

Appendix 4. Major and trace element data for cobbles and granitoid rocks in the Bogda Shan and Tian Shan

sample	96-ZB-403	98-TS-2A	98-TS-14	TS-79-1**	TS-64-1**	TS-88-1**	TS-
location/type	cobbles	BS/granite	BS/granite	CTS/granite	CTS/granite	STS/granite	STS/
Lat. (N), Long. (E)	43.15, 90.25	43.10, 93.57	43.05, 93.42	42.21, 88.26	42.28, 88.37	42.13, 87.42	42.13, 87.42
major elements (%)*							
SiO ₂	75.65	77.04	77.44	73.41	69.02	74.57	76.15
Al ₂ O ₃	13.76	12.46	12.49	14.46	15.91	14.02	13.76
TiO ₂	0.219	0.113	0.051	0.208	0.435	0.123	0.123
FeO*	1.21	0.99	0.82	1.17	3.10	1.07	1.07
MnO	0.043	0.017	0.033	0.017	0.063	0.069	0.069
CaO	1.80	0.32	0.35	1.14	3.55	0.59	0.59
MgO	0.48	0.09	0.07	0.57	1.50	0.17	0.17
K ₂ O	0.58	4.93	4.39	5.26	2.36	5.15	4.39
Na ₂ O	6.18	4.04	4.34	3.70	3.93	4.23	3.70
P ₂ O ₅	0.067	0.013	0.011	0.068	0.136	0.025	0.025
CaO+Na ₂ O+K ₂ O	8.56	9.29	9.08	10.10	9.84	9.96	8.56
Na ₂ O+K ₂ O	6.759	8.964	8.727	8.960	6.292	9.374	8.727
Al ₂ O ₃ /(Na ₂ O+CaO+K ₂ O)	1.608	1.342	1.376	1.433	1.617	1.407	1.608
trace elements (ppm):							
Ba	1231	17	55	1333	554	270	1231
Ce	40.58	90.94	49.53	63.42	30.54	90.75	30.54
Cs	0.64	1.37	4.14	0.36	2.59	2.05	0.64
Cr	1	0	0	1	15	1	1
Cu	5	0	0	2	9	5	5
Dy	2.56	10.91	12.76	0.81	2.79	5.23	2.56
Er	1.41	7.00	7.51	0.31	1.52	2.99	1.41
Eu	0.76	0.21	0.14	0.83	1.09	0.75	0.76
Ga	15	22	20	16	19	18	15
Gd	2.72	8.15	10.40	1.92	3.09	5.50	2.72
Hf	3.05	8.07	7.59	3.84	3.07	5.24	3.05
Ho	0.51	2.27	2.57	0.13	0.57	1.05	0.51
La	21.53	44.59	20.89	34.90	16.29	49.62	21.53
Lu	0.24	1.16	1.30	0.06	0.23	0.46	0.24
Nb	10.66	31.96	37.85	2.74	8.15	18.24	10.66

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	sample	96-ZB-403	98-TS-2A	98-TS-14	TS-79-1**	TS-64-1**	TS-88-1**	TS-
Nd		15.50	37.42	31.49	19.35	13.94	34.84	1:
Ni		5	4	4	3	8	4	
Pb		7.62	18.25	18.30	19.58	16.26	24.80	2
Pr		4.24	10.29	7.18	5.84	3.46	9.82	3
Rb		18.5	178.2	233.1	85.6	68.3	172.7	20
Sc		3.5	2.4	5.2	2.6	8.2	3.9	.
Sm		2.95	9.27	10.44	3.18	3.27	7.00	3
Sr		574	9	12	314	427	59	
Ta		1.03	2.46	2.51	0.08	0.66	1.33	1
Tb		0.44	1.68	2.00	0.21	0.49	0.93	0
Th		11.69	24.11	36.44	25.10	4.76	19.89	1:
Tm		0.22	1.12	1.20	0.04	0.23	0.45	0
U		1.11	6.92	4.72	1.09	0.75	3.96	2
V		16	6	7	2	41	11	.
Y		16.11	69.76	74.47	3.38	16.56	30.55	40
Yb		1.46	7.42	8.23	0.27	1.42	2.86	4
Zn		26	36	16	15	46	52	2
Zr		107	186	146	134	139	150	3

*Major elements are normalized on a volatile-free basis, with total Fe expressed as FeO.

** samples were previously analyzed for isotopes by Wen (1991)

see Figure 1B for sample locations. BS = Bogda Shan; CTS = Central Tian Shan; STS = South Tian Shan