**Table S2:** Representativemineral compositions in some of the studied meta-mafic rocks.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Sample R9 R1 R17 R17 R 16 R1 R6 R17

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mineral grt grt grt pl ep amph amph amph

Rock type grt-amph grt-amph grt-amph grt-amph amph grt-amph grt-amph grt-amph

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SiO2  | 37.20 | 37.63 | 37.61 | 65.10 | 38.42 | 43.24 | 47.76 | 43.44 |
| TiO2 | 0.14 | 0.11 | 0.04 | 0.007 | 0.14 | 0.61 | 0.51 | 1.03 |
| Al2O3 | 21.03 | 21.24 | 21.41 | 22.03 | 28.27 | 12.07 | 10.52 | 13.77 |
| Cr2O3 | 0.05 | 0.01 | 0.00 | - | 0.06 | 0.01 | 0.13 | 0.01 |
| Fe2O3 | 0.66 | 1.38 | 1.90 | 0.01 | 7.09 | 6.74 | 4.23 | 7.61 |
| FeO | 27.1 | 24.54 | 26.36 | - | - | 11.35 | 5.96 | 7.88 |
| MnO | 1.11 | 3.47 | 1.49 | - | - | 0.21 | 0.17 | 0.18 |
| Mn2O3 | - | - | - | - | 0.13 | - | - | - |
| MgO | 2.33 | 2.70 | 4.04 | 0.01 | 0.10 | 10.11 | 14.85 | 10.74 |
| CaO | 9.55 | 10.02 | 7.70 | 2.69 | 23.87 | 11.27 | 11.30 | 9.72 |
| Na2O | - | - | - | 9.94 | - | 1.92 | 1.86 | 2.44 |
| K2O | - | - | - | 0.07 | - | 0.32 | 0.27 | 0.67 |
| H2O | - | - | - | - | 1.93 | 2.02 | 2.10 | 2.05 |
| Total | 99.19 | 101.14 | 100.58 | 99.85 | 100.01 | 99.87 | 99.65 | 99.55 |
|  |  |  |  |  |  |  |  |  |
| Si | 2.97 | 2.96 | 2.95 | 2.86 | 2.98 | 6.407 | 6.816 | 6.351 |
| Ti | 0.009 | 0.006 | 0.002 | 0.000 | 0.008 | 0.068 | 0.054 | 0.113 |
| Al IV  | 0.023 | 0.034 | 0.048 | 1.143 | 0.017 | 1.593 | 1.184 | 1.649 |
| Al VI   | 1.959 | 1.938 | 1.930 | 0 | 2.569 | 0.514 | 0.586 | 0.723 |
| Cr | 0.003 | 0.001 | 0 | - | 0.004 | 0.001 | 0.015 | 0.001 |
| Fe3+ | 0.042 | 0.082 | 0.112 | 0.001 | 0.414 | 0.752 | 0.454 | 0.837 |
| Fe2+ | 1.813 | 1.617 | 1.735 | - | - | 1.406 | 0.711 | 0.964 |
| Mn2+ | 0.075 | 0.232 | 0.099 | - | - | 0.027 | 0.020 | 0.022 |
| Mn3+ | - | - | - | - | 0.007 | - | - | - |
| Mg | 0.278 | 0.276 | 0.471 | 0.000 | 0.011 | 2.232 | 3.160 | 2.34 |
| Ca | 0.818 | 0.846 | 0.648 | 0.126 | 1.985 | 1.789 | 1.728 | 1.523 |
| Na | - | - | - | 0.848 | - | 0.552 | 0.515 | 0.692 |
| K | - | - | - | 0.004 | - | 0.06 | 0.05 | 0.125 |
| OH | - | - | - | - | 1 | 2 | 2 | 2 |
|  |  |  |  |  |  |  |  |  |
| Py | 9.331 | 9.307 | 17.376 | - | - |  |  |  |
| Alm | 60.721 | 54.404 | 58.735 | - | - |  |  |  |
| Sp | 2.523 | 7.802 | 3.357 | - | - |  |  |  |
| And | 2.085 | 4.044 | 5.490 | - | - |  |  |  |
| Uv | 0.168 | 0.052 | 0.029 | - | - |  |  |  |
| Gro | 25.169 | 24.388 | 16.438 | - | - |  |  |  |
|  |  |  |  |  |  |  |  |  |
| xMg | 0.133 | 0.145 | 0.211 | - | - | 0.614 | 0.816 | 0.708 |
|  |  |  |  |  |  |  |  |  |
| Ab | - | - | - | 86.637 | - |  |  |  |
| An | - | - | - | 12.947 | - |  |  |  |
| Or | - | - | - | 0.415 | - |  |  |  |

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Structural formula based on 23, 24 and 32 oxygen atoms respectively for amphiboles, garnets and

feldspars. Abbreviations: grt, garnet; grt-amph, garnet-amphibolite; amph, massive/banded

amphibolite; pl, plagioclase; ep, epidote, amph, amphibole.