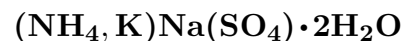


Lecontite



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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 H₂O, 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. $\alpha = 1.440(3)$ $\beta = 1.452(3)$ $\gamma = 1.453(3)$ 2V(meas.) = 40°–43° 2V(calc.) = 29°44'

Cell Data: *Space Group:* P2₁2₁2₁ (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)

Chemistry:	(1)
	SO ₃ 44.97
	P ₂ O ₅ trace
	Na ₂ O 17.56
	K ₂ O 2.76
	(NH ₄) ₂ O 12.94
	H ₂ 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 [(NH₄)_{0.88}K_{0.10}]_{Σ=0.98}Na_{1.01}(SO₄)_{1.00} • 1.92H₂O.

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, NaNH₄SO₄•2H₂O. *Acta Cryst.*, 22, 683–687.