Orthominasragrite

Crystal Data: Orthorhombic. Point Group: 2/m 2/m 2/m. Irregular grains, to 200 μm, in crusts and efflorescences.

Physical Properties: Hardness = ∼1 D(meas.) = n.d. D(calc.) = 2.00 Readily dissolves in H₂O.

Optical Class: Biaxial (+), pseudouniaxial (+). Orientation: X = b; Y = c; Z = a.

Cell Data: Space Group: Pmn₂₁. a = 7.242(1) b = 9.319(2) c = 6.192(1) Z = 2

Chemistry: (1) (2)
SO₃  31.97  31.64
VO₂  33.88  32.77
H₂O  [36.30]  35.59
Total [102.15] 100.00

(1) Temple Mountain, Utah, USA; by electron microprobe, H₂O from crystal-structure analysis; corresponds to V₁,₀¹O₁,₀₀(S₀,₉₉O₄)•₅H₂O. (2) VO(SO₄)•₅H₂O.

Polymorphism & Series: Dimorphous with minasragrite.

Occurrence: In a silicified tree, formed as an oxidation product of pyrite reacting with vanadium-rich organic material.

Association: Minasragrite, pyrite, szomolnokite, kornelite, ferricopiapite, rozenite, montroiseite, sulfur.

Distribution: From the [North Mesa No. 5 mine,] North Mesa mine group, Temple Mountain district, Emery County, Utah, USA.

Name: As the ORTHOrhombic polymorph of minasragrite.

Type Material: Canadian Museum of Nature, Ottawa, 83269; Canadian Geological Survey, Ottawa, Canada.