TABLE 1. Results of EPMA of feldspars in the Eagle Lake Granite

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | SiO2 | Al2O3 | FeO | MnO | MgO | CaO | Na2O | K2O | BaO | Total | Or (K) | Ab (Na) | An (Ca+Mn+Mg) |
| E6.36 | 63.41 | 20.54 | 0.06 | 0.01 | 0.00 | 1.99 | 9.80 | 0.40 | 0.00 | 96.22 | 2.35 | 87.74 | 9.91 |
| E6.37 | 64.30 | 20.86 | 0.07 | 0.01 | 0.00 | 1.93 | 10.23 | 0.20 | 0.00 | 97.59 | 1.15 | 89.50 | 9.35 |
| E6.38 | 64.34 | 21.01 | 0.10 | 0.00 | 0.00 | 2.12 | 10.16 | 0.18 | 0.01 | 97.93 | 1.01 | 88.70 | 10.27 |
| E6.39 | 65.37 | 18.58 | 0.02 | 0.01 | 0.00 | 0.01 | 0.30 | 16.29 | 0.02 | 100.61 | 97.13 | 2.73 | 0.10 |
| E6.40 | 65.91 | 18.26 | 0.02 | 0.00 | 0.00 | 0.01 | 0.35 | 16.29 | 0.00 | 100.85 | 96.77 | 3.15 | 0.07 |
| E6.41 | 66.03 | 20.83 | 0.56 | 0.00 | 0.15 | 1.41 | 9.51 | 0.28 | 0.01 | 98.79 | 1.76 | 89.75 | 8.47 |
| E6.42 | 65.82 | 20.87 | 0.04 | 0.02 | 0.00 | 2.14 | 10.27 | 0.26 | 0.00 | 99.42 | 1.46 | 88.30 | 10.24 |
| E6.43 | 65.03 | 18.60 | 0.13 | 0.03 | 0.00 | 0.05 | 0.46 | 16.08 | 0.00 | 100.38 | 95.52 | 4.11 | 0.37 |
| E6.44 | 67.40 | 19.58 | 0.02 | 0.00 | 0.00 | 0.64 | 11.33 | 0.09 | 0.00 | 99.06 | 0.53 | 96.47 | 3.00 |
| E6.45 | 65.40 | 21.02 | 0.36 | 0.00 | 0.07 | 1.21 | 9.70 | 0.13 | 0.00 | 97.90 | 0.82 | 92.25 | 6.93 |
| E6.46 | 65.23 | 20.46 | 0.21 | 0.00 | 0.03 | 1.14 | 6.83 | 5.61 | 0.00 | 99.51 | 33.02 | 61.10 | 5.87 |
| E6.47 | 66.73 | 20.68 | 0.07 | 0.02 | 0.01 | 1.72 | 10.10 | 0.16 | 0.00 | 99.49 | 0.92 | 90.41 | 8.67 |
| E6.48 | 66.28 | 18.24 | 0.05 | 0.01 | 0.01 | 0.05 | 0.38 | 16.22 | 0.00 | 101.25 | 96.16 | 3.45 | 0.39 |
| E6.49 | 65.39 | 18.28 | 0.00 | 0.01 | 0.00 | 0.29 | 0.40 | 16.15 | 0.00 | 100.52 | 94.96 | 3.58 | 1.46 |
| E6.50 | 64.68 | 20.99 | 0.05 | 0.02 | 0.00 | 2.41 | 9.95 | 0.28 | 0.00 | 98.38 | 1.59 | 86.70 | 11.71 |
| E6.51 | 66.35 | 20.52 | 0.02 | 0.00 | 0.00 | 1.67 | 10.50 | 0.15 | 0.01 | 99.23 | 0.87 | 91.09 | 8.02 |
| E6.52 | 66.22 | 18.38 | 0.02 | 0.02 | 0.00 | 0.02 | 0.99 | 15.59 | 0.00 | 101.24 | 91.03 | 8.82 | 0.16 |
| E6.53 | 65.39 | 18.19 | 0.02 | 0.03 | 0.00 | 0.02 | 0.42 | 16.39 | 0.00 | 100.46 | 96.07 | 3.74 | 0.20 |
| E6.54 | 65.24 | 20.75 | 0.08 | 0.01 | 0.00 | 2.37 | 9.98 | 0.32 | 0.00 | 98.75 | 1.83 | 86.76 | 11.41 |
| E6.55 | 65.19 | 20.68 | 0.18 | 0.00 | 0.00 | 2.16 | 10.14 | 0.30 | 0.00 | 98.65 | 1.71 | 87.92 | 10.37 |
| E6.56 | 65.91 | 18.23 | 0.00 | 0.02 | 0.00 | 0.03 | 0.40 | 16.26 | 0.00 | 100.85 | 96.19 | 3.58 | 0.23 |
| E6.57 | 65.32 | 18.25 | 0.04 | 0.00 | 0.01 | 0.01 | 0.42 | 16.20 | 0.00 | 100.26 | 96.07 | 3.82 | 0.12 |
| E6.58 | 69.87 | 19.42 | 0.06 | 0.03 | 0.00 | 0.20 | 11.32 | 0.17 | 0.02 | 101.08 | 0.94 | 97.96 | 1.06 |
| E6.59 | 65.19 | 18.20 | 0.02 | 0.00 | 0.00 | 0.04 | 0.38 | 16.23 | 0.00 | 100.05 | 96.40 | 3.39 | 0.21 |
| E6.60 | 64.77 | 18.22 | 0.01 | 0.00 | 0.00 | 0.00 | 0.35 | 16.30 | 0.00 | 99.65 | 96.81 | 3.18 | 0.01 |
| E6.61 | 65.82 | 20.74 | 0.18 | 0.00 | 0.04 | 1.98 | 9.88 | 0.15 | 0.00 | 98.79 | 0.87 | 89.00 | 10.14 |
| E6.62 | 67.31 | 20.76 | 0.13 | 0.01 | 0.02 | 1.86 | 10.13 | 0.35 | 0.00 | 100.57 | 2.02 | 88.79 | 9.20 |
| E6.63 | 65.26 | 18.35 | 0.05 | 0.00 | 0.00 | 0.01 | 0.39 | 16.28 | 0.00 | 100.35 | 96.42 | 3.53 | 0.05 |
| E6.64 | 66.54 | 18.69 | 0.02 | 0.00 | 0.00 | 0.01 | 0.34 | 16.35 | 0.00 | 101.95 | 96.89 | 3.05 | 0.06 |
| E6.65 | 65.84 | 21.38 | 0.74 | 0.00 | 0.16 | 1.71 | 9.13 | 0.32 | 0.02 | 99.30 | 2.01 | 87.69 | 10.27 |
| E6.66 | 67.58 | 19.92 | 0.06 | 0.02 | 0.00 | 0.86 | 10.49 | 0.08 | 0.00 | 99.00 | 0.45 | 95.17 | 4.37 |
| E6.67 | 65.20 | 18.14 | 0.13 | 0.00 | 0.00 | 0.00 | 0.31 | 16.59 | 0.01 | 100.38 | 97.21 | 2.73 | 0.04 |
| E6.68 | 65.24 | 18.29 | 0.00 | 0.03 | 0.00 | 0.00 | 0.31 | 16.60 | 0.00 | 100.48 | 97.09 | 2.79 | 0.12 |
| E6.69 | 66.52 | 20.39 | 0.07 | 0.00 | 0.00 | 1.57 | 10.63 | 0.11 | 0.00 | 99.28 | 0.60 | 91.89 | 7.50 |
| E6.70 | 67.92 | 19.88 | 0.03 | 0.02 | 0.00 | 1.87 | 9.91 | 0.20 | 0.00 | 99.82 | 1.16 | 89.45 | 9.39 |
| E6.71 | 65.87 | 18.34 | 0.08 | 0.01 | 0.00 | 0.00 | 0.32 | 16.53 | 0.00 | 101.15 | 97.11 | 2.83 | 0.06 |
| E6.72 | 65.36 | 18.29 | 0.04 | 0.00 | 0.01 | 0.01 | 0.27 | 16.54 | 0.00 | 100.51 | 97.49 | 2.43 | 0.08 |
| E6.73 | 67.37 | 21.11 | 0.06 | 0.00 | 0.02 | 1.98 | 10.10 | 0.17 | 0.00 | 100.81 | 0.99 | 89.21 | 9.79 |
| E6.74 | 69.92 | 19.14 | 0.04 | 0.01 | 0.00 | 1.54 | 9.56 | 0.15 | 0.00 | 100.36 | 0.95 | 90.90 | 8.15 |
| E6.75 | 67.18 | 21.29 | 0.05 | 0.03 | 0.00 | 2.17 | 10.04 | 0.27 | 0.00 | 101.04 | 1.57 | 87.81 | 10.62 |
| E6.76 | 68.90 | 19.26 | 0.06 | 0.00 | 0.00 | 0.28 | 10.90 | 0.15 | 0.01 | 99.56 | 0.86 | 97.71 | 1.40 |
| E6.77 | 65.70 | 21.33 | 0.05 | 0.01 | 0.00 | 2.58 | 9.73 | 0.32 | 0.00 | 99.71 | 1.83 | 85.62 | 12.55 |
| E6.78 | 67.93 | 19.74 | 0.06 | 0.02 | 0.00 | 1.69 | 10.23 | 0.09 | 0.00 | 99.76 | 0.52 | 91.07 | 8.41 |
| E6.79 | 66.35 | 18.54 | 0.03 | 0.02 | 0.00 | 0.10 | 1.16 | 15.03 | 0.00 | 101.23 | 89.00 | 10.42 | 0.58 |
| E6.80 | 65.31 | 18.45 | 0.06 | 0.00 | 0.00 | 0.04 | 0.33 | 16.24 | 0.00 | 100.43 | 96.83 | 2.97 | 0.21 |
| E6.81 | 65.57 | 18.23 | 0.02 | 0.00 | 0.00 | 0.07 | 0.43 | 16.14 | 0.01 | 100.47 | 95.74 | 3.88 | 0.36 |
| E16.175 | 64.49 | 20.86 | 0.40 | 0.00 | 0.01 | 0.50 | 10.01 | 1.09 | 0.00 | 97.36 | 6.50 | 90.88 | 2.62 |
| E16.176 | 63.47 | 18.33 | 0.00 | 0.02 | 0.01 | 0.00 | 0.24 | 16.42 | 0.07 | 98.56 | 97.58 | 2.16 | 0.13 |
| E16.177 | 64.37 | 18.35 | 0.07 | 0.01 | 0.00 | 0.04 | 0.59 | 15.95 | 0.01 | 99.39 | 94.46 | 5.28 | 0.24 |
| E16.178 | 63.89 | 18.26 | 0.03 | 0.00 | 0.00 | 0.04 | 0.26 | 16.34 | 0.09 | 98.90 | 97.30 | 2.31 | 0.23 |
| E16.179 | 63.68 | 18.39 | 0.00 | 0.00 | 0.00 | 0.00 | 0.26 | 16.24 | 0.50 | 99.08 | 96.70 | 2.38 | 0.00 |
| E16.180 | 68.60 | 19.28 | 0.01 | 0.00 | 0.00 | 0.23 | 11.54 | 0.08 | 0.00 | 99.73 | 0.44 | 98.49 | 1.07 |
| E16.181 | 66.71 | 19.89 | 0.06 | 0.00 | 0.01 | 0.73 | 11.04 | 0.14 | 0.00 | 98.57 | 0.81 | 95.66 | 3.53 |
| E16.182 | 64.34 | 22.38 | 0.34 | 0.02 | 0.12 | 2.40 | 9.18 | 0.31 | 0.00 | 99.10 | 1.88 | 84.90 | 13.22 |
| E16.183 | 63.98 | 21.31 | 0.11 | 0.00 | 0.00 | 2.60 | 9.98 | 0.37 | 0.02 | 98.37 | 2.06 | 85.54 | 12.37 |
| E16.184 | 64.53 | 18.31 | 0.05 | 0.01 | 0.01 | 0.00 | 0.30 | 16.50 | 0.03 | 99.74 | 97.14 | 2.70 | 0.12 |
| E16.185 | 64.77 | 21.73 | 0.14 | 0.00 | 0.00 | 3.06 | 9.80 | 0.33 | 0.00 | 99.83 | 1.87 | 83.69 | 14.44 |
| E16.186 | 67.98 | 20.50 | 0.20 | 0.01 | 0.01 | 0.65 | 10.69 | 0.47 | 0.04 | 100.55 | 2.71 | 93.96 | 3.27 |
| E16.187 | 64.03 | 18.41 | 0.02 | 0.02 | 0.00 | 0.00 | 0.27 | 16.27 | 0.30 | 99.31 | 96.96 | 2.43 | 0.07 |
| E16.188 | 64.60 | 18.24 | 0.07 | 0.00 | 0.00 | 0.05 | 0.31 | 16.30 | 0.12 | 99.68 | 96.78 | 2.75 | 0.25 |
| E16.189 | 64.43 | 18.12 | 0.05 | 0.00 | 0.00 | 0.05 | 0.64 | 15.90 | 0.03 | 99.22 | 93.92 | 5.78 | 0.24 |
| E16.190 | 64.25 | 21.99 | 0.40 | 0.03 | 0.01 | 2.75 | 8.84 | 0.57 | 0.01 | 98.85 | 3.48 | 82.17 | 14.33 |
| E16.191 | 64.44 | 20.73 | 0.09 | 0.03 | 0.00 | 2.18 | 10.20 | 0.22 | 0.05 | 97.93 | 1.24 | 88.17 | 10.50 |
| E16.192 | 64.85 | 18.18 | 0.05 | 0.00 | 0.01 | 0.02 | 0.32 | 16.37 | 0.09 | 99.88 | 96.81 | 2.89 | 0.15 |
| E16.193 | 68.14 | 18.95 | 0.06 | 0.01 | 0.00 | 1.91 | 8.88 | 0.11 | 0.00 | 98.06 | 0.69 | 88.72 | 10.59 |
| E16.194 | 70.31 | 18.21 | 0.07 | 0.03 | 0.00 | 1.33 | 9.09 | 0.13 | 0.00 | 99.17 | 0.86 | 91.62 | 7.52 |

