

Extracting Color from Wood Chips

Extracting color from wood chips to use as dye is a very easy process. Very few tools or equipment are required.

Tools & Equipment

You'll need the following things:

- Quart-size **canning jar** with tight-fitting lid.
- **Alcohol.** Any form of alcohol will do: cheap vodka, Everclear, rubbing alcohol, or denatured alcohol. I've found the latter is cheapest, especially when purchased in big jerrycans at Home Depot or any other big-box hardware store.
- **Strainer** with small enough holes that it will effectively get all the small bits out. If you leave small bits in the dyepot, and they stay in contact with the fiber too long, you can get *hotspots* of darker color. If you're dyeing fleece, this isn't a problem, but if you want solid color on yarn, you don't want spots. If your strainer has big holes, line it with a couple of layers of cheesecloth.
- **Dyepot** and a way to keep the dyepot warm but *never more than 140° F*. I use a Salton warming tray on its low setting, not the stove. A heating pad, protected from spills somehow, would work.
- **Thermometer** to keep an eye on dyebath temperature.
- Damp, mordanted **fiber**. I use potassium alum on silk, and aluminum acetate (from Earthues) on tencel. The wood dyes contain tannins, so I don't bother with an extra tannin bath on cellulose. I just leave the skein in the mordant pot until I'm ready to dye it. Because I weigh out the mordant based on the weight of the fiber, it's not possible to overdo it by leaving the skein in the pot. Skeins have been known to live in the mordant pot for weeks until I'm ready.
- **Wood** chips. I get mine from DH the woodturner. Fruit wood, nut wood, exotic hardwoods, especially varieties that have colorful wood. The richer the wood color, the more color you get on your fiber (although there can be surprises).
- **Patience.** Extracting the color takes days to weeks, and the dye process is slow because it must be done at low heat.

Procedure for Extracting the Dye

1. Put the wood chips in the canning jar.
2. Pour in alcohol to cover. Screw on the lid and be sure it forms a good tight seal.
3. Tilt the jar up and down to ensure all the chips are soaked with alcohol. Add more alcohol if necessary as the chips absorb the liquid.
4. Wait patiently. Days is good, weeks is better. Tilt the jar now and then to admire the developing color. Wait another week. Repeat.

Extracting Color from Wood Chips

Procedure for Dyeing with Wood Dye

1. When the color of the liquid in the jar is nice and rich, pour the contents of the jar into a dyepot through your strainer. Don't discard the chips – you can do the extracting process again, and get more color for another dyebath or two. Just put 'em back into the jar and add fresh alcohol. And wait patiently again.
2. Add enough hot water to the dyepot to make a sufficient ratio of water to fiber. If you start out with the hottest water you can get from the kitchen sink, and put the dyepot in a warm sunny place, you may not need to heat it at all. The amount of water you add will depend on how much fiber you plan to put in the pot; there needs to be enough liquid so that the fiber can move freely and remain covered by liquid.
3. Place damp fiber in the pot.
4. Wait patiently, stirring occasionally. The longer you leave the fiber in the dyepot, the darker the color will get. *Never let the dyepot get hotter than 140° F!*
5. When the fiber looks like it will dry to a depth of shade you like, remove it from the dyepot, rinse, and dry. Remember that wool dries one shade lighter than it looks when wet, silk dries maybe two shades lighter, and cellulose dries at least four or more shades lighter!
6. You can darken the color by dissolving a tiny pinch of iron sulfate in a cup of boiling water, strain the water through a coffee filter, and pour the strained liquid into the dyepot. Similarly, you can brighten the color by doing the same with a very tiny pinch of stannous chloride (tin) or add a greenish tinge by doing the same with a tiny pinch of copper sulfate. Use way less than you would if you were using the metals as mordants – a very tiny pinch is enough to affect the color. I've also added other natural dye extracts to the bath to shift the color more significantly.
7. If there's lots of color left in the dyebath, you can always put in a second batch of mordanted fiber after the first batch is a deep enough color. Successive baths will be lighter depth of shade.

Safety Notes

Always, *always* use dedicated dyepots and utensils, never your cooking pots or spoons! Glass is pretty impermeable, so if you want to use the canning jar for food later, just scour it out really thoroughly, and then use the usual sterilization routine for canning. (Don't reuse the lid for food, though.)

The wood dyes themselves are not terribly toxic or dangerous to use. However, like any fine powder, sawdust can be irritating to the nasal passages and the lungs, and can cause an allergic reaction in sensitive individuals, so a dust mask is recommended when pouring the chips into the jar. Once they're wet, you don't need a mask. (It's usually the exotic hardwoods that are the worst irritants. Most woodturners wear Darth Vader-type ventilated breathing masks when working with exotics.)

You might not want to do wood dyes indoors. The alcohol evaporates pretty quickly from the warm dyepot, but it does tend to make the kitchen smell a bit like a morgue.

Cultivate your local woodworker. There are lots of wood chips out there going to waste! Most woodworkers love to see their waste being put to good use, and will let you collect 'em from the workshop floor.

Above all, have fun and enjoy the glorious colors!