

MATERIAL SUPLEMENTARIO

del artículo

Geocronología U-Pb y geoquímica del vulcanismo de arco del Paleoceno de la Formación Tetelcingo en el área de Chilpancingo-Tixtla, Guerrero (sur de México)

por

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Tabla S1. Geoquímica de mayores en % en peso, traza y tierras raras en ppm de las muestras volcánicas de la Formación Tetelcingo.

| Tipo de roca | Lavas | | | | | | | | | | | | | | Brechas volcánicas | | | | | |
|--------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--|--|
| | AO-03A | AO-04 | AO-52 | AO-53B | AO-55 | AO-60 | AO-62 | AO-63 | AO-64 | AO-65 | AO-68 | AO-70 | AO-73 | AO-61 | AO-53A | AO-72A | AO-72B | AO-72C | | |
| Coordenadas UTM 14Q | 0454310 1940622 | 0450858 1941648 | 0456138 1940961 | 0453292 1940725 | 0451894 1939856 | 0456197 1941412 | 0456210 1941124 | 0456219 1941081 | 0455811 1940747 | 0455270 1940677 | 0454094 1940764 | 0453119 1940719 | 0451538 1940182 | 0456266 1941308 | 0453292 1940725 | 0451829 1940012 | 0451829 1940012 | 0451829 1940012 | | |
| SiO ₂ | 58.4 | 63.9 | 61.9 | 62.1 | 58.5 | 61.3 | 62.8 | 65.9 | 58 | 62 | 62.6 | 67.3 | 63.4 | 66.9 | 66 | 60.6 | 61.7 | 62.1 | | |
| TiO ₂ | 0.65 | 0.61 | 0.62 | 0.81 | 0.82 | 0.79 | 0.72 | 0.67 | 0.61 | 0.63 | 0.7 | 0.64 | 0.59 | 0.63 | 0.42 | 0.72 | 1.16 | 1.12 | | |
| Al ₂ O ₃ | 15.05 | 15.35 | 15.8 | 15.75 | 16.6 | 15.8 | 16.95 | 16.45 | 15.05 | 17.05 | 15.2 | 14.5 | 15.1 | 15 | 16.9 | 17.8 | 17.25 | 16.7 | | |
| Fe ₂ O ₃ | 3.78 | 3.8 | 3.77 | 4.77 | 5.56 | 4.48 | 4.77 | 4.59 | 3.51 | 3.83 | 4 | 3.44 | 3.47 | 4.12 | 3.1 | 4.95 | 5.57 | 5.37 | | |
| MnO | 0.07 | 0.05 | 0.05 | 0.07 | 0.05 | 0.06 | 0.04 | 0.04 | 0.05 | 0.05 | 0.06 | 0.05 | 0.06 | 0.05 | 0.04 | 0.05 | 0.06 | 0.05 | | |
| MgO | 2.49 | 1.53 | 2.39 | 2.55 | 2.45 | 3.8 | 1.39 | 0.71 | 2.13 | 1.82 | 2.41 | 1.05 | 1.69 | 0.83 | 0.19 | 1.4 | 0.88 | 0.84 | | |
| CaO | 6.34 | 3.19 | 3.88 | 4.57 | 3.3 | 3.21 | 2.84 | 2.74 | 6.79 | 4.37 | 4.18 | 2.64 | 4.38 | 2.88 | 0.55 | 1.33 | 1.57 | 1.56 | | |
| Na ₂ O | 2.67 | 4.53 | 3.32 | 3.7 | 2.45 | 3.34 | 5.2 | 5.07 | 3.52 | 4.75 | 3.36 | 4.2 | 3.79 | 4.04 | 9.71 | 7.97 | 8.38 | 8.13 | | |
