Mineralogical Society of America  
Handbook of Mineralogy  
Revised 5/18/2017

**Hydrokenomicrolite**  
\((\square,\text{H}_2\text{O})_2\text{Ta}_2(\text{O,OH})_6(\text{H}_2\text{O})\)

**Crystal Data:** Cubic.  
*Point Group:* 4/m 3 2/m.  
As octahedral crystals, occasionally modified by rhombododecahedra, to 1.5 mm.

**Physical Properties:**  
*Cleavage:* None.  
*Tenacity:* Brittle.  
*Fracture:* Conchoidal.  
*Hardness =* 4.5-5  
*VHN =* 485-498 (100 g load).  
*D(meas.)* = n.d.  
*D(calc.)* = 6.666

**Optical Properties:**  
*Translucent.*  
*Color:* Pinkish brown.  
*Streak:* White.  
*Luster:* Adamantine to resinous.  
*Optical Class:* Isotropic.  
*n(calc.) =* 2.055

**Cell Data:**  
*Space Group:* Fd3 m.  
*a =* 10.454(1)  
*Z =* 8

**X-ray Powder Pattern:** Volta Grande pegmatite, Nazareno, Minas Gerais, Brazil.  
3.052 (100), 6.112 (86), 3.191 (52), 1.869 (29), 2.642 (28), 1.594 (24), 2.035 (11)

**Chemistry:**  
(1)  
<table>
<thead>
<tr>
<th>Element</th>
<th>Formula</th>
<th>Amount</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>CaO</td>
<td></td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>MnO</td>
<td></td>
<td>0.27</td>
<td>0.18</td>
</tr>
<tr>
<td>SrO</td>
<td></td>
<td>4.88</td>
<td>2.60</td>
</tr>
<tr>
<td>BaO</td>
<td></td>
<td>8.63</td>
<td>2.18</td>
</tr>
<tr>
<td>PbO</td>
<td></td>
<td>0.52</td>
<td>66.33</td>
</tr>
<tr>
<td>La2O3</td>
<td></td>
<td>0.52</td>
<td>0.46</td>
</tr>
<tr>
<td>Ce2O3</td>
<td></td>
<td>0.49</td>
<td>0.67</td>
</tr>
<tr>
<td>Nd2O3</td>
<td></td>
<td>0.55</td>
<td>[H2O]</td>
</tr>
<tr>
<td>Bi2O3</td>
<td></td>
<td>0.57</td>
<td>Total</td>
</tr>
</tbody>
</table>

(1) Volta Grande pegmatite, Nazareno, Minas Gerais, Brazil; average of 3 wavelength-dispersive spectroscopic analyses supplemented by IR spectroscopy, H2O calculated from structure; corresponds to \([\square,\text{H}_2\text{O})_2\text{Ba}_{0.48}\text{Sr}_{0.27}\text{Sn}_{1.11}\text{Mn}_{0.02}\text{Nd}_{0.002}\text{Ce}_{0.02}\text{La}_{0.002}\text{Ca}_{0.01}\text{B}_{0.01}\text{Pb}_{0.01}\text{Ta}_{1.75}\text{Nb}_{0.10}\text{Sn}_{0.10}\text{Si}_{0.04}\text{Ti}_{1.01}\text{O}_{0.57}\text{OH}_{0.23}\text{H}_{2}\text{O}_{0.97}\text{Cs}_{0.03}\text{H}_{2}\text{O}_{1.00}\).  

**Mineral Group:** Pyrochlore supergroup, microlite subgroup.

**Occurrence:** An accessory mineral in the heavy mineral concentrate from a zoned granitic pegmatite.


**Distribution:** From the Volta Grande pegmatite, Sn-Ta-rich São João del Rei Pegmatite Province, Nazareno, Minas Gerais, Brazil.

**Name:** For a member of the *microlite* subgroup with the *A* site dominated by vacancies, the *B* site by Ta, and the *Y* site by H2O.

**Type Material:** Institute of Geosciences, University of São Paulo, SP, Brazil (DR725).

**References:**  
Hydrokenomicrolite, \((\square,\text{H}_2\text{O})_2\text{Ta}_2(\text{O,OH})_6(\text{H}_2\text{O})\), a new microlite-group mineral from Volta Grande pegmatite, Nazareno, Minas Gerais, Brazil.  