



Let's define sensations

Vol. I



Agrovin in Spain and around the world:

+ 60 years of experience

+ 200 workers

+ 5000 clients

+ 20 countries



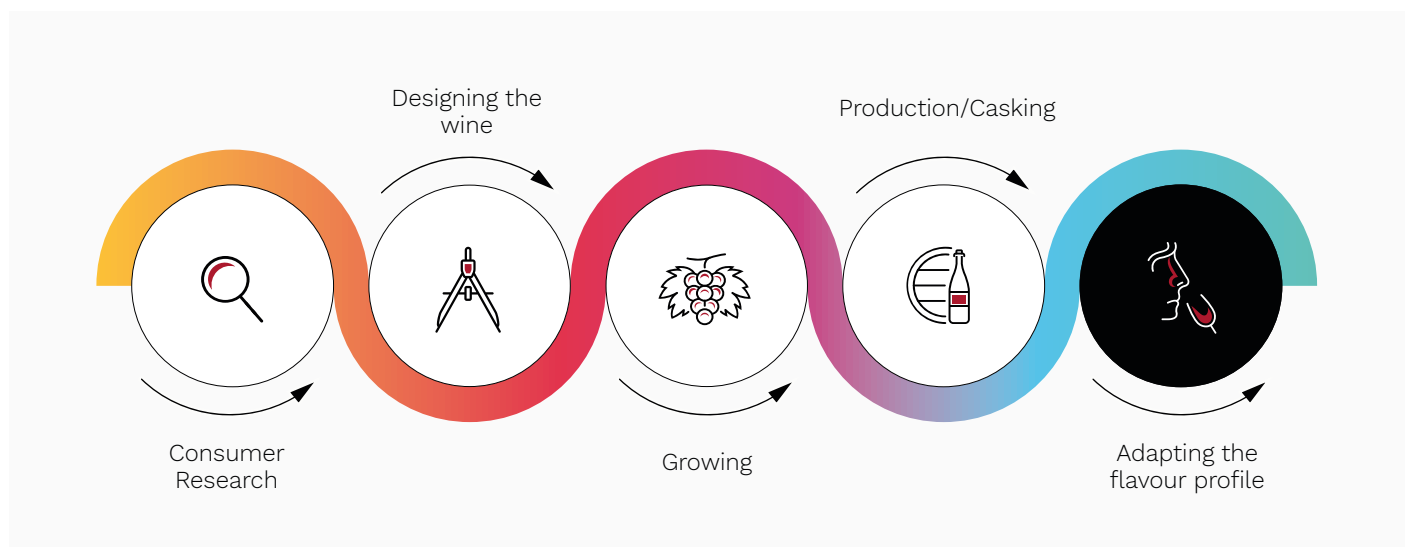
- Sales Offices
- Distributors

Determining the character of the wine

In a market as competitive as that of the wine market, it is no longer enough to simply create a quality product. This is because what a consumer perceives as “quality” varies according to cultural factors such as the origin, age or even the season.

Nowadays, it is necessary to fully understand consumer tastes. We address this even before harvesting the grape. Prior knowledge of the necessary flavour profile of the wine allows us to manage the production and fining of the wine in order to satisfy customer demands.

At Agrovín, we help the oenologist determine the character of the wine by proposing solutions for all production processes.



The flavour profiles of wine nowadays are varied, although there are a number of trends which, although seemingly impossible, can coexist in the markets:

- Wines aged in wood, but where the fruit is preserved
- Structured, astringency-free wines
- Wines lacking in structure but very fruity
- Sugar-free wines, but with some sweetness.
- Long-life wines, yet sulphite-free.
- Wines which are not only ecologically friendly, but also suitable for vegans.

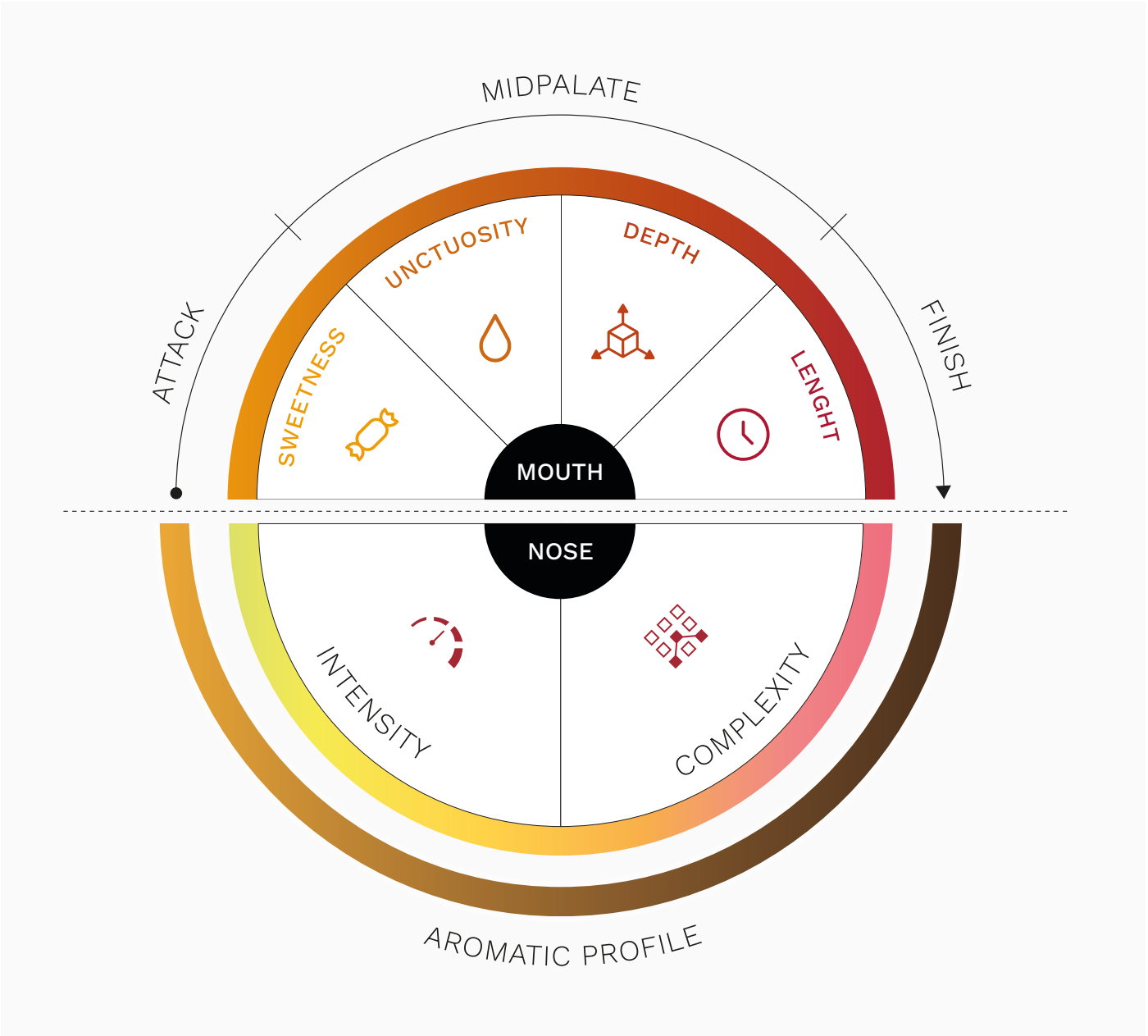
These attributes form a number of characteristics which can be balanced separately: Fruit-Wood, Concentration-Astringency, Sweetness-Acidity... So that together, an overall balance between tactile and aromatic sensations can be created.

Balance

Tactile and aromatic sensations

In wine, tactile and aromatic sensations are the fundamental pillars of the taste experience. There must be a synergy between the two, allowing both characteristics to unite and fortify each other in order to create a great wine.

The aromatic profile not only has a role to play in the olfactory phase, but is also highly relevant to the tasting phase. Intense and persistent aromas take part in this phase from beginning to end, by reinforcing the sweetness of the **attack**, intensifying the **midpalate** of the wine and being the main component in the **finish** phase.

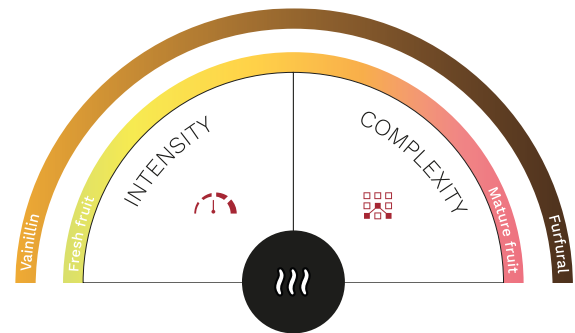


Nose. Aromatic sensations

On the nose, the Fruit-Wood profile must be adjusted and a balance must be struck between the intensity of one for another, according to requirements.

In the **fruit profile** an appropriate balance must be reached with regards to the ripeness, where fresh aromas, such as thiols or citrus fruits, and other more mature aromas, such as compotes and marmalades, can come together.

The **wood profile**, in turn, also requires a balance between sweeter aromas, such as vanilla and coconut, and other more toasted scents, such as coffee and smoky aromas.



Mouth. Tactile sensations

The different phases on the palate must each balance in order to create a really sophisticated wine.

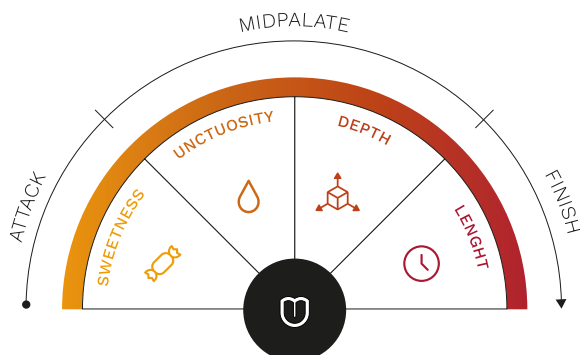
On a taste level, sweetness must be balanced out by acidity.

Unctuousity must be in sync with astringency and astringency cannot be a dominating factor in the structure.

This series of sensations occurs in the following order:

- **Attack:** the first sensation is the Sweetness.
- In the **centre** of the mouth: the sensation is Unctuousity and Depth.
- **Finish:** the Length.

If we know which compounds are influential in each phase, we will be able to influence each one of them separately.



