

supplementary Table 1: Representative chemical analyses (in wt.%) of olivines of Cameroon dykes

Sample	Mb	Mb	Mb	Mb	Mb	Mb	Mb	Mb	Mb	Mb	M3	M3	M3	M3	M3	M3	M3	M3	M3	M3	M3	D1a	D1a	D1a	D1a	D1a	D1a	D1a	D1a	D1a	D1a	D1a	Tb	Tb	Tb	Tb	Tb
Description	core	rim	core	rim	core	core	rim	core	core	core	core	rim	core	core	core	rim	core	rim	core	rim	core	rim	core	rim	core	core	rim	rim	core	core	core	rim	core	rim	core	rim	core
SiO <sub>2</sub>	40.03	39.86	39.13	39.99	40.56	39.58	39.59	38.19	38.27	38.99	40.37	38.13	39.94	40.13	39.78	40.27	38.55	36.69	39.44	30.96	39.59	37.28	39.15	40.14	36.79	36.42	38.65	39.68	37.49	31.59	39.38	39.85	40.52	40.18	38.62		
FeO	18.20	18.47	15.86	17.64	16.20	14.50	17.38	17.97	17.94	16.21	15.34	22.12	15.89	16.06	15.35	16.35	16.10	30.35	17.19	60.47	15.39	26.72	16.62	12.55	31.27	32.45	17.06	13.14	29.83	54.11	13.63	15.00	14.43	16.27	15.79		
MnO	0.20	0.03	0.33	0.00	0.47	0.05	0.44	0.28	0.28	0.16	0.09	0.37	0.41	0.24	0.42	0.30	0.18	0.36	0.03	1.32	0.33	0.76	0.47	0.17	0.88	0.53	0.28	0.53	0.55	0.93	0.35	0.00	0.17	0.34	0.22		
MgO	42.50	42.32	42.95	43.22	44.37	43.59	43.84	41.72	42.71	42.97	44.06	38.02	42.50	42.84	44.43	43.32	42.55	29.95	42.52	5.58	45.12	34.75	43.30	46.81	31.78	31.21	42.21	45.31	32.06	10.70	44.59	42.55	45.67	42.63	43.51		
CaO	0.35	0.22	0.32	0.33	0.10	-	0.24	0.24	0.34	0.18	0.22	0.36	0.25	0.40	0.09	0.40	0.39	0.35	0.28	0.20	0.37	0.42	0.37	0.22	0.18	0.29	0.42	0.19	0.20	0.20	0.13	0.38	0.24	0.38	0.28		
NiO	-	0.62	0.12	0.04	0.46	-	0.16	0.41	0.50	0.27	-	0.05	-	0.05	-	-	0.49	0.23	0.20	0.39	-	-	-	0.44	-	0.11	0.14	-	-	-	0.16	-	0.45	0.31	0.21		
sum	101.3	101.5	98.7	101.2	102.2	97.7	101.7	98.8	100.0	98.8	100.1	99.1	99.0	99.7	100.1	100.6	98.2	97.9	99.7	98.9	100.8	99.9	99.9	100.3	100.9	101.0	98.8	98.9	100.1	97.5	98.2	97.8	101.5	100.1	98.6		
Fo	81	80	83	81	83	84	82	81	81	83	84	75	83	83	84	83	82	64	82	14	84	70	82	87	64	63	82	86	66	26	85	83	85	82	83		
Si	1.006	1.003	1.002	1.003	1.003	1.013	0.991	0.989	0.980	0.999	1.012	1.002	1.017	1.014	1.000	1.010	0.995	1.017	1.004	1.011	0.990	0.995	0.994	0.995	0.994	0.989	0.996	1.001	1.011	1.008	1.002	1.021	1.001	1.014	0.990		
Fe	0.383	0.389	0.339	0.370	0.335	0.310	0.364	0.389	0.384	0.347	0.322	0.486	0.338	0.340	0.323	0.343	0.348	0.704	0.366	1.652	0.322	0.597	0.353	0.260	0.707	0.737	0.367	0.277	0.673	1.444	0.290	0.322	0.298	0.343	0.339		
Mn	0.004	0.001	0.007	0.000	0.010	0.001	0.009	0.006	0.006	0.003	0.002	0.008	0.009	0.005	0.009	0.006	0.004	0.009	0.001	0.036	0.007	0.017	0.010	0.004	0.020	0.012	0.006	0.011	0.012	0.025	0.008	0.000	0.004	0.007	0.005		
Mg	1.592	1.587	1.639	1.615	1.636	1.663	1.636	1.611	1.630	1.641	1.647	1.490	1.613	1.615	1.665	1.620	1.637	1.238	1.614	0.272	1.682	1.383	1.639	1.731	1.280	1.263	1.621	1.704	1.288	0.509	1.691	1.626	1.682	1.604	1.664		
Ca	0.009	0.006	0.009	0.009	0.003	0.000	0.006	0.007	0.009	0.005	0.006	0.010	0.007	0.011	0.002	0.011	0.011	0.010	0.008	0.007	0.010	0.012	0.010	0.006	0.005	0.009	0.012	0.005	0.006	0.007	0.004	0.010	0.006	0.010	0.008		
Ni	0.000	0.012	0.002	0.001	0.009	0.000	0.003	0.009	0.010	0.005	0.000	0.001	0.000	0.001	0.000	0.000	0.010	0.005	0.004	0.010	0.000	0.000	0.000	0.009	0.000	0.002	0.003	0.000	0.000	0.000	0.000	0.003	0.000	0.009	0.006	0.004	
sum	2.994	2.985	2.996	2.997	2.987	2.987	3.006	3.002	3.010	2.996	2.988	2.997	2.983	2.985	3.000	2.990	2.995	2.978	2.992	2.979	3.010	3.005	3.006	2.996	3.006	3.009	3.002	2.999	2.989	2.992	2.995	2.979	2.990	2.979	3.005		