

# CROSS EVOLUTION®

**YSEO™**  
PROCESS  
Research in collaboration  
with Washington State University

## ORIGIN AND APPLICATION

**A yeast suited to white varieties where mouthfeel and high aromatic intensity (including ester production) are sought. This is a natural cross hybrid between *Saccharomyces cerevisiae* wine yeasts.**

**Cross Evolution®** is the result of research by the Institute for Wine Biotechnology, Stellenbosch University, South Africa, supported by Lallemand.

**Cross Evolution®** results in an increased mouthfeel, high aromatic intensity, fresh fruit and floral characters. Some ester production. Generally good balance between volume and acidity. The use of **Cross Evolution®** in Sauvignon Blanc results in a good balance between vegetal notes and distinctive fruity aromas. Suited to a range of varieties including Chenin Blanc, Gewürztraminer, Pinot Gris, Roussane, Sauvignon Blanc and Viognier. Most recently it is performing very well in Riesling, from different regions of Australia.

**Cross Evolution®** is also recommended to be used in apple and pear cider production.

The **Cross Evolution®** yeast, was selected from nature, and has since been improved using the Lallemand proprietary process called YSEO®.



## MICROBIAL AND OENOLOGICAL PROPERTIES

- White and rosé wines only
- *Saccharomyces cerevisiae* var. *cerevisiae*
- Fermentation temperature: 14-20°C
- Moderate fermentation vigour with a long lag phase.
- Low relative nitrogen demand (under controlled laboratory conditions). Tends to perform well under low YAN conditions.
- Alcohol tolerance 15% v/v \**subject to fermentation conditions*.
- Low relative potential for SO<sub>2</sub> production.
- High glycerol production.
- Killer factor active.
- **Cross Evolution®** has the potential to produce compounds inhibitory to MLF, but due to good autolysis, generally considered compatible to sequential MLF inoculation. Co-inoculation of **Cross Evolution®** and LAB is generally not recommended.
- Medium foam producer.
- Suggested varieties – Chenin Blanc, Gewürztraminer, Pinot Gris, Riesling, Roussane, Sauvignon, Blanc and Viognier.

YSEO™ signifies Yeast Security and Sensory Optimization, a unique Lallemand yeast production process to meet demanding fermentation conditions. While not all yeast benefit from this process, YSEO™ improves the reliability of alcoholic fermentation by improving yeast quality and performance and reduces the risk of organoleptic deviation even under difficult conditions. YSEO™ yeasts are 100% natural and non-GMO.



## INSTRUCTION FOR USE

### Dosage Rate:

- 25g/hL of Active Dried Yeast (this will provide an initial cell population of approximately  $5 \times 10^6$  viable cells/mL)
- 30g/hL of Go-Ferm Protect® / Go-Ferm Protect Evolution™
- Nitrogen source from the Fermaid™ range

### Procedure for 1000L ferment.

- 1) Add 300g of Go-Ferm Protect® / Go-Ferm Protect Evolution™ to 5L of 40-43°C clean, chlorine free water. Stir until an homogenous suspension free of lumps is achieved.
- 2) When the temperature of this suspension is between 35-40°C, sprinkle 250g of yeast slowly and evenly onto the surface of the water, whilst gently stirring. Ensure any clumps are dispersed.
- 3) Allow to stand for 20 minutes before further gently mixing.
- 4) Mix the rehydrated yeast with a little juice, gradually adjusting the yeast suspension temperature to within 5-10°C of the juice/must temperature.
- 5) Inoculate into the must.

### Further Notes

- Steps 1-5 should be completed within 30 minutes.
- It is best to limit first juice/must volume addition to one tenth the yeast suspension volume and wait 10 minutes before the addition to juice.
- To minimize cold shock, ensure temperature changes are less than 10°C.
- It is recommended that juice / must be inoculated no lower than 18°C.
- It is recommended to use complex nutrition nitrogen source, such as either **Fermaid AT™** or **Fermaid O™**.

## PACKAGING AND STORAGE

- All Active Dried Yeast should be stored dry, best practice between 4-12°C and the vacuum packaging should remain intact.

The information herein is true and accurate to the best of our knowledge; however, this data sheet is not to be considered as a guarantee, expressed or implied, or as a condition of sale of this product.



WINE  
YEASTS



WINE  
BACTERIA



NUTRIENTS  
/PROTECTORS



SPECIFIC  
INACTIVATED YEASTS



ENZYMES



CHITOSAN



VINEYARD  
SOLUTIONS



LALLEMAND OENOLOGY

Original **by culture**