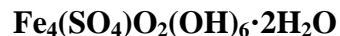


**Volaschioite**

**Crystal Data:** Monoclinic. *Point Group:*  $2/m$ . As radial clusters of bladed crystals to 0.1 mm, elongated along [010].

**Physical Properties:** *Cleavage:* Perfect on {100}. *Fracture:* n.d. *Tenacity:* Brittle.  
Hardness = n.d. D(meas.) = n.d. D(calc.) = 3.03

**Optical Properties:** Transparent. *Color:* Yellowish-orange. *Streak:* Orange.  
*Luster:* Vitreous to resinous.  
*Optical Class:* n.d.  $n > 1.68$  *Pleochroism:* Strong; red [010], yellowish-orange (010).

**Cell Data:** *Space Group:*  $C2/m$ .  $a = 18.068(4)$   $b = 3.058(1)$   $c = 10.929(2)$   $\beta = 93.82(3)^\circ$   
 $Z = 2$

**X-ray Powder Pattern:** Fornovolasco, Apuan Alps, Tuscany, Italy.  
8.03 (s), 4.37 (m), 3.989 (m), 3.343 (mw), 2.633 (mw), 3.028 (w), 2.73 (w)

<b>Chemistry:</b>	(1)	(2)
Fe <sub>2</sub> O <sub>3</sub>	63.33	65.24
SO <sub>3</sub>	14.07	16.36
<u>H<sub>2</sub>O</u>	<u>17.18</u>	<u>18.40</u>
Total	94.58	100.00

(1) Fornovolasco, Apuan Alps, Tuscany, Italy; average of 11 electron microprobe analyses, H<sub>2</sub>O and OH calculated from structure analysis; corresponding to Fe<sub>4.16</sub>(SO<sub>4</sub>)<sub>0.92</sub>O<sub>2.32</sub>(OH)<sub>6</sub>·2H<sub>2</sub>O.

(2) Fe<sub>4</sub>(SO<sub>4</sub>)O<sub>2</sub>(OH)<sub>6</sub>·2H<sub>2</sub>O.

**Occurrence:** An oxidation product of pyrite in tunnels through a magnetite-pyrite deposit.

**Association:** Pyrite, fibroferrite, goethite, melanterite, römerite.

**Distribution:** Cava del Ferro mining complex, Fornovolasco, Apuan Alps, Tuscany, Italy.

**Name:** Derived from the ancient name for the first known locality, believed to be derived from *forno* (furnace) and *Volaschio* (a locally significant proper noun).

**Type Material:** Museum of Natural History, University of Pisa, Italy; 19300.

**References:** (1) Biagioni, C., E. Bonnacorsi, and P. Orlandi (2011) Volaschioite, Fe<sub>4</sub>(SO<sub>4</sub>)O<sub>2</sub>(OH)<sub>6</sub>·2H<sub>2</sub>O, a new mineral species from Fornovolasco, Apuan Alps, Tuscany, Italy. *Canadian Mineralogist*, 49, 605-614. (2) (2013) *Amer. Mineral.*, 98, 813-814 (abs. ref. 1).