



Supplementary material: Experimental evidence for the shallow production of phonolitic magmas at Mayotte

Document complémentaire : Evidence expérimentale de la production de magmas phonolitiques à faible profondeur à Mayotte

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Supplementary Table S1. An, Ab, Or mole % end members calculated as in Deer *et al.* [1972].

Experimental plagioclases																
Charge	<i>T</i> (°C)	<i>P</i> (MPa)	<i>n</i>	SiO ₂	TiO ₂	Al ₂ O ₃	FeO	MnO	MgO	CaO	Na ₂ O	K ₂ O	Sum	An	Ab	Or
DR08-164	925	100	3	59.06	0.00	24.37	1.12	0.00	0.14	8.48	6.01	0.84	100.03	41.70	53.40	4.90
sd				0.32	0.00	0.44	0.18	0.00	0.04	0.23	0.38	0.15	1.74	1.78	1.93	0.89
DR08-166	925	100	2	61.38	0.00	22.20	1.71	0.00	0.60	6.04	6.37	1.64	99.93	30.95	59.05	9.99
sd				0.63	0.00	0.40	0.02	0.00	0.25	0.18	0.22	0.04	1.74	1.92	2.26	0.67
DR08-159	925	150	2	59.40	0.00	24.09	1.27	0.00	0.11	7.95	6.26	0.92	100.00	39.00	55.62	5.38
sd				0.59	0.00	0.83	0.33	0.00	0.07	0.66	0.49	0.20	0.00	2.24	2.61	1.30
DR08-160	925	150	1	60.70	0.00	22.42	1.52	0.00	0.27	7.37	6.22	1.23	99.73	36.71	56.01	7.28
DR08-161	925	150	1	61.05	0.00	22.73	1.22	0.00	0.29	5.69	7.14	1.50	99.62	27.92	63.33	8.75
DR08-131	925	200	1	61.40	0.00	22.33	1.88	0.00	0.47	5.72	6.82	1.31	99.93	29.14	62.90	7.96
DR08-132	925	200	4	62.44	0.00	21.86	1.47	0.00	0.29	5.42	7.06	1.26	99.80	27.52	64.86	7.61
sd				0.64	0.00	0.34	0.14	0.00	0.14	0.24	0.22	0.25	0.17	1.42	0.85	1.52
DR08-154	925	400	2	61.16	0.00	21.86	1.39	0.00	0.24	6.35	6.90	1.37	99.27	31.03	61.02	7.95
sd				0.18	0.00	0.20	0.11	0.00	0.08	0.06	0.09	0.21	0.15	0.34	0.88	1.22
DR08-155	925	400	3	62.29	0.00	20.76	1.61	0.00	0.35	5.58	7.06	1.65	99.29	27.48	62.86	9.66
sd				0.44	0.00	0.68	0.28	0.00	0.16	0.35	0.17	0.16	0.17	1.43	2.21	0.84
DR08-58	950	200	3	59.94	0.00	23.85	1.26	0.00	0.16	7.52	6.04	1.24	100.00	37.73	54.87	7.40
sd				0.33	0.00	0.44	0.33	0.00	0.04	0.23	0.15	0.21	0.00	0.65	0.82	1.31
DR08-143	950	400	2	58.64	0.00	24.47	1.01	0.00	0.12	8.63	6.15	0.91	99.93	41.39	53.38	5.24
				0.66	0.00	0.51	0.23	0.00	0.11	0.50	0.25	0.25	0.14	1.39	0.93	1.55
DR08-145	950	400	2	61.00	0.00	23.29	1.08	0.00	0.23	5.90	6.90	1.61	100.00	29.12	61.47	9.41
				0.44	0.00	0.80	0.14	0.00	0.05	0.53	0.37	0.33	0.00	3.37	1.70	1.67

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Supplementary Table S1. (continued)

Experimental plagioclases																
Charge	T (°C)	P (MPa)	<i>n</i>	SiO ₂	TiO ₂	Al ₂ O ₃	FeO	MnO	MgO	CaO	Na ₂ O	K ₂ O	Sum	An	Ab	Or
Standards																
SEM analysis																
Albite			5	68.96	0.00	19.57	0.00	0.00	0.00	0.34	11.02	0.10	100			
sd				0.63	0.00	1.19	0.00	0.00	0.00	0.00	0.21	0.15	0			
Andradite			5	32.92	0.00	0.00	30.51	0.00	0.18	36.39	0.00	0.00	100.0			
sd				0.34	0.00	0.00	0.13	0.00	0.00	0.22	0.00	0.00	0.0			
Orthose			5	65.27	0.00	16.80	0.96	0.00	0.00	0.00	0.41	16.57	100			
sd				0.40	0.00	0.03	0.04	0.00	0.00	0.00	0.01	0.43	0			
EMPA reference																
Albite				67.33	0.00	20.06	0.00	0.06	0.00	0.62	11.34	0.16	99.58			
Andradite				35.31	0.01	0.15	26.28	0.00	0.24	33.51	0.00	0.00	95.51			
Orthose				66.24	0.00	18.13	0.00	0.00	0.00	0.00	1.08	14.73	100.19			