# Renaissance Yeast™

## PRODUCT CATALOGUE

Enlightened Science. Empowered Artistry.

THE UNIQUENESS OF THE RENAISSANCE WINE YEAST

# $H_2S$ Prevention

In addition to the metabolic characteristics and the organoleptic improvement of the wine, the Renaissance wine yeast strains have unique features that differentiate them from other yeast strains on the market.

This unique characteristic has been inherited from their common ancestor and, gradually, over the course of long and careful selection and breeding cycles, has been maintained in their genetic heritage, in addition to each strains own specific winemaking characteristics.

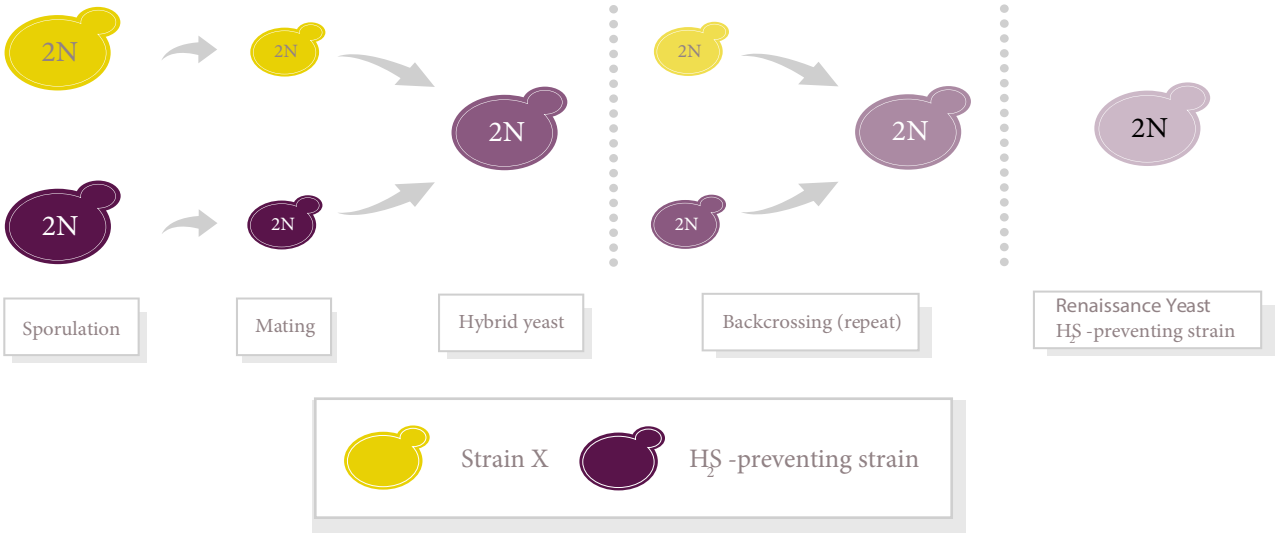
The MET10 gene is part of the sulfide reduction pathways and is linked to the production of $H_2S$. mutated A rare mutation in the gene (MET10-932; T622K), has been identified as a key role in the sulfide reduction pathway.

The original yeast ancestral strain (UCD932) for the Renaissance range of yeast strains was isolated from an old Lambrusco vineyard in Emilia Romagna, Italy; it was shown to be incapable of producing $H_2S$, even in particularly stressful conditions and in the presence of high sulfur content.

Dr. Linda Bisson's team at the University of Davis California, lead the research and characterization of the original strain (UCD932) and subsequent strains with the mutated MET10-932 gene which have been patented by the University of Davis.

Renaissance Bioscience, a leading yeast company based in Vancouver Canada have used selective breeding and adaptive evolution from the original unique strain UCD932 to isolate all the RENAISSANCE yeast strains which no longer produce $H_2S$ during alcoholic fermentation.

The Renaissance Wine Yeast are all non-GMO.



# Wine Reduction

Wine reduction has a direct and unfavorable impact on the wine quality. It often is due to the formation of reduced sulfur compounds during alcoholic fermentation and subsequently during storage.

It can still be a frequent issue despite careful winemaking.

The reduced sulfur compounds can be of various nature with different sensory impact. The most relevant groups of compounds are listed in the table.

Hydrogen sulfide has a rather low sensory threshold, thus perceptible even at low doses, allowing the winemaker to recognize the risk and resolve it promptly.

Even at concentrations lower than the sensory threshold, $H_2S$ can exert a masking effect on the fruity aromas of the wine, thus lowering the quality and compromising its organoleptic complexity.

The production of $H_2S$ mainly depends on the yeast strain used for fermentation, nitrogen deficiencies and the presence of sulfur residues from vineyard treatments.

If $H_2S$ remains in the wine, it can evolve into mercaptan. Ethyl and methyl mercaptans (ethanethiol and methanethiol) are the most frequent mercaptans in wine. Like $H_2S$, they react with copper reducing their unpleasant aroma impact.

Mercaptans can be oxidized to the corresponding disulfides (the most common are ethyl- and methyl-disulfide) which have a higher sensory threshold than mercaptans and in most cases are not perceptible in wine. They are very difficult to remove from wine and do not react with copper. Disulfides are unstable chemical compounds and in a reduced environment - such as that of bottled wine - they can transform back into mercaptans.

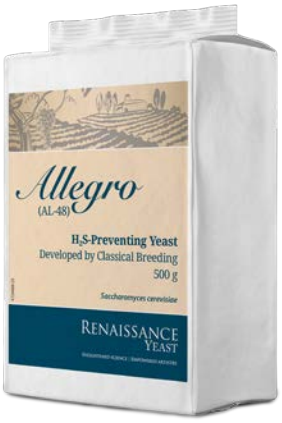
Therefore it is important to select a yeast strain which is genetically not capable of producing hydrogen sulfide such as from the extensive Renaissance range to avoid formation of reductive aromas, the masking effect of fruity aromas compromise wine quality.

