

Görgeyite

$\text{K}_2\text{Ca}_5(\text{SO}_4)_6 \cdot \text{H}_2\text{O}$

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Crystal Data: Monoclinic. *Point Group:* $2/m$. As crystals, tabular on {001}, to 8.5 cm, showing {001}, {100}, {111}, {110}.

Physical Properties: *Cleavage:* On {100}, imperfect. *Fracture:* Splintery to hackly. Hardness = 3.5–4 $D(\text{meas.}) = 2.90\text{--}2.93$ $D(\text{calc.}) = 2.90$

Optical Properties: Translucent. *Color:* Colorless, white, pale yellow, greenish yellow. *Luster:* Vitreous.

Optical Class: Biaxial (+). $\alpha = 1.560$ $\beta = 1.569\text{--}1.570$ $\gamma = 1.584\text{--}1.585$
 $2V(\text{meas.}) = 79^\circ\text{--}80^\circ$

Cell Data: *Space Group:* $C2/c$. $a = 17.51\text{--}17.519$ $b = 6.822\text{--}6.840$ $c = 18.21\text{--}18.252$
 $\beta = 113.3^\circ\text{--}113.33^\circ$ $Z = 4$

X-ray Powder Pattern: Ischl salt deposit, Austria.

3.005 (100), 3.164 (70), 2.817 (40), 2.756 (30), 1.841 (25), 1.896 (20), 3.029 (15)

Chemistry:

	(1)	(2)	(3)
SO_3	54.08	54.45	55.03
R_2O_3	0.18		
CaO	30.04	31.02	32.12
SrO		1.20	
Na_2O	1.77	0.15	
K_2O	10.82	10.77	10.79
Cl	0.06		
H_2O^+	2.82		
H_2O^-	0.34		
H_2O		n.d.	2.06
gangue	0.08		
Total	100.19	97.59	100.00

(1) Ischl salt deposit, Austria. (2) Cesano, Italy; by electron microprobe. (3) $\text{K}_2\text{Ca}_5(\text{SO}_4)_6 \cdot \text{H}_2\text{O}$.

Occurrence: Typically an uncommon secondary mineral in evaporite deposits; in hydrothermal veins.

Association: Glauberite, halite, polyhalite, anhydrite, gypsum (evaporites); cesanite, pyrite (Cesano, Italy).

Distribution: From the Ischl salt deposit, near Salzburg, Austria. In drill core at the edge of the Baccano caldera, Cesano geothermal field, east of Lake Bracciano, Lazio, Italy. From Astakós, Greece. At Praid, Romania. Very large crystals from Inder Lake, Kazakhstan. From Nongle, Sichuan Province, and the “Q” Basin [Jiangan Plain] potash deposits, Hubei Province, China.

Name: Honors Rolf von Görgey (1886–1915), mineralogist specializing in Austrian salt deposits.

Type Material: Natural History Museum, Vienna, Austria, M474; Harvard University, Cambridge, Massachusetts, USA, 107559.

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