

Crystal Data: Triclinic, pseudohexagonal. *Point Group:* $\bar{1}$ or 1. Crystals are platy, pseudohexagonal, flattened on {001}, corroded or skeletal, to 0.05 mm; typically granular. *Twinning:* Common, lamellar.

Physical Properties: *Cleavage:* {001}, distinct. *Fracture:* Uneven. Hardness = n.d. D(meas.) = 1.83 (synthetic). D(calc.) = 1.82 Soluble in H_2O .

Optical Properties: Transparent. *Color:* Colorless, white. *Optical Class:* Biaxial (-). *Orientation:* $Z = b$; $X \wedge c = 78^\circ$. $\alpha = 1.501$ $\beta = 1.516$ $\gamma = 1.525$ $2V(\text{meas.}) = 75^\circ$

Cell Data: *Space Group:* $P\bar{1}$ or $P1$ (synthetic). $a = 5.87(1)$ $b = 10.17(3)$ $c = 8.27(1)$ $\alpha = 101.1(4)^\circ$ $\beta = 111.1(1)^\circ$ $\gamma = 89.9(2)^\circ$ $Z = 2$

X-ray Powder Pattern: Synthetic.

4.95 (100), 4.98 (85), 3.77 (80), 3.39 (75), 2.932 (50), 3.36 (45), 4.65 (35)

Chemistry:

	(1)	(2)
SO_3	63.92	64.76
$(\text{NH}_4)_2\text{O}$	20.19	20.67
H_2O	[15.89]	14.57
Total	[100.00]	100.00

(1) Kladno, Czech Republic. (2) $\text{H}(\text{NH}_4)_3(\text{SO}_4)_2$.

Occurrence: A rare secondary mineral, formed from burning coal (Czech Republic); deposited from hot springs (The Geysers, California, USA).

Association: Sulfur (Letovice, Czech Republic); mascagnite, boussingaultite (The Geysers, California, USA).

Distribution: In the Czech Republic, from Písěčná, near Letovice; at Libušín, near Kladno; and from Radvanice. At Ormosbánya, Hungary. Found at The Geysers, Sonoma Co., California, USA.

Name: For Letovice, Czech Republic, the locality first noted for the mineral.

Type Material: Moravian Museum, Brno, Czech Republic, A6110.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 397. (2) Davis, B.L. and L.R. Johnson (1984) The true unit cell of ammonium hydrogen sulfate, $(\text{NH}_4)_3\text{H}(\text{SO}_4)_2$. J. Appl. Cryst., 17, 331-333.