Alterations in the profile

Achieving the desired characteristics of a wine is not only about highlighting its strengths, but also having to control some aspects during production which can negatively affect its quality.



Astringency is defined as the sensation of dryness which is produced in the mouth when saliva reacts to the tannins in the wine. If not balanced out, this can spoil the tasting experience.



Controlling **microorganisms** present in the wine is essential in order to avoid variations during fermentation and, more important still, once the wine has been bottled.

Index of sensations



01. Aromatic sensations

Fruit profile

— Fresh fruit

Robletan Soft Touch White	P. 10
Tanicol Blanc Excellence	P. 10

— Ripe fruit

Tanicol Red Vintage	P. 11
TanSutil	P. 11

— Fruit from wood derivatives

Spirit Smoothie	P. 11
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Oak profile

— Light toasted

Robletan OakBlend	P. 12
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— Medium toasted

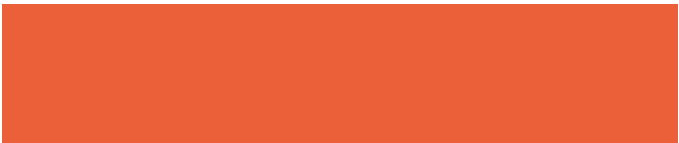
Robletan Coeur	P. 12
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— Medium+ toasted

Robletan Icône	P. 13
----------------	-------

— Defined wood profile

Spirit Candy	P. 13
Spirit Smoothie	P. 13
Spirit Nuance	P. 13



02. Tactile sensations

Attack

— Sweetness

Gomasol Seda	P. 17
Spirit Candy	P. 17

Midpalate

— Unctuousity

Spirit Smoothie	P. 18
Mannoplus ND	P. 19

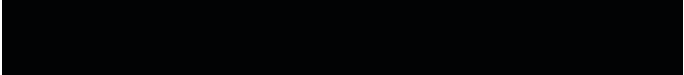
— Depth

TanReactive	P. 21
Tanicol Red Vintage	P. 21
FiniTan	P. 21

Finish

— Length

Tanicol Blanc Excellence	P. 23
Tanicol Red Vintage	P. 23
Spirit Nuance	P. 23
Robletan Oakblend	P. 23



03. Astringent sensations

Astringency control

— Vegetable-based clarifiers

Proveget Premium P. 26

— Increasing unctuousity

Superbouquet MN P. 27

Superbouquet P. 27

Mannoplus P. 27

— Reducing reactivity

Gomasol Óptima P. 27

— Reinforcing the structure

TanReactive P. 27



04. Microbiological control

Microbiology

— Reducing populations

Microstab Protect P. 28

— Reducing the perception of phenols

Spirit Candy P. 29

Robletan OakBlend P. 29

— Recouping fruit

Tanicol Blanc Excellence P. 29

Tanicol Red Vintage P. 29

01. Aromatic sensations

Aromatic sensations that are perceived in a wine include: the aromatic profile, which is comprised of the different descriptors that can be found during the tasting, the intensity with which they can be perceived and the relationship between them, in other words, the complexity.

All these factors can be represented graphically, allowing for an “observation” of how a wine smells.

The wine market nowadays is unpredictable and as such, it is essential to be able to adapt to the different trends and styles of an ever more demanding customer. The contribution of aromatic tannins allows us to modify the aromatic sensations and adapt them to current tastes.

Fruit profile		
— Fresh fruit		
Robletan Soft Touch White		P. 10
Tanicol Blanc Excellence		P. 10
— Ripe fruit		
Tanicol Red Vintage		P. 11
TanSutil		P. 11
— Fruit from wood derivatives		
Spirit Smoothie		P. 11
Oak profile		
— Light toasted		
Robletan OakBlend		P. 12
— Medium toasted		
Robletan Coeur		P. 12
— Medium + toasted		
Robletan Icône		P. 13
— Defined wood profile		
Spirit Candy		P. 13
Spirit Smoothie		P. 13
Spirit Nuance		P. 13

Aromatic intensity

We define the intensity of a wine as the aromatic expression that can be perceived. Wines with a high aromatic intensity can be perceived as such, almost without having to be near them. However, it is harder to perceive wines with a low aromatic intensity even as we are swirling the glass.

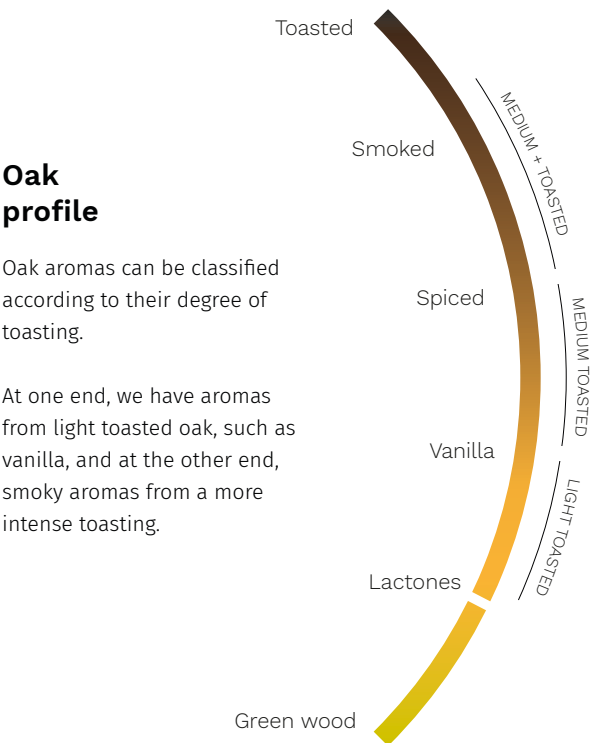
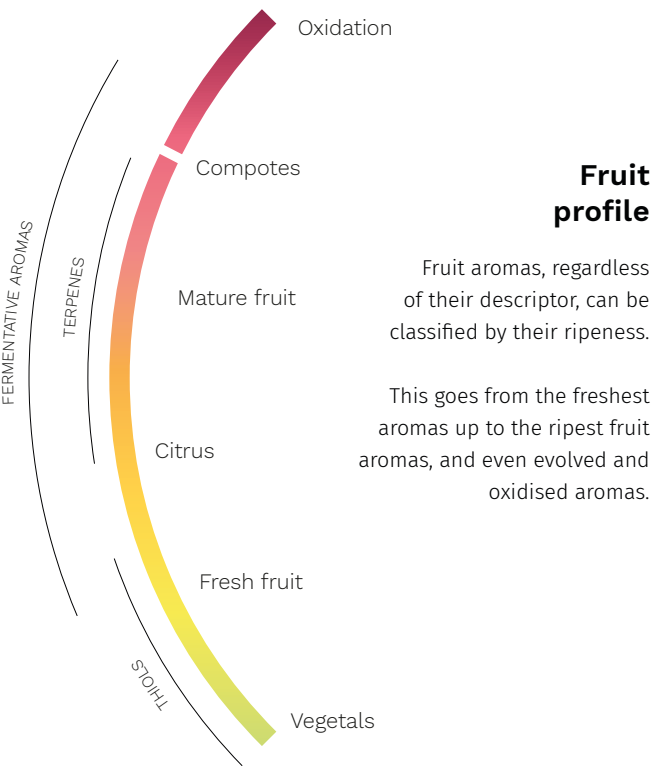
At this point, we're referring to the measure of aroma that we are able to perceive, irrespective of its quality. For this reason, high or low intensity is not necessarily synonymous with quality. It is essential to accompany the intensity with a complexity, rich in aromatic notes which help promote this sensation of quality.

Aromatic profile. Complexity

A qualitative parameter, referring to the specific aromas valued in a wine and also to its integration and balance. Complexity requires, not only a significant number of aromatic descriptors, but also that one of them does not overpower the rest. Less complex wines are characterised by being more linear on the nose. They can be perceived as simple wines and of poor quality.

The aromas of the wine, irrespective of its primary, secondary or tertiary origin, can be classified into two broad groups: fruit and wood. The descriptors of fruit present in wine are countless. However, they can be put into order according to their ripeness, starting with citrus and thiolic aromas, until we reach a riper fruit such as raisins or marmalades.

The aromatic descriptors of oak can also be grouped according to the toasting. This grouping starts from aromas of coconut and vanilla (light toasted aromas), until we reach coffee and smoky aromas (more intense toasted aromas).



According to the profile that we need to create, the presence of a fruit which is riper or less ripe, or aromas of variable toasting, can be increased.

● Fruit profile

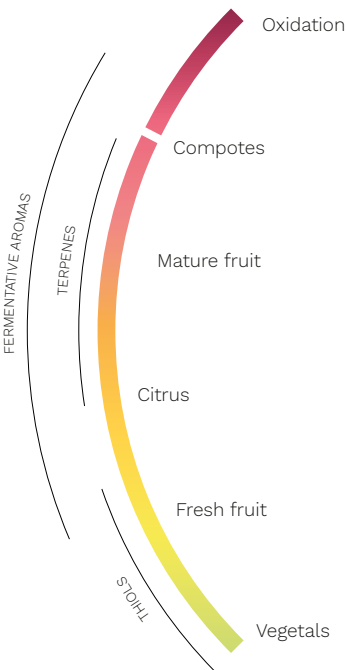
Evolution and ripening

The aromas of a wine are not a static component, fresh fruit will develop over time into riper profiles until they become evolved aromas. At the same time, intensity also reduces during storage.

Reinforcing the aromatic intensity allows not only for more intense wines to be produced, but also for the fruit profile to be modified towards fresher or riper fruit, according to market needs.

When defining finely aromatic products, we need to know which type of fruit they will contribute, in what way the aroma will be modified (complexity) and what aromatic intensity the wine will achieve.

By defining the intensity, complexity and the aromatic profile, the organoleptic contribution can be represented.

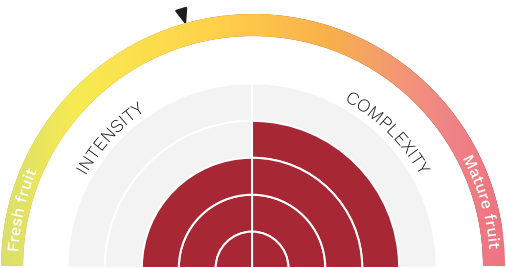


Fresh fruit

Robletan **SOFT TOUCH** **WHITE**

Aromatic intensity and complexity.