Table 1, Continued

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | SiO2 | Al2O3 | FeO | MnO | MgO | CaO | Na2O | K2O | BaO | Total | Or (K) | Ab (Na) | An (Ca+Mn+Mg) |
| E16.195 | 63.71 | 18.24 | 0.04 | 0.00 | 0.00 | 0.00 | 0.20 | 16.42 | 0.14 | 98.75 | 97.91 | 1.84 | 0.00 |
| E16.196 | 64.53 | 18.01 | 0.06 | 0.00 | 0.00 | 0.01 | 0.31 | 16.25 | 0.08 | 99.25 | 96.98 | 2.80 | 0.07 |
| E16.197 | 64.51 | 23.23 | 0.41 | 0.04 | 0.02 | 0.90 | 9.07 | 2.10 | 0.00 | 100.29 | 12.57 | 82.56 | 4.86 |
| E16.198 | 66.59 | 20.53 | 0.28 | 0.00 | 0.08 | 0.89 | 10.41 | 0.76 | 0.00 | 99.53 | 4.35 | 90.84 | 4.81 |
| E16.199 | 67.76 | 19.75 | 0.00 | 0.00 | 0.00 | 0.68 | 11.19 | 0.17 | 0.00 | 99.55 | 0.94 | 95.82 | 3.24 |
| E16.200 | 65.07 | 21.48 | 0.13 | 0.02 | 0.00 | 1.89 | 9.94 | 0.60 | 0.00 | 99.13 | 3.48 | 87.29 | 9.22 |
| E16.201 | 64.02 | 18.09 | 0.01 | 0.00 | 0.00 | 0.00 | 0.30 | 16.39 | 0.11 | 98.92 | 97.10 | 2.67 | 0.02 |
| E16.202 | 63.52 | 18.21 | 0.05 | 0.00 | 0.00 | 0.00 | 0.27 | 16.45 | 0.01 | 98.51 | 97.56 | 2.42 | 0.00 |
| E16.203 | 63.23 | 17.95 | 0.06 | 0.02 | 0.00 | 0.02 | 0.33 | 16.08 | 0.02 | 97.72 | 96.69 | 3.05 | 0.24 |
| E16.204 | 64.24 | 18.21 | 0.06 | 0.00 | 0.00 | 0.02 | 0.61 | 15.74 | 0.13 | 99.01 | 94.08 | 5.57 | 0.11 |
| E16.205 | 58.92 | 20.13 | 1.76 | 0.01 | 0.72 | 0.00 | 0.19 | 15.08 | 0.11 | 96.92 | 92.78 | 1.76 | 5.25 |
| E16.206 | 66.23 | 20.58 | 0.16 | 0.01 | 0.00 | 0.75 | 10.36 | 0.70 | 0.00 | 98.79 | 4.09 | 92.16 | 3.76 |
| E16.207 | 63.46 | 21.44 | 0.28 | 0.02 | 0.01 | 1.66 | 9.92 | 0.55 | 0.01 | 97.35 | 3.21 | 88.43 | 8.34 |
| E16.208 | 63.65 | 18.05 | 0.03 | 0.00 | 0.00 | 0.00 | 0.27 | 16.46 | 0.03 | 98.49 | 97.49 | 2.47 | 0.00 |
| E16.209 | 63.09 | 21.72 | 0.13 | 0.00 | 0.00 | 3.34 | 9.39 | 0.47 | 0.01 | 98.15 | 2.68 | 81.32 | 15.98 |
| E16.210 | 63.73 | 18.07 | 0.10 | 0.02 | 0.00 | 0.05 | 0.32 | 16.29 | 0.00 | 98.57 | 96.83 | 2.87 | 0.30 |
| E16.211 | 64.67 | 21.12 | 0.12 | 0.01 | 0.00 | 2.77 | 9.47 | 0.31 | 0.01 | 98.47 | 1.81 | 84.50 | 13.68 |
| E16.212 | 63.62 | 17.94 | 0.07 | 0.00 | 0.00 | 0.08 | 0.56 | 15.92 | 0.03 | 98.22 | 94.48 | 5.05 | 0.43 |
| E16.213 | 62.09 | 22.81 | 0.01 | 0.04 | 0.01 | 3.84 | 8.98 | 0.19 | 0.00 | 97.96 | 1.10 | 79.83 | 19.07 |
| E16.214 | 67.49 | 19.18 | 0.08 | 0.02 | 0.00 | 0.22 | 11.33 | 0.17 | 0.00 | 98.49 | 0.96 | 97.89 | 1.14 |
| E16.215 | 63.41 | 18.15 | 0.02 | 0.01 | 0.01 | 0.01 | 0.29 | 16.26 | 0.26 | 98.41 | 96.81 | 2.58 | 0.12 |
| E16.216 | 65.47 | 20.25 | 0.02 | 0.00 | 0.01 | 0.63 | 10.79 | 0.15 | 0.00 | 97.32 | 0.89 | 95.99 | 3.11 |
| E16.217 | 63.14 | 21.99 | 0.17 | 0.01 | 0.00 | 3.66 | 9.27 | 0.34 | 0.00 | 98.58 | 1.96 | 80.46 | 17.58 |
| E16.218 | 67.45 | 19.17 | 0.05 | 0.03 | 0.00 | 0.13 | 11.31 | 0.22 | 0.00 | 98.37 | 1.25 | 97.96 | 0.79 |
| E16.219 | 64.27 | 18.06 | 0.05 | 0.00 | 0.00 | 0.00 | 0.27 | 16.56 | 0.04 | 99.25 | 97.52 | 2.39 | 0.00 |
| E16.220 | 63.44 | 22.29 | 0.12 | 0.00 | 0.00 | 3.55 | 9.27 | 0.36 | 0.00 | 99.02 | 2.04 | 80.85 | 17.11 |
| E16.221 | 63.57 | 21.28 | 0.17 | 0.00 | 0.00 | 2.62 | 9.62 | 0.44 | 0.00 | 97.71 | 2.57 | 84.66 | 12.76 |
| E16.222 | 62.37 | 17.84 | 0.05 | 0.03 | 0.00 | 0.01 | 0.26 | 16.43 | 0.01 | 97.00 | 97.48 | 2.35 | 0.15 |
| E16.223 | 63.52 | 18.29 | 0.02 | 0.00 | 0.01 | 0.00 | 0.24 | 16.63 | 0.15 | 98.86 | 97.52 | 2.15 | 0.07 |
| E16.224 | 67.49 | 19.37 | 0.00 | 0.00 | 0.00 | 0.30 | 11.22 | 0.13 | 0.00 | 98.51 | 0.77 | 97.79 | 1.44 |
| E16.225 | 65.13 | 20.08 | 0.00 | 0.02 | 0.00 | 1.08 | 10.92 | 0.13 | 0.00 | 97.36 | 0.71 | 94.04 | 5.25 |
| E16.226 | 63.42 | 18.24 | 0.01 | 0.00 | 0.00 | 0.01 | 0.24 | 16.58 | 0.23 | 98.72 | 97.43 | 2.11 | 0.04 |
| E16.227 | 62.84 | 18.23 | 0.01 | 0.00 | 0.00 | 0.00 | 0.36 | 16.36 | 0.18 | 97.98 | 96.45 | 3.22 | 0.00 |
| E16.228 | 62.62 | 18.14 | 0.08 | 0.00 | 0.01 | 0.01 | 0.26 | 16.38 | 0.09 | 97.59 | 97.35 | 2.38 | 0.11 |
| E16.229 | 63.79 | 22.11 | 0.31 | 0.03 | 0.05 | 1.48 | 9.03 | 1.15 | 0.02 | 97.96 | 7.07 | 84.75 | 8.14 |
| E16.230 | 65.94 | 20.25 | 0.03 | 0.00 | 0.00 | 1.56 | 10.19 | 0.15 | 0.02 | 98.13 | 0.89 | 91.37 | 7.71 |
| E16.231 | 63.90 | 18.05 | 0.03 | 0.00 | 0.00 | 0.00 | 0.24 | 16.45 | 0.01 | 98.69 | 97.79 | 2.19 | 0.00 |
| E16.232 | 62.58 | 18.14 | 0.02 | 0.02 | 0.00 | 0.00 | 0.27 | 16.37 | 0.09 | 97.50 | 97.26 | 2.48 | 0.09 |
| E16.233 | 65.37 | 20.43 | 0.08 | 0.02 | 0.00 | 1.52 | 10.57 | 0.16 | 0.00 | 98.15 | 0.89 | 91.74 | 7.37 |
| E16.234 | 66.12 | 21.53 | 0.23 | 0.02 | 0.05 | 2.06 | 10.10 | 0.13 | 0.00 | 100.23 | 0.73 | 88.85 | 10.42 |
| E17.1 | 64.93 | 18.51 | 0.11 | 0.00 | 0.00 | 0.00 | 0.28 | 16.10 | 0.56 | 100.50 | 96.38 | 2.58 | 0.01 |
| E17.2 | 64.64 | 18.46 | 0.20 | 0.00 | 0.00 | 0.00 | 0.31 | 16.33 | 0.27 | 100.21 | 96.74 | 2.76 | 0.02 |
| E17.3 | 65.54 | 18.41 | 0.10 | 0.00 | 0.00 | 0.03 | 0.34 | 16.51 | 0.02 | 100.95 | 96.78 | 3.03 | 0.15 |
| E17.4 | 69.19 | 19.55 | 0.00 | 0.00 | 0.01 | 0.06 | 11.16 | 0.06 | 0.00 | 100.02 | 0.32 | 99.35 | 0.33 |
| E17.5 | 65.77 | 18.28 | 0.03 | 0.01 | 0.00 | 0.01 | 0.47 | 16.42 | 0.05 | 101.05 | 95.61 | 4.19 | 0.10 |
| E17.6 | 65.21 | 18.24 | 0.00 | 0.00 | 0.01 | 0.22 | 0.25 | 16.55 | 0.02 | 100.50 | 96.64 | 2.19 | 1.14 |
| E17.7 | 70.19 | 19.70 | 0.20 | 0.03 | 0.00 | 0.06 | 11.44 | 0.06 | 0.00 | 101.69 | 0.36 | 99.22 | 0.42 |
| E17.8 | 70.73 | 19.63 | 0.00 | 0.00 | 0.00 | 0.05 | 11.51 | 0.03 | 0.01 | 101.96 | 0.17 | 99.58 | 0.23 |
| E17.9 | 66.25 | 18.97 | 0.01 | 0.01 | 0.00 | 0.00 | 0.53 | 15.93 | 0.56 | 102.25 | 94.16 | 4.79 | 0.04 |
| E17.10 | 69.07 | 19.64 | 0.21 | 0.00 | 0.01 | 0.08 | 11.24 | 0.06 | 0.00 | 100.32 | 0.37 | 99.17 | 0.46 |
| E17.11 | 70.15 | 19.58 | 0.03 | 0.00 | 0.00 | 0.04 | 11.55 | 0.05 | 0.00 | 101.40 | 0.27 | 99.50 | 0.23 |
| E17.12 | 65.76 | 18.46 | 0.55 | 0.00 | 0.01 | 0.00 | 0.26 | 16.30 | 0.06 | 101.39 | 97.45 | 2.36 | 0.09 |
| E17.13 | 69.83 | 19.36 | 0.08 | 0.02 | 0.01 | 0.07 | 11.11 | 0.06 | 0.00 | 100.54 | 0.38 | 99.12 | 0.50 |
| E17.14 | 69.86 | 19.94 | 0.01 | 0.00 | 0.00 | 0.33 | 11.32 | 0.10 | 0.00 | 101.56 | 0.59 | 97.83 | 1.58 |
| E17.15 | 69.51 | 19.71 | 0.28 | 0.01 | 0.02 | 0.14 | 11.35 | 0.07 | 0.02 | 101.10 | 0.41 | 98.74 | 0.83 |
| E17.16 | 69.58 | 19.80 | 0.14 | 0.00 | 0.00 | 0.09 | 11.35 | 0.08 | 0.00 | 101.04 | 0.48 | 99.08 | 0.44 |
| E17.17 | 68.19 | 19.37 | 0.05 | 0.00 | 0.01 | 0.21 | 11.19 | 0.32 | 0.00 | 99.34 | 1.81 | 97.13 | 1.06 |
| E17.18 | 69.55 | 19.55 | 0.09 | 0.02 | 0.00 | 0.11 | 11.46 | 0.10 | 0.00 | 100.88 | 0.59 | 98.81 | 0.60 |
| E17.19 | 69.82 | 19.71 | 0.03 | 0.02 | 0.00 | 0.03 | 11.55 | 0.04 | 0.01 | 101.21 | 0.25 | 99.53 | 0.20 |
| E17.20 | 69.79 | 19.78 | 0.08 | 0.00 | 0.02 | 0.11 | 11.45 | 0.06 | 0.00 | 101.29 | 0.34 | 98.98 | 0.68 |
| E17.21 | 65.95 | 18.58 | 0.10 | 0.00 | 0.00 | 0.00 | 0.29 | 16.48 | 0.07 | 101.47 | 97.28 | 2.58 | 0.02 |
| E17.22 | 69.60 | 19.82 | 0.04 | 0.02 | 0.00 | 0.14 | 11.49 | 0.06 | 0.01 | 101.18 | 0.37 | 98.88 | 0.74 |
| E17.23 | 65.26 | 18.56 | 0.03 | 0.00 | 0.00 | 0.13 | 0.39 | 16.19 | 0.34 | 100.90 | 95.27 | 3.45 | 0.66 |
| E17.24 | 65.63 | 18.71 | 0.13 | 0.02 | 0.00 | 0.00 | 0.27 | 16.55 | 0.10 | 101.42 | 97.29 | 2.44 | 0.09 |
| E17.25 | 68.60 | 19.64 | 0.91 | 0.00 | 0.01 | 0.22 | 11.49 | 0.06 | 0.00 | 100.92 | 0.33 | 98.61 | 1.07 |
| E17.26 | 68.93 | 19.50 | 0.06 | 0.00 | 0.00 | 0.07 | 11.32 | 0.11 | 0.01 | 100.00 | 0.61 | 99.02 | 0.36 |

Table 1: Continued.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | SiO2 | Al2O3 | FeO | MnO | MgO | CaO | Na2O | K2O | BaO | Total | Or (K) | Ab (Na) | An (Ca+Mn+Mg) |
| E17.28 | 63.94 | 18.50 | 0.01 | 0.01 | 0.00 | 0.00 | 0.48 | 16.10 | 0.20 | 99.24 | 95.30 | 4.31 | 0.03 |
| E17.29 | 68.96 | 19.73 | 0.02 | 0.00 | 0.00 | 0.20 | 11.36 | 0.08 | 0.00 | 100.35 | 0.48 | 98.57 | 0.95 |
| E17.30 | 67.13 | 19.09 | 1.24 | 0.01 | 0.00 | 0.14 | 10.94 | 0.09 | 0.00 | 98.64 | 0.54 | 98.71 | 0.74 |
| E17.31 | 63.30 | 18.27 | 0.15 | 0.01 | 0.00 | 0.00 | 0.26 | 16.54 | 0.06 | 98.59 | 97.51 | 2.35 | 0.03 |
| E17.32 | 68.27 | 19.57 | 0.03 | 0.02 | 0.00 | 0.09 | 11.51 | 0.06 | 0.00 | 99.55 | 0.32 | 99.16 | 0.53 |
| E17.33 | 65.23 | 18.66 | 0.00 | 0.00 | 0.00 | 0.01 | 0.37 | 16.28 | 0.15 | 100.70 | 96.33 | 3.34 | 0.07 |
| E17.34 | 64.09 | 18.41 | 0.18 | 0.03 | 0.00 | 0.01 | 0.24 | 16.61 | 0.12 | 99.68 | 97.53 | 2.10 | 0.17 |
| E17.35 | 67.17 | 19.56 | 0.00 | 0.02 | 0.00 | 0.26 | 11.31 | 0.17 | 0.02 | 98.51 | 0.96 | 97.69 | 1.32 |
| E17A.82 | 64.95 | 18.13 | 0.02 | 0.02 | 0.00 | 0.01 | 0.32 | 16.61 | 0.04 | 100.09 | 96.96 | 2.85 | 0.12 |
| E17A.83 | 65.85 | 18.43 | 0.04 | 0.01 | 0.00 | 0.00 | 0.34 | 16.49 | 0.09 | 101.26 | 96.75 | 3.02 | 0.07 |
| E17A.84 | 64.96 | 18.13 | 0.11 | 0.00 | 0.00 | 0.00 | 0.26 | 16.57 | 0.04 | 100.07 | 97.58 | 2.36 | 0.00 |
| E17A.85 | 67.99 | 17.44 | 0.08 | 0.00 | 0.02 | 0.06 | 1.20 | 14.11 | 0.02 | 100.91 | 88.13 | 11.42 | 0.42 |
| E17A.86 | 65.26 | 18.50 | 0.15 | 0.00 | 0.00 | 0.03 | 0.27 | 16.41 | 0.04 | 100.66 | 97.36 | 2.40 | 0.17 |
| E17A.87 | 66.44 | 20.06 | 0.13 | 0.00 | 0.00 | 1.23 | 10.54 | 0.15 | 0.00 | 98.55 | 0.89 | 93.11 | 6.00 |
| E17A.88 | 66.09 | 20.41 | 0.09 | 0.00 | 0.02 | 1.60 | 10.39 | 0.13 | 0.00 | 98.73 | 0.75 | 91.35 | 7.90 |
| E17A.89 | 63.89 | 19.82 | 0.09 | 0.01 | 0.00 | 0.07 | 0.56 | 15.55 | 0.25 | 100.25 | 93.96 | 5.14 | 0.43 |
| E17A.90 | 65.92 | 18.50 | 0.01 | 0.00 | 0.00 | 0.15 | 0.56 | 16.20 | 0.14 | 101.47 | 94.09 | 4.95 | 0.72 |
| E17A.91 | 66.51 | 19.59 | 0.02 | 0.00 | 0.00 | 0.83 | 11.00 | 0.07 | 0.01 | 98.03 | 0.41 | 95.57 | 4.00 |
| E17A.92 | 68.13 | 19.89 | 0.15 | 0.02 | 0.01 | 0.46 | 10.82 | 0.07 | 0.00 | 99.57 | 0.44 | 97.07 | 2.49 |
| E17A.93 | 66.97 | 20.27 | 0.02 | 0.01 | 0.00 | 0.90 | 10.38 | 0.20 | 0.00 | 98.76 | 1.22 | 94.19 | 4.58 |
| E17A.94 | 65.28 | 18.65 | 0.02 | 0.00 | 0.00 | 0.07 | 0.31 | 16.39 | 0.18 | 100.90 | 96.53 | 2.78 | 0.36 |
| E17A.95 | 65.49 | 18.31 | 0.06 | 0.00 | 0.00 | 0.02 | 0.50 | 16.33 | 0.12 | 100.82 | 95.28 | 4.43 | 0.08 |
| E17A.96 | 65.02 | 18.28 | 0.01 | 0.03 | 0.00 | 0.03 | 0.39 | 16.37 | 0.23 | 100.36 | 95.82 | 3.47 | 0.30 |
| E17A.97 | 64.65 | 18.13 | 0.05 | 0.00 | 0.00 | 0.03 | 0.27 | 16.33 | 0.01 | 99.48 | 97.35 | 2.47 | 0.16 |
| E17A.98 | 66.98 | 20.77 | 0.08 | 0.00 | 0.00 | 1.52 | 10.12 | 0.18 | 0.00 | 99.65 | 1.05 | 91.36 | 7.60 |
| E17A.99 | 66.47 | 20.84 | 0.06 | 0.00 | 0.01 | 2.05 | 9.97 | 0.32 | 0.00 | 99.72 | 1.87 | 88.07 | 10.06 |
| E17A.100 | 68.20 | 19.84 | 0.10 | 0.00 | 0.01 | 1.00 | 10.06 | 0.57 | 0.01 | 99.79 | 3.40 | 91.49 | 5.10 |
| E17A.101 | 68.59 | 20.19 | 0.08 | 0.02 | 0.00 | 0.85 | 10.66 | 0.09 | 0.00 | 100.47 | 0.51 | 95.22 | 4.27 |
| E17A.102 | 66.94 | 20.11 | 0.01 | 0.01 | 0.01 | 1.25 | 10.30 | 0.07 | 0.00 | 98.69 | 0.41 | 93.22 | 6.36 |
| E17A.120 | 68.10 | 19.13 | 0.00 | 0.00 | 0.00 | 0.09 | 11.63 | 0.05 | 0.00 | 99.01 | 0.30 | 99.26 | 0.44 |
| E17A.121 | 68.16 | 18.95 | 0.13 | 0.00 | 0.00 | 0.19 | 11.19 | 0.08 | 0.02 | 98.72 | 0.47 | 98.58 | 0.91 |
| E17A.122 | 64.17 | 18.08 | 0.02 | 0.00 | 0.00 | 0.00 | 0.27 | 16.43 | 0.05 | 99.03 | 97.45 | 2.44 | 0.02 |
| E17A.123 | 64.21 | 18.20 | 0.07 | 0.00 | 0.00 | 0.01 | 0.32 | 16.28 | 0.25 | 99.34 | 96.64 | 2.86 | 0.05 |
| E17A.124 | 67.83 | 19.13 | 0.01 | 0.01 | 0.00 | 0.04 | 11.45 | 0.05 | 0.00 | 98.53 | 0.27 | 99.47 | 0.26 |
| E17A.125 | 69.33 | 19.22 | 0.04 | 0.01 | 0.00 | 0.09 | 11.35 | 0.09 | 0.02 | 100.15 | 0.51 | 98.97 | 0.48 |
| E17A.126 | 64.74 | 18.26 | 0.05 | 0.02 | 0.00 | 0.04 | 0.47 | 16.07 | 0.02 | 99.67 | 95.41 | 4.28 | 0.27 |
| E17A.127 | 66.51 | 20.51 | 0.04 | 0.01 | 0.01 | 0.06 | 10.78 | 0.72 | 0.01 | 98.66 | 4.17 | 95.37 | 0.43 |
| E17A.128 | 68.52 | 19.33 | 0.02 | 0.00 | 0.00 | 0.09 | 11.45 | 0.09 | 0.00 | 99.50 | 0.49 | 99.09 | 0.42 |
| E17A.129 | 68.54 | 19.31 | 0.50 | 0.00 | 0.01 | 0.23 | 11.22 | 0.08 | 0.02 | 99.92 | 0.48 | 98.29 | 1.19 |
| E17A.130 | 50.52 | 25.90 | 4.12 | 0.03 | 2.60 | 0.00 | 0.10 | 10.83 | 0.10 | 94.20 | 76.97 | 1.04 | 21.76 |
| E17A.131 | 65.04 | 18.38 | 0.04 | 0.00 | 0.00 | 0.03 | 0.27 | 16.42 | 0.04 | 100.22 | 97.36 | 2.41 | 0.15 |
| E17A.132 | 65.24 | 18.58 | 0.00 | 0.02 | 0.00 | 0.00 | 0.34 | 16.34 | 0.12 | 100.65 | 96.62 | 3.09 | 0.08 |
| E17A.133 | 64.73 | 18.51 | 0.07 | 0.00 | 0.00 | 0.00 | 0.29 | 16.43 | 0.04 | 100.07 | 97.28 | 2.63 | 0.01 |
| E17A.134 | 68.95 | 19.73 | 0.06 | 0.00 | 0.01 | 0.34 | 11.31 | 0.11 | 0.00 | 100.50 | 0.61 | 97.74 | 1.65 |
| E17A.135 | 68.97 | 19.39 | 0.02 | 0.00 | 0.00 | 0.04 | 11.58 | 0.04 | 0.00 | 100.05 | 0.25 | 99.52 | 0.23 |
| E17A.136 | 68.48 | 19.90 | 0.06 | 0.00 | 0.00 | 0.20 | 11.21 | 0.14 | 0.02 | 100.01 | 0.82 | 98.17 | 0.98 |
| E17A.137 | 64.84 | 18.66 | 0.07 | 0.02 | 0.00 | 0.04 | 0.25 | 16.14 | 0.29 | 100.31 | 96.89 | 2.31 | 0.26 |
| E17A.138 | 64.24 | 18.35 | 0.01 | 0.00 | 0.00 | 0.11 | 0.25 | 16.21 | 0.05 | 99.21 | 97.09 | 2.28 | 0.55 |
| E17A.139 | 69.20 | 19.47 | 0.01 | 0.00 | 0.00 | 0.08 | 11.54 | 0.05 | 0.01 | 100.37 | 0.29 | 99.29 | 0.39 |
| E17A.140 | 69.28 | 19.54 | 0.04 | 0.02 | 0.00 | 0.10 | 11.63 | 0.08 | 0.00 | 100.69 | 0.43 | 99.00 | 0.57 |
| E17A.141 | 64.71 | 18.82 | 0.05 | 0.00 | 0.00 | 0.06 | 0.80 | 15.06 | 0.93 | 100.43 | 90.62 | 7.35 | 0.32 |
| E17A.142 | 65.47 | 18.65 | 0.06 | 0.00 | 0.01 | 0.02 | 0.28 | 16.22 | 0.01 | 100.71 | 97.35 | 2.51 | 0.13 |
| E17A.143 | 69.31 | 19.52 | 0.04 | 0.01 | 0.01 | 0.09 | 11.41 | 0.15 | 0.00 | 100.55 | 0.88 | 98.58 | 0.55 |
| E17A.144 | 69.39 | 19.66 | 0.02 | 0.00 | 0.00 | 0.07 | 11.57 | 0.06 | 0.00 | 100.78 | 0.33 | 99.33 | 0.35 |
| E17A.145 | 65.73 | 18.43 | 0.03 | 0.00 | 0.00 | 0.06 | 0.23 | 16.60 | 0.03 | 101.11 | 97.56 | 2.07 | 0.32 |
| E17A.146 | 69.01 | 19.70 | 0.00 | 0.00 | 0.00 | 0.10 | 11.47 | 0.07 | 0.00 | 100.35 | 0.41 | 99.13 | 0.46 |
| E17A.147 | 67.45 | 20.81 | 0.80 | 0.01 | 0.01 | 0.37 | 10.82 | 0.71 | 0.00 | 100.98 | 4.09 | 94.08 | 1.83 |
| E17A.148 | 65.69 | 18.59 | 0.07 | 0.00 | 0.00 | 0.02 | 0.32 | 16.24 | 0.05 | 100.97 | 96.96 | 2.86 | 0.10 |
| E17A.149 | 65.20 | 18.68 | 0.00 | 0.02 | 0.00 | 0.01 | 0.24 | 16.28 | 0.15 | 100.60 | 97.33 | 2.21 | 0.18 |
| E17A.150 | 69.10 | 19.67 | 0.15 | 0.00 | 0.00 | 0.22 | 11.47 | 0.09 | 0.00 | 100.70 | 0.51 | 98.44 | 1.05 |
| E17A.151 | 65.41 | 18.48 | 0.05 | 0.00 | 0.00 | 0.01 | 0.27 | 16.41 | 0.21 | 100.84 | 97.10 | 2.46 | 0.07 |
| E17A.152 | 63.02 | 18.23 | 0.04 | 0.01 | 0.00 | 0.01 | 0.22 | 16.40 | 0.01 | 97.94 | 97.88 | 1.99 | 0.10 |
| E17A.153 | 68.23 | 19.06 | 0.04 | 0.02 | 0.00 | 0.13 | 11.36 | 0.07 | 0.02 | 98.93 | 0.39 | 98.90 | 0.68 |
| E17A.154 | 68.37 | 19.14 | 0.03 | 0.00 | 0.00 | 0.10 | 11.49 | 0.04 | 0.02 | 99.19 | 0.25 | 99.23 | 0.50 |
| E17A.155 | 63.70 | 18.06 | 0.05 | 0.00 | 0.00 | 0.00 | 0.22 | 16.39 | 0.02 | 98.44 | 97.97 | 1.98 | 0.02 |
| E17A.156 | 64.21 | 18.15 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 16.65 | 0.05 | 99.26 | 98.10 | 1.79 | 0.02 |

