

## What Macro Equipment Should I Have?

The kind of tools you need to get the most from a macro photography class depends on the type of camera you own. If you have a compact digital camera (one without interchangeable lenses), you generally do not need any extra camera equipment to take macro shots. Your camera's close-focusing setting allows you to get the camera very close to subjects and still get sharp focus. Check your camera manual to see how close the camera can focus; 1 inch or closer is preferable.

If you have an SLR digital or film camera (one with interchangeable lenses), you do need at least one accessory in order to make macro photos. Just because you have a lens which is described as "macro" does not mean it is capable of true macro photography (reproducing subjects at half to full life size or larger). The "macro" description often just means it can focus relatively close for its focal length. For macro photography you have a couple different equipment options of varying prices.

Cheapest is a set of **close-up filters**, usually sold as a set of three, which screw on to the front of a lens and act like a magnifying glass for your camera. These are designed for 50mm lenses for best results. They cost about \$40-\$60/set (58mm diameter, +1, +2, +4 power) depending on what diameter you need. Tiffen and Hoya are reliable brands. [Porter's Camera](#) offers a +8 Macro Adapter Lens either individually or as part of a 4-lens set.

Next is a **close-up "lens" from Canon** (useable on any camera). It too is a filter which screws on to the front of the lens and is designed for lenses 100mm and longer. There are two strengths, 250D and 500D, the higher number providing more magnification. These filters produce sharper results than the filter sets because there are two pieces of glass in each filter, providing an optically sharper image. You can combine or stack them (as the previous filters) for more magnification. They come in four sizes (52mm, 58mm, 72mm, 77mm) so you may need to buy an adapter (called a step-up ring) to enable you to use a larger diameter filter on a smaller diameter lens. (Don't use a small filter on a larger lens.) These cost about \$75-\$150, depending on the diameter you need.

A third option is a set of **extension tubes**. They are hollow tubes (no glass), which fit between the lens and the camera body, literally "extending" the lens farther from the sensor and thus providing magnification. Extension tubes have the greatest effect with shorter lenses, such as a 50mm, but can be used with any lens. Extension tubes can be purchased singly or in sets of three. If you want to purchase just one tube, choose a 25mm (or similar) size. The longer the extension tube, the more it magnifies. Be sure you purchase extension tubes that retain your camera's auto-focus and auto-exposure functions. A set of three [Kenko](#) brand (recommend) tubes for Canon or Nikon auto-focus cameras costs about \$170.

Last is a **dedicated macro lens** (Nikon "micro"), which provides magnification without any filters. This is the most expensive option but provides the best quality results. I recommend a 90mm/100mm/105mm macro (not the shorter 50mm or 60mm or longer 180mm---expensive!) because it provides a comfortable distance from your subject for close-up results. I also recommend a macro lens that can provide 1:1 magnification (life-size) without needing an



adapter. Tamron, Sigma and Tokina all make macro lenses to fit most modern SLRs and of course each camera manufacturer sells their own macro lens. Such lenses cost \$400-\$500.

You can even combine the close-up filters and extension tubes with a macro lens for more extreme magnification.

Finally, a **tripod** is *very* helpful for both compact and SLR cameras. Because you may be photographing wildflowers in the shade or other subjects indoors, the exposure times are long enough that holding the camera produces blurry photos. I recommend a full-size tripod that extends from eye-level to ground level for both camera types. Or you can use a mini or tabletop tripod, such as the [GorillaPod](#), to put the camera close to the ground. If you have an SLR camera, be sure the mini tripod is sturdy enough to hold your camera and lens steady.

#### Optional Accessories

- Polarizing filter
- Small (15-20") diffuser to soften harsh light
- Small (15-20") white/gold reflector to lighten shadows
- Rain protection ([Op-Tech Rain Sleeve](#) for SLRs, large zip-lock bag for compacts)
- Right-angle viewfinder attachment (SLRs only)
- Remote cable release (SLRs only)
- Lens shades (SLRs only)
- Knee-pads
- Large garbage bag for ground cloth

P.S. The article at this link has lots of very good information on macro photography equipment: [http://www.adorama.com/catalog.tpl?op=academy\\_new&article=061506\\_1](http://www.adorama.com/catalog.tpl?op=academy_new&article=061506_1)

#### Suppliers for Macro Equipment

B&H Photo/Video, New York City  
[www.bhphotovideo.com](http://www.bhphotovideo.com)

Adorama, New York City  
[www.adorama.com](http://www.adorama.com)

Porter's Cameras, Iowa  
[www.porters.com](http://www.porters.com)