Always remember to follow good viticultural and oenological practices.

| Compound | Organoleptic impact | Threshold |
|---|---|---|
| $H_2S$ | Rotten egg | 0.5-0.8 µg/L |
| Mercaptans | Brunt rubber, garlic, rotten cabbage | Methanothiol: 0.03-2 µg/L<br>Ethanthiol: 0.4-1.5 µg/L |
| Disulfides | Brunt rubber, garlic, rotten cabbage | Dimethyldisulfide: 15-30µg/L<br>Diethyldisulfide: 3.5-4µg/L |

# Our Range

## WHITE AND ROSÉ WINES

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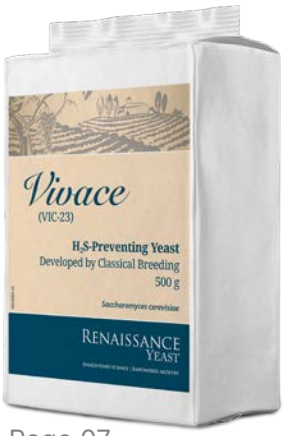


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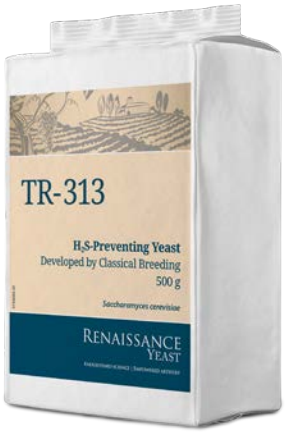


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## RED WINES


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## ORGANIC WINES


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## CIDER


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# RENAISSANCE YEAST™

## White and rosé wines

# Allegro™ (AL-48)

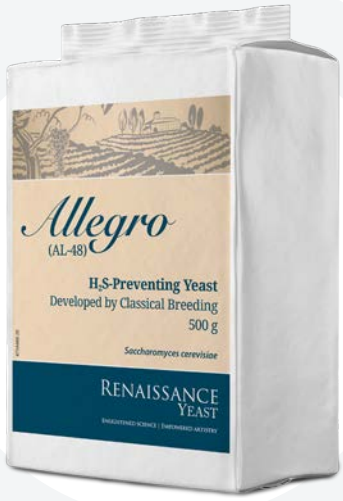
$H_2S$ PREVENTION

EXCLUSIVE LICENCE PATENTED THE UNIVERSITY OF CALIFORNIA

## FOR ELEGANT, INTENSE AND FRUITY WHITE AND ROSE' WINES

Allegro™ is the ideal yeast strain for varietal white wines, offering a solution for preserving and enhancing primary aromas. It combines these aromas in a synergistic and balanced way, incorporating floral and fruity esters. When used on neutral varieties, Allegro imparts a heightened aromatic complexity. Allegro is also an excellent choice for crafting fresh and fruity rosé wines.

Allegro™, under normal conditions, produces low acetaldehyde and low $SO_2$; these characteristics - together with the very low production of hydrogen sulfide - indirectly contribute to increasing the freshness and cleanliness of the wine.




## Recommended Varietals

- Chardonnay
- Viognier
- Ugni Blanc
- Colombard
- Pinot Blanc
- Chenin
- Semillon

## Key Benefits

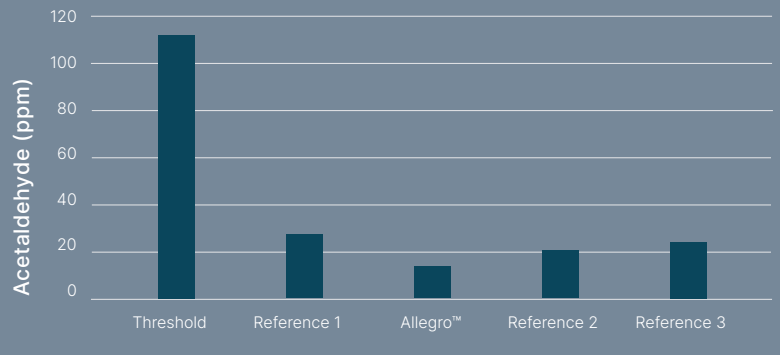
- $H_2S$-preventing wine yeast
- Fresh, fruity aromas
- Low $SO_2$
- Low acetaldehyde

**The aromatic notes** include peach, quince, tropical fruits, pear, accompanied by pleasant notes of white flowers. The wine palate is long and structured.

## Acetaldehyde (ppm) Production

### Chardonnay

Fermentation at 21 °C
24.6 Brix
273 mg/L YAN




## Technical Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Kinetics | Moderate | ■■■□□ | Flocculation | High | ■■■■■ |
| Optimal Temperature | 15 °C to 28 °C | | Glycerol | 5.0-7.0 g/L | |
| Cold Tolerance* | 13 °C | | Volatile Acidity | Low | ■□□□□ |
| Alcohol Tolerance | 16% vol. | | $SO_2$ Production | Very Low - None | □□□□□ |
| Nitrogen Requirements | Moderate | ■■■□□ | $H_2S$ Production** | Non-Detectable | □□□□□ |
| Killer Factor | Sensitive | | Foam Production | Low | ■□□□□ |

* Once active fermentation has been established.

** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

# RENAISSANCE YEAST™

## White and rosé wines

# Vivace™

(VIC-23)

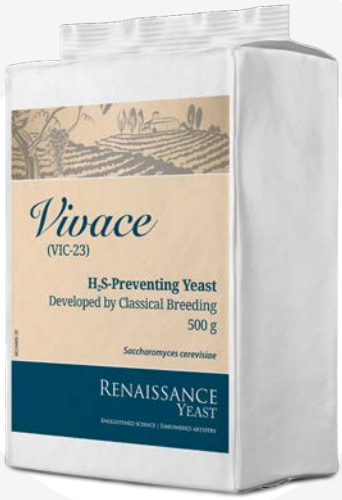
$H_2S$ PREVENTION

EXCLUSIVE LICENCE PATENTED THE UNIVERSITY OF CALIFORNIA

## FOR VARIETAL, FRESH AND CRISP WHITE AND ROSE' WINES

Vivace™ is a yeast strain particularly suitable for highlighting the grape varietal aromas. Its excellent fermentation performance, combined with the production of clean aromas contributes to the creation of elegant wines with varietal nuances.

Vivace™ is an excellent fermenter; it adapts to a wide range of temperatures and produces very low volatile acidity and sulfur compounds. It is perfect for fermentation in barrique and ideal for fermenting seltzers.




