

WHAT'S NEW IN 2024

New products

TECHNICAL ARTICLE

ACTIPROTECT ExpressTM

EXTRAFLORE Density TM

The IOC Group

Technical and Sales

INSIDER NEWS
Introducing the
newest members of
the Perdomini-IOC

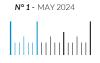
story of innovation

and quality

HISTORY
Perdomini-IOC: a

DEEP DIVES
Zero Additives
Yeast nutrition





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PRODUCTS INSERT

Key CERTIFIED ORGANIC | ALLOWED IN ORGANIC WINEMAKING | VEGAN

Yeast nutrition



ACTIPROTECT Express

Reinventing yeast inoculation



Speed up your process

To rehydrate yeast easily and quickly

To save time and resources

For better fermentation performance and achieving sensory goals



VINOFINE ROUGE

Plant-based choice for animal-free goals

NEW PRODUCTS

Yeast inoculation reinvented



VINOFINE ROUGE™



The vegan alternative to animal-origin gelatine

An original formulation which can be used instead of animal-origin gelatine in the fining and aging of red wines.

An innovative tool to make yeast inoculation simpler at the same time as guaranteeing highly effective alcoholic fermentation and full expression of sensory attributes.

ACTIPROTECT Express™ is a ground-breaking yeast protector with an exceptional sterol content. Thanks to its microaggregate form, it reduces the dustiness of the yeast, thereby making it significantly simpler to inoculate. As the name suggests, microagglomeration binds various product particles together. Free from binders or any other additives, this product is based exclusively on the physical agglomeration which occurs when water evaporates. Thanks to these attributes. ACTIPROTECT Express™ can be used directly in water acclimatization, leading to savings in terms of both time and money without losing any efficacy.

Thanks to ACTIPROTECT Express™, the rapid membranes of the yeast cells provides total, effective protection to the yeast. This exceptional tool is suitable for all yeast strains and perfect for inline dosing. ACTIPROTECT Express™ allows you to attain increased sensory expression (thiols and esters in particular) compared with a classic fermentation booster - without having to first rehydrate the yeast - or classic rehydration without protection.

Made from specially selected plant-based proteins, VINOFINE ROUGE™ is an innovative alternative to pork winemaking process, it acts as a fining agent, helping to wines. It also ensures greater stability in colourant substances by eradicating the polyphenols that can cause precipitation. When used later in the process, it enhances the sensory attributes of the wines by toning down bitter and astringent sensations and reducing vegetal notes.



Animal clarifiers give way to the vegan alternative

Unique effectiveness, demonstrated by 4 years of collaborative project Greater respect for aromas

Clarifies, stabilizes and reduces bitter and astringent notes

















Oenoccus oeni strain able to flourish in difficult conditions.

EXTRAFLORE Density™ is a winemaking bacteria selected by the Institut Français de la Vigne et du Vin as part of a programme to find a strain Oenococcus oeni of which could withstand challenging chemical and physical conditions. In testing, the chosen strain showed itself to be robust in very tricky conditions for vinification (high alcohol content, low pH, low malic acid content, etc.), therefore suitable for a range of different types of wines from different origins. EXTRAFLORE Density™ contributes to the sensations of volume and fullness in the mouth, leading to a feeling of overall quality in the structure. This makes it particularly suitable for producing wines from imperfectly ripe grapes as well as bringing out the best in quality wines. It helps increase creaminess and roundness, leading to wines that are more drinkable, less bitter and aggressive, and in line with modern customer preferences. Suitable for co-inoculation, it can be directly incorporated into the must or wine without prior reactivation.



ACTIPROTECT ExpressTM



ACTIPROTECT ExpressTM \mathcal{D} Alcoholic fermentation optimization in winemaking – speed up your process!

Progress in the field of winemaking is an ongoing process of improving techniques and products in order to produce higher-quality wines. Within this framework, **ACTIPROTECT Express™** stands out as a revolutionary yeast protector. It has been designed to optimize the alcoholic fermentation process by simplifying it and speeding it up, not only without compromising the quality of the finished wine but even improving its sensory profile.



HOUSE NEWSLETTER





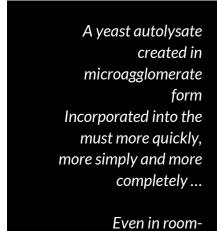
ACTIPROTECT Express™ is made from a specially selected yeast autolysate and deactivated yeasts in microaggregate form, which makes it easier to mix into the target liquid, leading to the bioavailable sterols being incorporated into the plasma membrane more swiftly. This characteristic ensures that the yeasts enjoy greater membrane functionality, allowing them to express the sensory potential of the grape variety and the specific grapes being fermented more effectively.

Simplifying inoculation without adversely affecting the fermentation process

Scan the QR Code to download the ACTIPROTECT Express™ technical info



One of the main challenges in winemaking is inoculating yeasts in the must. ACTIPROTECT Express™ considerably simplifies this process thanks to its being in microaggregate form and being highly wettable. For winemakers, being able to dissolve the product directly into water at room temperature, without having to heat the water first, makes inoculation both quicker and simpler. In just 15 minutes, the yeast is ready to be incorporated into the must, with no need for acclimatization.



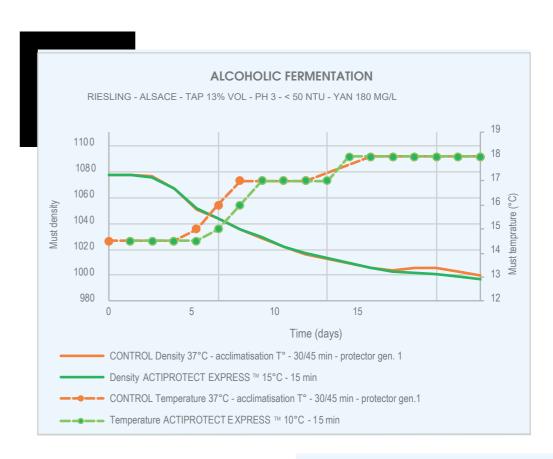
temperature water!

