Table 4-2 Mica compositions(wt%) for some early Paleozoic TTGs in Yunkai domain

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| sample | GDX3-3 | GDX3-3 | GDX3-3 | GDX3-3 | GD18-1 | GD18-1 | GD18-1 | GD18-1 | GD16-1 | GD16-1 | GD16-1 | GD16-1 | GD11-3 | GD11-3 | GD11-3 |
| spot | Bi1.1 | Bi1.2 | Bi2.1 | Bi3.1 | Bi1.1 | Bi2.1 | Bi3.1 | Bi4.1 | Bi1.1 | Bi2.1 | Bi3.1 | Ms1.1 | Bi1.1 | Bi2.1 | Bi3.1 |
| SiO2 | 37.45 | 37.28 | 36.37 | 37.87 | 35.50 | 35.13 | 35.08 | 35.54 | 34.39 | 34.50 | 34.42 | 42.94 | 34.83 | 34.79 | 34.77 |
| TiO2 | 1.58 | 1.88 | 1.43 | 0.93 | 2.53 | 2.08 | 2.31 | 2.58 | 2.71 | 2.81 | 2.16 | 0.52 | 3.15 | 3.01 | 3.19 |
| Al2O3 | 14.18 | 13.80 | 13.79 | 14.32 | 15.82 | 15.74 | 15.84 | 15.84 | 18.25 | 18.14 | 18.24 | 34.59 | 19.78 | 19.44 | 19.56 |
| FeO | 22.75 | 23.37 | 23.32 | 22.60 | 24.69 | 24.38 | 24.18 | 23.37 | 22.39 | 22.79 | 22.40 | 1.47 | 20.21 | 19.87 | 20.15 |
| MnO | 0.314 | 0.373 | 0.379 | 0.385 | 0.317 | 0.269 | 0.330 | 0.360 | 0.140 | 0.115 | 0.145 | 0.065 | 0.239 | 0.279 | 0.232 |
| MgO | 9.88 | 9.33 | 9.59 | 10.67 | 7.08 | 7.43 | 7.54 | 7.15 | 7.39 | 7.53 | 7.54 | 0.65 | 7.60 | 7.67 | 7.60 |
| CaO |  |  | 0.039 | 0.016 |  |  | 0.056 |  | 0.019 | 0.013 | 0.095 | 0.010 |  |  |  |
| Na2O | 0.048 | 0.088 | 0.057 | 0.033 | 0.078 | 0.050 | 0.078 | 0.068 | 0.120 | 0.113 | 0.090 | 0.526 | 0.076 | 0.120 | 0.128 |
| K2O | 9.60 | 9.67 | 9.65 | 9.77 | 9.29 | 9.47 | 9.44 | 9.52 | 9.50 | 9.52 | 9.24 | 10.52 | 9.41 | 9.41 | 9.37 |
| F | 0.095 | 0.045 | 0.912 | 0.017 |  | 0.510 |  |  |  |  |  |  | 0.420 |  | 0.392 |
| Cl | 0.017 | 0.045 | 0.033 | 0.018 | 0.002 |  | 0.006 | 0.006 | 0.053 | 0.044 | 0.048 |  | 0.008 | 0.014 | 0.018 |
| Total | 95.91 | 95.88 | 95.59 | 96.61 | 95.31 | 95.06 | 94.86 | 94.42 | 94.97 | 95.57 | 94.37 | 91.29 | 95.72 | 94.59 | 95.40 |
| Si | 5.775 | 5.779 | 5.669 | 5.790 | 5.568 | 5.528 | 5.530 | 5.600 | 5.357 | 5.348 | 5.388 | 6.006 | 5.301 | 5.356 | 5.311 |
| AlⅣ | 2.225 | 2.221 | 2.331 | 2.210 | 2.432 | 2.472 | 2.470 | 2.400 | 2.643 | 2.652 | 2.612 | 1.994 | 2.699 | 2.644 | 2.689 |
| AlⅥ | 0.350 | 0.301 | 0.203 | 0.370 | 0.493 | 0.447 | 0.475 | 0.542 | 0.708 | 0.663 | 0.753 | 3.708 | 0.850 | 0.885 | 0.832 |
| Ti | 0.183 | 0.219 | 0.168 | 0.106 | 0.299 | 0.246 | 0.274 | 0.306 | 0.317 | 0.327 | 0.254 | 0.054 | 0.361 | 0.348 | 0.367 |
