**Zincomenite**

**ZnSeO$_3$**

**Crystal Data:** Orthorhombic. *Point Group:* $2lm 2lm 2lm$. As tabular, equant or prismatic crystals to 0.2 mm; also in dense crystal aggregates to 0.3 mm, chain-like groups to 0.35 mm, or as interrupted incrustations to 1 cm. Crystals display {101}, {010}, {100}, and {013}. *Twinning:* T-shaped twins have (012) as twin plane.


**Optical Properties:** Transparent. *Color:* Colorless; white or beige aggregates. *Streak:* White. *Luster:* Adamantine. *Optical Class:* Biaxial (-). $\alpha = 1.744(5)$ $\beta = 1.860(5)$ $\gamma = 1.875(5)$ $2V$(meas.) = Medium. $2V$(calc.) = 38°

**Cell Data:** *Space Group:* Pbca. $a = 7.1971(2)$ $b = 6.2320(2)$ $c = 11.9914(3)$ $Z = 8$

**X-ray Powder Pattern:** Great Tolbachik Fissure Eruption, Tolbachik Volcano, Kamchatka, Russia. 3.014 (100), 3.601 (77), 2.996 (56), 3.119 (48), 3.048 (38), 4.612 (26), 2.459 (23)

**Chemistry:**

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ZnO</td>
<td>42.53</td>
<td>42.31</td>
</tr>
<tr>
<td>SeO$_2$</td>
<td>56.67</td>
<td>57.69</td>
</tr>
<tr>
<td>Total</td>
<td>99.20</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Great Tolbachik Fissure Eruption, Tolbachik Volcano, Kamchatka, Russia; average of 5 electron microprobe analyses supplemented by IR spectroscopy; corresponding to Zn$_{1.02}$Se$_{0.99}$O$_3$.

(2) ZnSeO$_3$.

**Occurrence:** A sublimate around active fumaroles.

**Association:** Sellaite, fluorite, halite, anhydrite, cotunnite, sofiite, flinteite, anglesite, chubarovite, challacolloite, olsacherite, saltonseait, hollandite, bixbyte, jacobsessenite, sylvite, hematite, barite.

**Distribution:** From the First scoria cone, Northern Breakthrough, Great Tolbachik Fissure Eruption, Tolbachik Volcano, Kamchatka, Russia.

**Name:** An allusion to its chemical composition: zinc selenite (the Greek μηνάζ means *moon*, indicating selenium).

**Type Material:** A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (94377).

**References:**