



A White Paper by Chicago Wine Cellar Expert

Subject: The Selection of Wine Cellar Materials

Part of the decision process in any wine cellar project is the choice of materials for the racking. Over the years I have seen everything from wood, to finished mill-work, to metal, to clay sewer tiles (earthen colored cylinders stacked one another) to faux rock niches. Some collectors were pleased with their choices, a few were not. The purpose of this paper is to provide you with the information required to make an informed choice that works for your collection and the design themes of your cellar.

At Chicago Wine Cellar Expert we represent four different racking companies. We offer a wider selection of woods than ANY of our competition: five basic types, three hardwoods and seven exotics. We offer unfinished, stained, and stained plus finish on wood. We also offer metal racking in black, chrome, copper, brass, rustic red and antique brown.

Wood racking: The vast majority of what we sell and have sold in the past is unfinished mahogany of various species and unfinished redwood, either all-heart or premium. Anytime one purchases a piece of furniture made of unfinished wood it is best to remember one fact of life. The color and appearance of unfinished wood, assuming it is of the same species, will vary within a certain range because each tree is different. Some were grown where the soil was richer in a particular nutrient. Some were cut ten years post maturity; some were cut immediately. Grain patterns, even within the same tree, can be more pronounced on some cuts and practically non-existent on others. No wine racking company guarantees its unfinished racking will be either grain or color consistent.

Note: Chicago-WCE is an environmentally coherent company. None of the redwood comes from old-growth trees. All woods are from sustainable forests, and none are endangered. We, too, are committed to passing on to our children a planet that is better than the one we found.

What is a patina and how will it affect by wine racking?

A patina is defined as a film or covering appearing gradually on something. Copper turns green over time. The colors of finished wood deepen over time. Unfinished wood gets darker over time, especially when placed into a cold cellar. Over the first six months, a

wine cellar racking system can darken by 3-4 shades. Once the initial darkening occurs, every 12-months you will see another shade darker.

Below are pictures of all-heart redwood. The one on the left is a sanded piece where the patina has been removed, simulating the color when it was cut from the tree. The second is from that same piece of wood after 18-months in my shop.



New sample



Older sample



New sample



Older sample

As you can see, the two on the right are demonstrably darker in just over 18-months, and these were not stored in a cold room like a wine cellar. Also note that it is not the deep grain streaks that darken but rather the spaces between the deeper graining.

The next samples are sapele. The same conditions as those described above apply.



New sample



Older sample

In this case the deepening is not as pronounced as in the redwood. Different woods, different results.

Finished pieces will also develop a patina over time. The cherry cabinets in my kitchen are appreciably darker after twenty years than when first installed. The difference between patinas on finished wood is that the film cannot be removed by a simple sanding. The entire piece must be refinished.

To finish or not to finish?

Rule #1: If your wine cellar is not going to be chilled (i.e. mechanically cooled) the question is moot. Finished wine racking in your dining room will off-gas into the entire home. If there was a problem with the smell, it's dissipated completely within seven days of installation.

Rule #2: A chilled wine cellar requires a vapor-sealed room. In the old days, this meant that any racking finished using oil-based stains and finishes cured and off-gassed into a sealed room. If you walked into a wine cellar containing newly finished racks, you could smell the odor of the stain/finish. This was thought bad for the wine in storage because the stain/finish molecules could migrate through the cork and into the wine.

Note: To this writer's knowledge, these horror stories about tainted wine are anecdotal. No one has ever provided me with nor have I found test results from double-blind studies run by a disinterested third-party like those conducted by the University of California at Davis on other factors in wine storage. And, no one has ever offered the name and contact information of a collector who experienced this anomaly first-hand. Like much that passes for common knowledge in our business, these stories appear to be based upon someone's 'common sense'. Either way, this leads me to the first conclusion.

Conclusion #1: Given the stories about tainted wine and the *common knowledge* of our industry, the *safest* course of action is to purchase unfinished wine racks.

Rule #3: If complementing the aesthetics of the room is driving you toward finished racking make certain that you trust the finisher and that he/she understands that you want low-VOC or no-VOC products used. Make certain that you receive something in writing that the products used are 'green' (i.e. water-based, not oil-based).

Placing a finish on any piece of raw wood, makes the grain *pop* and deepens the color. Take a look at the pages where I compare unfinished samples to the same wood with a clear coat finish. Look at the walnut pieces. Compare the finished versus the unfinished. Very few clients would consider unfinished walnut because one-half of the board-feet available is gray. Adding a finish turns much of the gray a rich brown.

The vast majority of woodsmiths will tell you that finishing is much easier and the colors are much richer using oil-based products. For this reason, most production shops are set-up to spray oil-based products. Returning to rule #1 above, most mill-work product is not installed in sealed rooms. In these situations oil-based products produce a superior finish

without any downside risk. However, in a sealed room, water-based is a must. After all, there might be a downside. Do you wish to take that chance?

Rule #4: If you are going to stain, add the finish coat over the stain.

One of our leading competitors offers a stained rack but does not offer a finish coat over the stain. The result is a darker piece of wood with a flat color that looks lifeless and is very difficult to clean. I have no idea why this company will not *finish the finish* because the result would look so much better. Moreover, the chance for VOC contamination is reduced by the application of a good finish. One blocks the other.

I love the look of clay tiles. Can I use them as wine racks?

Rule #5: If you care about your wine labels, never use clay, sewer tiles for racking.

I understand that stacked, clay tiles look great as wine racking. A number of the builders in Hinsdale used these with great result. Everything began to unravel with this approach when one builder I know sold his spec house, containing a clay-tile wine cellar, to a true wine collector. About a week after occupancy, the owner began loading his cellar. His screams could be heard down to Burr Ridge and up to Oak Brook.

Clay sewer tiles were never meant to house bottles. They are built to convey sewage. Small bumps, fissures, and raised stubble are not a problem for sewage. But, every time a wine bottle is slid in or out, the labels *catch* on these imperfections and rip. It only took the collector two cases of wine to determine that no matter how careful and no matter what approach was used, it was impossible to slide a bottle into the cylinder of the tile without scarring the label.

The owner called the builder and demanded that he rip-out the clay tile and install standard racking. I personally won because I got the bid on the racking, but the builder lost big-time.

I hope that I have addressed many of the areas of concern and clarified what is and what is not a useful wine cellar approach. If you have any further questions, please call me using the contacts below. I look forward to speaking with you.

My best, Rick

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