Pääkkönenite

Crystalline Data: Monoclinic, pseudo-orthorhombic. Point Group: 2/m. As rare crystals, to 30 µm, and in irregular grains. Twinning: Finely spaced polysynthetic twinning is present; synthetic crystals are twinned on {001}.

Physical Properties: Cleavage: In one direction. Tenacity: Brittle. Hardness = ∼2
VHN = 66–87, 77 average (10 g load). D(meas.) = n.d. D(calc.) = 5.21

R₁–R₄: (400) — , (420) — , (440) 40.9–52.1, (460) 39.8–51.7, (480) 38.7–50.8, (500) 38.0–49.8,
(520) 37.5–48.7, (540) 37.2–47.8, (560) 36.9–47.0, (580) 36.7–46.3, (600) 36.5–45.8, (620) 36.5–45.5,
(640) 36.4–45.3, (660) 36.3–45.1, (680) 36.2–45.4, (700) 36.0–45.3

Cell Data: Space Group: C2/m (synthetic). a = 10.75(2) b = 3.959(3) c = 12.49(2)
β = 115.28(8)° Z = 4

X-ray Powder Pattern: Kalliosalo deposit, Finland.

2.87 (10), 2.68 (6), 3.90 (4), 3.13 (4), 2.27 (3), 1.750 (3), 2.08 (2)

Chemistry:

<table>
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<tr>
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<th>(2)</th>
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<tbody>
<tr>
<td>Sb</td>
<td>66.9</td>
<td>63.65</td>
</tr>
<tr>
<td>As</td>
<td>18.6</td>
<td>19.59</td>
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<tr>
<td>S</td>
<td>15.5</td>
<td>16.76</td>
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</tbody>
</table>

(1) Kalliosalo deposit, Finland; by electron microprobe, average of five analyses; corresponding to Sb₂₁₄₄As₀₉₀₉S₁₈₉. (2) Sb₂AsS₂.

Occurrence: In hydrothermal mineral deposits with other Sb–As-bearing minerals.

Association: Arsenopyrite, arsenic, löllingite, stibnite, antimony (Kalliosalo deposit, Finland); stibarsen, arsenic, stibnite, sphalerite, siderite, quartz (Příbram, Czech Republic); vaughanite, stibarsen, realgar, arsenic (Hemlo mine, Canada).

Distribution: From the Kalliosalo deposit, Seinäjoki region, Finland [TL]. At Příbram, Czech Republic. In the Hemlo gold deposit, Hemlo, Ontario, Canada.

Name: To honor Viekko Pääkkönen (1907–1980), Finnish geologist, who studied the ore deposits of the type region.

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