



SafOeno™ Bioprotect MP-72

FOR THE BIOPROTECTION OF GRAPES AND MUSTS

Ingredients:

Yeast (*Metschnikowia pulcherrima*), Emulsifier: Sorbitan monostearate (E/INS 491).

Origin:

SafOeno™ BioProtect MP-72 was isolated in a Loire Valley vineyard in France through a program carried out in partnership with the French Institute of Vine and Wine (IFV). The selection of **SafOeno™ BioProtect MP-72** is the result of screening several hundred microorganisms from different wine-growing regions and three different vintages.

Oenological characteristics:

SafOeno™ BioProtect MP-72 was selected for its ability to colonize the environment and ensure the bioprotection of grapes and musts. This innovative product allows winemakers to reduce or avoid the use of SO₂ during the pre-fermentative phases.

Pre-fermentative abilities

- Good bioprotection effect with pre-fermentative phases lasting up to 5 days at less than 10°C.
- Tolerance to SO₂ up to 2 g/hL (20 ppm of TSO₂).
- High colonization and maintenance of its population in the musts, limiting the development of undesirable wild yeast.
- Low alcohol tolerance (2% vol.) and very low fermentation capacity.
- Does not limit the growth of the yeast selected for alcoholic fermentation.
- Low mineral and organic nitrogen consumption, no requirement for additional nitrogen supplementation due to the use of **SafOeno™ Bioprotect MP-72**.
- No production of undesirable compounds (volatile acidity, SO₂ and H₂S).

Suggested use:

Selected for its very low fermentation capacity, **SafOeno™ Bioprotect MP-72** is particularly suitable for the bioprotection of musts and grapes.

SafOeno™ Bioprotect MP-72 is recommended for pre-fermentation phases:

- On white and rosé musts (cold settling and stabulation).
- On red grapes during cold soak/cold maceration.

Warning: For regulatory compliance reasons, this product is strictly restricted to oenological applications.



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TRIALS

Grape variety: Cabernet franc (Loire Valley).

Vintage: 2022

Technical itinerary: Manual harvest, destemming, artificial contamination with *H. uvarum* at 10E+04, inoculation with *Metschnikowia pulcherrima* at 10E+06,

Day 0 to D+5: Maceration at 10°C,

D+5: pressing and temperature rise,

D+6: alcoholic fermentation at 18°C, inoculation with SafOeno™ SC22 at 20 g/hL (24.3 oz/1000gal).

Modalities: 2 controls: NBS (non-bioprotection, sulfite added at 3 g/hL) and NBNS (non-bioprotection, no sulfite).

MP1, SafOeno™ Bioprotect MP-72, MP2: *Metschnikowia pulcherrima* strains.

Chemical characteristics of the must	
Sugar	243
Malic acid (g/L)	0.84
pH	3.43
Total acidity (g/L H ₂ SO ₄)	3.10
Titrateable acidity (g/L tartaric acid)	4.7
Yeast assimilable nitrogen (mg/L)	46
Free SO ₂ (mg/L)	< 10
Total SO ₂ (mg/L)	< 15

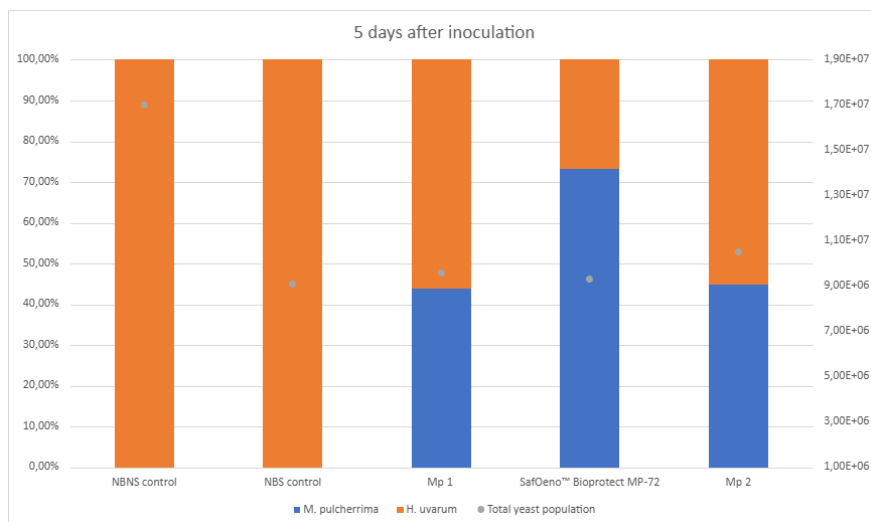


Figure 1: Monitoring of *Metschnikowia pulcherrima* implantation during the pre-fermentation phases (5 days after inoculation).

