

MaloBacti™ HF2 DI (Direct Inoculation)

FREEZE DRIED BACTERIA STRAIN FOR LOW pH AND HIGH ALCOHOL FOR MLF IN RED AND WHITE WINE

► The solution for low pH or high alcohol

MaloBacti™ HF2 DI 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.

► The Background of HF2 DI

MaloBacti™ HF2 DI was isolated from a Pinot Noir with 15.4%vol. of alcohol. Among all commercially available MLF starter cultures, MB HF2 DI is the one with the lowest β -glucosidases activity. Therefore, it is very suitable for colour sensitive red wines but also white wines, and shows excellent sensory properties. The wines lose their harsh and vegetal character without any additional flavour modification.

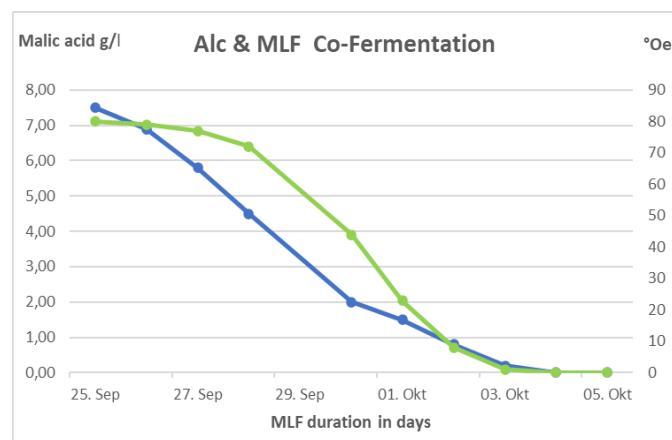
MLF strain	β -glucosidase (nmoles 4 MU /min/g biomass)	β -glucosidase (nmoles 4 MU min/ g proteine)
MaloBacti™ HF2 DI	15,3	60
competitive 1	16,3	66,6
competitive 2	22,3	81
competitive 4	25,2	94,1

Table 1: Comparison of the β -glucosidaseactivity of 4 different *O.oeni* Strains and 4-methylumbelliferyl β -glucopyranoside (4 MU β -G) University of Tarragona 2002

MaloBacti™ HF2 DI is therefore a perfect partner for the MLF in Pinot Noir, Sangiovese, Tempranillo and all aromatic white wines, including sparkling base wine.

The example shown here in Graph 1 is a Crémant base wine was inoculated at the end of the fermentation to use the residual temperature. The wine with MaloBacti™ HF2 DI shows a very quick malic acid depletion in between 8 days. Therefore MB HF 2 is a perfect fit for all simultaneous, meaning co-inoculations.

- Tolerant to high alcohol conditions, up to 16% Vol. Alc.
- Very tolerant to low conditions, down to pH 3.0,
- Temperature tolerant down to 13 °C
- Colour protective by lowest β -glucosidases activity (see table 1)
- Outstanding fruity flavour profile, highlighting the varietal characters
- Low active flavour impact by limited release of primary characters



Graph 1: simultaneous MLF in 2021 Crémant base wines. MLF finished parallelly to the primary fermentation.

► Technical advice

► Perfectly suitable for simultaneous and sequential inoculation

- Simultaneous:
24 - 48 h after yeasting, up to max. pH 3,5
- If the pH is >3,5, sequential inoculation is recommended
- Late simultaneous: at 8° – 9° brix

► Recommended wine temp. 18 - 20 °C

► Oenological properties

- SO₂: tolerance at pH 3.3 ≤ 40ppm
- pH-range from 3.0 to 4.2
- Ethanol tolerant up to 16.0% Vol. Alc.

► Shelf life / storage

- 2 years at min. -18 °C
- 4 weeks at +5°C
- 5 days at 4 - 6 °C
- Always use the whole package at once.

- For excellent sensory properties and accentuation of varietal characters
- Take out the bacteria package out of the freezer 30 min. before use
- Add directly into the tank. Mix it without oxygen intake (as far as possible)
- Keep temp. around 18 - 20°C while entire MLF in difficult conditions (slow fermentation, high total SO₂, low nutrient content, high alc.) and use **MaloControl™** BIO additionally

► Package content

MaloBacti™ HF2 DI 100 hL

Freeze-dried MLF starter cultures; *Oenococcus oeni* with a minimum cell count of > 2 x 10¹¹ CFU/g.
Strain: DSZM No.21224.



Disclaimer:

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