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Pervasive exsolution within the calcic amphibole series: TEM evidence for a miscibility gap between actinolite and hornblende in natural samples

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For deposit: Table 3-4

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Table 3: on deposit.

Table 3. Representative EMP analyses from calcic amphiboles.

amphibole formula: based on normalization to 23 oxygens and 15 eNK.

Sample #		62B	62B	62B	62B	62B	62B	62B	62B
Analysis #		tr4.8	tr4.12	tr4.25	tr4.24	tr4.5	tr4.3	tr4.4	tr4.1
tetrahedral	Si	6.263	6.463	7.621	7.520	7.055	6.941	6.887	7.083
	Al	1.737	1.537	0.379	0.480	0.945	1.059	1.113	0.917
	Σ T-site	8.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000
octahedral M(1,2,3)	Al	0.828	0.806	0.179	0.165	0.297	0.467	0.468	0.435
	Ti	0.063	0.046	0.014	0.028	0.051	0.075	0.070	0.052
	Fe^{3+}	0.380	0.279	0.137	0.192	0.323	0.142	0.265	0.188
	Mg	1.876	1.978	3.235	3.182	2.746	2.554	2.544	2.795
	Fe^{2+}	1.853	1.891	1.435	1.433	1.583	1.762	1.653	1.530
	Σ M(1,2,3)	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
octahedral M(4)	Ca	1.932	1.916	1.879	1.854	1.877	1.805	1.802	1.813
	Fe^{2+}	0.056	0.046	0.096	0.110	0.076	0.161	0.170	0.151
	Mn	0.012	0.038	0.025	0.036	0.047	0.034	0.028	0.036
	Σ M(4)	2.000	2.000	2.000	2.000	2.000	2.000	2.000	2.000
A-site	Na	0.321	0.299	0.024	0.060	0.179	0.235	0.160	0.147
	K	0.080	0.062	0.011	0.006	0.045	0.065	0.079	0.044
	Σ A-site	0.401	0.361	0.035	0.066	0.224	0.300	0.239	0.191
$Fe^{2+}/(Fe^{2+} + Mg)$		0.505	0.495	0.321	0.327	0.377	0.430	0.417	0.376

Table 4: on deposit

Table 4. Representative EMP analyses from calcic amphiboles.

amphibole formula: based on normalization to 23 oxygens and 13 eCNK.

Sample # / Analysis #		62B tr4.8	62B tr4.12	62B tr4.25	62B tr4.24	62B tr4.5	62B tr4.3	62B tr4.4	62B tr4.1
tetrahedral	Si	6.231	6.421	7.551	7.437	6.989	6.838	6.784	7.983
	Al	1.769	1.579	0.449	0.563	1.011	1.162	1.216	1.017
	Σ T-site	8.000	8.000	8.000	8.000	8.000	8.000	8.000	8.000
octahedral M(1,2,3)	Al	0.783	0.750	0.103	0.074	0.219	0.342	0.341	0.315
	Ti	0.063	0.045	0.014	0.028	0.051	0.074	0.069	0.051
	Fe^{3+}	0.616	0.572	0.561	0.702	0.750	0.820	0.950	0.838
	Mg	1.865	1.966	3.205	3.146	2.720	2.516	2.506	2.756
	Fe^{2+}	1.662	1.630	1.092	1.014	1.213	1.214	1.107	1.005
	Mn	0.011	0.037	0.025	0.036	0.047	0.034	0.027	0.036
	Σ M(1,2,3)	5.000	5.000	5.000	5.000	5.000	5.000	5.000	5.000
octahedral	Ca	1.922	1.904	1.861	1.833	1.860	1.778	1.775	1.787
	Na	0.078	0.096	0.024	0.059	0.140	0.222	0.158	0.145
	Σ M(4)	2.000	2.000	1.885	1.892	2.000	2.000	1.933	1.932
A-site	Na	0.242	0.201	0.000	0.000	0.037	0.010	0.000	0.000
	K	0.080	0.062	0.011	0.006	0.044	0.064	0.078	0.043
	Σ A-site	0.322	0.263	0.011	0.006	0.081	0.074	0.078	0.043
$Fe^{2+}/(Fe^{2+} + Mg)$		0.471	0.453	0.254	0.244	0.308	0.326	0.306	0.267