- Increase in tropical fruit aromas.
- Provides unctuous character and body on the palate, improving the acid and tannin balance of the wine.
- Light toasted oak tannin.



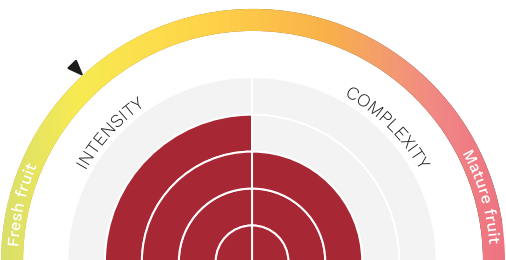
AROMATIC PROFILE



Tanicol **BLANC** **EXCELLENCE**

Freshness and aromatic intensity.

- Restores the prematurity of white, red and rosé wines, providing them with significant freshness and greater aromatic intensity.
- Recoups the hints of citrus, fresh grass and thiolic notes, according to the variety of grape.
- Combination of tannin from seeds and hydrolysable tannin (citruses).



AROMATIC PROFILE

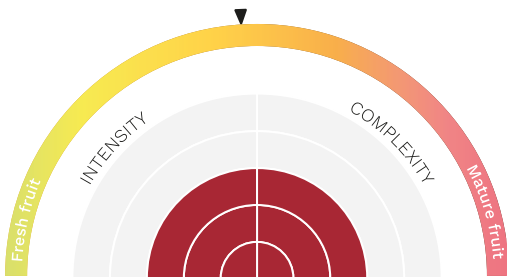


Ripe fruit

Tanicol RED VINTAGE

Intensifies the fruit profile potential of wines.

- Applied at aging or pre-bottling, this enhances the red and black fruit descriptors.
- In white wine, it helps produce a riper fruit profile.
- Combination of tannin from seeds and hydrolysable tannin (red fruit).



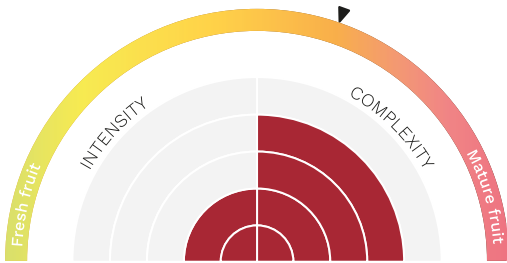
AROMATIC PROFILE



TAN SUTIL

More defined fruit profile.

- Applied to wines aging in wood, this accentuates the fruit, emphasising the varietal character of the wine.
- Its composition, 100% grape skin, integrates perfectly into the wine matrix.



AROMATIC PROFILE

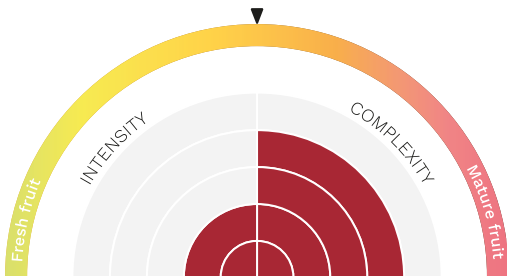


Topping. Bringing a fruit profile from wood derivatives

SPIRIT Smoothie

More noticeable fruit profile.

- Enhances the fruit in all aspects, whether it is fresh fruit or ripe fruit.
- Oak alternative in topping format



AROMATIC PROFILE



● Oak profile

Evolution and ripening

Once the aromas and structure we need in an aged wine have been obtained, the **tannins and oak derivatives** can help achieve the necessary touches in order to adjust the profile, enhancing the descriptors and modifying the small nuances in order to produce the desired wine.

Not all wines will evolve in the same way after treatment with oak derivatives. It is essential to know what we are starting with and where we want to get to.

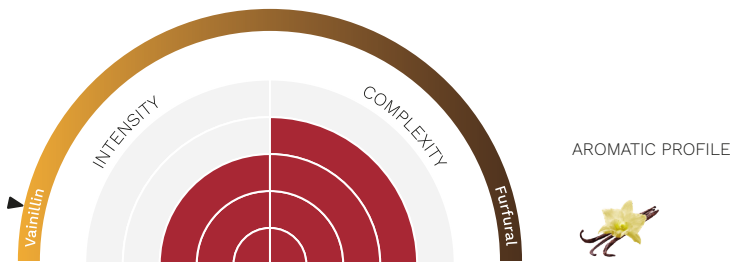


Light toasted profile

Robletan **OAKBLEND**

Definition of aroma and texture.

- Increases the aromatic complexity by contributing sweet wooden notes (vanilla).
- Good integration in the mouth.
- Light toasted oak tannin.

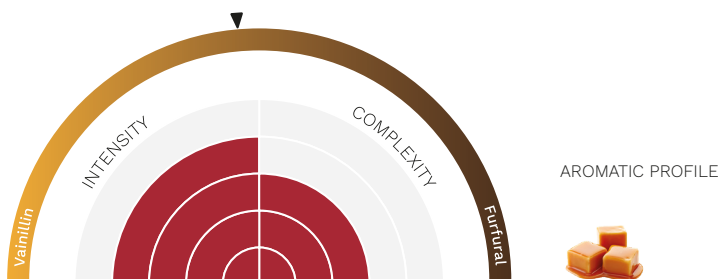


Medium toasted profile

Robletan **COEUR**

Increase in sweet aromas.

- High complexity with sweet notes (caramel, dulce de leche).
- Increase in structure.
- Medium toasted oak tannin.

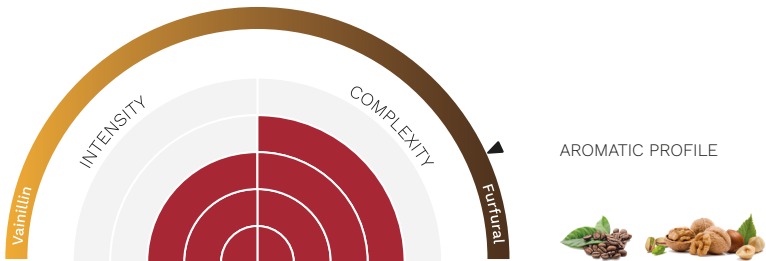


Medium + toasted profile

Robletan **ICÔNE**

Depth and toasted notes.

- With a high aromatic intensity, it provides different high-complexity toasted notes.
- Excellent integration in the mouth.
- Medium + toasted oak tannin.



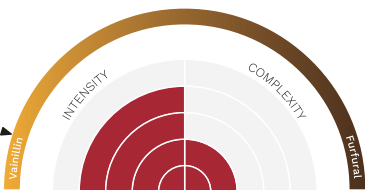
Topping. Defined wood profile

SPIRIT *Candy*

Defined vanilla profile and exceptional sweetness.

- Topping with a defined vanilla profile.
- Created to intensify the sweetest notes in wines.

AROMATIC PROFILE

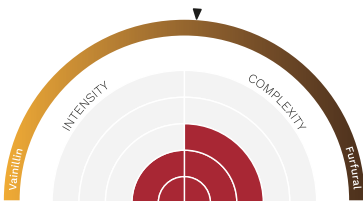


SPIRIT *Smoothie*

Spicy profile with a high level of unctuousity.

- Topping with a complex spicy profile that actively participates in the mouthfeel of the wine.

AROMATIC PROFILE

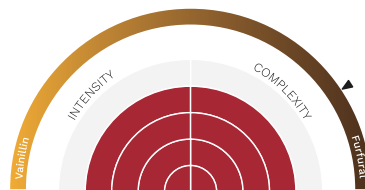


SPIRIT *Nuance*

Opens up the wine to toasted notes and protects the fresh fruit profile.

- Topping which increases the general sensation of complex notes, with a broad range of spiced and toasted aromas.

AROMATIC PROFILE



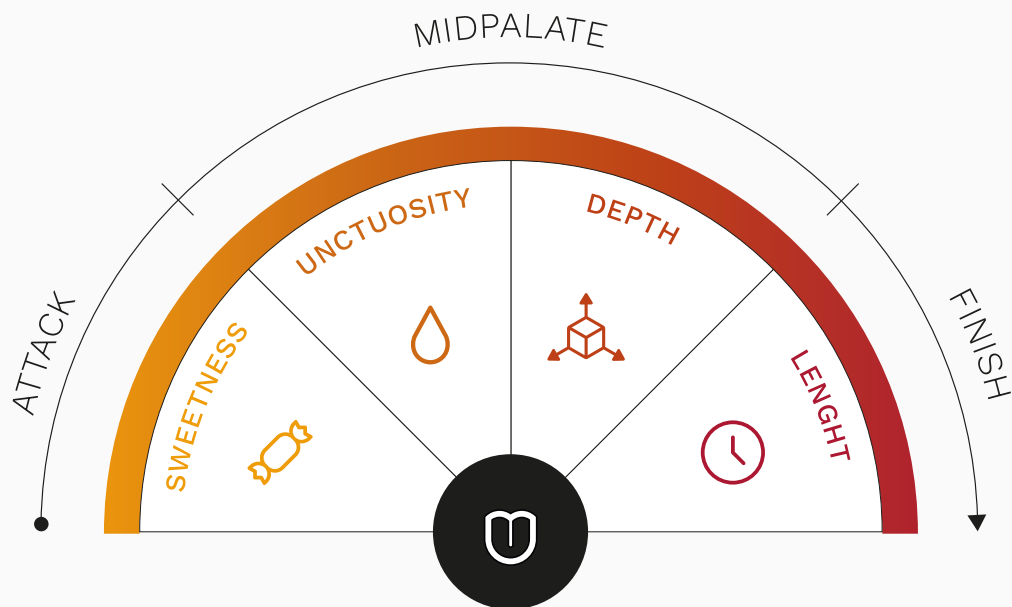
02. Tactile Sensations

The mouth does not only allow for sensations to take place on the tongue and tastebuds, but it also carries olfactory sensations through the aftertaste.

These sensations in the mouth can be perceived gradually as tasting progresses. This allows us to define 3 phases which correspond to the evolution of tactile sensations.

