

# For the detoxification of sluggish fermentation Used to prevent a stuck fermentation

#### **DESCRIPTION** •

NUTRIENT VIT END™ was developed by Lallemand to treat sluggish fermentation.

NUTRIENT VIT END<sup>TM</sup> is a complex product including yeast cell walls which have good bio-absorptive properties for toxic saturated short and medium chain fatty acids and pesticides. Given it is comprised of a selected inactivated yeast, it also contributes some survival factors and low levels of yeast derived nutrients, all of which can help the yeast complete fermentation in challenging conditions. Please note however that NUTRIENT VIT END<sup>TM</sup> only provides a minor supply of nutrients, hence does not replace a good nutritional program.



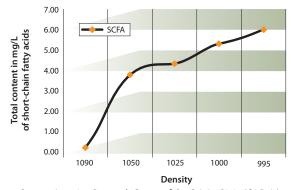
### **BENEFITS & RESULTS**

Under stressful fermentation conditions yeast cells produce toxic saturated fatty acids such as hexanoic, octanoic, decanoic acids, compounds which can build in concentration to a point that the yeast cells will lose viability and vitality, hence compromising successful fermentation.

The production of these toxic saturated fatty acids by yeast is significantly increased in stressful fermentation conditions such as low juice turbidity, high sugars, poorly rehydrated yeast or extreme fermentation temperatures, conditions which often lead to stuck alcoholic fermentation.

By adding NUTRIENT VIT END $^{\text{m}}$  at the early signs of a struggling fermentation, these toxic metabolites can be removed, by adsorption, from the wine matrix. Yeast viability and vitality are thus maintained improving the chances of a complete alcoholic fermentation.

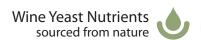
# Evolution during fermentation of the total short-chain fatty acid content.



Source: Agrarian Research Center of the C.A. La Rioja (C.I.D.A.).

In the graph, a slowdown in the accumulation of total short-chain fatty acids (SCFA) can be observed from the middle of fermentation. It is due to the adsorption of these compounds by the cell walls of dead yeasts and their assimilation by viable cells. This fact demonstrates the use of inactive yeast cell walls as a preventive treatment in slow fermentations and as a curative use in stuck musts/wines.





#### **PROPERTIES**

- Increase the security of fermentation in difficult conditions and prevention of stuck fermentations.
- Treatment of sluggish or stuck fermentations.
- Reduction of short-chain fatty acids that cause sluggish or stuck fermentations.
- Metabolic prevention of deviations (H<sub>2</sub>S, VA).
- Highly bio-adsorptive properties for short and medium chain fatty acids and fungicides, pesticides and herbicides which can cause problem fermentations.

#### INSTRUCTIONS FOR OENOLOGICAL USE

Recommended dosage: 30 g/hL

Suspend NUTRIENT VIT END™ in water, must or wine (1 kg in 10 L).

Add to the ferment to be treated. Ensure well mixed after addition.

#### **Preventative**

Use 30 g/hL (300 ppm) of Nutrient Vit End™ early in fermentation when a challenging fermentation is predicted (such as high osmotic pressure, high potential alcohol or low turbidity etc).

#### For sluggish fermentation

Use 30 g/hL (300 ppm) of Nutrient Vit End™ when a potential problematic fermentation becomes evident. It is best to add NUTRIENT VIT END™ when the fermentation rate starts to indicate a potential problem, rather than waiting until it has practically stopped, as at this time, the yeast cells may have already been significantly compromised. NUTRIENT VIT END™ can be added at any stage of alcoholic fermentation.



OMRI (Organic Materials Review Institute) is a US national nonprofit organization that determines which input products are allowed for use in organic production and processing.

## PACKAGING AND STORAGE

- 2.5 kg foil sealed bags.
- When stored in a dry environment at 25 °C or lower in sealed packs, the shelf life of NUTRIENT VIT END™ is 3 years from the manufacturing date.

Distributed by:

#### C.A.L LTD

3-34 Mihini Road, Henderson, Auckland 0610 john@cal.org.nz | www.cal.org.nz +64 21 505 331

The information in this document is correct to the best of our knowledge. However, this data sheet should not be considered to be an express quarantee, nor does it have implications as to the sales condition of this product. May 2024.















