Sørensenite **$Na_4SnBe_2Si_6O_{18}\cdot 2H_2O$**

Crystal Data: Monoclinic. *Point Group:* $2/m$. As lath-shaped to acicular crystals ‖ [010], branching or splitting from the base upwards, forming bladed fans and bowties, to 15 cm. *Twinning:* Complex, twin axis ⊥ [011] in {100}, uncommon.

Physical Properties: *Cleavage:* $\{10\bar{1}\}$ and {100}, distinct, $(10\bar{1}) \wedge (100) = 63°$. *Tenacity:* Brittle. Hardness = 5–5.5 VHN = 572–658, 616 average. D(meas.) = 2.9 D(calc.) = 2.92

Optical Properties: Transparent. *Color:* Colorless to pale pink, altering to milky white; in transmitted light, colorless; anomalous yellow-brown and blue interference colors. *Luster:* Silky. *Optical Class:* Biaxial (–). *Dispersion:* Strong, inclined. α = 1.576–1.579 β = 1.581–1.585 γ = 1.584–1.586 2V(meas.) = Small to 75°. 2V(calc.) = 76(5)°

Cell Data: *Space Group:* $C2/c$. a = 20.698(17) b = 7.442(5) c = 12.037(11) β = 117.28(6)° Z = 4

X-ray Powder Pattern: Nákâlâq, Greenland.
2.918 (100), 3.41 (85), 2.960 (85), 3.06 (75), 6.31 (60), 2.837 (50), 2.676 (50)

Chemistry:

	(1)	(2)	(3)
SiO_2	49.73	50.41	49.98
SnO_2	20.07	18.40	20.89
Fe_2O_3	0.04	trace	
Nb_2O_5	0.75	1.36	
BeO	8.02	7.43	6.94
Na_2O	15.95	17.21	17.19
K_2O	0.34	0.08	
H_2O	5.24	5.01	5.00
Total	100.14	99.90	100.00

(1) Nákâlâq, Greenland. (2) Kvanefjeld, Greenland. (3) $Na_4SnBe_2Si_6O_{18}\cdot 2H_2O$.

Occurrence: On the floor of miarolitic cavities in hydrothermal veins cutting coarse-grained nepheline syenites.

Association: Analcime, microcline, neptunite, sodalite, aegirine, arfvedsonite, beryllite, chkalovite, apatite, sphalerite.

Distribution: Found at Nákâlâq and Kvanefjeld, in the Ilímaussaq intrusion, southern Greenland.

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Type Material: University of Copenhagen, Copenhagen, Denmark, 1965.222; The Natural History Museum, London, England.

References: (1) Semenov, E.I., V.I. Gerasimovskii, N.V. Maksimova, S. Andersen, and O.V. Petersen (1965) Sorensenite [*sic*], a new sodium-beryllium-tin-silicate from the Ilímaussaq intrusion, South Greenland. Medd. Grønland, 181(1), 1–19. (2) (1966) Amer. Mineral., 51, 1547–1548 (abs. ref. 1). (3) Metcalf-Johansen, J. and R.G. Hazell (1976) The crystal structure of sorensenite, $Na_4SnBe_2(Si_3O_9)_2\cdot 2H_2O$. Acta Cryst., 32, 2553–2556.