

Table 4. Selected spinel compositions.

Sample Lithology	AJE 1049 grt hz symp	AJE 1054 c hz symp	AJE 1054 c hz	AJE 1169 c hz symp	Bf 6 f hz symp	Bf 16 c hz symp	Bf 110 metas.symp	Bf 127 f hz symp
TiO ₂	0.03	0.01	0.00	0.03	0.00	0.00	0.05	0.03
Al ₂ O ₃	10.93	29.94	26.84	10.62	27.30	29.35	23.91	29.28
Cr ₂ O ₃	59.19	41.99	44.55	59.68	43.12	40.28	41.35	40.99
Fe ₂ O ₃	3.54	0.00	0.00	3.65	0.14	0.52	5.41	0.55
V ₂ O ₃	na	na	na	na	0.02	0.09	0.18	0.13
MgO	13.08	14.08	13.33	13.74	13.83	13.14	13.65	14.45
MnO	na	na	na	na	0.00	0.24	0.25	0.22
FeO	13.89	14.79	15.57	12.61	14.92	16.33	14.17	14.31
ZnO	0.08	0.34	0.32	0.26	na	na	na	na
Total	100.74	101.15	100.61	100.59	99.33	99.95	98.97	99.96
Cations/32 oxygens								
Ti	0.005	0.000	0.000	0.007	0.000	0.000	0.009	0.004
Al	3.309	8.297	7.582	3.151	7.755	8.272	6.934	8.217
Cr	12.007	7.808	8.449	12.144	8.219	7.616	8.044	7.716
Fe ³⁺	0.684	0.000	0.000	0.705	0.028	0.096	1.002	0.012
V	na	na	na	na	0.024	0.016	0.035	0.024
Mg	4.996	4.930	4.766	5.238	4.970	4.680	5.008	5.129
Mn	na	na	na	na	0.000	0.048	0.052	0.043
Fe ²⁺	2.982	2.910	3.149	2.705	3.006	3.272	2.915	2.850
Zn	0.017	0.056	0.056	0.049	na	na	na	na
Total	24.000	24.001	24.002	23.999	24.002	24.000	23.999	23.995

Table 4. Selected spinel compositions continued.

Sample Lithology	Bf 144 grt hz	Kf 2 c hz	New 89-34 grt hz	Pl 33 f hz	Pl 33 f hz symp	Pl 34 metas.	Pl 34 metas. symp	Prem 89-37 grt hz
TiO ₂	0.26	0.12	0.00	0.03	0.02	2.92	0.46	0.06
Al ₂ O ₃	11.02	14.13	24.40	18.74	17.99	3.99	5.33	21.28
Cr ₂ O ₃	59.46	55.43	45.09	51.57	51.97	56.19	56.10	47.36
Fe ₂ O ₃	2.31	3.53	0.14	0.45	1.14	10.25	10.74	2.66
V ₂ O ₃	0.43	0.18	na	0.14	0.14	0.32	0.30	0.00
MgO	13.76	14.61	13.50	11.92	12.40	12.19	11.73	13.63
MnO	0.49	0.28	0.25	0.31	0.34	0.29	0.31	0.29
FeO	12.39	11.48	15.92	16.30	15.41	13.43	14.07	13.92
ZnO	na	na	0.00	na	na	na	na	na
Total	100.12	99.76	99.30	99.46	99.41	99.58	99.04	99.20
Cations/32 oxygens								
Ti	0.049	0.024	0.000	0.008	0.000	0.589	0.088	0.012
Al	3.332	4.219	7.030	5.576	5.362	1.268	1.695	6.218
Cr	12.021	11.118	8.718	10.296	10.388	11.988	11.993	9.286
Fe ³⁺	0.444	0.675	0.252	0.088	0.216	2.085	2.185	0.496
V	0.088	0.032	na	0.032	0.032	0.073	0.064	na
Mg	5.244	5.523	4.920	4.488	4.674	4.903	4.723	5.039
Mn	0.105	0.064	0.052	0.064	0.072	0.065	0.072	0.061
Fe ²⁺	2.648	2.349	3.029	3.448	3.257	3.029	3.181	2.887
Zn	na	na	na	na	na	na	na	na
Total	23.931	24.004	24.001	24.000	24.001	24.000	24.001	23.999