## Recommended Varietals

- Chardonnay
- Riesling
- Pinot Gris/ Grigio
- Sauvignon Blanc

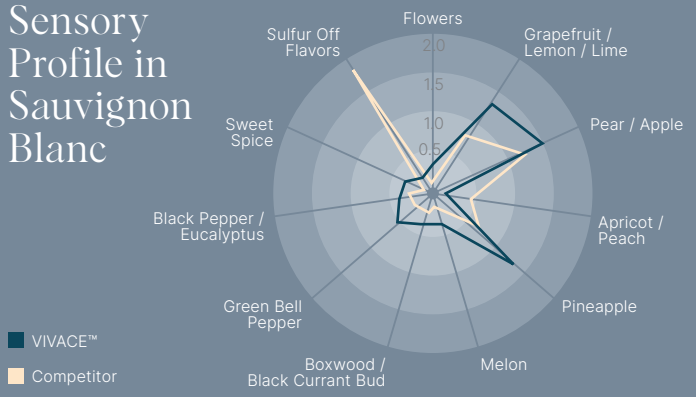
## Key Benefits

$H_2S$-preventing wine yeast

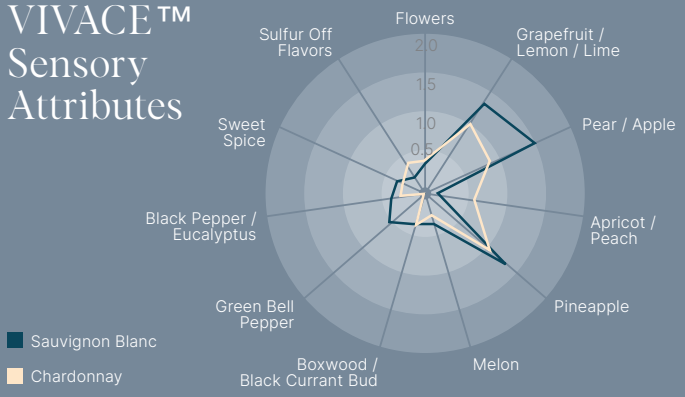
- Exceptionally clean fermenter
- High temperature adaptation
- Very low volatile acidity

**In addition to respecting the varietal aromas,** it contributes to the quality of the wine by bringing very clean aromas of pear, apple, citrus fruit and fresh pineapple.

## Sensory Profile in Sauvignon Blanc




## VIVACE™ Sensory Attributes




## Technical Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Kinetics | Moderate | ■■■□□ | Flocculation | High | ■■■■■ |
| Optimal Temperature | 14 °C to 28 °C | | Glycerol | 6.0-7.5 g/L | |
| Cold Tolerance* | 13 °C | | Volatile Acidity | Low | ■□□□□ |
| Alcohol Tolerance | 16% vol. | | $SO_2$ Production | Low | ■□□□□ |
| Nitrogen Requirements | Moderate | ■■■□□ | $H_2S$ Production** | Non-Detectable | □□□□□ |
| Killer Factor | Active | | Foam Production | Low | ■□□□□ |

* Once active fermentation has been established.

** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

# RENAISSANCE YEAST™

## White and rosé wines

# TR-313™

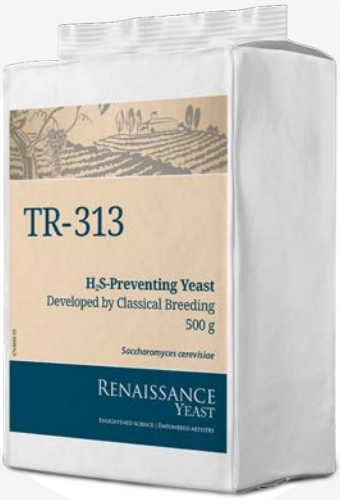
$H_2S$ PREVENTION

EXCLUSIVE LICENCE PATENTED THE UNIVERSITY OF CALIFORNIA

## FOR THIOLIC, INTENSELY AROMATIC WHITE AND ROSE' WINES

TR-313™ reigns as the champion within the Renaissance yeast range when it comes to aromas. With strong beta-lyase activity for the liberation of grape thiol precursors, it also produces high quantities of fermentative esters, which enriches the varietal aromas. The resulting wine presents a complex and varied bouquet and palate, characterized by intense and enduring aromas, accentuated by a sense of volume and smoothness on the palate.

TR-313™ has good cold tolerance and steady fermentation kinetics. Additionally, it has strong glycerol production contributing to a well-balanced wine with aromatic richness and a pronounced and unique personality.




## Recommended Varietals

- Sauvignon Blanc
- Riesling
- Chenin Blanc
- Semillon
- Pinot Noir

## Key Benefits

$H_2S$-preventing wine yeast

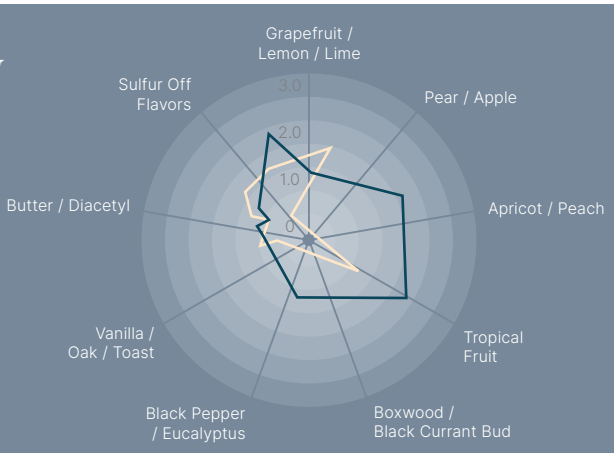
- Thiols releasing
- Ester production
- Fermentation adaptability

**Specifically tailored** for grapes with thiol precursors, TR-313™ imparts aromas of guava, passion fruit, grapefruit, gooseberry and blackcurrant. The ester contribution focuses on tropical fruit and yellow fruits, with the aromas exhibiting longevity.

## High Aroma Intensity with no Sulphur Off-aromas

Sauvignon Blanc

22.5 Brix
275 mg/L YAN




## Technical Characteristics

| | | | |
|---|---|---|---|
| Kinetics | Moderate to Fast | Flocculation | High |
| Optimal Temperature | 14 °C to 25 °C | Glycerol | 7.0-8.5 g/L |
| Cold Tolerance* | 13 °C | Volatile Acidity | Low |
| Alcohol Tolerance | 16% vol. | $SO_2$ Production | Low to Moderate |
| Nitrogen Requirements | Low to Moderate | $H_2S$ Production** | Non-Detectable |
| Killer Factor | Active | Foam Production | Low |

* Once active fermentation has been established.

** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

# RENAISSANCE YEAST™

## White and rosé wines

# Bella™
(BEL-93)

$H_2S$ PREVENTION

EXCLUSIVE LICENCE PATENTED THE UNIVERSITY OF CALIFORNIA

## FOR STYLISH, TERPENIC WHITE AND ROSE' WINES

Bella™ is a particularly versatile yeast strain, capable of producing an excellent organoleptic profile even in non-optimal winemaking conditions. It promotes the aromatic complexity of the grape and enhances its character.

Bella™ is resistant to stressful conditions such as low temperatures and high alcohol levels and is known for its low volatile acidity and $SO_2$ production. However, good nitrogen nutrition must be provided. Thanks to its robustness and adaptation, it is also suitable for secondary fermentation.


