

Crystal Data: Orthorhombic. *Point Group:* $mm2$. As aggregates and crusts of prismatic crystals to 0.2 mm, elongated along [001] and displaying {010} and {001}.

Physical Properties: *Cleavage:* Perfect on {100}. *Fracture:* Uneven. *Tenacity:* Brittle. Hardness = ~ 2 D(meas.) = n.d. D(calc.) = 3.259 Slightly soluble in water. Strong yellowish green fluorescence in SW and LW UV.

Optical Properties: Transparent to translucent. *Color:* Bright green. *Streak:* Greenish white. *Luster:* Vitreous. *Optical Class:* Biaxial (-). $\alpha = \text{n.d.}$ $\beta = 1.596(2)$ $\gamma = 1.634(4)$ $2V(\text{meas.}) = \text{n.d.}$ $2V(\text{calc.}) = \text{n.d.}$ *Orientation:* $X = a$.

Cell Data: *Space Group:* $Pna2_1$. $a = 13.7778(3)$ $b = 7.2709(4)$ $c = 11.5488(2)$ $Z = 4$

X-ray Powder Pattern: Geschieber vein, Jáchymov, Western Bohemia, Czech Republic. 6.882 (100), 5.622 (53), 3.681 (18), 3.006 (17), 4.428 (16), 3.304 (15), 4.589 (12)

Chemistry:	(1)	(2)
Na ₂ O	0.23	
K ₂ O	14.29	16.38
MgO	2.05	
CaO	0.06	
UO ₃	49.51	49.56
SO ₃	27.74	27.80
H ₂ O	[6.36]	6.26
Total	100.24	100.00

(1) Geschieber vein, Jáchymov, Western Bohemia, Czech Republic; average of 7 electron microprobe analyses supplemented by Raman spectroscopy, H₂O calculated; corresponding to $(K_{1.72}Mg_{0.29}Na_{0.04}Ca_{0.01})_{\Sigma=2.06}(U_{0.98}O_2)(S_{0.98}O_4)_2(H_2O)_2$. (2) $K_2(UO_2)(SO_4)_2(H_2O)_2$.

Occurrence: As a weathering product from the post-mining alteration of uraninite and sulfides in a Ag-Bi-Co-Ni-U bearing hydrothermal vein deposit.

Association: Svornostite, adolfpateraite, gypsum, mathesiusite.

Distribution: From the Geschieber vein, Svornost mine (5th level), Jáchymov (Joachimsthal), Western Bohemia, Czech Republic.

Name: For the Geschieber vein, the locality that produced the first specimens.

Type Material: A.E. Fersman Mineralogical Museum, Russian Academy of Sciences, Moscow, Russia (4537/1).

References: (1) Plášil, J., J. Hloušek, A.V. Kasatkin, R. Škoda, M. Novák, and J. Čejka (2015) Geschieberite, $K_2(UO_2)(SO_4)_2(H_2O)_2$, a new uranyl sulfate mineral from Jáchymov. *Mineral. Mag.*, 79(1), 205-216. (2) (2016) *Amer. Mineral.*, 101, 2570-2571 (abs. ref. 1).