

**Crystal Data:** Hexagonal. *Point Group:*  $\bar{3}$ . As coatings, massive.

**Physical Properties:** Hardness = Soft.  $D(\text{meas.}) = 2.90$  (synthetic).  $D(\text{calc.}) = [2.91]$   
Very deliquescent; hydrolyzed by H<sub>2</sub>O to hydrous iron oxide.

**Optical Properties:** Semitransparent. *Color:* Brownish red or yellowish.  
*Optical Class:* Uniaxial (-); very strong birefringence.  $\omega = \text{n.d.}$   $\epsilon = \text{n.d.}$

**Cell Data:** *Space Group:*  $R\bar{3}$  (synthetic).  $a = 6.065$   $c = 17.42$   $Z = [6]$

**X-ray Powder Pattern:** Synthetic.  
2.68 (100), 2.08 (40), 5.9 (32), 1.75 (32), 1.63 (16), 1.67 (6), 4.79 (< 6)

**Chemistry:** Natural material has not been analyzed.

**Occurrence:** A volcanic sublimate.

**Association:** Tridymite, hematite, anhydrite, halite (Augustine volcano, Alaska, USA).

**Distribution:** In Italy, from Vesuvius, Campania; at Larderello, Val di Cecina, Tuscany; and on Vulcano, Lipari Islands. From the Tolbachik fissure volcano, Kamchatka Peninsula, Russia. Found on the Augustine volcano, Augustine Island, near the Kenai Peninsula, Alaska, USA.

**Name:** From the Greek for *a stain*, as it stains the host rock.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 47–48. (2) Hashimoto, S., K. Forster, and S.C. Moss (1989) Structure refinement of an FeCl<sub>3</sub> crystal using a thin plate sample. *J. Applied Cryst.*, 22, 173–180.