**Tab. 1.** Major element composition of granites and metasomatic rocks which alter them, weight %

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **D** | **Rock** | **Sample** | **SiO2** | **TiO2** | **Al2O3** | **FeO** | **MnO** | **MgO** | **CaO** | **Na2O** | **K2O** | **P2O5** | **S** | **Ʃ** |
| Andreevskaya | Grt | DA-4 | 73.00 | 0.21 | 12.90 | 1.54 | 0.03 | 0.34 | 1.30 | 4.04 | 3.65 | 0.07 | 0.15 | 97.22 |
| Qz-M | DA-29 | 72.70 | 0.23 | 14.70 | 4.12 | 0.03 | 0.48 | 0.35 | 0.11 | 4.90 | 0.08 | 1.15 | 98.84 |
| Qz-M | DA-11 | 71.00 | 0.24 | 17.30 | 2.69 | 0.01 | 0.46 | 0.19 | 0.12 | 5.36 | 0.15 | 2.17 | 99.69 |
| Msc | DA-31 | 51.90 | 0.26 | 16.60 | 5.62 | 0.94 | 4.07 | 11.70 | 0.12 | 5.73 | 0.12 | 1.13 | 98.19 |
| Vtoropavlovslaya | Grt | VP-4 | 72.00 | 0.15 | 13.40 | 1.62 | 0.04 | 0.49 | 1.21 | 2.63 | 3.58 | 0.16 | 0.24 | 95.52 |
| Grt | VP-11 | 72.30 | 0.19 | 13.60 | 1.66 | 0.04 | 0.46 | 1.44 | 4.32 | 4.56 | 0.10 | 0.26 | 98.93 |
| Qz-M | VP-17 | 50.90 | 0.42 | 28.10 | 8.08 | 0.01 | 0.95 | 0.18 | 0.24 | 8.22 | 0.10 | 2.45 | 99.65 |
| Msc | VP-15 | 51.10 | 0.31 | 30.10 | 2.40 | 0.05 | 0.96 | 1.60 | 0.20 | 10.00 | 0.22 | 2.72 | 99.66 |
| Msc | VP-16 | 58.50 | 0.16 | 24.90 | 2.26 | 0.06 | 0.50 | 0.66 | 0.15 | 8.94 | 0.16 | 0.94 | 97.24 |
| Msc | VP-37 | 41.20 | 0.32 | 28.60 | 4.57 | 0.20 | 0.95 | 6.88 | 0.13 | 9.87 | 0.29 | 2.49 | 95.50 |
| I-kaya | Qz-M | ID-7 | 64.20 | 0.32 | 14.50 | 4.62 | 0.13 | 0.79 | 2.99 | 0.12 | 5.73 | 0.18 | 1.56 | 95.14 |
| Msc | ID-32 | 64.80 | 0.35 | 15.30 | 2.60 | 0.10 | 0.84 | 2.17 | 0.13 | 4.81 | 0.22 | 2.47 | 93.79 |
| Elizavet-kaya | Grt | DE-9 | 67.60 | 0.24 | 18.40 | 1.94 | 0.04 | 0.76 | 1.63 | 5.50 | 3.01 | 0.12 | 0.13 | 99.37 |
| Grt | DE-9/1 | 71.30 | 0.27 | 13.50 | 1.97 | 0.03 | 0.50 | 1.90 | 4.68 | 2.40 | 0.16 | 0.12 | 96.83 |
| Qz-M | DE-1 | 71.90 | 0.29 | 14.50 | 2.76 | 0.06 | 1.03 | 1.27 | 0.11 | 5.18 | 0.09 | 0.89 | 98.08 |
| Qz-M | DE-8 | 68.90 | 0.25 | 18.10 | 3.02 | 0.04 | 0.96 | 0.89 | 0.17 | 6.34 | 0.09 | 1.23 | 99.99 |
| Pervo-kaya | Grt | ПП-20 | 71.20 | 0.18 | 14.60 | 1.66 | 0.02 | 0.53 | 2.59 | 4.59 | 2.46 | 0.13 | 0.85 | 98.81 |
| Grt | ПП-6 | 72.80 | 0.23 | 15.50 | 1.95 | 0.02 | 1.01 | 1.30 | 3.55 | 2.75 | 0.07 | 0.57 | 99.74 |
| Qz-M | ПП-13 | 70.10 | 0.21 | 15.20 | 3.43 | 0.06 | 0.76 | 0.92 | 0.10 | 5.67 | 0.14 | 2.26 | 98.84 |
| Qz-M | ПП-7 | 71.90 | 0.24 | 15.80 | 2.53 | 0.03 | 0.67 | 0.55 | 0.19 | 4.99 | 0.07 | 2.69 | 99.66 |
| Sev-aya | Qz-M | CD-2 | 61.80 | 0.50 | 17.50 | 9.30 | 0.15 | 1.39 | 1.58 | 0.10 | 5.60 | 0.20 | 1.26 | 99.38 |
| Qz-M | CD-4 | 64.70 | 0.23 | 17.80 | 4.65 | 0.07 | 0.70 | 1.41 | 0.11 | 6.47 | 0.13 | 3.24 | 99.51 |

