

Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m. 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.

Physical Properties: *Cleavage:* None. *Tenacity:* Brittle. *Fracture:* Uneven. Hardness = n.d. D(meas.) = n.d. D(calc.) = 4.760

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:	(1)	(2)
ZnO	42.53	42.31
SeO ₂	56.67	57.69
Total	99.20	100.00

(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}O₃.
(2) ZnSeO₃.

Occurrence: A sublimate around active fumaroles.

Association: Sellaite, fluorite, halite, anhydrite, cotunnite, sofiite, flinteite, anglesite, chubarovite, challacolloite, olsacherite, saltonseait, hollandite, bixbyite, jacobssonite, 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 $\mu\eta\nu\alpha\zeta$ means *moon*, indicating selenium).

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

References: (1) Pekov, I.V., N.V. Zubkova, V.O. Yapaskurt, S.N. Britvin, N.V. Chukanov, I.S. Lykova, E.G. Sidorov, and D.Y. Pushcharovsky (2016) Zincomenite, ZnSeO₃, a new mineral from the Tolbachik volcano, Kamchatka, Russia. *Eur. J. Mineral.*, 28(5), 997-1004. (2) (2017) *Amer. Mineral.*, 102, 1570 (abs. ref. 1).