| Fe3+ | 0.319 | 0.307 | 0.365 | 0.235 | 0.388 | 0.403 | 0.315 | 0.411 | 0.396 | 0.381 | 0.395 | 0.172 | 0.614 | 0.529 | 0.604 |
| Fe2+ | 2.614 | 2.724 | 2.675 | 2.654 | 2.851 | 2.806 | 2.873 | 2.668 | 2.522 | 2.574 | 2.537 | 0.000 | 1.959 | 2.030 | 1.971 |
| Mn | 0.041 | 0.049 | 0.050 | 0.050 | 0.042 | 0.036 | 0.044 | 0.048 | 0.018 | 0.015 | 0.019 | 0.008 | 0.031 | 0.036 | 0.030 |
| Mg | 2.270 | 2.156 | 2.229 | 2.431 | 1.657 | 1.742 | 1.772 | 1.680 | 1.717 | 1.741 | 1.759 | 0.135 | 1.724 | 1.760 | 1.730 |
| Ca | 0.000 | 0.000 | 0.007 | 0.003 | 0.000 | 0.000 | 0.009 | 0.000 | 0.003 | 0.002 | 0.016 | 0.001 | 0.000 | 0.000 | 0.000 |
| Na | 0.014 | 0.026 | 0.017 | 0.010 | 0.024 | 0.015 | 0.024 | 0.021 | 0.036 | 0.034 | 0.027 | 0.143 | 0.022 | 0.036 | 0.038 |
| K | 1.889 | 1.912 | 1.920 | 1.905 | 1.859 | 1.901 | 1.899 | 1.913 | 1.887 | 1.883 | 1.844 | 1.877 | 1.826 | 1.847 | 1.825 |
| Total | 15.68 | 15.69 | 15.63 | 15.76 | 15.61 | 15.60 | 15.68 | 15.59 | 15.60 | 15.62 | 15.60 | 14.10 | 15.39 | 15.47 | 15.40 |
| MF | 0.43 | 0.41 | 0.42 | 0.45 | 0.34 | 0.35 | 0.35 | 0.35 | 0.37 | 0.37 | 0.37 | 0.43 | 0.40 | 0.40 | 0.40 |
| *P*(108Pa) | 1.27 | 1.11 | 1.15 | 1.29 | 2.33 | 2.32 | 2.39 | 2.38 | 3.62 | 3.51 | 3.67 |  | 4.22 | 4.16 | 4.14 |

Table 4-2(Continued).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| sample | GD11-3 | GDX09 | GDX09 | GDX09 | GDX09 | GDX07 | GDX07 | GDX07 | GD11-4 | GD11-4 | GD11-4 | GD11-4 | GD11-4 | GD11-4 |  |
| spot | Bi4.1 | Bi1.1 | Bi2.1 | Bi3.1 | Bi4.1 | Bi1.1 | Bi2.1 | Bi3.1 | Bi1.1 | Bi2.1 | Bi3.1 | Bi4.1 | Bi5.1 | Bi6.1 |  |
| SiO2 | 34.41 | 34.49 | 34.69 | 34.24 | 34.23 | 35.01 | 35.66 | 34.97 | 34.54 | 34.79 | 34.21 | 33.99 | 34.65 | 34.54 |  |
| TiO2 | 3.08 | 3.34 | 2.10 | 2.73 | 2.91 | 3.13 | 3.50 | 3.27 | 2.42 | 2.40 | 2.40 | 1.85 | 1.88 | 1.74 |  |
| Al2O3 | 19.54 | 15.57 | 16.51 | 16.52 | 16.37 | 15.21 | 14.60 | 15.44 | 18.86 | 18.74 | 18.43 | 18.83 | 18.96 | 18.85 |  |
| FeO | 19.52 | 26.52 | 26.57 | 25.66 | 25.57 | 27.12 | 27.33 | 26.83 | 25.96 | 25.82 | 25.32 | 26.33 | 25.85 | 25.97 |  |
| MnO | 0.272 | 0.373 | 0.352 | 0.386 | 0.400 | 0.506 | 0.429 | 0.422 | 0.254 | 0.223 | 0.239 | 0.253 | 0.283 | 0.238 |  |
| MgO | 7.68 | 5.37 | 4.76 | 5.67 | 5.68 | 5.46 | 5.76 | 5.45 | 5.01 | 4.80 | 4.85 | 5.13 | 5.09 | 5.23 |  |
| CaO |  |  |  |  |  |  | 0.030 |  |  |  |  |  |  |  |  |
