

**Crystal Data:** Monoclinic. *Point Group:*  $2/m$ . As prismatic crystals, elongated along [001] and flattened on {010}, with a few other forms, to 1.5 mm; radial, foliated, columnar.

**Physical Properties:** *Cleavage:* Perfect on {010}, poor on {100}. *Tenacity:* Flexible. Hardness = 1 D(meas.) = 2.57–2.73 D(calc.) = 2.57

**Optical Properties:** Transparent. *Color:* White; colorless in transmitted light.

*Luster:* Resinous to waxy, pearly on cleavages.

*Optical Class:* Biaxial (+). *Orientation:*  $X = b$ ;  $Z \wedge c = 31^\circ$ .  $\alpha = 1.563$   $\beta = 1.571$

$\gamma = 1.596$   $2V(\text{meas.}) = 60^\circ$

**Cell Data:** *Space Group:*  $C2/m$ .  $a = 10.26(2)$   $b = 13.44(2)$   $c = 4.74(1)$   $\beta = 104.9(1)^\circ$   
 $Z = 2$

**X-ray Powder Pattern:** Băița (Rézbánya), Romania.

6.692 (100), 3.005 (50), 2.712 (50), 3.217 (30), 2.779 (30), 2.734 (30), 1.692 (25)

**Chemistry:**

	(1)	(2)
$\text{As}_2\text{O}_5$	46.33	46.45
MgO	25.54	24.43
$\text{H}_2\text{O}$	29.07	29.12
Total	100.94	100.00

(1) “Banat, Hungary” [probably Oravița or Csiklova, Romania]. (2)  $\text{Mg}_3(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}$ .

**Polymorphism & Series:** Forms a series with erythrite.

**Mineral Group:** Vivianite group.

**Occurrence:** In limestone blocks, thermally metamorphosed, in a volcanic tuff (Fiano, Italy).

**Association:** Fluorborite, fluorite, hydromagnesite (Fiano, Italy).

**Distribution:** In Romania, from Oravița (Oravicza), Băița (Rézbánya), and Săcărîmb (Nagyág). At Jáchymov (Joachimsthal), Czech Republic. From Glatschach and Hirt, Carinthia, Austria. In Germany, in the Bauhaus district, Richelsdorf Mountains, Hesse. From Långban, Värmland, Sweden. At Fiano, near Naples, Italy. From Huercal-Overa, Almería Province, Spain. In the USA, at the Kalkar quarry, Santa Cruz, Santa Cruz Co., California; in a cave in Peach Springs Canyon, Mohave Co., Arizona; at the White Caps mine, Manhattan district, Nye Co., Nevada. From the Córrego do Urucum pegmatite, near Galiléia, Minas Gerais, Brazil.

**Name:** Honors Moritz Hörnes (1815–1868), Curator of the Imperial Cabinet, Vienna, Austria.

**Type Material:** Natural History Museum, Vienna, Austria, A.a.415.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana’s system of mineralogy, (7th edition), v. II, 755–756. (2) Koritnig, S. and P. Süssé (1966) Gitterkonstanten und Raumgruppe des Hörnesit,  $\text{Mg}_3[\text{AsO}_4]_2 \cdot 8\text{H}_2\text{O}$ . Neues Jahrb. Mineral., Monatsh., 349–351 (in German with English abs.).