**Supp. Table 8:** Hf isotope compositions of zircons from the Nanwenhe gneissic granites.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sample** | **Age (Ma)** | **εHf(t)** | **1s** | **tDM1 (Ga)** | **tDM2 (Ga)** | **References** |
| WS13-8 |  |  |  |  |  | **Zhou et al., 2017** |
| 1 | 432 | -1.57 |  | 1.11 | 1.51 |
| 2 | 435 | -1.12 |  | 1.10 | 1.49 |
| 3 | 433 | -3.91 |  | 1.21 | 1.66 |
| 4 | 429 | 1.86 |  | 0.98 | 1.29 |
| 5c | 822 | 4.46 |  | 1.21 | 1.43 |
| 5r | 427 | -3.00 |  | 1.17 | 1.60 |
| 7m | 523 | -1.74 |  | 1.20 | 1.59 |
| 9 | 424 | -5.28 |  | 1.26 | 1.74 |
| 11c | 855 | -1.12 |  | 1.46 | 1.81 |
| 12c | 1263 | -5.91 |  | 1.99 | 2.42 |
| 15 | 423 | -0.14 |  | 1.07 | 1.42 |
| 16 | 433 | 0.70 |  | 1.03 | 1.37 |
| 17 | 432 | 1.96 |  | 0.97 | 1.29 |
| 18 | 427 | 1.94 |  | 0.97 | 1.29 |
| 19 | 446 | -2.95 |  | 1.20 | 1.61 |
| 22c | 834 | -6.49 |  | 1.66 | 2.13 |
| 22r | 433 | -0.42 |  | 1.07 | 1.44 |
| 23 | 433 | -0.12 |  | 1.05 | 1.42 |
| 24 | 423 | -4.43 |  | 1.25 | 1.69 |
| 25 | 426 | -8.87 |  | 1.40 | 1.97 |
| 14WS-7 |  |  |  |  |  |
| 1 | 429 | -1.01 |  | 1.11 | 1.48 |
| 2c | 854 | 3.18 |  | 1.30 | 1.54 |
| 5 | 429 | -4.62 |  | 1.27 | 1.70 |
| 6 | 429 | -8.36 |  | 1.40 | 1.94 |
| 10 | 429 | 1.22 |  | 1.01 | 1.33 |
| 12 | 841 | -6.14 |  | 1.63 | 2.11 |
| 13 | 429 | -0.13 |  | 1.06 | 1.42 |
| 15 | 429 | -3.96 |  | 1.22 | 1.66 |
| 17c | 749 | 1.89 |  | 1.25 | 1.54 |
| 18m | 540 | -1.67 |  | 1.22 | 1.60 |
| 20 | 570 | 3.16 |  | 1.04 | 1.32 |
| 21 | 429 | -0.69 |  | 1.07 | 1.46 |
| 22 | 429 | -4.97 |  | 1.25 | 1.72 |
| 23 | 429 | -0.47 |  | 1.06 | 1.44 |
| 24 | 429 | -2.79 |  | 1.15 | 1.59 |
| 25 | 429 | -2.16 |  | 1.13 | 1.55 |
| 26m | 513 | 2.20 |  | 1.04 | 1.34 |
| 27 | 429 | -1.89 |  | 1.12 | 1.53 |
| 28 | 429 | -0.76 |  | 1.08 | 1.46 |
| 14WS-16 |  |  |  |  |  |
| 1 | 428 | -8.08 |  | 1.37 | 1.92 |
| 3 | 431 | -2.51 |  | 1.17 | 1.57 |
| 4c | 789 | 3.57 |  | 1.21 | 1.46 |
| 5c | 783 | 2.50 |  | 1.26 | 1.53 |
| 8 | 433 | -4.13 |  | 1.22 | 1.67 |
| 10c | 1475 | 1.47 |  | 1.88 | 2.12 |
| 11 | 433 | -3.84 |  | 1.26 | 1.66 |
| 12c | 1198 | -2.31 |  | 1.81 | 2.14 |
| 13 | 439 | -3.46 |  | 1.21 | 1.64 |
| 14m | 544 | -1.51 |  | 1.23 | 1.59 |
| 15 | 431 | -5.21 |  | 1.26 | 1.74 |
| 17c | 1874 | -4.95 |  | 2.48 | 2.82 |
| 18 | 433 | -5.51 |  | 1.29 | 1.76 |
| 19 | 436 | -6.01 |  | 1.32 | 1.79 |
| 20 | 425 | -2.39 |  | 1.15 | 1.56 |
| 21c | 1834 | -7.56 |  | 2.53 | 2.95 |
| 22 | 698 | -17.71 |  | 1.97 | 2.72 |
| 23 | 435 | -1.50 |  | 1.12 | 1.51 |
| 24 | 434 | -5.80 |  | 1.31 | 1.78 |