Table 1: Continued

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | SiO2 | Al2O3 | FeO | MnO | MgO | CaO | Na2O | K2O | BaO | Total | Or (K) | Ab (Na) | An (Ca+Mn+Mg) |
| E17A.158 | 63.61 | 18.23 | 0.08 | 0.00 | 0.00 | 0.01 | 0.30 | 16.33 | 0.12 | 98.69 | 96.96 | 2.74 | 0.07 |
| E17A.159 | 67.40 | 18.94 | 0.68 | 0.00 | 0.01 | 0.14 | 11.42 | 0.06 | 0.00 | 98.66 | 0.35 | 98.90 | 0.75 |
| E17A.160 | 67.91 | 19.25 | 0.14 | 0.02 | 0.01 | 0.13 | 11.44 | 0.07 | 0.02 | 98.98 | 0.38 | 98.84 | 0.76 |
| E17A.161 | 64.03 | 18.07 | 0.14 | 0.02 | 0.00 | 0.36 | 0.29 | 16.24 | 0.17 | 99.32 | 95.22 | 2.59 | 1.89 |
| E17A.162 | 64.55 | 18.01 | 0.04 | 0.02 | 0.00 | 0.05 | 0.32 | 16.30 | 0.04 | 99.32 | 96.72 | 2.90 | 0.32 |
| E17A.163 | 68.44 | 19.06 | 0.08 | 0.00 | 0.00 | 0.10 | 11.51 | 0.06 | 0.01 | 99.25 | 0.32 | 99.21 | 0.46 |
| E17A.164 | 68.49 | 19.21 | 0.12 | 0.01 | 0.00 | 0.08 | 11.50 | 0.08 | 0.01 | 99.50 | 0.46 | 99.12 | 0.41 |
| E17A.165 | 68.32 | 19.34 | 0.00 | 0.00 | 0.01 | 0.04 | 11.84 | 0.06 | 0.00 | 99.61 | 0.34 | 99.43 | 0.22 |
| E17A.166 | 67.47 | 19.42 | 0.08 | 0.00 | 0.00 | 0.19 | 11.55 | 0.07 | 0.00 | 98.78 | 0.37 | 98.73 | 0.89 |
| E17A.167 | 68.22 | 19.26 | 0.00 | 0.00 | 0.00 | 0.06 | 11.86 | 0.05 | 0.00 | 99.45 | 0.26 | 99.45 | 0.29 |
| E17A.168 | 67.52 | 19.45 | 0.00 | 0.03 | 0.00 | 0.20 | 11.56 | 0.07 | 0.01 | 98.84 | 0.38 | 98.54 | 1.06 |
| E17A.169 | 64.72 | 18.16 | 0.05 | 0.00 | 0.01 | 0.01 | 0.27 | 16.22 | 0.30 | 99.73 | 96.93 | 2.43 | 0.08 |
| E17A.170 | 69.55 | 19.30 | 0.05 | 0.01 | 0.00 | 0.09 | 11.52 | 0.08 | 0.01 | 100.61 | 0.44 | 99.08 | 0.47 |
| E17A.171 | 68.47 | 19.59 | 0.10 | 0.00 | 0.03 | 0.14 | 11.34 | 0.17 | 0.00 | 99.84 | 0.99 | 98.16 | 0.85 |
| E17A.172 | 68.08 | 19.03 | 0.14 | 0.00 | 0.00 | 0.10 | 11.59 | 0.07 | 0.00 | 99.01 | 0.40 | 99.15 | 0.45 |
| E17A.173 | 66.74 | 19.29 | 0.06 | 0.00 | 0.00 | 0.08 | 11.37 | 0.06 | 0.01 | 97.61 | 0.35 | 99.23 | 0.40 |
| E17A.174 | 68.25 | 19.30 | 0.02 | 0.00 | 0.00 | 0.08 | 11.50 | 0.06 | 0.00 | 99.21 | 0.32 | 99.27 | 0.41 |
| E26.82 | 64.95 | 18.13 | 0.02 | 0.02 | 0.00 | 0.01 | 0.32 | 16.61 | 0.04 | 100.09 | 96.96 | 2.85 | 0.12 |
| E26.83 | 65.85 | 18.43 | 0.04 | 0.01 | 0.00 | 0.00 | 0.34 | 16.49 | 0.09 | 101.26 | 96.75 | 3.02 | 0.07 |
| E26.84 | 64.96 | 18.13 | 0.11 | 0.00 | 0.00 | 0.00 | 0.26 | 16.57 | 0.04 | 100.07 | 97.58 | 2.36 | 0.00 |
| E26.85 | 67.99 | 17.44 | 0.08 | 0.00 | 0.02 | 0.06 | 1.20 | 14.11 | 0.02 | 100.91 | 88.13 | 11.42 | 0.42 |
| E26.86 | 65.26 | 18.50 | 0.15 | 0.00 | 0.00 | 0.03 | 0.27 | 16.41 | 0.04 | 100.66 | 97.36 | 2.40 | 0.17 |
| E26.87 | 66.44 | 20.06 | 0.13 | 0.00 | 0.00 | 1.23 | 10.54 | 0.15 | 0.00 | 98.55 | 0.89 | 93.11 | 6.00 |
| E26.88 | 66.09 | 20.41 | 0.09 | 0.00 | 0.02 | 1.60 | 10.39 | 0.13 | 0.00 | 98.73 | 0.75 | 91.35 | 7.90 |
| E26.89 | 63.89 | 19.82 | 0.09 | 0.01 | 0.00 | 0.07 | 0.56 | 15.55 | 0.25 | 100.25 | 93.96 | 5.14 | 0.43 |
| E26.90 | 65.92 | 18.50 | 0.01 | 0.00 | 0.00 | 0.15 | 0.56 | 16.20 | 0.14 | 101.47 | 94.09 | 4.95 | 0.72 |
| E26.91 | 66.51 | 19.59 | 0.02 | 0.00 | 0.00 | 0.83 | 11.00 | 0.07 | 0.01 | 98.03 | 0.41 | 95.57 | 4.00 |
| E26.92 | 68.13 | 19.89 | 0.15 | 0.02 | 0.01 | 0.46 | 10.82 | 0.07 | 0.00 | 99.57 | 0.44 | 97.07 | 2.49 |
| E26.93 | 66.97 | 20.27 | 0.02 | 0.01 | 0.00 | 0.90 | 10.38 | 0.20 | 0.00 | 98.76 | 1.22 | 94.19 | 4.58 |
| E26.94 | 65.28 | 18.65 | 0.02 | 0.00 | 0.00 | 0.07 | 0.31 | 16.39 | 0.18 | 100.90 | 96.53 | 2.78 | 0.36 |
| E26.95 | 65.49 | 18.31 | 0.06 | 0.00 | 0.00 | 0.02 | 0.50 | 16.33 | 0.12 | 100.82 | 95.28 | 4.43 | 0.08 |
| E26.96 | 65.02 | 18.28 | 0.01 | 0.03 | 0.00 | 0.03 | 0.39 | 16.37 | 0.23 | 100.36 | 95.82 | 3.47 | 0.30 |
| E26.97 | 64.65 | 18.13 | 0.05 | 0.00 | 0.00 | 0.03 | 0.27 | 16.33 | 0.01 | 99.48 | 97.35 | 2.47 | 0.16 |
| E26.98 | 66.98 | 20.77 | 0.08 | 0.00 | 0.00 | 1.52 | 10.12 | 0.18 | 0.00 | 99.65 | 1.05 | 91.36 | 7.60 |
| E26.99 | 66.47 | 20.84 | 0.06 | 0.00 | 0.01 | 2.05 | 9.97 | 0.32 | 0.00 | 99.72 | 1.87 | 88.07 | 10.06 |
| E26.100 | 68.20 | 19.84 | 0.10 | 0.00 | 0.01 | 1.00 | 10.06 | 0.57 | 0.01 | 99.79 | 3.40 | 91.49 | 5.10 |
| E26.101 | 68.59 | 20.19 | 0.08 | 0.02 | 0.00 | 0.85 | 10.66 | 0.09 | 0.00 | 100.47 | 0.51 | 95.22 | 4.27 |
| E26.102 | 66.94 | 20.11 | 0.01 | 0.01 | 0.01 | 1.25 | 10.30 | 0.07 | 0.00 | 98.69 | 0.41 | 93.22 | 6.36 |
| E26.103 | 67.71 | 20.71 | 0.03 | 0.00 | 0.01 | 1.06 | 10.32 | 0.09 | 0.00 | 99.93 | 0.56 | 94.04 | 5.41 |
| E26.104 | 69.75 | 19.82 | 0.00 | 0.03 | 0.00 | 0.44 | 10.94 | 0.06 | 0.02 | 101.05 | 0.35 | 97.35 | 2.27 |
| E26.105 | 65.79 | 18.49 | 0.00 | 0.00 | 0.00 | 0.02 | 0.27 | 16.64 | 0.01 | 101.24 | 97.41 | 2.44 | 0.12 |
| E26.106 | 70.07 | 19.68 | 0.01 | 0.02 | 0.01 | 0.30 | 10.82 | 0.24 | 0.02 | 101.16 | 1.41 | 96.95 | 1.60 |
| E26.107 | 67.25 | 20.06 | 0.00 | 0.00 | 0.00 | 1.33 | 10.63 | 0.06 | 0.00 | 99.33 | 0.36 | 93.19 | 6.45 |
| E26.108 | 67.56 | 20.35 | 0.07 | 0.00 | 0.00 | 1.34 | 10.44 | 0.13 | 0.01 | 99.90 | 0.73 | 92.65 | 6.59 |
| E26.109 | 67.04 | 18.74 | 0.00 | 0.00 | 0.00 | 0.00 | 0.36 | 16.52 | 0.06 | 102.73 | 96.63 | 3.23 | 0.04 |
| E26.110 | 69.91 | 20.74 | 0.04 | 0.02 | 0.00 | 0.99 | 10.68 | 0.11 | 0.00 | 102.49 | 0.62 | 94.44 | 4.93 |
| E26.111 | 68.24 | 19.89 | 0.13 | 0.01 | 0.00 | 0.12 | 11.02 | 0.10 | 0.02 | 99.52 | 0.58 | 98.75 | 0.64 |
| E26.112 | 66.05 | 18.51 | 0.03 | 0.00 | 0.00 | 0.07 | 0.32 | 16.47 | 0.01 | 101.46 | 96.76 | 2.86 | 0.36 |
| E26.113 | 65.65 | 18.20 | 0.04 | 0.01 | 0.00 | 0.01 | 0.27 | 16.46 | 0.06 | 100.70 | 97.41 | 2.39 | 0.10 |
| E26.114 | 64.71 | 18.15 | 0.09 | 0.03 | 0.00 | 0.11 | 0.37 | 16.22 | 0.00 | 99.69 | 95.97 | 3.36 | 0.67 |
| E26.115 | 65.47 | 18.20 | 0.05 | 0.00 | 0.00 | 0.28 | 0.31 | 16.39 | 0.02 | 100.72 | 95.80 | 2.79 | 1.38 |
| E26.116 | 66.09 | 18.22 | 0.03 | 0.03 | 0.00 | 0.01 | 0.36 | 16.47 | 0.14 | 101.35 | 96.44 | 3.16 | 0.14 |
| E26.117 | 68.79 | 20.50 | 0.10 | 0.01 | 0.01 | 1.04 | 10.41 | 0.08 | 0.00 | 100.93 | 0.46 | 94.22 | 5.32 |
| E26.118 | 67.31 | 21.17 | 0.45 | 0.01 | 0.22 | 0.95 | 9.77 | 0.91 | 0.01 | 100.79 | 5.43 | 88.30 | 6.26 |
| E26.119 | 69.07 | 20.29 | 0.08 | 0.02 | 0.00 | 0.35 | 10.79 | 0.23 | 0.01 | 100.85 | 1.35 | 96.77 | 1.87 |

TABLE 2. Representative EPMA of biotite from the Eagle Lake Granite

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | E16.4b | E16.5b | E16.6b | E16.7b | E16.8b | E16.11b | E16.13b | E16.15b | E16.17b | E16.20b | E16.21b | E16.23b | E16.24b | E16.26b | E16.27b | E16.28b | E16.30  B |
| Major elements in wt.% (EPMA) | | | | | | | | | | | | | | | | | |
| SiO2 | 34.33 | 34.54 | 35.94 | 35.85 | 26.40 | 36.09 | 36.40 | 36.54 | 36.51 | 36.12 | 36.94 | 26.44 | 36.62 | 47.35 | 37.31 | 46.42 | 36.96 |
| TiO2 | 3.640 | 3.470 | 3.350 | 3.380 | 0.570 | 3.290 | 3.130 | 2.760 | 3.060 | 3.430 | 3.150 | 0.050 | 3.480 | 0.370 | 3.160 | 0.510 | 3.610 |
| Al2O3 | 14.16 | 14.09 | 14.43 | 14.37 | 17.54 | 14.32 | 14.33 | 14.76 | 14.44 | 14.61 | 14.55 | 18.30 | 14.32 | 28.49 | 15.05 | 29.29 | 14.63 |
| FeO | 19.47 | 19.89 | 19.58 | 19.04 | 25.08 | 18.45 | 19.63 | 18.67 | 19.80 | 19.06 | 18.48 | 24.52 | 19.23 | 4.72 | 18.36 | 5.48 | 19.70 |
| MnO | 0.690 | 0.510 | 0.460 | 0.460 | 0.730 | 0.400 | 0.430 | 0.440 | 0.490 | 0.450 | 0.500 | 0.840 | 0.600 | 0.010 | 0.410 | 0.060 | 0.540 |
| MgO | 10.60 | 10.76 | 11.04 | 10.68 | 14.76 | 11.07 | 11.49 | 10.86 | 11.49 | 10.91 | 10.98 | 15.45 | 10.66 | 2.26 | 10.95 | 2.20 | 10.77 |
| CaO | 0.060 | 0.020 | 0.080 | 0.010 | 0.590 | 0.010 | 0.020 | 0.050 | 0.040 | 0.080 | 0.030 | 0.080 | 0.040 | 0.000 | 0.060 | 0.010 | 0.020 |
| Na2O | 0.13 | 0.08 | 0.07 | 0.04 | 0.01 | 0.07 | 0.06 | 0.10 | 0.10 | 0.10 | 0.03 | 0.03 | 0.16 | 0.15 | 0.04 | 0.24 | 0.09 |
| K2O | 9.27 | 9.47 | 8.98 | 9.48 | 0.02 | 9.48 | 8.93 | 9.36 | 8.73 | 9.05 | 9.48 | 0.01 | 9.21 | 10.22 | 9.38 | 10.75 | 9.51 |
| Total | 93.25 | 93.72 | 94.73 | 94.23 | 85.86 | 94.15 | 95.31 | 93.91 | 95.57 | 96.14 | 97.80 | 92.79 | 95.18 | 93.79 | 95.64 | 95.11 | 96.69 |
| O=Cl | 0.010 | 0.010 | 0.010 | 0.000 | 0.010 | 0.010 | 0.010 | 0.010 | 0.020 | 0.010 | 0.010 | 0.020 | 0.010 | 0.000 | 0.010 | 0.000 | 0.010 |
| O=F | 0.350 | 0.360 | 0.330 | 0.380 | 0.060 | 0.400 | 0.360 | 0.140 | 0.350 | 0.330 | 0.360 | 0.070 | 0.340 | 0.090 | 0.370 | 0.060 | 0.350 |
|  | | | | | | | | | | | | | | | | | |
| Si | 5.42 | 5.43 | 5.54 | 5.56 | 4.50 | 5.58 | 5.56 | 5.65 | 5.56 | 5.55 | 5.64 | 4.47 | 5.61 | 6.51 | 5.64 | 6.36 | 5.58 |
| Al IV | 2.58 | 2.57 | 2.46 | 2.44 | 3.50 | 2.42 | 2.44 | 2.35 | 2.44 | 2.45 | 2.36 | 3.53 | 2.39 | 1.49 | 2.36 | 1.64 | 2.42 |
| Al VI | 0.06 | 0.05 | 0.16 | 0.18 | 0.02 | 0.19 | 0.15 | 0.35 | 0.16 | 0.20 | 0.26 | 0.12 | 0.19 | 3.13 | 0.32 | 3.08 | 0.18 |
| Ti | 0.43 | 0.41 | 0.39 | 0.39 | 0.07 | 0.38 | 0.36 | 0.32 | 0.35 | 0.40 | 0.36 | 0.01 | 0.40 | 0.04 | 0.36 | 0.05 | 0.41 |
| Fe+3 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Fe+2 | 2.57 | 2.62 | 2.52 | 2.47 | 3.57 | 2.38 | 2.51 | 2.42 | 2.52 | 2.45 | 2.36 | 3.47 | 2.46 | 0.54 | 2.32 | 0.63 | 2.49 |
| Mn | 0.09 | 0.07 | 0.06 | 0.06 | 0.11 | 0.05 | 0.06 | 0.06 | 0.06 | 0.06 | 0.07 | 0.12 | 0.08 | 0.00 | 0.05 | 0.01 | 0.07 |
| Mg | 2.50 | 2.52 | 2.54 | 2.47 | 3.75 | 2.55 | 2.62 | 2.51 | 2.61 | 2.50 | 2.50 | 3.90 | 2.43 | 0.46 | 2.47 | 0.45 | 2.42 |
| Y | 5.65 | 5.67 | 5.67 | 5.57 | 7.52 | 5.55 | 5.69 | 5.65 | 5.71 | 5.61 | 5.55 | 7.62 | 5.57 | 4.18 | 5.52 | 4.22 | 5.57 |
| Ca | 0.01 | 0.00 | 0.01 | 0.00 | 0.11 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 |
| Na | 0.04 | 0.02 | 0.02 | 0.01 | 0.00 | 0.02 | 0.02 | 0.03 | 0.03 | 0.03 | 0.01 | 0.01 | 0.05 | 0.04 | 0.01 | 0.06 | 0.02 |
| K | 1.87 | 1.90 | 1.77 | 1.87 | 0.00 | 1.87 | 1.74 | 1.85 | 1.70 | 1.78 | 1.85 | 0.00 | 1.80 | 1.79 | 1.81 | 1.88 | 1.83 |

