



PRODUCT INFORMATION

2B FermControl GmbH FERMENTATION TECHNOLOGY & OENOLOGY

ClearUp™ BIO

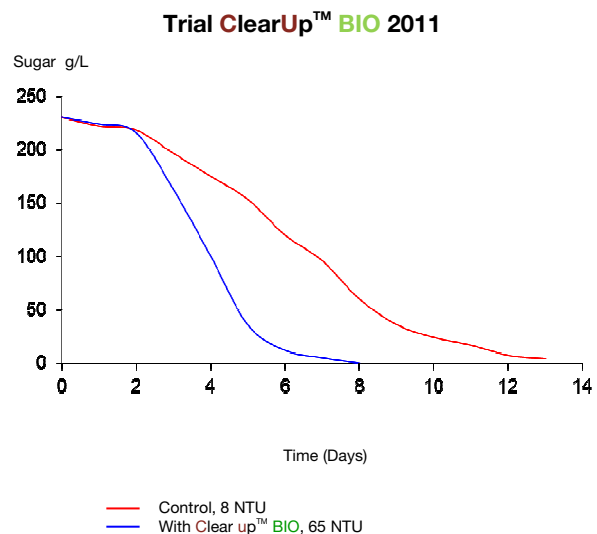
IN HIGHLY PURIFIED YEAST CELL WALLS IN CERTIFIED ORGANIC QUALITY

► General

This highly purified yeast cell wall product offers a range of properties which provide several interesting application tools in the winemaking process. These include the absorption of 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). ClearUp™ BIO is the first organic certified yeast cell product, which can remove or reduce above mentioned inhibitory substances such as medium chain fatty acids and other toxins from the must or wine. ClearUp™ BIO is certified according to EU Regulation 234/2007 and 889/2008 and approved for the production of organic wine.

► Application

ClearUp™ BIO is a novel, highly purified yeast cell wall preparation. Due to its significantly higher content of lipids it has multiple properties which are desirable for modern wine making. Among those are the adsorption of fermentation inhibiting fatty acids, as well as critical pesticides or even mycotoxins that are often responsible for inhibited fermentations. ClearUp™ BIO can also eliminate a number of sensoric off-flavours such as Brettanomyces and negative Thiol-flavours. ClearUp™ BIO is a real allrounder – of course fully compliant with EU regulations (EC) 834/2007 and (EC) 889/2008.. The third application is to increase the inner surface in heavily pre-clarified musts, which will result in better yeast dynamics and higher final fermentation gravity in sugar-rich juices. Figure 1 shows the effect on the yeast dynamics in a white Burgundy from 2011. With ClearUp™ BIO the NTU value is increased to 65 NTU. It is evident that the fermentation process is more reliable and healthier compared to the control.



► Properties

ClearUp™ BIO has numerous applications for corrections of sluggish, stuck fermentations, off-flavours and odour defects.

- 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.
- Elimination of undesired phenols in juice or wine.
- Correction of colour problems in white wine, Blanc de Noirs and rosé-wine.
- Ideal for increasing the internal surface with heavily pre-clarified musts, e.g. flotation.
- Absolutely sensory neutral.



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▶ 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.

▶ 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.
- ▶ ClearUp™ BIO by filtration or racking after sedimentation.

▶ 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

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
- ▶ After 24 hours rack in clean environment under air tight conditions
- ▶ Inoculate with new yeast
- ▶ Add 10 g/hL ClearUp™ BIO

▶ Ingredients

ClearUp™ BIO is a purified yeast hull preparation and compliant with the Organic regulation EC 834/2007 & 889/2008.

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 containers must be consumed immediately.



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