

Pyrolusite - Mn^{4+}O_2

Hardness: 2 - 6.5. Cleavage: Perfect. Tolerates sonication. Insoluble in water. Readily soluble in HCl, releasing toxic chlorine gas. Insoluble in HNO_3 . Avoid oxalic acid. Attacked by H_2SO_4 . Dissolves in 12% H_2O_2 with vigorous evolution of oxygen gas and (often) with significant heating; watch for thermal shock. Insoluble in acetone. See also psilomelane.

Varieties/related species (treat same as pyrolusite): Polianite.

References

Mindat: <https://www.mindat.org/min-3318.html>

Handbook of Mineralogy: <https://www.handbookofmineralogy.org/pdfs/pyrolusite.pdf>

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