MALOLACT Plantarum Uno

Bacteria for malolactic fermentation for high alcohol levels and pH above 3.5

TECHNICAL DESCRIPTION

Malolactic fermentation consists of the conversion of malic acid into lactic acid through the metabolic activity of strains of lactic acid bacteria. The consequences of this fermentation are a reduction in acidity and a change in aroma. Malolactic fermentation is often done not only for the effects mentioned above, but also to remove compounds from the wine that could create instability over time.

It has now been proven how qualitatively inoculated malolactic fermentation makes wines better on the nose, avoiding unwanted deviations. Cleanliness on the palate is significantly better and all without an increase in biogenic amines, which are characteristic of fermentations with indigenous bacterial microflora.

The species of bacteria that we can find in the must and then in the wine can be different. The strains of interest for the AEB Group are: *Oenococcus oeni*, the best performing oenological species, which gives rise to a wide range of our bacteria, and *Lactobacillus plantarum*, an interesting species due to its peculiarities.

MALOLACT Plantarum Uno is the result of a study carried out by AEB's R&D team in collaboration with Bionova, our Group's exclusive producer. The choice of this strain was based on its great resistance and excellent fermentation performance.

Why choose **MALOLACT Plantarum Uno**:
- It belongs to the *Lactobacillus plantarum* group and is therefore ideal for co-inoculation. It also has an optional heterofermentative metabolism; thus, it does not produce acetic acid from glucose and fructose, a characteristic that makes it particularly useful as a starter in high pH wines, which are most prone to lactic spurt and increased volatile acidity in the event of fermentation problems.
- It possesses a wider enzymatic range than the classic *O. oeni* and is capable of influencing the wine's sensory profile. The enzyme activities highlighted during screening for selection were βglucosidase, esterase and protease, activities that significantly enhance the aromatic profile of our wine. In addition, the presence of decarboxylase inactivates phenolic acids; with an important improvement in the aromatic profile over time.
- This strain showed good bacteriocinic activity, whose antimicrobial activity is mainly based on the production of peptides or proteins, capable of killing phylogenetically close bacterial species.
- Its use, in synergy with the other microorganisms, significantly reduces Ochratoxin A values, overall by more than 50%, about 20% more than the classic *Oenococcus oeni.*
- It can tolerate sulphur content of 50 mg/L.
- Its utilisation is ideal:
  - o in the co-inoculum;
  - o for fermentation of raisined grapes where malic acid values are high and for vinification in the absence of sulphur dioxide as a bio-protector of the must from other bacterial species.
- Its speed of planting and its ability to complete MLF make it ideal for combating the development of Brettanomyces.
- It is a low producer of:
  - o biogenic amines;
  - o diacetyl;
  - o acetic acid.

Reference: MALOLACT_PLANTARUM_UNO_TDS_EN_1101024_OENO_USA

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MALOLACT Plantarum Uno

⇢ COMPOSITION AND TECHNICAL CHARACTERISTICS

Culture of lyophilised *Lactobacillus Plantarum* bacteria.

⇢ INSTRUCTIONS FOR USE

MALOLACT Plantarum Uno's sensitivity to alcohol makes it an ideal addition to must.

⇢ STORAGE AND PACKAGING

Stable product under the storage conditions indicated on each package (24 months at -20 °C).

Bag for inoculation of 25 hL net.

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