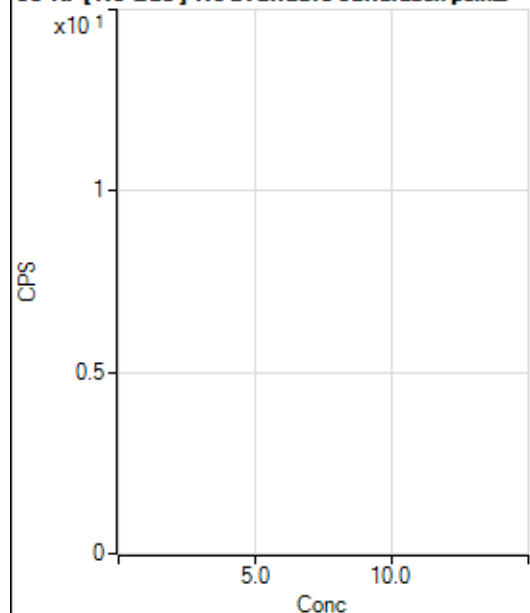
$$R = 0.9994$$

$$DL = 0.4973$$

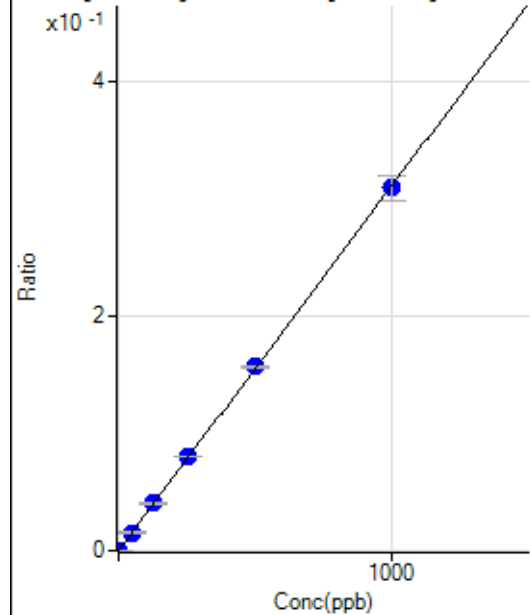
$$BEC = -0.04186$$

Weight: <None>

Min Conc: 0

83 Kr [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			436.68		P	14.1
2	☐			417.79		P	10.8
3	☐			391.13		P	9.8
4	☐			414.46		P	6.1
5	☐			296.67		P	17.0
6	☐			337.79		P	11.8
7	☐			332.23		P	5.7
8	☐			371.12		P	7.3
9	☐			431.12		P	11.0

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	644.49	0.0000	P	10.8
2	☐	0.100	0.110	1180.66	0.0001	P	8.5
3	☐	1.000	0.890	5001.05	0.0003	P	3.3
4	☐	50.000	48.820	241233.29	0.0152	P	5.0
5	☐	125.000	129.213	577510.14	0.0402	P	0.3
6	☐	250.000	257.036	1046732.59	0.0800	P	0.5
7	☐	500.000	504.511	2062837.68	0.1569	P	0.7
8	☐	1000.000	995.518	4215293.19	0.3096	P	6.9
9	☐			18607.19	0.0014	P	4.0

$$y = 3.1096E-004 * x + 4.1738E-005$$

$$R = 0.9999$$

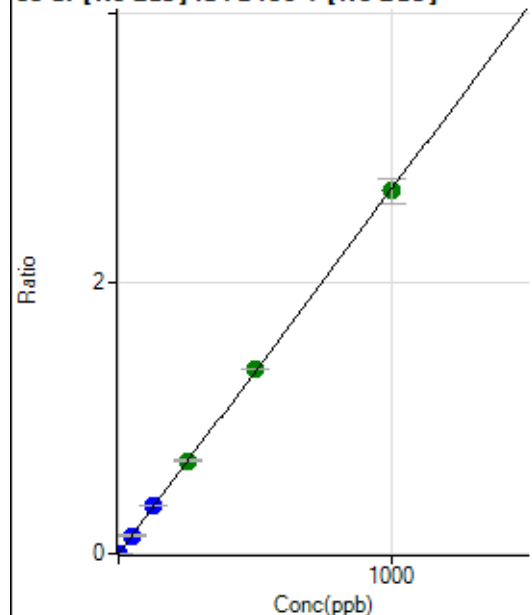
$$DL = 0.04346$$

$$BEC = 0.1342$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	147.23	0.0000	P	36.6
2	☐	0.100	0.094	4086.85	0.0003	P	6.3
3	☐	1.000	0.899	38148.93	0.0024	P	1.5
4	☐	50.000	49.149	2097883.73	0.1324	P	5.3
5	☐	125.000	129.756	5018291.87	0.3495	P	0.2
6	☐	250.000	255.399	9004768.08	0.6879	A	0.5
7	☐	500.000	504.883	17877216.72	1.3599	A	0.2
8	☐	1000.000	995.657	36513687.27	2.6819	A	6.9
9	☐			156541.88	0.0121	P	0.5

$$y = 0.0027 * x + 9.5453E-006$$

$$R = 1.0000$$

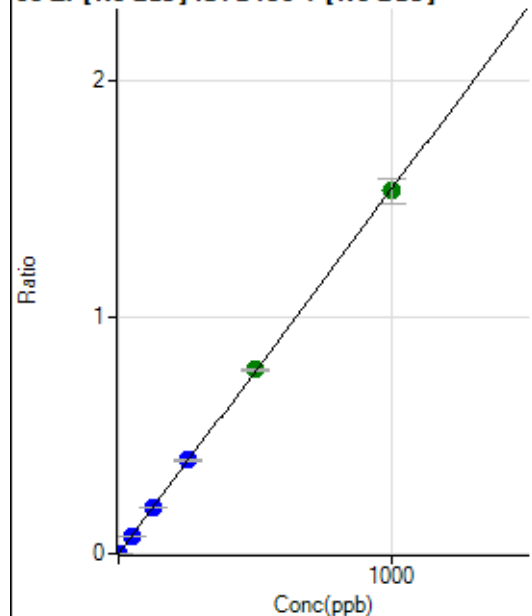
$$DL = 0.003888$$

$$BEC = 0.003544$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	991.75	0.0001	P	8.4
2	☐	0.100	0.089	3131.04	0.0002	P	3.4
3	☐	1.000	0.885	22435.14	0.0014	P	0.7
4	☐	50.000	48.858	1195448.87	0.0754	P	4.8
5	☐	125.000	128.777	2853163.41	0.1987	P	0.1
6	☐	250.000	256.211	5174072.51	0.3953	P	0.2
7	☐	500.000	504.835	10238053.10	0.7788	A	0.6
8	☐	1000.000	995.615	20910526.86	1.5359	A	6.9
9	☐			8967.01	0.0007	P	4.1

$$y = 0.0015 * x + 6.4202E-005$$

$$R = 1.0000$$

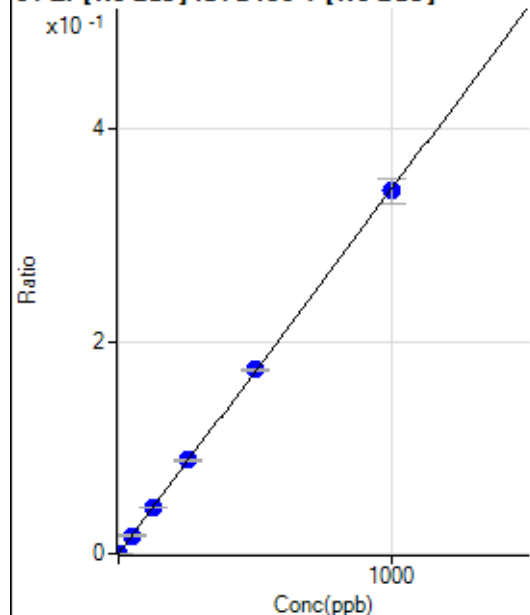
$$DL = 0.01048$$

$$BEC = 0.04162$$

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	147.23	0.0000	P	21.2
2	☐	0.100	0.111	738.94	0.0000	P	11.8
3	☐	1.000	0.909	5053.89	0.0003	P	1.9
4	☐	50.000	49.401	269135.67	0.0170	P	5.2
5	☐	125.000	128.499	634122.99	0.0442	P	0.5
6	☐	250.000	256.106	1152020.12	0.0880	P	0.2
7	☐	500.000	505.306	2282635.29	0.1736	P	0.8
8	☐	1000.000	995.413	4657670.59	0.3421	P	6.6
9	☐			1989.12	0.0002	P	11.1

$$y = 3.4362\text{E-}004 * x + 9.5309\text{E-}006$$

$$R = 1.0000$$

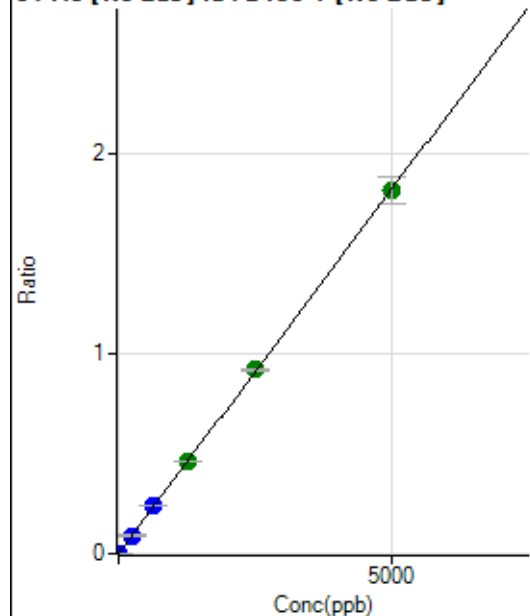
$$DL = 0.01768$$

$$BEC = 0.02774$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	355.57	0.0000	P	15.5
2	☐	0.500	0.465	2992.13	0.0002	P	7.0
3	☐	5.000	4.757	27596.98	0.0018	P	1.7
4	☐	250.000	247.487	1430815.52	0.0903	P	4.8
5	☐	625.000	650.300	3405621.17	0.2372	P	0.4
6	☐	1250.000	1271.593	6070731.78	0.4638	A	0.1
7	☐	2500.000	2521.603	12089799.84	0.9197	A	0.9
8	☐	5000.000	4980.764	24726865.13	1.8166	A	7.4
9	☐			17628.20	0.0014	P	2.9

