

Table 1. Composition from microprobe measurements (wt%) and measured %Fe³⁺ of silicate glasses. Numbers in parentheses indicate standard deviation of measurements.

	BAS-1 (n=8)	BAS-2 (n=7)	BAS-2 (n=6)	BAS-3 (n=10)	BAS-3 (n=8)	BAS-4 (n=6)	BAS-6 (n=8)	AND-4 (n=8)	AND-4 (n=9)	RHY-2 (n=7)	RHY-3 (n=7)	RHY-3 (n=7)	RHY-5 (n=8)
<i>f</i> _{O₂}	QFM	CO ₂	QFM	QFM	IW	air	QFM	air	IW	CO ₂	CO ₂	IW	IW
SiO ₂	49.81 (0.86)	49.42 (0.43)	49.73 (0.35)	48.42 (0.22)	51.53 (0.15)	50.96 (0.53)	51.15 (0.26)	55.61 (1.02)	61.97 (0.31)	69.35 (3.58)	70.85 (3.28)	73.21 (1.22)	71.19 (2.31)
TiO ₂	1.07 (0.02)	1.60 (0.03)	1.55 (0.03)	2.84 (0.06)	2.72 (0.04)	0.82 (0.03)	2.66 (0.06)	0.66 (0.02)	0.66 (0.04)	0.33 (0.12)	0.15 (0.03)	0.28 (0.08)	0.23 (0.06)
Al ₂ O ₃	17.94 (0.33)	15.62 (0.11)	15.51 (0.19)	17.15 (0.18)	17.90 (0.08)	17.58 (0.26)	13.79 (0.13)	18.19 (0.44)	18.10 (0.10)	17.56 (2.51)	15.81 (2.02)	16.07 (0.71)	14.39 (1.58)
FeO	7.03 (0.20)	10.56 (0.36)	9.67 (0.43)	10.85 (0.40)	11.93 (0.31)	9.96 (0.34)	10.16 (0.37)	7.62 (0.26)	7.06 (0.23)	3.29 (0.56)	1.73 (0.43)	1.83 (0.30)	3.63 (0.13)
MgO	9.14 (0.10)	7.03 (0.09)	7.10 (0.08)	5.62 (0.07)	5.77 (0.03)	6.09 (0.03)	7.10 (0.05)	4.15 (0.25)	3.78 (0.04)	0.37 (0.08)	0.25 (0.07)	0.22 (0.04)	0.04 (0.01)
CaO	10.94 (0.16)	11.60 (0.05)	11.48 (0.07)	8.97 (0.12)	9.23 (0.05)	11.35 (0.04)	11.71 (0.06)	8.14 (0.39)	7.61 (0.06)	3.19 (0.80)	1.20 (0.32)	1.09 (0.15)	0.25 (0.04)
MnO	0.01 (0.01)	0.02 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.01 (0.02)	0.01 (0.01)	0.01 (0.01)	0.01 (0.01)	0.00 (0.00)	0.00 (0.01)	0.01 (0.01)
Na ₂ O	2.96 (0.16)	2.59 (0.11)	2.66 (0.07)	3.08 (0.08)	0.68 (0.08)	2.16 (0.09)	2.30 (0.14)	3.64 (0.19)	1.01 (0.08)	5.46 (0.28)	3.76 (0.41)	3.31 (0.09)	6.07 (0.54)
K ₂ O	0.27 (0.02)	0.15 (0.01)	0.19 (0.02)	1.06 (0.04)	0.07 (0.02)	0.44 (0.04)	0.59 (0.03)	1.09 (0.07)	0.06 (0.01)	1.53 (0.06)	4.44 (0.26)	4.01 (0.06)	4.84 (0.16)
Total	99.15	98.60	97.89	97.99	99.84	99.35	99.46	99.11	100.25	101.09	98.18	100.03	100.65
Fe ³⁺ / ΣFe ^a	10	80	12	22	16	89	17	100	12		71	16	30

^a Mossbauer, error ±1-3%