Blossite

\( \alpha - \text{Cu}_2\text{V}_{2+}^5\text{O}_7 \)

Crystal Data: Orthorhombic. Point Group: \textit{mm}2. As equant anhedral crystals, to 150 \( \mu \text{m} \), typically intergrown with other fumarolic copper vanadates.

Physical Properties: Hardness = n.d. \( D(\text{meas.}) = 3.95–3.97 \) (synthetic). \( D(\text{calc.}) = 4.051 \)


Cell Data: Space Group: \textit{Fdd}2. \( a = 20.676(6) \) \( b = 8.392(3) \) \( c = 6.446(2) \) \( Z = 8 \)

X-ray Powder Pattern: Synthetic \( \alpha - \text{Cu}_2\text{V}_{2+}\text{O}_7 \). (ICDD 26-566). 3.260 (100), 3.080 (100), 3.220 (80), 2.483 (80), 2.102 (70), 2.096 (70), 1.712 (70)

Chemistry:

\[
\begin{array}{ccc}
V_2O_5 & 53.28 & 53.34 \\
\text{CuO} & 46.49 & 46.66 \\
\hline
\text{Total} & 99.77 & 100.00
\end{array}
\]

(1) Izalco volcano, El Salvador; by electron microprobe. (2) \( \text{Cu}_2\text{V}_2\text{O}_7 \).

Polymorphism & Series: Dimorphous with ziesite.

Occurrence: A very rare sublimate, probably formed between 100–200 \(^\circ\)C, from the outer sulfate zone of a fumarole in the crater of a basaltic composite volcano.

Association: Fingerite, stoiberite, mcbirneyite, ziesite.

Distribution: From the summit crater of Izalco volcano, El Salvador.

Name: To honor Dr. F. Donald Bloss (1920–), American mineralogist, Virginia Polytechnic Institute, Blacksburg, Virginia, USA.


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