Meta-uranopilite $(UO_2)_6(SO_4)(OH)_{10}\cdot 5H_2O$

Crystal Data: Orthorhombic (?). *Point Group:* n.d. Needlelike to lathlike crystals.

Physical Properties: Hardness = n.d. D(meas.) = n.d. D(calc.) = n.d. Radioactive; fluoresces yellowish green under UV.

Optical Properties: Semitransparent. *Color:* Grayish yellow with a brownish tint. *Optical Class:* Biaxial (–). *Orientation:* $X = b$; $Y = c$; $Z = a$. $\alpha = 1.72$ $\beta = 1.76$ $\gamma = 1.76$ 2V(meas.) = n.d.

Cell Data: *Space Group:* n.d. Z = n.d.

X-ray Powder Pattern: n.d.

Chemistry:

	(1)	(2)
SO_3	4.17	4.05
UO_3	82.40	86.83
Fe_2O_3	2.03	
H_2O	9.40	9.12
Total	98.00	100.00

(1) Jáchymov, Czech Republic; Fe_2O_3 probably "limonite". (2) $(UO_2)_6(SO_4)(OH)_{10}\cdot 5H_2O$.

Occurrence: On a museum specimen from a uranium-bearing hydrothermal ore deposit [may = jáchymovite].

Association: Uranopilite.

Distribution: From Jáchymov (Joachimsthal), Czech Republic.

Name: From the Greek *meta*, for a lower hydrate, and its relation to *uranopilite*.

Type Material: National Museum, Prague, Czech Republic, listed but cannot be located.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 582–583. (2) Frondel, C. (1952) Studies of uranium minerals (X): uranopilite. Amer. Mineral., 37, 950–959. (3) Ondruš, P., F. Veselovský, J. Hloušek, R. Skála, I. Vavřín, J. Frýda, J. Čejka, and A. Gabašová (1997) Secondary minerals of the Jáchymov (Joachimsthal) ore district. J. Czech Geol. Soc., 42(4), 3–76, esp. 35–36.