Comments. Columns: D – dykes (I-kaya – Ilyinskaya, Elizavet-skaya – Elizavetinskaya, Pervo-kaya – Pervopavlovskaya, Sev-aya – Sevastyanovskaya), Rocks: Grt – granite, Qz-M – quartz-muscovite metasomatic rocks, Msc – monomineralic muscovite metasomatic rocks. FeO\* – total iron oxide. Major elements were analyzed by XRF (All the Russian State Geological Institution, analysts V.A. Shishlov, V.L. Kudryashov).

**Tab. 2.** High field strength elements in metasomatic rocks, ppm

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| D | Rock | Sample | **La** | **Ce** | **Pr** | **Nd** | **Sm** | **Eu** | **Gd** | **Tb** | **Dy** | **Ho** | **Er** | **Tm** | **Yb** | **Lu** | **Sc** | **Th** | **U** | **Y** | **Zr** | **Hf** | **Nb** | **Ta** |
| Andreevskaya | Grt | DA-4 | 20.6 | 40.3 | 4.01 | 14.7 | 2.32 | 0.51 | 1.69 | 0.15 | 0.70 | 0.13 | 0.31 | 0.04 | 0.33 | 0.05 | 2.70 | 15.0 | 10.5 | 3.72 | 98.7 | 3.63 | 5.91 | 0.49 |
| Qz-M | DA-29 | 22.2 | 39.1 | 4.54 | 15.1 | 2.40 | 0.58 | 1.90 | 0.13 | 0.66 | 0.07 | 0.21 | 0.01 | 0.28 | 0.02 | 3.00 | 14.9 | 6.20 | 2.62 | 107.0 | 3.66 | 5.87 | 0.50 |
| Qz-M | DA-11 | 28.7 | 55.3 | 6.00 | 19.8 | 3.02 | 0.85 | 2.16 | 0.21 | 0.86 | 0.10 | 0.20 | 0.03 | 0.23 | 0.03 | 6.50 | 16.4 | 14.9 | 3.11 | 150.0 | 4.60 | 7.90 | 0.50 |
| Msc | DA-31 | 22.8 | 41.0 | 4.80 | 16.8 | 2.77 | 1.04 | 2.96 | 0.40 | 2.21 | 0.36 | 1.06 | 0.15 | 0.78 | 0.15 | 5.40 | 21.2 | 11.3 | 12.5 | 117.0 | 3.95 | 6.88 | 0.53 |
| Vtoropavlovslaya | Grt | VP-4 | 15.1 | 29.4 | 3.12 | 10.4 | 1.66 | 0.47 | 1.29 | 0.17 | 0.75 | 0.13 | 0.35 | 0.06 | 0.51 | 0.07 | 5.93 | 14.1 | 7.44 | 4.33 | 114.0 | 3.83 | 6.59 | 0.38 |
| Grt | VP-11 | 15.3 | 29.4 | 3.11 | 11.2 | 1.93 | 0.36 | 1.10 | 0.13 | 0.73 | 0.10 | 0.34 | 0.04 | 0.38 | 0.06 | 3.46 | 15.5 | 13.3 | 3.89 | 84.90 | 3.44 | 6.00 | 0.54 |
| Qz-M | VP-17 | 32.2 | 56.8 | 5.99 | 23.6 | 3.99 | 1.13 | 2.36 | 0.25 | 1.01 | 0.10 | 0.32 | 0.02 | 0.28 | 0.06 | 6.79 | 14.6 | 5.26 | 3.85 | 145.0 | 4.89 | 2.55 | 0.25 |
| Msc | VP-15 | 21.7 | 41.2 | 4.86 | 18.3 | 3.29 | 1.07 | 2.48 | 0.19 | 0.99 | 0.15 | 0.43 | 0.05 | 0.58 | 0.11 | 12.9 | 20.1 | 14.9 | 4.46 | 154.0 | 6.93 | 6.28 | 0.65 |
| Msc | VP-16 | 12.9 | 26.2 | 2.99 | 10.2 | 1.51 | 0.44 | 1.06 | 0.12 | 0.59 | 0.11 | 0.27 | 0.05 | 0.34 | 0.07 | 5.95 | 9.40 | 28.6 | 3.47 | 121.0 | 4.10 | 6.64 | 0.45 |
