Berdesinskiite

Crystal Data: Monoclinic. Point Group: 2/m or m. As grains, rarely up to 70 µm, and as rims around schreyerite.

Physical Properties: Hardness = [6–6.5] (polishing hardness close to that of rutile). D(meas.) = n.d. D(calc.) = 4.536


Cell Data: Space Group: \([C2/c or Cc; \ P2_1/c or \ P2/c or \ Pc]\) (by analogy to synthetic \(V_2TiO_5\)). \(a = 10.11(1)\) \(b = 5.084(4)\) \(c = 7.03(1)\) \(\beta = 111.46(6)°\) \(Z = 4\)

X-ray Powder Pattern: Near Lasamba Hill, Kenya; line intensities not given. 4.721, 4.492, 3.316, 2.895, 2.676, 2.543, 2.447

Chemistry:

\[
\begin{array}{lcr}
\text{Composition} & (1) & (2) \\
\text{TiO}_2 & 34.13 & 34.77 \\
\text{Al}_2\text{O}_3 & 0.76 \\
\text{V}_2\text{O}_3 & 64.35 & 65.23 \\
\text{Cr}_2\text{O}_3 & 1.39 \\
\text{MnO} & 0.01 \\
\text{Total} & 100.64 & 100.00 \\
\end{array}
\]

(1) Near Lasamba Hill, Kenya; by electron microprobe, average of five analyses; corresponding to \(V_{1.96}\text{Cr}_{0.05}\text{Al}_{0.03}\Sigma=2.04\text{Ti}_{0.98}\text{O}_5\). (2) \(V_2\text{TiO}_5\).

Occurrence: In strongly weathered gneiss with quartzite in a gem kornerupine deposit of Precambrian age.

Association: Schreyerite, rutile, kornerupine, diopside, epidote, graphite, quartz, biotite, tourmaline.

Distribution: From six km southeast of Lasamba Hill, Kwale district, south of Voi, Kenya.

Name: For Professor Waldemar Berdesinski (1911–1990), crystallographer, University of Heidelberg, Heidelberg, Germany.
