Bohmite

Crystal Data: Orthorhombic. Point Group: 2/m 2/m 2/m. Rarely as tabular to stout prismatic crystals, to 2 mm, showing {001}, {110}, {101}, {111}, {221}, and in groups; commonly extremely fine-grained, in pisolithic aggregates or disseminated.

Physical Properties: Cleavage: {010}, very good; {100}, well-developed; {001}, poor. Hardness = 3.5 D(meas.) = 3.02–3.05 D(calc.) = [3.08]


Cell Data: Space Group: Amam. a = 3.693(1) b = 12.221(2) c = 2.865(1) Z = 4

X-ray Powder Pattern: Huruni Peak, New Zealand. 6.11 (100), 3.15 (60), 2.347 (60), 1.862 (20), 1.850 (20), 1.308 (15), 1.661 (10)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO₂</td>
<td>2.11</td>
<td>0.76</td>
<td>Fe₂O₃</td>
<td>0.58</td>
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<tr>
<td>TiO₂</td>
<td>0.03</td>
<td></td>
<td>MgO</td>
<td>0.02</td>
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<tr>
<td>Al₂O₃</td>
<td>81.60</td>
<td>83.84</td>
<td>CaO</td>
<td>0.26</td>
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<tr>
<td>Ga₂O₃</td>
<td>0.05</td>
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<td>H₂O</td>
<td>15.31</td>
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<tr>
<td>Total</td>
<td>99.91</td>
<td>[100.31]</td>
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</tbody>
</table>

(1) Vishnev Mountains, Ural Mountains, Russia; corresponds to Al₀.₉₈[O₀.₉₆(OH)]₁₀.₀₁[Σ=2.₀₀.₈₈]
(2) Huruni Peak, New Zealand; by electron microprobe, H₂O calculated from stoichiometry; corresponds to Al₀.₉₈Si₀.₀₁O(OH).

Polymorphism & Series: Dimorphous with diaspore.

Occurrence: Formed from aluminosilicates during tropical weathering, commonly a major constituent of bauxites, laterites, or fireclays; a late product of low-temperature hydrothermal decomposition of corundum, nepheline in nepheline pegmatites, syenites, or ocean-ridge basalts.

Association: Kaolinite, gibbsite, diaspore (bauxites); nepheline, gibbsite, diaspore, natrolite, analcime (nepheline pegmatites).

Distribution: Widespread, but rarely well-crystallized; studied material from: in France, at les Baux, near Arles, Bouches-du-Rhône; at Recoux, Var; and Périlille and Cadarcet, Ariège. On Montecchio Maggiore, Vicenza, Italy. At Baratka, Hungary. Crystals from the Tvedalen district and elsewhere in the Langesundsfjord area, Norway. In the Mandamus complex, 20 km west of Culverden, New Zealand. In the USA, in the Alberhill clay pits, Riverside Co., California; from the Linwood-Barton district, and at the Laurel Creek mine, Rabun Co., Georgia; on Hogback Mountain, Jackson Co., North Carolina.

Name: For Johannes Böhm (1857–1938), German geologist, who first studied the species.

Type Material: n.d.


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