

Crystal Data: Monoclinic. *Point Group:* 2/m. As crystals with dominant { $\bar{1}$ 01}, {100}, {010} and {001}, to 0.5 mm, elongated along [100] and tabular on {010}. *Twinning:* Simply or polysynthetically twinned on {001}.

Physical Properties: *Cleavage:* Perfect on {001}. *Fracture:* Stepped. *Tenacity:* Brittle. Hardness = ~ 3.5 D(meas.) = 2.70(3) D(calc.) = 2.768

Optical Properties: Transparent. *Color:* Colorless to pale yellow, colorless in transmitted light. *Streak:* White. *Luster:* Vitreous. *Pleochroism:* None. *Optical Class:* Biaxial (+). $\alpha = 1.589(2)$ $\beta = 1.592(2)$ $\gamma = 1.601(2)$ 2V(meas.) = 60(10)° 2V(calc.) = 60.3° *Orientation:* $X = b$, $Z \wedge a = 5^\circ$.

Cell Data: *Space Group:* P2/a. $a = 15.020(5)$ $b = 6.959(2)$ $c = 10.237(3)$ $\beta = 111.470(4)^\circ$ $Z = 2$

X-ray Powder Pattern: Hagendorf-Süd granitic pegmatite no. 25, Germany. 2.7958 (100), 4.929 (80), 9.443 (65), 4.719 (47), 3.494 (46), 5.596 (25), 1.979 (24)

Chemistry:	(1)
Na ₂ O	0.53
MgO	0.88
Al ₂ O ₃	11.66
P ₂ O ₅	34.58
CaO	4.29
MnO	17.32
FeO	8.32
ZnO	2.60
H ₂ O	2.27
Total	99.68

(1) Hagendorf-Süd granitic pegmatite no. 25, Germany; average of 65 electron microprobe analyses, H₂O by Penfield method; corresponding to (Ca_{0.63}Zn_{0.26}Na_{0.14}) $\Sigma=1.03$ (Mn_{0.60}Fe²⁺_{0.40}) $\Sigma=1.00$ (Mn_{1.40}Fe²⁺_{0.37}Mg_{0.18}Fe³⁺_{0.06}) $\Sigma=2.01$ (Al_{1.88}Fe³⁺_{0.12}) $\Sigma=2.00$ [PO₄]₄(OH)₂·7.89 H₂O.

Mineral Group: Jahnsite-whiteite group.

Occurrence: A secondary mineral in cavities within zwieselite crystals or as coronas (up to 1 mm in diameter) around cubic crystals of uraninite in the core zone of a complex granitic pegmatite that was altered and leached by low-temperature oxidizing hydrothermal solutions.

Association: Triplite-zwieselite, fluorapatite, nordgauite, columbite-(Fe), a Mn-analogue of montgomeryite, koninckite, jahnsite-(CaMnMn).

Distribution: From the Cornelia open pit, Hagendorf-Süd granitic pegmatite no. 25, Bavaria, Germany.

Name: For the chemical composition, in accordance with nomenclature for the whiteite group.

Type Material: Mineralogical Museum, St. Petersburg State University, Russia (1/19470).

References: (1) Yakovenchuk, V.N., E. Keck, S.V. Krivovichev, Y.A. Pakhomovsky, E.A. Selivanova, J.A. Mikhailova, A.P. Chernyatueva, and G.Yu. Ivanyuk (2012) Whiteite-(CaMnMn), CaMnMn₂Al₂[PO₄]₄(OH)₂·8H₂O, a new mineral from the Hagendorf-Süd granitic pegmatite, Germany. Mineral. Mag., 76(7), 2761-2771. (2) (2015) Amer. Mineral., 100, 663 (abs. ref. 1).