

# Wood Stabilization/Infusion

## Tex Turn Woodworks (TX)

[http://www.turntex.com/index.php?option=com\\_content&view=frontpage&Itemid=28](http://www.turntex.com/index.php?option=com_content&view=frontpage&Itemid=28)

### Cactus Juice, Epoxy (I think)



### Vacuum Chamber



### Dyes



# Resin Casting

## Alumilite (MI)

<http://www.alumilite.com>

Alumilite Clear (polyurethane)

## Reynolds Advanced Materials (AZ)

<http://www.reynoldsam.com>

Epoxacast 690 (epoxy)

## Creative Wholesale (GA)

<http://www.creative-wholesale.com>

Polyester Casting Resin (same material they sell at Michaels)

# Mold Materials

## Port Plastics (AZ)

<http://www.portplastics.com>

High Density Polyethylene (HDPE)

## Fred Wissen Designs

<http://www.ptownsubbie.com/index.html>

Silicone Molds

# Pressure Pot

## Grainger

<http://www.grainger.com>

Paint Tank, 2 1/2 Gal, Galvanized Steel



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## Alcohol soaking method for drying bowls

by Dave Smith

### Background:

Drying roughed turned bowls has always been a challenge for wood turners. You need to balance the desire to finish a piece as soon as possible with the inherent tendency of wood to warp and split when dried too quickly. Wood turners have employed various methods to maximize the drying speed while minimizing the degradation of the wooden shape being created. Over time each method has collected its own supporters and detractors with respect to the relative effectiveness of the process.

Criteria for a good drying process include ease of use, cost, and consistency of results. A process that is difficult to use, even though it produces good results, will garner few adherents. Likewise, an expensive protocol may appeal to a commercial turner who can expect to recoup the investment but it may be cost prohibitive for the average wood turner. Consistent results without labor intensive monitoring or manipulations are a major benefit of any method.

The most common method of drying wood bowls is placing them in a paper grocery bag. The theory is that the permeable paper produces a micro climate around the bowl. The bowl dries slowly with a small differential moisture gradient across the bowl sides. This method works well but it is slow.

Boiling can improve the stability of the wood by rupturing the cells, allowing moisture to more readily migrate to the surface and evaporate. Boiling is time and labor intensive, consuming requiring considerable space for a large pot and heat source. Since most people don't want to boil bowls in the kitchen, it is necessary to set up some way to boil outdoors which can be a big drawback in cooler climates during the winter months. Boiling can also be dangerous. A good friend of mine was severely burned when a plate blank wedged in a boiling pot of water, sealed the pot and led to a steam explosion.

Soap soaking has gained popularity in recent years. A bowl soaked in a soap solution is supposed to be easier to turn because of the lubricating action of the soap. Bowls are said to dry faster and crack less after soaking but some people report that there is still a fair amount of distortion of the finished piece.

It was my experience with soap soaking that led me to the alcohol soaking procedure I use today. When I researched soap soaking and read the discussions on wood working forums, the consensus was that it was the surfactant in soap that allowed the wood to dry faster.

Researching the MSDS (material safety data sheets) for several commonly used soaps revealed that the surfactants were listed as being alcohols. I reasoned that using alcohol for a soaking solution might be a simpler method. The most readily available alcohol is denatured alcohol found in the paint section of any hardware store. A gallon of denatured alcohol costs from 10 to 12 dollars.

A search on the internet noted several instances of alcohol soaking of archeological artifacts to displace water in a complicated protocol for stabilizing and preserving historical wood pieces. Alcohol soaking is used as the first step in of a process to replace water in the wood with a stable inert binder that will maintain the shape of the artifact and prevent further degradation. The fact that alcohol is used to displace water in archeological artifacts suggests that it might also work to displace water in green wood thus speeding up the drying process.

My testing involved a large variety of wood species. In each case, the results have been consistently good. Types of wood included some traditionally hard to dry woods such as apple, plum, cherry and mulberry.