- **Attack:** the first impact, where the sweetness that we perceive when the wine enters the mouth, can be tasted. Firstly, it is perceived on the tip of the tongue, where the sugars and alcohols dominate. However, some olfactory molecules which increase this sweet sensation, can also be perceived.
- **Midpalate:** this is the most complex part, it is here that the character of the wine, with all of its qualities and defects, is determined. We perceive the unctuousity and depth, which create a balance between smoothness and tannicity.
- **Finish:** this refers to how long the wine remains in the mouth. Excessive astringency and bitterness can spoil the tasting in this phase.

Attack		
— Sweetness		
Gomasol Seda		P. 17
Spirit Candy		P. 17
Midpalate		
— Unctuousity		
Spirit Smoothie		P. 18
Mannoplus ND		P. 19
— Depth		
TanReactive		P. 21
Tanicol Red Vintage		P. 21
FiniTan		P. 21
Finish		
— Length		
Tanicol Blanc Excellence		P. 23
Tanicol Red Vintage		P. 23
Spirit Nuance		P. 23
Robletan Oakblend		P. 23



1 Sweetness

This is the first sensation we perceive and it is not very persistent.

3 Depth

The tannic structure, acidity and aromatic fraction all come together to contribute this sensation of fullness.

2 Unctuousity

We perceive this in the centre of the mouth, it comprises mainly of polysaccharides which increase the creaminess.

4 Length

The aromatic intensity and complexity contribute to the length in which the wine remains in the mouth.

What influences the balance in the mouth?

Alcohol

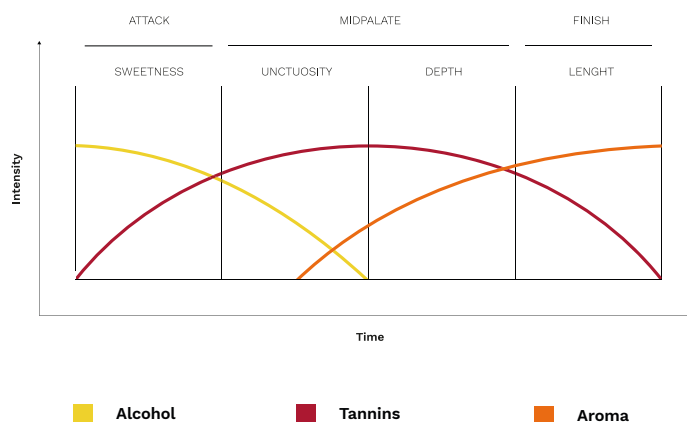
Alcohol contributes sweetness to the attack, but in unbalanced wines, it produces an acidic quality which can be present at any time during the tasting.

Tannins

These are perceived mainly in the midpalate and although they provide unctuousity and depth, they can also contribute, to a lesser extent, to the sweetness and have a negative effect, by contributing astringency and bitterness, leaving sensations of dryness in the final phase.

Aroma

The impact of the aroma in the mouth directly affects the length of the wine staying in the mouth, but it also contributes immensely to the depth. Despite not playing a direct role in the sweetness of the wine, certain "sweet" aromas can increase the sensation of sweetness in the mouth.



● Attack

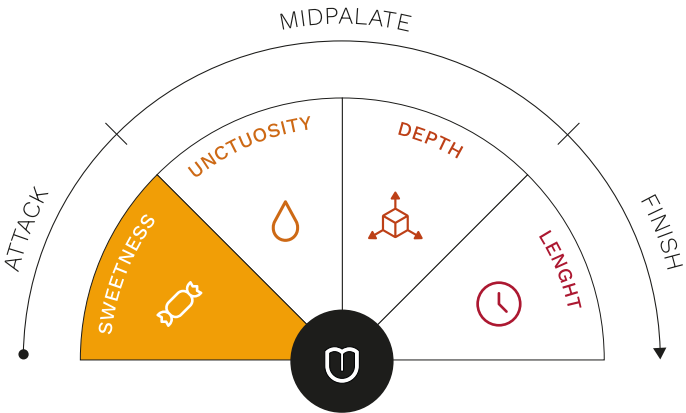
Sweetness, much more than just sugars

The origin of sweetness in wines not only lies in the residual sugar, there also exist a number of molecules which contribute sweetness or reinforce sweet sensations.

Within the range of different sugars, glucose and fructose, as residual sugars, play an important role, but are not the only ones to do so.

The alcohols present in wine also contribute to the sweet sensation, with ethyl alcohol and glycerol being the only ones that can exceed the perception threshold in wine.

Sweet aromas such as ripe fruit or wood derivatives, such as vanilla and coconut, while not contributing directly to the sweetness, do accentuate its perception.



Balance. Astringency control

In wine, the presence of sweetness makes the sensations of bitterness and astringency less obvious, while at the same time, balancing out acid perception.

However, excessive sweetness can bring out the bitter flavours and can be starkly perceived due to the lack of acid.

Gum arabic will have a direct influence on sweet sensations, however wood derivatives bring added sweetness and increase the overall complexity of the wine at the same time.

Gum arabic



Gomasol Seda

Toppings



Spirit Candy

- Contribution of sweetness
- Contribution of complexity

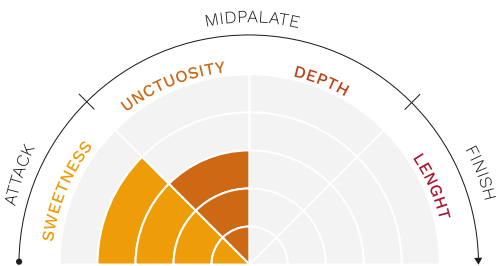
Sweetness and Gum arabic

The incorporation of **vegetable-based polysaccharides** increases sweet sensations on the palate, providing balance and roundness in the mouth. At AGROVIN, we use high quality 100% natural raw materials.

Gomasol® SEDA

Exceptional improvement to taste perception before bottling.

- Increases the sensations of body and sweetness in the mouth, with respect to the aromatic characteristics of the wine.
- Polishes aggressive tannins, reducing excessive astringency, both from the grape and from wood.
- Liquid combination of gum arabic and mannoprotein.



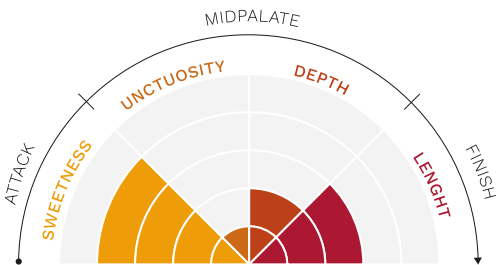
Sweetness from wood

Compounds derived from wood such as, **polysaccharides and triterpenes** can provide sweet sensations. The different aromatic compounds that toasted oak provides wine, such as coconut and vanilla, are aromas that the brain automatically relates to sweet flavours, even though the taste-buds do not detect them in this way.



**Topping with a defined Vanilla profile.
Created to intensify the sweetest notes.**

- In wines with an inferior attack, this contributes sweet aromatic notes.
- Rapid release of lactones and polysaccharides and high intensity vanilla which take part in the attack.



● Midpalate. Unctuousity

The importance of polysaccharides

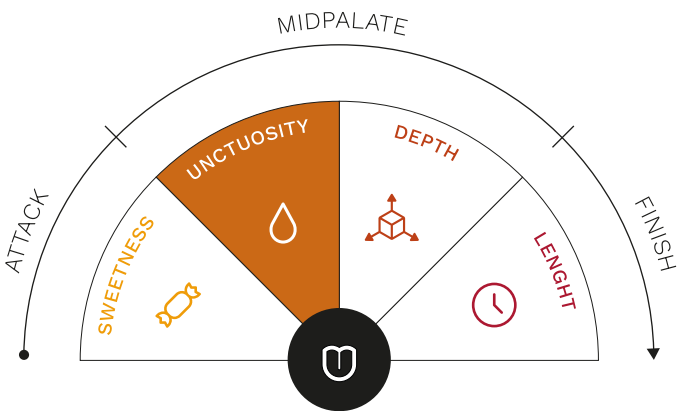
The unctuousity of a wine is the characteristic which causes the wine that we taste to be smooth in the mouth, dense, buttery. This would be the opposite sensation to astringency, reinforcing the moisturising action of saliva.

To achieve balance in this phase, the acidity-structure combination must be in equilibrium with the unctuousity. In other words, as the unctuousity increases, the perception of acidity and structure decreases.

An excess of unctuousity reduces the acidic and tannic sensations, losing part of the freshness and depth, causing the wine to feel flat and to lose its structure.

On the contrary, a lack of unctuousity causes the tannicity and acidity to be perceived with greater intensity, leading to the sensation of an unbalanced wine.

Polysaccharides derived from yeast *Saccharomyces cerevisiae* contribute to an increase in unctuousity. These polysaccharides can be removed from the natural lees of the wine or can even be provided in the form of **inactivated yeast**, **yeast hulls** or in the form of **purified mannoprotein**.



Although the compounds contributed by wood are different to those contributed by yeast cell walls, the contact with wood in different forms, with medium-light toasting, provides sensory characteristics similar to those from resting on lees.

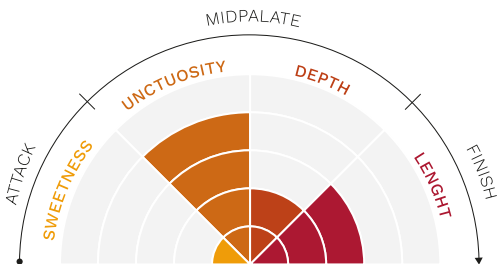
Unctuousity from wood

The release of polysaccharides from the wood will complement the sensations of unctuousity in wines, allowing the midpalate to intensify in a balanced way.



Increases the unctuousity, completing the sensations in the midpalate and finish.

— Topping with a complex spicy profile that actively participates in the mouthfeel of the wine.



Unctuousity and mannoproteins

Mannoproteins increase the sensation of unctuousity, bringing equilibrium to the whole wine, by joining together the sweetness and the structure in a balanced way, without affecting the aromatic profile.

MannoPLUS ND



All the properties of purified mannoprotein in a liquid format.

Effect on the midpalate

- Contributes to the sensory characteristics of the wine, providing density, an unctuous sensation and body.
- Polishes aggressive tannins, reducing astringency.
- Restores the acid balance by increasing positive sensations in the mouth.
- In the second fermentation: it increases unctuousity on the palate and the persistence of foam.

Effect on the aroma

Stabilises the aromatic fraction and protects it from oxidation:

- Mannoprotein is able to bind to volatile molecules, both those from fermentation (esters) and varietal aromas (β -ionone).