 $(= or > 15^{\circ}C)$



Left, **ACTIPROTECT Express™**; right another yeast protector

HOUSE NEWSLETTER

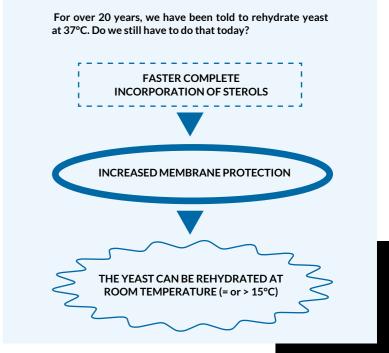


Optimized bioavailability, surer results and increased quality

The optimized bioavailabilty of the survival factors provided by

ACTIPROTECT Express™ makes the yeast tolerant to a broad range of rehydration conditions. Compared with a yeast rehydrated on its own or accompanied by a first-, second- or third-generation protector*, the simplified protocol for using

ACTIPROTECT Express™ provides equally sure fermentation dynamics without the need to heat the water or acclimatize the yeast to the temperature of the must.





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No. 1 - MAY 2024



SENSORIAL PROFILE CHARDONNAY - LANGUEDOC IOC INFINI'TWICE ™ YEAST - TAP 11,7% VOL - PH 3,57 - 178 NTU - YAN 287 MG/L ACTIPROTECT EXPRESS ™ 15°C - 15 min CONTROL 37°C - acclimatisation T° - 30/45 min – not protected AROMATE INTENSITY ** (1%) PERSISTENCE ON AROMATIC THE PLATE EXOTIC FRUITS* BITTERNESS ROUDNESS FLESHY FRUITS FRESHNESS AMYL FRUITS AROMATIC FRESHNESS

What's more, **ACTIPROTECT Express™** enhances the sensory expression of wines, even in aggressive conditions such as high or low temperatures, intensive fining or high ethanol concentrations.

In conclusion, ACTIPROTECT Express™ constitutes a major innovation in the field of winemaking, as it provides an effective way to optimize alcoholic fermentation. Thanks to its ability to simplify inoculation without negatively affecting the quality of the wine, it meets wineries' requirements in terms of streamlining the operations performed during vinification, especially at the critical yeast inoculation



Give your wines volume

In order to adapt to the requests of "new" consumers, which are inevitably leading to a drop in the consumption of red wines, winemakers need a tool with the power to reduce the aggressive tactile sensations of reds without reducing the level of pleasure consumers get from drinking them. With this in mind, working on creaminess, sweetness and volume is key.

PRODUCT PRESENTATION

We conducted a study for that very purpose, with the result that we pinpointed a strain of Oenococcus oeni with the ability to conduct malolactic fermentation in such a way as to produce wines with the required characteristics and that also has a high resistance to challenging chemical and physical conditions (high alcohol content, very low malic acid, etc.) EXTRAFLORE Density™.

Its most important features are:

- Contribution to creaminess and roundness
- Reduction in bitterness.

Ethanol resistance: 16% vol (red wines) and 13.5% vol (white wines)

pH: >3.15

Total SO2: <55 mg/l (red wines) or <30 mg/l (white wines)

T°: 18-27°C if the ethanol:

- >10% vol -> <24°C
- >14% vol -> <17-20°C

Phenol negative

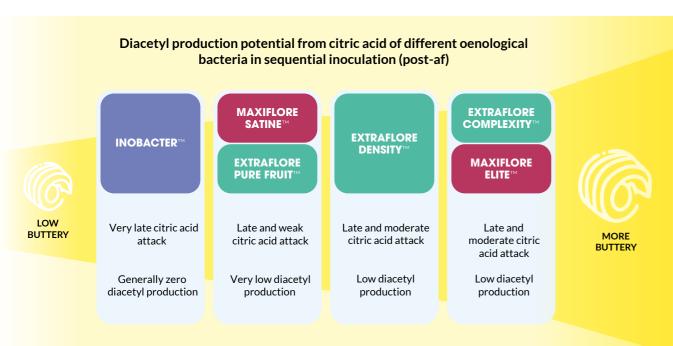




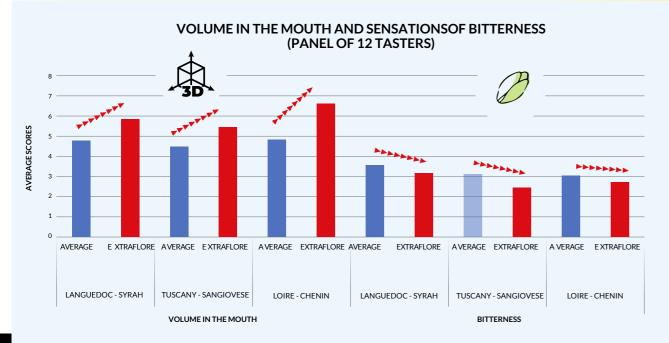








EXTRAFLORE Density™ facilitates the late onset of citric acid, so that a manageable amount of diacetyl is produced. This leads to enhancing the sensory complexity of the wine without overriding its fruitiness.



In practical experiments, EXTRAFLORE Density™ notably improved the mouthfeel of the wines compared to other bacterial strains. Through its ability to reduce bitterness and green tastes, and to enhance velvetiness and density in the mouth, the wines move towards the tastes of new consumers seeking softer, less aggressive sensations.

Perdomini-IOC: A STORY OF INNOVATION AND QUALITY

Perdomini-IOC yesterday...

In the 1950s, Chimici Perdomini was founded in the heart of the Verona hinterland. This venture, whose core business was marketing products for fining and stabilization, soon became a flagship for the winemaking and food & beverage sectors



After rapid expansion, by the 1980s, the newly-named Perdomini S.P.A. had gained considerable success both in Italy and further afield. The company was restructured into four specialist divisions: winemaking aids, detergents and sanitizers for the food & beverage sector, microfiltration and microbiological controls, and membrane-based equipment and processes.

2011 marked the beginning of a new chapter in the Perdomini story: the company underwent a strategic merger with Institut Œnologique de Champagne (IOC), a French company with a time-honoured tradition in the winemaking sector. This merger led to the creation of Perdomini-IOC, the perfect union of the great Italian and French winemaking traditions.





Some archive photos of the Perdomini-IOC headquarters, Right, a recent photo of our laboratories.



HOUSE NEWSLETTER





HISTORY

Perdomini-IOC today...

The market position of Perdomini-IOC has been further consolidated, with a complete range of winemaking products and services that cover everything from technical support to solutions for wineries – from harvesting the grapes to finished wines.

The partnership between Perdomini and Institute CEnologique de Champagne has led not only to greater strength, but is also a synergistic union of experience and know-how. Italian winemaking history and skill has merged with the centuries-old French tradition to consolidate Perdomini-IOC's presence in the world of wine.