| K ₂ O | 2.95 | 2.46 | 2.31 | 1.62 | 3.19 | 3.19 | 3.39 | 3.22 | 2.33 | 2.16 | 2.77 | 2.21 | 1.75 | 2.86 | 0.18 | 1.72 | 0.86 | 0.84 | | |
| P ₂ O ₅ | 0.25 | 0.14 | 0.25 | 0.19 | 0.21 | 0.28 | 0.32 | 0.33 | 0.23 | 0.22 | 0.25 | 0.19 | 0.14 | 0.23 | 0.11 | 0.24 | 0.43 | 0.42 | | |
| LOI* | 7.3 | 3.25 | 5.51 | 4.51 | 8.09 | 4.72 | 2.24 | 1.46 | 6.75 | 2.68 | 3.85 | 3.2 | 4.79 | 1.74 | 0.98 | 2.73 | 1.92 | 1.93 | | |
| Total | 99.95 | 98.81 | 99.8 | 100.6 | 101.2 | 101 | 100.7 | 101.2 | 98.97 | 99.56 | 99.38 | 99.42 | 99.16 | 99.28 | 98.18 | 99.51 | 99.78 | 99.06 | | |
| Cs | 2.23 | 2.46 | 5.25 | 1.89 | 8.46 | 2.64 | 1.99 | 2.04 | 4.46 | 1.62 | 1.99 | 2.89 | 1.88 | 2.88 | 0.55 | 1.62 | 1.16 | 0.83 | | |
| Ba | 1705 | 1135 | 1505 | 684 | 1290 | 875 | 1180 | 1235 | 1365 | 777 | 1130 | 1095 | 762 | 1115 | 76.7 | 806 | 341 | 335 | | |
| Rb | 92.6 | 73.4 | 63.8 | 46.7 | 146.5 | 98.4 | 84.3 | 74.9 | 59.8 | 64.3 | 94.7 | 61.7 | 54.5 | 103 | 3.6 | 61.1 | 38.1 | 33.5 | | |
| Sr | 2070 | 768 | 1975 | 1240 | 787 | 806 | 958 | 1070 | 1385 | 1210 | 1510 | 1085 | 1475 | 1110 | 114 | 487 | 559 | 505 | | |
| Ga | 21.6 | 20.9 | 22.4 | 20.9 | 26.4 | 22.3 | 22.6 | 20.6 | 21.6 | 22.8 | 21.1 | 16.8 | 19.4 | 22.3 | 11.3 | 16.8 | 17.7 | 15.6 | | |
| Cr | 60 | 50 | 20 | 70 | 60 | 60 | 40 | 40 | 30 | 70 | 60 | 50 | 60 | 30 | 20 | 40 | 10 | 10 | | |
| Ni | 21 | 16 | 13 | 22 | 28 | 23 | 26 | 29 | 9 | 21 | 21 | 12 | 15 | 12 | 6 | 14 | 8 | 7 | | |
| Co | 11 | 8 | 8 | 12 | 15 | 11 | 13 | 9 | 8 | 10 | 10 | 6 | 8 | 5 | 3 | 9 | 10 | 10 | | |
| Th | 8.19 | 6.83 | 7.21 | 5.5 | 7.89 | 7.14 | 14 | 15.1 | 7.31 | 5.63 | 8.06 | 7.18 | 6.4 | 7.63 | 8.53 | 6.31 | 4.66 | 4.11 | | |
| U | 2.68 | 2.28 | 2.35 | 1.87 | 2.55 | 2.41 | 4.71 | 4.15 | 2.68 | 2.06 | 2.78 | 2.42 | 2.13 | 2.62 | 2.76 | 3.58 | 2.52 | 2.2 | | |
| V | 89 | 97 | 91 | 137 | 103 | 91 | 104 | 96 | 84 | 78 | 87 | 90 | 88 | 109 | 46 | 134 | 173 | 147 | | |
| Y | 14.4 | 11.1 | 14 | 15.8 | 17.2 | 13.9 | 18.7 | 15 | 11.7 | 11.9 | 13.3 | 12.5 | 12.5 | 16 | 9 | 12.2 | 16 | 15.1 | | |
| Nb | 8.5 | 6.9 | 4.8 | 5.9 | 6.8 | 8.4 | 5.9 | 5.8 | 4.6 | 6.9 | 8.3 | 6 | 6.1 | 4.8 | 4.1 | 4.5 | 7.2 | 6.5 | | |
