

*There's an old saying –  
"If the angels don't take their share ... the rest just isn't worth taking!"*

### **The Angel's Share and more ...**

All oak barrels have one thing in common – they are relatively porous, they breathe and ... *that is good!*  
As the barrels breathe, the liquor, wine or ale ages and flavors develop and ... *that is very good!*  
Small oak barrels hasten the process, intensify the flavors and ... *that is very, very good!*

An oak barrel is almost magical. It removes unpleasant compounds from its contents while at the same time shares some of its distinct flavor profile, color and aroma resulting in smooth whiskies, wines and brews that we have all come to love.

Because of their porosity, they allow some oxygen in and also let some alcohol out allowing the contents to mature and enhance in flavor. As legend has it, this 'boozy' vaporous elixir rises to the heavens where the angels claim it as their toll for watching over the spirits and making sure they turn out properly.

The breathing plays another part in the aging factor - oxidation. This very gradual micro-oxidation results in decreased astringency, increased color, stability and the formation of complex fragrances.

In the case of liquor aging in standard sized large 53 - 59 gal barrels, somewhere between eight to ten percent of the alcohol volume will be lost to evaporation in the first year. A good whiskey is likely to lose approximately thirty to forty percent of its original volume by the time it is ready for bottling years later.

Using a smaller sized barrel changes the amount of surface area or the amount of wood barrel in contact with the contents. This larger ratio of wood to liquor has a direct impact on the flavor and length of the aging process and is the very reason that aging in a smaller barrel is much faster. For example, liquor can be aged out in four to six months when aged inside of a 20 L barrel instead of years and years using the standard large 53-59 gallon barrel.

The rule of thumb for aging in smaller barrels:

- 20 L Oak Barrel – four to six months
- 10 L Oak Barrel – two to four months
- 5 L Oak Barrel – four to six weeks
- 2 L Oak barrel – two to four weeks
- 1 L Oak Barrel – one to two weeks

### **Temperature and Humidity**

Temperature also impacts the aging process due to the amount of oxidation that occurs at different temperatures. Higher temperatures accelerate this process while lower temperatures result in slower oxidation. Ideally there would be great variations between night and day temperatures. These fluctuations in temperature, along with changes in barometric pressure, have been shown to actually force the whiskey, wine or ale in and out of the wood, resulting in maximum flavor and character.

Oxygen enters a barrel when water or alcohol is lost due to evaporation – once again the, "angels share". In an environment with 100% relative humidity, very little water evaporates and so most of the loss is alcohol – a useful trick if one has a liquor or wine with very high proof. Most beverages are topped up from other barrels or bottles to prevent significant oxidation. With small barrels, it's recommended to top off the barrel every one or two weeks.

In a nutshell ...

- Low Humidity – primarily water lost resulting in higher alcohol content
  - Dry air and higher temperatures will result in more water being lost (alcohol content goes up)
- High Humidity – primarily alcohol lost resulting in losing the alcoholic strength of the product
  - When stored at 60% relative humidity or higher – primarily alcohol loss
  - Humid atmospheres with moderate temperatures will lead to more alcohol than water evaporating

Enjoy your small oak barrel – and remember ... you'll get the best results and have the most fun by frequently checking, tasting, sharing and don't forget - topping it off!