Table A1. U-Pb zircon data.

Table A2. Full set of XRF major (wt.%).

Table A3. Full set of XRF trace element data (ppm).

Table A4. Whole-rock Sr-Nd isotopes data.

Table A5. Zircon in-situ Hf isotope ratio analysis data.

**Table A1. U-Pb zircon data.**

Zircon U-Pb data of syenites from Inexpressible Island, NVL.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | Pb | Th | | U |  | | |  |  | |  |  | | Isotopic ratios | |  |  |  | |  |  |  | |  | |  |  |  |  | |  |  | Ages（Ma） | |  |  |  |  |  | | Concordance | | |
| (×10-6) | | | | | Th/U |  | | | 1σ | | |  | | 1σ |  | | | 1σ |  | | | 1σ | |  | | 1σ | | |  | | | 1σ |  | 1σ | |  | | | 1σ | | (%) |
| *Dingjunshan syenite* | | |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| DJS-6-01 | 4.57 | 33.0 | 50.2 | 0.66 | 0.0577 | 0.0033 | 0.6002 | 0.03 | 0.0754 | 0.0013 | 0.0213 | 0.0008 | 517 | 126 | 477 | 22 | 468 | 8 | 426 | 15.8 | 98% |
| DJS-6-02 | 4.78 | 34.0 | 52.6 | 0.65 | 0.0603 | 0.0037 | 0.6342 | 0.04 | 0.0762 | 0.0012 | 0.0215 | 0.0007 | 617 | 133 | 499 | 23 | 473 | 7 | 430 | 14.8 | 94% |
| DJS-6-03 | 4.34 | 28.2 | 49.1 | 0.58 | 0.0576 | 0.0038 | 0.5947 | 0.03 | 0.0752 | 0.0013 | 0.0197 | 0.0007 | 522 | 146 | 474 | 22 | 468 | 8 | 394 | 13.6 | 98% |
| DJS-6-04 | 4.66 | 33.3 | 51.2 | 0.65 | 0.0561 | 0.0038 | 0.5845 | 0.04 | 0.0762 | 0.0014 | 0.0194 | 0.0007 | 457 | 150 | 467 | 23 | 473 | 8 | 389 | 14.1 | 98% |
| DJS-6-05 | 4.41 | 30.7 | 48.9 | 0.63 | 0.0568 | 0.0044 | 0.5721 | 0.04 | 0.0757 | 0.0016 | 0.0200 | 0.0008 | 483 | 179 | 459 | 24 | 471 | 10 | 401 | 15.9 | 97% |
| DJS-6-06 | 7.12 | 48.0 | 79.2 | 0.61 | 0.0550 | 0.0029 | 0.5751 | 0.03 | 0.0757 | 0.0013 | 0.0196 | 0.0006 | 413 | 120 | 461 | 17 | 470 | 8 | 391 | 11.9 | 98% |
| DJS-6-07 | 2.82 | 20.0 | 30.9 | 0.65 | 0.0570 | 0.0051 | 0.5941 | 0.05 | 0.0769 | 0.0016 | 0.0196 | 0.0009 | 500 | 198 | 473 | 31 | 477 | 10 | 393 | 17.7 | 99% |
| DJS-6-08 | 6.24 | 41.8 | 70.7 | 0.59 | 0.0570 | 0.0031 | 0.5901 | 0.03 | 0.0752 | 0.0012 | 0.0201 | 0.0007 | 500 | 119 | 471 | 20 | 467 | 7 | 403 | 13.3 | 99% |
| DJS-6-09 | 4.48 | 31.8 | 46.3 | 0.69 | 0.0595 | 0.0039 | 0.6392 | 0.04 | 0.0780 | 0.0014 | 0.0256 | 0.0015 | 587 | 144 | 502 | 25 | 484 | 8 | 511 | 30.0 | 96% |
| DJS-6-10 | 6.14 | 40.8 | 69.8 | 0.58 | 0.0585 | 0.0035 | 0.6115 | 0.04 | 0.0759 | 0.0013 | 0.0200 | 0.0007 | 550 | 130 | 485 | 23 | 472 | 8 | 401 | 14.4 | 97% |