| Ta | 0.5 | 0.5 | 0.3 | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 | 0.3 | 0.4 | 0.6 | 0.4 | 0.4 | 0.3 | 0.3 | 0.4 | 0.4 | 0.4 | | |
| Hf | 5.6 | 4.8 | 5.1 | 4.9 | 5.1 | 5.5 | 6 | 6.3 | 5.2 | 5.2 | 5.4 | 4.3 | 5 | 4.5 | 4.3 | 4.3 | 5.9 | 5.5 | | |
| Pb | 17 | 17 | 15 | 11 | 16 | 14 | 25 | 18 | 15 | 16 | 18 | 11 | 11 | 21 | 5 | 16 | 16 | 12 | | |
| Zr | 191 | 172 | 165 | 178 | 174 | 199 | 216 | 221 | 181 | 195 | 198 | 155 | 187 | 156 | 137 | 156 | 219 | 195 | | |
| La | 40.3 | 28.2 | 44.9 | 28.5 | 29.8 | 35.1 | 81.5 | 61.8 | 39.8 | 31 | 35.3 | 29.6 | 27.8 | 119 | 19.5 | 35.5 | 43.1 | 38.8 | | |
| Ce | 79.8 | 55.8 | 91.7 | 56.5 | 57.2 | 70.6 | 136.5 | 124 | 81.9 | 62.3 | 71.3 | 56.1 | 55.6 | 72.9 | 42.3 | 65.9 | 90.6 | 81.5 | | |
| Pr | 9.49 | 6.74 | 11.75 | 7.1 | 7.45 | 8.79 | 16.75 | 14.75 | 9.61 | 7.4 | 8.28 | 7.04 | 6.38 | 25.4 | 5.12 | 7.43 | 11.25 | 10.35 | | |
| Nd | 36.5 | 24.9 | 47 | 29.1 | 30.2 | 34.4 | 61.7 | 55.3 | 37.2 | 28.2 | 30.3 | 26.6 | 25.1 | 85.8 | 19.3 | 27.4 | 43.5 | 40.9 | | |
| Sm | 6.51 | 4.45 | 8.26 | 5.43 | 5.44 | 5.74 | 10.65 | 9.4 | 6.79 | 5.44 | 5.69 | 5.19 | 4.84 | 12.3 | 3.57 | 5.34 | 9.11 | 7.65 | | |
| Eu | 1.44 | 1.27 | 1.9 | 1.4 | 1.37 | 1.49 | 2.62 | 2.32 | 1.61 | 1.49 | 1.45 | 1.36 | 1.28 | 3.02 | 0.69 | 0.99 | 1.67 | 1.59 | | |
| Gd | 4.36 | 3.34 | 4.57 | 3.98 | 4.13 | 3.97 | 6.62 | 5.35 | 3.96 | 3.7 | 3.51 | 3.09 | 3.16 | 6.55 | 2.42 | 3.65 | 5.36 | 5.38 | | |
| Tb | 0.59 | 0.42 | 0.54 | 0.55 | 0.56 | 0.56 | 0.75 | 0.64 | 0.45 | 0.51 | 0.52 | 0.46 | 0.49 | 0.74 | 0.34 | 0.46 | 0.72 | 0.58 | | |
| Dy | 2.73 | 2.22 | 2.73 | 2.87 | 3.05 | 2.71 | 3.43 | 2.93 | 2.22 | 2.45 | 2.63 | 2.3 | 2.45 | 3.55 | 1.84 | 2.38 | 3.08 | 2.79 | | |
| Ho | 0.46 | 0.38 | 0.46 | 0.54 | 0.56 | 0.5 | 0.61 | 0.51 | 0.39 | 0.39 | 0.46 | 0.45 | 0.41 | 0.55 | 0.33 | 0.45 | 0.54 | 0.48 | | |
| Er | 1.28 | 1.12 | 1.15 | 1.45 | 1.66 | 1.28 | 1.39 | 1.29 | 0.99 | 1.1 | 1.16 | 1.18 | 1.09 | 1.2 | 0.86 | 1.09 | 1.31 | 1.15 | | |

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Tabla S1 (cont.). Geoquímica de mayores en % en peso, traza y tierras raras en ppm de las muestras volcánicas de la Formación Tetelcingo.

