表1泰北地区晚泥盆世岩浆岩锆石U-Pb年龄（谐和度＞90%）

Tab. 1Zircon U-Pb Ages of Late Devonian Magmatic Rocks in Northern Thailand (degree of harmony＞90%)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | 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 | Concordance | |
|  |  |  | Ratio | 1sigma | Ratio | 1sigma | Ratio | 1sigma | Age (Ma) | 1sigma | Age (Ma) | 1sigma | Age (Ma) | 1sigma |  |
| N12-15-1g-01 | 192 | 240 | 0.0582 | 0.0038 | 0.4804 | 0.0290 | 0.0588 | 0.0010 | 539 | 143 | 398 | 19.9 | 368 | 6.3 | 92% |
| N12-15-1g-02 | 166 | 215 | 0.0573 | 0.0046 | 0.4925 | 0.0353 | 0.0596 | 0.0012 | 506 | 206 | 407 | 24.0 | 373 | 7.0 | 91% |
| N12-15-1g-03 | 692 | 684 | 0.0570 | 0.0032 | 0.4514 | 0.0240 | 0.0574 | 0.0009 | 500 | 124 | 378 | 16.8 | 360 | 5.6 | 95% |
| N12-15-1g-04 | 466 | 401 | 0.0567 | 0.0037 | 0.4522 | 0.0282 | 0.0583 | 0.0010 | 480 | 146 | 379 | 19.7 | 365 | 6.3 | 96% |
| N12-15-1g-05 | 924 | 610 | 0.0579 | 0.0039 | 0.4657 | 0.0295 | 0.0583 | 0.0011 | 524 | 146 | 388 | 20.4 | 365 | 6.4 | 93% |
| N12-15-1g-06 | 236 | 341 | 0.0566 | 0.0041 | 0.4535 | 0.0309 | 0.0581 | 0.0012 | 476 | 161 | 380 | 21.6 | 364 | 7.5 | 95% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| N12-15-2g-01 | 432 | 413 | 0.0583 | 0.0027 | 0.4646 | 0.0202 | 0.0582 | 0.0007 | 539 | 102 | 387 | 14.0 | 365 | 4.6 | 93% |
| N12-15-2g-02 | 178 | 230 | 0.0572 | 0.0037 | 0.4591 | 0.0268 | 0.0576 | 0.0009 | 498 | 141 | 384 | 18.6 | 361 | 5.6 | 93% |
| N12-15-2g-03 | 330 | 368 | 0.0563 | 0.0032 | 0.4566 | 0.0239 | 0.0583 | 0.0009 | 465 | 126 | 382 | 16.6 | 365 | 5.4 | 95% |
| N12-15-2g-04 | 189 | 240 | 0.0587 | 0.0033 | 0.4646 | 0.0247 | 0.0577 | 0.0010 | 567 | 124 | 387 | 17.1 | 361 | 6.1 | 93% |
| N12-15-2g-05 | 126 | 179 | 0.0528 | 0.0041 | 0.4584 | 0.0310 | 0.0577 | 0.0011 | 317 | 176 | 383 | 21.6 | 362 | 6.9 | 94% |
| N12-15-2g-06 | 119 | 170 | 0.0582 | 0.0044 | 0.4790 | 0.0327 | 0.0603 | 0.0025 | 539 | 167 | 397 | 22.5 | 377 | 15.2 | 94% |
| N12-15-2g-07 | 424 | 392 | 0.0591 | 0.0036 | 0.4700 | 0.0277 | 0.0580 | 0.0010 | 572 | 133 | 391 | 19.1 | 363 | 6.0 | 92% |
| N12-15-2g-08 | 116 | 157 | 0.0543 | 0.0048 | 0.4980 | 0.0357 | 0.0623 | 0.0013 | 383 | 198 | 410 | 24.2 | 390 | 7.8 | 94% |
| N12-15-2g-09 | 50.1 | 73.3 | 0.0600 | 0.0033 | 0.4715 | 0.0242 | 0.0580 | 0.0009 | 606 | 117 | 392 | 16.7 | 364 | 5.5 | 92% |
