

AD

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AMERICAN DISTILLER: A SOURCE OF INFORMATION ON THE DISTILLING PROCESS



The American Distilling Institute^c
Box 510, Hayward, CA94541, USA
510-538-9500 • 510-538-7644 fax
To join: (800) 646-2701
distilling@aol.com

Bill Owens, President
Karen Dolan, Vice-President
Steve Costello, Secretary/Treasurer
Alan Moen, Editor & Spiritual Advisor

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AD promotes an open discussion of column rectification and the pot distilling process. This includes Alambic distillers doing traditional eau de vie and brandy distilling. AD covers spirit wholesalers and liquor retailers and the important roll they play in the industry.

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Irish Whisky

by Hrayr Berberoglu

These days, it seems everything Irish is golden. The Emerald Island itself is undergoing an economic renaissance that has made it the darling of the EU and some call it the Celtic Tiger.

Every industry in Ireland is becoming, including restaurants, hotels, pubs, and more importantly the exports of Irish whiskey. Today, Irish whiskey has become the world's fastest growing brown spirit. Needless to say, this popularity originates from the substantial marketing efforts of IDL (Irish Distillers Limited); and smaller distillers are benefactors.

Almost every consumer enjoying Irish whiskey for the first time states that it is smoother and more pleasant than Scotch whisky, both characteristics emanating mainly from Coffey- still- distilled products. Previously, Irish whiskey was aged for three years as the law requires, but today many distillers surpass this period by a few years. As a result of longer aging and better selection of barrels, Irish whiskey overall has undergone a "taste revolution" that many people seem to like. Small distillers are also using pot stills, at least partially to impart more flavor to their products.

Interestingly enough, a century ago, Irish whiskey was considered to be the world's foremost whiskey. They toppled from grace while Scottish whiskies started their march to popularity, not only in the British Empire, but in many European and South American countries.



ILLUSTRATION FROM "THE ART OF DISTILLATION", LONDON 1651, BY JOHN FRENCH

Ireland's historians believe their country to be the birthplace of whiskey. The resources for creating whiskey are widely available: barley, crystalline spring water and an alcoholic beverage tradition dating back to the 6th century when Christian monks brewed primitive beers from wheat. Folklore tells us that distilling goes back 1,000 years and it may be plausible since whiskey really is nothing more than distilled beer.

English King Henry II's returning soldiers in the 12th century described how much they enjoyed the local libation of Ireland, an intoxicating lubricant, *uisce beatha*, Gallic for water of life. "Uisce beathe" eventually evolved into whiskey.

Irish whiskey's halcyon days were during most of the 19th century, when it was the gold standard of whiskey. Then a series of internal and global events caused the bubble to burst.

Ironically, it was an Irishman who caused one of the first fractures in Ireland's whiskey industry. Aeneas Coffey, an Irishman working for the English government as an inspector in Scotland, advanced the technique of continuous distillation with the introduction of the patent still (a.k.a. Coffey still). This steam-powered three-column still could distil huge volumes of mash in a single operation at less cost and much faster than pot stills.

Scottish distillers were quick to perceive the economic and commercial advantages of the Coffey still and invested heavily in it.

When Andrew Usher invented "blended whisky", Scottish distillers reduced their costs significantly, and by the 1890's Scotch whisky was outselling Irish whisky.

World War I and the 1919–1921 Irish war did not help matters, even worse was that Irish distillers were oblivious of the pending repeal of the Prohibition in the USA (1933), whereas their Scottish counterparts were well prepared.

Most Irish whiskey today is distilled in Coffey stills and comes out at 80% ABV (alcohol by volume) and is diluted to 60% for aging, which occurs mostly in American white oak 55 US Gallon barrels previously used for the aging of Bourbon.

Some distillers use oloroso sherry casks, others use port barrels. The minimum aging period by law is three years, but most distillers surpass it by many years. After blending, the whiskey is diluted to 40–43% ABV.

There are three Irish whiskey varieties; grain whiskey (mostly derived from corn), malted barley pot-still-distilled, and pure pot-still (a combination of malted and unmalted barley distilled in copper pot stills). Irish distillers use unmalted barley for less pronounced biscuit flavours, and for malting heat moisture is used.

Irish whiskeys tend to be super-smooth, less assertive in taste, and finish with a pleasant freshness.

