



RePrise BIO

NOVEL INACTIVE YEAST

Vinification, maturation and refreshment for all wines

Yeast is a natural bioreactor which is not only responsible for alcoholic fermentation in winemaking. In addition, the yeast produces a number of natural, valuable ingredients during fermentation, which offer a variety of additional functions during wine maturation.

RePrise BIO is a new inactive yeast specifically designed for wine maturation after alcoholic fermentation and for the treatment of aged wines. It is produced exclusively on the basis of natural raw materials from certified organic agriculture, and contains no known allergens. Besides the complete inactivation of the yeasts by a vacuum process, the functional ingredients are protected by this gentle process. In particular, these are the polysaccharides and polypeptides of the yeast cell. They are the functional groups that serve as antioxidants, harmonisation of phenols, colour stabilisation of red wines or refreshment of old wines. They have **reducing, adsorbing** as well as **complementary** properties when applied in the wines. In addition, due to its natural production, RePrise BIO does not add its own yeasty taste to the wine.

With the entry into force of Regulation (EU) 2019/934 supplementing Regulation (EU) No 1308/2013 with regard to authorised oenological practices and restrictions on the production and conservation of wine products, the following amendment, inter alia, opens up further areas of use for the winemaker:

NEW APPROVAL: Till the 7th of December 2019, the product class of inactivated yeasts was only permitted as a nutrient in must and young wine. By the aforementioned regulation, inactivated yeasts are now also permitted as treatment agents for wine and all other wine categories.

Functionality

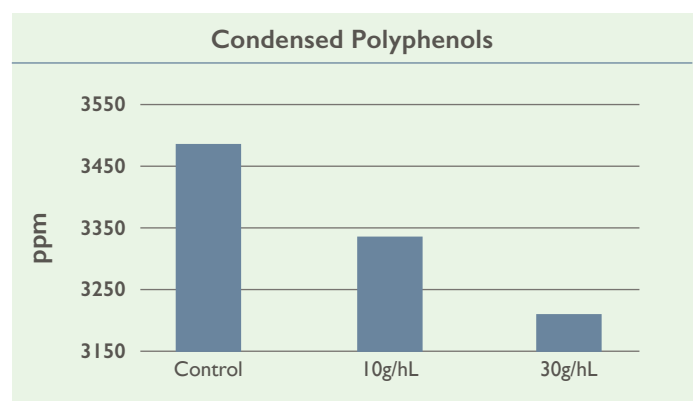
Due to a specific selection of substrates during production of RePrise BIO, the product is rich in polypeptides, mannoproteins and polysaccharides. These valuable ingredients in RePrise BIO are composed of a variety of polysaccharides, polypeptides, proteins and other natural polymers.

In addition, these yeast cell components, such as the yeast cell wall and yeast extract, provide other useful additional functions that make technical additives unnecessary.

This results in the following new applications for the treatments of all wine by this special inactivated yeast:

- Use as a natural antioxidant in wine maturation.
- Reduction of SO₂ addition rate at stabilisation.
- Promotes the colour and aroma protection of the wine during vinification without SO₂.
- Enhancement of colour stabilisation and harmonisation of the phenol content in red wines.
- Protection against early ageing.
- For refreshing old wine.

Results from the practice



Properties

- The naturally existing high content of polypeptides ensures the protection of the native flavours and thus creates longevity of the wines.
- The peptides promote colour stabilisation during red wine maturation.
- The natural peptides and yeast proteins harmonise the phenolic impression in the wine and increase the positive mouthfeel.
- Harmonisation and buffering of phenol components.
- More complexity and density on the palate.
- Removes aged characters and brings back freshness and elegance of aged wines.

Practical Application

- Completely dissolve the amount of RePrise BIO as indicated for the target application in wine.
 - » per 1 kg in 10 litres of wine.
- Don't mix RePrise BIO with other fining products or any tannins.
- When adding in wine, please ensure complete homogenisation, stir well or if necessary, do a pump over into another tank.
- As a Fining Aid the minimum contact time should be 2 hours, after 48 hours it needs to be racked or filtered off.
- The sediment from any fining process should be separated off after three days at the latest by diatomaceous earth, crossflow or a sheet filtration with a nominal separation rate of 3 μ .
- As Vinification Aid or antioxidant RePrise BIO can last in the wine up to six months easily.
- To determine the correct dosage, we recommend a preliminary test in the laboratory.

Target Application: Vinification Aid

Contact time up to 6 months	Dosage
Use as antioxidant in white wine	20-30g/hL
Use as antioxidant in red wine	15-20g/hL
Colour and flavour evolution and protection	20-30g/hL

Target Application: Fining Aid

Min. contact time 2 hr max. 48 hr	Dosage
Phenol harmonisation white wine	10-20g/hL
Phenol harmonisation red wine	15-25g/hL
Refreshment of aged wines	>25g/hL
Refreshment of very aged wines	30-40g/hL

Ingredients

RePrise BIO is a purified inactivated yeast preparation and compliant with the organic regulation EC 834/2007 and 889/2008.

