**Supplementary Table S2**. Whole-rock chemical composition of post-collision-related granites of the Guéra Massif

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | 14ZA01 | 14ZA20A | 14ZA20B | 14ZA20C | 14ZA20D-1 | 14ZA20D-2 | 14ZA21A | 14ZA21B | 14ZA22A |
| Age (Ma) | 570 | 570 | 570 | 570 | 570 | 570 | 570 | 570 | 570 |
| Lithology | granite | granite | granite | diorite | vein | granite | granite | granite | granite |
| Lat. (N) | 12.0499 | 11.5124 | 11.5124 | 11.5124 | 11.5124 | 11.5124 | 11.5808 | 11.5808 | 11.7010 |
| Lon. (E) | 17.7515 | 19.1965 | 19.1965 | 19.1965 | 19.1965 | 19.1965 | 19.1604 | 19.1604 | 19.1354 |
| SiO2 (wt%) | 72.63 | 72.56 | 69.34 | 58.81 | 84.53 | 71.69 | 76.93 | 71.28 | 67.12 |
| TiO2 | 0.24 | 0.24 | 0.40 | 1.40 | 0.14 | 0.32 | 0.12 | 0.28 | 0.59 |
| Al2O3 | 14.00 | 13.93 | 13.79 | 16.18 | 7.35 | 13.02 | 12.55 | 13.48 | 13.65 |
| Fe2O3 | 2.47 | 2.71 | 4.89 | 8.68 | 2.45 | 4.05 | 1.40 | 3.77 | 6.47 |
| MnO | 0.05 | 0.04 | 0.07 | 0.11 | 0.06 | 0.06 | 0.03 | 0.08 | 0.10 |
| MgO | 0.36 | 0.19 | 0.18 | 0.90 | 0.12 | 0.15 | 0.05 | 0.06 | 0.30 |
| CaO | 1.17 | 1.12 | 1.69 | 5.14 | 1.03 | 1.17 | 0.48 | 0.91 | 2.33 |
| Na2O | 3.55 | 3.19 | 3.27 | 3.31 | 2.21 | 3.20 | 3.21 | 3.30 | 3.22 |
| K2O | 4.60 | 4.36 | 4.56 | 3.00 | 1.41 | 4.66 | 5.59 | 4.88 | 4.34 |
| P2O5 | 0.08 | 0.06 | 0.08 | 0.67 | 0.03 | 0.06 | 0.00 | 0.05 | 0.17 |
| LOI | 0.51 | 0.45 | 0.47 | 0.98 | 0.23 | 0.51 | 0.47 | 0.58 | 0.51 |
| TOTAL | 99.66 | 98.85 | 98.74 | 99.18 | 99.55 | 98.89 | 100.83 | 98.66 | 98.79 |
| Mg# | 22.4 | 12.0 | 6.8 | 17.0 | 9.0 | 6.6 | 6.6 | 3.3 | 8.3 |
|  |  |  |  |  |  |  |  |  |  |
| Sc (ppm) | 3 | 1 | 4 | 8 | 1 | 4 |  | 2 | 7 |
| V | 8 | 5 | 4 | 26 | 3 |  | 1 | 1 | 4 |
| Cr | 4 | 6 |  |  |  |  |  |  |  |
| Co | 1 | 1 | 1 | 6 | 1 | 1 |  |  | 1 |
| Ni | 2 | 2 |  | 1 |  |  |  |  |  |
| Rb | 75 | 113 | 121 | 36 | 29 | 93 | 88 | 78 | 77 |
| Sr | 85 | 75 | 68 | 254 | 64 | 73 | 23 | 42 | 88 |
| Y | 19 | 20 | 55 | 25 | 19 | 54 | 35 | 38 | 53 |
| Zr | 115 | 114 | 99 | 227 | 36 | 79 | 73 | 116 | 66 |
| Nb | 15 | 14 | 29 | 16 | 9.4 | 23 | 7.2 | 19 | 35 |
| Cs | 1.50 | 0.76 | 1.91 | 0.19 | 0.31 | 0.80 | 0.66 | 0.90 | 0.56 |
| Ba | 285 | 414 | 519 | 1031 | 244 | 558 | 183 | 545 | 923 |
| La | 67.4 | 68.7 | 137.8 | 41.8 | 38.1 | 242.6 | 99.1 | 72.8 | 82.7 |
| Ce | 144.6 | 139.7 | 295.8 | 88.9 | 69.1 | 544.9 | 49.3 | 151.6 | 186.6 |
| Pr | 15.9 | 15.8 | 32.8 | 9.91 | 8.79 | 57.5 | 24.6 | 19.1 | 22.4 |