The most important distillers in Ireland are: Irish Distillers Group (owned by Pernod-Ricard a French liquor conglomerate); John Jameson and Sons Ltd. (founded in 1780 ; John Power and Sons; Tullamore Dew, Bushmill (holder of the oldest distillery license in the world, dating back to 1608), Tyronecell, Coonemara, Mulligan and Co.

Here is a list of some of the finest Irish whiskeys money can buy:

- ¥ Bushmill's, aged 12 years Distillery Reserve
- ¥ Bushmill's Malt, 16 years
- ¥ Coonemara, Cask Strength 59.6 percent ABV
- ¥ Jameson Limited Edition, aged 15 year
- ¥ Jameson Gold
- ¥ Jameson, 12 years old
- ¥ Magilligan Single Malt Irish Whiskey, 43% ABV
- ¥ The Tyronecell Single Malt
- ¥ Black Bush Irish Whiskey, 43% ABV
- ¥ Jameson 178, 12 year old Single Malt
- ¥ Middleton Very Rare

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Hrayr Berberoglu is professor emeritus of hospitality and tourism management, specializing in food and beverage.

New York Bill Would Assist Small Distillers

by Marc E. Sorini*, April 2002

Law change is a sure sign of marketplace change in the alcohol beverage industry. A recent example is **New York State Assembly Bill 9600**, which would create a new "class A-1" distillers license designed especially for small distillers.

Like the law of most states, existing New York law assumes that distillers are big operations. Thus, New York's current "class A" distillers license contains no production limits. It also, however, requires a distiller to pay a whopping \$39,575 in license fees in just the first three years of operations.

The class A-1 license that is proposed by Assembly Bill 9600 would cost a small distiller just \$500 per year. In exchange, however, the license would be available only to distillers producing less than 35,000 gallons per year, and at least 75% of the ingredients used by the distillery must

originate in New York State. The small distiller could sell to either wholesalers or retailers licensed to purchase liquor, or to other distillers, rectifiers, and non-beverage alcohol users.

The Bill was pre-filed with the Assembly on January 9, 2002. Sponsored by Tonko Clark, it passed through the Committee on Economic Development in February, and is now in the Assembly's Ways and Means Committee.

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Marc Sorini is a partner in the Washington, DC office of McDermott, Will & Emery. His practice is focused on legal issues facing the alcohol beverage industry. Mr. Sorini grants others the permission of reprinting. Reach him at msorini@mwe.com.

Tequila and Mezcal

by Alan S. Dikty

AN OVERVIEW

“All tequila is mezcal, but not all mezcal is tequila.”

— Tequila marketing mantra

The Basis of Tequila and Mezcal

Tequila, and its country cousin mezcal, are made by distilling the fermented juice of agave plants in Mexico. The agave is a spiky-leaved member of the lily family (it is *not* a cactus) and is related to the century plant. By Mexican law the agave spirit called tequila can be made only from one particular type of agave, the blue agave (*Agave Tequiliana* Weber), and can be produced only in specifically designated geographic areas, primarily the state of Jalisco in west-central Mexico.

Mezcal is made from the fermented juice of other species of agave. It is produced throughout most of Mexico.

Both tequila and mezcal are prepared for distillation in similar ways. The agave, also known as maguey (pronounced muh-GAY), is cultivated on plantations for eight to 10 years, depending on the type of agave. When the plant reaches sexual maturity it starts to grow a flower stalk. The agave farmer, or *campesino*, cuts off the stalk just as it is starting to grow. This redirects the plant growth into the central stalk, swelling it into a large bulbous shape that contains a sweet juicy pulp. When the swelling is completed, the *campesino* cuts the plant from its roots and removes the long sword-shaped leaves, using a razor-sharp pike-like tool called a *coa*. The remaining *piña* (“pineapple” — so-called because the cross-thatched denuded bulb resembles a giant green and white pineapple) weighs anywhere from 25 to 100 pounds.

At the distillery the *piñas* are cut into quarters. For tequila they are then slowly baked in steam ovens or autoclaves until all of the starch has been converted to sugars. For mezcal they are baked in underground ovens heated with wood charcoal (which gives mezcal its distinctive smoky taste). They are then crushed (traditionally with a stone wheel drawn around a circular trough by a mule) and shredded to extract the sweet juice, called *aguamiel* (honey water).