| Msc | VP-37 | 22.0 | 41.8 | 4.45 | 14.7 | 2.42 | 0.84 | 1.81 | 0.21 | 0.97 | 0.15 | 0.36 | 0.07 | 0.50 | 0.08 | 9.51 | 21.4 | 23.0 | 4.87 | 232.0 | 7.61 | 7.98 | 0.53 |
| I-kaya | Qz-M | ID-7 | 19.8 | 38.9 | 4.36 | 15.6 | 2.83 | 1.10 | 2.04 | 0.26 | 1.17 | 0.20 | 0.52 | 0.06 | 0.53 | 0.07 | 6.50 | 7.21 | 5.16 | 6.38 | 133.0 | 3.43 | 4.81 | 0.28 |
| Msc | ID-32 | 18.2 | 36.4 | 4.03 | 14.3 | 2.52 | 0.92 | 1.87 | 0.24 | 1.25 | 0.18 | 0.46 | 0.07 | 0.49 | 0.07 | 6.92 | 6.11 | 4.36 | 5.86 | 137.0 | 3.30 | 4.49 | 0.28 |
| Elizavet-kaya | Grt | DE-9 | 16.3 | 29.6 | 3.53 | 11.6 | 1.79 | 0.53 | 1.37 | 0.17 | 0.79 | 0.14 | 0.31 | 0.06 | 0.27 | 0.04 | 3.08 | 8.58 | 2.15 | 3.36 | 115.0 | 3.22 | 2.47 | 0.22 |
| Grt | DE-9/1 | 25.6 | 49.7 | 5.13 | 17.5 | 2.49 | 0.69 | 1.91 | 0.25 | 1.06 | 0.14 | 0.37 | 0.06 | 0.36 | 0.05 | 5.80 | 10.0 | 2.81 | 4.92 | 159.0 | 3.91 | 3.37 | 0.27 |
| Qz-M | DE-1 | 25.4 | 44.3 | 4.94 | 17.3 | 2.94 | 0.73 | 1.96 | 0.19 | 0.94 | 0.11 | 0.35 | 0.03 | 0.26 | 0.05 | 4.42 | 12.5 | 5.35 | 4.09 | 116.0 | 3.39 | 3.10 | 0.29 |
| Qz-M | DE-8 | 9.21 | 17.8 | 1.83 | 7.08 | 1.20 | 0.44 | 0.99 | 0.11 | 0.64 | 0.11 | 0.33 | 0.03 | 0.40 | 0.05 | 6.75 | 10.6 | 6.41 | 3.49 | 131.0 | 4.20 | 2.08 | 0.16 |
| Pervopavlovskaya | Grt | ПП-20 | 13.0 | 24.4 | 2.67 | 9.69 | 1.69 | 0.55 | 1.34 | 0.15 | 0.83 | 0.13 | 0.30 | 0.04 | 0.30 | 0.04 | 5.68 | 7.71 | 4.65 | 3.70 | 117.0 | 3.08 | 2.04 | 0.16 |
| Grt | ПП-6 | 11.6 | 22.9 | 2.46 | 8.35 | 1.47 | 0.49 | 1.24 | 0.12 | 0.59 | 0.09 | 0.30 | 0.02 | 0.23 | 0.05 | 3.30 | 7.87 | 4.41 | 3.08 | 86.0 | 2.88 | 1.94 | 0.19 |
| Qz-M | ПП-13 | 14.9 | 28.0 | 3.13 | 10.7 | 1.99 | 0.55 | 1.37 | 0.15 | 0.63 | 0.11 | 0.31 | 0.05 | 0.27 | 0.04 | 5.65 | 7.87 | 4.47 | 3.09 | 116.0 | 3.12 | 2.23 | 0.19 |
| Qz-M | ПП-7 | 16.5 | 30.9 | 3.47 | 11.2 | 1.97 | 0.62 | 1.41 | 0.16 | 0.65 | 0.09 | 0.23 | 0.01 | 0.23 | 0.03 | 3.87 | 8.22 | 4.71 | 3.22 | 93.5 | 2.97 | 1.96 | 0.22 |
| Sev-aya | Qz-M | CD-2 | 21.1 | 43.2 | 5.00 | 18.3 | 4.47 | 1.93 | 4.49 | 0.71 | 3.23 | 0.47 | 1.04 | 0.14 | 0.72 | 0.11 | 11.0 | 5.84 | 3.04 | 9.20 | 175.0 | 4.38 | 6.00 | 0.38 |
| Qz-M | CD-4 | 15.4 | 28.8 | 3.31 | 11.5 | 1.83 | 0.67 | 1.44 | 0.19 | 0.61 | 0.13 | 0.27 | 0.05 | 0.38 | 0.07 | 6.34 | 7.98 | 8.41 | 3.23 | 123.0 | 3.36 | 2.45 | 0.18 |

