

## Biological Acidity Reduction

### VINIFLORA® CH11

#### *Oenococcus Oeni*

VINIFLORA CH11 malolactic bacteria are a new type of *oenococcus oeni* compound selected from a German Riesling must for use in the preparation of white or rosé wines to biologically reduce acidity. The VINIFLORA CH11 malolactic bacteria direct inoculation culture is particularly suitable for simultaneously inoculation in the must stage with low pH value and low fermentation temperatures (approx. 57.2 °F (14 °C)). With simultaneous inoculation the high malolactic activity of VINIFLORA CH11 malolactic bacteria ensures exceptionally rapid and complete acid reduction.

The specific advantages of VINIFLORA CH11 malolactic bacteria:

- Maximum vitality and activity development in wine and can therefore be used directly as a dry product (without reactivation)
- All-purpose application for white and rosé wines
- Particularly suitable for simultaneous inoculation with appropriate must parameters
- Low diacetyl formation
- $\geq$  pH value 3.0
- Alcohol tolerance up to 15% by vol.
- Fermentation temperature  $\geq$  57.2 °F(14 °C) with simultaneous inoculation
- No formation of histamine (biogenic amine)
- Reliably prevents spontaneous, improper acidity reduction
- Leads to well-balanced, biologically stable white and rosé wine

#### Application and Dosage

VINIFLORA CH11 malolactic bacteria are packaged in bags sufficient for 660 gal (25 hl) of wine. Do not dose less than the recommended quantity. A lower dosage promotes spontaneous bacterial growth and jeopardizes degradation of malic acid.

VINIFLORA CH11 malolactic bacteria are particularly suitable for simultaneous inoculation and for inoculation immediately after completion of alcoholic fermentation. Sprinkle the dry product directly into the wine. Stir in without oxygen pickup. The packaging should be kept sealed as far as possible during BAR.

#### Product Characteristics

VINIFLORA CH11 malolactic bacteria are a high-purity concentrate made of freeze-dried *oenococcus oeni* cells. VINIFLORA CH11 malolactic bacteria has been selected from German Riesling must in accordance with all relevant oenological criteria (organoleptic purity of wine, high tolerance towards alcohol, low temperatures and low pH values, no development of undesired metabolism products).

Of particular significance is its ability in its dry state to quickly develop metabolism soon after inoculation. With these excellent properties and its unsurpassed economic viability, VINIFLORA CH11 malolactic bacteria are particularly suitable for simultaneous inoculation and meets all aspects of technical wine cellar requirements.

#### Important Notes

Do not open VINIFLORA CH11 malolactic bacteria packaging until immediately before use. Do not store any leftover product in the open package since air and moisture will render the product inactive within only a short period of time. For this reason, the contents of the package should never be broken down into smaller units since exposure to the air would damage the bacteria cells unnecessarily.

The ideal working temperature is 59 – 68 °F (15 – 20 °C). Young wines should not be sulfurized (max. 0.91 gr of free SO<sub>2</sub> per 100 fl oz (20 mg/l), maximum 1.37 gr per 100 fl oz (30 mg/l) of total SO<sub>2</sub>, at a pH value of approx. 3.0). Therefore, check the wine for SO<sub>2</sub> before treating with VINIFLORA CH11 malolactic bacteria. The alcohol content must not exceed 15% by volume; the pH value must not be less than 3.0.

When selecting a pure yeast for alcoholic fermentation (particularly with simultaneous inoculation), please bear in mind that the yeast should have low tendency to formation of SO<sub>2</sub> and low nutrient consumption.

It is particularly important that the factors indicated above work in synergy. If the wine nearly reaches the limits of two or more factors, biological acid reduction is delayed or even rendered impossible. On the other hand, the culture can tolerate extreme values of an inhibitor if the wine is otherwise suitable for biological acid reduction.

Biological acidity reduction normally begins 2 to 3 days after inoculating with VINIFLORA CH11 malolactic bacteria and is complete after 1 to 2 weeks depending upon peripheral conditions.



Since VINIFLORA CH11 malolactic bacteria uses diacetyl to break down citrate to imperceptible end products, the product can also be used to specifically contribute to harmonization. Live yeasts are also involved in this breakdown process. If a diacetyl note is not desired, add VINIFLORA CH11 malolactic bacteria before the initial tapping and do not sulfurize the young wine before the required diacetyl level is reached.

## Safety

There are no known detrimental effects if VINIFLORA CH11 malolactic bacteria is used as directed and processed properly. Since VINIFLORA CH11 malolactic bacteria mixes in easily, using this product poses no hazard to health.

Further safety information can be found in the relevant Material Safety Data Sheet, which can be downloaded from our website.

## Storage

VINIFLORA CH11 malolactic bacteria are packaged in gas and watertight laminated aluminum foil. Deep freeze at -0.4 °F (-18 °C) when storing for extended periods. Under these conditions, we guarantee that the product will remain fully active for at least three years. The activity will remain for a minimum of six months when stored at 68 °F (20 °C). Store VINIFLORA CH11 malolactic bacteria under the conditions indicated above until immediately before use. It is not necessary to adapt the temperature of the wine. Temperatures in excess of 86 °F (30 °C) will damage the bacteria and should be avoided under all circumstances.

## Delivery Information

VINIFLORA CH11 malolactic bacteria are sold under article no. 93.453.905 and are available in the following package size:

For 660 gal (25 hl)  
of wine: Pack (laminated aluminum)  
HS Customs Tariff: 3002 90 50

## Certified Quality

VINIFLORA CH11 malolactic bacteria comply with all applicable legal directives governing the production of wine and are inspected regularly during the production process to ensure consistently high product quality. These inspections include wide-ranging technical functional criteria as well as safeness in accordance with relevant laws governing production of foods. Strict controls are carried out immediately before and during final packaging.

*VINIFLORA® is a registered trademark of Chr. Hansen A/S.*

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