| DJS-6-11 | 6.57 | 45.4 | 74.0 | 0.61 | 0.0573 | 0.0033 | 0.5923 | 0.03 | 0.0757 | 0.0011 | 0.0192 | 0.0007 | 506 | 129 | 472 | 20 | 470 | 7 | 384 | 14.3 | 99% |
| DJS-6-12 | 4.23 | 31.9 | 46.3 | 0.69 | 0.0550 | 0.0037 | 0.5753 | 0.03 | 0.0763 | 0.0012 | 0.0185 | 0.0007 | 409 | 158 | 461 | 22 | 474 | 7 | 370 | 14.6 | 97% |
| DJS-6-13 | 3.42 | 23.6 | 39.1 | 0.60 | 0.0594 | 0.0042 | 0.6104 | 0.04 | 0.0747 | 0.0012 | 0.0196 | 0.0008 | 589 | 154 | 484 | 24 | 465 | 7 | 393 | 15.2 | 95% |
| DJS-6-14 | 4.12 | 29.1 | 47.2 | 0.62 | 0.0588 | 0.0040 | 0.5982 | 0.04 | 0.0752 | 0.0012 | 0.0201 | 0.0008 | 561 | 118 | 476 | 24 | 467 | 7 | 402 | 15.3 | 98% |
| DJS-6-15 | 3.73 | 25.3 | 42.2 | 0.60 | 0.0569 | 0.0040 | 0.5978 | 0.04 | 0.0763 | 0.0015 | 0.0188 | 0.0008 | 487 | 156 | 476 | 25 | 474 | 9 | 376 | 15.3 | 99% |
| DJS-6-16 | 3.55 | 25.4 | 39.4 | 0.65 | 0.0616 | 0.0039 | 0.6473 | 0.04 | 0.0763 | 0.0014 | 0.0199 | 0.0009 | 657 | 136 | 507 | 23 | 474 | 8 | 399 | 17.7 | 93% |
| DJS-6-17 | 3.88 | 26.7 | 43.4 | 0.61 | 0.0594 | 0.0034 | 0.6282 | 0.03 | 0.0770 | 0.0013 | 0.0198 | 0.0008 | 583 | 126 | 495 | 21 | 478 | 8 | 397 | 14.9 | 96% |
| DJS-6-18 | 3.75 | 32.3 | 41.2 | 0.78 | 0.0573 | 0.0035 | 0.6002 | 0.03 | 0.0766 | 0.0014 | 0.0213 | 0.0008 | 502 | 132 | 477 | 21 | 476 | 9 | 483 | 27.6 | 99% |
| DJS-6-19 | 4.07 | 31.1 | 45.1 | 0.69 | 0.0549 | 0.0037 | 0.5738 | 0.03 | 0.0765 | 0.0014 | 0.0215 | 0.0007 | 406 | 150 | 460 | 22 | 475 | 8 | 426 | 15.8 | 96% |
| DJS-6-20 | 3.46 | 25.2 | 38.2 | 0.66 | 0.0559 | 0.0055 | 0.5880 | 0.06 | 0.0746 | 0.0015 | 0.0242 | 0.0014 | 456 | 220 | 470 | 40 | 464 | 9 | 394 | 13.6 | 98% |
| *Dingjunshan syenite* | |  | | | | | | | | | | | | | | | | | | |
| DJS-13-01 | 10.17 | 76.8 | 111 | 0.69 | 0.0544 | 0.0022 | 0.5871 | 0.02 | 0.0770 | 0.0011 | 0.0195 | 0.0005 | 387 | 88 | 469 | 15 | 478 | 6 | 390 | 9.7 | 98% |
| DJS-13-02 | 3.50 | 22.5 | 38.8 | 0.58 | 0.0547 | 0.0038 | 0.5685 | 0.03 | 0.0767 | 0.0014 | 0.0197 | 0.0008 | 467 | 157 | 457 | 22 | 477 | 8 | 395 | 16.5 | 95% |
| DJS-13-03 | 4.17 | 33.6 | 42.7 | 0.79 | 0.0614 | 0.0042 | 0.6506 | 0.04 | 0.0783 | 0.0016 | 0.0215 | 0.0009 | 654 | 149 | 509 | 25 | 486 | 10 | 431 | 16.9 | 95% |
| DJS-13-04 | 7.55 | 52.5 | 82.3 | 0.64 | 0.0584 | 0.0027 | 0.6170 | 0.03 | 0.0763 | 0.0011 | 0.0194 | 0.0006 | 546 | 100 | 488 | 17 | 474 | 7 | 389 | 11.2 | 97% |
| DJS-13-05 | 5.89 | 48.5 | 60.7 | 0.80 | 0.0609 | 0.0035 | 0.6418 | 0.03 | 0.0772 | 0.0014 | 0.0205 | 0.0009 | 635 | 125 | 503 | 21 | 480 | 8 | 410 | 18.1 | 95% |
