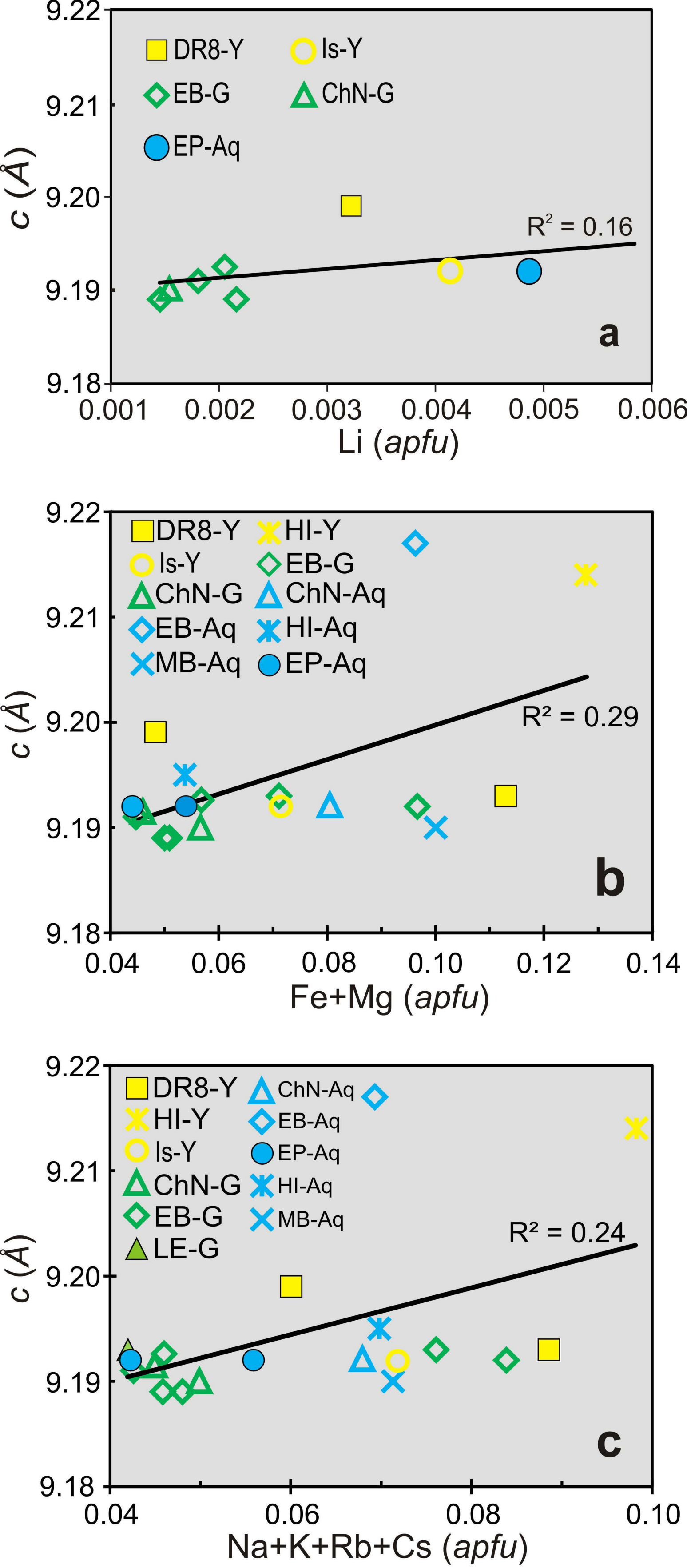


Figure A1. Sardi & Heimann, Beryl from Argentina, Canadian Mineralogist.