$$y = 3.6472\text{E-}004 * x + 2.3009\text{E-}005$$

$$R = 1.0000$$

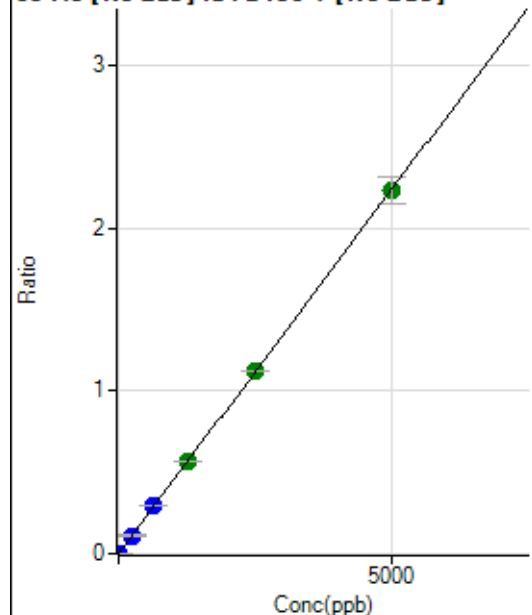
$$DL = 0.02924$$

$$BEC = 0.06309$$

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	61.11	0.0000	P	16.1
2	☐	0.500	0.488	3458.91	0.0002	P	3.2
3	☐	5.000	4.812	33880.08	0.0022	P	2.0
4	☐	250.000	247.476	1755676.14	0.1108	P	5.1
5	☐	625.000	650.058	4178440.41	0.2910	P	0.1
6	☐	1250.000	1271.267	7449312.23	0.5691	A	0.4
7	☐	2500.000	2515.469	14803434.88	1.1261	A	0.3
8	☐	5000.000	4983.943	30369175.68	2.2312	A	7.5
9	☐			26731.45	0.0021	P	3.7

$$y = 4.4767\text{E-}004 * x + 3.9584\text{E-}006$$

$$R = 1.0000$$

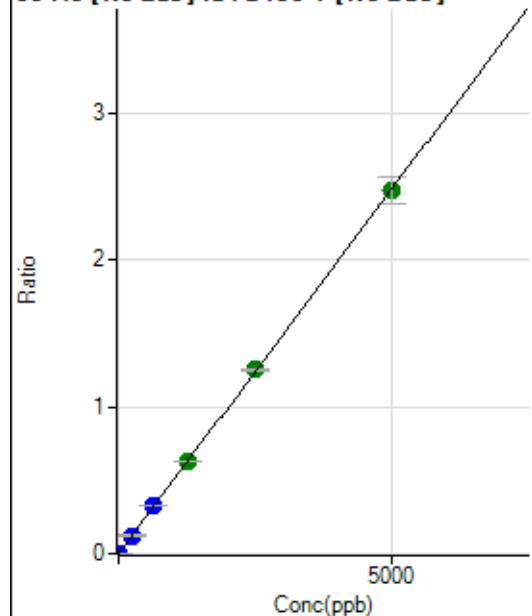
$$DL = 0.004259$$

$$BEC = 0.008842$$

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	180.57	0.0000	P	28.2
2	☐	0.500	0.510	4120.23	0.0003	P	3.4
3	☐	5.000	4.747	37191.10	0.0024	P	3.5
4	☐	250.000	247.398	1946906.19	0.1229	P	5.0
5	☐	625.000	649.407	4630120.94	0.3225	P	0.2
6	☐	1250.000	1276.404	8296034.74	0.6338	A	0.4
7	☐	2500.000	2521.288	16457663.91	1.2519	A	0.2
8	☐	5000.000	4979.835	33658234.78	2.4727	A	7.4
9	☐			38302.72	0.0030	P	1.5

$$y = 4.9654\text{E-}004 * x + 1.1692\text{E-}005$$

$$R = 1.0000$$

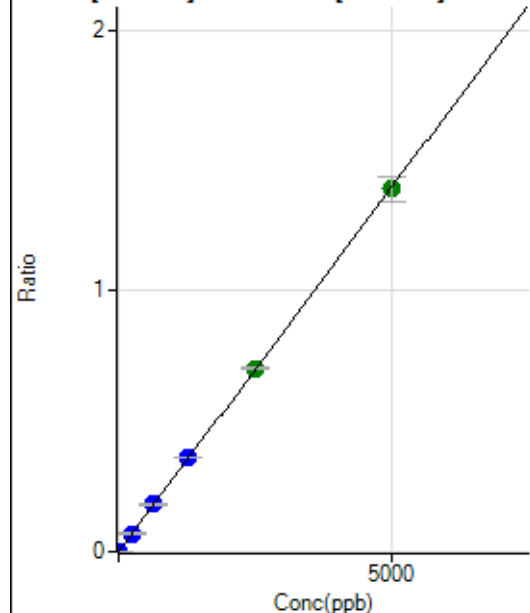
$$DL = 0.0199$$

$$BEC = 0.02355$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	58.34	0.0000	P	29.0
2	☐	0.500	0.479	2139.14	0.0001	P	5.0
3	☐	5.000	4.715	20751.90	0.0013	P	0.9
4	☐	250.000	245.549	1087593.56	0.0686	P	5.1
5	☐	625.000	647.068	2596816.05	0.1809	P	0.5
6	☐	1250.000	1284.571	4699509.09	0.3590	P	0.3
7	☐	2500.000	2516.922	9247568.35	0.7035	A	0.5
8	☐	5000.000	4980.360	18951070.04	1.3920	A	7.0
9	☐			15598.02	0.0012	P	1.4

$$y = 2.7949E-004 * x + 3.7804E-006$$

$$R = 1.0000$$

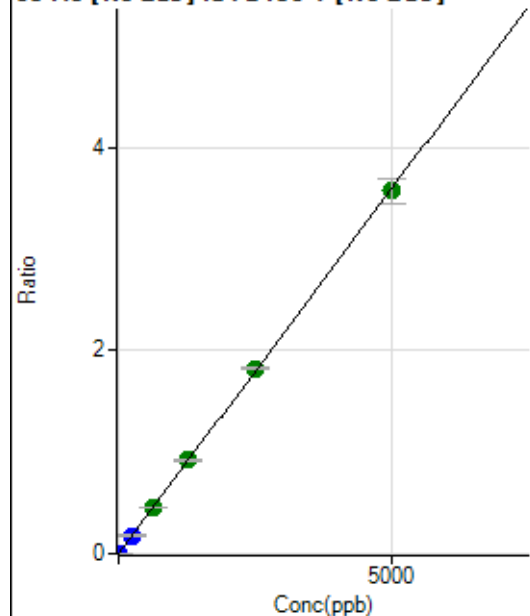
$$DL = 0.01179$$

$$BEC = 0.01353$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	122.23	0.0000	P	23.9
2	☐	0.500	0.474	5415.16	0.0003	P	0.2
3	☐	5.000	4.820	54451.96	0.0035	P	1.1
4	☐	250.000	246.156	2800784.53	0.1767	P	5.1
5	☐	625.000	637.699	6574330.44	0.4579	A	0.8
6	☐	1250.000	1279.531	12024896.62	0.9187	A	0.3
7	☐	2500.000	2535.744	23933125.71	1.8206	A	0.8
8	☐	5000.000	4973.351	48612514.63	3.5708	A	7.0
9	☐			39898.41	0.0031	P	3.4

$$y = 7.1798E-004 * x + 7.9139E-006$$

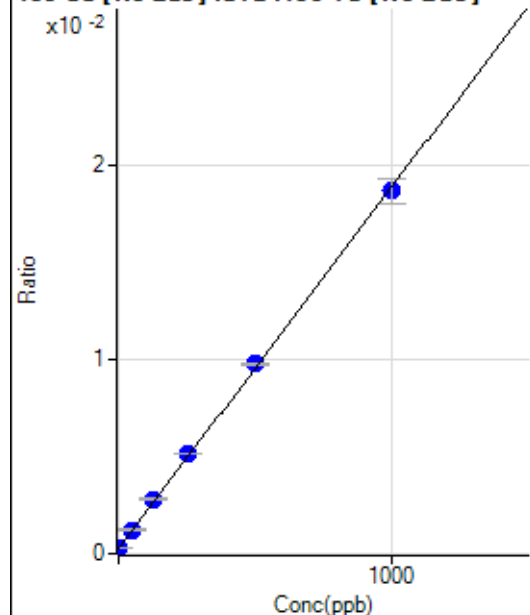
$$R = 0.9999$$

$$DL = 0.00789$$

$$BEC = 0.01102$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	5131.72	0.0003	P	1.4
2	☐	0.100	0.360	5356.78	0.0003	P	2.7
3	☐	1.000	0.433	5454.05	0.0003	P	10.4
4	☐	50.000	52.581	26264.13	0.0012	P	5.7
5	☐	125.000	137.350	55913.69	0.0028	P	1.6
6	☐	250.000	262.433	97302.35	0.0051	P	1.3
7	☐	500.000	511.030	188147.31	0.0098	P	0.9
8	☐	1000.000	989.704	369663.16	0.0187	P	6.6
9	☐			4250.84	0.0002	P	4.4

$$y = 1.8610E-005 * x + 2.5572E-004$$

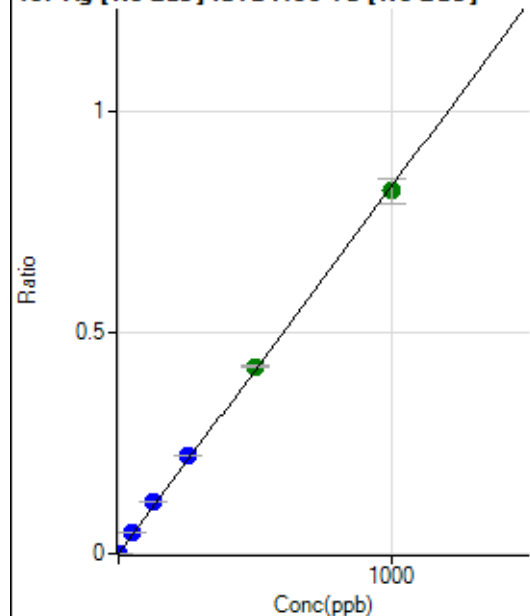
$$R = 0.9998$$

$$DL = 0.5795$$

$$BEC = 13.74$$

Weight: <None>

Min Conc: 0

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

	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	127.79	0.0000	P	30.5
2	☐	0.100	0.108	1955.78	0.0001	P	4.0
3	☐	1.000	1.106	19141.48	0.0009	P	3.2
4	☐	50.000	56.333	997095.14	0.0468	P	4.6
5	☐	125.000	141.804	2344630.59	0.1179	P	0.7
6	☐	250.000	267.890	4216947.53	0.2227	P	0.1
7	☐	500.000	510.029	8169865.28	0.4241	A	0.3
8	☐	1000.000	988.096	16262364.08	0.8215	A	6.6
9	☐			1111.21	0.0001	P	4.5

