Lapeyreite

Crystal Data: Monoclinic.  

Point Group: 2/m. As rectangular crystals elongate along [010] to 0.2 mm, flattened on (001), displaying {100}, {010}, and {001}; as acicular fibrous crystals or powdery masses.  

Twinning: Ubiquitous by mirror reflection on (001) observed in X-ray analysis.  

Physical Properties:  

Cleavage: Perfect on {001}.  

Tenacity: Brittle.  

Fracture: Conchoidal.  

Hardness = n.d.  

D(meas.) = ~4.3  

D(calc.) = 4.385  

Dissolves slowly in dilute HCl.  

Optical Properties:  

Transparent to translucent (aggregates).  

Color: Dark pistachio-green; pistachio-green in transmitted light.  

Streak: Yellowish green.  

Luster: Vitreous to adamantine.  

Cell Data: Space Group: C2/m.  

a = 19.158(3)  

b = 2.9361(6)  

c = 9.193(2)  

β = 103.26(1)°  

Z = 8/3  

Chemistry:  

<table>
<thead>
<tr>
<th>Element</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CuO</td>
<td>46.49</td>
<td>47.73</td>
</tr>
<tr>
<td>As₂O₅</td>
<td>45.82</td>
<td>45.97</td>
</tr>
<tr>
<td>H₂O</td>
<td>[6.30]</td>
<td>6.30</td>
</tr>
<tr>
<td>Total</td>
<td>98.61</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Roua copper deposits, Var valley, northwest Alpes-Maritimes, France; average of 10 electron microprobe analyses; H₂O calculated from structure analysis; corresponds to Cu₂₆As₂₀(OH)₂₀·0.77H₂O.  

(2) Cu₃O[AsO₃(OH)]₂·0.75H₂O.  

Occurrence: A secondary mineral in geodes of cuprite in a weathering zone.  

Association: Trippkeite, olivenite, malachite, gilmarite, cornubite, connellite, theoparacelsite, brochantite, cuprite, native copper, algodonite, domeykite.  

Distribution: From the old copper mines of Roua (North and South group, districts of Guillaumes and Daluis, respectively), upper part of the Var valley (Daluis gorge), ~50 km from Nice, northwest Alpes-Maritimes department, France.  

Name: Honors Laurent Lapeyre (b. 1973), the mineral collector who found the mineral.  

Type Material: Laboratory of Crystallography, University of Geneva, Switzerland (CR.010); the University of Adnan Menderes, Vocational School of Memnune Inci, Karacasu-Aydın (KMY.25) and the University of Dokuz Eylül, Vocational School of İzmir, Buca-Izmir (BM.73), Turkey.  