

# How Sparkling Wine is Made

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It's hard to believe, but effervescence in wine was not always considered a good thing. For centuries, Old World winemakers in cool regions struggled with bottles that would re-ferment when hot, which would create unintentional bubbles. But during the 17th century, French winemakers began to harness the process and developed various methods to produce sparkling wine. Today, there's an array of bubbly, from Champagne to Cava, all made with slightly different methods.

The bubbles in sparkling wine are products of carbon dioxide (CO<sub>2</sub>), which is absorbed when fermentation occurs under pressure. Therefore, most sparkling wines involve a secondary fermentation, which is induced when sugar and yeast are added to a still base wine.

Historically, the category was popular in regions that struggled to ripen grapes. This was because the secondary fermentation would raise the alcohol content and create robust flavors to balance out austere acidity.

However, sparkling wine is now made worldwide, and certain regions produce their own defined styles.

To understand what's in the bottle, it's best to start at fermentation.



## Traditional Method

Many of the world's best sparkling wines are made by the *méthode traditionnelle*, or traditional method, where still wine is bottled before additional yeast and sugar are added. Under a crown cap, typically, the yeast ferments sugar into alcohol until dry, which gives off CO<sub>2</sub>.

The sparkling wine then ages on the dead yeast, called lees, which adds notes of brioche and textural richness. The bottle goes through a process known as riddling where the bottle is frequently turned and repositioned at severe angles until all the sediment rests in the neck. The wine is disgorged to remove the lees sediment. Dosage, a blend of sugar and wine to add sweetness, is added typically before the wine receives its finishing cork.

This traditional method is most associated with the wines of the Champagne region, where the process is legally protected as *méthode Champenoise*. Its cool climate creates searing acidity in dry, low-alcohol base wine, which is made more palatable by secondary fermentation in bottle.

**“The enzyme- and lipid-emitting process of autolysis [a self-digestive action] will create two major changes for the wine: bubbles and a richer, creamier texture, thus creating a bit more balance,” says Valerie McDaniel, the West Coast U.S. brand director for Champagne Bollinger.**

There are eight appellations throughout France and Luxembourg for Crémant wines, which must be produced using the méthode traditionnelle, and regions like Vouvray and Blanquette de Limoux also require its use.

Elsewhere in Europe, the traditional method is required for Cava in Spain, Franciacorta and Col Fondo in Italy and the quality sparklers of England. While Méthode Cap Classique (MCC) in South Africa is one of the few New World sparkling wine designations that necessitates the traditional method, many producers in the U.S., New Zealand and Australia employ it as well.



**Tank Method**

The tank method, also known as the Charmat method, was developed around the turn of the 20th century. It carries out secondary fermentation in a pressurized tank, rather than in bottle. Yeast and sugar are added to the tank, and the wine is chilled usually to stop fermentation.

The wine is then filtered and bottled under pressure without any significant contact with its lees, which makes this method popular among producers and regions that want to emphasize fresh fruit aromas and flavors.

Perhaps most emblematic of the tank method is **Prosecco**, which began to use it in earnest to make sparkling wines in the 1960s and '70s. The method allows the Italian region's delicate, semi-aromatic Glera grape, formerly known as Prosecco, to be made into a clean, youthful wine.

“Any influence from the outside, such as wood or yeast, overpowers the typical fruity and floral aromas of Glera,” says Franco Adami, owner and winemaker of Prosecco producer **Adami**. “[The tank method] is able to maintain the typicity of the grape variety.”

For the same reasons, the **Moscato Bianco** grapes used in Asti and Moscato d'Asti wines are also vinified by the tank method, though a specific style called *metodo classico* uses the traditional method.

## Ancestral Method

Though it's recently come back into fashion, the ancestral method of sparkling wine production is thought to predate the traditional method. Rather than induce secondary fermentation, the *méthode ancestrale* bottles the wine before it has completed its first fermentation.

The moment of bottling is crucial. There must be enough sugar in the wine to build pressure and create bubbles, but not so much that the bottle explodes. Because of this, many *méthode ancestrale* wines have softer bubbles, and there may be some residual sugar. There's no requirement to disgorge the wine, so many *méthode ancestrale* wines contain sediment or appear cloudy.

While *méthode ancestrale* has been integrated into the legislation of regions like Bugey Cerdon for decades and practiced in Limoux for centuries, it has gained momentum via the *pétillant-naturels* of the natural wine movement.

“This method promotes natural winemaking techniques because you are bottling a fermenting wine, so most producers are not making any additions,”



says Faith Armstrong Foster, who makes several California pét-nats as the winemaker and owner of [Onward Wines](#) and [Farmstrong Wines](#). “No added yeast or sugar at bottling and no added dosage, sulfur dioxide or anything else [keeps] these wines pure, fresh and natural.”

While pét-nats gained traction in the Loire Valley, they’re now are produced around the world. Small-production wineries like them because much of the work must be done by hand.

Because there’s no regulated definition for pét-nats, some use the term interchangeably with méthode ancestrale wines. Others see pét-nat as a category of méthode ancestrale that’s focused on natural wine practices, like organic farming and indigenous yeast fermentation.

“I feel like many classic examples of ancestral wines do not subscribe to the pét-nat vibe,” says Caleb Ganzer, managing partner and wine director of [Compagnie des Vins Surnaturels](#) in New York. “It’s all about intention when it comes to how a wine is being categorized.”

## **Other Sparkling Winemaking Methods**

There are other ways to create sparkling wine, but they’re not popular for quality winemaking. The transfer method consists of secondary fermentation in bottle, like the traditional method, but the bottles are then emptied into a pressurized tank, filtered and rebottled to avoid the time and expense of disgorgement. And of course, standard carbonation adds CO<sub>2</sub> into a still wine before bottling, but it’s only used in lower-quality sparkling wines.