

Crystal Data: Monoclinic, pseudo-hexagonal. *Point Group:* 2. As needlelike crystals, to 0.1 mm, typically in parallel aggregates. *Twinning:* About [010], twin plane {101}, may be sectorized (synthetic).

Physical Properties: Hardness = n.d. D(meas.) = 2.69–2.76 D(calc.) = 2.731

Optical Properties: Semitransparent. *Color:* White.

Optical Class: Biaxial (+). *Orientation:* Positive elongation, parallel extinction, $\alpha = 1.550\text{--}1.559$ $\beta = 1.560$ $\gamma = 1.577\text{--}1.584$ $2V(\text{meas.}) = 10^\circ\text{--}15^\circ$

Cell Data: *Space Group:* I2 (synthetic). $a = 12.0317(4)$ $b = 6.9269(2)$ $c = 12.6712(3)$
 $\beta = 90.27(1)^\circ$ $Z = 12$

X-ray Powder Pattern: Synthetic.

3.006 (100), 2.807 (86), 6.00 (70), 1.847 (56), 3.469 (54), 2.139 (22), 3.042 (15)

Chemistry:

	(1)	(2)
SO ₃	54.19	55.16
CaO	37.75	38.63
H ₂ O	6.37	6.21
Total	98.31	100.00

(1) Danby Lake, California, USA. (2) 2CaSO₄•H₂O.

Occurrence: Altered from gypsum in leucite tephrite blocks; fumarolic (Vesuvius, Italy); in dry or perennially dry lake beds (California, Australia); in caves, interlayered with gypsum.

Association: Gypsum, anhydrite, celestine, calcite, gibbsite.

Distribution: From Vesuvius, Campania, Italy. At Wadi Mestaoua, east of Fom Tataouine, Tunisia. In the USA, in caves in Big Bend National Park, Brewster Co., Texas; in California, from Danby [dry] Lake, San Bernardino Co., at a dry lake near Ballarat, Inyo Co., and in the S.A.M. Corporation sulfur mine, near Taft, Kern Co. Found near Nappan, Nova Scotia, Canada. In the Hutt and Leeman [pond-playa] lagoons, north of Perth, Western Australia. From South Victoria Land, Antarctica. Probably more widespread than the above listing of localities would indicate.

Name: To honor Francesco Bassani (1853–1916), Professor of Paleontology, University of Naples, Naples, Italy.

Type Material: n.d.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 476. (2) Allen, R.D. and H. Kramer (1953) Occurrence of bassanite in two desert basins in southeastern California. *Amer. Mineral.*, 38, 1266–1268. (3) Bezou, C., A. Nonat, J.-C. Mutin, A.N. Christensen, and M.S. Lehmann (1995) Investigation of the crystal structure of $\gamma\text{-CaSO}_4$, CaSO₄•0.5H₂O, and CaSO₄•0.6H₂O by powder diffraction methods. *J. Solid State Chem.*, 117, 165–176. (4) (1981) NBS Mono. 25, 22–23.