| DJS-13-06 | 3.64 | 24.0 | 40.3 | 0.60 | 0.0550 | 0.0045 | 0.5588 | 0.04 | 0.0760 | 0.0015 | 0.0188 | 0.0005 | 413 | 181 | 451 | 25 | 472 | 9 | 376 | 10.5 | 95% |
| DJS-13-07 | 3.15 | 19.1 | 34.6 | 0.55 | 0.0555 | 0.0038 | 0.5900 | 0.04 | 0.0775 | 0.0015 | 0.0207 | 0.0006 | 432 | 150 | 471 | 23 | 481 | 9 | 414 | 12.7 | 97% |
| DJS-13-08 | 6.37 | 56.7 | 68.0 | 0.83 | 0.0546 | 0.0029 | 0.5770 | 0.03 | 0.0764 | 0.0012 | 0.0211 | 0.0006 | 398 | 125 | 463 | 20 | 475 | 7 | 423 | 12.3 | 97% |
| DJS-13-09 | 4.34 | 34.9 | 47.0 | 0.74 | 0.0598 | 0.0039 | 0.6199 | 0.04 | 0.0757 | 0.0014 | 0.0206 | 0.0006 | 598 | 147 | 490 | 24 | 470 | 9 | 412 | 11.7 | 95% |
| DJS-13-10 | 4.13 | 34.7 | 43.7 | 0.79 | 0.0583 | 0.0037 | 0.6151 | 0.04 | 0.0763 | 0.0012 | 0.0207 | 0.0006 | 543 | 141 | 487 | 24 | 474 | 7 | 413 | 11.2 | 97% |
| DJS-13-11 | 6.69 | 58.2 | 71.1 | 0.82 | 0.0576 | 0.0028 | 0.6110 | 0.03 | 0.0766 | 0.0012 | 0.0204 | 0.0009 | 517 | 106 | 484 | 19 | 476 | 7 | 409 | 17.7 | 98% |
| DJS-13-12 | 8.74 | 52.7 | 99.0 | 0.53 | 0.0568 | 0.0022 | 0.6053 | 0.03 | 0.0768 | 0.0010 | 0.0195 | 0.0006 | 483 | 89 | 481 | 16 | 477 | 6 | 391 | 11.5 | 99% |
| DJS-13-13 | 3.05 | 18.4 | 34.1 | 0.54 | 0.0566 | 0.0039 | 0.5962 | 0.04 | 0.0769 | 0.0014 | 0.0194 | 0.0008 | 476 | 149 | 475 | 24 | 477 | 9 | 389 | 15.9 | 99% |
| DJS-13-14 | 5.98 | 48.8 | 63.6 | 0.77 | 0.0595 | 0.0031 | 0.6309 | 0.03 | 0.0774 | 0.0012 | 0.0210 | 0.0006 | 585 | 108 | 497 | 20 | 481 | 7 | 421 | 11.6 | 96% |
| DJS-13-15 | 2.63 | 16.0 | 29.6 | 0.54 | 0.0585 | 0.0049 | 0.6088 | 0.04 | 0.0763 | 0.0015 | 0.0194 | 0.0006 | 550 | 177 | 483 | 28 | 474 | 9 | 389 | 11.8 | 98% |
| DJS-13-16 | 5.22 | 36.6 | 55.8 | 0.66 | 0.0577 | 0.0035 | 0.6173 | 0.04 | 0.0780 | 0.0013 | 0.0199 | 0.0007 | 517 | 133 | 488 | 24 | 484 | 8 | 398 | 13.7 | 99% |
| DJS-13-17 | 5.80 | 41.0 | 65.0 | 0.63 | 0.0573 | 0.0033 | 0.5960 | 0.03 | 0.0762 | 0.0013 | 0.0208 | 0.0009 | 502 | 131 | 475 | 22 | 473 | 8 | 417 | 17.2 | 99% |
| DJS-13-18 | 4.02 | 30.2 | 43.2 | 0.70 | 0.0593 | 0.0039 | 0.6221 | 0.04 | 0.0774 | 0.0014 | 0.0229 | 0.0011 | 589 | 147 | 491 | 24 | 481 | 9 | 457 | 21.3 | 97% |
| DJS-13-19 | 3.02 | 18.7 | 33.6 | 0.56 | 0.0573 | 0.0040 | 0.5951 | 0.04 | 0.0773 | 0.0015 | 0.0215 | 0.0009 | 506 | 154 | 474 | 23 | 480 | 9 | 390 | 9.7 | 98% |
| DJS-13-20 | 2.59 | 13.3 | 28.7 | 0.46 | 0.0599 | 0.0044 | 0.6322 | 0.04 | 0.0771 | 0.0013 | 0.0194 | 0.0006 | 598 | 159 | 497 | 25 | 479 | 8 | 395 | 16.5 | 96% |

