

Jagoite



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Crystal Data: Hexagonal. *Point Group:* $\bar{6}m2$. Fine-grained micaceous aggregates of plates.

Physical Properties: *Cleavage:* Perfect on {0001}. *Tenacity:* Plates are flexible.
Hardness = 3 D(meas.) = 5.43 D(calc.) = n.d.

Optical Properties: Semitransparent. *Color:* Yellow-green. *Streak:* Yellow.
Luster: Vitreous, shining on cleavages.
Optical Class: Uniaxial (-). $n = \sim 2.0$; birefringence = 0.025.

Cell Data: *Space Group:* $P\bar{6}2c$. $a = 8.528(8)$ $c = 33.33(3)$ $Z = [6]$

X-ray Powder Pattern: Långban, Sweden.

3.40 (100), 2.80 (80), 4.16 (50), 2.99 (50), 2.50 (40), 2.60 (30), 2.47 (30)

Chemistry:

	(1)		(1)
SiO ₂	22.35	MgO	0.60
TiO ₂	0.10	CaO	0.65
Al ₂ O ₃	0.50	Na ₂ O	0.61
Fe ₂ O ₃	7.00	K ₂ O	0.37
FeO	0.00	Cl	3.25
MnO	0.88	H ₂ O ⁺	0.17
PbO	64.26	H ₂ O ⁻	0.19
BeO	0.12	-O = Cl ₂	0.73
		Total	100.32

(1) Långban, Sweden; corresponds to $(\text{Pb}_{2.43}\text{Na}_{0.17}\text{Ca}_{0.10}\text{K}_{0.07})_{\Sigma=2.77}(\text{Fe}_{0.74}^{3+}\text{Mg}_{0.12}\text{Mn}_{0.10}\text{Ti}_{0.01})_{\Sigma=0.97}(\text{Si}_{3.14}\text{Al}_{0.08}\text{Be}_{0.04})_{\Sigma=3.26}\text{O}_{9.98}[\text{Cl}_{0.77}(\text{OH})_{0.16}]_{\Sigma=0.93}$.

Occurrence: In hematite ore in a metamorphosed Fe-Mn orebody.

Association: Melanotekite, quartz.

Distribution: At Långban, Värmland, Sweden.

Name: For John Bernard Jago Trelawney (1909–2001), American mineral collector of Palo Alto, California, USA, and benefactor of mineral collections in the USA.

Type Material: n.d.

References: (1) Blix, R., O. Gabrielson, and F.E. Wickman (1957) Jagoite, a new lead-silicate mineral from Långban in Sweden. *Arkiv Mineral. Geol.*, 2, 315–317. (2) (1958) *Amer. Mineral.*, 43, 387 (abs. ref. 1). (3) Mellini, M. and S. Merlino (1981) The crystal structure of jagoite. *Amer. Mineral.*, 66, 852–858.