**Article title**

Genesis and new mineral chemistry data of carlosbarbosaite, a new potential U and Nb ore source from miarolitic-, A-type granites and NYF pegmatites of the La Chinchilla pluton, Velasco ranges, La Rioja, Argentina

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Chemical composition of beryl (electron microprobe analyses in oxide wt. %) and calculated mineral formulae from La Chinchilla micromiarolitic assemblages.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sample | 5310-Bryl 1 | 5310-Bryl 2 | 5310-Bryl 3 | 5309-Bryl 1 |
| SiO2 | 65.38 | 64.94 | 65.51 | 65.43 |
| TiO2 | 0.00 | 0.06 | 0.05 | 0.06 |
| Al2O3 | 16.61 | 16.79 | 16.76 | 18.17 |
| FeO | 2.80 | 2.70 | 2.71 | 1.00 |
| BeO\* | 13.30 | 13.26 | 13.34 | 13.56 |
| MnO | 0.08 | 0.05 | 0.06 | 0.00 |
| MgO | 0.02 | 0.08 | 0.03 | 0.01 |
| Na2O | 0.28 | 0.23 | 0.36 | 0.30 |
| K2O | 0.04 | 0.05 | 0.03 | 0.04 |
| Cs2O | b.d. | 0.02 | 0.03 | 0.10 |
| Total | 98.49 | 98.18 | 98.88 | 98.67 |
| Cation distribution on the basis of 18 O |
| Si | 6.041 | 6.020 | 6.031 | 5.984 |
| ∑*T1* | 6.041 | 6.020 | 6.031 | 5.984 |
| Be | 2.953 | 2.953 | 2.952 | 2.980 |
| Li\*\* | 0.047 | 0.047 | 0.048 | 0.020 |
| ∑*T2* | 3.000 | 3.000 | 3.000 | 3.000 |
| Al | 1.809 | 1.834 | 1.818 | 1.958 |
| Fe | 0.216 | 0.209 | 0.209 | 0.077 |
| Mn | 0.006 | 0.004 | 0.005 | 0.000 |
| Mg | 0.002 | 0.011 | 0.004 | 0.001 |
| Ti | 0.000 | 0.004 | 0.004 | 0.004 |
| ∑*O* | 2.033 | 2.063 | 2.039 | 2.040 |
| Na | 0.051 | 0.040 | 0.064 | 0.053 |
| K | 0.004 | 0.006 | 0.004 | 0.004 |
| Cs | 0.000 | 0.001 | 0.003 | 0.008 |
| ∑*C* | 0.055 | 0.048 | 0.070 | 0.065 |

\*BeO calculated by stoichiometry considering an ideal formula and using the measured values of SiO2 and Al2O3.

\*\*Li calculated as Li= 3-Be (Wang *et al*. 2009). T1: tetrahedral position 1; T2: tetrahedral position 2; O: octahedral position; C: channel; Ca, Cs, Cr and Cu: analyzed but not detected.

Average formula:

(Na0.05K0.01)∑0.06(Be2.96Li0.04)∑3(Al1.86Fe0.18Mn0.01Mg0.01)∑2.06Si6.02O18