

OT0701-15a

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	mean	sd
SiO <sub>2</sub>	60.11	60.55	60.68	60.74	60.93	60.68	60.87	61.27	60.7	60.45	60.72	60.84	60.95	60.63	60.93	60.81	60.58	61.6	61.47	60.62	60.49	60.42	60.95	60.81	61.36	60.73	60.8	0.33
TiO <sub>2</sub>	0.54	0.53	0.41	0.47	0.32	0.45	0.24	0.31	0.46	0.52	0.27	0.48	0.52	0.33	0.33	0.22	0.47	0.39	0.38	0.42	0.57	0.49	0.39	0.46	0.44	0.41	0.42	0.09
Al <sub>2</sub> O <sub>3</sub>	19.08	19.08	19.08	19.06	19.23	18.97	19.09	19.07	19.28	19.02	19.43	19.23	19.05	19.28	19.46	19.1	19.13	19.09	19.18	19.05	19.24	19.26	19.22	19.15	18.91	19.08	19.15	0.13
FeO	3.19	3.06	2.97	2.96	2.86	2.98	3.02	2.89	3.21	3.08	2.87	2.9	3.13	2.88	2.93	3	3.31	2.8	2.82	3	3.07	3.19	2.95	2.93	2.91	2.9	2.99	0.13
MnO	0.38	0.33	0.16	0.19	0.15	0.24	0.11	0.27	0.29	0.21	0.19	0.36	0.2	0.05	0.12	0.12	0.33	0.22	0.1	0.39	0.27	0.37	0.34	0.17	0.34	0.19	0.23	0.1
MgO	0.41	0.43	0.41	0.4	0.26	0.38	0.41	0.43	0.32	0.28	0.41	0.33	0.3	0.55	0.37	0.36	0.51	0.37	0.5	0.28	0.37	0.42	0.48	0.3	0.42	0.34	0.39	0.07
CaO	1.71	1.71	1.64	1.75	1.79	1.7	1.43	1.73	1.61	1.68	1.56	1.58	1.63	1.75	1.82	1.77	1.46	1.58	1.64	1.82	1.63	1.73	1.7	1.71	1.71	1.71	1.68	0.1
Na <sub>2</sub> O	6.6	6.57	6.64	6.66	6.26	6.3	6.48	6.21	6.23	6.7	6.67	6.29	6.3	6.66	6.24	6.08	6.47	6.09	6.12	6.49	6.53	6.4	6.05	6.41	6.06	6.42	6.38	0.21
K <sub>2</sub> O	7.21	7.06	7.33	7.11	7.45	7.57	7.65	7.17	7.24	7.3	7.14	7.29	7.22	7.13	7.1	7.82	7.15	7.1	7.13	7.26	7.24	7.01	7.11	7.29	7.12	7.46	7.26	0.19
P <sub>2</sub> O <sub>5</sub>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ClO	0.77	0.68	0.68	0.66	0.75	0.73	0.71	0.65	0.67	0.75	0.72	0.69	0.72	0.74	0.71	0.73	0.58	0.75	0.66	0.68	0.6	0.71	0.8	0.77	0.74	0.76	0.71	0.05
	100	100	100	100	100	100	100.01	100	100.01	99.99	99.98	99.99	100.02	100	100.01	100.01	99.99	99.99	100	100.01	100.01	100	99.99	100	100.01	100	100	100
total alkali	13.81	13.63	13.97	13.77	13.71	13.87	14.13	13.38	13.47	14	13.81	13.58	13.52	13.79	13.34	13.9	13.62	13.19	13.25	13.75	13.77	13.41	13.16	13.7	13.18	13.88	13.64	0.27
alkali ratio	1.09	1.07	1.1	1.07	1.19	1.2	1.18	1.15	1.16	1.09	1.07	1.16	1.15	1.07	1.14	1.29	1.11	1.17	1.17	1.12	1.11	1.1	1.18	1.14	1.17	1.16	1.14	0.05

