

## ORIGIN AND APPLICATION

**Lalvin CLOS™ has a high alcohol tolerance and wide fermentation temperature range. Respects varietal character, adds complexity and minerality to red wines.**

A selection from the prestigious Spanish Priorat region. **Lalvin CLOS™** was selected by the University of Rovira / Virgili in Spain (Biotechnologia Enologica de la Facultad de Enologia de Tarragona). The selection criterion of the yeast was to preserve the typical characteristics of wines from the Priorat D.O.C, where the musts have low nutrient status, high polyphenolic levels and high potential alcohol. It was also deemed important that the yeast respected and expressed the minerality of the terroir.

Initially, expansive winery trials conducted with Carignan, Grenache, Shiraz, Zinfandel and Tempranillo grapes confirmed the yeasts potential as an excellent tool to complement aroma complexity, structure and mouthfeel.

Outstanding reports have been received when using **Lalvin CLOS™** to ferment Cabernet Sauvignon, Shiraz, Grenache and Tempranillo . The sensory characteristics include underlying complexity with an overall heightened expression of varietal characters with a good balance between mouthfeel and structure. **Lalvin CLOS™** is a relatively high producer of glycerol, which contributes to the mouthfeel effect of this yeast. Most importantly, its reliability has been commonly reported.

The **Lalvin CLOS™** yeast, was selected from nature, and has since been improved using the propriety 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 H<sub>2</sub>S, VA and SO<sub>2</sub> production.
- Shorter lag phase.
- Improves the resistance and adaption of the yeast under difficult fermentation conditions.

## MICROBIAL AND OENOLOGICAL PROPERTIES

- Red wines Only
- *Saccharomyces cerevisiae* var. *cerevisiae*
- Fermentation temperature: 13-35°C (55-95°F)
- High vigour – Implants well in difficult conditions, fast and regular fermentation rate.
- Medium relative nitrogen demand (under controlled laboratory conditions)
- Alcohol tolerance 17% v/v.
- Low relative potential for SO<sub>2</sub> production.
- High relative glycerol production.

## MICROBIAL AND OENOLOGICAL PROPERTIES (cont'd)

- Competitive factor active.
- Very malolactic-bacteria compatible.
- Suggested varieties – Cabernet Sauvignon, Grenache, Shiraz, Tempranillo, and Zinfandel.

## FURTHER READING *(Please request this booklet from your Lallemand representative).*

'Selecting Yeast in a Unique Terroir', Jose Maria Heras, Carlos Suarez, Ann Dumont, Anne Oritz-Julien, Francoise Raginel, Lallemand Spain, Lallemand Montreal, Lallemand France.

Lallemand Winemaking Update – Number 1 2008: 'The YSEO® Process'

Evaluation of the YSEO® Process to prepare dried winemaking yeast – Summary of a study done by Washington State University and Lallemand

Lallemand 'The Wine Expert' – Practical Winemaking Information – Glycerol and winemaking.

## INSTRUCTION FOR USE

### Dosage Rate:

- 25g/hL (2lb/1000gal) of Active Dried Yeast (this will provide an initial cell population of approximately  $5 \times 10^6$  viable cells/mL)
- 30g/hL (2.4lb/1000gal) of Go-Ferm Protect Evolution™
- Nitrogen source from the Fermaid™ range

### Procedure for 1000L (264gal) ferment.

- 1) Add 300g (10.6oz) of Go-Ferm Protect Evolution™ to 6L (1.5gal) of 40-43°C (104-110°F) 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 (95-104°F), sprinkle 250g (8.8oz) 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 (9-18°F) 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 (18°F).
- It is recommended that juice / must be inoculated no lower than 18°C (64°F).
- It is recommended to use complex nutrition source such as **Fermaid®**.

### PACKAGING AND STORAGE

All Active Dried Yeast should be stored dry, best practice between 4-12°C (39-54°F) 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.*