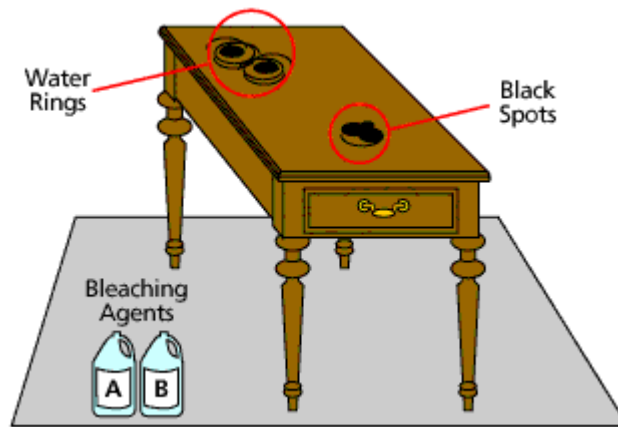


# Bleaching Water Stains from Furniture

## OVERVIEW



### Introduction

When restoring older wood furniture you will probably encounter dark rings and black spots, which are caused by water stains. Oxalic acid is a moderate bleach that will remove these stains even if they have penetrated the wood surface. Oxalic acid will also remove finish stain applied previously and lighten the wood for a fresh new look.

Restoring wood furniture takes time and patience, but the results of your labor can be enjoyed for years, even generations. The restoration process usually involves stripping off old finishes, bleaching, staining and then varnishing.

Once you have stripped the old varnish and paint from a piece of furniture (see tutorial on chemically stripping wood), you will most likely encounter stains in the wood surface that should be removed before applying a new finish. Bleaching is a good technique for getting out these stains. However, different types of stains require different bleaching techniques. Choose the tutorial that best addresses your needs.

### Type of Stain

Ink stains, stains caused by chemical refinishers

To lighten wood and remove old stain

Dark rings and black spots, usually caused by water

### Tutorial

Bleaching furniture with mild bleach

Bleaching furniture with two-part hydrogen peroxide

Bleaching furniture with oxalic acid (this tutorial)

### BEFORE YOU START...

#### SKILL LEVEL & TIME TO COMPLETE

- Beginner - 2-1/2 hours
- Intermediate - 2 hours
- Advanced - 1-1/2 hours

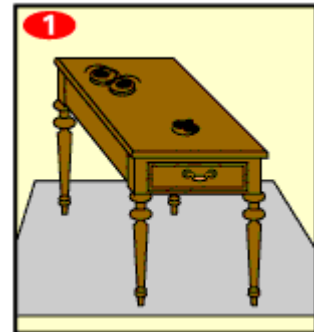
#### CAUTION

Plan quick access to water for rinsing bleach spills or splatters. Wear safety goggles, and if your skin or eyes are exposed to the oxalic acid, immediately rinse thoroughly. Seek medical attention if the acid does contact your eyes.

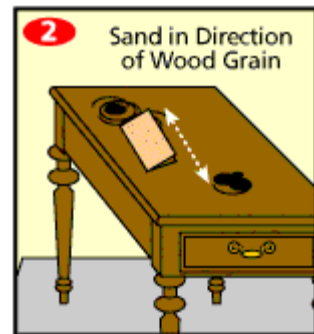
- CAUTION** Use a well-ventilated work area; do not breathe fumes from oxalic acid.
- CAUTION** Don't use a metal container or utensils to mix or store oxalic acid.
- CAUTION** Don't breathe dust from sanding wood.
- CAUTION** Dispose of unused mixture, used rags, paint brushes and sponges safely. Store unused oxalic acid crystals properly.
- HELPFUL TIP** Wear old clothes; oxalic acid does bleach.

## STEPS

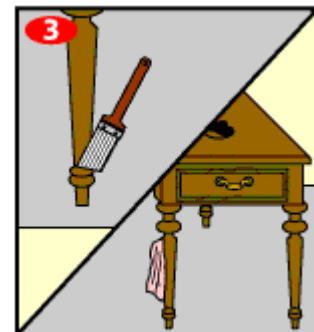
1. Start with a piece of furniture that is bare wood. To remove an existing finish, refer to the tutorial on stripping furniture. First, place your project piece on a drop cloth for protection.



