

# MALOSTART®

Malolactic bacterial activator for facilitating malolactic fermentation (MLF) start-up and accelerating fermentation kinetics. Product is in accordance with the œnological codex.

## SPECIFICATIONS

By combining nutritive elements (inert yeast, support elements) and detoxification agents (yeast cell walls), **MALOSTART®**:

- Optimises lactic acid bacterial survival (by adsorbing short or medium-chain fatty acid-type inhibitors).
- Encourages lactic acid bacterial activity (by supplying them with nutrients which they directly assimilate).

## œNOLOGICAL APPLICATIONS

In the case of wines with a low nutrient content (thermovinification, absence of lees, very low turbidity...), or after sluggish alcoholic fermentation, in difficult conditions (high % alcohol, late or «spring» MLF...).

**MALOSTART® detoxifies the wine and provides nutrition elements for the bacteria.**

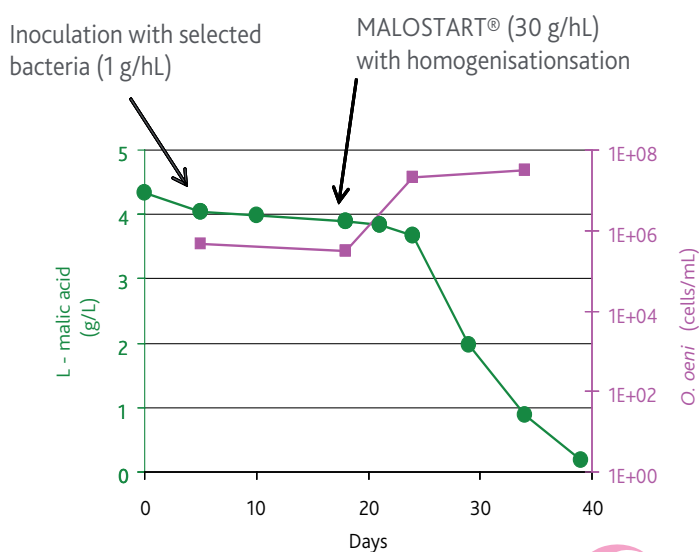
**MALOSTART®** increases lactic acid bacteria populations and ensures significantly faster MLF kinetics.

**MALOSTART®** can be used on all types of wine: white, rosé or red.

**MALOSTART®** is neutral from an organoleptic point of view.

## EXPERIMENTAL RESULTS

After having been inoculated with a malolactic starter in restricting conditions (high % alcohol, low temperature, spring MLF...) **MALOSTART®** encourages MLF start-up (Figure 1).

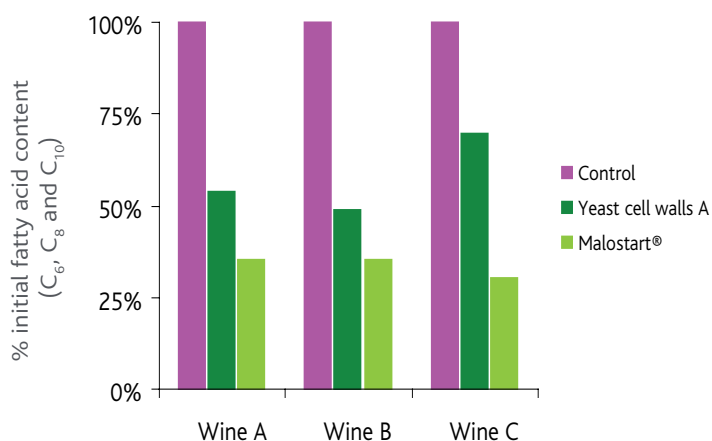


**Figure 1:** Illustration of the benefits of using **MALOSTART®** on a wine inoculated with selected bacteria (**LACTOENOS 450 PreAc®**) for initiating MLF.

The composition of **MALOSTART®** has been formulated to optimise the supply of amino acids essential to the bacteria (glutamic acid, valine...) while reducing the quantities of biogenic amine precursors of amino acids (histidine, tyrosine).

**MALOSTART®** is also rich in vitamins required by the bacteria and in minerals (magnesium and manganese) which are essential co-factors for enzymatic function.

In order to optimize detoxification (Figure 2), the most effective yeast cell walls for adsorbing short and medium-chain fatty acids were elucidated.



**Figure 2:** **MALOSTART®** is an accurate product for adsorbing short and medium-chain fatty acids and consequently for reducing their inhibiting effect on MLF.

## PROTOCOL FOR USE

### ŒNOLOGICAL CONDITIONS

Use in combination with selected lactic acid bacteria. For inoculations during AF: early or late co-inoculation, or during running-off, **MALOSTART®** can be added 15 days after inoculation if MLF has not started.

For curative or spring MLF, where nutritional deficiencies are more frequent and inhibitor compound contents are higher, we recommend the addition of **MALOSTART®** 24h following bacterial inoculation with anaerobic homogenisation.

### IMPLEMENTATION

- Do not use opened bags.
- Use an inert, clean container. Mix the total quantity of **MALOSTART®** required in 10 times its weight in water or wine. Incorporate into the wine with anaerobic homogenisation.

### DOSAGE

- 30 g/hL.
- Maximum legal dosage in Europe: 150 g/hL.

### STORAGE

- Store in the original unopened packaging, and use within the specified use-by-date.

### PACKAGING

- 500g vacuum bag.

*For optimal management of malolactic fermentation, please refer to the Technical Booklet « Good MLF management ».*

*For co-inoculation implementation, please refer to the technical booklet «Particular case of fermentation management, yeast / bacteria co-inoculation».*