

LACTOENOS® B16 STANDARD

Oenococcus oeni strain with particular resistance to acidity.

Suitable for the preparation of products intended for direct human consumption, in the scope of regulated use in oenology.

Complies with Commission Regulation (EU) 2019/934.

SPECIFICATIONS AND OENOLOGICAL APPLICATIONS

Strain selected in Champagne. Its reactivation protocol makes it suitable for carrying out malolactic fermentation of wines at low pH, such as base wines for sparkling wine.

LACTOENOS® B16 STANDARD in association with LACTOENOS® B16 REACTIVATOR can be used in must or wine by following a specific reactivation protocol.

ABV (% vol)	Up to 14
pH	As from 2.9
Total SO ₂ (mg/L)	Up to 60
Temperature	From 16°C (60.8°F)

Survival and activity spectrum of the LACTOENOS® B16 STANDARD bacteria.

NB: These parameters have a cumulatively inhibiting effect.

EXPERIMENTAL RESULTS

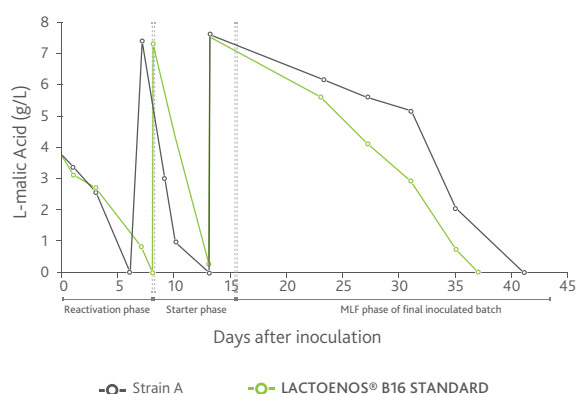


Illustration of the reactivation, starter and malolactic fermentation phases.

Reactivation in must according to the Laffort protocol.

Potential ABV 10.4% vol., pH 2.96, L-malic acid 8.85 g/L, total SO₂ 50 mg/L.



LAFFORT

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PHYSICAL CHARACTERISTICS

Appearance powder Colour yellow-beige

CHEMICAL AND MICROBIOLOGICAL ANALYSIS

Humidity(%)	< 8	Coliforms (CFU/g)	< 10 ²
Revivable lactic acid bacteria (CFU/g)	> 10 ⁹	<i>E. coli</i> (/g)	none
Moulds (CFU/g)	< 10 ³	Lead (ppm)	< 2
Contaminating yeasts (CFU/g)	< 10 ³	Mercury (ppm)	< 1
Contaminating acetic acid bacteria (CFU/g)	< 10 ⁴	Arsenic (ppm)	< 3
<i>Salmonella</i> (/25 g)	none	Cadmium (ppm)	< 1
<i>Staphylococcus</i> (/g)	none		

PROTOCOL FOR USE

■ REACTIVATION PROTOCOL FOR LACTOENOS® B16 STANDARD IN MUST

(for inoculation of a final volume of 100 hL).

Step 1: Reactivation medium - 20 L – 0.2% of the final volume to be inoculated

- Prepare 10 L of unchaptalised must from the batch.
- Add sulphite at ½ the dose of the main batch, with a maximum dose of 3 g/hL (30 ppm).
- Add 10 L of unchlorinated water.
- Add LACTOENOS® B16 REACTIVATOR (2 bags of 300 g) and mix thoroughly.
- Add LACTOENOS® B16 STANDARD (2 doses of 50 hL). Allow the bacteria bag to warm slowly to room temperature 30 min before use.
- Add 10 g of ZYMAFLORE® SPARK yeast (i.e. 0.5 g/L in the **reactivation medium**), without the rehydration step.
- Mix thoroughly.
- Maintain the temperature at between 22°C/ 71,6°F and 25°C/77°F.
- Determine the initial malic acid content then monitor it every day. When 2/3 of it is consumed, move on to step 2.

Remarks on the reactivation step:

- pH adjustment of the **reactivation medium** is not necessary.
- For low initial concentrations of malic acid (less than 5 g/L in the initial must), it is recommended to monitor the change in malic acid as from the day after starting the reactivation step. If the concentration becomes too low (less than one-third of the initial value), the volume of the **reactivation medium** can be doubled by adding one volume (20 L of most) of **starter** preparation (see below) and moving on to step 2 once two-thirds of the malic acid is consumed.

Step 2: Starter - 5 hL – 5% of the final volume to be inoculated (to be started at the same time as step 1).

- Use 5 hL of unchaptalised must at pH 3.1 (de-acidify with POTASSIUM BICARBONATE if needed).
- Add sulphite at ½ the dose of the main batch, with a maximum dose of 3 g/hL (30 ppm).
- Add 250 g of ZYMAFLORE® SPARK yeast (i.e. 0.5 g/L in the starter volume); follow the recommendations to rehydrate it in 10 times its weight of water at 37°C/98.6°F).



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- Bring the tank to 25°C/77°F.
- When the reactivation medium is ready:
 - Add 200 g of MALOBOOST® (i.e. 40 g/hL (400 ppm) for the starter volume), previously rehydrated in 10 times its weight of must.
 - Adjust the temperature of the starter to 20°C/68°F and maintain the temperature during the MLF.
 - Combine the two preparations (reactivation medium and starter).
- Determine the initial malic acid content then monitor it every other day. When 2/3 of it is consumed, move on to step 3.

