

**Roggianite****Ca<sub>2</sub>BeAl<sub>2</sub>Si<sub>4</sub>O<sub>13</sub>(OH)<sub>2</sub>•2.5H<sub>2</sub>O**

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**Crystal Data:** Tetragonal. *Point Group:* 4/m 2/m 2/m. Crystals prismatic, to 50 μm; in fibrous aggregates.

**Physical Properties:** *Cleavage:* Perfect on {110}. *Hardness* = n.d. *D(meas.)* = 2.02  
*D(calc.)* = [2.34]

**Optical Properties:** *Semitransparent.* *Color:* Pale yellow.  
*Optical Class:* Uniaxial (+).  $\omega = 1.527(1)$   $\epsilon = 1.535(1)$

**Cell Data:** *Space Group:* I4/mcm.  $a = 18.33(2)$   $c = 9.16(1)$   $Z = 8$

**X-ray Powder Pattern:** Alpe Rosso, Italy.  
12.990 (100), 3.411 (68), 9.230 (49), 3.154 (43), 6.150 (42), 3.605 (41), 3.198 (34)

<b>Chemistry:</b>	(1)	(2)
SiO <sub>2</sub>	40.22	44.30
Al <sub>2</sub> O <sub>3</sub>	18.32	18.80
BeO	3.19	4.61
CaO	19.24	20.67
SrO	0.02	
Na <sub>2</sub> O	0.28	
K <sub>2</sub> O	0.63	
H <sub>2</sub> O	[18.10]	11.62
Total	[100.00]	100.00

(1) Alpe Rosso, Italy; by electron microprobe, H<sub>2</sub>O by difference.

(2) Ca<sub>2</sub>BeAl<sub>2</sub>Si<sub>4</sub>O<sub>13</sub>(OH)<sub>2</sub>•2.5H<sub>2</sub>O.

**Occurrence:** Coating fractures in a sodic feldspar dike which cuts gneiss (Alpe Rosso, Italy).

**Association:** Thomsonite (Alpe Rosso, Italy); bertrandite, chrysoberyl, scheelite, molybdenite (Pizzo Marcio, Italy).

**Distribution:** At Alpe Rosso and Pizzo Marcio, Val Vigizzo, Piedmont, Italy.

**Name:** For Aldo G. Roggiani, Italian teacher of natural sciences, who first found the mineral.

**Type Material:** University of Modena, Modena, Italy; National School of Mines, Paris, France; National Museum of Natural History, Washington, D.C., USA, 122280.

**References:** (1) Passaglia, E. (1969) Roggianite, a new silicate mineral. *Clay Minerals*, 8, 107–111. (2) Gard, J.A. (1969) An electron microscope and diffraction study of roggianite. *Clay Minerals*, 8, 112–113. (3) (1970) *Amer. Mineral.*, 55, 322–323 (abs. refs. 1 and 2). (4) Passaglia, E. and G. Vezzalini (1988) Roggianite: revised chemical formula and zeolitic properties. *Mineral. Mag.*, 52, 201–206. (5) Giuseppetti, G., F. Mazzi, C. Tadini, and E. Galli (1991) The revised crystal structure of roggianite: Ca<sub>2</sub>[Be(OH)<sub>2</sub>Al<sub>2</sub>Si<sub>4</sub>O<sub>13</sub>] < 2.5H<sub>2</sub>O. *Neues Jahrb. Mineral., Monatsh.*, 307–314.