Tetrarooseveltite \( \beta\text{–Bi(AsO}_4\text{)} \)

Crystal Data: Tetragonal. Point Group: \(4/m\). As indistinct crystals, to 50 \(\mu\text{m}\), in powdery aggregates.

Physical Properties: Hardness = 2.5 D(meas.) = n.d. D(calc.) = 7.64


Cell Data: Space Group: \(I4_1/a\) (synthetic). \(a = 5.085(5)\) \(c = 11.69(2)\) \(Z = 4\)

X-ray Powder Pattern: Moldava fluorite mine, Czech Republic.

Chemistry:

\[
\begin{array}{ccc}
\text{Compound} & (1) & (2) \\
P_2O_5 & 0.02 & \\
As_2O_5 & 33.02 & 33.03 \\
Bi_2O_3 & 66.96 & 66.97 \\
\text{Total} & 100.00 & 100.00 \\
\end{array}
\]

(1) Moldava fluorite mine, Czech Republic; average of six analyses. (2) Bi(AsO\(_4\)).

Polymorphism & Series: Dimorphous with rooseveltite.


Association: Bayldonite, malachite, mimetite, fluorite, quartz.

Distribution: In the Moldava fluorite mine, about 20 km northwest of Teplice, Krušně hory Mountains, Czech Republic.

Name: As the tetragonal dimorph of rooseveltite.

Type Material: Národní Museum, Prague, Czech Republic, P1N 84 563.