IOC GROUP



Entrepôt Général de la Champagne was founded in 1890 in the French Champagne region In 1905, its name was changed to Institut Œnologique de Champagne (IOC). At that time, IOC produced, packaged and sold products for winemaking, in particular fining agents, preservatives and stabilizers. Over the years, IOC set up oenological analysis laboratories and expanded its area of operations from the Champagne region to the whole of France.

IOC also expanded its range of products into the sphere of producing and marketing biotechnologies (winemaking bacteria, yeasts and yeast derivatives). By 2011, it had also expanded into Italy, forming Perdomini-IOC, and Spain, forming IOC-Enotecnia (the headquarters for the Spanish market).

IOC, Perdomini-IOC and IOC-Enotecnia together make up the IOC corporate group, which currently has operations in 57 countries around the world and boasts 14 research labs and 2 production facilities

3 LOCATIONS









Enological analysis labs



R&D labs



Production sites



Lab specializing in wine filtration







INTRODUCING THE NEWEST MEMBERS OF THE Perdomini-IOC TEAM

Aiming ever higher with professionalism and dedication

We're glad to announce the arrival of three new members of the Perdomini-IOC team, all of whom have extensive experience in the sector and are ready to help us achieve new goals.

Matteo Pachera

/ Area Manager

Matteo graduated in Oenology from the University of Verona in 2005 and he immediately started working as an assistant winemaker for various wineries in the Bardolino and Valpolicella areas.

In 2010, he began his sales career, working for companies supplying winemaking aids to wineries. Over time, he has accumulated a considerable baggage of both technical and business know-how, acted as area manager for various parts of the north-east of Italy and worked with and for a number of major players in the world of winemaking.

After working for a leading company in the winemaking sector for several years, Matteo joined the Perdomini-IOC team in June 2023 as our new Area Manager.

We're very happy to welcome him to the team and we're sure that his experience and drive will be real bonuses for our company.

Fabio Centinaro

/ Winemaking Technician, Abruzzo & Marche area

Fabio is an oenologist who has worked for many years for renowned wine producers in Italy and abroad, in particular Australia and New Zealand. After numerous harvests as an oenologist, Fabio decided to transfer the experience he'd built up in the field of grape farming to the technical and sales spheres.

Having finished a project with a major multinational, he joined Perdomini-IOC a few months ago. With his ambitious and enthusiastic approach, we're sure he'll grow with us and fully exploit his experience in his assigned area (Abruzzo, Marche and adjoining regions), where there's plenty of potential for growth.

Giorgio Genzano Rita

/ Winemaking Technician, Piemonte area

Giorgio, who graduated in Grape Cultivation and Oenology from the University of Alba in 2019, has cultivated his love for the world of wine from his student days. His early experiences in the winery – first as a general assistant, then as assistant winemaker – eventually led him towards the business side of the sector, where he discovered his real vocation.

After graduating, Giorgio decided to put his business skills to practical use, taking a job as sales rep for one of the biggest companies in the winemaking aids sector, covering the prestigious Barolo and Barbaresco zones. Now he's taken on a new challenge by becoming part of the Perdomini-IOC team.

Giorgio is currently working in partnership with our long-standing Piemonte area agent, Mario Alessandria, with enthusiasm and determination to succeed.

ZERO ADDITIVES

New regulations on labelling

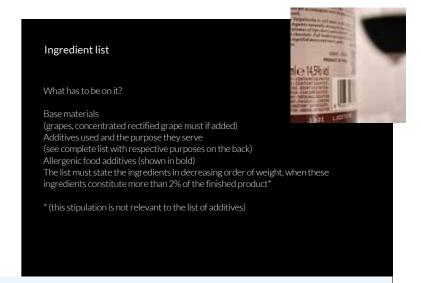


Our alternatives to help to reach your goals

EU Regulation 2021/2117 on wine labelling marks a turning point in the grape and wine sector, as it paves the way for natural alternatives to the use of traditional additives in winemaking.

Bearing this in mind, we invite you to take a moment to check out the list of ZERO ADDITIVE alternatives

Perdomini-IOC has to offer below.



ZERO-ADDITIVE ALTERNATIVES TO PRESERVATIVES: THE FIGHT AGAINST OXIDATION

| 250 | IOC Calypso™ Yeast Metschnikowia pulcherrima | + | Bio protection and bio detection of aromas |
|--------|--|---|---|
| GRAPES | Essential Antioxidant™ Gallic tannin | + | Effective tannin in terms of oxygen Inibizione dell'attività della laccasi |
| | Fullprotect™ Specific inactivated yeast and gallic tannin | + | Limit primary and secondary oxidation phenomena (color, aromas) |
| | Glutarom Extra™ Specific inactivated yeast with guaranteed glutathione content | + | Reinforce the oxidative stability of wines |

THE ZERO ADDITIVES ALTERNATIVES FOR PRESERVATION AND MICROBIOLOGICAL STABILIZATION

| IOC Gaïa™ Yeast Metschnikowia fructicola | + | Microbiological bio protection Bio sanitation of equipment |
|--|---|---|
| IOC Be Thiols™ / IOC Be Fruits™ / IOC Be Fresh™ Yeasts Saccharomyces cerevisiae | + | Preserve the level of active SO2, limiting the combinazion |
| MAXIFLORE™ / EXTRAFLORE™ Oenococcus oeni bacteria | + | Environmental domination and early stabilization |
| IOC Sentinel™ Chitosan and chitin-glucan | + | It reduces bacterial populations, with a broader spectrum of action compared to lysozyme or fumaric acid |
| | Yeast Metschnikowia fructicola IOC Be Thiols™ / IOC Be Fruits™ / IOC Be Fresh™ Yeasts Saccharomyces cerevisiae MAXIFLORE™ / EXTRAFLORE™ Oenococcus oeni bacteria IOC Sentinel™ | Yeast Metschnikowia fructicola IOC Be Thiols™ / IOC Be Fruits™ / IOC Be Fresh™ Yeasts Saccharomyces cerevisiae MAXIFLORE™ / EXTRAFLORE™ Oenococcus oeni bacteria IOC Sentinel™ |





