

付録S1 蛍光X線分析装置 (XRF) の検量線法によるGSJ岩石標準試料の主成分・微量元素組成

Appendix S1 Major and trace element compositions of the GSJ geochemical reference samples measured by XRF (calibration line method)

Std name	JA-1	JA-2	JA-3	JB-1a	JB-2	JB-3	JR-1	JR-2	JR-3	JG-1a	JG-2	JG-3	JP-1	JGb-1	JGb-2	JSI-1	JSI-2	JSd2	JSd3	JLk-1	JLk-1+	JLk-1+	JLk-1+		
XRF (wt.%)																						S (1wt.%)	S (5wt.%)	S (10wt.%)	
SiO <sub>2</sub>	65.97	58.17	62.01	53.52	54.62	52.31	77.44	77.97	74.75	73.03	76.64	67.57	41.65	44.89	46.93	61.04	61.67	61.09	76.06	62.56	62.55	62.04	61.57		
TiO <sub>2</sub>	0.87	0.70	0.70	1.31	1.18	1.26	0.11	0.07	0.24	0.26	0.04	0.52	n.d.	1.59	0.51	0.85	0.88	0.68	0.49	0.85	0.84	0.80	0.75		
Al <sub>2</sub> O <sub>3</sub>	14.18	15.82	16.12	14.38	15.45	18.15	12.91	12.79	12.46	14.62	13.25	15.42	0.13	16.39	22.55	17.92	19.10	13.08	13.36	17.68	17.88	17.67	17.52		
Fe <sub>2</sub> O <sub>3</sub>	7.18	6.82	6.67	9.11	14.76	11.02	0.88	0.78	5.52	2.04	1.01	3.74	12.23	14.99	6.61	8.59	8.21	12.87	5.33	9.10	8.99	8.31	7.54		
MnO	0.16	0.11	0.10	0.14	0.21	0.17	0.12	0.13	0.09	0.06	0.02	0.08	0.16	0.18	0.12	0.07	0.10	0.14	0.18	0.33	0.32	0.30	0.28		
MgO	1.02	6.86	2.66	6.76	3.25	3.78	0.09	0.03	0.04	1.00	0.04	2.72	45.87	8.19	7.19	3.25	3.12	3.74	1.55	2.29	2.32	2.29	2.27		
CaO	5.36	6.06	6.21	8.81	9.98	9.85	0.67	0.51	0.15	2.03	0.71	3.59	0.75	12.54	14.44	1.56	1.94	3.68	0.59	0.76	0.77	0.74	0.72		
Na <sub>2</sub> O	4.02	3.24	3.22	2.80	2.22	3.06	3.82	3.89	5.03	3.36	3.72	3.96	0.45	1.15	0.87	1.82	1.19	2.31	0.37	0.87	0.84	0.87	0.85		
K <sub>2</sub> O	0.78	1.92	1.38	1.53	0.35	0.80	4.30	4.34	4.32	4.18	4.83	2.78	n.d.	0.15	n.d.	3.09	3.20	1.22	2.32	3.06	3.08	2.98	2.86		
P <sub>2</sub> O <sub>5</sub>	0.18	0.18	0.10	0.29	0.10	0.31	0.03	0.02	0.03	0.10	0.01	0.15	0.02	0.07	0.03	0.20	0.16	0.13	0.11	0.23	0.19	0.19	0.19		
SO <sub>3</sub>	0.11	0.12	0.12	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.10	0.11	0.11	0.19	0.14	0.07	0.00	1.62	0.00	0.18	0.94	4.03	7.99		
total	99.83	99.98	99.29	98.76	102.22	100.81	100.47	100.62	102.73	100.78	100.37	100.64	101.38	100.32	99.38	98.45	99.57	100.54	100.35	97.90	98.72	100.21	102.54		
XRF (wt.%)	JA-1	JA-2	JA-3	JB-1a	JB-2	JB-3	JR-1	JR-2	JR-3	JG-1a	JG-2	JG-3	JP-1	JGb-1	JGb-2	JSI-1	JSI-2	JSd2	JSd3	JLk-1	JLk-1+S1	JLk-1+S5	JLk-1+S10		
SiO <sub>2</sub>	66.09	58.17	62.45	54.19	53.43	51.89	77.07	77.48	72.76	72.47	76.35	67.15	41.09	44.74	47.23	62.00	61.94	60.76	75.80	63.90	63.36	61.91	60.04		
