

Swamboite**U⁶⁺H₆(UO₂)₆(SiO₄)₆•30H₂O**

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Crystal Data: Monoclinic. *Point Group:* 2/m. As acicular crystals elongated || [010], to ~1 mm, showing {001} and $\{\bar{2}01\}$; in nodular fibrous aggregates.

Physical Properties: *Cleavage:* $\{\bar{2}01\}$, good. Hardness = n.d. D(meas.) = 4.0
D(calc.) = 4.064 Radioactive.

Optical Properties: Transparent. *Color:* Deep to very pale yellow; in transmitted light, colorless to yellow.

Optical Class: Biaxial (-). *Pleochroism:* X = colorless; Y = Z = light yellow. *Orientation:* X \simeq a; Y \simeq b; Z \wedge c = 13°. *Dispersion:* r > v, strong. $\alpha = 1.640$ $\beta = 1.661$ $\gamma = 1.663$
2V(meas.) = 30° 2V(calc.) = 34°

Cell Data: *Space Group:* P2₁/a. a = 17.64(3) b = 21.00(5) c = 20.12(4) $\beta = 103.4(2)^\circ$
Z = 18

X-ray Powder Pattern: Swambo, Congo.

8.67 (100), 4.75 (80), 4.32 (80), 3.51 (60), 2.979 (60b), 5.85 (50), 4.49 (50)

Chemistry:

	(1)	(2)
SiO ₂	12.73	13.42
UO ₃	67.43	74.51
H ₂ O ⁺	19.93	12.07
Total	100.09	100.00

(1) Swambo, Congo; by electron microprobe, average of six analyses, H₂O by TGA.

(2) UH₆(UO₂)₆(SiO₄)₆•30H₂O.

Occurrence: A secondary mineral formed during the weathering of uranium deposits.

Association: Soddyite, gypsum, curite (Swambo, Congo).

Distribution: From the uranium deposit of Swambo, about 36 km west of Shinkolobwe, Katanga Province, Congo (Shaba Province, Zaire). In the USA, at the Jomac mine, White Canyon district, San Juan Co., Utah.

Name: For the occurrence at Swambo, Congo (Zaire).

Type Material: Royal Museum of Central Africa, Tervuren, Belgium, RGM13690.

References: (1) Deliens, M. and P. Piret (1981) La swamboïte, nouveau silicate d'uranium hydraté du Shaba, Zaïre. Can. Mineral., 19, 553–557 (in French with English abs.). (2) (1983) Amer. Mineral., 68, 1250 (abs. ref. 1).