

1) Final On Peak Zero (OPZ) corrected intensities

2) Correct <sup>204</sup>Pb for <sup>204</sup>Hg contribution

<sup>204</sup>Pb corrected ratios

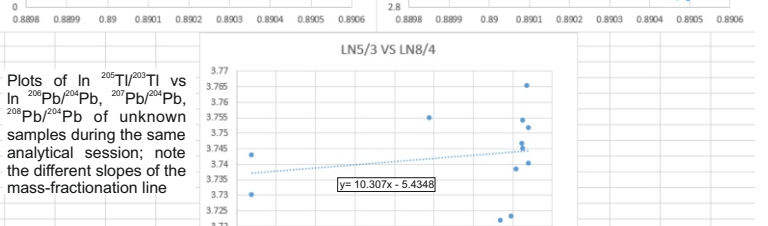
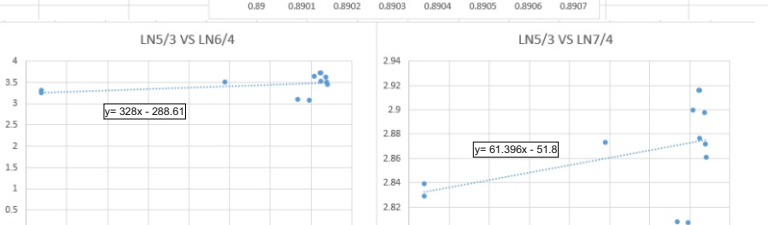
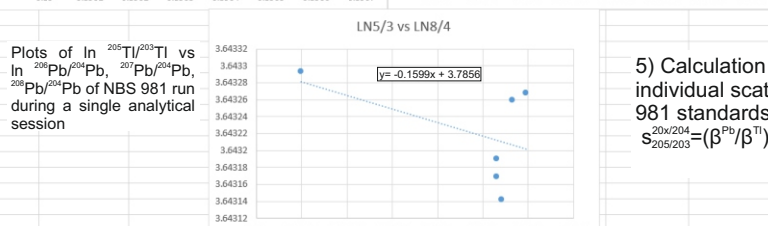
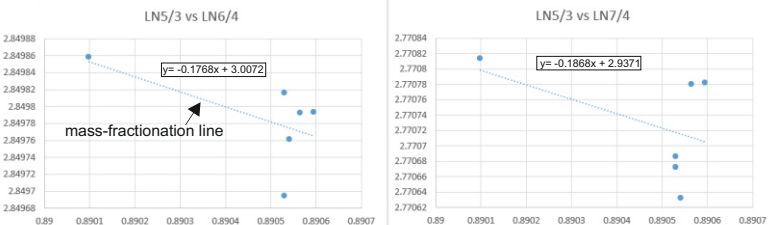
SI No.	Sample name	202Hg	203Tl	204Pb	205Tl	206Pb	207Pb	208Pb	corr 204	206/204 int cor	207/204 int cor	208/204 int cor
1	20240101 NBS981 Std1	1.69778E-05	1.295669345	0.16804462	3.156999685	2.90436898	2.683721923	6.421746369	0.1680359	17.28421957	15.97112464	38.21651967
2	20240101 NBS981 Std2	5.8642E-06	1.244830945	0.16115811	3.033036785	2.78543598	2.573821623	6.158734969	0.1611551	17.2841949	15.97108492	38.21619894
3	20240101 JK1 L3	1.64705E-05	1.020402845	0.18237054	2.486155285	5.97030208	3.220312423	7.678855969	0.1823621	32.73872955	17.65889499	42.10775024
4	20240101 JK1 L4	1.24112E-05	2.781715673	0.201615421	6.777383182	8.231930288	3.721214777	8.542970986	0.201609	40.8311589	18.45759	42.37395041
5	20240101 JK1 L5	2.47549E-05	2.71688748	0.094858755	6.619451353	3.882590605	1.751065815	4.013216287	0.094846	40.9357311	18.46219873	42.31297076
6	20240101 JK1 L6	2.25055E-05	2.694105732	0.036256875	6.563839111	1.37349707	0.658121677	1.523525137	0.0362453	37.8945037	18.15744269	42.03374743
7	20240101 JK1 L7	4.13789E-05	2.696777493	0.036038989	6.570084	0.784709216	0.59676264	1.4888674	0.0360177	21.78677921	16.56860351	41.337128
8	20240101 NBS981 Std3	1.60172E-05	1.16470897	0.151135142	2.837720682	2.612168511	2.413400518	5.775097759	0.1511269	17.28460406	15.969365	38.21356767
