Table 1. Trace element compositions (in ppm) of granites from the Yinyan tin deposit

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample NO. | Y730 | Y801 | Y802 | Y803 | Y804 | Y805 | Y806 | Y807 |
| Rock type | quartz porphyry | granite porphyry | | | | | | |
| Ba | 14.8 | 0.692 | 0.950 | 12.1 | 1.42 | 21.7 | 11.0 | 22.5 |
| Th | 28.0 | 18.4 | 19.8 | 15.9 | 15.3 | 23.9 | 20.7 | 23.9 |
| U | 22.1 | 14.0 | 18.3 | 14.6 | 13.8 | 16.0 | 14.2 | 17.9 |
| Nb | 55.2 | 26.3 | 24.8 | 44.6 | 10.2 | 44.7 | 35.4 | 52.8 |
| Ta | 30.0 | 12.7 | 11.2 | 23.2 | 4.24 | 21.8 | 14.8 | 24.1 |
| Sr | 13.1 | 12.2 | 9.28 | 18.9 | 7.65 | 8.37 | 14.9 | 9.71 |
| P | 138 | 45.1 | 44.6 | 45.3 | 49.0 | 45.3 | 46.0 | 44.9 |
| Nd | 23.6 | 38.4 | 33.7 | 22.9 | 20.6 | 26.4 | 24.8 | 30.6 |
| Zr | 63.8 | 72.5 | 70.2 | 57.5 | 32.6 | 73.0 | 51.1 | 63.8 |
| Hf | 7.18 | 6.95 | 6.73 | 6.97 | 3.21 | 8.41 | 5.35 | 7.07 |
| Sm | 8.37 | 13.8 | 11.4 | 8.53 | 6.75 | 9.12 | 8.86 | 9.72 |
| Eu | 0.009 | 0.024 | 0.014 | 0.019 | 0.015 | 0.009 | 0.025 | 0.029 |
| Ti | 63.5 | 186 | 123 | 125 | 135 | 125 | 127 | 61.7 |
| Y | 90.7 | 154 | 120 | 108 | 65.1 | 87.9 | 86.4 | 72.5 |
| La | 21.6 | 28.8 | 28.9 | 17.8 | 19.8 | 20.7 | 18.9 | 28.9 |
| Ce | 59.5 | 77.6 | 75.7 | 48.6 | 50.0 | 58.0 | 54.0 | 75.6 |
| Pr | 7.15 | 10.1 | 9.34 | 6.16 | 5.90 | 7.45 | 6.88 | 8.95 |
| Nd | 23.6 | 38.4 | 33.7 | 22.9 | 20.6 | 26.4 | 24.8 | 30.6 |
| Sm | 8.37 | 13.8 | 11.4 | 8.53 | 6.75 | 9.12 | 8.86 | 9.72 |
| Eu | 0.009 | 0.024 | 0.014 | 0.019 | 0.015 | 0.009 | 0.025 | 0.029 |
| Gd | 8.32 | 13.9 | 12.5 | 9.48 | 6.39 | 8.87 | 8.51 | 8.70 |
| Tb | 1.98 | 2.88 | 2.64 | 2.39 | 1.51 | 2.26 | 2.10 | 2.02 |
| Dy | 16.4 | 22.1 | 20.4 | 20.1 | 12.6 | 19.1 | 17.6 | 16.3 |
| Ho | 3.69 | 4.79 | 4.27 | 4.44 | 2.74 | 4.09 | 3.74 | 3.38 |
| Er | 11.8 | 14.6 | 12.7 | 14.2 | 8.83 | 13.0 | 11.9 | 10.6 |
| Tm | 2.36 | 2.62 | 2.31 | 2.94 | 1.82 | 2.62 | 2.46 | 2.20 |
| Yb | 17.8 | 18.4 | 16.2 | 22.3 | 14.1 | 19.8 | 18.7 | 16.4 |
| Lu | 2.74 | 2.71 | 2.41 | 3.40 | 2.14 | 3.00 | 2.84 | 2.54 |
| δEu | 0.003 | 0.005 | 0.004 | 0.006 | 0.007 | 0.003 | 0.009 | 0.010 |
| LREE | 120 | 169 | 159 | 104 | 103 | 122 | 113 | 154 |
| HREE | 65.1 | 82.0 | 73.4 | 79.3 | 50.1 | 72.7 | 67.9 | 62.1 |
| Total REE | 185 | 251 | 232 | 183 | 153 | 194 | 181 | 216 |
| LREE/HREE | 1.85 | 2.06 | 2.17 | 1.31 | 2.06 | 1.67 | 1.67 | 2.48 |
| (La/Yb)N | 0.82 | 1.06 | 1.20 | 0.54 | 0.95 | 0.70 | 0.68 | 1.19 |
| Nb/Ta | 1.84 | 2.07 | 2.21 | 1.92 | 2.41 | 2.05 | 2.39 | 2.19 |
| Zr/Hf | 8.89 | 10.43 | 10.43 | 8.25 | 10.16 | 8.68 | 9.55 | 9.02 |
| TE1 | 1.25 | 1.16 | 1.17 | 1.18 | 1.17 | 1.22 | 1.22 | 1.20 |
| TE3 | 1.14 | 1.08 | 1.11 | 1.18 | 1.15 | 1.20 | 1.19 | 1.17 |
| TE1,3 | 1.19 | 1.12 | 1.14 | 1.18 | 1.16 | 1.21 | 1.21 | 1.18 |

Note: the subscript N represents chondrite-normalized. δEu = EuN/(SmN × GdN)1/2. TE1 = (CeN/(LaN2/3 × NdN1/3) × PrN/(LaN1/3 × NdN2/3))1/2, TE3 = (TbN/(GdN2/3 × HoN1/3) × DyN/(GdN1/3 × HoN2/3))1/2 and TE1,3 = (TE1 × TE3) 1/2 (Irber 1999).