

PT0704-1

	1	2	3	4	5	6	7	8	9	10	mean	sd
SiO ₂	60.78	61.05	61.94	61.59	61.16	61.53	61.89	60.47	61.4	62.45	61.43	0.59
TiO ₂	0.31	0.41	0.32	0.43	0.29	0.33	0.46	0.39	0.41	0.34	0.37	0.06
Al ₂ O ₃	18.72	18.7	18.57	18.71	18.64	18.64	18.71	18.61	18.57	18.34	18.62	0.11
FeO	3.39	3.14	3	3.33	3.41	3.08	3.02	3.54	3.08	2.74	3.17	0.24
MnO	0.18	0.15	0.07	0.1	0	0.04	0.18	0.16	0.13	0	0.1	0.07
MgO	0.91	0.91	0.52	0.61	0.61	0.65	0.89	0.64	0.69	0.46	0.66	0.15
CaO	2.59	2.41	2.18	2.17	2.42	2.26	2.19	2.79	2.3	2.1	2.34	0.22
Na ₂ O	3.22	3.6	4.12	3.21	3.26	3.67	3.37	2.97	3.79	4.19	3.54	0.41
K ₂ O	9.62	9.47	8.84	9.46	9.84	9.32	9.1	9.88	9.18	8.73	9.34	0.39
P ₂ O ₅	0	0	0	0	0	0	0	0	0	0	0	0
ClO	0.29	0.37	0.45	0.37	0.38	0.48	0.55	0.31	0.45	0.64	0.43	0.11
	100.01	100.01	100.01	100.01	100.01	100	100.01	100.01	100	99.99	100.01	
total alkali	12.84	13.07	12.96	12.67	13.1	12.99	12.47	12.85	12.97	12.92	12.88	0.19
alkali ratio	2.99	2.63	2.15	2.95	3.02	2.54	2.7	3.33	2.42	2.08	2.68	0.4

PT0704-2

	1	2	3	4	5	mean	sd	1	2	3	4	mean	sd	1	2	mean	sd
SiO ₂	52.97	53.4	57.14	55.39	56.41	55.59	1.62	56.96	58.37	58.22	57.63	57.8	0.44	60.99	61.91	61.45	0.45
TiO ₂	0.88	0.96	0.6	0.28	0.22	0.59	0.34	0.82	0.55	0.72	0.73	0.71	0.11	0.41	0.41	0.41	0
Al ₂ O ₃	20.55	21.31	24.21	23.41	24.73	22.84	1.83	19.66	21.28	22.04	23.71	21.67	1.48	19.04	18.94	18.99	0.07
FeO	4.93	4.27	1.85	2.9	1.73	3.14	1.43	4.8	3.18	2.53	1.88	3.1	1.25	3.31	2.81	3.06	0.35
MnO	0.05	0.17	0	0.04	0	0.05	0.07	0	0	0	0	0	0	0	0.22	0.11	0.16
MgO	2.63	1.96	0.28	0.9	0.6	1.27	0.99	1.08	0.5	0.97	0.39	0.61	0.32	0.94	0.44	0.69	0.35
CaO	11.47	10.39	6.19	9.48	7.83	9.07	2.09	5.56	4.54	4.76	5.38	5.06	0.49	2.61	1.74	2.18	0.42
Na ₂ O	2.34	2.63	3.72	4.06	3.1	3.17	0.72	3.1	3.36	3.56	3.1	3.28	0.22	3	5.09	4.05	1.48
K ₂ O	4.03	4.62	5.88	3.11	5.1	4.55	1.05	7.49	7.72	7.55	7.04	7.45	0.29	9.28	7.9	8.59	0.98
P ₂ O ₅	0	0.12	0	0	0	0.02	0.05	0.23	0.14	0	0	0.09	0.11	0	0	0	0
ClO	0.15	0.16	0.13	0.45	0.23	0.22	0.13	0.3	0.36	0.15	0.14	0.24	0.11	0.43	0.53	0.48	0.07
	47.03	99.99	100	99.98	99.99	100.52		100	100	100	100	100		100.01	99.99	100	
total alkali	6.37	7.25	9.6	7.17	8.2	7.72	1.24	10.59	11.08	11.11	10.14	10.73	0.46	12.28	12.99	12.64	0.5
alkali ratio	1.72	1.76	1.58	0.77	1.65	1.49	0.41	2.42	2.3	2.12	2.27	2.28	0.12	3.09	1.55	2.32	1.09

