

Crystal Data: Monoclinic. *Point Group:* 2/m. As radial or randomly oriented aggregates of fibers to 1.5 mm, elongated along [010] and somewhat flattened on {100}.

Physical Properties: *Cleavage:* {100}, good. *Tenacity:* Brittle. *Fracture:* Splintery. Hardness = n.d. D(meas.) = n.d. D(calc.) = 2.92

Optical Properties: Translucent. *Color:* Pale gray to silvery white. *Streak:* n.d. *Luster:* Silky. *Optical Class:* Biaxial (-). $\alpha = 1.745(5)$ $\beta = 1.760(5)$ $\gamma = 1.770(5)$ $2V(\text{meas.}) = 80(5)^\circ$ $2V(\text{calc.}) = 78^\circ$ *Dispersion:* Distinct, $r < v$. *Orientation:* $Y = b$, $Z \approx c$. *Pleochroism:* Distinct, $X = Y = \text{pale beige}$, $Z = \text{light orange-brown}$. *Absorption:* $X = Y < Z$.

Cell Data: *Space Group:* C2/c. $a = 20.837(2)$ $b = 5.1624(4)$ $c = 19.250(1)$ $\beta = 93.252(5)^\circ$ $Z = 4$

X-ray Powder Pattern: Hagendorf South pegmatite, Bavaria, Germany. 10.37 (100), 3.079 (33), 9.58 (32), 7.24 (26), 4.817 (22), 3.194 (15), 3.483 (14)

Chemistry:	(1)	(2)
MgO	0.28	
CaO	0.47	
ZnO	7.36	8.87
Al ₂ O ₃	0.88	
Fe ₂ O ₃	42.42	43.50
P ₂ O ₅	31.63	30.94
H ₂ O	16.2(5)	16.69
Total	99.24	100.00

(1) Hagendorf South pegmatite, Bavaria, Germany; average of 5 electron microprobe analyses supplemented by IR spectroscopy, H₂O by gas chromatography; corresponds to (Zn_{0.83}Ca_{0.08}Mg_{0.06}) $\Sigma=0.97$ (Fe³⁺_{4.88}Al_{0.16}) $\Sigma=5.04$ (PO₄)_{4.09}(OH)_{4.78}·5.86H₂O. (2) ZnFe³⁺₅(PO₄)₄(OH)₅·6H₂O.

Mineral Group: Beraunite group.

Occurrence: In a zoned phosphatic granitic pegmatite.

Association: Potassium feldspar, quartz, jungite, phosphophyllite, mitridatite; or flurlite, plimerite, Zn-bearing beraunite, schoonerite, parascholzite/scholzite, robertsite, altered phosphophyllite.

Distribution: From the Cornelia Mine Open Cut, Hagendorf South pegmatite, Upper Palatinate, Bavaria, Germany.

Name: As the analogue of *beraunite* with zinc dominant among essential bivalent cations.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (4828/1) and Museum Victoria, Melbourne, Victoria, Australia (M53238).

References: (1) Chukanov, N.V., I.V. Pekov, I.E. Grey, J.R. Price, S.N. Britvin, M.G. Krzhizhanovskaya, A.R. Kampf, B. Dünkler, E. Keck, D.I. Belakovskiy, and C.M. MacRae (2017) Zincoberaunite, ZnFe³⁺₅(PO₄)₄(OH)₅·6H₂O, a new mineral from the Hagendorf South pegmatite, Germany. *Mineralogy and Petrology*, 111(3), 351-361. (2) (2018) *Amer. Mineral.*, 103, 662-663 (abs. ref. 1).