Colloidal protection

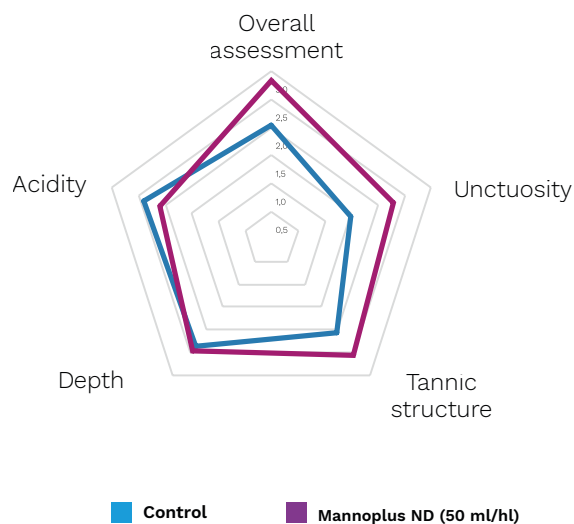
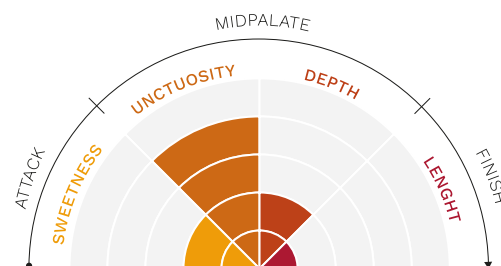
Participates in the colloidal stabilisation of wines:

- Complicates the addition of certain colloids, helping their suspension in the medium and preventing their precipitation. In this way it binds to tartrate crystals and interacts with colouring matter and unstable proteins.

Effect on the bottling

Minimal impact on filterability and colour;

- Its low turbidity and colouring allows for last minute additions, with maximum respect for the sensory characteristics and filterability of the wines.



Trial on filtered red wine. Grape harvest 2020.

● Midpalate. Depth

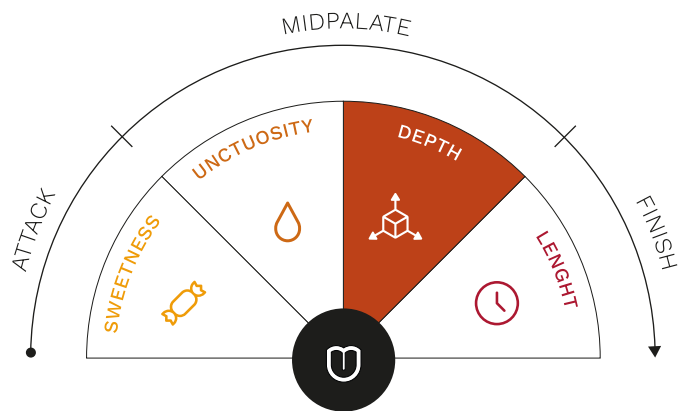
Balance: acidity, tannic structure and aromas

The depth is the capacity of a wine to provide the whole mouth with sensations. The acidity and tannic structure play a part in this. The aromatic complexity and intensity also increase this sensation of depth.

Wines lacking depth are characterised as light wines, with little body and with a lack of balance. An excess of acidity or tannic structure also creates an imbalance in this phase, producing dry and bitter wines.

When the tannic structure increases, we must keep in mind that if tannins with a low degree of polymerisation or ones derived from untoasted wood are used, the depth can be increased, but at the cost of also increasing astringency.

For this reason, we must always consider how the unctuousity plays out, in order to achieve balance.



Depth without astringency. Grape tannins

Grape tannins are ideal in order to increase this attribute, whether the wine requires just a slight increase in depth, or if a greater depth is needed.

This type of tannins integrates perfectly into the wine matrix, increasing the depth with minimal impact on the astringency and aromatic profile.

Another possibility is to introduce tannins which increase the tannic structure and increase the aromatic intensity at the same time, whether from fruit or wood.

Seed tannins



TanReactive

Seed/skin and wood tannins



Tanicol Red Vintage - FiniTan

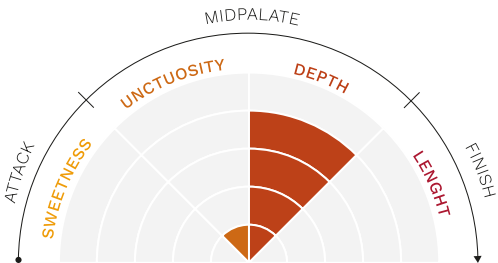
- Contribution of depth
- Contribution of complexity

Depth and structure

TAN REACTIVE

Great robustness and structure without any increase in astringency.

- Supports colour stability and a better evolution over time thanks to its antioxidant capacity.
- Condensed tannin from grape seeds

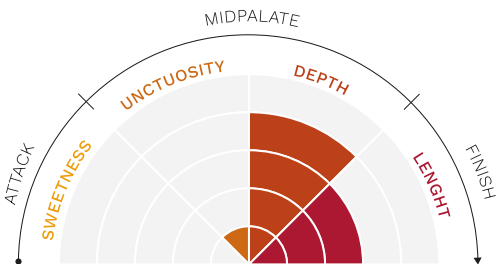


Depth and fruit

Tanicol RED VINTAGE

Highlights red and black fruit descriptors while providing structure and roundness.

- With its increase in aromatic intensity, the length of wine in the mouth is also increased.
- Condensed tannin from grape seeds combined with wood from red fruit trees.

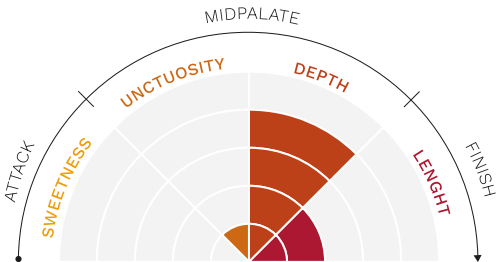


Depth and oak

FINI TAN

Structure and varietal aromatic increase.

- Enhances the varietal aromatic characteristics, contributing notes of light-toasted oak without any bitterness or astringency.
- Its antioxidant capacity ensures an excellent evolution in bottle.
- Condensed tannin from grape skin combined with light-toasted wood from French oak.



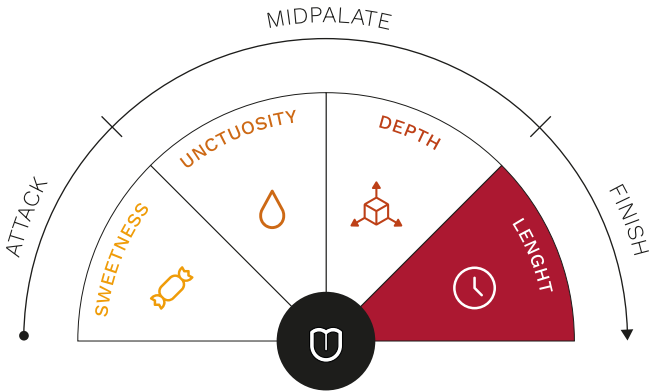
● Finish Length

Persistence in mouth

The finish consists of all sensations left behind when wine leaves the mouth. Initially, the lingering aroma is at its height, (length), in a secondary phase, these aromas and the other taste sensations will fade until they eventually disappear.

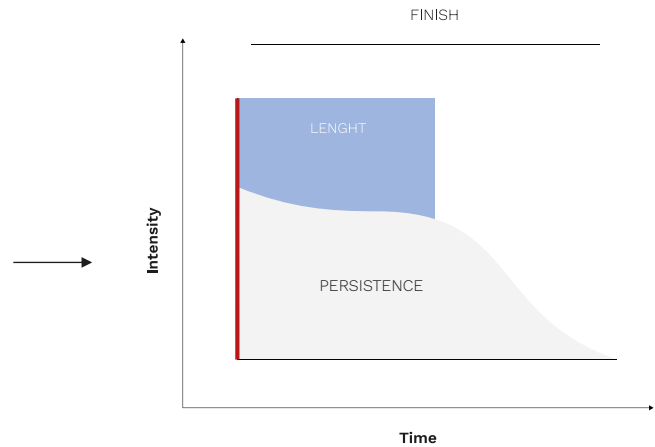
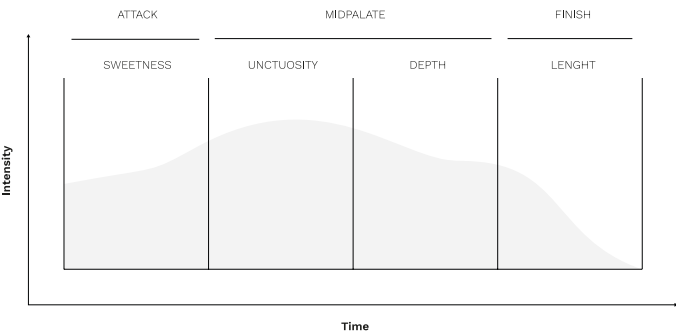
Even if the length consists only of the aromatic fraction, the persistence of taste includes all those sensations which remain on the palate, such as acidity, the warmth of a high alcohol content and the potential presence of some bitterness.

The length is a phase which takes place at the finish, defined as the time during which the aromatic sensations remain in the mouth with a high intensity.



A big wine is one which, with a balanced mouthfeel, is intense and its flavour lingers for several seconds after leaving the mouth. On the contrary, a short wine is one which, after an intense start, fades quickly.

Persistence in aromas. Length



— The wine leaves the mouth ■ Persistence of aromas (LENGTH) ■ Persistence of taste (PERSISTENCE)

The persistence of taste is more difficult to measure than the persistence of aromas, due to its gradual decrease. Whereas the decline in the intense persistence of aromas is very obvious.

Increasing the time in which the aromatic intensity is at a high level directly affects its perceived quality.

This persistence of aromas can be measured in seconds and classifies wine by the length of time it remains in the mouth.

