Aliettite

\[ [\text{Mg}_3\text{Si}_4\text{O}_{10}\text{(OH)}_2] \cdot [(\text{Ca}_{0.5}, \text{Na})_{0.33} (\text{Al}, \text{Fe}, \text{Mg})_{2-3} (\text{Al}, \text{Si})_4\text{O}_{10}(\text{OH})_2] \cdot n\text{H}_2\text{O} \]

Crystal Data: n.d. Point Group: n.d. Irregular, tabular to platy crystals, < 2 μm, with curled edges when viewed under the electron microscope; as microscopic rounded aggregates.


Optical Properties: Translucent. Color: Colorless, pale yellow or green. Optical Class: n.d. \( n = 1.558-1.567 \)

Cell Data: Space Group: n.d. \( Z = n.d. \)

X-ray Powder Pattern: Taro Valley, Italy.
24.8 (100), 12.4 (67), 3.10 (12), 8.27 (6), 4.96 (2), 3.54 (2), 2.48 (0.5)

Chemistry:

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>( \text{SiO}_2 )</td>
<td>53.15</td>
<td>( \text{Al}_2\text{O}_3 )</td>
<td>3.48</td>
</tr>
<tr>
<td>( \text{Fe}_2\text{O}_3 )</td>
<td>3.48</td>
<td>( \text{MnO} )</td>
<td>0.03</td>
</tr>
<tr>
<td>( \text{MgO} )</td>
<td>27.40</td>
<td>( \text{CaO} )</td>
<td>1.10</td>
</tr>
<tr>
<td>( \text{Na}_2\text{O} )</td>
<td>1.18</td>
<td>( \text{H}_2\text{O} )</td>
<td>10.18</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
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</table>

(1) Taro Valley, Italy; by AA and XRF.

Polymorphism & Series: Talc-saponite mixed-layer mineral.

Mineral Group: Smectite group.

Occurrence: An alteration product in serpentinized ophiolites and residual in soils derived therefrom; in altered dolostones.

Association: Talc, chlorite, serpentine, calcite.

Distribution: In Italy, in Emilia-Romagna, at Monte Chiaro, Taro Valley; Frassinoro, Modena; and Ferriere, Nure Valley. From Kinshasa, Katanga Province, Congo (Shaba Province, Zaire).

Name: To honor Professor Andrea Alietti (1923– ), of the University of Modena, Modena, Italy, who first studied the structure of the mineral.

Type Material: n.d.


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