

# CATALOG

Oenological  
Products

2015 - 2016



Design,  
Decision,  
Optimisation



# THE INSTITUT OENOLOGIQUE DE CHAMPAGNE

## A UNIQUE PARTNER

**You are already unique,  
now we'll make you outstanding.**

Our strong presence on the ground in all vineyards in France and throughout the world is the keystone of our expertise in wine profile management.

This expertise is being enhanced day after day, through the ongoing connection between œnologists, laboratories and you, who are part and parcel of our learning community.

By helping you manage time and through rationalisation, we aim to make your work easier. This is why we are constantly seeking formulations that are more effective, more respectful of your wine and easier to use.

Through its experience on the ground and its "Design & Development" laboratory, IOC offers a range of traditional and innovative œnological products for vinification and élevage of still and sparkling wines.



# TABLE OF CONTENTS



## Optimising the fermentation ..... 4

Protecting yeasts : survival factors .....	5
Media and detoxicants .....	5
Nutrition : growth factors .....	6
FAQ .....	9



## Oenological yeasts..... 10

Yeasts for red wines .....	10
Yeasts for white and rosé wines .....	12
Yeasts for sparkling wines .....	15
Yeasts for white, rosé and red wines .....	16
Rehydrating yeasts .....	18
FAQ .....	19



## Yeast products..... 20

In fermentation .....	20
Elevage .....	20
Pre-bottling finishing .....	21



## Oenological enzymes ..... 22

Mode of enzyme action .....	22
Actions of clarifying enzymes .....	22
Extraction and maceration enzymes .....	24
Aromatic extraction enzymes .....	25
Stabilisation and elevage enzymes .....	26



## Selected malolactic bacteria ..... 28

Why perform bacterial inoculation ? .....	28
Different types of inoculation .....	28
Lactic acid bacteria .....	29



## Vinification - Clarification ..... 30

Bentonites .....	30
Products for resisting oxidation .....	31
Anti-oxidation formulations .....	32
Riddling aids .....	33



## Fining products..... 34

Fish-based / isinglass finings .....	34
Gelatine-based finings .....	35
Egg albumin-based finings .....	35
Other finings .....	36
Flotation adjuvants .....	36



## Stabilisation..... 37

Arabic gums .....	37
Tartrate stabilisation .....	38
Cellulose gum .....	40



## Correctors..... 41

Organoleptic correctors .....	41
Acidity correctors .....	43
Other correctors .....	45



## Sulphur products ..... 46

Complex formulations .....	48
----------------------------	----



## Tannins..... 48

Tannins for red wines - Vinification .....	49
Tannins for red wines - Elevage .....	49
Tannins for white wines - Vinification .....	50
Tannins for white wines - Fining .....	50
Tannins for white wines - Elevage .....	51
Tannins for sparkling wines - Grape-harvesting .....	51
Tannins for sparkling wines - Malolactic fermentation .....	51
Tannins for sparkling wines - Fining .....	52
Tannins for sparkling wines - Tirage .....	52
Tannins for sparkling wines - Disgorging .....	52



## Wood in oenology ..... 53

Enoquer range .....	53
Brasé bois range .....	54



## RCM ..... 56

# OPTIMISING THE FERMENTATION



Go to [www.ioc.eu.com](http://www.ioc.eu.com) and discover our dedicated decision-making tool : which proposes and automatically calculates optimised protocols, tailored to your requirements, product-objectives and choice of yeast.

## EVALUATING THE ENVIRONMENT

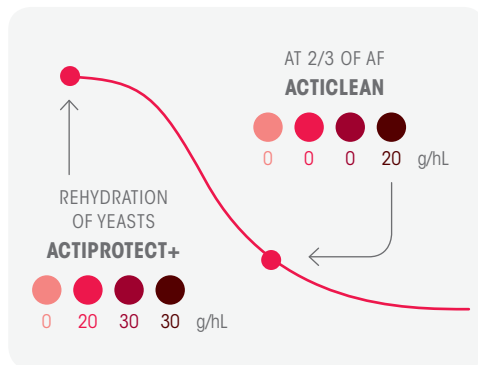
AGGRESSIVITY OF THE LIQUOR	
BASIC CONDITIONS	0
Vinification without oxygen	+ 1
Potential alcohol content > 13,5 % vol.	+ 1
Potential alcohol content > 14,5 % vol.	+ 2
Must turbidity < 80 NTU	+ 1
Temperature < 15°C or > 28°C	+ 1
pH < 3,2	+ 1
AF recurrently difficult	2
<span style="background-color: #f08080; border: 1px solid black; border-radius: 5px; padding: 2px;">0</span> <span style="background-color: #f06292; border: 1px solid black; border-radius: 5px; padding: 2px;">1</span> <span style="background-color: #e91e63; border: 1px solid black; border-radius: 5px; padding: 2px;">2</span> <span style="background-color: #c2185b; border: 1px solid black; border-radius: 5px; padding: 2px;">3 et +</span> <span style="margin-left: 10px;">← TOTAL</span>	

NITROGEN DEFICIENCIES FOR A YEAST WITH MODERATE REQUIREMENTS <sup>(1)</sup>				
POTENTIAL ALCOHOL CONTENT				
Assimilable nitrogen of must	< 12,5 % vol.	from 12,5 to 13,5 % vol.	from 13,5 to 14,5 % vol.	> 14,5 % vol.
> 200 mg/L	No nitrogen deficiency	Low deficiency	Moderate deficiency	
from 150 to 200 mg/L	No nitrogen deficiency	Low deficiency	Moderate deficiency	High deficiency
from 120 to 150 mg/L	Low deficiency	Moderate deficiency	High deficiency	Extreme deficiency
from 90 to 120 mg/L	High deficiency	High deficiency	Extreme deficiency	Extreme deficiency
< 90 mg/L	Extreme deficiency	Extreme deficiency	Maximum deficiency	Maximum deficiency

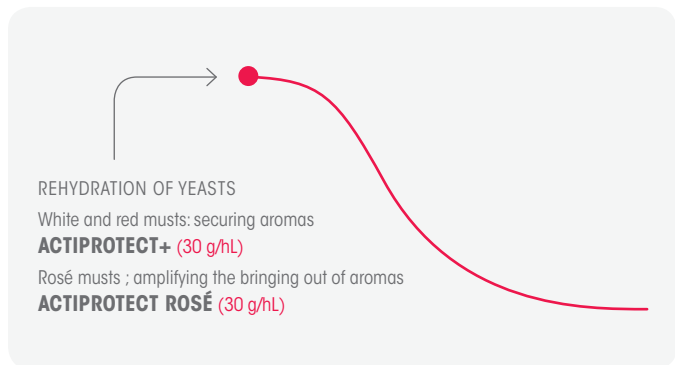
## FERMENTATION STRATEGIES TAILORED TO PRODUCT-OBJECTIVES

### ! FERMENTATION SAFETY

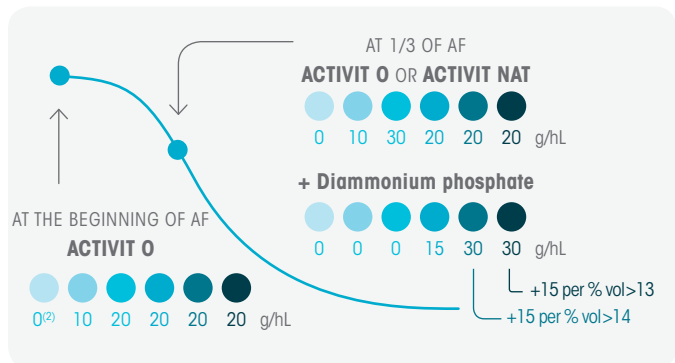
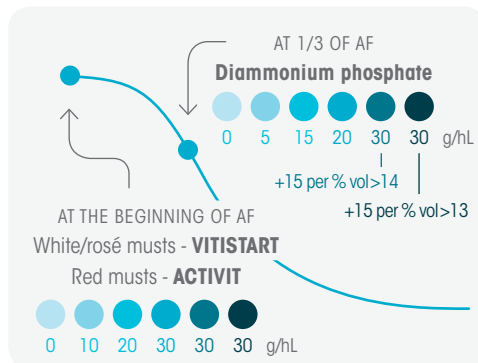
PROTECTION OF YEASTS AND DETOXIFICATION OF MUST



### 😊 OPTIMISATION AND EVALUATION OF AROMAS



YEAST NUTRITION



(1) For a yeast with low requirements, reduce deficiency by one level ; for a yeast with high requirements, increase by one level.



## PROTECTING YEASTS : Survival factors

### ACTIPROTECT +

1 kg

#### PREPARE YEASTS FOR ALCOHOLIC FERMENTATION.

ACTIPROTECT + is a natural product based on inactivated yeasts, extremely rich in sterols that strengthen the yeast's plasma membrane during rehydration.

In this way the yeast is better prepared to deal with the acidity of the must. It is less stressed during inoculation.

**Protection** : Specific yeast-derived sterols and polyunsaturated fatty acids = strengthening the external membrane and facilitated exchanges (sugars, etc.).

**Stimulation** : Minerals, vitamins = reactivation of the yeast's internal metabolism.

**Impact sur le vin** → Secure fermentation, particularly for clarified and/or sugar-rich musts,  
→ Shorter lag phase,  
→ Promotes the yeast's potential,  
→ Reduced production of malodorous compounds and volatile acidity.

**A yeast protected from rehydration is an unstressed yeast that will produce fewer compounds that could spoil the wine.**

### ACTIPROTECT ROSÉ

1 kg

#### YEAST PROTECTOR TO BRING OUT THE AROMAS OF ROSÉ WINES.

ACTIPROTECT ROSÉ is a 3rd-generation protector: obtained from a yeast strain selected for its exceptional sterol-producing capacity, autolysed using a dedicated process to concentrate these sterols and combined in an inactivated yeast particularly rich in minerals and vitamins.

This unique composition confers a capacity that was unmatched by second- and first-generation protectors to strengthen the membrane of active yeasts when being rehydrated. More resilient and functional, the plasma membrane optimises must-to-cell exchanges, in particular of thiolated aroma precursors.

The result is that the yeast is able to bring out the entire aromatic potential of the rosé must, in complete safety where fermentation is concerned, even in stress conditions (e.g. enhanced clarification, low temperature, vinification in reducing conditions).

NOUVEAUTE

## MEDIA AND DETOXICANTS

### ACTICLEAN

1 kg

5 kg

#### DETOXIFYING INACTIVATED YEASTS AND CELLULOSE MEDIUM, TO PREVENT STUCK FERMENTATIONS.

ACTICLEAN prevents or limits sluggish and stuck fermentations. It is used in difficult conditions (high alcohol, low turbidity, extreme temperatures), at two-thirds of the AF, to gradually absorb the toxins released into the liquor by stressed yeasts.

### CELLCLEAN

500 g

#### SPECIFIC YEAST CELL-WALL FRAGMENTS WITH HIGH DETOXIFYING POWER, TO DEAL WITH STUCK FERMENTATIONS.

CELLCLEAN removes numerous inhibitory molecules from the AF, which are concentrated in the must when the AF is stuck. It is one of the essential tools for preparing stuck wine before restarting the fermentation.

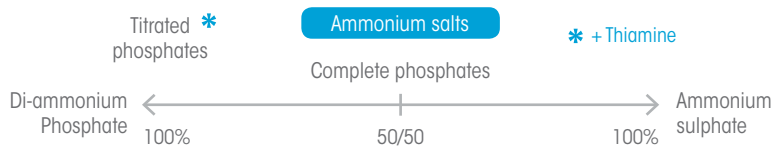
# NUTRITION : GROWTH FACTORS

## AMMONIUM SALTS

Ammonium salts are the nitrogen source most rapidly assimilated by yeasts. They are added preferably during the first 1/3 of the alcoholic fermentation and particularly when nitrogen deficiencies are significant, however always avoiding additions during the yeasts' growth phase (start of AF).

Ammonium salts enable the yeast to perform :

- Biosynthesis of yeast proteins needed for cell multiplication,
- Biosynthesis of cell wall proteins essential for sugar transport.



### EXPERT ADVICE

Ammonium salts are assimilated very rapidly by yeasts, which causes a yeast growth spike. This phenomenon can make wines dry and increase sulphurous flavours. It is often preferable to use complex nutrients.

## AMMONIUM SULPHATE

1 kg 5 kg 25 kg

**FOR SIGNIFICANT NITROGEN DEFICIENCIES.**

Adding AMMONIUM SULPHATE provides the must with the nitrogen needed for the yeasts to multiply and to keep them active throughout the fermentation. Should preferably be used during the first third of the AF, as a supplement to a more complex nutrient.

## DI-AMMONIUM PHOSPHATE

1 kg 5 kg 25 kg

**COMPLETE NUTRITION FOR A MAJOR DEFICIENCY.**

DI-AMMONIUM PHOSPHATE is an ammoniacal nitrogen supplement for liquors poor in assimilable nitrogen. It is used preferably in the first third of the fermentation, when the yeasts are no longer in the growth phase, in cases where the complex or organic nutrient added is insufficient to mitigate the deficiency level. Recommended ammoniacal nitrogen source to limit the production of SO<sub>2</sub> for certain yeasts.

## PHOSPHATES COMPLETS

1 kg 5 kg

**COMBINED AMMONIACAL NITROGEN SOURCE.**

Made up of di-ammonium phosphate and ammonium sulphate, complete phosphates provide yeasts additional nitrogenous nutrition. To be used for significant deficiencies in the first third of the alcoholic fermentation, in cases where you want to balance additions between phosphate and sulphate.

## PHOSPHATES TITRES

1 kg 5 kg

**TO PROMOTE SIGNIFICANT YEAST BIOMASS.**

A mixture based on di-ammonium phosphate and thiamine, titrated phosphates combine a sulphate-free nitrogen source with an essential vitamin for the growth phase. To be used when you want to obtain a high yeast biomass, with a more limited risk of associated sulphurous deviations. The absence of sulphate reduced the possibilities of sulphite production by certain yeasts.

TITRATED PHOSPHATES are particularly suitable for the bubble-forming phase.

## THIAMINE

10 g 1 kg

### TO FACILITATE YEAST GROWTH.

THIAMINE (vitamin B1) acts on the growth of yeasts, increasing their population and prolonging their activity. It does this by being involved in carbohydrate metabolism at the point where ketonic acids are decarboxylated to aldehydes.

## FOSFOVIT

1 kg 15 kg

### FOSTERING YEAST MULTIPLICATION IN THE VINIFICATION PROCESS.

With a mixture comprising ammonium phosphate as sole nitrogen source, as well as thiamine, FOSFOVIT fosters strong yeast multiplication without the drawbacks associated with the use of ammonium sulphate (a potential source of SO<sub>2</sub> unusable in organic vinification).

## COMPLEX NUTRIENTS

## ACTIVIT

1 kg 5 kg 25 kg

### A COMPLEX, NITROGEN-RICH NUTRIENT TO MANAGE DEFICIENCIES.

ACTIVIT contains di-ammonium phosphate, inactivated yeast and thiamine. It therefore provides assimilable nitrogen in amine and ammoniacal form, vitamins and minerals, and ensures uniform development of yeasts when there is a pronounced deficiency.

## VITISTART

1 kg

### COMPLEX NITROGENOUS NUTRIENT AND MEDIUM FOR YEASTS.

A good compromise between a combined nitrogen source and cellulose source, VITISTART is particularly well-suited to the conditions for white and rosé musts (temperatures and/or low turbidity).

## 100% ORGANIC NUTRIENTS

## ACTIVIT NAT

1 kg 5 kg 20 kg

### 100% ORGANIC SOURCE OF BIOAVAILABLE AMINO ACIDS AND VITAMINS.

ACTIVIT NAT is a recommended nutrient to avoid sulphurous odours, facilitate alcoholic fermentation and bring out varietal thiols.

## ACTIVIT O

1 kg 5 kg

### 100% ORGANIC COMPLETE NUTRIENT FOR HIGH QUALITY FERMENTATION.

ACTIVIT O promotes aromatic expression :

- fermented, by directly supplying amino acids as sources of fruity and floral esters,
- varietal, by avoiding inhibition of fruity thiols being brought out due to excess ammonium salts.

In addition, ACTIVIT O limits production of SO<sub>2</sub>, sometimes observed with use of ammonium salts, and improves the effectiveness of sulphiting because it is rich in thiamine, which limits combination phenomena.

### EXPERT ADVICE

Activit Nat and Activit O very effectively prevent the appearance of reductive notes by avoiding yeast overpopulation phenomena.

## SPECIFIC NUTRIENTS FOR SPARKLING WINES

### ↘ HYDRA PC

1 kg

HYDRA PC optimises rehydration of yeasts by strengthening their plasma membrane.

With HYDRA PC, yeasts are more resistant to the difficult conditions they encounter when inoculating the Starter.

(SO<sub>2</sub>, alcohol, pH, sugars, etc.).

Strengthening the membrane allows the yeasts to be less stressed during inoculation of the tirage wine and more resistant to the increase in alcohol content and the carbon dioxide gas concentration during bubble-forming.

### ↘ EXTRA PM

1 kg

**OPTIMISES BUBBLE FORMATION, LIMITS REDUCTION-TYPE AROMATIC EXCESSES AND PRESERVES AROMATIC FRESHNESS.**

EXTRA PM is a specific fermentation activator for bubble-forming.

This activator :

- ensures optimal yeast activity during 'bubble-forming', traditional, Charmat, ancestral, etc.
- preserves membrane exchange abilities, especially for continuous inoculation,
- ensures an ideal physiological condition of the yeast, especially in the terminal phase (after 2.5 kg pressure).

## MALOLACTIC FERMENTATION ACTIVATORS

### ↘ NUTRIFLORE FML

1 kg

**OPTIMISED NUTRIENT FOR ACCELERATING MALOLACTIC FERMENTATION.**

NUTRIFLORE FML provides not just the necessary elements for successful multiplication of bacteria in liquor (amino-acids, minerals, vitamins) but also and above all specific peptides which enhance resistance to acidity in wine. NUTRIFLORE FML is particularly effective in wines with low pH (<3.4).

### ↘ NUTRIFLORE PDC

250 g

**DEDICATED NUTRIENT FOR OPTIMISING THE MALOLACTIC STARTER PROCESS.**

NUTRIFLORE PDC activates bacterial enzymatic systems by contributing dedicated nutrients to liquor : specific vitamins, minerals and amino-acids, which unquestionably accelerate the starter process.

To adapt a sustainable and efficient nutrient strategy, it is effectively better to dose most nitrogen that is to be assimilated by the yeast. On the one hand, this makes it possible to avoid stuck fermentations due to deficiencies and, on the other, overdose of nitrogen which would jeopardise the survival of the yeast, the malolactic fermentation and the sensory quality of wines (sulphurous odours).

«Does nitrogen richness need to be known before pitching?»

«Do indigenous yeasts have the same needs in nutrients as selected yeasts?»

«Why do you recommend two inputs of nitrogen?»

Yeasts do not all have the same needs in nitrogen. IOC has characterised the nitrogen needs of each of its speciality yeasts, making it possible to sustain nutrient contributions. An indigenous yeast can have very variable, unknown needs, which, a priori, are difficult to assess. Unforeseeable variability is regularly responsible for AF stoppages or sensory deviations, as the winemaker cannot choose the suitable nutrient.

«What form of ammoniacal nitrogen - phosphate or sulphate salt?»

Some yeasts -but not all- would have increased SO<sub>2</sub> production if ammonium sulphate were added.

