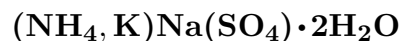


# Lecontite



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**Crystal Data:** Orthorhombic. *Point Group:* 222. Small prismatic crystals, short along [001]; commonly very fine-grained.

**Physical Properties:** Hardness = 2–2.5 D(meas.) = 1.745 (synthetic). D(calc.) = 1.747 Soluble in H<sub>2</sub>O, taste saline, bitter.

**Optical Properties:** Transparent. *Color:* Colorless. *Luster:* Vitreous. *Optical Class:* Biaxial (–) (synthetic). *Orientation:* X = c; Y = a; Z = b. *Dispersion:* r > v, or r < v, strong. α = 1.440(3) β = 1.452(3) γ = 1.453(3) 2V(meas.) = 40°–43° 2V(calc.) = 29°44′

**Cell Data:** *Space Group:* P2<sub>1</sub>2<sub>1</sub>2<sub>1</sub> (synthetic). a = 8.216(8) b = 12.854(1) c = 6.232(8) Z = 4

**X-ray Powder Pattern:** Las Piedras Cave, Honduras. 3.038 (100), 5.085 (83), 4.649 (83), 4.972 (67), 3.783 (56), 3.325 (56), 3.923 (50)

<b>Chemistry:</b>	(1)
	SO <sub>3</sub> 44.97
	P <sub>2</sub> O <sub>5</sub> trace
	Na <sub>2</sub> O 17.56
	K <sub>2</sub> O 2.76
	(NH <sub>4</sub> ) <sub>2</sub> O 12.94
	H <sub>2</sub> O 19.45
	insol. 2.41
	<hr/>
	Total 100.09

(1) Las Piedras Cave, Honduras; insoluble residue is organic 2.30%, inorganic 0.11%; corresponds to [(NH<sub>4</sub>)<sub>0.88</sub>K<sub>0.10</sub>]<sub>Σ=0.98</sub>Na<sub>1.01</sub>(SO<sub>4</sub>)<sub>1.00</sub> • 1.92H<sub>2</sub>O.

**Occurrence:** An early product of the breakdown of bat guano.

**Association:** Thénardite, mascagnite, probable.

**Distribution:** From Las Piedras Cave, near Comayagua, 62 km northwest of Tegucigalpa, Honduras.

**Name:** Honoring John Lawrence LeConte (1825–1883), American entomologist, University of California, Berkeley, California, USA, who discovered the mineral.

**Type Material:** Philadelphia Academy of Natural Sciences, Philadelphia, Pennsylvania, Vaux 15337; Yale University, New Haven, Connecticut, USA, 1696.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 438–439. (2) Winchell, H. and R.J. Benoit (1951) Taylorite, mascagnite, apthitalite, lecontite, and oxammite from guano. *Amer. Mineral.*, 36, 590–602. (3) Faust, R.J. and F.D. Bloss (1963) X-ray study of lecontite. *Amer. Mineral.*, 48, 180–188. (4) Corazza, E., C. Sabelli, and G. Giuseppetti (1967) The crystal structure of lecontite, NaNH<sub>4</sub>SO<sub>4</sub>•2H<sub>2</sub>O. *Acta Cryst.*, 22, 683–687.