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**Crystal Data:** Monoclinic. *Point Group:* 2/m. As crystals, to 0.1 mm, in spherical and mammillary aggregates and crusts. *Twinning:* 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.  $\alpha = 2.05(6)$   $\beta = 2.06(7)$   $\gamma = 2.09(6)$   $2V(\text{meas.}) = 58.0(6)^{\circ}$   $2V(\text{calc.}) = 61^{\circ}$ 

**Cell Data:** Space Group:  $[P2_1/c]$  (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)
$P_2O_5$	12.74	13.00
$As_2O_5$	0.17	
$V_2O_5$	0.03	
$SiO_2$	0.02	
$Bi_2O_3$	85.16	85.35
$H_2O$	[1.65]	1.65
Total	[99.77]	100.00

(1) Smrkovec, Czech Republic; by electron microprobe, average of five analyses,  $H_2O$  calculated for stoichiometry; corresponds to  $Bi_{2.01}O_{1.00}[(PO_4)_{0.98}(AsO_4)_{0.01}]_{\Sigma=0.99}(OH)_{1.00}$ . (2)  $Bi_2O(PO_4)(OH)$ .

**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) Smrkovecite, monoclinic  $Bi_2O(OH)(PO_4)$ , a new mineral of the atelestite group. Neues Jahrb. Mineral., Monatsh., 97–102. (2) (1996) Amer. Mineral., 81, 1283–1284 (abs. ref. 1).