

NEW FREEZE DRIED BACTERIA STRAIN FOR LOW PH AND HIGH ALCOHOL THE NEW STANDARD FOR MLF IN RED AND WHITE WINE

► The solution for low pH or high alcohol wines

MaloBacti™ HF2 has an outstanding performance to conduct fast malolactic fermentation in wine with high alcohol content or low pH, and it works equally well in both red and white wines. MaloBacti™ HF2 is a strain of *Oenococcus oeni* and was isolated from a Pinot Noir wine.

- Very high tolerant to high alcohol conditions in wine, up to 16% Vol. Alc.
- Very tolerant to low conditions, down to pH 3.0, temperature tolerant down to 13 °C
- Outstanding fruity flavour profile, accentuation of the own flavour

► New +A³ process

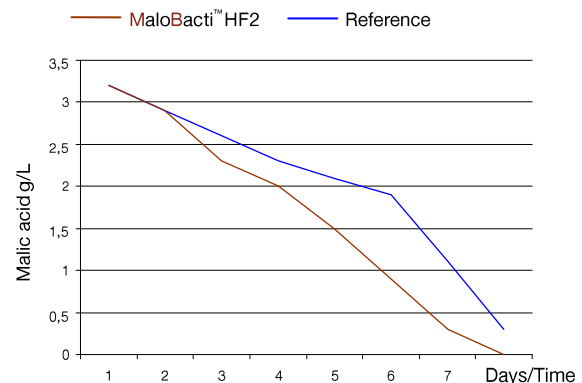
The new +A³ process accommodates an increased number of active cells in combination with a so far unreached fast activation and perfected adaption of the bacteria for the inoculation in wine or must.



- For fruity red and white wines. No more biogenic amines.
- Increase of the survival rate of the bacteria at inoculation.
- Ideal adaptation to difficult conditions in wine already in 6-8 hours!

► The Background of HF2

MaloBacti™ HF2 was isolated from a Pinot Noir with 15.4% Vol. of alcohol. It is appropriate for red and white wines and shows excellent sensory properties and are losing their harsh and vegetal character. In the example shown here two identical wines were divided into separate tanks. One wine was inoculated with MaloBacti™ HF2 (red curve) by using the new activation media where the other wine was inoculated with the standard activated reference culture (blue curve). The wine with MaloBacti™ HF2 shows obviously a quicker malic acid reduction, as the activated reference strain.



Important information

- To dissolve product exactly **1L** of water is needed for a **25 hL**-pouch and exactly **10L** for a **250 hL**-pouch.
- **First** put in the +A³-media (1), **then** the bacteria (2). The water has to be non-chlorinated and non-distilled.

► Additional information

After activation of the bacteria the suspension can be stored for **max. 5 days at 4-6 °C**. For another inoculation with the stored suspension adjust the temperature to the wine's temperature. Stir well again before inoculation. The addition of SO₂ can be done right after the completion of the MLF in order to avoid the growth of other undesired micro-organisms. The addition of Thiamine (Vit.B1) or FermControl™ to the primary fermentation is recommended to reduce the SO₂ formation of yeast.

► Direct inoculation:

A direct inoculation with HF2 bacteria without prior adjustment of the pH is generally possible. However, we recommend the adjustment of the pH by activation with water as previously described.

► Package content


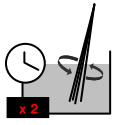
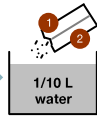
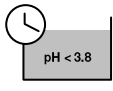
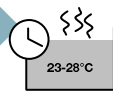
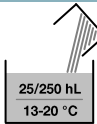
Available for 25 hL and 250 hL (or MaxBacti™ HF2 for 5,000 hL) wine or juice. Freeze-dried MLF starter cultures; *Oenococcus oeni* with a minimum cell count of > 2 x 10¹¹ CFU/g. Strain: 21224.

► Shelf life / storage

2 years at min. -18 °C
4 weeks at +5 °C
5 days at 4-6 °C, if product is already activated
Store frozen, always use the whole package at once



PRACTICAL APPLICATION ADVICE

<p>1</p> 	<p>Oenological properties</p> <ul style="list-style-type: none"> ▶ SO₂: tolerance at pH 3.3 < 40ppm ▶ pH range from 3.0 to 4.2 ▶ Ethanol tolerant up to 16.0% Vol. Alc. ▶ Temperature range: 13-26°C ▶ For excellent sensory properties and accentuation of own flavour 		<p>During activation stir suspension twice.</p> <p>4</p>
<p>2</p> 	<p>water ▶ non-chlorinated, non-distilled</p> <p>1L ▶ 25 hL-pouch</p> <p>10L ▶ 250 hL-pouch</p> <ul style="list-style-type: none"> ▶ keep water at 23-28 °C ▶ 1. dissolve the +A³-media (chamber 1) in water ▶ 2. dissolve the bacteria (chamber 2) in solution, stir for approx. 5-8 min. 		<p>After maximum 8 hours of activation the pH will drop to < 3.8. The bacteria are now completely activated. Check with a pH-meter.</p> <p>5</p>
<p>3</p> 	<p>The activation of the suspension will take 6-8 hours at 23-28 °C.</p>		<p>Stir suspension again and inoculate in 25/250 hL of wine. Stir well again. Maintain temperature of wine at approx. 13-20 °C during MLF.</p> <p>6</p>

