

OENOVEGAN® MICRO FA



Biocontrol product for must microorganisms, made from *Aspergillus niger* chitosan

CHARACTERISTICS

OENOVEGAN® MICRO FA is a **100% natural biocontrol product** developed to slow down the growth and reduce the population of spoilage microorganisms naturally present on grapes. Its antifungal properties make it **an effective alternative to SO₂**.

OENOVEGAN® MICRO FA controls the microbiological diversity of must, thanks to the synergy between two active ingredients:

- **Activated chitosan**: limits the growth of microorganisms and ensures safe fermentation kinetics.
- **Yeast hulls**: detoxify the must and eliminate certain undesirable molecules (unsaturated fatty acids, pesticides, etc.).

OENOVEGAN® MICRO FA is an easy-to-use solution due to its powder formula, which enables **fast rehydration** and produces a homogeneous product, guaranteeing effective action on the entire grape crop or must treated.

TEST RESULTS

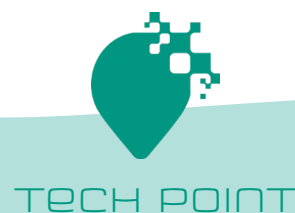
1 - IMPACT OF CHITOSAN ON THE FERMENTATION KINETICS OF *SACCHAROMYCES CEREVISIAE*

The use of **OENOVEGAN® MICRO FA** instead of SO₂ when vatting **helps to limit the development** of *Brettanomyces bruxellensis* populations (Figure 1).

However, the use of chitosan at this dosage does **not affect the kinetics of alcoholic fermentation**, thanks to the particular metabolism of *Saccharomyces cerevisiae*.

2 - INDIGENOUS FERMENTATION

OENOVEGAN® MICRO FA shortens the lag phase and enables faster alcoholic fermentation, **encouraging the establishment of indigenous yeasts** (Figure 2).



The difference between biocontrol and bioprotection

Unlike **bioprotection**, which consists in colonising a medium at the pre-fermentation stage with **microorganisms selected** to limit the development of other species, **biocontrol** aims to **slow down and reduce the overall microbial diversity of the must**. This provides lasting protection against contamination. It also **facilitates the development of the yeasts of interest** (by limiting competition). This is because *Saccharomyces cerevisiae* is a species that is not very sensitive to chitosan, the active compound used in this solution.

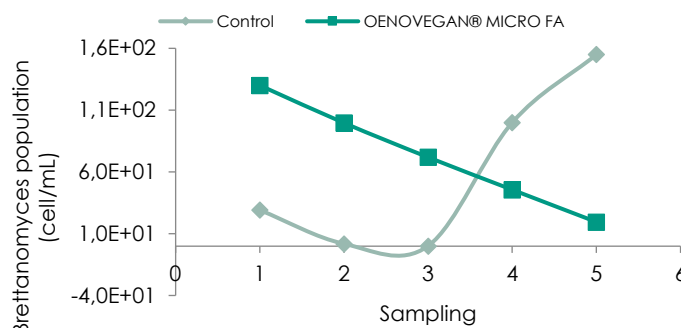


Figure 1: Evolution of *B. bruxellensis* population during vinification. qPCR analysis of musts treated, or not, with **OENOVEGAN® MICRO FA** at 20 g/hL.

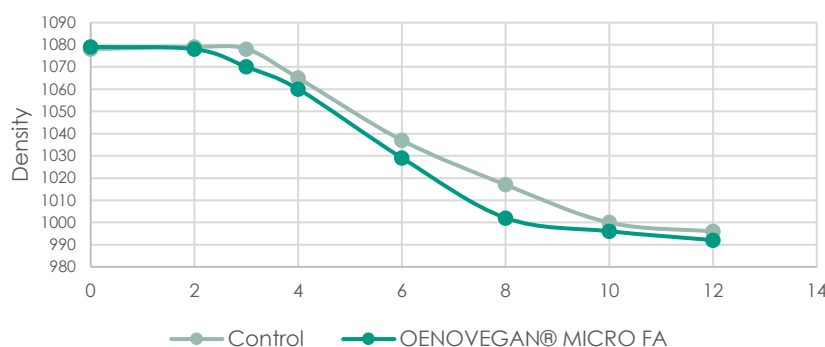


Figure 2: Evolution of the density during alcoholic fermentation of an indigenous yeast. Must treated with **OENOVEGAN® MICRO FA** at 20 g/hL.

APPLICATIONS



100% natural
biocontrol tool and
alternative to SO₂



Contributes to the
**microbiological
stability of musts and
ensures safe alcoholic
fermentation**



**Slows down
growth and reduces the
population** of spoilage
microorganisms, including
Brettanomyces



Detoxifies the
must, resulting in a
**clearer aromatic
profile**

INSTRUCTIONS FOR USE

Implementation:

• To use on grapes:

1. Disperse the product in 15 times its weight in water (do not use must) and homogenise.
2. Fill a spray bottle and open the nozzle as far as it will go.
3. Spray on the grapes.

We recommend:

- The solution can be prepared a few hours in advance, but it must be resuspended when used.
- Can be applied to the harvest in several stages (e.g. the bin is filled in 3 steps).

• To use in vatted must:

1. Disperse the product in **10 times its weight in water (do not use must)** and homogenise.
2. Add to the vat when pumping over (it is advisable to use a fining connector).
3. Homogenise the vat well after adding the product.

We recommend:

- With white or rosé must, add as it comes out of the press into the settling vat.

Technical information:

For use on grapes and/or must before alcoholic fermentation.

Can be complemented by treating wines with **OENOVEGAN® MICRO** (depending on the microbiological pressure at the winery).

Precautions for use:

Do not use on grapes at temperatures above 40° C.
Product for oenological and specifically professional use.

Use in accordance with current regulations.

DOSAGE

Recommended dose:

From 15 to 20 g/hL depending on the microbiological risk.

Maximum legal dose:

25 g/hL in accordance with current European regulations.

PACKAGING

1 kg and 10 kg bags.

STORAGE

Store unopened, sealed packages away from light in a dry, odour-free environment. Once opened, use up within 48 hours.

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