

Crystal Data: Triclinic. *Point Group:* $\bar{1}$. As bladed crystals or laths, typically fibrous with [010] as fiber axis. In aggregates of curved crystals, and compact radial fibrous balls, to 4 cm. *Twinning:* About [010], composition plane {102}, lamellar.

Physical Properties: *Cleavage:* Perfect on {001}. *Tenacity:* Elastic. Hardness = .5–5 D(meas.) = 2.28–2.33 D(calc.) = 2.33

Optical Properties: Transparent to translucent. *Color:* White, slightly yellow; in thin section, colorless. *Luster:* Vitreous to pearly.

Optical Class: Biaxial (–). $\alpha = 1.530$ $\beta = 1.536$ $\gamma = 1.541$ –1.553 2V(meas.) = Large.

Cell Data: *Space Group:* $P\bar{1}$. $a = 9.69(1)$ $b = 7.28(1)$ $c = 22.02(4)$ $\alpha = 92.7(2)^\circ$ $\beta = 100.1(3)^\circ$ $\gamma = 110.9(1)^\circ$ $Z = [2]$

X-ray Powder Pattern: Bombay, India.

21 (vvs), 8.8 (vs), 3.56 (vs), 2.93 (vs), 3.07 (s), 3.05 (s), 2.98 (ms)

Chemistry:

	(1)	(2)
SiO ₂	53.88	55.00
Al ₂ O ₃	0.08	
Fe ₂ O ₃	0.01	
CaO	27.61	28.51
SrO	0.27	
Na ₂ O	0.12	
K ₂ O	0.06	
H ₂ O	18.02	16.49
Total	100.05	100.00

(1) Bombay, India. (2) Ca₅Si₉O₂₃•9H₂O.

Occurrence: Commonly in amygdules in basalts.

Association: Zeolites, apophyllite, prehnite, calcite, quartz, “chalcedony.”

Distribution: From Greenland, at Qutdligssat (Kudlisat), Ritenbenk district; on Quqertarsuaq [Disko] Island, at Skarvefjeld and Blæsedal, Godhavn district; and elsewhere. On Bordoy and Streymoy, Faeroe Islands. At Scawt Hill, near Larne, Co. Antrim, Ireland. On the Isle of Mull and on Morven Peak, Grampian Highlands, Scotland. In India, in Maharashtra, from the Syhadree Mountains; the Bombay quarry, Bombay; around Poona; and in the Nasik and Kolhapur districts. At Rio Putagan, Chile. In the Noche Buena mine, Mazapil, Zacatecas, Mexico. In the USA, at Crestmore, Riverside Co., California; in the Fairfax quarry, Centreville, Fairfax Co., Virginia; and at Skookumchuck Dam, near Bucoda, Thurston Co., Washington. In the Jeffrey mine, Asbestos, Quebec, Canada. Other localities are known.

Name: For the German naturalist Lorenz Ocken (1779–1851), of Munich, Germany, the mineral name later shortened.

References: (1) Dana, E.S. (1892) Dana’s system of mineralogy, (6th edition), 565. (2) Gard, J.A. and H.F.W. Taylor (1956) Okenite and nekoite (a new mineral). Mineral. Mag., 31, 5–20. (3) Heller, L. and H.F.W. Taylor (1956) Crystallographic data for the calcium silicates. H.M. Stationary Office, London, 22–24. (4) Merlino, S. (1983) Okenite, Ca₁₀Si₁₈O₄₆•18H₂O: the first example of a chain and sheet silicate. Amer. Mineral., 68, 614–622.