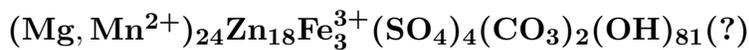


Hauckite



©2001-2005 Mineral Data Publishing, version 1

Crystal Data: Hexagonal. *Point Group:* 6/m 2/m 2/m. As hexagonal crystals, extremely flattened on {0001}, with {01 $\bar{1}$ 0} and {0001}, to 1 mm; as almost spherical to imperfect rosettes.

Physical Properties: *Cleavage:* On {0001}, perfect. *Tenacity:* Brittle. *Hardness* = 2–3
D(meas.) = 3.02, thought low due to adhering air bubbles. D(calc.) = 3.10

Optical Properties: Semitransparent. *Color:* Bright orange to pale yellow. *Streak:* Yellow to pale yellow. *Luster:* Vitreous to slightly pearly.

Optical Class: Uniaxial (+). *Pleochroism:* *O* = golden brown; *E* = pale yellow.

Absorption: *O* > *E*. $\omega = 1.630(2)$ $\epsilon = 1.638(2)$

Cell Data: *Space Group:* 6/mmm (Laue symmetry). $a = 9.17(4)$ $c = 30.21(9)$ $Z = [1]$

X-ray Powder Pattern: Sterling Hill, New Jersey, USA.

3.96 (100), 7.8 (90), 4.57 (60), 3.02 (60), 5.02 (50), 3.78 (50), 1.748 (30)

Chemistry:

	(1)
SO ₃	7.4
CO ₂	[2.1]
Al ₂ O ₃	0.5
Fe ₂ O ₃	6.0
MnO	17.1
ZnO	36.0
MgO	13.2
H ₂ O	[17.7]
Total	[100.0]

(1) Sterling Hill, New Jersey, USA; by electron microprobe, total Fe as Fe₂O₃, confirmed by microchemical test, total Mn as MnO, CO₂ and H₂O calculated for stoichiometry; corresponds to (Mg_{13.5}Mn_{9.9}Fe_{0.5}²⁺Zn_{0.2})_{Σ=24.1}Zn_{18.0}(Fe_{2.6}³⁺Al_{0.4})_{Σ=3.0}(SO₄)_{3.8}(CO₃)_{2.0}(OH)_{80.8}.

Occurrence: Very rare, found in several different parageneses in a metamorphosed stratiform zinc orebody.

Association: Mooreite, phlogopite, calcite; sussexite, pyrochroite, zincite; chlorophoenicite, calcite;

Distribution: From Sterling Hill, Ogdensburg, Sussex Co., New Jersey, USA.

Name: To honor Richard Philip Hauck (1935–), mineral collector of Bloomfield, New Jersey, USA, for his contributions to preserving scientifically significant specimens from Franklin and Sterling Hill, New Jersey, USA.

Type Material: Royal Ontario Museum, Toronto, Canada, M35860; American Museum of Natural History, New York City, New York, T45495; Harvard University, Cambridge, Massachusetts, 126591; National Museum of Natural History, Washington, D.C., USA, 142854, 164107.

References: (1) Dunn, P.J., D.R. Peacor, and B.D. Sturman (1980) Hauckite, Fe₃³⁺(Mg, Mn)₂₄Zn₁₈(SO₄)₄(CO₃)₂(OH)₈₁, a new mineral from Sterling Hill, New Jersey. *Amer. Mineral.*, 65, 192–195.