

**Crystal Data:** Orthorhombic. *Point Group:* 2/m 2/m 2/m. As tabular crystals to 0.04 mm and in masses to 0.13 mm.

**Physical Properties:** *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* Brittle. *Hardness =* n.d. *D(meas.) =* n.d. *D(calc.) =* 3.439

**Optical Properties:** Transparent. *Color:* Colorless to pale yellow. *Streak:* White.

*Luster:* Vitreous.

*Optical Class:* Biaxial (-).  $\alpha(\text{calc.}) = 1.645$   $\beta = 1.667(2)$   $\gamma = 1.674(2)$   $2V(\text{meas.}) = 58(10)^\circ$

**Cell Data:** Space Group: *Cmca*.  $a = 10.615(2)$   $b = 20.937(3)$   $c = 6.393(1)$   $Z = 4$

**X-ray Powder Pattern:** Second cinder cone, Tolbachik volcano, Russia. 2.824 (100), 2.922 (83), 2.735 (71), 5.47 (47), 4.84 (47), 10.37 (44), 3.07 (26)

Chemistry:	(1)	(2)
Na <sub>2</sub> O	7.71	8.59
K <sub>2</sub> O	6.91	6.53
As <sub>2</sub> O <sub>5</sub>	61.8	63.69
P <sub>2</sub> O <sub>5</sub>	0.70	
CuO	1.18	
Al <sub>2</sub> O <sub>3</sub>	18.23	22.19
Fe <sub>2</sub> O <sub>3</sub>	3.48	
ZnO	0.37	
Total	100.04	100.00

(1) Second cinder cone, Tolbachik volcano, Kamchatka Peninsula, Russia; average of 4 EDS analyses; corresponds to (Na<sub>1.82</sub>K<sub>1.08</sub>)<sub>Σ=2.90</sub>(Al<sub>2.62</sub>Fe<sub>0.32</sub>Cu<sub>0.12</sub>Zn<sub>0.02</sub>)<sub>Σ=3.08</sub>(As<sub>3.95</sub>P<sub>0.07</sub>)<sub>Σ=4.2</sub>O<sub>16</sub>.

(2) Na<sub>2</sub>KAl<sub>3</sub>(AsO<sub>4</sub>)<sub>4</sub>.

**Occurrence:** As sublimates on basaltic scoria near a volcanic fumarole vent (410-420 °C.).

**Association:** Ponomarevite, piypite, dolerophanite, euchlorine, sylvite, lammerite, johillerite, urusovite, bradaczekite, filatovite, hatertite, hematite, tenorite, wrightite.

**Distribution:** From the Second cinder cone, Tolbachik volcano, Kamchatka Peninsula, Russia.

**Name:** Honors the Russian scholar Dr. Nina Aleksandrovna Ozerova (1930-2012), for her contributions to geochemistry, geology, metallogeny, ecology and the eco-geochemistry of mercury.

**Type Material:** Mineralogical Museum, St. Petersburg State University, St. Petersburg, Russia (1/19655).

**References:** (1) Shablinskii, A.P., S.K. Filatov, L.P. Vergasova, E.Yu. Avdontseva, S.V. Moskaleva and A.V. Povolotskiy (2019) Ozerovaite, Na<sub>2</sub>KAl<sub>3</sub>(AsO<sub>4</sub>)<sub>4</sub>, new mineral species from Tolbachik volcano, Kamchatka peninsula, Russia. *Eur. J. Mineral.*, 31(1), 159-166. (2) (2019) *Amer. Mineral.*, 104(12), 1868-1869 (abs. ref. 1).