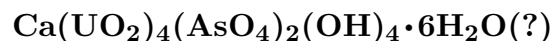


Arsenuranylite



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Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. As fine scales and lichenlike incrustations of elongated crystals, to 0.5 mm.

Physical Properties: *Cleavage:* One, perfect. Hardness = 2–3 D(meas.) = n.d. D(calc.) = 4.25 Radioactive.

Optical Properties: Semitransparent. *Color:* Deep orange; yellow in transmitted light. *Optical Class:* Biaxial (-). $\alpha = 1.737$ $\beta = 1.761$ $\gamma = 1.771$ – 1.778 $2V(\text{meas.}) = \text{n.d.}$

Cell Data: *Space Group:* $Bmmb$. $a = 15.40$ $b = 17.40$ $c = 13.768$ $Z = 6$

X-ray Powder Pattern: Cherkasar deposit, Uzbekistan. 7.72 (10), 3.85 (10), 8.41 (8), 3.13 (8), 3.42 (7), 1.778 (7), 1.729 (7)

Chemistry:	(1)	(2)
UO ₃	68.64	72.68
As ₂ O ₅	16.68	14.60
CaO	3.48	3.56
H ₂ O	9.15	9.16
Total	97.95	100.00

(1) Cherkasar deposit, Uzbekistan; corresponding to $\text{Ca}_{1.00}(\text{UO}_2)_{3.89}(\text{AsO}_4)_{2.34} \cdot 8.10\text{H}_2\text{O}$.

(2) $\text{Ca}(\text{UO}_2)_4(\text{AsO}_4)_2(\text{OH})_4 \cdot 6\text{H}_2\text{O}$.

Occurrence: In the oxidized zone of a uranium deposit containing arsenic-bearing sulfides (Cherkasar deposit, Uzbekistan).

Association: Paraschoepite, schoepite, metazeunerite, nováčekite, uranospinite (Cherkasar deposit, Uzbekistan).

Distribution: From the Cherkasar uranium deposit, 30 km northwest of Pap, Chatkal Range, Uzbekistan. At Menzenschwand, Black Forest. Germany.

Name: For ARSENic and URANium in its composition and probable relation to *phosphuranylite*.

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia, 64434.

References: (1) Belova, L.N. (1958) Arsenuranylite – the arsenic analogue of phosphuranylite. Zap. Vses. Mineral. Obshch., 87, 598–602 (in Russian). (2) (1959) Amer. Mineral., 44, 208 (abs. ref. 1). (3) (1960) Mineral. Abs., 14, 344 (addendum to abs. ref. 1). (4) Pekov, I.V. (1998) Minerals first discovered on the territory of the former Soviet Union, 30.