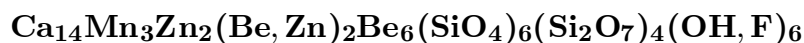


Samfowlerite

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Crystal Data: Monoclinic. *Point Group:* 2/m. As crystals, to 0.05 mm, and in groups.**Physical Properties:** Hardness = < 3. D(meas.) = 3.28(5) D(calc.) = 3.29–3.31 Weakly fluoresces red under SW and LW UV.**Optical Properties:** Semitransparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Biaxial (-). *Orientation:* Y = b; X ∧ a = 44°; Z ∧ c = 29°. α = 1.674(3) β = 1.680(3) γ = 1.681(3) 2V(meas.) = 29.0(1)°**Cell Data:** *Space Group:* P2₁/c. a = 9.068(2) b = 17.992(2) c = 14.586(2) β = 104.86(1)° Z = 2**X-ray Powder Pattern:** Franklin, New Jersey, USA.

2.863 (100), 2.653 (50), 2.388 (50), 2.771 (40), 2.272 (30), 1.832 (30), 2.329 (20)

Chemistry:

	(1)
SiO ₂	36.9
MnO	9.3
ZnO	9.5
BeO	5.6
MgO	0.2
CaO	34.1
F	1.0
H ₂ O	[3.8]
-O = F ₂	0.4
Total	[100.0]

(1) Franklin, New Jersey, USA; by electron microprobe, Be and F by ion microprobe, H₂O by difference; crystal structure analysis indicates that Be is lower and H₂O is higher than reported; corresponding to (Ca_{13.9}Mg_{0.1})_{Σ=14.0}Mn_{3.0}Zn_{2.6}Be_{5.1}Si_{14.0}O_{56.5}H_{9.6}F_{1.2}.**Occurrence:** In vugs in granular willemite-franklinite-andradite ore from a metamorphosed stratiform Zn–Mn deposit.**Association:** Andradite-grossular, cahnite, clinocllore, leucophoenicite, johnbaumite, barite, franklinite, willemite.**Distribution:** From Franklin, Sussex Co., New Jersey, USA.**Name:** For Samuel Fowler, M.D. (1779–1844), who early encouraged study of the Franklin deposits.**Type Material:** National Museum of Natural History, Washington, D.C., USA, M04254.**References:** (1) Rouse, R.C., D.R. Peacor, P.J. Dunn, S.-C. Su, P.H. Chi, and H. Yeates (1994) Samfowlerite, a new Ca Mn Zn beryllsilicate mineral from Franklin, New Jersey: its characterization and crystal structure. *Can. Mineral.*, 32, 43–53.