$$y = 8.3143E-004 * x + 6.3746E-006$$

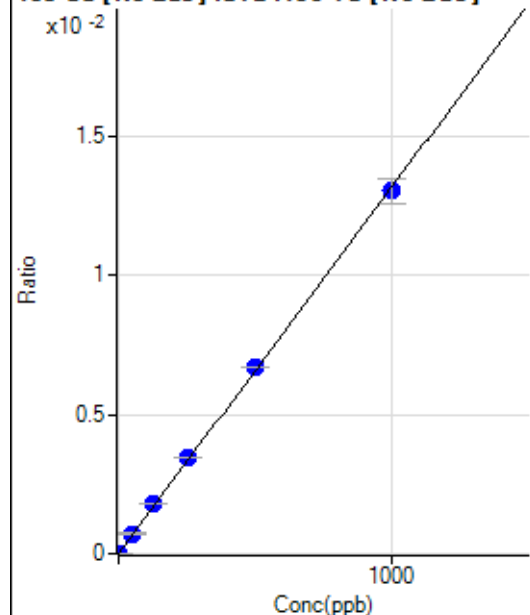
$$R = 0.9997$$

$$DL = 0.007022$$

$$BEC = 0.007667$$

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	16.67	0.0000	P	25.4
2	☐	0.100	0.076	37.50	0.0000	P	33.4
3	☐	1.000	1.055	304.18	0.0000	P	10.4
4	☐	50.000	54.048	15168.06	0.0007	P	5.2
5	☐	125.000	138.398	36266.09	0.0018	P	1.0
6	☐	250.000	261.535	65234.06	0.0034	P	1.0
7	☐	500.000	509.336	129263.43	0.0067	P	0.8
8	☐	1000.000	990.571	258270.21	0.0130	P	6.8
9	☐			55.55	0.0000	P	15.6

$$y = 1.3172\text{E-}005 * x + 8.3100\text{E-}007$$

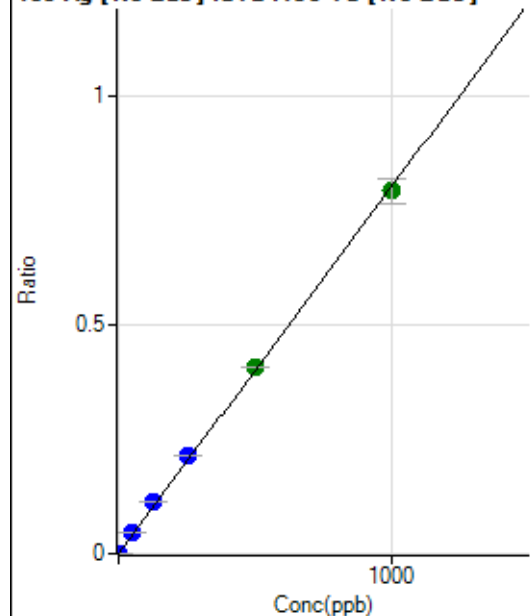
$$R = 0.9998$$

$$DL = 0.04807$$

$$BEC = 0.06309$$

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	91.67	0.0000	P	9.7
2	☐	0.100	0.113	1944.67	0.0001	P	4.6
3	☐	1.000	1.097	18304.14	0.0009	P	3.6
4	☐	50.000	56.535	966830.92	0.0454	P	4.5
5	☐	125.000	142.400	2274851.83	0.1144	P	1.1
6	☐	250.000	267.612	4070115.50	0.2150	P	0.3
7	☐	500.000	508.798	7874542.97	0.4087	A	0.4
8	☐	1000.000	988.696	15720595.66	0.7942	A	6.8
9	☐			1025.08	0.0001	P	5.9

$$y = 8.0332\text{E-}004 * x + 4.5700\text{E-}006$$

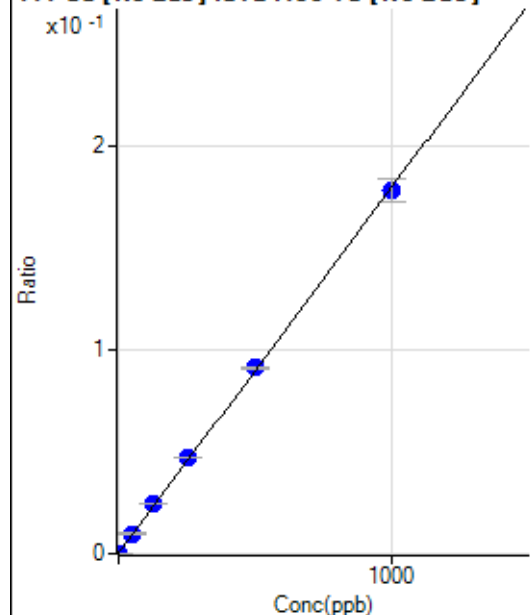
$$R = 0.9997$$

$$DL = 0.001659$$

$$BEC = 0.005689$$

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	3616.64	0.0002	P	1.3
2	☐	0.100	0.116	4102.68	0.0002	P	2.0
3	☐	1.000	0.962	7287.42	0.0004	P	7.3
4	☐	50.000	53.794	208776.91	0.0098	P	5.3
5	☐	125.000	136.901	490943.86	0.0247	P	0.8
6	☐	250.000	262.509	893135.09	0.0472	P	0.2
7	☐	500.000	508.089	1755846.96	0.0911	P	1.1
8	☐	1000.000	991.151	3516479.95	0.1776	P	6.3
9	☐			3331.16	0.0002	P	5.1

$$y = 1.7902\text{E-}004 * x + 1.8022\text{E-}004$$

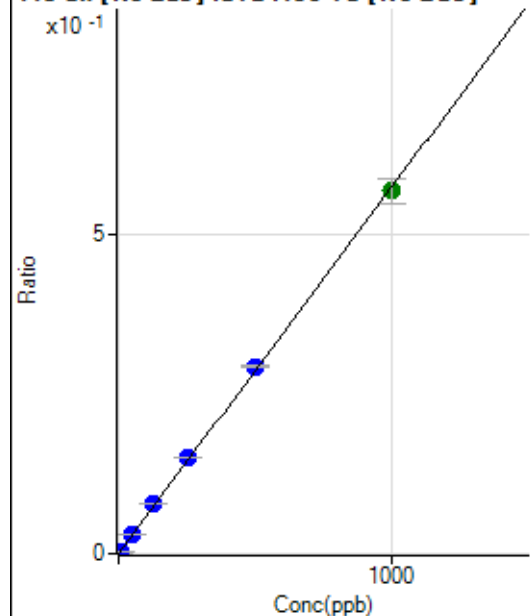
$$R = 0.9998$$

$$DL = 0.03922$$

$$BEC = 1.007$$

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	675.05	0.0000	P	7.0
2	☐	0.500	0.519	6771.37	0.0003	P	1.6
3	☐	5.000	5.008	60165.43	0.0029	P	0.4
4	☐	50.000	52.416	641683.73	0.0301	P	4.7
5	☐	125.000	135.911	1553357.65	0.0781	P	0.6
6	☐	250.000	262.022	2850580.25	0.1506	P	0.4
7	☐	500.000	510.201	5647626.43	0.2931	P	1.0
8	☐	1000.000	990.409	11262696.00	0.5690	A	6.8
9	☐			10521.05	0.0006	P	2.1

$$y = 5.7451\text{E-}004 * x + 3.3629\text{E-}005$$

$$R = 0.9998$$

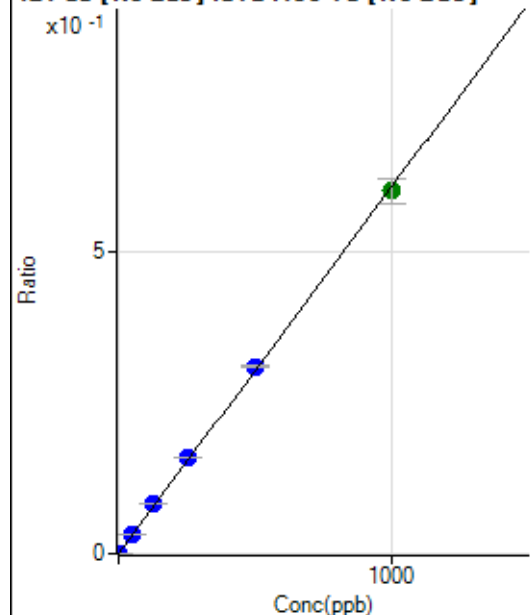
$$DL = 0.01222$$

$$BEC = 0.05854$$

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	52.78	0.0000	P	63.2
2	☐	0.200	0.190	2397.53	0.0001	P	2.2
3	☐	2.000	1.913	23988.06	0.0012	P	0.6
4	☐	50.000	52.492	676345.94	0.0318	P	4.8
5	☐	125.000	135.902	1635880.17	0.0823	P	1.0
6	☐	250.000	262.926	3013136.85	0.1592	P	0.5
7	☐	500.000	511.240	5961919.45	0.3095	P	1.1
8	☐	1000.000	989.661	11857413.29	0.5991	A	6.7
9	☐			12533.93	0.0007	P	2.6

$$y = 6.0531\text{E-}004 * x + 2.6240\text{E-}006$$

$$R = 0.9998$$

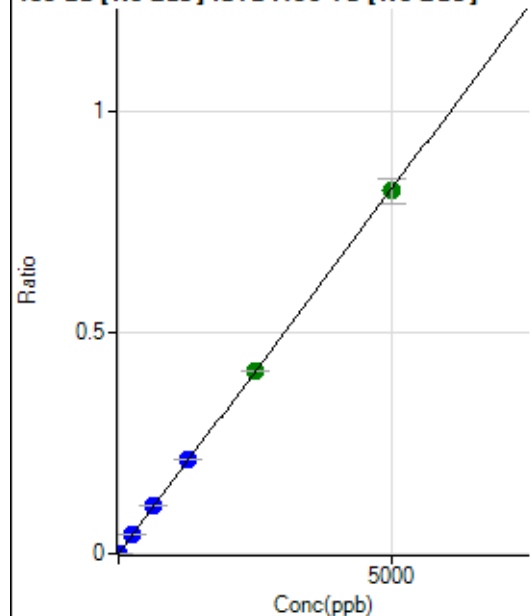
$$DL = 0.008224$$

$$BEC = 0.004335$$

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	77.78	0.0000	P	37.0
2	☐	1.000	1.046	3600.62	0.0002	P	1.4
3	☐	10.000	9.832	33583.29	0.0016	P	2.4
4	☐	250.000	256.906	901670.93	0.0424	P	4.6
5	☐	625.000	665.753	2182765.33	0.1098	P	0.7
6	☐	1250.000	1298.988	4054704.30	0.2142	P	0.4
7	☐	2500.000	2513.248	7983115.71	0.4144	A	0.1
8	☐	5000.000	4975.690	16237001.58	0.8203	A	6.8
9	☐			2519.79	0.0001	P	6.4

