

APPENDIX 2

Whole-rock composition of the Bozeş siliciclastic rocks

Samples	2-INI	11-INI	1-VIN	2-VIN	3-RAC	4-RAC	6-RAC	7-RAC	9-RAC	10-BAC	11-BAC	12-BAC	14-BAC	15-BAC	C-BAC	3-STA*	19A- STA*	60-STA*	97A –STA*	134A –STA*
SiO ₂	65.05	61.55	57.95	66.15	79.71	72.40	67.72	79.82	59.34	60.05	60.79	59.51	54.38	75.20	53.39	78.1	58.2	65.2	60.5	63.5
TiO ₂	0.62	0.42	0.72	0.66	0.44	0.45	0.37	0.61	0.27	0.45	0.34	0.61	0.29	0.57	0.55	0.74	0.53	0.54	0.62	0.64
Al ₂ O ₃	12.65	10.10	14.87	12.56	7.09	8.14	8.79	8.11	9.06	12.12	8.67	11.68	8.06	7.68	11.54	8.85	9.75	10.01	10.26	8.75
Fe ₂ O ₃	4.69	2.71	4.84	4.47	1.96	2.33	2.75	2.54	2.11	3.65	2.30	3.22	1.60	2.11	5.55	2.78	2.36	2.10	4.03	2.22
MnO	0.06	0.08	0.07	0.05	0.04	0.06	0.07	0.03	0.06	0.07	0.09	0.08	0.12	0.04	0.08	0.05	0.25	0.12	0.20	0.24
MgO	2.13	1.26	2.24	2.08	0.96	1.06	1.24	1.05	1.12	1.67	0.90	1.70	0.86	1.28	2.00	1.13	0.90	0.83	1.60	0.82
CaO	4.84	12.26	7.34	4.56	3.82	6.75	9.18	1.21	14.44	10.06	13.93	11.50	19.16	4.95	10.15	1.30	12.22	8.25	8.63	10.28
Na ₂ O	1.65	1.30	1.14	1.02	1.66	0.97	1.31	2.03	1.57	0.81	0.91	0.94	1.29	2.08	1.38	1.79	1.64	1.87	1.60	1.72
K ₂ O	2.22	1.84	2.49	2.26	1.80	1.84	1.83	1.93	1.71	2.12	1.54	2.06	1.39	1.64	1.93	1.36	1.75	1.90	1.82	1.54
P ₂ O ₅	0.13	0.08	0.14	0.12	0.09	0.13	0.05	0.14	0.05	0.12	0.13	0.17	0.08	0.09	0.11	0.11	0.10	0.12	0.11	0.12
LOI	4.75	8.51	7.23	4.73	2.89	4.7	6.15	1.56	10.13	8.07	9.45	8.69	12.04	3.62	12.6	3.65	11.80	8.70	10.10	10.56
Total	98.78	100.12	99.03	98.66	100.46	98.82	99.46	99.03	99.86	99.18	99.05	100.16	99.27	99.26	99.27	99.85	99.51	99.71	99.55	100.46
Rb	72.00	64.48	98.72	71.31	51.50	62.42	62.71	62.80	53.13	79.45	52.20	78.79	49.66	50.76	62.12	47.30	53.40	53.70	66.30	46.50
Ba	337.52	324.25	372.67	337.17	291.87	322.50	302.38	287.17	321.90	388.60	314.15	345.02	264.37	323.61	311.31	271.00	317.00	298.00	296.00	276.00
Nb	9.50	8.29	12.81	9.99	6.38	8.07	6.63	9.57	5.17	8.39	7.02	12.11	6.09	9.09	8.83	10.90	7.50	6.30	9.10	8.80
Ni	23.39	16.98	57.82	18.90	29.23	12.91	15.43	13.22	8.87	20.36	245.29	2827.99	10.88	10.86	29.43	22.00	14.80	20.10	28.10	12.20
Sr	209.38	315.19	237.89	170.99	110.44	241.91	294.75	79.58	292.88	229.91	249.74	250.78	339.72	156.77	192.16	92.30	269.00	237.80	212.80	207.90
