

Arsenuranylite**Ca(UO₂)₄(AsO₄)₂(OH)₄•6H₂O(?)**

©2001-2005 Mineral Data Publishing, version 1

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*(meas.) = 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
<hr/>		
Total	97.95	100.00

(1) Cherkasar deposit, Uzbekistan; corresponding to Ca_{1.00}(UO₂)_{3.89}(AsO₄)_{2.34}•8.10H₂O.

(2) Ca(UO₂)₄(AsO₄)₂(OH)₄•6H₂O.

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.