$$y = 1.6487\text{E-}004 * x + 3.8699\text{E-}006$$

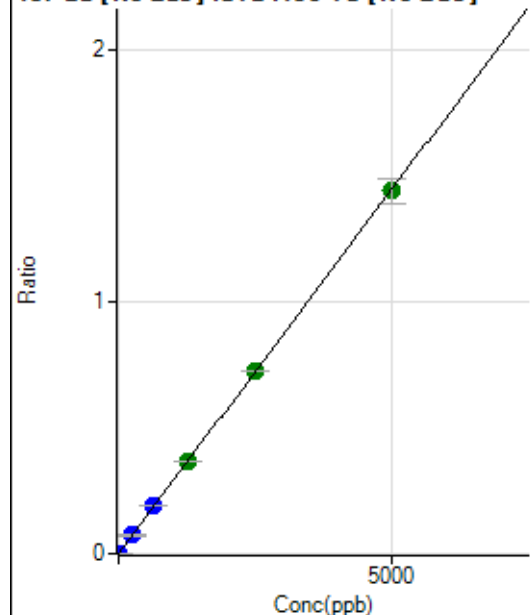
$$R = 0.9999$$

$$DL = 0.02609$$

$$BEC = 0.02347$$

Weight: <None>

Min Conc: 0

¹³⁷Ba [No Gas] ISTD : ¹⁵⁹Tb [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	88.89	0.0000	P	44.3
2	☐	1.000	0.973	5832.03	0.0003	P	1.1
3	☐	10.000	9.861	58975.73	0.0029	P	2.0
4	☐	250.000	256.390	1577013.57	0.0741	P	4.3
5	☐	625.000	667.910	3837442.71	0.1930	P	0.3
6	☐	1250.000	1273.301	6965010.23	0.3679	A	0.6
7	☐	2500.000	2509.713	13969954.31	0.7251	A	0.5
8	☐	5000.000	4983.635	28498378.41	1.4399	A	6.9
9	☐			4234.17	0.0002	P	4.1

$$y = 2.8892E-004 * x + 4.4311E-006$$

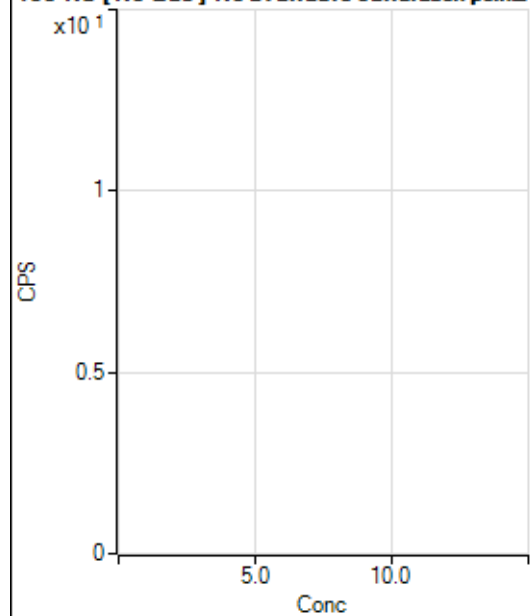
$$R = 1.0000$$

$$DL = 0.02039$$

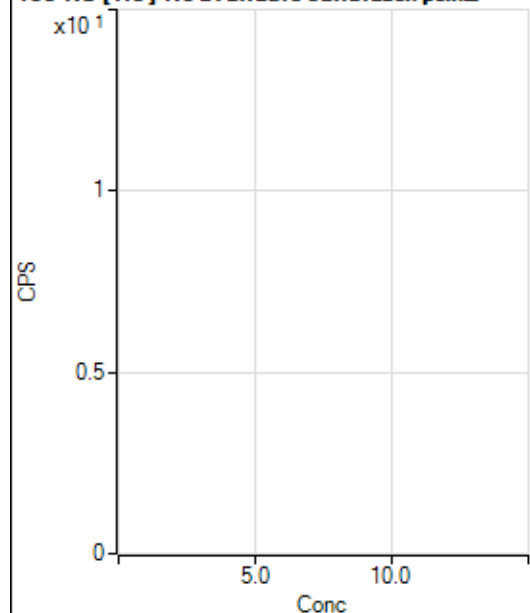
$$BEC = 0.01534$$

Weight: <None>

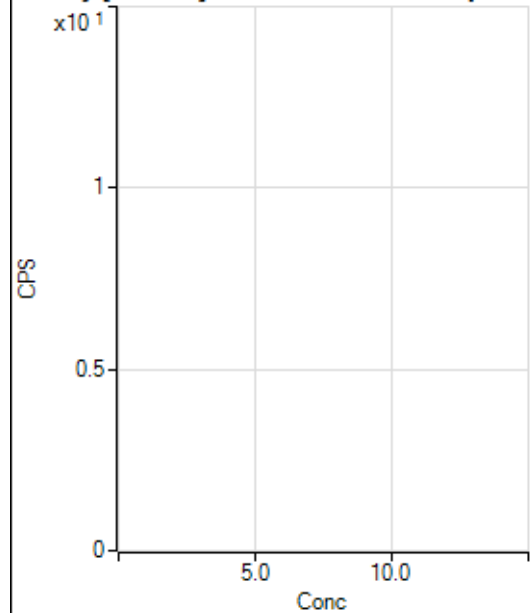
Min Conc: 0

¹⁵⁰Nd [No Gas] No available calibration points

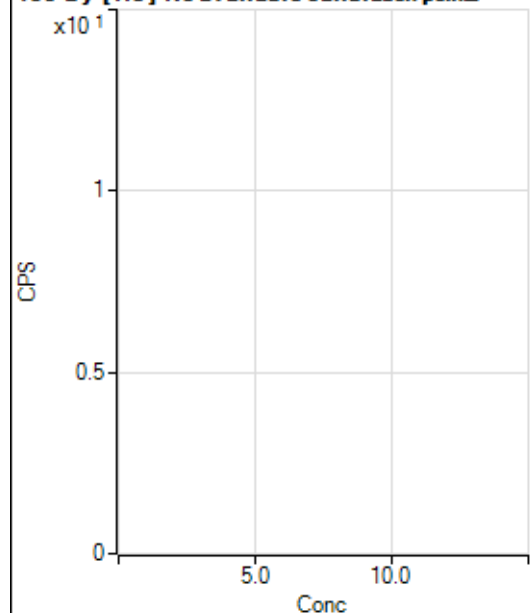
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	173.2
2	☐			4.45		P	86.6
3	☐			4.44		P	173.2
4	☐			104.45		P	25.8
5	☐			171.12		P	12.5
6	☐			302.24		P	11.1
7	☐			473.36		P	8.8
8	☐			1055.63		P	14.1
9	☐			253.35		P	16.4

150 Nd [He] No available calibration points

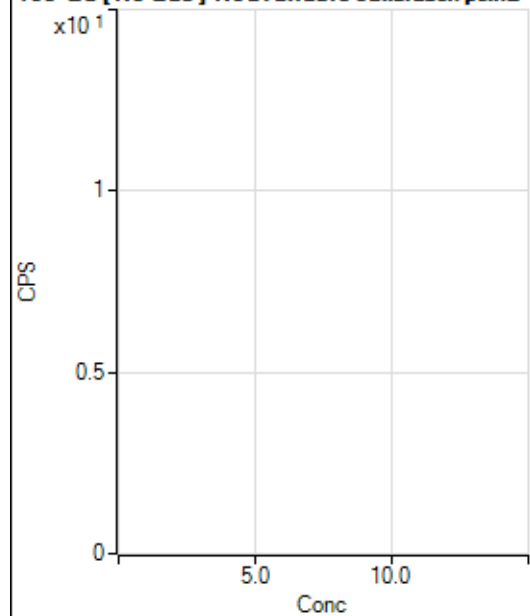
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			2.22		P	86.6
2	☐			0.00		P	
3	☐			1.11		P	173.2
4	☐			6.67		P	50.0
5	☐			20.00		P	44.1
6	☐			22.22		P	37.8
7	☐			61.11		P	28.0
8	☐			98.89		P	18.6
9	☐			86.67		P	10.2

156 Dy [No Gas] No available calibration points

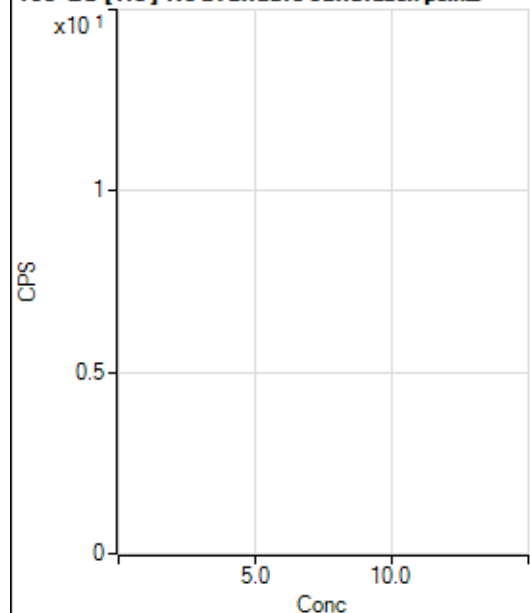
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			19.44		P	49.5
2	☐			22.22		P	57.3
3	☐			5.56		P	173.2
4	☐			25.00		P	57.7
5	☐			30.56		P	41.7
6	☐			58.33		P	24.7
7	☐			138.90		P	9.2
8	☐			247.23		P	5.2
9	☐			127.79		P	19.9

156 Dy [He] No available calibration points

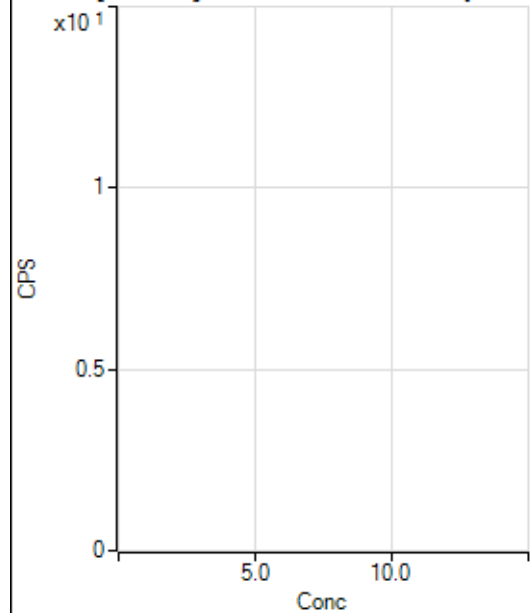
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			5.55		P	124.9
2	☐			11.11		P	45.8
3	☐			12.22		P	31.5
4	☐			16.67		P	40.0
5	☐			38.89		P	40.5
6	☐			60.00		P	24.2
7	☐			127.78		P	4.0
8	☐			250.01		P	15.7
9	☐			54.44		P	31.4

