



# FERMAID® O

NATURAL YEAST-DERIVED FERMENTATION NUTRIENT



**100% yeast autolysate, OMRI listed, natural with no additives.**

## APPLICATION

Lallemand spent many years determining the best combination of yeast autolysates composed of amino acids, peptides and micronutrients that gave the best kinetic and sensory outcomes during alcoholic fermentation.

**FERMAID® O** contains 100% natural yeast derived components rich in organic nitrogen and essential vitamins and minerals. It does not contain any inorganic nitrogen (e.g. no DAP).

**FERMAID® O** is at the highest level of amino acids as permitted and defined by the OIV (OIV-OENO-496-2103). The OIV only permits amino acids from yeast source.

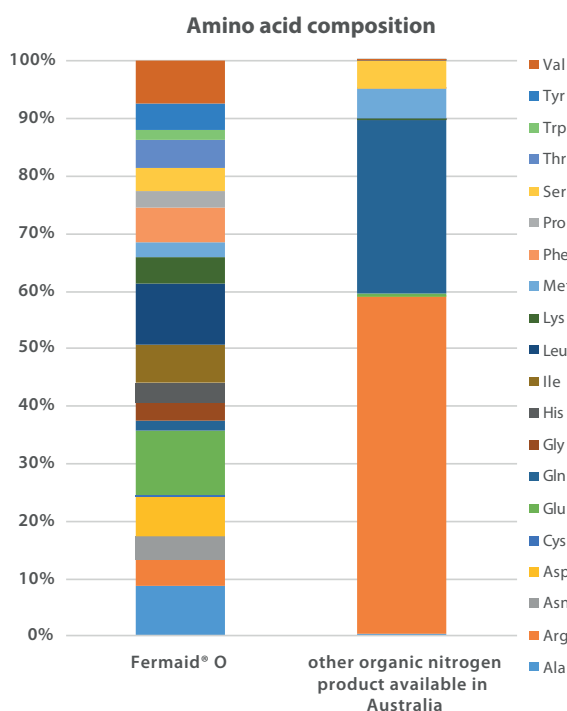
**FERMAID® O** is OMRI Listed, and registered with ACO and BioGro. For market specific organic compliance, please contact your organic certifier.

Lallemand emphasises that YAN is not the only answer for smooth and complete alcoholic fermentations. Lipid content (from rehydration products), high quality FAN, vitamins and minerals are key factors that are provided by **FERMAID® O**.

**FERMAID® O** supplies well-balanced nutrients for yeast:

- Highly bio- available amino acids and peptides. The speed and uptake of most amino acids is slower compared to  $\text{NH}_4^+$  salts. It is postulated that these amino acids are stored within the cell and used later in fermentation, hence reducing the tailing off of fermentation rate at the end of fermentation.
- Micronutrients, naturally present in **FERMAID® O**, such as vitamins (thiamine, biotin, pantothenic acid) and minerals (magnesium and zinc) all contribute to cleaner and more reliable fermentations.
- Organic nitrogen has a tremendous impact on the organoleptic qualities of wine where it increases the expression of some aromatic fruity esters.

*Fermaid® O provides a more broad and complete amino acid composition for yeast growth and metabolism.*





## KEY NOTES ON NUTRIENT DOSING FOR EFFICIENT ALCOHOLIC FERMENTATION

Initial YAN is an indicator of the nutritional composition of the must, but other factors need to be taken into consideration that also dictate the quantity of nutrient that is needed to ensure complete fermentation.

Factors affecting nitrogen utilization and requirements

- pH: Active transport systems are affected at low pH. High pH optimum for ammonium transport.
- Ethanol toxicity: Active transport process such as amino acid accumulation is inhibited in the presence of alcohol.
- Temperature: the rate of accumulation of amino acids is reduced at low temperatures.
- Plasma membrane composition: low sterols will reduce the efficiency of nitrogen transport.
- Yeast strain: different yeast strains have different nitrogen requirements and rates of assimilation; refer to the datasheet for the yeast to be used.
- Wild yeast: will provide competition for nitrogen sources.
- Yeast Dose rate: The use of DAP can lead to a yeast biomass higher than required, hence leading to a higher nitrogen demand than initially anticipated.

### **Actual YAN verses 'YAN Equivalent' requires a special mention.**

- **Actual YAN** is how much Yeast Assimilable Nitrogen is present in the product (mg/g) or present for a given dose of a product mg/L. A 40g/hL (400 ppm) dose of **FERMAID® O** provides 17.2mg/L of YAN.
- Lallemand has demonstrated that 'organic' YAN is 2.5 times more efficient than inorganic YAN on a per mg basis. Hence a 40g/hL (400 ppm) dose of **FERMAID® O** has a YAN equivalent (to inorganic) of 48mg/L.

Circumstances such as fruit quality, variety, winemaking practice, must parameters, yeast nutrient demand and cellar conditions are infinitely variable and impact on yeast performance.

## GUIDELINES FOR USE

**Re-suspend FERMAID® O in 10x its weight in water. Ensure it is well dispersed with no lumps, then add immediately to the tank.**

### **Dose Rate of FERMAID® O:**

A 40g/hL (400 ppm) dose of **FERMAID® O** will give 17.2mg/L of *actual*\* YAN (a YAN equivalent (to inorganic) of 48mg/L).

For Low YANs, **Fermaid® AT** is the recommended product.

### PACKAGING AND STORAGE

- Available in 2.5 kg and 10 kg bags.
- Store in a cool (below 25°C) and dry environment away from direct sunlight and strong odours.
- Shelf-life at the recommended storage temperature is 4 years from production time.

*The information herein is true and accurate to the best of our knowledge; however, this data sheet is not to be considered as a guarantee, expressed or implied, or as a condition of sale of this product.*