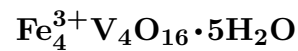


Fervanite



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Crystal Data: Monoclinic (probable). *Point Group:* n.d. Crystals fibrous, elongated along [001] and flattened on {010}, to 0.5 cm, in parallel aggregates.

Physical Properties: Hardness = n.d. D(meas.) = 3.28 D(calc.) = n.d.

Optical Properties: Transparent. *Color:* Golden brown, yellow-brown, pale green.

Luster: Brilliant.

Optical Class: Biaxial (-). *Orientation:* Extinction inclined to length of fibers. $\alpha = 2.186(5)$
 $\beta = 2.222(5)$ $\gamma = 2.224(5)$ $2V(\text{meas.}) = \text{Very small.}$

Cell Data: *Space Group:* n.d. $a = 9.02(1)$ $b = \text{n.d.}$ $c = 6.65(3)$ $\beta = 103^\circ 20'(20)'$
 $Z = \text{n.d.}$

X-ray Powder Pattern: Mounana mine, Gabon.

8.79 (FFF), 6.45 (FF), 3.22 (F), 3.15 (mF), 2.99 (mf), 2.93 (mf), 3.29 (ff)

Chemistry:

| | (1) | (2) |
|--------------------------------|----------|--------|
| V ₂ O ₅ | 46.10 | 47.04 |
| Fe ₂ O ₃ | 41.89 | 41.31 |
| H ₂ O ⁻ | 12.01 | 11.65 |
| Total | [100.00] | 100.00 |

(1) Gypsum Valley, Colorado, USA; recalculated to 100% after deduction of gypsum 7.34%, insoluble 9.40%. (2) Fe₄V₄O₁₆•5H₂O.

Occurrence: As an impregnation in sandstone (Colorado Plateau-type U–V deposits).

Association: Hewettite, metaheiwettite, carnotite, steigerite, tyuyamunite, gypsum, other vanadium oxides (Colorado Plateau deposits); hewettite, duttonite, schoderite, metaschoderite, straczekite (Wilson Springs, Arkansas, USA).

Distribution: In the USA, from an unspecified locality in Gypsum Valley [later noted from the Tiny mine], San Miguel Co., on Polar Mesa, Gateway district, La Sal Mountains, Grand Co., at the Hummer mine, Bull Canyon area, Paradox Valley, and from the Fox mine, Uravan district, Montrose Co., Colorado; in the Monument No. 2 mine, Monument Valley, Apache Co., Arizona; in the Gold Quarry mine, near Carlin, Maggie Creek district, Eureka Co., Nevada; and in the Wilson Springs (Potash Sulphur Springs) mine, Garland Co., Arkansas. At the Mounana uranium mine, Gabon.

Name: Named for its content of FERric iron and VANadium.

Type Material: Harvard University, Cambridge, Massachusetts, 91457; National Museum of Natural History, Washington, D.C., USA, 96420, 96421, 97874.

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