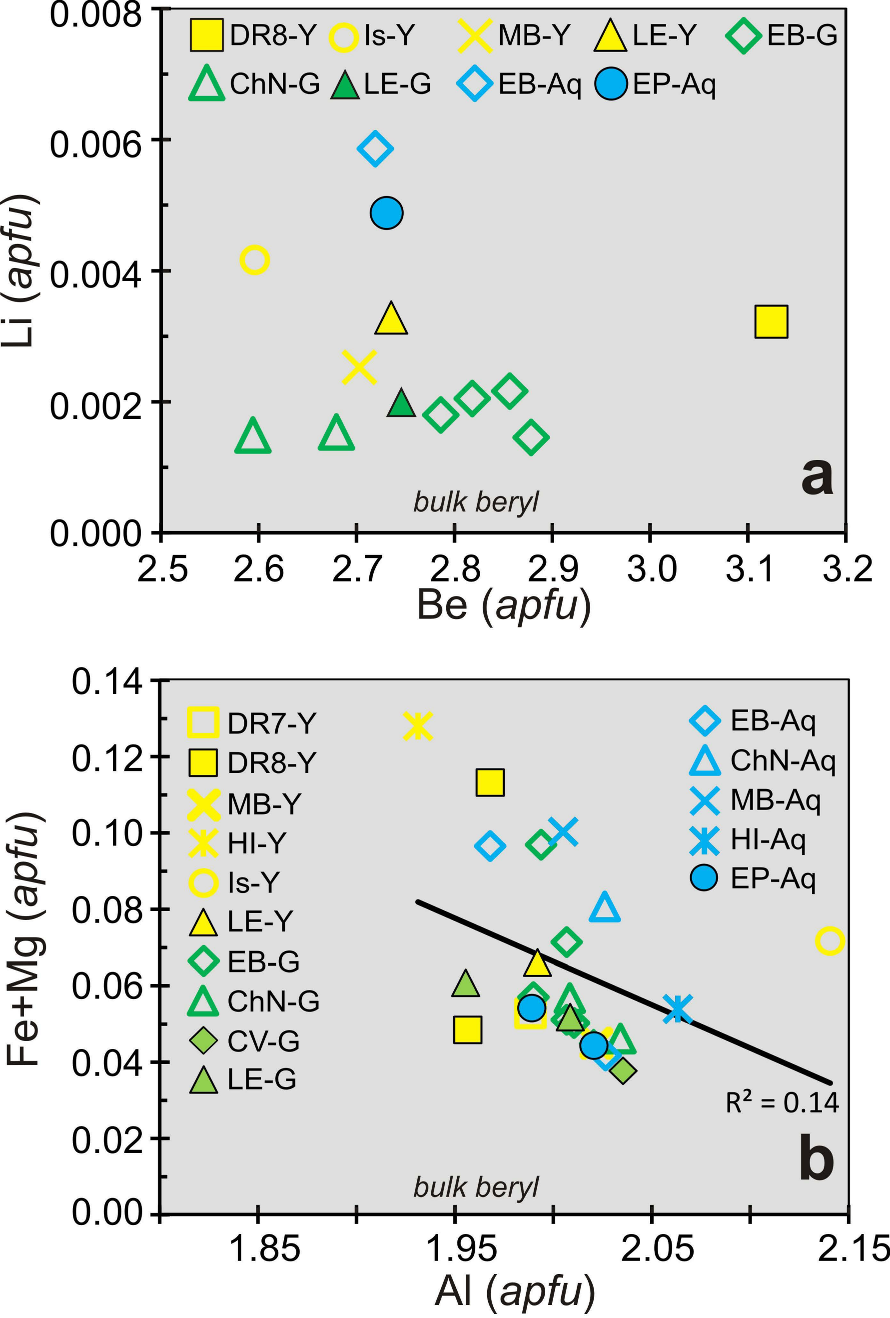


Figure A2. Sardi & Heimann, Beryl from Argentina, Canadian Mineralogist.

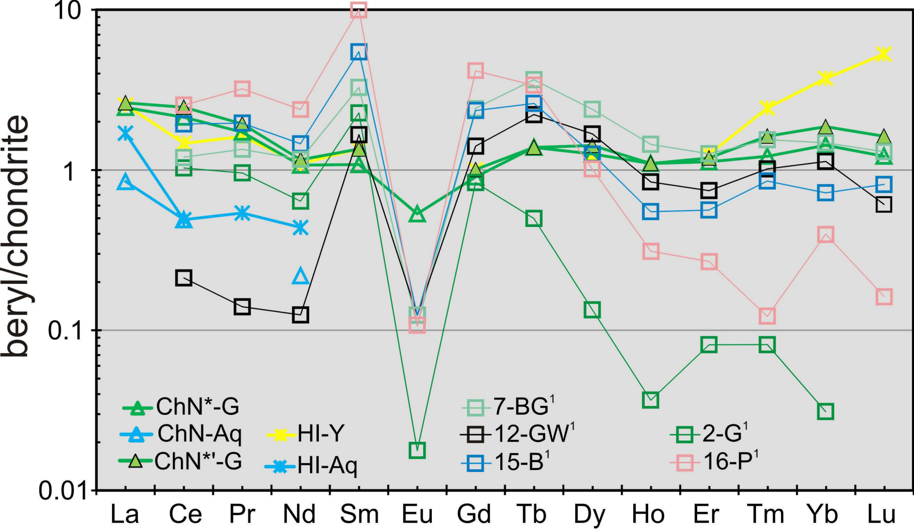


Figure A3. Sardi & Heimann, Beryl from Argentina, Canadian Mineralogist.

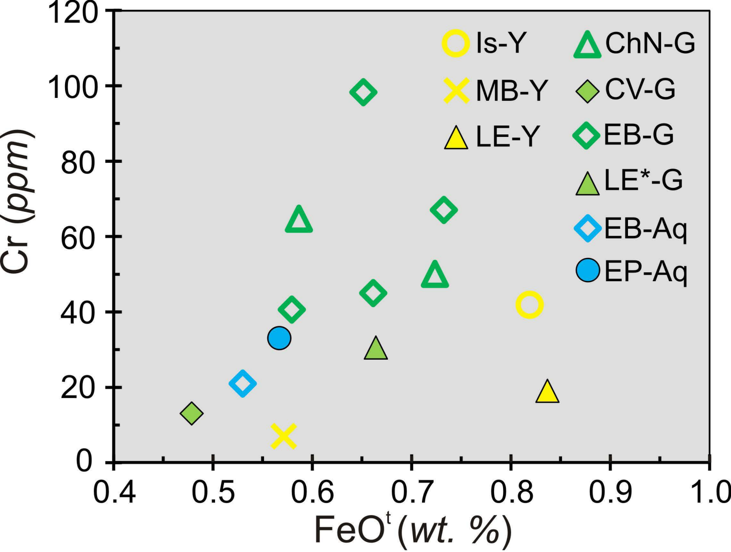


Figure A4. Sardi & Heimann, Beryl from Argentina, Canadian Mineralogist.

