

## The Micro Collector's Workshop

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### Estimate Micro Crystal Size Easily

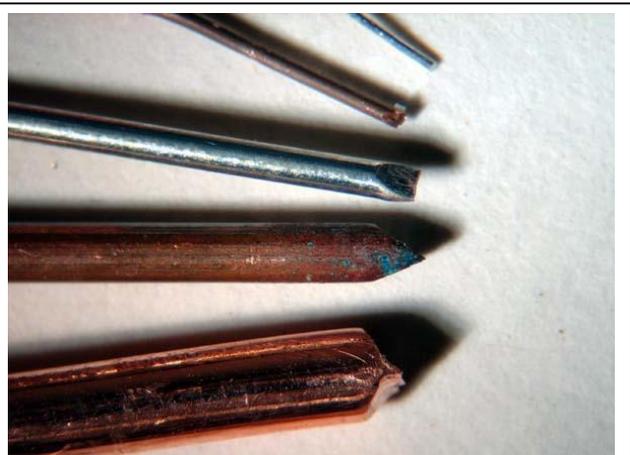
Micro mineral collectors often desire to make an estimate of the size of small crystals they observe through the scope. The crystal size is a valuable reference to include with the catalog data, to add to a photograph, or simply to note on the specimen label. Micro crystal sizes typically span a range of sub-millimeter to several millimeters.

A somewhat expensive approach to size estimation is to purchase a graduated reticule that will fit one's microscope. The cost of a new reticule for my Meiji scope is \$40. A low cost alternative that I have found to work well is to assemble a set of four to six short lengths of electrical wire of varying wire gauges. My set of five wires spans 0.28 mm to 2.5 mm: (0.28 mm, 0.5 mm, 1.0 mm, 1.7 mm, and 2.5 mm). Radio Shack is (was) a good source for smaller gauge wire. Standard copper house wire will provide some of the larger sizes, (#10 house wire is approximately 2.5 mm in diameter). Wire tables on the web, (e.g. [http://www.howstuffworks.com/framed.htm?parent=question260.htm&url=http://www.reade.com/Conversion/wire\\_gauge.html](http://www.howstuffworks.com/framed.htm?parent=question260.htm&url=http://www.reade.com/Conversion/wire_gauge.html)), will allow you to convert the wire gauges you acquire to wire diameters. I taped labels with the millimeter wire diameter to the end of each wire, (Figure 1).

To estimate a micro crystal size, bring the end of the wire close to the crystal, (Figure 3). Selecting a wire diameter near the crystal size is helpful, but not necessary. If the crystal appears to be about half the size of the wire diameter, simply estimate the crystal size to be half the wire diameter.



**Figure 1:** Set of five wire gauges



**Figure 2:** Wire ends under microscope magnification.



**Figure 3:** A 1 mm Chickering Mine Wardite crystal adjacent to 1 mm wire.

