Alacránite

Crystal Data: Monoclinic Point Group: 2/m. Crystals are pinacoidal, prismatic, and flattened on [100], striated || {001} on {100}, other faces dull or tarnished, to 1 mm; as subhedral flattened and prismatic grains.

Physical Properties: Cleavage: Imperfect on {100}. Fracture: Conchoidal. Tenacity: Very brittle. Hardness = 1.5 VHN = 69 (20 g load). D(meas.) = 3.43(3) D(calc.) = 3.503


Cell Data: Space Group: C2/c. a = 9.943(1) b = 9.366(1) c = 8.908(1) β = 102.007° Z = 16

X-ray Powder Pattern: Uzon caldera, Russia. 3.064 (100), 5.91 (90), 2.950 (90), 5.11 (80), 4.05 (70), 3.291 (50)

X-ray Powder Pattern: Synthetic. 3.01 (100), 2.89 (100), 5.78 (80), 3.20 (80), 3.93 (70), 3.08 (70), 2.82 (60)

Chemistry:

<table>
<thead>
<tr>
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<th>(1)</th>
<th>(2)</th>
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</thead>
<tbody>
<tr>
<td>As</td>
<td>67.35</td>
<td>70.03</td>
</tr>
<tr>
<td>S</td>
<td>32.61</td>
<td>29.97</td>
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Total 99.96 100.00

(1) Uzon caldera, Russia; by electron microprobe, average of four analyses; corresponding to \( \text{As}_{0.88}\text{S}_{1.00} \). (2) \( \text{AsS} \).

Polymorphism & Series: Trimorphous with pararealgar and realgar.

Occurrence: In hydrothermal As–S veins (Alacrán mine, Chile); in the condensation zone of a hydrothermal Hg–Sb–As system as cement in a sandy gravel (Uzon caldera, Russia); formed at low temperatures in a polymetallic hydrothermal deposit on a submarine seamount (Conical Seamount, Papua New Guinea).

Association: Realgar, orpiment, arsenic, sulfur, stibnite, pyrite, greigite, arsenopyrite, arsenolamprite, sphalerite, acanthite, barite, quartz, calcite (Alacrán mine, Chile); realgar, orpiment, uzonite, stibnite, cinnabar, pyrite, sulfur (Uzon caldera, Russia); realgar, pyrite, sphalerite, galena, chalcopyrite, amorphous silica (Conical Seamount, Papua New Guinea).

Distribution: From the Alacrán Ag–As–Sb mine, Pampa Larga district, Copiapó, Chile [TL]. In the Uzon caldera, Kamchatka, Russia. At Tiefengraben, Reinerzau, Black Forest, Germany. On Conical Seamount, ten km south-southeast of Lihir Island, Papua New Guinea.

Name: For the occurrence in the Alacrán deposit, Chile.

Type Material: Il’menskii Preserve Museum, Miass; A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.


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