**Supplemental Table 1.** Representative garnet analyses

| | Erzgebirge1 Low-P Domain | Erzgebirge2 High-P Domain | Saxony1 Low-Ca Domain | Saxony2 High-Ca & High-P Domain | Saxony3 High-Ca & Low-P Domain |
|---|---|---|---|---|---|
| | *n*=5 | *n*=5 | *n*=6 | *n*=4 | *n*=6 |
| $SiO_2$ | 38.83(8) | 38.73(1) | 36.07(5) | 36.18(5) | 36.40 (6) |
| $TiO_2$ | 0.147(10) | 0.020(3) | 0.072(5) | 0.076(8) | 0.118(10) |
| $P_2O_5$ | 0.139(7) | 0.340(2) | 0.343(26) | 0.479(7) | 0.119(29) |
| $Al_2O_3$ | 21.97(2) | 22.05(4) | 20.67(3) | 20.69(4) | 20.63(6) |
| $Cr_2O_3$ | 0.01(<1) | 0.01(<1) | b.d. | b.d. | b.d. |
| $Y_2O_3$ | 0.01(1) | b.d. | 0.11(1) | 0.08(1) | 0.13(2) |
| FeO | 27.00(5) | 26.99(9) | 39.68(10) | 38.27(8) | 38.37(14) |
| MgO | 7.78(1) | 8.13(9) | 1.34(1) | 1.24(2) | 1.23(2) |
| MnO | 0.29(1) | 0.28(1) | 0.94(2) | 0.91(2) | 0.91(2) |
| CaO | 3.78(1) | 3.50(13) | 0.88(6) | 2.30(7) | 2.28(6) |
| $Na_2O$ | 0.102(6) | 0.109(2) | 0.039(3) | 0.084(10) | 0.041(4) |
| Total | 100.05 | 100.17 | 100.19 | 100.36 | 100.31 |
| | **Structural formulas (12 O atoms)** | | | | |
| Si | 2.994 | 2.979 | 2.949 | 2.944 | 2.965 |
| Ti | 0.0085 | 0.0012 | 0.0044 | 0.0047 | 0.0072 |
| P | 0.0091 | 0.0221 | 0.0237 | 0.0330 | 0.0082 |
| Al | 1.997 | 2.000 | 1.993 | 1.985 | 1.981 |
| Cr | 0.001 | 0.001 | | | |
| Y | | | 0.005 | 0.003 | 0.006 |
| $Fe^{3+}$ | | | 0.030 | 0.030 | 0.049 |
| $Fe^{2+}$ | 1.741 | 1.736 | 2.683 | 2.574 | 2.565 |
| Mg | 0.894 | 0.932 | 0.163 | 0.150 | 0.149 |
| Mn | 0.019 | 0.018 | 0.065 | 0.063 | 0.063 |
| Ca | 0.312 | 0.288 | 0.077 | 0.201 | 0.199 |
| Na | 0.0153 | 0.0163 | 0.0062 | 0.0133 | 0.0065 |

*Notes:* b.d. = below detection. *n* is the number of analyses averaged for each table entry. $Fe^{2+}$ and $Fe^{3+}$ in garnet estimated based on 8 cations per 12 O. The values in parentheses represent the 1σ uncertainties in the last digits.