



ZYMAFLORE® KHIO^{MP}

Non-*Saccharomyces* yeast *Metschnikowia pulcherrima* for the **BIO**Protection of white and rosé musts or grapes during long pre-fermentation phases at low temperatures.

Selected Active Dry Yeast (ADY), non GMO, for oenological use. Suitable for the preparation of products intended for direct human consumption, in the scope of regulated use in oenology. Complies with Commission Regulation (EU) 2019/934.

SPECIFIC CHARACTERISTICS AND OENOLOGICAL PROPERTIES

Metschnikowia pulcherrima strain resulting from mass selection for **BIO**Protection. ZYMAFLORE® KHIO^{MP} was selected from indigenous grape flora for its ability to colonise the medium at low temperature (cold stabulation) and during long pre-fermentation phases.

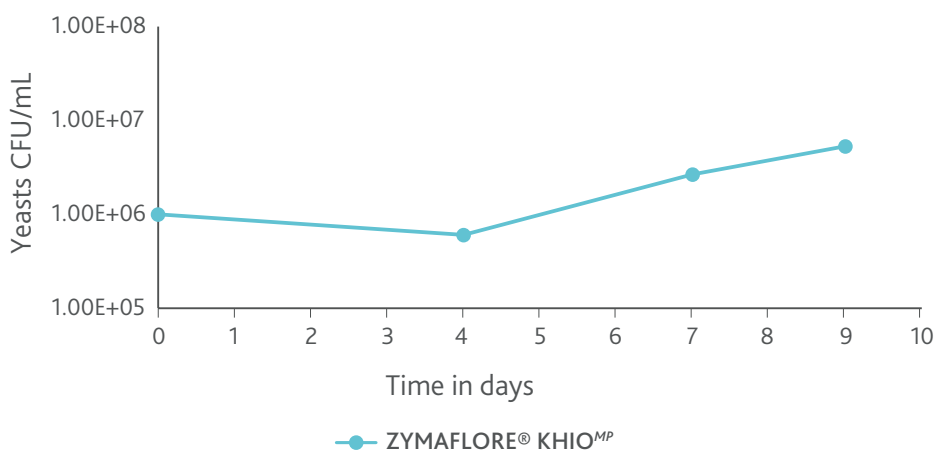
Study results have validated the **BIO**Protection effect of this preparation:

- Colonisation of the medium at low temperature with maintenance of the population for several weeks at 2°C.
- Select for its very low fermentation capacity: ZYMAFLORE® KHIO^{MP} is particularly suitable for the **BIO**Protection of musts during long stabulation at low temperature.
- Limitation of the predominance of potentially undesirable indigenous microorganisms.
- Limitation of the growth of indigenous flora to avoid the onset of alcoholic fermentation.
- Compatible with the strain of *Saccharomyces cerevisiae* selected for the alcoholic fermentation.

EXPERIMENTAL RESULTS

Establishment and colonisation of ZYMAFLORE® KHIO^{MP} at low temperature.

Study carried out during the selection of a strain of *Metschnikowia pulcherrima* best suited to pre-fermentation phases at low temperature.



Inoculation of the strain: 5 g/hL (1.10⁶ CFU/mL). Stabulation on total solids for 9 days at 2°C.

ZYMAFLORE® KHIO^{MP} maintains its population for the first 4 days after inoculation, no onset of AF detected after 9 days.



LAFFORT

l'œnologie par nature

PHYSICAL CHARACTERISTICS

Dehydrated and vacuum-packed yeasts.

Appearance granules

CHEMICAL AND MICROBIOLOGICAL ANALYSES

Humidity (%) < 8

Viable SADA cells (CFU/g) $\geq 2.10^{10}$

Lactic acid bacteria (CFU/g) < 10^5

Acetic acid bacteria (CFU/g) < 10^4

Yeasts of a different genus, species or strain (%) < 5

Coliforms (CFU/g) < 10^2

E. Coli (/g) none

Staphylococcus (/g) none

Salmonella (/25 g) none

Moulds (CFU/g) < 10^3

Lead (ppm)..... < 2

Arsenic (ppm)..... < 3

Mercury (ppm)..... < 1

Cadmium (ppm) < 1

PROTOCOL FOR USE

DOSE

Recommended dose: 2 - 5 g/hL.

Increase the dose to 5 g/hL in the case of very low temperatures (temperature below 4°C), non-rehydration or high microbiological pressure (red grapes, etc.).

ADDITION

Add ZYMAFLORE® KHIO^{MP} directly to white or red grapes or must (healthy grapes), rehydrated or not.

- Without rehydration, sprinkle ZYMAFLORE® KHIO^{MP} directly on grapes or must.
- With rehydration, follow the yeast rehydration protocol (see label).

The total preparation time for the starter should not exceed 6 hours.

Thoroughly mix the tank after adding the yeast.

Inoculate with *Saccharomyces cerevisiae* (usual dose) to ensure complete alcoholic fermentation.

STORAGE RECOMMENDATION

- Store off the ground in the original unopened packaging in a cool (2 - 10°C) and dry area not liable to impart odours.
- Optimal date of use: 2 years.

PACKAGING

500 g vacuum bag.
10 kg box.

