Koktaite $(NH_4)_2Ca(SO_4)_2 \cdot H_2O$

Crystal Data: Monoclinic. *Point Group:* $2/m$. Crystals are acicular to lamellar, fibrous, showing {100}, {110}, {001}, {011}, {101}, as very fine-grained aggregates. *Twinning:* Common on {100}.

Physical Properties: Hardness = n.d. D(meas.) = 2.09 D(calc.) = 2.114 Soluble in H_2O, leaving a residue of gypsum.

Optical Properties: Semitransparent. *Color:* Colorless to white.
Optical Class: Biaxial (–). *Orientation:* $Y = b$; $Z' \wedge c$ (on {110}) = 2°. $\alpha = 1.524$ $\beta = 1.532$ $\gamma = 1.536$ 2V(meas.) = 72°

Cell Data: *Space Group:* $P2_1/a$. $a = 10.17$ $b = 7.15$ $c = 6.34$ $\beta = 102.75°$ Z = 2

X-ray Powder Pattern: Žeravice, Czech Republic. (ICDD 11-475).
9.83 (100), 3.30 (65), 4.96 (40), 5.83 (25), 3.00 (25), 3.56 (20), 2.89 (20)

Chemistry: (1) Optical data and X-ray pattern are found to be identical with synthetic $(NH_4)_2Ca(SO_4)_2 \cdot H_2O$.

Occurrence: On waste piles of a lignite mine.

Association: Gypsum, mascagnite, tschermigite.

Distribution: From Žeravice, near Kyjov, Czech Republic.

Name: To honor Jaroslav Kokta (1904–1970), Czech chemist who analyzed the synthetic compound.

Type Material: Moravian Museum, Brno, Czech Republic, A6109; National School of Mines, Paris, France; National Museum of Natural History, Washington, D.C., USA, 137963.

References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 444.