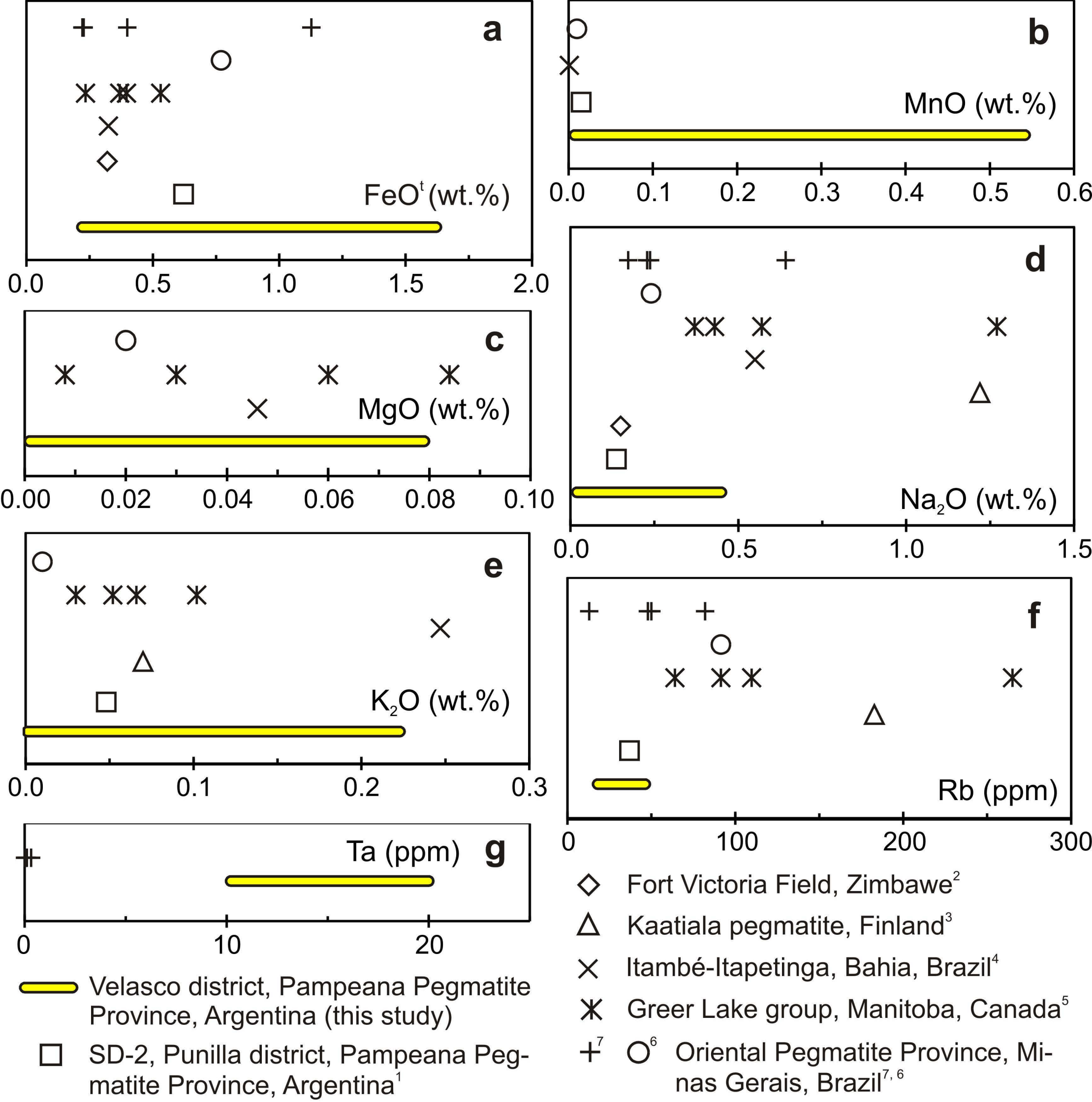


Figure A5. Sardi & Heimann, Beryl from Argentina, Canadian Mineralogist.

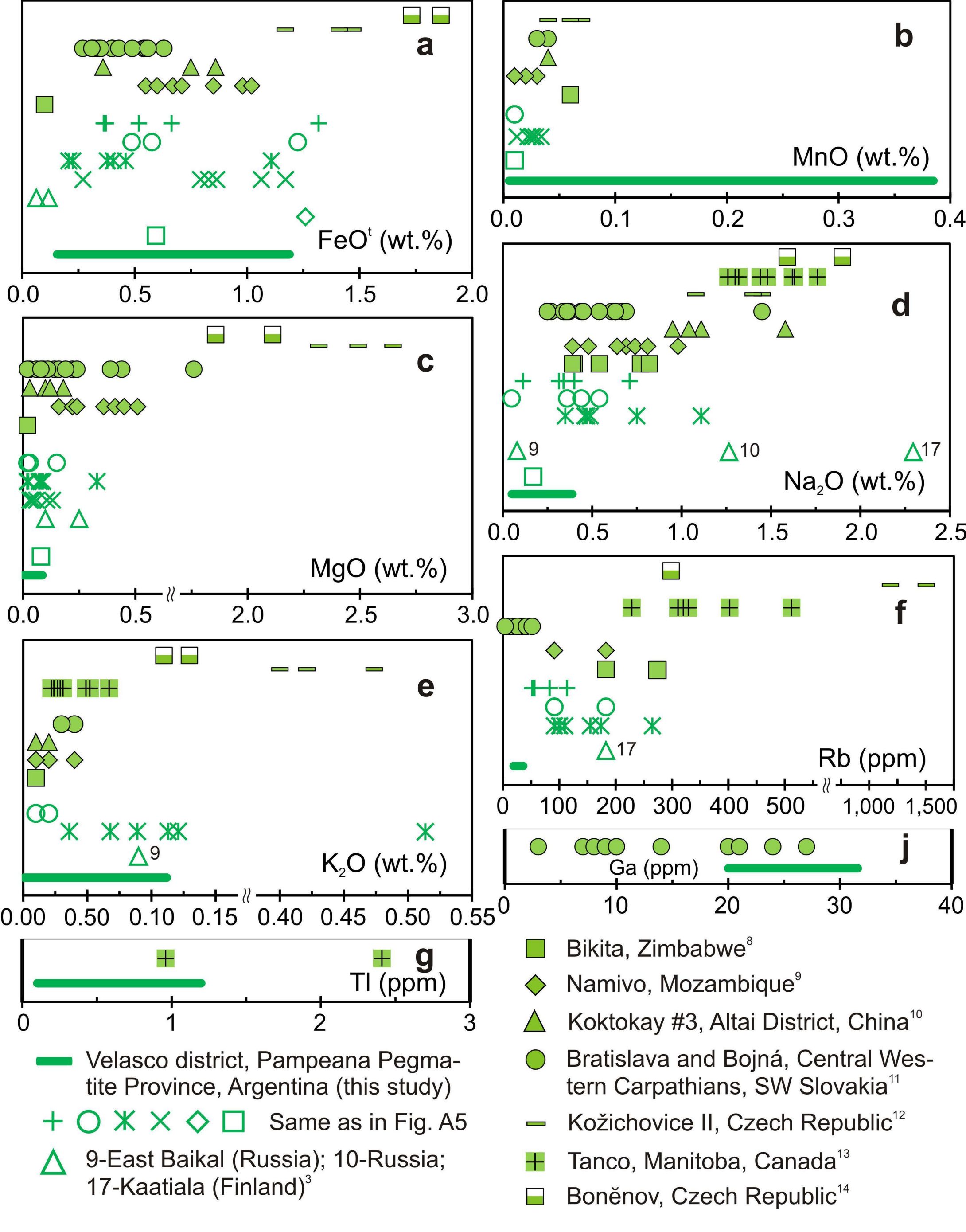


Figure A6. Sardi & Heimann, Beryl from Argentina, Canadian Mineralogist.

