Fuming Wood

Bill Karow
NWWT November 2021 Demonstration



*****NOTE**: This process should only be done in an environment with an abundance of air circulation, preferably outdoors. NOT in your closed up shop! Adequate ventilation is absolutely necessary, especially when using the stronger concentrations of ammonia.

*****WEAR PPE**. Specifically glasses/goggles, a respirator with an Ammonia/Methylamine cartridge, rubber gloves and long sleeves.

- **Ammonium Hydroxide** (30%) from a Scientific Lab Equipment Supply House (Nurnberg Scientific in Tualatin) *or* Janitorial Strength Ammonia (10%) (from Ace Hardware)
- **Plastic Storage Container** large enough to fit your piece in (You can add adhesive strip foam insulation tape around the edges of the bin) *or* an air-tight Igloo-type cooler (You can add a see-thru window on the lid by cutting a hole and using foil tape to secure a small sheet of plexiglass.)
- **Small plastic yogurt container** to hold the ammonia in the tub while fuming

Use ½ to ¾ cup of Ammonia. Leave the piece you are fuming in the tub for 2 days (30%) or at least 3 days (10%)

*****BE EXTREMELY CAREFUL WHEN OPENING THE CONTAINER!** You do NOT want the ammonia fumes in your lungs, eyes or nose!

I have found that warmer air temperatures during fuming create more reddish hues. Colder temperatures create greener hues.

Leave the fumed piece in a well ventilated area until it no longer has that strong ammonia smell. You can lightly sand the finished piece if you find the grain has raised after fuming.

Experiment with using a finish (wax, BLO, walnut oil, etc.) ***before*** fuming to add depth and richness to the final color. I have achieved colors ranging from darker coffee browns to dark golden hues.

Complete the project with your preferred finish. I find walnut oil works well. Have fun and BE SAFE!

Good article: **Fuming Wood with Ammonia by Chris Gochnour** in the May/June 2020 issue (#282) of Fine Woodworking

Bleaching Wood

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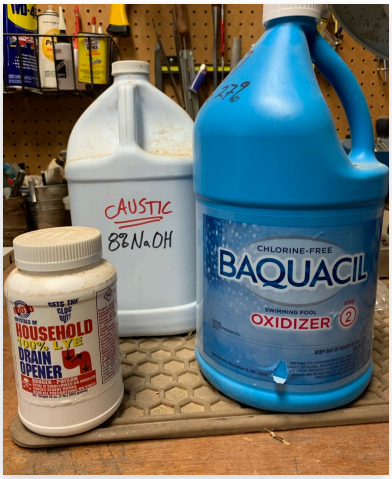

*****WARNING** Both bleaching agents are highly caustic and can cause serious burns. Mix and use only in a well ventilated space. **WEAR PPE** - specifically faceshield, safety glasses, rubber gloves and cover ALL exposed skin.

The wood bleach I use consists of two parts (Hydrogen Peroxide and Sodium Hydroxide) that when mixed, create a chemical reaction that removes tannin from the wood. The amount of lightening varies greatly among species depending on its tannin content. I have had good success bleaching oaks, maple, madrone, box elder and cherry.

You can purchase the two pint Daly's 2-part Wood Bleaching Kit for $27. Or for about the same price, you can mix your own and make a lot more. This is how I make my own:

Part A is the Sodium Hydroxide solution. I use **Household 100% Lye Drain Opener**. Measure **½ cup (125ml) of cold water** and pour it into a one cup-size **glass** (not metal) **container**. Put **1 ½ level teaspoons of the Lye crystals** into the water. Stir thoroughly to dissolve the solids, and then rinse the spoon with water. Pour the 125 ml of lye solution carefully into a clean glass or plastic storage jar or bottle with a plastic cap (no metal contact). Wipe up spills immediately. Clearly label the container: *"8% sodium hydroxide solution – caustic!"* It will last indefinitely.

Part B is the Hydrogen Peroxide solution. I bought a gallon of **Baquacil Oxidizer** for $25 from Apollo Pool Supply (BioGuard SoftSwim C and AquaSilk Chlorine-Free Shock Oxidizer are different brand names with the same ingredient.) **27% Hydrogen Peroxide**.

You must keep each of the two bleaching components separate until you are ready to use them, just like two-part epoxy. Mix up only what you will need, as the solution will lose its potency over time. A little goes a long way.

Sand your piece to 300 or 400 before bleaching. **Mix equal Parts A and B** in a plastic or glass container. Apply with a chip brush, sponge brush or cotton swab Let dry completely between coats. Do not expect to see the color change immediately. One coat is not enough for most applications. I've found that 3 or 4 coats usually bleaches the wood pretty well.

Once finished, the piece can be very lightly sanded if needed or just burnished with a paper towel or. brown paper bag. You can leave it unfinished, finish with a few light coats of a spray fixative or buff with white diamond compound on the Beall system (Thanks for the tip, Kevin!)

Most of the above information I found online in a **detailed article** written by Montgomery County Woodturners club member, Gary Guenther.

Ebonizing Wood

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Option 1: FIRE

Scorching wood with fire from a propane or mapp gas torch can be messy, smelly, unpredictable and potentially burn your shop down. But hey, it's fun to play with fire! If you go this route, best to do it outside in your yard or driveway, away from wood chips and sawdust. And keep a container of water AND a fire extinguisher nearby, just in case.

Start slow; you will find different areas of the wood char at different rates. Experimentation is key to find the technique that will give the outcome you hope to achieve. So practice on different scraps of wood and pieces that will not take pride of place on your mantle.

I'll start burning a small area until I'm satisfied with the level of char, then I move on. I usually go back over areas I've already scorched to even out the blackness. I'm looking for an "alligator skin" effect on the surface of the wood. Keep a spray bottle of water on hand to extinguish glowing embers that may burn too aggressively. Let it cool down, then lightly use a brass or nylon brush to remove some of the char and make the grain pop. This is messy. Topping it off with a spray laquer is the easiest way to finish, but I have also used walnut oil and wax with good success.

Option 2: IRON ACETATE

Like bleaching, this technique works best on species with a high tannin content (oaks, cherry and walnut). Wear gloves unless you want stained fingers.

Sand up to but not past 220 grit. Any finer and it is more difficult for the ebonizing to penetrate the surface of the wood. In a glass or plastic jar (NOT metal), place a handful of **0000 wax-free steel wool** and a quart or so of **cleaning-strength vinegar**. (TIP: Use a magnet to keep the steel wool at the bottom of the jar to facilitate the oxidation process.) Poke a hole in the lid screw it on. Leave it alone for a week or two, and the steel wool will mostly be dissolved. Stir and strain the iron filings out of the solution with a coffe filter and your ready to apply with disposable brush, paper towel or even spray bottle for larger areas. After the first coat is dry, you can apply multiple coats to increase the darkness of the wood.

Good article on iron acetate ebonizing: **How To Ebonize Wood by Brian Boggs** February 2021 issue of Popular Woodworking.

Option 3: INK

This is my preferred way of ebonizing. It is less messy, way more predictable and works on every species of wood. It also allows the grain to show through, is water-resistant when dry, and provides UV protection. Again, wear gloves.

A 32 oz. bottle of **Speedball Super Black India Ink** from Blick Art Supply runs around $16. There are also 2 oz and 16 oz sizes, but the largest is the best value. Also, it will pretty much last forever.

Application is easy: Use a chip brush, sponge or paper towel. After drying, if it is not black enough, apply another coat. I like to finish it with walnut oil and wax. Then lightly buff to achieve a beautiful luster.