Length of the wine	Aromatic intensity duration
Very short	
Short	3 - 4 seconds
Medium	5 - 6 seconds
Long	7 - 8 seconds
Very long	> 8 seconds

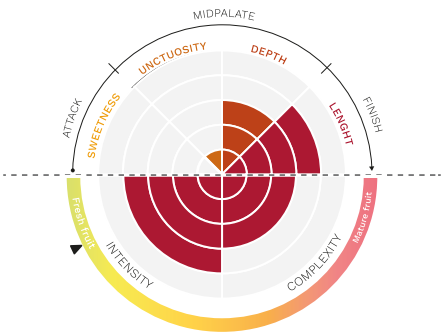
Increasing the persistence of aromas

This final impression is based on the perception of the compounds derived from the grape and fermentation (Fruit) and the contribution from the oak during the aging (Wood). These two attributes (Fruit-Wood) must be balanced and be intense enough to have a positive role in the length. The length is an easily detectable element in knowing the quality of wine.

Persistent fruit: Whether in wines with a fruity profile or in wines with a more defined wood profile, in which more focus on the fruit is needed, the use of grape tannins combined with woods from fruit trees increases this persistence of fruity aromas. Fresher or riper notes according to the botanical origin of the wood is also emphasised.

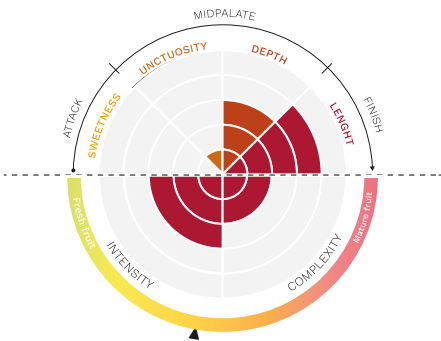
Tanicol **BLANC EXCELLENCE**

Citric-tannin, freshness and intensity.



Tanicol **RED VINTAGE**

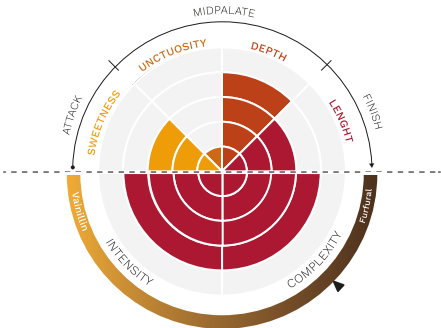
Red fruit tannin, intensity and persistence.



Persistent wood: In order to reinforce the aromas derived from wood in the finish, more toasted notes, such as coffee and smoky aromas, and sweeter and fresher aromas, such as vanilla or spices, can be chosen.

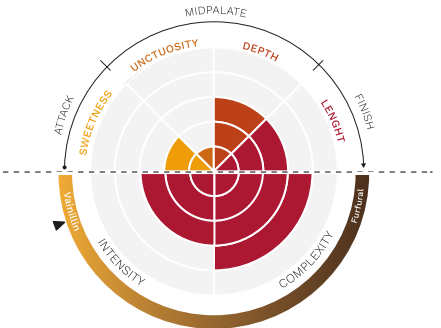
SPIRIT *Nuance*

Topping of persistent toasted aromas.



Robletan **OAKBLEND**

Tannin with persistent aromas of vanilla.



03. Astringent sensations

Astringency is defined as the sensation of dryness which is produced in the mouth when saliva reacts to the tannins in wine.

This sensation will be more or less intense according to the tannic composition of the wine and can be accompanied by bitter flavours.

This sensation of dryness and bitterness can appear in all phases of tasting:

- **Attack:** less ripe tannins which provide greenness can be found.
- **Midpalate:** in this phase, the tannins dominate more and dry sensations begin to occur which can dominate until the finish.
- **Finish:** the bitter flavours are not perceived in the first instance, but are very persistent, so much so that they can dominate the finish.

Astringency control

— Vegetable-based clarifiers

Proveget Premium P. 26

— Increasing unctuousity

Superbouquet MN P. 27

Superbouquet P. 27

Mannoplus P. 27

— Reducing reactivity

Gomasol Óptima P. 27

— Reinforcing the structure

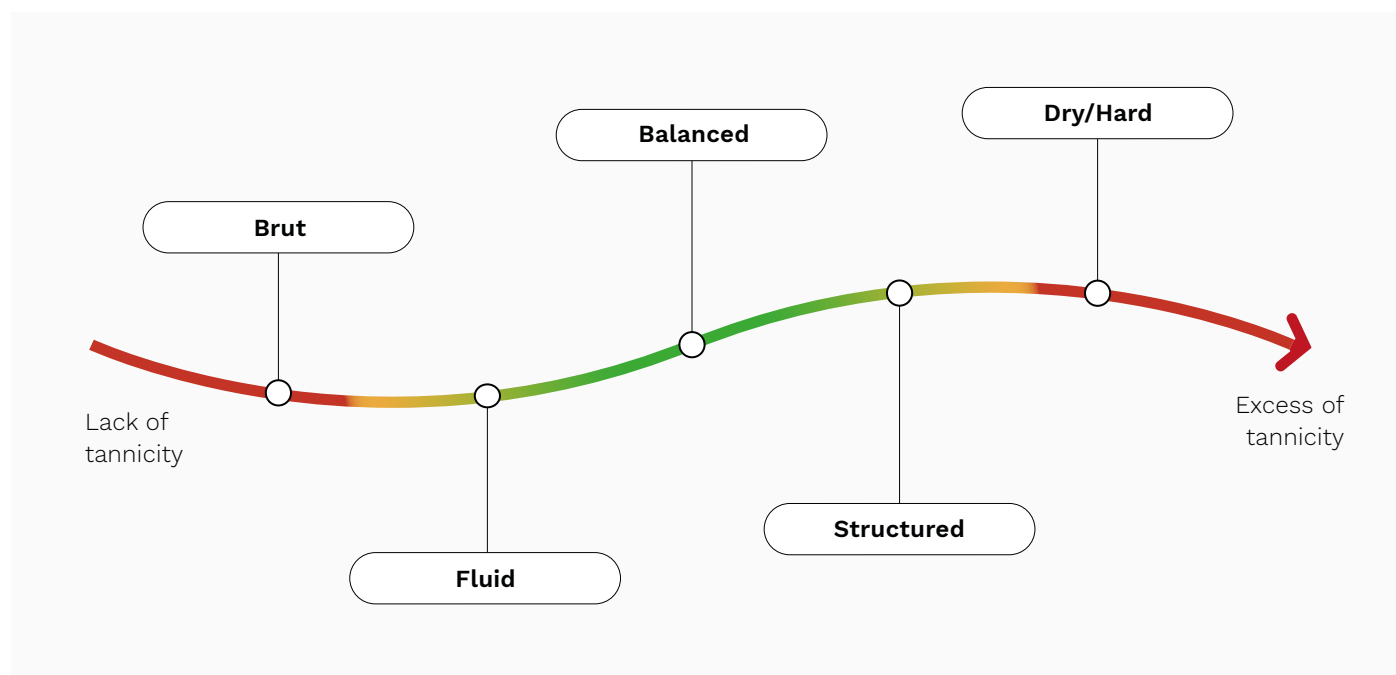
TanReactive P. 27

When the tannicity becomes a defect

The tannic structure of a wine plays an important role during every phase of tasting. However, an excess in quantity or in reactivity can spoil the tasting experience.

Both the individual grape tannins and those contributed by the wood derivatives can increase this sensation, although its perception is different. Grape tannins produce an astringency that is more 'green'; whereas the tannins from wood often provide greater sensations of dryness.

Tannic structure and balance



The perception of a wine as balanced-structured-dry not only depends upon its tannic composition, but it also depends upon a number of compounds which can accentuate (acidity) or alleviate this sensation (smoothness). However, to achieve balance, this astringency must be removed or compensated, according to the profile of the wine that is needing to be produced.

Reducing the sensation of dryness

According to the degree of astringency present in the wine, various treatments can be used:

- **Vegetable-based clarifiers** for **reducing astringency** from severe to moderate, we can selectively remove the most astringent tannins of lower molecular weight or carry out a more intense reduction, depending on the characteristics of the clarifier.
- To **increase unctuousity** and reduce the perception of astringency, **polysaccharides** increase the sensations of sweetness and unctuousity, which assist the moistening in the mouth, countering the drying effect of the tannins. At the same time, they are capable of binding to tannins, forming a complex polysaccharide-tannin which alleviates the sensation of astringency.
- **Reinforcing the structure**, the **tannins**, both from grapes and ones which certain **oak alternatives** contribute, increase the depth, allowing the bitterness and astringency to be reduced, increasing the tannic structure and reducing the proportion of dry tannins in the wine. This completes this phase of the tasting and significantly reduces the sensation of dryness.

Astringency control

Vegetable-based clarifiers

Vegetable-based clarifiers respond to the demand of new markets which reject using derivatives of animal origin, like vegans or Kosher wines.

The clarifiers from the **Proveget** range are characterised by rapid flocculation and the production of compact solids. Using vegetable proteins aims to reduce astringency, respecting the aromatic profile of the wine as far as possible. It also aims to reduce the impact that clarification has on other parameters such as colour, unctuousity and depth.

Proveget PREMIUM

Liquid vegetable-based clarifier with high reactivity.

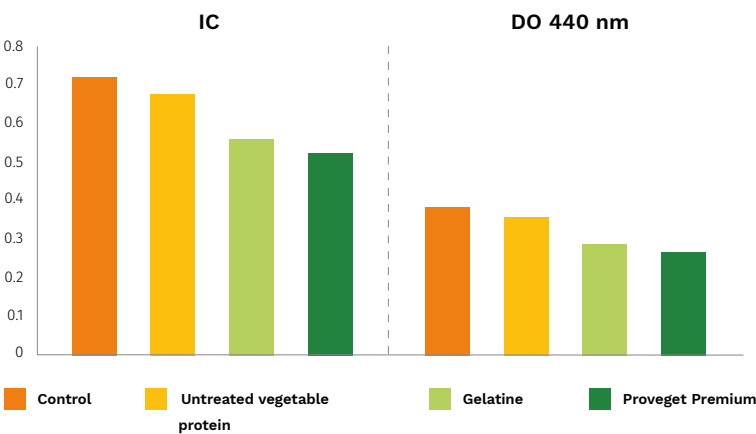
Due to a more environmentally-friendly production process, where there aren't any drastic temperature changes, a removal process occurs where the protein is released from the vegetable structures, which allows a greater active fraction of solubilised vegetable protein to be used. This treatment process allows for a change in the composition of the protein, meaning greater reactivity can be achieved.

- It allows astringent notes and bitterness to be removed and it improves the balance on the palate.
- Rapid sedimentation speed, while respecting the characteristics of the wine as much as possible.

