Hydroxyferroroméite \((\text{Fe}^{2+1.5\underbrace{\text{1.5}}_{0.5}}\text{Sb}^{5+2})\text{O}_6(\text{OH})\)

**Crystal Data:** Cubic.  
**Point group:** 4/m 3 2/m.  
Powdery in masses to 50 μm.

**Physical Properties:**  
**Cleavage:** n.d.  
**Tenacity:** Brittle.  
**Fracture:** Conchoidal.  
**Hardness:** = ~ 3 (powder)  
D(meas.) = n.d.  
D(calc.) = n.d.

**Optical Properties:**  
**Translucent.**  
**Color:** Yellow to yellow-brown.  
**Streak:** Yellow.  
**Luster:** Earthy to vitreous.  
**Optical Class:** n.d.  

**Cell Data:**  
**Space Group:** Fd\(\overline{3}\) m.  
**a:** 10.25(3)  
**Z:** 8

**X-ray Powder Pattern:**  
Correc d’en Llinassos, near Oms, Pyrénées-Orientales Department, France.  
2.963 (100), 5.920 (65), 3.089 (63), 1.815 (63), 2.557 (48), 1.548 (43), 1.733 (25)

**Chemistry:**

\[
\begin{array}{ll}
\text{Sb}_2\text{O}_5 & 67.10 \\
\text{As}_2\text{O}_5 & 0.15 \\
\text{SiO}_2 & 1.17 \\
\text{Al}_2\text{O}_3 & 0.28 \\
\text{CaO} & 0.18 \\
\text{SrO} & 0.58 \\
\text{FeO} & 16.95 \\
\text{CuO} & 8.69 \\
\text{ZnO} & 0.54 \\
\text{H}_2\text{O} & [1.72] \\
\text{Total} & 97.36 \\
\end{array}
\]

(1) Correc d’en Llinassos, near Oms, Pyrénées-Orientales Department, France; average of 9 electron microprobe analyses supplemented by Raman and X-ray photoelectron spectroscopy (for valences of Fe, Cu and Sb), \(\text{H}_2\text{O}\) calculated from stoichiometry; corresponds to 
\((\text{Fe}^{2+1.07}\text{Cu}^{2+0.50}\text{Zn}^{0.00}\text{Sb}^{0.05}\text{Ca}^{0.01}[\text{0.38}]\text{Si}^{0.01}\text{Al}^{0.02}\text{As}^{0.01})\text{O}_6[\text{OH}^{0.86}\text{O}_{0.14}]\text{O}_{2-}\).

**Mineral Group:** Pyrochlore supergroup (general formula \(-\text{A}_2\text{B}_2\text{X}_6\text{Y}\)); roméite group \((B = \text{Sb}^{5+})\).

**Occurrence:** As powdery boxwork replacements after tetrahedrite in a siderite-quartz matrix (France).

**Association:** Hematite, goethite, chalcopyrite, tetrahedrite, native antimony (France); chlorargyrite, dyscrasite (Australia).

**Distribution:** From Correc d’en Llinassos, near Oms, Pyrénées-Orientales Department, France; also at the Consols Mine (ABH Consols Mine; Australian Broken Hill Consols Mine), Broken Hill, New South Wales, Australia.

**Name:** For a member of the roméite group with prefixes to indicate dominant \(\text{OH}^-\) (hydroxy) in the \(Y\) site and dominant \(\text{Fe}^{2+}\) (ferro) in the \(A\) site.

**Type Material:** Museum Victoria, Melbourne, Victoria, Australia (M53584) and the Natural History Museum, London, England (BM2016,2).

**References:**