Chromferide \( \text{Fe}_3\text{Cr}_{1-x} \) \((x = 0.6)\)

Crystal Data: Cubic. \textit{Point Group}: \(4/m \bar{3} \overline{2}/m\). As small grains forming aggregates, to several hundred \(\mu\)m.


Optical Properties: Opaque. \textit{Color}: Pale gray. \textit{Luster}: Metallic. R: (400) —, (420) —, (440) 50.4, (460) 51.4, (480) 50.9, (500) 52.6, (520) 53.0, (540) 55.3, (560) 56.5, (580) 56.9, (600) 57.9, (620) 58.3, (640) 59.0, (660) 60.0, (680) 60.7, (700) 60.8

Cell Data: \textit{Space Group}: \(Pm\bar{3}m\). \(a = 2.859(5)\) Z = 1

X-ray Powder Pattern: Efim area, Russia. 2.02 (100), 1.16 (100), 1.43 (80), 1.01 (70), 1.28 (50), 2.87 (20), 1.656 (10)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fe</td>
<td>88.91</td>
<td>88.96</td>
</tr>
<tr>
<td>Cr</td>
<td>11.30</td>
<td>11.04</td>
</tr>
</tbody>
</table>

Total 100.21 100.00

(1) Efim area, Russia; by electron microprobe, corresponding to \(\text{Fe}_3\text{Cr}_{1-x}\), with \(x = 0.6\).
(2) \(\text{Fe}_3\text{Cr}_{0.4}\).

Occurrence: In quartz veins within brecciated amphibolites and schist.

Association: Iron, copper, bismuth, gold, ferchromide, graphite, cohenite, halite, sylvite, marialite, quartz.

Distribution: From a gold occurrence in the Efim area, Kumak ore field, 110 km east of Orsk, Southern Ural Mountains, Russia [TL].

Name: For the chemical composition, CHROMium and FERrum, iron.

Type Material: A.E. Fersman Mineralogical Museum, Academy of Sciences, Moscow, Russia.


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