## ELECTRONIC APPENDIX FIGURE CAPTIONS

## SARDI & HEIMANN, BERYL FROM ARGENTINA, CANADIAN MINERALOGIST

**Figure A1.** Binary diagrams showing the relationship among beryl's unit-cell parameters and chemical composition, Velasco district, Argentina. **a**. *c* (Å) *vs.* Li (in atoms per formula unit, *apfu*). **b**. *c* (Å) *vs.* Fe+Mg (*apfu*). **c.** *c vs.* Na+K+Rb+Cs (*apfu*). *apfu* values based on 18 oxygen atoms. No correlation exists between the size of the unit cell parameter *c* and substitutions. Symbols and colors as in Table 1 and Fig. 4 in main paper.

**Figure A2.** Diagrams for beryl from the Velasco district showing the relationships: **a.** Li *vs.* Be (*apfu*), and **b.** Fe+Mg (*apfu*) *vs.* Al (*apfu*). Data for bulk beryl analyses. *apfu* values based on 18 oxygen atoms.

**Figure A3.** Chondrite-normalized REE patterns of beryl from the Velasco district and the Namivo pegmatite, Mozambique. Data for Namivo pegmatite beryl from Neiva & Neiva (2005). Normalization values after McDonough & Sun (1995). Data for 1 from Neiva & Neiva (2005)

**Figure A4.** Diagram showing elements that allow the separation of beryl types. Binary diagram of beryl (bulk) in terms of the chromophore element Cr (ppm) *vs.* $FeO^t$ (wt.%). Within a single pegmatite, green beryl tends to have higher Cr contents than yellow beryl.

**Figure A5.** Chemistry of yellow beryl from the Velasco district compared to previously published yellow pegmatitic beryl. Sources of data as follows: 1 Colombo & Lira (2002), 2 Aurisicchio *et al.* (1988), 3 Deer *et al.* (1997), 4 De Almeida Sampaio *et al.* (1973), 5 Černý & Turnock (1975), 6 Kahwage & Mendes (2003), 7 Polli *et al.* (2006).

**Figure A6.** Chemistry of green beryl from the Velasco district compared to previously published green pegmatitic beryl. Sources of data for references 1 to 7 as in Fig. A5. For the rest: 8 Černý *et al.* (2003), 9 Neiva & Neiva (2005), 10 Wang *et al.* (2009), 11 Uher *et al.* (2010), 12 Novak & Filip (2010), 13 Černý & Simpson (1977), 14 Přikryl *et al.* (2014).

**Figure A7.** Chemistry of aquamarine beryl from the Velasco district compared to previously published aquamarine pegmatitic beryl. Sources of data from references 1 to 14 as in Fig. A5-A6. For the rest: 15 Beal & Lentz (2010), 16 Viana *et al.* (2002), 17 Schaller *et al.* (1962), 18 Bocchio *et al.* (2009).

## ELECTRONIC APPENDIX TABLE HEADINGS

**Table A1.** Major and some trace element contents of bulk beryl in pegmatites, Velasco district.

**Table A2.** Trace element (except REE) contents (in ppm) of bulk beryl in pegmatites from the Velasco district.

**Table A3.** Rare earth element contents (ppm) of bulk beryl in pegmatites from Velasco district.

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**Table A1.** Major and some trace element contents of bulk beryl in pegmatites, Velasco district. Sardi & Heimann, Canadian Mineralogist.

