



# LALVIN VP41™

## Oenococcus oeni



### Highly tolerant for limiting conditions & very low diacetyl production



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 VP41™ was isolated from nature, in a hot climate region in Italy during an extensive European Union collaboration (CRAFT). LALVIN VP41™ has unique performance and winemaking properties.

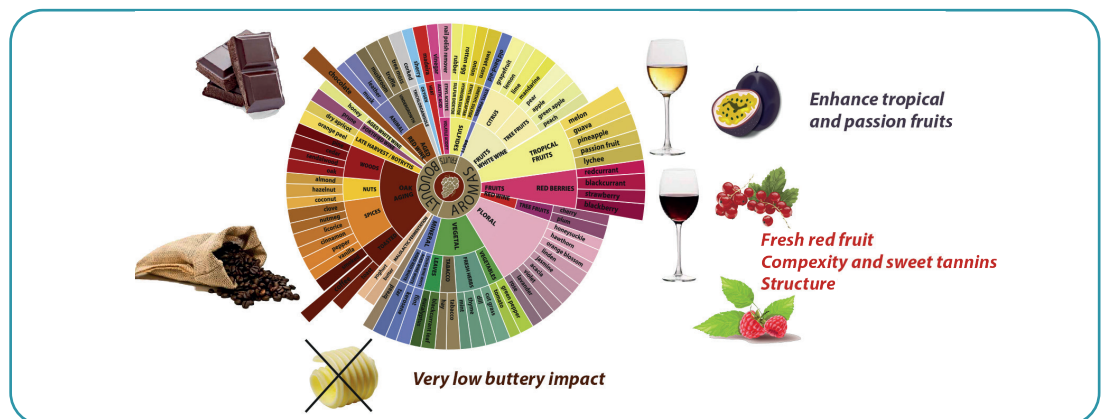
Produced with our MBR process™, LALVIN VP41™ is very active and competitive which helps to better start and achieve fast MLF and to better control wine quality.



### BENEFITS & RESULTS

LALVIN VP41™ is a highly tolerant strain, which can perform MLF under the most difficult winemaking conditions such as very high alcohol or SO<sub>2</sub> content and low pH, with an easy-to-use protocol (direct inoculation without any rehydration step).

Beyond bio-deacidification, LALVIN VP41™ is used for its sensory contribution to fruity aroma. LALVIN VP41™ is a very low diacetyl producer because of its late and slow degradation of citric acid.



LALVIN VP41™ is a bio-protection tool to protect wines against *Brettanomyces* when inoculated as soon as possible to prevent the excessive development of the spoilage yeast.

### PROPERTIES

- pH tolerance: > 3.1
- Alcohol tolerance: up to 16% vol.
- SO<sub>2</sub> tolerance: up to 60 mg/L total SO<sub>2</sub> (pay attention to molecular SO<sub>2</sub> at low pH)
- T° tolerance: > 16°C
- Low nutritional demand
- Good implantation
- MLF kinetic: fast
- Low volatile acidity production
- Bacteria cinnamoyl esterase negative: cannot produce precursors for ethylphenol production by *Brettanomyces*
- No production of biogenic amines
- Co-inoculation recommended



## 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.

### Co-inoculation (simultaneous alcoholic fermentation)

#### 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

Depending on the SO<sub>2</sub> addition at crush:

- SO<sub>2</sub> addition < 5 g/hL: wait for 24 hours
- SO<sub>2</sub> addition 5-8 g/hL: wait for 48 hours
- Direct inoculation of bacteria without rehydration: open the sachet and add the bacteria directly to the must/wine to be fermented from the top of the tank (white must) or during a pumping-over (red must).
- Direct inoculation with rehydration step: for best distribution, you can rehydrate the packet of freeze-dried lactic acid bacteria in 20 times its weight of clean chlorine free water at 20°C for a maximum of 15 minutes and add the suspension to the must/wine to be fermented.
  - Assure a good distribution.
  - Carefully monitor must temperature, which must be below 30° C at lactic acid bacteria inoculation (alcohol < 5 % vol.) and below 27° C when the level of 10 % alcohol is reached.
  - Complex nutrient addition at 1/3<sup>rd</sup> of alcoholic fermentation is recommended.
  - Monitor malic acid and volatile acidity.
  - Top the wine to ensure minimum ullage after alcoholic fermentation (AF) if MLF is not complete.
  - Otherwise rack and stabilize after MLF.

### 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 and ensuring good mixing.
- 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 towards the end or after 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 / rosé wine: from 16 to 20°C.
- Red wine:
  - › If alcohol < 14.5% vol .: from 17 to 25°C, with an optimal range: 18-22 °C
  - › If alcohol > 14.5% vol : from 18 to 20°C

## PACKAGING & STORAGE

- Product in powder form obtained by lyophilization.
- Available in different dosages for 2.5 hL (66 US gal.), for 25 hL (660 US gal.), for 250 hL (6,600 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°C/77°F) without significant loss of viability.

Distributed by:

### LALLEMAND AUSTRALIA

23-25 Erudina Ave,  
Edwardstown, SA, 5039  
australiaoffice@lallemand.com  
+61 8 8276 1200

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.



WINE  
YEASTS



WINE  
BACTERIA



NUTRIENTS  
/PROTECTORS



SPECIFIC  
YEAST DERIVATIVES



ENZYMES



CHITOSAN



VINEYARD  
SOLUTIONS



LALLEMAND OENOLOGY

Original by culture