9	20240101 NBS981 Std4	2.08694E-06	1.15779507	1.50096E-01	2.820905682	2.594196111	2.396830918	5.735399259	0.1500953	17.28366018	15.96872762	38.21171859
10	20240101 JK2 L3	1.90263E-05	2.602752196	0.2365016	6.34146658	7.299036636	4.133123131	10.07206968	0.2364918	30.8638041	17.47681358	42.58950885
11	20240101 JK2 L4	3.60208E-05	2.618426865	0.135857478	6.378056475	4.483944671	2.403140625	5.805052975	0.1358389	33.00927614	17.69110422	42.7348263
12	20240101 JK2 L5	1.60479E-05	2.64292317	0.083193358	6.439317528	3.107315901	1.507466774	3.591846329	0.0831851	37.35423943	18.12183781	43.17896604
13	20240101 JK2 L6	1.62494E-05	2.442190052	0.048850976	5.95017277	1.640261423	0.86671676	2.05108165	0.0488426	33.58259307	17.7450959	42.69035291
14	20240101 JK2 L7	3.20348E-05	2.640410674	0.040892839	6.432939391	0.887876546	0.67694419	1.692044458	0.0408763	21.72103795	16.56078259	41.39422541
15	20240101 NBS982 Std1	8.54527E-06	1.031783684	0.045364032	2.513902018	1.701052344	0.80233116	1.734958067	0.0453596	37.50145864	17.68826354	38.24894539
16	20240101 NBS982 Std2	1.92296E-06	0.957965724	0.042145995	2.334062718	1.579859644	0.745129476	1.611243967	0.042145	37.48628444	17.68013733	38.23095925
17	20240101 NBS981 Std5	1.73133E-05	1.148505241	0.15003397	2.797033985	2.593233923	2.396142899	5.733581937	0.1500251	17.28533902	15.97161829	38.2174962
18	20240101 NBS981 Std6	4.45786E-06	1.151938441	0.15059244	2.806608485	2.602574723	2.404862899	5.754464237	0.1505901	17.28250364	15.9695902	38.21275456