| **Sample** | **Yellow Beryl –Y- (*n* = 7)** | | | | | | | **Aquamarine Beryl –Aq- (*n* = 7)** | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **DR7-Y** | **DR8-Y** | **HI-Y** | **DR8*-Y** | **Is*-Y** | **MB*-Y** | **LE*-Y** | **EB-Aq** | **ChN-Aq** | **MB-Aq** | **HI-Aq** | **EP-Aq** | **EB*-Aq** | **EP*-Aq** |
| **$SiO_2$ (wt.%)** | 65.47 | 63.83 | 63.59 | 64.47 | 63.84 | 64.81 | 64.30 | 64.39 | 65.05 | 64.95 | 64.3 | 64.70 | 64.60 | 65.23 |
| **$Al_2O_3$** | 18.32 | 18.13 | 17.76 | 18.11 | 19.30 | 18.30 | 17.95 | 17.87 | 18.62 | 18.42 | 18.86 | 18.10 | 18.34 | 18.42 |
| **$FeO^t$** | 0.59 | 1.43 | 1.62 | 0.59 | 0.82 | 0.57 | 0.84 | 1.20 | 0.94 | 1.24 | 0.69 | 0.62 | 0.53 | 0.57 |
| **MnO** | 0.011 | 0.015 | 0.027 | 0.107 | 0.109 | 0.018 | 0.542 | 0.014 | 0.010 | 0.011 | 0.014 | 0.008 | 0.044 | 0.004 |
| **MgO** | 0.05 | 0.02 | 0.02 | 0.02 | 0.05 | - | - | 0.02 | 0.06 | 0.03 | - | 0.04 | - | - |
| **CaO** | 0.08 | 0.03 | 0.03 | 0.05 | 0.19 | 0.17 | - | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 | 0.33 | - |
| **BeO** | 12.83 | 13.87 | 14.07 | 12.74 | 11.48 | 12.00 | 12.09 | 12.61 | 12.58 | 12.64 | 12.76 | 12.66 | 12.07 | 12.21 |
| **$Li_2O$** | -- | -- | -- | 0.009 | 0.011 | 0.007 | 0.009 | -- | -- | -- | -- | -- | 0.016 | 0.013 |
| **$Na_2O$** | 0.29 | 0.42 | 0.45 | 0.29 | 0.24 | 0.20 | 0.19 | 0.33 | 0.33 | 0.34 | 0.33 | 0.28 | 0.22 | 0.22 |
| **$K_2O$** | 0.04 | 0.09 | 0.13 | 0.05 | 0.22 | 0.02 | - | 0.06 | 0.07 | 0.08 | 0.07 | 0.02 | - | - |
| **$Rb_2O$** | 0.004 | 0.004 | 0.004 | 0.004 | 0.005 | 0.002 | 0.002 | 0.003 | 0.002 | 0.002 | 0.002 | 0.003 | 0.002 | 0.004 |
| **$Cs_2O$** | 0.062 | 0.069 | 0.057 | 0.061 | 0.035 | - | - | 0.054 | 0.013 | 0.022 | 0.051 | 0.069 | - | 0.078 |
| **LOI** | 1.31 | 1.45 | 1.75 | 1.71 | 1.50 | 1.56 | 1.64 | 1.45 | 1.57 | 1.83 | 1.76 | 1.25 | 1.68 | 1.43 |
| ***Total*** | *99.06* | *99.36* | *99.51* | *98.21* | *97.80* | *97.66* | *97.56* | *98.02* | *99.27* | *99.59* | *98.86* | *97.78* | *97.83* | *98.18* |
| *apfu* based on 18 oxygen atoms | | | | | | | | | | | | | | |
| **Si ($T_1$)** | 6.032 | 5.881 | 5.870 | 5.913 | 6.010 | 6.078 | 6.057 | 6.019 | 6.008 | 6.001 | 5.971 | 6.035 | 6.059 | 6.074 |
| **Be** | 2.838 | 3.068 | 3.119 | 3.123 | 2.595 | 2.702 | 2.735 | 2.829 | 2.790 | 2.803 | 2.845 | 2.835 | 2.719 | 2.730 |
| **Li** | -- | -- | -- | 0.003 | 0.004 | 0.003 | 0.003 | -- | -- | -- | -- | -- | 0.006 | 0.005 |
| **$\Sigma T_2$** | 2.838 | 3.068 | 3.119 | 3.126 | 2.599 | 2.705 | 2.738 | 2.829 | 2.790 | 2.803 | 2.845 | 2.835 | 2.725 | 2.735 |
| **Al** | 1.988 | 1.968 | 1.931 | 1.957 | 2.141 | 2.022 | 1.992 | 1.968 | 2.026 | 2.005 | 2.063 | 1.989 | 2.027 | 2.021 |
| **Fe** | 0.046 | 0.110 | 0.125 | 0.046 | 0.064 | 0.045 | 0.066 | 0.094 | 0.072 | 0.096 | 0.054 | 0.048 | 0.042 | 0.044 |
| **Mn** | 0.001 | 0.001 | 0.002 | 0.008 | 0.009 | 0.001 | 0.043 | 0.001 | 0.001 | 0.001 | 0.001 | 0.001 | 0.003 | - |
| **Mg** | 0.007 | 0.003 | 0.003 | 0.003 | 0.007 | - | - | 0.003 | 0.008 | 0.004 | - | 0.006 | - | - |
| **$\Sigma O$** | 2.042 | 2.082 | 2.061 | 2.014 | 2.221 | 2.068 | 2.101 | 2.066 | 2.107 | 2.106 | 2.118 | 2.044 | 2.072 | 2.065 |
| **Ca** | 0.008 | 0.003 | 0.003 | 0.005 | 0.019 | 0.017 | - | 0.002 | 0.002 | 0.002 | 0.002 | 0.003 | 0.033 | - |
| **Na** | 0.052 | 0.075 | 0.080 | 0.052 | 0.044 | 0.037 | 0.035 | 0.060 | 0.059 | 0.061 | 0.059 | 0.051 | 0.039 | 0.039 |
| **Rb** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **K** | 0.005 | 0.011 | 0.015 | 0.006 | 0.026 | 0.003 | - | 0.007 | 0.008 | 0.009 | 0.008 | 0.002 | - | - |
| **Cs** | 0.002 | 0.003 | 0.002 | 0.002 | 0.001 | - | - | 0.002 | 0.001 | 0.001 | 0.002 | 0.003 | - | 0.003 |
| **$\Sigma Ch$** | 0.067 | 0.092 | 0.100 | 0.062 | 0.090 | 0.057 | 0.035 | 0.071 | 0.070 | 0.073 | 0.071 | 0.059 | 0.072 | 0.042 |

