

TABLE 1. REPRESENTATIVE CHEMICAL ANALYSIS AND STRUCTURAL FORMULAE OF GARNET (1 - 4) AND ORTHOPYROXENE (5 - 10).

Sample no.	V74A/1	V74A/1	V74A/1	V46-3	V46	V46	V46	V46	V46	V46
Analysis no.	1	2	3	4	5	6	7	8	9	10
SiO ₂	39.694	39.539	39.146	39.272	46.792	48.881	47.801	47.955	47.699	47.753
TiO ₂	0.093	0.000	0.036	0.023	0.297	0.192	0.128	0.190	0.167	0.159
Al ₂ O ₃	22.679	22.695	22.408	22.758	10.854	8.278	9.634	8.853	8.962	8.895
Cr ₂ O ₃	0.000	0.049	0.089	0.041	0.085	0.079	0.000	0.054	0.068	0.000
FeO	24.860	25.196	24.886	25.197	18.872	19.355	19.522	20.228	20.843	19.771
MnO	0.613	0.968	1.084	0.859	0.361	0.353	0.433	0.545	0.538	0.482
MgO	11.782	10.774	11.002	11.275	22.135	22.849	21.704	21.698	21.163	21.787
CaO	1.195	1.122	1.215	1.203	0.056	0.071	0.016	0.046	0.071	0.051
Na ₂ O	0.032	0.000	0.000	0.015	0.000	0.000	0.009	0.000	0.022	0.012
K ₂ O	0.027	0.000	0.000	0.009	0.000	0.005	0.009	0.013	0.018	0.000
Total	100.975	100.343	99.866	100.652	99.452	100.063	99.256	99.582	99.610	98.919

Number of cations on the basis of 12 (O) for garnet and 6 (O) for orthopyroxene

Si	2.980	2.995	2.980	2.962	1.728	1.794	1.771	1.779	1.775	1.780
Al	2.007	2.027	2.011	2.023	0.472	0.358	0.421	0.387	0.393	0.391
Ti	0.005	0.000	0.002	0.001	0.008	0.021	0.003	0.005	0.005	0.004
Cr	0.000	0.003	0.005	0.002	0.002	0.002	0.001	0.001	0.002	0.000
Fe ³⁺	0.020	0.000	0.020	0.052	0.078	0.059	0.045	0.063	0.067	0.061
Fe ²⁺	1.541	1.596	1.565	1.537	0.501	0.533	0.558	0.562	0.579	0.552
Mn	0.039	0.062	0.070	0.055	0.011	0.011	0.013	0.017	0.017	0.015
Mg	1.319	1.216	1.248	1.267	1.218	1.250	1.199	1.200	1.174	1.211
Ca	0.096	0.091	0.099	0.097	0.002	0.003	0.002	0.001	0.003	0.002
Na	0.005	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.002	0.001
K	0.003	0.000	0.000	0.001	0.000	0.002	0.001	0.001	0.001	0.000
Total	8.015	7.990	8.000	7.999	4.022	4.012	4.013	4.018	4.020	4.017
X _{Mg}	0.440	0.410	0.418	0.428	0.708	0.701	0.681	0.685	0.669	0.686

1Grt core; 2Grt rim; 3,4 Grt corona; 5,7 Opx core; 6,8 Opx rim; 9,10 Opx corona. Mineral abbreviations after Kretz (1983)

TABLE 2. REPRESENTATIVE CHEMICAL ANALYSIS AND STRUCTURAL FORMULAE OF SPINEL (1 - 4), MAGNETITE (5), AND ILMENITE (6 - 7).