| Tipo de roca | Lavas | | | | | | | | | | | | | | Brechas volcánicas | | | | | |
|----------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|---------|---------|---------|---------|--|
| | AO-03A | AO-04 | AO-52 | AO-53B | AO-55 | AO-60 | AO-62 | AO-63 | AO-64 | AO-65 | AO-68 | AO-70 | AO-73 | AO-61 | AO-53A | AO-72A | AO-72B | AO-72C | | |
| Coordenadas | 0454310 | 0450858 | 0456138 | 0453292 | 0451894 | 0456197 | 0456210 | 0456219 | 0455811 | 0455270 | 0454094 | 0453119 | 0451538 | 0456266 | 0453292 | 0451829 | 0451829 | 0451829 | 0451829 | |
| UTM 14Q | 1940622 | 1941648 | 1940961 | 1940725 | 1939856 | 1941412 | 1941124 | 1941081 | 1940747 | 1940677 | 1940764 | 1940719 | 1940182 | 1941308 | 1940725 | 1940012 | 1940012 | 1940012 | 1940012 | |
| Tm | 0.13 | 0.14 | 0.15 | 0.18 | 0.21 | 0.16 | 0.17 | 0.17 | 0.11 | 0.15 | 0.16 | 0.15 | 0.16 | 0.13 | 0.12 | 0.14 | 0.17 | 0.14 | 0.14 | |
| Yb | 1.08 | 0.93 | 0.81 | 1.36 | 1.37 | 1.08 | 1.18 | 1.13 | 0.8 | 0.77 | 1.02 | 1 | 0.98 | 0.76 | 0.71 | 0.88 | 0.96 | 0.8 | 0.8 | |
| Lu | 0.14 | 0.12 | 0.13 | 0.17 | 0.18 | 0.11 | 0.18 | 0.17 | 0.11 | 0.13 | 0.15 | 0.17 | 0.16 | 0.13 | 0.1 | 0.16 | 0.14 | 0.1 | 0.1 | |
| Sc | 6 | 7 | 7 | 11 | 11 | 8 | 10 | 10 | 6 | 7 | 7 | 7 | 8 | 7 | 5 | 10 | 5 | 5 | 5 | |
| Zn | 65 | 49 | 77 | 64 | 88 | 74 | 66 | 58 | 64 | 62 | 68 | 49 | 51 | 54 | 32 | 116 | 116 | 101 | 101 | |
| As | 19.6 | 7.6 | 7.8 | 4.7 | 22.5 | 15.6 | 17 | 17.5 | 5.6 | 7.3 | 7.3 | 6.4 | 8.8 | 7.6 | 10.3 | 5.7 | 8 | 8 | 8.5 | |
| Cu | 9 | 13 | 15 | 21 | 25 | 12 | 17 | 11 | 8 | 10 | 13 | 23 | 14 | 7 | 8 | 10 | 13 | 13 | 13 | |
| Li | 10 | 40 | 20 | 20 | 30 | 40 | 10 | 10 | 20 | 20 | 20 | 20 | 20 | 30 | 10 | 10 | 10 | 10 | 10 | |
| #Mg | 39.71 | 28.71 | 38.80 | 34.84 | 30.59 | 45.89 | 22.56 | 13.40 | 37.77 | 32.21 | 37.60 | 23.39 | 32.75 | 16.77 | 5.78 | 22.05 | 13.64 | 13.53 | 13.53 | |
| (Rb/Yb) _N | 66.7 | 61.28 | 61.15 | 26.66 | 83.02 | 70.74 | 55.46 | 51.46 | 58.03 | 64.83 | 72.08 | 47.9 | 43.18 | 105.2 | 3.94 | 53.91 | 30.81 | 32.51 | 32.51 | |
| (La/Yb) _N | 26.78 | 21.76 | 39.78 | 15.04 | 15.61 | 23.32 | 49.56 | 39.25 | 35.7 | 28.89 | 24.84 | 21.24 | 20.36 | 112.4 | 19.71 | 28.95 | 32.22 | 34.8 | 34.8 | |
| Eu/Eu* | 0.83 | 1.01 | 0.95 | 0.92 | 0.88 | 0.95 | 0.95 | 1 | 0.95 | 1.02 | 0.99 | 1.04 | 1 | 1.03 | 0.72 | 0.69 | 0.73 | 0.76 | 0.76 | |
| Sr/Y | 143.75 | 69.19 | 141.07 | 78.48 | 45.76 | 57.99 | 51.23 | 71.33 | 118.38 | 101.68 | 113.53 | 86.80 | 118.00 | 69.38 | 12.67 | 39.92 | 34.94 | 33.44 | 33.44 | |
| (Yb) _N | 2.19 | 1.89 | 1.64 | 2.76 | 2.78 | 2.19 | 2.39 | 2.29 | 1.62 | 1.56 | 2.07 | 2.03 | 1.99 | 1.54 | 1.44 | 1.78 | 1.95 | 1.62 | 1.62 | |
| Gd/Yb | 4.04 | 3.59 | 5.64 | 2.93 | 3.01 | 3.68 | 5.61 | 4.73 | 4.95 | 4.81 | 3.44 | 3.09 | 3.22 | 8.62 | 3.41 | 4.15 | 5.58 | 6.73 | 6.73 | |

Tabla S2. Datos de geocronología U-Pb de zircones y esfenas de rocas volcánicas de la Formación Tetelcingo.