Step 3: Inoculation of the final volume of wine (100 hL)

- Add the **starter** to the tank to be treated: Wine at the end of AF or with the AF complete.
- Add 2 kg of MALOBOOST®, i.e. 20 g/hL (200 ppm) for 100hL, previously rehydrated in 10 times its weight of wine.
- Mix thoroughly.
- Maintain the temperature at between 18°C/64°F and 20°C/68°F until the end of the malolactic fermentation.

■ REACTIVATION PROTOCOL FOR LACTOENOS® B16 STANDARD IN WINE:

(for inoculation of a final volume of 100 hL)

Step 1: Reactivation medium - 20 L – 0.2% of the final volume to be inoculated

- Prepare 10 L of unsulphited wine.
- Add 10 L of unchlorinated water.
- Maintain the temperature at 20°C/68°F.
- Add LACTOENOS® B16 REACTIVATOR (2 bags of 300 g) for 100 hL and mix thoroughly.
- Add LACTOENOS® B16 STANDARD (2 doses of 50 hL). Allow the bacteria bag to warm slowly to room temperature 30 min before use.
- Determine the initial malic acid content then monitor it every day. When 2/3 of it is consumed, move on to step 2.

Remarks on the reactivation step:

- pH adjustment of the **reactivation medium** is not necessary.
- For low initial concentrations of malic acid (less than 5 g/L in the initial must), it is recommended to monitor the change in malic acid as from the day after starting the reactivation step. If the concentration becomes too low (less than one-third of the initial value), the volume of the **reactivation medium** can be doubled by adding one volume (20 L of wine) of **starter** preparation (see below) and moving on to step 2 once two-thirds of the malic acid is consumed.

Step 2: Starter - 5 hL – 5% of the final volume to be inoculated

- Use 5 hL of wine from the final batch to be inoculated.
- De-acidify with POTASSIUM BICARBONATE up to pH = 3.3.
- When the reactivation medium is ready:
 - Add 200 g of MALOBOOST® (i.e. 40 g/hL (400 ppm) for the starter volume), previously rehydrated in 10 times its weight of must.

- Adjust the temperature of the starter to 20°C/68°F and maintain the temperature during the MLF.
- Combine the two preparations (reactivation medium and starter).
- Determine the initial malic acid content then monitor it every other day. When 2/3 of it is consumed, move on to step 3.

Step 3: Inoculation of the final volume of wine (100 hL)

- Add the **starter** to the tank to be treated.
- Add 2 kg of **MALOBOOST®**, i.e. 20 g/hL (200 ppm) for 100hL, previously rehydrated in 10 times its weight of wine.
- Mix thoroughly.
- Maintain the temperature at between 18°C/64°F and 20°C/68°F until the end of the malolactic fermentation.

STORAGE RECOMMANDATION

- Keep refrigerated (-18°C/-0.4°F or 4°C/39.2°F) in its original unopened packaging.
- Optimal date of use: 30 months at -18°C/-0.4°F.
18 months at +4°C/39.2°F.
- Do not use opened packaging.

PACKAGING

- Dose for 50 hL.
- Dose for 250 hL.



LACTOENOS® B16 REACTIVATOR

Inactivated yeast (*Saccharomyces cerevisiae*) for the reactivation phase of the LACTOENOS® B16 STANDARD strain.
Suitable for the preparation of products intended for direct human consumption, in the scope of regulated use in oenology. Complies with Commission Regulation (EC) No. 2019/934.

SPECIFICATION AND OENOLOGICAL APPLICATIONS

LACTOENOS® B16 REACTIVATOR is specifically formulated to favour reactivation of the LACTOENOS® B16 STANDARD strain. This preparation allows the bacterium to better reacclimatise in musts and wines and provides a qualitative advantage for success of the malolactic fermentation, including under difficult conditions (low pH...).

PHYSICAL CHARACTERISTICS

Appearance powder Colour beige

CHEMICAL AND MICROBIOLOGICAL ANALYSIS

Humidity (%) < 7	<i>Staphylococcus</i> (I/g) none
Insoluble matter (%) > 60	<i>Salmonella</i> (I/25 g) none
Total nitrogen (%) < 10	<i>E. coli</i> (I/g) none
Revivable yeasts (CFU/g) < 10 ²	Lead (ppm) < 2
Moulds (CFU/g) < 10 ³	Cadmium (ppm) < 1
Lactic acid bacteria (CFU/g) < 10 ³	Mercury (ppm) < 1
Acetic acid bacteria (CFU/g) < 10 ³	Arsenic (ppm) < 3
Coliforms (CFU/g) < 10 ²	

PROTOCOL FOR USE

Consult the LACTOENOS® B16 STANDARD product data sheet.

STORAGE RECOMMENDATION

- Store above ground level in a dry area not liable to impart odours. Ensuring stock is kept at a moderate temperature, in its original, unopened packaging.
- Optimal date of use: 3 years.

PACKAGING

- 300 g bag (for a LACTOENOS® B16 STANDARD dose for 50 hL).
- 1.5 kg bag (for a LACTOENOS® B16 STANDARD dose for 250 hL).