The population monitoring highlights the bioprotective power of the yeast *Metschnikowia pulcherrima* SafOeno™ Bioprotect MP-72 over time.

SafOeno™ Bioprotect MP-72 colonizes the medium and controls the microflora in the pre-fermentation phase.

SafOeno™ Bioprotect MP-72 represents 73% of the total yeast population after 5 days of maceration at 10°C.

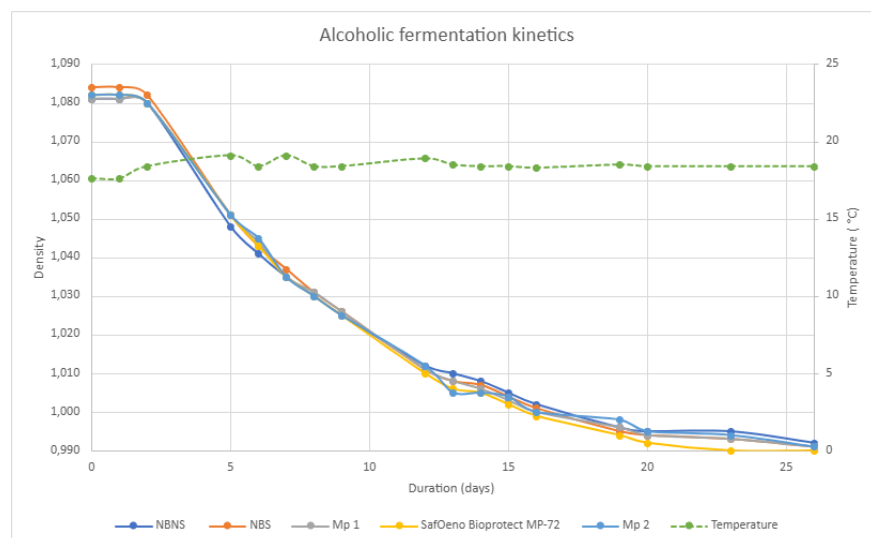


Figure 2: Monitoring of the fermentation kinetics.

Monitoring the fermentation kinetics in laboratory conditions shows that the SafOeno™ Bioprotect MP-72 modality completes fermentation in 23 days, while the other modalities take 3 days longer to complete the total consumption of sugars.



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Directions of use:

With prior rehydration: gently pour the desired quantity of **SafOeno™ Bioprotect MP-72** in 10 times its weight of tap water from 25°C (77°F) to 30°C (86°F). Gently stir to complete homogenization and avoid the formation of clumps. Leave to rest for 20 minutes and incorporate the yeast starter to the grapes or in the fermentation tank with homogenization.

Recommended addition time:

- White must: after the pressing, during the filling of the settling tank for clarification.
- Red must: during the filling of the tank for cold soak, followed by homogenization.

At the end of the pre-fermentative phase, inoculate with your selected *S. cerevisiae* strain to ensure complete alcoholic fermentation.

Dosage:

Recommended dose: 10 to 20 g/hL (12.2 to 24.3 oz/1000gal)

Increase the dose to 20 g/hL (24.3 oz/1000gal) in the case of very low temperature or high microbiological pressure.

Packaging:

Box of 20 vacuum-packed sachets of 500g / 1.1 lb each (Full box net weight: 10 kg / 22.05 lb)

Storage and compliance

To store or transport, keep in a dry place, protected from direct sunlight, at a temperature between 4 and 10°C (39.2 to 50°F).

Shelf life: 2 years. Refer to the "best before" date printed on the sachet. Opened sachets must be sealed and stored between 4 and 10°C and used within 7 days of opening. Do not use soft or damaged sachets.

Fermentis guarantees this product complies with International Oenological Codex specifications until its Best Before End Date in the storage conditions mentioned above. The product is also authorized as per TTB 27 CFR 24.246.

Each Fermentis yeast is developed under a specific production scheme and benefits from the know-how of the Lesaffre group, a world leader in yeast manufacturing. This guarantees the highest microbiological purity and maximum fermentation activity.

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