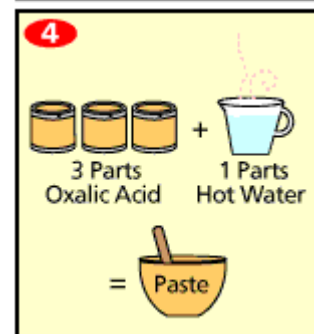
2. Next, sand the wood thoroughly to remove oil and debris left from the finish removing process. Be sure to sand in the direction of the wood grain.



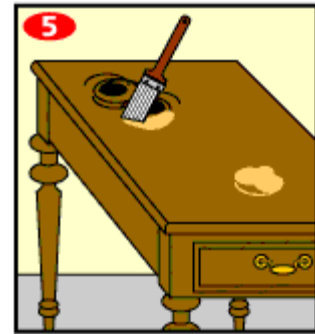
3. Remove sanding dust by brushing with a clean, dry paintbrush, especially in the joints and detail areas. Then rub a tack cloth over the entire surface of your furniture.



4. Next, make a small amount of wet paste, mixing hot water and oxalic acid crystals. Use a mixture of three parts oxalic acid to one part hot water. Add more water or more crystals as needed.



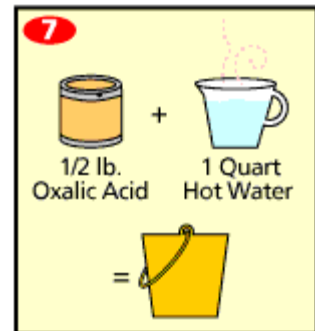
5. Apply the paste mixture only to the heavily stained areas and black spots with the tip of a paintbrush or sponge applicator. Avoid contact with metal fasteners and the metal of the paintbrush, but be sure to avoid breathing fumes if you do touch any metal hardware. Allow the mixture to "soak" a few minutes on softwood, such as pine, and up to one hour or more on hardwoods, such as oak, maple and hickory. Check it often to achieve your desired color. If the acid crystals dry before the wood is lightened, remoisten the area with a few drops of water or reapply the paste.



6. After the stains and spots are bleached, remove the paste with a sponge.



7. Next, use the larger-size plastic container to mix a wash of water and oxalic acid. To work a large area, mix ½ lb. oxalic acid crystals to 1 quart of hot water. For smaller areas, mix 1 oz. of acid crystals to 1 cup of hot water.



8. Then coat the entire surface of your furniture piece to remove the stain finish and achieve an even color. Be sure to get the bleach into the seams, joints and detail areas.



9. Once the surface is uniformly bleached, thoroughly wash away the acid with warm water using a clean sponge and clean water.



10. Then neutralize the acid bleach by wiping the wood surface with white vinegar using a clean sponge. If you don't neutralize the bleach, it will lighten any stain you apply later.



11. Rinse again with clean water and a clean sponge, being sure not to let the wood sit for too long saturated with water or vinegar.



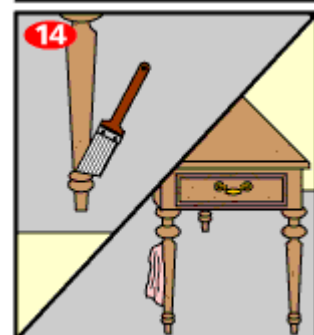
12. Allow your furniture piece to dry thoroughly, which will take about two days.



13. After the piece is dry, gently sand the surface with extra-fine grit sandpaper - 280-grit should do.



14. Use a clean, dry paintbrush to brush off sanding dust, especially in the joints and detail areas. Then rub a tack cloth over the entire surface of your furniture. If stains and marks persist, you can repeat the process, or try one of the other bleaching methods, either mild bleach or a two-part hydrogen peroxide solution (see our tutorials on these two topics).



## SHOPLIST

**Materials List**

Oxalic Acid Crystals (sold in paint stores and paint departments)  
White Vinegar  
Plastic Pail of Hot Water  
Vinyl or Rubber Gloves  
Rags  
Plastic Pail of Rinse Water  
Dust Mask  
2 Sponges  
Tack Cloth  
Extra Fine (280) Grit Sandpaper

**Tools List**

Safety Glasses  
3 Plastic Mixing Containers (a two-quart capacity and a couple pint size)  
Plastic or wood stir stick  
Sturdy Drop Cloth  
Paintbrush  
Sponge applicators in several sizes including a small tip