Wattevillite


Physical Properties: Hardness = n.d. D(meas.) = 1.81 D(calc.) = n.d. Soluble in H₂O, with separation of gypsum after some time; taste initially sweet then astringent.

Optical Properties: Semitransparent. Color: Snow-white; colorless in transmitted light. Luster: Silky. Optical Class: Biaxial (−). Orientation: Highly variable extinction. \( \alpha = 1.435(3) \) \( \beta = 1.455(3) \) \( \gamma = 1.459(3) \) 2V(meas.) = 48(3)°


X-ray Powder Pattern: Bauersberg, Germany. (ICDD 41-1360). 4.39 (100), 4.20 (64), 2.892 (53), 2.945 (49), 5.44 (45), 4.03 (42), 5.10 (36)

Chemistry:

\[
\begin{array}{c|c|c}
& (1) & (2) \\
\hline
\text{SO}_3 & 44.01 & 45.72 \\
\text{Al}_2\text{O}_3 & 0.24 & \\
\text{FeO} & 0.88 & \\
\text{CoO} & 1.30 & \\
\text{NiO} & 1.05 & \\
\text{MgO} & 2.49 & \\
\text{CaO} & 16.87 & 16.01 \\
\text{Na}_2\text{O} & 10.46 & 17.70 \\
\text{K}_2\text{O} & 4.74 & \\
\text{H}_2\text{O} & 17.73 & 20.57 \\
\hline
\text{Total} & 99.77 & 100.00 \\
\end{array}
\]

(1) Einigkeit mine, Germany; after deduction of H₂O 33.69% as hygroscopic.
(2) Na₂Ca(SO₄)₂•4H₂O.

Occurrence: In pyritic lignite.

Association: Pyrite, other sulfides.

Distribution: From the Einigkeit mine, on the Bauersberg, near Bischofsheim, Bavaria, Germany.

Name: Honors Oscar de Watteville, Paris, France.

Type Material: n.d.