| N12-15-2g-10 | 96.0 | 108 | 0.0545 | 0.0022 | 0.4350 | 0.0175 | 0.0580 | 0.0007 | 394 | 92.6 | 367 | 12.4 | 363 | 4.0 | 99% |
| N12-15-2g-11 | 46.2 | 67.1 | 0.0553 | 0.0032 | 0.4394 | 0.0246 | 0.0574 | 0.0008 | 433 | 125 | 370 | 17.4 | 360 | 4.9 | 97% |
| N12-15-2g-12 | 46.5 | 64.7 | 0.0538 | 0.0033 | 0.4338 | 0.0243 | 0.0571 | 0.0010 | 361 | 137 | 366 | 17.2 | 358 | 6.0 | 97% |
| N12-15-2g-13 | 153 | 154 | 0.0556 | 0.0024 | 0.4360 | 0.0177 | 0.0565 | 0.0007 | 435 | 91.7 | 367 | 12.5 | 354 | 4.2 | 96% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| N12-15-3-01 | 585 | 681 | 0.0549 | 0.0022 | 0.4452 | 0.0183 | 0.0587 | 0.0007 | 409 | 86.1 | 374 | 12.8 | 368 | 4.0 | 98% |
| N12-15-3-02 | 754 | 907 | 0.0542 | 0.0018 | 0.4360 | 0.0144 | 0.0583 | 0.0006 | 389 | 75.9 | 367 | 10.2 | 365 | 3.8 | 99% |
| N12-15-3-03 | 678 | 728 | 0.0534 | 0.0021 | 0.4234 | 0.0164 | 0.0577 | 0.0007 | 346 | 90.7 | 359 | 11.7 | 361 | 4.2 | 99% |
| N12-15-3-04 | 2954 | 2810 | 0.0522 | 0.0018 | 0.4174 | 0.0143 | 0.0579 | 0.0007 | 300 | 77.8 | 354 | 10.2 | 363 | 4.1 | 97% |
| N12-15-3-05 | 1430 | 1290 | 0.0513 | 0.0020 | 0.4092 | 0.0156 | 0.0578 | 0.0007 | 254 | 88.9 | 348 | 11.2 | 362 | 4.0 | 96% |
| N12-15-3-06 | 1655 | 1663 | 0.0508 | 0.0019 | 0.4045 | 0.0151 | 0.0575 | 0.0007 | 235 | 85.2 | 345 | 10.9 | 361 | 4.0 | 95% |
| N12-15-3-07 | 433 | 724 | 0.0537 | 0.0025 | 0.4177 | 0.0193 | 0.0565 | 0.0008 | 367 | 105.5 | 354 | 13.9 | 354 | 4.7 | 99% |
| N12-15-3-08 | 402 | 572 | 0.0547 | 0.0025 | 0.4419 | 0.0197 | 0.0587 | 0.0008 | 467 | 104 | 372 | 13.9 | 368 | 4.9 | 98% |
| N12-15-3-09 | 896 | 1190 | 0.0498 | 0.0020 | 0.4007 | 0.0165 | 0.0579 | 0.0008 | 187 | 89.8 | 342 | 12.0 | 363 | 4.6 | 94% |
| N12-15-3-10 | 1550 | 1463 | 0.0495 | 0.0022 | 0.3808 | 0.0165 | 0.0556 | 0.0008 | 169 | 134 | 328 | 12.2 | 349 | 4.6 | 93% |
| N12-15-3-11 | 1435 | 1324 | 0.0508 | 0.0022 | 0.3951 | 0.0173 | 0.0562 | 0.0008 | 232 | 100.0 | 338 | 12.6 | 353 | 4.6 | 95% |
| ~~N12-15-3-12~~ | ~~263~~ | ~~394~~ | ~~0.0517~~ | ~~0.0028~~ | ~~0.4951~~ | ~~0.0271~~ | ~~0.0694~~ | ~~0.0011~~ | ~~272~~ | ~~128~~ | ~~408~~ | ~~18.4~~ | ~~432~~ | ~~6.4~~ | ~~94%~~ |
| N12-15-3-13 | 604 | 842 | 0.0507 | 0.0025 | 0.4130 | 0.0201 | 0.0589 | 0.0009 | 228 | 108 | 351 | 14.4 | 369 | 5.4 | 94% |
| N12-15-3-14 | 2076 | 1820 | 0.0511 | 0.0024 | 0.3996 | 0.0184 | 0.0566 | 0.0008 | 243 | 73 | 341 | 13.3 | 355 | 5.1 | 96% |
