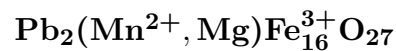


Lindqvistite



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Crystal Data: Hexagonal. *Point Group:* $6/m\ 2/m\ 2/m$. As subhedral crystals, tabular on {0001}, to 5 mm.

Physical Properties: *Cleavage:* {0001}, perfect. *Tenacity:* Brittle. *Hardness* = ~ 6
VHN = 818–898, 857 average (100 g load). *D*(meas.) = n.d. *D*(calc.) = 5.76(1)

Optical Properties: Opaque. *Color:* Black; gray with a faint brownish tint in reflected light.
Streak: Brownish black. *Luster:* Submetallic.

Optical Class: Uniaxial. *Anisotropism:* Moderate; in bluish gray to browns.

Birefractance: Weak.

R_1 – R_2 : (470) 23.7–22.0, (546) 22.7–21.5, (589) 22.0–21.1, (650) 21.3–20.7

Cell Data: *Space Group:* $P6_3/mmc$. $a = 5.951(1)$ $c = 33.358(4)$ $Z = 2$

X-ray Powder Pattern: Jakobsberg, Sweden.

2.624 (100), 2.802 (95), 2.612 (90), 2.975 (70), 3.011 (60), 4.168 (55), 3.334 (40)

Chemistry:

	(1)
SiO ₂	0.16
TiO ₂	0.12
Al ₂ O ₃	0.07
Fe ₂ O ₃	67.49
MnO	5.13
ZnO	0.17
PbO	25.95
MgO	1.62
BaO	0.03
Cl	0.00
Total	100.74

(1) Jakobsberg, Sweden; by electron microprobe, average of six analyses, all Mn as Mn²⁺ from associated minerals, Fe²⁺ absent by Mössbauer spectroscopy; corresponds to Pb_{2.04}Mn_{1.27}²⁺Mg_{0.71}Zn_{0.04}Fe_{14.84}³⁺Si_{0.05}Ti_{0.03}Al_{0.02}O₂₇.

Occurrence: In a regionally metamorphosed lead-bearing Fe–Mn skarn deposit.

Association: Jacobsite, plumboferrite, hematite, phlogopite, andradite, calcite, hedyphane, barite, copper, cuprite, malachite, azurite.

Distribution: From Jakobsberg, Värmland, Sweden.

Name: For Dr. Bengt Lindqvist (1927–), formerly Senior Curator of the Swedish Museum of Natural History, Stockholm, Sweden.

Type Material: Swedish Museum of Natural History, Stockholm, Sweden, 38126; The Natural History Museum, London, England, 1992,375.

References: (1) Holtstam, D. and R. Norrestam (1993) Lindqvistite, Pb₂MeFe₁₆O₂₇, a novel hexagonal ferrite mineral from Jakobsberg, Filipstad, Sweden. *Amer. Mineral.*, 78, 1304–1312.