



Lactic acid bacteria selected from nature

SILKA™



Oenococcus oeni

WINE BACTERIA - BATTERI PER VINO - BACTERIA PARA VINO - WEIN BAKTERIEN

APPLICATION FOR RED WINES

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, 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, SILKA™ is recognized for its positive impact on the roundness, softening the astringency and bitterness of red wines, and allows to achieve complex and very well balanced red wines, with a nice aromatic persistency.

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

PROCESS



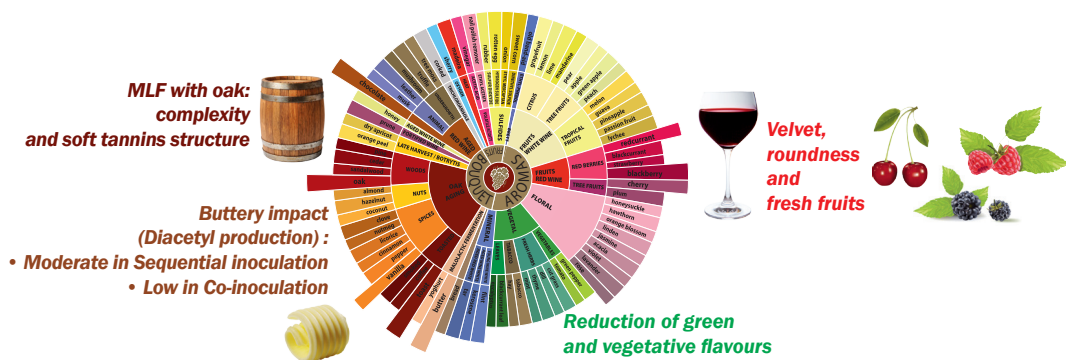
The 1-Step™ starter Kit is a highly efficient Starter to promote Malolactic Fermentation (MLF) of most red wines, in a wide range of oenological conditions. The 1-Step™ starter Kit consists of a malolactic active freeze-dried Oenococcus oeni strain and specific activator. The excellent activity and high vitality of the 1-Step™ starter culture is achieved during a short acclimatization step allowing that activates their metabolism to induce a fast onset of malolactic fermentation.

OENOLOGICAL AND MICROBIOLOGICAL 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:** cannot 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

ORGANOLEPTICAL PROPERTIES

Beyond bio-deacidification, Silka™ 1-STEP™ is a true winemaking agent, which contributes to the sensory complexity and the quality of red 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



Use one sachet for right 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)

1A. Mix and dissolve content of the activator sachet in drinking water (temperature between 18 and 25°C) according to the table below.

	1A	2
1-STEP™ Kit	Volume of drinking water (L)	Volume of wine (L)
For 100 hL	10	10

1B. Add content of the lactic acid bacteria sachet and dissolve carefully by gently stirring. Wait for maximum 20 minutes.

2. Add to this suspension the appropriate volume of wine (see table above) pH > 3.5, total SO₂ < 45 ppm, no free SO₂ (temperature between 18 and 25°C). Wait for 18 to 24 hours. If malic acid content is < 1, 2 g/L, wait only for 6 to 10 hours.

3. Transfer the activated malolactic bacteria starter culture into the wine according to the volume indicated on the kit. Check malolactic fermentation activity (malic acid degradation) every 2 to 4 days. Under more difficult conditions, add a specific bacteria nutrient.

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.

Co-inoculation (simultaneous Alcoholic fermentation)

The 1-STEP™ activator and lactic acid bacteria can be used in co-inoculation without doing an acclimatization step when the conditions and must are suitable (pH > 3.4 and sulphite addition to the grapes < 8 g/hL).

1A. Mix and dissolve content of the activator sachet in drinking water (temperature between 18 and 25°C) according to the table below.

	1A
Kit 1-STEP™	Volume of drinking water (L)
For 100 hL	10

1B. Add content of the lactic acid bacteria sachet and dissolve carefully by gently stirring. Wait for from 10 minutes to 2 hours maximum.

2. Transfer the rehydrated mix (activator and lactic acid bacteria) into the fermenting must/wine 24 hours after the yeast is added.

3. Check malolactic fermentation activity (malic acid degradation) every 2 to 4 days, as well as volatile acidity. In the case of must with pH < 3.4 or sulphite addition > 8 g/hL, it is recommended to use the 1-STEP™ activator and lactic acid bacteria after alcoholic fermentation.

Recommended temperature range:

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.

PACKAGING ET STORAGE



- Product in powder form. The bacteria is obtained by lyophilisation.
- Available in sachet for inoculation of 100 hL (2,640 US gal.)
- Once opened, activator and lactic acid bacteria sachet must be used immediately
- Activator and lactic acid bacteria sachet must not be used separately.
- 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.

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