



SILKA™

MBR™ process
direct inoculation

APPLICATION

Lalvin SILKA™ was isolated in the famous region of La Rioja in Spain. It has been selected by Instituto de Ciencias de la Vid y del Vino (Institute of Grapevine and Wine Sciences) (ICVV), during an extensive research program starting in 2006. After a screening of 1000 natural isolates coming from different wineries and a full characterization, **Lalvin SILKA™** gives unique sensory properties while responding to the demands of climate change in warm climates.

Beside its good resistance to high alcohol content and regular MLF kinetic, **Lalvin SILKA™** is recognized for its positive impact on the roundness, softening the astringency and bitterness of wines, and allows to achieve complex and very well balanced red wines, with a nice aromatic persistency.

Lalvin SILKA™ is unable to produce histamine or other biogenic amines.

Due to its unique origin and sensory impact particularly on softening tannins, **Lalvin SILKA™** is also very well suited to conduct MLF in contact with oak. Compared to a spontaneous MLF, the wines inoculated with **Lalvin SILKA™** have a better integrated oak sensation, with an elegant structure and present a highest aromatic freshness. After several months, the wines elaborated with **Lalvin SILKA™** are still fruity and fresh whereas the control wines have overripe aromas characteristics.



MICROBIAL AND OENOLOGICAL PROPERTIES

- pH tolerance: ≥ 3.3
- Alcohol tolerance: up to 16 % vol.
- SO₂ tolerance: up to 60 mg/L total SO₂ (pay attention to molecular SO₂ in the lower pH range)
- T° tolerance: > 15°C
- MLF Kinetic: Regular
- Low volatile acidity production
- Bacteria cinnamoyl esterase negative: can not produce precursors for volatile phenol production by *Brettanomyces*
- No production of biogenic amines
- Suited for co-inoculation and sequential inoculation
- Nutrition demand: moderate - it's recommended to add **ML REDBOOST™** in post alcoholic fermentation inoculation

ORGANOLEPTIC PROPERTIES

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



This sensory contribution can be further supported by the combination with an appropriate selected yeast strain 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 from the top of the tank or while emptying the tank.

2) 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 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.
- Check malolactic fermentation activity (malic acid degradation) every 2 to 4 days.
- Stabilize wine once malolactic fermentation (MLF) is finished.

Recommended temperature range :

- Red wine: from 17 to 25°C. If limiting conditions (high alcohol > 14.5 vol or high SO₂ > 45 ppm) : from 18 to 22°C.



The MBR® form of lactic acid bacteria represents a Lallemmand 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).

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 SO₂ addition at crush:

- Sulfitage < 5 g/hL: wait for 24 hours
- Sulfitage 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 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 % 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 Lysozyme (150-200 mg/L) or BACTILESS™ or SO₂.
- Top the wine after alcoholic fermentation (AF).
- Otherwise rack and stabilize after MLF.

PACKAGING AND STORAGE

- Product in powder form obtained by lyophilisation.
- Available in different dosages for 2.5 hL (66 US gal.) — for 25 hL (660 US gal.) — for 100 hL (2,641 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.

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 INACTIVATED YEASTS



ENZYMES



CHITOSAN



VINEYARD SOLUTIONS



LALLEMAND OENOLOGY

Original by culture