## Recommended Varietals

- Muscat
- Riesling
- Chardonnay
- Semillon
- Glera
- Gewürztraminer

## Key Benefits

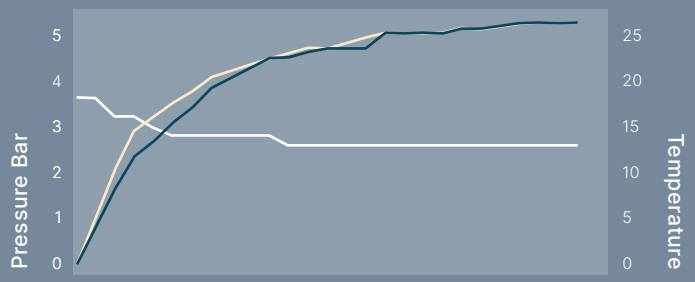
- $H_2S$-preventing wine yeast
- Stress tolerant
- High adaptability
- Terpenes conversion

**Wine fermented with Bella™** shows strong tropical and citrus aromatic notes, sweetened by a floral component. The wines show great aromatic finesse, revealing terpene-type aromas.

## Sparkling Production - Secondary Fermentation

Traditional Method
Alcohol 10.6% vol.
Sugar 22.9 g/L
72 mg/L YAN

- Bella™
- Leading Sparkling Competitor
- Temperature




## Technical Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Kinetics | Moderate | ■■■□□ | Flocculation | High | ■■■■■ |
| Optimal Temperature | 14 °C to 30 °C | | Glycerol | 6.0-8.0 g/L | |
| Cold Tolerance* | 13 °C | | Volatile Acidity | Very Low | ■□□□□ |
| Alcohol Tolerance | 17% vol. | | $SO_2$ Production | None to Very Little | ■□□□□ |
| Nitrogen Requirements | High | ■■■■■ | $H_2S$ Production** | None to Very Little | ■□□□□ |
| Killer Factor | Neutral | | Foam Production | Low | ■□□□□ |

* Once active fermentation has been established.

** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

# RENAISSANCE YEAST™

Red wine

# Andante™

(ADT-36)

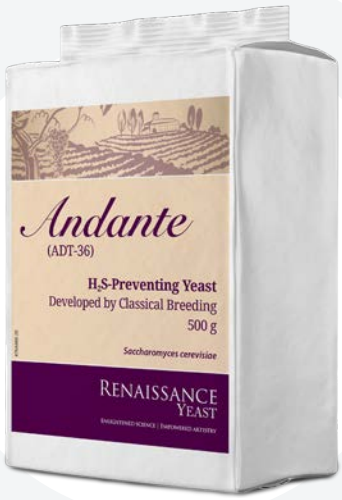
$H_2S$ PREVENTION

EXCLUSIVE LICENCE PATENTED THE UNIVERSITY OF CALIFORNIA

## FOR FRUITY, YOUNG RED WINES

Andante™ is the strain preferred by the winemaker for good color stability over time, organoleptic richness and fermentation security. The strain shows a positive influence on the anthocyanins for color stability and on aromatic compounds, enhancing the expression of red fruit notes.

Andante™ is well suited to long macerations, thanks to its steady moderate kinetics; it has moderate nutritional needs. The strain works in a wide temperature range with excellent fermentation and quality results. Due to its robustness, neutral killer factor, and low nutritional requirements, Andante is a popular choice for seltzer producers.




## Recommended Varietals

- Shiraz
- Zinfandel
- Cabernet Sauvignon
- Sangiovese

## Key Benefits

$H_2S$-preventing wine yeast

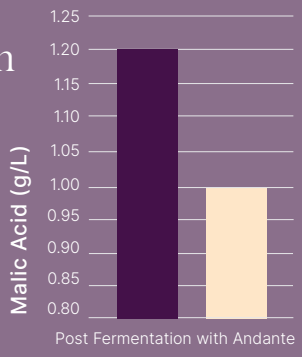
- Red fruit-driven aromas
- Color stability
- Alcohol and thermo-tolerance

**Above all, the aromas** of raspberry, strawberry, cherry and red plum prevail. It's ideal for the production of young wines with fruity aromas, paired with the varietal grape aromas. It provides an interesting balance between aromatic power and structure.

## Malic Acid Consumption

Pinot noir

24.6 Brix
268 mg/L YAN

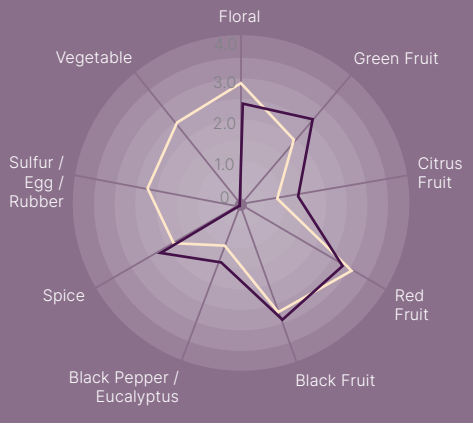



## Produces Red ™Black Fruit Aromas Without Sulphur Off-aromas

Cabernet Sauvignon

23.4 Brix
320 mg/L YAN

- Andante™
- High Alcohol Competitor




## Technical Characteristics

| | | | |
|---|---|---|---|
| Kinetics | Moderate to Fast | Flocculation | High |
| Optimal Temperature | 18 °C to 35 °C | Glycerol | 7.0-9.0 g/L |
| Cold Tolerance* | 15 °C | Volatile Acidity | Moderate |
| Alcohol Tolerance | 17% vol. | $SO_2$ Production | Low |
| Nitrogen Requirements | Low to Moderate | $H_2S$ Production** | Non-Detectable |
| Killer Factor | Neutral | Foam Production | Low |

* Once active fermentation has been established.

** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

# RENAISSANCE YEAST™

Red wine

# *Maestoso*™

(MTS-29)

$H_2S$ PREVENTION

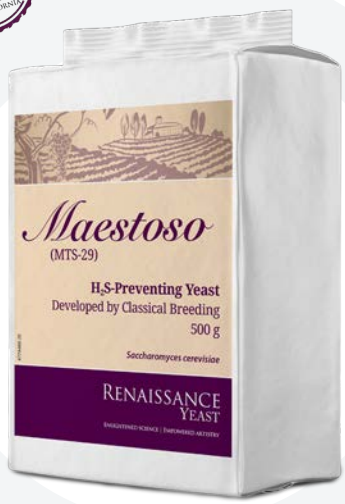
EXCLUSIVE LICENCE PATENTED THE UNIVERSITY OF CALIFORNIA

## FOR FULL-BODY, FRUITY, INTENSE RED WINES

Maestoso™ derives from the careful selection of aromatic strains specific for reds, with a persistent and intense fruity component, and a tannic structure that lasts over time and is well blended with the organoleptic profile of the wine.