"ZERO ADDITIVE" ALTERNATIVES TO A. SEYAL GUMS AND MANNOPROTEINS: STRUCTURE, SOFTNESS AND AGING

| | IOC R9008™ Saccharomyces cerevisiae yeast strain | + | Releases polysaccharides (which add softness) during fermentation |
|--------------|---|---|---|
| | Edifys Rilievo™ Deactivated yeasts and selected autolysates | + | Improves the initial mouthfeel of red wines by enhancing sensations of volume and freshness |
| VINIFICATION | Edifys Inciso™ Deactivated yeasts and selected autolysates | | Reduces bitter, astringent finishes in red wines while maturing |
| | FeelWood™ Wood shavings | t | Increases sweetness |
| | EXTRAFLORE Density ™ Oenococcus Oeni bacterial strains | | Adds volume and softness |
| | Fyneo™ Yeast protein extract | + | Reduces astrigency, refines tannins |
| | Sphere Blanc™ Targeted deactivated yeasts | + | Texture, softness and stabilization of sensory attributes in white wines |
| AGING | Sphere Rouge™ Targeted deactivated yeasts | + | Volume, quality structure and sweetness in red wines |
| | Essential Oak Sweet™ / Essential Oak Barrel™ Ellagic tannins | + | Increases softness/volume |
| | Privilege Bleu™ / Privilege Noir™ Ellagic tannins | + | Increases fineness/structure |

"ZERO ADDITIVE" ALTERNATIVES TO A. VEREK GUMS: COLOUR STABILIZATION

| | FullColor™ Ellagic tannins and proanthocyanins, yeast polysaccharides | + | Long-term colour stabilization | | |
|--------------|--|---|---|--|--|
| VINIFICATION | IOC Revelation Terroir™ Saccharomyces cerevisiae yeast strain | + | Increases colour intensity | | |
| | Volutan™ Grape tannin | + | Stabilizes colour by forming tannin-anthocyanin complexes | | |
| AGING | Essential Oak Barrel™ Ellagic tannins | + | Stabilizes colour by forming tannin-anthocyanin complexes | | |

"ZERO ADDITIVE" ALTERNATIVES TO ACIDITY REGULATORS

| GRAPES | IOC Boreal™ | - | Natural lactic-acid production |
|----------|---------------------------------------|---|--------------------------------|
| SIVAI ES | Lachancea thermotolerans yeast strain | | Natural lactic-acid production |

"ZERO ADDITIVE" ALTERNATIVES TO TARTRATE AND CALCIUM STABILIZATION

| | Duostab™ Bitartrato di potassio e tartrato di calcio | + | Removal techniques |
|-------|--|---|--|
| AGING | Crème de tartre micronisée | | Removal techniques |
| | Tartrato di calcio | | Tartrate salt crystallization inducers |

ORGANIC NUTRITION

To be sure of avoiding malnutrition, choose the right diet for your yeast!

Yeast nutrition has become a consolidated practice and is only from the yeast in itself but also in terms of the considered as an essential step in the winemaking process in order to attain the best technical and sensory performances from the yeast being used. nutrient(s) to optimize the performance of the Experience has taught us that poorly nourished yeast inoculated yeast is. cells not only fail to fully express the potential A number of studies have shown that the type of characteristics of the wine, but also give rise to nutrition used leads to greater differences in the unwanted processes (production of off-flavours, acetaldehyde, etc.), leading to a loss of performance not of yeast!

quality of the finished product. With this in mind, it's not hard to see how important choosing the right

sensory attributes of the wine than the actual strain

| COMPOSIZION | | Nitrogen source YAN p. l) by ac g/hl | | YAN provided (mg/ I) by addition of 40 g/hl | g/ 0 Ammonia nitrogen | | Factors provided by the yeast | | | | Other | |
|-----------------------------------|---------------------------|--------------------------------------|---------------------|---|--------------------------|-----------|-------------------------------|---------------------|----------|----------|----------------|-----------|
| | | | Mineral nitrogen | Direct calculation | Phosphates | Sulphates | Aminoacids | Sterols & lipids | Minerals | Vitamins | Added thiamine | Cellulose |
| | Ecobiol pied de cuve | | | na | | | na | 000 | 0000 | 0000 | | |
| Yeast protectors | Ecobiol pied de cuve Arom | | | na | | | na | 000000 | 000 | 0000 | | |
| | Actiprotect Express™ | | | na | | | na | 000000 | 00000 | 0000 | | |
| Aroma metabolism | Natjja™ * | 00000 | | 13 | | | 00000 | 0 | 00000 | 0000 | | |
| stimulation | Natjja Fizz™ * | 00000 | | 13 | | | 00000 | ٥ | 000000 | 0000 | | |
| | Activit 0 | 000000 | | 17 | | | 000000 | ٥ | 000 | 000 | 000 | |
| Organic nutrients | Extra PM | 0000 | | 12 | | | 0000 | ٥ | 000 | 000 | | |
| | Activit Safe™ | 000 | | 8 | | | 000 | 00 | 00 | 00 | | |
| | Activit | 00 | 000 | 52 | X | | 0 | | 00 | 00 | 00 | |
| | Activit AD | 0000 | 000 | 57 | X | | 000 | | 00 | 00 | 00 | |
| Mixed nutrients | Ecobiol | 00 | 000 | 48 | X | X | 0 | | 00 | 00 | | 00 |
| | Ecobiol Perlage | 000 | 00 | 36 | × | | 00 | | 00 | 00 | | |
| Detoxifiers | Cellclean | | | na | | | na | 00 | 00 | 00 | | |
| | Fosfovit | | 00000 | 84 | X | | | | | | 000 | |
| | Fosfovit + | | 0000 | 76 | X | | | | | | 00000 | ۰ |
| Simple nutrients (minerals) | MinVit | | 0000 | 76 | X | X | | | | | 000 | ٥ |
| (Illinerally) | Phosphate Titres | | 0000 | 84 | ok | | | | | | 000000 | |

^{*} Contains chitosan selected for its anti-free-radical action.





PProducts AUTHORIZED in the production of organic wines as required by Regulation (EU) N.2018/1584. They can be directly allowed or allowed if obtained from organic raw materials, if available (products indicated with */ necessary request to Perdomini of specific declaration).

Product with BIO certification.

Vegan Product.

TANNINIS





OPTIMIZATION OF ALCOHOLIC FERMENTATION

Actiprotect Express

V Innovative yeast protector that significantly simplifies the inoculation process because it can be rehydrated in water at room temperature. It also ensures better aromatic expression for the yeast.