| N12-15-3-15 | 915 | 1016 | 0.0508 | 0.0025 | 0.4047 | 0.0201 | 0.0578 | 0.0009 | 232 | 117 | 345 | 14.5 | 362 | 5.5 | 95% |
| N12-15-3-16 | 618 | 1259 | 0.0506 | 0.0025 | 0.4101 | 0.0201 | 0.0588 | 0.0010 | 233 | 113 | 349 | 14.5 | 368 | 6.0 | 94% |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| N12-15-2-01 | 1808 | 1740 | 0.0521 | 0.0011 | 0.4191 | 0.0097 | 0.0580 | 0.0005 | 300 | 50.0 | 355 | 6.9 | 363 | 3.3 | 97% |
| N12-15-2-02 | 863 | 951 | 0.0526 | 0.0012 | 0.4250 | 0.0093 | 0.0583 | 0.0005 | 322 | 50.0 | 360 | 6.6 | 365 | 2.8 | 98% |
| N12-15-2-03 | 961 | 1096 | 0.0538 | 0.0012 | 0.4367 | 0.0096 | 0.0586 | 0.0005 | 365 | 45.4 | 368 | 6.8 | 367 | 2.9 | 99% |
| N12-15-2-04 | 853 | 977 | 0.0562 | 0.0013 | 0.4549 | 0.0106 | 0.0586 | 0.0005 | 457 | 51.8 | 381 | 7.4 | 367 | 2.9 | 96% |
| N12-15-2-05 | 952 | 994 | 0.0545 | 0.0012 | 0.4397 | 0.0100 | 0.0583 | 0.0005 | 391 | 52 | 370 | 7.0 | 365 | 2.9 | 98% |
| N12-15-2-06 | 873 | 1145 | 0.0553 | 0.0012 | 0.4523 | 0.0095 | 0.0593 | 0.0005 | 433 | 50 | 379 | 6.7 | 371 | 2.8 | 98% |
| N12-15-2-07 | 2127 | 1652 | 0.0533 | 0.0011 | 0.4326 | 0.0093 | 0.0587 | 0.0005 | 343 | 46.3 | 365 | 6.6 | 367 | 2.8 | 99% |
| N12-15-2-08 | 441 | 485 | 0.0572 | 0.0019 | 0.4741 | 0.0154 | 0.0602 | 0.0006 | 498 | 69 | 394 | 10.6 | 377 | 3.5 | 95% |
| N12-15-2-09 | 1297 | 1136 | 0.0533 | 0.0013 | 0.4315 | 0.0101 | 0.0586 | 0.0005 | 343 | 54 | 364 | 7.2 | 367 | 2.8 | 99% |
| N12-15-2-10 | 2551 | 1615 | 0.0546 | 0.0012 | 0.4431 | 0.0098 | 0.0587 | 0.0005 | 398 | 52.8 | 372 | 6.9 | 368 | 3.1 | 98% |
| N12-15-2-11 | 4021 | 2485 | 0.0541 | 0.0011 | 0.4366 | 0.0093 | 0.0585 | 0.0005 | 372 | 48.1 | 368 | 6.6 | 366 | 2.9 | 99% |
| N12-15-2-12 | 830 | 738 | 0.0567 | 0.0017 | 0.4639 | 0.0137 | 0.0595 | 0.0005 | 480 | 64.8 | 387 | 9.5 | 372 | 3.2 | 96% |
| N12-15-2-13 | 971 | 967 | 0.0543 | 0.0014 | 0.4397 | 0.0114 | 0.0587 | 0.0005 | 389 | 57.4 | 370 | 8.0 | 368 | 3.0 | 99% |
| N12-15-2-14 | 1776 | 1331 | 0.0585 | 0.0016 | 0.4888 | 0.0139 | 0.0607 | 0.0006 | 546 | 61 | 404 | 9.5 | 380 | 3.6 | 93% |
| N12-15-2-15 | 488 | 615 | 0.0562 | 0.0017 | 0.4533 | 0.0140 | 0.0585 | 0.0006 | 461 | 67 | 380 | 9.8 | 367 | 3.7 | 96% |
| N12-15-2-16 | 661 | 795 | 0.0541 | 0.0016 | 0.4262 | 0.0124 | 0.0571 | 0.0005 | 376 | 66.7 | 360 | 8.8 | 358 | 2.9 | 99% |

表2 泰北地区晚泥盆世岩浆岩锆石Hf同位素测试结果

