

**Table OM1.** Electron microprobe analyses of clinopyroxene from selected reaction-reversal experiments at the conditions indicated in Table 4. Cations calculated on the basis of 6 oxygens with all iron assumed to be Fe<sup>2+</sup>.

Oxides (wt%)	CLFP 2-15	CLFP 2-8	CLFP 2-12	FEPG 7-13	FEPG 7-7
<i>n</i>	11	11	11	7	8
SiO <sub>2</sub>	47.7(12)	46.6(14)	47.9(7)	45.0(8)	45.6(11)
Al <sub>2</sub> O <sub>3</sub>	2.4(15)	2.15(86)	1.90(82)	4.9(11)	4.48(35)
FeO <sup>a</sup>	30.4(15)	34.1(18)	31.8(21)	27.4(5)	28.0(7)
CaO	18.9(10)	16.7(14)	18.7(14)	21.3(2)	21.3(5)
Na <sub>2</sub> O	0.28(21)	0.16(18)	0.21(17)	0.43(7)	0.52(11)
Total	99.7(12)	99.8(14)	100.5(10)	99.1(7)	99.9(17)
atoms					
Si	1.96(4)	1.95(4)	1.97(2)	1.86(3)	1.88(2)
<sup>IV</sup> Al	0.04(4)	0.06(3)	0.03(2)	0.14(3)	0.22(2)
Sum T	2.00	2.00(1)	2.00	2.00	2.00
<sup>VI</sup> Al	0.08(4)	0.05(2)	0.06(2)	0.10(2)	0.09(1)
Fe <sup>2+</sup>	1.05(6)	1.19(7)	1.09(7)	0.95(2)	0.96(2)
Ca	0.83(4)	0.75(5)	0.82(6)	0.94(1)	0.94(1)
Na	0.02(2)	0.01(1)	0.02(1)	0.04(1)	0.04(1)
Total cations	3.99(2)	4.01(2)	3.99(1)	4.03(1)	4.04(1)
<i>a</i> <sub>Hed</sub> <sup>b</sup>	0.82	0.85	0.83	0.82	0.80
<i>a</i> <sub>CaTs</sub> <sup>b</sup>	0.18	0.12	0.13	0.17	0.12

Values reported are the average of *n* analyses, and uncertainties (1σ) in the last digit are given in parentheses.

<sup>a</sup> Total Fe reported as FeO; <sup>b</sup>Activities calculated at the *P* and *T* of treatment (Table 4).

**Table OM2.** Electron microprobe analyses of plagioclase from selected reaction-reversal experiments at the conditions indicated in Table 3. Cations calculated on the basis of 8 oxygens with the fraction of ferric iron fixed at 0.7 (see text).

Oxide (wt%)	CLFP 2-15	CLFP 2-8	CLFP 2-12	FEPG 7-13	FEPG 7-7
<i>n</i>	10	12	12	6	12
SiO <sub>2</sub>	46.9(17)	47.2(21)	46.6(26)	55.1(28)	54.6(16)
Al <sub>2</sub> O <sub>3</sub>	32.4(16)	33.4(19)	33.5(41)	26.3(14)	27.4(14)
FeO <sup>a</sup>	1.5(12)	1.06(29)	1.52(98)	1.15(46)	0.41(19)
CaO	16.3(9)	16.7(18)	16.0(12)	10.1(11)	10.6(14)
Na <sub>2</sub> O	2.02(26)	1.89(92)	1.98(50)	5.71(65)	5.33(72)
Total	99.2(29)	100.2(15)	99.6(31)	98.3(46)	98.4(18)
atoms					
Si	2.18(2)	2.16(9)	2.16(12)	2.53(4)	2.50(7)
Al	1.77(4)	1.81(10)	1.80(14)	1.42(4)	1.48(6)
Fe <sup>3+</sup>	0.04(4)	0.03(1)	0.04(3)	0.03(1)	0.011(5)
Sum Tet.	3.99(1)	4.00(1)	4.00(1)	3.98(1)	3.99(1)
Fe <sup>2+</sup>	0.02(2)	0.012(3)	0.02(1)	0.01(1)	0.005(2)
Ca	0.81(2)	0.82(9)	0.79(5)	0.50(5)	0.52(7)
Na	0.18(2)	0.17(8)	0.18(5)	0.51(5)	0.47(6)

Total	5.00(1)	5.00(1)	5.00(2)	5.00(1)	4.99(1)
$a_{Ab}$	0.39	0.36	0.36	0.59	0.53
$a_{An}$	0.85	0.86	0.85	0.73	0.69

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Values reported are the average of  $n$  analyses, and uncertainties ( $1\sigma$ ) in the last digit given in parentheses.

<sup>a</sup> Total Fe reported as FeO; <sup>b</sup>Activities calculated at the  $P$  and  $T$  of treatment (Table 4).