

Crystal Data: Monoclinic. *Point Group:* *m*. As globular sprays of prismatic crystals to 0.6 mm that show indistinct hexagonal outlines. *Twinning:* Rotational domains observed by X-ray study.

Physical Properties: *Cleavage:* n.d. *Fracture:* n.d. *Tenacity:* n.d. Hardness = n.d. D(meas.) = 3.67(1) D(calc.) = 3.74 Fluoresces weak yellow to yellow-green in SW and LW UV. Soluble in dilute acids and in water with pH < 6.5.

Optical Properties: Translucent. *Color:* Pale yellow to beige. *Streak:* Light yellow.

Luster: Vitreous.

Optical Class: Biaxial. *n*(calc.) = 1.5825

Cell Data: *Space Group:* *Cc*. *a* = 9.2919(8) *b* = 16.0991(11) *c* = 6.4436(3) *β* = 91.404(5)° *Z* = 4

X-ray Powder Pattern: Svornost mine, Jáchymov, Czech Republic.

4.639 (100), 8.022 (92), 4.967 (68), 3.221 (63), 5.024 (60), 2.681 (60), 5.080 (57)

Chemistry:	(1)	(2)
Na ₂ O	21.39	22.87
MgO	0.15	
FeO	0.53	
UO ₃	53.93	52.77
CO ₂	[24.00]	24.36
Total	100.00	100.00

(1) Svornost mine, Jáchymov, Czech Republic; ICP MS analysis supplemented by DTA and IR spectroscopy, CO₂ by difference; corresponds to (Na_{3.77}Fe_{0.04}Mg_{0.02})_{Σ=3.83}(UO₂)_{1.03}(CO₃)_{2.98}.

(2) Na₄(UO₂)(CO₃)₃.

Occurrence: As efflorescence over a calcite vein associated with disintegrated uraninite, formed in a relatively dry environment with rapid precipitation, due to a change of acidity of sodium-carbonate solutions to a pH range of 6.5 to 11.5.

Association: Andersonite, schröckingerite.

Distribution: From the Geschieber vein, Svornost mine, Jáchymov, Krušné hory Mountains (Erzgebirge), ~20 km north of Karlovy Vary, northwest Bohemia, Czech Republic [TL]; at Rožná, Western Moravia, Czech Republic, in Mina Euréka, Pyrenees, Spain and from localities in Hungary and the USA.

Name: Honors Jiří Čejka, D.Sc. (b. 1929), Director of the Museum of Natural History, National Museum, Prague, Czech Republic, from 1991 to 2001, for his contributions to the crystal chemistry of uranium minerals.

Type Material: Mineralogical collection, National Museum, Prague, Czech Republic (P1p 17/99).

References: (1) Ondruš, P., R. Skalá, F. Veselovský, J. Sejkora, and C. Vitti (2003) Čejkaite, the triclinic polymorph of Na₄(UO₂)(CO₃)₃ - a new mineral from Jáchymov, Czech Republic. *Amer. Mineral.*, 88, 686-693. (2) Plášil, J., K. Fejfarová, M. Dušek, R. Škoda, and J. Rohlíček (2013) Revision of the symmetry and the crystal structure of čejkaite, *Am. Mineral.*, 98, 549-553. (3) Colmenero, F., J. Plášil, and J. Sejkora (2020) The crystal structures and mechanical properties of the uranyl carbonate minerals roubaultite, fontanite, sharpite, widenmannite, grimselite and cejkaite. *Inorganic Chemistry Frontiers*, 7, 4197-4221.