| 26c | 1573 | 7.70 |  | 1.72 | 1.81 |
| 27c | 806 | -2.38 |  | 1.47 | 1.85 |
| 28c | 804 | -3.87 |  | 1.53 | 1.94 |
| 29c | 2237 | -5.50 |  | 2.79 | 3.13 |
| 30c | 811 | 5.43 |  | 1.16 | 1.36 |
| 31m | 576 | -10.04 |  | 1.57 | 2.15 |
| WS13-11-1 |  |  |  |  |  |
| 1 | 427 | -4.64 |  | 1.27 | 1.70 |
| 4 | 424 | -9.91 |  | 1.50 | 2.03 |
| 6 | 420 | -1.20 |  | 1.08 | 1.48 |
| 8 | 435 | -1.87 |  | 1.13 | 1.53 |
| 9 | 428 | -3.03 |  | 1.20 | 1.60 |
| 11 | 438 | -4.98 |  | 1.25 | 1.73 |
| 15c | 1389 | 10.45 |  | 1.46 | 1.49 |
| WS13-24 |  |  |  |  |  |
| 1 | 442 | -2.50 |  | 1.18 | 1.58 |
| 4 | 436 | -3.81 |  | 1.21 | 1.66 |
| 5 | 427 | -5.74 |  | 1.28 | 1.77 |
| 6 | 437 | -4.36 |  | 1.25 | 1.69 |
| 7 | 423 | -1.82 |  | 1.13 | 1.52 |
| 8 | 424 | -4.71 |  | 1.25 | 1.70 |
| 9 | 422 | -4.62 |  | 1.27 | 1.70 |
| 10 | 422 | -4.76 |  | 1.25 | 1.71 |
| 12 | 424 | -3.86 |  | 1.23 | 1.65 |
| 13 | 431 | -2.33 |  | 1.15 | 1.56 |
| 17 | 441 | -3.64 |  | 1.20 | 1.65 |
| 16r | 426 | -0.82 |  | 1.08 | 1.46 |
| 19c | 860 | 5.00 |  | 1.22 | 1.43 |
| 21c | 662 | -6.01 |  | 1.49 | 1.97 |
| 24c | 741 | 5.91 |  | 1.09 | 1.28 |
| 26c | 832 | 6.71 |  | 1.13 | 1.30 |
| 27c | 778 | -3.15 |  | 1.47 | 1.88 |
| 30c | 678 | -4.62 |  | 1.44 | 1.89 |
| 32c | 863 | 2.02 | 　 | 1.34 | 1.62 |
| 11WS-12-1 | 　 | 　 | 　 | 　 | 　 | **Xu et al., 2016** |
| 1 | 437 | -6.2 |  |  | 1.807 |
| 2 | 430 | 0.1 |  |  | 1.406 |
| 3 | 440 | -3.6 |  |  | 1.644 |
| 4 | 438 | 0.4 |  |  | 1.392 |
| 5 | 440 | -1.1 |  |  | 1.491 |
| 7 | 431 | 2.2 |  |  | 1.272 |
| 8 | 443 | -1.3 |  |  | 1.504 |
| 9 | 442 | -4.2 |  |  | 1.687 |
| 10 | 431 | 0.4 |  |  | 1.388 |
| 11 | 440 | -7.1 |  |  | 1.864 |
| 12 | 440 | -7.3 |  |  | 1.875 |
| 13 | 439 | 0.7 |  |  | 1.373 |
| 14 | 443 | -1.4 |  |  | 1.51 |
| 15 | 438 | -1.4 |  |  | 1.505 |
| 16 | 449 | -0.9 |  |  | 1.485 |
| 11WS-13-1 |  |  |  |  |  |
| 1 | 440 | -3.6 |  |  | 1.646 |
| 2 | 441 | 1.1 |  |  | 1.352 |
| 3 | 438 | -1.9 |  |  | 1.54 |
| 4 | 422 | -0.8 |  |  | 1.454 |
| 5 | 429 | -2 |  |  | 1.539 |
| 6 | 422 | -3.2 |  |  | 1.609 |
| 7 | 425 | -1 |  |  | 1.469 |
| 8 | 442 | -3.4 |  |  | 1.634 |
| 10 | 430 | -2.3 |  |  | 1.557 |
| 11 | 434 | -0.6 |  |  | 1.449 |
| 12 | 444 | -0.5 |  |  | 1.452 |
| 14 | 438 | -2.2 |  |  | 1.555 |
| 15 | 424 | -5.1 |  |  | 1.73 |
| 16 | 444 | -2.8 |  |  | 1.599 |
| 17 | 437 | -2.1 |  |  | 1.548 |
| 18 | 430 | -2.3 |  |  | 1.556 |
| 19 | 430 | -8.7 |  |  | 1.958 |
| 20 | 434 | -2.6 |  |  | 1.576 |
| 21 | 438 | -5.2 |  |  | 1.742 |
| 22 | 437 | -1.6 |  |  | 1.519 |
| 23 | 429 | -9 |  |  | 1.974 |
