Table 4-1 Amphibole compositions of some early Paleozoic TTGs in Yunkai domain, South China

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | GD18-1 | GD18-1 | GD18-1 | GD18-1 | GDX3-3 | GDX3-3 | GDX3-3 | GDX09 | GDX09 | GDX09 |
| spot | 1.1 | 2.1 | 3.1 | 4.1 | 1.1 | 2.1 | 3.1 | 1.1 | 1.2 | 2.1 |
| SiO2 | 40.47 | 43.16 | 42.98 | 41.13 | 41.69 | 40.95 | 41.71 | 38.01 | 37.88 | 38.80 |
| Al2O3 | 12.89 | 9.60 | 10.49 | 11.74 | 8.54 | 9.09 | 8.92 | 10.84 | 10.83 | 9.42 |
| TiO2 | 0.79 | 0.99 | 0.68 | 0.88 | 0.90 | 0.87 | 0.86 | 0.80 | 0.62 | 1.36 |
| MgO | 5.18 | 6.79 | 6.58 | 5.62 | 6.03 | 5.91 | 6.03 | 4.03 | 3.95 | 4.54 |
| FeO | 23.79 | 23.25 | 22.86 | 23.71 | 26.13 | 26.26 | 26.15 | 30.42 | 30.45 | 28.56 |
| MnO | 0.49 | 0.57 | 0.55 | 0.51 | 0.55 | 0.53 | 0.58 | 0.84 | 0.80 | 0.85 |
| CaO | 11.69 | 11.44 | 11.38 | 11.41 | 11.48 | 11.40 | 11.63 | 11.49 | 11.60 | 11.05 |
| Na2O | 1.09 | 1.06 | 0.98 | 1.19 | 1.35 | 1.38 | 1.30 | 1.41 | 1.38 | 1.41 |
| K2O | 0.96 | 0.52 | 0.55 | 0.83 | 1.29 | 1.39 | 1.39 | 1.46 | 1.54 | 1.30 |
| F | - | 0.05 | 0.149 | 0.017 | 0.505 | 0.471 | 0.31 | - | - | - |
| Cl | 0.013 | 0.008 | 0.005 | 0.01 | 0.072 | 0.076 | 0.05 | 0.051 | 0.041 | 0.074 |
| Si | 6.257 | 6.609 | 6.586 | 6.37 | 6.492 | 6.394 | 6.455 | 5.931 | 5.934 | 6.157 |
| Al | 2.349 | 1.733 | 1.894 | 2.143 | 1.567 | 1.672 | 1.626 | 1.993 | 1.999 | 1.761 |
| Ti | 0.092 | 0.114 | 0.078 | 0.102 | 0.106 | 0.103 | 0.1 | 0.094 | 0.073 | 0.162 |
| Fe3+ | 0.504 | 0.535 | 0.522 | 0.507 | 0.666 | 0.739 | 0.677 | 1.324 | 1.316 | 1.033 |
| Fe2+ | 2.571 | 2.443 | 2.407 | 2.564 | 2.737 | 2.69 | 2.707 | 2.645 | 2.673 | 2.757 |
| Mn | 0.064 | 0.075 | 0.072 | 0.067 | 0.073 | 0.071 | 0.077 | 0.111 | 0.107 | 0.113 |
| Mg | 1.193 | 1.549 | 1.503 | 1.297 | 1.4 | 1.375 | 1.392 | 0.938 | 0.923 | 1.073 |
| Ca | 1.936 | 1.877 | 1.868 | 1.893 | 1.915 | 1.907 | 1.928 | 1.921 | 1.947 | 1.879 |
| Na | 0.328 | 0.315 | 0.29 | 0.356 | 0.407 | 0.418 | 0.39 | 0.427 | 0.42 | 0.434 |
| K | 0.19 | 0.102 | 0.107 | 0.165 | 0.257 | 0.277 | 0.274 | 0.291 | 0.307 | 0.262 |
| P(108Pa) | 5.29 | 3.61 | 3.72 | 4.75 | 4.17 | 4.63 | 4.34 | 6.48 | 6.51 | 5.37 |
| Mf | 0.28 | 0.34 | 0.33 | 0.29 | 0.29 | 0.28 | 0.29 | 0.19 | 0.18 | 0.22 |

Cations calculated based on 23 oxygens; P=4.76×AlT-3.01 (Schmidt,1992); Mf=Mg/(Mg+Fe2++Fe3++Mn)