⊘ Activit

A fermentation activator, made up of ammonium salts, inactive yeast and thiamine. It generates organic and inorganic nitrogen and has a detoxifying effect, allowing the full aromatic expression of the veast.

CellClean

√ 100% Saccharomyces cerevisiae yeast hulls with high detoxifying power. Cellclean yeast hulls absorb alcoholic fermentation inhibitors such as medium-chain fatty acids (hexanoic acid, octanoic acid and decanoic acidand residue of plant protection producs.

Fosfo Vit

A yeast nutrient made up of phosphate and thiamine. It can also be used in the production of organic wine.

Natija

Organic nutrient containing a special chitosan of fungal origin, developed to improve and protect the well-being and physiological conditions of wine yeasts during alcoholic fermentation (antioxidant and anti-radical effect), with consequent optimization of aromatic development.

Activit AD

V Nutrient made up of organic and inorganic nitrogen (biammonic phosphate) and thiamine. Unlike conventional complex nutrients, the main organic base is an autolyzed

Ecobiol Pied de Cuve

Specially formulated fermentation regulator. When used during the rehydration of yeasts, it provides sterols and other vital components to aid yeast metabolism.

Fosfo Vit+

A yeast nutrient made up of phosphate, cellulose and thiamine.

Activit O

✓ An alcoholic fermentation nutrient, 100% organic with added thiamine. When used in yeast inoculation and 1/3 of the way through fermentation, it generates greater production of fruity and floral aromas and reduces the production of sulphur.

Arom

Specially formulated fermentation regulator. When used during the rehydration of yeasts, it provides vital components allowing the yeast to fully express its potential for aromas and flavours.

Activit Safe

✓ Activit Safe™ is a 100% organic nutrient to be used at the two-thirds stage of alcoholic fermentation.

V OEnocell

A special fermentation regulator for use in all situations. It makes must less cloudy, regulates fermentation and enhances the potential of

Min Vit

A yeast nutrient made up of ammonium salts (sulphates and phosphates, thiamine and inert material.

→ Natjja Fizz

fruity aromas that remain stable

over time

Organic nutrient containing a special chitosan of fungal origin, developed to improve and protect the well-being and physiological conditions of wine yeasts during second fermentation with the Charmat method, as well as to guarantee re-fermentation.

YEAST FOR ALCHOLIC FERMENTATION



C58

WHITES | ROSÉ | REDS | CLASSIC METHOD | CHARMAT METHOD

| TIPE OF WINI | FERMENTATION KINETICS | RECOMMENDED FERMENTATION TEMPERATURE | ALCOHOL TOLERANCE | NITROGEN REQUIREMENTS | SENSORY PROFILE | | |
|-----------------|--------------------------|--|----------------------|--------------------------|-----------------|--|--|
| La Claire range | | | | | | | |

from 15°C-35°C



| CGC62 | ⊘ * | 111 | rapid | from 15°C-35°C | high (16% vol.) | high | maintains and enhances the defining features of the grape variety; enhances fruity, floral and fresh notes |
|----------------|----------------------------|-----|--------|------------------|----------------------|--------------|--|
| EM2 | ⊘ * ∨ | 11 | rapid | from 15°C-30°C | high (15% vol.) | average-high | releases varietal terpenic aroma compounds; greater roundness and softness; adds reductive notes, enhances fruity and floral notes |
| eXtase | * V | 1 | rapid | from 13°C-20°C | high (14,5% vol.) | average-high | aromatic intensity, freshness, fruity, thiolic, persistence |
| eXtreme | * ∀ | • | short | from 15°C-35°C | high (17,5% vol.) | low | aromas of ripe red fruit and jam accompanied by notes of dried fruit and spicy notes |
| SP665 | * * * * * * * * * * | T | rapid | from 10°C-30°C | high (18% vol.) | low | elegance, fineness, structure and aomatic complexity |
| T73 | * ∀ | 11 | rapid | from 15°C-35°C | high (17% vol.) | high | enhances fruity notes; adds softness and balance |
| Varietal Touch | * V | | normal | from 14°C - 22°C | high (15% vol.) | moderate | Expression on of aromatic varietal notes |
| VDP | * ∨ * | 11 | rapid | from 15°C-32°C | high (15,5% vol.) | average-high | enhances fruity and floral notes |

IOC (Institut Oenologique de Champagne) range

| IOC 18-2007 | TITT | rapid | from 18°C-30°C | high (15% vol.) | low | fineness, preservation of the terroir |
|---------------------------|------|-------------------------|---|---|----------|--|
| IOC Be Fresh | • | normal | from 20°C-28°C | high (15,5% vol.) | high | revelation of aromas associated with fresh fruity notes |
| IOC Be Fruits | 11 | from normal to rapid | from 12-24°C for fruity ester expression 12-15°C | moderate (14% vol.) | low | fruity esters (notes of red fruit, pineapple, citrus fruits); avoids aroma masking because of its inability to produce SO2 |
| IOC Be Thiols | 11 | very rapid | from 13-25°C; max. thiol expression: 15-18°C | high (15% vol.) | moderate | thiol expression (citrus and exotic fruits), enhancement of 3MH |
| IOC BIO | 111 | normal | from 14°C-28°C | high (16% vol.) | low | full and balanced expression of the grape variety and the terroir |
| ⊖* V IOC Boreal | 1 | rapid | from 15°C - 35°C | high (16% vol.) | high | Bio-acidification of musts. Lachancea thermotolerans yeast capable of producing high levels of lactic acid to rebalance the freshness of wines. A natural alternative to acidifying additives. |
| IOC DynaMix ♥ | • | normal | from 22°C-28°C | high (16% vol.) | moderate | wines with clean aromas (IOC Dynamix avoids spontaneous fermentation start-up and therefore faults in the nose of the wine) |
| IOC Fresh Rosé 🅜 | 1 | very rapid | from 12°C-25°C | high (16% vol.) | moderate | development of floral notes in young wines made from grapes considered "neutral" |
| IOC Infini'TwICE | 11 | normal | from 18°C - 25°C | high (15% vol.) in case of turbidity high than 80 NTU | high | perfect balance between body and freshness in white wines, now without limits. |
| IOC Prime Rouge | • | normal | from 14°C-24°C | moderate (14% vol.) | high | rounded, intensely aromatic wines with notes of red fruit (strawberry and raspberry), am and blackcurrant |
| IOC R-9008 | 1 | very rapid | from 18°C-30°C | high (16% vol.) | low | expression of ripe and complex fruity aromas, volume in the mouth |
| IOC Revelation ** Terroir | • | normal | from 18°C-30°C | high (15% vol.) | high | fruity varietal notes, freshness, fineness and elegance |

