

Crystal Data: Hexagonal. *Point Group:* $\bar{3} 2/m, 3m$ or 32 . Crystals flattened || {0001}, to 1 mm, strongly deformed to produce lamellae, in massive aggregates.

Physical Properties: *Cleavage:* Perfect on {0001}. *Hardness* = n.d. *VHN* = 52–74, 63 average (25 g load). *D(meas.)* = n.d. *D(calc.)* = 7.94

Optical Properties: Opaque. *Color:* Steel-gray; white with a yellow tint in polished section. *Streak:* Black. *Luster:* Metallic. *Anisotropism:* Moderate, blue to bluish gray.

R₁–R₂: (400) —, (420) 41.0–43.0, (440) 44.6–46.1, (460) 46.5–47.8, (480) 47.7–48.8, (500) 48.3–49.5, (520) 48.7–50.0, (540) 49.0–50.3, (560) 49.1–50.4, (580) 49.1–50.4, (600) 49.2–50.5, (620) 49.3–50.6, (640) 49.4–50.8, (660) 49.4–50.8, (680) 49.4–50.8, (700) 49.4–50.8

Cell Data: *Space Group:* $R\bar{3}m, R3m$, or $R32$. *a* = 4.183(4) *c* = 29.12(8) *Z* = 3

X-ray Powder Pattern: Otish Mountains deposit, Canada. 3.074 (10), 2.090 (8), 2.267 (7), 4.85 (6), 3.584 (6), 9.71 (5), 2.133 (5)

Chemistry:	(1)	(2)
Bi	60.85	59.41
Cu	0.19	
Pb	0.14	
Se	22.46	22.45
Te	15.68	18.14
S	0.58	
Total	99.90	100.00

(1) Otish Mountains deposit, Canada; by electron microprobe, average of six analyses; corresponding to $(\text{Bi}_{2.07}\text{Cu}_{0.02}\text{Pb}_{0.01})_{\Sigma=2.10}\text{Se}_{2.02}(\text{Te}_{0.87}\text{S}_{0.13})_{\Sigma=1.00}$. (2) Bi₂Se₂Te.

Mineral Group: Tetradymite group.

Occurrence: In a vein-type uranium deposit with other tellurides and selenides.

Association: Watkinsonite, součekite, clausthalite, chalcopyrite, Au–Ag alloy.

Distribution: From the Otish Mountains uranium deposit, Quebec, Canada [TL].

Name: To honor Professor George Skippen (1936–), Canadian geologist, Carleton University, Ottawa, Canada.

Type Material: n.d.

References: (1) Johan, Z., P. Picot, and F. Ruhlmann (1987) The ore mineralogy of the Otish Mountains uranium deposit, Quebec: skippenite, Bi₂Se₂Te, and watkinsonite, Cu₂PbBi₄(Se, S)₈, two new mineral species. *Can. Mineral.*, 25, 625–637. (2) (1989) *Amer. Mineral.*, 74, 947 (abs. ref. 1). (3) Nakajima, S. (1963) The crystal structure of Bi₂Te_{3–x}Se_x. *J. Phys. Chem. Solids*, 24, 479–485. [str??must]