For this reason, we would tend to recommend diammonium phosphate if an addition of ammoniacal nitrogen is necessary.

Generally speaking, it is more efficient to provide nitrogen input after the growth phase, at one third of AF. Often, however, people prefer to divide this input between one third and the beginning of AF for the following reasons:

- to avoid a peak of yeast activity and temperature at the third of AF, due to too much added nitrogen;
- to provide nutrients that are of 100% yeast origin or complex at the beginning of AF to nourish the yeast in the vitamins (especially thiamine) and minerals it needs at that time;
- to foster aromatic syntheses through amino nitrogen provided at the beginning of AF.

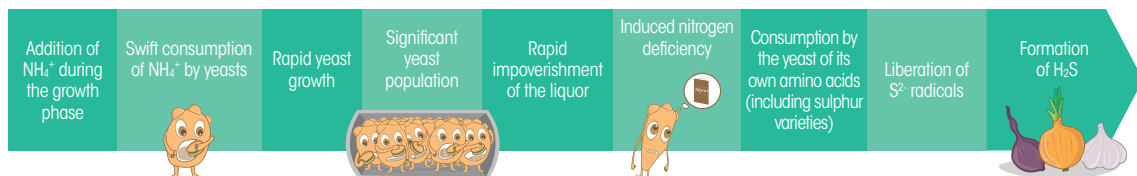
In all cases, you must avoid adding ammoniacal nitrogen on its own at the beginning of AF.

«Why not just use nitrogen in the form of ammonium salts?»

A nutrient made up of just ammoniacal nitrogen and thiamine is liable to create yeast overpopulation, jeopardising not just the physiological status of each yeast, but also possibly causing induced deficiency in nitrogen. Complex nutrients ACTIVIT and VITISTART are made up of a balanced ratio of ammoniacal nitrogen and amino nitrogen.

They also contain micronutrients (vitamins and minerals). All these elements make it possible to avoid nutritional unbalance which could lead to kinetic and sensory difficulties. 100% organic-based nutrients ACTIVIT O and ACTIVIT NAT go even further in regulating growth and yeast metabolism, in particular by strongly limiting the production of sulphurous odours. Moreover, these foster the bringing out of aromas, in particular of varietal thiols, whereas excessive ammonium could inhibit such.

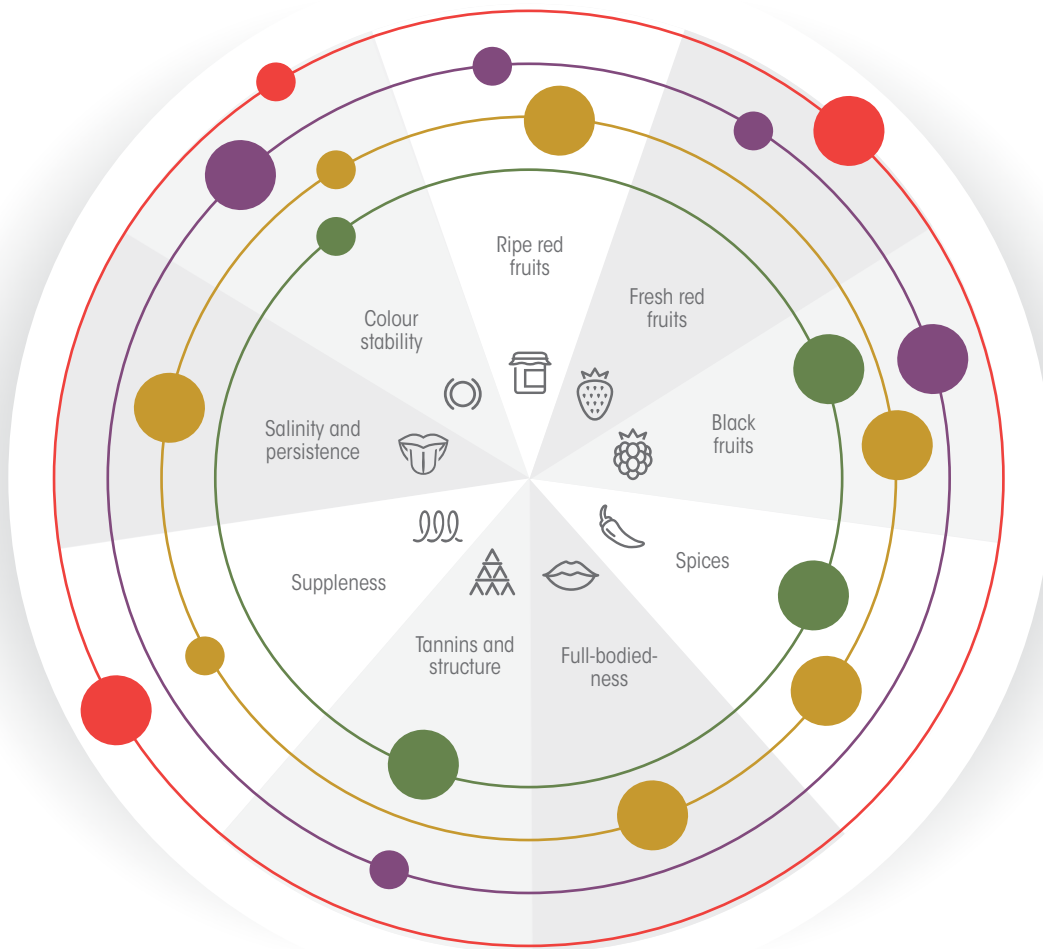
Impact of an addition of ammoniacal nitrogen (NH<sub>4</sub><sup>+</sup>) during the yeast growth phase





# ENOLOGICAL YEASTS

## YEASTS FOR RED WINES



### IOC R 9002

Spices, black fruit and structure of wines for laying down

### IOC Révélation Terroir

Finesse, fruitiness and colour of red wines

### IOC R 9008

Body, aromatic maturity and longevity of red wines

### IOC Primrouge R 9001

Benchmark for early, primeur red wines

## IOC PRIMROUGE - R 9001

500 g

### THE STANDARD FOR VINIFICATION OF EARLY RED WINES.

The IOC PRIMROUGE R9001 strain is used to obtain rounded, aromatic wines, marked by red fruits (strawberry, raspberry) and candy. The wines obtained are characterised by better colour, a clean nose, very fruity and a supple full-bodiedness.

It is mainly suitable for making flattering, rounded wines, from gamay, merlot or syrah, and is ideally suited to liquidphase vinification of red musts.

## IOC R 9002

500 g

### SPICES, BLACK FRUITS AND WOODINESS.

The IOC R 9002 strain is used to make structured, woody wines for laying down. It brings out aromas blending spices with black fruits. It improves colour fixing phenomena. It also shows good tolerance for high alcohol contents.

## IOC R 9008

500 g

### BODY, RIPE FRUITS, SALINITY AND LONGEVITY.

The IOC R 9008 yeast has been selected to develop complex ripe fruit aromas and full-bodiedness in structured red wines from concentrated fully-ripened grapes.

In the difficult conditions of musts from hot wine-growing regions, it helps to limit the perception of dryness and bitterness, while intensifying the hints of minerals and salinity and the length.

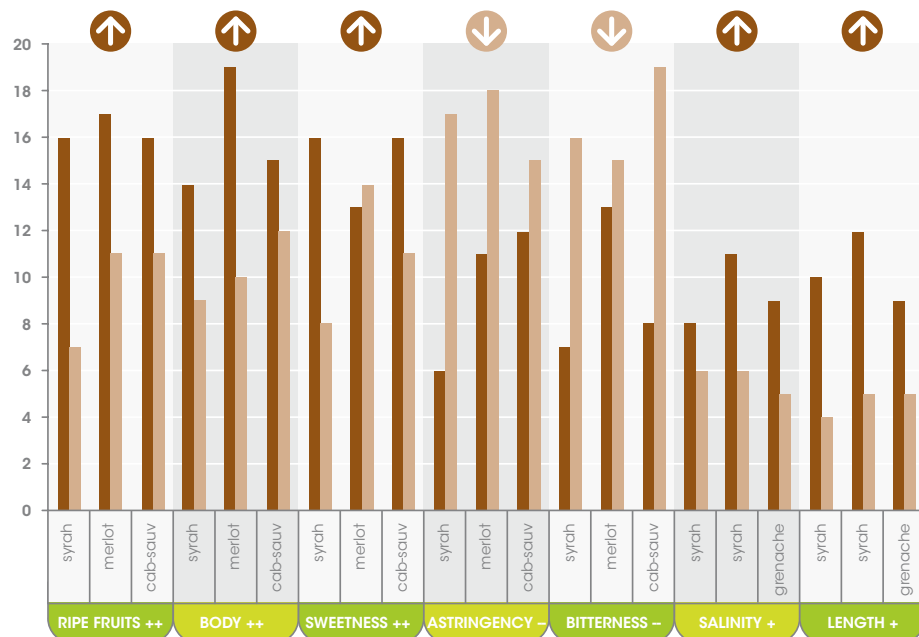
It reduces the risks of herbaceous aromas and aggressive tannic sensations on sensitive grape varieties : merlot, cabernet-sauvignon, cabernet franc, carménère, malbec, grenache, etc.

#### Sensory analysis on test wines (2009)

Panel of professional tasters from the wine growing/making sector.

Number of tasters choosing the wine.

- IOC R 9008
- Reference yeast



## IOC RÉVÉLATION TERROIR

500 g

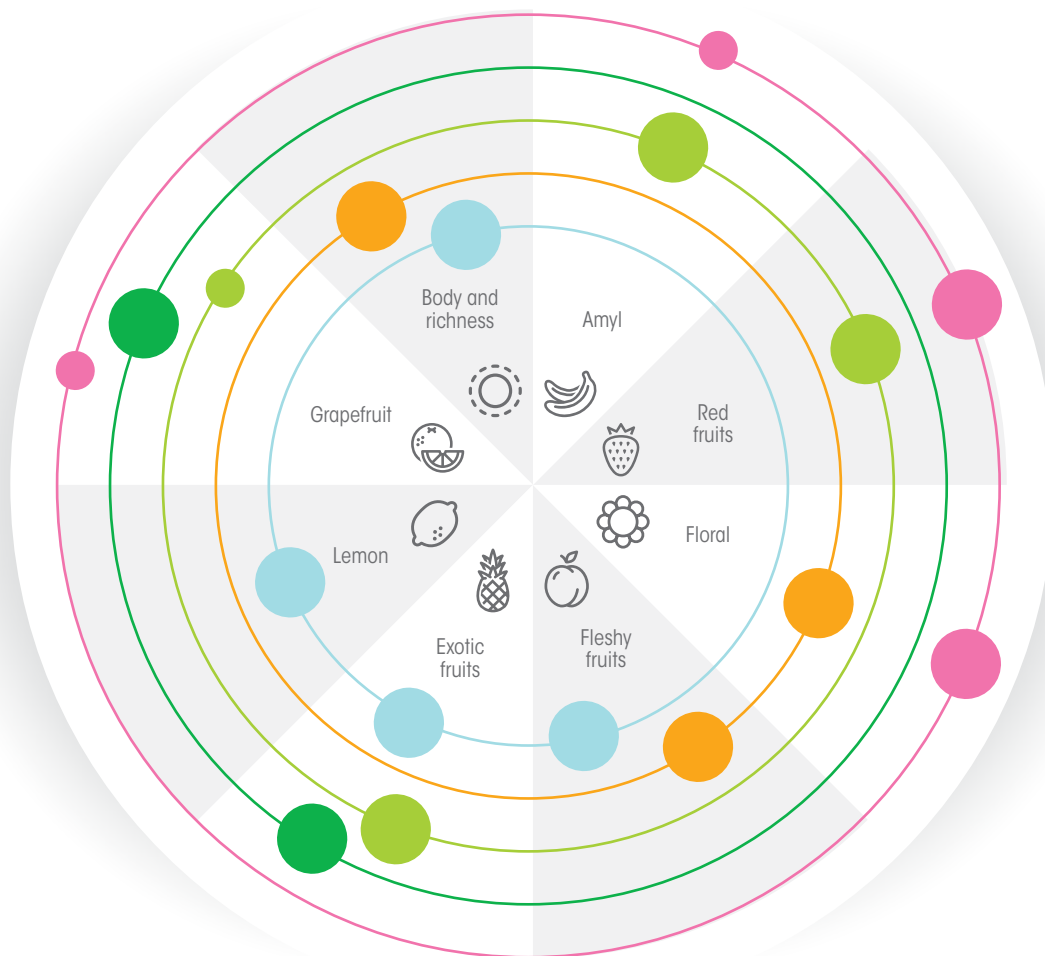
### FINESSE, FRUITINESS AND COLOUR.

IOC REVELATION TERROIR has been selected on pinot noir for its excellent ability to preserve colour. It increases the colouring intensity by 5% to 15% in comparison to numerous selected or indigenous yeasts.

Its essential sensory contribution is to bring out varietal fruity aromas (raspberry, gooseberry, blackberry) of numerous red grape varieties, with a good balance between the freshness of the fruit and its maturity, on finesse and elegance.

IOC Revelation Terroir provides very good results in terms of fruity expression on pinot noir, gamay, grenache noir, merlot, carignan and tempranillo.

# YEASTS FOR WHITE AND ROSÉ WINES



## IOC Twice

Perfect balance between full-bodiedness and final freshness of white wines

## IOC B 2000

Freshness and aromatic intensity of white and rosé wines

## IOC Fresh Rosé

Floral and varietal expression of rosé wines

## IOC B 3000

Fleshy fruits, floral notes and full-bodiedness of white wines

## IOC Révélation Thiols

Full expression of fruity thiols on white or rosé musts

## IOC RÉVÉLATION THIOLS

500 g

### FULL EXPRESSION OF FRUITY THIOLS.

IOC REVELATION THIOLS offers a very good percentage conversion of precursors into varietal thiols and expresses superior aromatic potential to that given by most yeasts, on citrus and passion fruit notes, with limited plant notes.

This strain is specific to white and rosé wines based on the expression of varietal thiols, aromatic compounds responsible for the varietal notes characteristic of numerous grape varieties, such as sauvignon blanc, colombard, picpoul, melon de Bourgogne, muscat, syrah, gamay, pinot noir, cabernet varieties, merlot, tempranillo, negrette, etc.

## KIT IMPACKTHIOLS

KIT 4 x 500 g of IOC Révélation Thiols + 1 x 5 kg of ProThiols

### THE COMBINED SOLUTION FOR RELEASING THE FRUITY THIOLATED POTENTIAL OF YOUR WINES.

#### → A YEAST WITH CHARACTER : IOC RÉVÉLATION THIOLS

Numerous experiments have given us in-depth knowledge of this yeast and the conditions (turbidity and pH of the must, fermentation temperature, nutritional environment) which best nurture the expression of its potential and that of your grapes.

#### → BRINGING OUT & PROTECTING THIOLS : PROTHIOLS

As nutrient and anti-oxidant substances, ProThiols will help bring out thiols and the production of glutathione of IOC Révélation Thiols.

#### → A SIMPLE PROTOCOL

Simple yeasting and addition of ProThiols immediately afterwards will release the thiolated potential of your musts and ensure their lasting effect, preserving aromas up to the bottling phase.



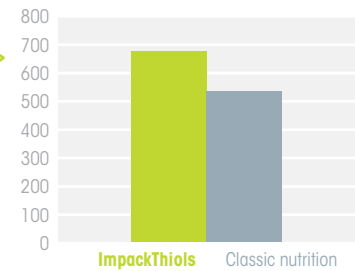
#### Composition of wines in total varietal thiols (olfactory units)

*Sauvignon, New Zealand 2014*  
Sum of olfactory units (concentrations)  
Traditional nutrition



#### Composition of wines in total varietal thiols (concentrations)

*Sauvignon, South Africa 2014*  
Sum of concentrations (mg/L)



## IOC B 2000

500 g

10 kg

### FRESHNESS AND AROMATIC INTENSITY.

The IOC B 2000 strain facilitates the aromatic fruity expression of white and rosé musts. It is suitable for making fresh, aromatic wines. It is used to obtain different aromatic profiles depending on the fermentation temperature and so combine fermentation and varietal notes harmoniously.

IOC B 2000 is used or vinification of white wines on which aromatic expression is essential.

It is all the more interesting on grape varieties poor in varietal precursors, but also rosés from syrah, grenache, merlot and cabernet. On rosé wines, IOC B 2000 expresses exotic fruit and citrus aromas.

## IOC TWICE

500 g

### THE PERFECT BALANCE BETWEEN FULL-BODIEDNESS AND FINAL FRESHNESS.

IOC TwICE yeast has been selected by the IFV de Beaune as the most suitable for making fresh, complex and balanced Chardonnay wines. Tests carried out highlight its suitability for enhancing the fresh aromas of citrus (lemon in particular), peach, apricot and flowers.

In a remarkable way, IOC TwICE gives unrivaled fullness and roundness when attacking the palate and in mid-palate, followed by final freshness for perfect balance.

Its excellent suitability for mutage also makes it ideal for mellow or syrupy wines.

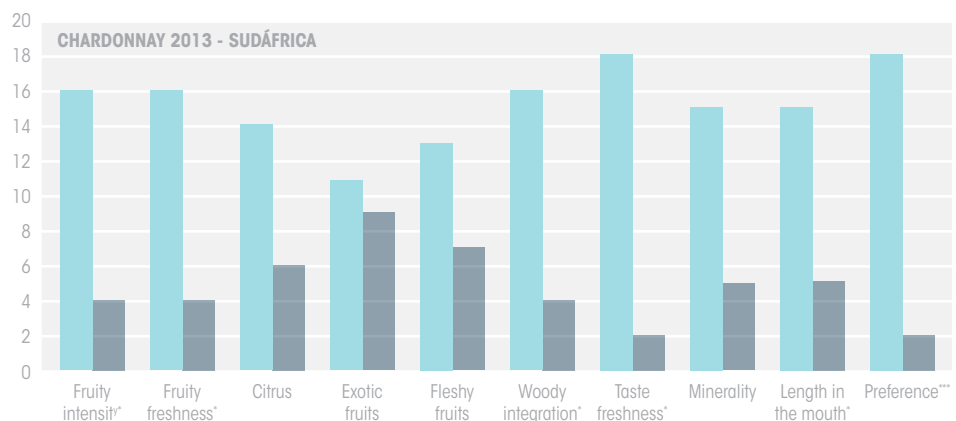


#### Sensorial analysis pair testing - 20 professional tasters - difference :

\* Significant (5%)  
\*\* Very significant (1%)  
\*\*\* Highly significant (0.1%)

Number of tasters choosing the wine for the descriptor in question

● IOC TwICE  
● Chardonnay benchmark yeast



## IOC B 3000

500 g

### YELLOW FRUITS, FLOWERS AND FULL-BODIEDNESS.

It brings out the intensity and aromatic complexity of wines, on yellow fruit and flower notes, while also contributing to the full-bodiedness and roundness.

Its good fermentation capabilities make it an ally of choice for preventing the risks of sulphurous odours called 'reduction' appearing. Ideal elevelage yeast, for making elegant, persistent and rounded wines.

## IOC FRESH ROSÉ

500 g

### FLORAL AND VARIETAL EXPRESSION OF ROSÉ WINES.

The IOC FRESH ROSÉ strain is used to highlight an aromatic intensity on floral, citrus and spicy notes in rosé wines. The contribution to taste is also essential since it contributes to reducing aggressive sensations such as acidity, dryness and bitterness.