**Table A1 continued.**

| **Sample** | **Green Beryl –G- (*n* = 11)** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **EB-G** | **EB'-G** | **LE-G** | **EB*-G** | **EB*'-G** | **EB*''-G** | **EB*'''-G** | **ChN*-G** | **ChN*'-G** | **CV*-G** | **LE*-G** |
| **$SiO_2$ (wt.%)** | 65.76 | 63.38 | 64.33 | 65.04 | 65.44 | 65.29 | 65.32 | 64.94 | 65.33 | 64.97 | 65.28 |
| **$Al_2O_3$** | 18.90 | 18.17 | 17.71 | 18.21 | 18.57 | 18.49 | 18.57 | 18.20 | 18.40 | 18.41 | 18.33 |
| **$FeO^t$** | 0.91 | 1.19 | 0.72 | 0.73 | 0.58 | 0.66 | 0.65 | 0.72 | 0.59 | 0.49 | 0.66 |
| **MnO** | 0.011 | 0.014 | 0.007 | 0.265 | 0.066 | 0.005 | 0.006 | 0.385 | 0.013 | 0.023 | 0.018 |
| **MgO** | 0.03 | 0.03 | 0.09 | - | - | - | - | - | - | 0.13 | - |
| **CaO** | 0.03 | 0.03 | 0.09 | - | - | - | - | - | - | 0.13 | - |
| **BeO** | 13.81 | 13.47 | 12.83 | 12.65 | 12.56 | 12.91 | 13.04 | 11.91 | 11.51 | 11.78 | 12.29 |
| **$Li_2O$** | -- | -- | -- | 0.005 | 0.005 | 0.006 | 0.004 | 0.004 | 0.004 | -- | 0.005 |
| **$Na_2O$** | 0.38 | 0.39 | 0.22 | 0.24 | 0.23 | 0.26 | 0.24 | 0.27 | 0.24 | 0.24 | 0.18 |
| **$K_2O$** | 0.07 | 0.10 | 0.01 | - | - | - | - | - | - | - | - |
| **$Rb_2O$** | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 |
| **$Cs_2O$** | 0.039 | 0.036 | 0.017 | 0.054 | 0.037 | 0.055 | 0.060 | 0.018 | 0.014 | - | - |
| **LOI** | 1.62 | 1.26 | 1.69 | 1.44 | 1.46 | 1.44 | 1.39 | 1.46 | 1.47 | 1.60 | 1.38 |
| ***Total*** | *101.56* | *98.07* | *97.72* | *98.64* | *98.95* | *99.12* | *99.28* | *97.91* | *97.77* | *97.78* | *98.15* |
| *apfu* based on 18 oxygen atoms | | | | | | | | | | | |
| **Si ($T_1$)** | 5.927 | 5.903 | 6.029 | 6.033 | 6.044 | 6.015 | 6.003 | 6.083 | 6.130 | 6.097 | 6.072 |
| **Be** | 2.989 | 3.014 | 2.888 | 2.818 | 2.786 | 2.856 | 2.878 | 2.679 | 2.594 | 2.655 | 2.745 |
| **Li** | -- | -- | -- | 0.002 | 0.002 | 0.002 | 0.001 | 0.002 | 0.001 | -- | 0.002 |
| **$\Sigma T_2$** | 2.989 | 3.014 | 2.888 | 2.820 | 2.788 | 2.858 | 2.879 | 2.681 | 2.595 | 2.655 | 2.747 |
| **Al** | 2.007 | 1.994 | 1.955 | 1.990 | 2.021 | 2.007 | 2.011 | 2.008 | 2.034 | 2.035 | 2.009 |
| **Fe** | 0.068 | 0.092 | 0.056 | 0.057 | 0.045 | 0.050 | 0.051 | 0.057 | 0.046 | 0.038 | 0.052 |
| **Mn** | 0.001 | 0.001 | 0.001 | 0.021 | 0.005 | - | - | 0.031 | 0.001 | 0.002 | 0.001 |
| **Mg** | 0.003 | 0.004 | 0.004 | - | - | - | - | - | - | - | - |
| **$\Sigma O$** | 2.079 | 2.091 | 2.016 | 2.068 | 2.071 | 2.057 | 2.062 | 2.096 | 2.081 | 2.075 | 2.062 |
| **Ca** | 0.003 | 0.003 | 0.009 | - | - | - | - | - | - | 0.013 | - |
| **Na** | 0.066 | 0.070 | 0.040 | 0.044 | 0.041 | 0.046 | 0.043 | 0.049 | 0.044 | 0.044 | 0.032 |
| **Rb** | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| **K** | 0.008 | 0.012 | 0.001 | - | - | - | - | - | - | - | - |
| **Cs** | 0.001 | 0.001 | 0.001 | 0.002 | 0.001 | 0.002 | 0.002 | 0.001 | 0.001 | - | - |
| **$\Sigma Ch$** | 0.081 | 0.086 | 0.051 | 0.046 | 0.042 | 0.048 | 0.045 | 0.050 | 0.045 | 0.057 | 0.032 |

Analysis by ICP-MS, ICP-AES (Be), and AAS (Li); ' Additional sample; - Not detected; -- Not determined; * Analysis at IGME (Spain), rest in ActLabs (Canada).

**Table A2.** Trace element (except REE) contents (in ppm) of bulk beryl in pegmatites from the Velasco district. Heimann& Sardi, CanMin.