Tab.2 Zircon Hf Isotopic Test Results of Late Devonian Magmatic Rocks in Northern Thailand

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 测试点号 | Age | 176Lu/177Hf | 1σ | 176Hf/177Hf | 1σ | 176Hf/177Hf(t) | 176Hf/177Hf(t) | eHf | eHf(t) | TDM1 | fLu/Hf | TDM2 |
| （Ma） |  |  |  |  | (new) | (Chon) |  |  | (Ma) |  | (Ma) |
| N12-15-1g-01 | 365.60 | 0.002407 | 0.000015 | 0.282776 | 0.000015 | 0.282760 | 0.282545 | 0.14 | 7.61 | 701 | -0.93 | 879 |
| N12-15-1g-02 | 365.60 | 0.002206 | 0.000023 | 0.282868 | 0.000018 | 0.282853 | 0.282545 | 3.39 | 10.91 | 562 | -0.93 | 669 |
| N12-15-1g-04 | 365.60 | 0.003632 | 0.000016 | 0.282789 | 0.000017 | 0.282764 | 0.282545 | 0.61 | 7.78 | 705 | -0.89 | 868 |
| N12-15-1g-05 | 365.60 | 0.005043 | 0.000036 | 0.282734 | 0.000020 | 0.282699 | 0.282545 | -1.36 | 5.47 | 823 | -0.85 | 1015 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| N12-15-2g-01 | 362.50 | 0.003061 | 0.000052 | 0.282721 | 0.000018 | 0.282700 | 0.282547 | -1.82 | 5.43 | 796 | -0.91 | 1015 |
| N12-15-2g-02 | 362.50 | 0.002807 | 0.000053 | 0.282736 | 0.000048 | 0.282717 | 0.282547 | -1.27 | 6.04 | 768 | -0.92 | 976 |
| N12-15-2g-03 | 362.50 | 0.002918 | 0.000057 | 0.282779 | 0.000020 | 0.282759 | 0.282547 | 0.25 | 7.53 | 706 | -0.91 | 882 |
| N12-15-2g-04 | 362.50 | 0.001775 | 0.000033 | 0.282778 | 0.000026 | 0.282766 | 0.282547 | 0.23 | 7.78 | 685 | -0.95 | 865 |
| N12-15-2g-05 | 362.50 | 0.003185 | 0.000040 | 0.282776 | 0.000014 | 0.282755 | 0.282547 | 0.15 | 7.36 | 716 | -0.90 | 892 |
| N12-15-2g-06 | 362.50 | 0.001723 | 0.000021 | 0.282721 | 0.000016 | 0.282710 | 0.282547 | -1.80 | 5.77 | 767 | -0.95 | 993 |
| N12-15-2g-07 | 362.50 | 0.001861 | 0.000008 | 0.282751 | 0.000013 | 0.282739 | 0.282547 | -0.74 | 6.80 | 726 | -0.94 | 928 |
| N12-15-2g-08 | 362.50 | 0.004976 | 0.000048 | 0.282793 | 0.000027 | 0.282759 | 0.282547 | 0.73 | 7.51 | 728 | -0.85 | 883 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| N12-15-2-01 | 367.70 | 0.002020 | 0.000037 | 0.282737 | 0.000015 | 0.282723 | 0.282543 | -1.25 | 6.35 | 750 | -0.94 | 960 |
| N12-15-2-02 | 367.70 | 0.005408 | 0.000151 | 0.282766 | 0.000017 | 0.282729 | 0.282543 | -0.22 | 6.56 | 780 | -0.84 | 947 |
| N12-15-2-05 | 367.70 | 0.002874 | 0.000084 | 0.282752 | 0.000015 | 0.282732 | 0.282543 | -0.71 | 6.68 | 746 | -0.91 | 939 |
