Jáchymovite

\[(\text{UO}_2)_8(\text{SO}_4)(\text{OH})_{14}\cdot13\text{H}_2\text{O}\]

Crystal Data: Monoclinic. Point Group: 2/m or 2. As crusts of acicular crystals, to 0.1 mm.


Cell Data: Space Group: \(P2_1/m\) or \(P2_1\). \(a = 18.553(8)\) \(b = 9.276(2)\) \(c = 13.532(7)\) \(\beta = 125.56(2)°\) \(Z = 2\)

X-ray Powder Pattern: Jáchymov, Czech Republic. 7.56 (100), 7.13 (48), 3.771 (34), 3.554 (20), 3.206 (13), 3.234 (10), 2.052 (8)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>\text{SO}_3</td>
<td>2.79</td>
<td>2.93</td>
</tr>
<tr>
<td>\text{UO}_3</td>
<td>84.20</td>
<td>83.86</td>
</tr>
<tr>
<td>\text{H}_2\text{O}</td>
<td>13.32</td>
<td>13.21</td>
</tr>
<tr>
<td>Total</td>
<td>100.31</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Jáchymov, Czech Republic; \text{H}_2\text{O} by TGA, corresponds to \((\text{UO}_2)_{8.01}(\text{SO}_4)_{0.95}(\text{OH})_{14.12}\cdot13\text{H}_2\text{O}\). (2) \((\text{UO}_2)_8(\text{SO}_4)(\text{OH})_{14}\cdot13\text{H}_2\text{O}\).

Occurrence: Found on a museum specimen from the heavily oxidized portions of a uranium-bearing vein in dolomite.

Association: Gypsum, uranopilite, uraninite.

Distribution: From Jáchymov (Joachimsthal), Czech Republic.

Name: For the uranium deposit at Jáchymov, Czech Republic, where the specimen was collected.

Type Material: Natural History Museum, Prague, Czech Republic, P1N-68905.