**Aluminocoquimbite**

Crystal Data: Hexagonal. *Point Group*: 3 2/m. As intergrown tabular or short hexagonal prismatic crystals, to 0.5 mm.

**Physical Properties:**
- *Cleavage*: Imperfect, {101}.
- *D*(meas.) = 2.03(1)  *D*(calc.) = 2.044

**Optical Properties:**
- *Color*: Colorless to pale pink.
- *Streak*: White.
- *Luster*: Vitreous.
- *Optical Class*: Uniaxial (+).
  - *ω* = 1.53
  - *ε* = 1.56

**Cell Data:**
- *Space Group*: P̅3 1 2/c.
  - *a* = 10.7065(7)
  - *c* = 17.3077
  - *Z* = 4

**X-ray Powder Pattern:**
- Aeolian Islands (Vulcano), Italy.
  - 9.251 (100), 5.310 (83), 3.152 (43), 4.087 (33), 1.765 (20), 2.112 (17), 8.710 (13)

**Chemistry:**

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Fe₂O₃</td>
<td>13.96</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>10.30</td>
</tr>
<tr>
<td>SO₃</td>
<td>44.24</td>
</tr>
<tr>
<td>H₂O</td>
<td>[31.50]</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Aeolian Islands (Vulcano), Italy; electron microprobe analysis, H₂O by difference, corresponding to Al₁.07Fe₀.92S₂.92H₁₈.₄₆O₂₁.

**Occurrence:** A precipitate from volcanic vapors in a fumarole (< 100°C).

**Association:** Alunogen, coquimbite, krausite, tamarugite, yavapaiite, voltaite, pertlikite, pickeringite, metavoltine.

**Distribution:** Alum Grotto, Aeolian Islands (Vulcano), Italy.

**Name:** For its high *aluminum* content and relation to *coquimbite*.

**Type Material:** Department of Structural Chemistry and Inorganic Stereochemistry, University of Milan, Italy (2009-03).

**References:**