| N12-15-2-06 | 367.70 | 0.004894 | 0.000037 | 0.282708 | 0.000018 | 0.282675 | 0.282543 | -2.25 | 4.65 | 859 | -0.85 | 1068 |
| N12-15-2-07 | 367.70 | 0.001761 | 0.000067 | 0.282750 | 0.000014 | 0.282738 | 0.282543 | -0.77 | 6.89 | 726 | -0.95 | 926 |
| N12-15-2-08 | 367.70 | 0.003410 | 0.000033 | 0.282710 | 0.000017 | 0.282687 | 0.282543 | -2.18 | 5.08 | 820 | -0.90 | 1041 |
| N12-15-2-10 | 367.70 | 0.004194 | 0.000044 | 0.282830 | 0.000014 | 0.282801 | 0.282543 | 2.03 | 9.11 | 654 | -0.87 | 785 |
| N12-15-2-11 | 367.70 | 0.002727 | 0.000140 | 0.282757 | 0.000015 | 0.282739 | 0.282543 | -0.51 | 6.91 | 734 | -0.92 | 925 |
| N12-15-2-12 | 367.70 | 0.002605 | 0.000039 | 0.282496 | 0.000177 | 0.282478 | 0.282543 | -9.77 | -2.32 | 1117 | -0.92 | 1509 |
| N12-15-2-13 | 367.70 | 0.002695 | 0.000017 | 0.282745 | 0.000014 | 0.282727 | 0.282543 | -0.95 | 6.49 | 752 | -0.92 | 952 |
| N12-15-2-14 | 367.70 | 0.001833 | 0.000073 | 0.282758 | 0.000030 | 0.282746 | 0.282543 | -0.49 | 7.16 | 716 | -0.94 | 909 |
| N12-15-2-15 | 367.70 | 0.003726 | 0.000042 | 0.282563 | 0.000156 | 0.282537 | 0.282543 | -7.39 | -0.21 | 1051 | -0.89 | 1375 |
| N12-15-2-16 | 367.70 | 0.004102 | 0.000029 | 0.282786 | 0.000016 | 0.282758 | 0.282543 | 0.50 | 7.59 | 720 | -0.88 | 881 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| N12-15-3-02 | 361.30 | 0.001758 | 0.000007 | 0.282670 | 0.000013 | 0.282658 | 0.282547 | -3.60 | 3.93 | 841 | -0.95 | 1109 |
| N12-15-3-03 | 361.30 | 0.001241 | 0.000005 | 0.282706 | 0.000012 | 0.282698 | 0.282547 | -2.32 | 5.33 | 778 | -0.96 | 1020 |
| N12-15-3-04 | 361.30 | 0.002852 | 0.000045 | 0.282602 | 0.000065 | 0.282582 | 0.282547 | -6.03 | 1.24 | 968 | -0.91 | 1279 |
| N12-15-3-05 | 361.30 | 0.002787 | 0.000028 | 0.282673 | 0.000032 | 0.282654 | 0.282547 | -3.49 | 3.79 | 861 | -0.92 | 1118 |
| N12-15-3-06 | 361.30 | 0.002307 | 0.000027 | 0.282677 | 0.000033 | 0.282662 | 0.282547 | -3.34 | 4.06 | 843 | -0.93 | 1101 |
| N12-15-3-07 | 361.30 | 0.000749 | 0.000008 | 0.282798 | 0.000034 | 0.282793 | 0.282547 | 0.91 | 8.69 | 640 | -0.98 | 807 |
| N12-15-3-08 | 361.30 | 0.001098 | 0.000024 | 0.282720 | 0.000017 | 0.282712 | 0.282547 | -1.85 | 5.84 | 756 | -0.97 | 988 |
| N12-15-3-09 | 361.30 | 0.002143 | 0.000016 | 0.282672 | 0.000016 | 0.282658 | 0.282547 | -3.52 | 3.92 | 846 | -0.94 | 1110 |