160 Gd [No Gas] Noavailable calibration poin_

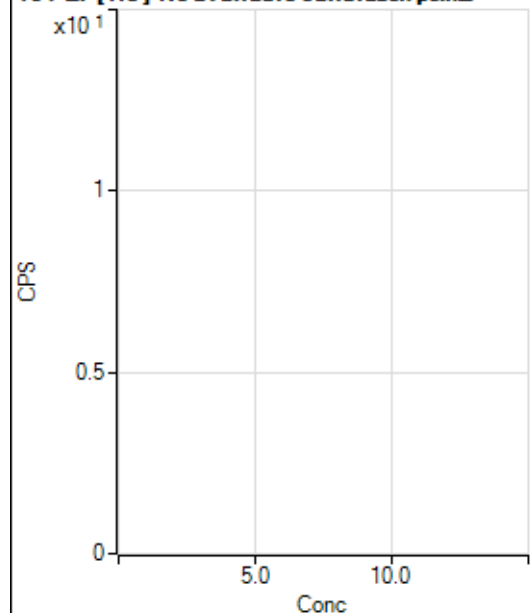
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			72.22		P	40.5
2	☐			58.34		P	42.9
3	☐			94.45		P	22.2
4	☐			100.01		P	38.2
5	☐			66.67		P	69.6
6	☐			83.34		P	30.0
7	☐			88.90		P	37.9
8	☐			111.12		P	18.9
9	☐			161.12		P	26.5

160 Gd [He] No available calibration points

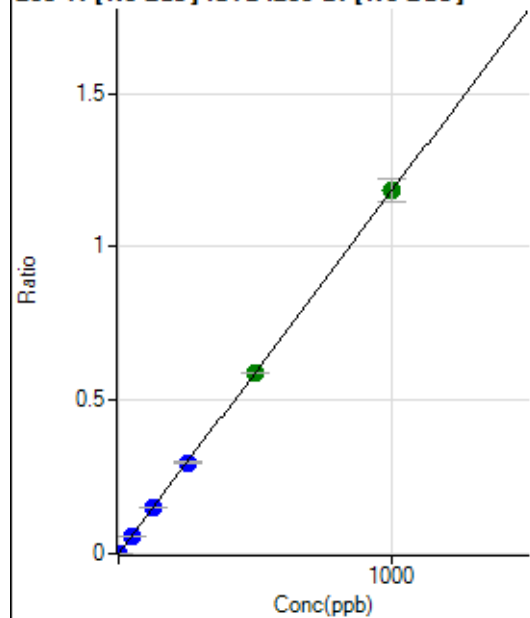
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			253.34		P	8.6
2	☐			247.78		P	9.0
3	☐			263.34		P	12.7
4	☐			285.56		P	3.8
5	☐			242.23		P	0.8
6	☐			222.23		P	12.1
7	☐			243.34		P	11.9
8	☐			250.01		P	18.0
9	☐			241.12		P	13.6

164 Er [No Gas] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			52.78		P	32.9
2	☐			58.33		P	24.7
3	☐			66.67		P	33.1
4	☐			63.89		P	45.8
5	☐			61.11		P	20.8
6	☐			52.78		P	9.1
7	☐			61.11		P	28.4
8	☐			80.56		P	47.8
9	☐			105.56		P	24.1

164 Er [He] No available calibration points

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐			33.34		P	17.3
2	☐			27.78		P	30.2
3	☐			26.67		P	50.0
4	☐			31.11		P	62.8
5	☐			42.22		P	12.1
6	☐			34.44		P	34.0
7	☐			31.11		P	16.4
8	☐			45.56		P	16.9
9	☐			36.67		P	32.8

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

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	0.000	0.000	358.36	0.0000	P	7.1
2	☐	0.100	0.082	1777.98	0.0001	P	7.6
3	☐	1.000	0.880	15673.74	0.0011	P	3.8
4	☐	50.000	47.528	841443.55	0.0562	P	4.8
5	☐	125.000	125.227	2083840.28	0.1480	P	0.8
6	☐	250.000	251.855	3995001.35	0.2977	P	0.6
7	☐	500.000	497.583	7841586.11	0.5881	A	0.3
8	☐	1000.000	1000.840	15781255.91	1.1829	A	6.5
9	☐			2833.76	0.0003	P	6.0

$$y = 0.0012 * x + 2.5144E-005$$

$$R = 1.0000$$

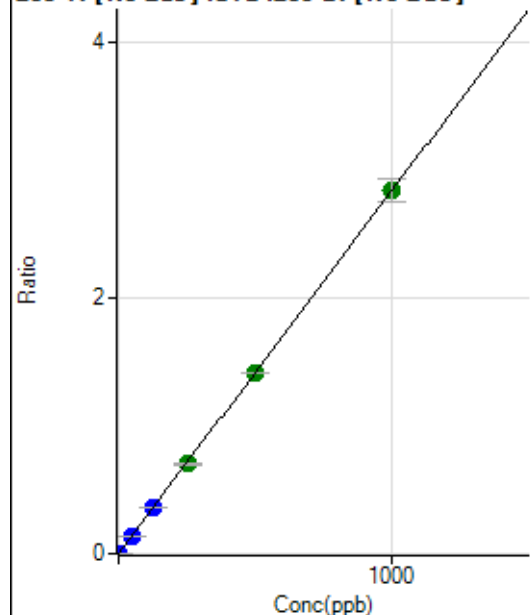
$$DL = 0.004503$$

$$BEC = 0.02128$$

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	858.40	0.0001	P	8.5
2	☐	0.100	0.083	4309.23	0.0003	P	4.9
3	☐	1.000	0.856	36590.31	0.0025	P	0.8
4	☐	50.000	47.816	2030638.48	0.1356	P	4.7
5	☐	125.000	126.574	5052202.63	0.3589	P	0.6
6	☐	250.000	246.863	9392829.20	0.6999	A	0.4
7	☐	500.000	499.954	18899003.37	1.4173	A	0.3
8	☐	1000.000	1000.720	37848548.41	2.8369	A	6.5
9	☐			6418.50	0.0006	P	4.7

$$y = 0.0028 * x + 6.0210E-005$$

$$R = 1.0000$$

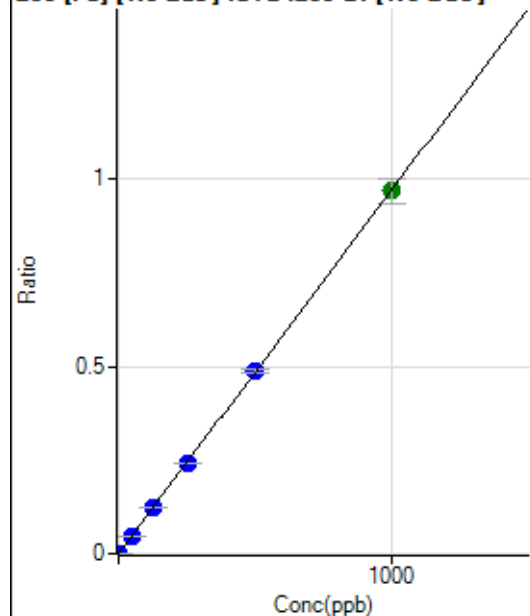
$$DL = 0.005426$$

$$BEC = 0.02124$$

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	944.51	0.0001	P	11.0
2	☐	0.100	0.095	2302.13	0.0002	P	3.9
3	☐	1.000	0.856	13182.79	0.0009	P	0.9
4	☐	50.000	47.531	690902.60	0.0461	P	5.0
5	☐	125.000	125.420	1712615.43	0.1217	P	0.4
6	☐	250.000	250.856	3264700.45	0.2433	P	0.2
7	☐	500.000	502.866	6501289.50	0.4876	P	1.2
8	☐	1000.000	998.424	12911463.83	0.9680	A	7.0
9	☐			13863.09	0.0012	P	1.1

$$y = 9.6944E-004 * x + 6.6226E-005$$

$$R = 1.0000$$

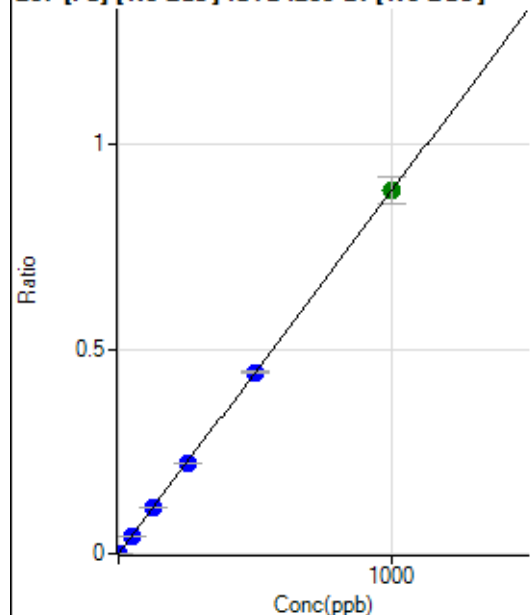
$$DL = 0.02255$$

$$BEC = 0.06831$$

Weight: <None>

Min Conc: 0

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



	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det	RSD
1	☐	0.000	0.000	859.31	0.0001	P	10.3
2	☐	0.100	0.083	1950.20	0.0001	P	1.4
3	☐	1.000	0.837	11790.73	0.0008	P	2.6
4	☐	50.000	47.299	628437.65	0.0420	P	4.8
5	☐	125.000	124.871	1558429.45	0.1107	P	0.3
6	☐	250.000	249.583	2968679.49	0.2212	P	0.8
7	☐	500.000	499.905	5907003.26	0.4430	P	0.6
8	☐	1000.000	1000.303	11821231.05	0.8864	A	7.3
9	☐			11733.25	0.0010	P	2.5

