

**Crystal Data:** Monoclinic. *Point Group:* 2. Crystals, to 0.1 mm, form druses, spherulites, irregularly shaped grains, or microcrystalline masses.

**Physical Properties:** *Cleavage:* None. *Fracture:* Uneven. *Tenacity:* Brittle. *Hardness* = n.d. *D(meas.)* = n.d. *D(calc.)* = 2.937 Water-soluble and sensitive to air humidity. Transforms to kröhnkite on exposure to air at 87% relative humidity and 25 °C.

**Optical Properties:** Transparent to translucent. *Color:* Very light-blue or nearly white to sky-blue; light gray in transmitted light. *Streak:* White. *Luster:* Vitreous.  
*Optical Class:* Biaxial (+).  $\alpha = 1.517(2)$   $\beta = 1.531(2)$   $\gamma = 1.559(2)$   $2V(\text{meas.}) = \text{n.d.}$   
 $2V(\text{calc.}) = 71.6^\circ$

**Cell Data:** Space Group: *P2*<sub>1</sub>.  $a = 9.0109(5)$   $b = 15.6355(8)$   $c = 10.1507(5)$   $\beta = 107.079(2)^\circ$   $Z = 8$

**X-ray Powder Pattern:** Tolbachik volcano, Kamchatka, Russia.  
3.765 (100), 2.712 (98), 2.535 (65), 7.828 (60), 6.091 (50), 7.671 (47), 4.634 (46)

Chemistry:	(1)	(2)
Na <sub>2</sub> O	18.38	20.55
K <sub>2</sub> O	2.23	
CaO	0.16	
CuO	24.72	26.37
ZnO	0.78	
SO <sub>3</sub>	52.79	53.08
Total	99.05	100.00

(1) Tolbachik volcano, Kamchatka, Russia; average of 10 electron microprobe analyses; corresponds to (Na<sub>1.81</sub>K<sub>0.14</sub>Ca<sub>0.01</sub>) $\Sigma=1.96$ (Cu<sub>0.95</sub>Zn<sub>0.03</sub>) $\Sigma=0.98$ S<sub>2.01</sub>O<sub>8</sub>. (2) Na<sub>2</sub>Cu(SO<sub>4</sub>)<sub>2</sub>.

**Occurrence:** A sublimate from volcanic gases with temperature ~600 °C at a fumarole.

**Association:** Euchlorine, anhydrite, itelmenite, hermannjahnite, chalcocyanite, thénardite, apthitalite, hematite.

**Distribution:** From the Saranchinaitovaya fumarole, Naboko Scoria cone, Tolbachik volcano, Kamchatka, Far-Eastern Region, Russia.

**Name:** Honors Professor Galina M. *Saranchina* (1911-2004), St. Petersburg State University, Russia, for her distinguished teaching and scientific achievements in metamorphic petrology.

**Type Material:** Mineralogical Museum, St. Petersburg State University, St. Petersburg, Russia (19639).

**References:** (1) Siidra, O.I., E.A. Lukina, E.V. Nazarchuk, W. Depmeier, R.S. Bubnova, A.A. Agakhanov, E.Yu. Avdontseva, S.K. Filatov, and V.M. Kovrugin (2018) Saranchinaite, Na<sub>2</sub>Cu(SO<sub>4</sub>)<sub>2</sub>, a new exhalative mineral from Tolbachik volcano, Kamchatka, Russia, and a product of the reversible dehydration of kröhnkite, Na<sub>2</sub>Cu(SO<sub>4</sub>)<sub>2</sub>(H<sub>2</sub>O)<sub>2</sub>. *Mineral. Mag.*, 82(2), 257-274.  
(2) (2019) *Amer. Mineral.*, 104(4), 627-628 (abs. ref 1).