

## WHISKIES

**Whisky** or **whiskey** refers to a broad category of alcoholic beverages that are distilled from fermented grain mash and aged in wooden casks (generally oak). Different grains are used for different varieties, including barley, malted barley, rye, malted rye, wheat, and maize (corn). With few exceptions, the spelling is always Scotch, Canadian, and Japanese **whisky** (plural: **whiskies**), but Irish and American **whiskey** (**whiskeys**).

**History.** It is believed that the art of distillation was brought from the Mediterranean regions by Irish missionaries between the 6th century and 7th century. While the art of distillation originated in the East, its first European practice was in Spain introduced by the Moors in the Middle Ages, with perfumes and aromatics being distilled long before potable spirits. Whisky is a shortened form of *usquebaugh*, which English borrowed from Irish Gaelic *uisce beatha* and Scottish Gaelic *uisge beatha*. This compound descends from Old Irish *uisce*, "water," and *bethad*, "of life," and meaning literally "water of life." (It thus meant the same thing as the name of another drink, aquavit, which comes from Latin *aqua vitae*, "water of life" which had been applied to intoxicating drinks since early 14th century. Other early spellings include *usquebea* (1706) and *iskie bae* (1583). In the Irish Annals of Clonmacnoise in 1405, the first written record of whisky appears describing the death of a chieftain at Christmas from "*taking a surfeit of aqua vitae*." In Scotland, the first evidence of whisky production comes from an entry in the Exchequer Rolls for 1494 where malt is sent "*To Friar John Cor, by order of the king, to make aquavitae*."

**Types.** Whisky or whisky-like products are produced in most grain-growing areas. They differ in base product, alcoholic content, and quality.

Malted barley is an ingredient of some whiskies.

- **Malt** is whisky made entirely from malted barley and distilled in an onion-shaped pot still.
- **Grain** is made from malted and unmalted barley along with other grains, usually in a continuous "patent" or "Coffey" still. Until recently it was only used in blends, but there are now some single grain scotches being marketed.

Malts and grains are combined in various ways

- **Vatted malt** is blended from malt whiskies from different distilleries. If a whisky is labelled "pure malt" or just "malt" it is almost certain to be a vatted whisky. This is also sometimes labelled as "blended malt" whisky.
- **Single malt** whisky is malt whisky from a single distillery. However, unless the whisky is described as "single-cask" it will contain whisky from many casks, and different years, so the blender can achieve a taste recognisable as typical of the distillery. In most cases, the name of a single malt will be that of the distillery (The Glenlivet, Bushmills, Yochi), with an age statement and perhaps some indication of some special treatments such as maturation in a port wine cask.
- **Pure pot still** whiskey refers to a whiskey distilled in a pot-still (like single malt) from a mash of mixed malted and unmalted barley. It is exclusive to Ireland.
- **Blended whiskies** are made from a mixture of malt and grain whiskies. A whisky simply described as Scotch Whisky or Irish Whiskey is most likely to be a blend in this sense. A blend is usually from many distilleries so that the blender can produce a flavor consistent with the brand, and the brand name (e.g. Chivas Regal, Canadian Club) will usually not therefore contain the name of a distillery. Jameson Irish Whiskey is an exception and comes from only one distillery. However, "blend" can (less frequently) have other meanings. A mixture of malts (with no grain) from different distilleries (more usually called a vatted malt) may sometimes be referred to as a "blended malt", and a mixture of grain whiskies with no malts will sometimes carry the designation "blended grain".
- **Cask strength** whiskies are rare and usually only the very best whiskies are bottled in this way. They are bottled from the cask undiluted. Rather than diluting, the distiller is inviting the drinker to dilute to the level of potency most palatable.

Whiskies do not mature in the bottle, only in the cask, so the "age" of a whisky is the time between distillation and bottling. This reflects how much the cask has interacted with the whisky, changing its chemical makeup and taste. Whiskies which have been in bottle for many years may have a rarity value, but are not "older" and will not necessarily be "better" than a more recently made whisky matured in wood for a similar time. Most whiskies are sold at or near an alcoholic strength of 40% abv.