Sample no.	V8(2)	V8(2)	V20C2	V20C2	V8(2)	V20C1	V20C1
Analysis no.	1	2	3	4	5	6	7
SiO ₂	0.015	0.000	0.000	0.000	0.158	0.000	0.000
TiO ₂	0.016	0.018	0.000	0.227	0.283	47.989	45.796
Al ₂ O ₃	62.235	60.739	62.731	61.815	0.460	0.013	0.053
Cr ₂ O ₃	0.359	0.345	0.000	0.290	0.306	0.000	0.172
FeO	27.240	29.364	22.129	27.107	90.690	49.553	50.130
MnO	0.096	0.156	0.292	0.168	0.138	0.183	0.365
MgO	11.140	10.546	13.586	10.523	0.040	1.038	1.059
CaO	0.022	0.000	0.024	0.012	0.089	0.032	0.003
Na ₂ O	0.006	0.008	0.020	0.010	0.044	0.000	0.000
K ₂ O	0.027	0.000	0.003	0.000	0.082	0.000	0.000
ZnO	0.473	0.291	0.519	0.403	0.275	0.000	0.034
Total	101.63	101.467	99.304	100.555	92.565	98.808	98.700
Number of cations on the basis of 4 (O) for spinel and magnetite and 3 (O) for ilmenite							
Si	0.000	0.000	0.000	0.000	0.006	0.000	0.000
Al	1.944	1.913	1.967	1.958	0.021	0.001	0.002
Ti	0.000	0.000	0.000	0.004	0.008	0.910	0.878
Cr	0.008	0.007	0.000	0.006	0.009	0.000	0.003
Fe ³⁺	0.048	0.080	0.038	0.030	1.948	0.179	0.240
Fe ²⁺	0.556	0.576	0.453	0.579	0.989	0.867	0.829
Mn	0.002	0.004	0.006	0.004	0.005	0.004	0.008
Mg	0.444	0.420	0.539	0.422	0.002	0.039	0.040
Ca	0.001	0.000	0.001	0.000	0.004	0.001	0.001
Na	0.000	0.000	0.001	0.001	0.003	0.000	0.000
K	0.001	0.000	0.000	0.000	0.004	0.000	0.000
Zn	0.009	0.006	0.010	0.008	0.010	0.000	0.001
Total	3.009	3.006	3.015	3.012	3.009	2.000	2.001
X _{Mg}	0.441	0.421	0.543	0.421			

Mineral abbreviations after Kretz (1983)

TABLE 3. REPRESENTATIVE CHEMICAL ANALYSIS AND STRUCTURAL FORMULAE OF CORDIERITE (1-3), SILLIMANITE (4), K-FELDSPAR (5 - 6) AND PLAGIOCLASE (7 - 8).

Sample no. Analysis no.	V8(2) 1	V77(1) 2	V77(1) 3	V20C1 4	V46-3 5	V46-3 6	V74A/1 7	V74A/1 8
SiO ₂	50.167	49.555	50.165	37.124	63.625	63.402	57.489	55.850
TiO ₂	0.000	0.000	0.000	0.046	0.000	0.105	0.025	0.003
Al ₂ O ₃	33.941	34.103	33.908	61.674	18.294	19.037	26.639	27.463
Cr ₂ O ₃	0.087	0.011	0.000	0.019	0.078	0.000	0.080	0.000
FeO	3.397	4.051	3.788	1.451	0.397	0.020	0.097	0.138
MnO	0.030	0.028	0.044	0.000	0.016	0.063	0.019	0.000
MgO	11.724	11.245	11.130	0.000	0.049	0.019	0.012	0.003
CaO	0.006	0.022	0.004	0.000	0.002	0.396	8.743	9.089
Na ₂ O	0.039	0.052	0.026	0.000	1.128	2.134	6.687	6.374
K ₂ O	0.036	0.000	0.000	0.000	15.125	13.399	0.060	0.135
ZnO	0.000	0.000	0.000	0.047	0.000	0.019	0.000	0.000
Total	99.477	99.066	99.065	100.361	98.714	98.594	99.851	99.055

Number of cations on the basis of 18 (O) for cordierite, 5 (O) for sillimanite and 24 (O) for K-feldspar and plagioclase

Si	4.984	4.955	5.013	1.005	8.938	8.858	7.742	7.599
Al	3.975	4.020	3.995	1.968	3.029	3.135	4.229	4.404
Ti	0.000	0.000	0.000	0.001	0.000	0.011	0.003	0.001
Cr	0.007	0.001	0.000	0.001	0.000	0.011	0.002	0.000
Fe ³⁺	0.056	0.068	0.000	0.033	0.000	0.000	0.000	0.000
Fe ²⁺	0.226	0.271	0.317	0.000	0.046	0.002	0.011	0.016
Mn	0.007	0.002	0.004	0.000	0.002	0.007	0.002	0.000
Mg	1.736	1.676	1.658	0.000	0.010	0.004	0.002	0.001
Ca	0.001	0.002	0.000	0.000	0.001	0.059	1.262	1.325
Na	0.008	0.010	0.005	0.000	0.307	0.578	1.746	1.682
K	0.005	0.000	0.000	0.000	2.711	2.388	0.010	0.023
Zn	0.000	0.000	0.000	0.001	0.000	0.002	0.000	0.000
Total	11.005	11.005	10.992	3.009	15.052	15.046	15.015	15.051
X _{Mg}	0.885	0.861	0.839					

1,3 Crd porphyroblast; 2 Crd rim; 4 Crd corona; 5-8 Porphyroblast within leucoband. Mineral abbreviations after Kretz (1983)

