

Fact sheet

>>> Best natural processing aids for wine applications Application data-sheet

>>> INTRODUCTION

Natural tannins are a large family of polyphenolic compounds. For the ease of simplicity we discern condensed and hydrolysable tannins, which can be further subdivided in gallo- and ellagitannins. Both hydrolysable and condensed tannins are of significance in wine applications.

Chemically hydrolysable tannins are mixtures of polygalloyl glucoses and/or polygalloyl quinic acid derivatives containing in between 3 up to 12 gallic acid residues per molecule. Condensed tannins are polymeric flavonols containing catechin, epicatechin, sometimes gallic acid,... building blocks in their polymeric structure.

As a consequence, commercial tannins are always complex mixtures of dozens of closely related yet different organic structures.

Figure 1. gives an overview of the tannin family.

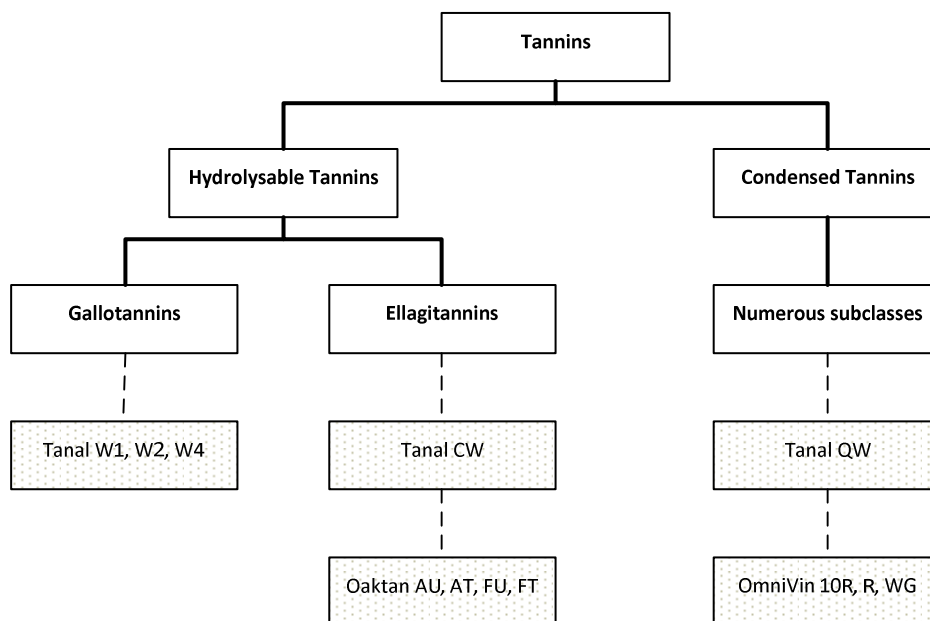


Figure 1.: The world of tannins and polyphenols

Highly purified tannins typically have a slight astringent taste, and exhibit a specific affinity for proteins with which they can form insoluble complexes. They are widely used in many industries, especially in beverage and food applications.

Ajinomoto OmniChem offers a wide range of tannins suitable for wine applications. They can be used as:

- Stabilising agents for clarification and fining; removal of excess proteins
- Anti-oxidant and colour stabilising agents
- Taste modification agents
- Metal complexing agents to remove excessive amounts of metals (e.g. Fe)

GRADES

>> Fermentation tannins

Fermentation tannins can already be used on the grapes during crushing or can be added to the juice or the must, during maceration but also during fermentation.

Some of our fermentation tannins can also be added in the cellar provided a 3 – 6 weeks rest period before bottling is respected to add structure to the wine.

- *Tanal QCT* has important anti-oxidant properties and is as such a powerful aid for colour stabilisation. *Tanal QCT* is used as taste modification aid in red wines lacking sufficient tannins.
- *Tanal QCTN* is a blend of carefully selected hydrolysable and condensed tannins with a low to medium average molecular weight. *Tanal QCTN* is used as an aromatic enhancer in red wines lacking sufficient tannins.
- *Tanal WB* is a blend of carefully selected condensed tannins and is used for its important anti-oxidant properties in red wines.

>> Clarification tannins

Tanal W1 is a high molecular weight hydrolysable tannin specially purified for wine applications. *Tanal W1* is used as stabilising and clarification aid in wines by eliminating sensitive proteins.

>> Finishing tannins

Our finishing tannins can be added at the end of maturation or even just before bottling, to impart character or complete the sensorial profile.

- *Tanal W2* is used in white wines as strong anti-oxidant. *Tanal W2* will help to prevent the so-called “sun-struck” effect and inhibit oxydase enzymes. In sparkling wines, *Tanal W2* is added to obtain the typical mouthfeel.
- *Tanal W4* is used as taste modification aid in ciders, red and white wines lacking sufficient tannins. By adding *Tanal W4* a more astringent full-bodied taste is obtained.

- *OmniVin 10R* is designed to closely mimic the polyphenol composition that is naturally occurring in the grape seed raw material. Adding *OmniVin 10R* will create a more full-bodied taste without increasing astringency.
- *OmniVin WG* has important anti-oxidant properties and is as such a powerful aid for colour stabilisation. By adding *OmniVin WG* a more full-bodied taste is obtained, without increasing astringency.
- The *Oaktan range* is used as taste modification aid in red wines and is especially interesting for introducing aromatic wood notes in wines. By using the *Oaktan range*, the maturation time can be reduced, allowing a faster introduction of the wine to the customer.

American oak: *Oaktan AU*, *Oaktan AT*

French oak: *Oaktan FU*, *Oaktan FT*

>> Blending ingredients

- *OmniVin R* is a grape seed extract mainly used in red wine. It will bring soft tannin notes in wines lacking sufficient tannins. *OmniVin R* provides a good mouth feel balance.
- *Tanal QW* is a carefully selected Quebracho tannin with a low to medium average molecular weight. *Tanal QW* has important anti-oxidant properties and is as such a powerful aid for colour stabilisation mainly in red wines.
- *Tanal CW* is a specially selected ellagitannin from chestnut wood for wine applications. *Tanal CW* is used as tannin basic building block for taste modification purposes. It is usually combined with small amounts of other tannins with a more distinct taste profile.

The information provided in this technical data sheet is based on the present state of our knowledge. Some of the applications mentioned in this document are protected by patent law. Ajinomoto OmniChem nv/sa cannot be held responsible for patent law infringements and the customer should contact the patent holder if so required. Due to the many process parameters involved we are not able to submit a general recommendation. It only shows without liability on our part the uses to which our products can be put. However, Ajinomoto OmniChem nv/sa cannot be held responsible for the consequences of the application of the above described product.