Metavanuralite $Al(UO_2)_2(V_2O_8)(OH)\cdot 8H_2O$

Crystal Data: Triclinic. *Point Group:* $\overline{1}$ or 1. As multiply terminated prismatic crystals, dominated by {001} and {100}, pseudomorphous after vanuralite. *Twinning:* On {001}.

Physical Properties: *Cleavage:* Perfect on {001}. Hardness = n.d. D(meas.) = n.d. D(calc.) = n.d. Radioactive.

Optical Properties: Semitransparent. *Color:* Yellow to greenish yellow. *Optical Class:* Biaxial. α = n.d. β = n.d. γ = n.d. 2V(meas.) = n.d.

Cell Data: *Space Group:* $P\overline{1}$ or $P1$. $a = 10.46(3)$ $b = 8.44(3)$ $c = 10.43(3)$ $\alpha = 75°53(20)'$ $\beta = 102°50(20)'$ $\gamma = 90°0(20)'$ Z = 2

X-ray Powder Pattern: Mounana mine, Gabon.
9.92 (FFF), 4.174 (FF), 3.153 (FF), 4.086 (F), 3.240 (F), 3.073 (F), 5.10 (mF)

Chemistry:

	(1)	(2)
UO_3	59.63	59.71
V_2O_5	18.61	18.99
Al_2O_3	5.30	5.32
H_2O	16.20	15.98
Total	99.74	100.00

(1) Mounana mine, Gabon; by colorimetric analysis, H_2O by the Penfield method.
(2) $Al(UO_2)_2(V_2O_8)(OH)\cdot 8H_2O$.

Occurrence: In the oxidized zone of a lead-bearing U–V deposit, formed as a reversible dehydration product of vanuralite.

Association: Vanuralite.

Distribution: From the Mounana uranium mine, Franceville, Gabon.

Name: The prefix *meta* indicates the dehydration product of *vanuralite*.

Type Material: National School of Mines, Paris, France; National Museum of Natural History, Washington, D.C., USA, 165404, R16486.

References: (1) Cesbron, F. (1970) Nouvelles données sur la vanuralite. Existence de la méta-vanuralite. Bull. Minéral., 93, 242–248 (in French with English abs.). (2) (1971) Amer. Mineral., 56, 637 (abs. ref. 1).