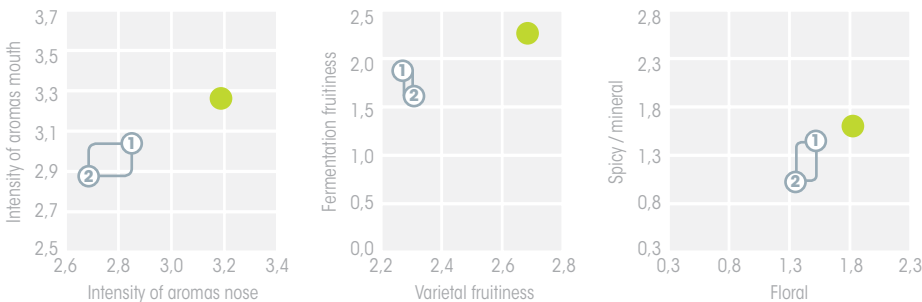
IOC FRESH ROSÉ is particularly well suited to vinification of complex, rounded rosé wines, and particularly for varietal expression of grape varieties such as syrah and cabernet-sauvignon.

#### EXPERT OPINIONS

In tasting, this strain mainly produces heightened aromatic intensity with fruity notes, principally for varietals but also fermentations. The aroma also has floral notes which increase the complexity obtained even more.

Globally, the level of preference in early tasting is enhanced with this strain.

**Jean-Christophe Crachereau**, CEnological practices and products\* Experiments Manager, Gironde Chamber of Agriculture.



Experiments carried out by the Gironde Chamber of Agriculture, on cabernet-sauvignon rosé : more fruitiness (plant and fermentation) / floral / spicy

● IOC Fresh Rosé ① ② Controls 1 and 2

## IOC BE THIOLS

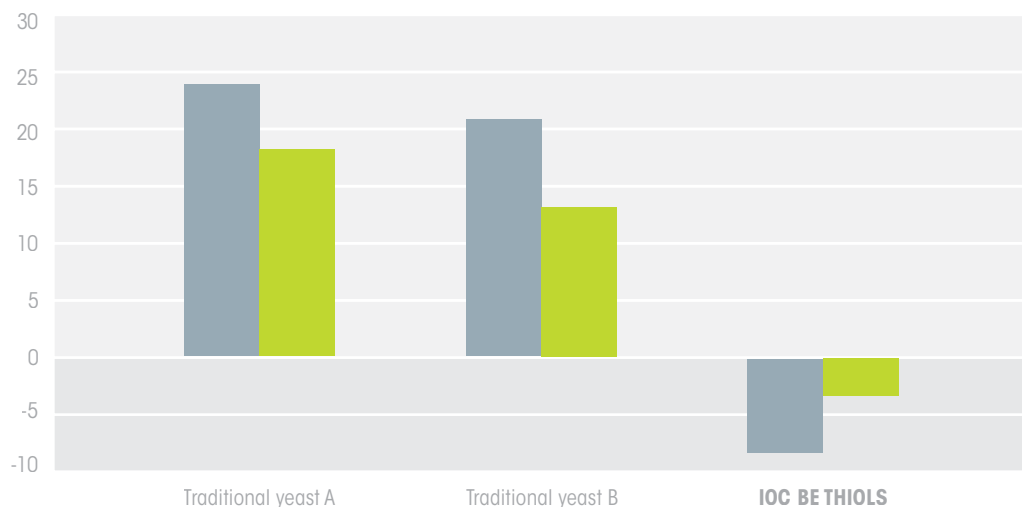
500 g

### THE NATURAL TOOL FOR OBTAINING THIOLATED WINES WITH LOW SULPHITE CONTENT.

Derived from an innovative selection process assisted by markers, IOC BE THIOLS combines strong expression of fruity thiols with the inability to produce SO<sub>2</sub> and ethanal excesses. It therefore constitutes a remarkable lever for wine-makers who want to reduce the amount of sulphites in their white or rosé wines. In addition, IOC BE THIOLS cannot produce H<sub>2</sub>S, which produces negative sulphurous odours.

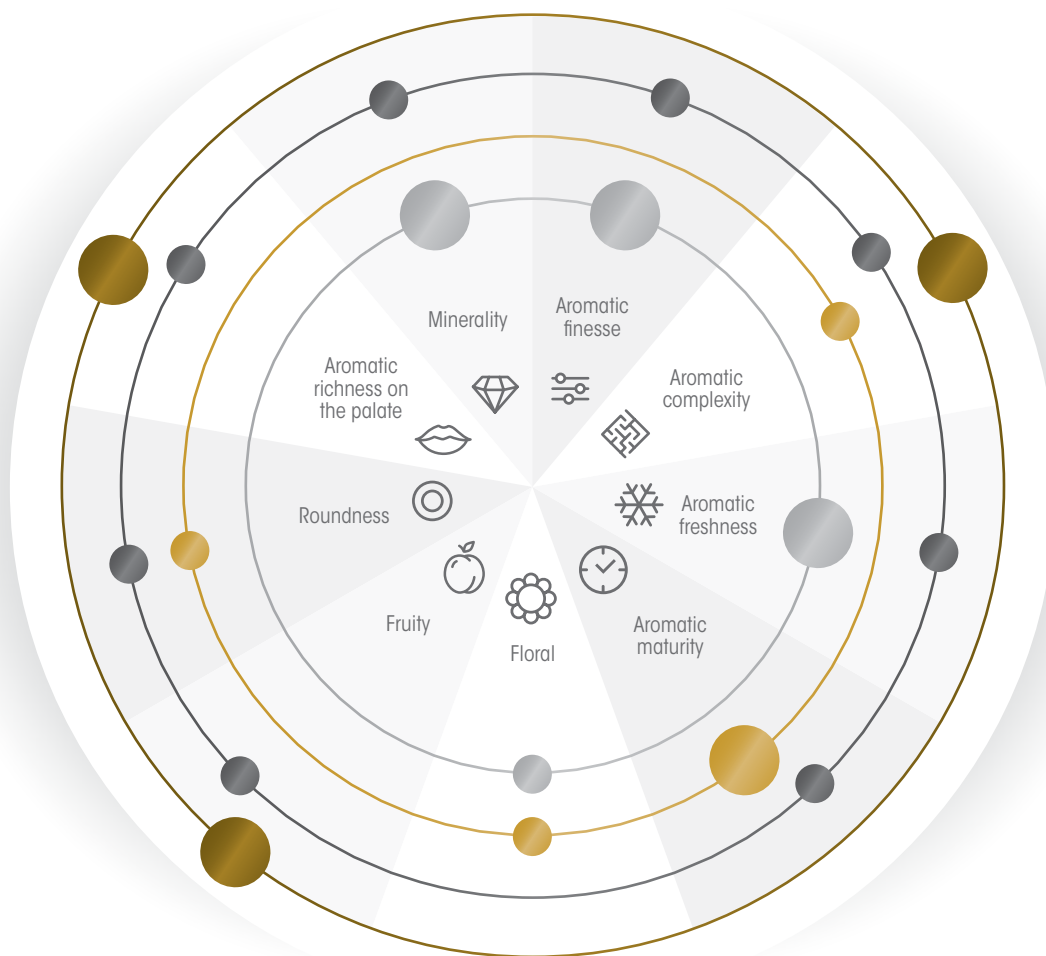
Concentrations in total SO<sub>2</sub>: differences between wine and must (mg/L)

- Grenache rosé (initial sulphiting operation 30 mg/L - pH 3.30 TAV 14% vol)
- Sauvignon white (initial sulphiting operation 50 mg/L pH 3.30 - TAV 12.25% vol)





# YEASTS FOR SPARKLING WINES



**IOC 18-2007**  
World benchmark  
for elegance

**IOC Divine**  
complexity and  
full-bodiedness

**IOC Fizz**  
Efficient bubble  
formation

**IOC Fizz+**  
Bringing out fruity  
notes

## IOC 18-2007

500 g

10 kg

### THE REFERENCE FOR PRISE DE MOUSSE (SECONDARY FERMENTATION).

A strain selected by the Institut OEnologique de Champagne from the best strains of the great Champagne vineyards. Excellent adaptation to the most difficult liquors: low pH, low temperature, high alcohol content. Rapidly established, complete breakdown of sugars and low nutrient requirements. It is ideally suited to making wines by the traditional method and closed-tank method. It is also used to deal with stuck fermentations and in this case requires the preparation of a starter culture.

## IOG DIVINE

500 g

### FAST AUTOLYSIS YEAST FOR THE TRADITIONAL METHOD.

The IOG DIVINE yeast is suited for making sparkling wines produced using the traditional method. It has been selected for the quality of its prise de mousse (secondary fermentation), but also for its autolytic capabilities, which give the wine exceptional richness and full-bodiedness. It is used to make very aromatically-complex and particularly long sparkling wines.

## IOG FIZZ

500 g

### FOR THE CLOSED-TANK METHOD.

The IOG FIZZ yeast has been selected for vinification of sparkling wines using the closed-tank method. Its ability to adapt to difficult liquors enables it to provide rapid and complete prise de mousse (secondary fermentation).

## IOG FIZZ+

500 g

### AROMATIC YEAST BRINGING OUT FRUITY NOTES FOR THE CLOSED-TANK METHOD.

The IOG FIZZ+ yeast has been selected to meet the expectations of sparkling wine production using the Charmat method (closed-tank). It not only has very good fermentation characteristics for prise de mousse (secondary fermentation) as in the first fermentation, but also contributes to the fruity intensity of these wines.

## YEASTS FOR WHITE, ROSÉ AND RED WINES

## IOG BIO

500 g

### CERTIFIED ORGANIC YEAST, ENSURING RESPECT FOR VARIETIES AND TERROIRS.

IOG BIO has been selected to preserve wine typicity. It does not act on one aromatic fraction to the detriment of another, and allows the variety to express itself fully, without so-called "technological" aromas.

Derived from an exceptional organic production process which meets all the conditions required by European regulations, it allows wide flexibility of use, on all colours of still wines, as well as bubble formation.



## IOG BY

500 g

10 kg

### FOR REGULAR AND COMPLETE FERMENTATION OF LIGHT WHITE, ROSÉ AND RED WINES.

This strain is very resistant to high alcohol contents. It performs a regular and complete fermentation without adding any particular aromatic character to the wine.

## IOG HARMONIE

500 g

### FOR FINE, STRONG WINES.

It respects the aromatic characteristics of grape varieties and regions. In every case it produces very little volatile acidity. It is used to obtain white and rosé wines with great finesse and red wines with very strong aromas.

## ↘ IOC 11-1002

500 g

### FOR REGULAR AND COMPLETE FERMENTATION OF LIGHT WHITE, ROSÉ AND RED WINES.

This strain is very resistant to high alcohol contents. It performs a regular and complete fermentation without adding any particular aromatic character to the wine.

## ↘ IOC 11-1002 K

500 g

### FOR REGULAR AND COMPLETE FERMENTATION OF LIGHT WHITE, ROSÉ AND RED WINES.

This strain is used to obtain fine wines.

Its killer character helps it get established and gets the fermentation started quickly.

It provides regular and complete fermentations and withstands high alcohol contents well.

	Type of wine	Character Killer	Alcohol tolerance	Nitrogen requirement	Production of volatile acidity	Production of Glycerol	Fermentation speed
<b>IOC B 3000</b>	<b>White</b>	Sensitive	14 %	moderate	low	high	slow
<b>IOC TwICE</b>	<b>White</b>	Killer	15,5 %	high	low to medium	nd	slow
<b>IOC B 2000</b>	<b>White / Rosé</b>	Killer	14 %	low	very low	low	fast
<b>IOC Rév.Thiols</b>	<b>White / Rosé</b>	Killer	15 %	moderate	low	low	very fast
<b>IOC Fresh Rosé</b>	<b>Rosé</b>	Killer	16 %	moderate	low	low	fast
<b>IOC Primrouge</b>	<b>Red</b>	Sensitive	14 %	high	very low	high	moderate
<b>IOC R 9002</b>	<b>Red</b>	Killer	15 %	high	very low	moderate	moderate
<b>IOC R 9008</b>	<b>Red</b>	Sensitive	16 %	low	low	high	fast
<b>IOC Rév.Terroir</b>	<b>Red</b>	Killer	15 %	high	low	moderate	moderate
<b>IOC 18-2007</b>	<b>Traditional method</b>	Killer	15 % minimim	low	low	moderate	very fast
<b>IOC Divine</b>	<b>Traditional method</b>	Sensitive	14 % minimim	low	moderate	high	moderate
<b>IOC Fizz</b>	<b>Charmat method</b>	Killer	18 %	low	low	moderate	fast
<b>IOC Fizz+</b>	<b>Charmat method</b>	Killer	14 % minimim	low	low to medium	moderate	very fast

# REHYDRATING YEASTS

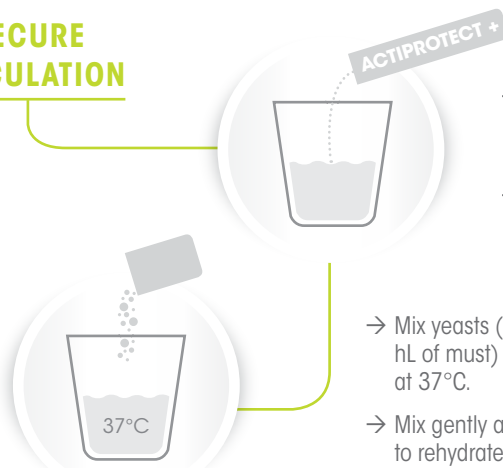
## TRADITIONAL INOCULATION



Water (10x the weight of yeast)

## SECURE INOCULATION

20 min



Water + ACTIPROTECT+

- Mix ACTIPROTECT + (30 g/hL of must) in water (20 times the weight of yeast) at 43°C
- Stir well to avoid lumps.

- Mix yeasts (20 to 40 g/hL of must) in water at 37°C.
- Mix gently and leave to rehydrate.

**NB :** At this stage, it is normal to observe a little effervescence



Rehydration starter culture

- Acclimatise the starter culture at the temperature by adding must progressively.
- Objective: the difference between the temperature of the starter culture and the must should not exceed 10°C.



- Incorporate the starter culture in the must, mixing by pumping over.

**O**n the contrary, the qualities that yeasts can confer on wines essentially depends on the intrinsic potential of the grape; yeasts just bring it out. The results for a given yeast will therefore be different from one must to another because they are linked to this potential.

**"Doesn't using selected strains lead to standardising the taste of my wines?"**

**C**ertain musts may be heavily contaminated with wild-type yeasts and this initial population jeopardises not only the proper establishment of active dry yeast but also the quality of the wine. For this reason, it is essential to add yeast as early as possible, from first vatting for reds that are filled in several steps, after settling for whites and rosés. This includes cold pre-fermentation, where risks remain high. Fractioned yeasting trials (5 g/hL at vatting then 15 g/hL after cold pre-fermentation maceration) show good results in cases where it is difficult to maintain a low temperature.

**"As a general rule, what is the right temperature for must when inoculating to ensure optimum establishment?"**

**"When should yeasts be added to the must? Can I wait before inoculating in the pre-fermentation maceration?"**

Pre-fermentation bioprotection of musts and grapes by non-Saccharomyces yeasts can also be considered today to act even earlier without any untimely start-up in fermentation.

**Y**ou can inoculate without risk when the must temperature is above 8°C. Using the yeast protector is recommended, but what is essential above all is to acclimatise yeasts to the vat temperature by gradually adding must when rehydrating the starter culture.

**"Is it worthwhile inoculating the same must with different yeasts?"**

**T**he suitable yeast dose depends on the conditions in the must. We recommend a minimum dose of 20 g/hL, which can be increased to 25-30 g/hL if the grapes are over-ripe and/or are microbially altered. A study has also shown that in 25% of cases, yeasts added at only 10 g/hL of juice did not get established.

**«What is the right yeast dose?»**

**I**t may be, particularly to take advantage of complementary specific activities. Nevertheless, to ensure a reliable result and not create inappropriate competition between yeasts, it is better to carry out a complete study into the dynamics of the different populations present. Many associations are actually antagonistic and result in the AF becoming stuck.



# YEAST PRODUCTS

## IN FERMENTATION

### GLUTAROM

1 kg

#### EARLY AROMATIC PRESERVATION OF WHITE AND ROSÉ WINES.

GLUTAROM is made up of inactivated yeasts that are naturally rich in glutathione.

Its anti-oxidant properties help GLUTAROM prevent defective aromatic ageing of white wines and the loss of fruity aromas in young wines. It also enables reserve wines to be better preserved.

As a natural source of polysaccharides, it improves the body of white wines. Added at the beginning of fermentation, it fosters the production of glutathione by yeasts.

## ELEVAGE

### SPHÈRE BLANC

1 kg

#### RICHNESS, ROUNDNESS AND SENSORY STABILISATION IN ELEVAGE OF WHITE WINES.

A true selected lees, SPHÈRE BLANC rapidly amplifies perceptions of roundness and richness in white wines. This is particularly useful when the quality of fresh lees is insufficient to envisage this type of result, as well as when lees cause contamination or sulphurous odours. SPHÈRE BLANC makes an essential contribution to long-term stabilisation of taste and aromatic sensations, through interactions between polysaccharides and wine aromas.

### SPHÈRE EXPRESS

1 kg

#### BODY AND SWEETNESS FOR VERY SHORT ELEVAGES.

Particularly rich in free manno-proteins, SPHÈRE EXPRESS produces very quick action (1 to 8 weeks) on body, sweetness and length in the mouth of white, rosé or red wines. It is a sure, qualitative alternative to elevages where time is of the essence.

NEW

NEW

## SPHÈRE ROUGE

1 kg

### BODY, STRUCTURE AND PERSISTANCE.

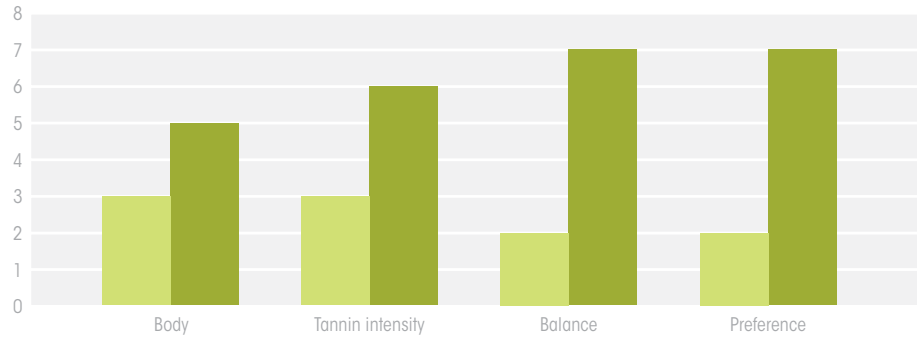
A formulation of inactivated yeasts specific to red wines and their phenolic structure, SPHÈRE ROUGE is the fruit of our knowledge of the phenomena of body and roundness. SPHÈRE ROUGE contributes to full-bodiedness while heightening the quality of tannin structure and respecting aromas and taste freshness of wines.

#### Sphère rouge: body and structural balance

*Trial with 20 g/hL on cabernet sauvignon, médoc - 9 tasters*

Number of tasters giving better classification to wine

● Sphère Rouge ● Control



## PRE-BOTTLING FINISHING

### ULTIMA SOFT

500 g

1 kg

#### ROUNDNESS AND AROMATIC PERSISTANCE..

UltiMA Soft is a 100% soluble preparation of selected, instantaneously-acting manno-proteins, that in particular helps improve the balance of wines and increase length in the mouth and sweetness. UltiMA Soft provides better integration of the perceived acidity.