| N12-15-3-10 | 361.30 | 0.002528 | 0.000028 | 0.282662 | 0.000012 | 0.282645 | 0.282547 | -3.89 | 3.45 | 871 | -0.92 | 1139 |
| N12-15-3-13 | 361.30 | 0.002277 | 0.000046 | 0.282672 | 0.000018 | 0.282657 | 0.282547 | -3.53 | 3.87 | 850 | -0.93 | 1113 |
| N12-15-3-14 | 361.30 | 0.001196 | 0.000006 | 0.282675 | 0.000013 | 0.282667 | 0.282547 | -3.42 | 4.24 | 821 | -0.96 | 1089 |
| N12-15-3-15 | 361.30 | 0.002062 | 0.000009 | 0.282657 | 0.000014 | 0.282643 | 0.282547 | -4.07 | 3.39 | 867 | -0.94 | 1144 |
| N12-15-3-16 | 361.30 | 0.001575 | 0.000011 | 0.282698 | 0.000015 | 0.282688 | 0.282547 | -2.61 | 4.97 | 796 | -0.95 | 1043 |

表3泰北地区晚泥盆世岩浆岩主量元素测试结果

Tab.3Test Results of Macroelement of Late Devonian Magmatic Rocks in Northern Thailand

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | SiO2 | TiO2 | Al2O3 | Fe2O3 | MnO | MgO | CaO | Na2O | K2O | P2O5 | LOI | TOL |
| N12-15-2g-1 | 72.09 | 0.25 | 13.49 | 2.90 | 0.05 | 0.35 | 0.47 | 4.96 | 3.98 | 0.04 | 1.09 | 99.66 |
| N12-15-2g-2 | 71.75 | 0.25 | 13.75 | 2.90 | 0.05 | 0.33 | 0.47 | 4.97 | 3.96 | 0.04 | 0.80 | 99.26 |
| N12-15-2g-3 | 72.05 | 0.26 | 13.65 | 2.91 | 0.05 | 0.35 | 0.47 | 4.95 | 3.96 | 0.04 | 0.92 | 99.61 |
| N12-15-2-1 | 51.47 | 1.40 | 16.10 | 11.15 | 0.22 | 4.75 | 8.37 | 3.92 | 0.89 | 0.44 | 1.20 | 99.89 |
| N12-15-2-2 | 50.83 | 1.42 | 16.35 | 10.94 | 0.25 | 4.94 | 8.24 | 4.04 | 1.11 | 0.47 | 1.21 | 99.81 |
| N12-15-2-3 | 51.34 | 1.39 | 16.13 | 11.15 | 0.22 | 4.77 | 8.35 | 3.95 | 0.89 | 0.44 | 1.32 | 99.95 |
| N12-15-3-1 | 45.12 | 1.17 | 16.69 | 10.32 | 0.15 | 8.01 | 12.64 | 1.31 | 0.70 | 0.23 | 3.02 | 99.34 |
| N12-15-3-2 | 45.24 | 1.18 | 16.79 | 10.36 | 0.15 | 8.40 | 12.68 | 1.31 | 0.69 | 0.23 | 2.92 | 99.95 |
| N12-15-3-3 | 45.07 | 1.17 | 16.92 | 10.32 | 0.15 | 8.40 | 12.66 | 1.30 | 0.69 | 0.23 | 2.84 | 99.75 |

附表4泰北地区晚泥盆世岩浆岩微量元素测试结果

Tab.4Test Results of Microelement of Late Devonian Magmatic Rocks in Northern Thailand

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 样品名 | N12-15-2g-1 | N12-15-2g-2 | N12-15-2g-3 | N12-15-2-1 | N12-15-2-2 | N12-15-2-3 | N12-15-3-1 | N12-15-3-2 | N12-15-3-3 |
| Li | 3.96 | 3.87 | 3.90 | 6.73 | 6.66 | 6.61 | 19.2 | 19.6 | 19.3 |
| Be | 3.61 | 3.53 | 3.42 | 1.24 | 1.37 | 1.31 | 0.40 | 0.36 | 0.40 |
| Sc | 6.02 | 6.00 | 5.95 | 37.0 | 37.0 | 36.1 | 48.9 | 48.5 | 48.5 |
| V | 7.11 | 8.67 | 7.83 | 255 | 252 | 249 | 280 | 279 | 281 |
