附表1 北山造山带北部辉长岩主量元素（wt%）和微量元素（ppm）组成

Appendix table 1 Major elements (in weight %) and trace elements (in ppm) compositions of the gabbro from northern Beishan orogenic belt

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 样品号 | 3005-1a | 3005-1b | 3005-1c | 3005-1d | 3005-1e |
| SiO2 | 51.4 | 51.02 | 49.61 | 50.01 | 50.78 |
| Al2O3 | 16.28 | 17.99 | 13.68 | 15.31 | 14.95 |
| Fe2O3 | 4.49 | 3.21 | 3.88 | 3.82 | 3.06 |
| FeO | 5.51 | 5.26 | 7.05 | 5.81 | 6.61 |
| CaO | 8.65 | 9.48 | 9.49 | 9.59 | 9.36 |
| MgO | 6.44 | 6.35 | 10.91 | 9.77 | 9.49 |
| K2O | 0.68 | 0.82 | 0.22 | 0.39 | 0.31 |
| Na2O | 3.23 | 3.28 | 2.1 | 2.48 | 2.57 |
| TiO2 | 1.34 | 0.83 | 0.93 | 0.85 | 0.97 |
| P2O5 | 0.24 | 0.091 | 0.031 | 0.069 | 0.11 |
| MnO | 0.16 | 0.13 | 0.19 | 0.16 | 0.16 |
| 灼失 | 0.97 | 0.95 | 1.13 | 1.08 | 0.88 |
| H2O+ | 0.36 | 0.34 | 0.39 | 0.39 | 0.32 |
| H2O- | 0.027 | 0.03 | 0.027 | 0.028 | 0.042 |
| Na2O+K2O | 3.91 | 4.1 | 2.32 | 2.87 | 2.88 |
| Na2O+K2O-CaO | -4.74 | -5.38 | -7.17 | -6.72 | -6.48 |
| A/CNK | 1.16 | 1.19 | 1.10 | 1.15 | 1.13 |
| A/NK | 2.62 | 2.79 | 3.60 | 3.31 | 3.18 |
| FeOT | 9.55 | 8.15 | 10.54 | 9.25 | 9.36 |
| Mg# | 55 | 58 | 65 | 66 | 65 |
| Rb | 17.5 | 20.9 | 6.4 | 11.2 | 8.9 |
| Ba | 156 | 168 | 58.4 | 93.7 | 87.3 |
| Th | 1.87 | 1.88 | 0.41 | 0.58 | 0.63 |
| U | 0.55 | 0.6 | 0.16 | 0.37 | 0.25 |
| Nb | 3.23 | 1.98 | 0.64 | 1.1 | 1.35 |
| Ta | 0.22 | 0.15 | 0.051 | 0.087 | 0.092 |
| La | 11.1 | 7.42 | 2.88 | 4.56 | 5.19 |
| Ce | 29.6 | 18.5 | 8.08 | 12.3 | 14.2 |
| Sr | 472 | 488 | 355 | 362 | 368 |
| Nd | 19.7 | 10.8 | 6.41 | 8.72 | 10.3 |
| Zr | 83.6 | 57.5 | 25.5 | 42.7 | 41.4 |
| Hf | 2.61 | 1.85 | 0.9 | 1.4 | 1.38 |
| Sm | 4.93 | 2.7 | 1.87 | 2.49 | 2.87 |
| Eu | 1.37 | 1.18 | 0.75 | 0.8 | 0.91 |
| Ti | 8040 | 4980 | 5580 | 5100 | 5820 |
| Gd | 5.37 | 2.98 | 2.44 | 2.8 | 3.42 |
| Tb | 0.87 | 0.5 | 0.42 | 0.49 | 0.57 |
| Dy | 5.21 | 3.19 | 2.66 | 3.07 | 3.41 |
| Y | 26.9 | 16.9 | 14.1 | 15.7 | 17.9 |
| Ho | 1.02 | 0.66 | 0.56 | 0.61 | 0.68 |
| Er | 2.64 | 1.82 | 1.53 | 1.65 | 1.83 |
| Tm | 0.38 | 0.26 | 0.23 | 0.24 | 0.27 |
| Yb | 2.56 | 1.76 | 1.52 | 1.58 | 1.82 |
| Lu | 0.38 | 0.27 | 0.24 | 0.24 | 0.28 |
| Cr | 149 | 134 | 725 | 664 | 644 |
| Ni | 83.6 | 83.2 | 199 | 186 | 177 |
| Co | 38.5 | 38.5 | 56 | 51.5 | 49.3 |
| Cs | 2.49 | 2.34 | 1 | 1.66 | 0.97 |
| V | 301 | 128 | 252 | 232 | 216 |
| Sc | 24.9 | 19.6 | 33 | 28.7 | 26.6 |
| Ga | 20.1 | 19.4 | 15.6 | 16.5 | 16.7 |
| Pr | 4.21 | 2.41 | 1.27 | 1.79 | 2.14 |
| ΣREE | 116.2 | 71.4 | 45.0 | 57.0 | 65.8 |
| LREE | 70.9 | 43.0 | 21.3 | 30.7 | 35.6 |
| HREE | 45.3 | 28.3 | 23.7 | 26.4 | 30.2 |
| LREE/HREE | 1.56 | 1.52 | 0.90 | 1.16 | 1.18 |
| LaN/YbN | 3.11 | 3.02 | 1.36 | 2.07 | 2.05 |
| δEu | 0.81 | 1.27 | 1.07 | 0.92 | 0.89 |
| δCe | 1.06 | 1.07 | 1.03 | 1.06 | 1.04 |

注：测试单位为中国地质调查局天津地质调查中心同位素实验室