

F O R T I F I E D W I N E S



Fortification known as adding alcohol

grape must, herbs...

What are fortified wines?

Fortification means strengthening. In winemaking terms, it refers to a wine that has been strengthened – hence the name.

Fortification of wines can also be done using concentrated grape must or certain aromatics, such as herbs.

Fortified wines are divided into liqueur wines and aromatized wines. Liqueur wine may be fortified only with wine distillate, and it may be sweetened with concentrated grape must. Aromatized wine can be fortified with any distillate, may contain sugar and aromatic additives, and may also include caramel for coloring; however, it must always contain at least three-quarters wine or grape must.

Natural wine is quite sensitive; under unfavorable conditions, it spoils easily, and in earlier times, it was difficult to transport. To prevent spoilage, it had to be preserved. At the time fortified wines were first created, the only suitable preservative was concentrated alcohol. Distillates began to be added to wine, which increased its durability. Concentrated alcohol effectively eliminated yeasts and bacteria in the wine, preventing it from fermenting.

Wine distillate or another neutral alcohol can be added to the wine at various stages of its production.

The first possibility is adding concentrated alcohol to freshly pressed grape must before fermentation begins. The result is a sweet wine, depending on the sugar concentration in the must, with a higher alcohol content.

Another method is adding concentrated alcohol to fermenting must – a process known as early fortification. This step kills the yeasts, which cannot survive higher alcohol concentrations. Because some sugar remains unfermented, the resulting wine is sweet to varying degrees, depending on when fermentation is stopped. This method is used, for example, in the production of Port and Madeira wines.

The last method is adding concentrated alcohol after fermentation – so-called late fortification. Since most of the sugar in the must has been converted into alcohol, the resulting beverage has a low sugar content. To achieve a pleasant taste, fortified wines are usually sweetened. This fortification method is typical for Sherry or Sicilian Marsala.

Fortified wines are often aged. One method is the **solera** system, originally developed for aging Sherry. To imagine the **solera** method, think of several rows of barrels stacked on top of each other. Wine is drawn from the bottom row – usually once a year – and bottled. The barrels in the bottom row are then refilled with wine from the row above, and those barrels are filled with wine from the next row up, continuing up to the youngest wine in the top row. The more rows of barrels, the older and higher-quality the final product. The result is a blend of wines from different vintages. Another aging method is the static method, in which the wine or distillate ages in one barrel throughout the entire process.

A famous fortified wine is **Madeira**, produced on the Portuguese island of the same name off the coast of Africa. Centuries ago, local winemakers began adding concentrated alcohol to their wine, and the barrels were sent on long sea voyages to America or the Far East.



Another world-famous fortified wine is Port, produced in northern Portugal. It comes in both white and red varieties, with many color variations and a wide range of sweetness levels.

Another popular fortified wine is Sherry, originating from Andalusia in Spain. Sherry is usually made in partially filled barrels. In the drier varieties of Sherry (Fino, Amontillado), a thin layer of yeast known as **flor** forms on the surface of the fermenting wine – these yeasts occur only in this region. In this process, fortification occurs after fermentation. If fortification is done during fermentation, the yeast layer does not form, partial oxidation occurs, and the wine acquires a darker color. The final production step is blending and aging in the solera system.

Sherry is a protected designation of origin (appellation), meaning it can only be produced in the region between the cities of Jerez de la Frontera, Sanlúcar de Barrameda, and El Puerto de Santa María in southwestern Spain.

A very well-known type of fortified wine is vermouth. Vermouth (from the German Wermut – wormwood) is a fortified wine probably originating in Italy or France. It is made from light, not overly acidic wine (such as the Trebbiano variety), which is sweetened and mixed with an alcoholic infusion of herbs and spices. The essential ingredient is wormwood (*Artemisia absinthium*), but it may also be flavored with cinnamon, clove, hyssop, hops, fennel, cardamom, or angelica. The drink should contain between 15% and 18% alcohol. According to sugar content, vermouths are classified as extra dry, dry, or sweet (bianco). Besides the classic white vermouth, there are also rosé (rosé, rosato) and red (rosso) versions. It is served chilled with lemon as an aperitif and is also a popular cocktail ingredient. One of the first modern vermouths was mixed in 1786 in Turin by **Antonio Benedetto Carpano**.

Although the production of fortified wines has no long tradition in our region, some local winemakers have started producing them.

Port Wine

Port wine (also known as Porto, Oporto, or in the original Vinho do Porto) is a fortified wine produced in the valleys along the Douro River in northern Portugal.

Legend says it was brought to Catalonia from Great Moravia by a Frankish merchant. It is typically a red wine with a high residual sugar content. It is available in dry, semi-dry, and white varieties. Fortified wines in a similar style are produced outside Portugal as well – in Australia, North Africa, Canada, India, Argentina, and the USA. However, within the European Union, the designation Porto is reserved as a protected designation of origin for Portuguese products only.

Port is made exclusively from grapes grown and processed in the Douro Valley. The grapes are first pressed to extract must, which is allowed to ferment in closed tanks. After about half the sugar has fermented, the must is transferred to barrels containing prepared wine brandy, which immediately stops fermentation. The unfermented sugar remains in the wine, and the addition of brandy raises the alcohol content to about 19–22%. Before bottling, the wine continues to age in oak barrels.

