

Crystal Data: Hexagonal. *Point Group:* $\bar{3}2/m$. Minute crystals, flattened on {0001}, may be elongated \perp [0001]. Arborescent, mammillary; commonly included within cryptohalite. *Twinning:* Dartlike or paddlewheel twins, with twin plane inclined to {0001}.

Physical Properties: *Cleavage:* Perfect on {0001}. Hardness = ~ 2.5 D(meas.) = 2.152 (synthetic). D(calc.) = 2.144 Soluble in H_2O , with a saline taste.

Optical Properties: Transparent. *Color:* White; colorless in thin section. *Luster:* Vitreous. *Optical Class:* Uniaxial (-). $\omega = 1.406(1)$ $\epsilon = 1.391(3)$

Cell Data: *Space Group:* $C\bar{3}m$ (synthetic). $a = 5.77$ $c = 4.78$ $Z = 1$

X-ray Powder Pattern: Kehley's Run mine, Pennsylvania, USA.
4.84 (100), 2.42 (45), 2.09 (40), 2.22 (35), 3.45 (30), 5.00 (20), 4.20 (20)

Chemistry: Analyses of natural material have not been made.

Polymorphism & Series: Dimorphous with cryptohalite, the higher-temperature form.

Occurrence: Above a burning coal seam (Barari, India); a sublimation product at fumaroles (Vesuvius, Italy); a sublimation product in burning anthracite piles (Pennsylvania, USA).

Association: Cryptohalite, sal ammoniac, sulfur.

Distribution: In India, at the Bararee colliery, Barari, Jharia coalfield, West Bengal. From Vesuvius, Campania, Italy. In the Clara mine, near Oberwolfach, Black Forest, Germany. From the Kehley's Run mine, Shenandoah, Schuylkill Co., Pennsylvania, USA.

Name: For the occurrence at Barari, India, from which it was first characterized.

Type Material: n.d.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 106–107. (2) Lapham, D.M., J.H. Barnes, W.F. Downey, Jr. and R.B. Finkelman (1980) Mineralogy associated with burning anthracite deposits of eastern Pennsylvania. Pennsylvania Geol. Surv. Min. Res. Report, 4th ser., 78, 45–47.