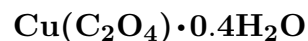


# Moolooite



©2001-2005 Mineral Data Publishing, version 1

**Crystal Data:** Orthorhombic. *Point Group:* n.d. Crystallites are lathlike or prismatic, to 4  $\mu\text{m}$ , in microconcretions.

**Physical Properties:** Hardness = n.d.  $D(\text{meas.}) = \text{n.d.}$   $D(\text{calc.}) = 3.43$

**Optical Properties:** Semitransparent. *Color:* Turquoise green, green, blue. *Luster:* Dull to waxy.

*Optical Class:* Biaxial. *Orientation:*  $X \parallel$  elongation;  $Z \perp$  elongation.  $\alpha = 1.57$   $\beta = [1.77]$   
 $\gamma = 1.95$   $2V(\text{meas.}) = \text{n.d.}$

**Cell Data:** *Space Group:* n.d.  $a = 5.35$  (by analogy to synthetic  $\text{Cu}(\text{C}_2\text{O}_4) \cdot 0.1\text{H}_2\text{O}$ .  
 $b = 5.63$   $c = 2.56$   $Z = 1$

**X-ray Powder Pattern:** Mooloo Station, Australia.  
3.88 (100), 2.50 (30), 1.753 (30), 2.31 (25), 1.787 (25), 2.14 (20), 2.33 (18)

## Chemistry:

|                               |         |
|-------------------------------|---------|
|                               | (1)     |
| SiO <sub>2</sub>              | [6.35]  |
| CuO                           | [46.7]  |
| C <sub>2</sub> O <sub>3</sub> | 42.3    |
| H <sub>2</sub> O              | 4.65    |
| Total                         | [100.0] |

(1) Mooloo Station, Australia; CHN analyzer gave C 14.10% and H 0.52% and a positive test for oxalate was obtained; calculating CuO for stoichiometry and assuming SiO<sub>2</sub> by difference, corresponds to  $\text{Cu}(\text{C}_2\text{O}_4) \cdot 0.44\text{H}_2\text{O}$ .

**Occurrence:** On an outcrop of quartz, thought to have formed by reaction between bird guano and soluble secondary copper minerals (Mooloo Station, Australia); in a mine shaft near tree roots (Sainte-Marie-aux-Mines, France).

**Association:** Opaline silica, sampleite, libethenite, brochantite, antlerite, atacamite, whewellite, chalcocopyrite, digenite, covellite, gypsum, barite, jarosite (Mooloo Station, Australia).

**Distribution:** From Mooloo Station, 12 km east of the homestead, Murchison, Western Australia. At Sainte-Marie-aux-Mines, Haut-Rhin, France.

**Name:** For the original locality on Mooloo Station, Australia.

**Type Material:** Western Australian Museum, Perth, Australia, MDC6738.

**References:** (1) Clarke, R.M. and I.R. Williams (1986) Moolooite, a naturally occurring hydrated copper oxalate from Western Australia. *Mineral. Mag.*, 50, 295–298. (2) (1987) *Amer. Mineral.*, 72, 1025–1026 (abs. ref. 1).