### ULTIMA FRESH

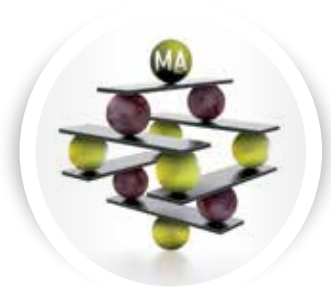
500 g

1 kg

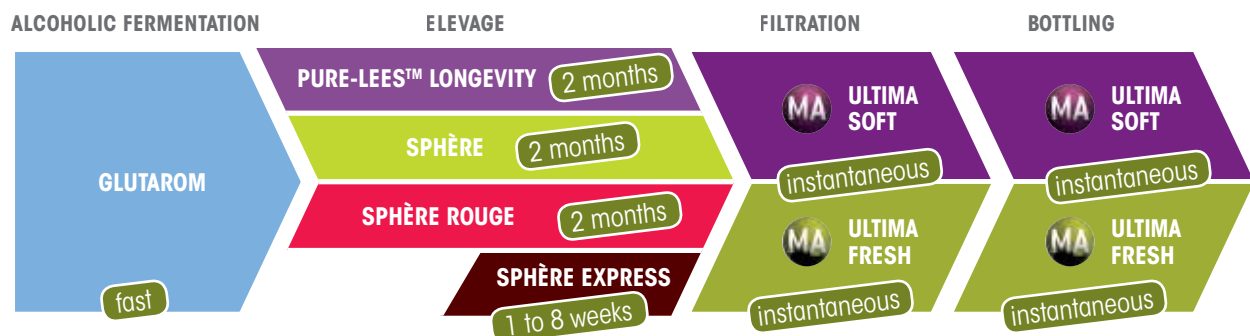
#### FRESHNESS, SWEETNESS AND LENGTH IN THE MOUTH.

UltiMA Fresh is a 100% soluble preparation of selected, instantaneously-acting manno-proteins, that, among other things, helps increase length in the mouth and sweetness, while reducing bitterness for optimum taste balance.

UltiMA Fresh brings out the fresh taste of wines.



#### YEAST PRODUCTS : preferential windows for action



# ENOLOGICAL ENZYMES

## MODE OF ENZYME ACTION



- **CRUST** : wax, fatty acid no enzyme action
- **SKIN** : tannins, anthocyanins, aromatic substances and/or aroma precursors ⚡ → Pectinases  
→ Cellulases  
→ Glucanases
- **FLESH** : must ⚡ → Pectinases
- **SEEDS** : catechins, tannins no enzyme action

## ACTIONS OF CLARIFYING ENZYMES

ENZYMATIC ACTIVITIES		EFFECT ON THE MUST AND WINE
<b>Action on pectin :</b> - Pectin esterase (PE) - Pectin lyase (PL) - Polygalacturonase (PG)	<b>Action on glucans :</b> - Glucanase	- Effects on viscosity of the juice, suspended particles and poor filterability of the wine - Improves decanting of sediments

### INOZYME

50 g   250 g   1 kg   10 kg

#### RAPID CLARIFICATION OF MUSTS.

INOZYME is a preparation of highly-purified synergistic pectolytic enzymes that accelerates decanting must sediments, by hydrolysing pectins.

### INOZYME LIQUID

1 L   20 L

#### RAPID, EASY CLARIFICATION OF MUSTS.

INOZYME LIQUID is a suspension of synergistic pectolytic enzymes that accelerates decanting must sediments, by hydrolysing pectins. Its liquid form makes it easy to use, particularly in large-scale vinification processes and for musts from thermo-vinification.

## INOZYME TERROIR

50 g

250 g

10 kg

### HIGH CLARIFYING POWER FOR MUSTS UNDER DIFFICULT CONDITIONS.

The particularly high endo-polygalacturonase activity of INOZYME TERROIR provides extremely rapid hydrolysis of pectins in the must. Its activity remains high despite difficult use conditions (low pH and low temperature). In red wine, INOZYME TERROIR rapidly clarifies musts highly-loaded with pectins from thermo-vinification.

## INOZYME CRYO

1 L

25 kg

### STRONG ACTIVITY AT LOW TEMPERATURE AND EASE-OF-USE.

INOZYME CRYO is a liquid preparation of highly-concentrated pectolytic enzymes which accelerates decanting of must sediments, even at low temperatures (from 5°C), by hydrolysing pectins. This liquid formulation therefore helps accelerate your clarification processes, while acting at low temperatures to facilitate sedimentation and limit microbial development.

## INOZYME CLEAR

100 g

### CLARIFICATION AND AROMATIC CLARITY OF GRAPE MUSTS ALTERED BY *BOTRYTIS CINEREA*.

Optimised clarification : dual pectolytic and glucanase activity to reduce polymers coming from the grape and Botrytis. Its restores aromatic clarity to altered musts.

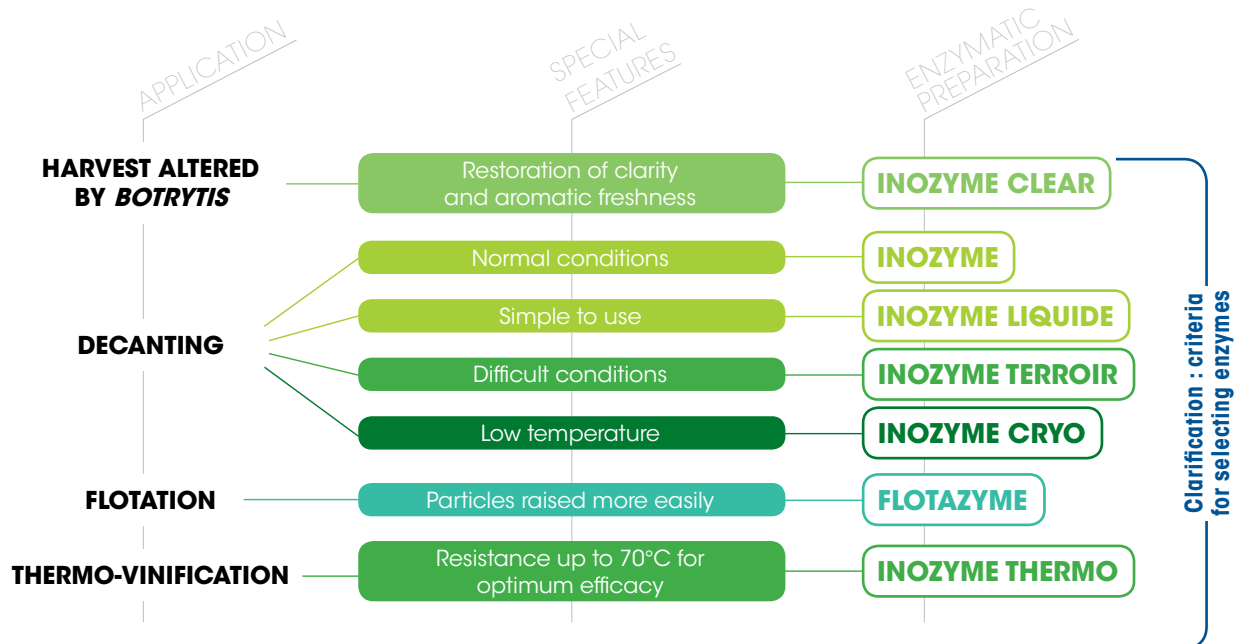
## FLOTAZYME

1 L

25 kg

### RAPID, EASY CLARIFICATION OF MUSTS, BY FLOTATION.

FLOTAZYME is a suspension of synergistic pectolytic enzymes that accelerates raising sediments to the surface. Its liquid form makes it easy to use, particularly in large-scale vinification processes.



# EXTRACTION AND MACERATION ENZYMES

ENZYMATIC ACTIVITIES	EFFECT ON THE MUST AND WINE
<ul style="list-style-type: none"> <li>- Pectin Lyase (PL)</li> <li>- Polygalacturonase (PG)</li> </ul>	<ul style="list-style-type: none"> <li>- Break down pectins from the middle lamella and primary wall.</li> <li>- Promote the release of tannins and anthocyanins found in granular form inside the vacuole.</li> </ul>
<ul style="list-style-type: none"> <li>- Cellulase</li> <li>- Hemicellulase</li> </ul>	<ul style="list-style-type: none"> <li>- Promote release of tannins associated with the cell wall.</li> <li>- Promote extraction of aroma precursors.</li> </ul>

## EXTRAZYME

100 g 250 g 1 kg 10 kg

### EXTRACTION OF JUICE AND QUALITATIVE CONSTITUENTS FROM WHITE OR BLACK GRAPES.

EXTRAZYME is suitable for making wines from ripe black grapes with low extractability. So it increases the yield of free-run wine, as well as improving the colour (more intense, more purplish-red hue) and enhancing tannic structure; EXTRAZYME reduces the frequency and intensity of mechanical actions and the risks of crushing.

For direct-pressed white or rosé wine, EXTRAZYME used before or in the press increases the juice yield and shortens pressing cycles. A larger dose will also accelerate settling of these musts.

## EXTRAZYME LIQUIDE

500 mL 1 L 20 L

### EXTRACTION OF JUICE AND QUALITATIVE CONSTITUENTS FROM WHITE OR BLACK GRAPES.

EXTRAZYME LIQUID is suitable for making wines from ripe black grapes with low extractability.

So it increases the yield of free-run wine, as well as improving the colour (more intense, more purplish-red hue) and enhancing tannic structure.

## EXTRAZYME TERROIR

100 g 250 g

### COLOUR EXTRACTION, STRUCTURE AND BODY IN MACERATION OF RED HARVESTS.

The broad, active spectrum of EXTRAZYME TERROIR make it the appropriate enzyme formulation for making wines from high-potential black grapes. For this type of harvest, it rapidly stabilises the colour and concentrates the structure while enclosing it by the action of polysaccharides from hydrolysed pectins.

For less rich grapes, EXTRAZYME TERROIR improves colour and tannins significantly, while limiting crushing and mechanical work needed to extract them. The free-run juice/press wine ratio is improved, contributing to the overall quality of the wine obtained: more colour, more structure but less astringency.

## EXTRAZYME MPF

100 g

### SELECTIVE EXTRACTION OF ACTIVE SUBSTANCES SUITABLE FOR LOW MACERATION TEMPERATURES.

EXTRAZYME MPF [cold pre-fermentation maceration] is an enzyme preparation with highly-concentrated pectolytic and secondary activities to compensate for reduced enzymatic activity due to low operating temperatures.

For red wine vinification, used during maceration, EXTRAZYME MPF promotes rapid extraction of anthocyanins and the aromatic potential. For white wine vinification, EXTRAZYME MPF improves the extraction of aromatic substances and precursors in skin maceration.



## EXTRAZYME ROSÉ

1 L

### AN ENZYME DEDICATED TO MAKING AROMATIC ROSÉ WINES.

EXTRAZYME ROSÉ is a liquid pectolytic formulation whose main and secondary activities fully enhance the specific aromatic potential of rosé musts :

- powerful clarifying action, even at very low temperatures, ideal for obtaining rosé musts of medium turbidity (80-150 NTU) for a "thiolated aroma" typology; or very low turbidity (20-80 NTU) weighted towards "fruity esters".
- pre-clarifying and extracting action on grapes and/or in maceration of sediments, to extract a juice rich in aromatic precursors to produce wines that are rich in fruity, varietal thiols.
- no anthocyanase activity, to avoid denaturing the colour, nor cinnamoyl-esterase activity, to avoid loss of aromatic freshness.

NEW

## AROMATIC EXTRACTION ENZYMES

ENZYMATIC ACTIVITIES	EFFECT ON THE MUST AND WINE
<ul style="list-style-type: none"> <li>- Pectinases - Hemi-cellulases</li> <li>- Cellulases</li> </ul>	<ul style="list-style-type: none"> <li>- Extraction of aroma precursors</li> </ul>
<ul style="list-style-type: none"> <li>- Glycosidases</li> </ul>	<p><b>Hydrolyses odourless aroma precursors to odorous volatile substances</b></p> <ul style="list-style-type: none"> <li>- Varietal aroma : key to the aromatic profile + typicality of the wine.</li> <li>- Enhancers precursors from aromatic grape varieties: Release of varietal aromas from grape varieties such as muscat, riesling...</li> </ul>

## EXTRAZYME BLANC

100 g

250 g

1 kg

10 kg

### EXTRACTS AND BRINGS OUT VARIETAL AROMAS DURING MACERATION OF WHITE GRAPES AND SEDIMENTS.

EXTRAZYME BLANC is a formulation developed to obtain more aromatic white wines.

EXTRAZYME BLANC allows better extraction of varietal thiol precursors, which the appropriate yeast can then bring out.

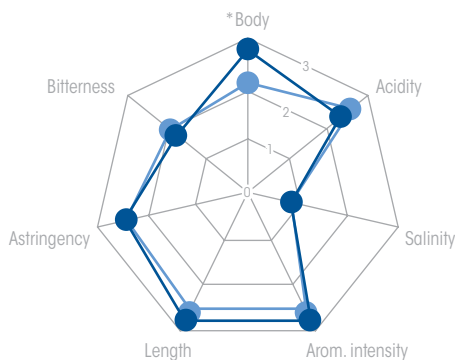
EXTRAZYME BLANC also gives wines richer in aromatic terpenes.

## EXTRAZYME FRUIT

100 g

### EXTRACTS AND BRINGS OUT VARIETAL AROMAS DURING MACERATION OF RED AND SAIGNÉE ROSÉ MUSTS.

EXTRAZYME FRUIT is a formulation developed to obtain both richness and fruity aromas from black grapes. Its propensity for bringing out substances such as beta-damascenone makes it an enhancer for fruity aromas obtained in alcoholic fermentation. EXTRAZYME FRUIT is used in traditional or pre-fermentation maceration and can also be used on saignée rosés



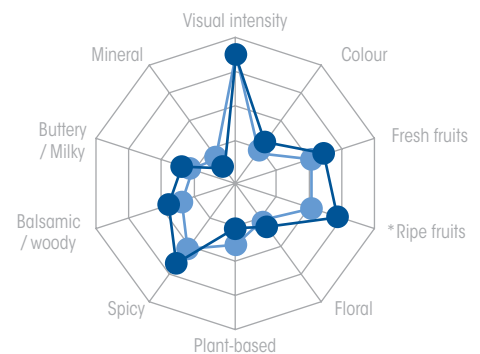
#### Taste examination

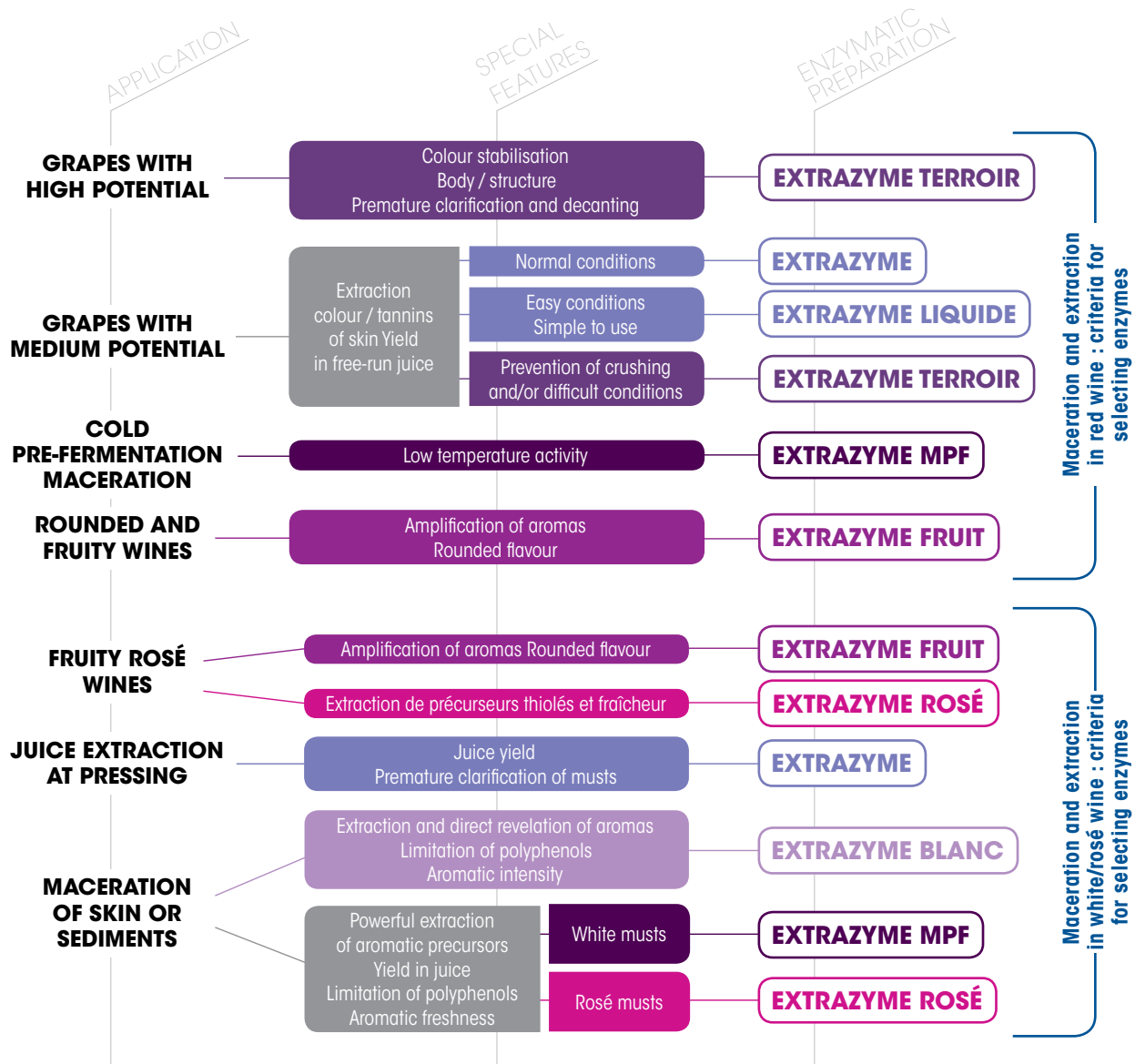
Trial on merlot, Gironde, 2011

● Extrazyme Fruit ● Control

#### Olfactory and visual examinations

Trial on merlot, Gironde, 2011





## STABILISATION AND ELEVAGE ENZYMES

ENZYMATIC ACTIVITIES	EFFECT ON THE MUST AND WINE
- Glycosidases	<p><b>Hydrolyses odourless aroma precursors to odorous volatile substances</b></p> <ul style="list-style-type: none"> <li>- Varietal aroma: key to the aromatic profile + typicality of the wine.</li> <li>- Enhancers precursors from aromatic grape varieties: Release of varietal aromas from grape varieties such as muscat, riesling...</li> </ul>
- $\beta$ -glucanase	<ul style="list-style-type: none"> <li>- Promotes yeast autolysis: boosts fullness and richness of wines.</li> <li>- Promotes filterability under altered harvesting conditions.</li> </ul>
- Lysozyme	<p><b>Inhibition of Gram+ bacteria (lactic acid bacteria)</b></p> <ul style="list-style-type: none"> <li>- Avoids the lactic acid spike when the alcoholic fermentation is stuck.</li> <li>- Inhibition of malolactic fermentation after the alcoholic fermentation, stabilisation after malolactic fermentation before bottling.</li> </ul>

## FLUDASE

100 g

### CLARIFICATION AND FILTERABILITY OF WINES UNDER DIFFICULT CONDITIONS.

For enhanced clarification of wines from Botrytis-affected or hard-to-clarify musts. Its  $\beta$ -glucanase activity contributes to eliminating the glucans responsible for clarification problems by fining or filtration.

