APPENDIX 4

Microprobe analyses of inclusions in the chromian spinels studied (oxides are in wt.%)

Mineral	amphibole		Pyroxene			Olivine	
Sample	BZK-264	GIR-1	Sample	BZK-264	GIR-1	Sample	BZK-700
SiO_2	41.33	42.73	SiO_2	54.34	46.52	SiO_2	42.46
TiO_2	0.44	2.44	TiO_2	0.02	1.76	TiO_2	0.03
Al_2O_3	10.00	15.35	Al_2O_3	0.88	8.84	Al_2O_3	0.02
Cr_2O_3	9.01	1.42	Cr_2O_3	5.81	0.94	Cr_2O_3	1.04
MnO	0.14	0.05	Fe_2O_3*	0.00	2.13	Fe_2O_3*	0.00
FeO	0.96	3.00	FeO	6.79	3.40	FeO	5.58
Fe_2O_3*	5.59	0.96	MnO	0.23	0.14	MnO	0.12
NiO	0.08	0.03	MgO	28.91	14.19	MgO	52.56
MgO	19.17	16.98	CaO	0.58	20.99	CaO	0.02
CaO	9.41	12.00	Na_2O	0.17	0.32	total	101.83
Na_2O	3.13	2.98	total	97.73	99.22		
K_2O	0.55	0.10	Based on				
Cl	0.02	0.01	6 O			4 O	
H_2O^+	2.06	2.12	Si	1.978	1.726	Si	1.007
Total	101.87	100.16	Ti	0.001	0.049	Ti	0.001
Si	5.904	6.039	Al	0.038	0.386	Al	0.001
Al	1.683	1.961	Cr	0.167	0.028	Cr	0.020
Ti	0.047		Fe^{3+}	0.000	0.059	Fe^{3+}	0.000
Fe^{3+}	0.366		Fe^{2+}	0.207	0.105	Fe^{2+}	0.111
T subtotal	8.000	8.000	Mn	0.007	0.004	Mn	0.002
Ti		0.259	Mg	1.569	0.785	Mg	1.859
Al		0.596	Ca	0.023	0.834	Ca	0.001
Cr	1.018	0.159	Na	0.012	0.023	total	3.000
Fe^{3+}	0.234	0.102	total	4.000	4.000		
Ni	0.009	0.003	End members				
Fe^{2+}		0.303	Wo	1.26	46.77	Te	0.12
Mg	3.739	3.578	En	87.25	43.99	Fo	94.24
C subtotal	5.000	5.000	Fs	11.50	9.24	Fa	5.61
Mn^{2+}	0.017	0.006				Ca-Ol	0.03
Fe^{2+}	0.114	0.052					
Mg	0.343						
Ca	1.440	1.817					
Na	0.085	0.125					
B subtotal	1.999	2.000					
Na	0.783	0.692					
K	0.100	0.018					
A subtotal	0.883	0.710					
O (non-W)	22.000	22.000					
OH	1.996	1.998					
Cl	0.004	0.002					
W subtotal	2.000	2.000					
Sum T.C.B.A	15.882	15.710					

Analyses of amphiboles were calculated on the basis of 22 oxygens (*sensu* Locock, 2014)
Fe_2O_3* – calculated, Wo – wollastonite, En – enstatite, Fs – ferrosilite, Te – tephroite, Fo – forsterite, Fa – fayalite, Ca-Ol – calcio-olivine