**Table A2. Full set of XRF Major element data (wt.%).**

Whole-rock compositions of the syenite domain samples from Inexpressible Island.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | DJS-1 | DJS-5-a | DJS-6 | DJS-7 | DJS-13 | DJS-14 | DJS-15 |
| SiO2 | 60.92 | 62.14 | 61.75 | 60.96 | 61.10 | 60.88 | 62.81 |
| TiO2 | 0.61 | 0.66 | 0.58 | 0.55 | 0.46 | 0.57 | 0.43 |
| Al2O3 | 17.46 | 18.21 | 18.46 | 18.20 | 17.55 | 17.96 | 17.97 |
| Fe2O3T | 6.00 | 4.30 | 3.74 | 5.54 | 4.65 | 5.38 | 3.90 |
| MnO | 0.14 | 0.09 | 0.08 | 0.12 | 0.09 | 0.11 | 0.07 |
| MgO | 0.44 | 0.53 | 0.45 | 0.48 | 0.35 | 0.43 | 0.36 |
| CaO | 2.44 | 2.02 | 1.85 | 2.24 | 2.56 | 2.73 | 2.08 |
| Na2O | 2.76 | 2.94 | 2.88 | 2.85 | 2.92 | 3.11 | 3.01 |
| K2O | 7.26 | 7.90 | 8.35 | 7.90 | 8.47 | 7.99 | 8.71 |
| P2O5 | 0.18 | 0.18 | 0.16 | 0.14 | 0.11 | 0.13 | 0.11 |
| LOI | 0.57 | 0.75 | 0.98 | 0.46 | 0.79 | 0.27 | 0.26 |
| Total | 98.78 | 99.72 | 99.26 | 99.42 | 99.05 | 99.55 | 99.70 |
| Na2O+K2O | 10.02 | 10.84 | 11.23 | 10.74 | 11.39 | 11.10 | 11.72 |
| A.R. | 3.03 | 3.31 | 3.47 | 3.22 | 3.62 | 3.31 | 3.81 |
| A/CNK | 1.04 | 1.07 | 1.08 | 1.05 | 0.94 | 0.96 | 0.99 |
| A/NK | 1.41 | 1.36 | 1.34 | 1.38 | 1.26 | 1.31 | 1.25 |
| K2O/Na2O | 2.63 | 2.69 | 2.90 | 2.77 | 2.90 | 2.57 | 2.90 |
| Rittmann Index(**σ**) | 5.60 | 6.14 | 6.73 | 6.43 | 7.17 | 6.89 | 6.93 |

