

**Montetrisaite**

**Crystal Data:** Orthorhombic. *Point Group:* *mm*2. Crystals, acicular along [100], to 0.2 mm, tabular on {001} and striated on {010}.

**Physical Properties:** *Cleavage:* Distinct on {001}. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = 2-3 D(meas.) = n.d. D(calc.) = 3.023

**Optical Properties:** Transparent. *Color:* Blue. *Streak:* n.d. *Luster:* Vitreous. *Optical Class:* Biaxial.  $\alpha = 1.584$   $\gamma = 1.65$  *Orientation:*  $X = a$ ;  $Z = b$ . *Pleochroism:*  $X = \text{blue}$ ;  $Y = \text{very pale blue}$ .

**Cell Data:** *Space Group:* *Cmc*2<sub>1</sub>.  $a = 2.989(2)$   $b = 16.970(5)$   $c = 14.812(4)$   $Z = 2$

**X-ray Powder Pattern:** Monte Trisa, Torrebelticino, Vicenza, Italy. 7.45 (100), 3.73 (35), 1.595 (20), 2.788 (18), 2.503 (14), 2.341 (9), 2.166 (9)

|                       |              |
|-----------------------|--------------|
| <b>Chemistry:</b>     | (1)          |
| CuO                   | 71.66        |
| ZnO                   | 0.33         |
| PbO                   | 0.11         |
| SO <sub>3</sub>       | 11.17        |
| <u>H<sub>2</sub>O</u> | <u>19.00</u> |
| Total                 | 102.27       |

(1) Monte Trisa, Torrebelticino, Vicenza, Italy; average of 5 electron microprobe analyses, H<sub>2</sub>O calculated from structure analysis, corresponding to Cu<sub>5.97</sub>Zn<sub>0.03</sub>(SO<sub>4</sub>)<sub>0.93</sub>(OH)<sub>10.00</sub>·2H<sub>2</sub>O.

**Occurrence:** A secondary mineral formed near oxidizing sulfide minerals.

**Association:** Kaolinite, galena, sphalerite, chalcopyrite, cerussite, anglesite, goethite, langite, posnjakite, linarite, redgillite.

**Distribution:** Mining concession Lombardo, near the Veneziana mine, Monte Trisa, Torrebelticino, Vicenza, Italy.

**Name:** For the first described locality, Monte Trisa, Italy.

**Type Material:** Museo di Storia Naturale e del Territorio of the University of Pisa at Calci, Pisa, Italy (catalog no. 18900).

**References:** (1) Orlandi P., and E. Bonaccorsi (2009) Montetrisaite, a new hydroxy-hydrated copper sulfate species from Monte Trisa, Vicenza, Italy. *Can. Mineral.*, 47, 143–151. (2) (2009) *Amer. Mineral.*, 94, 1498-1499 (abs. ref. 1).