

Table 5. Average compositions of agglutinitic glasses in Apollo Mare Soils. This designation effectively includes all impact-contain np-Fe⁰. Maturity as Is/FeO of the <250 μm fraction [Morris, 1978] is given directly after the soil number, a value commonly used as the reference maturity for an entire soil.

	10084-78			12030-14			12001-56		
	20-45μm	10-20μm	<10μm	20-45μm	10-20μm	<10μm	20-45μm	10-20μm	<10μm
SiO ₂	44.5 (44) ^b	45.2 (42)	44.5 (41)	47.8 (46)	47.9 (53)	47.7 (60)	46.7 (32)	45.9 (96)	46.2 (39)
TiO ₂	2.96 (226)	2.94 (182)	3.30 (233)	2.74 (240)	2.53 (190)	2.43 (172)	2.26 (180)	2.31 (163)	2.34 (189)
Al ₂ O ₃	17.4 (75)	18.0 (80)	16.4 (82)	13.3 (59)	12.9 (62)	13.3 (68)	15.0 (64)	15.4 (57)	15.2 (51)
Cr ₂ O ₃	0.31 (19)	0.24 (18)	0.24 (18)	0.32 (31)	0.36 (28)	0.34 (33)	0.29 (23)	0.23 (14)	0.27 (20)
MgO	8.69 (325)	8.45 (335)	8.68 (326)	8.73 (375)	8.81 (317)	8.97 (346)	8.56 (376)	8.65 (321)	8.47 (364)
CaO	13.2 (25)	13.9 (26)	13.2 (31)	11.6 (29)	11.7 (22)	11.6 (31)	11.9 (27)	11.7 (25)	11.8 (19)
FeO	10.6 (53)	10.2 (53)	11.8 (61)	13.7 (51)	13.5 (47)	13.6 (64)	13.0 (60)	12.9 (54)	13.2 (67)
Na ₂ O	0.36 (13)	0.36 (25)	0.33 (21)	0.46 (27)	0.48 (29)	0.44 (26)	0.48 (29)	0.49 (21)	0.44 (25)
K ₂ O	0.09 (7)	0.11 (7)	0.12 (6)	0.31 (24)	0.29 (22)	0.25 (16)	0.31 (17)	0.34 (19)	0.29 (18)
Total	98.11	99.35	98.49	98.82	98.47	98.56	98.44	11272.92	98.21
	15071-52			15041-94			71061-14		
	20-45μm	10-20μm	<10μm	20-45μm	10-20μm	<10μm	20-45μm	10-20μm	<10μm
SiO ₂	46.4 (37)	46.2 (38)	46.5 (33)	46.4 (39)	47.1 (46)	46.4 (37)	44.3 (37)	44.7 (48)	44.4 (39)
TiO ₂	1.48 (119)	1.58 (146)	1.44 (121)	1.35 (121)	1.41 (109)	1.48 (119)	3.25 (279)	3.54 (323)	3.16 (326)
Al ₂ O ₃	16.4 (69)	16.4 (70)	16.6 (74)	17.8 (69)	16.8 (64)	16.4 (69)	14.6 (76)	15.6 (72)	15.6 (85)
Cr ₂ O ₃	0.33 (29)	0.31 (21)	0.29 (20)	0.25 (21)	0.21 (19)	0.33 (29)	0.37 (27)	0.31 (28)	0.36 (27)
MgO	9.72 (433)	10.4 (375)	10.1 (364)	9.39 (380)	9.78 (310)	9.72 (333)	10.1 (246)	10.1 (257)	9.44 (325)
CaO	11.5 (30)	11.5 (32)	11.6 (27)	12.1 (26)	11.5 (28)	11.5 (30)	13.6 (38)	12.4 (34)	12.6 (32)
FeO	12.3 (61)	12.3 (63)	12.1 (54)	11.1 (57)	11.4 (52)	12.3 (61)	11.8 (51)	11.4 (52)	12.0 (64)
Na ₂ O	0.35 (20)	0.38 (19)	0.34 (12)	0.48 (38)	0.41 (40)	0.35 (30)	0.34 (32)	0.37 (28)	0.36 (38)
K ₂ O	0.20 (14)	0.18 (13)	0.21 (14)	0.22 (28)	0.18 (27)	0.20 (34)	0.07 (11)	0.12 (14)	0.08 (9)
Total	98.70	99.22	14409.18	98.87	98.81	98.70	98.43	98.54	98.00
	71501-35			70181-47			79221-81		
	20-45μm	10-20μm	<10μm	20-45μm	10-20μm	<10μm	20-45μm	10-20μm	<10μm
SiO ₂	44.8 (38)	44.2 (40)	44.1 (33)	43.7 (45)	43.9 (40)	43.9 (38)	44.8 (37)	44.0 (40)	43.2 (43)
TiO ₂	2.94 (241)	3.81 (340)	2.44 (251)	3.56 (349)	3.08 (310)	3.02 (347)	2.59 (359)	2.43 (265)	2.75 (235)
Al ₂ O ₃	14.2 (90)	15.0 (85)	15.9 (78)	15.9 (85)	17.1 (89)	16.5 (74)	16.9 (76)	17.8 (66)	16.7 (67)
Cr ₂ O ₃	0.35 (26)	0.31 (25)	0.29 (23)	0.35 (27)	0.30 (26)	0.33 (23)	0.29 (21)	0.36 (22)	0.28 (12)
MgO	10.6 (453)	9.90 (431)	11.7 (373)	9.61 (379)	9.46 (389)	9.49 (289)	9.57 (372)	9.71 (340)	9.72 (418)
CaO	14.0 (39)	12.9 (35)	11.8 (39)	13.4 (36)	13.2 (37)	13.5 (34)	12.7 (34)	12.5 (31)	11.7 (29)
FeO	11.1 (52)	12.0 (58)	11.4 (51)	11.4 (65)	10.5 (49)	10.9 (61)	10.9 (58)	10.8 (53)	12.1 (63)
Na ₂ O	0.31 (26)	0.34 (24)	0.31 (21)	0.33 (28)	0.39 (28)	0.44 (23)	0.41 (24)	0.30 (24)	0.37 (28)
K ₂ O	0.07 (6)	0.08 (6)	0.07 (5)	0.05 (4)	0.09 (6)	0.08 (7)	0.09 (8)	0.07 (5)	0.09 (7)
Total	98.37	98.54	98.01	98.30	98.02	69346.16	98.25	97.97	96.91

^bThe one sigma range in compositions is given in brackets as the amount of the last decimal cited.