Note: LOI: loss on ignition; Fe2O3T means total iron ; A/CNK = Al2O3/ [CaO + Na2O+K2O] (mol%);

**Table A3. Full set of XRF trace element data (ppm).**

Trace element compositions of syeniteS from Inexpressible Island.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | DJS-1 | DJS-5-a | DJS-6 | DJS-7 | DJS-13 | DJS-14 | DJS-15 |
| Li | 44.19 | 50.18 | 44.76 | 42.2 | 14.28 | 14.77 | 13.8 |
| Be | 1.659 | 2.152 | 2.151 | 1.78 | 1.044 | 1.116 | 0.86 |
| Sc | 19.68 | 9.31 | 8.13 | 19.0 | 19.38 | 26.44 | 18.6 |
| V | 4.39 | 4.55 | 3.87 | 5.59 | 4.85 | 4.87 | 5.02 |
| Cr | 5.06 | 5.27 | 3.45 | 1.60 | 3.38 | 3.34 | 1.40 |
| Co | 4.80 | 2.40 | 2.12 | 1.99 | 2.20 | 2.75 | 1.36 |
| Ni | 4.22 | 3.24 | 2.48 | 1.53 | 4.59 | 2.97 | 1.26 |
| Cu | 4.89 | 4.31 | 4.37 | 2.09 | 6.00 | 5.50 | 3.05 |
| Zn | 66.37 | 58.65 | 48.56 | 58.6 | 45.77 | 59.09 | 40.1 |
| Ga | 15.9 | 18.57 | 17.68 | 20.4 | 14.19 | 14.94 | 16.7 |
| Rb | 209.4 | 266.8 | 269.4 | 235 | 139.4 | 134.8 | 146 |
| Sr | 318.4 | 290.9 | 311.9 | 345 | 346.0 | 372.2 | 378 |
| Y | 12.31 | 15.97 | 13.59 | 9.53 | 13.50 | 10.96 | 7.88 |
| Zr | 465.9 | 233.6 | 366.0 | 141 | 97.2 | 225.6 | 92.6 |
| Nb | 19.57 | 26.25 | 23. 48 | 19.8 | 8.29 | 8.60 | 6.46 |
| Sn | 4.11 | 4.49 | 4.12 | 3.50 | 2.68 | 2.79 | 1.93 |
| Cs | 7.435 | 8.681 | 8.567 | 6.87 | 3.738 | 4.414 | 3.99 |
| Ba | 3887 | 3368 | 3820 | 3999 | 4464 | 4766 | 5003 |
| La | 10.52 | 16.00 | 7.05 | 8.87 | 14.03 | 16.43 | 12.5 |
| Ce | 22.72 | 34.45 | 14.61 | 18.1 | 33.76 | 33.57 | 25.0 |
| Pr | 3.02 | 4.17 | 2.01 | 2.25 | 4.38 | 4.11 | 2.95 |
| Nd | 12.90 | 16.57 | 9.24 | 9.57 | 19.00 | 17.62 | 12.2 |
| Sm | 3.30 | 4.35 | 2.68 | 2.44 | 3.95 | 3.54 | 2.47 |
| Eu | 1.78 | 1.23 | 1.23 | 3.50 | 2.47 | 2.41 | 4.25 |
| Gd | 3.44 | 3.94 | 3.46 | 2.32 | 3.65 | 3.28 | 2.08 |
| Tb | 0.690 | 0.666 | 0.534 | 0.40 | 0.565 | 0.456 | 0.33 |
| Dy | 2.730 | 3.402 | 2.915 | 1.98 | 2.777 | 2.420 | 1.64 |
| Ho | 0.560 | 0.577 | 0.515 | 0.34 | 0.527 | 0.435 | 0.29 |
| Er | 1.320 | 1.485 | 1.339 | 0.87 | 1.367 | 1.151 | 0.76 |
| Tm | 0.280 | 0.173 | 0.170 | 0.12 | 0.180 | 0.161 | 0.11 |
| Yb | 1.055 | 1.060 | 0.871 | 0.66 | 1.198 | 1.006 | 0.72 |
| Lu | 0.211 | 0.137 | 0.130 | 0.14 | 0.176 | 0.152 | 0.14 |
| Hf | 9.31 | 5.14 | 7.65 | 2.68 | 2.34 | 4.80 | 1.91 |
| Ta | 1.81 | 2.18 | 1.90 | 1.52 | 0.63 | 0.59 | 0.38 |
| Tl | 1.199 | 1.460 | 1.496 | 1.34 | 0.654 | 0.594 | 0.71 |
| Pb | 27.93 | 32.46 | 34.89 | 32.8 | 17.18 | 14.31 | 16.2 |
| Th | 1.79 | 5.78 | 2.29 | 1.60 | 1.28 | 3.82 | 3.13 |
| U | 0.91 | 0.90 | 0.71 | 0.64 | 0.87 | 0.78 | 0.62 |
| Zr/Nb | 23.81 | 8.90 | 15.59 | 7.13 | 11.73 | 26.24 | 14.34 |
| la/Sm | 3.185 | 3.676 | 2.628 | 3.631 | 3.556 | 4.643 | 5.059 |
| Sr/Y | 25.86 | 18.21 | 22.96 | 36.23 | 25.63 | 33.94 | 47.90 |
| Nb+Y | 31.88 | 42.22 | 37.07 | 29.35 | 21.79 | 19.56 | 14.34 |
| δEu\* | 1.60 | 0.89 | 1.23 | 4.43 | 1.95 | 2.13 | 5.58 |
| La/Yb | 7.150 | 10.832 | 5.809 | 9.700 | 8.402 | 11.716 | 12.502 |
| Rb/Sr | 0.66 | 0.92 | 0.86 | 0.68 | 0.40 | 0.36 | 0.39 |
| Ba/Rb | 18.559 | 12.625 | 14.178 | 17.023 | 32.030 | 35.351 | 34.337 |