$$y = 8.8604\text{E-}004 * x + 6.0273\text{E-}005$$

$$R = 1.0000$$

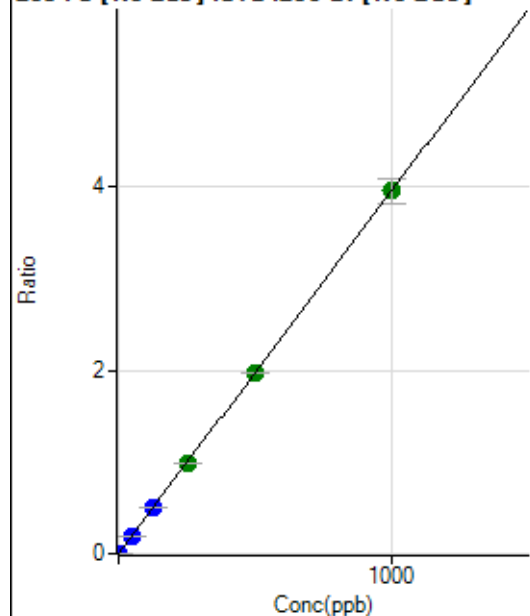
$$DL = 0.02108$$

$$BEC = 0.06802$$

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	3905.90	0.0003	P	1.0
2	☐	0.100	0.093	9347.91	0.0006	P	3.5
3	☐	1.000	0.862	54165.45	0.0037	P	2.3
4	☐	50.000	47.600	2823780.87	0.1886	P	4.6
5	☐	125.000	125.763	7007566.58	0.4978	P	0.2
6	☐	250.000	249.537	13251793.59	0.9874	A	0.3
7	☐	500.000	499.634	26358348.97	1.9768	A	0.5
8	☐	1000.000	1000.324	52783946.67	3.9574	A	7.1
9	☐			54454.04	0.0048	P	1.9

$$y = 0.0040 * x + 2.7396\text{E-}004$$

$$R = 1.0000$$

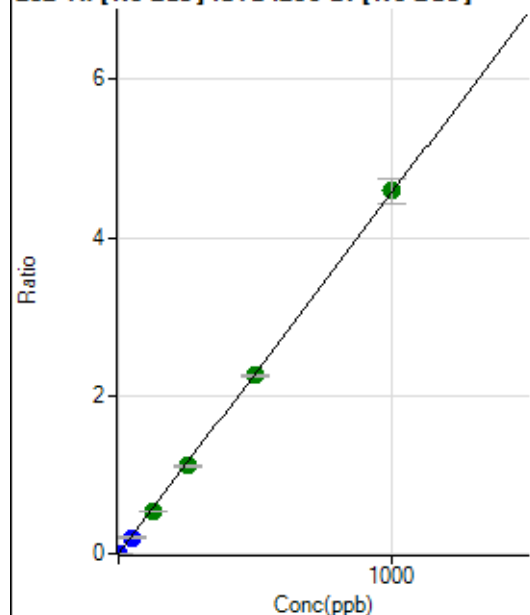
$$DL = 0.002045$$

$$BEC = 0.06925$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	101.85	0.0000	P	14.8
2	☐	0.100	0.080	5416.09	0.0004	P	2.0
3	☐	1.000	0.789	52988.91	0.0036	P	0.5
4	☐	50.000	44.536	3041294.71	0.2031	P	4.7
5	☐	125.000	118.218	7589567.99	0.5391	A	0.1
6	☐	250.000	242.655	14851104.27	1.1066	A	0.4
7	☐	500.000	493.649	30017538.40	2.2512	A	0.4
8	☐	1000.000	1006.133	61203307.85	4.5882	A	6.9
9	☐			13218.23	0.0012	P	8.9

$$y = 0.0046 * x + 7.1508E-006$$

$$R = 0.9999$$

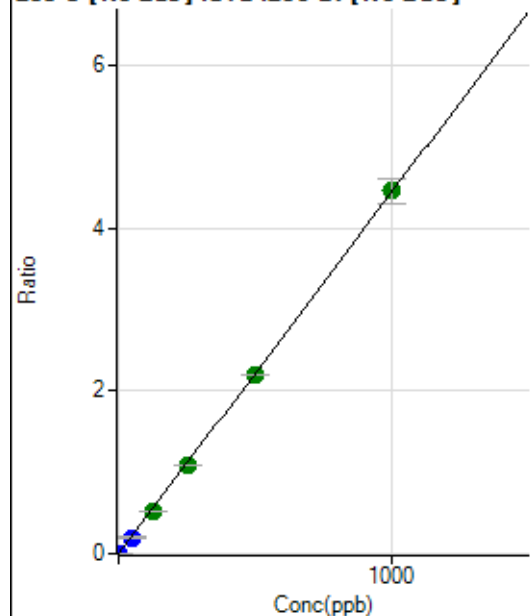
$$DL = 0.0006948$$

$$BEC = 0.001568$$

Weight: <None>

Min Conc: 0

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



	R _{ct}	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	94.45	0.0000	P	44.6
2	☐	0.100	0.081	5298.53	0.0004	P	5.9
3	☐	1.000	0.796	52074.93	0.0035	P	0.9
4	☐	50.000	44.831	2978990.80	0.1989	P	4.5
5	☐	125.000	118.385	7395369.35	0.5253	A	0.4
6	☐	250.000	243.616	14508225.67	1.0810	A	0.8
7	☐	500.000	495.502	29317885.73	2.1987	A	0.3
8	☐	1000.000	1004.931	59481120.77	4.4592	A	6.9
9	☐			4003.59	0.0004	P	6.4

$$y = 0.0044 * x + 6.6434E-006$$

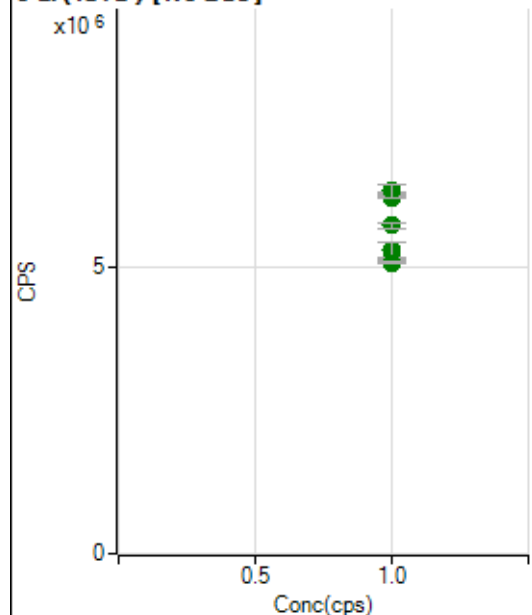
$$R = 0.9999$$

$$DL = 0.002003$$

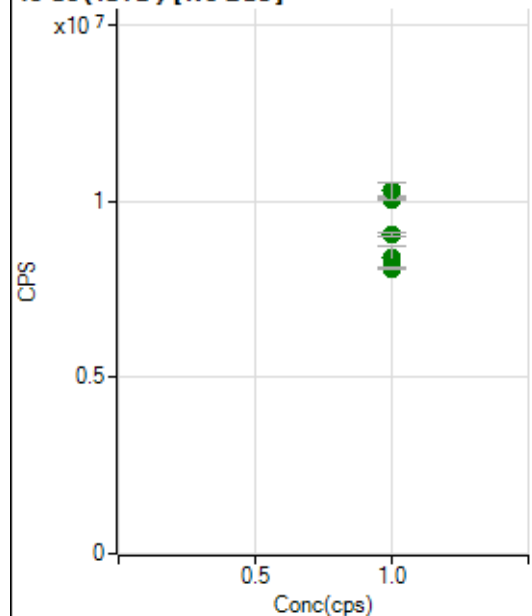
$$BEC = 0.001497$$

Weight: <None>

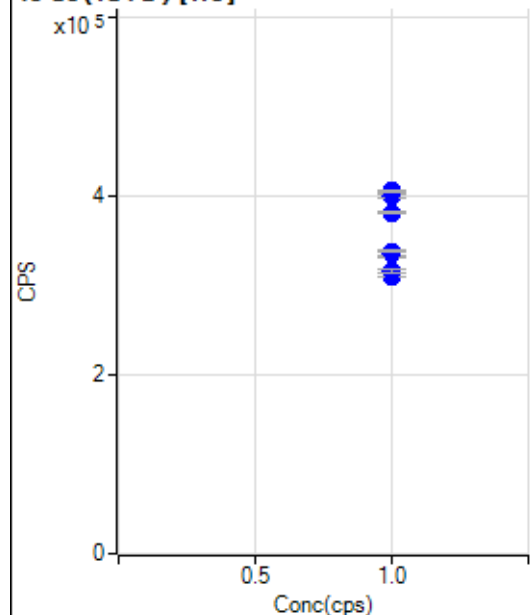
Min Conc: 0

6 Li (ISTD) [No Gas]

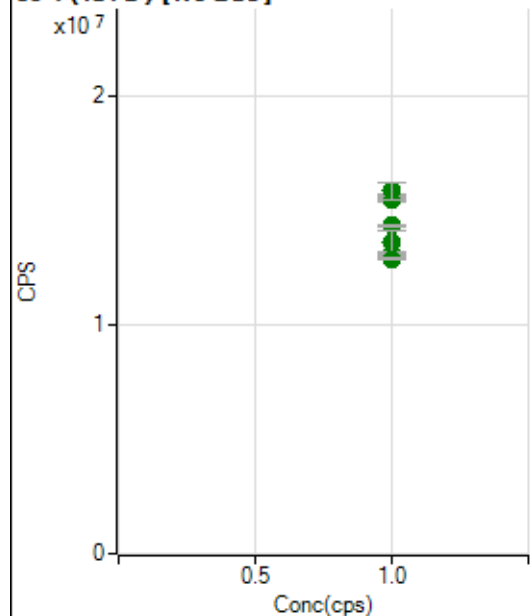
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6288316.71		A	0.6
2	☐	1.000		6216619.07		A	0.2
3	☐	1.000		6244643.38		A	0.6
4	☐	1.000		6339384.77		A	4.0
5	☐	1.000		5731168.39		A	1.9
6	☐	1.000		5129647.39		A	0.3
7	☐	1.000		5111644.12		A	0.4
8	☐	1.000		5309402.91		A	5.6
9	☐	1.000		5079604.19		A	0.7

