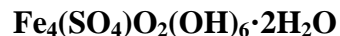


Volaschioite

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)

Chemistry:	(1)	(2)
Fe ₂ O ₃	63.33	65.24
SO ₃	14.07	16.36
<u>H₂O</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, H₂O and OH calculated from structure analysis; corresponding to Fe_{4.16}(SO₄)_{0.92}O_{2.32}(OH)₆·2H₂O.

(2) Fe₄(SO₄)O₂(OH)₆·2H₂O.

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, Fe₄(SO₄)O₂(OH)₆·2H₂O, 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).