

ESI Table S6. Analytical results for tourmaline using crater volume-corrected LA-MFC-ICPMS^a

Run #	Ablation condition	Sample	Crat. vol. (μm^3)	B (ppm)	2SE (ppm)	$^{10}\text{B}/\text{V}$	2SE	$^{11}\text{B}/\text{V}$	2SE	$^{10}\text{B}/^{11}\text{B}$	2SE	$\delta^{11}\text{B}$	$\delta^{11}\text{B}$ (vcv)	2SE
Run1	50um/3Hz/193nm (130 mJ)	SRM610_1	56941	350		0.0622	0.0011	0.2859	0.0051	4.5973	0.0016	-0.01		0.34
Run2	50um/3Hz/193nm (130 mJ)	Tourm-1	25525	27796	2207	2.2527	0.1787	10.2750	0.8160	4.5609	0.0005	-8.26	-8.36	0.11
Run3	50um/3Hz/193nm (130 mJ)	SRM610_2	56941			0.0633	0.0011	0.2914	0.0054	4.6003	0.0019			0.41
Run4	50um/3Hz/193nm (130 mJ)	Tourm-2	25525	29641	1521	2.4636	0.1263	11.2422	0.5769	4.5631	0.0005	-8.06	-8.16	0.10
Run5	50um/3Hz/193nm (130 mJ)	SRM610_3	56941			0.0654	0.0011	0.3010	0.0048	4.6000	0.0015			0.33
Run6	50um/3Hz/193nm (130 mJ)	Tourm-3	25525	28888	1334	2.4461	0.1129	11.1657	0.5158	4.5646	0.0004	-7.87	-7.97	0.09
Run7	50um/3Hz/193nm (130 mJ)	SRM610_4	56941			0.0657	0.0012	0.3025	0.0053	4.6015	0.0017			0.36
Run8	50um/3Hz/193nm (130 mJ)	Tourm-4	25525	25386	1859	2.1563	0.1577	9.8425	0.7206	4.5642	0.0005	-8.11	-8.21	0.11
Run9	50um/3Hz/193nm (130 mJ)	SRM610_5	56941			0.0658	0.0010	0.3029	0.0047	4.6015	0.0016			0.35
Run10	50um/3Hz/193nm (130 mJ)	Tourm-5	25525	24170	1882	2.0146	0.1567	9.1938	0.7160	4.5630	0.0007	-8.38	-8.48	0.16
Run11	50um/3Hz/193nm (130 mJ)	SRM610_6	56941			0.0633	0.0009	0.2913	0.0039	4.6016	0.0013			0.28
Run12	50um/3Hz/193nm (130 mJ)	Tourm-6	25525	25263	1787	2.0601	0.1455	9.4036	0.6652	4.5640	0.0008	-8.42	-8.52	0.17
Run13	50um/3Hz/193nm (130 mJ)	SRM610_7	56941			0.0630	0.0008	0.2899	0.0036	4.6038	0.0017			0.37
Run14	50um/3Hz/193nm (130 mJ)	Tourm-7	25525	24622	1878	2.0033	0.1525	9.1459	0.6977	4.5647	0.0009	-8.45	-8.55	0.19
Run15	50um/3Hz/193nm (130 mJ)	SRM610_8	56941			0.0630	0.0009	0.2901	0.0041	4.6033	0.0016			0.35
Run16	50um/3Hz/193nm (130 mJ)	Tourm-8	25525	23603	1900	1.9403	0.1561	8.8583	0.7131	4.5650	0.0006	-8.36	-8.46	0.12
Run17	50um/3Hz/193nm (130 mJ)	SRM610_9	56941			0.0643	0.0005	0.2960	0.0023	4.6037	0.0015			0.32
Run18	50um/3Hz/193nm (130 mJ)	Tourm-9	25525	23068	1947	1.9203	0.1619	8.7668	0.7399	4.5650	0.0006	-8.25	-8.35	0.14
Run19	50um/3Hz/193nm (130 mJ)	SRM610_10	56941			0.0646	0.0007	0.2974	0.0033	4.6021	0.0015			0.33
Run20	50um/3Hz/193nm (130 mJ)	Tourm-10	25525	22777	1843	1.8986	0.1535	8.6679	0.7012	4.5652	0.0005	-8.41	-8.51	0.12
Run21	50um/3Hz/193nm (130 mJ)	SRM610_11	56941			0.0644	0.0006	0.2968	0.0027	4.6056	0.0014			0.31
Run22	50um/3Hz/193nm (130 mJ)	Tourm-11	25525	23833	2037	1.9724	0.1684	9.0053	0.7698	4.5651	0.0007	-8.80	-8.90	0.15
Run23	50um/3Hz/193nm (130 mJ)	SRM610_12	56941			0.0637	0.0007	0.2932	0.0033	4.6057	0.0014			0.30
Run24	50um/3Hz/193nm (130 mJ)	Tourm-12	25525	24407	2109	1.9964	0.1723	9.1145	0.7874	4.5651	0.0006	-8.64	-8.74	0.13
Run25	50um/3Hz/193nm (130 mJ)	SRM610_13	56941			0.0630	0.0009	0.2899	0.0039	4.6040	0.0016			0.36
