Honzaite  (Ni,Co)₂(AsO₃OH)₂(H₂O)₅

Crystal Data: Monoclinic.  Point Group: 2/m.  As irregular to hemispherical aggregates to 5 mm; as prismatic crystals to 30 μm.


Optical Properties: Transparent to translucent.  Color: Pale pink, sometimes with purplish or violet tints.  Streak: Pale pink.  Luster: Vitreous.  Optical Class: Biaxial (+).  α = 1.601(2)  β = 1.608(2)  γ = 1.629(2)  2V(meas.) = 60(1)°  2V(calc.) = 60.6°  Orientation: X = b; if elongated on [100], Z ∧ a ≈ 20°.

Cell Data: Space Group: P2₁/n.  a = 4.6736(6)  b = 9.296(1)  c = 12.592(1)  β = 99.115(8)°  Z = 2


Chemistry:

<table>
<thead>
<tr>
<th>Element</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MgO</td>
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</tr>
<tr>
<td>CaO</td>
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</tr>
<tr>
<td>FeO</td>
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<tr>
<td>NiO</td>
<td>16.51</td>
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<tr>
<td>CoO</td>
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<tr>
<td>CuO</td>
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<tr>
<td>ZnO</td>
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<td>P₂O₅</td>
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<td>As₂O₃</td>
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<tr>
<td>SO₃</td>
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<td>H₂O</td>
<td>[22.15]</td>
<td>22.18</td>
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<tr>
<td>Total</td>
<td>99.91</td>
<td>100.00</td>
</tr>
</tbody>
</table>

(1) Jáchymov, Czech Republic; average of 23 electron microprobe analyses supplemented by IR and Raman spectroscopy, H₂O calculated from structure; corresponds to (Ni₁₃Ca₀₈Zn₀₅Cu₀₅Mg₀₃Fe₀₃Ca₀₃)₂₋₂·₀₄(AsO₃OH)₁·₉₄(PO₄)₀₅(PO₃OH)₀₂·₅H₂O.  (2) (Ni)₂(AsO₃OH)₂(H₂O)₅.

Occurrence: A secondary mineral formed by weathering of nickelskutterudite and tennantite, under strongly acidic conditions, in a Ag+As+Co+Ni+Bi and U vein-type hydrothermal mineral deposit.

Association: Arsenolite, zeunerite, Ni-rich burgessite.

Distribution: From Jáchymov, Czech Republic.

Name: Honors Czech mineralogist and collector of minerals from the Jáchymov ore district, Jan “Honza” Hloušek (1950-2014).

Type Material: Department of Mineralogy and Petrology, National Museum, Prague, Czech Republic (P1N 38.099).