

Crystal Data: Hexagonal. *Point Group:* 622. As crystals with square, rectangular, or hexagonal outlines, to 2 mm; may be included in microlite.

Physical Properties: Hardness = n.d. VHN = 970 (40 g load). D(meas.) = 7.46
D(calc.) = 7.40 Weak blue cathodoluminescence.

Optical Properties: Transparent. *Color:* Colorless. *Luster:* Adamantine.
Optical Class: Uniaxial.

R₁–R₂: (486) 16.9–16.3, (551) 17.0–16.6, (589) 17.1–16.7, (656) 18.2–18.0

Cell Data: *Space Group:* P6₃22. *a* = 6.245(3) *c* = 12.323(4) *Z* = 2

X-ray Powder Pattern: Mt. Vasin-Myl'k, Russia.
3.02 (10), 1.508 (10), 2.78 (9), 3.15 (7), 1.793 (7), 1.551 (7), 2.47 (6)

Chemistry:	(1)	(2)	(3)
Nb ₂ O ₅	2.84	6.54	
Ta ₂ O ₅	91.09	87.18	94.03
SnO ₂		0.55	
PbO		0.09	
CaO	6.05	5.51	5.97
Na ₂ O	0.05	0.47	
Total	100.03	100.34	100.00

(1) Mt. Vasin-Myl'k, Russia; corresponds to (Ca_{0.99}Na_{0.01})_{Σ=1.00}(Ta_{3.20}Nb_{0.80})_{Σ=4.00}O₁₁.

(2) Do.; by electron microprobe, corresponds to (Ca_{0.88}Na_{0.14})_{Σ=1.02}(Ta_{3.52}Nb_{0.44}Sn_{0.03})_{Σ=3.99}O_{10.90}. (3) CaTa₄O₁₁.

Occurrence: In the albite-spodumene zone of granite pegmatites.

Association: Microlite, scheelite, wodginite, apatite (Mt. Vasin-Myl'k, Russia); cassiterite, lithiotantite, microlite, thoreaulite, cesplumtantite (Manono pegmatite, Congo).

Distribution: From Mt. Vasin-Myl'k, Voron'i massif, Kola Peninsula, Russia. At Ungursai, eastern Kazakhstan. In the Manono pegmatite, Katanga Province, Congo (Shaba Province, Zaire).

Name: For CALCIum and TANTalum in the composition.

Type Material: Geology Museum, Kola Branch, Academy of Sciences, Apatity, 5702/1; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 81392.

References: (1) Voloshin, A.V., Y.A. Pakhomovskii, and F.M. Tyusheva (1982) Calciotantite, CaTa₄O₁₁, a new mineral from granitic pegmatites of the Kola Peninsula. *Mineral. Zhurnal*, 4(3), 75–79 (in Russian with English abs.). (2) (1983) *Amer. Mineral.*, 68, 471 (abs. ref. 1). (3) Voloshin, A.V., Y.A. Pakhomovskii, L.V. Bulgak, and G.A. Perlina (1985) Ungursaite [calciotantite] - a new tantalate of calcium and sodium from granitic pegmatites. *Mineral. Zhurnal*, 7(4), 88–94 (in Russian with English abs.). (4) Yamnova, N.A., D.Y. Pushcharovskii, and A.V. Voloshin (1988) Identity of ungursaite with calciotantite and synthetic CaTa₄O₁₁. *Kristallografiya (Sov. Phys. Crystal)*, 33, 845–847 (in Russian).