

Crystal Data: Monoclinic. *Point Group:* $2/m$. Crystals prismatic, to 2.5 cm, showing {100}, {120}, {110}, {320}, {011}, and {021}.

Physical Properties: *Cleavage:* On {110}. Hardness = 6 D(meas.) = 2.77–2.796 D(calc.) = 2.788 Slightly soluble in H₂O; fluoresces brownish yellow under UV.

Optical Properties: Semitransparent. *Color:* Colorless.
Optical Class: Biaxial (-). *Orientation:* $Y = b$; $X \wedge a = 22(2)^\circ$; $Z \wedge c = -45(2)^\circ$.
Dispersion: $r < v$, weak. $\alpha = 1.608\text{--}1.612$ $\beta = 1.636\text{--}1.637$ $\gamma = 1.650\text{--}1.653$
 $2V(\text{meas.}) = 65^\circ$

Cell Data: *Space Group:* $P2_1/a$. $a = 6.593(1)$ $b = 10.488(2)$ $c = 6.365(1)$
 $\beta = 113.38(2)^\circ$ $Z = 4$

X-ray Powder Pattern: Rehden, Germany.
 3.269 (100), 2.920 (87), 3.032 (83), 2.025 (56), 3.962 (54), 2.074 (54), 2.620 (48)

Chemistry:	(1)	(2)
SO ₃	2.2	
B ₂ O ₃	57.9	61.61
Fe ₂ O ₃	0.6	
CaO	32.1	33.08
H ₂ O	5.2	5.31
Total	98.0	100.00

(1) Rehden, Germany; includes impurities of CaSO₄ and Fe₂O₃. (2) CaB₃O₅(OH).

Occurrence: In a marine evaporite deposit.

Association: Halite, anhydrite, howlite, szaibélyite.

Distribution: From drill core at Rehden, near Diepholz, Lower Saxony, Germany.

Name: Honors Hans-Joachim Fabian, German geologist.

Type Material: National Museum of Natural History, Washington, D.C., USA, 160098.

References: (1) Gaertner, H., K.-L. Roese, and R.K. Kühn (1962) Fabianit = CaB₃O₅(OH), ein neues Mineral. Naturwiss., 49, 230 (in German). (2) Kühn, R.K., K.-L. Roese, and H. Gaertner (1962) Fabianit CaB₃O₅(OH), ein neues Mineral. Kali und Steinsalz, 3, 285–290 (in German). (3) (1963) Amer. Mineral., 48, 212–213 (abs. refs. 1 and 2). (4) Erd, R.C., G.D. Eberlein, and C.L. Christ (1969) Fabianite and its synthetic dimorph, CaB₃O₅(OH): new data. Can. Mineral., 10, 108–112. (5) Konnert, J.A., J.R. Clark, and C.L. Christ (1970) Crystal structure of fabianite, CaB₃O₅(OH), and comparison with the structure of its synthetic dimorph. Zeits. Krist., 132, 241–254.