

APPENDIX 7

EPMA analyses of cordierite and calculated cation numbers

Sample no.	Andalusite hornfels (N501)				Spinel–cordierite symplectite-bearing migmatite (A8)				Fibrolite-bearing cordierite migmatite (A10)			
	SiO ₂	47.76	48.28	48.77	48.82	48.31	48.35	47.45	46.77	47.54	46.88	46.95
TiO ₂	0.04	0.04	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Al ₂ O ₃	32.82	32.08	32.66	32.74	32.34	32.18	32.72	32.77	31.77	31.91	32.19	32.04
FeO	11.60	11.67	11.87	11.80	11.65	10.62	11.65	11.67	10.88	10.63	10.66	10.18
MnO	0.47	0.42	0.17	0.50	0.44	0.95	0.86	0.82	2.09	2.29	2.22	2.04
MgO	6.32	6.15	6.27	6.27	6.17	6.31	5.75	5.79	5.93	5.98	6.20	5.98
CaO	0.04	0.03	0.03	0.01	0.04	0.01	0.03	0.03	0.02	0.03	0.02	0.04
Na ₂ O	0.11	0.12	0.09	0.11	0.16	0.07	0.12	0.12	0.07	0.08	0.11	0.11
K ₂ O	0.11	0.12	0.09	0.11	0.16	0.07	0.12	0.12	0.00	0.00	0.00	0.02
Total	99.19	98.79	99.87	100.25	99.13	98.49	98.60	98.09	97.81	97.81	98.35	98.01
Number of cations on the basis of 18 oxygens												
Si	4.946	5.026	5.019	5.006	5.008	5.040	4.955	4.916	4.988	4.938	4.911	4.992
Ti	0.003	0.003	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001
Al	4.004	3.936	3.961	3.957	3.951	3.954	4.027	4.051	3.928	3.961	3.968	3.963
Fe	1.005	1.016	1.022	1.042	1.010	0.968	1.017	1.024	0.955	0.936	0.933	0.893
Mn	0.041	0.037	0.015	0.043	0.039	0.084	0.076	0.073	0.186	0.204	0.197	0.181
Mg	0.975	0.954	0.962	0.959	0.953	0.981	0.895	0.905	0.927	0.939	0.967	0.936
Ca	0.004	0.003	0.003	0.001	0.004	0.001	0.003	0.003	0.002	0.003	0.002	0.004
Na	0.022	0.024	0.018	0.022	0.032	0.014	0.024	0.024	0.014	0.016	0.022	0.024
K	0.000	0.000	0.000	0.000	0.000	0.000	0.003	0.003	0.000	0.001	0.000	0.000
Total	11.000	11.000	11.000	11.000	11.000	11.000	11.000	11.000	11.000	11.000	11.000	11.000
Mg [#]	0.524	0.492	0.489	0.500	0.503	0.509	0.491	0.507	0.524	0.554	0.580	0.535