| | Sample | Sc | Li | V | Ba | Sr | Y | Cr | Co | Zn | Ga | Ge | Rb | Nb | Cs | Ta | Tl | Th |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yellow beryl** | **DR7-Y** | 2.0 | -- | 8.0 | 5.0 | 4.0 | - | - | 274 | 210 | 27 | 2.0 | 40 | 7.0 | 589 | 20.0 | - | 0.4 |
| | **DR8-Y** | 3.0 | -- | 7.0 | - | - | - | - | 323 | 260 | 28 | 1.0 | 45 | 6.0 | 648 | 18.6 | 0.2 | 0.6 |
| | **HI-Y** | 2.0 | -- | 7.0 | - | - | - | - | 266 | 160 | 31 | 1.0 | 33 | 10.0 | 535 | 16.8 | 0.2 | 6.0 |
| | **DR8*-Y** | - | 40.6 | 6.0 | 4.0 | - | 2.0 | - | 53 | 290 | 25 | 1.0 | 41 | 7.0 | 577 | 10.3 | 0.2 | 1.0 |
| | **Is*-Y** | 0.4 | 49.9 | 4.8 | 24.4 | 6.1 | 14.5 | 41.9 | 77 | 240 | 22 | 1.6 | 46 | 16.6 | 326 | 10.2 | 0.5 | 2.5 |
| | **MB*-Y** | 3.0 | 31.1 | 2.0 | 1.0 | 1.0 | 4.0 | 7.0 | 217 | 70 | - | - | 22 | 8.0 | - | - | - | - |
| | **LE*-Y** | 6.0 | 40.3 | 7.0 | 2.0 | 1.0 | 5.0 | 19.0 | 235 | 51 | - | - | 18 | 26.0 | - | - | - | - |
| | ***Min.*** | *0.4* | *31.1* | *2.0* | *1.0* | *1.0* | *2.0* | *7.0* | *53* | *51* | *22* | *1.0* | *18* | *6.0* | *326* | *10.2* | *0.2* | *0.4* |
| | ***Max.*** | *6.0* | *49.9* | *8.0* | *24.4* | *6.1* | *14.5* | *41.9* | *323* | *290* | *31* | *2.0* | *46* | *26.0* | *648* | *20.0* | *0.5* | *6.0* |
| | ***Avg.*** | *2.7* | *40.5* | *6.0* | *7.3* | *3.0* | *6.4* | *22.6* | *206* | *183* | *27* | *1.3* | *35.1* | *11.5* | *535* | *15.2* | *0.3* | *2.1* |
| **Green beryl** | **EB-G** | 2.0 | -- | 6.0 | - | - | - | - | 65 | 180 | 20 | | 26 | 2.0 | 370 | 4.8 | 0.1 | 0.1 |
| | **EB'-G** | 3.0 | -- | 6.0 | 5.0 | - | 2.0 | - | 143 | 130 | 22 | 1.0 | 26 | 2.0 | 336 | 7.8 | - | 0.4 |
| | **LE-G** | 21.0 | -- | 23.0 | - | 2.0 | 9.0 | - | 373 | 90 | 28 | 1.0 | 23 | 11.0 | 164 | 30.5 | - | 2.5 |
| | **EB*-G** | 1.5 | 25.5 | 3.3 | - | 1.1 | 2.5 | 67.1 | 42 | 142 | 23 | 1.5 | 30 | 4.0 | 505 | 4.8 | 1.0 | - |
| | **EB*'-G** | 1.2 | 22.5 | 3.5 | - | - | 8.0 | 40.6 | 50 | 176 | 20 | 1.4 | 25 | 3.9 | 352 | 6.7 | 0.9 | 1.9 |
| | **EB*''-G** | 1.4 | 27.1 | 3.0 | - | - | - | 45.0 | 78 | 132 | 22 | 2.0 | 23 | 2.3 | 519 | 4.7 | 0.4 | - |
| | **EB*'''-G** | 2.1 | 18.3 | 3.5 | - | - | - | 98.4 | 54 | 124 | 23 | 2.0 | 29 | 1.3 | 571 | 4.3 | 1.2 | - |
| | **ChN*-G** | 8.3 | 19.0 | - | 5.3 | 1.2 | 3.3 | 50.1 | 68 | 184 | 23 | 1.4 | 25 | 4.4 | 167 | 3.9 | 0.4 | 1.5 |
| | **ChN*'-G** | 7.3 | 18.4 | 1.9 | 6.3 | - | 2.5 | 64.8 | 45 | 197 | 22 | 1.3 | 30 | 1.3 | 131 | 6.3 | 0.8 | - |
| | **CV*-G** | 1.0 | -- | 1.0 | 1.0 | - | 14.0 | 13.0 | 202 | 126 | - | - | 19 | 7.0 | - | - | - | - |
| | **LE*-G** | 9.2 | 24.7 | 16.3 | 2.0 | 3.2 | 10.4 | 30.5 | 81 | 124 | 25 | 2.1 | 20 | - | 155 | 31.6 | 0.4 | 12.6 |
| | ***Min.*** | *1.2* | *18.3* | *1.0* | *1.0* | *1.1* | *2.0* | *13.0* | *42* | *90* | *20* | *1.0* | *19* | *1.3* | *131* | *3.9* | *0.1* | *0.1* |
| | ***Max.*** | *21.0* | *27.1* | *23.0* | *6.3* | *3.2* | *10.4* | *98.4* | *373* | *197* | *28* | *2.1* | *30* | *11.0* | *571* | *31.6* | *1.2* | *12.6* |
| | ***Avg.*** | *5.3* | *22.2* | *6.8* | *3.9* | *1.9* | *6.5* | *51.2* | *109* | *146* | *23* | *1.5* | *25* | *3.9* | *327* | *10.5* | *0.7* | *3.2* |
| **Aquamarine** | **EB-Aq** | 4.0 | -- | 7.0 | - | - | - | - | 244 | 120 | 24 | 1.0 | 31 | 3.0 | 514 | 13.9 | - | 0.1 |
| | **ChN-Aq** | 10.0 | -- | - | - | - | - | - | 68 | 190 | 22 | 1.0 | 21 | 1.0 | 120 | 5.0 | - | - |
| | **MB-Aq** | 5.0 | -- | - | - | - | - | - | 196 | 130 | 26 | 1.0 | 23 | 3.0 | 207 | 12.0 | - | 0.2 |
| | **HI-Aq** | - | -- | - | 3.0 | - | - | - | 119 | 340 | 23 | 1.0 | 20 | 2.0 | 478 | 6.2 | 0.1 | 0.1 |
| | **EP-Aq** | 3.0 | -- | 8.0 | - | - | - | - | 323 | 110 | 19 | 1.0 | 24 | 8.0 | 650 | 26.9 | - | - |
| | **EB*-Aq** | 1.0 | 72.2 | 2.0 | 1.0 | 1.0 | 11.0 | 21.0 | 400 | 63 | - | - | 17 | 8.0 | - | - | - | - |
| | **EP*-Aq** | - | 60.6 | 2.4 | - | - | - | 33.0 | 154 | 145 | 19 | 18.5 | 34 | 3.7 | 730 | 31.6 | 0.4 | 12.6 |
| | ***Min.*** | *1.0* | *60.6* | *2.0* | *1.0* | *1.0* | *11.0* | *21.0* | *68* | *63* | *19* | *1.0* | *17* | *1.0* | *120.0* | *5.0* | *0.1* | *0.1* |
| | ***Max.*** | *10.0* | *72.2* | *8.0* | *3.0* | *1.0* | *11.0* | *33.0* | *400* | *340* | *26* | *18.5* | *34* | *8.0* | *730* | *31.6* | *0.4* | *12.6* |
| | ***Avg.*** | *4.6* | *66.4* | *4.9* | *2.0* | *1.0* | *11.0* | *27.0* | *215* | *157* | *22* | *3.9* | *24* | *4.1* | *450* | *15.9* | *0.3* | *3.3* |

Notes: Analysis by ICP-MS, ICP-AES (Be), and AAS (Li); ' Additional sample; - Not detected; -- Not determined; * Determined at IGME (Spain), rest at ActLabs (Canada).