Columns: D – dykes (I-kaya – Ilyinskaya, Elizavet-skaya – Elizavetinskaya, Pervo-kaya – Pervopavlovskaya, Sev-aya – Sevastyanovskaya), Rocks: Grt – granite, Qz-M – quartz-muscovite metasomatic rocks, Msc – monomineralic muscovite metasomatic rocks. Elements were analyzed by ICP-MS (All the Russian State Geological Institution, analysts V.A. Shishlov, V.L. Kudryashov).

**Tab. 3.** LILE content in granites, quartz-muscovite metasomatic rocks and monomineralic muscovite metasomatic rocks, ppm

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| D | Rock | Sample | **Li** | **Sn** | **Be** | **Rb** | **Sr** | **Ba** | **W** | **Cs** |
| Andreevskaya | Grt | DA-4 | 13.8 | 1.30 | 3.07 | 104.0 | 347.0 | 504.0 | 2.06 | 2.15 |
| Qz-M | DA-29 | 4.62 | 3.52 | 2.56 | 142.0 | 12.9 | 199.0 | 8.86 | 1.18 |
| Qz-M | DA-11 | 4.86 | 7.50 | 2.27 | 192.0 | 14.3 | 335.0 | 13.1 | 1.82 |
| Msc | DA-31 | 2.64 | 6.10 | 2.55 | 177.0 | 351.0 | 189.0 | 17.3 | 0.91 |
| Vtoropavlovslaya | Grt | VP-4 | 7.67 | 3.29 | 3.65 | 132.0 | 156.0 | 300.0 | 6.90 | 2.80 |
| Grt | VP-11 | 14.3 | 1.52 | 3.43 | 145.0 | 303.0 | 415.0 | 2.76 | 3.74 |
| Qz-M | VP-17 | 7.81 | 13.0 | 3.71 | 276.0 | 29.1 | 1790.0 | 11.5 | 3.88 |
| Msc | VP-15 | 3.22 | 13.7 | 5.24 | 288.0 | 26.5 | 313.0 | 27.3 | 1.30 |
| Msc | VP-16 | 2.92 | 3.78 | 2.59 | 147.0 | 22.1 | 189.0 | 12.8 | 0.87 |
| Msc | VP-37 | 8.17 | 11.1 | 2.41 | 314.0 | 93.4 | 350.0 | 43.3 | 1.39 |
| I-kaya | Qz-M | ID-7 | 11.68 | 2.41 | 1.39 | 127.0 | 161.0 | 590.0 | 8.86 | 1.10 |
| Msc | ID-32 | 13.63 | 2.32 | 0.90 | 124.0 | 113.0 | 504.0 | 7.36 | 1.22 |
| Elizavet-kaya | Grt | DE-9 | 7.18 | 0.71 | 2.26 | 55.7 | 276.0 | 539.0 | 2.34 | 1.64 |
| Grt | DE-9/1 | 7.41 | 5.93 | 1.52 | 69.8 | 389.0 | 639.0 | 3.28 | 1.52 |
| Qz-M | DE-1 | 5.93 | 5.36 | 2.83 | 147.0 | 43.4 | 377.0 | 11.6 | 1.77 |
| Qz-M | DE-8 | 6.91 | 6.14 | 3.14 | 173.0 | 34.3 | 784.0 | 12.2 | 2.00 |
| Pervopavlovskaya | Grt | ПП-20 | 13.75 | 0.98 | 1.05 | 63.7 | 476.0 | 761.0 | 1.25 | 0.97 |
| Grt | ПП-6 | 7.03 | 1.29 | 1.56 | 65.7 | 397.0 | 1010.0 | 0.61 | 1.47 |
| Qz-M | ПП-13 | 3.64 | 3.15 | 1.13 | 130.0 | 38.5 | 635.0 | 10.9 | 0.99 |
| Qz-M | ПП-7 | 5.99 | 3.69 | 2.65 | 145.0 | 27.2 | 920.0 | 6.97 | 1.76 |
| Сева-ая | Qz-M | CD-2 | 13.2 | 2.21 | 1.58 | 177.0 | 109.0 | 1160.0 | 18.4 | 2.73 |
| Qz-M | CD-4 | 8.15 | 4.13 | 1.43 | 147.0 | 66.8 | 606.0 | 9.65 | 1.00 |

