Corrensite  
(Ca, Na, K)(Mg, Fe, Al)₉(Si, Al)₈O₂₀(OH)₁₀·nH₂O

Crystal Data:  

Physical Properties:  

Optical Properties:  

Cell Data:  

X-ray Powder Pattern:  
Wellington Formation, Lyon Co., Kansas, USA; a 30 Å d-spacing changes to: air dried, 28−29; ethylene glycol, 32−33; on heating to ~500 °C, 23−29.

Chemistry:  

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SiO₂</td>
<td>37.2</td>
<td>34.</td>
</tr>
<tr>
<td>TiO₂</td>
<td>0.4</td>
<td>CaO</td>
</tr>
<tr>
<td>Al₂O₃</td>
<td>15.5</td>
<td>Na₂O</td>
</tr>
<tr>
<td>Fe₂O₃</td>
<td>6.7</td>
<td>K₂O</td>
</tr>
<tr>
<td>MnO</td>
<td>0.01</td>
<td>H₂O</td>
</tr>
<tr>
<td>Total</td>
<td>99.7</td>
<td>[100.]</td>
</tr>
</tbody>
</table>

(1) Sparta, Tennessee, USA; total Fe as Fe₂O₃; traces of Zr, V, and Cu determined spectrographically.  (2) Do.; recalculated to 100% after removal of impurities.

Polymorphism & Series:  
A 1:1 mixed-layer interstratification of trioctahedral chlorite with either a trioctahedral vermiculite or a trioctahedral smectite.

Occurrence:  
From diverse sedimentary environments, which produced clastic, carbonate, volcanoclastic, or evaporite rocks. Also a hydrothermal alteration product, may be formed under retrograde diagenetic conditions; in soils.

Association:  
Illite, chlorite, laumontite, gypsum, anhydrite, quartz, dolomite.

Distribution:  
Probably fairly widely distributed; a few localities with material known to meet the definition are: from Zaiserweiher, three km from Maulbronn, Baden-Württemberg, and at the Hünstollen, near Holserode, Lower Saxony, Germany. At Wilkesley, near Audlem, Cheshire, and elsewhere in England. From Hillhouse quarry, Ayrshire, Scotland. In the USA, from Juniper Canyon, Moffat Co., Colorado; in the Wellington Formation, in Lyon Co., Kansas; in the County rock quarry, Sparta, White Co., Tennessee; and from a number of localities in west-central Montana, as between Bowman’s Corner and Wolf Creek, Lewis and Clark Co. From Packwood, Western Australia. From the Yamanaka area, Shimane Prefecture, and in the Yoshino mine, Yamagata Prefecture, Japan.

Name:  
For Professor Carl Wilhelm Correns (1893−1980), Director of the Sedimentary Petrography Institute, Göttingen University, Göttingen, Germany.

Type Material:  

References:  

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