

BRANDY & WHISKEY

Both brandy and whiskey are distilled beverages. What distinguishes them from each other is the liquor from which they are distilled. Brandy is a distillate of wine, specifically grape wine, while whiskey is distilled from beer and other grain beverages. It is interesting to note that the term used to denote an alcohol distillate, regardless of the language almost invariably translates into the phrase water of life. In Latin it is known as aquae vitae. The French call it eau-de-vie, and in the Gaelic tongue it is uisge beatha.¹⁰² The term eau-de-vie is still used to denote French brandies, and the Gaelic uisge beatha is the origins of our modern word whiskey.¹⁰³ The English word brandy appears to be the one exception to this rule, seeming to come from the Dutch brandewijn,¹⁰⁴ which means 'burnt wine,' referring to the heating of wine for distillation.

History of Distilled Spirits

Distilled beverages may date as far back as 800 BC in China with a distillate of Sake.¹⁰⁵ In Europe, distillation was known by at least the eleventh or twelfth century.¹⁰⁶ The Norman English found distillation from grain firmly established in the form of a drink called uisge beatha when they invaded Ireland in the twelfth century.¹⁰⁷ The Romans found apples in abundance as they made their conquests through Gaul, and as early as the ninth century had laws regulating the production of cider. The first written mention of an eau-de-vie made of 'Syder', however, was not until 1553 when it was mentioned in the journal of a Norman farmer. Arnold de Vila Nova, a 13th Century alchemist, wrote of aqua vitae and its restorative properties¹⁰⁸ and also of the medicinal properties of various flavored alcohols.¹⁰⁹ Legal documents dating to 1411 mention the distillation of wine into brandy in the Armagnac region of France.¹¹⁰ Das Buch zu Destilliern by Hieronymus Braunsweig was printed in 1519. This book, as its title explains, is a book on distillation. In addition to the text, there are pictures in the book which show the operations, including one of a still with 4 alembics (retorts).

The Encyclopaedia Britannica lists in its article on 'Alcoholic Beverages' the following dates and places of origin of several distilled alcoholic beverages.

DATE	MATERIAL	FERMENT	DISTILLATE	ORIGIN
800 BC	rice millet	Tehoo	Sautchoo	China
	rice molasses palm sap	Toddy	Arrack	Ceylon India
	mare's milk	Kumiss	Arika	Tatars
	mare's milk	Kefir	Skhou	Caucasus
	rice	Sake	Sochou	Japan
500 AD	Honey	Mead	Distilled Mead	Brittain
1000 AD	Grape	Wine	Brandy	Italy
1100 AD	Oats Barley	Beer	Usqubaugh	Ireland
1200 AD	Grape	Wine	Aqua Vini	Spain
1300 AD	Grape	Wine	Cognac	France
1500 AD	Barley	Beer	Whisky Aqua Vitae	Scotland

Theory of Distillation

Distilled alcoholic beverages are possible due to the different boiling points of the two primary ingredients in the original mixture i.e. water and ethyl alcohol. Water boils at a temperature of 100 C (212 F), while ethyl alcohol will boil at only 78.3 C (173 F).¹¹¹ This differential makes it possible to boil out the alcohol from a beverage such as wine, mead, or beer while leaving the water and other substances behind. This is done by heating the liquid to a temperature above 78.3 C, but below 100 C.¹¹² The alcohol, on boiling, is captured and recondensed into a liquid of considerably higher alcoholic concentrations. The lower the temperature is kept, while remaining in the proper range, the higher the concentration of alcohol will be in the distillate. A lower temperature, and therefore a purer distillate may be desired if the purpose is simply to obtain alcohol to use in fortifying other beverages. In most cases, unless a modern patent still is used, a second or third distillation may be necessary to get a really pure and tasteless distillate. If it is desired, however, to obtain a directly drinkable beverage, a higher temperature will produce a liqueur which contains, in addition to ethyl alcohol, a distinct percentage of water as well as higher alcohols and esters (which are present in the original beverage), keeping the alcoholic content to within range of what can be safely drunk. The inclusion of these other substances will give the beverage flavor and aroma, as well as smoothness of character. These qualities would be lacking in a solution of almost pure alcohol.