Columns: D – dykes (I-kaya – Ilyinskaya, Elizavet-skaya – Elizavetinskaya, Pervo-kaya – Pervopavlovskaya, Sev-aya – Sevastyanovskaya), Rocks: Grt – granite, Qz-M – quartz-muscovite metasomatic rocks, Msc – monomineralic muscovite metasomatic rocks. Elements were analyzed by ICP-MS (All the Russian State Geological Institution, analysts V.A. Shishlov, V.L. Kudryashov).

**Tab. 4.** Content of minor elements of golde ore geochemical assotiation of granites and apogranitic metasomatites, ppm

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **D** | **Rock** | **Sample** | **W** | **As** | **Sb** | **Tl** | **Pb** | **Bi** | **In** | **Ag** | **Au** | **Ga** | **Ge** | **Cu** | **Zn** | **Cd** | **Se** | **Te** | **Hg** | **Co** | **Ni** |
| Andreevskaya | Grt | DA-4 | 2.06 | 5.36 | 0.25 | 0.61 | 39.3 | 2.43 | 0.21 | 0.11 | 0.03 | 21.8 | 0.93 | 6.00 | 47.2 | 0.05 | 0.38 | 0.25 | – | 1.76 | 2.02 |
| Qz-M | DA-29 | 8.86 | 34.7 | 1.05 | 0.57 | 26.5 | 4.00 | 0.23 | 0.20 | 0.72 | 24.0 | 1.46 | 40.8 | 21.6 | 0.05 | 0.41 | 0.25 | – | 2.35 | 2.21 |
| Qz-M | DA-11 | 13.1 | 8.64 | 0.90 | 0.82 | 10.5 | 0.16 | 0.26 | 0.07 | 0.01 | 27.2 | 2.52 | 17.9 | 35.3 | 0.09 | 0.76 | 0.05 | – | 2.12 | 3.49 |
| Msc | DA-31 | 17.3 | 10.8 | 0.25 | 0.54 | 5.66 | 3.49 | 0.28 | 0.05 | 0.05 | 24.7 | 1.04 | 2.13 | 51.1 | 0.24 | 0.63 | 0.25 | – | 5.53 | 48.5 |
| Vtoropavlovslaya | Grt | VP-4 | 6.90 | 7.99 | 3.60 | 0.81 | 89.4 | 0.68 | 0.27 | 0.70 | 0.21 | 21.7 | 1.69 | 22.18 | 182.9 | 2.14 | 0.38 | 0.09 | 0.01 | 1.93 | 5.01 |
| Grt | VP-11 | 2.76 | 6.34 | 0.51 | 0.80 | 45.3 | 0.83 | 0.25 | 0.12 | 0.01 | 21.9 | 0.92 | 7.07 | 47.6 | 0.05 | 0.15 | 0.25 | 0.01 | 2.09 | 4.01 |
| Qz-M | VP-17 | 11.5 | 28.9 | 8.57 | 1.52 | 207.0 | 6.72 | 0.78 | 1.20 | 2.86 | 40.0 | 1.80 | 32.7 | 37.2 | 0.05 | 0.86 | 0.85 | 0.03 | 17.8 | 14.9 |
| Msc | VP-15 | 27.3 | 63.2 | 2.08 | 1.05 | 11.5 | 5.64 | 0.21 | 0.14 | 0.24 | 42.0 | 1.93 | 14.7 | 15.3 | 0.05 | 0.60 | 0.25 | 0.01 | 5.24 | 10.8 |
| Msc | VP-16 | 12.8 | 25.2 | 6.43 | 0.73 | 138.4 | 1.35 | 0.14 | 0.69 | 0.24 | 25.7 | 2.29 | 20.2 | 48.3 | 0.19 | 0.39 | 0.08 | 0.02 | 2.23 | 5.22 |
| Msc | VP-37 | 43.3 | 73.9 | 2.82 | 1.06 | 42.38 | 0.50 | 0.37 | 0.18 | 0.24 | 43.6 | 2.47 | 10.4 | 33.1 | 0.11 | 0.83 | 0.14 | – | 2.51 | 4.17 |