BLASTOSEL range

| Delice | normal | from 18°C-32°C | high (15,5% vol.) | average-high | complex range of spicy aromas |
|--------|--------|----------------|----------------------|--------------|---|
| Delta | rapid | from 12°C-35°C | high (18% vol.) | low | full and balanced expression of grape variety and terroir |



| FR95 | ⊘ * | 1 | very rapid | from 12°C-30°C | high (15% vol.) | low | fruity notes, hints of rose |
|-----------|---------------|-----|------------|----------------|--------------------------|--------------|---|
| Grand Cru | ⊘ * | 7 | normal | from 16°C-30°C | high (17,5% vol.) | low | full expression of complex aroma compounds |
| Horizon | * ∀ | TII | normal | from 15°C-30°C | moderate (14,5% vol.) | average-low | enhances aromatic cleanliness and perception of the terroir |
| Lambda | * ∀ | 111 | normal | from 18°C-32°C | high (18% vol.) | average-high | complex range of spicy aromas |
| P346 | * ∀ | 111 | rapid | from 10°C-18°C | moderate (14,5% vol.) | average-low | aroma of fresh fruit (citrus fruits, apple and pear), exotic fruits and white flowers |
| WhiteFeel | ⊘ * | 11 | rapid | from 15°C-24°C | moderate (14,5% vol.) | low | notes of exotic fruits and fresh fruit |

Yeasts for Bioprotection

🎷 IOC Gaïa

Metschnikowia fructicola yeast, which has no fermentation activity but can combat unwanted yeasts. Gaïa™ has been shown to be a useful tool in limiting pre-fermentation sulphitation.

* IOC BoreAl

Pre-fermentation Lachancea thermotolerans yeast which takes sugars and turns them into L-lactic acid. To be used at least twenty-four hours before inoculating the chosen Saccharomyces cerevisiae strain for alcoholic fermentation. Also helps enhance the complexity of the flavours and bouquet in the wines produced.

IOC Calypso

A Metschnikowia pulcherrima yeast selected for its unique enzyme activity. When used at the pre-fermentation stages on white or rosé must - in particular when cold-macerating on the lees - it acts as an innovative bioprotection tool which helps enhance the sensory potential of the grapes. It limits browning in must and the oxidation reactions which can affect the more sensitive aromas and flavours

Edifys Rilievo

TREATMENTS CONTAINING SELECTED YEAST DERIVATIVES

Ecobiol Rouge

Product deriving from yeast hulls rich in rapid-release parietal polysaccharides. It allows you to obtain more stable wines both from the point of view of color and taste (softness and structure) and bouquet.

Tullprotect

Blend of tannins and yeast polysaccharides, effective in protection of the color and aromas of white and rosé wines. It specifically acts against oxidation in the prefermentation phases.

→ Netarom

An ageing adjuvant made with inactive yeast selected for its ability to absorb products responsible for the reduction taste.

* ultiMA Ready Expression

Selected mannoprotein fractions in liquid form for instant activation and solubility in the wine to add a touch of freshness in terms of the balance of flavours. In red wines, this product is highly effective at reducing sourness and astringency, while in white wines it enhances sapidity.

Tedifys Inciso

▼ Innovative product based on specific yeasts, improves the gustatory quality of wines by reducing the hint of bitterness and green characteristic of some tannins and

♥ Glutarom Extra

guaranteed glutathione content (reduced glutathione). Thanks to the presence of glutathione and reducing peptides, Glutarom Extra has a high antioxidant activity, allowing you to obtain wines with a better shelf-life.

Netarom Extra

An ageing adjuvant made with inactive yeast rich in copper, makes it possible to absorb taste without adding copper to the wine.

Specific fractions of obtaining a finer perlage in sparkling wines produced with the Charmat method.

edifys

rilievo inciso

sulphurous hints known as "reduction".

Specific inactivated yeast with

products that cause reduction

*ultiMA Ready Fizz

mannoproteins in liquid form. instantly active and soluble in wine for creamier bubbles. It contributes significantly to

Innovative product based on specific inactivated yeasts allows you to quickly perceive a sensation of volume and structure of the wine, thanks to the presence of polysaccharides that interact with phenolic compounds; promotes a greater perception of fruitiness fresh, it neutralizes the sulphurous scents known as "reduction".

ultiMA Fresh

A product made with special completely soluble mannoproteins. When added to the wine before bottling, it stabilises the softness ("sugariness") and aromatic persistence by increasing the overall freshness of the wine. It does not alter the filterability of the wine.

ultiMA Ready Life

Liquid preparation made from selected mannoproteins which interacts with the aromatic components of the wine Increases the colloidal balance of the wine and increases both length in the mouth and "sugariness".

ultiMA Jump

Preparation based on 100% soluble yeast mannoproteins, specifically selected for the enhancement of wines white and rosé. UltiMA Jump is particularly exciting the citrus thiol notes excellently enhancing the ultimate freshness of the taste.

ultiMA Soft

A product made with special completely soluble mannoproteins. When added to the wine before bottling, it stabilises the softness ("sugariness") and aromatic persistence by increasing salinity and roundness and decreasing acidic edges. It does not alter the filterability of the wine.



ENZYMES ENO&ZYMES RANGE

✓ AromColor

Pectolytic enzyme in granule form, for use when macerating red-wine grapes. Boosts the breakdown of the polysaccharides, tannins and aroma precursors contained in the skins. Moreover, thanks to its special formulation, it frees aroma precursors right from the fermentation stage.

EvolutionPlus

A granular pectol ytic/β-glucanase enzyme for the ageing of white and red wines. It improves the overall sensory profile (taste and aromas) of the wine.

◊ AromPress

A granular pectolytic enzyme for skin maceration for aromatic white wines. It is conducive to aromatic extraction and expression.

In granule form, for clarifying or

**Process Extreme

macerating troublesome base materials. Thanks to its formula, it is active even at low pH and in difficult conditions in general. Suitable for working on sparklingwine bases or not-fully-ripe grapes.

The Clear Speed

A granular pectolytic enzyme to accelerate the clarification of white must, thereby guaranteeing fresher, fruitier

A granular pectolytic/βglucanase enz yme, one of a kind, with supplementary action to improve the filterability of must and wine.

