# **LACTIC**<sup>®</sup> EXPRESSION

*Oenococcus oeni* wine bacteria for direct inoculation. To enhance the fresh red fruit aromas of red wines. Particularly suitable to wines with a medium/high maturity.

The MBR<sup>™</sup> 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<sup>™</sup> lactic acid bacteria are robust and possess the ability to conduct reliable malolactic fermentation.



## <sup>1</sup> applications

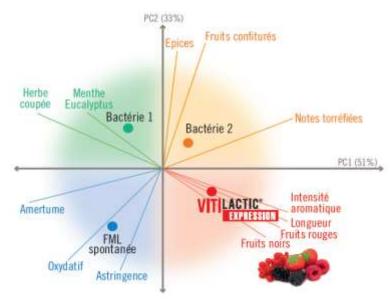
In red wines, **VITILACTIC® EXPRESSION** enhances floral and fruity notes thanks to the synthesis of stable esters (maintained 3 years after bottling). **VITILACTIC® EXPRESSION** reinforce freshness in wines with a medium/high maturity.

## 2 MICROBIOLOGICAL AND OENOLOGICAL PROPERTIES

- pH tolerance  $\geq 3.3$
- Alcohol tolerance: up to 15% vol
- SO<sub>2</sub> tolerance: up to 50 mg/L total SO<sub>2</sub> (pay attention to molecular SO<sub>2</sub> at low pH)
- Temperature tolerance  $\geq 15^{\circ}C$

- No production of biogenic amines
- Bacteria cinnamoyl esterase negative: cannot produce precursors for ethylphenol production by *Brettanomyces*
- Low volatile acidity production
- Suitable for co-inoculation and sequential inoculation

- Sensory contribution:
  - Diacetyl production average in sequential inoculation and low in co-inoculation
    - Reinforce the freshness of medium/high maturity wines, with an increase of fresh red fruits aromas
  - Express the complexity of wines, with the enhancement of the length



Cabernet Sauvignon - Sequential inoculation - pH 3.7



## INSTRUCTIONS FOR USE

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

#### Sequential inoculation (post alcoholic fermentation)

- **Direct inoculation without rehydration**: open the sachet and add the bacteria directly into the tank from the top of the tank and homogenize.
- **OR 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 the alcoholic fermentation.

For these two options:

- Recommended temperature: from 17 to 25°C for red wines from 18 to 22°C in limiting conditions (high alcohol > 14.5% vol. or high SO<sub>2</sub> > 45 mg/L).
- Check malolactic fermentation activity (malic acid degradation) every 2 to 4 days.
- Stabilize wine once malolactic fermentation is finished.
- In limiting conditions (overclarified wines, low pH, high SO₂ and alcohol level, etc.): rehydrate bacteria with PRE-LACTIC<sup>™</sup> (20 g/hL) and before the bacteria inoculation, add MALOVIT<sup>™</sup> (20 g/hL).

#### Co-inoculation (inoculation of bacteria 24 to 48 hours after addition of yeast)

**1/Yeast addition**: rehydrate and inoculate the selected dry yeast according to the instructions, preferably in presence of a rehydration nutrient.

**2/ Bacteria inoculation depending on sulphite addition to the grapes**: if sulfitage < 5 g/hL, wait for 24 hours; if sulfitage = 5-8 g/hL, wait for 48 hours.

- **Direct inoculation without rehydration**: open the sachet and add the bacteria directly to the must/wine from the top of the tank or during a pumping-over.
- **OR 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 must/wine to be fermented.

For these two options:

- Assure a good distribution.
- Carefully monitor must temperature, which must be below 30°C at wine bacteria inoculation (alcohol < 5% vol.) and below 27°C when the level of 10% of alcohol is reached.
- Complex or organic nutrients addition at 1/3<sup>rd</sup> of alcoholic fermentation is recommended.
- Monitor malic acid and volatile acidity. If MLF takes place during alcoholic fermentation and an unusual increase in volatile acidity is observed add Lysozyme (150-200 mg/L) or a chitin derivate or SO<sub>2</sub>.
- Stabilize wine once malolactic fermentation is finished.

# 4 PACKAGING AND STORAGE

- Dose for 2.5 hL, 25 hL, 100 hL and 250 hL.
- Store unopened original sealed packaging: 18 months at 4°C or 36 months at -18°C.
- Once opened, use rapidly.
- Sealed packets can be delivered and stored for 3 weeks at ambient temperature (< 25°C) without significant loss of viability.

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