| Análisis de zircones | Relación isotópica | | | | | | | | | | Edades aparentes (Ma) | | | | | Mejor edad | | Conc (%) | |
|----------------------|--------------------------------------|--------------------------------------|----------------------------------------|----------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|-------------|---------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|----------------------------------------|----------------------------------------|------------|--------|----------|------|
| | U (ppm) | ²⁰⁶ Pb/ ²⁰⁴ Pb | U/Th | ²⁰⁶ Pb*/ ²⁰⁷ Pb* | ± (%) | ²⁰⁷ Pb*/ ²³⁵ U* | ± (%) | ²⁰⁶ Pb*/ ²³⁸ U | ± (%) | error corr. | ²⁰⁶ Pb*/ ²³⁸ U* | ± (Ma) | ²⁰⁷ Pb*/ ²³⁵ U | ± (Ma) | ²⁰⁶ Pb*/ ²⁰⁷ Pb* | ± (Ma) | (Ma) | | (Ma) |
| AO03-1C | 741 | 16432 | 1.3 | 21.9966 | 12.1 | 0.0636 | 12.2 | 0.0102 | 1.5 | 0.12 | 65.1 | 1.0 | 62.6 | 7.4 | -30.8 | 295.3 | 65.1 | 1.0 | NA |
| AO03-2R | 517 | 8757 | 1.4 | 19.9761 | 13.2 | 0.0683 | 13.7 | 0.0099 | 3.7 | 0.27 | 63.5 | 2.4 | 67.1 | 8.9 | 197.8 | 307.6 | 63.5 | 2.4 | NA |
| AO03-3C | 379 | 10474 | 4.5 | 21.8989 | 14.1 | 0.0640 | 14.5 | 0.0102 | 3.5 | 0.24 | 65.2 | 2.3 | 63.0 | 8.9 | -20.0 | 342.1 | 65.2 | 2.3 | NA |
| AO03-4R | 441 | 9934 | 3.5 | 21.5368 | 9.8 | 0.0647 | 10.2 | 0.0101 | 2.9 | 0.28 | 64.8 | 1.9 | 63.7 | 6.3 | 20.1 | 235.0 | 64.8 | 1.9 | NA |
| AO03-5C | 505 | 18633 | 4.3 | 20.2611 | 11.4 | 0.0697 | 11.6 | 0.0102 | 2.0 | 0.17 | 65.7 | 1.3 | 68.4 | 7.7 | 164.7 | 267.6 | 65.7 | 1.3 | NA |
| AO03-6C | 145 | 175560 | 1.4 | 12.7571 | 2.3 | 2.1205 | 5.8 | 0.1962 | 5.4 | 0.92 | 1154.8 | 56.7 | 1155.5 | 40.3 | 1156.7 | 45.8 | 1156.7 | 45.8 | 99.8 |
| AO03-6R | 441 | 9437 | 3.4 | 21.0411 | 16.6 | 0.0668 | 16.7 | 0.0102 | 2.4 | 0.14 | 65.4 | 1.5 | 65.6 | 10.6 | 75.7 | 395.9 | 65.4 | 1.5 | NA |
| AO03-8C | 489 | 14568 | 2.2 | 20.8268 | 19.0 | 0.0546 | 19.8 | 0.0082 | 5.4 | 0.27 | 52.9 | 2.9 | 53.9 | 10.4 | 100.0 | 454.0 | 52.9 | 2.9 | NA |
