Gold (Native Gold) - Au

Hardness: 2.5 - 3. Cleavage: None observed. Soft and flexible but prone to breakage where narrow (thin sheets, small wires, where small crystals meet, etc.). Avoid metal tools. Insoluble in water. Excellent chemical resistance. (Weast states that gold is soluble in hot H_2SO_4, but this is incorrect unless an oxidizer is also present. Rohner states soluble in HNO_3 or HCl; again wrong for the same reason.) Pure gold does not tarnish but alloys (electrum, etc.) may. Tolerates sonication. Derust using and dithionite recipe or oxalic acid. Tolerates dilute HCl used to remove enclosing calcite and NH_4HF_2 used to (slowly - months) dissolve enclosing quartz. Dilute HNO_3, HCl and 10% NH_3 sometimes recommended for cleaning. Insoluble in ethanol or acetone.

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