V	86.64	59.92	122.55	70.96	32.71	46.08	51.02	43.44	40.91	86.80	45.21	79.93	34.67	40.87	87.98	56.00	64.00	81.00	78.00	63.00
Y	29.51	22.46	33.80	26.31	14.40	18.87	24.93	22.02	16.34	21.27	20.86	33.87	21.46	22.11	31.14	19.60	15.40	18.50	20.80	19.80
Pb	16.61	12.76	19.08	16.57	9.20	9.88	14.61	10.44	12.08	14.99	10.50	10.31	8.60	9.88	13.21	6.30	7.50	8.10	12.60	5.10
Ta	0.99	0.84	1.30	1.07	0.68	0.91	0.69	1.06	0.54	0.90	0.77	1.27	0.69	0.96	0.91	0.80	0.50	0.40	0.70	0.70
Hf	6.45	5.65	5.33	3.89	5.38	4.38	5.63	3.35	3.59	4.26	3.70	7.76	3.78	6.38	4.66	8.50	4.00	3.10	5.60	7.90
Zr	202.71	140.16	250.57	231.10	156.38	203.79	167.16	230.31	121.08	127.54	151.64	321.74	134.44	279.24	179.53	266.10	114.50	103.20	171.70	241.30
Th	6.54	5.14	10.45	7.90	3.73	5.24	4.35	5.68	4.10	8.44	5.45	8.84	4.70	5.43	7.62	7.00	5.60	5.60	7.50	6.70
U	1.83	1.49	2.65	2.04	2.51	1.37	1.16	1.45	1.07	1.77	1.43	2.37	1.27	1.53	2.03	2.10	1.60	2.00	2.10	1.80
Co	11.98	9.09	12.80	9.63	5.03	6.51	8.54	5.05	4.73	8.38	6.64	9.95	5.29	5.88	11.49	8.40	7.90	8.50	11.90	5.10
Sc	9.60	7.43	9.44	10.91	12.09	9.73	8.12	9.78	9.09	9.00	10.62	7.93	6.77	8.50	8.68	7.56	8.14	8.87	9.43	10.02
Cs	1.90	1.58	3.24	2.25	0.97	1.22	1.25	1.31	1.29	2.36	1.09	2.22	1.04	0.97	1.43	1.60	1.50	1.60	2.60	1.20
Cr	151.97	88.88	196.36	114.39	63.56	54.00	61.09	73.51	58.43	110.76	70.69	131.19	44.97	72.17	105.62	23.95	34.21	82.11	47.90	109.47
La	23.14	16.73	27.37	21.37	10.92	14.97	13.79	13.90	15.44	21.33	19.73	27.98	15.53	15.31	16.98	20.80	17.50	17.00	25.90	22.90
Ce	50.78	33.86	58.31	45.94	24.51	32.23	29.08	31.84	31.47	44.46	38.85	57.99	31.61	33.69	37.30	42.50	35.40	35.00	52.00	42.70
Pr	5.85	3.89	6.76	5.23	2.78	3.72	3.41	3.75	3.51	5.06	4.38	6.65	3.65	3.88	4.31	4.98	3.98	4.02	5.72	4.64
Nd	24.23	15.74	27.07	20.96	11.09	14.88	13.80	15.01	14.10	19.95	17.42	26.77	14.75	15.59	17.68	17.80	15.80	15.30	22.90	17.60
Sm	4.77	3.12	5.33	4.13	2.21	2.90	2.86	3.00	2.77	3.82	3.33	5.11	2.87	2.98	3.60	3.60	2.95	3.19	4.19	3.53
Eu	1.14	0.74	1.18	0.88	0.55	0.69	0.71	0.67	0.65	0.88	0.80	1.09	0.68	0.68	0.81	0.76	0.75	0.84	0.94	0.76
Gd	4.36	2.90	4.93	3.78	2.01	2.67	2.70	2.73	2.50	3.46	3.04	4.68	2.67	2.69	3.50	3.36	2.71	3.22	3.74	3.25