Run26	50um/3Hz/193nm (130 mJ)	Tourm-13	25525	24522	1937	1.9894	0.1570	9.0893	0.7180	4.5684	0.0005	-7.82	-7.92	0.12
Run27	50um/3Hz/193nm (130 mJ)	SRM610_14	56941			0.0627	0.0005	0.2889	0.0025	4.6047	0.0015			0.32
Run28	50um/3Hz/193nm (130 mJ)	Tourm-14	25525	25755	2023	2.0804	0.1633	9.5012	0.7464	4.5665	0.0006	-8.29	-8.39	0.14
Run29	50um/3Hz/193nm (130 mJ)	SRM610_15	56941			0.0624	0.0006	0.2872	0.0027	4.6045	0.0015			0.33
Run30	50um/3Hz/193nm (130 mJ)	Tourm-15	25525	27171	1932	2.1528	0.1529	9.8324	0.6990	4.5671	0.0005	-8.13	-8.23	0.11
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
		Average / 1SD		25394	2088					Average / 2SD			-8.4	0.5
Run #	Ablation condition	Sample	Crat. vol. (μm^3)	B (ppm)	2SE (ppm)	$^{10}\text{B}/\text{V}$	2SE	$^{11}\text{B}/\text{V}$	2SE	$^{10}\text{B}/^{11}\text{B}$	2SE	$\delta^{11}\text{B}$	$\delta^{11}\text{B}$ (vcv)	2SE
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020	-0.01		0.42
Run32	50um/1Hz/193nm (130 mJ)	SRM610_C1	20597	350	20	0.0218	0.0013	0.1006	0.0058	4.6031	0.0042	-0.30	-0.50	0.90
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run33	50um/2Hz/193nm (130 mJ)	SRM610_C2	40346	350	6	0.0428	0.0007	0.1970	0.0032	4.6049	0.0022	0.09	-0.11	0.48
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run34	50um/5Hz/193nm (130 mJ)	SRM610_C3	89981	350	5	0.0954	0.0013	0.4393	0.0058	4.6067	0.0012	0.48	0.28	0.25
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run35	50um/7Hz/193nm (130 mJ)	SRM610_C4	123649	350	5	0.1311	0.0018	0.6037	0.0081	4.6063	0.0009	0.40	0.20	0.20
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run36	50um/10Hz/193nm (130 mJ)	SRM610_C5	168105	350	4	0.1782	0.0022	0.8208	0.0099	4.6068	0.0007	0.50	0.30	0.15
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run37	50um/15Hz/193nm (130 mJ)	SRM610_C6	233222	350	7	0.2471	0.0048	1.1387	0.0221	4.6077	0.0009	0.69	0.49	0.19
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run38	50um/20Hz/193nm (130 mJ)	SRM610_C7	299471	350	8	0.3173	0.0073	1.4621	0.0333	4.6079	0.0008	0.76	0.56	0.17
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run39	100um/10Hz/193nm (130 mJ)	SRM610_C8	591412	350	5	0.6275	0.0087	2.8875	0.0403	4.6016	0.0004	-0.61	-0.81	0.08
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run40	100um/5Hz/193nm (130 mJ)	SRM610_C9	337282	350	2	0.3577	0.0020	1.6467	0.0090	4.6033	0.0004	-0.26	-0.46	0.10
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run50	100um/3Hz/193nm (130 mJ)	SRM610_C10	216420	350	3	0.2295	0.0019	1.0566	0.0089	4.6037	0.0006	-0.16	-0.36	0.12
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42
Run52	100um/1Hz/193nm (130 mJ)	SRM610_C11	83377	350	8	0.0884	0.0020	0.4071	0.0094	4.6057	0.0014	0.26	0.06	0.31
Run31	50um/3Hz/193nm (130 mJ)	SRM610_16	56941			0.0604	0.0007	0.2780	0.0032	4.6044	0.0020			0.42

^a: 2SE: 2-standard error, volume: μm^3 , depth μm ; Crat. Vol.: crater volume; vcv: volume-corrected value. Run 31 to 36 were used for crater volume correction calculations