Voudourisite

\[ \text{Cd(SO}_4\text{)}\cdot\text{H}_2\text{O} \]

Crystal Data: Monoclinic. Point Group: 2/m. As clusters < 0.5 mm of stacked, short prismatic and rounded crystals or powdery crusts.


Optical Properties: Transparent to translucent. Color: Colorless, white. Streak: White. Luster: Vitreous. Optical Class: Biaxial(-). \[ \alpha = 1.580(2) \quad \beta = 1.624(2) \quad \gamma = 1.640(2) \quad 2V(\text{meas.}) = 70(5)^\circ \] \[ 2V(\text{calc.}) = 61^\circ \]

Cell Data: Space Group: \( P2_1/c \). \[ a = 7.633(2) \quad b = 7.458(2) \quad c = 8.151(2) \quad \beta = 122.35(1)^\circ \quad Z = 4 \]


Chemistry:

\[
\begin{array}{ccc}
\text{CdO} & 47.91 & 56.69 \\
\text{SO}_3 & 36.43 & 35.35 \\
\text{CuO} & 5.98 & \\
\text{FeO} & 1.27 & \\
\text{MgO} & 0.22 & \\
\text{H}_2\text{O} & [8.28] & 7.96 \\
\text{Total} & 100.09 & 100.00
\end{array}
\]

(1) Esperanza Mine, Kaminiza area, Lavrion Mining District, Greece; average electron microprobe analysis, \( \text{H}_2\text{O} \) calculated; corresponds to \((\text{Cd}_{0.81}\text{Cu}_{0.16}\text{Fe}_{0.01}\text{Mg}_{0.01})\text{Z}^{-1}\text{Cd}_{0.99}\text{SO}_4\text{H}_2\text{O}\). (2) \( \text{Cd(SO}_4\text{)}\cdot\text{H}_2\text{O} \).

Occurrence: A secondary mineral from the weathering of primary hawleyite and greenockite.

Association: Lazaridisite, sphalerite, galena, edwardsite, chalcanthite, gypsum, greenockite.

Distribution: At the Esperanza Mine, Kaminiza area, #19 Mine, Ano Sounio area, and at the North Mine, Villia area, Lavrion Mining District, Greece.

Name: Honors Professor Panagiotis Voudouris (b. 1962), Department of Mineralogy and Petrology, Faculty of Geology and Geoenvironment, National and Kapodistrian University of Athens, Greece, in recognition of his groundbreaking work on the Lavrion deposits.

Type Material: Institute for Mineralogy and Crystallography, University of Vienna, Austria, (HS13.077).

References: (1) Rieck, B., C.L. Lengauer, and G. Giester (2019) Voudourisite, \( \text{Cd(SO}_4\text{)}\cdot\text{H}_2\text{O} \), and lazardisite, \( \text{Cd(SO}_4\text{)}\cdot8\text{H}_2\text{O} \), two new minerals from the Lavrion Mining District, Greece. Mineral. Mag., 83, 551-559.