"Note: δEu\*= 2 × EuN/(SmN+GdN);

**Table A4 . Full set of Bulk Sr-Nd isotopes data.**

Whole-rock Sr-Nd isotopic compositions for the syenite domain samples from Inexpressible Island.

|  |  |  |
| --- | --- | --- |
| Sample | DJS-13 | DJS-6 |
| Age (Ma) | 477.3 | 471.8 |
| Rb（×10-6） | 146.72 | 217.95 |
| Sr（×10-6） | 367.35 | 233.57 |
| 87Rb/86Sr | 1.148837966 | 2.705991011 |
| 87Sr/86Sr | 0.718212 | 0.731002 |
| 2sm | 0.000014 | 0.000010 |
| （87Sr/86Sr）i | 0.710399 | 0.712812 |
| Sm（×10-6） | 4.159 | 3.267 |
| Nd（×10-6） | 20.145 | 14.266 |
| 147Sm/144Nd | 0.124786168 | 0.138410897 |
| 143Nd/144Nd | 0.511976 | 0.51193 |
| 2sm | 0.000008 | 0.00009 |
| （143Nd/144Nd）i | 0.511586 | 0.511502 |
| ***ε***Nd(*t*) | -8.5 | -10.3 |

Note: The calculated parameter λ147Sm=6.54×10-12y-1; λ87Rb=14.2×10-12y-1 (Steiger and Jager, 1977); The parameters used in the initial calculation of isotopes are as follows: (87Sr/86Sr) CHUR=0.7045; (147Sm/144Nd) CHUR =0.1967, (143Nd/144Nd) CHUR=0.512638 (Hart, 1984).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table A5. Zircon in situ Hf isotope ratio analysis data.**  Zircon Hf isotope compositions of syenite from Inexpressible Island area. | | | | | | | | | |
| pot | Age（Ma） | 176Yb/177Hf | ±1σ | 176Lu/177Hf | ±1σ | 176Hf/177Hf | ±1σ | εHf(*t*) | *f*Lu/Hf |
| *Dingjunshan syenite* |  |  |  |  |  |  |  |  |  |
| DJS-6-01 | 468 | 0.009986 | 0.000123 | 0.000338 | 0.000003 | 0.282272 | 0.000013 | -7.8 | -0.99 |
| DJS-6-02 | 473 | 0.011545 | 0.000142 | 0.000393 | 0.000004 | 0.282268 | 0.000013 | -7.9 | -0.99 |
| DJS-6-03 | 468 | 0.009649 | 0.000033 | 0.000320 | 0.000001 | 0.282283 | 0.000014 | -7.4 | -0.99 |
| DJS-6-04 | 473 | 0.010012 | 0.000121 | 0.000341 | 0.000003 | 0.282262 | 0.000015 | -8.1 | -0.99 |
| DJS-6-05 | 471 | 0.008826 | 0.000119 | 0.000300 | 0.000003 | 0.282268 | 0.000015 | -7.9 | -0.99 |
| DJS-6-06 | 470 | 0.010448 | 0.000072 | 0.000343 | 0.000002 | 0.282238 | 0.000014 | -9.0 | -0.99 |
