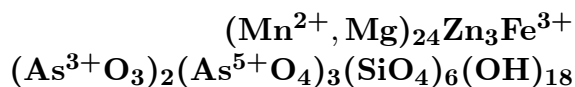


Kraisslite

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Crystal Data: Hexagonal. *Point Group:* $6/m\ 2/m\ 2/m$. As thin, curved, compact foliated scales and coarse plates, to 1 cm; in sprays; in veinlets and lenses.

Physical Properties: *Cleavage:* Perfect on {0001}. *Tenacity:* Brittle. Hardness = 3–4
D(meas.) = 3.876 D(calc.) = 3.918

Optical Properties: Translucent. *Color:* Deep coppery brown; rich brown in thin section.
Streak: Golden brown. *Luster:* Submetallic.

Optical Class: Uniaxial (+). $\omega = 1.805(2)$ $\epsilon = \text{n.d.}$; weak birefringence.

Cell Data: *Space Group:* $P6_322$. $a = 8.22(1)$ $c = 43.88(5)$ $Z = 2$

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

2.74 (100), 2.437 (55), 2.194 (55), 4.385 (45), 3.651 (35), 3.13 (20), 1.219 (7)

Chemistry:

	(1)	(2)
SiO ₂	13.8	12.9
Al ₂ O ₃	0.21	0.2
Fe ₂ O ₃		2.0
As ₂ O ₃	0.87	6.69
As ₂ O ₅	17.7	10.35
FeO	1.92	
MnO	51.6	52.0
ZnO	8.47	8.6
MgO	2.53	2.6
H ₂ O	3.68	[3.68]
Total	100.78	[99.02]

(1) Sterling Hill, New Jersey, USA. (2) Do.; by electron microprobe and other chemical tests; average of five analyses, excepting As₂O₃ and As₂O₅ which are averages of three; H₂O from (1); corresponds to $(\text{Mn}_{21.96}\text{Mg}_{1.90})_{\Sigma=23.86}\text{Zn}_{3.16}\text{Fe}_{0.74}^{3+}(\text{As}^{3+}\text{O}_3)_{2.02}(\text{As}^{5+}\text{O}_4)_{2.70}(\text{SiO}_4)_{6.44}(\text{OH})_{18}$.

Occurrence: In the zincite zone, as films and lenses in fractures, probably of secondary origin, in a metamorphosed stratiform zinc deposit.

Association: Zincite, willemite, franklinite, calcite, pyrochroite, barite, sphalerite, rhodochrosite, adelite, holdenite.

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

Name: For Frederick Kraissl, Jr. (1899–1986) and Alice L. Kraissl (1905–1986), of Hackensack, New Jersey, USA, American amateur mineralogists who specialized in Franklin and Sterling Hill minerals.

Type Material: National Museum of Natural History, Washington, D.C., USA, 137017, 137018.

References: (1) Moore, P.B. and J. Ito (1978) Kraisslite, a new platy arsenosilicate from Sterling Hill, New Jersey. *Amer. Mineral.*, 63, 938–940. (2) Dunn, P.J. and J.A. Nelen (1980) Kraisslite and mcgovernite: new chemical data. *Amer. Mineral.*, 65, 957–960.