

Supplementary File 2b. Major and trace element compositions of mafic (lamprophyric) dykes of the Bokan Mountain Complex

Sample	LM90	LM92	LM113	752	779	801	804	806	824	828
(wt%)										
SiO ₂	55.75	50.29	56.16	47.62	48.66	51.38	52.21	50.81	48.64	52.12
TiO ₂	0.42	0.65	0.39	0.71	0.72	0.65	0.45	0.54	0.76	0.57
Al ₂ O ₃	18.17	17.15	17.58	17.65	19.93	19.05	16.56	17.22	18.30	18.95
Fe ₂ O ₃ ^t	5.15	8.26	4.79	10.31	9.11	8.85	6.52	6.32	9.92	7.57
MnO	0.17	0.32	0.16	0.19	0.17	0.18	0.23	0.22	0.21	0.22
MgO	1.42	2.46	1.18	3.85	4.08	3.25	1.75	1.77	4.21	2.53
CaO	5.56	6.16	5.97	10.08	9.80	9.36	7.66	6.99	10.29	8.54
Na ₂ O	5.31	6.07	6.88	2.65	3.32	3.46	5.11	5.80	3.10	3.04
K ₂ O	1.94	2.14	0.92	1.01	1.00	1.08	2.15	3.25	0.74	1.18
P ₂ O ₅	0.24	0.31	0.21	0.71	0.19	0.21	0.29	0.34	0.21	0.21
LOI	5.37	5.29	5.31	4.91	3.22	3.35	6.61	7.08	3.34	4.71
Total	99.50	99.10	99.55	99.69	100.20	100.82	99.54	100.34	99.72	99.64
(ppm)										
Rb	85	116	45	46	37	36	99	218	33	53
Ba	1219	457	237	252	477	439	536	444	250	642
Sr	781	708	12	738	783	838	621	903	813	841
Ga	17	18	18	18	17	19	19	16	18	19
Ta	0.32	0.32	0.49	0.00	0.00	0.20	0.30	0.20	0.10	1.00
Nb	4.5	4.3	12.4	2.0	2.0	5.0	8.0	5.0	3.0	4.0
Hf	2.5	2.2	2.8	1.4	1.6	1.8	2.8	2.8	1.6	2.4
Zr	85	81	96	48	52	62	97	102	53	67
Y	20	34	23	16	16	25	38	30	27	556
Th	2.51	1.94	8.98	5.80	1.20	3.70	2.60	2.70	1.50	1.90
U	0.98	6.96	2.12	1.70	0.50	0.80	2.60	2.00	0.70	1.50
La	11.7	14.1	15.3	9.2	8.9	11.1	18.2	17.7	9.8	13.6
Ce	25.4	31.1	33.3	20.8	20.6	25.6	40.5	40.4	23.0	29.0
Pr	3.61	4.25	4.53	2.88	2.90	3.31	4.91	4.96	2.97	4.31
Nd	17.7	19.0	21.4	13.3	13.5	15.2	21.6	22.0	14.1	21.2
Sm	4.19	4.57	4.82	3.30	3.30	3.70	4.60	5.20	3.50	10.90
Eu	1.35	1.44	1.54	1.18	1.18	1.21	1.37	1.57	1.17	2.64
Gd	3.89	4.44	4.67	3.40	3.40	3.60	4.30	4.70	3.40	29.60
Tb	0.64	0.80	0.78	0.60	0.60	0.60	0.70	0.80	0.60	8.40
Dy	3.76	5.05	4.70	3.20	3.20	3.50	4.80	4.50	3.60	65.00
Ho	0.80	1.13	0.99	0.70	0.60	0.70	1.00	0.90	0.80	14.70
Er	2.36	3.29	2.87	1.90	1.80	2.00	3.20	2.70	2.10	39.30
Tm	0.37	0.47	0.46	0.29	0.27	0.29	0.52	0.40	0.33	4.72
Yb	2.43	3.38	2.89	1.90	1.90	1.90	3.50	2.60	2.00	20.10
Lu	0.36	0.50	0.43	0.31	0.30	0.30	0.50	0.39	0.30	2.00

Fe₂O_{3t} - total iron as Fe₂O₃; LOI - loss on ignition.