BioPREVENTIVE

Control treatment against undesired microbiological populations: Brettanomyces, acetic acid bacteria and/or lactic bacteria

BioPREVENTIVE is a treatment based on Chitosan, developed to prevent, control and remove undesired microbiological populations in wines. Chitosan is a natural material that many living beings have developed as a protection against the attack of different microorganisms.

OIV and CEE have approved Chitosan from Aspergillus Niger in wine treatments to prevent and remove undesired microbiological populations in them

BioPREVENTIVE is a Chitosan preparation for preventive and removal treatments of microbiological contaminations. The product is very efficient to remove every microbiological contamination, even resistant strains to other treatments. OENOGREEN **BioPREVENTIVE** is a new very effective tool with which oenologist will be able to deal with every microbiological contamination and development with the assurance to be able to correct them and avoid significant quality loses on their wines. It is recommended as a preventive or maintenance service to gradually reduce the aforementioned undesired microbiological populations.

MAIN ADVANTAJES:

- New tool for the oenologist that enables to control the undesired microbiological developments.
- Possibility to use it as a complementary treatment to the traditional SO2, to prevent Brettanomyces, acetic acid bacteria and/or lactic bacteria in wine aging.
- Highly efficient in those cases in which SO2, provides insufficient protection.

avda. Lentiscares 4-6 Pol. Lentiscares 26370 Navarrete (La Rioja) T. +34 941 58 70 27 CIF: b26370908

MAIN CHARACTERISTICS.

Chitosan is a natural product insoluble in wine that has an antibacterial activity due to its specific surface and its dispersion in wine. A good dispersion is a key point for Chitosan antimicrobiological activity. Other products in the market, also based in Chitosan, that show lower dispersability are less effective in controlling and removing microorganisms.

BioPREVENTIVE is presented in 2 components (A & B) that enables to maximize the antimicrobial activity of Chitosan.

Chitosan, apart from being an effective product for wine microbiological stabilization, it is also approved for its application as a clarifying agent by the OIV, so that the product may have a clarification effect. This calarification effect is complementary to the removal of undesired microbiological populations.

DOSAGE.

The product is presented in 2 components: component A and component B, that should be mixed in a 1:2 relationship (1 part of A for every 2 parts of B). The product packaging already includes the quantities of both components following this relationship. The following indicated doses refer to the sum of the components.

Maximum approved dose: 12 gr/hL total (4 gr/hL component A + 8 gr/hL component B)

Regular or typical dose: 6 gr/hL total (2 gr/hL component A + 4 gr/hL component B)

PREPARATION AND USE INSTRUCTIONS.

In application in wine tanks is recommended. The product comprises 2 components: A & B. To obtain a maximum efficiency in the removal of microbiological contaminations, please follow the subsequent steps:

- **PHASE 1.** Add 1 part of the component A in 20 times its weight in water (or wine) and stir it until getting a lump-free, smooth dispersion. Add 2 parts of component B to the aforementioned dispersion. Mix them until getting a gel-like dispersion.

- **PHASE 2.** Apply movement in the tank for the treatment by propellers, nitrogen stripping, venturi or pumping-over, add dispersion prepared at Phase 1 and stir it.

- **PHASE 3.** Stir and maintain the movement in the tank for at least 30 minutes. The following periods of time of tank movement, depending on the tank capacity, are recommended, for an optimal dispersion:

avda. Lentiscares 4-6 Pol. Lentiscares 26370 Navarrete (La Rioja) T. +34 941 58 70 27 CIF: b26370908

Tank < 50.000 litros (1 hours)

Tank 50.000 a 100.000 litros (2 hours)

Tank >100.000 (5 hours)

- **PHASE 4.** Allow it to settled during 2-3 days.

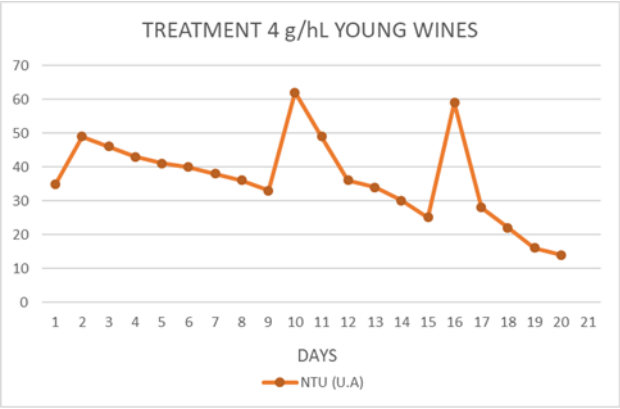
- **PHASE 5**. Apply movement in the deposit during the aforementioned recommended periods of time, depending on the tank´s capacity, every 2-3 days during the first week. Check on its microbiological evolution.

