Camerolaite  
\[ \text{Cu}_4\text{Al}_2(\text{HSbO}_4,\text{SO}_4)(\text{CO}_3)(\text{OH})_{10}\cdot2\text{H}_2\text{O} \]

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Crystal Data: Monoclinic.  
Point Group: 2/m or 2. Crystals are acicular, elongated along [010], flattened on \{100\}, showing only \{100\} and \{001\}; typically in tufts or radiating aggregates, to 2 mm.

Physical Properties:  
Cleavage: On \{100\} and \{001\}, good. Fracture: Fibrous.

Optical Properties:  
Optical Class: Biaxial (+). Pleochroism: X = colorless; Y = pale green; Z = blue-green.
Orientation: X \perp \{100\}; Z = b. Dispersion: r < v, strong. \( \alpha = 1.626(2) \) \( \beta = 1.646(2) \) \( \gamma = 1.682(2) \) 2V(meas.) = 77(3)° 2V(calc.) = 75°

Cell Data:  
Space Group: P2₁/m or P2₁. \( a = 10.765(6) \) \( b = 2.903(2) \) \( c = 12.527(8) \) \( \beta = 95.61(4)° \) \( Z = 1 \)

X-ray Powder Pattern:  
Cap Garonne mine, France.
4.276 (100), 5.160 (90), 5.62 (50), 3.565 (40), 2.380 (35), 2.326 (35), 2.137 (30)

Chemistry:

<table>
<thead>
<tr>
<th>Element</th>
<th>Formula</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>SO₄</td>
<td>4.75</td>
<td></td>
</tr>
<tr>
<td>CO₂</td>
<td>6.26</td>
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</tr>
<tr>
<td>Sb₂O₃</td>
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<tr>
<td>Al₂O₃</td>
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<tr>
<td>CuO</td>
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<tr>
<td>H₂O</td>
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<tr>
<td>Total</td>
<td>99.66</td>
<td></td>
</tr>
</tbody>
</table>

(1) Cap Garonne mine, France; by electron microprobe, average of eight analyses, CO₂ and H₂O by CHN analyzer; corresponds to Cu₄.₅₆Al₁.₉₉[(HSbO₄)₀.₅₉(SO₄)₀.₄₁](OH)₀.₉₉[(CO₃)₀.₉₉(OH)]₀.₉₉•2.12H₂O.

Occurrence: A rare secondary mineral in the oxidized zone of polymetallic mineral deposits.

Association: Parnauite, cyanotrichite, malachite, quartz (Cap Garonne mine, France); brochantite, chalcoxyllite, mimetite, azurite (St.-Luc, Switzerland).

Distribution: In France, from the Cap Garonne mine, near le Pradet, Var, and at Ceilhes, Hérault. From near St.-Luc, Val d’Anniviers, Valais, Switzerland. In the Clara mine, near Oberwolfach, Black Forest, Germany. At Spania Dolina (Herrregrund) and Piesky, Slovakia.

Name: Honors Michel Camerola, mineral collector who collected the first specimen.

Type Material: Natural History Museum, Geneva, Switzerland, 435/84.

References:  