Skippenite

Crystal Data: Hexagonal. Point Group: 32/m, 3m or 3. Crystals flattened \parallel \{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


R₁–R₂: (400) — , (420) 41.0–43.0, (440) 44.6–46.1, (460) 46.5–47.8, (480) 47.7–48.8, (500) 49.3–50.6, (520) 49.4–50.8, (600) 49.4–50.8, (640) 49.4–50.8, (680) 49.4–50.8, (700) 49.4–50.8

Cell Data: Space Group: R\overline{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:

\[
\begin{array}{c|cc}
 & (1) & (2) \\
\hline
\text{Bi} & 60.85 & 59.41 \\
\text{Cu} & 0.19 & \\
\text{Pb} & 0.14 & \\
\text{Se} & 22.46 & 22.46 \\
\text{Te} & 15.68 & 18.14 \\
\text{S} & 0.58 & \\
\hline
\text{Total} & 99.90 & 100.00 \\
\end{array}
\]

(1) Otish Mountains deposit, Canada; by electron microprobe, average of six analyses; corresponding to \((\text{Bi}^{2+}\text{Cu}^{0.02}\text{Pb}^{0.01})\Sigma=2\text{Se}^{2.02}(\text{Te}^{0.87}\text{S}^{0.13})\Sigma=1.00\). (2) \(\text{Bi}_2\text{Se}_2\text{Te}\).

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.