



LACTOENOS[®] BACTERIA

MANAGING MLF DIFFERENTLY

Derived from its research on malolactic fermentation, **LAFFORT** has selected different bacterial strains for their oenological aptitudes and has developed production and inoculation procedures specific to each. **LAFFORT's strain/production technology combination** provides wine professionals with optimal MLF control at competitive prices.

Why inoculate a wine with a selected bacterium?

- To control MLF initiation.
- To occupy the wine's microbiological ecosystem with chosen, active, controlled microflora during vinification, thus avoiding the development of undesirable compounds and microorganisms.
- To conserve freshness and the qualities of the wines even after MLF.
- Because a malolactic starter costs less than a tank which needs to be heated for weeks and significantly improves the quality of the wine!

How to inoculate wine with a selected bacterium?

Product	Implementation
PreAc*	12 h final acclimatisation at 20°C in the cellar with a preparator (ENERGIZER[®]) which is supplied with the bacteria.
Instant	Reactivation in non-chlorinated and non-sulphited water at 20°C for 15min before direct inoculation into the wine.
Standard	Activation protocol using sequential culture development and the addition of MALOSTART[®] .

* Amongst the production technologies, the PreAc concept was developed exclusively by **LAFFORT**. Innovative and effective, it enables enhancement of the strain's activity by reinforcing its resistance capacity during the production phase. The bacterial preparation is acclimatised firstly during production, then secondly in the cellar where it undergoes a final rapid acclimatisation phase (12 h), in the presence of required nutrients.

Parameters influencing MLF

	Total SO ₂	pH	Alcohol	Temperature
Optimal conditions	Up to 40 mg/L	From 3,3	Up to 13,5 %vol.	18 - 25°C
Difficult conditions	From 70 mg/L	2,9 - 3,2	From 15 %vol.	14 - 18°C

These parameters have a cumulatively inhibiting effect.

THE LACTOENOS® PRODUCT RANGE



• LACTOENOS® SB3 Instant

The *Enococcus œni* direct inoculation strain. This bacterium reactivates in non-chlorinated water at 20°C in 15 minutes before transfer to the tank.

With regards to good AF management and correct yeast nutrition, Lactoenos SB3 can be inoculated at the start of AF (co-inoculation) and ensures rapid MLF after AF.



• LACTOENOS 350 PreAc®

Pre-acclimatisation *Enococcus œni* strain selected for its resistance to low pH. Its genetic qualities render it capable of initiating malolactic fermentation in acidic wines, especially white wines, despite the presence of other restrictive parameters (alcohol, temperature...).



• LACTOENOS 450 PreAc®

Pre-acclimatisation *Enococcus œni* strain, specifically selected for wines of high alcohol content. 450 PreAc® is particularly suitable for late co-inoculation, allowing the medium to be monopolised (in relation to spoilage micro-organisms) for MLF initiation at the end of fermentation.



• LACTOENOS® B16 Standard

Enococcus œni strain using standard starter preparation, adapted to the most difficult conditions (even stuck MLF). Not acclimatised during production, the bacterial adaptation to the wine conditions requires a precise protocol (refer to the applicable product data sheet).

• MALOSTART®

Complex activator which enables the wine to be detoxified and supplies the bacteria with the nutrients essential to their development.

Which bacterial strain for which wine?

Product	Alcohol	pH	Total SO ₂	Temperature
SB3® Instant	Up to 15 % vol.	From 3,3	Up to 30 mg/L	From 16°C
450 PreAc®	Up to 17 % vol.	From 3,3	Up to 80 mg/L	From 16°C
350 PreAc®	Up to 16 % vol.	From 2,9	Up to 60 mg/L	From 15°C
B16 Standard	Up to 16 % vol.	From 2,9	Up to 60 mg/L	From 16°C

These parameters have a cumulatively inhibiting effect.

Type of inoculation	Recommended preparation
Early co-inoculation (start of AF)	SB3® Instant
Late co-inoculation (from 3 °Brix)	450 PreAc® (if pH>3,3) 350 PreAc® (if pH<3,3)
Sequential inoculation (after AF and/or a post-fermentation maceration period)	450 PreAc® (if pH>3,3) 350 PreAc® (if pH<3,3)
Spring inoculation and/or restart	B16 Standard + Malostart®

For optimal management of malolactic fermentation, please refer to the LAFFORT Technical Booklet « Good MLF management » and « Fermentation management: specific case of yeast/ bacteria co-inoculation ».

