



# **APPLICATION**

Lalvin VP41® was isolated in a hot region of Italy during a European Craft malolactic bacteria selection project for wine bacteria with unique performance and winemaking properties. Lalvin VP41° stood out as highly tolerant, which can perform under the most difficult winemaking conditions such as very high alcohol as well as low pH. It is one of the wine bacteria that is very tolerant to SO<sub>2</sub>. In addition to it's excellent wine tolerance, *Lalvin VP41*® is recognized for it's sensory contribution to red berry fruit aroma, it's late and slow degradation of citric acid and very low production of diacetyl.



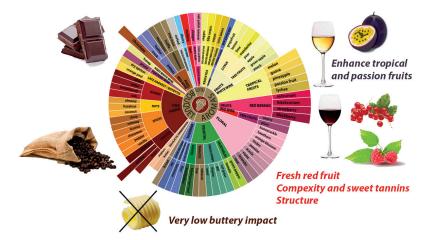
# MICROBIAL AND OENOLOGICAL PROPERTIES

- 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>
- T° tolerance > 16°C
- Low nutrition demand
- Good implantation
- MLF Kinetic: Fast
- Low volatile acidity production
- Bacteria cinnamyl esterase negative: cannot produce precursors for ethylphenol production by Brettanomyces
- No production of biogenic amines
- Co-inoculation recommended

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

# **SENSORY PROPERTIES**

Beyond bio-deacidification, *Lalvin VP41*® is a true winemaking agent, which contributes to the sensory complexity and the quality of wine as follows:



This sensory contribution can be further supported by the combination with an appropriate selected wine yeast and timing of ML bacteria inoculation.





## INSTRUCTIONS FOR USE

# SEQUENTIAL INOCULATION (Post-alcoholic fermentation)

Bacteria inoculation: two options:

- 1) 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 ensure good mixing.
- 2) Direct inoculation with rehydration step: for best distribution, you can rehydrate the packet of freezedried 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 of or after the alcoholic fermentation.
- Stir gently to evenly distribute the selected wine bacteria and minimize the oxygen pickup.
- Check malolactic fermentation activity (malic acid degradation) every 2 to 4 days.
- Stabilize wine once malolactic fermentation (MLF) is finished.

# Recommended temperature range:

- White wine / rosé wine: from 16 to 20°C.
- Red wine: from 17 to 25°C.

If limiting conditions (high alcohol > 14.5 vol, or low pH < 3.1, or high  $SO_2 > 45$  ppm), from 18 to 22°C, check malolactic fermentation activity (malic acid degradation) every 2 to 4 days.

# **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:

- < 5 g/hL (50 ppm SO<sub>2</sub> added): wait for 24 hours
- 5-8 g/hL (50-80 ppm SO<sub>2</sub> added): 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 freezedried 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 % of alcohol is reached.
- Complex nutrients addition at 1/3rd of alcoholic fermentation is recommended.
- Monitor malic acid and volatile acidity.
- If MLF takes place during AF and an unusual increase in volatile acidity is observed add **Bactiless™** (20-50 g/hL).
- Top the wine to ensure minimum ullage after alcoholic fermentation (AF) if MLF is not completed.
- Otherwise rack and stabilize after MLF

# 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 ( $< 25^{\circ}\text{C}$ ) 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.

