

**Crystal Data:** Monoclinic. *Point Group:* 2/m. As sprays of divergent tabular crystals to 100 μm flattened on {100}.

**Physical Properties:** *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. *Hardness:* = n.d. D(meas.) = n.d. D(calc.) = 2.406

**Optical Properties:** Transparent. *Color:* Colorless. *Streak:* White. *Luster:* n.d. *Optical Class:* Two optical axes. β = 1.45 Low birefringence. Nonpleochroic.

**Cell Data:** *Space Group:* P2<sub>1</sub>/c. a = 8.655 b = 9.652 c = 9.147 β = 108.76°

**X-ray Powder Pattern:** Tolbachik fissure eruption, Kamchatka Peninsula, Russia. 3.768 (100), 3.949 (87), 2.732 (70), 4.010 (53), 2.764 (49), 2.891 (42), 3.022 (22)

<b>Chemistry:</b>	(1)
Na <sub>2</sub> O	33.82
SO <sub>3</sub>	63.06
CuO	1.75
Total	98.63

(1) Tolbachik fissure eruption, Kamchatka Peninsula, Russia; average electron microprobe analysis; corresponds to (Na<sub>2.793</sub>Cu<sub>0.056</sub>)Σ=2.849HS<sub>2.016</sub>O<sub>8</sub>.

**Occurrence:** A sublimate at an active volcanic fumarole (Kamchatka); secondary in the post-mining oxidation zone of asphaltum-rich sandstone beds laced with uraninite and sulfides in a damp underground environment (Utah).

**Association:** Copiapite, ferrinatrite, metavoltine, römerite, seaborgite, gypsum (Utah).

**Distribution:** From a fumarole on the Naboko outburst, Tolbachik fissure eruption, Kamchatka Peninsula, Russia [TL]. At the Blue Lizard mine, Red Canyon, San Juan County, Utah, USA.

**Name:** After the Institute of Volcanology and Seismology, Far East Branch, Russian Academy of Sciences.

**Type Material:** Mineralogical Museum, St. Petersburg State University, Russia (1/19608).

**References:** (1) Filatov, S.K., G.A. Karpov, A.P. Shablinskii, S.V. Krivovichev, L.P. Vergasova, and A.V. Antonov (2016) Ivsite, Na<sub>3</sub>H(SO<sub>4</sub>)<sub>2</sub>, a new mineral from volcanic exhalations of fumaroles of the Fissure Tolbachik Eruption of the 50th anniversary of the Institute of Volcanology and Seismology, Far East Branch, Russian Academy of Sciences. *Doklady Earth Sciences* 468, 632-635. (2) Kampf, A.R., T.A. Olds, J. Plášil, J. Marty, S.N. Perry, L. Corcoran, and P.C. Burns (2021) Seaborgite, LiNa<sub>6</sub>K<sub>2</sub>(UO<sub>2</sub>)(SO<sub>4</sub>)<sub>5</sub>(SO<sub>3</sub>OH)(H<sub>2</sub>O), the first uranyl mineral containing lithium Amer. Mineral., 106, 105-111 [ivsite locality].