Charmarite

\( \text{Mn}^{2+} \text{Al}_2(\text{CO}_3)(\text{OH})_{12} \cdot 3\text{H}_2\text{O} \)

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Crystal Data: Monoclinic. \textit{Point Group}: 2/m. As complexly faceted crystals, several cm in length, with \{100\}, \{221\}, \{2\overline{2}1\}, and \{001\} prominent; 28 forms have been recognized. \textit{Twinning}: Commonly twinned on \{100\}, producing contact twins or finely polysynthetic lamellae.

Physical Properties: \textit{Cleavage}: \{100\} and \{010\}. Hardness = \( \sim 3 \) D(meas.) = 6.30–6.49 D(calc.) = [6.38]

Optical Properties: Transparent. \textit{Color}: Colorless to yellow; colorless to gray or brown in thin section. \textit{Streak}: White. \textit{Luster}: Adamantine. \textit{Optical Class}: Biaxial (−). \textit{Pleochroism}: X = light brownish; Z = brownish. \textit{Dispersion}: Weak, inclined. \( \alpha = 2.250(8) \quad \beta = 2.382(8) \quad \gamma = 2.410(8) \quad 2V(\text{meas.}) = 50^\circ \)

Cell Data: \textit{Space Group}: \( P2_1/a \). \( a = 13.37–13.379 \quad b = 7.16–7.174 \quad c = 7.11–7.116 \)
\( \beta = 105.96^\circ–106^\circ \quad Z = 4 \)

X-ray Powder Pattern: Mounana mine, Gabon. 3.441 (FFF), 3.428 (FFF), 3.206 (FF), 4.93 (F), 3.081 (F), 4.32 (mF), 3.569 (mF)

Chemistry:

\begin{tabular}{ll}
\text{Chemistry:} & \\
\hline
\text{V}_2\text{O}_5 & 29.1 \\
\text{PbO} & 71.6 \\
\text{Total} & 100.7 \\
\end{tabular}

(1) Mounana mine, Gabon; by electron microprobe, corresponds to \( \text{Pb}_{2.00}\text{V}_{2.00}\text{O}_7 \).

Occurrence: In the oxidized zone of a lead-bearing U–V deposit (Mounana mine, Gabon).

Association: Francevillite, wulfenite (Mounana mine, Gabon).

Distribution: In the Mounana uranium mine, Franceville, Gabon. From the Kusu deposit, 85 km south of Kinshasa, Bas-Congo Province, Congo (Bas-Zaire Province, Zaire). From St. Andreasberg, Harz Mountains, Germany. Found at Vrančice, near Příbram, Czech Republic.

Name: Honors Jean Chervet (1904–1962), French mineralogist.

Type Material: National School of Mines, Paris, France.