45 Sc (ISTD) [No Gas]

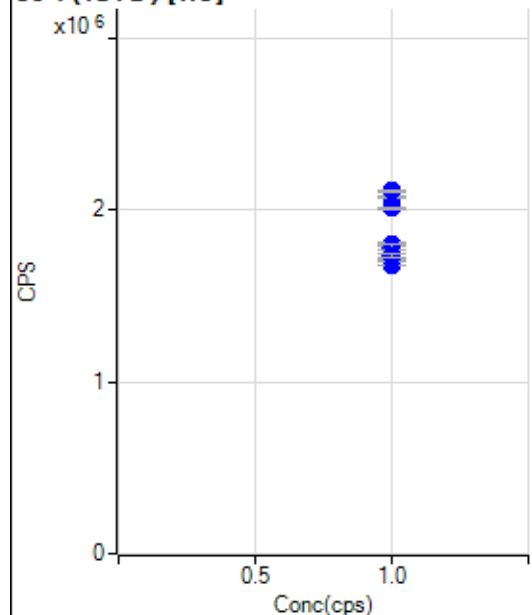
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10123755.09		A	0.7
2	☐	1.000		10055813.77		A	0.4
3	☐	1.000		10126754.22		A	0.5
4	☐	1.000		10294817.68		A	4.8
5	☐	1.000		9063520.00		A	1.6
6	☐	1.000		8076518.67		A	0.3
7	☐	1.000		8082064.85		A	0.2
8	☐	1.000		8426951.92		A	6.7
9	☐	1.000		8123917.81		A	0.5

45 Sc (ISTD) [He]

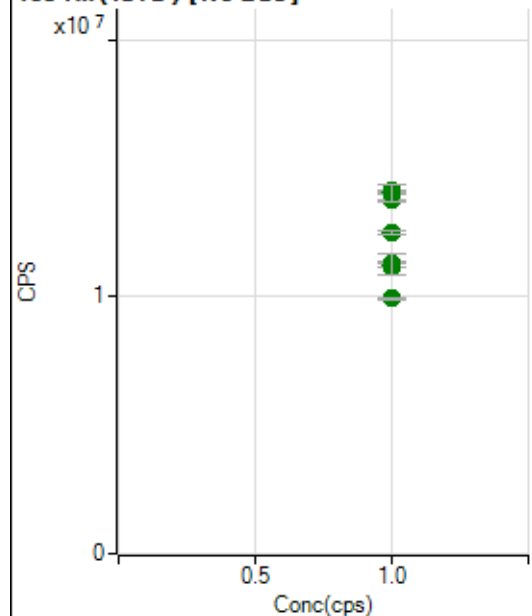
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		400508.25		P	0.8
2	☐	1.000		405405.43		P	0.5
3	☐	1.000		405970.18		P	0.5
4	☐	1.000		381753.66		P	0.2
5	☐	1.000		336048.03		P	0.9
6	☐	1.000		309373.80		P	0.1
7	☐	1.000		315939.09		P	1.0
8	☐	1.000		335203.62		P	2.7
9	☐	1.000		338885.37		P	0.6

89 Y (ISTD) [No Gas]

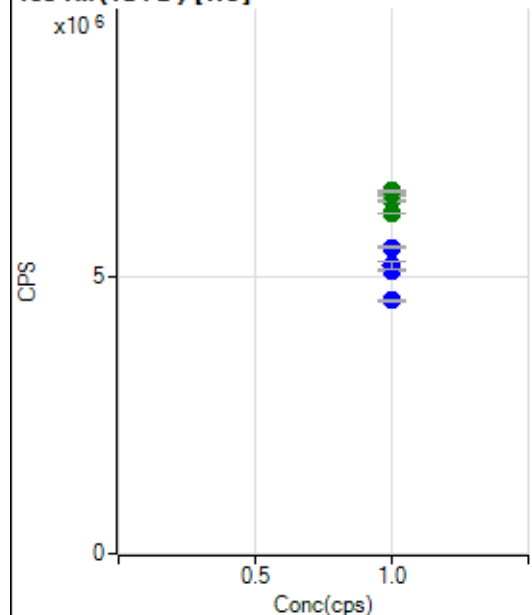
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		15444722.82		A	0.6
2	☐	1.000		15546618.66		A	0.4
3	☐	1.000		15700529.35		A	0.5
4	☐	1.000		15871514.48		A	4.6
5	☐	1.000		14358057.42		A	0.9
6	☐	1.000		13089328.97		A	0.4
7	☐	1.000		13145720.36		A	0.3
8	☐	1.000		13658887.02		A	7.0
9	☐	1.000		12901493.28		A	0.4

89 Y(ISTD) [He]

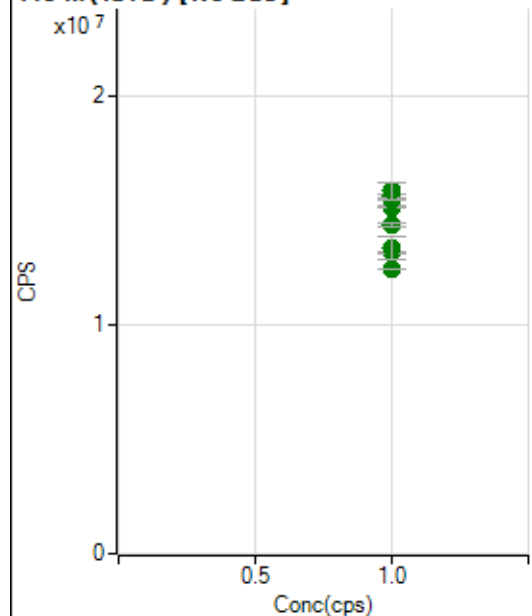
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2075896.31		P	0.3
2	☐	1.000		2112282.47		P	0.6
3	☐	1.000		2111093.85		P	0.7
4	☐	1.000		2010177.68		P	0.4
5	☐	1.000		1803548.41		P	0.9
6	☐	1.000		1683431.89		P	0.2
7	☐	1.000		1707942.40		P	0.5
8	☐	1.000		1785582.40		P	2.4
9	☐	1.000		1734343.97		P	1.5

103 Rh(ISTD) [No Gas]

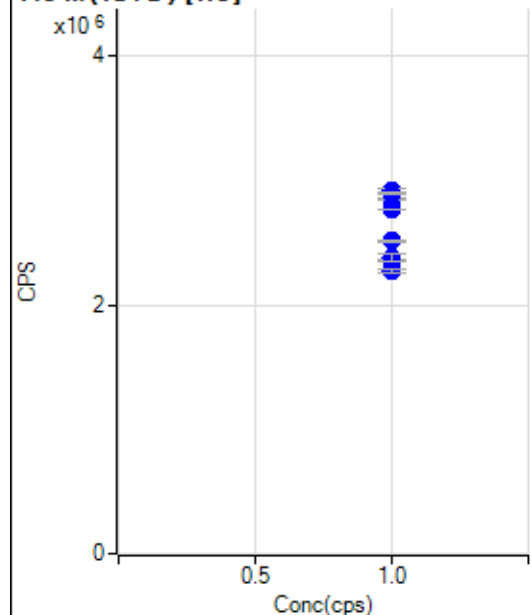
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		13756672.01		A	0.6
2	☐	1.000		13982227.92		A	0.4
3	☐	1.000		14111356.39		A	0.5
4	☐	1.000		14044320.28		A	4.8
5	☐	1.000		12514716.16		A	1.1
6	☐	1.000		11315558.59		A	0.3
7	☐	1.000		11147713.01		A	0.1
8	☐	1.000		11251897.73		A	7.4
9	☐	1.000		9916766.20		A	0.7

103 Rh (ISTD) [He]

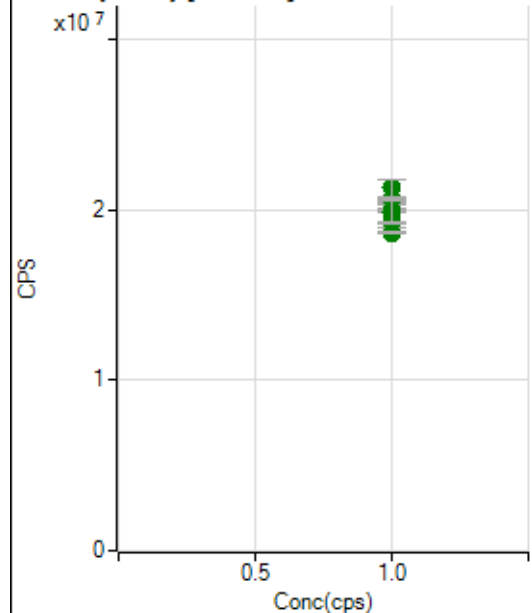
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		6371298.17		A	0.6
2	☐	1.000		6479445.95		A	0.4
3	☐	1.000		6543507.06		A	0.6
4	☐	1.000		6128084.98		A	0.2
5	☐	1.000		5519645.82		P	0.8
6	☐	1.000		5116076.97		P	0.3
7	☐	1.000		5102357.67		P	0.5
8	☐	1.000		5188122.46		P	2.7
9	☐	1.000		4566731.84		P	1.0

115 In (ISTD) [No Gas]

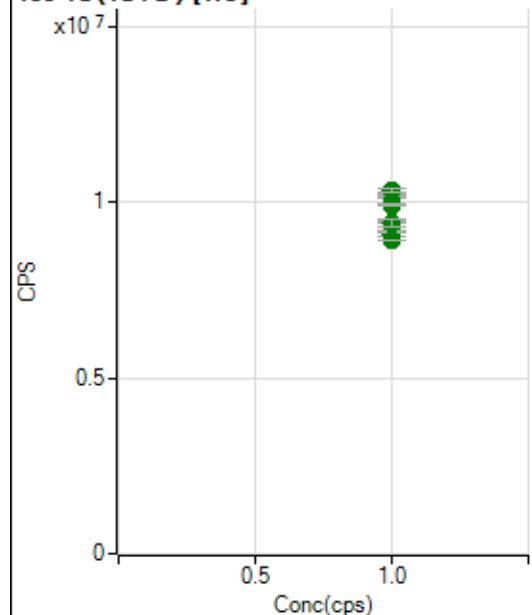
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		15148437.93		A	0.4
2	☐	1.000		15514607.46		A	0.3
3	☐	1.000		15643434.84		A	0.7
4	☐	1.000		15867284.18		A	4.4
5	☐	1.000		14366816.87		A	1.0
6	☐	1.000		13212869.38		A	0.4
7	☐	1.000		13179458.83		A	0.4
8	☐	1.000		13371330.35		A	7.3
9	☐	1.000		12420133.07		A	0.1

