

Crystal Data: Monoclinic. *Point Group:* 2/m. Crystals, to 0.6 mm, slightly elongated along [010], showing poorly developed {001}, {101}, {100}, {201}, {110}; commonly equidimensional granular.

Physical Properties: *Cleavage:* Perfect on {001}, {100}; distinct on {110}.
Fracture: Subconchoidal to uneven. *Tenacity:* Very brittle. Hardness = 2.5–3 D(meas.) = 2.88
 D(calc.) = 2.891 Soluble in H₂O, with separation of Fe(OH)₃ from a weakly acid solution.

Optical Properties: Transparent. *Color:* Very pale purplish pink; colorless in transmitted light. *Streak:* White to pale yellow. *Luster:* Vitreous to nearly adamantine.
Optical Class: Biaxial (-). *Orientation:* Z = b; X ∧ c = 6°. *Dispersion:* r > v, strong, horizontal. α = 1.593(2) β = 1.684(2) γ = 1.698(1) 2V(meas.) = 30.5°

Cell Data: *Space Group:* C2/m. a = 8.152(5) b = 5.153(4) c = 7.877(5) β = 94.90(7)°
 Z = 2

X-ray Powder Pattern: Jerome, Arizona, USA.
 2.97 (100), 7.85 (90), 3.87 (80), 2.394 (80), 3.73 (75), 2.842 (75), 3.49 (60)

Chemistry:	(1)	(2)
SO ₃	55.84	55.78
Al ₂ O ₃	0.11	
Fe ₂ O ₃	27.82	27.81
FeO	0.07	
MgO	0.08	
Na ₂ O	0.62	
K ₂ O	15.46	16.41
Total	[100.00]	100.00

(1) Jerome, Arizona, USA; recalculated to 100% from an original total of 99.94% after deduction of H₂O⁻ 0.14% and SiO₂ + insoluble 0.26%; corresponds to (K_{0.93}Na_{0.06})_{Σ=0.99}(Fe_{1.00}Mg_{0.01})_{Σ=1.01}(SO₄)_{2.00}. (2) KFe(SO₄)₂.

Occurrence: In the fire zone of a pyritic orebody, formed under fumarolic conditions.

Association: Voltaite, sulfur, jarosite.

Distribution: From the open pit at the United Verde mine, Jerome, Yavapai Co., Arizona, USA.

Name: For the Yavapai Indian tribe who inhabit the region around Jerome, Arizona, USA.

Type Material: n.d.

References: (1) Hutton, C.O. (1959) Yavapaiite, an anhydrous potassium, ferric sulphate from Jerome, Arizona. *Amer. Mineral.*, 44, 1105–1114. (2) Graeber, E.J. and A. Rosenzweig (1971) The crystal structures of yavapaiite, KFe(SO₄)₂, and goldichite, KFe(SO₄)₂•4H₂O. *Amer. Mineral.*, 56, 1917–1933. (3) Anthony, J.W., W.J. McLean, and R.B. Laughon (1972) The crystal structure of yavapaiite: a discussion. *Amer. Mineral.*, 57, 1546–1549.