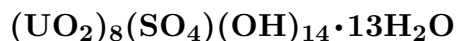


Jáchymovite

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Crystal Data: Monoclinic. *Point Group:* $2/m$ or 2 . As crusts of acicular crystals, to 0.1 mm.

Physical Properties: *Cleavage:* On $\{010\}$, very good. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = n.d. $D(\text{meas.}) = \text{n.d.}$ $D(\text{calc.}) = 4.79$ Radioactive; fluoresces yellow under SW and LW UV.

Optical Properties: Translucent. *Color:* Yellow. *Streak:* Pale yellow. *Luster:* Vitreous. *Optical Class:* Biaxial (-). *Pleochroism:* $Y = \text{pale yellow}$; $Z = \text{yellow}$. $\alpha = 1.715(2)$
 $\beta = 1.718(2)$ $\gamma = 1.720(2)$ $2V(\text{meas.}) = \text{n.d.}$ $2V(\text{calc.}) = 78^\circ$

Cell Data: *Space Group:* $P2_1/m$ or $P2_1$. $a = 18.553(8)$ $b = 9.276(2)$ $c = 13.532(7)$
 $\beta = 125.56(2)^\circ$ $Z = 2$

X-ray Powder Pattern: Jáchymov, Czech Republic.
7.56 (100), 7.13 (48), 3.771 (34), 3.554 (20), 3.206 (13), 3.234 (10), 2.052 (8)

Chemistry:	(1)	(2)
SO ₃	2.79	2.93
UO ₃	84.20	83.86
H ₂ O	13.32	13.21
Total	100.31	100.00

(1) Jáchymov, Czech Republic; H₂O by TGA, corresponds to $(\text{UO}_2)_{8.01}(\text{SO}_4)_{0.95}(\text{OH})_{14.12} \cdot 13.06\text{H}_2\text{O}$. (2) $(\text{UO}_2)_8(\text{SO}_4)(\text{OH})_{14} \cdot 13\text{H}_2\text{O}$.

Occurrence: Found on a museum specimen from the heavily oxidized portions of a uraninite-bearing vein in dolomite.

Association: Gypsum, uranopilite, uraninite.

Distribution: From Jáchymov (Joachimsthal), Czech Republic.

Name: For the uranium deposit at Jáchymov, Czech Republic, where the specimen was collected.

Type Material: Natural History Museum, Prague, Czech Republic, P1N-68905.

References: (1) Čejka, J., J. Sejkora, Z. Mrázek, Z. Urbanec, and T. Jarchovský (1996) Jáchymovite, $(\text{UO}_2)_8(\text{SO}_4)(\text{OH})_{14} \cdot 13\text{H}_2\text{O}$, a new uranyl mineral from Jáchymov, the Krušné hory Mts., Czech Republic, and its comparison with uranopilite. *Neues Jahrb. Mineral., Abh.*, 170, 155–170. (2) (1997) *Amer. Mineral.*, 82, 207–208 (abs. ref. 1).