(Continued on Next Page)

## WHISKIES, continued

**Scotch whiskies.** Scotch whiskies are generally distilled twice, though some are distilled a third time. International laws require anything bearing the label "Scotch" to be distilled in Scotland and matured for a minimum of three years and one day in oak casks, among other, more specific criteria. If Scotch whisky is from more than one cask, and if it includes an age statement on the bottle, it must reflect the age of the youngest whisky in the blend. Many cask-strength single malts omit the age as they use younger elements in minute amounts for flavouring and mellowing. The basic types of Scotch are malt and grain, which are combined to create blends. While the market is dominated by blends, the most highly prized of Scotch whiskies are the single malts. Scotch whiskies are divided into five main regions: Highland, Lowland, Islay, Speyside and Campbeltown.

**Irish whiskeys.** Most Irish whiskeys are distilled three times, although there are exceptions. Though traditionally distilled using the pot still method, in modern times a column still is used to produce the grain whiskey used in blends. By law, Irish whiskey must be produced in Ireland and aged in wooden casks for a period of not less than three years, although in practice it is usually three or four times that period. Unpeated malt is almost always used, the main exception being Connemara Peated Malt whiskey.

There are several types of whiskey common to Ireland: single malt, single grain, blended whiskey and uniquely to Ireland, pure pot still whiskey. The designation "pure pot still" as used in Ireland generally refers to whiskey made of 100% barley, mixed malted and unmalted, and distilled in a pot still made of copper. The "green" unmalted barley gives the traditional pure pot still whiskey a spicy, uniquely Irish quality. Like single malt, pure pot still is sold as such or blended with grain whiskey. Usually no real distinction is made between whether a blended whiskey was made from single malt or pure pot still.

**Canadian whiskies.** Canadian whiskies are usually lighter and smoother than other whiskey styles. Another common characteristic of many Canadian whiskies is their use of rye that has been malted, which provides a fuller flavour and smoothness. By Canadian law, Canadian whiskies must be produced in Canada, be distilled from a fermented mash of cereal grain, "be aged in small wood for not less than 3 years", and "possess the aroma, taste and character generally attributed to Canadian whisky." The terms "Canadian Whisky", "Canadian Rye Whisky" and "Rye Whisky" are legally indistinguishable in Canada and do not denote any particular proportion of rye or other grain used in production.

**American whiskeys.** American whiskey is distilled from a fermented mash of cereal grain. It must have the taste, aroma, and other characteristics commonly attributed to whiskey. The most common types listed in the federal regulations are:

- **Bourbon** whiskey, which is made from mash that consists of at least 51% corn (maize).
- **Rye** whiskey, which is made from mash that consists of least 51% rye.
- **Corn** whiskey, which is made from mash that consists of at least 80% corn (maize).
- **Straight** whiskey, (without naming a grain) is a whiskey which has been aged in charred new oak containers for 2 years or more and distilled at not more than 80 percent alcohol by volume but is derived from less than 51% of any one grain.

The "named types" of American whiskey must be distilled to not more than 80 percent alcohol by volume. "Named types" must then be aged in charred new oak containers, excepting corn whiskey. Corn whiskey does not have to be aged but, if it is aged, it must be in new un-charred oak barrels or used barrels. The aging for corn whiskey usually is brief, e.g. six months.

If the aging for a "named type" reaches 2 years or beyond, the whiskey is then additionally designated "straight" e.g. "straight rye whiskey." "Straight whiskey" (without naming a grain) is a whiskey which has been aged in charred new oak containers for 2 years or more and distilled at not more than 80 percent alcohol by volume but is derived from less than 51% of any one grain.

American blended whiskeys combine straight whiskey with un-aged whiskey, grain neutral spirits, flavorings and colorings. Important in the marketplace is Tennessee whiskey, of which Jack Daniel's is the leading example. During distillation, it is identical to bourbon in almost every important respect. The most recognizable difference is that Tennessee whiskey is filtered through sugar maple charcoal, giving it a unique flavor and aroma. The Government of the United States of America officially recognized Tennessee whiskey as a separate style in 1941.

