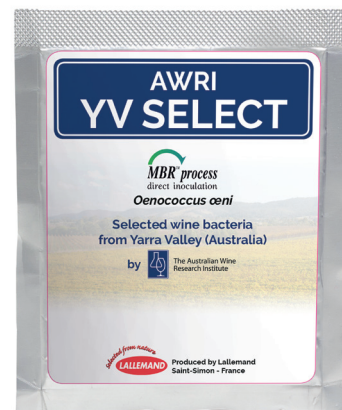


AWRI YV SELECT™

MBR™ process
direct inoculation

APPLICATION

AWRI YV Select™ was isolated and selected in the Yarra Valley (Australia) by the Australian Wine Research Institute (AWRI) for its ability to perform malolactic fermentation under a wide range of conditions. **AWRI YV Select™** is an efficient *Oenococcus oeni* wine bacterium which can perform under the most difficult winemaking conditions, such as very high alcohol and low temperatures. In addition to its excellent wine tolerance, **AWRI YV Select™** is a uniquely Australian wine bacteria, selected for its robustness and performance under Australian winemaking conditions.



**Wine bacteria
Selected from Nature.**

MICROBIAL AND OENOLOGICAL PROPERTIES

- pH tolerance: > 3.2
- Alcohol tolerance: < 17% vol.
- SO₂ tolerance: < 50 mg/L total SO₂
- T° tolerance: > 14°C
- Nutrient demand: Medium
- Good implantation
- MLF kinetics: Fast
- Low volatile acidity production
- Can be used as co- and sequential inoculation
- Late degradation of citric acid: low diacetyl production
- No production of biogenic amines

SENSORY PROPERTIES

From recent trials, **AWRI YV Select™** has demonstrated its positive contribution to wine sensory; spicy, adds complexity and good palate structure.

The MBR® form of lactic acid bacteria represents a Lallemand specific process that subjects the lactic acid bacteria cells to various biophysical stresses, making them better able to withstand the rigors of direct addition to wine. The conditioned MBR® lactic acid bacteria that survive are robust and possess the ability to conduct reliable malolactic fermentation (MLF).

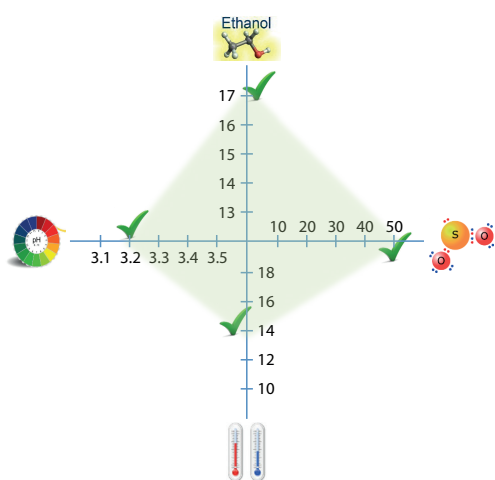


Figure 1. Tolerance range of **AWRI YV Select™** to alcohol, SO₂, temperature and pH.

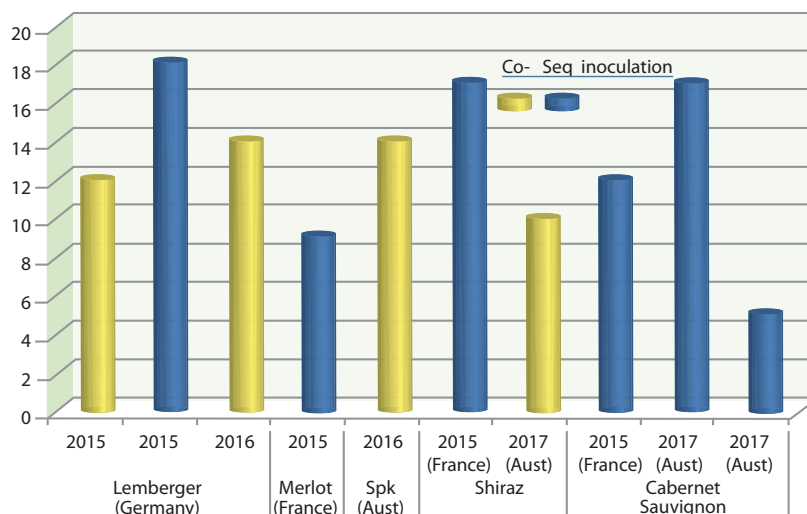


Figure 2. Days for **AWRI YV Select** to complete MLF in different red wines.

INSTRUCTIONS FOR USE

SEQUENTIAL INOCULATION (Post-alcoholic fermentation)

Bacteria inoculation: two options:

- 1) Direct inoculation without rehydration : open the sachet and add the bacteria directly into the wine after the end of alcoholic fermentation at the top of the tank or while racking the tank and ensure good mixing.
 - 2) Direct inoculation with rehydration step: for best distribution, you can rehydrate the packet of freeze-dried selected wine bacteria in 20 times its weight of clean chlorine free water at 20°C for a maximum 15 minutes. Add this suspension directly to the wine towards the end of or after the alcoholic fermentation.
- Stir gently to evenly distribute the selected wine bacteria and minimize the oxygen pickup.
 - Check malolactic fermentation activity (malic acid degradation) every 2 to 4 days.
 - Stabilize wine once malolactic fermentation (MLF) is finished.

Recommended temperature range:

- White wine / rosé wine: from 16 to 20°C.
- Red wine: from 17 to 25°C.

If limiting conditions (high alcohol > 14.5 vol, or low pH < 3.1, or high SO₂ > 45 ppm) : from 18 to 22°C, check malolactic fermentation activity (malic acid degradation) every 2 to 4 days.

CO-INOCULATION

(Simultaneous alcoholic fermentation)

1) Yeast addition

Rehydrate the selected dry yeast according to the instructions. Preferably in presence of a rehydration nutrient and inoculate the must.

2) Bacteria addition

Depending on the SO₂ addition at crush:

- < 5 g/hL (50 ppm SO₂ added): wait for 24 hours
- 5-8 g/hL (50-80 ppm SO₂ added): wait for 48 hours
 - Direct inoculation of bacteria without rehydration : open the sachet and add the bacteria directly to the must/ wine to be fermented from the top of the tank (white must) or during a pumping-over (red must).
 - Direct inoculation with rehydration step: for best distribution, you can rehydrate the packet of freeze-dried lactic acid bacteria in 20 times its weight of clean chlorine free water at 20°C for a maximum of 15 minutes and add the suspension to the must/ wine to be fermented.
- Assure a good distribution.
- Carefully monitor must temperature, which must be below 30°C at lactic acid bacteria inoculation (alcohol < 5% vol) and below 27°C when the level of 10 % of alcohol is reached.
- Complex nutrients addition at 1/3rd of alcoholic fermentation is recommended.
- Monitor malic acid and volatile acidity.
- If MLF takes place during AF and an unusual increase in volatile acidity is observed add **Bactiless™** (20-50 g/hL).
- Top the wine to ensure minimum ullage after alcoholic fermentation (AF) if MLF is not completed.
- Otherwise rack and stabilize after MLF

PACKAGING AND STORAGE

- Product in powder form obtained by lyophilisation.
- Available for 25 hL and 250 hL.
- This product can be stored for 18 months at 4°C and 36 months at - 18°C in original sealed packaging. Once opened, the sachet must be used immediately.
- During delivery, sealed packets can be held at ambient temperature for 3 weeks (< 25°C) without significant loss of viability.

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.