| AO03-9C | 476 | 10219 | 4.6 | 21.3311 | 5.7 | 0.0658 | 6.0 | 0.0102 | 1.7 | 0.28 | 65.3 | 1.1 | 64.7 | 3.7 | 43.1 | 136.9 | 65.3 | 1.1 | NA |
| AO03-10R | 571 | 12708 | 3.0 | 21.0451 | 10.1 | 0.0660 | 10.3 | 0.0101 | 1.8 | 0.17 | 64.6 | 1.1 | 64.9 | 6.5 | 75.3 | 241.6 | 64.6 | 1.1 | NA |
| AO03-11C | 469 | 5827 | 4.5 | 20.2566 | 8.5 | 0.0683 | 8.9 | 0.0100 | 2.7 | 0.30 | 64.4 | 1.7 | 67.1 | 5.8 | 165.3 | 199.6 | 64.4 | 1.7 | NA |
| AO03-12R | 548 | 14876 | 2.9 | 23.1035 | 11.6 | 0.0611 | 11.7 | 0.0102 | 1.9 | 0.16 | 65.6 | 1.2 | 60.2 | 6.9 | -151.3 | 288.5 | 65.6 | 1.2 | NA |
| AO03-13C | 795 | 20055 | 3.7 | 21.4850 | 8.5 | 0.0662 | 9.0 | 0.0103 | 2.9 | 0.32 | 66.1 | 1.9 | 65.1 | 5.7 | 25.9 | 204.2 | 66.1 | 1.9 | NA |
| AO03-14R | 682 | 11026 | 2.5 | 22.2582 | 7.9 | 0.0621 | 8.2 | 0.0100 | 2.4 | 0.30 | 64.3 | 1.6 | 61.2 | 4.9 | -59.6 | 191.9 | 64.3 | 1.6 | NA |
| AO03-15C | 474 | 12448 | 1.9 | 20.3679 | 6.3 | 0.0716 | 7.3 | 0.0106 | 3.7 | 0.51 | 67.8 | 2.5 | 70.2 | 5.0 | 152.5 | 148.0 | 67.8 | 2.5 | NA |
| AO03-16C | 607 | 13104 | 6.1 | 14.9910 | 2.7 | 0.4512 | 6.6 | 0.0491 | 6.0 | 0.91 | 308.7 | 18.0 | 378.1 | 20.7 | 828.6 | 56.3 | 308.7 | 18.0 | 37.3 |
| AO03-17R | 545 | 18951 | 3.1 | 21.2645 | 14.8 | 0.0666 | 15.0 | 0.0103 | 2.3 | 0.16 | 65.9 | 1.5 | 65.5 | 9.5 | 50.6 | 354.3 | 65.9 | 1.5 | NA |
| AO03-18C | 464 | 7869 | 3.5 | 22.8299 | 13.3 | 0.0615 | 13.6 | 0.0102 | 2.7 | 0.20 | 65.3 | 1.8 | 60.6 | 8.0 | -121.8 | 329.8 | 65.3 | 1.8 | NA |
| AO03-19R | 530 | 8421 | 3.1 | 21.7775 | 10.6 | 0.0644 | 10.8 | 0.0102 | 2.1 | 0.20 | 65.2 | 1.4 | 63.3 | 6.7 | -6.6 | 257.1 | 65.2 | 1.4 | NA |
| AO03-20C | 459 | 7028 | 3.9 | 20.1600 | 15.1 | 0.0693 | 15.3 | 0.0101 | 2.6 | 0.17 | 65.0 | 1.6 | 68.0 | 10.1 | 176.4 | 354.6 | 65.0 | 1.6 | NA |
| AO04-1C | 406 | 21750 | 6.3 | 21.6415 | 9.0 | 0.0650 | 9.3 | 0.0102 | 2.5 | 0.26 | 65.5 | 1.6 | 64.0 | 5.8 | 8.4 | 217.4 | 65.5 | 1.6 | NA |
