Modderite

(Co, Fe)As

Crystal Data: Orthorhombic. Point Group: 2/m 2/m 2/m. As tiny grains, to 0.05 mm; massive.


R1–R2: n.d.


X-ray Powder Pattern: Synthetic CoAs. (ICDD 9-94).
1.97 (100), 2.59 (90), 0.957 (70b), 2.55 (60), 1.047 (60), 0.999 (60), 0.927 (60)

Chemistry:

<table>
<thead>
<tr>
<th>Element</th>
<th>Atomic %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Co</td>
<td>39.2</td>
</tr>
<tr>
<td>Fe</td>
<td>5.0</td>
</tr>
<tr>
<td>As</td>
<td>56.4</td>
</tr>
<tr>
<td>Total</td>
<td>100.6</td>
</tr>
</tbody>
</table>

(1) Dashkesan deposit, Azerbaijan; by electron microprobe, average of 11 grains; corresponding to (Co_{0.88}Fe_{0.12})_{Σ=1.00}As_{1.00}.

Occurrence: In heavy mineral concentrates (Witwatersrand, South Africa).

Association: Nickeline, alloclasite, safflorite, glaucodot, cobaltite, pentlandite, pyrrhotite, chalcopyrite (Witwatersrand, South Africa); alloclasite, glaucodot, cobaltite, pentlandite, pyrrhotite, chalcopyrite (Dashkesan deposit, Azerbaijan).

Distribution: From the “Far East” Witwatersrand, Transvaal, South Africa [TL]. In the Dashkesan deposit, Middle Caucasus Mountains, Azerbaijan.

Name: Derivation not given; presumably named for the Modderfontein mine, South Africa.
