Hydrophilite $CaCl_2(?)$

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Crystal Data: Orthorhombic (synthetic), pseudocubic. *Point Group:* 2/m 2/m . In pseudocubic crystals, modified by $\{111\}$ and $\{011\}$; as a crystalline to mealy crust.

Physical Properties: Hardness = n.d. D(meas.) = n.d. D(calc.) = 2.175 (synthetic). Hygroscopic, deliquescent, soluble in H_2O ; intensely bitter taste.

Optical Properties: Transparent to translucent. *Color:* White, may be stained violet. *Optical Class:* Biaxial (+) (synthetic). $\alpha = 1.600(3)$ $\beta = 1.605(3)$ $\gamma = 1.613(3)$ 2V(meas.) = Moderate.

Cell Data: Space Group: Pnnm (synthetic). a=6.261(2) b=6.429(2) c=4.167(1) Z=2

X-ray Powder Pattern: Synthetic. 3.050 (100), 4.48 (85), 2.331 (50), 2.858 (35), 2.244 (30), 2.356 (25), 1.906 (25)

Chemistry: An analysis of natural material is not available.

Occurrence: In a boracite deposit, as a coating on gypsum.

Association: Anhydrite, gypsum, halite.

Distribution: From Lüneburg, Lower Saxony, Germany. Reported from a few additional localities. All occurrences require modern confirmation.

Name: From the Greek for water and friend, in allusion to the mineral's hygroscopic property.

References: (1) Dana, E.S. (1892) Dana's system of mineralogy, (6th edition), 161. (2) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 41–42. (3) Hey, M. (1980) What was hydrophilite? Mineral. Mag., 43, 682. (4) Slawson, C.B. (1929) Note on hydrophilite. Amer. Mineral., 14, 161–162. (5) van Bever, A.K. and W. Nieuwenkamp (1935) Die Kristallstruktur von Calciumchlorid, CaCl₂. Zeits. Krist., 90, 374–376 (in German). (6) (1974) NBS Mono. 25, 11, 18.