**Table S2.** LA-ICPMS zircon analytical data of NPIC granites. NP-RAPG-01, NP-RAGG-01, NP-PINK-01 and NP-GG-01.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spot | Sample Name | Element (ppm) | | Isotopic ratio | | | | Ages (Ma) | | | |
|  |  | 232Th | 238U | 207Pb/235U | 1σ | 206Pb/238U | 1σ | 207Pb/235U | 1σ | 206Pb/238U | 1σ |
| 1013A094 | NP-RAPG-01-1 | 492.2 | 614.7 | 1.28311 | 0.05289 | 0.13497 | 0.00209 | 838.2 | 23.5 | 816.1 | 11.9 |
| 1013A095 | NP-RAPG-01-2 | 198.3 | 233.4 | 1.23059 | 0.08288 | 0.13526 | 0.00306 | 814.6 | 37.7 | 817.8 | 17.4 |
| 1013A096 | NP-RAPG-01-3 | 430.0 | 575.7 | 1.35812 | 0.06387 | 0.13134 | 0.00228 | 871.1 | 27.5 | 795.5 | 13.0 |
| 1013A099 | NP-RAPG-01-5 | 334.4 | 437.7 | 1.35601 | 0.08425 | 0.13120 | 0.00327 | 870.2 | 36.3 | 794.7 | 18.7 |
| 1013A100 | NP-RAPG-01-6 | 578.1 | 422.1 | 1.32726 | 0.06448 | 0.13138 | 0.00237 | 857.7 | 28.1 | 795.7 | 13.5 |
| 1013A105 | NP-RAPG-01-9 | 451.6 | 362.0 | 1.38646 | 0.11111 | 0.13472 | 0.00299 | 883.2 | 47.3 | 814.7 | 17.0 |
| 1013A112 | NP-RAPG-01-15 | 483.0 | 812.0 | 1.41619 | 0.05895 | 0.13538 | 0.00207 | 895.8 | 24.8 | 818.5 | 11.8 |
| 1013A113 | NP-RAPG-01-16 | 432.1 | 665.3 | 1.30680 | 0.06666 | 0.13248 | 0.00319 | 848.7 | 29.3 | 802.0 | 18.1 |
| 1013A116 | NP-RAPG-01-18 | 254.1 | 385.1 | 1.21773 | 0.06051 | 0.13466 | 0.00288 | 808.7 | 27.7 | 814.4 | 16.4 |
| 1013A118 | NP-RAPG-01-20 | 395.4 | 634.1 | 1.24129 | 0.05961 | 0.13469 | 0.00235 | 819.5 | 27.0 | 814.6 | 13.3 |
| 1013A122 | NP-RAPG-01-22 | 298.5 | 352.5 | 1.29993 | 0.08715 | 0.13558 | 0.00344 | 845.7 | 38.5 | 819.6 | 19.6 |
| 1013A123 | NP-RAPG-01-23 | 413.8 | 626.3 | 1.26473 | 0.07903 | 0.13358 | 0.00329 | 830.0 | 35.4 | 808.2 | 18.7 |
| 1013A124 | NP-RAPG-01-24 | 568.5 | 604.0 | 1.15705 | 0.05671 | 0.13344 | 0.00248 | 780.6 | 26.7 | 807.4 | 14.1 |
| 1013A127 | NP-RAPG-01-26 | 633.2 | 628.6 | 1.18945 | 0.05410 | 0.13536 | 0.00211 | 795.7 | 25.1 | 818.3 | 12.0 |
| 1013A129 | NP-RAPG-01-28 | 191.7 | 391.2 | 1.09189 | 0.07257 | 0.13558 | 0.00430 | 749.4 | 35.2 | 819.6 | 24.4 |
| 1013A134 | NP-RAPG-01-32 | 410.5 | 556.4 | 1.11950 | 0.07672 | 0.13431 | 0.00284 | 762.7 | 36.8 | 812.4 | 16.1 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spot | Sample Name | Element (ppm) | | Isotopic ratio | | | | Ages (Ma) | | | |
|  |  | 232Th | 238U | 207Pb/235U | 1σ | 206Pb/238U | 1σ | 207Pb/235U | 1σ | 206Pb/238U | 1σ |
| 1013A190 | NP-RAGG-01-8 | 75.1 | 98.5 | 1.36906 | 0.06999 | 0.13811 | 0.00272 | 875.7 | 30.0 | 833.9 | 15.4 |
