McBirneyite

Crystal Data: Triclinic. Point Group: 1. As anhedral crystals, to 200 µm.


Cell Data: Space Group: P1. a = 5.3418(9) b = 6.5100(8) c = 5.1798(7) α = 88.61(1)° β = 68.11(1)° γ = 69.22(1)° Z = 1

X-ray Powder Pattern: Izalco Volcano, El Salvador. 3.12 (100), 2.82 (100), 4.01 (80), 2.641 (80), 2.428 (80), 4.25 (60), 2.572 (60)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V₂O₅</td>
<td>41.44</td>
<td>43.25</td>
</tr>
<tr>
<td>CuO</td>
<td>56.82</td>
<td>56.75</td>
</tr>
<tr>
<td>Total</td>
<td>98.26</td>
<td>100.00</td>
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</tbody>
</table>

(1) Izalco Volcano, El Salvador; by electron microprobe, average of six analyses of three crystals; corresponds to Cu₃₀₈(VO₄)₁.₉₇. (2) Cu₃(VO₄)₂.

Occurrence: Very rare in the sulfate zone of sublimates around a fumarole in a composite volcano, likely formed between 100 °C–200 °C.

Association: Fingerite, thenardite, euchlorine.


Name: Honors Professor Alexander Robert McBirney (1924– ), Volcanologist, University of Oregon, Corvallis, Oregon, USA.
