

**MLF-starter
culture for red
and white wine**

Product Description

Highly concentrated freeze-dried BioStart® Vitale SK11®-starter culture for direct initiation of malo-lactic fermentation in red and white wine.

Permitted according to the laws and regulations currently in force in the EU. Purity and quality are proved by specialized laboratories.

Origin

The freeze-dried starter preparation for red and white wines has been carefully selected and isolated from spontaneous fermentations of *Oenococcus oeni* strains coming from an internationally renowned wine-growing region. BioStart® Vitale SK11® has proved successful under extremely difficult conditions.

Properties

The new *Oenococcus oeni* strain was selected for its high rate of propagation, increased vitality and consequently for its capability to perform a secure and rapid malic acid degradation. BioStart® Vitale SK11® tolerates without problem low pH-values and cool cellar temperatures. High alcohol concentrations, typical for regions with southern climate, were particularly considered when selecting the strain. Equally unproblematic are high SO₂ values, usually in use with grape mash and grape must sulphiting. BioStart® Vitale SK11® assures a histamine-free MLF and only little volatile acid formation.

Vitality is advanced by stress induction already employed during production and thus the culture is optimally adapted to difficult conditions.

Organoleptic properties

Malo-lactic fermentation improves the structure of the wines which acquire an enhanced creamy palate and increased mellowness. In addition the starter culture emphasizes the varietal aroma of the individual white wine. Especially desiccated fruit and peach notes dominate. With red wines, BioStart® Vitale SK11® elegantly rounds off the typical red wine character with often very pronounced jam, cherry or ripe paprika flavours. Hints of butter notes support the aroma profile of robust white wines and full-bodied red wines. Malo-lactic fermentation eliminates excessive sharp amounts of acid and improves the structure - the wines present themselves complex, round and harmonious.

Total viable cell count/concentration

The concentration of the new BioStart® Vitale SK11®-starter culture is very high and provides an excellent inoculation capacity of $> 1 \times 10^{11}$ CFU/g.

Product and process advantages

- the use of BioStart® Vitale SK11® to start malo-lactic fermentation in wine, leads to a better control of the starting point and the duration of MLF and of the effects on aroma and structure of red and white wines.
- after malo-lactic fermentation, wines have an increased microbiological stability.
- after malo-lactic fermentation, wines have a lower SO₂ demand.
- an accomplished malo-lactic fermentation is a harmonious acid correction.
- wines show improved organoleptic properties after a successful malo-lactic fermentation.

Conditions for malo-lactic fermentation with BioStart® Vitale SK11®

- Total SO₂: a maximum of 50-60 mg/L. Free SO₂: a maximum of 15 mg/L. **Ideal: no SO₂ !**
- pH-value: The pH-value of the wines should be 3.0 or higher (if necessary, adjust to pH 3.0 or to a higher pH with Erbslöh-Kalk).
- Temperature: The temperature of the wine should be at, or above 16 °C.
- Alcohol content: maximally 15.5 % by volume.
- It is favourable when the wine is left on the sound lees or, at least, on the fine lees.
- CO₂ can inhibit malo-lactic fermentation and has to be expelled by careful stirring or pumping over.
- An additional dosage of the nutrient substance BioStart® Nutri promotes a smooth course of malo-lactic fermentation.

Application

The new BioStart® Vitale SK11® strain is alternatively applicable for red and white wine. The strain selection and concentration, as well as the stress induction at a stage in advance, lead to improved conditions for the onset and completion of malo-lactic fermentation with, at the same time, reduced dosages. Add the contents of the package for 10 hl to 0.2 litres; for 50 hl to 1.0 litre water (approx. 20 °C), wait for 15 minutes and stir from time to time, then add to the wine and mix. For improved nutrient supply, add BioStart® Nutri.

For an optimal course of malo-lactic fermentation, it is advisable to conduct inoculation by the end of alcoholic fermentation (residual sugar < 4 g/L) or immediately after fermentation. BioStart® Vitale SK11® is also best suited for simultaneous inoculation.

Storage

The freeze-dried BioStart® Vitale SK11®-starter culture is particularly stable. Storage of unopened, original packagings is possible over a period of 18 months in the refrigerator or over 30 months at – 18 °C. A short-term warming during transport has no influence on activity.

Producer: Lallemand S.A. France

Sales by : Erbslöh Geisenheim AG, Erbslöhstr. 1, 65366 Geisenheim, Germany