

Crystal Data: Triclinic. *Point Group:* $\bar{1}$ or 1. As multiply terminated prismatic crystals, dominated by {001} and {100}, pseudomorphous after vanuralite. *Twining:* 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:* $P\bar{1}$ or $P1$. $a = 10.46(3)$ $b = 8.44(3)$ $c = 10.43(3)$
 $\alpha = 75^\circ 53(20)'$ $\beta = 102^\circ 50(20)'$ $\gamma = 90^\circ 0(20)'$ $Z = 2$

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 ₂ O ₅ | 18.61 | 18.99 |
| Al ₂ O ₃ | 5.30 | 5.32 |
| H ₂ O | 16.20 | 15.98 |
| Total | 99.74 | 100.00 |

(1) Mounana mine, Gabon; by colorimetric analysis, H₂O by the Penfield method.

(2) Al(UO₂)₂(V₂O₈)(OH)•8H₂O.

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).