

Crystal Data: Monoclinic. *Point Group:* 2/m. Rare crystals, to 4 mm, elongated along [010], with prominent {100}, {001}, smaller {011}, {110}, {111}, {1̄11}, {1̄13}; may form branching aggregates. *Twinning:* Composition plane {001}.

Physical Properties: *Cleavage:* Perfect on {001}. Hardness = ~2 D(meas.) = 3.62 D(calc.) = 3.16 Radioactive.

Optical Properties: Translucent. *Color:* Citron-yellow, canary-yellow, pale yellow. *Optical Class:* Biaxial (-); some optical properties quoted here may be those of metavanuralite. *Pleochroism:* Strong; X = colorless; Y = Z = yellow. *Orientation:* Z = b; X ≈ c; Y ≈ a. *Dispersion:* r < v, weak. α = 1.65 β = 1.85 γ = 1.90 2V(meas.) = 44° 2V(calc.) = 46°

Cell Data: *Space Group:* A2₁/a. a = 10.55(3) b = 8.44(3) c = 24.52(5) β = 103°(20)' Z = 4

X-ray Powder Pattern: Mounana mine, Gabon.
11.98 (FFF), 5.98 (FF), 3.975 (Fd), 3.231 (F), 3.180 (F), 5.14 (mF), 6.53 (mf)

Chemistry:	(1)	(2)
UO ₃	59.03	56.52
V ₂ O ₅	17.74	17.97
Al ₂ O ₃	5.05	5.04
H ₂ O	18.40	20.47
Total	100.22	100.00

(1) Mounana mine, Gabon; corresponds to Al_{1.02}(UO₂)_{2.11}(V₂O₈)(OH)·10.48H₂O.

(2) Al(UO₂)₂(V₂O₈)(OH)·11H₂O.

Occurrence: In the oxidized zone of a lead-bearing U–V deposit (Mounana mine, Gabon).

Association: Metavanuralite, francevillite, curienite, duttonite, chervetite, brackebuschite, mottramite, carnotite, dewindtite, torbernite, uranopilite, johannite, kasolite.

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

Name: For VANadium, URanium, and ALuminum in the composition.

Type Material: National School of Mines, Paris, France; The Natural History Museum, London, England.

References: (1) Branche, G., P. Bariand, F. Chantret, R. Pouget, and A. Rimsky (1963) La vanuralite, nouveau minéral uranifère. *Compt. Rendus Acad. Sci. Paris*, 256, 5374–5376 (in French). (2) (1963) *Amer. Mineral.*, 48, 1415–1416 (abs. ref. 1). (3) Cesbron, F. (1970) Nouvelles données sur la vanuralite. Existence de la méta-vanuralite. *Bull. Minéral.*, 93, 242–248 (in French with English abs.).