

Crystal Data: Orthorhombic. *Point Group:* *mm*2. Crystals minute, thin, platy, with a habit near-orthogonal, may be equant, in spherulites composing thin laminae; less commonly powdery.

Physical Properties: *Tenacity:* Puttylike. Hardness = Soft. *D*(meas.) = n.d. *D*(calc.) = 2.17

Optical Properties: Translucent to opaque. *Color:* White.

Optical Class: [Biaxial.] *n* = 1.48 *2V*(meas.) = n.d.

Cell Data: *Space Group:* *F*2*dd*. *a* = 10.5035(9) *b* = 10.0262(9) *c* = 61.9608(46) *Z* = [2]

X-ray Powder Pattern: Lake Magadi, Kenya.

15.41 (100), 3.44 (80), 3.146 (50), 3.30 (35), 5.18 (19), 4.46 (18), 5.01 (16)

Chemistry:	(1)	(2)	(3)
SiO ₂	77.62	77.78	78.96
TiO ₂	0.06	trace	
Al ₂ O ₃	0.79	0.20	
Fe ₂ O ₃	0.55	0.12	
MnO	0.01	< 0.01	
MgO	0.26	0.44	
CaO	0.14	0.12	
Na ₂ O	5.55	5.74	5.82
K ₂ O	0.35	0.10	
H ₂ O ⁺	5.28	5.96	
H ₂ O ⁻	9.32	9.46	
H ₂ O			15.22
Total	99.93	99.92	100.00

(1) Lake Magadi, Kenya. (2) Alkali Lake Playa, Oregon, USA. (3) Na₂Si₁₄O₂₈(OH)₂·8H₂O.

Occurrence: In silts of upper Pleistocene to recent age, precipitated by evaporation of saline brines (Lake Magadi); in veins cutting playa sediments and in muds associated with alkali salts and brines (Alkali Lake Playa, Oregon); in altered volcanic rocks (Trinity Co., California); in marble xenoliths in an intrusive alkalic gabbro-syenite complex (Mont Saint-Hilaire, Canada); in miarolitic cavities in a nepheline syenite sill (near Saint-Amable, Canada).

Association: Kenyaite, calcite (Lake Magadi); kanemite (Lake Chad); bavenite, pectolite, apophyllite, phlogopite, quartz, thaumasite (Mont Saint-Hilaire); varennite, natroite, eudialyte, shkatulkalite, makatite, pectolite, sphalerite, monazite-(Ce), serandite, zakharovite, lorenzenite, aegirine, taperssuatsiaite (near Saint-Amable, Canada).

Distribution: From Lake Magadi and Lake Bogoria, Rift Valley, Kenya. Near Kanem, Lake Chad, Chad. In the USA, on Alkali Lake Playa, Lake Co., Oregon, and ~5 km north of Trinity Lake, Trinity Co., California. From Mont Saint-Hilaire and near Saint-Amable, Quebec, Canada.

Name: For the Kenyan locality, Lake *Magadi*.

Type Material: National School of Mines, Paris, France; National Museum of Natural History, Washington, D.C., USA, 121336.

References: (1) Eugster, H.P. (1967) Hydrous sodium silicates from Lake Magadi, Kenya: precursors of bedded chert. *Science*, 157, 1177-1180. (2) (1968) *Amer. Mineral.*, 53, 510 (abs. ref. 1). (3) McAtee, J.L., Jr., R. House, and H.P. Eugster (1968) Magadiite from Trinity County, California. *Amer. Mineral.*, 53, 2061-2069. (4) Rooney, T.P., B.F. Jones, and J.T. Neal (1969) Magadiite from Alkali Lake, Oregon. *Amer. Mineral.*, 54, 1034-1043. (5) Eugster, H.P. (1969) Inorganic bedded cherts from the Magadi area, Kenya. *Contr. Mineral. Petrol.*, 22, 1-31. (6) Marler, B., Y. Krysiak, I. Grosskreuz, H. Gies, and U. Kolb (2022) The crystal structure of mineral magadiite, Na₂Si₁₄O₂₈(OH)₂·8H₂O. *Amer. Mineral.*, 107, 2101-2110.