3) Tl-spiking; individual mass-fractionation corrected Pb ratios

4) Calculation of ln values of <sup>204</sup>Pb corrected ratios

7) Using individual β-values in exponential law equation to obtain 'slope-corrected' <sup>206</sup>Pb/<sup>204</sup>Pb ratios of unknown samples

meas 205/203		Thallium-corrected				Slope; Albarède04				beta6/4, beta7/4, beta8/4			206/204, 207/204, 208/204			
	beta1 Tl	206/204 mfc1	207/204 mfc1	208/204 mfc1	Pb/Tl	LN6/4	LN7/4	LN5/3	LN8/4							
2.436578204	-2.090100873	16.9350489	15.49064975	36.6950013	2.03412956	2.849793921	2.770782381	0.89059468	3.643267874	0.0657	-3.13963413	-1.781	17.2953	15.2549	36.9161	
2.436504971	-2.087038775	16.9355311	15.49130447	36.6968775	2.0305507	2.849792494	2.770779894	0.890564624	3.643259482	0.0657	-3.13503442	-1.7784	17.2953	15.2558	36.9177	
2.436444878	-2.084526044	32.0790977	17.12904077	40.4356914	3.08864696	3.488558767	2.871239622	0.89053996	3.740231815	0.0656	-3.13125993	-1.7762	32.7597	16.8690	40.6787	
2.436403996	-2.082816558	40.0091457	17.90420859	40.6926731	1.26051173	3.709445488	2.91545126	0.89052318	3.746533796	0.0655	-3.12869204	-1.7748	40.8573	17.6326	40.9370	
2.436409826	-2.083060348	40.1115171	17.90862504	40.6339204	0.60627627	3.712003303	2.91572533	0.890525573	3.745093676	0.0655	-3.12905824	-1.775	40.9619	17.6369	40.8780	
2.436370271	-2.081406297	37.1321225	17.61343261	40.3670751	0.23210885	3.634806608	2.899080542	0.890509338	3.738472806	0.0655	-3.12657362	-1.7736	37.9187	17.3464	40.6093	
2.436272186	-2.077370471	21.3493166	16.07315964	39.7012422	0.22661315	3.081303327	2.80750955	0.890469079	3.721761079	0.0653	-3.12041244	-1.7701	21.8007	15.8300	39.9390	
2.436420389	-2.083502036	16.9365169	15.49043686	36.6968735	2.03511846	2.849816167	2.770672199	0.890529909	3.643190627	0.0655	-3.12972172	-1.7754	17.2957	15.2554	36.9173	
2.436446445	-2.084591547	16.9354119	15.48957196	36.6943207	2.03317654	2.849761557	2.770632286	0.890540603	3.643142238	0.0656	-3.13135833	-1.7763	17.2947	15.2544	36.9149	
2.436446539	-2.08459549	30.2419284	16.95240551	40.8982646	1.58828712	3.429584109	2.860875064	0.890540641	3.751607952	0.0656	-3.13136425	-1.7763	30.8836	16.6950	41.1441	
2.435835257	-2.059031664	32.3522459	17.16667847	41.0582086	0.91016017	3.496788617	2.873061927	0.890289719	3.755014192	0.0648	-3.09296368	-1.7545	33.0302	16.9092	41.3020	
2.436437654	-2.084223963	36.6017206	17.57817063	41.4646137	0.55779923	3.620446411	2.89711772	0.890536995	3.76535348	0.0656	-3.13080616	-1.776	37.3782	17.3114	41.7138	
2.436408569	-2.083007765	32.9064466	17.21303716	40.9963693	0.35042817	3.514007869	2.87610919	0.890525057	3.753972967	0.0655	-3.12897926	-1.775	33.6041	16.9519	41.2426	
2.436340473	-2.080160281	21.2843019	16.06490215	39.7538734	0.2630282	3.078281282	2.807037406	0.890497107	3.723141388	0.0654	-3.12470192	-1.7725	21.7349	15.8215	39.9923	
2.436462271	-2.08525331	36.7456046	17.15734576	36.7295968	0.69014546	3.624379829	2.872901343	0.890547098	3.644115988	0.0656	-3.13235239	-1.7769	37.5255	16.8968	36.9504	
2.43647832	-2.085924392	36.7304956	17.14929527	36.7118462	0.69031734	3.623975118	2.872441825	0.890553685	3.643645639	0.0656	-3.13336045	-1.7774	37.5103	16.8888	36.9326	
2.435368935	-2.039525779	16.9445115	15.50258275	36.7320316	2.04987925	2.849858687	2.77081329	0.890098258	3.643293427	0.0642	-3.06366302	-1.7379	17.2962	15.2723	36.9480	
2.436422283	-2.083581203	16.9344457	15.49063739	36.6960362	2.05032667	2.849694639	2.770686301	0.890530686	3.643169349	0.0655	-3.12984064	-1.7754	17.2936	15.2556	36.9165	



6) Calculation of individual β<sup>Pb</sup> values using  $s_{20x/204}^{20x/204}$  of NBS 981 standards and β<sup>Tl</sup> values of unknown samples (see step 5, generalized power law equation; Albarède et al., 2004)

5) Calculation of slope from individual scatter plots of NBS 981 standards; where  $s_{20x/204}^{20x/204} = (\beta^{Pb}/\beta^{Tl}) * [\ln(M_{20xPb}/M_{204Pb})/\ln(M_{205Tl}/M_{203Tl})]$

Schematic of two-stage instrumental mass-bias correction using both thallium-spiking and standard-sample bracketing. Primary blank On Peak Zero (OPZ) and <sup>204</sup>Pb corrections are followed by application of the generalized power law (after Albarède et al., 2004) correction which allows determination of accurate and precise Pb isotopic data on a MC-ICPMS.