

APPENDIX 1

Represent whole geochemical analysis of rock major elements (XRF) of Arbat gabbro-monzonite-syenite complex, west of Miandoab

	Alkali syenite						Syenite-monzosyenite								Monzonite-monzodiorite					Gabbro-monzogabbro			
Sample ID	AR22	Hy-10	Hy-11	Hy-13	Hy-16	AR2	AR5	AR11	AR18	AR26	AR31	AR39	Hy-1	Hy-20	AR15	AR23	Go1	Hy-4	Hy-6	Hy-21	Hy-22	AR14	
SiO ₂	69.62	58.57	58.73	59.80	58.44	58.48	60.26	62.08	59.33	59.41	65.64	59.51	53.07	53.32	55.18	56.71	53.20	48.40	51.20	51.69	50.43	53.05	
Al ₂ O ₃	15.25	18.68	18.72	18.91	18.56	19.39	18.02	17.02	19.24	19.30	16.88	18.52	15.13	14.55	15.95	17.83	15.56	12.27	15.91	16.11	15.57	14.68	
TiO ₂	0.17	0.65	0.67	0.57	0.69	0.69	0.83	0.47	0.59	0.59	0.28	0.69	0.71	0.77	0.73	0.83	0.81	0.63	0.92	0.89	0.78	0.76	
Fe ₂ O ₃ *	1.93	4.52	4.57	3.85	4.95	3.73	4.08	4.44	3.62	3.74	3.13	4.00	8.45	7.68	6.80	5.31	8.51	10.32	9.89	10.19	10.31	9.24	
MgO	0.24	1.72	1.82	1.36	1.85	1.34	1.02	1.61	1.25	1.32	0.87	1.57	6.67	7.60	5.33	2.22	5.80	11.73	6.66	5.02	6.84	6.42	
MnO	0.026	0.08	0.08	0.07	0.09	0.07	0.07	0.09	0.07	0.07	0.08	0.07	0.16	0.14	0.12	0.10	0.15	0.21	0.19	0.18	0.18	0.18	
CaO	0.635	4.10	3.85	3.50	3.81	4.18	1.89	3.10	3.66	3.87	2.27	3.43	7.42	6.64	5.57	4.25	7.08	9.96	9.15	8.05	8.40	8.89	
K ₂ O	6.77	5.56	5.58	6.03	5.59	6.03	8.16	4.91	5.82	5.86	4.96	6.04	3.02	4.54	4.57	5.55	3.63	1.41	2.24	2.81	2.50	2.79	
Na ₂ O	4.21	4.52	4.54	4.65	4.47	4.50	4.33	4.53	4.85	4.73	4.72	4.79	3.46	3.08	3.87	4.38	3.52	2.27	2.79	3.63	3.24	3.19	
P ₂ O ₅	0.041	0.350	0.370	0.290	0.370	0.311	0.279	0.342	0.295	0.290	0.174	0.341	0.360	0.470	0.530	0.444	0.483	0.310	0.230	0.310	0.620	0.336	
Cr ₂ O ₃	<0.002	0	0	0	0	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.01	0.036	0.06	0.04	0.01	0.03	0.078	0.015	0.008	0.032	0.02
BaO	0.01	–	–	–	–	0.08	0.02	0.07	0.07	0.08	0.07	0.08	–	–	0.07	0.06	0.05	–	–	–	–	0.06	
LOI	0.34	1.00	0.80	0.70	0.90	1.09	0.63	0.46	0.76	0.29	0.61	0.57	1.20	0.80	0.49	1.41	0.24	2.00	0.50	0.80	0.70	0.04	
Total	99.25	99.7	99.7	99.7	99.7	99.88	99.58	99.12	99.57	99.55	99.69	99.61	99.66	99.63	99.24	99.1	99.06	99.59	99.69	99.68	99.61	99.65	
FeO*	1.74	4.07	4.11	3.46	4.45	3.36	3.67	4.00	3.26	3.37	2.82	3.60	7.60	6.91	6.12	4.78	7.66	9.29	8.90	9.17	9.28	8.31	
X _{Fe}	0.88	0.70	0.69	0.72	0.71	0.71	0.78	0.71	0.72	0.72	0.76	0.70	0.53	0.48	0.53	0.68	0.57	0.44	0.57	0.65	0.58	0.56	
K ₂ O/Na ₂ O	1.6	1.2	1.2	1.3	1.3	1.3	1.9	1.1	1.2	1.2	1.1	1.3	0.9	1.5	1.2	1.3	1.0	0.6	0.8	0.8	0.8	0.9	

Note: – view as ppm, <0.002 – less than detection limit, Fe₂O₃* is Fe₂O₃ total