| 1013A195 | NP-RAGG-01-12 | 79.8 | 81.9 | 1.25504 | 0.06927 | 0.13524 | 0.00280 | 825.6 | 31.1 | 817.7 | 15.8 |
| 1013A197 | NP-RAGG-01-13 | 114.1 | 137.9 | 1.24997 | 0.05225 | 0.12961 | 0.00231 | 823.3 | 23.5 | 785.6 | 13.1 |
| 1013A198 | NP-RAGG-01-14 | 61.7 | 83.8 | 1.21450 | 0.06191 | 0.14154 | 0.00265 | 807.2 | 28.3 | 853.3 | 14.9 |
| 1013A199 | NP-RAGG-01-15 | 58.7 | 66.9 | 1.28092 | 0.06465 | 0.13587 | 0.00254 | 837.2 | 28.7 | 821.2 | 14.4 |
| 1013A200 | NP-RAGG-01-16 | 30.5 | 47.2 | 1.33204 | 0.07563 | 0.13570 | 0.00324 | 859.7 | 32. | 820.2 | 18.3 |
| 1013A204 | NP-RAGG-01-18 | 134.7 | 217.2 | 1.20501 | 0.04824 | 0.12736 | 0.00238 | 802.9 | 22.2 | 772.7 | 13.6 |
| 1013A205 | NP-RAGG-01-19 | 144.7 | 174.5 | 1.18626 | 0.06331 | 0.13023 | 0.00229 | 794.2 | 29.4 | 789.1 | 13.0 |
| 1013A206 | NP-RAGG-01-20 | 130.5 | 118.6 | 1.32842 | 0.06173 | 0.13502 | 0.00237 | 858.1 | 26.9 | 816.4 | 13.4 |
| 1013A209 | NP-RAGG-01-22 | 74.0 | 85.8 | 1.36557 | 0.06486 | 0.13532 | 0.00239 | 874.2 | 27.8 | 818.1 | 13.5 |
| 1013A210 | NP-RAGG-01-23 | 99.8 | 113.3 | 1.43505 | 0.07341 | 0.13607 | 0.00274 | 903.6 | 30.6 | 822.4 | 15.5 |
| 1013A211 | NP-RAGG-01-24 | 65.8 | 77.4 | 1.34075 | 0.06366 | 0.14378 | 0.00304 | 863.5 | 27.6 | 866.0 | 17.1 |
| 1013A213 | NP-RAGG-01-25 | 78.2 | 94.4 | 1.27905 | 0.06461 | 0.13961 | 0.00269 | 836.4 | 28.7 | 842.4 | 15.2 |
| 1013A216 | NP-RAGG-01-28 | 70.7 | 87.6 | 1.17155 | 0.06077 | 0.13072 | 0.00281 | 787.3 | 28.4 | 791.9 | 16.0 |
| 1013A219 | NP-RAGG-01-29 | 61.4 | 73.4 | 1.23134 | 0.06572 | 0.13369 | 0.00260 | 814.9 | 29.9 | 808.9 | 14.8 |
| 1013A220 | NP-RAGG-01-30 | 108.5 | 121.9 | 1.34020 | 0.05683 | 0.13205 | 0.00223 | 863.3 | 24.6 | 799.5 | 12.6 |
| 1013A221 | NP-RAGG-01-31 | 65.0 | 81.3 | 1.14590 | 0.06034 | 0.12523 | 0.00236 | 775.3 | 28.5 | 760.6 | 13.5 |
| 1013A222 | NP-RAGG-01-32 | 68.7 | 77.7 | 1.16288 | 0.06546 | 0.14047 | 0.00268 | 783.3 | 30.7 | 847.3 | 15.1 |

NP-RAGG-01

NP-PINK-01

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spot | Sample Name | Element (ppm) | | Isotopic ratio | | | | Ages (Ma) | | | |
|  |  | 232Th | 238U | 207Pb/235U | 1σ | 206Pb/238U | 1σ | 207Pb/235U | 1σ | 206Pb/238U | 1σ |
| 1013A007 | NP-PINK-01-1 | 42.7 | 88.5 | 1.07349 | 0.05490 | 0.12298 | 0.00217 | 740.4 | 26.8 | 747.7 | 12.4 |
| 1013A008 | NP-PINK-01-2 | 41.4 | 79.7 | 1.16894 | 0.04845 | 0.12407 | 0.00199 | 786.1 | 22.6 | 753.9 | 11.4 |
| 1013A009 | NP-PINK-01-3 | 45.5 | 89.4 | 1.08995 | 0.04772 | 0.11719 | 0.00227 | 748.4 | 23.1 | 714.3 | 13.1 |