115 In (ISTD) [He]

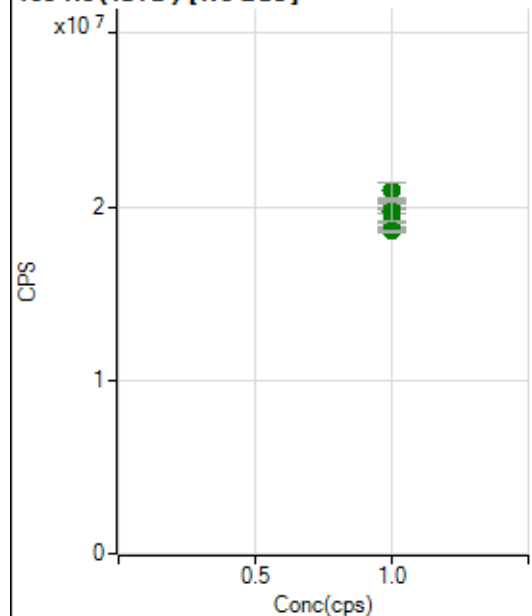
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		2849415.80		P	0.7
2	☐	1.000		2914800.25		P	0.9
3	☐	1.000		2889491.00		P	0.5
4	☐	1.000		2770893.07		P	0.1
5	☐	1.000		2513005.15		P	0.4
6	☐	1.000		2351826.72		P	0.3
7	☐	1.000		2350843.88		P	0.6
8	☐	1.000		2375945.76		P	2.8
9	☐	1.000		2267055.87		P	1.1

159 Tb (ISTD) [No Gas]

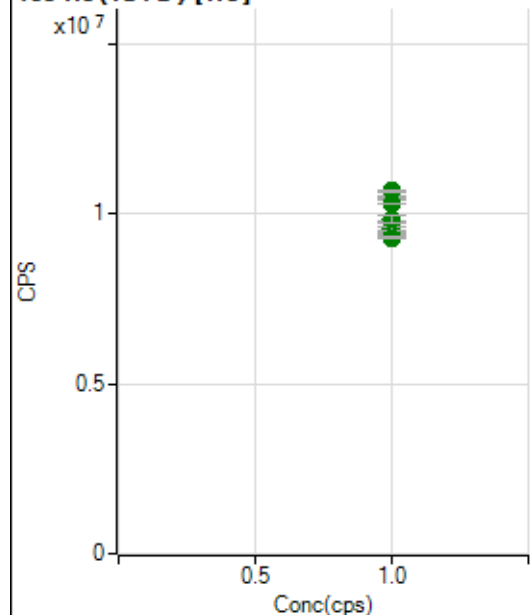
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		20068023.73		A	0.6
2	☐	1.000		20414348.45		A	0.2
3	☐	1.000		20670094.69		A	0.5
4	☐	1.000		21315513.85		A	4.6
5	☐	1.000		19885249.56		A	0.2
6	☐	1.000		18932298.88		A	0.1
7	☐	1.000		19265950.13		A	0.4
8	☐	1.000		19854709.98		A	6.9
9	☐	1.000		18697148.33		A	0.3

159 Tb (ISTD) [He]

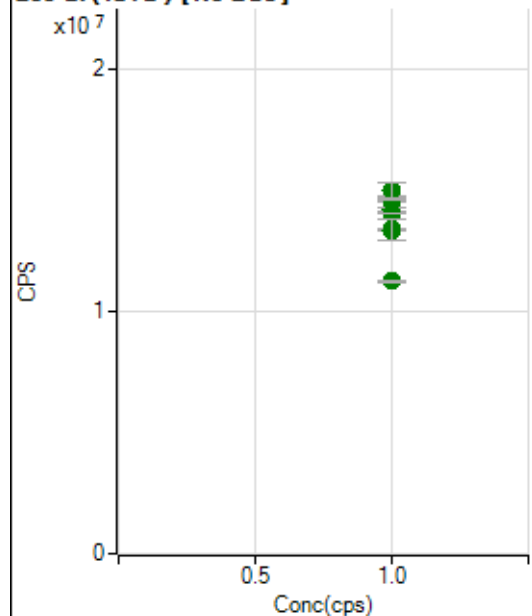
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10146376.45		A	0.3
2	☐	1.000		10190384.92		A	0.4
3	☐	1.000		10310164.85		A	0.9
4	☐	1.000		9917535.76		A	0.1
5	☐	1.000		9418462.57		A	0.4
6	☐	1.000		9068303.34		A	0.7
7	☐	1.000		9157648.89		A	0.7
8	☐	1.000		9403582.22		A	2.0
9	☐	1.000		8920435.22		A	0.1

165 Ho (ISTD) [No Gas]

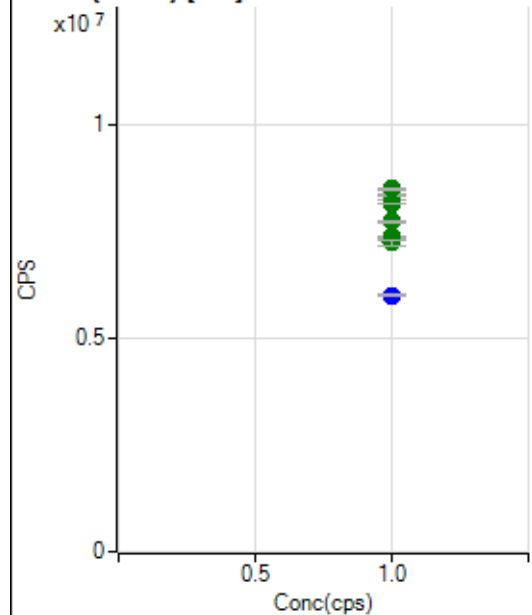
	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		19728952.35		A	1.5
2	☐	1.000		19957895.76		A	0.3
3	☐	1.000		20272345.94		A	0.4
4	☐	1.000		20921967.31		A	4.8
5	☐	1.000		19610562.25		A	0.4
6	☐	1.000		18833674.73		A	0.5
7	☐	1.000		19162934.11		A	0.4
8	☐	1.000		19787807.39		A	6.8
9	☐	1.000		18590511.52		A	0.3

165 Ho (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		10399076.44		A	0.4
2	☐	1.000		10478861.37		A	0.2
3	☐	1.000		10662070.74		A	0.8
4	☐	1.000		10301395.54		A	0.2
5	☐	1.000		9765509.44		A	0.8
6	☐	1.000		9407940.21		A	0.5
7	☐	1.000		9548650.48		A	1.2
8	☐	1.000		9806785.76		A	2.3
9	☐	1.000		9274127.09		A	0.7

209 Bi (ISTD) [No Gas]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		14257955.34		A	1.0
2	☐	1.000		14546224.64		A	0.5
3	☐	1.000		14707279.92		A	0.7
4	☐	1.000		14994691.59		A	4.4
5	☐	1.000		14077865.35		A	0.3
6	☐	1.000		13420870.63		A	0.4
7	☐	1.000		13334100.49		A	0.1
8	☐	1.000		13381314.11		A	6.9
9	☐	1.000		11252689.42		A	0.2

209 Bi (ISTD) [He]

	Rj ct	Conc.	Calc Conc.	CPS	Ratio	Det .	RSD
1	☐	1.000		8232220.29		A	0.2
2	☐	1.000		8365440.08		A	0.4
3	☐	1.000		8495986.33		A	0.7
4	☐	1.000		8155174.81		A	0.3
5	☐	1.000		7732466.97		A	0.5
6	☐	1.000		7378274.48		A	0.2
7	☐	1.000		7322619.68		A	0.7
8	☐	1.000		7237712.74		A	1.9
9	☐	1.000		5997544.08		P	1.0

US EPA Tune Check Sample Report

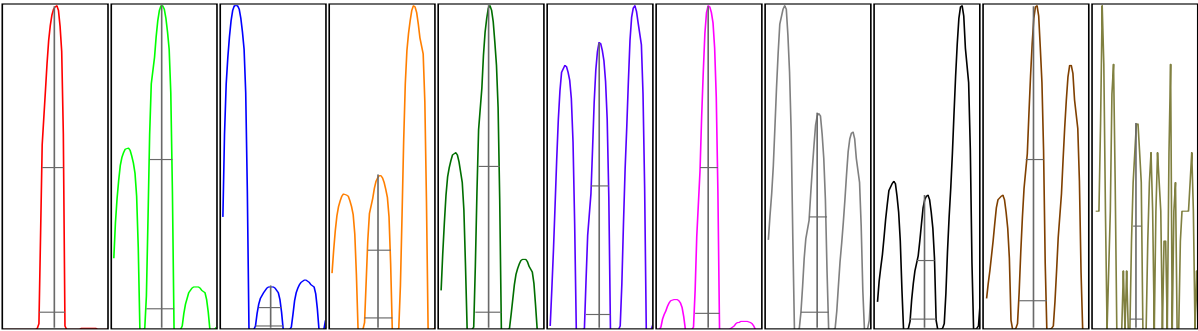
Batch Folder D:\ICP-MS Data\P7122018-MS.b
Report Comment
Instrument Name G8403A JP14410463

[No Gas]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
9	17108	0.97	5.00	
24	152068	0.60	5.00	
25	20080	0.64	5.00	
26	23213	0.74	5.00	
59	114762	0.65	5.00	
113	15015	0.96	5.00	
115	180392	1.04	5.00	
206	48559	0.39	5.00	
207	45010	0.31	5.00	
208	107265	0.22	5.00	
220	0	47.08		

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
9	17290	17239	17116	17018	16878
24	153291	152665	151926	151362	151097
25	20224	20199	20055	19993	19931
26	23382	23387	23214	23057	23023
59	115364	115635	114675	114348	113785
113	15200	15108	15013	14908	14847
115	183333	181151	179431	179307	178737
206	48541	48635	48663	48720	48237
207	44926	45215	45056	45013	44840
208	107483	107350	107313	107324	106855
220	0	0	0	0	0

Integration Time [sec] = 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	Width-X% (Actual)	Width-X% (Required)	Width- X% (Flag)
9	28744	9.00	8.9 - 9.1		0.741	0.900	
24	243558	23.95	23.9 - 24.1		0.812	0.900	
25	32264	24.95	24.9 - 25.1		0.788	0.900	
26	36902	25.90	25.9 - 26.1		0.787	0.900	
59	198340	58.95	58.9 - 59.1		0.781	0.900	
113	28781	113.00	112.9 - 113.1		0.731	0.900	
115	348285	115.00	114.9 - 115.1		0.725	0.900	
206	94435	206.00	205.9 - 206.1		0.785	0.900	
207	85469	206.95	206.9 - 207.1		0.744	0.900	
208	206071	207.95	207.9 - 208.1		0.791	0.900	
220	0	219.75	-		0.341		

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	6.4	V	Deflect	14.2	V
Extract 2	-95.0	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	200	V			

[He]

Mass	Count (Mean)	RSD% (Actual)	RSD% (Required)
59	26782	0.51	
89	34418	0.34	
205	42212	0.33	

Mass	Replicate 1 Count	Replicate 2 Count	Replicate 3 Count	Replicate 4 Count	Replicate 5 Count
59	26914	26914	26769	26712	26599
89	34499	34447	34552	34300	34290
205	42347	42358	42200	42060	42097

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	2.0	V
Extract 2	-105.0	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			