OT0701-15b

	1	2	3	4	5	6	7	8	9	10	11	mean	sd
SiO <sub>2</sub>	61.46	61.12	62.21	61.14	61.48	61.68	60.91	61.04	61.12	61.16	61.2	61.32	0.37
TiO <sub>2</sub>	0.57	0.41	0.3	0.45	0.2	0.33	0.43	0.44	0.29	0.39	0.58	0.4	0.12
Al <sub>2</sub> O <sub>3</sub>	18.99	18.95	18.39	19.08	19.36	18.95	19.18	19.54	19.52	19.41	19.06	19.13	0.33
FeO	3.1	3.02	2.76	2.77	2.92	2.82	3.05	3.1	2.95	3.34	3.07	2.99	0.17
MnO	0.25	0.08	0	0.15	0	0.11	0	0.16	0.11	0.09	0.29	0.14	0.12
MgO	0.45	0.4	0.51	0.29	0.34	0.61	0.5	0.43	0.48	0.76	0.47	0.48	0.13
CaO	2.16	1.74	2.16	1.7	1.62	2.17	1.57	1.74	1.8	2.27	1.67	1.87	0.26
Na <sub>2</sub> O	5.43	5.87	4.63	5.8	5.89	5.3	5.94	5.73	5.58	4.89	5.77	5.53	0.43
K <sub>2</sub> O	7.24	7.82	8.47	7.88	7.56	7.71	7.5	7.1	7.32	7.34	7.14	7.55	0.4
P <sub>2</sub> O <sub>5</sub>	0	0	0	0	0	0	0	0	0	0	0	0	0
ClO	0.33	0.61	0.57	0.75	0.63	0.31	0.75	0.79	0.68	0.34	0.65	0.58	0.18
	99.98	100	100	100.01	100	99.99	99.99	100.01	99.99	99.99	100	100	
total alkali	12.67	13.69	13.1	13.68	13.45	13.01	13.44	12.83	12.9	12.23	12.91	13.08	0.45
alkali ratio	1.33	1.33	1.83	1.36	1.28	1.45	1.26	1.24	1.31	1.5	1.24	1.38	0.17

OT0701-15c

	1	2	3	4	mean	sd
SiO <sub>2</sub>	61.26	60.56	60.92	59.37	60.53	0.82
TiO <sub>2</sub>	0.29	0.3	0.36	0.48	0.36	0.09
Al <sub>2</sub> O <sub>3</sub>	18.8	18.78	18.73	20.43	19.19	0.83
FeO	2.99	3.46	3.12	3.37	3.24	0.21
MnO	0.1	0.15	0	0.11	0.09	0.06
MgO	0.62	0.72	0.68	0.83	0.71	0.09
CaO	2.28	2.44	2.38	2.6	2.43	0.13
Na <sub>2</sub> O	3.82	3.27	3.55	3.12	3.44	0.31
K <sub>2</sub> O	9.48	9.97	9.92	9.4	9.69	0.29
P <sub>2</sub> O <sub>5</sub>	0	0	0	0	0	0
ClO	0.35	0.34	0.33	0.28	0.33	0.03
	99.99	99.99	99.99	99.99	99.99	
total alkali	13.3	13.24	13.47	12.52	13.13	0.42
alkali ratio	2.48	3.05	2.79	3.01	2.83	0.26

OT0701-6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	mean	sd
SiO <sub>2</sub>	59.75	59.33	59.72	59.62	59.54	59.45	59.77	59.13	59.27	59.7	59.53	59.59	60.07	59.72	59.57	59.58	0.23
TiO <sub>2</sub>	0.45	0.51	0.48	0.41	0.57	0.43	0.37	0.57	0.42	0.35	0.46	0.43	0.39	0.35	0.41	0.44	0.07
Al <sub>2</sub> O <sub>3</sub>	20.09	19.92	20.04	19.81	19.96	19.96	20.02	20.22	20.04	20.2	20.15	19.98	20.07	20.16	20.15	20.04	0.12
FeO	2.81	2.96	2.68	2.86	2.92	2.91	2.65	2.68	2.82	2.64	2.9	2.75	2.49	2.56	2.82	2.76	0.14
MnO	0	0.19	0.16	0.12	0.27	0.13	0	0.17	0.27	0	0.17	0.09	0	0.17	0.14	0.13	0.09
MgO	0.54	0.5	0.38	0.55	0.4	0.68	0.49	0.59	0.62	0.55	0.47	0.59	0.43	0.47	0.44	0.51	0.09
CaO	2.23	2.29	2.34	2.37	2.31	2.39	2.45	2.29	2.3	2.24	2.19	2.43	2.26	2.39	2.14	2.31	0.09
Na <sub>2</sub> O	5.17	5.26	5.16	4.94	5.05	5.38	5.11	5.38	5.49	5.31	5.03	5.44	5.23	5.31	5.32	5.24	0.14
K <sub>2</sub> O	8.77	8.86	8.87	9.13	8.78	8.46	9.03	8.76	8.59	8.8	8.94	8.68	8.94	8.73	8.73	8.8	0.17
P <sub>2</sub> O <sub>5</sub>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ClO	0.18	0.18	0.16	0.2	0.21	0.2	0.12	0.2	0.19	0.2	0.16	0.13	0.13	0.15	0.27	0.18	0.04
	99.99	100	99.99	100.01	100.01	99.99	100.01	99.99	100.01	99.99	100	100.01	100.01	100.01	99.99	100	
total alkali	13.94	14.12	14.03	14.07	13.83	13.84	14.14	14.08	14.11	13.97	14.12	14.17	14.04	14.05	14.04	14.04	0.11
alkali ratio	1.7	1.68	1.72	1.85	1.74	1.57	1.77	1.63	1.56	1.66	1.78	1.6	1.71	1.64	1.64	1.68	0.08

