

ML Prime™

MBR™ process
direct inoculation

APPLICATION

ML Prime™ has been developed with a new production process that optimizes the active bacterial culture. Its high malolactic enzyme activity shortens the lag phase and can quickly degrade malic acid content up to 3 g/L.

ML Prime™ is able to achieve a very fast malolactic fermentation before the growth of indigenous bacteria, often responsible for the VA increase or other wine defects in high pH conditions.

ML Prime™ is a *Lactobacillus plantarum* wine bacteria selected by Università Cattolica del Sacro Cuore - Piacenza Campus in Italy, with interesting microbiological and oenological properties for high pH red wines.

Used in co-inoculation, **ML Prime™** is perfectly suited to conduct MLF in classical red winemaking process using short or medium macerations or thermovinification process on the liquid phase.

ML Prime™ is the perfect tool for winemakers for red vinification with low natural acidity and pH \geq 3.4.

- In co-inoculation, **ML Prime™** can:
 - Rapidly consume malic acid (between 3 and 15 days depending on grapes and musts matrix).
 - Avoid the development of indigenous and undesirable bacteria contamination
- In co-inoculation, ML Prime™ limits the risks that could affect wine quality:
 - No risk of production of volatile acidity due its facultative heterofermentative metabolism (does not produce acetic acid from glucose and fructose)
 - No development of wine faults because growth of indigenous spoilage bacteria is suppressed.

When used correctly, ML Prime™ can help reduce the rate of SO₂ addition after the end of AF.

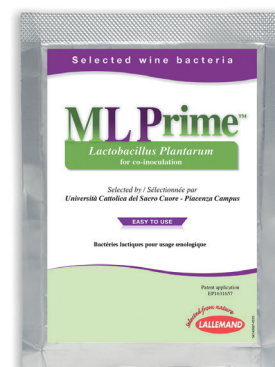
ML Prime™ can only be used for co-inoculation. There is no growth in wine and slow die-off towards the end of MLF.

Grapes should be well macerated.

MICROBIAL AND OENOLOGICAL PROPERTIES

To be used only as co-inoculation (on must 24 hours after yeast addition)

- pH \geq 3.4
- Malic acid content \leq 3 g/L
- Temperature range tolerance: from 20°C to 26°C
- Total SO₂ tolerance: 5 g/hL (total addition at crush before addition of **ML Prime™**)
- Short lag phase – fast MLF kinetic
- No volatile acidity production: does not produce acetic acid from glucose and fructose (facultative heterofermentative strain)
- No production of biogenic amines
- Bacteria cinnamyl esterase negative: cannot produce precursors for ethylphenol production by *Brettanomyces*
- No diacetyl formation
- Good impact on the colour intensity of wine



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

MICROBIAL AND OENOLOGICAL PROPERTIES (cont'd)

- No problem to be used with thermovinification (except with Merlot fruit)
- Higher lactic acid production: slight increase in L-lactic acid, which brings freshness to wines
- Good colour intensity and stabilisation of colour
- Good tool to ensure an efficient and complete MLF with high Baume fruit (which could potentially lead to sluggish or stuck alcoholic fermentation)

Used in co-inoculation, **ML Prime™** contributes to produce red wines with more structure.

INSTRUCTIONS FOR USE

EXCLUSIVELY IN CO-INOCULATION

1) Yeast addition

Rehydrate the selected dry yeast according to the instructions. Preferably in presence of a rehydration nutrient and inoculate the must.

2) Bacteria addition

SO₂ addition at crush up to 5 g/hL (< 50ppm SO₂ added): wait for 24 hours after yeast addition before adding bacteria. Avoid SO₂ addition > 5 g/hL

- Open the sachet of wine bacteria and:
 - Either add it directly into the must at temperature between 20°C and 26°C .
 - Or for better distribution, quickly rehydrate the bacteria in a mix of must and drinking water (50/50) and add the suspension to the fermenting must.
- Carefully monitor the temperature, between 20°C and 26°C during alcoholic and malolactic fermentation. Avoid a temperature below 20°C and > 26°C.
- Monitor malic acid degradation every 2 days.

PACKAGING AND STORAGE

- Product in powder form obtained by lyophilisation.
- Available for 2,5 hL, 25 hL and 250 hL.
- This product can be stored for 18 months at 4°C and 36 months at - 18°C in original sealed packaging. Once opened, the sachet must be used immediately.
- During delivery, sealed packets can be held at ambient temperature for 3 weeks (< 25°C) without significant loss of viability.

The information herein is true and accurate to the best of our knowledge; however, this data sheet is not to be considered as a guarantee, expressed or implied, or as a condition of sale of this product.



WINE
YEASTS



WINE
BACTERIA



NUTRIENTS
/PROTECTORS



SPECIFIC
YEAST DERIVATIVES



ENZYMES



CHITOSAN



VINEYARD
SOLUTIONS



LALLEMAND OENOLOGY

Original **by culture**