The fermentation stage determines whether the final product will be 100 percent agave or mixed (“mixto”). The highest-quality tequila is made from fermenting and then distilling just agave juice mixed with some water. Mixto is made by fermenting and then distilling a mix of agave juice and other sugars, usually cane sugar with water. Mixtos made and bottled in Mexico can contain up to 40% alcohol made from other sugars. Mixtos that have been shipped in bulk to other countries for bottling (primarily the United States) may have the agave content further reduced to 51% by the foreign bottler. By

Mexican law all 100% agave or aged tequila must be bottled in Mexico. If a tequila is 100 percent agave it will always say so on the bottle label. If it doesn’t say 100% it is a mixto, although that term is seldom used on bottle labels.

Distillation and Aging of Tequila and Mezcal

Traditionally tequila and mezcal have been distilled in pot stills at 110° proof (55% ABV). The resulting spirit is clear, but contains a significant amount of congeners and other flavor elements. Some light-colored tequilas are now being rectified (re-distilled) in column stills to produce a cleaner, blander spirit.

Color in tequila and mezcal comes mostly from the addition of caramel, although barrel aging is a factor in some high-quality brands. Additionally, some distillers add small amounts of natural flavorings such as sherry, prune concentrate and coconut to manipulate the product’s flavor profile. These added flavors do not stand out themselves, but instead serve to smooth out the often hard-edged palate of agave spirit.

Classifications of Tequila

Beyond the two basic designations of tequila--agave and mixto--there are four categories:

- **Silver or Blanco tequilas** are clear, with little (no more than 60 days in stainless steel tanks) or no aging. They can be either 100% agave or mixto. Silver tequilas are used primarily for mixing and blend particularly well into fruit-based drinks.
- **Gold tequila** is unaged silver tequila that has been colored and flavored with caramel. It is usually a mixto.
- **Reposado (“rested”) tequila** is aged in wooded tanks or casks for a legal minimum period of at least two months, with the better-quality brands spending three to nine months in wood. It can be either 100% agave or mixto. Reposado tequilas are the best-selling tequilas in Mexico.
- **Añejo (“old”) tequila** is aged in wooden barrels (usually old bourbon barrels) for a minimum of 12 months. The best-quality añejos are aged 18 months to three years for mixtos, and up to four years for 100% agaves. Aging tequila for more than four years is a matter of controversy. Most tequila producers oppose doing so because they feel that “excessive” oak aging will overwhelm the distinctive earthy and vegetal agave flavor notes.

Mezcal and the Worm

The rules and regulations that govern the production and packaging of tequila do not apply to agave spirits produced outside of the designated areas in Mexico. Some mezcal distilleries are very primitive and very small. The best known mezcals come from the southern state of Oaxaca (oah-HA-kuh), although they are produced in a number of other states.

Eight varieties of agave are approved for mezcal production, but the chief variety used is the espadin agave (agave angustifolia Haw). The famous “worm” that is found in some bottles of mezcal (“con gusano”) is actually the larva of one of two moths that live on the agave plant. The reason for adding the worm to the bottle of mezcal is obscure. But one story, that at least has the appeal of logic to back it up, is that the worm serves as proof of high proof. Which is to say that if the worm

remains intact in the bottle, the percentage of alcohol in the spirit is high enough to preserve the pickled worm. Consuming the worm, which can be done without harm, has served as a rite of passage for generations of fraternity boys. Top-quality mezcals do not include a worm in the bottle.

You can reach Alan Dikty at dikty@tastings.com.

This passage is excerpted from *A Sip Through Time*, a Collection of Old Brewing Recipes, by Cindy Renfrow, 1994, p. 209.

INTRO:

The Dyer’s Companion, by Elijah Bemiss, offers us a wealth of information about commercial cloth dyeing in the early 1800s. But more interesting still is his last chapter – a collection of 126 “useful receipts” ranging from a cure for “almonds of the ears fallen down” to how to pickle walnuts. (This last section was added to the 1815 edition, most likely to expand the market for his book. It is not unusual for books, especially household manuals, from this time period to contain cookery recipes, the making of medicines, and animal husbandry instructions, among other things.) There are also fifteen recipes for wines, beer, and cider, and this lone recipe for apple brandy. As you can see, he adds fresh apple cider to the distillate to improve the flavor.