All components are GMO-free and compliant with Food Grade Standard.



Kauri Winemaking Innovation

Aus Tel: 1800 127 611

NZ Tel: 0800 528 749

Email: info@kauriwine.com

Web: www.kauriwine.com



ClearUp BIO vs RePrise BIO



ClearUp BIO Yeast Cell Wall a fining tool for juice and wine	VS	RePrise BIO Inactivated Yeast a vinification and fining aid
<ul style="list-style-type: none"> • Removal of undesired phenols in juice and wine 		<ul style="list-style-type: none"> • Improves mouthfeel and flavour stability
<ul style="list-style-type: none"> • Removal of spray residues • Increases inner surface (NTU) 		<ul style="list-style-type: none"> • Improves colour and tannin stabilisation
<ul style="list-style-type: none"> • Reduction of volatile phenols (up to 54%) <ul style="list-style-type: none"> • Treatment of Brett • Treatment of smoke taint 		<ul style="list-style-type: none"> • Removal of oxidised phenols • Elimination of high colour in white wines
<ul style="list-style-type: none"> • Detoxification of stressed ferments • Removal of mid chain fatty acids 		<ul style="list-style-type: none"> • Improving the redox potential to reduce the requirement of necessary SO₂
<ul style="list-style-type: none"> • Removes reductive characters after completion of the primary fermentation 		<ul style="list-style-type: none"> • Refreshing aged wines



What are yeast derivatives?

Yeast are microorganisms and belong to the group of eukaryotes (living beings whose cells – in contrast to prokaryotes, such as bacteria – have a real cell nucleus).

The yeast of the species *Saccharomyces cerevisiae* are among the most intensively researched microorganisms. The easy reproducibility, together with the biological composition of the ingredients, make the yeast cell the ideal donor for a variety of organic raw materials and applications, from food production through to biotechnology and pharmacy.

The distinction between yeast products with regard to their biological composition is regulated by the legislator. For the wine industry, the OIV (Organisation Internationale de la vigne et du Vin) has carried out the classification of the various yeast products and written them down in the OIV Code:

OIV: Oeno-Specif 10-452- 497

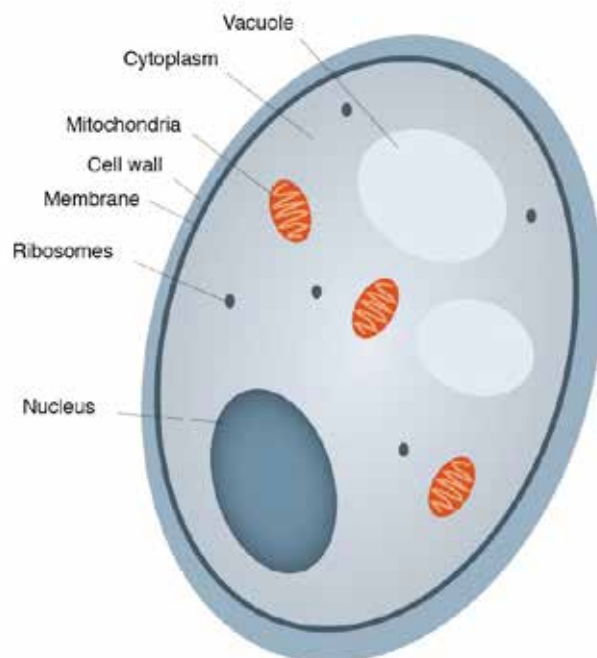




Illustration: Schematic drawing of a yeast cell

Yeast Products in Comparison

	YEAST CELL WALL	INACTIVE YEAST
INGREDIENTS/PROPERTIES		
2B Product solutions	ClearUp BIO	FermControl™ BIO RePrise™ BIO MaloControl™ BIO
Purpose (OIV)	<ul style="list-style-type: none"> • Prevention and correction of stuck fermentation • Fining and absorbing off flavours 	Nutrition during alcoholic fermentation
Soluble parts of dry matter (OIV)	max. 10 %	max. 40 %
Areas of application in winemaking	Adsorption of inhibitory substances, e.g. spraying residuals, sensory purity	Supplier of amino acids, macro- and micronutrients, contribution to aroma protection, reduction of ochratoxin A
Relevant components	Lipids release of sterols and unsaturated fatty acid	Amino-N trace elements, vitamins, glutathione (GSH)
Nourishing effect	low	high
Adsorptive effect	high	high
Phenol-reduction	high	average/medium
Dosage	max. 40 g/hL	not limited

Yeast mannoprotein and inactive yeast with guaranteed glutathione content (GSH) are not dealt with here.



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