TABLE 3. Results of EPMA of magnetite in the of Eagle Lake Granite

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | SiO2 | TiO2 | Al2O3 | FeO(T) | MnO | MgO | CaO | Na2O | K2O | Cr2O3 | BaO | ZnO | V2O3 | NiO | Total |
| E6.3 | 0.23 | 0.00 | 0.01 | 88.49 | 0.04 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 88.80 |
| E6.4 | 0.03 | 44.10 | 0.04 | 40.73 | 9.36 | 0.01 | 0.00 | 0.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.20 | 0.00 | 94.68 |
| E6.5 | 0.10 | 0.40 | 0.24 | 89.55 | 0.09 | 0.00 | 0.01 | 0.19 | 0.00 | 0.01 | 0.00 | 0.00 | 0.19 | 0.00 | 90.80 |
| E6.6 | 3.14 | 0.00 | 0.04 | 75.58 | 0.00 | 0.11 | 0.00 | 0.02 | 0.01 | 0.00 | 0.00 | 0.00 | 0.02 | 0.01 | 78.94 |
| E16.30 | 0.04 | 0.01 | 0.05 | 92.66 | 0.09 | 0.01 | 0.10 | 0.09 | 0.03 | 0.05 | 0.22 | 0.00 | 0.29 | 0.00 | 93.62 |
| E16.31 | 0.07 | 0.00 | 0.03 | 92.33 | 0.05 | 0.00 | 0.00 | 0.20 | 0.00 | 0.05 | 0.00 | 0.00 | 0.17 | 0.00 | 92.91 |
| E16.32 | 0.04 | 0.00 | 0.03 | 92.64 | 0.05 | 0.01 | 0.01 | 0.19 | 0.00 | 0.08 | 0.00 | 0.00 | 0.22 | 0.00 | 93.28 |
| E16.33 | 0.20 | 0.00 | 0.03 | 92.76 | 0.09 | 0.00 | 0.00 | 0.02 | 0.01 | 0.10 | 0.00 | 0.00 | 0.23 | 0.00 | 93.45 |
| E16.34 | 0.05 | 0.08 | 0.03 | 92.87 | 0.04 | 0.00 | 0.06 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.18 | 0.00 | 93.37 |
| E16.35 | 0.00 | 0.08 | 0.02 | 92.09 | 0.04 | 0.00 | 0.03 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.23 | 0.00 | 92.55 |
| E16.36 | 0.03 | 0.75 | 0.02 | 91.50 | 0.10 | 0.00 | 0.03 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.25 | 0.00 | 92.76 |
| E16.37 | 0.05 | 49.19 | 0.02 | 37.43 | 9.88 | 0.05 | 0.04 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.19 | 0.01 | 96.86 |
| E16.38 | 0.04 | 0.00 | 0.02 | 92.59 | 0.07 | 0.00 | 0.04 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.21 | 0.00 | 93.04 |
| E16.39 | 0.07 | 0.03 | 0.05 | 92.79 | 0.07 | 0.06 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.13 | 0.01 | 93.26 |
| E16.40 | 0.05 | 0.01 | 0.06 | 92.83 | 0.08 | 0.02 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.19 | 0.00 | 93.32 |
| E16.41 | 0.06 | 0.00 | 0.05 | 92.31 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.26 | 0.01 | 92.85 |
| E16.42 | 0.00 | 0.00 | 0.02 | 91.65 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.14 | 0.00 | 91.92 |
| E16.43 | 0.05 | 46.36 | 0.02 | 40.16 | 9.49 | 0.06 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.23 | 0.00 | 96.37 |
| E16.44 | 0.00 | 0.03 | 0.03 | 90.74 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.23 | 0.00 | 91.13 |
| E16.45 | 0.03 | 0.02 | 0.03 | 92.85 | 0.08 | 0.02 | 0.00 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.30 | 0.01 | 93.45 |
| E16.46 | 0.07 | 0.04 | 0.02 | 92.84 | 0.05 | 0.01 | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.13 | 0.01 | 93.23 |
| E16.47 | 0.05 | 0.01 | 0.03 | 92.20 | 0.04 | 0.01 | 0.10 | 0.09 | 0.03 | 0.06 | 0.22 | 0.00 | 0.24 | 0.00 | 93.07 |
| E16.48 | 0.08 | 0.38 | 0.27 | 92.70 | 0.07 | 0.00 | 0.00 | 0.20 | 0.00 | 0.05 | 0.00 | 0.00 | 0.30 | 0.01 | 94.08 |
| E16.49 | 0.05 | 0.11 | 0.02 | 91.80 | 0.04 | 0.00 | 0.01 | 0.19 | 0.00 | 0.04 | 0.00 | 0.00 | 0.21 | 0.00 | 92.47 |
| E16.50 | 0.15 | 0.00 | 0.00 | 91.67 | 0.07 | 0.00 | 0.00 | 0.02 | 0.01 | 0.06 | 0.00 | 0.00 | 0.17 | 0.03 | 92.17 |
| E16.51 | 0.00 | 0.01 | 0.02 | 92.43 | 0.07 | 0.00 | 0.06 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.26 | 0.00 | 92.90 |
| E16.52 | 0.04 | 0.09 | 0.04 | 92.88 | 0.08 | 0.02 | 0.03 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.26 | 0.00 | 93.48 |
| E16.53 | 0.05 | 0.03 | 0.10 | 92.28 | 0.08 | 0.00 | 0.03 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.29 | 0.02 | 92.94 |
| E16.54 | 0.06 | 0.00 | 0.03 | 91.62 | 0.08 | 0.01 | 0.04 | 0.00 | 0.00 | 0.14 | 0.00 | 0.00 | 0.28 | 0.01 | 92.27 |
| E16.55 | 0.11 | 0.01 | 0.09 | 91.63 | 0.06 | 0.00 | 0.04 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.16 | 0.02 | 92.20 |
| E16.56 | 0.04 | 0.02 | 0.03 | 90.97 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.27 | 0.00 | 91.48 |
| E16.57 | 0.03 | 46.22 | 0.04 | 35.79 | 13.32 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.22 | 0.00 | 95.69 |
| E16.58 | 0.09 | 0.00 | 0.02 | 91.19 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.10 | 0.00 | 91.50 |
| E16.59 | 0.04 | 0.02 | 0.02 | 93.57 | 0.07 | 0.02 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.24 | 0.00 | 94.05 |
| E16.60 | 0.00 | 0.04 | 0.03 | 90.51 | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.11 | 0.00 | 90.77 |
| E16.61 | 0.05 | 0.74 | 0.05 | 89.74 | 0.08 | 0.01 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.21 | 0.00 | 90.96 |
| E16.62 | 0.04 | 46.24 | 0.07 | 42.38 | 6.72 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.28 | 0.01 | 95.78 |
| E16.63 | 0.06 | 0.00 | 0.05 | 90.82 | 0.07 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.29 | 0.00 | 91.36 |
| E16.64 | 0.08 | 0.02 | 0.28 | 89.90 | 0.07 | 0.01 | 0.10 | 0.09 | 0.03 | 0.06 | 0.22 | 0.00 | 0.22 | 0.00 | 91.08 |
| E16.65 | 0.04 | 0.02 | 0.03 | 92.91 | 0.06 | 0.00 | 0.00 | 0.20 | 0.00 | 0.06 | 0.00 | 0.00 | 0.20 | 0.00 | 93.53 |
| E16.66 | 0.10 | 0.00 | 0.03 | 92.36 | 0.04 | 0.00 | 0.01 | 0.19 | 0.00 | 0.05 | 0.00 | 0.00 | 0.15 | 0.00 | 92.95 |
| E16.67 | 0.11 | 0.02 | 0.01 | 91.61 | 0.06 | 0.00 | 0.00 | 0.02 | 0.01 | 0.05 | 0.00 | 0.00 | 0.12 | 0.01 | 92.03 |
| E16.68 | 0.12 | 0.02 | 0.01 | 91.56 | 0.07 | 0.00 | 0.06 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.21 | 0.00 | 92.12 |
| E16.69 | 0.06 | 0.01 | 0.03 | 92.69 | 0.06 | 0.01 | 0.03 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.21 | 0.00 | 93.14 |
| E16.70 | 0.06 | 0.02 | 0.03 | 91.22 | 0.05 | 0.01 | 0.03 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.23 | 0.00 | 91.68 |
| E16.71 | 0.00 | 53.35 | 0.39 | 24.52 | 1.58 | 0.01 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.63 | 0.00 | 80.53 |
| E16.72 | 0.08 | 47.73 | 0.01 | 37.37 | 11.14 | 0.06 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.12 | 0.00 | 96.55 |
| E16.73 | 0.00 | 0.01 | 0.03 | 92.47 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.15 | 0.01 | 92.74 |
| E16.74 | 0.06 | 0.05 | 0.04 | 92.61 | 0.05 | 0.01 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.26 | 0.00 | 93.13 |
| E16.75 | 0.04 | 0.05 | 0.02 | 92.52 | 0.09 | 0.06 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.31 | 0.00 | 93.14 |
| E16.76 | 0.11 | 0.01 | 0.04 | 92.26 | 0.05 | 0.01 | 0.00 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.19 | 0.03 | 92.73 |
| E16.77 | 0.05 | 0.06 | 0.04 | 91.56 | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 0.11 | 0.00 | 0.00 | 0.21 | 0.00 | 92.09 |
| E16.78 | 0.05 | 0.01 | 0.02 | 91.64 | 0.09 | 0.02 | 0.00 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.24 | 0.00 | 92.12 |
| E16.79 | 0.13 | 0.00 | 0.07 | 93.14 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.03 | 0.00 | 0.00 | 0.19 | 0.01 | 93.62 |
| E16.80 | 0.00 | 0.08 | 0.03 | 92.65 | 0.04 | 0.01 | 0.00 | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.19 | 0.00 | 93.02 |
| E16.81 | 0.05 | 0.06 | 0.02 | 91.97 | 0.06 | 0.02 | 0.10 | 0.09 | 0.03 | 0.06 | 0.22 | 0.00 | 0.23 | 0.00 | 92.90 |
| E16.82 | 0.04 | 0.04 | 0.02 | 92.65 | 0.06 | 0.02 | 0.00 | 0.20 | 0.00 | 0.07 | 0.00 | 0.00 | 0.22 | 0.00 | 93.33 |
| E16.83 | 0.07 | 45.92 | 0.00 | 41.06 | 9.82 | 0.06 | 0.01 | 0.19 | 0.00 | 0.02 | 0.00 | 0.00 | 0.04 | 0.01 | 97.21 |
| E16.84 | 0.00 | 0.00 | 0.03 | 92.54 | 0.06 | 0.00 | 0.00 | 0.02 | 0.01 | 0.01 | 0.00 | 0.00 | 0.20 | 0.00 | 92.87 |
| E16.85 | 0.06 | 0.01 | 0.02 | 91.88 | 0.06 | 0.01 | 0.06 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.18 | 0.00 | 92.33 |
| E16.86 | 0.10 | 0.07 | 0.11 | 92.41 | 0.05 | 0.01 | 0.03 | 0.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.11 | 0.02 | 92.94 |
| E17.1 | 2.94 | 0.05 | 2.87 | 78.01 | 0.24 | 0.04 | 0.01 | 0.00 | 0.01 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 84.19 |
| E17.2 | 10.46 | 0.03 | 2.58 | 71.71 | 0.15 | 0.03 | 0.00 | 0.02 | 0.00 | 0.06 | 0.00 | 0.00 | 0.02 | 0.00 | 85.06 |
| E17A.29 | 2.97 | 0.00 | 0.05 | 82.26 | 0.01 | 0.06 | 0.10 | 0.09 | 0.03 | 0.00 | 0.22 | 0.00 | 0.02 | 0.02 | 85.83 |
| E26.7 | 0.05 | 0.15 | 0.02 | 90.76 | 0.07 | 0.00 | 0.00 | 0.02 | 0.00 | 0.10 | 0.22 | 0.00 | 0.22 | 0.00 | 91.60 |
| E26.8 | 0.24 | 0.52 | 0.10 | 91.88 | 0.09 | 0.00 | 0.00 | 0.20 | 0.00 | 0.10 | 0.00 | 0.00 | 0.16 | 0.01 | 93.31 |
| E26.9 | 0.00 | 0.06 | 0.02 | 92.45 | 0.06 | 0.00 | 0.01 | 0.19 | 0.00 | 0.08 | 0.00 | 0.00 | 0.22 | 0.00 | 93.10 |

Table 3: Continued.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | SiO2 | TiO2 | Al2O3 | FeO(T) | MnO | MgO | CaO | Na2O | K2O | Cr2O3 | BaO | ZnO | V2O3 | NiO | Total |
| E26.11 | 0.11 | 0.20 | 0.00 | 92.66 | 0.06 | 0.00 | 0.06 | 0.00 | 0.00 | 0.11 | 0.00 | 0.00 | 0.20 | 0.01 | 93.42 |
| E26.12 | 0.04 | 49.49 | 0.01 | 34.42 | 12.36 | 0.01 | 0.03 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 96.38 |
| E26.13 | 0.05 | 0.03 | 0.10 | 93.09 | 0.07 | 0.00 | 0.03 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.24 | 0.01 | 93.71 |
| E26.14 | 0.06 | 0.03 | 0.08 | 93.19 | 0.06 | 0.00 | 0.04 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.26 | 0.02 | 93.83 |
| E26.15 | 0.09 | 0.02 | 0.05 | 91.86 | 0.04 | 0.01 | 0.04 | 0.00 | 0.00 | 0.09 | 0.00 | 0.00 | 0.24 | 0.00 | 92.44 |
| E26.16 | 0.24 | 0.07 | 0.32 | 91.86 | 0.05 | 0.01 | 0.00 | 0.00 | 0.00 | 0.14 | 0.00 | 0.00 | 0.21 | 0.03 | 92.92 |
| E26.17 | 0.07 | 0.02 | 0.04 | 92.77 | 0.09 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.24 | 0.00 | 93.31 |
| E26.18 | 0.05 | 0.01 | 0.04 | 92.60 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.25 | 0.00 | 93.11 |
| E26.19 | 0.07 | 0.06 | 0.03 | 92.68 | 0.04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.20 | 0.00 | 93.15 |
| E26.20 | 0.06 | 0.25 | 0.21 | 90.55 | 0.06 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.15 | 0.00 | 91.35 |
| E26.21 | 0.09 | 0.01 | 0.04 | 90.53 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.07 | 0.00 | 0.00 | 0.13 | 0.00 | 90.96 |
| E26.22 | 0.05 | 0.00 | 0.10 | 89.77 | 0.08 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 | 0.00 | 0.00 | 0.14 | 0.00 | 90.20 |
| E26.23 | 0.03 | 0.01 | 0.02 | 93.52 | 0.05 | 0.01 | 0.00 | 0.00 | 0.00 | 0.08 | 0.00 | 0.00 | 0.17 | 0.00 | 93.90 |
| E26.24 | 0.10 | 0.01 | 0.02 | 92.18 | 0.03 | 0.01 | 0.10 | 0.09 | 0.03 | 0.10 | 0.22 | 0.00 | 0.09 | 0.03 | 93.00 |
| E26.25 | 0.04 | 0.02 | 0.05 | 90.99 | 0.09 | 0.00 | 0.00 | 0.20 | 0.00 | 0.06 | 0.00 | 0.00 | 0.22 | 0.00 | 91.67 |
| E26.26 | 0.06 | 0.05 | 0.04 | 92.85 | 0.05 | 0.00 | 0.01 | 0.19 | 0.00 | 0.05 | 0.00 | 0.00 | 0.19 | 0.00 | 93.50 |
| E26.27 | 0.09 | 0.02 | 0.07 | 93.37 | 0.05 | 0.01 | 0.00 | 0.02 | 0.01 | 0.05 | 0.00 | 0.00 | 0.18 | 0.02 | 93.89 |
| E26.28 | 0.05 | 0.03 | 0.04 | 93.77 | 0.04 | 0.00 | 0.06 | 0.00 | 0.00 | 0.04 | 0.00 | 0.00 | 0.14 | 0.00 | 94.17 |

