

Crystal Data: Monoclinic. *Point Group:* 2/m. As crystals, to 0.1 mm, in spherical and mammillary aggregates and crusts. *Twining:* According to an unknown law, common.

Physical Properties: *Cleavage:* On {010}, indistinct. *Fracture:* Subconchoidal. Hardness = 4–5 D(meas.) = n.d. D(calc.) = [6.69]

Optical Properties: Transparent to translucent. *Color:* White to pale yellow, may be zoned. *Luster:* Vitreous to adamantine.

Optical Class: Biaxial (+). *Dispersion:* $r > v$, distinct. $\alpha = 2.05(6)$ $\beta = 2.06(7)$ $\gamma = 2.09(6)$
2V(meas.) = 58.0(6)° 2V(calc.) = 61°

Cell Data: *Space Group:* [P2₁/c] (by analogy to atelestite). $a = 6.954(2)$ $b = 7.494(4)$
 $c = 10.869(6)$ $\beta = 107.00(6)^\circ$ $Z = 4$

X-ray Powder Pattern: Smrkovec, Czech Republic.

3.254 (100), 3.271 (51), 3.145 (34), 2.727 (29), 4.268 (17), 1.885 (16), 2.544 (14)

Chemistry:

	(1)	(2)
P ₂ O ₅	12.74	13.00
As ₂ O ₅	0.17	
V ₂ O ₅	0.03	
SiO ₂	0.02	
Bi ₂ O ₃	85.16	85.35
H ₂ O	[1.65]	1.65
Total	[99.77]	100.00

(1) Smrkovec, Czech Republic; by electron microprobe, average of five analyses, H₂O calculated for stoichiometry; corresponds to Bi_{2.01}O_{1.00}[(PO₄)_{0.98}(AsO₄)_{0.01}]_{Σ=0.99}(OH)_{1.00}.

(2) Bi₂O(PO₄)(OH).

Occurrence: A rare secondary mineral formed by weathering, found in old mine dumps at an Ag–Bi–As–U deposit.

Association: Quartz, atelestite, bismutite, bismutoferrite, eulytite, metatorbernite, petitjeanite, preisingerite, pucherite, retgersite, sillénite.

Distribution: From near Smrkovec, Slavkovský Les Mountains, about 10 km north-northeast of Mariánské Lázně (Marienbad), Czech Republic.

Name: For its first-noted occurrence near Smrkovec, Czech Republic.

Type Material: National Museum, Prague, Czech Republic, P1N84596.

References: (1) Řídkošil, T., J. Sejkora, and V. Šrein (1996) Smrkovec, monoclinic Bi₂O(OH)(PO₄), a new mineral of the atelestite group. Neues Jahrb. Mineral., Monatsh., 97–102.
(2) (1996) Amer. Mineral., 81, 1283–1284 (abs. ref. 1).