Vésigniéite

\[ \text{BaCu}_3(\text{VO}_4)_2(\text{OH})_2 \]

Crystal Data: Monoclinic. Point Group: 2/m. Lamellar pseudohexagonal crystals, to 2 mm, in botryoidal aggregates; powdery. Twinning: Common, polysynthetic, on \{001\}.

Physical Properties: Cleavage: \{001\}, perfect; \{110\}, imperfect. Hardness = 3–4
\[ \text{D(meas.)} = 4.56(10) \quad \text{D(calc.)} = 4.70 \]

\[ \alpha = 2.04 \quad \beta = 2.07 \quad \gamma = 2.08 \quad 2V(\text{meas.}) = \sim 60° \]

Cell Data: Space Group: \( C2/m \). \( a = 10.239–10.270 \quad b = 5.885–5.911 \quad c = 7.725–7.711 \)
\[ \beta = 116.42°–116.43° \quad Z = 2 \]

X-ray Powder Pattern: Vrančice, Czech Republic.

Chemistry:

<table>
<thead>
<tr>
<th>Element</th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \text{V}_2\text{O}_5 )</td>
<td>32.4</td>
<td>30.73</td>
</tr>
<tr>
<td>( \text{CuO} )</td>
<td>39.1</td>
<td>40.32</td>
</tr>
<tr>
<td>( \text{BaO} )</td>
<td>24.9</td>
<td>25.91</td>
</tr>
<tr>
<td>( \text{H}_2\text{O} )</td>
<td>3.6</td>
<td>3.04</td>
</tr>
</tbody>
</table>

Total [100.0] 100.00

(1) Friedrichroda, Germany; recalculated after deduction of insoluble, 3.3%, original total 99.5%.
(2) \( \text{BaCu}_3(\text{VO}_4)_2(\text{OH})_2 \).


Association: Volborthite, malachite, tyuyamunite, carnottite, barite, calcite.

Distribution: From [the Gottlob mine], Friedrichroda, Thuringia, and Bad Lauterberg, Harz Mountains, Germany. At Perm, Ural Mountains, Russia. In the Agalyk U–V deposit, Kara-Tyube Mountains, 15 km south of Samarkand, Uzbekistan. At Vrančice, about 15 km south-southeast of Príbram, Czech Republic. From the Roua copper mines, about 50 km north of Nice, Alpes Maritimes, France. In the Newhurst quarry, near Shepshed, and the Bardon quarry, Coalville, Leicestershire, England. At the Mashamba West mine, Kolwezi, Katanga Province, Congo (Shaba Province, Zaire). In the USA, from the Paradox Bell mine, Paradox Valley, Montrose Co., Colorado; at Arizona, at the Monument #1 mine, Navajo Co., from the Ridenauro breccia pipe, Coconino Co., and about six km south of Mercer Ranch, Copper Creek district, Pinal Co.; in the Gold Quarry mine, near Carlin, Maggie Creek district, and the Goldstrike mine, Lynn district, Eureka Co., Nevada. At the Edelweiss mine, Burra, South Australia. From the Gorob-Hope copper deposit, west-central Namibia.

Name: Honoring Colonel Jean Paul Louis Vésignié (1870–1954), noted French mineral collector.

Type Material: National School of Mines, Paris, France.


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