## LEVULYSE

100 g

### BODY, RICHNESS AND OPTIMISATION OF ELEVAGE ON LEES AND POST-FERMENTATION MACERATIONS.

LEVULYSE enhances the quality of the structure of wines by giving them body and richness, and reduces the elevage period on lees.

#### WORDS FROM USERS

At the end of the AF for white (blocked MLF): richness, fullness, disappearance of the amyl nose.

## LACTOLYSE

500 g

### PREVENTION OF LACTIC ACID SPIKES AND INHIBITION OF MALOLACTIC FERMENTATION.

LACTOLYSE (lysozyme) can be used on white or rosé wines to inhibit malolactic fermentation (MLF) or in red wine to delay it (e.g. if using carbonic maceration). It is also used to control microbiological risks :

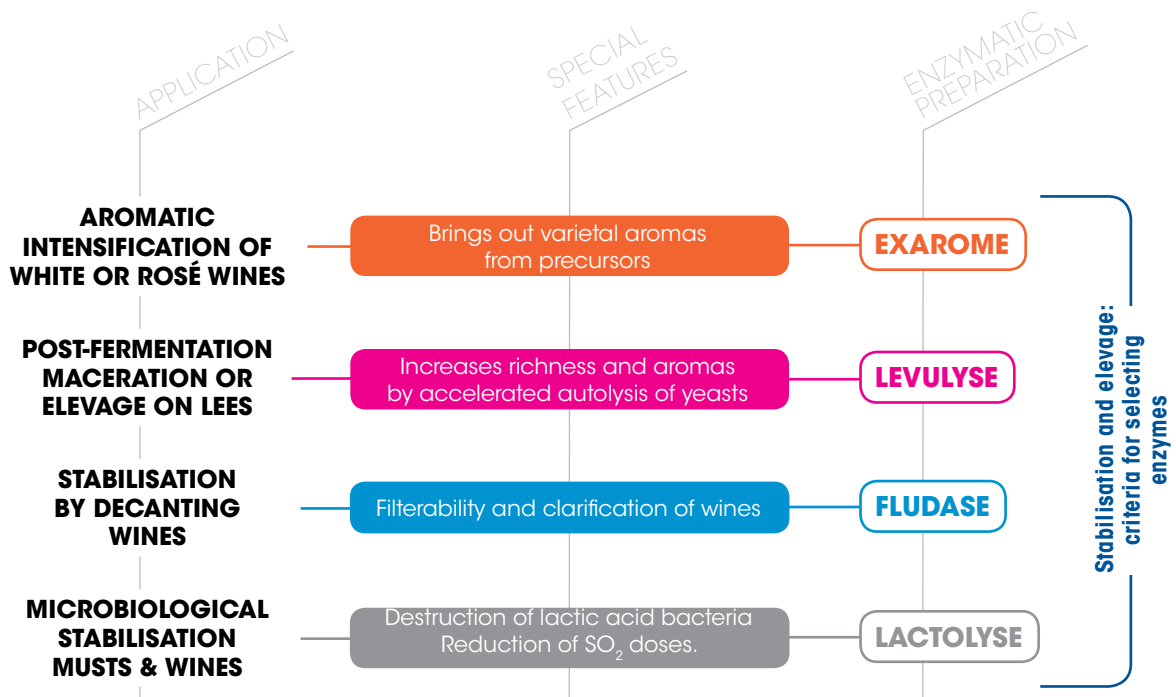
- 1/ If the fermentation gets stuck, LACTOLYSE blocks development of lactic acid bacteria and so avoids the lactic acid spike. The alcoholic fermentation can then be restarted with a starter culture preparation.
- 2/ LACTOLYSE is used preventively, when the vinification method used tends to increase volatile acidity. Adding lysozyme to marc considerably reduces final volatile acidity.
- 3/ After MLF, LACTOLYSE can also be used to reduce bacterial activity and so the risks of producing biological amines, negative sulphurous substances and acetic acid.

## EXAROME

100 g

### REVELATION OF VARIETAL AROMAS DURING ELEVAGE OF WHITE WINES.

EXAROME provides wines richer in aromatic terpenes, by hydrolysing their glycosylated precursors to active aromas. These terpenes will increase the overall fruity intensity of wines.



# SELECTED MALOLACTIC BACTERIAS

## WHY PERFORM BACTERIAL INOCULATION ?

- Malolactic fermentation can be triggered just after alcoholic fermentation, making wines available more rapidly. The time-savings are significant and the cellar-work is easier.
- Sanitary quality is assured because no biological amines are formed.
- The risks of organoleptic deviations due to the indigenous bacteria or sluggish malolactic fermentations are avoided.
- Certain inoculation techniques can preserve the must against the development of *Brettanomyces*, responsible for phenolic tastes.
- By choosing a inoculation technique, or the bacteria used, we can intervene and favourably direct the sensory profile of the wine towards a given objective.

## DIFFERENT TYPES OF INOCULATION

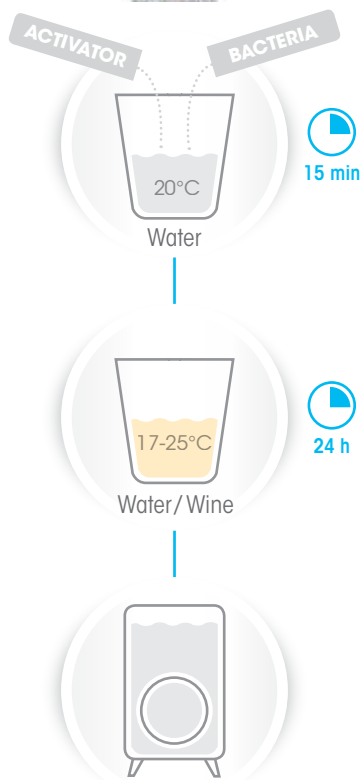
### DIRECT INOCULATION

**MBR process**  
direct inoculation

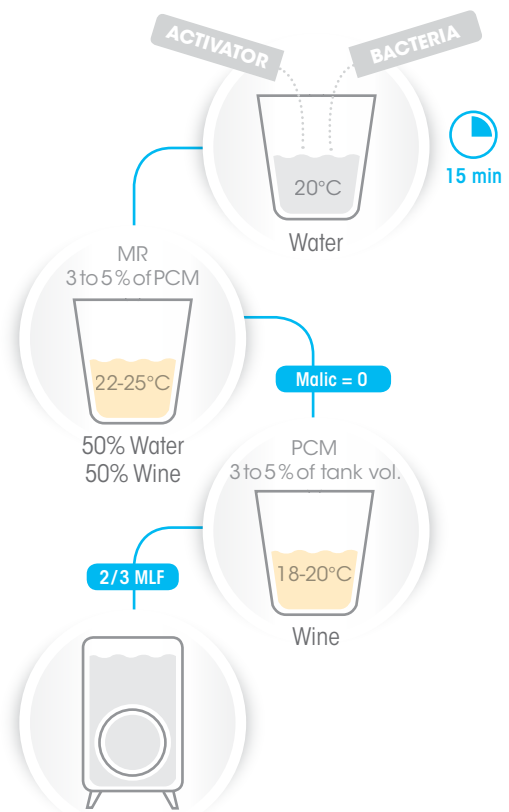


### INOCULATION WITH 1 ACCLIMATISATION STEP

**1STEP**



### INOCULATION IN 2 STEPS (1 ACCLIMATISATION PHASE & 1 STARTER PHASE)



# LACTIC ACID BACTERIAS

## INOBACTER

DOSES FOR INOCULATING

25 hL

100 hL

500 hL

1 000 hL

2 000 hL

### OENOLOGICAL BACTERIA WITH RE-ACTIVATION AND ACCLIMATISATION PHASES (STARTER). FOR WINES AND MUSTS WITH VERY LOW PH.

INOBACTER has been selected for the quality of its overall performance and for its ability to conduct malolactic fermentation in the most difficult wines.

The INOBACTER strain is remarkable for its resistance to low pH and its high malolactic activity. Its use requires preparation of a starter culture.

## MAXIFLORE ELITE

DOSES FOR INOCULATING

25 hL

100 hL

500 hL

### CONTRIBUTION TO STRUCTURE AND AROMATIC COMPLEXITY.

MAXIFLORE ELITE gives wines particularly interesting sensory properties. On red wines, this malolactic fermenter contributes to increasing the sensation of structure and body, while emphasising spicy aromas. On white must, it can boost dry fruit notes, but also protect fresher aromas, by early inoculation.

MAXIFLORE ELITE is probably one of the malolactic fermenters that tolerates the widest range of conditions.

Combining 1-Step® acclimatisation efficiency with its specific characteristics of withstanding low pH, low temperatures, SO<sub>2</sub> and high alcohol content, this is an ally of choice to make your malolactic fermentation secure, and it is used for early inoculation (at 2/3 of the alcoholic fermentation) as well as sequentially.

Tolerances : pH > 3,1 (if low total SO<sub>2</sub>)

Alcohol < 15,5% vol.

## MAXIFLORE SATINE

DOSES FOR INOCULATING

25 hL

500 hL

### REDUCED ASTRINGENCY AND PREVENTION OF BUTTERY AROMAS.

MAXIFLORE SATINE is the recommended bacteria for fermentation of wines made from very ripe grapes. Its talents go further, since it has the ability to produce only a very small quantity of diacetyl. This is why MAXIFLORE SATINE is used to preserve the aromatic purity of wines by significantly limiting the preponderance of buttery notes.

Tolerances : pH > 3,25

Alcohol < 16% vol.

## INOFLORE

DOSES FOR INOCULATING

2,5 hL

25 hL

250 hL

### TO OBTAIN FRUITY WINES BY CO-INOCULATION.

INOFLORE appears to be particularly well suited for use in yeast/bacteria co-inoculation, in which circumstances it has one of the most efficient kinetics. Furthermore, used in this way, INOFLORE produces a very low level of diacetyl (buttery/milky mask) and contributes to bringing out and preserving fruity aromas, particularly esters. It is indisputably THE bacteria for co-inoculation and fruity wines.

Tolerances : pH > 3,25

Alcohol < 14% vol.

INOFLORE is used by direct inoculation.

## EXTRAFLORE

DOSES FOR INOCULATING

2,5 hL

25 hL

250 hL

### FOR SIMPLIFIED CONTROL OF MALOLACTIC FERMENTATION.

EXTRAFLORE is a bacteria that withstands a vast range of wine conditions. It is chosen for its simplicity in use, because it is suitable for direct inoculation, which always allows its development and activity.

Malolactic fermentation of white, red and rosé wines. Used in sequential inoculation, it contributes to sweet buttery notes and overall complexity.

Tolerances : pH > 3,15

Alcohol < 14% vol.

# VINIFICATION CLARIFICATION

## BENTONITES

Grape proteins are well-known for causing formation of cloudiness in white and rosé wines. Precipitation of these proteins causes a protein haze.

Bentonite is a clay from the Montmorillonites family and it is recommended to provide good clarification and deproteinisation of musts and wines. It is the only effective treatment against protein haze.

Proteins are macromolecules made up of amino acids, positively-charged at the pH of wine, while suspended bentonite forms negatively-charged particles that attract proteins, forming heavy particles that precipitate.

### ↘ BENTOSTAB

1 kg

5 kg

25 kg

**NATURAL SODIUM BENTONITE, WITH HIGH DEPROTEINISING POWER, INTENDED FOR STABILISING AND CLARIFYING WHITE AND ROSÉ MUSTS AND WINES.**

Its high deproteinising power is used to remove the proteins responsible for protein haze. The fine particle size of BENTOSTAB gives it optimum capability to swell in water and a very large capacity to remove colloids. BENTOSTAB has also been selected for its great ability to preserve the sensory characteristics of musts and wines. BENTOSTAB is also available as granules, making it very easy to use.

### ↘ INOBENT

1 kg

5 kg

25 kg

**ACTIVATED SODIUM BENTONITE PROVIDING VERY GOOD CLARIFICATION OF WHITE AND ROSÉ WINES.**

INOBENT is a very good flocculating agent. It facilitates sedimentation of lees at the end of alcoholic fermentation. It has low deproteinising power and therefore does not remove the elements necessary for the second alcoholic fermentation, and provides better performance of bubble formation. INOBENT has been selected to preserve all the organoleptic qualities of wines.

### ↘ BENTONITE L 100

10 L

1 000 L

**SOLUTION OF 100 G/L NATURAL SODIUM BENTONITE FOR STABILISING AND CLARIFYING MUSTS.**

BENTONITE L 100 has been selected for its great ability to preserve the sensory characteristics of musts and wines. The liquid formulation makes it easier to use.

# PRODUCTS FOR RESISTING OXIDATION

## Qi-No[Ox]

1 kg

5 kg

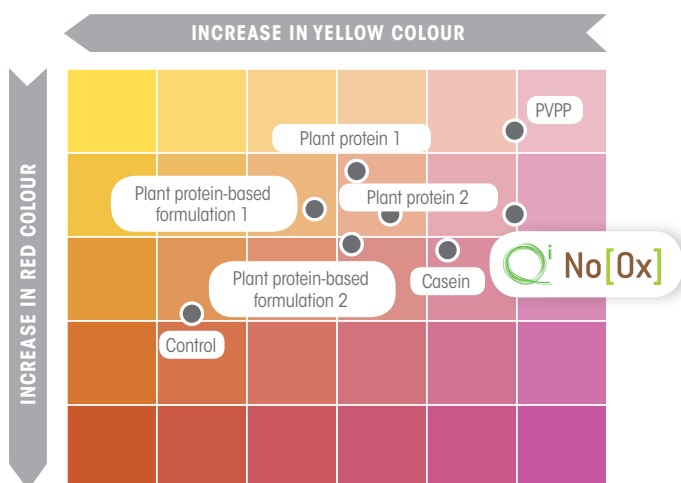
15 kg

### THE NATURAL SOLUTION TO OXIDATION OF MUSTS IN WHITE AND ROSÉ WINES.

Qi-No[Ox] is a unique and innovative technological ancillary made up of polysaccharides of non-animal origin that is allergen- and synthetic product-free. Its efficacy and swift action enable it to combat oxidative excesses, in both must and wine, while preserving the intrinsic qualities of the initial product.

Qi No[OX] is used for :

- **Protecting the colour of white and rosé wines** by eliminating iron and copper which are the main catalysers of oxidation, and interacting with polyphenols.
- **Preserving the aromatic freshness of wines** by durably protecting polyphenols against oxidation and efficiently preserving varietal thiols through the anti-free radical properties of Qi No[Ox].
- **Erasing organoleptic defects** by eliminating bitterness and oxidative notes, while at the same time preserving sensory and taste properties.



### Coordinates - chromametry a\* and b\*

*Grenache rosé, treated during alcoholic fermentation at 40 g/hL (micro-vinification)*

Wine treated with Qi'No[Ox] has a slight yellow tint, almost equivalent to that treated with PVPP, and less than other methods that can be applied in œnology. Oxidised polyphenols which are responsible for orangey tints, rejected by consumers, are thus efficiently eliminated.

## POTASSIUM CASEINATE

1 kg

5 kg

20 kg

POTASSIUM CASEINATE is a treatment agent for preventing oxidation of musts and white and rosé wines. It eliminates the characteristic brown colours due to oxidation, since POTASSIUM CASEINATE has particular affinity with oxidised polyphenols.

With botrytised harvests, POTASSIUM CASEINATE constitutes a suitable treatment which will stabilise wines against oxidation haze.

## P.V.P.P.

1 kg

20 kg

PVPP is used for preventive and curative treatment of oxidation in white and rosé wines.

PVPP is formed from macromolecules organised in a lattice. It acts by adsorbing oxidised and oxidisable polyphenols, forming bonds between the phenolic hydroxyl group and an amide bond of the PVPP, so removing the brown colour.

In organoleptic terms, we see a reduction in bitterness and an improvement in freshness and aromas.



## INOFINE V

**ALLERGEN-FREE PLANT-BASED PROTEINS DESIGNED TO COMBAT OXIDATION OF MUSTS AND WINES, WHILE CONTRIBUTING TO THEIR CLARIFICATION.**

INOFINE V is a pea protein specifically selected for :

- its reactivity with oxidised and oxidisable compounds,
- its efficiency flocculating suspended materials or those to be sedimented,
- its organoleptic qualities,
- its ease of use.

## ANTI-OXIDATION FORMULATIONS

	BENTONITE	POTASSIUM CASEINATE	PVPP	PEA PROTEIN	CELLULOSE
Freshprotect	●		●		●
Colorprotect V	●		●	●	
Polyoxyl	●		●		
Bentolact S	●	●			

## FRESHPROTECT

1 kg 5 kg 20 kg

**FRESHPROTECT PREVENTS AND ELIMINATES OXIDATION FROM MUSTS AND WINES WITHOUT USING ALLERGENIC SUBSTANCES.**

This complex formulation comprises **PVPP, bentonites, cellulose and gum arabic** :

- absorbing a part of the oxidisable and oxidised phenolic compounds from musts and white and rosé wines,
- adsorbing oxidases, proteins responsible for oxidising certain phenols,
- reducing bitter sensations as well as herbaceous notes, while preserving the organoleptic properties of the must or wine.

## COLORPROTECT V

POWDER 1 kg 5 kg 25 kg

**TO PREVENT OXIDATION OF MUSTS AND WINES AS WELL AS PINKING.**

COLORPROTECT V significantly reduces oxidation phenomena. Its formulation results from a synergistic effect between **bentonites, PVPP and plant proteins**.

COLORPROTECT V is designed for all oxidation phenomena :

- protection of musts displaying sensitivity to oxidation,
- reduction of the brown coloration in oxidised white wines,
- marked reduction in pinking phenomena,
- maintenance of the organoleptic qualities of musts and wines, while eliminating bitterness and herbaceous notes.

COLORPROTECT V contains no substances listed as allergens.

## POLYOXYL

POWDER 1 kg 5 kg 20 kg LIQUID 10 L 1 000 L

**POLYOXYL IS PREPARED FROM PVPP AND SODIUM BENTONITE.**

It combines the clarifying and stabilising properties of the carefully selected bentonite with the action of PVPP against phenolic compounds implicated in the bitter taste and plant aromas of certain wines. It improves the profile of wines made from altered harvests or delicate pressings (harvests affected by mildew, high pressures used for pressing, pruning, etc.).

## ↘ BENTOLACT S

1 kg

5 kg

25 kg

### COMPLEX BASED ON BENTONITE AND CASEIN.

BENTOLACT S significantly reduces oxidation phenomena.

This formulation is designed for all oxidation phenomena :

→ Reduction of the brown coloration in oxidised musts and white and rosé wines.

→ Reduction of bitterness sensations caused by oxidation.

## RIDDLING AIDS

### ↘ PHOSPHATES MAZURE

1 L

5 L

10 L

PHOSPHATES MAZURE are a co-adjutant promoting cohesion and elimination of the deposit formed during bubble-forming, so facilitating automatic or traditional turning. They enhance the action of CLARIFIER S.

### ↘ INOCLAIR 2

POUDRE

1 kg

LIQUIDE

1 L

10 L

INOCLAIR 2 is used to reduce the turning time on racks and on automatic systems. It can be used equally well with clumping or traditional yeasts. It forms a non-stick deposit that slides easily.

