



O-MEGA™

Oenococcus oeni

MBR™ process
direct inoculation

Secure and highly efficient wine bacteria



As a producer of wine lactic acid bacteria, Lallemand developed a specific MBR™ production process that subjects the wine bacteria cells to various biophysical stresses, making them 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).

DESCRIPTION

O-MEGA™ was isolated from nature and selected in South of France by the Institut Français de la Vigne et du Vin (IFV) for its high capacity to quickly achieve malolactic fermentation (MLF) in a very wide range of applications.

Produced with our MBR™ process, O-MEGA™ is very competitive which helps to have a high dominance in must or wine, to better control MLF and wine quality. O-MEGA™ is a secure and efficient wine bacteria which tolerates low pH, high alcohol conditions or low temperature.



BENEFITS & RESULTS

O-MEGA™ has a very fast kinetic of malic acid degradation under limiting conditions and can achieve a complete MLF up to 17% vol of alcohol, or at pH >3.1, with an easy-to-use protocol (direct inoculation without any rehydration step).

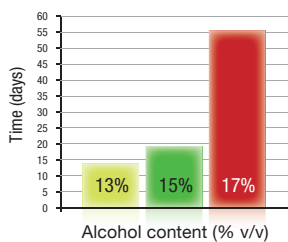
Reliable in white, red and rosé wines, O-MEGA™ complements fresh and fruit driven wines and helps to stabilize red wine color because of its slower degradation of acetaldehyde.

O-MEGA™ contributes to produce very fresh and fruity red wines from high maturity grapes. In normal mature grapes, O-MEGA™ reinforces the aging potential.

O-MEGA™ is a bio-protection tool to protect wines against *Brettanomyces* when inoculated as soon as possible to prevent the excessive development of the spoilage yeast.

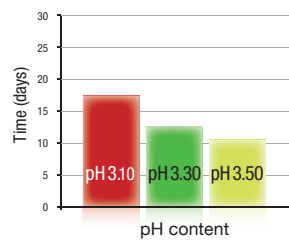
O-MEGA™ alcohol tolerance

Red wine – MLF duration at
pH 3.50 and 18°C



O-MEGA™ low pH tolerance

Rosé wine – MLF duration at
13% v/v and 18°C



PROPERTIES

- pH tolerance ≥ 3.1
- T° tolerance ≥ 14°C
- Alcohol tolerance: up to 16% volume (can tolerate up to 17% volume).
- SO₂ tolerance: up to 60 mg/L total SO₂ (pay attention to molecular SO₂ at low pH)
- Good implantation - short lag phase
- MLF kinetic: very fast
- Late degradation of citric acid: very low production of diacetyl (no buttery or lactic notes)
- Higher color intensity
- No production of biogenic amines
- Very low volatile acidity production
- Bacterial cinnamoyl esterase activity negative
- Co-inoculation recommended
- Low nutritional demand. Under more difficult MLF conditions, we advise to use a specific bacteria nutrient:
- For white and rosé wines to avoid amino acids deficiencies and ensure a good growth of the selected bacteria,
- For structured red wines to avoid amino acids deficiencies and increase the resistance of the selected bacteria against certain inhibitory polyphenolic fractions.

INSTRUCTIONS FOR OENOLOGICAL USE

Use one sachet for the correct quantity of hL indicated on label. Lowering the dosage or doing cross seeding or pitching methods will reduce the bacteria performance.

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.

Bacteria addition

Depending on the SO₂ addition at crush:

- SO₂ addition < 5 g/hL: wait for 24 hours
- SO₂ addition 5-8 g/hL: 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% alcohol is reached.
 - Complex nutrients addition at 1/3rd of alcoholic fermentation is recommended.
 - Monitor malic acid and volatile acidity.
 - Top the wine to ensure minimum ullage after alcoholic fermentation (AF) if MLF is not completed.
 - Otherwise rack and stabilize after MLF.

Sequential inoculation (post-alcoholic fermentation)

Bacteria inoculation: two options

- 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.
- 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 or after the alcoholic fermentation.
 - Stir gently to evenly distribute the selected wine bacteria and minimize the oxygen pickup.
 - Under more difficult conditions, add a specific bacteria nutrient.
 - Monitor malolactic fermentation activity (malic acid degradation) every 2 to 4 days.
 - Stabilize wine once malolactic fermentation (MLF) is finished.

Recommended temperatures:

- White wine / rosé wine: from 16 to 20°C.
- Red wine:
 - › If alcohol < 14.5% vol.: from 17 to 25°C, with an optimal range: 18-22°C
 - › If alcohol > 14.5% vol.: from 18 to 20°C

PACKAGING & STORAGE

- Product in powder form obtained by lyophilization.
- Available for 25 hL (660 US gal.) and 250 hL (6,600 US gal.)
- This product can be stored for 18 months at 4°C / 39°F and 36 months at - 18°C / 0°F 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 / 77°F) without significant loss of viability.

Distributed by:

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The information in this document is correct to the best of our knowledge. However, this data sheet should not be considered to be an express guarantee, nor does it have implications as to the sales condition of this product. April 2024.



WINE
YEASTS



WINE
BACTERIA



NUTRIENTS
/PROTECTORS



SPECIFIC
YEAST DERIVATIVES



ENZYMES



CHITOSAN



VINEYARD
SOLUTIONS



LALLEMAND OENOLOGY

Original by culture