

# LACTOENOS 450 PreAc®

*Enococcus oeni* strain for a quick MLF start, combined with the exclusive production process: PreAc®.  
Qualified for the elaboration of products for direct human consumption in the field of the regulated use in oenology. In accordance with the current EU regulation n° 2019/934.

## SPECIFICATIONS AND OENOLOGICAL APPLICATIONS

- Strain with a high resistance to ethanol.
- One of the strains with the highest malolactic activity on the market in optimal conditions.
- Low production of diacetyl and ethyl lactate.
- Low volatile acidity (VA) production.
- No biogenic amine production.
- The blend of effectiveness and cost makes **LACTOENOS 450 PreAc®** the ideal preparation for the control and reliability of malolactic fermentation in white and red wines of any style.

|                              |                       |
|------------------------------|-----------------------|
| TAV (% vol)                  | Up to 17              |
| pH                           | From 3.3              |
| Total SO <sub>2</sub> (mg/L) | Up to 60              |
| Temperature                  | From 16°C<br>(60.8 F) |

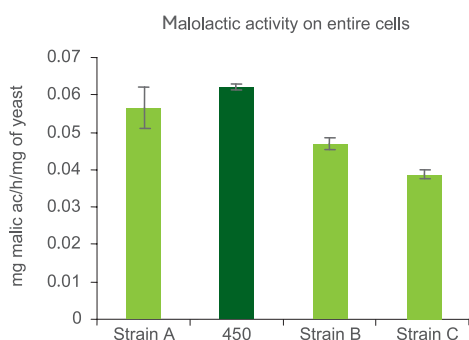
Survival and activity spectrum of the **LACTOENOS 450 PreAc®** bacteria:

**LACTOENOS 450 PreAc®** allows a rapid onset of MLF. Implementation is simple (in 30 minutes only for early co-inoculation and in 12 hours for late co-inoculation or post AF inoculation).

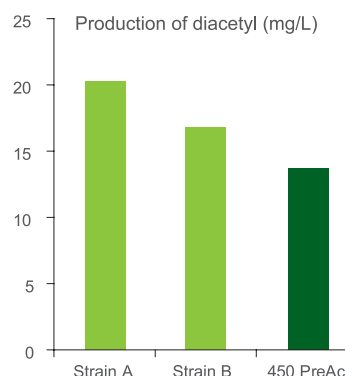
**LACTOENOS 450 PreAc®** is aromatically neutral and permits to preserve the fruity character of the wine.

*NB: These parameters have a cumulatively inhibiting effect.*

## EXPERIMENTAL RESULTS



Malolactic activity: quantity of malate degraded per time unit (h) and per quantity of cells (mg of yeast), in buffer medium at 25°C / 77°F.



Diacetyl production by 3 strains. Sample after MLF.  
\* Merlot wine, 2005.



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## PHYSICAL CHARACTERISTICS

Aspect ..... Powder Colour ..... Clear beige

## CHEMICAL AND MICROBIOLOGICAL ANALYSIS

|  |   |
|--|---|
| Humidity (%) ..... < 8   | Coliforms (CFU/g) ..... < 10 <sup>2</sup> |
| Bacteria counted on each Petri dish (CFU/g) ..... > 10 <sup>11</sup> | <i>E. coli</i> (/g) ..... None            |
| Mould (CFU/g) ..... < 10 <sup>3</sup>                                | Lead (ppm) ..... < 2                      |
| Yeast (CFU/g) ..... < 10 <sup>3</sup>                                | Mercury (ppm) ..... < 1                   |
| Acetic bacteria (CFU/g) ..... < 10 <sup>4</sup>                      | Arsenic (ppm) ..... < 3                   |
| <i>Salmonella</i> (/25g) ..... None                                  | Cadmium (ppm) ..... < 1                   |
| <i>Staphylococcus</i> (/g) ..... None                                |   |

## PROTOCOL FOR USE

- Inoculate as soon as possible. There are several inoculation methods:
  - **Early co-inoculation** (bacteria inoculation 24 – 48h after the alcoholic fermentation start), technique more and developed that we advise for its many advantages like the optimisation of bacteria efficiency.
  - **Late co-inoculation** (inoculation at 1020 – 1010 density).
  - **Sequential inoculation.**
- Do not use opened bags.
- Use a container inert and clean. Mix 1 L of mineral water and 1 L of wine at 20°C /68°F for 50 hL dose. Dilute **ENERGIZER®**, and then add the **LACTOENOS 450 PreAc®** dose. Homogenise and let it rest for 30 minutes in early co-inoculation, 12h at 20°C /68°F in late co-inoculation or sequential inoculation. Add to the tank.
- Maintain the tank temperature throughout the MLF (at about 20°C /68°F).
- In hard conditions (sluggish AF, poor medium or high alcoholic degree) and for a quicker MLF kinetic, add 20 -40 g/hL of **MALOBOOST®**.
- Respect the volume of wine indicated on the bacteria dose (50 hL).
- **LACTOENOS® 450 PreAc** can be used in organic winemaking without the use of **ENERGIZER®**.

## STORAGE RECOMMENDATION

- On reception, keep refrigerated (-18°C /-0.4°F or +4°C/32°F) in its unopened original packaging.
- Optimal date of use: 30 months at -18°C /-0.4°F.  
18 months at +4°C/32°F.
- Do not use opened packaging.

## PACKAGING

- Dose for 50 hL and 250 hL (**ENERGIZER®** supplied).