| DJS-6-07 | 477 | 0.009848 | 0.000169 | 0.000326 | 0.000005 | 0.282266 | 0.000014 | -7.8 | -0.99 |
| DJS-6-08 | 467 | 0.011450 | 0.000087 | 0.000379 | 0.000002 | 0.282246 | 0.000015 | -8.8 | -0.99 |
| DJS-6-09 | 484 | 0.026407 | 0.000187 | 0.000812 | 0.000007 | 0.282257 | 0.000018 | -8.1 | -0.98 |
| DJS-6-10 | 472 | 0.013412 | 0.000055 | 0.000446 | 0.000002 | 0.282277 | 0.000015 | -7.6 | -0.99 |
| DJS-6-11 | 470 | 0.012107 | 0.000066 | 0.000391 | 0.000002 | 0.282250 | 0.000015 | -8.6 | -0.99 |
| DJS-6-12 | 474 | 0.011363 | 0.000056 | 0.000376 | 0.000002 | 0.282268 | 0.000013 | -7.8 | -0.99 |
| DJS-6-13 | 465 | 0.009995 | 0.000045 | 0.000343 | 0.000001 | 0.282248 | 0.000015 | -8.7 | -0.99 |
| DJS-6-14 | 467 | 0.010243 | 0.000025 | 0.000350 | 0.000001 | 0.282284 | 0.000015 | -7.4 | -0.99 |
| DJS-6-15 | 474 | 0.011170 | 0.000108 | 0.000367 | 0.000002 | 0.282251 | 0.000013 | -8.5 | -0.99 |
| DJS-6-16 | 474 | 0.011100 | 0.000113 | 0.000380 | 0.000003 | 0.282265 | 0.000016 | -8.0 | -0.99 |
| DJS-6-17 | 478 | 0.012109 | 0.000150 | 0.000401 | 0.000004 | 0.282239 | 0.000013 | -8.8 | -0.99 |
| DJS-6-18 | 476 | 0.020278 | 0.000242 | 0.000677 | 0.000009 | 0.282269 | 0.000016 | -7.9 | -0.98 |
| DJS-6-19 | 475 | 0.009731 | 0.000084 | 0.000331 | 0.000003 | 0.282268 | 0.000017 | -7.8 | -0.99 |
| DJS-6-20 | 464 | 0.010276 | 0.000038 | 0.000336 | 0.000001 | 0.282262 | 0.000015 | -8.3 | -0.99 |
| *Dingjunshan syenite* |  |  |  |  |  |  |  |  |  |
| DJS-13-01 | 478 | 0.015178 | 0.000115 | 0.000456 | 0.000004 | 0.282277 | 0.000015 | -7.5 | -0.99 |
| DJS-13-02 | 477 | 0.009340 | 0.000072 | 0.000285 | 0.000002 | 0.282250 | 0.000014 | -8.4 | -0.99 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| DJS-13-03 | 486 | 0.017982 | 0.000352 | 0.000523 | 0.000008 | 0.282245 | 0.000014 | -8.4 | -0.98 |
| DJS-13-04 | 474 | 0.015252 | 0.000550 | 0.000450 | 0.000017 | 0.282247 | 0.000013 | -8.6 | -0.99 |
| DJS-13-05 | 480 | 0.027531 | 0.000295 | 0.000835 | 0.000016 | 0.282273 | 0.000022 | -7.7 | -0.98 |
