Mcconnellite

Crystal Data: Hexagonal. Point Group: 3m. As parallel intergrowths with grimaldiite in tabular rhombohedral crystals, to 1 mm; as granular aggregates of intergrown crystals.

Physical Properties: Cleavage: {0001}. Hardness = n.d. D(meas.) = 5.49 (synthetic). D(calc.) = 5.61

Optical Properties: Translucent in intergrowths with grimaldiite. Color: Deep red. Optical Class: Uniaxial. \( \omega = \text{n.d.} \) \( \epsilon = \text{n.d.} \)

Cell Data: Space Group: \( R\overline{3}m \). \( a = 2.983(4) \) \( c = 17.160(31) \) \( Z = 1 \)

X-ray Powder Pattern: Merume River, Guyana; from a mixture with grimaldiite. 2.85 (ms), 2.462 (ms), 2.21 (vw), 1.420 (vw), 1.64 (vvw)

Chemistry:

\[
\begin{array}{ccc}
\text{SiO}_2 & 0.42 & \\
\text{Al}_2\text{O}_3 & 4.3 & \\
\text{Fe}_2\text{O}_3 & 0.85 & \\
\text{Cr}_2\text{O}_3 & 77.3 & 51.51 \\
\text{CuO} & 5.5 & \\
\text{Cu}_2\text{O} & 48.49 & \\
\text{LOI} & 11.5 & \\
\text{Total} & 99.9 & 100.00
\end{array}
\]

(1) Merume River, Guyana; integrowth of 80%–86% grimaldiite, the balance mcconnellite and \( \text{H}_2\text{O} \). (2) \( \text{CuCr}_2\text{O}_4 \).

Occurrence: In fine-grained intergrowth with other chromium oxide-hydroxide minerals in alluvial cobbles.

Association: Bracewellite, eskolaite, grimaldiite, guyanaite.

Distribution: In the basin of the Merume River, Guyana.

Name: For Dr. Richard Bradford McConnell, formerly Director, British Guyana Geological Survey.

Type Material: n.d.