This strain is ideal for wines with prolonged maceration, featuring an intense polyphenol profile and also aging in wood. On the palate it stands out for its good integration of the tannins, providing high silkiness and persistence.

Thanks to its malic acid preservation and very low Sulphur dioxide production, Maestoso™ maintains good freshness and promotes the start of malolactic fermentation. The kinetics are moderate and suitable for long-term macerations. The volatile acidity production is always very contained, even with long ageing.




## Recommended Varietals

- Merlot
- Tempranillo
- Petit Syrah
- Shiraz

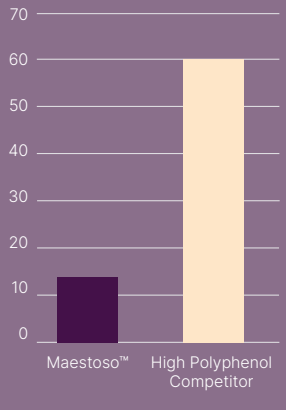
## Key Benefits

- $H_2S$-preventing wine yeast
- Black fruit-driven aromas
- Smoothness and roundness
- Malolactic fermentation promotion

**Prominent aromas** are black fruits, particularly blueberry and plum.

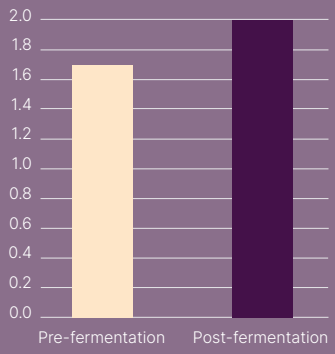
## Production of $TSO_2$ (ppm) During Fermentation

Very low $TSO_2$ production of Maestoso™ with $H_2S$ prevention compared to Commercial strain in Merlot Juice Fermentations (Yan 300 mg/L, Brix 25, 20 Celsius).




## Malic acid (g/L) Preservation During Fermentation

Maestoso™ preserves the natural acidity of musts. Merlot Juice Fermentations (Yan 300 mg/L, Brix 25, 20 Celsius).




## Technical Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Kinetics | Moderate | ▬▬▬▭▭ | Flocculation | High | ▬▬▬▬▬ |
| Optimal Temperature | 18 °C to 25 °C | | Glycerol | 7.0-9.0 g/L | |
| Cold Tolerance* | 15 °C | | Volatile Acidity | Moderate | ▬▬▬▭▭ |
| Alcohol Tolerance | 16% vol. | | $SO_2$ Production | Very Low | ▬▭▭▭▭ |
| Nitrogen Requirements | Moderate to High | ▬▬▬▬▭ | $H_2S$ Production** | Non-Detectable | ▭▭▭▭▭ |
| Killer Factor | Neutral | | Foam Production | Moderate | ▬▬▬▭▭ |

* Once active fermentation has been established.

** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

# RENAISSANCE YEAST™

Red wine

## Brio™ (BRO-58)

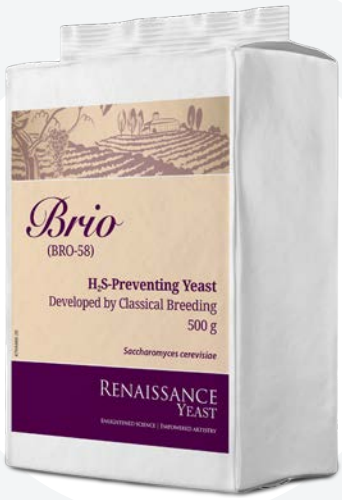
$H_2S$ PREVENTION

EXCLUSIVE LICENCE PATENTED THE UNIVERSITY OF CALIFORNIA

### FOR ETHYL ESTER-PROFILE RED WINES

The main characteristic that emerges from the use of Brio™ is aroma complexity. This complexity is a result of the genetic features inherited through the careful breeding and selection of its parental strains. Beyond its aromas contribution, Brio™ also acquired the ability to enhance phenolic components, for greater structure and richness.

It is suited for ageing in wood, with good colour stabilization. It has strong fermentation kinetics, as with all the yeasts in the range; it ensures safe and complete fermentation.




### Recommended Varietals

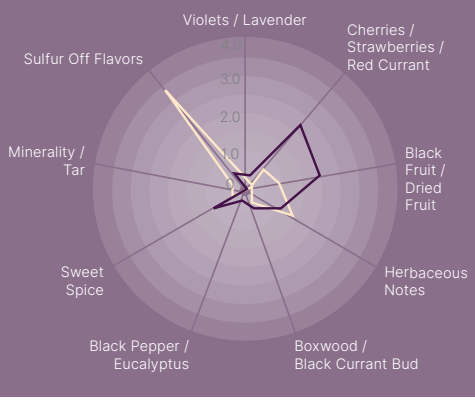
- Pinot Noir
- Gamay Nouveau
- Grenache
- Carmenere
- Syrah
- Petit Verdot

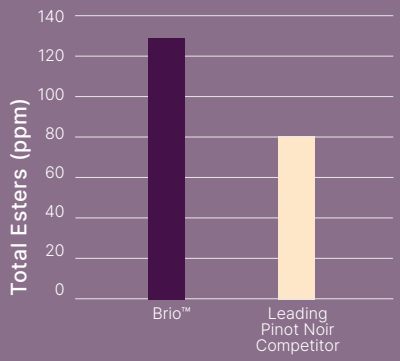
### Key Benefits

- $H_2S$-preventing wine yeast
- Ethyl esters richness
- Aroma complexity
- Low volatile acidity

**The aroma** profile is driven by ethyl esters and ranges from black fruit to red fruit, with accentuated pleasant spicy notes.

### Enhanced Red Fruit Sensory Attributes




## Technical Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Kinetics | Moderate to Fast | ■■■■□ | Flocculation | High | ■■■■■ |
| Optimal Temperature | 17 °C to 28 °C | | Glycerol | 6.0-8.0 g/L | |
| Cold Tolerance* | 16 °C | | Volatile Acidity | Low | ■□□□□ |
| Alcohol Tolerance | 16% vol. | | $SO_2$ Production | Moderate | ■■■□□ |
| Nitrogen Requirements | Moderate | ■■■□□ | $H_2S$ Production** | Non-Detectable | □□□□□ |
| Killer Factor | Active | | Foam Production | Low | ■□□□□ |

* Once active fermentation has been established.

** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

# RENAISSANCE YEAST™

Red wine

## Bravo™ (BV-33)

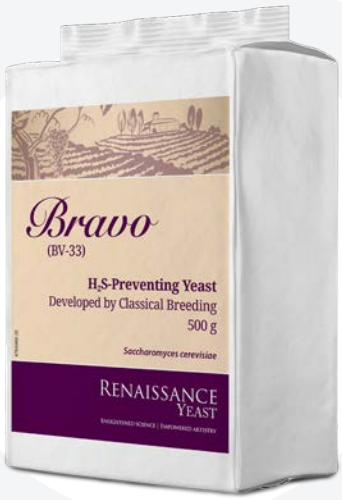
$H_2S$ PREVENTION

EXCLUSIVE LICENCE PATENTED THE UNIVERSITY OF CALIFORNIA

### FOR FRUITY, ROUND AND VELVETY RED WINES

Bravo™ is a strain particularly appreciated for its strong glycerol production, associated with an exceptional aromatic complexity. It is the recommended yeast for those who want a wine with excellent tannic softness, particularly fruity and with a great clean nose.

The vegetal character of wines are reduced, for a greater tactile mouthfeel. Bravo™ exhibits good kinetics in a wide temperature range, thus allowing great application flexibility. High glycerol production, high alcohol resistance, and low volatile acidity production are its distinctive metabolic characteristics.




### Recommended Varietals

- Nebbiolo
- Cabernet Sauvignon
- Malbec
- Carmenere
- Syrah
- Petit Verdot

### Key Benefits

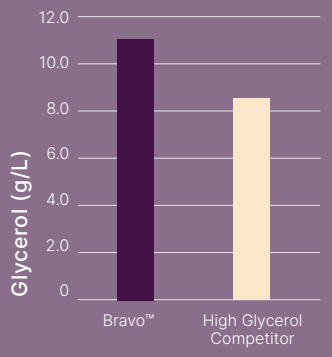
- $H_2S$-preventing wine yeast
- High glycerol production
- High ester production
- High alcohol resistance

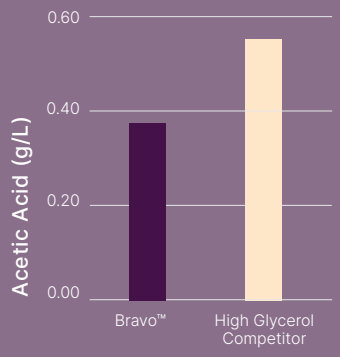
**The aromas** deriving from the fermentative metabolism of Bravo™ are red fruits, such as cherries and strawberries, and black fruits, such as plums.

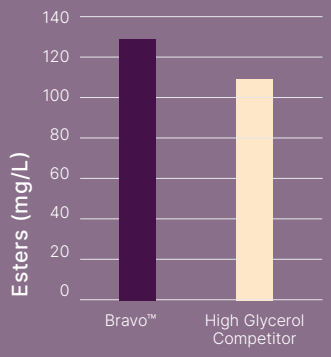
### Glycerol, Esters, ™Acetic Acid Production

Cabernet Sauvignon

Fermentation at 21 °C
25.0 Brix
320 mg/L YAN




## Technical Characteristics

| | | | |
|---|---|---|---|
| Kinetics | Moderate to Fast | Flocculation | High |
| Optimal Temperature | 16 °C to 30 °C | Glycerol | 9.0-11.0 g/L |
| Cold Tolerance* | 13 °C | Volatile Acidity | Low |
| Alcohol Tolerance | 17% vol. | $SO_2$ Production | Very Low |
| Nitrogen Requirements | Moderate | $H_2S$ Production** | Non-Detectable |
| Killer Factor | Neutral | Foam Production | Moderate |

* Once active fermentation has been established.

** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

# Fresco™ (FRS-66)

$H_2S$ PREVENTION

EXCLUSIVE LICENCE PATENTED THE UNIVERSITY OF CALIFORNIA

## THE STRAIN SPECIFICALLY SELECTED FOR QUALITY CIDER

Fresco™ is the result of a rigorous selection, aiming to identify the ideal strain for fermenting apple juice and producing high-quality ciders. Thanks to the naturally occurring genetic characteristic of preventing the formation of hydrogen sulphide – a characteristic shared with all Renaissance yeasts, it enables the creation of vibrant and crisp ciders even in low-nutrient situations.

Fresco™ exhibits consistent and steady fermentation kinetics, allowing the process to occur even at lower temperatures and reaching high alcohol levels.


## Recommended Styles

- New World
- English
- French
- Perry
- Ice
- New England
- Apple Wine
- Fruit Cider

## Key Benefits

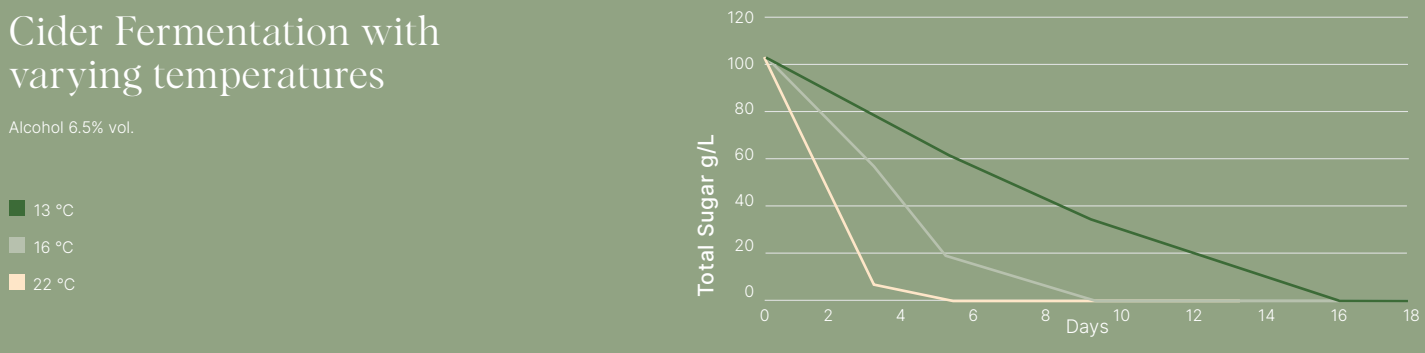
$H_2S$-preventing wine yeast

- Selected for cider production
- Fresh, intense aromas
- Suitable for low temperature fermentation

**The cider** produced with Fresco™ features refreshing aromas, characterized by distinct and intense notes of red apple, pear, and citrus.