| AO04-2C | 361 | 8046 | 6.0 | 19.7858 | 8.1 | 0.0703 | 8.5 | 0.0101 | 2.4 | 0.28 | 64.7 | 1.5 | 69.0 | 5.6 | 220.0 | 188.0 | 64.7 | 1.5 | NA |
| AO04-3 | 612 | 4689 | 2.2 | 20.8692 | 10.7 | 0.0691 | 11.1 | 0.0105 | 3.0 | 0.27 | 67.1 | 2.0 | 67.9 | 7.3 | 95.2 | 253.3 | 67.1 | 2.0 | NA |
| AO04-4 | 665 | 45748 | 6.0 | 22.1516 | 8.4 | 0.0631 | 9.0 | 0.0101 | 3.1 | 0.35 | 65.1 | 2.0 | 62.2 | 5.4 | -47.9 | 205.4 | 65.1 | 2.0 | NA |
| AO04-5 | 607 | 21046 | 3.8 | 22.3792 | 12.6 | 0.0620 | 12.9 | 0.0101 | 2.6 | 0.20 | 64.5 | 1.7 | 61.1 | 7.7 | -72.8 | 310.2 | 64.5 | 1.7 | NA |
| Análisis de esfenas | Relación isotópica | | | | | | | | | | Edades aparentes (Ma) | | | | | Mejor edad | | Conc (%) | |
| U (ppm) | ²⁰⁶ Pb/ ²⁰⁴ Pb | U/Th | ²⁰⁶ Pb*/ ²⁰⁷ Pb* | ± (%) | ²⁰⁷ Pb*/ ²³⁵ U* | ± (%) | ²⁰⁶ Pb*/ ²³⁸ U | ± (%) | error corr. | ²⁰⁶ Pb*/ ²³⁸ U* | ± (Ma) | ²⁰⁷ Pb*/ ²³⁵ U | ± (Ma) | ²⁰⁶ Pb*/ ²⁰⁷ Pb* | ± (Ma) | (Ma) | (Ma) | | |
| AO3B SPH-1 | 256 | 57 | 4.6 | 16.9440 | 26.0 | 0.0890 | 26.4 | 0.0109 | 4.4 | 0.17 | 70.1 | 3.1 | 86.6 | 21.9 | 567.8 | 575.4 | 70.1 | 3.1 | NA |
| AO3B SPH-2 | 236 | 54 | 2.9 | 22.9649 | 57.8 | 0.0655 | 58.3 | 0.0109 | 7.9 | 0.13 | 70.0 | 5.5 | 64.4 | 36.4 | -136.3 | 1552.2 | 70.0 | 5.5 | NA |
| AO3B SPH-3 | 278 | 56 | 4.5 | 82.8668 | 80.6 | 0.0175 | 80.9 | 0.0105 | 6.3 | 0.08 | 67.3 | 4.2 | 17.6 | 14.1 | 0.0 | 341.1 | 67.3 | 4.2 | NA |
| AO3B SPH-4 | 255 | 54 | 5.8 | 17.3291 | 24.7 | 0.0816 | 26.7 | 0.0103 | 10.1 | 0.38 | 65.8 | 6.6 | 79.7 | 20.5 | 518.6 | 550.6 | 65.8 | 6.6 | NA |
| AO3B SPH-5 | 310 | 59 | 4.6 | 17.7679 | 24.5 | 0.0806 | 24.9 | 0.0104 | 4.6 | 0.18 | 66.6 | 3.0 | 78.7 | 18.9 | 463.5 | 549.4 | 66.6 | 3.0 | NA |
| AO3B SPH-6 | 214 | 53 | 2.7 | 17.3182 | 30.9 | 0.0833 | 31.7 | 0.0105 | 7.1 | 0.22 | 67.1 | 4.7 | 81.3 | 24.8 | 520.0 | 693.4 | 67.1 | 4.7 | NA |
| AO3B SPH-7 | 296 | 58 | 4.4 | 20.3659 | 18.5 | 0.0722 | 19.0 | 0.0107 | 4.1 | 0.22 | 68.4 | 2.8 | 70.8 | 13.0 | 152.7 | 437.1 | 68.4 | 2.8 | NA |