Tb	0.72	0.49	0.83	0.64	0.35	0.44	0.50	0.48	0.40	0.55	0.51	0.77	0.46	0.46	0.66	0.55	0.45	0.51	0.58	0.51
Dy	4.33	2.91	4.85	3.82	2.10	2.68	3.16	3.02	2.33	3.16	2.95	4.60	2.84	2.89	4.30	3.25	2.61	2.94	3.57	3.22
Ho	0.77	0.54	0.89	0.70	0.39	0.50	0.60	0.58	0.42	0.56	0.55	0.84	0.54	0.56	0.81	0.72	0.52	0.66	0.71	0.66
Er	2.39	1.71	2.81	2.22	1.26	1.62	1.91	1.87	1.33	1.83	1.73	2.70	1.69	1.86	2.54	2.31	1.46	1.85	1.99	1.91
Yb	2.35	1.68	2.94	2.28	1.36	1.67	1.98	1.96	1.33	1.88	1.71	2.75	1.72	2.00	2.57	2.22	1.47	1.64	2.00	1.85
Tm	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	0.35	0.22	0.27	0.32	0.31
Lu	0.36	0.26	0.45	0.35	0.21	0.26	0.30	0.30	0.21	0.29	0.26	0.42	0.27	0.32	0.39	0.35	0.22	0.24	0.31	0.31
Eu/Eu*	0.75	0.74	0.69	0.67	0.78	0.75	0.77	0.70	0.74	0.73	0.75	0.67	0.74	0.71	0.69	0.66	0.80	0.79	0.71	0.67
Gd _N /Yb _N	1.39	1.37	1.53	1.22	1.32	1.13	1.16	1.56	1.53	1.48	1.43	1.41	1.29	1.11	1.13	1.25	1.53	1.62	1.55	1.45
CIA	62	62	70	68	49	61	58	53	56	71	65	69	58	47	64	58	57	55	59	54
CIW	70	70	80	79	56	72	67	61	64	82	74	79	65	53	72	64	64	62	66	61
CIW'	82	83	89	88	72	84	80	71	78	90	85	88	79	69	84	75	78	76	80	76
SiO ₂ /Al ₂ O ₃	5.14	6.09	3.9	5.27	11.25	8.9	7.71	9.85	6.55	4.96	7.01	5.09	6.75	9.79	4.63	8.82	5.97	6.51	5.9	7.26
Na ₂ O/K ₂ O	0.74	0.70	0.46	0.45	0.93	0.53	0.72	1.06	0.92	0.38	0.59	0.46	0.93	1.27	0.71	1.3	0.9	1.0	0.9	1.1
Sr/Rb	2.91	4.89	2.41	2.40	2.14	3.88	4.70	1.27	5.51	2.89	4.78	3.18	6.84	3.09	3.09	1.95	5.04	4.43	3.21	4.47
Th/Sc	0.68	0.69	1.11	0.72	0.31	0.54	0.54	0.58	0.45	0.94	0.51	1.12	0.69	0.64	0.88	0.93	0.69	0.63	0.80	0.67
Zr/Sc	21.11	18.87	26.53	21.18	12.93	20.95	20.59	23.54	13.33	14.16	14.27	40.59	19.86	32.87	20.68	35.2	14.07	11.63	18.21	24.08
La/Th	3.54	3.25	2.62	2.7	2.92	2.86	3.17	2.45	3.77	2.53	3.62	3.17	3.3	2.82	2.23	2.97	3.13	3.04	3.45	3.42

Major oxide contents are given in wt. %, and for trace elements in ppm (samples marked with * were analyzed at Acme Analytical Laboratories, Vancouver, Canada, the rest at the University of Vienna, Austria, for major elements and the University of South Florida, USA, for trace and rare earth elements); n.d. – not determined