**SweetPress

A granular pectolytic enzyme for the skin maceration of white grapes. It is conducive to aromatic extraction.

TrueColor

♥ EnzyFlow

Granular pectolytic enzyme for the maceration of red grapes. It promotes the dissolution of tannins, polysaccharides and aromatic precursors contained in the peel.

Zimopec range

^{*} 2 Flotto lash

Flottoflash 2 is a product developed for flotation in the most difficult cases. It has a high pectolytic activity that breaks down pectins and assists the formation and growth of floccules that are easier to separate.

P110L

A liquid enzyme formula for the rapid clarification of white must. The formula makes it possible to obtain clear must in rapid time.

** only for oenological purposes in clarification

Clear Flash

A liquid enzyme for the clarification of white wines The formula makes it possible to obtain clear must in rapid time and at low temperatures.

*PML

A liquid enzyme formula for the pre-fermentation maceration of white grape varieties. It is conducive to the release of aromatic precursors. It increases the vield of flower must.

Color Flash

A liquid enzyme for extraction and stabilisation during red maceration.

**Press Flash

A liquid enzyme for the skin maceration of white grapes.

PX5

A solid enzyme formula for optimising the extraction of precursors and polyphenols from red grape varieties. It improves the sensory profile.

*Flotto lash

A liquid enzyme for continuous and discontinuous flotation. The formula makes it possible to obtain clear must in rapid time and at low temperatures

PXL-09

A liquid enzyme formula for extraction from red grape skins. It improves the overall quality and the production processes

VINIFICATION AND FINING

Bent'Up

✓ Bent'Up is a sodium bentonite clay particularly recommended for flotation with excellent clarification properties. Strongly recommended for use when the wine has been treated with carbon, as it can remove any residual particles still spended in the wine.

⊕* Cristalline Liquid

High quality liquid isinglass, stabilised and ready to use.

*Cristalline Plus

Isinglass derived from swim bladder. A natural clarifying agent with high molecular weight and incomparable brightening power.

Clear GT F

Clarifier formulated using PVPP, non-animalorigin protein and silica gel for rapid, high-performance flotation.

* Easy'Up

Liquid additive made from vegetable charcoal, pea protein and bentonite clay designed for use in flotation. Easy'Up performs a powerful action on browned/oxidized must, helps reduce the quantity of oxidized and oxidizable phenol compounds, facilitates clarification and helps

Fyneo Protein-rich yeast extract

😗 Clear GT W

Clarifier formulated using

PVPP, non-animal-origin

synergistic removal of

unstable proteins and

oxidizable phenols.

protein and bentonite for the

which provides a powerful clarifying action and aid to rapid sedimentation. It fines the wines by eliminating any hard or bitter sensations, yet preserves the desirable sensory characteristics.



*Clear GT R

Product containing nonanimal-origin protein, selected yeast hulls and silica gel for phenol clarification during fermentation leading to greater softness in the mouth

create a more compact flotation cap.

😙 Inobent Nat

Non-activated bentonite intended for the clarification of musts and wines, in granular form to facilitate dispersion Interacts with proteins for optimal protein stabilization in white wines and rosés.

P-Cell

Compound clarifying and stabilising agent (PVPP. activated bentonites and alpha-cellulosic fibres) ideal for use in fermentation.

· Qi Fine Mes

Liquid additive made from fungal-origin chitosan and pea protein, for performing fining or flotation on white and rosé must.

Qi Up XC Mes

Liquid additive made from chitosan, for performing fining or flotation on white and rosé must.

Thofine V Mes

Liquid additive made from pea protein, for performing fining or flotation on must. Recommended as a preventive treatment for musts at high risk of oxidation, Inofine V Mes significantly increases resistance to oxidation, enhances sensory properties, reduces bitter tastes and eliminates vegetal or grassy notes from wines subject to oxidative browning.

Phenox-free

in terms of colour enhancement, preservation of aromas and flavours, and mouthfeel (less bitterness). When used as a preventive treatment on white and rosé musts. Phenox-free allows winemakers to craft wines that are less susceptible to oxidation and have notably improved roundness, thanks to the deactivated yeast cells.

Qi No[Ox]

A clarifying agent and stabiliser for wines and musts, an alternative to casein the first non-allergenic and biodegradable formula that does not contain products of animal origin or synthetic products.

VinOfine Rouge

Innovative alternative to traditional animal coadiuvants (gelatins, albumins), new formulated based on specific vegetable proteins, for clarification, color stability and better sensorial quality of wines.

V LumyClean Plus

Stabilizer used to eliminate oxidized and oxidizable polyphenols from must and wine. Lumyclean Plus is also effective at reducing the riboflavin content of white and rosé wines, helping the winemaker avoid the so-called 'light-struck taste' phenomenon.

PK SOL M

A product for the clarification of red, white and rosé wines, allergen free. The latestgeneration formula made up with chitin polysaccharides. Excellent brightening and subtractive power towards the oxidised and oxidisable polyphenolic fraction.

🌃 MetalClean

MetalClean exploits the synergistic capacity of its components to adsorb metals such as copper, iron, lead and aluminium. MetalClean's metalremoving action creates an optimal environment for starting off and regulating alcoholic fermentation, while lessening any tendency to oxidation or pinking.

Qi Fine

Ideal for the elimination of phenolic compounds, it is an excellent natural solution, biodegradable, allergen-free and free from products of animal origin, effective for rapid flocculation in red wines. Recommended as the best alternative to PVPP.

[→] Qi Up-XC

Powder clarifier for flotation procedures in white, rosé and red musts. Qi Up-XC is an innovative flotation additive: natural. biodegradable, allergen-free and free from animal products.



MICROBIOLOGICAL STABILIZATION Specific antioxidants: OxyLess

**OxvLess M

A special antioxidant for red and white musts. It protects the aromatic properties obtained at the end of alcoholic fermentation. It is rich in glutathione and antioxidant amino acids.

*OxvLess U

✓ A special antioxidant for red and white grapes. It prevents browning and oxidation of the must aromas.

* OxvLess V

A special antioxidant for red and white wines. It protects against oxidation and stabilises the anthocyanin fraction still unstable during wine racking processes.

TREATMENTS TO CORRECT SPECIFIC DEFECTS

Absolute M

This product selectively reduces pesticide content. For use during alcoholic fermentation or during clarification of the wine. Can be used on both red and white

* Absolute SP

Blend of yeast hulls from various strains of S. cerevisiae. Ideal for reducing pesticide residues, which can potentially inhibit alcoholic fermentation.