The Douro region is a UNESCO World Heritage Site. The center of this area lies along the Douro River and the town of Trás-os-Montes. The Alto Douro region is located near the city of Porto. It is a very hilly area surrounded by mountains, which give it its unique character. The Marão and Montemuro mountain ranges serve as barriers that protect the region from the moist western winds blowing in from the Atlantic. It lies in deep valleys sheltered by mountains, characterized by very cold winters and, conversely, hot, dry summers.

Since the 17th century, the Douro region has been closely linked to England and its relations with France. England boycotted or taxed French wines and granted trade privileges to Portugal. Deprived of their favorite red wines, English consumers soon acquired a taste for Port wine from this region. The wines of Douro were eventually named after the port from which they were shipped. To protect quality, the Douro wine-producing region was officially demarcated in 1756, making it one of the first in the world.

The Institute of Wines of Douro and Porto (IVDP – Instituto dos Vinhos do Douro e Porto) divides Port into two categories: standard ports (classic types such as Ruby, Tawny, and White – made from Touriga Nacional, Tinta Barroca, Touriga Franca, Tinta Roriz) and Categorias Especiais, special varieties that include all others.

Tawny Port

Tawny Ports are made from red grapes and aged in smaller wooden barrels (225–400 L), where they undergo gradual oxidation and evaporation. As a result, they mature into a golden-brown color. Exposure to oxygen gives the wine a “nutty” flavor, balanced to match the classic Port taste. Tawny Ports are sweet or semi-dry and usually enjoyed as dessert wines.

Ruby Port

Ruby Port is the most affordable and most widely produced type of Port. After fermentation, it is stored in tanks made of concrete, wood, or stainless steel to prevent oxidation and preserve its deep red color. The wine is blended to match the style of its brand, fined, and cold-filtered before bottling. It generally does not improve with age.

White Port

White Port is made from white grapes and can be produced in a wide range of styles. Ordinary white Port makes an excellent base for cocktails, while older ones are best enjoyed on their own, well chilled. There are many types of white Port, from dry to very sweet. If aged for a long time in wooden barrels, white Ports darken and may even become indistinguishable in color from red Ports.



Special Port Varieties

Colheita, Garrafeira, Ruby Reserve or Vintage, Rosé Port, Late Bottled Vintage (LBV), Crusted, and Single Quinta Ports.

Sherry

Originating from vibrant Spain, not every Spanish wine can be used to make Sherry – the grapes must be grown near the town of Jerez de la Frontera in Andalusia, within the so-called “Sherry Triangle” formed by Jerez de la Frontera, Sanlúcar de Barrameda, and El Puerto de Santa María. Only wines from this region may bear the name Sherry. The name itself comes from “Jerez,” with “Sherry” being the anglicized form of the Spanish “Xerez.”

Selected Wine Varieties

Although Sherry was historically made from more than a hundred varieties, today it is produced mainly from three white varieties. The most common is Palomino, which forms the base of dry Sherries. Sweet Sherries are mainly produced from Pedro Ximénez grapes and, less commonly, Moscatel.

How does wine become Sherry?

Two key steps are required: aging and fortification. Sherry ages for at least 3 years – often much longer. The second step is fortification, or the addition of strong distillate. After fortification, it contains between 15% and 22% alcohol, depending on the type.

Fino

The driest and lightest traditional type of Sherry, with residual sugar around 1–2 g/l.

Manzanilla

Also a dry Sherry, produced near the port of Sanlúcar. It is characterized by its very delicate flavor.

Amontillado

Slightly darker in color, but despite the higher residual sugar, still classified as a dry Sherry.

Oloroso

A darker Sherry variety, richer and more full-bodied than the previous ones. With its deep brown color, Oloroso Sherry offers a complex aroma and flavor, yet remains relatively dry.

Palo Cortado

Closely related to Oloroso, Palo Cortado Sherry has a fresh, lightly nutty, yet dry flavor..

Moscatel

As mentioned, Moscatel grapes are sun-dried to concentrate their sugars. The resulting Sherry is much sweeter, with a dark brown color.

Pedro Ximénez (P.X., PX)

Another naturally sweet Sherry made from the Pedro Ximénez grape. Sweetness is achieved in the same way as with Moscatel Sherry. PX is also used to sweeten blended Sherries. It has a very dark brown color similar to Moscatel.

Cream

A collective name for all sweetened Sherries, usually blends of Oloroso and Pedro Ximénez.

Vermouth

Born perhaps in France or Italy but carrying a German name (Wermut – wormwood). Allegedly, even the ancient Romans added wormwood to sweet wine, creating the first highly aromatic vermouth.

It is made from light, not overly acidic wine, sweetened and infused with alcohol containing herbs and spices. Essential ingredients include wormwood (*Artemisia absinthium*), cinnamon, clove, hyssop, hops, fennel, cardamom, and angelica.

The drink typically contains 15–18% alcohol. Depending on sugar content, vermouths are classified as extra dry, dry, or sweet (bianco). In addition to the classic white vermouth (bianco), rosé (rosé, rosato) and red (rosso) types are also produced.

One of the first modern vermouths was mixed in 1786 in Turin by **Antonio Benedetto Carpano**. In addition to traditional Italian brands, French, Spanish, and even Czech vermouths can be found.



Fortified Wines



They represent a unique world of flavors, aromas, and traditions that deserve a place not only in the wine cellar but also on the dining table. Whether it is elegant Port, aromatic Sherry, or complex Madeira, these wines offer an experience that transcends ordinary categories.

Thanks to their distinctive production process, higher alcohol content, and long shelf life, they pair perfectly with desserts, cheeses, and can be served as aperitifs or digestifs.