Fukuchilite  

(Cu, Fe)S₂

Crystal Data:  Cubic.  Point Group:  [2/m 3].  In a uniform, nearly eutecticlike intergrowth with pyrite and covellite, with grains < 1 μm.


Optical Properties:  Opaque.  Color:  Dark brownish gray; in polished section, pinkish brown, very similar to bornite.  Luster:  Submetallic.

Cell Data:  Space Group:  Pa3 (by analogy to other pyrite group members).  a = 5.58  Z = 4

X-ray Powder Pattern:  Hanawa mine, Japan.  2.789 (vs), 3.21 (s), 1.685 (s), 2.281 (m), 2.497 (w), 1.971 (w), 1.545 (w)

Chemistry:

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
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</thead>
<tbody>
<tr>
<td>Cu</td>
<td>37.9 – 40.6</td>
<td>37.90</td>
</tr>
<tr>
<td>Fe</td>
<td>10.5 – 12.9</td>
<td>11.10</td>
</tr>
<tr>
<td>S</td>
<td>49.2 – 53.3</td>
<td>51.00</td>
</tr>
<tr>
<td>Total</td>
<td>100.00</td>
<td></td>
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</tbody>
</table>

(1) Hanawa mine, Japan; by X-ray fluorescence, range of analyses.  (2) (Cu, Fe)S₂ with Cu:Fe = 3:1.

Mineral Group:  Pyrite group.

Occurrence:  In an ore body of gypsum–anhydrite, in interstices of small masses consisting of barite, covellite, and pyrite.

Association:  Pyrite, covellite, barite, gypsum.

Distribution:  From the Hanawa mine, Akita Prefecture, Japan.

Name:  Honors Nobuyo Fukuchi (1877–1934), Japanese mineralogist and geologist, who studied many Japanese Kuroko-type deposits.

Type Material:  National Science Museum, Tokyo, Japan, M15937; National Museum of Natural History, Washington, D.C., USA, 135971.