Selective removal of oxidised polyphenols and oxidisable polyphenols.

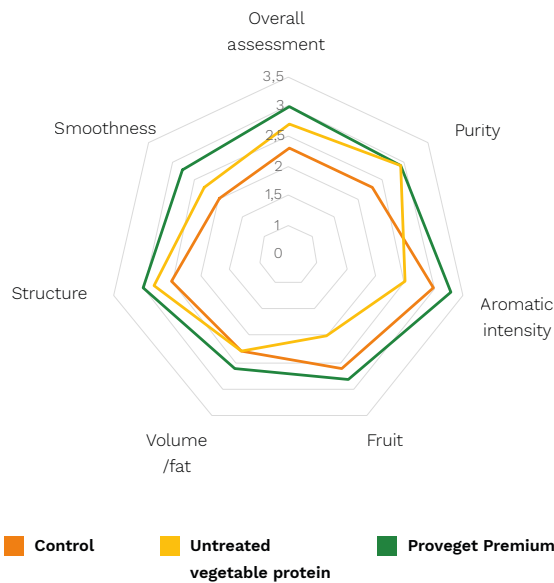
Thanks to its exclusive solubilisation process, this vegetable protein clarifier is capable of preventing and correcting browning, while respecting the integrity of the wine.

Effect on the colour



Trials on white wine. Grape harvest 2020.

Sensory analysis of red wine




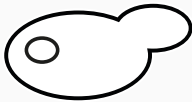
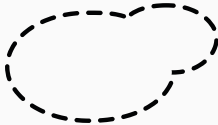

Revelation of fruity notes and improvement in balance while respecting the structure of the wine. Trial on Tempranillo. Grape harvest 2020.

Proveget Premium This is the result of the Winebalance project: "Improving the colloidal structure of the wine - New bioactive tools of interest".



Increasing unctuousity

The use of yeast polysaccharides causes an increase in the sensation of smoothness or greasiness in the wine. It immediately decreases the perception of astringency. On the other hand, these polysaccharides will combine with more reactive tannins, reducing the sensation of dryness. The speed of release of the polysaccharides varies according to the type of yeast derivative:

			
Viable yeast	Inactivated yeast	Yeast hull	Pure mannoprotein
	18-22% polysaccharides. Contact/release time: several weeks.	48-53% polysaccharides. 20-22% soluble mannoprotein. Contact/release time: several days.	85-95% soluble mannoprotein. Contact/release time: immediate
	SuperBouquet	SuperBouquet MN	MannoPLUS

Reducing the reactivity of the tannin

Gum arabic is capable of reacting with the most astringent tannins, reducing the astringency or bitterness of very structured wines. Quality gum arabic **Gomasol** does not undergo any chemical process or hydrolysis to modify its aspect, giving it some exceptional stabilising and round mouthfeel properties.

Gomasol® **ÓPTIMA**

Increases the sensations of body and smoothness in the mouth.

- Reduction in astringency with a low clogging index, respecting the aromatic characteristics of the wine.
- Combination of gum arabic in liquid form.

Reinforcing the structure

TAN REACTIVE

100% grape seed tannin.

- Increases the structure of wine, allowing the proportion of astringent tannins to be reduced at the same time as the sensations of depth and unctuousity are increased.

04. Microbiological control

Controlling the growth of contaminating microorganisms is an essential process in order to achieve a quality product and comply with strict food safety requirements.

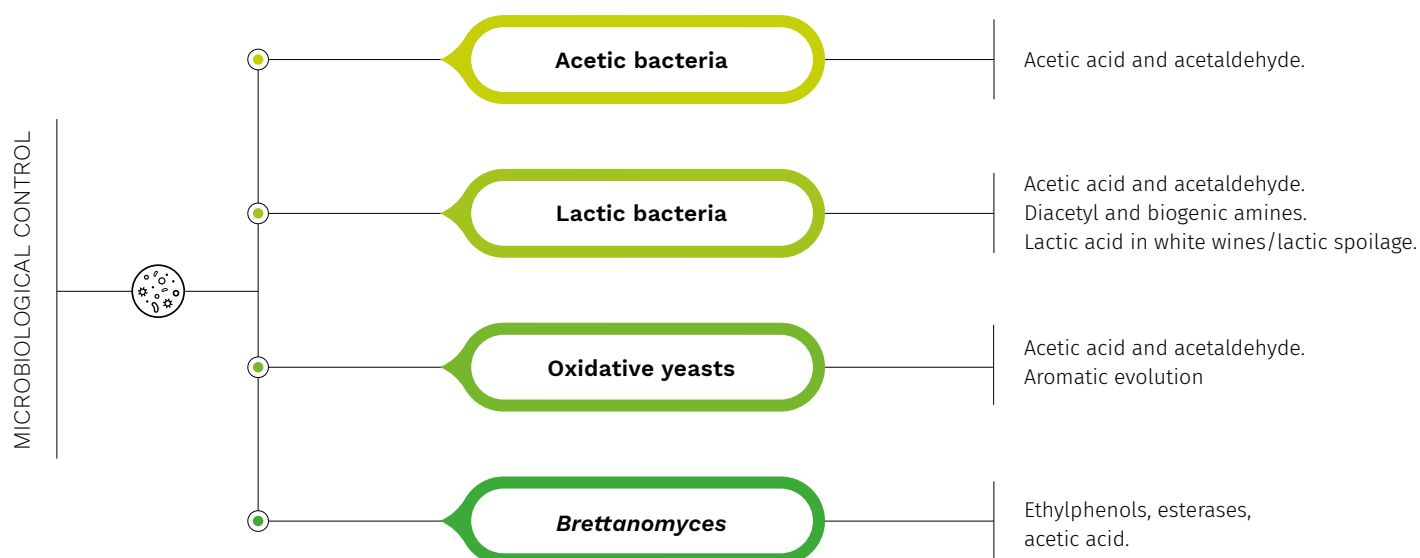
Microbial contamination can negatively affect the quality of wine. We have to keep in mind that grape must is high in sugar and nutrients, which makes it easier for yeasts, bacteria and moulds to grow.

Even after fermentation has taken place, some of these organisms can remain active. However, microbiological analyses and preventative and corrective measures are essential to be able to control them.

Microbiological control	
— Reducing populations	
Microstab Protect	P. 30
— Reducing the perception of phenols	P. 31
Spirit Candy	P. 31
Robletan OakBlend	
— Recouping fruit	
Tanicol Blanc Excellence	P. 31
Tanicol Red Vintage	P. 31

Harmful microorganisms

Microbiological control is an essential safety requisite in the food industry as a whole, and especially in wine. Knowing which microorganisms, and in which specific cases, can cause changes allows us to act before defects appear in the wine, which are especially indicated in wines produced with little to no sulphites.

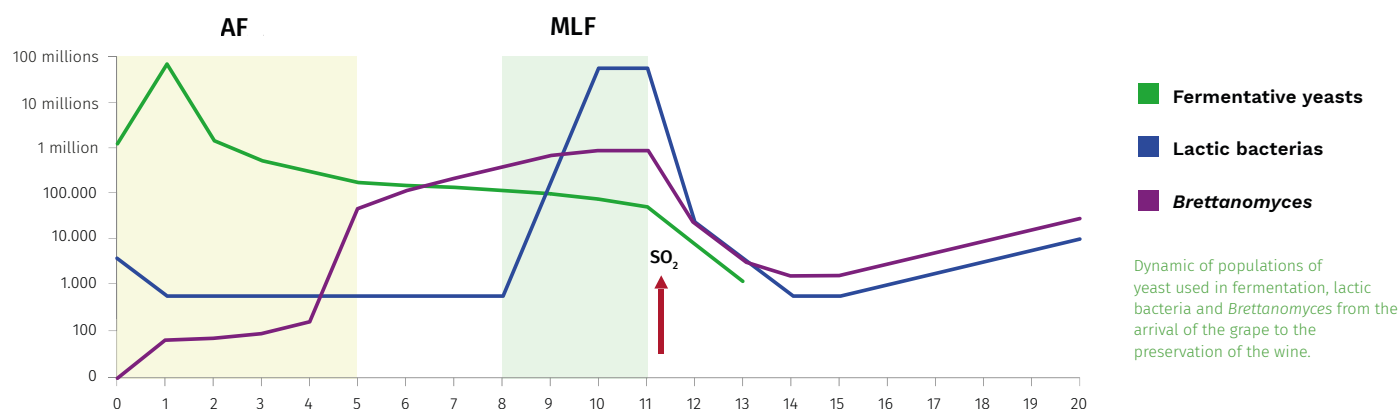


Growth of *Brettanomyces* populations

Yeasts belonging to the genus *Brettanomyces*/*Dekkera* cause one of the most serious problems in modern-day oenology due to the sensory defects directly associated with *Brett*. They appear mainly in quality red wines which have been in contact with wood. *Brettanomyces*, as opposed to the yeasts responsible for the fermentation of the grape must, is characterised by a low fermentation rate and slow growth. However, due to its physiological characteristics, it is capable of growing in adverse conditions.

The first favourable period for the proliferation of *Brettanomyces* is the period in between alcoholic and malolactic fermentation, where the sulphur levels are low and there is no excessive competition between microorganisms. Viniferm OE-AG20, which can be implemented quickly, can reduce this critical period.

Once malolactic fermentation is complete and the sulphur levels have been corrected, the growth of this microorganism is more limited. Yet, for long periods of time and in low molecular sulphur levels, these conditions can help its growth reach populations large enough to produce noticeable levels of ethylphenols.



● Microbiology

Reducing populations



Specific preparation with fungal chitosan, combining antimicrobial, antioxidant and antioxidative properties which allow sulphur levels to decrease during the preservation of wines.

- Substantially reduces or eliminates populations of *Brettanomyces*, decreasing the risk of any changes due to the presence of this contaminating yeast.
- Effectively decreases populations of yeasts and lactic bacteria. As with any other antimicrobial, the reduction in populations depends on the initial microbiological load.
- Antioxidant effect and oxidation protector. Natural antioxidant effect, protecting the aromatic fraction and limiting the browning of wines.
- Inactivates oxidation catalysts. Reduces the activity of oxidative enzymes, responsible for the oxidation of phenols.
- Reduces metallic content (Fe and Cu).