Carbo Clean

Highly bleaching vegetable activated carbon, preserves the organoleptic characteristics of the wine



Carbo F

Special vegetable carbon with intense decolourizing power, s highly porous, making it perform extremely well in winemaking, as the contact surface between the carbon and the must/wine is exceptionally large.

Carbo Grané

🗸 Carbo Grané is a carbon in pellet form with an exceptional decolourizing ability. The chemical activation process leads to extremely porous particles which can adsorb various different types of molecules, depending on their size

🕝 Lumyclean Rex

Lumyclean Rex is a special treatment made with a Blend of a special activated vegetable charcoal and silica gel, for white and rosé wines that helps winemakers avoid the so-called 'light-struck taste' caused by the photoreduction of riboflavin

Extra lore Density

Contributes to the volume

the mouth favoring the

expression of a quality

robustness in limiting

structure. It guarantees

winemaking conditions (high

malic acid). It also reduces any

aggressive sensations in the

alcohol, low pH, very weak

and fullness of the wines in

P Qi Smoke

A formula composed of fungal-origin chitosan and charcoal for winemaking use, Qi SMOKE[™] has been specially developed to eliminate the smell of smoke from wines produced using grapes exposed to forest fires.

Extraflore Pure Fruit

Oenococcus oeni for direct

difficult conditions

reach roundness.

inoculation to give purity of the

fruity notes and for the control

of malolactic fermentation in

Oenological selected bacteria,

vigorous in difficult conditions

Extraflore Pure Fruit favours

the purity of the fruity profile

of the grapes and helps to

MALOLACTIC FERMENTATION

Extraflore Co-In

🕝 IOC Inobacter

oenological conditions.

A malolactic fermentation regulator and activator. It adds essential nutrients to allow bacteria to carry out

optimum malolactic fermentation, along with

fundamental supports for rapid fermentation.

Nutriflore FML

Bacteria used by direct inoculation. Increases the fruity and floral notes, with a minimal production of diacetyl ("butter" notes). Ideal if used in the yeast/ bacteria co-inoculation technique. Especially suitable for white wines red and rosé

Extra lore Complexity

Bacteria used by direct inoculation. Increases spicy and fruity notes, and the sensation of roundness and volume. Ideal if used in the technique of post-alcoholic inoculation. Especially suitable for red wines

IOC Maxiflore Elite

Long preparation bacteria (Standard). They are suitable for Step). They increase fruity all oenological situations, thanks notes and the sensation of to low production of diacetyl, and exalt the varietal notes of They are suitable for large the wine. They are suitable for the preparation of sparkling vinification processes. bases with the traditional method or wines with "difficult"

Rapid preparation bacteria (1body and volume in the mouth. volumes in red and white wine

mouth.

IOC Maxiflore Satine Rapid preparation bacteria (1-Step). They increase fruity notes with low production of diacetyl. They are extremely resistant to high alcohol content and are suitable above all for red wine vinification processes.

💔 IOC Sentinel

Innovative, totally allergenfree and GMO-free product for keeping bacteria under control both before and after malolactic fermentation.

Mutriflore PDC

A special nutrient for the rehydration of malolactic bacteria. It is especially recommended when there are difficult alcoholic fermentation conditions

Timopec Ovolys

A pure hen egg white derivative. It acts against gram + bacteria (lactic bacteria). It has no effect against acetic bacteria and yeast.





TANNINIS

** Cromofix SR

An oenological tannin for colour stabilisation in red wines.

🗫 Essential PEP

A grape seed tannin, ideal for obtaining protein stabilisation and colour stabilisation, and for improving the structure of the wine (ideal if used in conjunction with microoxygenation).

→ Mann Bouquet R16

A product for red musts, made up with tannins and yeast derivative rich in polysaccharides. It adds complexity and notes of spice and black fruit (currant), and contributes to colour stabilisation.

√ Tanin Bouquet B49

A tannin for white and rosé musts, with a small fraction derived from yeast rich in glutathione. It is ideal for obtaining wines with a fruity, exotic character, and is a powerful antioxidant.

* Cromox

A tannin derived from a blend of proanthocyanidinic tannins and gallotannins.
Cromox has pronounced antioxidant and stabilising action of the colouring part.

←* FullColor

A grape seed tannin, ideal for obtaining protein stabilisation and colour stabilisation, and for improving the structure of the wine (ideal if used in conjunction with microoxygenation

殕 Tan FlavourFF

A proanthocyanidinic tannin for white and red vinification processes, rich in flavonoids and aromatic precursors.

🌁 Tanifase Elevage

A pure ellagic tannin. The quality of the obtainable results reflects the careful selection of raw materials. It is ideal for eliminating sulphur proteins, preventing oxidation and improving the sensory profile of every wine.

** Essential AntiOxidant

Gall nut tannin with an excellent an-tioxidant power. It inhibits the enzymatic activity responsible for the oxidation of musts coming from harvests af-fected by Botrytis. Extremely pure tannin very rich in polyphenols.

🔭 Gallotan

It can be used as an adjuvant in clarification operations and is an excellent antioxidant whose action is enhanced when used with sulphur. It protects aromatic substances against oxidation and is essential for treating must infected by Botrytis.

💇 Tanin Bouquet R36

A cherry tannin for red and rosé musts, which expresses notes of red fruit and stabilises the colour.

* Tanin TC

A pure ellagic chestnut tannin characterised by the absence of bitterness and high chemical reactivity.

⊕* Tanin SR

A pure quebracho tannin for colour stabilisation.

🞷 Essential PEL

A proanthocyanidinic tannin derived from white grape skins. It improves the structure, body and softness of the wine. It exalts the primary aromas of the wine by increasing its intensity without affecting its sensory profile.

Mann Bouquet B19

A product for white and rosé musts, made up with tannins and yeast derivative rich in polysaccharides and glutathione. It adds notes of flowers and white fruit. It is an excellent antioxidant.

** Tanin Bouquet B45

A citrus tannin for white and rosé musts, which expresses citrus notes, together with effective antioxidant action.

*** Volutan**

A 100% liquid grape tannin.
Thanks to its original extraction method, it is 100% soluble without any precipitation. It is derived solely from white grapes. It is used in colour stabilisation and to generate softness in wine.





NOTES, CONSIDERATIONS, IDEAS.

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