

Direct inoculation *Oenococcus oeni* bacteria selected by Français de la Vigne et du Vin (IFV), Beaune.

Very resistant to difficult conditions: low pH, high alcohol.

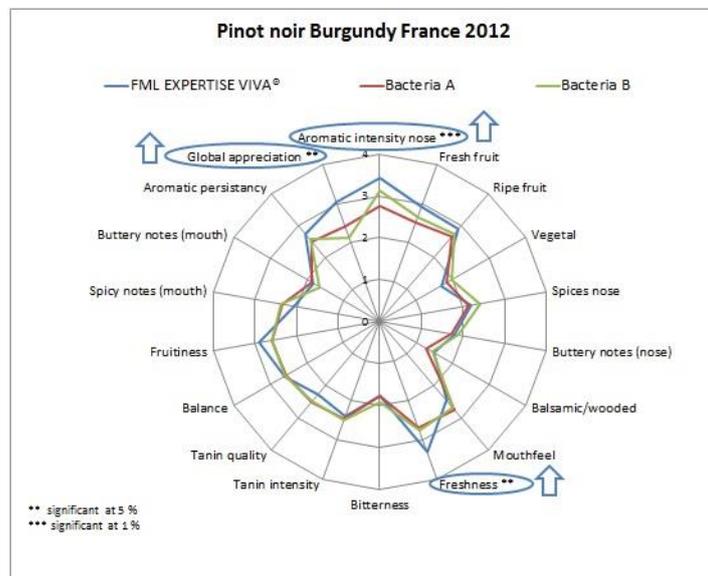
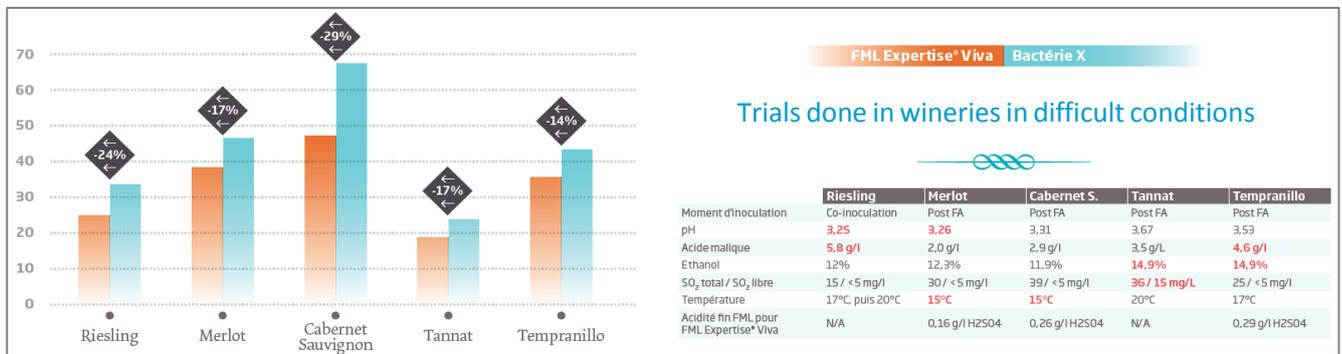
For fresh and fruity white, rosé and red wines.

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 are robust and possess the ability to conduct reliable malolactic fermentation (MLF).



MICROBIOLOGICAL AND OENOLOGICAL PROPERTIES

- pH tolerance ≥ 3.1
- Alcohol tolerance: up to 16% vol. and even 17% vol. if there is no other limiting factor
- SO₂ tolerance : up to 60 mg/L (pay attention to molecular SO₂ at low pH)
- Temperature tolerance: $\geq 15^{\circ}\text{C}$
- Sensory contribution:
 - Very low diacetyl production (very low and very late degradation of the citric acid)
 - Contribute to the freshness and the aromatic complexity of white, rose and red wines, respecting varietal aromas
- Very fast malolactic fermentation
- No production of biogenic amines
- Bacteria cinnamoyl esterase negative: cannot produce precursors for ethylphenol production by *Brettanomyces*
- Very low volatile acidity production
- Suitable for co-inoculation and sequential inoculation



INSTRUCTION FOR USE



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 low pH < 3.1 or high SO₂ > 45 mg/L).
- Check malolactic fermentation activity (malic acid degradation) every 2 to 4 days.
- Stabilize wine once malolactic fermentation (MLF) is finished.
- In limiting conditions (overclarified wines, low pH, high SO₂ and alcohol level, etc.): rehydrate bacteria with **ATOUT MALO™ NATIVE** (20 g/hL) and before the bacteria inoculation, add **ATOUT MALO™ ROUGE** (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 sulfite < 5 g/hL, wait for 24 hours; if sulfite = 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 lactic acid bacteria inoculation (alcohol < 5% vol) and below 27°C when the level of 10% of alcohol is reached.
- Complex or organic nutrients addition at 1/3rd 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 SO₂.
- Stabilize wine once malolactic fermentation is finished.

PACKAGING AND STORAGE

- Dose for 25 hL or 100 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.

A Danstar product
Distributed by:

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