

Crystal Data: Hexagonal. *Point Group:* 3*m*. As tabular crystals or spherules, to 5 mm, showing {0001}, {000 $\bar{1}$ }, {01 $\bar{1}$ 1}, {10 $\bar{1}\bar{1}$ }, {10 $\bar{1}$ 2}, {01 $\bar{1}$ 2}, and {11 $\bar{2}$ 0}.

Physical Properties: *Cleavage:* {0001}, perfect; one rhombohedral, distinct.
Fracture: Hackly; conchoidal for spherules. *Tenacity:* Brittle. Hardness = 5.3 VHN = 472
D(meas.) = 6.48 D(calc.) = 6.51

Optical Properties: Transparent to translucent. *Color:* Colorless, cream-white, pale brown, yellowish brown, pale yellowish green. *Streak:* White. *Luster:* Adamantine to pearly.
Optical Class: Uniaxial (+); may be anomalously biaxial. *Dispersion:* $r > v$. $\omega = 2.476$
 $\epsilon = 2.485$ $2V(\text{meas.}) = 0^\circ\text{--}38^\circ$

Cell Data: *Space Group:* *R*3*m*. $a = 10.499$ $c = 11.553$ $Z = 9$

X-ray Powder Pattern: Tonghua, China.
3.100 (10), 3.028 (9), 1.760 (6), 2.160 (5), 1.621 (5), 1.919 (4), 1.745 (3)

Chemistry:	(1)	(2)	(3)
Nb ₂ O ₅	53.43	55.62	54.36
Ta ₂ O ₅	0.37		
TiO ₂	0.89	0.95	
Fe ₂ O ₃	0.42		
FeO	0.77	0.94	
PbO	44.12	41.51	45.64
Total	100.00	99.02	100.00

(1) Tonghua, China; corresponds to (Pb_{0.95}Fe_{0.05}²⁺)_{Σ=1.00}(Nb_{1.93}Ti_{0.05}Fe_{0.02}³⁺Ta_{0.01})_{Σ=2.01}O₆.

(2) Do.; by electron microprobe. (3) PbNb₂O₆.

Occurrence: In kaolinite-filled veins and cavities in a potassic granite.

Association: Kaolinite, quartz, potassic feldspar.

Distribution: From Changbai Mountain, Tonghua, southeastern Kirin Province, China.

Name: For Changbai Mountain, China, on which the mineral occurs.

Type Material: "Museum of Geology", location unstated [Beijing, China].

References: (1) Detachment No. 8, Comprehensive Geological Brigade of Tonghua Region and Petrology and Mineralogy Laboratory, Kirin Institute of Geological Science (1978) Changbaiite (PbNb₂O₆), a new mineral of lead and niobium from eastern Kirin, China. *Acta Geol. Sinica*, 1, 54–62 (in Chinese with English abs.). (2) (1979) *Amer. Mineral.*, 64, 242 (abs. ref. 1).