Caoxite

Crystal Data: Triclinic. Point Group: $\overline{1}$. As elongated crystals, tabular on {010}, with polygonal outline, to 0.5 mm; as crystalline spherulites.

Physical Properties: 
- Cleavage: On {010}, good.
- Fracture: Uneven.
- Tenacity: Brittle.
- Hardness = n.d.
- $D$(meas.) = n.d.
- $D$(calc.) = 1.87

Optical Properties: 
- Transparent.
- Color: Colorless.
- Streak: White.
- Luster: Vitreous.
- Optical Class: Biaxial (−).
- $\alpha = 1.483(3)$ ($\alpha'$)
- $\beta = 1.516$
- $\gamma = 1.533(3)$ ($\gamma'$)
- $2V$(meas.) = 70(2)$°$

Cell Data: 
- Space Group: $P\overline{1}$.
- $a = 6.097(1)$
- $b = 7.145(1)$
- $c = 8.434(1)$
- $\alpha = 76.54(1)^{\circ}$
- $\beta = 70.30(1)^{\circ}$
- $\gamma = 70.75(1)^{\circ}$
- $Z = 2$

X-ray Powder Pattern: Cerchiara mine, Italy.
5.52 (vs), 2.834 (s), 7.92 (m), 5.26 (m), 4.99 (m), 3.643 (m), 2.758 (m)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$C_2O_3$</td>
<td>[39.54]</td>
<td>39.54</td>
</tr>
<tr>
<td>CaO</td>
<td>30.03</td>
<td>30.79</td>
</tr>
<tr>
<td>$H_2O$</td>
<td>[29.67]</td>
<td>29.67</td>
</tr>
<tr>
<td>Total</td>
<td>[99.24]</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Cerchiara mine, Italy; by electron microprobe, average of five analyses, $C_2O_3$ and $H_2O$ calculated from the ideal formula; corresponds to $Ca_{0.98}C_{2.01}O_4 \cdot 3.01H_2O$ (2) $CaC_2O_4 \cdot 3H_2O$.

Occurrence: In veinlets cutting metamorphosed Mn–Ba-rich cherts in an obducted ophiolite.

Association: Quartz, barite, manganese oxides.

Distribution: From the Cerchiara mine, near Faggiona, Val di Vara, Liguria, Italy.

Name: An acronym with two meanings, for the essential chemical components, CAlcium and OXalate, or the Centennial Anniversary Of X-rays, an essential analytical tool in modern mineralogy.

Type Material: University of Genoa, Genoa, Italy.