

Jennite**Ca₉H₂Si₆O₁₈(OH)₈·6H₂O**

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Crystal Data: Triclinic. *Point Group:* $\bar{1}$ or 1. As blade-shaped crystals, elongated along [010], to 6 mm, or as fibrous aggregates.

Physical Properties: *Cleavage:* Distinct on {001}. *Hardness* = n.d. *D*(meas.) = 2.32–2.33 *D*(calc.) = [2.34]

Optical Properties: Transparent to translucent. *Color:* White; colorless in thin section. *Luster:* Vitreous.

Optical Class: Biaxial (-). *Orientation:* $X \perp \{001\}$ cleavage; $Y \wedge b = 35^\circ\text{--}40^\circ$.

$\alpha = 1.548\text{--}1.552$ $\beta = 1.562\text{--}1.564$ $\gamma = 1.570\text{--}1.571$ $2V(\text{meas.}) = 74^\circ$

Cell Data: *Space Group:* $P\bar{1}$ or $P1$. $a = 10.56$ $b = 7.25$ $c = 10.81$ $\alpha = 99^\circ 42'$
 $\beta = 97^\circ 42'$ $\gamma = 110^\circ 4'$ $Z = 1$

X-ray Powder Pattern: Crestmore, California, USA.

10.5 (vvs), 2.92 (vs), 3.04 (s), 2.83 (s), 2.66 (s), 6.46 (ms), 3.47 (ms)

| Chemistry: | (1) | (2) | (1) | (2) |
|--------------------------------|------|-------|-------------------------------|----------------------------|
| SiO ₂ | 34.2 | 33.20 | Na ₂ O | 0.00 |
| TiO ₂ | | 0.02 | K ₂ O | 0.01 |
| Al ₂ O ₃ | | 0.09 | H ₂ O ⁺ | 18.53 |
| FeO | | 0.01 | H ₂ O ⁻ | 1.69 |
| MnO | | 0.02 | H ₂ O | 19.2 |
| MgO | | 0.03 | P ₂ O ₅ | 0.04 |
| CaO | 46.6 | 46.85 | <u>Total</u> | <u>100.0</u> <u>100.49</u> |

(1) Crestmore, California, USA; by electron microprobe; H₂O by TGA; corresponds to Ca_{8.76}H_{2.00}Si_{6.00}O_{17.76}(OH)_{8.00}·6.24H₂O. (2) Fuka, Japan; by electron microprobe, H₂O by gravimetry; corresponds to Ca_{9.00}H_{2.00}(Si_{5.95}Al_{0.02})_{Σ=5.97}O_{17.93}(OH)_{8.00}·6.07H₂O.

Occurrence: A late-stage mineral, partially filling open spaces and in veins in fractured skarns.

Association: Tobermorite, scawtite, calcite (Crestmore, California, USA); afwillite, oyelite, spurrite (Fuka, Japan).

Distribution: From Crestmore, Riverside Co., California, USA. At Campomorto, Montalto di Castro, Lazio, Italy. In Germany, from the Bellerberg volcano, two km north of Mayen, Eifel district, and fine crystals from the Zeilberg, near Maroldsweisach, Bavaria. In the Hatrumim Formation, Israel. In the Wessels mine, near Kuruman, Cape Province, South Africa. In Japan, from Fuka, near Bicchu, Okayama Prefecture.

Name: For Colonel Clarence M. Jenni (1896–1974?), Director of the Geological Museum, University of Missouri, Rollo, Missouri, USA, the mineral's discoverer.

Type Material: National Museum of Natural History, Washington, D.C., USA, 119007.

References: (1) Carpenter, A.B., R.A. Chalmers, J.A. Gard, K. Speakman, and H.F.W. Taylor (1966) Jennite, a new mineral. *Amer. Mineral.*, 51, 56–74. (2) Gard, J.A., H.F.W. Taylor, G. Cliff, and G.W. Lorimer (1977) A reexamination of jennite. *Amer. Mineral.*, 62, 365–368. (3) Kusachi, I., C. Henmi, and K. Henmi (1989) Afwillite and jennite from Fuka, Okayama Province, Japan. *Mineral. J. (Japan)*, 14, 279–292.