| AO3B SPH-8 | 264 | 53 | 4.0 | 19.2917 | 30.3 | 0.0700 | 30.8 | 0.0098 | 5.5 | 0.18 | 62.8 | 3.4 | 68.7 | 20.5 | 278.2 | 708.7 | 62.8 | 3.4 | NA |
| AO3B SPH-9 | 230 | 55 | 5.7 | 24.3553 | 45.0 | 0.0603 | 46.4 | 0.0106 | 11.4 | 0.24 | 68.3 | 7.7 | 59.4 | 26.8 | -283.9 | 1198.8 | 68.3 | 7.7 | NA |
| AO3B SPH-10 | 307 | 56 | 4.1 | 17.0408 | 43.4 | 0.0752 | 45.7 | 0.0093 | 14.4 | 0.31 | 59.6 | 8.5 | 73.6 | 32.5 | 555.3 | 991.3 | 59.6 | 8.5 | NA |
| AO3B SPH-11 | 130 | 198 | 249.7 | 20.0563 | 47.0 | 0.0808 | 55.6 | 0.0118 | 29.6 | 0.53 | 75.3 | 22.2 | 78.9 | 42.2 | 188.4 | 1154.5 | 75.3 | 22.2 | NA |
| AO3B SPH-12 | 298 | 57 | 3.8 | 19.2439 | 27.5 | 0.0725 | 28.5 | 0.0101 | 7.7 | 0.27 | 64.9 | 5.0 | 71.1 | 19.6 | 283.9 | 638.9 | 64.9 | 5.0 | NA |
| AO3B SPH-13 | 258 | 54 | 3.2 | 22.0202 | 26.0 | 0.0638 | 26.2 | 0.0102 | 3.6 | 0.14 | 65.4 | 2.4 | 62.8 | 16.0 | -33.4 | 639.6 | 65.4 | 2.4 | NA |
| AO3B SPH-14 | 252 | 53 | 4.8 | 15.5294 | 24.4 | 0.0921 | 25.5 | 0.0104 | 7.2 | 0.28 | 66.5 | 4.7 | 89.4 | 21.8 | 754.6 | 523.2 | 66.5 | 4.7 | NA |
| AO3B SPH-15 | 267 | 55 | 5.7 | 24.8957 | 34.6 | 0.0574 | 35.2 | 0.0104 | 6.3 | 0.18 | 66.4 | 4.1 | 56.6 | 19.4 | -340.2 | 914.6 | 66.4 | 4.1 | NA |
| AO4 SPH-1 | 247 | 55 | 3.5 | 16.3938 | 27.3 | 0.0871 | 28.3 | 0.0104 | 7.6 | 0.27 | 66.4 | 5.0 | 84.8 | 23.0 | 639.2 | 597.2 | 66.4 | 5.0 | NA |
| AO4 SPH-2 | 212 | 50 | 2.1 | 19.6715 | 48.4 | 0.0706 | 50.3 | 0.0101 | 13.8 | 0.27 | 64.6 | 8.9 | 69.3 | 33.7 | 233.4 | 1181.8 | 64.6 | 8.9 | NA |
| AO4 SPH-3 | 234 | 52 | 2.9 | 24.7540 | 43.5 | 0.0560 | 43.9 | 0.0101 | 6.1 | 0.14 | 64.5 | 3.9 | 55.3 | 23.7 | -325.5 | 1165.5 | 64.5 | 3.9 | NA |
| AO4 SPH-4 | 12 | 27 | 30.9 | -3.4029 | 170.1 | 2.9119 | 249.0 | 0.0719 | 181.9 | 0.73 | 447.4 | 790.0 | 0.0 | 0.0 | 0.0 | 1989.7 | 447.4 | 790.0 | NA |
| AO4 SPH-5 | 227 | 53 | 3.1 | 22.5931 | 28.2 | 0.0615 | 28.6 | 0.0101 | 4.9 | 0.17 | 64.6 | 3.2 | 60.6 | 16.8 | -96.1 | 703.1 | 64.6 | 3.2 | NA |