INOCLAIR 2 is also available as a liquid formulation, making it easier to use.

### ↘ CLARIFIANT BK

1 kg

It facilitates sedimentation of yeasts into a compact deposit. It comprises bentonite with poor deproteinising power and kaolin able to form a non-stick deposit. This selection has been made to maintain the behaviour and finesse of the bubbles.

### ↘ CLARIFIANT S

1 L

5 L

10 L

CLARIFIANT S, combined with PHOSPHATES MAZURE, is IOC's reference turning adjuvant. Robust and multi-purpose, CLARIFIANT S is suitable for all types of wine and different turning methods. It maintains all the basic taste characteristics of wines.

### ↘ CLARIFIANT XL

1 L

5 L

10 L

CLARIFIANT XL is an optimised turning adjuvant, made from pure bentonite and a silicate providing excellent packing down of the sediment. Combining these components provides high clarification and sedimentation power, particularly effective for difficult turning. No other co-adjutant is present or needed for turning.

CLARIFIANT XL provides a compact, non-stick and easily-removed deposit. Clarity of the wine is improved, making it perfectly bright after turning.

# FINING PRODUCTS

**F**inings are protein-based products added to wine to flocculate, i.e. to agglomerate with unstable or suspended particles. When these formed particles have grown sufficiently, they sediment rapidly.

Thus, fining musts and wines improves their clarity, brightness, filterability, colloidal stability, microbiological stability and taste :

## For improved brightness, clarity and filterability

Fining removes suspended particles responsible for the cloudiness.

The filterability of wine means its ability to be filtered. It depends mainly on the nature of suspended particles. It is determined by calculating the maximum volume to blocking or  $V_{max}$ , which is used to give an indication of the filterability of wines and so specify the filter media to be used and the performance of the filtration cycle.

## For greater stability over time

The stability of a wine results from the persistence of clarity and absence of a deposit after bottling.

Fining eliminates particles responsible for cloudiness or likely to create a haze, such as colouring material, certain polysaccharides and a proportion of any metals present. In the special case of white and rosé wines, fining inhibits the risk of protein haze, which is one of the main causes of cloudiness in these wines.

## To refine sensory characteristics

In addition to the visual appearance, finings is used to fix a proportion of the tannins responsible for astringency and bitterness, and to promote clarity and the finesse of aromatic expression.

Fining is an important step that requires preliminary steps to be carried out in the laboratory in order to choose the most appropriate fining agent and the optimum dose.

## FISH-BASED / ISINGLASS FININGS

Isinglass finings are favoured for quality white and rosé wines because they are very delicate and do not require tannins to be present to act. These finings yield remarkable brightness and greatly improve clarity, while refining the sensory characteristics of the wine.

### CRISTALLINE

POWDER 1 kg LIQUID 1 L 5 L 10 L 21 kg

CRISTALLINE is a high purity fish-based fining agent using slow flocculation to remove the finest suspended particles, which then sediment rapidly.

CRISTALLINE is available as powder and liquid for ease of use.

It is used to give very great precision to the nose while softening the vivacity of certain wines.

### CRISTALLINE PLUS

100 g 1 kg

CRISTALLINE PLUS is a mixture of high purity fish-based fining and citric acid, stabilised with potassium metabisulphite, making it ready-to-use.

### CRISTALLINE SUPRA

100 g 1 kg

CRISTALLINE SUPRA is a mixture of lyophilised, pre-hydrolysed fish-based fining powder (for faster dispersion in wine) and citric acid, stabilised with potassium metabisulphite. Cristalline Supra goes into solution much more quickly than traditional fish-based finings.

## GELATINE -BASED FININGS

Gelatine combines with albumin and tannins contained in the wine, so flocculating colloidal substances making the wine cloudy or likely to make it cloudy. They are also used to improve suppleness of wines rich in phenolic compounds.

### COLFINE

POWDER 1 kg 25 kg LIQUID 1 L 5 L 23 kg

COLFINE is hydrolysed porcine gelatine intended for fining red wines. It is characterised by a high quantity of surface charges, enabling it to interact with colloidal substances.

COLFINE is intended for :

- stabilising the colloidal state by removing suspended particles,
- enhancing the organoleptic potential by removing tannins responsible for astringent characteristics,
- contributing roundness and suppleness.

COLFINE is recommended for young, tannic red wines and press wines, to refine the polyphenolic structure.

### COLLE PERLE

POWDER 1 kg 5 kg LIQUID 1 L 5 L 10 L 22 kg

COLLE PERLE is fully-hydrolysed porcine gelatine (0° Bloom) at 150 g/L. It is characterised by a high quantity of surface charges, enabling it to interact with colloidal substances.

COLLE PERLE is intended for :

- stabilising the colloidal state by removing suspended particles,
- Bringing out the organoleptic potential of wines by promoting aromatic expression and refining their polyphenolic structure.

COLLE PERLE is recommended for clarifying red wines to improve aromatic characteristics while maintaining the structural balance of the wine.

### INOCOLLE

1 L 5 L 10 L 22 kg 1 000 L

INOCOLLE is a solution of very pure, partially-hydrolysed porcine gelatine (~ 15° Bloom) at 100 g/L. Its strong electric charge and molecular weight distribution make it a reference fining agent to stabilising the colloidal state of white, rosé and red wines, and contributing brightness and clarity. INOCOLLE clarifies musts and wines while maintaining their structural and aromatic potential. It is used when fining white wines, in combination with TC SOLUTION or GELOCOLLE. It is also used for flotation.

## EGG ALBUMIN -BASED FININGS

### TRADICOLLE

POWDER 1 kg 25 kg LIQUID 1 kg 5 kg

TRADICOLLE is an egg-based preparation designed for fining and clarifying quality red wines. Egg albumin causes precipitation of suspended particles and unstable polyphenols. This fining agent is appropriate for quality red wine because it preserves the polyphenolic structure of wines, intended to maintain and provide excellent colloidal stability while preserving the aromatic qualities and typicality of the wine.

# FLotation ADJUVANT

## Qi UP

1 kg

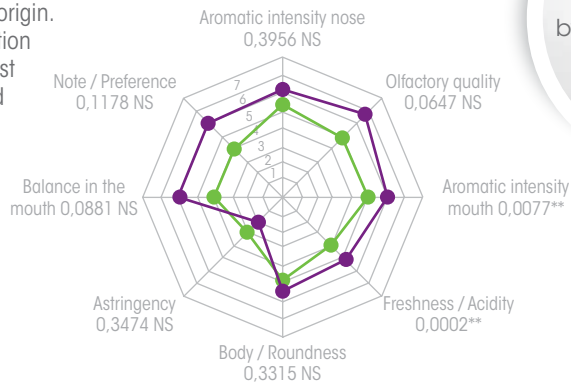
5 kg

**Qi UP IS A UNIQUE AND INNOVATIVE ADJUVANT FLotation MADE UP OF DERIVATIVES OF CHITIN, THAT IS ALLERGEN- AND SYNTHETIC PRODUCT-FREE.**

Its efficacy and swift action enable it to float in all types of musts. Qi'Up makes it possible to preserve all the organoleptic qualities of musts and wines derived from it. In this example of rosé must, we have compared the action of Qi'Up with a gelatine of porcine origin. The two methods followed the same vinification process (same vinified volume, identical yeast strain...). Sensory analyses were carried out within 3 months following alcoholic fermentation and in accordance with the principle of quantified descriptive profiles.



● Gélatine ● Qi up



The **Qi up** method is significantly different on account of its aromatic intensity on the palate and its greater freshness.



### Variance analysis average

*Rosé wine from Syrah and Grenache (Côtes du Rhône)*

Variance analyses according to averages. Organoleptic descriptors significant to \*\*\*0.1% - \*\*1% - \*5% NS non-significant

## OTHER FININGS

### GELOCOLLE

1 L

5 L

10 L

25 kg

255 kg

1 200 kg

**FACILITATES FLOCCULATION AND ACCELERATES SEDIMENTATION DURING FINING OPERATIONS.**

GELOCOLLE is a solution of silica gel. It is used in combination with organic fining agents to optimise fining. Highly charged GELOCOLLE silica particles will react with proteins in the organic fining agent and form flocks. By sedimenting, they bring down suspended particles making the wine cloudy.

### FISHANGEL

POWDER

500 g

1 kg

LIQUID

1 L

5 L

10 L

**FINING FOR WHITE AND ROSÉ WINES, SPECIALLY DESIGNED FOR RAPID SEDIMENTATION, EXCELLENT BRIGHTNESS OF WINES AND GREAT SUPPLENESS.**

FISHANGEL is a formulation based on 2 protein fining agents : fish finings and gelatine. FISHANGEL not only has perfect clarifying and stabilising action, but also improves filterability of wines and significantly increases their brightness and filterability.

### GELPLUS

1 kg

**MIXTURE OF GELATINE AND NATURAL SODIUM BENTONITE, WITH HIGH DEPROTEINISING POWER, INTENDED FOR STABILISING AND CLARIFYING WHITE AND ROSÉ MUSTS AND WINES.**

The composition of GELPLUS provides :

- rapid clarification of wines as well as good packing down of lees,
- stabilisation of colloidal precipitation,
- suppleness of astringent and tannic red wines.

# STABILISATION

## ARABIC GUMS

**A**rabic gum is a solidified exudate of descending sap. It can be mixed naturally or by incision into the trunk and at the foot of trees from the mimosa family (Acacia). It is collected mainly in Saharan Africa.



Arabic gum is a highly branched polysaccharide molecule rich in galactose and arabinose, with a small protein fraction.

This molecular structure gives it remarkable properties :

- stabilisation of colour by slowing down polymerisation phenomena and the precipitation of colouring material,
- better stabilisation of tartrate precipitation,
- preventing metal hazes by avoiding flocculation of cupric and/or ferric complexes,
- sensory improvement of wines, by contributing a sensation of roundness and balance while preserving aromas.

### FLASHGUM

POWDER 1 kg 5 kg 25 kg MES 1 L 5 L 10 L

**THIS INSTANTLY-DISSOLVING ARABIC GUM COMES FROM VEREK OR KORDOFAN ACACIA AND IS THE MOST EFFECTIVE PROTECTIVE AGENT FOR COLLOIDAL SOLUTIONS.**

FLASHGUM is used for preventive treatment :

- precipitation of colouring materials,
- ferric and cupric metal hazes,
- tartrate precipitation by boosting METATARTARIC ACID.

The porous structure of FLASHGUM particles provides immediate dissolution in wine.

### FLASHGUM R

POWDER 1 kg 25 kg MES 5 L 10 L 22 kg

**FLASHGUM R IS AN INSTANTLY-DISSOLVING ARABIC GUM FROM SEYAL ACACIA.**

Its 100% natural polysaccharides reduce the astringency and increase the impression of body and roundness.

FLASHGUM R is also used as a protective colloid to stabilise phenolic compounds.

FLASHGUM R is offered in liquid form making it easier to use (5 L, 10 L and 22 L).

If making sparkling wine, Flashgum R can be added to wines before tirage.

## ↘ GOMME ARABIQUE 300

22 kg

1 100 kg

**GOMME ARABIQUE 300 IS A SELECTED AND PURIFIED SOLUTION FROM VEREK AND SEYAL ACACIA.**

This gum is made up of stable macromolecules that inhibit the aggregation of unstable colloids responsible for cloudiness and deposits in the bottle.

GOMME ARABIQUE 300 is used for preventive treatment of :

- precipitation of colouring materials,
- ferric and cupric metal hazes,
- tartrate precipitation by boosting METATARTARIC ACID.

This gum is also used to contribute roundness and body to wines.

## ↘ INOGUM

INOGUM 200

5 L

22 kg

1 070 kg

INOGUM 300

1 L

5 L

22 kg

1 100 kg

INOGUM preparations are acacia gum solutions, selected and purified, derived from the Verek acacia, well-known for its richness in protein fractions and consequently its very high protective power.

INOGUM :

- inhibits the aggregation of unstable colloids which produce cloudiness and deposits in the bottle,
- opposes flocculation of unstable colouring material in red wines,
- enhances the action of METATARTARIC ACID with regard to tartaric precipitations,
- prevents metallic hazes by avoiding flocculation of copper/iron complexes.

## ↘ GOMME ARABIQUE SD

500 mL

1 L

5 L

10 L

GOMME ARABIQUE SD is a 300 g/L solution of arabic gum, purified and specially selected for sparkling wines.

This gum comes from Verek Acacia, well known for having rich protein fractions and therefore very high protective capacity.

GOMME ARABIQUE SD inhibits aggregation of unstable colloids responsible for cloudiness and deposits after disgorging sparkling wines, particularly rosé.

This gum is used in preventive treatment for its ability to :

- oppose flocculation of unstable colouring material in red wines,
- boost the action of METATARTARIC ACID against tartrate precipitation,
- prevent metal hazes by avoiding flocculation of cupric/ferric complexes

Moreover, GOMME ARABIQUE SD has been selected for its surface-active properties, providing better stabilisation of the bubbles.

# TARTRATE STABILISATION

## ↘ METATARTARIC ACID

1 kg

METATARTARIC ACID prevents the risks of tartrate precipitation. It acts as a crystallisation inhibitor against potassium bitartrate, but also calcium tartrate.

It is added to wine before bottling or in the transport liquor for traditional methods.

METATARTARIC ACID is also available in solution for ease of use.

## ↘ CREME DE TARTRE

1 kg

5 kg

25 kg

CREME DE TARTRE or potassium bitartrate, is essential for optimum tartrate stabilisation of wines. It acts as a crystallisation seed that starts the formation of potassium bitartrate crystals and accelerates sedimentation of endogenous crystals. It optimises the transfer into the cold, whatever the process used (continuous or by contact).

Our choice is to use micronised CREME DE TARTRE, to guarantee and optimise its effectiveness.

## ↘ CALCIUM TARTRATE

25 kg

CALCIUM TARTRATE is essential for optimum tartrate stabilisation of wines that contain a high calcium content liable to for precipitates in the bottle.

It causes preferential crystallisation of calcium tartrate, significantly reducing  $\text{Ca}^{2+}$  levels in wines.

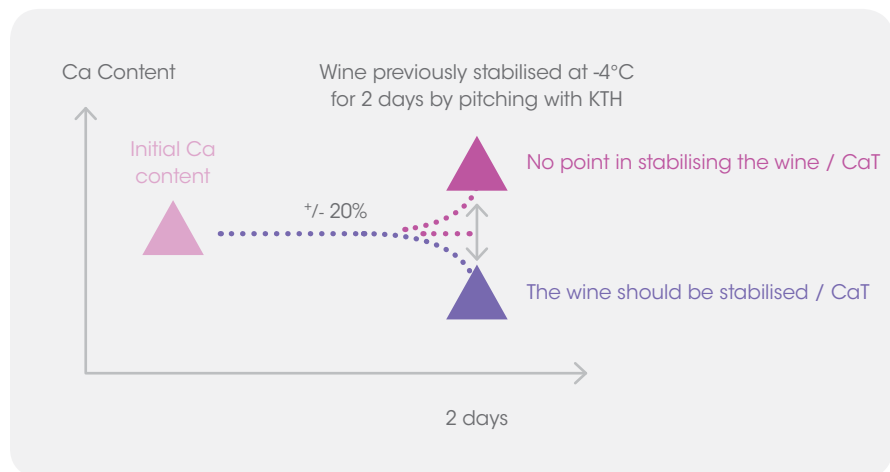
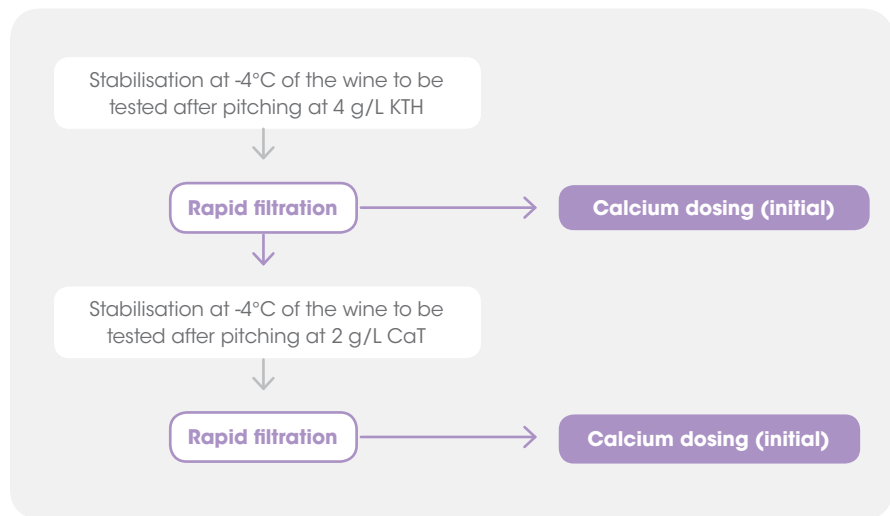
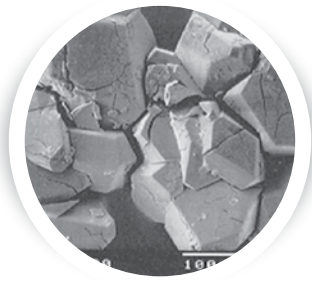
## ↘ DUOSTAB

25 kg

DUOSTAB can be used in a single step to cold-stabilise the 2 tartrate salts responsible for crystals forming in the bottle and racking in the traditional method : KBT and CaT.

DUOSTAB starts the formation of potassium bitartrate and calcium tartrate crystals, so optimising transfer into the cold, whatever the process used (continuous or by contact).

Determination of precipitation risks for calcium in wines



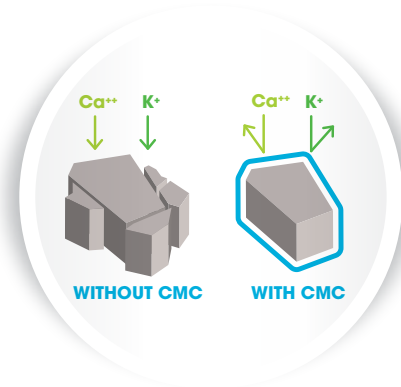
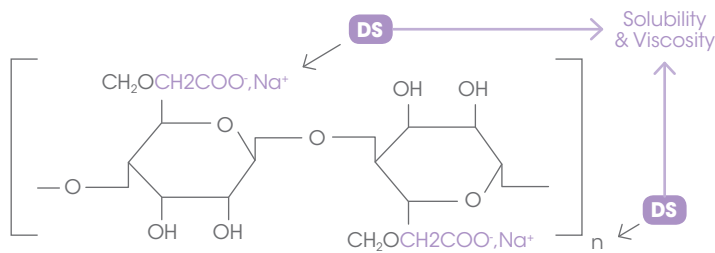


# CELLULOSE GUM

In 2009 cellulose gum (carboxymethylcellulose or CMC) was approved by the European Community as an alternative to traditional treatments using electrolysis or cold, used for tartrate stabilisation of wines. This cellulose derivative, extracted only from wood for oenology (to avoid any risk of contaminating products by a GMO source from cotton) and sustainably-managed

forests, has been used for several decades in a large number of food preparations (E468). It has the advantage of being totally organoleptically neutral and extremely effective for stabilising wines against potassium bitartrate.

