

EXTRAFLORE DENSITY™

BACTERIA

**MBR process**
direct inoculation

Oenological bacteria for direct inoculation.
Add volume to your wines

↓ OENOLOGICAL APPLICATION

EXTRAFLORE DENSITY™ is an oenological bacterium resulting from a programme initiated in Burgundy with the *Institut Français de la Vigne et du Vin* (French Institute of Vine and Wine) aimed at selecting *Oenococcus oeni* resistant to unfavourable physico-chemical conditions, which are of interest to the wine industry. It has proved to be very robust under limiting winemaking conditions (high alcohol, low pH, very low malic acid) and is therefore suitable for wines of very diverse colours and origins. It can be added directly to must or wine without reactivation.

EXTRAFLORE DENSITY™ contributes to the volume and fullness on the palate of wines, helping to create a high-quality structure. Therefore, it is ideal for producing wines from slightly under-ripe harvests, as well as for enhancing great wines.

↓ IMPLEMENTATION AND PRECAUTIONS FOR USE

Dosage: Use one sachet to inoculate the volume in hL indicated. Decreasing the dosage, transplanting or using starters will reduce the performance of the bacteria.

Bacterial inoculation with or without rehydration:

- **Without rehydration:** Open the sachet and add the bacteria directly to the must/wine at the top of the vat (white must/rosé or wine) or during pumping over, preferably under the cap if it has formed (red harvest).
- **With rehydration:** For better homogenisation, rehydrate the sachet of selected oenological bacteria in 20 times its weight of non-chlorinated water at 20°C for a maximum of 15 minutes. Add the suspension directly to the must/wine.
- The bacteria are then evenly spread throughout the must/wine or grape mass.
- Stabilise the wine once malolactic fermentation (MLF) is complete.

Additional precautions when used in co-inoculation (at the beginning of alcoholic fermentation):

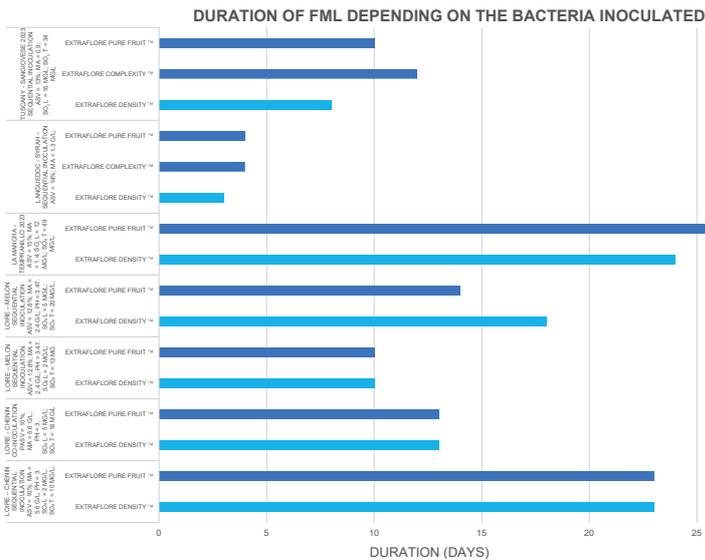
- Inoculate the must with selected oenological yeasts as described above.
- Total SO₂ recommended < 50 mg/L. Inoculate the bacteria at the very beginning of fermentation (without waiting for the density to decrease). If sulphiting is between 5 and 8 g/hL, defer inoculation for at least 48 hours after yeasting.
- The temperature should remain below 26°C once 10% alcohol has been reached.
- Organic rather than mineral yeast nutrition is recommended.
- Monitor malic acid breakdown and volatile acidity. If MLF occurs during AF and an unusual increase in volatile acidity is observed, stabilise with lysozyme (150 - 200 mg/L), or Bactiless™ (20 - 50 g/hL) or SO₂ (1 - 2 g/hL).

↓ CHARACTERISTICS

- Species: *Oenococcus oeni*.
- Population: > 1.10¹¹UFC/g.
- pH tolerance: > 3,15.
- Alcohol tolerance: up to 16% vol (red wines) and 13.5% vol (white wines).
- SO₂ tolerance: up to 55 mg/L total SO₂ (red wines) or 30 mg/L (white wines).
- Tolerated temperature range: between 18 and 27°C. Do not exceed 24°C if ethanol > 10% vol. In the case of high ethanol levels (> 14% vol.), inoculation should take place between 17
- In the event of a combination of difficult conditions, these tolerance ranges (pH, alcohol, SO₂, temperature) are more limited.
- MLF kinetics: very rapid.
- Diacetyl production: low.
- Production of volatile acidity: low.
- Does not produce biogenic amines.
- Phenol-negative bacteria: does not produce volatile phenols or their precursors.
- Very good compatibility with co-inoculation.

EXTRAFLORE DENSITY™

EXTRAFLORE DENSITY™, proven robustness



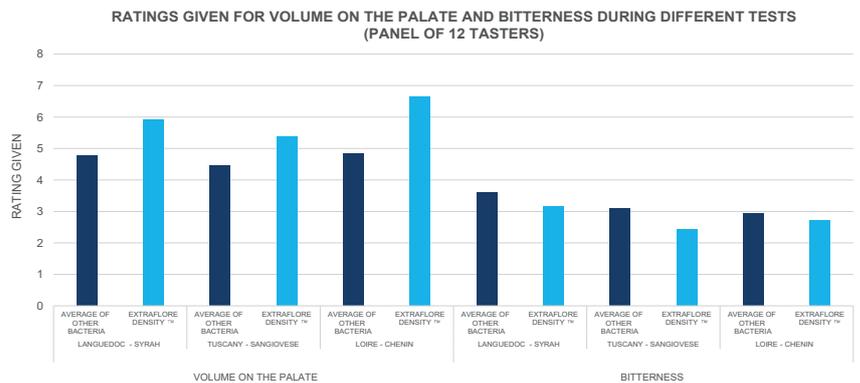
EXTRAFLORE DENSITY™ successfully overcame the limiting conditions in the numerous tests it underwent, in both white and red wines.

It stands out in particular for its high resistance to ethanol in concentrated wines, but above all for its ability to develop in wines containing very low levels of malic acid, which are reputed to be resistant when it comes to triggering malolactic fermentation.

EXTRAFLORE DENSITY™ helps improve the wine's volume on the palate

In field trials, EXTRAFLORE DENSITY™ significantly improved the taste perception of wines compared to other bacteria.

Whether through its propensity to reduce bitterness and tartness, or to enhance smoothness and density on the palate, this selection is designed to appeal to new consumers, who are looking for less aggressive and softer sensations.



EXTRAFLORE DENSITY™ emphasises fruity complexity

EXTRAFLORE DENSITY™ consumes citric acid at a late stage and therefore only produces a moderate amount of diacetyl, contributing to the aromatic complexity of the wines without overpowering the fruitiness.

PACKAGING AND STORAGE

- Dosage for 25 and 100 hL.

EXTRAFLORE DENSITY™ must be kept cold. The powder retains its properties for at least 36 months after the production date if stored at -18°C (which corresponds to its expiry date) and at least 18 months if stored at +4°C.

Sealed packets can be delivered and stored for three weeks at room temperature (< 25°C) without any significant loss of activity or efficacy.

On the other hand, an opened sachet must be used immediately, as the freeze-dried powder is hygroscopic, and the bacteria lose their activity very quickly.