OT0701-7

	1	2	3	4	5	6	7	8	mean	sd	1	2	3	4	5	6	7	8	9	10	11	12	13	mean	sd	1
SiO <sub>2</sub>	50.44	48.76	49.59	50.97	49.42	50.72	53.01	53.96	50.86	1.79	58.14	58.59	55.46	56.92	58.82	56.81	56.3	59.24	59.36	59.24	59.04	60.6	59.36	58.3	1.48	62.55
TiO <sub>2</sub>	1.21	1.27	1.39	1.09	1.19	1.16	0.88	0.99	1.15	0.16	0.5	0.67	0.76	0.84	0.72	0.69	0.66	0.54	0.65	0.51	0.67	0.42	0.51	0.63	0.12	0.6
Al <sub>2</sub> O <sub>3</sub>	18.26	18.26	18.34	18.8	18.51	18.28	18.88	19.09	18.55	0.33	19.63	19.59	19.46	19.53	19.65	19.75	19.52	19.92	20	19.79	19.88	20.05	19.95	19.75	0.2	18.22
FeO	8.93	9.79	9.17	7.82	9.09	8.73	7.04	6.05	8.33	1.26	3.67	3.64	5.12	4.33	3.26	4.64	5.13	3.07	2.88	2.9	2.91	2.66	2.91	3.62	0.89	2.75
MnO	0.19	0.34	0.25	0.16	0.24	0.23	0.15	0.16	0.22	0.04	0.09	0.24	0.2	0.15	0.27	0.11	0.06	0.16	0.24	0.12	0.16	0	0.19	0.15	0.08	0.18
MgO	3.32	3.78	3.75	3.98	3.72	3.21	2.5	3.19	0.59	0.62	0.63	1.57	1.36	0.59	1.36	0.59	1.36	0.4	0.49	0.52	0.62	0.39	0.46	0.82	0.43	0.49
CaO	9.23	9.24	9.49	8.21	9.51	8.44	7.31	6.34	8.47	1.15	3.58	3.62	5.41	4.15	3.02	4.45	5.09	2.5	2.55	2.29	2.59	2.52	2.51	3.41	1.07	0.97
Na <sub>2</sub> O	2.95	2.92	2.76	3.46	2.9	3.37	3.94	3.83	3.27	0.45	4.74	4.22	4.13	4.48	4.77	4.38	4.06	4.91	4.61	4.96	4.77	4.27	4.77	4.54	0.31	7.26
K <sub>2</sub> O	4.89	4.9	4.67	5.77	4.76	5.32	5.87	6.98	5.4	0.78	8.35	8.3	7.42	7.85	8.52	7.43	7.48	8.74	8.82	9.22	8.96	8.68	8.91	8.36	0.62	6.43
P <sub>2</sub> O <sub>5</sub>	0.32	0.47	0.27	0.34	0.43	0.22	0.12	0.07	0.28	0.14	0	0	0.08	0	0	0	0	0.07	0	0	0	0	0	0.01	0.03	0
ClO	0.27	0.26	0.27	0.29	0.22	0.33	0.3	0.35	0.29	0.04	0.37	0.51	0.4	0.36	0.39	0.38	0.3	0.5	0.38	0.39	0.4	0.41	0.42	0.4	0.05	0.56
	100.01	99.99	99.95	99.99	99.99	100.01	100	100.01	99.99	0.04	99.99	100.01	100.01	99.99	100.01	99.99	99.99	99.98	99.96	99.94	100	100	99.99	99.99	99.99	100.01
tot alkali	7.84	7.82	7.43	9.23	7.66	8.69	9.81	10.81	8.66	1.2	13.09	12.52	11.55	12.33	13.29	11.81	11.54	13.65	13.43	14.18	13.73	12.95	13.68	12.79	0.88	13.69
alkali ratio	1.66	1.68	1.69	1.67	1.64	1.58	1.49	1.82	1.65	0.1	1.76	1.97	1.8	1.75	1.79	1.7	1.84	1.78	1.91	1.86	1.88	1.83	1.87	1.84	0.09	0.89