| Nd | 54.3 | 55.1 | 118.4 | 42.6 | 33.4 | 197.5 | 95.4 | 74.2 | 87.5 |
| Sm | 8.77 | 8.58 | 19.9 | 8.05 | 5.83 | 28.3 | 16.0 | 12.8 | 16.7 |
| Eu | 0.37 | 0.88 | 1.55 | 2.12 | 0.65 | 1.63 | 1.95 | 1.81 | 2.27 |
| Gd | 5.88 | 5.92 | 14.9 | 6.31 | 4.54 | 18.4 | 11.9 | 10.1 | 13.7 |
| Tb | 0.88 | 0.85 | 2.21 | 0.94 | 0.68 | 2.61 | 1.68 | 1.50 | 2.09 |
| Dy | 3.92 | 4.17 | 11.5 | 4.96 | 3.61 | 12.4 | 8.00 | 7.76 | 11.2 |
| Ho | 0.71 | 0.75 | 2.09 | 0.95 | 0.69 | 2.20 | 1.30 | 1.46 | 2.11 |
| Er | 1.81 | 2.02 | 5.37 | 2.56 | 1.88 | 5.44 | 3.24 | 3.75 | 5.54 |
| Tm | 0.25 | 0.28 | 0.75 | 0.36 | 0.26 | 0.83 | 0.42 | 0.52 | 0.76 |
| Yb | 1.51 | 1.69 | 4.53 | 2.22 | 1.58 | 4.65 | 2.44 | 3.24 | 4.79 |
| Lu | 0.22 | 0.24 | 0.62 | 0.32 | 0.23 | 0.74 | 0.33 | 0.46 | 0.67 |
| Hf | 3.57 | 3.27 | 3.28 | 6.5 | 1.14 | 2.69 | 2.44 | 3.28 | 2.12 |
| Th | 15 | 12 | 22 | 3.5 | 5.2 | 37 | 3.4 | 9.5 | 9.1 |
| U | 1.8 | 1.5 | 1.7 | 0.5 | 0.8 | 2.3 | 0.8 | 1.3 | 1.0 |
| Eu/Eu\* | 0.15 | 0.36 | 0.26 | 0.88 | 0.37 | 0.20 | 0.41 | 0.47 | 0.45 |
| (La/Sm)N | 5.0 | 5.2 | 4.4 | 3.4 | 4.2 | 5.5 | 4.0 | 3.7 | 3.2 |
| (La/Yb)N | 32.0 | 29.2 | 21.3 | 13.5 | 17.3 | 37.4 | 29.1 | 16.1 | 12.4 |

**Supplementary Table S2**. continued

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | 14ZA22B | 14ZA23 | 14ZA24A | 14ZA24B | 14ZA24C | 14ZA10 | 14ZA11 | 14ZA18 | 14ZA19A |
| Age | 570 | 570 | 570 | 570 | 570 | 560 | 560 | 560 | 560 |
| Lithology | granite | granite | granite | diorite | granite | granite | granite | granite | granite |
| Lat. | 11.7010 | 11.8018 | 11.8094 | 11.8094 | 11.8094 | 10.5551 | 10.5620 | 11.4534 | 11.4626 |
| Lon. | 19.1354 | 19.0422 | 19.0334 | 19.0334 | 19.0334 | 18.9246 | 18.9601 | 19.3070 | 19.2946 |
| SiO2 (wt%) | 76.20 | 75.79 | 71.71 | 60.05 | 71.44 | 73.33 | 73.60 | 76.86 | 69.53 |
| TiO2 | 0.11 | 0.15 | 0.26 | 1.62 | 0.28 | 0.22 | 0.23 | 0.14 | 0.39 |
| Al2O3 | 12.24 | 12.18 | 13.87 | 14.50 | 13.36 | 13.44 | 13.57 | 11.86 | 13.49 |
| Fe2O3 | 1.83 | 2.07 | 3.06 | 9.26 | 3.48 | 2.35 | 2.43 | 1.82 | 4.98 |
| MnO | 0.02 | 0.04 | 0.05 | 0.13 | 0.07 | 0.05 | 0.05 | 0.03 | 0.08 |
| MgO | 0.03 | 0.04 | 0.16 | 1.85 | 0.12 | 0.19 | 0.22 | 0.06 | 0.18 |
| CaO | 0.67 | 0.75 | 0.92 | 4.19 | 1.14 | 1.17 | 1.01 | 0.84 | 1.72 |
| Na2O | 3.12 | 2.93 | 3.63 | 3.37 | 3.21 | 3.14 | 3.00 | 2.69 | 3.03 |
| K2O | 4.24 | 4.55 | 4.77 | 3.30 | 4.92 | 4.32 | 5.04 | 4.22 | 4.77 |
