

Supplemental Material Part II = Bulk Rock Composition and Garnet Crystal Core Composition

Component	Sikkim; 24-99 (Gaidies, et al., 2015)	Rappold Complex; 35F03 (Gaidies, et al., 2008)	Eastern Tibet W122 (Weller et al. 2013)	Kootenay Arc DM_06_128 (Moynihan & Pattison 2013)	Eastern Vermont TM549a (Spear et al. 2014)	Pomfret Dome AV26A (Bell et al. 2013)
SiO ₂	73.43	58.80	63.86	70.32	65.28	74.02
TiO ₂	0.52	0.89	0.88	0.83	0.00	0.00
Al ₂ O ₃	12.50	18.91	15.87	11.71	14.39	8.98
MgO	3.19	4.76	6.08	4.00	6.31	5.22
FeO	6.10	10.77	8.19	8.44	6.25	5.91
MnO	0.05	0.06	0.09	0.18	0.17	0.10
CaO	0.67	0.47	0.68	1.06	1.22	1.53
Na ₂ O	0.95	0.76	1.18	1.37	2.04	2.03
K ₂ O	2.60	4.56	3.17	2.09	4.34	2.21
Total	100	100	100	100	100	100
X_{alm}	0.68	0.73	0.68	0.49	0.538	0.59
X_{gr}	0.16	0.14	0.09	0.27	0.112	0.25
X_{sps}	0.12	0.08	0.16	0.21	0.292	0.1
X_{py}	0.05	0.05	0.07	0.02	0.0577	0.06

Component	SE Ontario			Central Himalaya		Funeral Mountains
	Nelson Aureole 93- CW-04 (Gaidies et al. 2011)	12TM16 (McCarron et al. 2014)	SW Turkey ED34 (Etzet et al. 2019)	D13-06 (Iaccarino et al. 2017)	Albion Mountains TH203B (Kelly et al. 2015)	7G (Craddock Affinati et al. 2020)
SiO ₂	69.80	66.06	82.50	83.07	67.08	54.48
TiO ₂	0.83	0.96	0.89	0.32	1.10	0.80
Al ₂ O ₃	14.03	12.34	6.66	5.87	16.48	17.58
MgO	3.50	3.46	2.39	2.97	3.20	9.02
FeO	6.30	12.11	4.71	4.95	5.82	10.47
MnO	0.14	0.16	0.07	0.11	0.19	0.25
CaO	0.55	1.38	0.58	0.98	0.52	1.66
Na ₂ O	0.92	0.38	0.65	0.93	1.51	2.84
K ₂ O	3.94	3.14	1.55	0.80	4.10	2.92
Total	100	100	100	100	100	100
X_{alm}	0.56	0.76	0.71	0.74	0.71	0.64
X_{gr}	0.07	0.12	0.16	0.13	0.11	0.16
X_{sps}	0.31	0.07	0.06	0.07	0.1102	0.13
X_{py}	0.06	0.05	0.07	0.06	0.0656	0.07