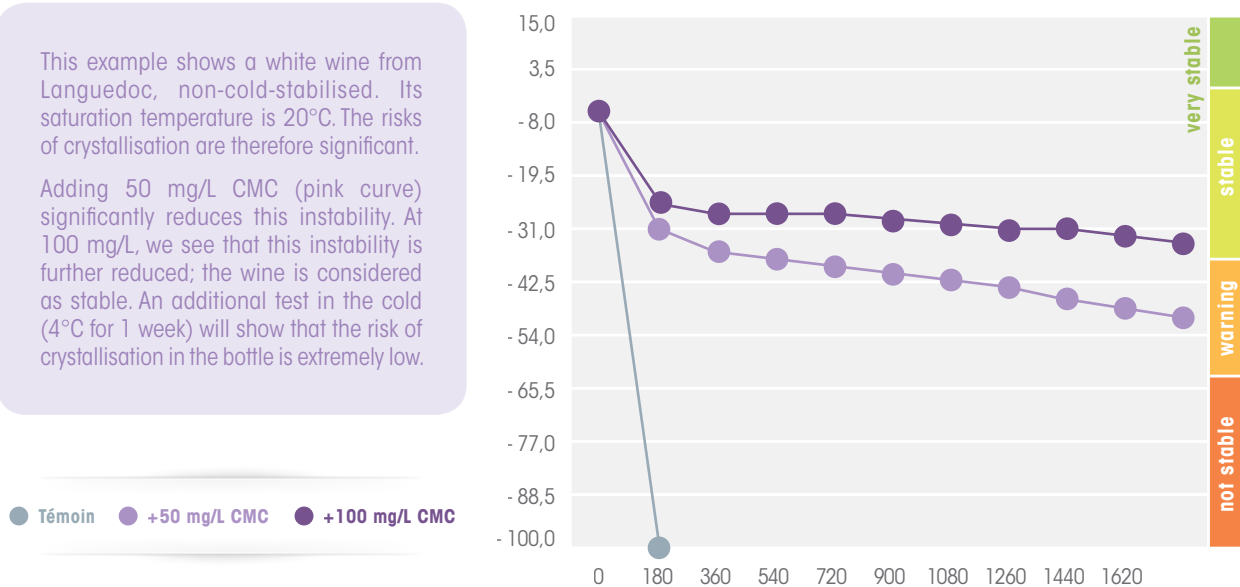
Its action has been known to be effective for at least 4 years.



Very soluble in wine, CMC has the special feature of being able to interfere with microcrystals as they form. It prevents them growing and they do not therefore become visible. In this way wines are stabilised against tartrate precipitation.

This example shows a white wine from Languedoc, non-cold-stabilised. Its saturation temperature is 20°C. The risks of crystallisation are therefore significant.

Adding 50 mg/L CMC (pink curve) significantly reduces this instability. At 100 mg/L, we see that this instability is further reduced; the wine is considered as stable. An additional test in the cold (4°C for 1 week) will show that the risk of crystallisation in the bottle is extremely low.



Preliminary tests are recommended to determine the appropriate dose to use and to avoid any colloidal instability.

## INOSTAB G

1 kg 5 kg 20 kg

Highly purified cellulose gum supplied in granules for better solubilisation. It is used to delay crystallisation of tartrate salts in wines.

## INOSTAB MES

1 L 5 L 10 L 1000 L 21 kg

Cellulose gum is also available in solution for ease of use.



# CORRECTORS

## ORGANOLEPTIC CORRECTORS

### CARBONS

#### INOBENT N10

MES 10 L 20 L 1 000 L

FOR HEAVILY-STAINED WHITE MUSTS AND WINES.

INOBENT N10 is an activated plant-based black suitable for decolourising stained white musts and wines, and bentonite with high sedimenting capacity.

It contains :

- A bentonite with a good capacity to take up colloids while avoiding adsorption of soluble macromolecules responsible for body and the quality of the bubbles for sparkling wines.
- A carbon specially selected for its ability to preserve the organoleptic properties of the must or the wine

Wines treated with INOBENT N10 are considered more upright, stronger and more elegant.

*Products subject to approval. Comply with current legislation in your wine-growing region.*

#### OTACLEAN

1 kg

TO FIGHT AGAINST OTA.

OTACLEAN is an activated plant-based carbon, specially selected for its excellent adsorptive properties for Ochratoxin A. It works without stripping the wine and by preserving the organoleptic properties of the must or wine. OTACLEAN has been specially selected not to contribute ethereal and solvent notes normally associated with carbon treatments.

It also corrects taste defects while preserving the aromas of wines.

It also has the advantage of being weakly decolourising.

*Products subject to approval. Comply with current legislation in your wine-growing region.*

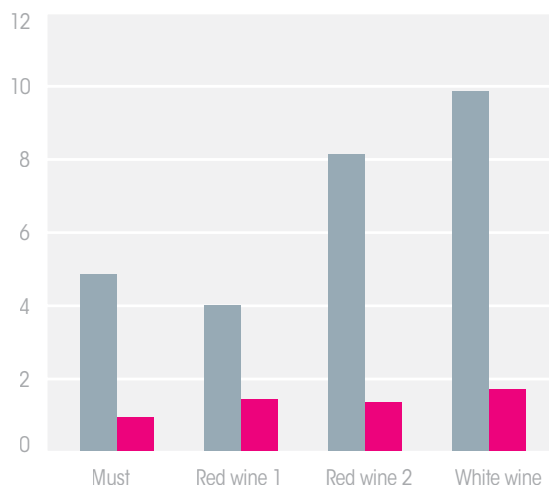
#### Example of a must treatment

	OTA (µg/L)
Initial must	4,80
Conc. formul. A	1,95
Conc. formul. B	1,15
OTACLEAN	0,90
OTACLEAN + Vitistart	0,81

The results obtained with OTACLEAN are spectacular, even when initial concentrations of OTA are very high.

OTA (µg/L)

● Initial  
● Otaclean



## FLAVOCLEAN

1 kg

### TO FIGHT AGAINST BAD TASTES.

Activated plant-based black, suitable for deodorising musts and wines, particularly active against certain tastes : musty and plant-like (IPMP, etc.). It is inert activated carbon with high adsorptive capacity for certain wine defects. It has relatively weak decolourising capacity

*Products subject to approval. Comply with current legislation in your wine-growing region.*

## CARBION

POWDER

1 kg

5 kg

20 kg

GRANULES

1 kg

15 kg

LIQUID

10 L

CARBION carbon is an activated plant-based black suitable for deodorising stained white musts and wines. It has been specially designed to avoid affecting the bouquet of wines.

CARBION is also available in granules to limit dust emissions and as a liquid for immediate use.

*Products subject to approval. Comply with current legislation in your wine-growing region.*

## CARBION ENO

1 kg

CARBION ENO carbon is an activated plant-based black with very high deodorising capacity, suitable for heavily stained white musts and wines. It selectively reduces the colour of wines while maintaining sensory qualities.

It also eliminates excess yellow-orange hues due to oxidation, so improving visual appearance.

It can be used in flotation.

*Products subject to approval. Comply with current legislation in your wine-growing region.*

## COMBATTING REDUCTION

**R**eductive notes are a recurrent problem in oenology and are often difficult to eliminate. They are often described in these terms : rotten egg, cabbage, rubber, alliaceous odours, etc. To help combat these reductive notes, we offer two ready-to-use biological preparations: NETAROM and NETAROM Extra.

## NETAROM

1 kg

### TO ELIMINATE SLIGHT REDUCTIVE NOTES.

Compounds partly responsible for 'rotten egg' reductive notes have the general formula : R-SH.

NETAROM is a preparation based on inactivated yeasts used to decrease reductive notes by means of 2 mechanisms :

→ Copper in the wine is captured by NETAROM and malodorous R-SH thiols are attached to it and sediment. This will all be removed during decanting.

→ To a lesser extent, R-SH compounds are bound by the sulphurous groups in NETAROM by direct oxidation.

In this way, brief contact with NETAROM adsorbs the various sulphurous substances responsible for reductive changes while contributing to roundness and body.

#### WORDS FROM EXPERTS

Mixing both NETAROM products can give better results than using one product or the other on its own.



## NETAROM EXTRA

1 kg

### TO ELIMINATE INTENSE REDUCTIVE AROMAS.

NETAROM EXTRA is used for intense reduction. NETAROM EXTRA has the advantage of being active on wines with significant reductive faults and where NETAROM could be less effective.

It also has the advantage of contributing to roundness and body of wines, while preserving the sensory characteristics, unlike using copper, which dries and contributes a metallic sensation in the finish.

## ↘ SOLUTION 700

250 mL

1 L

10 L

Solution based on copper sulphate, citric acid and sulphur dioxide. SOLUTION 700 is used to prevent and treat reductive notes.

*Comply with current legislation in your wine-growing region.*

## ↘ REDOXYL

1 L

5 L

Very concentrated solution of copper sulphate, citric acid and SO<sub>2</sub>. REDOXYL prevents and treats reductive notes.

# ACIDITY CORRECTORS

## ACIDIFIERS

**T**he acidity of wine is a basic characteristic, both organoleptically and analytically. It influences the microbiological stability of the wine, the antiseptic power of sulphur dioxide, clarification, the malolactic fermentation, etc.

Three acids are approved for acidifying musts and wines :

RCEE 606/2009 authorises the addition of tartaric acid, lactic acid and malic acid to acidify musts and wines. Acidification is a practice subject to authorisation, depending on the production area.

## ↘ D,L MALIC ACID

5 kg

25 kg

Strong diacid MALIC ACID is a natural component of must and wine. It increases the titration acidity and actual acidity. It can also be used to manage the malolactic fermentation.

## ↘ L+ TARTARIC ACID

1 kg

5 kg

25 kg

Strong diacid L+ TARTARIC ACID is a natural component of must and wine. It increases the titration acidity and actual acidity.

## ↘ OENO LACTIC ACID

1 L

5 L

10 L

25 kg

1 200 kg

LACTIC ACID is a monoacid used to increase the titration acidity while having very little effect on pH.

	ACIDIFICATION		
Increase in the total acidity of wine, expressed in meq/L	13	20	33
Increase in the total acidity of wine, expressed in meq/L of H <sub>2</sub> SO <sub>4</sub>	0,67	1,00	1,65
Tartaric acid g/hl	100	150	250
D, L Malic acid g/hl	90	130	220
Lactic acid g/hl	120	180 (170 mL)	300 (280 mL)

Acidification is subject to regulations; please refer to the current legislation in your wine-growing region.

## ↘ CITRIC ACID

1 kg

5 kg

25 kg

CITRIC ACID is used to prevent ferric hazes. It is capable of complexing iron. Added to a wine containing a few milligrams of iron per litre, it will combine with the iron to create a soluble complex. Its acidifying action is weak by reference to pH but markedly more perceptible from a taste viewpoint.

## DE-ACIDIFIERS

**D**e-acidifiers can be used on difficult vintages with incomplete maturity, when the musts and wines have very high levels of acidity.

They are also frequently used in the fabrication process by the traditional method, during reactivation and starter phases to initiate malolactic fermentation.

Two types of de-acidification are possible :

- De-acidification by precipitation of insoluble tartaric acid salts,
- De-acidification of malate and tartrate salts.

De-acidification is subject to regulations; please refer to the current legislation in your wine-growing region.

## ↘ POTASSIUM BICARBONATE

1 kg

25 kg

De-acidification using POTASSIUM BICARBONATE is explained by two phenomena :

- The formation of insoluble salts with tartaric acid in the form of KTH,
- The potassium super-saturation phenomenon.

In theory, adding 1 g/L of POTASSIUM BICARBONATE reduce the acidity by 0.49 g/L of H<sub>2</sub>SO<sub>4</sub>. However, under the effect of pH and other salt precipitations, there is quite another reality. Thus, in practice you have to add 140 g/hL to de-acidify wine at 1 g/L expressed as sulphuric acid.

## ↘ CALCIUM CARBONATE

1 kg

5 kg

25 kg

CALCIUM CARBONATE is used to de-acidify musts and wines. It causes precipitation of tartaric acid as an insoluble salt, calcium tartrate. In practice you have to add 50 g/hL of CALCIUM CARBONATE to de-acidify wine at 0.5 g/L expressed as sulphuric acid.

## OTHER CORRECTORS

### ACIDE ASCORBIQUE

500 g

1 kg

25 kg

ASCORBIC ACID is a powerful anti-oxidant.

It is used on the harvest as protection against oxidation. It is added to the harvest to complement the action of SO<sub>2</sub>.

In white and rosé wines, ASCORBIC ACID is used to avoid tanning of phenolic compounds by preferentially fixing dissolved oxygen. This also preserves the wine's sensory characteristics.

In red wines, ASCORBIC ACID prevents premature ageing.

ASCORBIC ACID is involved in preventing 'oxidative shock' suffered by sparkling wines vinified using the traditional method, during disgorging, because it is very effective against controlled but sudden oxidation.

It is also used during bottling of still wines.

It also combats ferric haze. In this way it prevents oxidation of iron in its 'iron oxide' form, which is a cause of cloudiness.

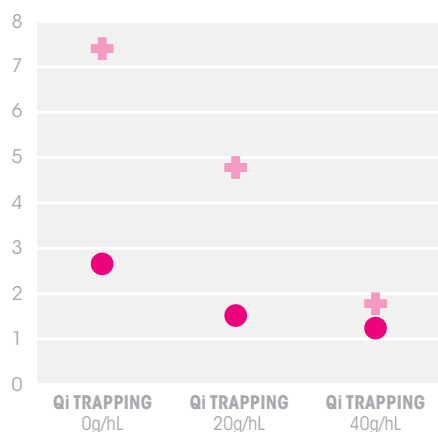
### Qi TRAPPING

1 kg

#### COMBATS EXCESSIVE IRON AND COPPER

Qi TRAPPING is the natural "magnet" for combatting metals and eliminating unwanted metallic elements in wines.

An innovation formulation which significantly reduces iron and other heavy metal contents in wines. 100% natural, Qi TRAPPING contains no synthetic product or products of animal origin.



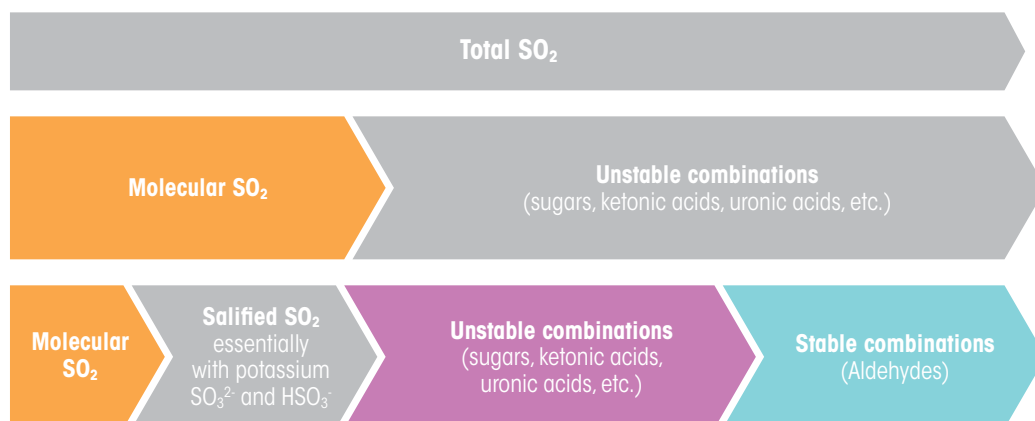
Iron and copper are the two main catalysers in the oxidation of wines. These two elements may also be the cause of cloudiness followed by unwanted haze. European regulations limit copper content in wines to 1 mg/L. Iron content of less than 10 mg/L

is strongly recommended to avoid any risk or iron haze. The experiment opposite shows the effect of chitin derivatives on iron and copper elements. It is carried out on a white wine contaminated by these 2 metallic salts. The treatment is carried out over 3 days. The result shows the good effect of Qi TRAPPING on iron and, to a lesser degree, on copper.

● Copper (mg/L) + Iron (mg/L)

# SULPHUROUS PRODUCTS

Chemical state of SO<sub>2</sub> in musts and wines



## The protective effect of SO<sub>2</sub>

### → Anti-oxidative role

Oxidation caused by laccase or tyrosinase enzymes is an extremely rapid phenomenon.

SO<sub>2</sub> completely inhibits the action of tyrosinase and partially inhibits laccase, particularly in botrytised musts. Polyphenoloxidase is completely inactivated in the presence of SO<sub>2</sub>, so preventing the colour tanning.

### → Anti-oxygen role

SO<sub>2</sub> reacts with gaseous or dissolved oxygen to be oxidised to sulphates. The reaction requires the presence of catalysts such as copper and iron. In this way, aromatic compounds, anthocyanins, tannins and other delicate compounds are effectively protected by the presence of SO<sub>2</sub>.

### → Antiseptic effect

SO<sub>2</sub> has a toxic action against micro-organisms. Note that bacteria are more sensitive to the action of SO<sub>2</sub> than yeasts.

## AMMONIUM BISULPHITE 150 g/L

1 L 5 L 10 L 1000 L

Solution of 150 g/L SO<sub>2</sub> used during harvesting on must.

It can be used in the must receiving tank (as an antiseptic) or at vatting, during pressing for its anti-oxidant, antioxygen and antiseptic action.

## POTASSIUM BISULPHITE 150 g/L

1 L 5 L 10 L 20 L 1000 L

Solution of 150 g/L SO<sub>2</sub> used under various circumstances.

It can be used on musts for the same reasons as ammonium bisulphite, but also on clear wines :

- To stop development of lactic acid bacteria,
- To ensure the wine is well protected against microbial attacks after the malolactic fermentation,
- After bubble-forming by means of the transport liquor, it preserves the wine from premature oxidation.

## ↘ SULFIVIN A50, A80, A100, A150, A180, A200, A225, A400

Solutions of ammonium bisulphite titrating respectively at 50, 80, 100, 150, 180, 200, 225 and 400 g/L SO<sub>2</sub>.

## ↘ SULFIVIN K50, K80, K100, K150, K180

Solutions of potassium bisulphite titrating respectively at 50, 80, 100, 150 and 180 g/L de SO<sub>2</sub>.

## ↘ POTASSIUM METABISULPHITE

1 kg

25 kg

It is used on fresh harvests (harvesting machine, press), on musts and wines. It contains 52 to 55% of its weight in SO<sub>2</sub>.

## ↘ INODOSE 2

48 tablets in a box

## INODOSE 5

48 tablets in a box

Effervescent tablets prepared on a base of potassium metabisulphite. They release 2 g or 5 g of SO<sub>2</sub> per tablet into musts, wines or liqueurs. They simplify the sulphiting operation, particularly for wines matured under wood, and allow gradual uniform release of the required dose of SO<sub>2</sub>.

## ↘ INODOSE GRANULES

PRE-DOSES BAGS

50 g

100 g

400 g releases

They come in the form of small, white, solid, odourless granules (1 to 2 mm). They release a precise dose of simplifying the sulphiting operation.

They are used for sulphiting trucks and musts coming out of the press, when stabilising wines at the end of fermentation or when readjusting SO<sub>2</sub>.

The granulated formula has appreciable advantages :

- Easy to disperse : granules mixed in easily,
- Better protection of musts and wines: effervescent granules providing good distribution of SO<sub>2</sub>,
- Easy to use : release a precise dose of SO<sub>2</sub>.

### WORDS FROM USERS

To test it is to adopt it !!!!!

## ↘ SULFI-TAGE K60

1 L

5 L

10 L

Solution of potassium bisulphite titrated at 60 g/L de SO<sub>2</sub>.

## ↘ SULFI-BONDE

1 L

5 L

10 L

Solution of potassium bisulphite titrated at 100 g/L SO<sub>2</sub> specially for antiseptic bungholes.