TABLE 4. Results of EPMA and LA-ICPMS of apatite in the of Eagle Lake Granite

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | GR1A-1 - 1 | GR1A-1 - 2 | GR1A-1 - 3 | GR1A-1 - 4 | GR1A-1 - 5 | GR1A-1 - 6 | GR1A-1 - 7 | GR1A-1 - 8 | GR1A-1 - 9 | GR1A-1 - 10 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 0.31 | 0.24 | 0.36 | 0.30 | 0.24 | 0.22 | 0.75 | 0.34 | 0.19 | 0.23 |
| Al2O3 | 0.02 | 0.23 | 0.02 | 0.01 | 0.01 | 0.05 | 0.26 | 0.02 | 0.09 | 0.10 |
| FeO | 0.09 | 0.09 | 0.06 | 0.10 | 0.08 | 0.08 | 0.04 | 0.16 | 0.12 | 0.09 |
| MnO | 0.093 | 0.167 | 0.175 | 0.133 | 0.208 | 0.128 | 0.193 | 0.170 | 0.147 | 0.224 |
| MgO | 0.02 | 0.01 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.00 |
| CaO | 54.18 | 54.17 | 53.04 | 54.08 | 53.18 | 53.37 | 53.16 | 52.07 | 52.58 | 52.99 |
| Na2O | 0.00 | 0.00 | 0.12 | 0.00 | 0.07 | 0.03 | 0.07 | 0.02 | 0.01 | 0.11 |
| K2O | 0.00 | 0.02 | 0.06 | 0.00 | 0.010 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 |
| P2O5 | 40.67 | 41.96 | 40.97 | 41.85 | 42.34 | 41.96 | 40.92 | 40.83 | 41.88 | 41.07 |
| Cl | 0.023 | 0.010 | 0.003 | 0.005 | 0.002 | 0.086 | 0.002 | 0.003 | 0.029 | 0.001 |
| F | 3.430 | 3.300 | 3.220 | 3.620 | 3.321 | 3.610 | 3.900 | 2.975 | 3.950 | 3.390 |
| Total | 97.41 | 98.86 | 96.69 | 98.64 | 98.14 | 98.08 | 97.67 | 95.37 | 97.4 | 96.85 |
| Trace elements in ppm (LA-ICP-MS) | | | | | | | | | | |
| Sr | 5.61 | 1.99 | 18.01 | 43.24 | 25.83 | 40.84 | 66.50 | 51.96 | 41.22 | 6.50 |
| Ba | 0.25 | 0.12 | 0.13 | 2.02 | 0.33 | 8.47 | 5.13 | 6.98 | 2.14 | 0.28 |
| U | 3.22 | 1.58 | 0.12 | 0.26 | 1.63 | 1.78 | 0.55 | 2.57 | 2.69 | 35.83 |
| La | 15.93 | 24.88 | 5.48 | 12.74 | 421.18 | 12.11 | 0.99 | 0.80 | 19.29 | 16.56 |
| Ce | 42.38 | 82.96 | 15.75 | 42.17 | 856.03 | 42.84 | 2.75 | 1.746 | 62.26 | 39.68 |
| Pr | 4.80 | 5.56 | 3.04 | 7.078 | 90.20 | 5.69 | 0.86 | 0.57 | 10.34 | 5.32 |
| Nd | 21.21 | 18.10 | 17.28 | 37.59 | 323.96 | 37.10 | 3.47 | 3.59 | 53.58 | 26.36 |
| Sm | 6.38 | 4.96 | 6.83 | 14.86 | 49.10 | 16.56 | 3.44 | 3.35 | 22.40 | 8.27 |
| Eu | 0.63 | 0.58 | 0.54 | 0.65 | 3.50 | 0.73 | 1.27 | 0.46 | 0.92 | 0.53 |
| Gd | 7.93 | 8.15 | 8.39 | 18.97 | 36.88 | 24.55 | 5.42 | 4.52 | 28.17 | 9.71 |
| Tb | 1.50 | 1.23 | 1.44 | 3.32 | 4.63 | 4.33 | 0.58 | 0.38 | 5.18 | 1.82 |
| Dy | 11.68 | 10.24 | 8.86 | 21.460 | 25.810 | 26.19 | 2.09 | 1.57 | 33.74 | 16.25 |
| Ho | 2.27 | 1.71 | 1.79 | 4.13 | 4.88 | 4.68 | 0.28 | 0.40 | 6.07 | 4.33 |
| Er | 6.09 | 5.57 | 4.71 | 11.00 | 12.42 | 10.62 | 0.59 | 1.08 | 16.77 | 16.35 |
| Tm | 1.01 | 0.98 | 0.59 | 1.37 | 1.43 | 1.60 | 0.07 | 0.15 | 2.31 | 3.48 |
| Yb | 6.55 | 6.30 | 3.34 | 8.04 | 8.52 | 7.33 | 0.28 | 1.23 | 15.35 | 27.43 |
| Lu | 0.86 | 0.83 | 0.45 | 1.05 | 1.12 | 0.77 | 0.03 | 0.17 | 2.04 | 3.73 |
| Y | 68.50 | 55.05 | 52.52 | 113.70 | 131.37 | 140.15 | 4.86 | 7.57 | 165.62 | 89.69 |
| Zr | 38.04 | 10.62 | 0.80 | 0.14 | 13.11 | 451.40 | 1.27 | 23.98 | 166.51 | 552.94 |
| Hf | 1.30 | 0.37 | 0.04 | 0.02 | 0.38 | 12.64 | 0.85 | 1.05 | 7.87 | 14.87 |
| Nb | 0.07 | 0.02 | 0.01 | 0.01 | 0.72 | 0.23 | 0.039 | 0.06 | 0.05 | 0.42 |
| Ta | 0.01 | 0.01 | 0.010 | 0.01 | 0.04 | 0.02 | 0.01 | 0.01 | 0.01 | 0.03 |
| Pb | 0.80 | 0.43 | 0.36 | 0.44 | 9.36 | 11.64 | 2.86 | 1.83 | 0.27 | 3.73 |
| Mn | 33.04 | 134.03 | 101.39 | 189.08 | 173.02 | 102.49 | 75.50 | 1.75 | 166.47 | 50.64 |
| S | 7.12 | 5.44 | 5.98 | 7.64 | 5.89 | 18.71 | 13.42 | 19.32 | 10.02 | 5.32 |
| Sc | 0.13 | 0.17 | 0.08 | 0.13 | 0.21 | 0.56 | 0.36 | 0.57 | 0.43 | 1.02 |
| V | 0.10 | 0.06 | 0.18 | 0.49 | 0.31 | 1.43 | 1.85 | 1.93 | 0.49 | 0.12 |
| Fe | 18.62 | 30.54 | 10.64 | 112.89 | 159.42 | 1239.31 | 348.08 | 448.11 | 139.72 | 36.47 |
| Cu | 0.11 | 0.08 | 0.14 | 0.13 | 0.11 | 8.69 | 0.16 | 0.19 | 0.05 | 0.08 |
| Mo | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.04 | 0.01 | 8.25 | 0.025 | 0.03 |
| As | 1.11 | 0.72 | 0.47 | 0.65 | 3.03 | 2.17 | 0.95 | 0.65 | 0.94 | 0.65 |

Table 4, Continued.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | GR1A-1 - 11 | GR1A-1 - 13 | GR1A-1 - 14 | GR1A-1 - 15 | GR1A-1 - 16 | GR1A-1 - 17 | GR1A-1 - 18 | GR1A-1 - 19 | GR1A-1 - 20 | GR1A-1 - 21 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 0.30 | 0.24 | 0.30 | 0.30 | 0.32 | 0.26 | 0.22 | 0.29 | 0.23 | 0.37 |
| Al2O3 | 0 | 0.02 | 0.02 | 0.02 | 0.02 | 0.01 | 0.01 | 0.40 | 0.02 | 0.01 |
| FeO | 0.07 | 0.13 | 0.15 | 0.14 | 0.30 | 0.09 | 0.09 | 0.04 | 0.13 | 0.22 |
| MnO | 0.162 | 0.170 | 0.166 | 0.187 | 0.219 | 0.176 | 0.203 | 0.176 | 0.150 | 0.201 |
| MgO | 0.01 | 0 | 0.01 | 0 | 0.02 | 0.01 | 0.01 | 0 | 0.02 | 0.01 |
| CaO | 52.760 | 53.440 | 52.910 | 52.981 | 54.200 | 53.370 | 54.011 | 53.570 | 53.930 | 54.010 |
| Na2O | 0 | 0 | 0.07 | 0.14 | 0 | 0.09 | 0.07 | 0 | 0.01 | 0 |
| K2O | 0.01 | 0.01 | 0.03 | 0.01 | 0.06 | 0.01 | 0 | 0.06 | 0.01 | 0.01 |
| P2O5 (wt%) | 41.500 | 42.080 | 41.530 | 40.850 | 40.870 | 41.090 | 41.560 | 40.990 | 41.620 | 41.120 |
| Cl | 0 | 0.013 | 0 | 0.008 | 0.016 | 0 | 0.050 | 0.032 | 0.024 | 0 |
| F | 3.300 | 3.600 | 2.981 | 3.340 | 3.890 | 3.010 | 3.720 | 3.190 | 3.950 | 3.630 |
| Total | 96.73 | 98.22 | 96.93 | 96.61 | 98.32 | 96.9 | 98.42 | 97.59 | 98.49 | 98.11 |
| Trace elements in ppm (LA-ICP-MS) | | | | | | | | | | |
| Sr | 7.653370 | 11.572860 | 20.055740 | 16.527240 | 41.011600 | 23.247290 | 3.001063 | 6.261914 | 52.869250 | 9.671965 |
| Ba | 89.062530 | 5.666264 | 0.218680 | 0.314877 | 3.395215 | 9.186184 | 0.101601 | 0.123294 | 1.356501 | 0.160943 |
| U | 0.410571 | 3.445664 | 0.242213 | 1.650087 | 8.740707 | 0.306321 | 0.380368 | 0.152649 | 22.456300 | 0.130731 |
| La | 9.281552 | 30.779580 | 2.432067 | 7.046955 | 33.890870 | 21.227970 | 6.458747 | 3.960767 | 26.428350 | 20.713360 |
| Ce | 28.712830 | 58.935230 | 7.153719 | 23.075060 | 112.755400 | 69.604960 | 20.238080 | 14.256710 | 77.627420 | 67.541160 |
| Pr | 5.227102 | 8.515544 | 1.206343 | 3.866582 | 18.574470 | 11.783950 | 2.787728 | 2.389725 | 12.043050 | 9.093002 |
| Nd | 24.427510 | 24.091480 | 7.781994 | 18.806640 | 96.826720 | 60.037050 | 15.441610 | 14.013070 | 56.937270 | 44.544250 |
| Sm | 10.893620 | 5.721452 | 3.295678 | 7.655640 | 42.308670 | 25.058110 | 6.2063100 | 4.732512 | 23.509860 | 8.454799 |
| Eu | 0.954236 | 0.705361 | 0.375328 | 0.477553 | 2.252021 | 1.710207 | 0.602923 | 0.401870 | 0.719289 | 0.755350 |
| Gd | 12.136430 | 6.650645 | 5.003839 | 10.564870 | 56.751270 | 32.216970 | 7.171190 | 6.005022 | 30.606010 | 6.649405 |
| Tb | 1.76078 | 1.37934 | 0.82022 | 2.08358 | 10.59013 | 5.79427 | 1.47218 | 0.82285 | 6.12889 | 0.67790 |
| Dy | 14.128860 | 7.894259 | 4.923474 | 13.554700 | 66.80762 | 34.019490 | 8.175898 | 4.245090 | 41.442820 | 3.534040 |
| Ho | 2.474791 | 1.498265 | 1.043833 | 2.384949 | 12.416800 | 5.920061 | 1.623851 | 0.977345 | 7.780205 | 0.716729 |
| Er | 7.346315 | 4.185983 | 2.488797 | 6.636192 | 34.332320 | 15.608830 | 4.139592 | 2.434308 | 22.054000 | 1.684564 |
| Tm | 0.880074 | 0.742648 | 0.384543 | 0.924563 | 4.655696 | 2.019422 | 0.630919 | 0.326827 | 3.186903 | 0.238501 |
| Yb | 5.705878 | 5.210793 | 2.039910 | 5.596634 | 29.700630 | 14.027360 | 3.821949 | 1.912946 | 20.703200 | 1.849971 |
| Lu | 0.880410 | 0.694518 | 0.311466 | 0.749119 | 3.785094 | 1.647706 | 0.506740 | 0.277807 | 2.689708 | 0.219172 |
| Y | 51.99920 | 37.81904 | 19.32924 | 71.32428 | 355.47240 | 195.64190 | 46.59072 | 21.32949 | 217.82810 | 14.54145 |
| Zr | 0.127970 | 23.53879 | 5.051199 | 132.3246 | 22.43669 | 0.655445 | 60.89868 | 0.032770 | 90.588800 | 0.894046 |
| Hf | 0.072837 | 0.653861 | 0.132226 | 3.996448 | 0.516180 | 0.086171 | 2.011164 | 0.009621 | 2.421484 | 0.038560 |
| Nb | 0.263726 | 15.42755 | 0.004012 | 0.068704 | 0.082289 | 0.219789 | 0.008696 | 0.004377 | 0.325452 | 0.006358 |
| Ta | 0.020373 | 0.904376 | 0.003310 | 0.007776 | 0.007328 | 0.019147 | 0.004200 | 0.003986 | 0.029179 | 0.002849 |
| Pb | 3.270089 | 18.15130 | 0.222237 | 1.415829 | 1.049508 | 2.168257 | 0.336520 | 1.389160 | 1.526982 | 0.357641 |
| Mn | 68.51105 | 54.65644 | 11.13733 | 56.28525 | 390.76380 | 40.02690 | 73.18406 | 37.44606 | 264.99620 | 99.88701 |
| S | 42.480140 | 7.101332 | 10.941080 | 7.488143 | 11.819860 | 29.727850 | 6.178558 | 5.709507 | 9.530971 | 5.930343 |
| Sc | 1.081055 | 1.015434 | 0.048604 | 0.204076 | 0.394651 | 2.882198 | 0.233976 | 0.076950 | 0.201034 | 0.087033 |
| V | 1.576478 | 1.406591 | 0.081830 | 0.228704 | 1.352638 | 7.076472 | 0.096722 | 0.060893 | 0.283234 | 0.222801 |
| Fe | 380.527200 | 318.814500 | 18.055510 | 69.748060 | 599.559000 | 6174.312000 | 8.820374 | 6.171113 | 80.578140 | 17.392650 |
| Cu | 0.229851 | 0.341961 | 0.078309 | 0.076569 | 0.164937 | 0.718049 | 0.116651 | 0.077239 | 0.068746 | 0.496462 |
| Mo | 0.065720 | 0.034665 | 0.026854 | 0.027116 | 0.032027 | 0.048292 | 0.040185 | 0.032997 | 0.024679 | 0.040740 |
| As | 1.134925 | 0.748072 | 0.649329 | 1.360220 | 0.792321 | 1.158733 | 0.443946 | 0.367263 | 0.767574 | 0.771737 |

Table 4, Continued.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | GR2A-1 - 1 | GR2A-1 - 2 | GR2A-1 - 3 | GR2A-1 - 4 | GR2A-1 - 5 | GR2A-1 - 7 | GR2A-1 - 8 | GR2A-1 - 9 | GR2A-1 - 11 | GR2A-1 - 14 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 0.03 | 0.12 | 0.67 | 0.34 | 0 | 0.38 | 0.26 | 0.24 | 0.29 | 0.36 |
| Al2O3 | 0.13 | 0.13 | 0.02 | 0.01 | 0.69 | 0.01 | 0.06 | 0.13 | 2.69 | 0.01 |
| FeO | 0.03 | 0.17 | 0.07 | 0.09 | 0.04 | 0.23 | 0.10 | 0.08 | 0.08 | 0 |
| MnO | 0 | 0.265 | 0.375 | 0.398 | 0.016 | 0.364 | 0.275 | 0.428 | 0.217 | 0.229 |
| MgO | 0.01 | 0.01 | 0.01 | 0.01 | 0 | 0 | 0.02 | 0.01 | 0.02 | 0.01 |
| CaO | 54.010 | 52.660 | 52.820 | 53.710 | 54.320 | 53.560 | 52.900 | 53.500 | 51.370 | 53.060 |
| Na2O | 0 | 0 | 0 | 0 | 0 | 0 | 0.02 | 0 | 0 | 0 |
| K2O | 0.045 | 0.01 | 0.01 | 0 | 0.05 | 0 | 0.01 | 0.01 | 0.01 | 0 |
| P2O5 (wt%) | 40.760 | 40.030 | 40.080 | 40.330 | 41.480 | 40.270 | 40.410 | 41.190 | 39.970 | 40.720 |
| Cl | 0.011 | 0.094 | 0.004 | 0 | 0.012 | 0.015 | 0.013 | 0.011 | 0.012 | 0.019 |
| F | 3.420 | 3.420 | 2.93490 | 3.090 | 3.680 | 3.580 | 3.720 | 3.120 | 3.590 | 3.90 |
| Total | 97.07 | 95.59 | 95.75 | 96.69 | 99.19 | 96.91 | 96.28 | 97.4 | 96.76 | 96.66 |
| Trace elements in ppm (LA-ICP-MS) | | | | | | | | | | |
| Sr | 2.065535 | 1.363514 | 8.823250 | 2.325139 | 1.409052 | 1.196119 | 2.800927 | 0.996560 | 5.382689 | 1.824350 |
| Ba | 1.291543 | 0.027464 | 1.285559 | 0.567681 | 0.050496 | 4.048113 | 0.210882 | 0.346965 | 0.045944 | 0.086454 |
| U | 0.390247 | 1.899593 | 1.638064 | 0.359362 | 0.263962 | 0.162387 | 0.261765 | 0.168857 | 0.206556 | 0.137358 |
| La | 7.976352 | 2.954387 | 9.900474 | 8.823443 | 2.583057 | 4.711231 | 2.968019 | 4.095714 | 3.926463 | 4.490464 |
| Ce | 24.701730 | 11.310580 | 42.105690 | 28.070830 | 9.676214 | 17.011800 | 11.750200 | 19.699680 | 14.810670 | 14.757420 |
| Pr | 4.439135 | 1.729591 | 6.813596 | 3.965802 | 2.222341 | 2.997802 | 1.801258 | 2.689555 | 2.118426 | 2.360632 |
| Nd | 21.205930 | 11.989660 | 37.427040 | 26.167540 | 15.165840 | 16.204620 | 10.441200 | 15.119130 | 10.330250 | 10.414790 |
| Sm | 7.753088 | 5.527057 | 15.918840 | 6.809983 | 8.240662 | 7.424160 | 4.953061 | 7.254513 | 4.631452 | 5.612222 |
| Eu | 0.579865 | 0.452734 | 1.177895 | 0.727217 | 0.606774 | 0.604554 | 0.492561 | 0.497783 | 0.346072 | 0.452020 |
| Gd | 7.279531 | 8.073940 | 21.034750 | 7.141156 | 15.718100 | 9.684679 | 8.350291 | 10.200510 | 6.012757 | 5.996515 |
| Tb | 1.565184 | 1.200692 | 3.200978 | 1.104354 | 2.408934 | 1.484479 | 1.124276 | 1.614226 | 1.091707 | 1.113762 |
| Dy | 11.591400 | 6.611384 | 19.166120 | 7.566782 | 14.793690 | 9.016917 | 8.003031 | 10.49928 | 7.654425 | 6.945849 |
| Ho | 2.121253 | 1.144612 | 3.764580 | 1.366792 | 2.834678 | 1.703346 | 1.637630 | 2.168541 | 1.513298 | 1.481628 |
| Er | 5.931233 | 3.166671 | 9.749472 | 3.401613 | 6.346827 | 4.333386 | 4.397157 | 5.536440 | 4.378196 | 4.155499 |
| Tm | 1.014144 | 0.466077 | 1.304565 | 0.552880 | 0.738293 | 0.649311 | 0.655819 | 0.691935 | 0.782706 | 0.641036 |
| Yb | 6.166344 | 2.662481 | 7.273395 | 3.077117 | 3.354276 | 3.625401 | 3.716202 | 4.180940 | 4.911240 | 4.206390 |
| Lu | 0.720535 | 0.369967 | 0.998808 | 0.378237 | 0.446560 | 0.531003 | 0.466653 | 0.631470 | 0.747319 | 0.583026 |
| Y | 55.23638 | 27.25017 | 108.08080 | 22.37622 | 54.03516 | 34.13910 | 37.72406 | 52.32257 | 45.86912 | 35.93582 |
| Zr | 58.659810 | 85.776440 | 178.055400 | 0.550600 | 0.286811 | 0.206979 | 0.886458 | 0.233348 | 0.035505 | 0.122321 |
| Hf | 1.607001 | 3.063541 | 7.740341 | 0.070325 | 0.014542 | 0.044511 | 0.079055 | 0.025799 | 0.010603 | 0.0214000 |
| Nb | 1.150414 | 0.022596 | 18.044960 | 12.498590 | 0.003298 | 1.009953 | 3.714006 | 0.290078 | 0.006513 | 0.316252 |
| Ta | 0.175322 | 0.005243 | 0.828558 | 0.661685 | 0.003881 | 0.041051 | 0.211289 | 0.013950 | 0.002588 | 0.014898 |
| Pb | 1.201743 | 0.239835 | 31.716160 | 15.214060 | 0.196879 | 6.324611 | 8.280134 | 1.027762 | 1.110637 | 1.652374 |
| Mn | 83.17984 | 21.45755 | 32.06834 | 110.5079 | 41.88408 | 122.7197 | 66.33127 | 38.50761 | 20.17626 | 18.63129 |
| S | 5.955555 | 4.458963 | 9.348998 | 16.126100 | 6.714696 | 17.710100 | 11.794200 | 8.416946 | 5.365931 | 6.182048 |
| Sc | 0.126956 | 0.219426 | 7.673023 | 6.870010 | 0.040449 | 0.771420 | 1.532226 | 0.109590 | 0.064591 | 0.087919 |
| V | 0.312341 | 0.080622 | 14.504700 | 13.067800 | 0.809629 | 3.329818 | 4.414574 | 0.466579 | 0.217155 | 0.709420 |
| Fe | 121.944500 | 5.521440 | 1238.407000 | 5052.691000 | 5.212257 | 3652.429000 | 2343.354000 | 513.263200 | 239.056900 | 216.533500 |
| Cu | 0.259048 | 0.04501 | 0.529559 | 1.28847 | 0.130202 | 1.066106 | 2.292270 | 0.120287 | 0.120193 | 0.248947 |
| Mo | 0.044289 | 0.031779 | 0.040581 | 0.058243 | 0.031939 | 0.043405 | 0.041550 | 0.044314 | 0.042096 | 0.026759 |
| As | 3.183172 | 0.561978 | 0.825396 | 2.491801 | 0.443464 | 1.986597 | 1.272229 | 0.676635 | 2.271524 | 1.226060 |

