

Supplementary Table 3. In-situ LA-MC-ICPMS thick section U-Pb data of LAV-14-5 ilmenite-bearing chloritite (blackwall).

Spot	207Pb/ 235U		206Pb/ 238U		238U/ 206Pb		207Pb/ 206Pb		206Pb/ 238Pb Age (Ma)		207Pb/ 206Pb Age (Ma)		U (ppm)	Th (ppm)	U/Th Ratio
LAV-ILM_3	0.21000	0.29000	0.03850	0.00160	25.97403	1.07944	0.07000	0.01800	243.7	9.6	570.0	620.0	460	275	1.67
LAV-ILM_4	1.31000	0.14000	0.04610	0.00360	21.69197	1.69395	0.20300	0.02900	291.0	22.0	2660.0	310.0	209	271	0.77
LAV-ILM_5	0.93900	0.09500	0.05540	0.00290	18.05054	0.94488	0.12230	0.01000	347.0	18.0	1910.0	140.0	432	640	0.68
LAV-ILM_6	1.05000	0.29000	0.05360	0.00210	18.65672	0.73095	0.15100	0.03000	337.0	13.0	2290.0	340.0	143	143	1.00
LAV-ILM_7	0.82700	0.09400	0.05750	0.00180	17.39130	0.54442	0.09440	0.00460	360.6	11.0	1510.0	80.0	688	872	0.79
LAV-ILM_8	1.24000	0.40000	0.06260	0.00210	15.97444	0.53588	0.12500	0.03500	391.0	13.0	1550.0	920.0	108	223	0.48
LAV-ILM_9	0.99000	0.13000	0.04580	0.00270	21.83406	1.28716	0.14800	0.01600	288.0	17.0	2150.0	210.0	406	880	0.46
LAV-ILM_10	1.45000	0.33000	0.06180	0.00420	16.18123	1.09970	0.13800	0.03300	391.0	25.0	1820.0	550.0	210	1720	0.12
LAV-ILM_11	0.97000	0.11000	0.04420	0.00260	22.62443	1.33085	0.15400	0.01300	279.0	16.0	2340.0	150.0	361	209	1.73
LAV-ILM_12	1.22000	0.14000	0.05380	0.00210	18.58736	0.72553	0.16600	0.01800	337.0	13.0	2400.0	170.0	386	370	1.04
LAV-ILM_13	0.90000	0.25000	0.05910	0.00240	16.92047	0.68713	0.09400	0.01800	370.0	14.0	1270.0	410.0	470	920	0.51
LAV-ILM_14	1.25000	0.32000	0.06030	0.00210	16.58375	0.57754	0.11100	0.02000	377.0	13.0	1620.0	360.0	370	530	0.70
LAV-ILM_15	1.19000	0.40000	0.05110	0.00320	19.56947	1.22549	0.15000	0.03200	321.0	20.0	1810.0	590.0	370	530	0.70
LAV-ILM_16	1.24000	0.11000	0.06340	0.00170	15.77287	0.42293	0.14000	0.01100	396.5	10.0	2180.0	140.0	514	413	1.24
LAV-ILM_17	1.40000	0.13000	0.05900	0.00140	16.94915	0.40218	0.16500	0.01600	369.5	8.6	2430.0	170.0	266	224	1.19
LAV-ILM_18	2.20000	0.20000	0.05560	0.00210	17.98561	0.67931	0.27800	0.03000	349.0	13.0	3220.0	240.0	660	990	0.67
LAV-ILM_19	1.59000	0.26000	0.03610	0.00260	27.70083	1.99507	0.30500	0.05300	228.0	16.0	3280.0	280.0	300	241	1.24
LAV-ILM_21	1.02100	0.07700	0.05580	0.00160	17.92115	0.51387	0.13720	0.00800	350.2	9.9	2154.0	97.0	689	950	0.73
LAV-ILM_22	0.97000	0.11000	0.05810	0.00160	17.21170	0.47399	0.11800	0.01200	364.3	9.8	1790.0	230.0	442	720	0.61
LAV-ILM_23	0.68900	0.03600	0.06180	0.00180	16.18123	0.47130	0.08020	0.00430	386.7	11.0	1160.0	140.0	810	970	0.84
LAV-ILMb_0	0.52100	0.14000	0.05500	0.00380	18.10000	1.10000	0.06380	0.00810	345.0	23.0	680.0	260.0	540	317	1.70
LAV-ILMb_2	0.41800	0.07800	0.05370	0.00340	18.90000	1.20000	0.05490	0.00250	337.0	21.0	400.0	96.0	520	370	1.41
LAV-ILMb_3	0.66900	0.18000	0.06350	0.00180	15.68000	0.23000	0.07440	0.00730	397.1	11.0	1043.0	200.0	995	1650	0.60
LAV-ILMb_4	0.30800	0.17000	0.03870	0.00260	25.90000	1.40000	0.05830	0.00720	248.0	15.0	500.0	250.0	170	78	2.18
LAV-ILMb_5	0.31400	0.07500	0.04340	0.00290	23.06000	0.95000	0.05247	0.00034	274.0	18.0	305.7	15.0	475	334	1.42
LAV-ILMb_7	0.55000	0.08000	0.05840	0.00180	17.17000	0.39000	0.06910	0.00590	366.0	11.0	880.0	190.0	1153	597	1.93
LAV-ILMb_9	0.42400	0.17000	0.05350	0.00310	18.92000	0.95000	0.06110	0.00930	336.0	19.0	630.0	310.0	1600	950	1.68
LAV-ILMb_10	0.31300	0.04800	0.04390	0.00320	22.70000	1.30000	0.05241	0.00033	277.0	20.0	303.0	14.0	420	192	2.19
LAV-ILMb_11	0.27700	0.09300	0.03920	0.00390	26.80000	2.40000	0.05290	0.00310	247.0	24.0	313.0	100.0	600	890	0.67
LAV-ILMb_13	0.42800	0.20000	0.04920	0.00280	20.47000	0.82000	0.06060	0.00610	310.0	17.0	590.0	210.0	1024	973	1.05

LAV-ILMb_16	0.47200	0.23000	0.05260	0.00260	19.40000	1.20000	0.06460	0.01000	330.0	16.0	680.0	320.0	1000	723	1.38
LAV-ILMb_17	0.32800	0.02700	0.04560	0.00180	22.05000	0.72000	0.05257	0.00032	287.1	11.0	310.0	14.0	475	980	0.48
LAV-ILMb_18	0.70000	0.15000	0.07060	0.00710	14.00000	1.30000	0.06180	0.00520	439.0	42.0	630.0	150.0	87	540	0.16