



LALVIN MCBB™

MBR™ process
direct inoculation

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Malolactic Culture Butter Bomb for complex buttery driven white wines

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direct inoculation

As a producer of wine lactic acid bacteria, Lallemand developed a specific MBR™ production process that subjects the wine bacteria cells to various biophysical stresses, making them 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).

DESCRIPTION

LALVIN MCBB™ has been isolated from nature during a European CRAFT in Fair program on wine lactic acid bacteria diversity. Following an extensive screening, LALVIN MCBB™ was selected for its capacity to produce high concentrations of diacetyl (buttery notes) when inoculated at the end of alcoholic fermentation.

Produced with our MBR process, LALVIN MCBB™ is a robust wine bacteria able to grow quickly and achieve reliable MLF under a broad range of white wines conditions.

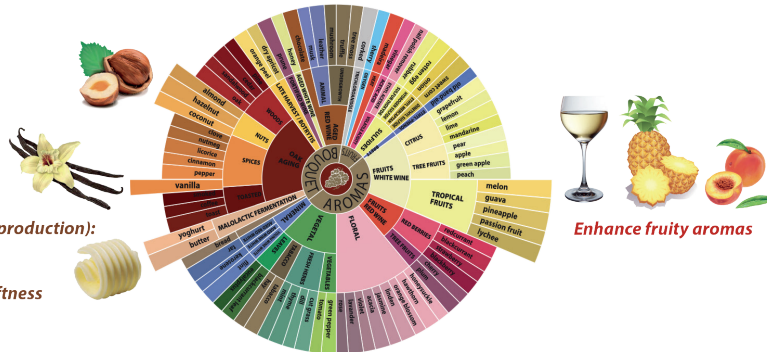


BENEFITS & RESULTS

Beyond bio-deacification, LALVIN MCBB™, Malolactic Culture Butter Bomb, is the perfect tool to produce traditional and complex well-balanced buttery driven white wines, with an easy-to-use protocol (direct inoculation without any rehydration step).

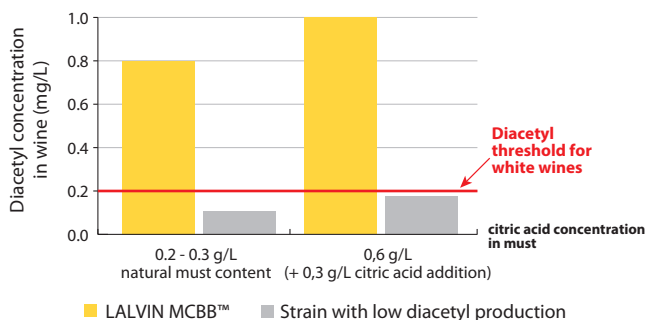
Buttery impact (Diacetyl production):

- High diacetyl in
- Sequential inoculation
- Increase volume and softness



Enhance fruity aromas

Diacetyl production - Chardonnay wine



The metabolism of citric acid through to diacetyl is bacteria strain dependent, and LALVIN MCBB™ has a strong ability to synthesize high diacetyl concentrations.

Highest diacetyl production occurs when LALVIN MCBB™ is inoculated after alcoholic fermentation and can be maximized if the malolactic fermentation is performed at 16-18°C (60-64°F), at low pH and with minimum lees contact.



PROPERTIES

- pH tolerance: ≥ 3.2
- Alcohol tolerance: up to 15.5 % vol.
- SO₂ tolerance: up to 60 mg/L total SO₂ (pay attention to molecular SO₂ low pH)
- T° tolerance: $> 14^{\circ}\text{C}$ (57°F)
- MLF kinetic: fast to moderate
- Low volatile acidity production
- Bacteria cinnamoyl esterase negative: cannot produce precursors for volatile phenol production by *Brettanomyces*
- No production of biogenic amines
- High nutritional demand: it is strongly recommended to add a specific bacteria nutrient to reduce the potential deficiencies of the white wines.

INSTRUCTIONS FOR OENOLOGICAL USE

Use one sachet for the correct quantity of hL indicated on label. Lowering the dosage or doing cross seeding or pitching methods will reduce the bacteria performance.

Sequential inoculation (post-alcoholic fermentation)

Bacteria inoculation: two options

- Direct inoculation without rehydration: open the sachet and add the bacteria directly into the wine after the end of alcoholic fermentation at the top of the tank or while racking the tank.
- Direct inoculation with rehydration step: for best distribution, you can rehydrate the packet of freeze-dried selected wine bacteria in 20 times its weight of clean chlorine free water at 20°C for a maximum 15 minutes. Add this suspension directly to the wine at the end of the alcoholic fermentation.
 - Stir gently to evenly distribute the selected wine bacteria and minimize the oxygen pickup.
 - Under more difficult conditions, add a specific bacteria nutrient.
 - Monitor malolactic fermentation activity (malic acid degradation) every 2 to 4 days.
 - Stabilize wine once malolactic fermentation (MLF) is finished.

Recommended temperatures:

- White wine: 16 to 20°C.

PACKAGING & STORAGE

- Product in powder form obtained by lyophilization.
- Available in dosage for 25 hL (660 US gal.).
- Once opened, lactic acid bacteria sachet must be used immediately.
- This product can be stored for 18 months at 4°C/40°F or 36 months at -18°C/0°F in original sealed packaging.
- Sealed packets can be delivered and stored for 3 weeks at ambient temperature ($<25^{\circ}\text{C}/77^{\circ}\text{F}$) without significant loss of viability.

Distributed by:

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The information in this document is correct to the best of our knowledge. However, this data sheet should not be considered to be an express guarantee, nor does it have implications as to the sales condition of this product. April 2024.



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