| DJS-13-06 | 472 | 0.012401 | 0.000095 | 0.000364 | 0.000002 | 0.282247 | 0.000014 | -8.6 | -0.99 |
| DJS-13-07 | 481 | 0.017627 | 0.000458 | 0.000515 | 0.000014 | 0.282266 | 0.000015 | -7.8 | -0.98 |
| DJS-13-08 | 475 | 0.040342 | 0.000355 | 0.001228 | 0.000021 | 0.282274 | 0.000025 | -7.9 | -0.96 |
| DJS-13-09 | 470 | 0.019479 | 0.000065 | 0.000565 | 0.000003 | 0.282248 | 0.000013 | -8.7 | -0.98 |
| DJS-13-10 | 474 | 0.022052 | 0.000064 | 0.000636 | 0.000003 | 0.282269 | 0.000016 | -7.9 | -0.98 |
| DJS-13-11 | 476 | 0.025987 | 0.000392 | 0.000734 | 0.000010 | 0.282235 | 0.000015 | -9.1 | -0.98 |
| DJS-13-12 | 477 | 0.011899 | 0.000062 | 0.000357 | 0.000003 | 0.282251 | 0.000013 | -8.4 | -0.99 |
| DJS-13-13 | 477 | 0.009158 | 0.000036 | 0.000275 | 0.000001 | 0.282263 | 0.000017 | -7.9 | -0.99 |
| DJS-13-14 | 481 | 0.020911 | 0.000191 | 0.000598 | 0.000003 | 0.282256 | 0.000014 | -8.2 | -0.98 |
| DJS-13-15 | 474 | 0.008731 | 0.000073 | 0.000259 | 0.000002 | 0.282278 | 0.000015 | -7.5 | -0.99 |
| DJS-13-16 | 484 | 0.021841 | 0.000521 | 0.000621 | 0.000013 | 0.282245 | 0.000014 | -8.5 | -0.98 |
| DJS-13-17 | 473 | 0.013983 | 0.000087 | 0.000406 | 0.000001 | 0.282263 | 0.000013 | -8.0 | -0.99 |
| DJS-13-18 | 481 | 0.013206 | 0.000112 | 0.000390 | 0.000003 | 0.282262 | 0.000013 | -7.9 | -0.99 |
| DJS-13-19 | 480 | 0.011313 | 0.000210 | 0.000343 | 0.000006 | 0.282239 | 0.000015 | -8.7 | -0.99 |
| DJS-13-20 | 479 | 0.009516 | 0.000101 | 0.000300 | 0.000005 | 0.282250 | 0.000016 | -8.4 | -0.99 |

Note: *ε*Hf(*t*)=10000×{[(176Hf/177Hf) s−(176Lu/177Hf)s×(eλ*t−*1)] / [(176Hf/177Hf)CHUR,0−(176Lu/177Hf)CHUR×(eλ*t*−1)]−1}. *f*Lu/Hf=(176Hf/177Hf)s/(176Lu/177Hf)CHUR−1. λ=1.867×10−11a−1; (176Lu/177Hf) S and (176Hf/177Hf)S are samples standard vaule；(176Lu/177Hf) CHUR=0.0332; (176Hf/177Hf) CHUR,0=0.282772(Blichert-Toft and Albarède F, 1998); (176Lu/177Hf)DM=0.28325；(176Lu/177Hf) Average Crust =0.015(Vervoort and Blichert-Toft, 1999)；*fCC*=[(176Lu/177Hf) Average Crust /(176Hf/177Hf)CHUR]−1；*f*S = *f*Lu/Hf; *t* is Zircon crystallization age