Sphaerobertrandite  Be$_3$(SiO$_4$)(OH)$_2$

Crystal Data: Monoclinic.  Point Group: 2/m.  As spherulites, to 2 mm; crystals are flattened, prismatic, showing dominant {001}; as finely crystalline crusts.  Twinning: Pseudomerohedral.


Optical Class: Biaxial (-).  $\alpha = 1.597(3)$  $\beta = 1.607(4)$  $\gamma = 1.616(3)$  $2V$(meas.) = 70(20)°  $2V$(calc.) = 86.5°  Orientation: Z = c.  Pleochroism: Weak, yellowish to colorless.  Absorption: X > Z.

Cell Data: Space Group: P2$_1$/c.  $a = 5.082(2)$  $b = 4.640(2)$  $c = 17.696(8)$  $\beta = 106.13(3)$°  Z = 4

X-ray Powder Pattern: Sengischorr Mountain, Lovozero massif, Kola peninsula, Russia.  3.161 (100), 4.885 (90), 2.318 (90), 2.836 (70), 4.236 (62), 2.538 (55), 2.174 (55)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BeO</td>
<td>45.20</td>
<td>45.88</td>
<td>49.00</td>
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<tr>
<td>Al$_2$O$_3$</td>
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<td>Fe$_2$O$_3$</td>
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<tr>
<td>SiO$_2$</td>
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<td>38.46</td>
<td>39.23</td>
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<tr>
<td>H$_2$O$^+$</td>
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<td>12.54</td>
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<tr>
<td>H$_2$O$^-$</td>
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<tr>
<td>Total</td>
<td>99.70</td>
<td>96.88</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Mannepakhk Mountain, Lovozero, Kola peninsula, Russia.  (2) Sengischorr Mountain, Lovozero, Kola peninsula, Russia.  (3) Be$_3$(SiO$_4$)(OH)$_2$.

Occurrence: In schlieren-like pegmatite occurring in eudialyte lujavrite near the margin of poikilitic nepheline-sodalite syenites (Mannepakhk Mountain).  In greisen-like metasomatite developed after high-magnesia rocks (Hsianghualing).

Association: Epididymite, eudidymite, aegirine, mangan-neptunite (Lovozero massif); hambergite, analcime, chiavennite (Tvedalen); bromellite (Hsianghualing).

Distribution: From Mannepakhk and Sengischorr Mountains, Lovozero massif, Kola peninsula, Russia.  At Qeqertaussaq, northern coast of Kangerluarsuk fjord, Ilimaussaq complex, South Greenland.  In the western Tuften larvikite quarry, Tvedalen, Larvik, South Norway.  From Hsianghualing, Hunan Province, China.

Name: Alludes to the typical spherulitic morphology of its aggregates and its similarity to bertrandite in the main chemical constituents.
