

Eakerite**Ca₂Sn⁴⁺Al₂Si₆O₁₈(OH)₂·2H₂O**

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Crystal Data: Monoclinic. *Point Group:* 2/*m*. Crystals prismatic, up to 5 mm, prism zone striated || [001]. Forms are {111}, {210}, {410}, {201}, {201}, {001}, and {100}. As minute lathlike inclusions along {110} in andradite.

Physical Properties: *Fracture:* Conchoidal. Hardness = 5.5 D(meas.) = 2.93(1)
D(calc.) = 2.931

Optical Properties: Transparent to translucent. *Color:* Colorless to white. *Luster:* Vitreous. *Optical Class:* Biaxial (+). *Orientation:* X = b; Y ∧ c = 23.5° *Dispersion:* r > v, marked.
α = 1.584 β = 1.586 γ = 1.600 2V(meas.) = ~35°

Cell Data: *Space Group:* P2₁/a. a = 15.829(7) b = 7.721(3) c = 7.438(3)
β = 101°34(3)' Z = 2

X-ray Powder Pattern: Kings Mountain, North Carolina, USA.
4.812 (100), 5.257 (90), 7.31 (80), 3.021 (80), 3.353 (60), 6.905 (50), 5.944 (50)

Chemistry:	(1)
	SiO ₂ 46.75
	SnO ₂ 18.59
	Al ₂ O ₃ 14.07
	CaO 14.2
	H ₂ O 6.7
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	Total 100.3

(1) Kings Mountain, North Carolina, USA; by microchemical analysis, corresponds to Ca_{1.96}Sn_{0.95}⁴⁺Al_{2.12}Si_{6.03}H_{5.77}O₂₂.

Occurrence: Probably of hydrothermal origin, in a seam in spodumene-bearing pegmatite (Foote mine, North Carolina, USA); as exsolved inclusions in stanniferous andradite (Kitel'skoye deposit, Karelia).

Association: Tetrawickmanite, bavenite, quartz, albite (Foote mine, North Carolina, USA); andradite (Kitel'skoye deposit, Karelia).

Distribution: In the Foote mine, Kings Mountain, Cleveland Co., North Carolina, USA. From the Kitel'skoye tin skarn deposit, north of Lake Lagoda, Karelia.

Name: In honor of Jack Eaker, mineral collector of Kings Mountain, North Carolina, USA, who discovered the mineral.

Type Material: The Natural History Museum, London, England, 1968,204; National Museum of Natural History, Washington, D.C., USA, 120301, 121143.

References: (1) Leavens, P.B., J.S. White, Jr., and M.H. Hey (1970) Eakerite, a new tin silicate. *Mineral. Record*, 1, 92–96. (2) (1971) *Amer. Mineral.*, 56, 637–638 (abs. ref. 1). (3) Kossiakoff, A.A. and P.B. Leavens (1976) The crystal structure of eakerite, a calcium-tin silicate. *Amer. Mineral.*, 61, 956–962. (4) Gaydukova, V.S., I.M. Grigor'yev, V.T. Dubinchuk, A.M. Il'yasov, V.I. Kuz'min, and G.A. Sidorenko. (1982) Exsolution of stanniferous garnets. *Doklady Acad. Nauk SSSR*, 250, 151–153 (in Russian). (5) (1983) *Mineral. Abs.*, 34, 164 (abs. ref. 4).