| Cr | 2.59 | 2.71 | 2.73 | 54.6 | 54.5 | 52.9 | 336 | 337 | 333 |
| Co | 52.0 | 53.9 | 52.5 | 40.1 | 40.0 | 39.3 | 50.9 | 53.5 | 52.1 |
| Ni | 1.22 | 1.32 | 1.25 | 27.6 | 26.6 | 26.2 | 75.2 | 75.7 | 74.0 |
| Cu | 7.88 | 7.94 | 8.16 | 68.7 | 66.9 | 66.7 | 150 | 153 | 152 |
| Zn | 90.6 | 92.8 | 90.7 | 108 | 107 | 105 | 63.4 | 63.6 | 62.8 |
| Ga | 21.0 | 21.0 | 20.7 | 20.8 | 21.2 | 20.4 | 16.7 | 16.4 | 16.5 |
| Rb | 98.0 | 101 | 101 | 20.5 | 20.2 | 20.1 | 25.3 | 25.2 | 25.0 |
| Sr | 89.8 | 91.5 | 91.7 | 493 | 489 | 485 | 513 | 512 | 513 |
| Y | 72.7 | 74.1 | 73.3 | 42.1 | 42.0 | 40.9 | 13.3 | 13.2 | 13.3 |
| Zr | 396 | 403 | 423 | 152 | 140 | 154 | 27.6 | 27.2 | 26.2 |
| Nb | 22.9 | 23.2 | 23.0 | 10.3 | 10.1 | 10.1 | 1.96 | 1.97 | 1.86 |
| Sn | 3.51 | 3.61 | 3.68 | 1.39 | 1.41 | 1.39 | 0.41 | 0.49 | 0.44 |
| Cs | 0.70 | 0.69 | 0.67 | 0.35 | 0.34 | 0.33 | 0.42 | 0.43 | 0.41 |
| Ba | 864 | 873 | 865 | 334 | 330 | 326 | 144 | 144 | 142 |
| La | 49.7 | 50.4 | 49.1 | 22.9 | 22.8 | 22.5 | 5.38 | 5.30 | 5.34 |
| Ce | 100 | 102 | 98.9 | 52.3 | 51.2 | 51.2 | 12.0 | 12.0 | 11.8 |
| Pr | 12.8 | 13.0 | 12.6 | 6.94 | 6.92 | 6.80 | 1.77 | 1.75 | 1.75 |
| Nd | 51.6 | 52.0 | 51.4 | 30.7 | 31.1 | 30.6 | 8.46 | 8.45 | 8.62 |
| Sm | 11.9 | 11.9 | 11.5 | 7.43 | 7.52 | 7.66 | 2.39 | 2.42 | 2.41 |
| Eu | 2.02 | 2.04 | 1.98 | 2.54 | 2.53 | 2.50 | 1.02 | 1.04 | 1.07 |
| Gd | 11.6 | 11.3 | 11.4 | 8.25 | 8.07 | 7.87 | 2.83 | 2.73 | 2.86 |
| Tb | 1.86 | 1.93 | 1.87 | 1.21 | 1.20 | 1.17 | 0.43 | 0.43 | 0.39 |
| Dy | 12.5 | 12.3 | 12.2 | 7.38 | 7.68 | 7.34 | 2.41 | 2.49 | 2.60 |
| Ho | 2.50 | 2.57 | 2.52 | 1.50 | 1.57 | 1.50 | 0.51 | 0.52 | 0.52 |
| Er | 7.63 | 7.69 | 7.46 | 4.24 | 4.23 | 4.26 | 1.42 | 1.39 | 1.32 |
| Tm | 1.22 | 1.21 | 1.24 | 0.65 | 0.63 | 0.64 | 0.18 | 0.18 | 0.19 |
| Yb | 7.93 | 8.03 | 7.95 | 4.08 | 4.06 | 4.01 | 1.16 | 1.14 | 1.10 |
| Lu | 1.12 | 1.11 | 1.11 | 0.57 | 0.57 | 0.56 | 0.16 | 0.15 | 0.15 |
| Hf | 10.7 | 10.7 | 11.0 | 3.94 | 3.76 | 4.04 | 0.84 | 0.79 | 0.79 |
| Ta | 1.38 | 1.40 | 1.40 | 0.53 | 0.55 | 0.51 | 0.15 | 0.15 | 0.14 |
| Tl | 0.52 | 0.51 | 0.49 | 0.10 | 0.075 | 0.084 | 0.10 | 0.095 | 0.10 |
| Pb | 6.02 | 6.36 | 5.86 | 5.18 | 5.30 | 4.93 | 3.59 | 3.63 | 3.59 |
| Th | 9.79 | 9.82 | 9.72 | 1.73 | 1.68 | 1.68 | 0.60 | 0.56 | 0.56 |
| U | 2.28 | 2.36 | 2.26 | 0.51 | 0.50 | 0.53 | 0.15 | 0.15 | 0.17 |