Swedenborgite $NaBe_4SbO_7$

Crystal Data: Hexagonal. *Point Group:* $6mm$. Short prismatic crystals, $\{10\bar{1}0\}$, $\{10\bar{1}1\}$, and {0001} prominent, to 8 mm, may be morphologically hemihedral. *Twinning:* Observed.

Physical Properties: *Cleavage:* {0001}, distinct. *Fracture:* Subconchoidal. Hardness = ∼8 D(meas.) = 4.285 D(calc.) = 4.28

Optical Properties: Transparent. *Color:* Colorless, pale wine-yellow to honey-yellow; colorless in transmitted light.
Optical Class: Uniaxial (–). *Dispersion:* Strong. $\omega = 1.7724$ $\epsilon = 1.7700$

Cell Data: *Space Group:* $P6_3mc$. $a = 5.442$ $c = 8.848$ $Z = 2$

X-ray Powder Pattern: Långban, Sweden.
4.20 (10), 2.72 (9), 2.51 (9), 2.32 (9), 3.22 (8), 4.70 (7), 4.40 (7)

Chemistry:

	(1)	(2)
Sb_2O_5	54.17	55.25
BeO	34.72	34.17
MgO	0.52	
CaO	0.94	
Na_2O	8.50	10.58
K_2O	0.21	
H_2O	0.39	
P_2O_5	0.23	
Total	99.68	100.00

(1) Långban, Sweden; average of three partial analyses. (2) $NaBe_4SbO_7$.

Occurrence: In skarn from a metamorphosed Fe–Mn orebody.

Association: Bromellite, richterite, manganoan biotite, calcite, hematite.

Distribution: From Långban, Värmland, Sweden.

Name: Honors Emanuel Swedenborg (1688–1772), Swedish philosopher and theologian.

Type Material: Swedish Museum of Natural History, Stockholm, Sweden; The Natural History Museum, London, England, 1924,560.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 1027–1029. (2) Pauling, L., H.P. Klug, and A.N. Winchell (1935) The crystal structure of swedenborgite, $NaBe_4SbO_7$. Amer. Mineral., 20, 492–501. (3) Welin, E. (1968) X-ray powder data for minerals from Långban and the related mineral deposits of Central Sweden. Arkiv Mineral. Geol., 4(30), 499–541.