| Na2O | 0.130 | 0.043 | 0.032 | 0.036 | 0.047 | 0.040 | 0.068 | 0.075 | 0.065 | 0.082 | 0.111 | 0.099 | 0.046 | 0.050 |  |
| K2O | 9.39 | 9.46 | 9.67 | 9.72 | 9.72 | 9.58 | 9.67 | 9.55 | 9.72 | 9.42 | 9.58 | 9.16 | 9.45 | 9.57 |  |
| F | 0.511 |  | 0.580 |  |  |  |  |  | 0.434 |  | 0.475 |  |  |  |  |
| Cl | 0.016 | 0.020 | 0.013 | 0.018 | 0.010 | 0.081 | 0.094 | 0.066 | 0.028 | 0.020 | 0.029 | 0.026 | 0.028 | 0.023 |  |
| Total | 94.56 | 95.18 | 95.28 | 94.98 | 94.93 | 96.13 | 97.15 | 96.07 | 97.28 | 96.30 | 95.64 | 95.66 | 96.23 | 96.20 |  |
| Si | 5.296 | 5.493 | 5.511 | 5.448 | 5.448 | 5.538 | 5.582 | 5.524 | 5.336 | 5.414 | 5.368 | 5.346 | 5.399 | 5.393 |  |
| AlⅣ | 2.704 | 2.507 | 2.489 | 2.552 | 2.552 | 2.462 | 2.418 | 2.476 | 2.664 | 2.586 | 2.632 | 2.654 | 2.601 | 2.607 |  |
| AlⅥ | 0.840 | 0.416 | 0.603 | 0.546 | 0.519 | 0.374 | 0.275 | 0.398 | 0.769 | 0.852 | 0.776 | 0.836 | 0.880 | 0.861 |  |
| Ti | 0.357 | 0.401 | 0.251 | 0.326 | 0.349 | 0.372 | 0.412 | 0.389 | 0.281 | 0.281 | 0.283 | 0.219 | 0.221 | 0.205 |  |
| Fe3+ | 0.610 | 0.390 | 0.471 | 0.333 | 0.340 | 0.366 | 0.377 | 0.385 | 0.476 | 0.469 | 0.500 | 0.380 | 0.417 | 0.374 |  |
| Fe2+ | 1.903 | 3.142 | 3.059 | 3.081 | 3.064 | 3.222 | 3.200 | 3.159 | 2.878 | 2.892 | 2.822 | 3.084 | 2.951 | 3.017 |  |
| Mn | 0.035 | 0.050 | 0.047 | 0.052 | 0.054 | 0.068 | 0.057 | 0.056 | 0.033 | 0.029 | 0.032 | 0.034 | 0.037 | 0.031 |  |
| Mg | 1.762 | 1.275 | 1.128 | 1.344 | 1.348 | 1.287 | 1.344 | 1.282 | 1.153 | 1.113 | 1.135 | 1.202 | 1.183 | 1.216 |  |
| Ca | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.005 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |  |
| Na | 0.039 | 0.013 | 0.010 | 0.011 | 0.015 | 0.012 | 0.021 | 0.023 | 0.019 | 0.025 | 0.034 | 0.030 | 0.014 | 0.015 |  |
| K | 1.844 | 1.923 | 1.961 | 1.974 | 1.973 | 1.933 | 1.932 | 1.924 | 1.916 | 1.870 | 1.918 | 1.837 | 1.879 | 1.906 |  |
| Total | 15.39 | 15.61 | 15.53 | 15.67 | 15.66 | 15.63 | 15.62 | 15.62 | 15.52 | 15.53 | 15.50 | 15.62 | 15.58 | 15.63 |  |
| MF | 0.41 | 0.26 | 0.24 | 0.28 | 0.28 | 0.26 | 0.27 | 0.26 | 0.25 | 0.25 | 0.25 | 0.26 | 0.26 | 0.26 |  |
| *P*(108Pa) | 4.21 | 2.32 | 2.84 | 2.86 | 2.77 | 2.06 | 1.63 | 2.18 | 3.87 | 3.89 | 3.80 | 4.05 | 4.02 | 3.98 |  |

Cations calculated based on 22 Oxygens,P(108Pa)=3.03×TAl-6.53(±0.33)(Etsuo et al., 2007)

MF=Mg/(Mg+Fe2++Fe3++Mn)