PT0704-3a

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
SiO ₂	60.52	60.41	60.89	60.84	60.91	60.63	60.79	60.93	60.68	60.62	60.76	60.9	60.87	60.84	61.2	60.68	60.58	61.23	60.83	60.66
TiO ₂	0.52	0.49	0.43	0.32	0.36	0.47	0.46	0.45	0.32	0.31	0.5	0.42	0.54	0.34	0.41	0.4	0.5	0.46	0.35	0.47
Al ₂ O ₃	19.01	19.17	19.15	19.38	19.1	19.09	18.99	19.07	19.26	19.23	19.28	19.23	19.23	19.07	18.78	19.08	19.05	19.11	19.16	18.95
FeO	2.99	3.02	2.81	2.89	2.95	2.92	2.89	2.92	2.86	2.91	2.86	2.92	2.91	2.86	3	2.83	2.93	2.91	2.95	3.04
MnO	0.28	0.31	0.25	0.24	0.17	0.25	0.23	0.27	0.13	0.21	0.28	0.22	0.42	0.25	0.14	0.3	0.32	0.22	0.3	0.32
MgO	0.4	0.35	0.46	0.39	0.38	0.43	0.44	0.46	0.54	0.46	0.23	0.43	0.38	0.34	0.42	0.32	0.51	0.41	0.39	0.4
CaO	1.67	1.66	1.47	1.5	1.76	1.66	1.73	1.66	1.67	1.64	1.62	1.71	1.61	1.55	1.62	1.8	1.61	1.52	1.59	1.67
Na ₂ O	6.37	6.62	6.35	6.43	6.47	6.56	6.1	6.23	6.53	6.41	6.53	6.44	6.04	6.49	6.1	6.14	6.59	6.02	6.43	6.35
K ₂ O	7.44	7.29	7.53	7.26	7.22	7.27	7.51	7.33	7.42	7.7	7.29	7.07	7.18	7.4	7.62	7.72	7.19	7.36	7.32	7.5
P ₂ O ₅	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ClO	0.81	0.67	0.66	0.75	0.74	0.68	0.73	0.69	0.69	0.7	0.6	0.66	0.69	0.72	0.71	0.74	0.72	0.75	0.69	0.65
	100.01	99.99	100	100.01	100	99.99	100	100.01	100	99.99	100	99.99	99.99	100	100	100.01	100	99.99	100.01	100.01
total alkali	13.81	13.91	13.88	13.69	13.69	13.83	13.61	13.56	13.95	14.11	13.82	13.51	13.62	13.89	13.72	13.86	13.78	13.38	13.75	13.85
alkali ratio	1.17	1.1	1.19	1.13	1.12	1.11	1.23	1.18	1.14	1.2	1.12	1.1	1.11	1.14	1.25	1.26	1.09	1.22	1.14	1.18

	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	mean
SiO ₂	60.37	61.25	60.68	60.33	60.85	60.75	60.56	61.02	60.62	61.12	60.61	60.7	61.27	60.47													60.77
TiO ₂	0.57	0.36	0.42	0.6	0.44	0.51	0.38	0.48	0.47	0.38	0.41	0.44	0.23	0.49	61.08	60.34	60.9	60.64	60.28	60.68	60.85	60.87	60.88	60.6	61.26	60.72	0.42
Al ₂ O ₃	19.1	19.27	19.33	19.03	19.21	18.77	18.92	19.08	19.17	19.03	19.12	19.22	19.14	19.28	0.36	0.57	0.39	0.31	0.62	0.33	0.37	0.29	0.28	0.53	0.36	0.5	0.42
FeO	3.01	2.78	3	3.05	2.9	3.23	3.11	3.13	2.99	2.99	3.19	2.79	2.89	2.97	19.22	18.93	19.11	19.19	19	19.26	19.27	19.51	19.45	19.15	19.2	18.98	2.97
MnO	0.38	0.18	0.23	0.39	0.18	0.34	0.28	0.34	0.34	0.21	0.21	0.09	0.14	0.32	2.98	3.18	2.92	3.11	3.15	2.96	2.92	2.81	2.93	3.08	2.79	2.99	0.25
MgO	0.3	0.49	0.33	0.34	0.5	0.32	0.44	0.35	0.38	0.34	0.53	0.53	0.39	0.37	0.11	0.35	0.14	0.27	0.35	0.2	0.24	0.13	0.14	0.33	0.16	0.15	0.41
CaO	1.6	1.59	1.7	1.83	1.67	1.59	1.81	1.74	1.62	1.63	1.71	1.63	1.72	1.71	0.42	0.45	0.47	0.4	0.35	0.51	0.35	0.41	0.56	0.41	0.35	0.37	1.66
Na ₂ O	6.74	6.28	6.55	6.27	6.52	6.4	6.31	6.11	6.41	6.43	6.56	6.74	6.23	6.59	1.59	1.7	1.82	1.65	1.72	1.61	1.56	1.63	1.59	1.7	1.77	1.73	6.39
K ₂ O	7.23	7.09	7.02	7.35	7.01	7.36	7.45	7.07	7.31	7.12	7.05	7.11	7.32	7.13	6.25	6.35	6.19	6.51	6.26	6.31	6.53	6.75	6.23	6.34	6.19	6.56	7.29
P ₂ O ₅	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	0.71
ClO	0.7	0.71	0.74	0.81	0.72	0.73	0.74	0.69	0.68	0.77	0.62	0.75	0.67	0.67	0	0	0.06	0	0	0	0	0	0	0	0	0	1.00
	100	100	100	100	100	100	100	100.01	99.99	100.02	100.01	100	100	100	99.99	99.99	100	100	100	100	100	100	100	100	100.01	99.99	100
total alkali	13.97	13.37	13.57	13.62	13.53	13.76	13.76	13.18	13.72	13.55	13.61	13.85	13.55	13.72	13.59	13.83	13.48	13.72	13.72	13.67	13.73	13.66	13.43	13.51	13.52	13.85	13.66
alkali ratio	1.07	1.13	1.07	1.17	1.08	1.15	1.18	1.16	1.14	1.11	1.07	1.05	1.17	1.08	1.17	1.18	1.18	1.11	1.19	1.17	1.1	1.02	1.16	1.13	1.18	1.11	1.11