| P2O5 | 0.00 | 0.01 | 0.04 | 0.43 | 0.04 | 0.05 | 0.07 | 0.05 | 0.10 |
| LOI | 0.59 | 0.65 | 0.34 | 0.34 | 0.62 | 0.51 | 0.49 | 0.33 | 0.40 |
| TOTAL | 99.05 | 99.16 | 98.81 | 99.06 | 98.68 | 98.77 | 99.71 | 98.90 | 98.68 |
| Mg# | 2.7 | 3.9 | 9.4 | 28.3 | 6.3 | 13.8 | 15.2 | 6.3 | 6.6 |
|  |  |  |  |  |  |  |  |  |  |
| Sc (ppm) |  | 1 | 2 | 8 | 2 | 2 | 3 | 1 | 4 |
| V | 1 | 1 | 2 | 46 | 1 | 4 | 5 | 1 | 4 |
| Cr | 1 | 1 |  | 7 |  | 1 | 1 |  |  |
| Co |  |  | 1 | 10 |  | 1 | 1 |  | 1 |
| Ni |  |  |  | 6 |  |  |  |  |  |
| Rb | 170 | 139 | 113 | 64 | 105 | 1697 | 158 | 24.8 | 24.7 |
| Sr | 6.2 | 19 | 44 | 177 | 45 | 42 | 39 | 69 | 72 |
| Y | 57 | 35 | 18 | 26 | 41 | 32 | 30 | 21 | 32 |
| Zr | 145 | 139 | 136 | 272 | 173 | 121 | 116 | 40 | 55 |
| Nb | 33 | 25 | 17 | 16 | 27 | 16 | 19 | 11 | 25 |
| Cs | 1.22 | 1.75 | 1.84 | 0.85 | 1.27 | 1.74 | 2.58 | 0.81 | 1.17 |
| Ba | 43 | 127 | 343 | 700 | 568 | 232 | 240 | 648 | 647 |
| La | 52.9 | 63.2 | 48.8 | 35.6 | 69.1 | 47.8 | 48.6 | 92.6 | 71.8 |
| Ce | 120.1 | 136.6 | 97.4 | 79.6 | 146.9 | 98.6 | 100.4 | 183.3 | 158.8 |
| Pr | 14.4 | 15.6 | 10.6 | 9.69 | 17.5 | 10.6 | 10.9 | 19.3 | 18.4 |
| Nd | 54.1 | 57.2 | 36.7 | 38.8 | 67.2 | 37.3 | 38.0 | 64.5 | 70.6 |
| Sm | 12.2 | 10.4 | 5.83 | 7.65 | 12.3 | 7.11 | 6.96 | 9.09 | 12.7 |
| Eu | 0.16 | 0.40 | 0.63 | 1.59 | 1.59 | 0.57 | 0.54 | 1.37 | 1.74 |
| Gd | 11.1 | 8.43 | 4.47 | 6.28 | 10.1 | 5.85 | 5.76 | 5.67 | 9.95 |
| Tb | 1.89 | 1.36 | 0.70 | 0.98 | 1.54 | 0.97 | 0.94 | 0.82 | 1.33 |
| Dy | 10.8 | 7.33 | 3.61 | 5.17 | 7.89 | 5.22 | 5.07 | 4.2 | 7.62 |
| Ho | 2.16 | 1.33 | 0.70 | 1.02 | 1.53 | 1.03 | 1.03 | 0.77 | 1.26 |
| Er | 5.95 | 3.72 | 1.91 | 2.76 | 4.06 | 2.90 | 2.89 | 2.15 | 3.33 |
| Tm | 0.87 | 0.54 | 0.27 | 0.38 | 0.52 | 0.45 | 0.44 | 0.3 | 0.46 |
| Yb | 5.30 | 3.39 | 1.66 | 2.43 | 3.19 | 2.88 | 2.77 | 1.88 | 2.85 |
| Lu | 0.71 | 0.48 | 0.23 | 0.35 | 0.46 | 0.44 | 0.41 | 0.27 | 0.41 |
| Hf | 5.85 | 4.59 | 3.92 | 6.41 | 4.89 | 3.96 | 3.73 | 1.49 | 1.82 |
| Th | 16 | 13 | 13 | 5.5 | 11 | 22 | 22 | 15 | 11 |
| U | 3.8 | 2.9 | 3.0 | 0.9 | 1.8 | 4.3 | 3.9 | 1.5 | 5.4 |
| Eu/Eu\* | 0.04 | 0.13 | 0.36 | 0.68 | 0.42 | 0.26 | 0.25 | 0.54 | 0.46 |
| (La/Sm)N | 2.8 | 3.9 | 5.4 | 3.0 | 3.6 | 4.3 | 4.5 | 6.6 | 3.6 |
| (La/Yb)N | 7.2 | 13.4 | 21.1 | 10.5 | 15.5 | 11.9 | 12.6 | 35.3 | 18.1 |

**Supplementary Table S2**. continued

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | 14ZA19B | BIR-1a | BIR-1a | BCR-2 | BCR-2 | BHVO-2 | BHVO-2 |
