

**Cascandite****Ca(Sc, Fe<sup>2+</sup>)Si<sub>3</sub>O<sub>8</sub>(OH)**

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**Crystal Data:** Triclinic. *Point Group:* 1. As plates, to 0.2 mm, elongated along [100] and flattened || {001}; forms observed are {001}, {100}, {120}, and {5 $\bar{3}$ 0}.

**Physical Properties:** *Cleavage:* Good on {100} and {001}. *Hardness* = n.d.  
D(meas.) = n.d. D(calc.) = [3.03]

**Optical Properties:** Transparent. *Color:* Pale pink. *Luster:* Vitreous.  
*Optical Class:* Biaxial.  $\alpha = 1.663$  on (001).  $\beta = \text{n.d.}$   $\gamma = 1.684$  on (001).  $2V(\text{meas.}) = \text{n.d.}$

**Cell Data:** *Space Group:* P1.  $a = 9.791(8)$   $b = 10.420(9)$   $c = 7.076(6)$   $\alpha = 98.91(8)^\circ$   
 $\beta = 102.63(8)^\circ$   $\gamma = 84.17(8)^\circ$   $Z = 2$

**X-ray Powder Pattern:** Baveno, Italy.  
2.821 (s), 3.62 (m), 3.10 (m), 2.968 (m), 1.429 (m), 7.22 (w), 6.75 (w)

<b>Chemistry:</b>	(1)
SiO <sub>2</sub>	51.83
TiO <sub>2</sub>	0.08
Al <sub>2</sub> O <sub>3</sub>	0.11
Sc <sub>2</sub> O <sub>3</sub>	14.74
FeO	4.50
MnO	2.32
MgO	0.20
CaO	16.83
Na <sub>2</sub> O	0.06
H <sub>2</sub> O	[2.59]
Total	[93.26]

(1) Baveno, Italy; by electron microprobe, H<sub>2</sub>O calculated from stoichiometry.

**Occurrence:** In miarolitic cavities in granite.

**Association:** Quartz, orthoclase, albite, jervisite.

**Distribution:** From the Diverio quarry, Mt. Mottarone, near Baveno, Piedmont, Italy.

**Name:** For CALcium and SCANDium in the composition.

**Type Material:** Municipal Museum of Natural History, Milan, Italy, 23270.

**References:** (1) Mellini, M., S. Merlino, P. Orlandi, and R. Rinaldi (1982) Cascandite and jervisite, two new scandium silicates from Baveno, Italy. *Amer. Mineral.*, 67, 599–603. (2) Mellini, M. and S. Merlino (1982) The crystal structure of cascandite, CaScSi<sub>3</sub>O<sub>8</sub>(OH). *Amer. Mineral.*, 67, 604–609.