TiO <sub>2</sub>	0.87	0.70	0.70	1.33	1.15	1.25	0.11	0.06	0.23	0.26	0.04	0.51	n.d.	1.59	0.51	0.86	0.88	0.68	0.49	0.86	0.85	0.80	0.73		
Al <sub>2</sub> O <sub>3</sub>	14.21	15.82	16.24	14.56	15.12	18.00	12.85	12.71	12.13	14.50	13.20	15.32	0.13	16.34	22.69	18.20	19.18	13.00	13.32	18.06	18.11	17.63	17.09		
Fe <sub>2</sub> O <sub>3</sub>	7.19	6.82	6.71	9.22	14.44	10.94	0.88	0.77	5.37	2.03	1.00	3.71	12.07	14.94	6.65	8.73	8.25	12.80	5.31	9.29	9.11	8.29	7.36		
MnO	0.16	0.11	0.10	0.14	0.20	0.16	0.11	0.13	0.09	0.06	0.01	0.07	0.16	0.18	0.12	0.07	0.10	0.14	0.18	0.33	0.33	0.30	0.27		
MgO	1.02	6.86	2.68	6.85	3.18	3.75	0.09	0.03	0.03	0.99	0.04	2.70	45.25	8.17	7.23	3.30	3.14	3.72	1.54	2.34	2.35	2.29	2.22		
CaO	5.37	6.06	6.26	8.92	9.76	9.77	0.67	0.50	0.15	2.02	0.71	3.57	0.74	12.50	14.53	1.58	1.94	3.66	0.59	0.78	0.78	0.74	0.70		
Na <sub>2</sub> O	4.03	3.24	3.24	2.83	2.17	3.03	3.80	3.87	4.90	3.33	3.70	3.94	0.44	1.15	0.88	1.85	1.20	2.30	0.36	0.89	0.85	0.87	0.83		
K <sub>2</sub> O	0.78	1.92	1.39	1.55	0.35	0.80	4.28	4.31	4.20	4.14	4.82	2.76	n.d.	0.15	n.d.	3.14	3.22	1.21	2.31	3.13	3.12	2.97	2.79		
P <sub>2</sub> O <sub>5</sub>	0.18	0.18	0.10	0.29	0.10	0.31	0.03	0.02	0.03	0.10	0.01	0.15	0.02	0.07	0.03	0.20	0.16	0.13	0.11	0.24	0.19	0.19	0.18		
SO <sub>3</sub>	0.11	0.12	0.12	0.11	0.11	0.10	0.10	0.10	0.11	0.10	0.10	0.11	0.11	0.19	0.14	0.07	0.00	1.61	0.00	0.18	0.95	4.02	7.79		
total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		
ppm	JA-1	JA-2	JA-3	JB-1a	JB-2	JB-3	JR-1	JR-2	JR-3	JG-1a	JG-2	JG-3	JP-1	JGb-1	JGb-2	JSI-1	JSI-2	JSd2	JSd3	JLk-1	JLk-1+S1	JLk-1+S5	JLk-1+S10	SRM2710	SRM2710
As	3	2	4	2	3	2	13	15	n.d.	2	2	1	0	1	0	13	10	42	203	26				685	626
Ba	298	302	315	471	233	260	66	47	122	440	86	460	23	81	32	335	322	1149	524	622				742	707
Co	12	27	20	39	40	35	1	1	1	6	4	11	117	61	24	16	16	48	13	19				11	10
Cr	25	420	79	437	28	65	20	21	6	32	23	31	3374	73	147	77	88	177	55	94				398	39
Cu	45	30	44	60	231	205	1	1	2	2	n.d.	8	5	86	12	38	45	1053	402	66				2983	2950
Nb	2	11	4	33	1	3	19	22	663	14	18	7	1	3	1	12	16	6	9	20				14	
Ni	10	137	36	147	18	41	8	7	18	10	9	18	2525	27	19	42	48	110	25	44				19	14
Pb	6	21	8	7	5	4	23	26	63	27	33	13	n.d.	2	n.d.	20	24	147	83	49				5096	5532
Sr	356	334	376	578	241	532	38	9	31	241	17	476	n.d.	432	577	255	306	295	81	99				1115	
V	132	138	180	259	636	414	6	3	16	24	1	86	30	713	192	180	162	185	89	162				111	77
Zn	95	76	75	91	117	102	37	36	228	44	20	55	57	127	60	119	114	1931	137	166				7020	6952

n.d. = not detection