

# Why use **commercial tannins** during winemaking?

FOLLOW OUR USER FRIENDLY GUIDE TO SUPPORT YOUR TECHNICAL 'KNOW HOW'.

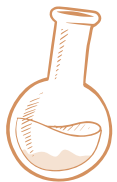
## What are tannins?

Tannins are bitter and astringent chemical compounds that belong to a larger group called “**polyphenols**”.



Tannins help provide texture, balance and structure to wine.

Tannins occur abundantly in nature, namely in the **bark of many trees** and in a variety of **leaves, tea, coffee** and **fruits, including grapes**.



Tannin molecules are typically much larger than those found in other types of polyphenols, and they have a unique ability to easily combine with other molecules like proteins, causing them to precipitate.

Because tannins bind with other proteins, including those in human saliva, they create a characteristic **astringent, mouth-coating sensation** in the palate.



Tannins have more of a texture and feel than a specific flavour. Depending on how intense the tannins are, there may be a temporary puckering or drying sensation.

## Use of tannins in the winemaking process:

**1** Tannins in wine **originate** primarily from **the skin, seeds** and, to some extent, **the stems of the grapes**.



**2** During **fermentation**, the juice, skins, and seeds **macerate together**.



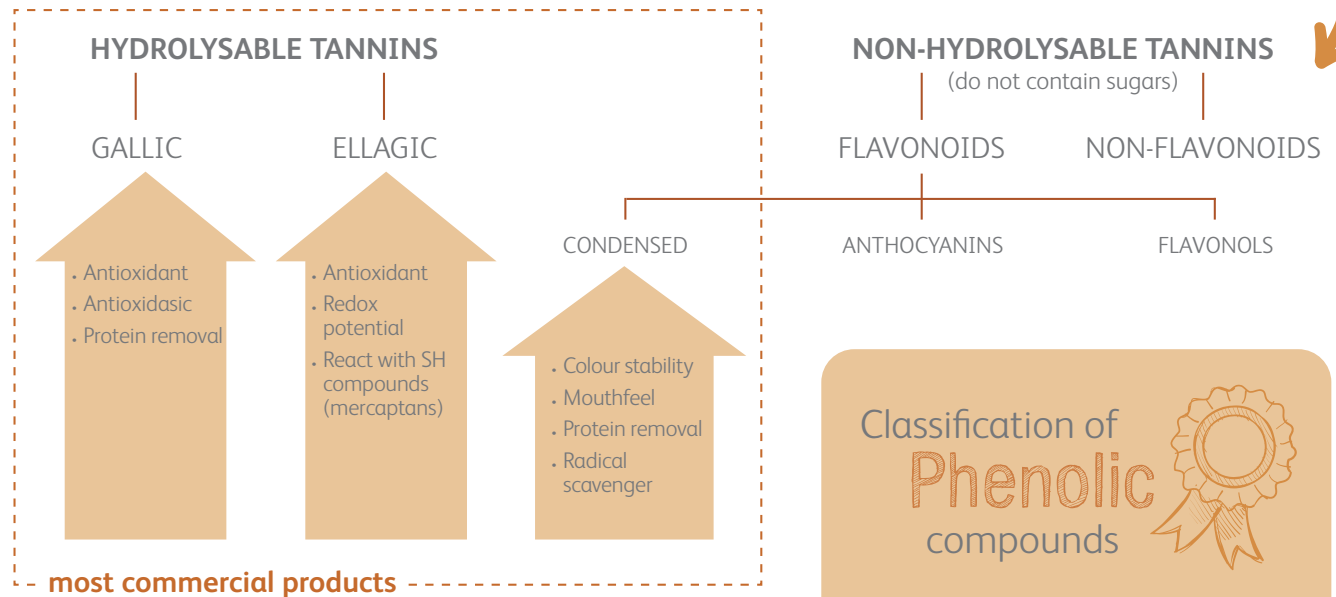
**3** As **sugar is used by the yeast** and **alcohol produced**, colour and tannin are released into the wine.

**4**

Alcohol will dissolve more tannins than water and therefore **the longer the skins and seeds macerate** during and after fermentation **the more tannic the final wine** will be.

**5**

Tannins can also come from the **wood vessels** in which a wine is **fermented and/or aged**, (wood can impart both tannins and flavour to wine).



