

Kamaishilite

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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 ₂ O ₃	34.15
FeO	0.21
MgO	0.02
CaO	37.42
H ₂ O ⁺	6.1
H ₂ O ⁻	0.2
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Total	98.13

(1) Kamaishi mine, Japan; by electron microprobe, H₂O by wet chemical analysis; corresponds to (Ca_{1.99}Fe_{0.01})_{Σ=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, Ca₂Al₂SiO₆(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).