



SELECTED WINE
BACTERIA

LAB PRE-TEST PROTOCOL

For a successful malolactic fermentation with **ML Prime™** inoculated in wines

A powerful pre-test at lab scale to determine the success of malolactic fermentation completion with ML Prime™ in red wines and white wines when used in post alcoholic fermentation inoculation.

ML Prime™ is a selected wine bacteria (*Lactobacillus plantarum*, or *Lactiplantibacillus plantarum* according to the new taxonomy) able to achieve a very fast and complete malolactic fermentation (MLF) when used, within its oenological parameters, in co-inoculation for red musts (inoculation of bacteria 24 hours after yeast addition).

To meet some winemakers needs, Lallemand Oenology has developed a new lab pre-test for new applications of ML Prime™ in wines.

The lab pre- test helps to determine the efficiency of ML Prime™ to degrade malic acid when inoculated in wine at the end of alcoholic fermentation.

step
1

BACTERIA REHYDRATION

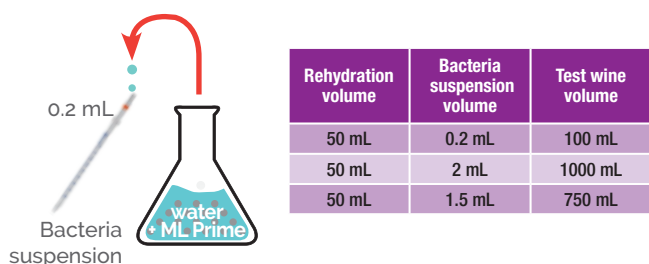


STEP 1

- Rehydrate the content of the bacteria sachet (2.5 g sachet) in 50 mL of clean chlorine-free water at 20 °C.
- Stir carefully. The suspension must be homogeneous for the test to work efficiently.
- Do not wait longer than 15 minutes.

step
2

BACTERIA SUSPENSION VOLUME FOR MLF TEST INOCULATION

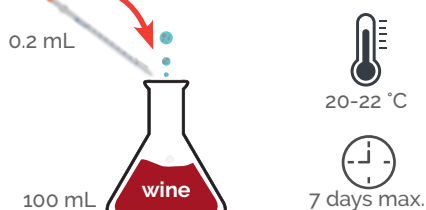


STEP 2

- Mix thoroughly and ensure a homogenous bacterial suspension prior to taking the bacteria volume for the pre-test.
- For 100 mL of test wine, take 0.2 mL of bacteria suspension. Adjust bacteria suspension volume if using a different test wine volume.
- It is important to use the correct bacteria suspension volume to ensure an equivalent bacteria inoculation ratio to be used at winery scale (10 g/hL).

step
3

BACTERIA INOCULATION AND TIME FOR MLF COMPLETION



STEP 3

- Inoculate the volume of wine with the appropriate dose of the bacterial suspension. Mix carefully.
- Maintain temperature at 20-22 °C for maximum seven days.
- Check malic acid degradation at 48 h, 72 h and if needed, day 7 with an enzymatic method.

step 4

TEST RESULTS

This lab pre-test is based on the results of malic acid degradation at 48 h, 72 h and day 7 (if there is still malic acid left after 3 days).

- **The test is positive when the malic acid concentration is below 0.2 g/L.** It can be after at 48 h or 72 h or day 7.
Recommend to use ML Prime™ at winery scale for this wine at the same temperature conditions.
- **Beyond 7 days, the test is negative if the concentration of malic acid is above 0.2g/L.** ML Prime™, at the normal dosage, won't be able to achieve a complete MLF in the tested wine. The test can be repeated with a double dose of ML Prime™.



KEY POINTS

- This test needs to be performed at ambient temperature (20-22°C). If the wine to be inoculated is below 20°C or above 22°C, perform the test at your wine temperature, because ML Prime™ is quite sensitive to temperature. A lower or a higher temperature can impact the result of this pre-test.
- In case of difficult wine conditions (such as low pH, high SO₂ level, high lactic acid concentration...), you can adapt this lab pre-test with a double dose of ML Prime™.

DISTRIBUTOR

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WINE
YEASTS



WINE
BACTERIA



NUTRIENTS
/PROTECTORS



SPECIFIC
INACTIVATED YEASTS



ENZYMES



CHITOSAN



VINEYARD
SOLUTIONS



LALLEMAND OENOLOGY
Original by culture

Visionary biological solutions - Being original is key to your success. At Lallemand Oenology, we apply our passion for innovation, maximize our skill in production and share our expertise, to select and develop natural microbiological solutions. Dedicated to the individuality of your wine, we support your originality, we cultivate our own.

www.lallemandwine.com