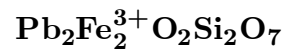


Melanotekite



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Crystal Data: Orthorhombic. *Point Group:* 222. As small spherules; commonly massive.

Physical Properties: *Cleavage:* In two directions, one more prominent. *Hardness* = 6.5
D(meas.) = 5.73–6.28 D(calc.) = [6.30]

Optical Properties: Nearly opaque; translucent in thin section. *Color:* Black to blackish gray or blackish green; dark green in thin section. *Streak:* Greenish gray. *Luster:* Metallic to greasy. *Optical Class:* Biaxial (+). *Pleochroism:* Bottle-green and red-brown. *Dispersion:* $r > v$, strong. $\alpha = 2.12$ $\beta = 2.17$ $\gamma = 2.31$ $2V(\text{meas.}) = 67^\circ$

Cell Data: *Space Group:* $C222_1$. $a = 6.93$ $b = 10.98$ $c = 10.06$ $Z = 4$

X-ray Powder Pattern: Långban, Sweden.
2.90 (vs), 2.86 (vs), 2.735 (vs), 3.71 (s), 3.51 (s), 3.24 (s), 2.84 (s)

Chemistry:	(1)	(2)	(3)		(1)	(2)	(3)
SiO ₂	17.32	16.59	16.55	PbO	55.26	62.38	61.46
TiO ₂		0.90		MgO		0.10	
Al ₂ O ₃		0.57		CaO		0.00	
Fe ₂ O ₃	23.18	19.21	21.99	BaO		0.00	
Mn ₂ O ₃	0.76			rem.	3.59		
MnO		0.39		Total	100.11	100.14	100.00

- (1) Långban, Sweden; remainder FeO, CuO, MgO, CaO, BaO, Na₂O, K₂O, Cl, and P₂O₅.
(2) Jakobsberg, Sweden; by electron microprobe, corresponds to $\text{Pb}_{2.03}(\text{Fe}_{1.75}^{3+}\text{Al}_{0.08}\text{Ti}_{0.08}\text{Mn}_{0.04}\text{Mg}_{0.02})_{\Sigma=1.97}\text{Si}_{2.00}\text{O}_9$. (3) $\text{Pb}_2\text{Fe}_2\text{O}_2\text{Si}_2\text{O}_7$.

Polymorphism & Series: Forms a series with kentrolite.

Occurrence: In a metamorphosed Fe–Mn deposit, from which over one ton was removed (Långban, Sweden); in oxidized Pb–Cu ores (Artillery Peaks, Arizona, USA).

Association: Lead, magnetite, garnet (Långban, Sweden); leadhillite, alamosite (Tsumeb, Namibia); diabolite (Tiger, Arizona, USA); luddenite, alamosite, shattuckite, mimetite, wulfenite, cerussite, wickenburgite (Artillery Peaks, Arizona, USA).

Distribution: At Långban, Jakobsberg, and Pajsberg, Värmland, Sweden. In the Merehead quarry, Wesley mine, and at Higher Pitts Farm, Priddy, Somerset, and at Westbury-on-Trym, Avon, England. From Tsumeb, Namibia. In the USA, from Hillsboro, Sierra Co., New Mexico; in Arizona, at the Mammoth-St. Anthony mine, Tiger, Pinal Co., and from a Pb–Cu prospect near Artillery Peaks, Mohave Co.

Name: From the Greek *black* and *to melt* or *glass*, for the black bead formed under the blowpipe.

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