表1 大田地区斜长角闪岩的主量元素(%)和微量元素(10-6)分析结果

Table 1 Element compositions of the amphibolites in Datian area(major element: %; trace element: 10-6)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 主量元素分析结果(%) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 样品号 | |  | ZK4001-11 | | | ZK4001-15 | | ZK4101-11 | | |  | | ZK4001-2 | | | | ZK4101-5 | | | ZK4101-9 | | DT1802 | | ZK2405-02 | | |
| 样品类型 | |  | 第1组样品 | | | | | | | |  | | | 第2组样品 | | | | | | | | | | | | | |
| SiO2 | |  | 48.04 | | | 50.05 | | 47.88 | | |  | | 49.70 | | | | 49.31 | | | 49.42 | | 49.46 | | 48.49 | | |
| Al2O3 | |  | 11.51 | | | 14.96 | | 11.16 | | |  | | 13.74 | | | | 15.15 | | | 15.05 | | 12.38 | | 13.78 | | |
| Fe2O3T | |  | 12.78 | | | 10.24 | | 12.91 | | |  | | 10.22 | | | | 13.65 | | | 13.83 | | 11.09 | | 12.40 | | |
| FeO | |  | 8.83 | | | 8.47 | | 9.18 | | |  | | 8.36 | | | | 10.85 | | | 11.25 | | 6.36 | | 6.16 | | |
| CaO | |  | 10.42 | | | 8.27 | | 10.86 | | |  | | 9.82 | | | | 7.51 | | | 8.47 | | 9.09 | | 8.77 | | |
| MgO | |  | 9.49 | | | 8.38 | | 10.10 | | |  | | 8.96 | | | | 5.65 | | | 5.61 | | 11.63 | | 5.99 | | |
| K2O | |  | 0.742 | | | 1.820 | | 0.514 | | |  | | 1.740 | | | | 2.430 | | | 1.170 | | 1.910 | | 1.280 | | |
| Na2O | |  | 2.6 | | | 2.3 | | 2.3 | | |  | | 2.0 | | | | 1.8 | | | 2.7 | | 1.4 | | 3.2 | | |
| TiO2 | |  | 2.2 | | | 1.5 | | 2.1 | | |  | | 0.9 | | | | 2.0 | | | 2.0 | | 0.7 | | 1.5 | | |
| P2O5 | |  | 0.222 | | | 0.352 | | 0.215 | | |  | | 0.331 | | | | 0.362 | | | 0.350 | | 0.119 | | 0.305 | | |
| MnO | |  | 0.185 | | | 0.173 | | 0.204 | | |  | | 0.177 | | | | 0.239 | | | 0.238 | | 0.177 | | 0.183 | | |
| LOI | |  | 1.86 | | | 1.99 | | 1.77 | | |  | | 2.36 | | | | 1.90 | | | 1.04 | | 1.56 | | 3.06 | | |
| total | |  | 100.00 | | | 99.99 | | 99.98 | | |  | | 99.99 | | | | 99.98 | | | 99.91 | | 99.51 | | 98.92 | | |
| Mg# | |  | 59.77 | | | 62.08 | | 61.01 | | |  | | 63.69 | | | | 45.30 | | | 44.80 | | 67.73 | | 49.14 | | |
| 稀土元素分析结果(10-6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 样品号 |  | ZK4001-11 | | | ZK4001-15 | | ZK4101-11 | | |  | | ZK4001-2 | | | | ZK4101-5 | | ZK4101-9 | | | DT1802 | | | | ZK2405-02 | | | |
| 样品类型 |  | 第1组样品 | | | | | | | |  | | 第2组样品 | | | | | | | | | | | | | | | |
| La |  | 24.00 | | | 36.30 | | 20.30 | | |  | | 21.90 | | | | 18.40 | | 20.80 | | | 18.70 | | | | 32.30 | | | |
| Ce |  | 49.70 | | | 66.80 | | 46.10 | | |  | | 53.00 | | | | 43.10 | | 47.80 | | | 46.70 | | | | 75.10 | | | |
| Pr |  | 6.69 | | | 9.01 | | 6.32 | | |  | | 7.33 | | | | 5.62 | | 6.98 | | | 6.38 | | | | 11.10 | | | |
| Nd |  | 27.5 | | | 31.7 | | 25.2 | | |  | | 32.2 | | | | 27.2 | | 29.7 | | | 28.7 | | | | 48.1 | | | |
| Sm |  | 5.85 | | | 6.33 | | 5.30 | | |  | | 6.30 | | | | 5.90 | | 6.81 | | | 8.38 | | | | 13.00 | | | |
| Eu |  | 1.99 | | | 1.71 | | 1.90 | | |  | | 1.71 | | | | 2.24 | | 2.47 | | | 0.95 | | | | 1.39 | | | |
| Gd |  | 5.38 | | | 5.54 | | 4.90 | | |  | | 5.41 | | | | 5.94 | | 6.50 | | | 7.54 | | | | 13.50 | | | |
| Tb |  | 1.03 | | | 1.09 | | 0.99 | | |  | | 1.01 | | | | 1.22 | | 1.34 | | | 1.40 | | | | 2.61 | | | |
| Dy |  | 5.34 | | | 6.09 | | 4.75 | | |  | | 5.34 | | | | 7.45 | | 7.83 | | | 8.01 | | | | 15.20 | | | |
| Ho |  | 0.94 | | | 1.17 | | 0.91 | | |  | | 1.06 | | | | 1.55 | | 1.55 | | | 1.64 | | | | 2.88 | | | |
| Er |  | 2.57 | | | 3.26 | | 2.27 | | |  | | 2.86 | | | | 4.34 | | 4.40 | | | 4.35 | | | | 7.58 | | | |
| Tm |  | 0.36 | | | 0.52 | | 0.32 | | |  | | 0.45 | | | | 0.73 | | 0.64 | | | 0.66 | | | | 1.03 | | | |
| Yb |  | 2.29 | | | 3.51 | | 2.04 | | |  | | 3.09 | | | | 4.83 | | 4.86 | | | 3.68 | | | | 5.82 | | | |
| Lu |  | 0.32 | | | 0.51 | | 0.30 | | |  | | 0.42 | | | | 0.74 | | 0.72 | | | 0.53 | | | | 0.82 | | | |
| Y |  | 24.6 | | | 31.1 | | 24.0 | | |  | | 27.8 | | | | 45.7 | | 42.2 | | | 38.0 | | | | 92.7 | | | |
| ΣREE |  | 133.96 | | | 173.54 | | 121.59 | | |  | | 142.08 | | | | 129.26 | | 142.40 | | | 137.62 | | | | 230.43 | | | |
| LREE |  | 115.73 | | | 151.85 | | 105.12 | | |  | | 122.44 | | | | 102.46 | | 114.56 | | | 109.81 | | | | 180.99 | | | |
| HREE |  | 18.23 | | | 21.69 | | 16.47 | | |  | | 19.64 | | | | 26.80 | | 27.84 | | | 27.81 | | | | 49.44 | | | |
| LREE/HREE |  | 6.35 | | | 7.00 | | 6.38 | | |  | | 6.24 | | | | 3.82 | | 4.12 | | | 3.95 | | | | 3.66 | | | |
| LaN/YbN |  | 7.52 | | | 7.42 | | 7.14 | | |  | | 5.08 | | | | 2.73 | | 3.07 | | | 3.64 | | | | 3.98 | | | |
| δEu |  | 1.07 | | | 0.86 | | 1.12 | | |  | | 0.87 | | | | 1.14 | | 1.12 | | | 0.36 | | | | 0.32 | | | |
| δCe |  | 0.95 | | | 0.88 | | 0.99 | | |  | | 1.02 | | | | 1.03 | | 0.97 | | | 1.04 | | | | 0.97 | | | |
| 微量元素分析结果(10-6) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 样品号 |  | ZK4001-11 | | ZK4001-15 | | | ZK4101-11 | |  | ZK4001-2 | | | | | ZK4101-5 | | | | ZK4101-9 | | DT1802 | | ZK2405-02 | | |
| 样品类型 |  | 第1组样品 | | | | | | |  | 第2组样品 | | | | | | | | | | | | | | | |
| U |  | 0.844 | | 1.560 | | | 0.660 | |  | 3.910 | | | | | 0.755 | | | | 1.070 | | 1.190 | | 6.390 | | |
| Li |  | 9.1 | | 18.0 | | | 8.3 | |  | 19.3 | | | | | 21.1 | | | | 7.7 | | 12.7 | | 15.8 | | |
| Be |  | 0.99 | | 1.90 | | | 0.93 | |  | 2.39 | | | | | 1.23 | | | | 1.14 | | 1.33 | | 3.67 | | |
| Sc |  | 33.7 | | 27.7 | | | 35.0 | |  | 40.3 | | | | | 40.7 | | | | 44.8 | | 42.3 | | 39.1 | | |
| V |  | 272 | | 196 | | | 293 | |  | 264 | | | | | 315 | | | | 348 | | 217 | | 238 | | |
| Cr |  | 468 | | 426 | | | 481 | |  | 632 | | | | | 67 | | | | 64.3 | | 1110 | | 82.6 | | |
| Co |  | 59.7 | | 43.8 | | | 60.5 | |  | 45.4 | | | | | 39.0 | | | | 39.8 | | 44.7 | | 51.5 | | |
| Ni |  | 188.0 | | 116.0 | | | 183.0 | |  | 39.5 | | | | | 22.4 | | | | 24.0 | | 67.7 | | 38.9 | | |
| Cu |  | 202.0 | | 32.3 | | | 161.0 | |  | 35.1 | | | | | 68.4 | | | | 57.6 | | 21.2 | | 608.0 | | |
| Zn |  | 159 | | 109 | | | 122 | |  | 102 | | | | | 165 | | | | 149 | | 115 | | 125 | | |
| Ga |  | 18.2 | | 17.9 | | | 16.3 | |  | 16.5 | | | | | 22.3 | | | | 20.9 | | 15.0 | | 23.0 | | |
| Rb |  | 21.8 | | 139.0 | | | 12.8 | |  | 91.7 | | | | | 130.0 | | | | 47.3 | | 111.0 | | 64.4 | | |
| Sr |  | 335 | | 328 | | | 280 | |  | 80.6 | | | | | 241 | | | | 326 | | 175 | | 138 | | |
| Nb |  | 22.9 | | 24.6 | | | 22.8 | |  | 12.0 | | | | | 9.4 | | | | 8.2 | | 9.0 | | 40.2 | | |
| Mo |  | 1.29 | | 1.24 | | | 2.12 | |  | 2.36 | | | | | 1.85 | | | | 1.05 | | 1.08 | | 7.00 | | |
| Cd |  | 0.17 | | 0.13 | | | 0.13 | |  | 0.14 | | | | | 0.19 | | | | 0.19 | | 0.17 | | 0.16 | | |
| In |  | 0.073 | | 0.103 | | | 0.075 | |  | 0.142 | | | | | 0.273 | | | | 0.148 | | 0.110 | | 0.280 | | |
| Sb |  | 0.218 | | 0.109 | | | 0.148 | |  | 0.120 | | | | | 0.113 | | | | 0.213 | | 0.068 | | 4.280 | | |
| Cs |  | 0.65 | | 1.34 | | | 0.38 | |  | 0.61 | | | | | 3.08 | | | | 1.40 | | 1.72 | | 0.68 | | |
| Ba |  | 234 | | 739 | | | 158 | |  | 454 | | | | | 671 | | | | 380 | | 241 | | 241 | | |
| Ta |  | 1.49 | | 1.78 | | | 1.35 | |  | 0.73 | | | | | 0.52 | | | | 0.51 | | 1.22 | | 2.17 | | |
| W |  | 0.38 | | 0.24 | | | 0.40 | |  | 0.35 | | | | | 0.42 | | | | 0.68 | | 0.36 | | 0.70 | | |
| Tl |  | 0.077 | | 0.467 | | | 0.078 | |  | 0.287 | | | | | 0.562 | | | | 0.208 | | 0.420 | | 0.400 | | |
| Pb |  | 3.68 | | 3.72 | | | 2.46 | |  | 5.42 | | | | | 8.97 | | | | 4.83 | | 4.57 | | 25.8 | | |
| Bi |  | 0.05 | | 0.017 | | | 0.047 | |  | 0.026 | | | | | 0.052 | | | | 0.058 | | 0.06 | | 0.24 | | |
| Th |  | 3.09 | | 4.43 | | | 2.95 | |  | 2.29 | | | | | 3.54 | | | | 2.70 | | 6.72 | | 5.40 | | |
| Zr |  | 169.0 | | 124.0 | | | 148.0 | |  | 78.3 | | | | | 66.6 | | | | 52.0 | | 87.6 | | 54.1 | | |
| Hf |  | 4.44 | | 3.11 | | | 4.00 | |  | 2.18 | | | | | 2.06 | | | | 1.80 | | 3.35 | | 1.50 | | |

表2 DT1802锆石U-Pb同位素测试结果

Table2 Zircon U-Pb dating results of DT1802

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 点号 | Th | U | Th/U | 207Pb/206Pb | | 207Pb/235U | | 206Pb/238U | | rho | 207Pb/206Pb | | 207Pb/235U | | 206Pb/238U | | 208Pb/232Th | | Con |
| (10-6) | (10-6) | Ratio | 1δ | Ratio | 1δ | Ratio | 1δ | Age (Ma) | 1δ | Age (Ma) | 1δ | Age (Ma) | 1δ | Age (Ma) | 1δ |
| DT1802-01 | 133.06 | 458.16 | 0.29 | 0.06 | 0.0011 | 1.23 | 0.0230 | 0.14 | 0.0020 | 0.76 | 768.5 | 234.30 | 816.2 | 10.50 | 833.4 | 11.10 | 820.9 | 14.80 | 97% |
| DT1802-02 | 305.71 | 1145.59 | 0.27 | 0.07 | 0.0009 | 1.31 | 0.0204 | 0.14 | 0.0018 | 0.82 | 827.8 | 27.80 | 851.2 | 9.00 | 858.7 | 10.30 | 917.7 | 13.54 | 99% |
| DT1802-03 | 260.50 | 809.90 | 0.32 | 0.07 | 0.0010 | 1.28 | 0.0255 | 0.14 | 0.0022 | 0.82 | 855.6 | 31.50 | 838.2 | 11.30 | 833.3 | 12.70 | 830.6 | 13.65 | 99% |
| DT1802-04 | 392.96 | 585.01 | 0.67 | 0.07 | 0.0011 | 1.28 | 0.0240 | 0.14 | 0.0020 | 0.75 | 794.4 | 30.60 | 837.6 | 10.70 | 852.6 | 11.20 | 805.1 | 29.95 | 98% |
| DT1802-05 | 609.42 | 2196.74 | 0.28 | 0.07 | 0.0008 | 1.29 | 0.0204 | 0.14 | 0.0019 | 0.85 | 838.9 | 24.10 | 840.0 | 9.10 | 836.3 | 10.60 | 971.6 | 16.78 | 99% |
| DT1802-06 | 952.66 | 1145.83 | 0.83 | 0.07 | 0.0009 | 1.31 | 0.0212 | 0.14 | 0.0018 | 0.79 | 820.4 | 32.40 | 851.3 | 9.30 | 859.1 | 10.30 | 906.5 | 13.35 | 99% |
| DT1802-07 | 798.16 | 1372.17 | 0.58 | 0.07 | 0.0009 | 1.25 | 0.0197 | 0.14 | 0.0018 | 0.82 | 809.3 | 28.90 | 823.9 | 8.90 | 825.6 | 9.90 | 862.7 | 15.39 | 99% |
| DT1802-08 | 159.92 | 2088.69 | 0.08 | 0.07 | 0.0009 | 1.28 | 0.0200 | 0.14 | 0.0018 | 0.81 | 816.7 | 26.70 | 837.4 | 8.90 | 840.6 | 10.00 | 998.8 | 23.75 | 99% |
| DT1802-09 | 936.36 | 2275.69 | 0.41 | 0.07 | 0.0008 | 1.24 | 0.0195 | 0.14 | 0.0019 | 0.90 | 790.7 | 24.80 | 821.0 | 8.80 | 828.2 | 11.00 | 948.8 | 17.10 | 99% |
| DT1802-10 | 448.50 | 1852.34 | 0.24 | 0.07 | 0.0009 | 1.29 | 0.0187 | 0.14 | 0.0016 | 0.78 | 842.6 | 30.60 | 840.6 | 8.30 | 833.9 | 8.80 | 948.0 | 14.74 | 99% |
| DT1802-11 | 471.58 | 1974.01 | 0.24 | 0.07 | 0.0010 | 1.28 | 0.0220 | 0.14 | 0.0019 | 0.78 | 827.8 | 29.60 | 835.7 | 9.80 | 831.8 | 10.50 | 853.3 | 14.13 | 99% |
| DT1802-12 | 507.36 | 2398.29 | 0.21 | 0.07 | 0.0009 | 1.30 | 0.0208 | 0.14 | 0.0018 | 0.79 | 842.6 | 28.90 | 844.6 | 9.20 | 839.2 | 9.90 | 981.3 | 16.73 | 99% |
| DT1802-13 | 40.86 | 84.10 | 0.49 | 0.06 | 0.0020 | 1.19 | 0.0376 | 0.13 | 0.0020 | 0.48 | 738.9 | 263.90 | 794.6 | 17.50 | 815.5 | 11.60 | 878.0 | 21.13 | 97% |
| DT1802-14 | 817.50 | 2305.97 | 0.35 | 0.07 | 0.0008 | 1.21 | 0.0177 | 0.13 | 0.0017 | 0.90 | 790.7 | 25.90 | 806.3 | 8.10 | 808.2 | 9.90 | 899.8 | 25.74 | 99% |
| DT1802-15 | 133.67 | 86.62 | 1.54 | 0.07 | 0.0017 | 1.21 | 0.0316 | 0.13 | 0.0020 | 0.58 | 805.6 | 51.80 | 804.8 | 14.60 | 801.9 | 11.50 | 835.7 | 16.33 | 99% |
| DT1802-16 | 80.22 | 451.47 | 0.18 | 0.07 | 0.0010 | 1.43 | 0.0288 | 0.15 | 0.0025 | 0.84 | 892.3 | 31.50 | 901.3 | 12.10 | 898.5 | 14.20 | 898.1 | 19.49 | 99% |
| DT1802-17 | 483.98 | 940.09 | 0.51 | 0.07 | 0.0010 | 1.18 | 0.0193 | 0.13 | 0.0016 | 0.77 | 820.4 | 29.60 | 789.4 | 9.00 | 777.0 | 9.30 | 857.9 | 12.27 | 98% |
| DT1802-18 | 781.04 | 1167.32 | 0.67 | 0.07 | 0.0008 | 1.42 | 0.0252 | 0.15 | 0.0024 | 0.87 | 833.0 | 26.70 | 895.7 | 10.60 | 918.3 | 13.20 | 1113.5 | 24.35 | 97% |
| DT1802-19 | 76.59 | 138.46 | 0.55 | 0.07 | 0.0014 | 1.40 | 0.0384 | 0.15 | 0.0029 | 0.69 | 827.8 | 43.40 | 889.0 | 16.30 | 906.5 | 16.00 | 998.2 | 24.21 | 98% |
| DT1802-20 | 1481.72 | 2024.68 | 0.73 | 0.07 | 0.0009 | 1.17 | 0.0195 | 0.13 | 0.0018 | 0.86 | 835.2 | 27.80 | 785.8 | 9.20 | 766.0 | 10.40 | 890.0 | 17.88 | 97% |
| DT1802-21 | 14.70 | 24.30 | 0.60 | 0.07 | 0.0033 | 1.21 | 0.0560 | 0.13 | 0.0027 | 0.45 | 875.9 | 98.90 | 804.7 | 25.80 | 790.9 | 15.50 | 728.7 | 23.67 | 98% |
| DT1802-22 | 371.01 | 1823.72 | 0.20 | 0.07 | 0.0014 | 1.02 | 0.0184 | 0.11 | 0.0015 | 0.72 | 799.7 | 45.20 | 713.1 | 9.20 | 683.4 | 8.40 | 656.8 | 32.70 | 95% |
| DT1802-23 | 1074.14 | 1781.38 | 0.60 | 0.07 | 0.0008 | 1.14 | 0.0165 | 0.12 | 0.0016 | 0.89 | 805.6 | 21.30 | 770.2 | 7.90 | 754.2 | 9.20 | 792.8 | 12.24 | 97% |
| DT1802-24 | 698.69 | 1509.95 | 0.46 | 0.07 | 0.0009 | 1.17 | 0.0191 | 0.13 | 0.0016 | 0.76 | 842.6 | 32.40 | 788.6 | 8.90 | 764.3 | 8.90 | 527.8 | 13.48 | 96% |
| DT1802-25 | 191.20 | 2859.58 | 0.07 | 0.07 | 0.0009 | 1.11 | 0.0203 | 0.12 | 0.0017 | 0.78 | 855.6 | 27.80 | 756.4 | 9.80 | 719.9 | 9.80 | 1013.6 | 18.68 | 95% |
| DT1802-26 | 106.15 | 216.84 | 0.49 | 0.10 | 0.0015 | 4.00 | 0.0639 | 0.29 | 0.0034 | 0.76 | 1650.9 | 23.20 | 1634.7 | 13.00 | 1618.8 | 17.30 | 1697.7 | 25.42 | 99% |

表3 ZK4001-11锆石U-Pb同位素测试结果

**Table3 Zircon U-Pb dating results of ZK4001-11**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 点号 | Th | U | Th/U | 207Pb/206Pb | | 207Pb/235U | | 206Pb/238U | | 207Pb/206Pb | | 207Pb/235U | | 206Pb/238U | | 208Pb/232Th | | Con |
| (10-6) | (10-6) | Ratio | 1δ | Ratio | 1δ | Ratio | 1δ | Age (Ma) | 1δ | Age (Ma) | 1δ | Age (Ma) | 1δ | Age (Ma) | 1δ |
| ZK4001-11-01 | 503 | 1149 | 0.44 | 0.0654 | 0.0019 | 1.2270 | 0.0368 | 0.1342 | 0.0018 | 787.0 | 65.74 | 813.0 | 16.80 | 812.0 | 10.14 | 805.9 | 23.69 | 99% |
| ZK4001-11-02 | 114 | 264 | 0.43 | 0.0623 | 0.0020 | 1.2231 | 0.0417 | 0.1401 | 0.0020 | 683.3 | 70.37 | 811.2 | 19.06 | 845.4 | 11.43 | 831.5 | 25.99 | 95% |
| ZK4001-11-03 | 153 | 188 | 0.81 | 0.0657 | 0.0024 | 1.2301 | 0.0434 | 0.134 | 0.0016 | 798.2 | 75.92 | 814.4 | 19.75 | 810.5 | 9.24 | 814.6 | 23.09 | 99% |
| ZK4001-11-04 | 61 | 116 | 0.53 | 0.0669 | 0.0026 | 1.3551 | 0.0532 | 0.1455 | 0.0026 | 835.2 | 82.25 | 869.8 | 22.94 | 875.7 | 14.89 | 949.6 | 31.83 | 99% |
| ZK4001-11-05 | 220 | 1317 | 0.17 | 0.0684 | 0.0022 | 0.8695 | 0.0279 | 0.0899 | 0.0010 | 879.6 | 66.67 | 635.3 | 15.18 | 555.0 | 6.17 | 851.6 | 25.78 | 86% |
| ZK4001-11-06 | 512 | 764 | 0.67 | 0.0532 | 0.0023 | 0.2514 | 0.0108 | 0.0333 | 0.0004 | 338.9 | 96.29 | 227.7 | 8.75 | 211.1 | 2.63 | 216.4 | 7.01 | 92% |
| ZK4001-11-07 | 359 | 722 | 0.5 | 0.0591 | 0.0025 | 1.2549 | 0.0517 | 0.1490 | 0.0021 | 568.6 | 90.73 | 825.6 | 23.30 | 895.5 | 11.65 | 833 | 28.83 | 91% |
| ZK4001-11-08 | 187 | 702 | 0.27 | 0.0609 | 0.0023 | 1.1248 | 0.0426 | 0.1302 | 0.0019 | 638.9 | 81.47 | 765.3 | 20.38 | 789.2 | 10.56 | 756.2 | 24.73 | 96% |
| ZK4001-11-09 | 411 | 770 | 0.53 | 0.0587 | 0.0020 | 1.1320 | 0.0382 | 0.1363 | 0.0018 | 566.7 | 74.06 | 768.7 | 18.20 | 823.6 | 10.02 | 775.9 | 23.61 | 93% |
| ZK4001-11-10 | 189 | 439 | 0.43 | 0.0603 | 0.0021 | 1.1327 | 0.0399 | 0.1335 | 0.0018 | 616.7 | 80.54 | 769.0 | 19.00 | 807.7 | 10.46 | 834.9 | 26.46 | 95% |
| ZK4001-11-11 | 312 | 726 | 0.43 | 0.0595 | 0.0019 | 1.1299 | 0.0372 | 0.1348 | 0.0015 | 583.4 | 65.73 | 767.7 | 17.72 | 815.4 | 8.64 | 822.4 | 25.45 | 93% |
| ZK4001-11-12 | 279 | 624 | 0.45 | 0.0597 | 0.0020 | 1.1219 | 0.0389 | 0.1337 | 0.0017 | 594.5 | 72.21 | 763.9 | 18.60 | 808.7 | 9.44 | 800.0 | 26.01 | 94% |
| ZK4001-11-13 | 263 | 1070 | 0.25 | 0.0599 | 0.0020 | 0.8321 | 0.0279 | 0.0993 | 0.0012 | 598.2 | 102.76 | 614.8 | 15.46 | 610.5 | 7.01 | 773.9 | 25.54 | 99% |
| ZK4001-11-14 | 144 | 239 | 0.6 | 0.0574 | 0.0020 | 1.1625 | 0.0448 | 0.1448 | 0.0024 | 509.3 | 77.77 | 783.1 | 21.05 | 872.0 | 13.53 | 831.4 | 29.04 | 89% |
| ZK4001-11-15 | 176 | 380 | 0.46 | 0.0585 | 0.0020 | 1.1333 | 0.0379 | 0.1390 | 0.0019 | 546.3 | 72.98 | 769.3 | 18.04 | 839.1 | 10.55 | 834.0 | 26.28 | 91% |
| ZK4001-11-16 | 598 | 906 | 0.66 | 0.0566 | 0.0019 | 0.9301 | 0.0303 | 0.1184 | 0.0018 | 476.0 | 39.81 | 667.7 | 15.93 | 721.2 | 10.53 | 606.0 | 24.62 | 92% |
| ZK4001-11-17 | 436 | 751 | 0.58 | 0.0563 | 0.0019 | 1.0102 | 0.0354 | 0.1279 | 0.0016 | 464.9 | 75.92 | 709.0 | 17.90 | 776.0 | 9.17 | 717.2 | 23.76 | 90% |
| ZK4001-11-18 | 396 | 776 | 0.51 | 0.0566 | 0.0021 | 1.0423 | 0.0404 | 0.1310 | 0.0020 | 476.0 | 81.48 | 725.1 | 20.11 | 793.3 | 11.33 | 758.4 | 28.73 | 91% |
| ZK4001-11-19 | 499 | 997 | 0.5 | 0.0549 | 0.0021 | 0.9128 | 0.0362 | 0.1188 | 0.0018 | 409.3 | 89.81 | 658.6 | 19.21 | 723.5 | 10.62 | 684.4 | 26.01 | 90% |
| ZK4001-11-20 | 354 | 1044 | 0.34 | 0.0572 | 0.0020 | 0.7308 | 0.0260 | 0.0917 | 0.0013 | 498.2 | 75.92 | 557.0 | 15.23 | 565.8 | 7.65 | 621.7 | 21.34 | 98% |
| ZK4001-11-21 | 136 | 642 | 0.21 | 0.0528 | 0.0017 | 0.6319 | 0.0222 | 0.0860 | 0.0014 | 320.4 | 74.07 | 497.3 | 13.81 | 531.6 | 8.49 | 653.3 | 21.67 | 93% |
| ZK4001-11-22 | 136 | 278 | 0.49 | 0.0616 | 0.0019 | 1.1674 | 0.0375 | 0.1366 | 0.0019 | 661.1 | 64.80 | 785.4 | 17.56 | 825.4 | 10.89 | 851.7 | 28.13 | 95% |
| ZK4001-11-23 | 471 | 513 | 0.92 | 0.0608 | 0.0016 | 1.1309 | 0.0367 | 0.1344 | 0.0027 | 631.5 | 55.55 | 768.2 | 17.49 | 812.8 | 15.39 | 841.7 | 30.46 | 94% |
| ZK4001-11-24 | 351 | 589 | 0.6 | 0.0636 | 0.0014 | 1.1394 | 0.0282 | 0.1297 | 0.0017 | 727.8 | 48.15 | 772.2 | 13.37 | 786.3 | 9.86 | 750.0 | 20.15 | 98% |
| ZK4001-11-25 | 236 | 330 | 0.71 | 0.0672 | 0.0018 | 1.2702 | 0.0366 | 0.1378 | 0.0023 | 855.6 | 53.71 | 832.5 | 16.39 | 832.4 | 13.29 | 863.5 | 26.30 | 99% |

表4大田地区斜长角闪岩(DT1802)锆石Lu-Hf同位素测试结果

Table4 Zircon Lu-Hfisotopic data of the amphibolite in Datian area(DT1802)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 点号 | 176Hf/177Hf | ±2σ | 176Lu/177Hf | ±2σ | 176Yb/177Hf | ±2σ | Age(Ma) | （176Hf/177Hf）i | *ε*Hf(*t*) | *T*DM1 (Ma) | *T*DM2 (Ma) | *f*Lu/Hf |
| DT1802-01 | 0.28209 | 0.000013 | 0.00114 | 0.000017 | 0.03645 | 0.00033 | 833.4 | 0.28207 | -6.3 | 1640.6 | 2113.1 | -0.966 |
| DT1802-02 | 0.28235 | 0.000025 | 0.00042 | 0.000009 | 0.01139 | 0.00035 | 858.7 | 0.28234 | 3.8 | 1255.7 | 1501.7 | -0.987 |
| DT1802-03 | 0.28217 | 0.000014 | 0.00074 | 0.000015 | 0.02478 | 0.00050 | 833.3 | 0.28215 | -3.5 | 1521.4 | 1936.4 | -0.978 |
| DT1802-04 | 0.28217 | 0.000014 | 0.00141 | 0.000015 | 0.04663 | 0.00035 | 852.6 | 0.28214 | -3.4 | 1548.5 | 1948.6 | -0.958 |
| DT1802-05 | 0.28213 | 0.000012 | 0.00218 | 0.000042 | 0.07433 | 0.00122 | 836.3 | 0.28210 | -5.4 | 1628.2 | 2057.2 | -0.934 |
| DT1802-06 | 0.28215 | 0.000014 | 0.00266 | 0.000023 | 0.09117 | 0.00073 | 859.1 | 0.28210 | -4.7 | 1627.8 | 2029.0 | -0.920 |
| DT1802-07 | 0.28215 | 0.000013 | 0.00140 | 0.000034 | 0.04826 | 0.00131 | 825.6 | 0.28213 | -4.6 | 1570.7 | 1999.0 | -0.958 |
| DT1802-08 | 0.28212 | 0.000012 | 0.00114 | 0.000025 | 0.03634 | 0.00079 | 840.6 | 0.28211 | -5.0 | 1595.9 | 2038.5 | -0.966 |
| DT1802-09 | 0.28215 | 0.000015 | 0.00309 | 0.000069 | 0.10271 | 0.00202 | 828.2 | 0.28211 | -5.3 | 1637.2 | 2044.3 | -0.907 |
| DT1802-10 | 0.28215 | 0.000012 | 0.00107 | 0.000011 | 0.03400 | 0.00038 | 833.9 | 0.28213 | -4.2 | 1558.1 | 1984.7 | -0.968 |
| DT1802-11 | 0.28208 | 0.000014 | 0.00085 | 0.000005 | 0.02879 | 0.00014 | 831.8 | 0.28206 | -6.8 | 1650.4 | 2139.4 | -0.974 |
| DT1802-12 | 0.28216 | 0.000013 | 0.00119 | 0.000016 | 0.03897 | 0.00049 | 839.2 | 0.28214 | -3.7 | 1542.1 | 1952.7 | -0.964 |
| DT1802-13 | 0.28221 | 0.000013 | 0.00039 | 0.000006 | 0.01292 | 0.00026 | 815.5 | 0.28220 | -2.1 | 1447.2 | 1837.8 | -0.988 |
| DT1802-14 | 0.28213 | 0.000013 | 0.00174 | 0.000011 | 0.05583 | 0.00043 | 808.2 | 0.28210 | -5.8 | 1613.1 | 2064.0 | -0.948 |
| DT1802-15 | 0.28238 | 0.000015 | 0.00079 | 0.000006 | 0.02418 | 0.00019 | 801.9 | 0.28236 | 3.3 | 1231.7 | 1491.2 | -0.976 |
| DT1802-16 | 0.28213 | 0.000013 | 0.00044 | 0.000010 | 0.01356 | 0.00029 | 898.5 | 0.28212 | -3.2 | 1561.4 | 1969.9 | -0.987 |
| DT1802-17 | 0.28213 | 0.000013 | 0.00044 | 0.000010 | 0.01356 | 0.00029 | 777.0 | 0.28212 | -3.2 | 1561.4 | 1969.9 | -0.987 |
| DT1802-18 | 0.28232 | 0.000013 | 0.00120 | 0.000027 | 0.03312 | 0.00080 | 918.3 | 0.28230 | 3.5 | 1328.3 | 1568.6 | -0.964 |
| DT1802-19 | 0.28215 | 0.000014 | 0.00138 | 0.000015 | 0.04723 | 0.00055 | 906.5 | 0.28213 | -2.7 | 1564.0 | 1943.0 | -0.959 |
| DT1802-20 | 0.28215 | 0.000014 | 0.00163 | 0.000049 | 0.05330 | 0.00220 | 766.0 | 0.28212 | -6.0 | 1583.1 | 2044.4 | -0.951 |
| DT1802-21 | 0.28235 | 0.000020 | 0.00055 | 0.000011 | 0.01406 | 0.00043 | 790.9 | 0.28234 | 2.2 | 1262.8 | 1552.2 | -0.983 |
| DT1802-22 | 0.28213 | 0.000013 | 0.00116 | 0.000035 | 0.03565 | 0.00088 | 683.4 | 0.28212 | -8.0 | 1581.5 | 2105.7 | -0.965 |
| DT1802-23 | 0.28213 | 0.000014 | 0.00164 | 0.000016 | 0.05621 | 0.00053 | 754.2 | 0.28210 | -7.0 | 1611.6 | 2095.2 | -0.951 |
| DT1802-24 | 0.28215 | 0.000013 | 0.00090 | 0.000003 | 0.02857 | 0.00016 | 764.3 | 0.28214 | -5.6 | 1547.0 | 2013.3 | -0.973 |
| DT1802-25 | 0.28202 | 0.000012 | 0.00157 | 0.000010 | 0.04812 | 0.00016 | 719.9 | 0.28200 | -11.4 | 1755.2 | 2340.6 | -0.953 |
| DT1802-26 | 0.28199 | 0.000016 | 0.00070 | 0.000010 | 0.02194 | 0.00016 | 1650.9 | 0.28197 | 8.2 | 1765.0 | 1834.6 | -0.979 |