Oyelite

**Crystal Data:** Triclinic. \( \text{Point Group}: \tilde{1} \). As lamellar to acicular crystals to 4 mm, in divergent fan-shaped aggregates or radial rosettes to 8 mm and clusters of aggregates to 12 mm.


\[ \text{D(meas.)} = 2.62 \quad \text{D(calc.)} = \text{n.d.} \]


**Optical Class:** Biaxial (+). \( \alpha = 1.602 \quad \beta = 1.606 \quad \gamma = 1.613 \) 2V(meas.) = n.d. 2V(calc.) = n.d.

**Cell Data:**
\[
\begin{align*}
& \alpha = 7.2557(5) \quad b = 10.7390(11) \quad c = 11.2399(8) \quad a = 89.432(7)° \\
& \beta = 89.198(6)° \quad \gamma = 72.097(8)° \\
\end{align*}
\]

\[ Z = 2 \]

**X-ray Powder Pattern:** Bazhenovskoe chrysotile asbestos deposit, Asbest, Central Urals, Russia. 2.917 (100), 10.22 (71), 2.812 (42), 3.031 (38), 4.921 (29), 3.067 (24), 3.409 (23)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CaO</td>
<td>42.29</td>
<td>42.83</td>
</tr>
<tr>
<td>B(_2)O(_3)</td>
<td>5.38</td>
<td>5.32</td>
</tr>
<tr>
<td>SiO(_2)</td>
<td>36.65</td>
<td>36.71</td>
</tr>
<tr>
<td>H(_2)O</td>
<td>[15.07]</td>
<td>15.14</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>99.39</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Bazhenovskoe deposit, Urals, Russia; average electron microprobe analysis supplemented by FTIR spectroscopy, H\(_2\)O calculated from structure; corresponds to Ca\(_4\)SiO\(_3\)B\(_2\)B\(_4\)O\(_7\)(OH)\(_4\)·4H\(_2\)O.

(2) Ca\(_3\)Si\(_2\)O\(_3\)(OH)\(_3\)·4H\(_2\)O.

**Occurrence:** A hydrothermal mineral in late-stage assemblages of several geological origins. At Crestmore and Fuka in classic calcic skarns, at Suisho-dani in rodingite embedded in serpentinite and at N’Chwaning in strata-bound manganese ores in metamorphosed volcanogenic-sedimentary rocks. At the Bazhenovskoe deposit in rodingite formed by low-grade metamorphism of gabbro dikes embedded in serpentinites.

**Association:** Tatarinovite, pectolite, xonotlite, calcite, grossular, diopside (Bazhenovskoe); charlesite, bultfonteinite, rhodochrosite, hausmannite (N’Chwaning II mine); bultfonteinite, scawtite, xonotlite, calcite (Fuka).

**Distribution:** Exceptional specimens from the N’Chwaning II mine, Kalahari Manganese Field, South Africa. At Crestmore quarries, Riverside County, California, USA. From the Bazhenovskoe chrysotile asbestos deposit, Asbest, Central Urals, Russia. In Japan at the Fuka Mine, Fuka, Bitchu-cho, Okayama Prefecture and at Suisho-dani, Ise City, Mie Prefecture.

**Name:** Honors Dr. Jiro Oye (1900-1968), Professor of Mineralogy, Okayama University, Okayama, Japan.

**Type Material:** National Science Museum, Tokyo, Japan (M23576); National Museum of Natural History, Washington, D.C., USA (148213).