| 24 | 429 | -5.4 |  |  | 1.748 |
| 25 | 439 | -5.6 |  |  | 1.767 |
| 26 | 440 | -6.5 |  |  | 1.826 |
| 27 | 433 | -2.4 |  |  | 1.565 |
| 28 | 433 | -4.8 |  |  | 1.715 |
| 13NWH-21 |  |  |  |  |  |
| 3 | 414 | -1 |  |  | 1.47 |
| 4 | 416 | -5 |  |  | 1.718 |
| 5 | 425 | -2.1 |  |  | 1.542 |
| 6 | 412 | -2.4 |  |  | 1.56 |
| 7 | 418 | -5.8 |  |  | 1.772 |
| 8 | 422 | -4.9 |  |  | 1.712 |
| 9 | 425 | -3 |  |  | 1.595 |
| 10 | 415 | -7 |  |  | 1.845 |
| 11 | 414 | -3.7 |  |  | 1.64 |
| 12 | 424 | -4 |  |  | 1.664 |
| 13 | 447 | -2.6 |  |  | 1.573 |
| 15 | 421 | -6 |  |  | 1.786 |
| 16 | 417 | -4.9 |  |  | 1.716 |
| 17 | 444 | 2.6 |  |  | 1.27 |
| 18 | 429 | -4.3 |  |  | 1.678 |
| 21 | 425 | -3.9 |  |  | 1.655 |
| 22 | 420 | -6.1 |  |  | 1.79 |
| 23 | 462 | 1 |  |  | 1.38 |
| 24 | 432 | -3.7 |  |  | 1.642 |
| 25 | 426 | -1.1 |  |  | 1.478 |
| 26 | 432 | -4.3 |  |  | 1.684 |
| 27 | 425 | -2.5 |  |  | 1.563 |
| 13NWH-22 |  |  |  |  |  |
| 1 | 427 | -6.2 |  |  | 1.797 |
| 2 | 433 | -13.4 |  |  | 2.252 |
| 3 | 430 | -5.2 |  |  | 1.739 |
| 4 | 428 | -5.9 |  |  | 1.781 |
| 5 | 427 | -5.8 |  |  | 1.77 |
| 6 | 428 | -8.2 |  |  | 1.922 |
| 7 | 424 | -5.3 |  |  | 1.738 |
| 8 | 420 | -6.3 |  |  | 1.798 |
| 9 | 432 | -6 |  |  | 1.788 |
| 10 | 427 | -7.9 |  |  | 1.906 |
| 11 | 435 | -5.2 |  |  | 1.739 |
| 13 | 428 | -3.7 |  |  | 1.645 |
| 14 | 417 | -5.9 |  |  | 1.773 |
| 15 | 424 | -11.5 |  |  | 2.127 |
| 16 | 430 | -4.3 |  |  | 1.68 |
| 17 | 428 | -5.3 |  |  | 1.745 |
| 18 | 431 | -9.7 |  |  | 2.022 |
| 19 | 431 | -7.1 |  |  | 1.854 |
| 22 | 425 | -7.8 |  |  | 1.894 |
| 24 | 447 | -4.4 |  |  | 1.703 |
| 13NWH-28 |  |  |  |  |  |
| 1 | 429 | -4.1 |  |  | 1.668 |
| 2 | 421 | -2.7 |  |  | 1.571 |
| 3 | 416 | -2.7 |  |  | 1.57 |
| 4 | 429 | -1.3 |  |  | 1.492 |
| 5 | 426 | -2.4 |  |  | 1.559 |
| 6 | 439 | -1.7 |  |  | 1.522 |
| 7 | 432 | -2 |  |  | 1.541 |
| 8 | 435 | -1.9 |  |  | 1.535 |
| 10 | 428 | -3.6 |  |  | 1.634 |
| 11 | 426 | -1.4 |  |  | 1.497 |
| 12 | 420 | -5.6 |  |  | 1.754 |
| 13 | 416 | -2.6 |  |  | 1.566 |
| 14 | 427 | -2.1 |  |  | 1.538 |
| 15 | 428 | -4.5 |  |  | 1.69 |
| 16 | 439 | -3.2 |  |  | 1.621 |
| 17 | 427 | -2.6 |  |  | 1.572 |
| 18 | 419 | -4.3 |  |  | 1.671 |
| 19 | 438 | -2.3 |  |  | 1.56 |
| 20 | 426 | -2 |  |  | 1.531 |
| 21 | 431 | -1.5 |  |  | 1.508 |
| 22 | 436 | -1.9 |  |  | 1.536 |
| 23 | 434 | -2.9 |  |  | 1.598 |
| 24 | 410 | -5.4 |  |  | 1.737 |
| 25 | 422 | -5.9 |  |  | 1.776 |
| 27 | 441 | -0.6 |  |  | 1.459 |
| 28 | 423 | -7.8 |  |  | 1.894 |

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