| I-kaya | Qz-M | ID-7 | 8.86 | 4.91 | 1.57 | 0.66 | 98.28 | 0.58 | 0.18 | 0.36 | 0.34 | 19.7 | 1.95 | 17.2 | 45.7 | 0.17 | 0.79 | 0.07 | – | 4.58 | 3.59 |
| Msc | ID-32 | 7.36 | 7.09 | 1.44 | 0.66 | 96.58 | 0.60 | 0.13 | 0.40 | 0.14 | 19.1 | 2.07 | 16.4 | 43.2 | 0.13 | 0.73 | 0.06 | – | 5.40 | 4.23 |
| Elizavet-kaya | Grt | DE-9 | 2.34 | 9.22 | 0.66 | 0.40 | 67.50 | 0.39 | 0.25 | 0.38 | – | 16.3 | 0.75 | 27.3 | 41.4 | 0.05 | 0.33 | 0.03 | – | 3.39 | 4.99 |
| Grt | DE-9/1 | 3.28 | 10.8 | 0.84 | 0.43 | 67.25 | 0.54 | 0.04 | 0.47 | 0.04 | 21.0 | 1.16 | 27.3 | 59.4 | 0.13 | 0.70 | 0.04 | 0.01 | 4.28 | 4.04 |
| Qz-M | DE-1 | 11.6 | 53.6 | 1.63 | 0.71 | 21.30 | 3.13 | 0.13 | 1.59 | 0.06 | 20.9 | 1.51 | 176.0 | 35.0 | 0.30 | 0.59 | 0.25 | – | 9.93 | 10.4 |
| Qz-M | DE-8 | 12.2 | 97.2 | 0.87 | 0.78 | 17.10 | 1.15 | 0.26 | 0.82 | 0.12 | 24.9 | 1.31 | 1010.0 | 22.1 | 0.05 | 0.39 | 0.25 | – | 12.9 | 13.5 |
| Pervopavlovskaya | Grt | ПП-20 | 1.25 | 1.31 | 0.44 | 0.50 | 33.95 | 0.18 | 0.02 | 0.09 | 0.06 | 16.9 | 0.98 | 25.9 | 63.8 | 0.13 | 0.55 | 0.01 | 0.01 | 3.69 | 3.32 |
| Grt | ПП-6 | 0.61 | 1.17 | 0.42 | 0.37 | 24.20 | 5.18 | 0.03 | 0.11 | 0.08 | 17.2 | 0.54 | 29.2 | 39.8 | 0.05 | 0.31 | 0.77 | 0.01 | 3.53 | 7.19 |
| Qz-M | ПП-13 | 10.9 | 157.8 | 46.3 | 0.63 | 13.04 | 1.72 | 0.25 | 2.86 | 0.28 | 18.9 | 1.88 | 471.6 | 99.4 | 1.29 | 0.50 | 0.05 | 0.01 | 4.13 | 4.67 |
| Qz-M | ПП-7 | 6.97 | 132.7 | 0.46 | 0.68 | 14.70 | 0.66 | 0.31 | 0.05 | 0.27 | 21.2 | 1.42 | 32.5 | 19.5 | 0.05 | 0.43 | 0.62 | – | 3.60 | 3.40 |
| Sev-aya | Qz-M | CD-2 | 18.4 | 25.87 | 0.83 | 0.96 | 9.47 | 0.32 | 0.22 | 0.15 | 0.03 | 25.1 | 2.34 | 6.98 | 46.1 | 0.08 | 2.11 | 0.06 | 0.03 | 9.90 | 21.7 |
| Qz-M | CD-4 | 9.65 | 5.36 | 0.46 | 0.75 | 52.05 | 0.30 | 0.20 | 0.17 | 0.44 | 21.7 | 1.83 | 9.54 | 35.6 | 0.08 | 0.56 | 0.09 | – | 3.94 | 5.98 |

Columns: D – dykes (I-kaya – Ilyinskaya, Elizavet-skaya – Elizavetinskaya, Sev-aya – Sevastyanovskaya), Rocks: Grt – granite, Qz-M – quartz-muscovite metasomatic rocks, Msc – monomineralic muscovite metasomatic rocks. Elements were analyzed by ICP-MS (All the Russian State Geological Institution, analysts V.A. Shishlov, V.L. Kudryashov