**Table A3. Rare earth element content (ppm) of bulk beryl in pegmatites from the Velasco district, Argentina. Sardi & Heimann, CanMin.**

| | Sample | La | Ce | Pr | Nd | Sm | Eu | Gd | Tb | Dy | Ho | Er | Tm | Yb | Lu | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yellow beryl** | **DR7-Y** | 0.8 | 0.8 | 0.14 | 0.5 | 0.1 | - | 0.1 | - | 0.2 | - | - | - | 0.10 | - | 2.74 |
| | **DR8-Y** | 0.6 | 0.5 | 0.08 | 0.3 | - | - | 0.2 | - | 0.2 | - | 0.10 | - | 0.20 | - | 2.18 |
| | **HI-Y** | 0.6 | 0.9 | 0.15 | 0.5 | 0.2 | - | 0.2 | - | 0.3 | - | 0.20 | 0.06 | 0.60 | 0.13 | 3.84 |
| | **DR8*-Y** | 0.1 | 0.5 | - | 0.2 | 0.1 | - | 0.2 | - | 0.5 | - | 0.30 | - | 0.50 | 0.09 | 2.49 |
| | ***Min.*** | *0.1* | *0.5* | *0.08* | *0.2* | *0.1* | - | *0.1* | - | *0.2* | - | *0.10* | *0.06* | *0.10* | *0.09* | *2.18* |
| | ***Max.*** | *0.8* | *0.9* | *0.15* | *0.5* | *0.2* | - | *0.2* | - | *0.5* | - | *0.30* | *0.06* | *0.60* | *0.13* | *3.84* |
| | ***Avg.*** | *0.5* | *0.7* | *0.12* | *0.4* | *0.1* | - | *0.2* | - | *0.3* | - | *0.22* | *0.06* | *0.35* | *0.11* | *2.81* |
| **Green beryl** | **EB-G** | 0.2 | 0.3 | - | 0.2 | - | - | - | - | 0.1 | - | - | - | - | - | 0.8 |
| | **EB'-G** | 0.2 | 0.5 | 0.06 | 0.3 | - | - | 0.2 | - | 0.2 | - | 0.20 | - | 0.30 | 0.05 | 2.01 |
| | **EB*-G** | 0.3 | 0.7 | 0.09 | 0.3 | 0.1 | 0.01 | 0.2 | 0.05 | 0.3 | 0.06 | 0.21 | 0.04 | 0.33 | 0.05 | 2.72 |
| | **EB*'-G** | 0.1 | 0.7 | 0.06 | 0.3 | 0.2 | 0.01 | 0.4 | 0.12 | 1.0 | 0.21 | 0.74 | 0.16 | 1.45 | 0.22 | 5.70 |
| | **EB*''-G** | 0.1 | 0.2 | 0.02 | 0.03 | 0.02 | - | 0.02 | 0.01 | 0.1 | 0.01 | 0.04 | 0.01 | 0.06 | 0.01 | 0.53 |
| | **EB*'''-G** | 0.2 | 0.3 | 0.04 | 0.1 | 0.04 | - | 0.05 | 0.01 | 0.1 | 0.02 | 0.05 | 0.01 | 0.06 | 0.01 | 0.94 |
| | **ChN*-G** | 0.6 | 1.3 | 0.16 | 0.5 | 0.2 | 0.03 | 0.2 | 0.05 | 0.3 | 0.06 | 0.18 | 0.03 | 0.23 | 0.03 | 3.80 |
| | **ChN*'-G** | 0.6 | 1.5 | 0.18 | 0.53 | 0.2 | - | 0.2 | 0.05 | 0.4 | 0.06 | 0.19 | 0.04 | 0.3 | 0.04 | 4.27 |
| | ***Min.*** | *0.1* | *0.2* | *0.02* | *0.03* | *0.02* | *0.01* | *0.02* | *0.01* | *0.5* | *0.01* | *0.04* | *0.01* | *0.06* | *0.01* | *0.53* |
| | ***Max.*** | *0.6* | *1.5* | *0.18* | *0.5* | *0.2* | *0.03* | *0.4* | *0.12* | *1.0* | *0.21* | *0.74* | *0.16* | *1.45* | *0.22* | *5.70* |
| | ***Avg.*** | *0.3* | *0.7* | *0.09* | *0.3* | *0.13* | *0.02* | *0.2* | *0.05* | *0.3* | *0.07* | *0.23* | *0.05* | *0.39* | *0.06* | *2. 60* |
| **Aquamarine** | **EB-Aq** | 0.2 | 0.4 | 0.06 | 0.1 | - | - | - | - | - | - | - | - | - | - | 0.76 |
| | **ChN-Aq** | 0.2 | 0.3 | | 0.1 | - | - | - | - | - | - | - | - | - | - | 0.6 |
| | **MB-Aq** | 0.3 | 0.5 | 0.06 | 0.3 | - | - | - | - | - | - | - | - | - | - | 1.16 |
| | **HI-Aq** | 0.4 | 0.3 | 0.05 | 0.2 | - | - | - | - | - | - | - | - | - | - | 0.95 |
| | **EP-Aq** | 0.2 | 0.3 | - | - | - | - | - | - | - | - | - | - | - | - | 0.5 |
| | **EP*-Aq** | 0.1 | 0.2 | 0.02 | 0.02 | 0.02 | - | 0.02 | - | 0.02 | - | 0.01 | - | 0.02 | - | 0.44 |
| | ***Min.*** | *0.1* | *0.2* | *0.02* | *0.02* | *0.02* | - | *0.02* | - | *0.02* | - | *0.01* | - | *0.02* | - | *0.44* |
| | ***Max.*** | *0.4* | *0.5* | *0.06* | *0.3* | *0.02* | - | *0.02* | - | *0.02* | - | *0.01* | - | *0.02* | - | *1.16* |
| | ***Avg.*** | *0.2* | *0.3* | *0.05* | *0.1* | *0.02* | - | *0.02* | - | *0.02* | - | *0.01* | - | *0.02* | - | *0.74* |

Note: Obtained by ICP-MS. The different number of significant figures for some elements is due to analyses made in different laboratories.
Normalizing values from McDonough & Sun (1995).