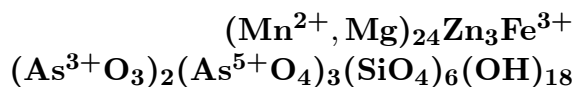


**Kraisslite**

©2001 Mineral Data Publishing, version 1.2

**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 <sub>2</sub>	13.8	12.9
Al <sub>2</sub> O <sub>3</sub>	0.21	0.2
Fe <sub>2</sub> O <sub>3</sub>		2.0
As <sub>2</sub> O <sub>3</sub>	0.87	6.69
As <sub>2</sub> O <sub>5</sub>	17.7	10.35
FeO	1.92	
MnO	51.6	52.0
ZnO	8.47	8.6
MgO	2.53	2.6
H <sub>2</sub> 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 As<sub>2</sub>O<sub>3</sub> and As<sub>2</sub>O<sub>5</sub> which are averages of three; H<sub>2</sub>O 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.