BiAsO₄

Rooseveltite

Crystal Data: Monoclinic. Point Group: 2/m. Microcrystalline, to < 5 μm; in thin botryoidal crusts, and replacing emplectite crystals.


Cell Data: Space Group: P2₁/n (synthetic). a = 6.879(1) b = 7.159(1) c = 6.732(1) β = 104.84(1)° Z = 4

X-ray Powder Pattern: Argentina. 3.15 (100), 2.97 (80), 3.33 (61), 2.98 (37), 4.82 (36), 2.70 (36), 2.50 (26)

Chemistry:

<table>
<thead>
<tr>
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<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
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</thead>
<tbody>
<tr>
<td>As₂O₅</td>
<td>33.2</td>
<td>33.0</td>
<td>33.03</td>
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<tr>
<td>Bi₂O₄</td>
<td>67.2</td>
<td>67.9</td>
<td>66.97</td>
</tr>
<tr>
<td>Total</td>
<td>100.4</td>
<td>100.9</td>
<td>100.00</td>
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</table>

(1) Santiaguillo, Bolivia. (2) San Francisco de los Andes, Argentina; by electron microprobe. (3) BiAsO₄.

Polymorphism & Series: Dimorphous with tetrarooseveltite.

Mineral Group: Monazite group.

Occurrence: Very rare in cassiterite veinlets in rhyolite-dacite lava flows (Santiaguillo, Bolivia); in the oxidized zone of a breccia pipe (San Francisco de los Andes, Argentina).

Association: Cassiterite (Santiaguillo, Bolivia); preisingerite, bismutite, mixite, zavaritskite, wulfenite (Moldava, Czech Republic); conichalcite, mixite (Uzbekistan).

Distribution: At Santiaguillo, west of Maragua, Potosí, Bolivia. From the San Francisco de los Andes and Cerro Negro de la Aguadita mines, San Juan Province, Argentina. At Moldava, about 20 km northwest of Teplice, Czech Republic. In the Ödshbach Valley, near Oberkirch, at the Clara mine, near Oberwolfach, and on the Schmiedestollen dump, Black Forest, Germany. From an undefined locality in the Chatkal Mountains, Uzbekistan.

Name: Honors Franklin Delano Roosevelt (1882–1945), 32nd President of the USA.

Type Material: Harvard University, Cambridge, Massachusetts, 101938; National Museum of Natural History, Washington, D.C., USA, 115317.