

CROSS EVOLUTION®



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* yeasts.

Cross Evolution® is a natural cross hybrid, the result of research by the Institute for Wine Biotechnology, Stellenbosch University, South Africa, supported by Lallemand. This is the result of a unique breeding program resulting in 'natural' hybrids, whereby the pace is accelerated compared to the natural environment. This is a cross between *Saccharomyces cerevisiae* oenological yeast.

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, Gewurztraminer, 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®.



Lallemand has developed a unique yeast production process called YSEO® (Yeast Security and Sensory Optimization). This process increases fermentation reliability and security and ensures fewer organoleptic deviations, but not all yeast can be prepared by this process. The process (when compared to non YSEO®):

- Improves the yeast cells assimilation of essential micronutrients and vitamins.
- Improves the yeasts ability to implant in the must for a more reliable fermentation.
- Linked to a reduction in yeast stress thereby reducing H₂S, VA and SO₂ production.
- Shorter lag phase.
- Improves the resistance and adaption of the yeast under difficult fermentation conditions.

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 SO₂ production.
- High glycerol production.

PACKAGING AND STORAGE

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

MICROBIAL AND OENOLOGICAL PROPERTIES (cont'd)

- 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.

INSTRUCTION FOR USE

Dosage Rate:

- 25g/hL of Active Dried Yeast (this will provide an initial cell population of approximately 5×10^6 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™**.

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