PT0704-3b

SiO ₂	61.96	61.22	61.22	62.04	61.34	60.62	61.41	61.3	61.22	61.65	62.71	61.52	0.55
TiO ₂	0.42	0.46	0.39	0.34	0.39	0.48	0.29	0.34	0.52	0.21	0.52	0.4	0.1
Al ₂ O ₃	19.56	19.21	19.16	19.54	20.12	18.95	19.11	19.1	19.47	19.47	18.42	19.28	0.43
FeO	3.06	3.16	3.04	2.66	2.79	3.1	3.22	2.94	2.76	2.89	2.91	2.96	0.18
MnO	0.13	0.25	0.21	0.08	0.17	0.26	0.2	0.29	0.42	0.2	0.31	0.23	0.09
MgO	0.49	0.39	0.29	0.53	0.57	0.38	0.48	0.49	0.57	0.5	0.4	0.46	0.09
CaO	1.53	1.69	1.71	1.78	1.64	1.73	1.66	1.69	1.57	1.64	1.5	1.65	0.15
Na ₂ O	5.21	5.77	5.98	5.45	5.34	5.42	5.69	5.62	5.89	5.8	5.73	5.63	0.24
SiO ₂	7.07	7.24	7.3	7.07	7.24	8.35	7.19	7.5	6.89	6.98	6.75	7.23	0.42

Foglio1													
K ₂ O	0	0	0	0	0	0	0	0	0	0	0	0	0
P ₂ O ₅	0.56	0.61	0.7	0.5	0.41	0.7	0.76	0.73	0.68	0.66	0.75	0.64	0.77
ClO	99.99	100	100	99.99	100.01	99.99	100.01	100	99.99	100	100	100	
total alkali	12.28	13.01	13.28	12.52	12.98	13.77	12.88	13.12	12.78	12.78	12.48	12.86	0.42
alkali ratio	1.36	1.25	1.22	1.3	1.36	1.54	1.26	1.33	1.17	1.2	1.18	1.29	0.77
PT0704-3c	1	2	3	4	5	6	7	8	9	mean	sd		
	60.5	61.06	60.6	60.72	60.81	60.4	58.36	58.93	61.48	60.32	1.01		
SiO ₂	0.38	0.36	0.53	0.28	0.48	0.34	0.5	0.55	0.2	0.4	0.12		
TiO ₂	18.9	19.09	19.02	18.9	18.96	19.08	19.17	18.8	18.94	18.98	0.12		
Al ₂ O ₃	3.58	2.92	3.18	3.31	3.29	3.45	3.91	4.39	3.01	3.45	0.46		
FeO	0	0.17	0.27	0.09	0.13	0.09	0.19	0.13	0	0.12	0.09		
MnO	0.93	0.69	0.6	0.69	0.74	0.93	0.82	1.21	0.62	0.8	0.19		
MgO	2.68	2.01	2.26	2.34	2.3	2.4	3.31	2.84	2.23	2.49	0.4		
CaO	2.82	3.88	3.31	3.68	3.48	3.08	3.55	3.84	3.71	3.48	0.36		
Na ₂ O	9.93	9.44	9.91	9.64	9.47	9.91	9.66	8.77	9.36	9.57	0.37		
K ₂ O	0	0	0	0	0	0	0	0	0	0	0		
P ₂ O ₅	0.29	0.39	0.31	0.33	0.35	0.32	0.53	0.54	0.44	0.39	0.09		
ClO	100.01	100.01	99.99	99.98	100.01	100	100	100	99.99	100			
total alkali	12.75	13.32	13.22	13.32	12.95	12.99	13.21	12.61	13.07	13.05	0.25		
alkali ratio	3.52	2.43	2.99	2.62	2.72	3.22	2.72	2.28	2.52	2.78	0.4		

sd
0.25
0.09
0.15
0.11
0.06
0.07
0.06
0.19
0.18
0.01
0.05

0.17
5.75