| 1013A013 | NP-PINK-01-6 | 125.0 | 195.1 | 1.08147 | 0.02776 | 0.12002 | 0.00121 | 744.3 | 13.5 | 730.6 | 6.9 |
| 1013A014 | NP-PINK-01-7 | 50.5 | 95.6 | 1.07810 | 0.04188 | 0.12216 | 0.00173 | 742.7 | 20.4 | 743.0 | 9.9 |
| 1013A015 | NP-PINK-01-8 | 53.7 | 102.8 | 1.16542 | 0.04502 | 0.12214 | 0.00237 | 784.5 | 21.1 | 742.8 | 13.5 |
| 1013A017 | NP-PINK-01-9 | 53.4 | 95.4 | 1.04318 | 0.04268 | 0.12383 | 0.00173 | 725.5 | 21.2 | 752.5 | 9.9 |
| 1013A020 | NP-PINK-01-12 | 85.9 | 110.3 | 1.07190 | 0.04523 | 0.11768 | 0.00177 | 739.6 | 22.1 | 717.2 | 10.2 |
| 1013A023 | NP-PINK-01-13 | 40.6 | 83.1 | 1.15139 | 0.04944 | 0.12122 | 0.00165 | 777.9 | 23.3 | 737.6 | 9.5 |
| 1013A024 | NP-PINK-01-14 | 39.4 | 78.9 | 1.15933 | 0.05276 | 0.12248 | 0.00188 | 781.6 | 24.8 | 744.8 | 10.8 |
| 1013A025 | NP-PINK-01-15 | 46.3 | 80.3 | 1.15362 | 0.04963 | 0.12237 | 0.00192 | 778.9 | 23.4 | 744.1 | 11.0 |
| 1013A026 | NP-PINK-01-16 | 58.3 | 103.4 | 1.12087 | 0.04952 | 0.12279 | 0.00197 | 763.3 | 23.7 | 746.5 | 11.2 |
| 1013A028 | NP-PINK-01-17 | 52.4 | 103.5 | 1.25920 | 0.04457 | 0.12125 | 0.00170 | 827.5 | 20.0 | 737.7 | 9.7 |
| 1013A029 | NP-PINK-01-18 | 52.7 | 86.8 | 1.07366 | 0.04495 | 0.12132 | 0.00187 | 740.5 | 22.0 | 738.1 | 10.7 |
| 1013A031 | NP-PINK-01-20 | 48.5 | 91.9 | 1.12892 | 0.04375 | 0.12112 | 0.00191 | 767.2 | 20.8 | 737.0 | 10.9 |
| 1013A033 | NP-PINK-01-21 | 41.1 | 79.1 | 0.94106 | 0.04821 | 0.12326 | 0.00216 | 673.4 | 25.2 | 749.3 | 12.3 |
| 1013A034 | NP-PINK-01-22 | 64.0 | 96.5 | 1.09350 | 0.04341 | 0.11864 | 0.00153 | 750.2 | 21.0 | 722.7 | 8.8 |
| 1013A035 | NP-PINK-01-23 | 54.9 | 90.0 | 1.08319 | 0.04788 | 0.12063 | 0.00179 | 745.1 | 23.3 | 734.2 | 10.2 |
| 1013A036 | NP-PINK-01-24 | 36.6 | 78.0 | 1.09427 | 0.04915 | 0.12219 | 0.00178 | 750.5 | 23.8 | 743.1 | 10.2 |
| 1013A041 | NP-PINK-01-27 | 54.7 | 85.6 | 1.22329 | 0.05401 | 0.11739 | 0.00247 | 811.2 | 24.6 | 715.5 | 14.2 |
| 1013A044 | NP-PINK-01-29 | 54.3 | 95.3 | 1.02660 | 0.04435 | 0.11812 | 0.00199 | 717.2 | 22.2 | 719.7 | 11.4 |
| 1013A045 | NP-PINK-01-30 | 47.4 | 83.2 | 1.00354 | 0.04862 | 0.12145 | 0.00236 | 705.61 | 24.6 | 738.8 | 13.5 |
| 1013A046 | NP-PINK-01-31 | 57.2 | 83.2 | 1.00991 | 0.04730 | 0.12001 | 0.00223 | 708.8 | 23.9 | 730.6 | 12.8 |
| 1013A047 | NP-PINK-01-32 | 44.9 | 86.1 | 0.94017 | 0.04285 | 0.12015 | 0.00207 | 672.9 | 22.4 | 731.4 | 11.9 |

NP-GG-01

