Kamaishilite $Ca_2Al_2SiO_6(OH)_2$

Crystal Data: Tetragonal. *Point Group:* n.d. As grains up to about 0.1 mm.

Physical Properties: Hardness = n.d. D(meas.) = n.d. D(calc.) = [2.82]

Optical Properties: Transparent. *Color:* Colorless.
Optical Class: Isotropic, nearly. $n = 1.629$

Cell Data: *Space Group:* Body-centered cell. $a = 8.850$ $c = 8.770$ $Z = 4$

X-ray Powder Pattern: Kamaishi mine, Japan.
3.607 (100), 2.799 (85), 2.777 (40), 2.547 (40), 1.557 (35), 2.085 (30)

Chemistry:

	(1)
SiO_2	20.03
Al_2O_3	34.15
FeO	0.21
MgO	0.02
CaO	37.42
H_2O^+	6.1
H_2O^-	0.2
Total	98.13

(1) Kamaishi mine, Japan; by electron microprobe, H_2O by wet chemical analysis; corresponds to $(Ca_{1.99}Fe_{0.01})_{\Sigma=2.00}Al_{2.00}Si_{0.99}O_{5.98}(OH)_{2.02}$.

Polymorphism & Series: Dimorphous with bicchulite.

Occurrence: In vesuvianite skarn in a marble, apparently altering from vesuvianite.

Association: Vesuvianite, perovskite, calcite, magnetite, chalcopyrite.

Distribution: At the Kamaishi mine, Iwate Prefecture, Japan.

Name: For the Kamaishi mine, Japan.

Type Material: National Science Museum, Tokyo, Japan, M23560.

References: (1) Uchida, E. and J.T. Iiyama (1981) On kamaishilite, $Ca_2Al_2SiO_6(OH)_2$, a new mineral (tetragonal), dimorphous with bicchulite, from the Kamaishi mine, Japan. Proc. Japan Acad., 57B, 239–243 (in English). (2) (1982) Amer. Mineral., 67, 855 (abs. ref. 1).