## Cider Fermentation with varying temperatures

Alcohol 6.5% vol.




## Technical Characteristics

| | |
|---|---|
| MLF Compatible | Yes |
| Optimal Temperature | 13°C to 25 °C |
| Cold Tolerance* | 13 °C |
| Alcohol Tolerance | 15% vol. |
| Nitrogen Requirements | Moderate |

| | |
|---|---|
| Killer Factor | Neutral |
| Flocculation | High |
| $SO_2$ Production | Low |
| $H_2S$ Production** | Non-Detectable |

* Once active fermentation has been established.

** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

# RENAISSANCE YEAST™

Organic

## Ossia™ ORGANIC

DE-ÖKO-003 EU Agriculture

$H_2S$ PREVENTION

EXCLUSIVE ELEGANCE PATENTED THE UNIVERSITY OF CALIFORNIA

## ROBUST AND VERSATILE YEAST FOR ORGANIC BEVERAGES

Ossia™, a certified organic yeast, is suitable for fermenting a diverse array of alcoholic beverages including white, rosé or red wines, cider, fruit beverages, seltzers, kombucha and more. The beverages fermented with Ossia™ are crisp and clean, with a fresh taste.

Ossia™ is a robust yeast, capable of fermenting in a broad temperature range, and achieving up to 15 degrees of alcohol. Its metabolism is particularly efficient with consistent kinetics and low production of sulphur dioxide and volatile acidity.


## Recommended Styles

- White Wine
- Red Wine
- Fruit Wine
- Cider

## Key Benefits

- $H_2S$-preventing wine yeast
- Organic certified
- Versatility and robustness
- Clean aromas

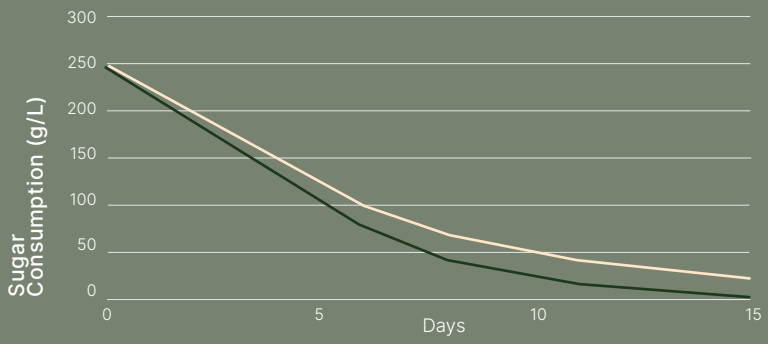
**The aromatic expression** is characterized by delicate hints of tropical fruit and white fruit.

## Sugar Consumption Profile (g/L)

Chardonnay

Fermentation at 20 °C
24,6 Brix
274 mg/L YAN

- Ossia™
- Leading All Purpose Competitor




## Technical Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Kinetics | Moderate | ■■■□□ | Flocculation | Moderate - High | ■■■■■ |
| Optimal Temperature* | 18 °C to 32 °C | | Glycerol | 6.0-8.0 g/L | |
| Cold Tolerance** | 15 °C | | Volatile Acidity | Low | ■□□□□ |
| Alcohol Tolerance | 16% vol. | | $SO_2$ Production | Very Low - None | □□□□□ |
| Nitrogen Requirements | Moderate | ■■■□□ | $H_2S$ Production*** | Non-Detectable | □□□□□ |
| Killer Factor | Active | | Foam Production | Low | ■□□□□ |

*When fermenting to dryness, it is recommended to increase temperature to > 18 °C near the end to ensure a proper finish. Nitrogen supplementation is recommended during the initial 1/3 of fermentation, especially when fermenting at warmer temperatures or in highly clarified musts. / ** Once active fermentation has been established.

*** Below threshold of detection in conditions tested.

YAN level: Low=between 150-225 / Moderate=between 225-300 / High=more than 300

RENAISSANCE YEAST
ENLIGHTENED SCIENCE | EMPOWERED ARTISTRY

# Yeast pairings

Even in trace amounts that can't be detected by smell, $H_2S$ can still impair the true flavors of your wine.

Pairing levels
- Very-lowly compatible
- Lowly compatible
- Moderately compatible
- Totally compatible
- Highly compatible

## Whites and Rosés Solutions

| Yeast Pairings | Thiolic wine | Terpenic wine | Esters | Ageing | Secondary Fermentation |
|---|---|---|---|---|---|
| Allegro™ | ●●○○○ | ●●●○○ | ●●●●○ | ●●●●○ | ●●○○○ |
| Vivace™ | ●●○○○ | ●●○○○ | ●●○○○ | ●●●○○ | ●●●●○ |
| TR-313™ | ●●●●● | ●●○○○ | ●●●●○ | ●○○○○ | ●○○○○ |
| Bella™ | ●●○○○ | ●●●●○ | ●●●●○ | ●○○○○ | ●●○○○ |

## Reds Solutions

| Yeast Pairings | Thiolic wine | Terpenic wine | Esters | Ageing | Secondary Fermentation |
|---|---|---|---|---|---|
| Andante™ | ●●○○○ | ●●○○○ | ●●●○○ | ●●●●● | ●○○○○ |
| Maestoso™ | ●○○○○ | ●○○○○ | ●●●○○ | ●●●●● | ●○○○○ |
| Brio™ | ●○○○○ | ●○○○○ | ●●●●● | ●●●○○ | ●○○○○ |
| Bravo™ | ●○○○○ | ●○○○○ | ●●●●○ | ●●●○○ | ●○○○○ |

## Others Solutions

| Yeast Pairings | Thiolic wine | Terpenic wine | Esters | Ageing | Secondary Fermentation |
|---|---|---|---|---|---|
| Ossia™ | ●○○○○ | ●●●○○ | ●●●○○ | ●●●○○ | ●●○○○ |
| Fresco™ | ●○○○○ | ●○○○○ | ●●●○○ | ●○○○○ | ●○○○○ |

RENAISSANCE YEAST
ENLIGHTENED SCIENCE | EMPOWERED ARTISTRY

# Yeast characterisation

Winemakers who use our yeasts have remarked: "My wine has never had such a remarkable aroma"

**Wine Types**

- White
- Red
- Rosé
- Secondar fermentation & Sparkling
- Fruit Wine
- Cider
- Seltzer

**Levels**

- Very-lowly compatible
- Lowly compatible
- Moderately compatible
- Totally compatible
- Highly compatible

