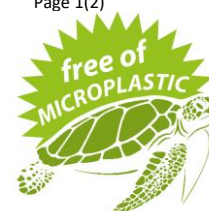




ClearUp BIO

FUNCTIONAL YEAST CELL WALLS IN CERTIFIED ORGANIC QUALITY



► General

ClearUp BIO is a, highly purified, functional yeast cell wall preparation.

In contrast to standard yeast cell walls, **ClearUp BIO** provides a range of new applications for cell wall products, which replace numerous standard fining products that are environmental unfriendly (microplastic) or highly allergenic (animal-based ingredients).

ClearUp BIO highly purified, functional yeast cell wall product offers a range of properties which provide several interesting application tools in the winemaking process. These include the absorption of undesired phenols, odours and substances which act inhibitory and can create stuck fermentations. Examples of such inhibitory substances are fatty acids (C12-C20) but also pesticide residues or fungal toxins (Mycotoxine).

► Application

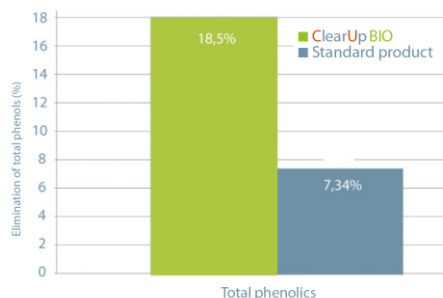
Due to its significantly higher content of lipids **ClearUp BIO** has multiple properties which are desirable for modern wine making. Among those are the adsorption of phenols or fermentation inhibiting fatty acids, as well as critical pesticides or even mycotoxins that are often responsible for inhibited fermentations.

The main application/benefit of **ClearUp BIO** is the replacement of microplastics, animal and silicate-containing fining tools for the removal of undesirable phenols in must and wine. The wines are rounded without sensory substances being removed.

Graph No. 1 shows the depletion of total phenols in a trial with **ClearUp BIO** versus a standard fining product. Graph No 2 illustrates the highly efficient depletion of inhibitory fatty acids versus a standard cell wall product from the market. It's obvious that is highly efficient and multifunctional.

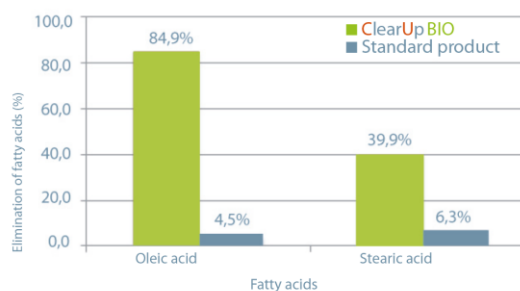
ClearUp BIO can also eliminate a number of sensorial off-flavours such as Brettanomyces and negative Thiol-flavours. **ClearUp BIO** is a real all-rounder.

Elimination of total phenols from white wine



Graph No. 1

Elimination of fatty acids from white wine



Graph No. 2

► Properties

ClearUp BIO covers numerous areas of application for corrections of sluggish, stuck fermentations, off-flavours and odour defects.

- Elimination of undesired phenols in juice or wine.
- Correction of colour problems in white wine, Blanc de Noirs and rosé-wine.
- Removes inhibitory medium chain fatty acids in the must or young wine.
- Binds a number of pesticides residues and mycotoxins, which all have yeast inhibitory effects.

- Can reduce the content of volatile phenols (e.g. by Brettanomyces) notably
- Improves sensory of wines from stressed fermentations.
- Can reduce sulphur off-flavours in young wines.
- Ideal for increasing the internal surface with heavily pre-clarified musts, e.g. flotation.
- Absolutely sensory neutral.
- Reduces smoke-taint (e.g. 4-methyl-guaiacol) caused by bush-fires

► Practical Application

ClearUp BIO can be applied to all musts and young wines. It can also be applied in fermentation of sugar- or fruit juice concentrates. For all applications it is important to ensure that **ClearUp BIO** is well suspended and well distributed in the young wine.

Any bentonite-fining should be applied after the **ClearUp BIO** fining.

► Dosage

Application	Dosage
Sluggish or stock fermentations	30 - 40 g/hL
To absorb off-flavours and odour defects	10 - 30 g/hL
To increase the inner surface	10 - 20 g/hL
Other applications	To be defined after own tests

► Instructions for use

- Suspend the recommended dose of **ClearUp BIO** completely in wine/juice.
 - Use 10 L of wine/juice for 1 kg
- When added in wine/juice, make sure the suspension is well mixed into the tank, e.g. by pumping.
- Unless using for increasing the inner surface of highly clarified juice/wine, the contact time should be min. 1-2 hours; a maximum time of 24 hours shouldn't be exceeded for the removal of substances with hydrophobic, non-polar bonds such as smoke flavours, PPPs, heavy metals, TCA, TBA and volatile phenolic acids.
- For the removal of phenols and neg. charged fatty acids, the contact time can be extended to up to 5 days.
- Remove **ClearUp BIO** by filtration or racking after sedimentation.
- A sequential addition of the total dosage of 4x10g/hl with stirring in between for approx. 20 minutes brings a significant reduction in undesirable components such as volatile polyphenols.

For sluggish or stock fermentations we recommend:

- Addition of max. 30-40 mg/l SO₂ for young wines, Attention! CO₂ formation!
- Addition of completely dissolved **ClearUp BIO**
- Make sure the suspension is mixed well into the tank, e.g. by pumping
- Rack in clean environment under air tight conditions after 24 hours
- Inoculate with new yeast
- Add 10 g/hL **ClearUp BIO**

► Ingredients

ClearUp BIO is a purified yeast cell wall preparation and compliant with the Organic regulation EC 2018/848. All components are GMO-free and compliant with Food Grade Standard.

► Packaging / Shelf life

ClearUp BIO will be delivered in a gas-tight aluminium foil in 1 kg or 5 kg units.

Shelf life: min. 36 months at 15 °C, stored in a cool and dry place. Storage over 35 °C can damage the product. Open packages must be consumed immediately.



Disclaimer:

The information, data and recommendations contained in this product information are provided in good faith, obtained from reliable sources, and believed to be true and accurate as of the date of revision. The PI serves as description of the products and its characteristics when used according to the protocol. No warranty, expressed or implied, regarding the product described in this PI shall be created or inferred by any statement in this PI.