

Crystal Data: Monoclinic. *Point Group:* $2/m$. As a 2 mm patch of crystalline material on the surface of drill core; a minor component of powdery sublimates.

Physical Properties: Hardness = n.d. $D(\text{meas.}) = \text{n.d.}$ $D(\text{calc.}) = 1.932$ Deliquescent; soluble in H₂O.

Optical Properties: Semitransparent. *Color:* Green.
Optical Class: Biaxial (+) (synthetic). *Pleochroism:* Weak; $X = \text{greenish yellow}$; $Z = \text{green}$.
Orientation: $Y = b$; $X \wedge c = 8^\circ$. *Absorption:* $Z > X$. $\alpha = 1.590$ $\beta = 1.620$ $\gamma = 1.648$
 $2V(\text{meas.}) = \text{Very large}$.

Cell Data: *Space Group:* $I2/m$ (synthetic). $a = 8.786(2)$ $b = 7.076(2)$ $c = 6.625(2)$
 $\beta = 97.27(1)^\circ$ $Z = 2$

X-ray Powder Pattern: Synthetic. (ICDD 25-1044).
5.59 (100), 5.50 (40), 4.82 (35), 2.926 (35), 2.747 (30), 2.689 (20), 2.178 (20)

Chemistry: Natural material shown to contain nickel and chlorine, and to be identical with synthetic material by X-ray diffraction.

Occurrence: As an alteration product on the surface of drill core from an ultramafic intrusion containing low-grade nickel mineralization, formed after storage (Amos, Canada); as a volcanic sublimate (Mt. Shirane, Japan).

Association: Coalingite, paratacamite, pentlandite, awaruite, heazlewoodite (Amos, Canada); alunogen (Mt. Shirane, Japan).

Distribution: From the Dumont ultramafic intrusive, 27 km west of Amos, Quebec, Canada. On Mt. Shirane, Gumma Prefecture, Japan.

Name: As the compositional *nickel* analog of *bischofite*, with which it is, however, not isostructural.

Type Material: Canadian Geological Survey, Ottawa, Canada, 17980.

References: (1) Jambor, J.L. (1975) Secondary minerals in an ultramafic intrusion, Amos area, Quebec. Geol. Surv. Canada Paper 75-1A, 261–263. (2) Crook, W.W., III and J.L. Jambor (1979) Nickelbischofite, a new nickel chloride hydrate. Can. Mineral., 17, 107–109. (3) (1980) Amer. Mineral., 65, 207–208 (abs. ref. 2). (4) Peacor, D.R., W.B. Simmons, Jr., E.J. Essene, and E.W. Heinrich (1982) New data on and discreditation of “texasite,” “albrittonite,” “cuproartinite,” “cuprohydromagnesite,” and “yttromicrolite,” with corrected data on nickelbischofite, rowlandite, and yttrocrasite. Amer. Mineral., 67, 156–169. (5) (1974) NBS Mono. 25, 11, 42.