## ↘ SULFI-DEGORGEMENT

1 L

5 L

10 L

Solution based on potassium bisulphite, specially designed for disgorging, titrated at 180 g/L SO<sub>2</sub>.

## ↘ SULFITAMINE C

250 mL

500 mL

1 L

Solution based on ascorbic acid and sulphurous solution.

SULFITAMINE C has strong reducing power.

It prevents enzymatic and non-enzymatic oxidation of wine.

Overall, it improves the taste qualities of the wine by giving it freshness and fruitiness.



## COMPLEX FORMULATIONS

### ↘ CASSIT

1 L 10 L

Mixture of citric acid and potassium bisulphite, it is used at disgorging and when dosing sparkling wines with sensitive development characters and/or slightly too much iron. This product is suitable for young wines that have a certain solidity or are too short.

### ↘ SULFI-PHOSPHATE

1 L 5 L 10 L

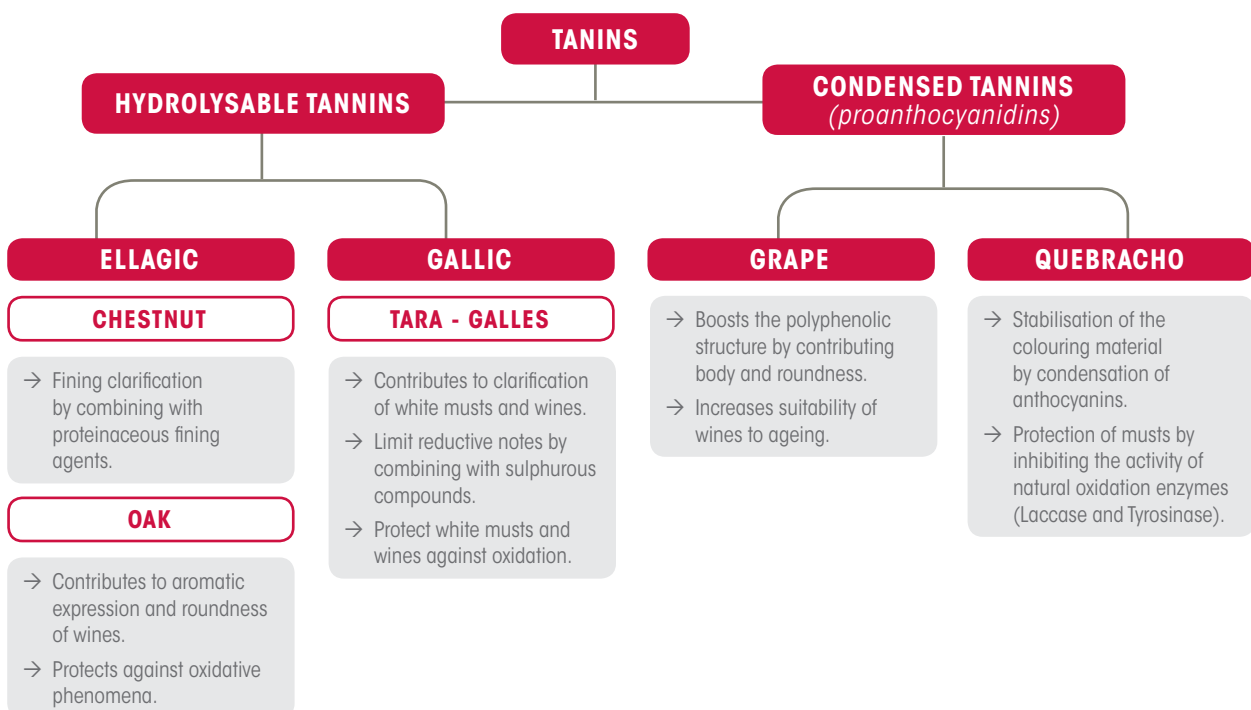
Solution based on di-ammonium phosphate and potassium bisulphite. Adding SO<sub>2</sub> to the musts receiving vessel acts to prevent oxidative haze and any microbial alteration. Di-ammonium phosphate provides the must with ammoniacal nitrogen, promoting yeast multiplication and so allowing complete consumption of the sugars.

### ↘ SULFI-TANIN

1 L 5 L 10 L

Solution of ammonium bisulphite at 100 g/L pure SO<sub>2</sub> and Tara tannin. The presence of tannin adds to the antiseptic and anti-oxidant actions. SULFITANIN is used essentially when sulphiting musts.

# TANINS



## TANNINS FOR RED WINES - VINIFICATION

### ↘ **VOLUTAN** (100% GRAPE)

PROPOSAL OF SERVICE TO PUT  
INTO SOLUTION AT 400 g/L

500 mL

1 L

5 L

#### TO MAINTAIN COLOURING MATERIAL WHILE CONTRIBUTING STRUCTURE, BODY AND SUPPLENESS.

VOLUTAN is specifically selected to maintain colouring material while contributing structure, body and suppleness to musts and wines with a polyphenol deficiency.

It sustainably stabilises colouring material by forming Tannin-Anthocyanin combinations.

It compensates the imbalance of natural tannins from grapes while contributing body and suppleness.

### ↘ **TANIN SR TERROIR** (PROANTHOCYANIDIN AND HYDROLYSABLE)

1 kg

5 kg

25 kg

#### TO MAINTAIN COLOURING MATERIAL AND IMPROVE STRUCTURE.

TANIN SR TERROIR is specifically formulated to combine the effects of proanthocyanidin tannins (grapes and quebracho) and hydrolysable tannins without adding bitterness.

It sustainably stabilises colouring material by forming covalent bonds with anthocyanins.

It improves the structure of wines by acting on the body.

### ↘ **SOLUTION SR TERROIR** (PROANTHOCYANIDIN AND HYDROLYSABLE)

1 L

5 L

SOLUTION SR TERROIR is a formulation combining the effects of proanthocyanidin and hydrolysable tannins, as well as copper sulphate. It stabilises colour and contributes intensity and structure to wines.

### ↘ **TANIN SR** (100% PROANTHOCYANIDIN)

1 kg

5 kg

#### TO MAINTAIN COLOURING MATERIALS.

TANIN SR is a formulation of 100% proanthocyanidin tannin, intended to stabilise colour.

It sustainably stabilises colouring material by forming covalent bonds with anthocyanins, but also by copigmentation phenomena.

It protects musts by inhibiting the activity of natural oxidation enzymes (Laccase and Tyrosinase).

## TANNINS FOR RED WINES - ELEVAGE

### ↘ **VOLUTAN** (100% GRAPE: SKIN AND SEED)

PROPOSAL OF SERVICE TO PUT  
INTO SOLUTION AT 400 g/L

500 mL

1 L

5 L

#### FOR MORE HARMONIOUS WINES WHILE ALSO IMPROVING SUITABILITY FOR AGEING.

VOLUTAN is a tannin derived only from grapes.

It compensates for polyphenol deficiency of wine by contributing balance, structure and roundness.

It increases the suitability of wines for ageing by protecting them against oxidative phenomena.

#### WORDS FROM USERS

'EXCELLENT product that rounds wines by giving sweetness and body and bringing out aromas'.

## **TANIFASE ELEV** (OAK)

1 kg

**TO HIGHLIGHT THE AROMATIC EXPRESSION AND ROUNDNESS OF WINES WHILE PROTECTING THEM AGAINST OXIDATIVE PHENOMENA.**

TANIFASE ELEVAGE is a high quality oak tannin.

It improves elegance, structure, length and aromatic expression of wines.

It regulates oxido-reductive phenomena during elevage in casks or during micro-oxygenation.

## **TANIN SR TERROIR** (PROANTHOCYANIDIN AND HYDROLYSABLE)

1 kg

5 kg

25 kg

**FOR YOUNG RED WINES OR THOSE FOR LAYING DOWN WITH A STRUCTURAL DEFICIENCY.**

TANIN SR TERROIR is specifically formulated to combine the effects of proanthocyanidin (grapes and quebracho) and hydrolysable tannins without adding bitterness.

It improves the structure of wines by acting on the body. It compensates for polyphenol deficiency of wine by contributing balance, structure and roundness.

It increases the suitability of wines for ageing by protecting them against oxidative phenomena.

## **SOLUTION SR TERROIR** (PROANTHOCYANIDIN AND HYDROLYSABLE)

1 L

5 L

SOLUTION SR TERROIR is a formulation combining the effects of proanthocyanidin and hydrolysable tannins, as well as copper sulphate. It stabilises colour and contributes intensity and structure to wines.

# TANNINS FOR WHITE WINES - VINIFICATION

## **TANIN CRISTALLIN** (GALLIC TANNIN)

1 kg

5 kg

12,5 kg

**FOR BETTER PRESERVATION.**

TANIN CRISTALLIN is a formulation that gives finesse and structure to white wines without adding astringency.

It protects musts from natural oxidation by inhibiting laccase and tyrosinase activity.

It eliminates protein hazes by precipitating unstable proteins when settling musts.

It boosts the anti-oxidant power of SO<sub>2</sub> and adds to its antiseptic effect. It is formulated as granules for ease of use.

# TANNINS FOR WHITE WINES - FINING

## **TANIN TC** (ELLAGIC TANNIN EXTRACTED FROM THE CHESTNUT)

1 kg

25 kg

**TO FACILITATE FINING.**

TANIN TC has been selected for its efficacy forming protein tannin complexes while playing an anti-oxidant role.

The tannin forming the complex with the fining agent leads to settling of particles making the wine cloudy.

It enhances the anti-oxidant power of SO<sub>2</sub>.

## TANNINS FOR WHITE WINES - ELEVAGE

### EXGRAPE PEL (100 % GRAPE SKIN)

1 kg

25 kg

**FOR MORE HARMONIOUS WINES WHILE ALSO IMPROVING SUITABILITY FOR AGEING.**

EXGRAPE PEL, derived from the skin of white grapes, is selected to improve the taste perception as well as the balance of wines. It compensates for polyphenol deficiency of wine by refining the structure while contributing roundness. It increases the suitability of wines for ageing by protecting them against oxidative phenomena.

### TANIFASE ELEVAGE (OAK)

1 kg

**TO HIGHLIGHT THE AROMATIC EXPRESSION AND ROUNDNESS OF WINES WHILE PROTECTING THEM AGAINST OXIDATIVE PHENOMENA.**

TANIFASE ELEVAGE is a high quality oak tannin that improves the general balance of wines. It improves elegance, structure, length and aromatic expression of wines. It regulates oxido-reductive phenomena, particularly during elevage in casks.

## TANNINS FOR SPARKLING WINES - GRAPE-HARVESTS

### TANIN CRISTALLIN (GALLIC TANNIN)

1 kg

5 kg

12,5 kg

**FOR BETTER PRESERVATION.**

TANIN CRISTALLIN is a formulation that gives finesse and structure to white wines without adding astringency. It protects musts from natural oxidation: inhibition of laccase and tyrosinase activity. It prevents protein hazes by precipitating unstable proteins when settling musts. It boosts the anti-oxidant power of SO<sub>2</sub> and adds to its antiseptic effect.

## TANNINS FOR SPARKLING WINES - MALOLACTIC FERMENTATION

### INOTAN B (QUEBRACHO)

1 kg

5 kg

1 L

5 L

10 L

**TO IMPROVE STRUCTURE.**

Using proanthocyanidin tannin restricts the addition of SO<sub>2</sub> and above all gives structure to white and rosé wines. It contributes to wines ageing well. It is used to richer and more generous wines.

## TANNINS FOR SPARKLING WINES - FINING

### ↘ SOLUTION TC (ELLAGIC TANNIN EXTRACTED FROM THE CHESTNUT)

1 L

5 L

10 L

#### TO FACILITATE FINING.

In red wines, there are sufficient quantities of tannins to react with protein fining agents (gelatines, albumin and fish finings). In white wines, adding a formulation of ellagic tannins optimises fining by promoting the interaction with the fining agent and avoids over-fining. Chestnut tannins are particularly suitable for this application; they enable good flocculation with proteins. A precipitate follows, which as it sediments brings with it the particles causing cloudiness in the wine.

In this way cloudiness is markedly improved, wines are stabilised and their polyphenolic structure is refined.

SOLUTION TC is made up from hydrolysable tannic acid (extracted from chestnut) and silica gel, which keeps the tannin in suspension and improves clarification of the wine.

## TANNINS FOR SPARKLING WINES - TIRAGE

### ↘ SOLUTION ST (GALLIC TANNIN)

1 L

5 L

10 L

#### SPECIALLY DESIGNED FOR TIRAGE.

Solution ST is gallic tannin extract particularly well suited to white wines.

Added at tirage, it gives more structure to wines.

The presence of copper sulphate prevents reductive notes appearing.

### ↘ TANIN CRISTALLIN (GALLIC TANNIN)

1 kg

5 kg

12,5 kg

TANIN CRISTALLIN is a formulation that gives finesse and structure to white wines without adding astringency.

Added at tirage, combined with adjuvants, it structures wines and makes subsequent turning easier.

It boosts the anti-oxidant power of SO<sub>2</sub> and adds to its antiseptic effect. It is formulated as granules for ease of use.

## TANNINS FOR SPARKLING WINES - DISGORGING

### ↘ TANIN CAS (OAK)

PROPOSAL OF SERVICE TO PUT INTO SOLUTION

1 L

#### SPECIFICALLY FORMULATED FOR TRANSPORT LIQUOR.

This high-quality oak tannin is used by addition to the transport liquor in order to improve the texture and sensory perception of wines. It brings out aromas while also improving the general balance and structure of wines.

# WOOD IN OENOLOGY

## ENOQUER RANGE

**T**he ENOQUER range is made from cask-quality cooperage oak wood guaranteed, without sapwood or bark. Our woods are rigorously selected from sessile oak varieties (*Quercus sessiliflora*) or pedunculate oak (*Quercus robur*) from French forests and using *Quercus alba* for American wood.

Before conversion, the wood is dried and matured for a minimum of 24 months in the open air.

The oak product is available in Wood sourced from :  
→ FRANCE,  
→ USA.

During the alcoholic fermentation, fresh wood improves the tannic structure and stabilises the colour of red wines. The wine has more body and sweetness emphasised by almond and dried fruit notes.

Gentle charring will be preferred during the alcoholic fermentation to improve body, sweetness and aromatic complexity (fruity nose).

Moderate and stronger charring will be preferred during elevage to increase the aromatic complexity of wines.

A mixture of these chars will come close to the best of elevage in casks.

### POWDER

MEDIUM HEATING - UNCHARRED

BAG 10 kg

*Banned for use in EU.*

### GRANULES

MEDIUM HEATING - UNCHARRED

BAG 10 kg

### FLAKES

LIGHT HEATING - MEDIUM - MEDIUM +  
STRONG - UNCHARRED

INFUSION NET 10 kg

### STAVES

LIGHT HEATING - MEDIUM - MEDIUM +  
STRONG - UNCHARRED

50 u/LDPE bag



## BRASE'BOIS RANGE

### Guaranteed origin

**A**t the heart of oak forests in the Allier (Tronçais, Prieurés, etc.), our supplier is ideally placed to select and track its wood from felling, and select a majority of sessile or rubor oaks (*Quercus sessiliflora* or *Q. petraea*), well-known for being rich in aromatic compounds.

Cask-quality logs are carefully selected, then worked to remove the heartwood, hard and tannic. In this way, only the highest quality part of the

tree, the 'duramen', is retained. It is recognised for its organoleptic and structural properties.

The sawn timber is stored on land in the open air for an average curing time of 14 to 18 months.



### An exclusive and patented charring process

**P**roducts from the Brase'Bois range offer aromatic complexity from the internal face of the cask by layered charring to the heart of the wood : our supplier's exclusive patented process provides uniform charring at the surface and layered charring in the structure of the wood, unlike roasting or convection charring processes normally offered. The temperature gradient in the bulk of the wood provides optimum organoleptic complexity and reproduces the layered charring characteristic of the internal cask surface.

Brase'Bois products offer an exceptional concentration of organoleptic compounds at the heart of alternatives: the process provides low thermal inertia. The rapid temperature rises and falls are the same as those found in traditional cooperage. This promotes the formation of aromatic compounds, which condense inside the wood by limiting losses by volatilisation.

Using Brase'Bois products contribute to the harvest :

- fixes the colour,
- reduces herbaceous notes,
- improves structure and richness,
- intensifies fruity aromas,
- inhibits laccase.

on finished wines :

- contributes aromatic complexity (coconut, vanilla, spices, roasted, etc.),
- increases body, sweetness and richness,
- reduces certain faults (phenol notes, herbaceous notes, etc.).



### Brase'Bois products are available with the following chars :

- **Fresh oak** - Sweetness, intense coconut notes
- **Light charring** - Vanilla, coconut, fresh oak aromas
- **Medium charring** - Vanilla with coconut and spice highlights
- **Medium + charring** - Complexity, vanilla, spices, cocoa
- **Strong charring** - Rich in grilled, empyreumatic notes



## SLATS

IN FANS FOR TANKS

15 u / bag

- 12 mm (L 980 x l 65 x h 12 mm)
- 6 mm (L 980 x l 65 x h 6 mm)



## SLATS

IN STRINGS FOR CASKS

16 u / bag

- L 320 mm x l 30 mm x h 12 mm



## RECTANGLES

IN HANGING MESH NET FOR TANKS

INFUSION NET 5 kg

- L 65 x l 30 à 65 x h 15 mm



## BLOCKS

IN HANGING MESH NET FOR TANKS

INFUSION NET 5 kg

- L 20 à 30 mm x l 12 mm x h 12 mm



## FRAGMENTS

BAG 5 kg 10 kg

- Greater than 2 mm

Used in vinification under certain conditions; find out about the regulations specific to your production area



## FINE FRAGMENTS

BAG 10 kg

Use banned in EU.



Using pieces of oak wood is subject to regulations specific to your country and your production area. Find out before using it.



## **SUCRAISIN ENRICHMENT RCM**

10 L

20 L

60 L

1 000 L

Rectified Concentrated Must (RCM) is made from grape juice with all 'non-sugar' components removed. It is perfectly neutral. It preserves the organoleptic qualities of the base wine and causes no differences in terms of taste compared to traditional chaptalisation with dry sugar. SUCRAISIN is simple to use; in liquid form, it can be pumped and mixes instantaneously.

### **The reliable, simple and effective solution for enriching musts :**

- Delivery by tanker,
- Unloaded by pumping,
- Tank storage,
- Added by pumping while pumping over,
- Mixes rapidly in the tank,
- Saves time, labour and energy, because it does not have to be melted.

## **SUCRAISIN LIQUOR RCM**

1 000 L

Legislation authorises rectified concentrated must for adding sugar when making tirage or transport liquors. Using SUCRAISIN enables the blend (sugar + wine + yeast + turning adjuvants) to be prepared rapidly and uniformly. RCM composed only of fructose and glucose can be used rapidly by yeasts.

### **Advantages of Sucraisin**

- saves time, labour and energy, because it does not have to be melted,
- liquor very uniform from one disgorgement to another; using RCM eliminates problems associated with storing conventional liquors,
- RCM preserves the qualities of the disgorged wine and contributes only the sugar component,
- practical to handle,
- product not requiring additional filtration,
- impurity-free product of known concentration,
- can be dosed near to transport by very rapid combination with the disgorged wine.

SUCRAISIN for making tirage or transport liquors is also available in ORGANIC form.











**IOC**

*Révélez votre différence*

ZI de Mardeuil - BP 25 - **51201 EPERNAY CEDEX**  
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