Table 4, Continued.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | GR2A-1 - 15 | GR2A-1 - 16 | GR2A-1 - 17 | GR2A-1 - 18 | GR2A-1 - 20 | GR2A-1 - 21 | GR2A-1 - 22 | GR2A-1 - 23 | GR2A-1 - 24 | GR2A-1 - 25 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 0.01 | 0 | 0 | 0.05 | 0.27 | 7.14 | 0.09 | 0.25 | 0.30 | 0.24 |
| Al2O3 | 0.03 | 0.40 | 0 | 0 | 0.03 | 6.21 | 0.06 | 0.04 | 0.01 | 0.07 |
| FeO | 0 | 0 | 0 | 0.06 | 0.10 | 1.99 | 0.08 | 0.03 | 0.12 | 0.24 |
| MnO | 0.025 | 0 | 0.006 | 0.018 | 0.269 | 0 | 0.470 | 0.367 | 0.746 | 0.751 |
| MgO | 0 | 0 | 0 | 0 | 0 | 0.77 | 0.01 | 0.001 | 0 | 0.01 |
| CaO | 54.810 | 53.640 | 54.190 | 54.560 | 53.370 | 43.910 | 54.160 | 53.870 | 52.430 | 51.590 |
| Na2O | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.01 | 0.03 |
| K2O | 0 | 0 | 0.01 | 0.01 | 0 | 2.79 | 0 | 0 | 0 | 0.01 |
| P2O5 (wt%) | 41.790 | 42.060 | 41.840 | 42.250 | 41.400 | 26.620 | 42.450 | 41.670 | 41.540 | 40.930 |
| Cl | 0.007 | 0 | 0 | 0.010 | 0.001 | 0.065 | 0.010 | 0.003 | 0.005 | 0.002 |
| F | 3.480 | 3.570 | 3.550 | 3.440 | 3.390 | 3.390 | 3.410 | 3.850 | 3.660 | 3.460 |
| Total | 98.88 | 98.41 | 98.32 | 99.04 | 97.45 | 91.56 | 99.34 | 98.48 | 97.29 | 95.88 |
| Trace elements in ppm (LA-ICP-MS) | | | | | | | | | | |
| Sr | 1.324012 | 37.943360 | 1.134391 | 3.078791 | 6.612167 | 2.241965 | 2.610492 | 1.966750 | 5.274914 | 5.205965 |
| Ba | 0.055848 | 30.106450 | 0.029687 | 0.092478 | 0.102023 | 0.147437 | 0.270658 | 0.058225 | 3.303439 | 0.033023 |
| U | 0.180168 | 0.527072 | 0.169627 | 0.150062 | 3.666011 | 0.180834 | 0.226678 | 0.615485 | 0.356117 | 0.143195 |
| La | 6.801213 | 22.82089 | 2.560053 | 9.038229 | 2.997124 | 11.22967 | 21.03074 | 2.563793 | 2.935606 | 7.096742 |
| Ce | 26.470420 | 81.547410 | 9.479655 | 24.061510 | 13.276660 | 38.084960 | 68.344480 | 9.283680 | 12.137360 | 21.230160 |
| Pr | 4.044493 | 12.567700 | 1.421920 | 3.501960 | 2.647847 | 5.708516 | 10.461230 | 1.720210 | 2.223189 | 2.999353 |
| Nd | 24.33264 | 64.45784 | 9.04716 | 13.12791 | 14.18426 | 29.73381 | 48.49713 | 8.66233 | 11.51672 | 12.86912 |
| Sm | 8.308287 | 26.06872 | 3.598643 | 5.557164 | 5.904703 | 7.903313 | 10.13129 | 3.687591 | 5.034735 | 4.071182 |
| Eu | 0.703981 | 1.474054 | 0.418701 | 0.438495 | 0.378981 | 0.811287 | 1.226157 | 0.399810 | 0.475611 | 0.432870 |
| Gd | 9.875252 | 36.636300 | 4.836862 | 11.811890 | 6.604856 | 8.043273 | 8.582886 | 4.980795 | 7.125007 | 4.412917 |
| Tb | 1.295412 | 6.493686 | 0.924278 | 1.693182 | 1.250100 | 1.076985 | 1.057721 | 0.777818 | 1.695830 | 0.920635 |
| Dy | 8.889408 | 43.74509 | 5.432191 | 10.52928 | 7.648986 | 6.428503 | 5.921152 | 5.530373 | 13.88223 | 7.198755 |
| Ho | 1.539176 | 8.505465 | 1.058446 | 1.879020 | 1.224570 | 1.110868 | 1.167054 | 0.944091 | 2.786221 | 1.485522 |
| Er | 4.033125 | 23.88433 | 3.574713 | 4.169596 | 2.863295 | 3.248071 | 2.958176 | 2.720035 | 8.471655 | 4.369937 |
| Tm | 0.637721 | 3.253425 | 0.482753 | 0.420564 | 0.425227 | 0.424553 | 0.370932 | 0.329821 | 1.396309 | 0.703459 |
| Yb | 4.210313 | 20.402820 | 3.034967 | 2.281127 | 2.955223 | 2.140432 | 2.097134 | 2.091945 | 9.374426 | 5.153618 |
| Lu | 0.560914 | 2.652876 | 0.391912 | 0.349416 | 0.479877 | 0.291567 | 0.332465 | 0.27376 | 1.283297 | 0.700645 |
| Y | 31.44657 | 242.0917 | 28.17741 | 42.82727 | 29.33832 | 28.50610 | 27.20782 | 18.39838 | 85.90055 | 44.68073 |
| Zr | 0.121793 | 0.268242 | 0.123559 | 0.044563 | 497.9425 | 0.053854 | 0.287664 | 2.565091 | 11.63488 | 0.230752 |
| Hf | 0.011686 | 0.016818 | 0.015360 | 0.012054 | 13.64441 | 0.006545 | 0.017956 | 0.107618 | 0.522456 | 0.009348 |
| Nb | 0.009376 | 0.135843 | 0.027597 | 0.006159 | 0.771304 | 0.003219 | 0.011956 | 0.049882 | 0.274700 | 0.007274 |
| Ta | 0.010699 | 0.004884 | 0.003868 | 0.002910 | 0.014777 | 0.002426 | 0.003395 | 0.008765 | 0.052358 | 0.002985 |
| Pb | 0.572866 | 6.904567 | 1.050059 | 0.479406 | 9.713792 | 0.542736 | 1.113772 | 0.777818 | 4.383922 | 2.077794 |
| Mn | 31.09477 | 153.24510 | 32.97959 | 57.10360 | 25.49126 | 8.051021 | 6.18954 | 18.78253 | 18.93240 | 32.93889 |
| S | 4.668293 | 18.172410 | 6.317853 | 7.098425 | 5.772235 | 5.778265 | 6.684790 | 7.227326 | 9.122880 | 6.646986 |
| Sc | 0.075506 | 0.066195 | 0.071229 | 0.058492 | 0.616060 | 0.062449 | 0.050518 | 0.053088 | 0.071331 | 0.062372 |
| V | 1.156967 | 0.484669 | 0.377324 | 0.086347 | 0.131841 | 0.254152 | 0.190333 | 0.075824 | 0.562725 | 0.314150 |
| Fe | 5.547782 | 233.4789 | 29.056400 | 5.958601 | 55.809370 | 5.166246 | 10.552270 | 13.922510 | 32.604040 | 5.328638 |
| Cu | 0.062713 | 0.112790 | 0.089530 | 0.060774 | 0.057586 | 0.03945 | 0.045374 | 0.036468 | 0.680864 | 0.196580 |
| Mo | 0.035123 | 0.039622 | 0.035378 | 0.030519 | 0.026981 | 0.017797 | 0.022077 | 0.031958 | 0.039983 | 0.034918 |
| As | 0.486985 | 7.334298 | 0.671385 | 0.548891 | 5.179454 | 0.32411 | 1.220041 | 0.479814 | 4.046313 | 0.497197 |

Table 4, Continued.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | GR2A-1 - 26 | GR2A-1 - 27 | GR2A-1 - 28 | GR2A-1 - 29 | GR2A-1 - 30 | GR2A-1 - 31 | GR2A-1 - 32 | GR2A-1 - 33 | GR2A-1 - 34 | GR2A-1 - 35 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 0.34 | 0.37 | 0.30 | 0.30 | 0.25 | 0.65 | 0.06 | 0.35 | 0.25 | 0.34 |
| Al2O3 | 0.01 | 0.02 | 0.60 | 0.07 | 0.18 | 0.18 | 0.21 | 0.02 | 0.15 | 0.19 |
| FeO | 0.19 | 0.12 | 0.06 | 0.21 | 0.12 | 0.15 | 0.14 | 0.17 | 0.24 | 0.14 |
| MnO | 0.712 | 0.689 | 0.754 | 0.538 | 0.545 | 0.153 | 0.826 | 0.746 | 0.554 | 0.439 |
| MgO | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0 | 0.00 | 0.01 | 0.01 |
| CaO | 52.620 | 52.690 | 47.060 | 53.410 | 53.07 | 52.480 | 52.440 | 53.230 | 53.450 | 52.000 |
| Na2O | 0 | 0 | 0 | 0 | 0.04 | 0 | 0.02 | 0.02 | 0 | 0.16 |
| K2O | 0.01 | 0 | 0 | 0.01 | 0.01 | 0.01 | 0 | 0.01 | 0.01 | 0.01 |
| P2O5 (wt%) | 40.760 | 39.830 | 38.620 | 41.550 | 40.910 | 41.390 | 41.870 | 41.650 | 41.670 | 40.1000 |
| Cl | 0 | 0.005 | 0 | 0.007 | 0.012 | 0.010 | 0.014 | 0.010 | 0 | 0.059 |
| F | 4.170 | 2.9809 | 4.210 | 3.000 | 3.130 | 3.500 | 3.850 | 3.330 | 3.560 | 2.990 |
| Total | 97.08 | 95.46 | 89.86 | 97.85 | 96.97 | 97.07 | 97.82 | 98.15 | 98.42 | 95.17 |
| Trace elements in ppm (LA-ICP-MS) | | | | | | | | | | |
| Sr | 1.059799 | 2.819479 | 2.305067 | 13.99241 | 1.494559 | 4.68832 | 2.677167 | 36.5798 | 7.603902 | 14.82534 |
| Ba | 0.055234 | 0.037256 | 0.116342 | 0.145149 | 0.048744 | 0.087078 | 0.056525 | 0.321300 | 0.093423 | 0.094771 |
| U | 0.275111 | 0.235062 | 0.741205 | 0.169363 | 0.164687 | 0.278850 | 0.267899 | 1.077292 | 0.305733 | 0.180015 |
| La | 5.884222 | 7.730148 | 12.88182 | 2.740474 | 3.624778 | 9.901887 | 3.147459 | 7.416800 | 5.297153 | 12.56797 |
| Ce | 24.98632 | 32.34363 | 49.63162 | 11.55887 | 14.05992 | 33.98674 | 15.59615 | 23.24494 | 17.60286 | 31.19223 |
| Pr | 3.049462 | 4.383353 | 7.242686 | 2.216461 | 2.408046 | 6.299261 | 2.101406 | 3.880356 | 2.760200 | 3.921675 |
| Nd | 20.03607 | 23.83665 | 36.75022 | 9.50094 | 10.72878 | 39.88162 | 11.39454 | 18.28295 | 12.18639 | 15.46609 |
| Sm | 8.349297 | 8.507883 | 8.894019 | 4.455452 | 3.848462 | 15.92419 | 4.955215 | 5.024248 | 3.21859 | 4.256691 |
| Eu | 0.559671 | 0.674178 | 1.115874 | 0.620995 | 0.370235 | 1.461658 | 0.344678 | 0.461527 | 0.389909 | 0.492703 |
| Gd | 13.11188 | 12.18561 | 6.875881 | 4.831317 | 5.159646 | 20.66732 | 7.591104 | 6.255727 | 4.601644 | 6.366449 |
| Tb | 2.018760 | 2.076134 | 0.763281 | 1.468119 | 0.883876 | 2.356678 | 1.368774 | 1.283273 | 0.795524 | 1.531853 |
| Dy | 10.778630 | 13.148070 | 4.352579 | 11.923320 | 4.976552 | 13.765890 | 9.830601 | 8.055653 | 4.274870 | 11.268770 |
| Ho | 1.839013 | 2.408663 | 0.715563 | 2.442496 | 0.893616 | 2.913993 | 1.909825 | 1.810947 | 0.861642 | 2.366105 |
| Er | 4.285068 | 6.506665 | 1.770747 | 8.207198 | 2.433662 | 6.070116 | 5.622068 | 4.956074 | 1.908861 | 7.423945 |
| Tm | 0.538273 | 0.877956 | 0.249007 | 1.557930 | 0.460997 | 0.883838 | 0.799276 | 0.891348 | 0.294129 | 1.092359 |
| Yb | 3.515598 | 5.810716 | 1.664391 | 11.228201 | 2.802083 | 6.492372 | 5.589659 | 5.476717 | 1.589266 | 7.485180 |
| Lu | 0.459568 | 0.786343 | 0.240742 | 1.429981 | 0.336426 | 1.058860 | 0.778488 | 0.670072 | 0.292544 | 0.984246 |
| Y | 44.54224 | 62.72696 | 16.43516 | 106.7655 | 23.10238 | 31.65366 | 42.07309 | 54.34215 | 18.49740 | 79.07237 |
| Zr | 0.762754 | 0.018235 | 354.991600 | 0.793186 | 0.029075 | 0.136988 | 11.795080 | 31.832910 | 5.603062 | 0.048265 |
| Hf | 0.037277 | 0.010326 | 10.08002 | 0.059633 | 0.009412 | 0.015133 | 0.408866 | 1.656147 | 0.365023 | 0.005991 |
| Nb | 0.084755 | 0.003449 | 0.021755 | 0.077764 | 0.004654 | 0.088656 | 0.141220 | 1.214626 | 0.180569 | 0.003977 |
| Ta | 0.007201 | 0.002505 | 0.004801 | 0.007895 | 0.003373 | 0.009120 | 0.018099 | 0.015369 | 0.004409 | 0.002058 |
| Pb | 1.448415 | 0.217435 | 2.51604 | 4.092943 | 0.225451 | 2.579299 | 0.323921 | 2.810668 | 2.228339 | 0.293375 |
| Mn | 26.36556 | 35.50640 | 21.55995 | 83.57302 | 34.16751 | 31.78911 | 34.27606 | 40.88031 | 45.91744 | 14.42790 |
| S | 5.522393 | 5.773796 | 5.773654 | 6.164567 | 5.537121 | 6.630789 | 6.892096 | 7.473447 | 4.620468 | 6.283568 |
| Sc | 0.057081 | 0.053234 | 0.487882 | 0.077211 | 0.058957 | 0.116652 | 0.063644 | 0.106835 | 0.062339 | 0.072401 |
| V | 0.080849 | 0.092338 | 0.105505 | 0.232554 | 0.106761 | 0.194340 | 0.060536 | 0.224080 | 0.096626 | 0.126114 |
| Fe | 20.767250 | 6.240783 | 7.466736 | 69.475740 | 5.207246 | 10.669170 | 11.436090 | 123.985000 | 7.074592 | 5.202038 |
| Cu | 0.067304 | 0.042055 | 0.056240 | 0.109740 | 0.043520 | 0.095166 | 0.056897 | 0.065370 | 0.054360 | 0.031333 |
| Mo | 0.029693 | 0.035469 | 0.024916 | 0.047786 | 0.037494 | 0.069100 | 0.034547 | 0.028578 | 0.038759 | 0.037563 |
| As | 1.322647 | 0.375829 | 0.470966 | 1.009928 | 0.359645 | 1.773503 | 0.477061 | 1.704318 | 0.981838 | 0.316045 |

