

Supplementary Material 3 – S3

S3. Representative chemical composition (wt.%, EDS) of garnets.

	VP6 garnet	VP10 garnet	VP12 garnet	VP15 garnet	VP16 garnet	VP19 garnet
SiO ₂	35.64	34.99	35.41	35.80	35.22	34.39
TiO ₂	2.97	2.93	2.60	2.54	3.02	2.17
Al ₂ O ₃	8.53	8.49	9.02	8.97	8.99	8.54
Cr ₂ O ₃	-	-	-	-	0.15	-
V ₂ O ₃	-	0.19	0.28	0.55	-	0.16
FeO _{tot}	17.81	18.59	17.16	18.13	17.81	18.11
MnO	1.38	1.08	1.30	1.34	1.06	1.45
MgO	0.20	0.20	0.23	0.17	0.23	0.36
CaO	31.19	31.10	31.55	32.60	31.23	31.54
Na ₂ O	0.02	0.17	-	-	-	-
Total (calc)	97.74	97.74	97.54	100.09	97.72	96.71
Recalculated (wt%)						
final FeO	3.50	2.42	2.56	1.65	3.34	0.56
final Fe ₂ O ₃	15.90	17.98	16.23	18.31	16.09	19.50
final MnO	1.38	1.08	1.30	1.34	1.06	1.45
final Mn ₂ O ₃	0.00	0.00	0.00	0.00	0.00	0.00
Total	99.33	99.55	99.18	101.92	99.34	98.66
End-members						
<i>Schorlomite-Al</i>	4.14%	6.82%	5.17%	7.10%	5.96%	6.73%
Morimotoite	9.71%	1.74%	5.68%	1.04%	6.68%	-
NaTi garnet	0.16%	1.33%	-	-	-	-
Goldmanite	-	0.63%	0.91%	1.76%	-	0.52%
Uvarovite	-	-	-	-	0.47%	-
Spessartine	3.18%	2.50%	2.99%	3.02%	2.45%	3.38%
Pyrope	0.80%	0.80%	0.91%	0.69%	0.93%	1.47%
Almandine	4.75%	4.93%	3.93%	3.32%	5.39%	1.30%
Grossular	28.28%	25.91%	30.46%	28.05%	28.60%	27.37%
Andradite	48.98%	55.35%	49.94%	55.02%	49.50%	58.38%
Remainder	0.00%	0.00%	0.00%	0.00%	0.00%	0.87%
Total	100.00%	100.01%	99.99%	100.00%	99.98%	100.02%
Quality Index	Superior	Superior	Superior	Superior	Superior	Excellent

The quality index represents the quality of a garnet analysis, calculated with Locock file [37]