Montetrisaite $Cu_6(SO_4)(OH)_{10}\cdot 2H_2O$

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* = blue; *Y* = very pale blue.

Cell Data: *Space Group*: $Cmc2_1$. $a = 2.989(2)$ $b = 16.970(5)$ $c = 14.812(4)$ $Z = 2$

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

Chemistry:

	(1)
CuO	71.66
ZnO	0.33
PbO	0.11
SO_3	11.17
H_2O	19.00
Total	102.27

(1) Monte Trisa, Torrebelvicino, Vicenza, Italy; average of 5 electron microprobe analyses, H_2O calculated from structure analysis, corresponding to $Cu_{5.97}Zn_{0.03}(SO_4)_{0.93}(OH)_{10.00}\cdot 2H_2O$.

Occurrence: A secondary mineral formed near oxidizing sulfide minerals.

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

Distribution: Mining concesson Lombardo, near the Veneziana mine, Monte Trisa, Torrebelvicino, 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).