

**Kenyaite****Na<sub>2</sub>Si<sub>22</sub>O<sub>41</sub>(OH)<sub>8</sub>·6H<sub>2</sub>O**

©2001 Mineral Data Publishing, version 1.2

**Crystal Data:** Monoclinic, probable. *Point Group:* n.d. As nodular concretions, commonly with chert cores.

**Physical Properties:** Hardness = n.d. D(meas.) = n.d. D(calc.) = [2.33]

**Optical Properties:** Transparent to translucent. *Color:* [White.]

*Optical Class:* n.d.  $n = \sim 1.48$

**Cell Data:** *Space Group:* n.d.  $a = 7.79(5)$   $b = 19.72(5)$   $c = 7.30(5)$   $\beta = 95^\circ 54(5)'$   
Z = 1

**X-ray Powder Pattern:** Lake Magadi, Kenya; pattern varies with interlayer Na:H<sub>2</sub>O.  
19.68 (100), 3.428 (85), 3.198 (55), 9.925 (50), 3.320 (45), 4.965 (35), 4.689 (28)

**Chemistry:**

	(1)	(2)
SiO <sub>2</sub>	83.50	84.52
TiO <sub>2</sub>	0.02	
Al <sub>2</sub> O <sub>3</sub>	0.22	
Fe <sub>2</sub> O <sub>3</sub>	0.09	
MnO	trace	
MgO	0.04	
CaO	0.11	
Na <sub>2</sub> O	3.96	3.96
K <sub>2</sub> O	0.04	
H <sub>2</sub> O <sup>+</sup>	4.90	
H <sub>2</sub> O <sup>-</sup>	7.10	
H <sub>2</sub> O		11.52
Total	99.98	100.00

(1) Lake Magadi, Kenya. (2) Na<sub>2</sub>Si<sub>22</sub>O<sub>41</sub>(OH)<sub>8</sub>·6H<sub>2</sub>O.

**Occurrence:** As concretions, with chert cores, embedded in magadiite; perhaps as a reaction product between the two (Lake Magadi, Kenya); in altered volcanic rocks (Trinity Co., California, USA).

**Association:** Magadiite, quartz.

**Distribution:** From Lake Magadi, Rift Valley, Kenya. In Niger, at Kafra. In the USA, from five km north of Trinity Lake, Trinity Co., California.

**Name:** For the locality in Kenya.

**Type Material:** National School of Mines, Paris, France; National Museum of Natural History, Washington, D.C., USA, 121336, 121337.

**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) Beneke, K. and G. Lagley (1983) Kenyaite – synthesis and properties. *Amer. Mineral.*, 68, 818–826.