## Yeast comparison

| Charateristics | Wine type | Nitrogen requirement | Alcohol tolerance | Glycerol | Volatile acidity | Total $SO_2$ | Killer factor | Kinetic |
|---|---|---|---|---|---|---|---|---|
| Allegro™ | | | | | | | Sensitive | |
| Vivace™ | | | | | | | Positive | |
| TR-313™ | | | | | | | Positive | |
| Bella™ | | | | | | | Neutral | |
| Andante™ | | | | | | | Neutral | |
| Maestoso™ | | | | | | | Neutral | |
| Brio™ | | | | | | | Positive | |
| Bravo™ | | | | | | | Neutral | |
| Ossia™ | | | | | | | Positive | |
| Fresco™ | | | | | | | Neutral | |

# REHYDRATION PROTOCOL

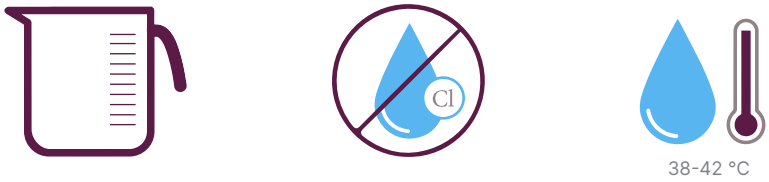
Please follow the Rehydration Instructions to avoid stuck or sluggish fermentations
Correct yeast rehydration is crucial to obtain a healthy fermentation

## Inoculation Rate™

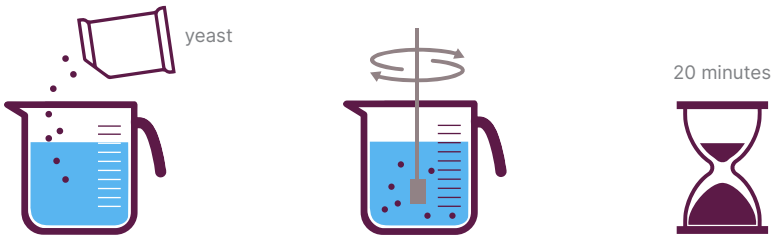
0.2-0.35 g/L

## Rehydration Instructions™

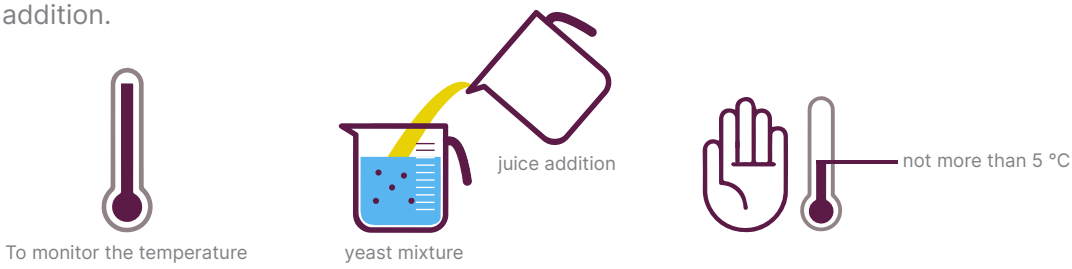
1. In an clean container, prepare chlorine-free water at 38-42 °C that is 10 times the weight of the yeast to be rehydrated.




2. Gently mix the yeast into the water and allow 20 minutes for rehydration.




3. After rehydration, begin to slowly add full strength juice into the yeast mixture every 5 minutes to allow for acclimation. Do not decrease the temperature of the mixture by more than 5 °C with each juice addition.




4. When the temperature of the yeast suspension is less than 10 °C warmer than the must or juice to be inoculated, slowly add the yeast mixture into the fermentation vessel.


Note. Directly adding dry yeast to the must or juice tank is not advised.

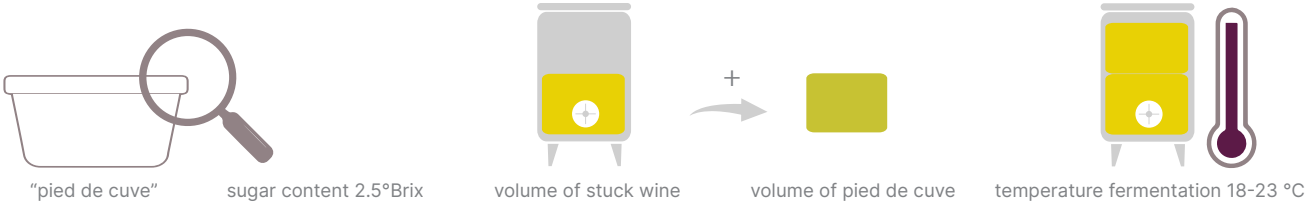
# RESTART OF STUCK OR SLUGGISH FERMENTATIONS PROTOCOL

1. **Prepare the "Pied de Cuve"** — The volume prepared should be 2-5 % of the volume of the stuck wine. This will contain water, grape juice and stuck wine (not more than half of the total volume). The sugar content should be around 5°Brix . Nutrients should be added and the temperature before the incorporation of the yeast should be at 24–26°C.


2. **Rehydration of the yeast** — Use a different strain from the one that has been used in the first inoculation, preferably a fructophilic yeast that is resistant to alcohol (Andante or Bravo for reds and Bella for whites or rosé). Follow instructions to prepare the mixture of water and yeast accordingly (steps 1 and 2 of the Rehydration Protocol).


3.**Add the yeast to the "Pied de Cuve"** — Follow steps 3 and 4 of the Rehydration Instructions, adding the yeast to the "Pied de Cuve" instead when the protocol refers to "full strength juice" and "fermentation vessel".


4. Once the yeast is incorporated in the "Pied de Cuve" monitor the sugar content. When the it has dropped by half (2.5°Brix), it is ready to be incorporated into the stuck wine. The incorporation is done by adding an equal volume of stuck wine to the volume of the "Pied de Cuve". Ensure that the temperature difference between the "Pied de Cuve" and the stuck wine does not exceed 10 °C. Keep the temperature of the fermentation between 18-23 °C. After each addition wait for the fermentation to show some activity and then double the volume again. Continue this procedure until all of the stuck wine is transferred to the "Pied de Cuve" vessel.




Note. The inoculation rate and the use of $SO_2$, yeast hulls, rehydration nutrients, lysozyme should be decided according to the judgement of the winemaker.

Enlightened Science. Empowered Artistry.

## Drop us a line

info@renaissanceyeast.com

DANSTAR FERMENT AG
Poststrasse 30
6300 ZUG
SWITZERLAND

RENAISSANCE YEAST™