## Benefits of tannins in wine



- Astringency and bitterness from tannins help **balance sweetness and fruitiness** to prevent a cloying sensation.
- A balanced astringency adds to the physical impact of the wine, contributing (along with alcohol and acidity) to the characteristic called “**body**”.
- Tannins play a role in **preventing premature oxidation** in wine.
- They can be used as an antioxidant (inhibition of undesirable enzymatic activity, such as laccase activity in botrytis-affected wines).
- They incorporate oxygen from the wine to facilitate polymerization (linking up) of individual tannin molecules to make bigger ones. This **prevents more harmful oxidative reactions, while mellowing and rounding out** the wine.



## The role of commercial tannins

Commercial tannins can be added **during fermentation.**

- Specific types of commercial tannins are meant to be added at specific times in the winemaking process. These tannins perform differently, adding different characteristics and helping to protect and smooth out the wine.
- Before adding tannins to must or wine you need to decide what you want to accomplish with the tannin addition.

**Make sure that the type of tannin you have is suitable for the job!**

## Sources of commercial tannins

Many commercial tannins are made from oak, which may be toasted or not.

Oak gallnuts (a growth on the tree that results from attack by a wasp) provide a different range of tannins that can be found in some wine addition products.

Tannins can also be extracted from grape seeds and skins.



## Tannins and colour

- Tannins assist in **stabilising colour.**
- Early in maceration and fermentation, some of the colour compounds — other polyphenolics called “anthocyanins” — may bind with proteins in the grapes and drop out as sediment.
- If tannins are present, some of them will bind with the proteins instead, in a role called “**sacrificial tannins**”.
- Tannins also bind directly with anthocyanins to form stable dissolved pigments to **help preserve colour.**

Today, even woods without specific wine heritage are contributing tannin products to the field.

One of these, the South American hardwood Quebracho tree, was first identified for its hide-tanning properties.

Chemical characteristics of quebracho tannins closely resemble those of grapes, making it a desirable potential addition for winemakers.

# Why use commercial tannins during winemaking?

FOLLOW OUR USER FRIENDLY GUIDE TO SUPPORT YOUR TECHNICAL 'KNOW HOW'.



wineinfo@abbiotek.com

# The **3** types of commercial tannins:

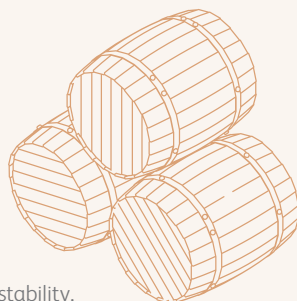
## 1 SACRIFICIAL TANNINS

- These are used to preserve the natural tannin of the grapes.
- These sacrificial tannins combine with proteins and other grape components and precipitate out into the lees.
- Through this, the natural grape tannins are preserved and can combine with water soluble pigments to create optimally stable colour.
- In general, these tannins provide **improved colour, protection against oxidation, and improved mouthfeel.**



## 2 CELLARING TANNINS

- The cellaring tannins play an important role in the development of wine **during the ageing period in the cellar.**
- These tannins are added after the first or second racking (after fermentation)
- Cellaring tannins used during wine ageing help protect against oxidation while enhancing tannin structure and aiding in colour stability.
- They also **add subtle differences** in **flavour** and **mouthfeel** to wines.



## 3 FINISHING TANNINS

- These tannins are usually added anywhere between **3 weeks before bottling, up to the day before.**
- They are used later in wine ageing to impart character that may be lacking from the grapes or barrel.
- Finishing tannins, such as those derived from quality French oak can impart really nice notes of coconut and vanilla, some even impart a perception of sweetness, to a finished wine.
- These tannins can **add the perception of sweetness** (slightly, but enough to balance out some acidity), with a very pleasant oak-like flavour and astringency.



## Tannins through the **ageing** process



The tannins transform throughout ageing.

In **young wines, they are strong and aggressive** and create an **intense mouth-drying sensation.**

During the ageing process, they connect and form bigger and bigger molecules. And eventually, these molecules become colloids losing their astringency. As a result of the tannins' fallout, the **wine becomes less bitter** and gets a **smoother and more elegant texture.**

Only wines with the right combination of characteristics get better with age. In general, **well-balanced wines** with high acidity, sugar, and tannin levels **are perfect for ageing.**



## In summary: Why use commercial tannins?

Using commercial tannins during winemaking has many benefits to the wine and the winemaker. The main benefits are:

- Balances sweetness and fruitiness to prevent cloying sensation.
- Contributes to the "body" of wine.
- Prevents premature oxidation.
- Gives unique texture to wine, including a characteristic mouth-coating sensation.
- Provides balance and structure to wine.
- Assists in stabilising and preserving colour in wine.

# Why use **commercial tannins** during winemaking?

FOLLOW OUR USER FRIENDLY GUIDE TO SUPPORT YOUR TECHNICAL 'KNOW HOW'.