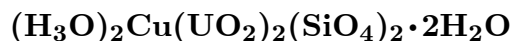


Cuprosklodowskite



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Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As needles, to 3 cm, commonly somewhat flattened on {010} and elongated along [100]. In radiating groups of crystals, matted fibers, and thin crusts.

Physical Properties: *Cleavage:* {100}. Hardness = n.d. D(meas.) = 3.85(2) D(calc.) = 3.83 Radioactive.

Optical Properties: Transparent to translucent. *Color:* Yellowish green to grass-green or greenish yellow. *Luster:* Dull to silky in aggregates.

Optical Class: Biaxial (-). *Pleochroism:* X = nearly colorless; Y = Z = yellowish green.

Orientation: X = a; Y = c; Z = b. *Dispersion:* $r > v$. $\alpha = 1.654\text{--}1.655$ $\beta = 1.664\text{--}1.667$ $\gamma = 1.664\text{--}1.667$ 2V(meas.) = Very small to 0°.

Cell Data: *Space Group:* $P\bar{1}$. $a = 7.052(5)$ $b = 9.267(8)$ $c = 6.655(5)$ $\alpha = 109^\circ 14(3)'$ $\beta = 89^\circ 50(3)'$ $\gamma = 110^\circ 1(4)'$ $Z = 1$

X-ray Powder Pattern: Jáchymov, Czech Republic.

8.18 (100), 4.09 (90), 2.97 (80), 4.82 (70), 3.52 (60), 2.21 (60), 2.72 (50)

Chemistry:

	(1)	(2)	(3)
SiO ₂	14.4	13.40	13.94
UO ₃	64.7	64.96	66.38
CuO	9.0	8.99	9.23
H ₂ O	12.1	11.72	10.45
Total	100.2	99.07	100.00

(1) Shaba Province, Congo; Fe₂O₃ trace. (2) Jáchymov, Czech Republic; Fe₂O₃, PbO, and CaO in traces. (3) (H₃O)₂Cu(UO₂)₂(SiO₄)₂•2H₂O.

Occurrence: A secondary mineral formed by alteration of earlier uranium minerals, both *in situ* and after transport of solutions.

Association: Becquerelite, brochantite, uranophane, kasolite, vandenbrandeite, liebigite, uranophane-beta, compregnacite.

Distribution: In Congo (Zaire), from Katanga (Shaba) Province, at Kambove and Kalongwe, with exceptional specimens from Shinkolobwe and the Musonoi mine, Kolwezi. From Jáchymov (Joachimsthal), Czech Republic. At Johanngeorgenstadt, Saxony, Germany. From West Wheal Owles and the Geevor mine, St. Just, Cornwall, England. In the Rabéjac uranium deposit, seven km south-southwest of Lodève, Hérault, France. In the USA, in New Mexico, from the Sanostee area, San Juan Co., in the Woodrow mine, Laguna district, Valencia Co., and in the Grants district, McKinley Co.; in Utah, in the Frey No. 4 mine, Frey Canyon, the Posey mine, Red Canyon, and the Happy Jack mine, White Canyon, San Juan Co.; in California, on the Ram claims, Pinto Mountains, Riverside Co. In Canada, from the Nicholson mine, Lake Athabasca, Saskatchewan. At Kenzan, Okayama Prefecture, Japan.

Name: A name supplied by Buttgenbach while introducing Vaes' paper, in the mistaken belief that it was the copper analog of *sklodowskite*.

Type Material: University of Liège, Liège, Belgium, 16.655.

References: (1) Vaes, J.P. (1933) Sur un minéral de Kalongwe (Katanga). Ann. Soc. Geol. Belg., Bull. 10, 56, 331–332 (in French). (2) (1934) Amer. Mineral., 19, 235 (abs. ref. 1). (3) Frondel, C. (1958) Systematic mineralogy of uranium and thorium. U.S. Geol. Sur. Bull. 1064, 304–307. (4) Bariand, P., M.T. Le Bihan, and Y. Gillet (1967) Étude cristallographique de la cuprosklodowskite. Bull. Soc. fr. Minéral., 90, 259 (in French). (5) Rosenzweig, A. and R.S. Ryan (1975) Refinement of the crystal structure of cuprosklodowskite, Cu[(UO₂)₂(SiO₃OH)₂]•6H₂O. Amer. Mineral., 60, 448–453. (6) Stohl, F.V. and D.K. Smith (1981) The crystal chemistry of the uranyl silicate minerals. Amer. Mineral., 66, 610–625.

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