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Spot | Sample Name | Element (ppm) | | Isotopic ratio | | | | Ages (Ma) | | | |
|  |  | 232Th | 238U | 207Pb/235U | 1σ | 206Pb/238U | 1σ | 207Pb/235U | 1σ | 206Pb/238U | 1σ |
| 1013A050 | NP-GG-01-1 | 66.2 | 99.0 | 1.13182 | 0.05246 | 0.12693 | 0.00227 | 768.6 | 24.9 | 770.3 | 13.0 |
| 1013A051 | NP-GG-01-2 | 58.1 | 103.7 | 1.08878 | 0.05494 | 0.12500 | 0.00217 | 747.9 | 26.7 | 759.2 | 12.4 |
| 1013A053 | NP-GG-01-4 | 243.6 | 193.9 | 1.37780 | 0.06233 | 0.12968 | 0.00190 | 879.5 | 26.6 | 786.0 | 10.8 |
| 1013A056 | NP-GG-01-5 | 77.7 | 113.8 | 1.39003 | 0.06500 | 0.12601 | 0.00213 | 884.7 | 27.6 | 765.0 | 12.1 |
| 1013A057 | NP-GG-01-6 | 78.4 | 101.3 | 1.19365 | 0.04908 | 0.12784 | 0.00194 | 797.6 | 22.7 | 775.5 | 11.0 |
| 1013A058 | NP-GG-01-7 | 43.4 | 82.3 | 1.05620 | 0.05427 | 0.12301 | 0.00191 | 731.9 | 26.8 | 747.8 | 10.9 |
| 1013A061 | NP-GG-01-9 | 87.8 | 132.2 | 1.17671 | 0.03737 | 0.12431 | 0.00143 | 789.7 | 17.4 | 755.3 | 8.1 |
| 1013A062 | NP-GG-01-10 | 54.4 | 85.2 | 1.11315 | 0.04546 | 0.12501 | 0.00192 | 759.6 | 21.8 | 759.3 | 11.0 |
| 1013A063 | NP-GG-01-11 | 94.6 | 101.2 | 1.32854 | 0.05218 | 0.12162 | 0.00202 | 858.2 | 22.7 | 739.8 | 11.6 |
| 1013A064 | NP-GG-01-12 | 89.1 | 105.2 | 1.14136 | 0.04927 | 0.12167 | 0.00167 | 773.1 | 23.3 | 740.1 | 9.6 |
| 1013A066 | NP-GG-01-13 | 41.3 | 73.8 | 1.08932 | 0.05400 | 0.12327 | 0.00227 | 748.1 | 26.2 | 749.3 | 13.0 |
| 1013A068 | NP-GG-01-15 | 40.4 | 80.8 | 1.13798 | 0.04923 | 0.12814 | 0.00215 | 771.5 | 23.3 | 777.2 | 12.2 |
| 1013A069 | NP-GG-01-16 | 53.9 | 95.7 | 1.24530 | 0.05144 | 0.12677 | 0.00226 | 821.2 | 23.2 | 769.4 | 12.9 |
| 1013A072 | NP-GG-01-17 | 61.5 | 94.9 | 1.32526 | 0.05752 | 0.12527 | 0.00167 | 856.8 | 25.1 | 760.8 | 9.5 |
| 1013A073 | NP-GG-01-18 | 53.2 | 93.9 | 1.09938 | 0.05045 | 0.12427 | 0.00176 | 753.0 | 24.4 | 755.1 | 10.0 |
| 1013A074 | NP-GG-01-19 | 55.9 | 83.0 | 1.11242 | 0.04708 | 0.12587 | 0.00183 | 759.3 | 22.6 | 764.2 | 10.4 |
| 1013A078 | NP-GG-01-22 | 50.7 | 82.3 | 1.14462 | 0.05064 | 0.12221 | 0.00200 | 774.7 | 23.9 | 743.2 | 11.5 |
| 1013A084 | NP-GG-01-27 | 57.0 | 90.3 | 1.15784 | 0.05009 | 0.12387 | 0.00197 | 780.9 | 23.5 | 752.8 | 11.3 |
| 1013A089 | NP-GG-01-30 | 55.2 | 83.6 | 1.18752 | 0.04895 | 0.11853 | 0.00187 | 794.8 | 22.7 | 722.0 | 10.7 |
| 1013A090 | NP-GG-01-31 | 95.7 | 125.3 | 1.25337 | 0.05155 | 0.12157 | 0.00184 | 824.9 | 23.2 | 739.5 | 10.5 |
| 1013A091 | NP-GG-01-32 | 66.0 | 94.3 | 1.16301 | 0.06109 | 0.12060 | 0.00234 | 783.3 | 28.6 | 734.0 | 13.4 |