Metanováčekite

\[
\text{Mg(UO}_2\text{)}_2(\text{AsO}_4)_2 \cdot 4 - 8\text{H}_2\text{O}
\]

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Crystal Data: Tetragonal. Point Group: 4/m. As rims on other minerals, to 0.5 mm; typically pseudomorphous after nováčekite crystals.

Physical Properties: Cleavage: Perfect on \{001\}; good on \{010\}. Hardness = 2–2.5. \(D(\text{meas.}) = 3.51\) \(D(\text{calc.}) = 3.72\). Radioactive. Fluoresces yellow or yellow-green under UV. Reversibly dehydrates from nováčekite under ambient conditions.


Cell Data: Space Group: \(P4/n\). \(a = 7.16\) \(c = 8.58\) \(Z = 1\)

X-ray Powder Pattern: Anton mine, Germany. 8.52 (10), 3.57 (9), 2.14 (6), 4.29 (5), 1.791 (5), 5.05 (4b), 3.02 (4)

Chemistry: (1) Anton mine, Germany; no chemical analysis has been performed; identification is from correspondence of properties with synthetic \(\text{Mg(UO}_2\text{)}_2(\text{AsO}_4)_2 \cdot 8\text{H}_2\text{O}\).

Mineral Group: Meta-autunite group.

Occurrence: Typically a dehydration product of nováčekite.

Association: Nováčekite (Germany, England); bassetite, saléeite (Sue mine, Arizona, USA).

Distribution: In Germany, in the Black Forest, from the Anton mine, Heubachtal, near Schiltach; at the Michael mine, Weiler, near Lahr; and the Clara mine, near Oberwolfach; in the Weisser Hirsch mine, Schneeberg, Saxony; from Ellweiler, Rhineland-Palatinate. In West Wheal Owles, St. Just, Cornwall, England. From the Sue mine, Cherry Creek area, Gila Co., Arizona, and on Twin Mountain, Comanche Co., Oklahoma, USA.

Name: The prefix \textit{meta} indicates the dehydration product of nováčekite.

Type Material: n.d.