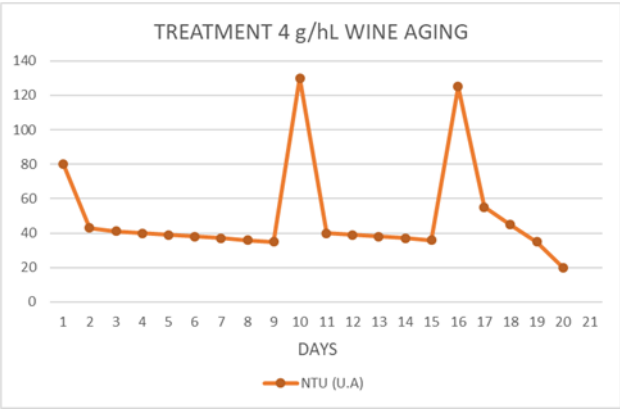
- **PHASE 6.** In case a negative microbiological test result would not be obtained during the first week, keep applying movement in the tank during the recommended periods of time depending on its capacity, every 2-3 days, and check on its microbiological evolution.

- **FASE 7.** If the microbiological control results are the required ones, leave it decant during the 3rd week and filter (more recommended) or rack as appropriate.

Protein stabilization treatments with negative charge such as Bentonite or Silica gel, are recommended to be applied at the end of the production process, since Chitosan is a positive charge stabilizer.

PRODUCT DISPERSION EFFECT:





These graphs display the turbiduty grade (NTU: Nephelometric Turbidity Unit) which gets and insight into the product dispersion. The greater stability of the preparation in wine, the greater NTU values after the addition and the product performance. The preparation is specially developed with a greater stability (dispersibility) than other alternative products in the market for greater effectiveness. Dispersion/homogenizations done with an interval between them over 2 days, increase the product activity.

PACKAGING.

BioPREVENTIVE is presented in 2 components: A & B. It is packed in 3 kg sachets (1 kg component A and 2 kg component B)

STORAGE.

It should be stored in a cool dry place.

The product can be stored unopened in its original packaging for at least 24 months without losing its properties.

The implementation of preliminary lab tests is recommended to adjust the product dosage and check its performance.

Before using this product, please read the product safety data sheet and follow the instructions and rules to apply it.

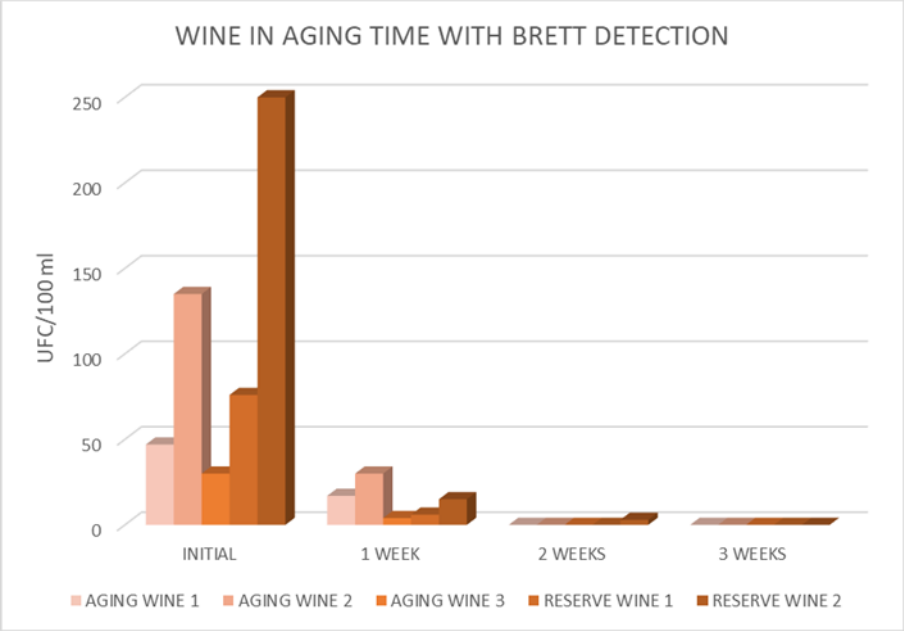
August 29, 2023

avanzare
innovación
tecnológica s.l.
C.I.F.: B25370908

REGISTRATION: R.G.S.A: 31.002865/LO, Product in accordance with the International Oenological Codex and Regulation 934/2019

RESULTS.

Results on treatment in barrel aged-red wines where Brettanomyces populations had been identified. The treatment of choice was 6 g/hL de **BioPREVENTIVE**:



Results on treatment in barrel-aged red wines, in which lactic bacteria (BAL) populations had been identified, which generates isovaleric acid, which causes a stable aroma in wines. The treatment of choice was 4 g/hL de **BioPREVENTIVE**: