表1 孬来可图岩体的锆石U-Pb定年数据表

Table.1 LAICP-MS zircon U-Pb isotope analysis of pluton in Naolaiketu

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 测点号 | 元素含量(10-6) | | | Th/U | 同位素比值 | | | | | | 同位素年龄 | | | | | |
| Pb | Th | U | 207Pb/206Pb | 207Pb/206Pb | 207Pb/235U | 207Pb/235U | 206Pb/238U | 206Pb/238U | 207Pb/206Pb | 207Pb/206Pb | 207Pb/235U | 207Pb/235U | 206Pb/238U | 206Pb/238U |
| Total |  |  | Ratio | 1sigma | Ratio | 1sigma | Ratio | 1sigma | Age (Ma) | 1sigma | Age (Ma) | 1sigma | Age (Ma) | 1sigma |
| BY194-1 | 25.12 | 184.10 | 405.22 | 0.45 | 0.0547 | 0.0030 | 0.3727 | 0.0197 | 0.0499 | 0.0010 | 466.7 | 124.1 | 321.6 | 14.6 | 314.1 | 6.3 |
| BY194-2 | 24.25 | 159.32 | 413.54 | 0.39 | 0.0502 | 0.0031 | 0.3464 | 0.0209 | 0.0506 | 0.0010 | 211.2 | 142.6 | 302.0 | 15.8 | 318.1 | 6.3 |
| BY194-4 | 31.69 | 263.42 | 501.64 | 0.53 | 0.0525 | 0.0030 | 0.3618 | 0.0199 | 0.0506 | 0.0009 | 305.6 | 131.5 | 313.6 | 14.8 | 318.1 | 5.7 |
| BY194-5 | 29.60 | 259.08 | 470.31 | 0.55 | 0.0483 | 0.0028 | 0.3373 | 0.0204 | 0.0507 | 0.0009 | 122.3 | 133.3 | 295.1 | 15.5 | 318.9 | 5.5 |
| BY194-9 | 35.41 | 318.22 | 498.51 | 0.64 | 0.0580 | 0.0034 | 0.4172 | 0.0261 | 0.0516 | 0.0009 | 527.8 | 127.8 | 354.1 | 18.7 | 324.5 | 5.6 |
| BY194-11 | 40.79 | 323.47 | 643.74 | 0.50 | 0.0538 | 0.0028 | 0.3647 | 0.0187 | 0.0493 | 0.0009 | 361.2 | 116.7 | 315.7 | 13.9 | 310.3 | 5.3 |
| BY194-13 | 68.88 | 689.21 | 961.60 | 0.72 | 0.0502 | 0.0020 | 0.3528 | 0.0141 | 0.0510 | 0.0008 | 205.6 | 92.6 | 306.8 | 10.6 | 320.7 | 4.7 |
| BY194-14 | 16.21 | 98.69 | 271.01 | 0.36 | 0.0514 | 0.0035 | 0.3759 | 0.0277 | 0.0523 | 0.0011 | 261.2 | 154.6 | 324.0 | 20.4 | 328.4 | 7.0 |
| BY194-15 | 18.57 | 136.38 | 311.88 | 0.44 | 0.0555 | 0.0045 | 0.3732 | 0.0292 | 0.0498 | 0.0010 | 431.5 | 183.3 | 322.0 | 21.6 | 313.3 | 6.1 |
| BY194-16 | 27.89 | 217.18 | 455.22 | 0.48 | 0.0490 | 0.0031 | 0.3393 | 0.0213 | 0.0501 | 0.0009 | 146.4 | 140.7 | 296.7 | 16.1 | 315.4 | 5.4 |
| BY194-17 | 17.12 | 126.81 | 276.20 | 0.46 | 0.0528 | 0.0041 | 0.3752 | 0.0299 | 0.0516 | 0.0010 | 316.7 | 179.6 | 323.5 | 22.1 | 324.2 | 6.4 |
| BY194-19 | 31.58 | 308.43 | 475.71 | 0.65 | 0.0510 | 0.0036 | 0.3615 | 0.0250 | 0.0514 | 0.0011 | 242.7 | 161.1 | 313.3 | 18.7 | 323.0 | 6.6 |
| BY194-20 | 18.42 | 131.69 | 293.69 | 0.45 | 0.0606 | 0.0046 | 0.4361 | 0.0304 | 0.0529 | 0.0011 | 633.4 | 167.6 | 367.5 | 21.5 | 332.4 | 6.7 |
| BY194-21 | 33.25 | 300.66 | 476.32 | 0.63 | 0.0507 | 0.0032 | 0.3535 | 0.0207 | 0.0507 | 0.0009 | 227.8 | 148.1 | 307.4 | 15.5 | 318.8 | 5.6 |
| BY194-22 | 12.41 | 68.77 | 213.52 | 0.32 | 0.0588 | 0.0044 | 0.4265 | 0.0295 | 0.0528 | 0.0011 | 561.1 | 162.9 | 360.7 | 21.0 | 331.7 | 6.9 |
| BY194-25 | 51.57 | 513.42 | 741.24 | 0.69 | 0.0523 | 0.0024 | 0.3775 | 0.0176 | 0.0523 | 0.0008 | 301.9 | 137.9 | 325.2 | 13.0 | 328.4 | 5.0 |
| BY194-27 | 62.87 | 655.52 | 873.54 | 0.75 | 0.0537 | 0.0023 | 0.3963 | 0.0180 | 0.0530 | 0.0008 | 361.2 | 96.3 | 338.9 | 13.1 | 332.9 | 4.9 |
| BY194-28 | 21.70 | 160.08 | 364.34 | 0.44 | 0.0513 | 0.0031 | 0.3612 | 0.0196 | 0.0514 | 0.0009 | 253.8 | 140.7 | 313.1 | 14.6 | 323.3 | 5.6 |
| BY194-29 | 25.68 | 173.50 | 426.67 | 0.41 | 0.0532 | 0.0031 | 0.3892 | 0.0221 | 0.0527 | 0.0009 | 338.9 | 126.8 | 333.8 | 16.1 | 330.8 | 5.8 |

表2 孬来可图岩体岩石化学分析结果

Table 2 The geochemistry composition of plutonin Naolaiketu

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 样品号 | SiO2 | TiO2 | Al2O3 | TFe2O3 | MnO | MgO | CaO | Na2O | K2O | P2O5 | LOI | TOTAL | Na2O/  K2O | Mg# | Rb | Ba | Th | U | Nb | Sr | Zr | Hf | V |
| BY194 | 65.29 | 0.737 | 13.62 | 6.86 | 0.122 | 2.36 | 3.69 | 3.40 | 1.79 | 0.105 | 2.50 | 100.47 | 1.90 | 40.76 | 40.22 | 374.93 | 3.35 | 0.83 | 1.43 | 301.81 | 160.97 | 4.95 | 154.02 |
| BY194-2 | 72.14 | 0.369 | 11.92 | 3.79 | 0.065 | 1.12 | 5.01 | 2.91 | 0.54 | 0.084 | 1.20 | 99.16 | 5.39 | 37.15 | 9.49 | 97.16 | 3.62 | 1.00 | 1.11 | 403.3 | 122.72 | 3.72 | 62.37 |
| BY195 | 77.17 | 0.228 | 11.23 | 1.56 | 0.026 | 0.56 | 2.56 | 3.84 | 0.89 | 0.041 | 2.00 | 100.09 | 4.31 | 41.79 | 6.83 | 59.77 | 0.59 | 0.16 | 0.33 | 71.82 | 45.86 | 1.37 | 13.56 |
| BY196 | 62.29 | 0.678 | 13.63 | 7.27 | 0.135 | 2.80 | 5.53 | 3.02 | 1.18 | 0.098 | 2.37 | 99.00 | 2.56 | 43.51 | 26.88 | 205.85 | 2.10 | 0.53 | 1.36 | 269.27 | 128.14 | 3.83 | 171.58 |
| 样品号 | Cr | Co | Ni | Ta | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm | Yb | Lu | Y | ΣREE | LREE/  HREE | LaN/  YbN | δEu |
| BY194 | 10.77 | 17.2 | 9.23 | 0.12 | 7.74 | 21.13 | 2.9 | 13.19 | 3.69 | 0.7 | 3.7 | 0.69 | 4.75 | 1.00 | 2.94 | 0.45 | 3.13 | 0.49 | 29.91 | 66.53 | 2.88 | 1.78 | 0.58 |
| BY194-2 | 9.60 | 10.1 | 8.21 | 0.09 | 5.08 | 12.54 | 1.82 | 8.42 | 2.5 | 0.58 | 2.45 | 0.46 | 3.10 | 0.65 | 1.87 | 0.28 | 1.90 | 0.3 | 18.7 | 41.96 | 2.81 | 1.91 | 0.72 |
| BY195 | 2.85 | 1.62 | 3.07 | 0.03 | 7.44 | 21.13 | 2.5 | 10.02 | 2.61 | 0.47 | 2.56 | 0.46 | 3.09 | 0.66 | 1.97 | 0.31 | 2.19 | 0.35 | 20.54 | 55.73 | 3.81 | 2.44 | 0.55 |
| BY196 | 16.66 | 20.94 | 12.44 | 0.11 | 1.59 | 2.20 | 0.33 | 1.34 | 0.31 | 0.17 | 0.31 | 0.05 | 0.34 | 0.07 | 0.22 | 0.04 | 0.25 | 0.05 | 2.48 | 7.28 | 4.45 | 4.51 | 1.61 |

表3 孬来可图侵入岩Sr-Nd同位素数据表

Table 3 Sr-Ndisotope of pluton in Naolaiketu

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sample** | **Age** | **Rb** | **Sr** | **87Rb/86Sr** | **87Sr/86Sr** | **(87Sr/86Sr)i** | **Sm** | **Nd** | **147Sm/144Nd** | **143Nd/144Nd** | **εNd(t)** | **TDM** | **T2DM** |
| BY194 | 322.2 | 40.22 | 301.81 | 0.385913 | 0.705559 | 0.7037893 | 3.69 | 13.19 | 0.1692762 | 0.513058 | 9.33 | 320.4 | 321.3 |
| BY196 | 322.2 | 26.88 | 269.27 | 0.289036 | 0.704783 | 0.7034574 | 3.20 | 11.43 | 0.1690514 | 0.513010 | 8.41 | 481.8 | 396.6 |

表4孬来可图侵入岩锆石Hf同位素

Table 4 Zircon Hf isotope of pluton in Naolaiketu

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 测点号 | *t*(Ma) | 176Yb/177Hf | 2σ | 176Lu/177Hf | 2σ | 176Hf/177Hf | 2σ | εHf(0) | εHf(*t*) | *T*DM(Ma) | *T*2DM(Ma) | *f(*Lu/Hf)s |
| BY194-01 | 330.84 | 0.020658 | 0.000154 | 0.000749 | 0.000002 | 0.282960 | 0.000014 | 6.66 | 13.8 | 411 | 459 | -0.98 |
| BY194-02 | 332.93 | 0.066080 | 0.000376 | 0.001945 | 0.000007 | 0.283022 | 0.000019 | 8.86 | 15.7 | 337 | 339 | -0.93 |
| BY194-04 | 328.43 | 0.055493 | 0.000338 | 0.001913 | 0.000016 | 0.283028 | 0.000019 | 9.05 | 15.9 | 325 | 323 | -0.94 |
| BY194-06 | 318.79 | 0.032930 | 0.000383 | 0.001144 | 0.000015 | 0.282977 | 0.000017 | 7.24 | 14.0 | 392 | 435 | -0.97 |
| BY194-07 | 332.36 | 0.018661 | 0.000092 | 0.000679 | 0.000005 | 0.282992 | 0.000015 | 7.80 | 15.0 | 364 | 384 | -0.98 |
| BY194-08 | 323.04 | 0.048831 | 0.001018 | 0.001717 | 0.000035 | 0.282965 | 0.000015 | 6.81 | 13.6 | 415 | 467 | -0.95 |
| BY194-10 | 315.42 | 0.024560 | 0.000083 | 0.000970 | 0.000003 | 0.282981 | 0.000014 | 7.40 | 14.1 | 383 | 424 | -0.97 |
| BY194-11 | 313.26 | 0.017638 | 0.000091 | 0.000672 | 0.000005 | 0.282988 | 0.000015 | 7.64 | 14.4 | 370 | 405 | -0.98 |
| BY194-12 | 328.37 | 0.014934 | 0.000101 | 0.000553 | 0.000001 | 0.282987 | 0.000013 | 7.62 | 14.7 | 370 | 396 | -0.98 |
| BY194-13 | 320.73 | 0.030222 | 0.000484 | 0.001077 | 0.000014 | 0.282970 | 0.000013 | 7.00 | 13.8 | 400 | 448 | -0.97 |
| BY194-15 | 324.46 | 0.017367 | 0.000047 | 0.000644 | 0.000004 | 0.282989 | 0.000014 | 7.68 | 14.7 | 369 | 396 | -0.98 |