

Sverigeite**NaMn²⁺MgSn⁴⁺Be₂Si₃O₁₂(OH)**

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Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m. In well-formed complex crystals, to 2 mm, elongated || [001]; as irregular platy segregations.

Physical Properties: *Cleavage:* {010}, perfect; two other directions, distinct. Hardness = ~6.5 D(meas.) = 3.60 D(calc.) = 3.61

Optical Properties: Translucent. *Color:* Yellow; in transmitted light, pale yellow to yellow. *Streak:* Light yellow. *Luster:* Vitreous on cleavages and fractures, dull on crystal faces. *Optical Class:* Biaxial (+). *Pleochroism:* Moderate; X = yellow; Y ≈ Z = pale yellow. *Orientation:* Z = b. *Dispersion:* r > v, strong. *Absorption:* X > Y ≈ Z. α = 1.678(4) β = 1.684(4) γ = 1.699(4) 2V(meas.) = 67(4)°

Cell Data: *Space Group:* Imma. a = 10.815(8) b = 13.273(8) c = 6.818(6) Z = 4

X-ray Powder Pattern: Långban mine, Sweden. 2.884 (100), 2.826 (90), 5.77 (70), 4.35 (70), 2.98 (60), 2.644 (60), 6.63 (50)

Chemistry:	(1)
	SiO ₂ 33.5
	SnO ₂ 28.5
	FeO 0.3
	MnO 11.8
	ZnO 1.2
	BeO 9.7
	MgO 8.1
	Na ₂ O 6.1
	H ₂ O 1.2
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	Total 100.4

(1) Långban mine, Sweden; by electron microprobe; Be by AA, H₂O by the Penfield method; corresponds to Na_{1.04}(Mg_{1.06}Mn_{0.88}²⁺Zn_{0.08}Fe_{0.02}²⁺)_{Σ=2.04}Sn_{1.00}Be_{2.06}Si_{2.96}O_{12.19}H_{0.71}.

Occurrence: Found on a mine dump; possibly part of a vein assemblage.

Association: Mimetite, jacobsite, manganoan calcite, amphibole.

Distribution: From Långban, Värmland, Sweden.

Name: For the country where the mineral was found, Sweden, Sverige in Swedish.

Type Material: National Museum of Natural History, Washington, D.C., USA, 160023, 160341.

References: (1) Dunn, P.J., D.R. Peacor, W.B. Simmons, and R.V. Gaines (1984) Sverigeite, a new tin beryllium silicate mineral from Långban, Värmland, Sweden. Geol. Fören. Förhandl. Stockholm, 106, 175–177. (2) (1985) Amer. Mineral., 70, 1332 (abs. ref. 1). (3) Rouse, R.C., D.R. Peacor, and G.W. Metz (1989) Sverigeite, a structure containing planar NaO₄ groups and chains of 3- and 4-membered beryllosilicate rings. Amer. Mineral., 74, 1343–1350.