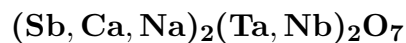


Stibiomicrolite



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Crystal Data: Cubic. *Point Group:* $4/m\bar{3}2/m$. Extremely fine grained.

Physical Properties: *Fracture:* [Uneven] (by analogy to the pyrochlore group).

Tenacity: [Brittle.] *Hardness* = < 5.5 *D(meas.)* = n.d. *D(calc.)* = 5.84–6.22

Optical Properties: Semitransparent. *Color:* Greenish white to white; gray in reflected light.

Streak: White.

Optical Class: Isotropic. $n = > 1.9$

Cell Data: *Space Group:* $Fd\bar{3}m$. $a = 10.455(2)$ $Z = 8$

X-ray Powder Pattern: Varuträsk pegmatite, Sweden.

3.01 (10), 3.14 (9), 6.03 (8), 1.575 (8), 2.61 (7), 1.846 (7), 2.010 (5)

Chemistry:

	(1)
Nb ₂ O ₅	17.54
Ta ₂ O ₅	52.65
Sb ₂ O ₃	19.24
CaO	6.78
Na ₂ O	2.58
Total	[98.79]

(1) Varuträsk pegmatite, Sweden; by electron microprobe, total Sb as Sb₂O₃, original total given as 98.80%; corresponds to (Sb_{0.71}Ca_{0.65}Na_{0.45})_{Σ=1.81}(Ta_{1.29}Nb_{0.71})_{Σ=2.00}O₇. (2) Odd West pegmatite, Canada; analysis not given, corresponds to (Ca_{0.71}Sb_{0.46}Na_{0.22}Fe_{0.04}Sn_{0.03})_{Σ=1.46}(Ta, Nb)₂O₇.

Mineral Group: Pyrochlore group, microlite subgroup; Sb_A > 20%; (Nb + Ta)_B > 2Ti_B; Ta_B ≥ Nb_B.

Occurrence: A very rare mineral, replacing stibiotantalite, in the lithium-rich albite unit of a complex granite pegmatite (Varuträsk pegmatite, Sweden).

Association: Stibiotantalite, antimony, allemontite, lithiophilite, alkalic beryl, cassiterite, columbite–tantalite, microlite (Varuträsk pegmatite, Sweden); cassiterite (Odd West pegmatite, Canada).

Distribution: In the Varuträsk pegmatite, 15 km northwest of Skellefteå, Västerbotten, Sweden. In the Odd West pegmatite, southeastern Manitoba, Canada.

Name: From the Latin for antimony, STIBIum, in its composition, and membership in the *microlite* subgroup of the pyrochlore group.

Type Material: Swedish Museum of Natural History, Stockholm, Sweden, 600200; University of Manitoba, Winnipeg, Canada, M6134.

References: (1) Groat, L.A., P Černý, and T.S. Ercit (1987) Reinstatement of stibiomicrolite as a valid species. *Geol. Fören. Förhandl.* Stockholm, 109, 105–109. (2) (1988) *Amer. Mineral.*, 73, 1499 (abs. ref. 1). (3) Palache, C., H. Berman, and C. Frondel (1944) *Dana's system of mineralogy*, (7th edition), v. I, 757 [hypothetical mineral].