Recommended especially for:

- Wines containing residual sugar

Reduces the risk of contamination by lactic bacteria.

- high pH.

When sulphur is less effective.

- Wines free from SO₂.

Complete alternative to using sulphur.

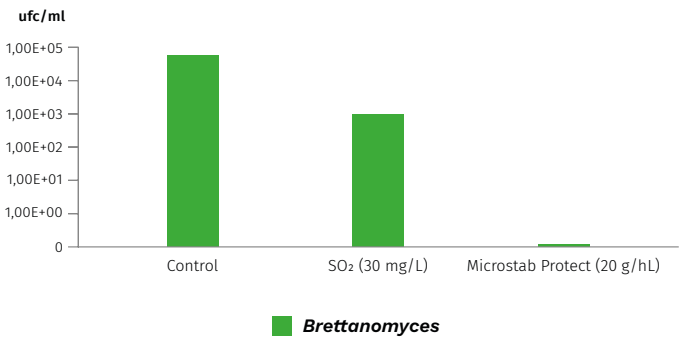
- Controlling *Brett*.
- Delaying or controlling MLF.
- Reducing oxidation.

Antioxidant effect

The reducing power of the inactivated yeast is strengthened by the presence of tannin with antioxidative properties.

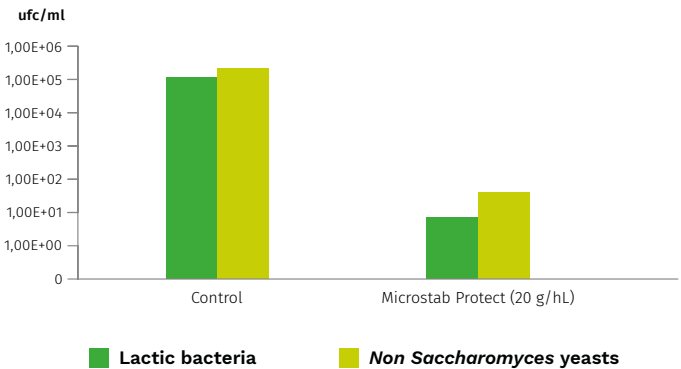
Effect on *Brettanomyces*

Trial on red wine after 10 days of treatment.



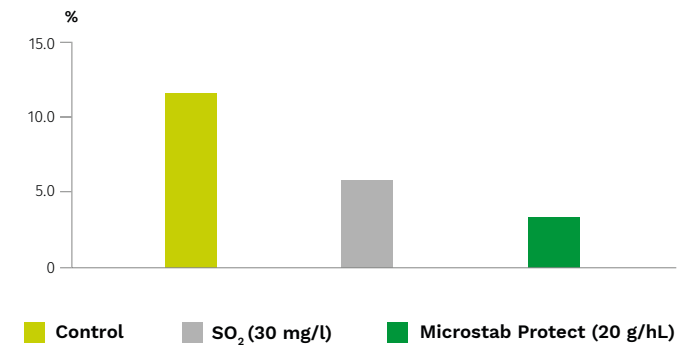
Effect against bacteria and *Non Saccharomyces* yeasts

Trial on NATURAL white wine (Xarello variety) after 10 days of treatment.



DO Increase 440 nm

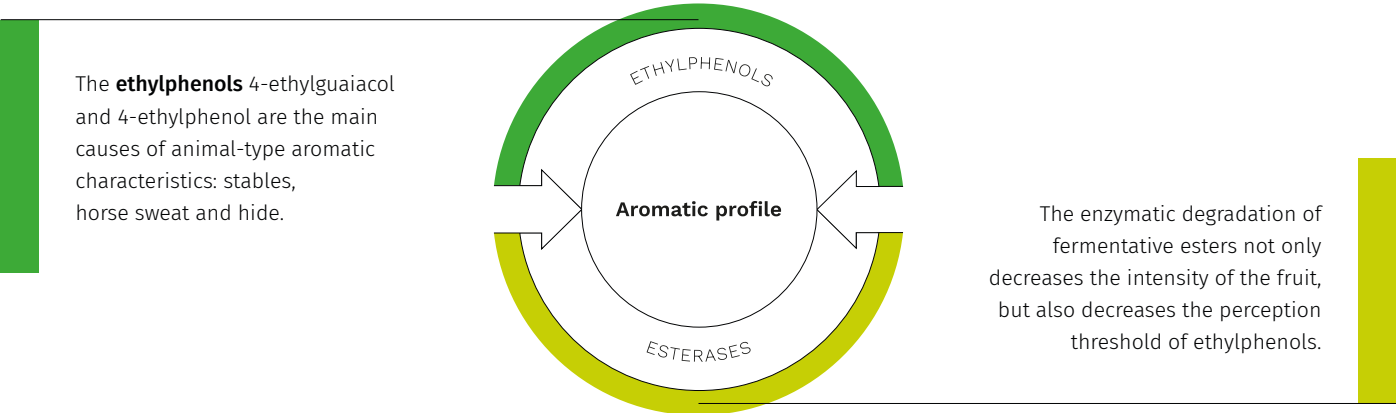
Study of browning according to test on accelerated aging (3 days/45°C), equivalent to 6 months of aging in bottle



Brettanomyces. Aromatic sensations

A contamination of *Brettanomyces* not only modifies the aromatic profile due to the production of ethylphenols, but other compounds, such as acetic acid, fatty acids like isovaleric acid (rancid aromas) or the 2-acetyl-1,4,5,6 -tetrahydropyridine (mousiness) can negatively affect the aroma of the wine.

Apart from producing these compounds with unpleasant aromas, it can be noted that esterases are also produced. These can significantly reduce the perception of the fruit profile. This enzymatic degradation of the fruit profile is one of the first signs of a contamination by *Brettanomyces*.



Reducing the perception of phenols

There are certain relationships between molecules which reinforce or reduce the perception of some aromatic descriptors. This is the case with the phenolic aroma where the ethylphenols produced by *Brettanomyces* increase its perception and the **vanillin from the wood** significantly reduces its impact.

Recouping fruit

The **tannins with a significantly fruity intensity** allow us to recoup fresh and fruity aromas in wines which have suffered from an enzymatic degradation of fruit for this reason.

Recommended products

→ P. 13

→ P. 12

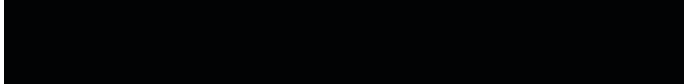
Recommended products

→ P. 10

→ P. 11

Notes

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A series of horizontal dashed lines spanning the width of the page, providing a guide for handwriting practice.

Ordering information

Placing orders

You can place your order by email.
Email to: jason.rodriquez@agrovin.com
Orders are normally shipped within 24-48 hours of receipt.

Terms of sale

Terms for payment are Net 30 days for established accounts. Past due invoices may be subject to a late fee of 2% per month on the unpaid balance.

A Customer Information/Credit Application must be completed and approved by **Agrovin USA inc** in order for credit to be established.

Shipping

Orders are sent via UPS or FedEx.
Large shipments are delivery by common carrier.

Payments

Payment check, money order, Wire transfer.
We accept Mastercard, American Express and Visa.

Prices & Bids

For a price quote on large harvest orders or full trucks like Tartaric, Cream of Tartar... contact by email to jason.rodriquez@agrovin.com
Order early to ensure product availability.

If you require confirmed prices for your order, please contact our sales department by email at: irabada@agrovin.com.

Return Policy

We offer credit if products are returned unopened/undamaged within 10 working days of delivery. Returns are subject to a 15% restocking charge.

Please contact ordersUSA@agrovin.com authorization prior to return.

Winemaking products that require refrigeration or freezing cannot be returned.

Customer will pay return freight costs.

Damage claims

Damage Claims must be reported within 3 working days of delivery.

Supplemental technical information is available online at www.agrovin.com

Return Policy

Dosage rates are infinitely variable: harvest, grape variety, type of wines and specific application, wine temperature etc... It is the buyer's responsibility of the buyer to adapt the use of our products to such variables.

The information in this catalog is provided "as is", without warranty or guarantee of any kind.

It is important to us that the information in this catalog is as accurate as possible. We apologize for any technical inaccuracies or typographical errors.

Calculations and conversions charts

Temperature conversions

F°	0	32	40	50	60	70	80	90
C°	-18	0	4	10	16	21	27	32
F° = (C° x9/5)+32								

Acids

	Tartaric acid	Sulfuric acid	Malic acid	Lactic acid
Tartaric acid	1	0.653	0.893	1,2
Sulfuric acid	1.531	1	1.367	1.837
Malic acid	1.119	0.731	1	1.343
Lactic acid	0.833	0.544	0.744	1

Equivalent Units

1 gal = 3,785 L	1 L = 0,264 gal
1 ml = 0,035 fl oz	1 fl oz = 30 ml
1 gal = 0,379 hl	1 hL = 26,4 gal
1 metric ton =2205	1 metric to = 1000kg
1 US ton = 2000 lb	1 US ton = 907 kg
1 lbs = 453,6 g	
1ppm = 1 mg/l	
1º Brix = 1% sugar (wt/vol)	
1 Vol % = 1 ml/ 100 ml	
1 barrel = 225 L = 59,4 gal = 25 cases	

Dosage

g/hl	lbs/10³gal	ppm
5	0.4	50
10	0.8	100
15	1.2	150
20	1.6	200
100	8	1000



Agrovin was founded in 1960 with the aim of supplying products for winemaking. At first, the company operated only in the Castile-La Mancha region from its headquarters in Alcázar de San Juan, a town in the province of Ciudad Real.

In 1965, the company began to expand within Spain and opened local offices throughout other country's top winemaking regions.

Today, the company operates in more than 15 countries. Beginning in 1985, Agrovin began to diversify into other sectors, such as beer, oils, mineral water, and the agri-food industry.

Agrovin has been expanding and modernizing its facilities. The company currently has more than 1,800 square meters of office space, more than 15,000 square meters of warehouses, and multiple in-house production plants throughout the world. It also has its own logistics network to ensure optimal distribution.

In its commitment to winemaking and to ongoing research advancements, Agrovin has the largest enological laboratory in Spain.

Headquarters / Factory

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Agrovin is the sector's first company to achieve compliance with quality standards in Spain.

In 2018, the company earned certification recognizing its achievement of the highest food safety standards.

It also has its own ENAC-accredited laboratory.





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