Continued on Next Page

**WHISKIES, continued**

**Names and spellings.** The word "whiskey" is believed to have been coined by soldiers of King Henry II who invaded Ireland in the 12th century as they struggled to pronounce the native Irish words *uisce beatha* meaning "water of life." Over time, the pronunciation changed from "Whishkeyba" (an approximation of how the Irish term sounds) to "Whisky." The name itself is a gaelic translation of the Latin phrase *aqua vitae*, meaning "Water of Life."

At one time, all whisky was spelled without the 'e', as "whisky." In around 1870, the reputation of Scottish whisky was very poor as Scottish distilleries flooded the market with cheaper spirits produced using the Coffey still. The Irish and American distilleries adopted the spelling "whiskey", with the extra "e," to distinguish their higher quality product. Today, the spelling *whisky* (plural *whiskies*) is generally used for whiskies distilled in Scotland, Wales, Canada, and Japan, while *whiskey* is used for the spirits distilled in Ireland and America. Even though a 1968 directive of the Bureau of Alcohol, Tobacco and Firearms specifies "whisky" as the official U.S. spelling, it allows labeling as "whiskey" in deference to tradition and most U.S. producers still use the historical spelling. Exceptions such as Early Times, Maker's Mark, and George Dickel are usually indicative of a Scottish heritage.

In the late Victorian era, Irish whiskey was the world's most popular whisk(e)y. Of the Irish whiskeys, Dublin whiskeys were regarded as the *grands crus* of whiskeys. In order to differentiate Dublin whiskey from other whiskies, the Dublin distilleries adopted the spelling "whiskey". The other Irish distilleries eventually followed suit. The last Irish "whisky" was Paddy, which adopted the "e" in 1966.

"Scotch" is the internationally recognized term for "Scotch whisky" however it is rarely used in Scotland, where grain whisky is generally referred to as "whisky" and single malt whisky as "malt."

**Chemistry.** Whiskies and other distilled beverages such as cognac and rum are complex beverages containing a vast range of flavouring compounds, of which some 200 to 300 can be easily detected by chemical analysis. The flavoring chemicals include "carbonyl compounds, alcohols, carboxylic acids and their esters, nitrogen- and sulphur-containing compounds, tannins and other polyphenolic compounds, terpenes, and oxygen-containing heterocyclic compounds" and esters of fatty acids. The nitrogen compounds include pyridines, picolines and pyrazines.

**Flavors from distillation.** The flavoring of whisky is partially determined by the presence of congeners and fusel oils. Fusel oils are higher alcohols than ethanol, are mildly toxic, and have a strong, disagreeable smell and taste. An excess of fusel oils in whisky is considered a defect. A variety of methods are employed in the distillation process to remove unwanted fusel oils. Traditionally, American distillers focused on secondary filtration using charcoal, gravel, sand, or linen to subtract undesired distillates. Canadian distillers have traditionally employed column stills which can be controlled to produce an almost pure (and less flavourful) ethanol known as neutral grain spirit or grain neutral spirit (GNS). Flavour is restored by blending the neutral grain spirits with flavouring whiskies.

Acetals are rapidly formed in distillates and a great many are found in distilled beverages, the most prominent being acetaldehyde diethyl acetal (1,1-diethoxyethane). Among whiskies the highest levels are associated with malt whisky. This acetal is a principal flavour compound in sherry, and contributes fruitiness to the aroma.

The diketone diacetyl (2,3-Butanedione) has a buttery aroma and is present in almost all distilled beverages. Whiskies and cognacs typically contain more than vodkas, but significantly less than rums or brandies.

**Flavors from oak.** Whisky lactone (3-methyl-4-octanolide) is found in all types of oak. This lactone has a strong coconut aroma. Whisky lactone is also known as quercus lactone. Commercially charred oaks are rich in phenolic compounds. One study discriminated 40 different phenolic compounds. The coumarin scopoletin is present in whisky, with the highest levels in Bourbon whiskey.

Source: Wikipedia