

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3}$ . As euhedral to subhedral crystals elongated || [0001], to 0.4 mm, showing hexagonal cross sections, and with {0001} and {10 $\bar{1}$ 0}.

**Physical Properties:** *Cleavage:* {10 $\bar{1}$ 0}, imperfect, suspected. *Fracture:* Conchoidal. *Tenacity:* Brittle. Hardness = n.d. D(meas.) = 2.65(3) D(calc.) = 2.58(2)

**Optical Properties:** Transparent. *Color:* Colorless. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Uniaxial (+).  $\omega = 1.596(2)$   $\epsilon = 1.604(2)$

**Cell Data:** *Space Group:* [ $P\bar{3}$ ] (by analogy to synthetic Ca<sub>6</sub>Si<sub>2</sub>O<sub>7</sub>(OH)<sub>6</sub>).  $a = 10.026(5)$   
 $c = 7.482(4)$   $Z = 2$

**X-ray Powder Pattern:** Kombat mine, Namibia.

8.66 (100), 2.996 (90), 2.833 (90), 2.887 (70), 3.279 (50), 2.466 (30), 2.083 (30)

**Chemistry:**

|                  |          |
|------------------|----------|
|                  | (1)      |
| SiO <sub>2</sub> | 23.96    |
| CaO              | 64.98    |
| H <sub>2</sub> O | [11.06]  |
| Total            | [100.00] |

(1) Kombat mine, Namibia; by electron microprobe, average of three analyses, includes Mn and Cl < 0.1%, H<sub>2</sub>O by difference; corresponds to Ca<sub>5.86</sub>Si<sub>2.02</sub>O<sub>13</sub>H<sub>6.21</sub>.

**Occurrence:** Closely associated with or enclosed by defernite within low-grade metamorphic rocks.

**Association:** Defernite, hausmannite, apatite, brucite, hillebrandite, vesuvianite, glaucochroite, galena, copper.

**Distribution:** At the Kombat mine, 49 km south of Tsumeb, Namibia.

**Name:** In honor of Professor Howard W. Jaffe of the University of Massachusetts, Amherst, Massachusetts, USA.

**Type Material:** Museum of Natural History, Geneva, Switzerland, 500/32; National Museum of Natural History, Washington, D.C., USA, 163802.

**References:** (1) Sarp, H. and D.R. Peacor (1989) Jaffeite, a new hydrated calcium silicate from the Kombat mine, Namibia. *Amer. Mineral.*, 74, 1203–1206.