Weilite

Crystal Data: Triclinic. Point Group: T. Powdery, massive, typically pseudomorphous after pharmacolite or haidingerite.


Optical Properties: Semitransparent. Color: White. Luster: Porcelaneous, may be greasy to slightly pearly.

Optical Class: Biaxial (-). Orientation: X \{001\} = 20(2)\°; Y \{001\} = 27(2)\°; Z \perp \{001\} = 34(2)\°. \alpha = 1.664(2) (\alpha') / \beta = n.d. \gamma = 1.688(2) (\gamma') 2V(meas.) = 82(1)\°

Cell Data: Space Group: P\bar{1} (synthetic). a = 7.0591(8) b = 6.8906(9) c = 7.2006(16)

\alpha = 97°26'(1') \beta = 103°33'(1') \gamma = 87°45'(1') Z = 4

X-ray Powder Pattern: Gabe-Gottes mine, France.

3.43 (FFF), 3.07 (FFF), 3.42 (F), 2.80 (F), 2.58 (mf), 2.28 (mf), 3.60 (f), 3.21 (f)

Chemistry: 

\begin{align*}
\text{As}_2\text{O}_5 & \quad 64.1 & \quad 61.7 & \quad 63.85 \\
\text{CaO} & \quad 30.7 & \quad 33.1 & \quad 31.15 \\
\text{H}_2\text{O} & \quad 5.2 & \quad 5.2 & \quad 5.00 \\
\text{Total} & \quad [100.0] & \quad [100.0] & \quad 100.00
\end{align*}

(1) Gabe-Gottes mine, France; recalculated to 100% after deduction of SiO₂ 1% and pharmacolite 10% from an original total of 99.7%. (2) Schneeberg, Germany; recalculated to 100% after deduction of pharmacolite 10% from an original total of 100.0%. (3) CaHAsO₄.

Occurrence: A rare secondary mineral in the oxidized zone of arsenic-bearing hydrothermal mineral deposits.

Association: Pharmacolite, haidingerite, picropharmacolite.

Distribution: In Germany, from Schneeberg, at the Daniel mine, and at Schlema-Hartenstein, Saxony; from Wittichen, Black Forest; in the Bauhaus district, Richelsdorf Mountains, Hesse. In the Gabe-Gottes mine, Rauenthal, near Sainte-Marie-aux-Mines, Haut-Rhin, and at Duranus, Alpes-Maritimes, France. From the Wanthaite mine, St. John’s in the Vale, Cambria, England. In the Bou Azzer district, Morocco. From the Getchell mine, Humboldt Co., Nevada, USA.

Name: To honor Professor René Weil (1901– ), French mineralogist, University of Strasbourg, Strasbourg, France.