| Age | 560 | m.v. (15) | r.v. | m.v. (1) | r.v. | m.v. (1) | r.v. |
| Lithology | granite |  |  |  |  |  |  |
| Lat. | 11.4626 |  |  |  |  |  |  |
| Lon. | 19.2946 |  |  |  |  |  |  |
| SiO2 (wt%) | 70.10 | 48.20 | 49.96 |  |  |  |  |
| TiO2 | 0.37 | 0.92 | 0.96 |  |  |  |  |
| Al2O3 | 13.46 | 15.7 | 15.5 |  |  |  |  |
| Fe2O3 | 4.72 | 11.2 | 11.3 |  |  |  |  |
| MnO | 0.08 | 0.17 | 0.175 |  |  |  |  |
| MgO | 0.16 | 9.7 | 9.7 |  |  |  |  |
| CaO | 1.55 | 13.3 | 13.3 |  |  |  |  |
| Na2O | 3.12 | 1.82 | 1.82 |  |  |  |  |
| K2O | 4.80 | 0.03 | 0.03 |  |  |  |  |
| P2O5 | 0.09 | 0.02 | 0.021 |  |  |  |  |
| LOI | 0.35 |  |  |  |  |  |  |
| TOTAL | 98.79 |  |  |  |  |  |  |
| Mg# | 6.3 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Sc (ppm) | 4 |  |  | 33.7 | 33.7 | 32.5 | 32 |
| V | 4 |  |  | 418 | 416 | 318 | 317 |
| Cr |  |  |  | 14.4 | 18 | 293 | 280 |
| Co | 1 |  |  | 37.6 | 37 | 45.2 | 45 |
| Ni |  |  |  | 12.7 |  | 120 | 119 |
| Rb | 26.5 |  |  | 47 | 48 | 9.2 | 9.8 |
| Sr | 74 |  |  | 341 | 346 | 388 | 389 |
| Y | 33 |  |  | 34.7 | 37 | 28.0 | 26 |
| Zr | 74 |  |  | 192 | 188 | 172 | 172 |
| Nb | 25 |  |  | 11.8 |  | 16.4 |  |
| Cs | 1.53 |  |  | 0.96 | 1.1 | 0.09 |  |
| Ba | 675 |  |  | 688 | 683 | 128 | 130 |
| La | 44.6 |  |  | 25.3 | 25 | 15.0 | 15 |
| Ce | 100.6 |  |  | 54.0 | 53 | 37.1 | 38 |
| Pr | 12.6 |  |  | 6.94 | 6.8 | 5.26 |  |
| Nd | 50.6 |  |  | 29.3 | 28 | 24.3 | 25 |
| Sm | 10.5 |  |  | 6.73 | 6.7 | 6.03 | 6.2 |
| Eu | 1.69 |  |  | 2.04 | 2.0 | 2.07 |  |
| Gd | 9.09 |  |  | 4.50 | 6.8 | 6.30 | 6.3 |
| Tb | 1.28 |  |  | 1.13 | 1.07 | 0.98 | 0.9 |
| Dy | 7.42 |  |  | 6.46 |  | 5.21 |  |
| Ho | 1.31 |  |  | 1.35 | 1.33 | 0.99 | 1.04 |
| Er | 3.47 |  |  | 3.76 |  | 2.53 |  |
| Tm | 0.49 |  |  | 0.54 | 0.54 | 0.33 |  |
| Yb | 2.99 |  |  | 3.41 | 3.5 | 1.97 | 2.00 |
| Lu | 0.43 |  |  | 0.51 | 0.51 | 0.27 | 0.28 |
| Hf | 2.34 |  |  | 4.91 | 4.8 | 4.33 | 4.10 |
| Th | 5.7 |  |  | 5.95 | 6.2 | 1.20 | 1.20 |
| U | 0.9 |  |  | 1.71 | 1.69 | 0.40 |  |
| Eu/Eu\* | 0.52 |  |  |  |  |  |  |
| (La/Sm)N | 2.8 |  |  |  |  |  |  |
| (La/Yb)N | 10.7 |  |  |  |  |  |  |

Mg# = {MgO (mol)/[MgO (mol) + FeOt (mol)]}\*100. FeOt = Fe2O3t\* 0.8998. Eu/Eu\*=2\*EuN/(SmN+GdN). N = chondrite normalized to Sun and McDonough (1989). m.v. = measured value, r.v. = recommended value. Number in parentheses for standards is averaged number of analyses.