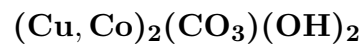


Kolwezite

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Crystal Data: Triclinic. *Point Group:* $\bar{1}$ or 1. In spherical aggregates, to 1 cm, and microcrystalline crusts.

Physical Properties: Hardness = ~ 4 D(meas.) = 3.97(1) D(calc.) = 3.94

Optical Properties: Semitransparent. *Color:* Blackish brown to pale beige, greenish. *Streak:* Beige.

Optical Class: Biaxial. $\alpha = 1.688(2)$ $\beta = \text{n.d.}$ $\gamma = 1.90$ $2V(\text{meas.}) = \text{n.d.}$

Cell Data: *Space Group:* $P\bar{1}$ or $P1$. $a = 9.50$ $b = 12.15$ $c = 3.189$ $\alpha = 93.32^\circ$
 $\beta = 90.74^\circ$ $\gamma = 91.47^\circ$ $Z = 4$

X-ray Powder Pattern: Musonoi mine, Congo.
3.69 (100), 6.08 (80), 5.08 (80), 2.599 (70), 3.02 (40), 2.958 (40), 2.531 (40)

Chemistry:	(1)
	CO ₂ 19.44
	CoO 22.98
	CuO 48.40
	<u>H₂O 8.78</u>
	Total 99.60

(1) Musonoi mine, Congo; by X-ray fluorescence, CO₂ by gas evolution, CO₂ + H₂O by TGA; corresponding to $(\text{Cu}_{1.33}\text{Co}_{0.67})_{\Sigma=2.00}(\text{CO}_3)_{0.98}(\text{OH})_{2.07}$.

Mineral Group: Rosasite group.

Occurrence: An uncommon secondary mineral in the oxidation zone of some Cu–Co hydrothermal ore deposits.

Association: Cobaltian malachite, cobaltian dolomite, heterogenite.

Distribution: From the Musonoi and Kamoto Cu–Co mines, near Kolwezi, and the Mupine, and Mashamba West mines, Katanga Province, Congo (Shaba Province, Zaire).

Name: For its occurrence at Kolwezi, Congo.

Type Material: Royal Museum of Central Africa, Tervuren, Belgium, RMG12975; National Museum of Natural History, Washington, D.C., USA, R17228.

References: (1) Deliens, M. and P. Piret (1980) La kolwézite, un hydroxycarbonate de cuivre et de cobalt analogue à la glaukosphaerite et à la rosasite. Bull. Minéral., 103, 179–184 (in French with English abs.). (2) (1980) Amer. Mineral., 65, 1067 (abs. ref. 1).