Another method, known as fractional crystallization,¹¹³ is done by inverting the process and freezing the beverage instead of boiling it. This works for very similar reasons to that of normal heat distillation, namely, the differential in freezing points of the two liquids involved. Water freezes at a temperature of 0 C, while ethyl alcohol does not freeze until reaching -114 C.¹¹⁴ This allows the water to be frozen out of the liquid, leaving behind the ethyl alcohol, as well as the other alcohols and esters. This produces a drink of a rather different character from heat distillation, as it contains everything except water, while heat distilled beverages leave everything behind except alcohol. Note also that simply lowering the temperature to 0 C will not produce an increase in alcoholic strength. The temperature required for this process is in the range of -15 C and below, but must vary, much as the di-urnal cycle naturally does.¹¹⁵ This allows crystals of ice to form as the temperature drops. As the temperature rises slightly the alcohol will drain out of the crystals so that when the temperature again goes down and more crystals of ice re-form they are purer crystals of water, containing less alcohol. As this process repeats itself the solution will gradually work its way toward the alcohol concentrations listed in the following table which is adapted from a chart on page 102 of the book, *Wines & Beers of Old New England*:

Temperature		% Alc.
F	C	
10	-12.2	8
5	-15.0	11
0	-17.8	14
10	-12.2	8
-5	-20.6	17
-10	-23.3	20
-15	-26.1	24
-20	-28.9	27
-25	-31.7	30
-30	-34.4	33

How Distilled Spirits are made

The word distillation is from the Latin, *destillare* which means to drop, or to trickle down.¹¹⁶ This refers to the visible dripping of the end product of any liquid distillation after having been vaporized and then re-condensed. The word alcohol, however, comes from the Arabic *Ko'hl* which translates into 'the powder'¹¹⁷ and refers to a finely powdered distillate from which the future distillation of spirits derived its name.

Brandy, as has been said, is the product of grape wine which has been subsequently distilled to increase its alcoholic content. The procedure is simply to heat the wine in a still and then save the captured distillate. Whiskey is made in the same manner as brandy, except that the original alcoholic beverage that goes into the still is a beer, made from grain, as opposed to a wine.

There are two main types of stills, but their difference is not in whether they are for the production of brandy or whiskey. Both types of stills are used in the production of both types of beverages. This will be gone into in more detail in the next few paragraphs, and also in the section on the history of distillation and distilled beverages.

The most famous brandies are Cognac and Armagnac, so it is with their production that I shall here concern myself. Both of these brandies are made from grapes grown in the wine regions of France which bear their names and are distilled there.

Cognac is distilled to this day in copper pot stills in the same manner in which it was first made.¹¹⁸ It should, perhaps be mentioned that the area of Cognac was originally noted for its wines, not for brandy. From the twelfth century through the fourteenth century the wines of Cognac and Aunis (near Cognac) were much sought after by the royal households of England. It was not until later years, when the quality of the Cognac wines began to diminish, that the brandy distillate of these wines became noted for their quality.¹¹⁹ The wine from which it is made comes from the Ugni Blanc grape and it averages an alcoholic strength of just under 8% and rarely exceeds 10%.¹²⁰ This wine is then double distilled early in the year, just after it has fallen bright.¹²¹ The distillate comes off the still for the second time at just under 150 proof.

The white wine from the Armagnac region, which is used in making its brandy has an average alcohol content of about 9%,¹²² just slightly higher than that used in the making of Cognac. Armagnac traditionally also used the pot still and was made much the same as Cognac still is. This has changed, however, since the invention of the continuous patent still created by Coffey in 1830, which is now the still used for this brandy. Using the patent still, Armagnac is distilled to a slightly higher alcoholic strength in a single distillation than Cognac is with its double distillation in pot stills.

Brandy Recipes

The following two recipes were found in *Delightes for Ladies* in the section titled *Secrets of Distillation*.

How to make true spirit of wine

Take the finest paper you can get, or else some Virgin parchment, straine it very right & stiffe over the glasse bodie, wherein you put your sack, malmsie or muskadine, oile the paper or virgin parchment with a pensill moistned in the oyle of Ben, and distil it in the Balneo with a gentle fire, and by this meanes you shall purchase onely the true spirit of wine. You shall not have above two or three ounces at the most out of a gallon of wine, which ascendeth in the forme of a cloude, without any dewe or veines in the helme, lute all the joints well in this distillation. This spirit will vanish in the ayre, if the glass stand open.

How to make the ordinarie spirit of wine, that is solde for five shillings, & a noble, a pinte

Put sacke, malmsie, or muskadine into a glasse body, leaving one third or more of your glasse empty, set it in balneo, or in a pan of ashes, keeping a soft and gentle fire, draw no longer then till all or most part will burne away, which you may prove now and then, by setting a spoonefull thereof on fire with a paper as it droppeth from the nose or pipe of the helme, and if your spirit thus drawn have any phlegme therin, the rectifie or redistil that spirit againe in a lesser body, or in a bolt receiver insted of another body, luting a small head on the top of the steele thereof, and so you shall have a verie strong spirit, or else for more expedition, distill five or sixe gallons of wine by a Lymbecke; and that spirit, which

ascendeth afterward, redistill in a glasse as
before.



[Return to the Table of Contents](#)



[Return to The Meadery](#)