## Nekoite $Ca_3Si_6O_{15}\cdot 7H_2O$



**Crystal Data:** Triclinic. *Point Group:* 1. Crystals fine, slender needles, to 5 mm, elongated ‖ [001]. *Twinning:* Repeated, lamellae ‖ {010} cleavage.

**Physical Properties:** *Cleavage:* Distinct on {010}. Hardness = n.d. D(meas.) = 2.21–2.24 D(calc.) = 2.21

**Optical Properties:** Transparent to translucent. *Color:* White. *Luster:* Vitreous. *Optical Class:* Biaxial (+). $n = 1.535(2)$, very low birefringence. 2V(meas.) = ∼70°

**Cell Data:** *Space Group:* $P1$. $a = 7.558(3)$ $b = 9.793(5)$ $c = 7.339(5)$ $\alpha = 111.77(7)°$ $\beta = 103.50(5)°$ $\gamma = 86.53(3)°$ Z = 1

**X-ray Powder Pattern:** Crestmore, California, USA.
9.25 (vs), 3.36 (vsb), 2.82 (vs), 2.47 (ms), 1.83 (ms), 1.90 (mw), 1.79 (mw)

**Chemistry:**

| | (1) | (2) | (3) |
|---|---|---|---|
| $SiO_2$ | 55. | 56.17 | 55.05 |
| CaO | 24. | 26.10 | 25.69 |
| $H_2O$ | 19.6 | 16.83 | 19.26 |
| Total | 99. | 99.10 | 100.00 |

(1) Crestmore, California, USA. (2) Do.; probably slightly dehydrated. (3) $Ca_3Si_6O_{15}\cdot 7H_2O$.

**Occurrence:** In a contact metamorphosed limestone deposit (Crestmore, California, USA).

**Association:** Apophyllite (Crestmore, California, USA); heulandite, apophyllite (Caxias do Sul, Brazil).

**Distribution:** In the USA, from Crestmore, Riverside Co., California, and at Landsman's Camp, Aravaipa district, Graham Co., Arizona. At Caxias do Sul, Rio Grande do Sul, Brazil. In the Kochbulak deposit, eastern Uzbekistan.

**Name:** An anagram of OKENite, for which it was originally mistaken.

**Type Material:** National Museum of Natural History, Washington, D.C., USA, 95637.

**References:** (1) Gard, J.A. and H.F.W. Taylor (1956) Okenite and nekoite (a new mineral). Mineral. Mag., 31, 5–20. (2) Chalmers, R.A., A.W. Nicol, and H.F.W. Taylor. (1962) The composition of nekoite. Mineral. Mag., 33, 70–71. (3) Alberti, A. and E. Galli (1980) The structure of nekoite, $Ca_3Si_6O_{15}\cdot 7H_2O$, a new type of sheet silicate. Amer. Mineral., 65, 1270–1276.