Table 4, Continued.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | GR2A-1 - 36 | GR2A-1 - 37 | GR2A-1 - 38 | GR2A-1 - 39 | GR2A-1 - 40 | GR2A-1 - 41 | GR2A-1 - 43 |
| Major elements in wt. % (EPMA) | | | | | | | |
| SiO2 | 0.30 | 0.23 | 0.45 | 0.22 | 0.21 | 0.15 | 0.63 |
| Al2O3 | 0.01 | 0.17 | 0.03 | 0.27 | 0.01 | 0.01 | 0.06 |
| FeO | 0.06 | 0.08 | 0.16 | 0.08 | 0.05 | 0.13 | 0.08 |
| MnO | 0.483 | 0.306 | 0.460 | 0.390 | 0.413 | 0.493 | 0.402 |
| MgO | 0.01 | 0 | 0 | 0.01 | 0 | 0.01 | 0.01 |
| CaO | 53.530 | 53.590 | 52.560 | 53.490 | 52.660 | 52.540 | 51.950 |
| Na2O | 0 | 0.03 | 0.16 | 0 | 0 | 0.042 | 0.09 |
| K2O | 0 | 0.01 | 0.09 | 0.08 | 0.01 | 0.01 | 0.01 |
| P2O5 (wt%) | 42.900 | 41.670 | 40.670 | 42.150 | 41.90 | 41.460 | 40.800 |
| Cl | 0.005 | 0.002 | 0.019 | 0.009 | 0 | 0.004 | 0.001 |
| F | 3.480 | 3.470 | 3.210 | 3.890 | 3.380 | 3.620 | 3.480 |
| Total | 99.33 | 98.13 | 96.47 | 98.91 | 97.23 | 96.97 | 96.08 |
| Trace elements in ppm (LA-ICP-MS) | | | | | | | |
| Sr | 2.161554 | 0.871731 | 2.320287 | 1.175813 | 0.817439 | 1.507862 | 1.279352 |
| Ba | 2.290547 | 0.068629 | 0.061702 | 0.023365 | 0.028423 | 1.068452 | 0.262862 |
| U | 0.207547 | 0.407162 | 0.335934 | 0.155030 | 4.910016 | 10.83904 | 0.115379 |
| La | 4.078289 | 4.640758 | 24.747380 | 6.211625 | 6.023799 | 24.098160 | 3.924475 |
| Ce | 15.88094 | 24.97258 | 81.99656 | 13.65246 | 23.51588 | 77.75127 | 17.35761 |
| Pr | 2.916470 | 3.372724 | 12.755040 | 2.032347 | 3.394230 | 12.235710 | 1.900284 |
| Nd | 22.28511 | 16.76608 | 59.94712 | 10.34259 | 18.73590 | 60.08957 | 10.42448 |
| Sm | 10.571760 | 7.090310 | 14.592850 | 3.251848 | 5.851555 | 20.634930 | 4.191549 |
| Eu | 1.292473 | 0.461454 | 1.734524 | 0.362333 | 0.440158 | 1.362619 | 0.461930 |
| Gd | 16.675700 | 8.669183 | 14.594930 | 4.083385 | 7.218237 | 26.746190 | 4.858194 |
| Tb | 1.725565 | 1.697587 | 2.141920 | 1.008105 | 1.114614 | 4.658649 | 0.762533 |
| Dy | 8.109796 | 10.963730 | 13.031690 | 7.060185 | 7.333193 | 32.577930 | 4.377704 |
| Ho | 1.517312 | 2.337743 | 2.448365 | 1.289773 | 1.796036 | 6.646990 | 0.806000 |
| Er | 4.342898 | 6.727261 | 6.643723 | 3.529383 | 5.586767 | 18.358150 | 2.422297 |
| Tm | 0.725809 | 0.962064 | 0.860876 | 0.463500 | 0.846276 | 2.325211 | 0.374932 |
| Yb | 4.598487 | 5.948320 | 5.076300 | 2.467605 | 6.727995 | 13.670210 | 1.896371 |
| Lu | 0.654620 | 0.915268 | 0.646838 | 0.451453 | 1.004290 | 1.751102 | 0.339409 |
| Y | 42.45768 | 59.89209 | 73.53487 | 27.52286 | 53.92701 | 158.56320 | 17.89863 |
| Zr | 0.131710 | 0.540659 | 0.329746 | 0.519526 | 591.51400 | 7.297404 | 0.084968 |
| Hf | 0.025731 | 0.028132 | 0.013432 | 0.028591 | 18.39032 | 0.178285 | 0.020373 |
| Nb | 0.353481 | 0.017615 | 0.005523 | 0.007944 | 0.041759 | 2.240162 | 0.058851 |
| Ta | 0.015639 | 0.006440 | 0.004316 | 0.004238 | 0.019779 | 0.834587 | 0.036507 |
| Pb | 4.429912 | 0.986865 | 0.394182 | 0.271081 | 0.474608 | 4.945162 | 0.269882 |
| Mn | 26.53400 | 38.28940 | 47.47217 | 100.20140 | 17.71664 | 27.36236 | 28.17241 |
| S | 12.114700 | 6.040097 | 5.559227 | 5.681500 | 6.218362 | 9.250592 | 6.147884 |
| Sc | 1.050289 | 0.059162 | 0.171568 | 0.051952 | 0.683502 | 0.298514 | 0.057246 |
| V | 2.616691 | 0.076672 | 0.573358 | 0.067234 | 0.083839 | 0.262690 | 0.068972 |
| Fe | 438.287300 | 40.919890 | 8.624530 | 20.150700 | 4.941510 | 46.531450 | 4.795794 |
| Cu | 0.220583 | 0.742344 | 0.026589 | 0.052007 | 0.075092 | 0.178176 | 0.04198 |
| Mo | 0.049478 | 0.034459 | 0.032792 | 0.031218 | 0.027817 | 0.055892 | 0.036312 |
| As | 3.745909 | 1.184047 | 0.371779 | 0.508747 | 0.552519 | 3.067848 | 0.549917 |

TABLE 5. Results of EPMA of chlorite in the Eagle Lake Granite

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | E16.1 | E16.2 | E16-9 | E16.10 | E16.12 | E16.16 | E16.18 | E16.25 | E17A.42 | E17A.44 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 25.69 | 26.72 | 25.36 | 25.91 | 25.55 | 26.41 | 26.56 | 26.75 | 25.65 | 26.09 |
| TiO2 | 0.027 | 0.000 | 0.000 | 0.053 | 0.038 | 0.073 | 0.000 | 0.122 | 0.006 | 0.038 |
| Al2O3 | 18.80 | 18.19 | 18.71 | 18.01 | 18.89 | 18.95 | 18.77 | 18.40 | 20.25 | 19.51 |
| FeO | 23.56 | 23.48 | 25.35 | 25.48 | 25.84 | 25.52 | 23.79 | 24.69 | 27.72 | 29.37 |
| MnO | 0.785 | 0.771 | 0.765 | 0.785 | 0.726 | 0.759 | 0.974 | 0.818 | 0.542 | 0.845 |
| MgO | 15.24 | 15.8 | 14.85 | 14.91 | 15.21 | 15.28 | 16.43 | 15.21 | 11.68 | 12.34 |
| CaO | 0.057 | 0.043 | 0.058 | 0.063 | 0.052 | 0.077 | 0.036 | 0.069 | 0.048 | 0.028 |
| BaO | 0.031 | 0.026 | 0.023 | 0.000 | 0.054 | 0.000 | 0.000 | 0.054 | 0.083 | 0.109 |
| Rb2O | 0.009 | 0.007 | 0.012 | 0.017 | 0.021 | 0.032 | 0.017 | 0.003 | 0.010 | 0.007 |
| F | 0.150 | 0.125 | 0.125 | 0.180 | 0.163 | 0.174 | 0.161 | 0.157 | 0.208 | 0.191 |
| Cl | 0.002 | 0.004 | 0.010 | 0.013 | 0.006 | 0.012 | 0.005 | 0.032 | 0.034 | 0 |
| Total | 84.35 | 85.16 | 85.26 | 85.43 | 86.55 | 87.28 | 86.74 | 86.31 | 86.26 | 88.53 |
|  | | | | | | | | | | |
| Si | 5.59 | 5.74 | 5.53 | 5.63 | 5.49 | 5.60 | 5.62 | 5.70 | 5.54 | 5.56 |
| Ti | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 |
| Al iv | 2.40 | 2.25 | 2.46 | 2.36 | 2.50 | 2.39 | 2.37 | 2.29 | 2.45 | 2.44 |
| Al vi | 2.44 | 2.37 | 2.35 | 2.26 | 2.29 | 2.35 | 2.32 | 2.35 | 2.73 | 2.48 |
| Fe3+ | 0.09 | 0.12 | 0.00 | 0.03 | 0.00 | 0.06 | 0.04 | 0.13 | 0.25 | 0.11 |
| Fe2+ | 4.19 | 4.09 | 4.62 | 4.59 | 4.67 | 4.45 | 4.16 | 4.27 | 4.75 | 5.11 |
| Mn | 0.14 | 0.14 | 0.14 | 0.14 | 0.13 | 0.13 | 0.17 | 0.14 | 0.09 | 0.15 |
| Mg | 4.94 | 5.062 | 4.83 | 4.83 | 4.87 | 4.83 | 5.18 | 4.83 | 3.76 | 3.92 |
| Ca | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Rb | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 |
| Ba | 0.01 | 0.01 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 |
| Na | 0.00 | 0.00 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.01 | 0.02 | 0.00 |
| K | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OH\* | 15.79 | 15.82 | 15.81 | 15.74 | 15.77 | 15.75 | 15.778 | 15.76 | 15.68 | 15.74 |

Table 5, Continued.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | E17A.46 | E17A.55 | E17A.67 | E26.69 | E26.71 | E26.73 | E26.74 | E26.76 | E26.77 | E26.78 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 25.90 | 26.09 | 24.77 | 24.83 | 24.81 | 25.26 | 24.75 | 26.14 | 25.96 | 26.09 |
| TiO2 | 0.087 | 0 | 0.115 | 0.051 | 0 | 0.127 | 0.058 | 0.255 | 0.222 | 0.048 |
| Al2O3 | 19.76 | 19.87 | 20.23 | 20.16 | 20.26 | 20.14 | 20.03 | 19 | 18.88 | 19.16 |
| FeO | 27.93 | 26.76 | 29.55 | 26.91 | 27.61 | 27.49 | 27.41 | 26.46 | 26.47 | 26.83 |
| MnO | 0.645 | 1.236 | 0.636 | 1.209 | 1.176 | 1.155 | 1.197 | 1.132 | 1.073 | 0.985 |
| MgO | 12.70 | 12.40 | 11.73 | 13.45 | 12.54 | 12.89 | 12.66 | 14.08 | 12.30 | 13.12 |
| CaO | 0.076 | 0.122 | 0.047 | 0.007 | 0.034 | 0.061 | 0.060 | 0.138 | 0.282 | 0.106 |
| BaO | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.066 | 0.049 |
| Rb2O | 0.016 | 0.017 | 0.019 | 0 | 0.010 | 0.004 | 0.016 | 0.018 | 0.023 | 0.014 |
| F | 0.154 | 0.161 | 0.194 | 0.105 | 0.095 | 0.125 | 0.107 | 0.150 | 0.119 | 0.124 |
| Cl | 0.004 | 0.013 | 0.003 | 0 | 0.009 | 0.004 | 0.019 | 0.012 | 0.015 | 0.007 |
| Total | 87.32 | 86.69 | 87.29 | 86.72 | 86.54 | 87.25 | 86.30 | 87.38 | 85.41 | 86.53 |
|  | | | | | | | | | | |
| Si | 5.549195 | 5.600474 | 5.373489 | 5.376491 | 5.398068 | 5.434447 | 5.39936 | 5.578837 | 5.667047 | 5.625965 |
| Ti | 0.014019 | 0 | 0.018713 | 0.008321 | 0 | 0.020581 | 0.009516 | 0.040913 | 0.036480 | 0.007801 |
| Al iv | 2.450805 | 2.399526 | 2.626511 | 2.623509 | 2.601932 | 2.565553 | 2.60064 | 2.421163 | 2.332953 | 2.374035 |
| Al vi | 2.562976 | 2.658678 | 2.565906 | 2.528890 | 2.604767 | 2.556456 | 2.561279 | 2.375339 | 2.552112 | 2.516423 |
| Fe3+ | 0.140634 | 0.214160 | 0.074461 | 0.004486 | 0.045865 | 0.074710 | 0.040959 | 0.089180 | 0.219193 | 0.144541 |
| Fe2+ | 4.864049 | 4.589942 | 5.286754 | 4.868681 | 4.978179 | 4.871496 | 4.959980 | 4.633662 | 4.613414 | 4.694052 |
| Mn | 0.117076 | 0.224685 | 0.116869 | 0.221785 | 0.216735 | 0.210518 | 0.221138 | 0.204642 | 0.198373 | 0.179825 |
| Mg | 4.056237 | 3.967910 | 3.793305 | 4.341441 | 4.067228 | 4.133942 | 4.117088 | 4.479507 | 4.002641 | 4.217413 |
| Ca | 0.017379 | 0.028130 | 0.010995 | 0.001601 | 0.007973 | 0.014039 | 0.014049 | 0.031650 | 0.065892 | 0.024538 |
| Rb | 0.004270 | 0.004637 | 0.005383 | 0 | 0.002714 | 0.001134 | 0.004488 | 0.004885 | 0.006540 | 0.003826 |
| Ba | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.011308 | 0.008398 |
| Na | 0 | 0.017898 | 0 | 0 | 0.002194 | 0 | 0 | 0 | 0 | 0 |
| K | 0.028859 | 0.000657 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.002530 |
| OH\* | 15.78802 | 15.77136 | 15.73193 | 15.85578 | 15.86244 | 15.827 | 15.83892 | 15.78923 | 15.82414 | 15.82482 |

Table 5, Continued.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | E26.83 | E26.86 | E26.87 | E26.88 | E6-90 | E6-91 | E6-92 | E6-93 | E6-94 | E6-95 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 25.74 | 26.04 | 25.75 | 24.85 | 25.28 | 25.13 | 25.34 | 23.34 | 25.83 | 25.04 |
| TiO2 | 0.045 | 0.098 | 0.136 | 0 | 0.094 | 0.225 | 0.141 | 0.064 | 2.035 | 0.013 |
| Al2O3 | 18.56 | 19.94 | 20.34 | 19.83 | 19.66 | 19.79 | 19.99 | 18.77 | 19.22 | 20.28 |
| FeO | 26.8 | 26.83 | 26.8 | 27.57 | 28.72 | 29.8 | 29.52 | 22.34 | 27.51 | 29.19 |
| MnO | 1.045 | 1.142 | 1.156 | 1.141 | 1.673 | 1.755 | 1.550 | 1.097 | 1.614 | 1.379 |
| MgO | 13.19 | 13.02 | 13.08 | 12.85 | 10.98 | 10.54 | 11.24 | 10.25 | 10.6 | 11.3 |
| CaO | 0.091 | 0.118 | 0.102 | 0.048 | 0.041 | 0.029 | 0.081 | 0.048 | 1.773 | 0.035 |
| BaO | 0.022 | 0.018 | 0.031 | 0.098 | 0 | 0.061 | 0.013 | 0 | 0.070 | 0 |
| Rb2O | 0.016 | 0.023 | 0.006 | 0.004 | 0.022 | 0.003 | 0.024 | 0 | 0.022 | 0.0196 |
| F | 0.145 | 0.141 | 0.128 | 0.099 | 0.055 | 0.068 | 0.070 | 0.098 | 0.102 | 0.0601 |
| Cl | 0.012 | 0.002 | 0.008 | 0.016 | 0.004 | 0.014 | 0.029 | 0.020 | 0.015 | 0.003 |
| Total | 85.67 | 87.41 | 87.54 | 86.50 | 86.64 | 87.44 | 88.00 | 76.03 | 88.81 | 87.3284 |
|  | | | | | | | | | | |
| Si | 5.623451 | 5.552379 | 5.485774 | 5.418371 | 5.533315 | 5.483713 | 5.474652 | 5.627112 | 5.483065 | 5.442494 |
| Ti | 0.007427 | 0.015860 | 0.021790 | 0 | 0.015572 | 0.036974 | 0.023040 | 0.011659 | 0.324909 | 0.002239 |
| Al iv | 2.376549 | 2.447621 | 2.514226 | 2.581629 | 2.466685 | 2.516287 | 2.525348 | 2.372888 | 2.516935 | 2.557506 |
| Al vi | 2.420899 | 2.587641 | 2.614343 | 2.523226 | 2.622850 | 2.589862 | 2.579524 | 3.009645 | 2.325158 | 2.649888 |
| Fe3+ | 0.101278 | 0.152322 | 0.138535 | 0.016852 | 0.114236 | 0.111427 | 0.091921 | 0.417033 | 0.299754 | 0.079124 |
| Fe2+ | 4.795434 | 4.632152 | 4.636438 | 5.010677 | 5.143129 | 5.327008 | 5.241940 | 4.087433 | 4.584127 | 5.226949 |
| Mn | 0.193459 | 0.206314 | 0.208625 | 0.210755 | 0.310348 | 0.32454 | 0.283785 | 0.224069 | 0.290265 | 0.254033 |
| Mg | 4.295647 | 4.138457 | 4.153917 | 4.176716 | 3.582614 | 3.428564 | 3.619976 | 3.683817 | 3.354241 | 3.661268 |
| Ca | 0.021513 | 0.027165 | 0.023307 | 0.011355 | 0.009733 | 0.006804 | 0.018936 | 0.012503 | 0.403435 | 0.008291 |
| Rb | 0.004663 | 0.006443 | 0.001835 | 0.001234 | 0.006192 | 0.001038 | 0.006917 | 0 | 0.006196 | 0.005478 |
| Ba | 0.003869 | 0.003024 | 0.005276 | 0.016831 | 0 | 0.010568 | 0.002252 | 0 | 0.011761 | 0 |
| Na | 0.001525 | 0.004713 | 0 | 0 | 0.006791 | 0.021833 | 0.005195 | 0.009163 | 0.008644 | 0.005563 |
| K | 0.001783 | 0.019963 | 0.000109 | 0 | 0.059858 | 0 | 0 | 0.000738 | 0.002924 | 0 |
| OH\* | 15.78954 | 15.80667 | 15.82035 | 15.85045 | 15.91927 | 15.89475 | 15.88183 | 15.83367 | 15.85182 | 15.91516 |

