Uvanite

\[ U_{2}^{6+}V_{6}^{5+}O_{21}\cdot15H_{2}O(?) \]

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Crystal Data: Orthorhombic (probable). Point Group: n.d. As minutely crystalline coatings and massive, to 1 cm thick.


Optical Properties: Semitransparent. Color: Brownish yellow; pale brown in transmitted light. Optical Class: Biaxial (+). Pleochroism: X = light brown; Y = dark brown; Z = greenish yellow. \( \alpha = 1.817 \quad \beta = 1.879 \quad \gamma = 2.057 \quad 2V(\text{meas.}) = 52^\circ \)


X-ray Powder Pattern: Temple Rock, Utah, USA. 2.94 (10), 1.71 (9), 2.24 (8), 1.484 (7), 5.9 (6), 4.6 (4), 1.637 (4)

Chemistry:

\[
\begin{array}{ll}
\text{Mineral} & \text{Content} \\
\text{UO}_3 & 39.60 \quad 41.22 \\
P_2O_5 & 0.06 \\
As_2O_5 & 0.05 \\
V_2O_5 & 37.70 \quad 39.31 \\
MgO & 0.04 \\
CaO & 1.73 \\
K_2O & 0.30 \\
H_2O & 18.28 \quad 19.47 \\
\text{insol.} & 1.24 \\
\text{Total} & 99.00 \quad 100.00 \\
\end{array}
\]

(1) Temple Rock, Utah, USA. (2) \( U_{2}^{6+}V_{6}^{5+}O_{21}\cdot15H_{2}O \).

Occurrence: In a Colorado Plateau-type uranium deposit in asphaltic sandstone.

Association: Carnotite, rauvite, hewettite, metatorbernite, gypsum, “hyalite”.

Distribution: From Temple Rock, about 70 km southwest of Green River, San Rafael district, Emery Co., Utah, USA.

Name: For Uranium and VANadium in the composition.

Type Material: Harvard University, Cambridge, Massachusetts, 62753; National Museum of Natural History, Washington, D.C., USA, 87512, R5708.