

APPENDIX 1

Chemical composition of andesites and pyroclastic rocks from Rožmitál

Sample	BR6B	BR7	BR10	Roz789	Roz792	Roz794
Rock	andesite	andesite	andesite	lapilli tuff	lapillistone	finely laminated tuff
North	50.618158°	50.617294°	50.618297°	50.616101°	50.616101°	50.616101°
East	16.370721°	16.369828°	16.369023°	16.373039°	16.373039°	16.373039°
Laboratory	CGS	CGS	CGS	ACME	ACME	ACME
[wt.%]						
SiO ₂	58.39	58.22	58.38	73.99	40.87	76.25
TiO ₂	0.87	0.82	0.86	0.61	0.95	0.51
Al ₂ O ₃	16.04	15.84	15.74	8.79	9.46	8.55
Fe ₂ O ₃	2.67	2.79	3.16	5.42*	2.57*	4.85*
FeO	3.58	2.71	3.20	n.a.	n.a.	n.a.
MgO	3.21	2.62	2.78	1.94	7.45	0.94
MnO	0.107	0.090	0.103	0.01	0.38	0.01
CaO	4.00	6.57	5.89	1.15	13.19	1.13
Na ₂ O	3.69	3.19	3.19	0.90	2.40	2.37
K ₂ O	1.40	2.62	2.57	1.59	2.13	2.07
P ₂ O ₅	0.316	0.332	0.345	0.65	0.31	0.70
F	0.060	0.081	0.071	n.a.	n.a.	n.a.
CO ₂	0.02	1.47	0.53	n.a.	n.a.	n.a.
C	0.009	0.019	0.061	0.03	4.87	0.02
S	n.d.	n.d.	0.005	0.01	0.01	0.01
H ₂ O ⁺ /LOI	2.52	1.46	1.64	4.80	20.00	2.50
H ₂ O ⁻	0.94	0.79	1.02	n.a.	n.a.	n.a.
Total	97.82	99.64	99.55	99.85	99.71	99.88
[ppm]						
Ba	1366.0	640.0	714.0	113.00	192.00	139.00
Cr	36	37	35	6.00	9.00	12.00
Cu	32	17	13	1.20	1.70	2.40
Ga	21.2	22.3	20.9	10.90	11.30	10.40
Hf	9.3	9.0	8.2	5.40	4.90	5.10
Mo	1	n.d.	n.d.	0.80	0.80	1.10
Nb	23	23	23	19.90	20.80	15.20
Ni	31.7	35.8	33.5	13.60	6.00	8.00
Pb	19.5	16.7	15.7	8.60	9.50	7.60
Rb	58	71	70	70.80	53.30	42.40
Sc	29.2	28.1	24.1	3.50	9.00	3.20
Sn	n.d.	3	n.d.	1.00	2.00	2.00
Sr	551.0	303.6	334.1	110.90	68.80	76.10
Ta	n.a.	n.a.	n.a.	1.20	1.10	1.20
Th	13.2	13.1	12.2	6.50	4.20	7.10
U	1.9	2.0	1.8	9.50	5.00	33.50
V	104.9	113.9	108.9	49.00	64.00	81.00
Zn	85	80	81	20.00	28.00	14.00
Zr	348	349	338	220.00	177.30	211.40
Y	33.38	33.38	32.97	35.90	29.80	53.00
La	56.00	55.40	54.10	28.30	32.70	32.50
Ce	113.20	111.60	108.60	65.30	71.90	68.30
Pr	12.41	12.45	12.05	n.a.	n.a.	n.a.
Nd	53.40	52.60	52.00	32.60	35.70	43.00
Sm	9.26	9.31	8.82	7.15	7.07	10.31
Eu	2.01	1.96	1.91	1.39	1.32	2.10
Gd	7.93	8.16	8.01	6.88	6.24	10.73
Tb	1.18	1.20	1.17	1.19	0.98	1.55
Dy	7.04	7.08	6.82	5.80	5.63	8.55
Ho	1.36	1.40	1.34	1.46	1.06	1.77
Er	3.85	4.06	3.93	3.73	2.92	5.32
Tm	0.56	0.53	0.53	0.57	0.46	0.83
Yb	3.87	3.57	3.50	3.58	2.80	5.62
Lu	0.56	0.56	0.52	0.59	0.40	0.83

* – all Fe as Fe₂O₃, n.a. – not analysed, n.d. – not detected; CGS – Czech Geological Survey; ACME – ACME Laboratories (see chapter Methods)