In my book, *A Sip Through Time*, I examined 400 old recipes for wines, beers, distilled beverages, etc., and identified over 200 herbs called for in the recipes. I find it interesting that so many of these plants (61, or about 30%) were also used as cloth dyes. In order to release their dye, many of the plants require preparation in pots of iron, copper, or tin. Yet curiously enough, many of the recipes specify that cauldrons of certain metals were to be used. I find it quite likely that dye herbs were deliberately chosen to add a pleasing color (and in some instances to add medicinal properties as well), perhaps in an effort to simulate an expensive imported beverage.

84th. method of Making Apple Brandy — 1815

...Put the cider, previous to distilling, into vessels free from must or smell, and keep it till in the state which is commonly called good, sound cider; but not till sour, as that lessens the quantity and injures the quality of the spirit. In the distillation, let it run perfectly cool from the worm,¹ and in the first time of distilling, not longer than it will flash when cast on the still head and a lighted candle applied under it. In the second distillation, shift the vessel as soon as the spirit runs below proof, or has a disagreeable smell or taste, and put what runs after with the low wines. By this method, the spirit, if distilled from good cider, will take nearly or quite one third of its quantity to bring it to proof; for which purpose, take the last running from a cheese² of good water cider, direct from the press, unfermented, and in forty-eight hours the spirit will be milder and better flavoured than in several years standing if manufactured in the com-

mon way. When the spirit is drawn off, which may be done in five or six days, there will be a jelly, at the bottom, which may be distilled again, or put into the best cider or used for making cider royal, it being better for the purpose that the clear spirit, as it will greatly facilitate in refining the liquor. (From *The Dyer’s Companion*, by Elijah Bemiss, 1815.)

“BRANDY is the alcoholic or spirituous portion of wine, separated from the aqueous part, the colouring matter, &c., by distillation. The word is of German origin, and in its German form, brantwein, signifies burnt wine, or wine that has undergone the action of fire; brandies, so called, however, have been made from potatoes, carrots, beetroot, pears, and other vegetable substances; but they are all inferior to true brandy. Brandy is prepared in most wine countries, but that of France is the most esteemed. It is procured not only by distilling the wine itself, but also by fermenting and distilling the marc, or residue of the pressings of the grape...”³

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¹ A “worm,” in this usage, means the spiral-shaped condenser of the still.

² “Cheese” here refers to the mass of apple pulp which has been wrapped in cheesecloth and pressed in the cider press until it resembles a large cheese.

³ *Mrs. Beeton’s Book of Household Management*. S. O. Beeton, 1861, p. 668.

(*The Dyer’s Companion* was reprinted by Dover Publications in 1973. ISBN 0-486-20601-7)



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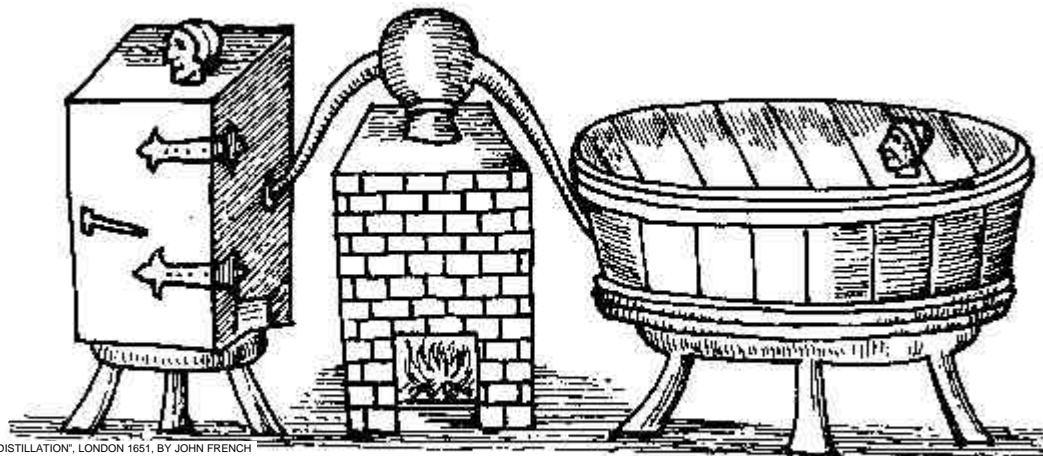


ILLUSTRATION FROM "THE ART OF DISTILLATION", LONDON 1651, BY JOHN FRENCH