Table 5, Continued.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Samples | E6-96 | E17-98 | E17-100 | E17-109 | E17-110 | E17-116 | E17-117 | E17-118 | E17-121 |
| Major elements in wt. % (EPMA) | | | | | | | | | |
| SiO2 | 25.83 | 26.53 | 26.06 | 25.41 | 25.32 | 25.64 | 25.74 | 25.30 | 25.74 |
| TiO2 | 0.140 | 0.142 | 0.068 | 0.050 | 0.122 | 0.069 | 0.020 | 0.049 | 0.027 |
| Al2O3 | 19.62 | 19.69 | 18.21 | 19.66 | 19.42 | 19.30 | 19.21 | 19.18 | 18.66 |
| FeO | 28.38 | 26.88 | 29.49 | 29.32 | 28.92 | 28.13 | 28.13 | 27.85 | 29.13 |
| MnO | 1.338 | 0.616 | 0.651 | 0.599 | 0.655 | 0.715 | 0.761 | 0.793 | 0.594 |
| MgO | 11.86 | 12.71 | 11.93 | 12.14 | 11.98 | 12.69 | 12.21 | 12.89 | 12.17 |
| CaO | 0.062 | 0.135 | 0.153 | 0.050 | 0.066 | 0.048 | 0.100 | 0.037 | 0.183 |
| BaO | 0.171 | 0 | 0 | 0 | 0 | 0 | 0.047 | 0.099 | 0.00 |
| Rb2O | 0.033 | 0.005 | 0.010 | 0.012 | 0.018 | 0.024 | 0.010 | 0.017 | 0.024 |
| F | 0.081 | 0.183 | 0.247 | 0.193 | 0.177 | 0.198 | 0.225 | 0.212 | 0.193 |
| Cl | 0 | 0.007 | 0.031 | 0.003 | 0.008 | 0.009 | 0.017 | 0.018 | 0.019 |
| Total | 87.51 | 86.93 | 87.01 | 87.44 | 86.68 | 86.82 | 86.49 | 86.44 | 86.82 |
|  | | | | | | | | | |
| Si | 5.569874 | 5.651410 | 5.659670 | 5.486355 | 5.509279 | 5.541996 | 5.581377 | 5.502690 | 5.599503 |
| Ti | 0.022801 | 0.022781 | 0.011123 | 0.008265 | 0.019980 | 0.011265 | 0.003327 | 0.008015 | 0.004434 |
| Al iv | 2.430126 | 2.348590 | 2.340330 | 2.513645 | 2.490721 | 2.458004 | 2.418623 | 2.497310 | 2.400497 |
| Al vi | 2.574632 | 2.630737 | 2.350511 | 2.510386 | 2.511657 | 2.482023 | 2.520506 | 2.440334 | 2.406548 |
| Fe3+ | 0.140374 | 0.259594 | 0.115726 | 0.094972 | 0.115613 | 0.116836 | 0.16393 | 0.077927 | 0.087568 |
| Fe2+ | 4.977726 | 4.529178 | 5.240599 | 5.199451 | 5.147040 | 4.968192 | 4.937336 | 4.987957 | 5.212199 |
| Mn | 0.244393 | 0.111223 | 0.119796 | 0.109643 | 0.120740 | 0.131054 | 0.139903 | 0.146096 | 0.109566 |
| Mg | 3.812370 | 4.036031 | 3.862305 | 3.907395 | 3.885772 | 4.088831 | 3.946734 | 4.179236 | 3.94658 |
| Ca | 0.014372 | 0.030882 | 0.035697 | 0.011706 | 0.015527 | 0.011302 | 0.023234 | 0.008786 | 0.042657 |
| Rb | 0.009316 | 0.001589 | 0.002988 | 0.003415 | 0.00526 | 0.006781 | 0.002900 | 0.004838 | 0.006825 |
| Ba | 0.029014 | 0 | 0 | 0 | 0 | 0 | 0.008105 | 0.017027 | 0 |
| Na | 0 | 0.010904 | 0.049523 | 0 | 0 | 0.000671 | 0.003616 | 0 | 0.030286 |
| K | 0 | 0.013586 | 0.053243 | 0 | 0.000333 | 0 | 0.008629 | 0 | 0.027415 |
| OH\* | 15.88829 | 15.74788 | 15.6375 | 15.73339 | 15.74946 | 15.72102 | 15.67763 | 15.6938 | 15.71909 |

TABLE 6. Results of EPMA of muscovite in the Eagle Lake Granite

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | E16.3 | E16.14 | E16-19 | E16.22 | E16.31 | E16.32 | E16.33 | E16.36 | E17A.39 |
| Major elements in wt. % (EPMA) | | | | | | | | | |
| SiO2 | 47.81 | 47.16 | 47.01 | 47.16 | 47.23 | 48.08 | 47.8 | 47.04 | 47.73 |
| TiO2 | 0.543 | 0.355 | 0.345 | 0.267 | 0.708 | 0.112 | 0.659 | 0.556 | 0.860 |
| Al2O3 | 29.27 | 29.14 | 28.83 | 27.83 | 28.60 | 28.96 | 27.43 | 29.16 | 28.07 |
| FeO | 4.95 | 5.20 | 5.26 | 6.00 | 6.12 | 5.69 | 5.11 | 5.65 | 4.53 |
| MnO | 0.019 | 0.063 | 0.080 | 0.047 | 0.074 | 0.107 | 0.059 | 0.056 | 0.053 |
| MgO | 2.05 | 2.02 | 2.14 | 2.80 | 2.59 | 2.66 | 2.85 | 2.28 | 2.85 |
| CaO | 0.010 | 0.019 | 0.006 | 0.019 | 0.022 | 0.026 | 0.025 | 0.018 | 0.000 |
| Na2O | 0.20 | 0.20 | 0.17 | 0.15 | 0.17 | 0.17 | 0.17 | 0.20 | 0.17 |
| K2O | 10.45 | 10.42 | 10.55 | 10.74 | 10.12 | 10.33 | 10.14 | 10.48 | 10.53 |
| BaO | 0.080 | 0.000 | 0.144 | 0.091 | 0.206 | 0.052 | 0.033 | 0.052 | 0.321 |
| Rb2O | 0.095 | 0.102 | 0.125 | 0.111 | 0.131 | 0.112 | 0.135 | 0.128 | 0.111 |
| F | 0.249 | 0.328 | 0.199 | 0.262 | 0.256 | 0.255 | 0.252 | 0.349 | 0.422 |
| Cl | 0.004 | 0.000 | 0.011 | 0.003 | 0.008 | 0.006 | 0.008 | 0.006 | 0.015 |
| Total | 95.74 | 95.02 | 94.88 | 95.49 | 96.25 | 96.58 | 94.68 | 95.99 | 95.68 |
|  | | | | | | | | | |
| Si | 7.77 | 7.73 | 7.74 | 7.73 | 7.68 | 7.77 | 7.87 | 7.65 | 7.78 |
| Al iv | 0.22 | 0.26 | 0.25 | 0.26 | 0.31 | 0.22 | 0.12 | 0.34 | 0.21 |
| Al vi | 5.71 | 5.69 | 5.67 | 5.45 | 5.50 | 5.61 | 5.50 | 5.59 | 5.49 |
| Ti | 0.06 | 0.04 | 0.04 | 0.03 | 0.08 | 0.01 | 0.08 | 0.06 | 0.10 |
| Fe3+ | 0.67 | 0.71 | 0.72 | 0.82 | 0.83 | 0.76 | 0.70 | 0.76 | 0.61 |
| Mn | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Mg | 0.49 | 0.49 | 0.52 | 0.68 | 0.63 | 0.64 | 0.70 | 0.55 | 0.69 |
| Ca | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.00 |
| Na | 0.12 | 0.13 | 0.10 | 0.09 | 0.11 | 0.11 | 0.11 | 0.12 | 0.11 |
| K | 4.33 | 4.35 | 4.43 | 4.49 | 4.20 | 4.26 | 4.26 | 4.35 | 4.38 |
| Ba | 0.01 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 0.04 |
| Rb | 0.01 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| F | 0.25 | 0.34 | 0.20 | 0.27 | 0.26 | 0.26 | 0.26 | 0.36 | 0.43 |
| Cl | 0.01 | 0.00 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| OH\* | 15.74 | 15.65 | 15.78 | 15.72 | 15.73 | 15.73 | 15.73 | 15.63 | 15.55 |
| Fe/(Fe+Mg) | 0.57 | 0.58 | 0.57 | 0.54 | 0.56 | 0.54 | 0.50 | 0.58 | 0.47 |

Table 6, Continued.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | E17A.39 | E17A.40 | E17A.41 | E17A.43 | E17A.45 | E17A.47 | E17A.48 | E17A.49 | E26.70 | E26.72 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 47.73 | 50.82 | 45.97 | 48.76 | 48.39 | 47.73 | 46.89 | 46.7 | 46.86 | 49.32 |
| Al2O3 | 28.07 | 28.40 | 28.37 | 27.73 | 27.34 | 29.79 | 28.97 | 27.58 | 29.94 | 28.54 |
| TiO2 | 0.860 | 0.201 | 0.634 | 0.232 | 0.463 | 0.269 | 0.224 | 1.166 | 0.647 | 0.053 |
| MgO | 2.85 | 2.29 | 2.36 | 2.48 | 3.96 | 2.03 | 1.98 | 2.60 | 1.97 | 2.20 |
| FeO | 4.53 | 4.13 | 4.83 | 5.57 | 4.98 | 3.98 | 4.29 | 5.12 | 4.98 | 5.23 |
| MnO | 0.053 | 0.015 | 0.093 | 0.082 | 0.072 | 0.011 | 0 | 0.043 | 0.062 | 0.108 |
| CaO | 0 | 0 | 0.098 | 0 | 0 | 0.038 | 0.066 | 0.002 | 0 | 0 |
| Na2O | 0.17 | 0.10 | 0.20 | 0.13 | 0.14 | 0.09 | 0.09 | 0.13 | 0.37 | 0.08 |
| K2O | 10.53 | 10.34 | 10.12 | 10.55 | 10.47 | 10.36 | 10.47 | 10.58 | 10.22 | 10.39 |
| BaO | 0.321 | 0.037 | 0.245 | 0.033 | 0.160 | 0.264 | 0 | 0.263 | 0.118 | 0 |
| Rb2O | 0.111 | 0.102 | 0.120 | 0.112 | 0.140 | 0.093 | 0.095 | 0.134 | 0.153 | 0.140 |
| F | 0.422 | 0.472 | 0.413 | 0.361 | 0.434 | 0.347 | 0.403 | 0.396 | 0.535 | 0.244 |
| Cl | 0.015 | 0.003 | 0.003 | 0.008 | 0.012 | 0.004 | 0.107 | 0.035 | 0.009 | 0.000 |
| Total | 95.68 | 96.92 | 93.48 | 96.06 | 96.57 | 95.02 | 93.59 | 94.76 | 95.88 | 96.32 |
|  | | | | | | | | | | |
| Si | 7.783429 | 8.096781 | 7.678611 | 7.909223 | 7.822237 | 7.802573 | 7.778247 | 7.713639 | 7.606721 | 7.963713 |
| Al iv | 0.216571 | 0 | 0.321389 | 0.090777 | 0.177763 | 0.197427 | 0.221753 | 0.286361 | 0.393279 | 0.036287 |
| Al vi | 5.494781 | 5.628039 | 5.594990 | 5.530140 | 5.338644 | 5.859031 | 5.773608 | 5.409717 | 5.682859 | 5.704368 |
| Ti | 0.105532 | 0.024084 | 0.079682 | 0.028399 | 0.056312 | 0.03317 | 0.027958 | 0.144892 | 0.079023 | 0.006448 |
| Fe3+ | 0.617807 | 0.550305 | 0.674731 | 0.755615 | 0.673256 | 0.544133 | 0.595161 | 0.707274 | 0.676083 | 0.706268 |
| Mn | 0.007321 | 0.002119 | 0.013229 | 0.011335 | 0.009955 | 0.001537 | 0 | 0.006016 | 0.008580 | 0.014881 |
| Mg | 0.694365 | 0.546231 | 0.589804 | 0.601409 | 0.954245 | 0.495810 | 0.490161 | 0.641391 | 0.478497 | 0.531617 |
| Ca | 0 | 0 | 0.017647 | 0 | 0 | 0.006814 | 0.011731 | 0.000442 | 0 | 0 |
| Na | 0.111365 | 0.062527 | 0.135319 | 0.083537 | 0.091713 | 0.060035 | 0.058283 | 0.084489 | 0.234683 | 0.052787 |
| K | 4.380534 | 4.202594 | 4.312288 | 4.365577 | 4.317587 | 4.320413 | 4.430648 | 4.458073 | 4.232191 | 4.279837 |
| Ba | 0.041085 | 0.004732 | 0.032135 | 0.004207 | 0.020382 | 0.033935 | 0 | 0.034081 | 0.015087 | 0 |
| Rb | 0.023316 | 0.021018 | 0.025880 | 0.023380 | 0.029119 | 0.019716 | 0.020391 | 0.028629 | 0.032080 | 0.029087 |
| F | 0.436210 | 0.476065 | 0.436986 | 0.370490 | 0.444471 | 0.359422 | 0.423059 | 0.414565 | 0.549733 | 0.249922 |
| Cl | 0.008624 | 0.001998 | 0.001869 | 0.004619 | 0.006576 | 0.002494 | 0.060398 | 0.019823 | 0.005008 | 0.000328 |
| OH\* | 15.55517 | 15.52194 | 15.56115 | 15.62489 | 15.54895 | 15.63808 | 15.51654 | 15.56561 | 15.44526 | 15.74975 |
| Fe/(Fe+Mg) | 0.470828 | 0.501858 | 0.533580 | 0.556818 | 0.413675 | 0.523234 | 0.548373 | 0.524425 | 0.585566 | 0.570544 |

Table 6, Continued.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sample | E26.75 | E26.79 | E26.80 | E26.81 | E26.82 | E26.84 | E17-101 | E17-102 | E17-103 | E17-104 |
| Major elements in wt. % (EPMA) | | | | | | | | | | |
| SiO2 | 46.28 | 47.75 | 45.15 | 45.6 | 46.57 | 45.30 | 46.47 | 46.5 | 51.29 | 49.23 |
| Al2O3 | 28.56 | 27.16 | 30.09 | 29.18 | 29.42 | 29.85 | 28.33 | 35.29 | 27.60 | 28.5 |
| TiO2 | 0.867 | 0.594 | 0.592 | 0.708 | 0.699 | 0.575 | 0.485 | 0 | 0.247 | 0.254 |
| MgO | 2.46 | 2.81 | 1.97 | 2.06 | 1.81 | 1.84 | 2.46 | 0.60 | 2.61 | 1.94 |
| FeO | 6.44 | 5.27 | 5.48 | 5.45 | 5.18 | 5.30 | 5.25 | 1.7914 | 3.88 | 5.12 |
| MnO | 0.127 | 0.070 | 0.097 | 0.119 | 0.104 | 0.148 | 0.088 | 0.027 | 0.009 | 0.014 |
| CaO | 0.004 | 0 | 0.008 | 0 | 0.021 | 0 | 0.023 | 0.008 | 0 | 0.029 |
| Na2O | 0.21 | 0.18 | 0.41 | 0.24 | 0.41 | 0.43 | 0.23 | 0.28 | 0.09 | 0.14 |
| K2O | 10.15 | 10.60 | 10.24 | 10.08 | 10.09 | 9.98 | 10.15 | 10.36 | 9.70 | 10.13 |
| BaO | 0.114 | 0.068 | 0.130 | 0.087 | 0 | 0.097 | 0.024 | 0.279 | 0.198 | 0.014 |
| Rb2O | 0.157 | 0.134 | 0.141 | 0.151 | 0.165 | 0.151 | 0.165 | 0.089 | 0.103 | 0.084 |
| F | 0.504 | 0.783 | 0.333 | 0.224 | 0.202 | 0.363 | 0.514 | 0.148 | 0.390 | 0.362 |
| Cl | 0.014 | 0.004 | 0.008 | 0.008 | 0.004 | 0.090 | 0.006 | 0.021 | 0 | 0.0027 |
| Total | 95.89 | 95.42 | 94.65 | 93.91 | 94.68 | 94.12 | 94.20 | 95.40 | 96.12 | 95.82 |
|  | | | | | | | | | | |
| Si | 7.563201 | 7.785582 | 7.464638 | 7.598072 | 7.673453 | 7.516638 | 7.687597 | 7.525588 | 8.232573 | 7.96806 |
| Al iv | 0.436799 | 0.214418 | 0.535362 | 0.401928 | 0.326547 | 0.483362 | 0.312403 | 0.474412 | 0 | 0.03194 |
| Al vi | 5.413887 | 5.342472 | 5.688373 | 5.666590 | 5.720909 | 5.710567 | 5.549882 | 6.580198 | 5.490868 | 5.715463 |
| Ti | 0.106509 | 0.072801 | 0.073658 | 0.088759 | 0.086657 | 0.071754 | 0.060379 | 0 | 0.029804 | 0.030906 |
| Fe3+ | 0.880184 | 0.718627 | 0.757717 | 0.75947 | 0.713822 | 0.735490 | 0.726361 | 0.242469 | 0.520847 | 0.693056 |
| Mn | 0.017511 | 0.009613 | 0.013570 | 0.016824 | 0.014543 | 0.020788 | 0.012289 | 0.003660 | 0.001237 | 0.001961 |
| Mg | 0.599704 | 0.682818 | 0.486431 | 0.512570 | 0.444706 | 0.454187 | 0.606779 | 0.145670 | 0.623663 | 0.468797 |
| Ca | 0.000665 | 0 | 0.001417 | 0 | 0.003708 | 0 | 0.004130 | 0.001405 | 0 | 0.005064 |
| Na | 0.132455 | 0.111602 | 0.261077 | 0.153531 | 0.261731 | 0.274895 | 0.147748 | 0.178307 | 0.058823 | 0.088251 |
| K | 4.231530 | 4.409026 | 4.318869 | 4.284678 | 4.241260 | 4.224497 | 4.283543 | 4.277267 | 3.971858 | 4.182648 |
| Ba | 0.014535 | 0.008650 | 0.016882 | 0.011360 | 0 | 0.012626 | 0.003047 | 0.035384 | 0.024905 | 0.001788 |
| Rb | 0.032990 | 0.028072 | 0.029931 | 0.032265 | 0.034915 | 0.032216 | 0.035140 | 0.018603 | 0.021216 | 0.017460 |
| F | 0.521394 | 0.807013 | 0.348550 | 0.236294 | 0.210739 | 0.380882 | 0.537325 | 0.151812 | 0.396158 | 0.370297 |
| Cl | 0.007756 | 0.002100 | 0.004260 | 0.004519 | 0.001955 | 0.050571 | 0.003309 | 0.011522 | 0 | 0.001482 |
| OH\* | 15.47085 | 15.19089 | 15.64719 | 15.75919 | 15.78731 | 15.56855 | 15.45937 | 15.83667 | 15.60384 | 15.62822 |
| Fe/(Fe+Mg) | 0.594764 | 0.512776 | 0.609025 | 0.597049 | 0.616146 | 0.618227 | 0.54485 | 0.624696 | 0.455083 | 0.596509 |