Parkinsonite (Pb, Mo)₄O₄Cl

Crystal Data: Tetragonal. Point Group: 4/m 2/m 2/m, 42m, 4mm, or 422. As bladed crystals, to 0.3 mm, and crystalline aggregates, embedded in other lead minerals.

Physical Properties: Cleavage: {001}, perfect; {100}, possible, fair. Tenacity: Sectile. Hardness = 2–2.5 VHN = 113–133, 122 average (50 g load). D(meas.) = 7.32 (synthetic). D(calc.) = 7.39


Cell Data: Space Group: I4/mmm, I42m, I4m2, I4mm, or I422. a = 3.9922(3) c = 22.514(3) Z = 2

X-ray Powder Pattern: Merehead quarry, England. 2.983 (100), 2.816 (78), 1.989 (75), 1.658 (51), 1.586 (33), 3.507 (32), 1.263 (24)

Chemistry:

<table>
<thead>
<tr>
<th>MoO₃</th>
<th>PbO</th>
<th>Cl</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>8.0</td>
<td>88.4</td>
<td>4.4</td>
<td>99.8</td>
</tr>
</tbody>
</table>

(1) Merehead quarry, England; by electron microprobe, average of six analyses, original total given as 100.8%; corresponds to (Pb₃.17Mo₀.44)O₄Cl₀.99.

Occurrence: A very rare mineral in nodules in manganese oxide ores in veins, fissures, and pockets in limestone.

Association: Mendipite, chloroxiphite, diaboleite, cerussite, paralaurionite, wulfenite, calcite, manganese oxides (Merehead quarry, England).

Distribution: In the Merehead quarry, Cranmore, and from the Wesley mine, Didsbury, near Bristol, Somerset, England.

Name: For Reginald F.D. Parkinson (1928–), British mineral collector and dealer, Shepton Mallet, Somerset, England, who first found the mineral.
