



# FERMAID® AT

## COMPLEX YEAST NUTRIENT

**Complex yeast nutrient with the highest level of yeast derived organic nitrogen**

### APPLICATION

**Fermaid® AT** is a blended complex yeast nutrient developed for low to moderate YAN conditions, which supplies a well balanced mix of organic nitrogen (wine yeast derived), inorganic nitrogen (DAP) and the vitamin thiamine.

- The nitrogen content of **Fermaid® AT** is composed of 50% yeast derived organic nitrogen (amino acids and peptides) and inorganic ( $\text{NH}_4^+$ ).
- Organic nitrogen is assimilated more gradually than inorganic nitrogen. Different amino acids are taken up at different rates. Once inside the cell the alpha amino acids are integrated directly into proteins, degraded into ammonium ( $\text{NH}_4^+$ ), or used to produce fruit driven esters.
- The  $\text{NH}_4^+$  component is involved in biomass production of yeast cells. Reaching critical biomass is essential for successful fermentation.
- The addition of thiamine to this complex nutrient allows for an improvement in the assimilation of both nitrogen sources and reduces the risk of off flavour production.

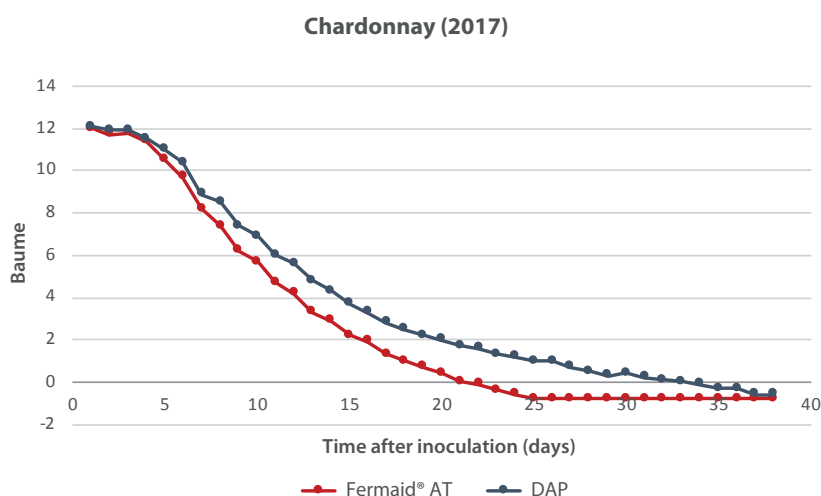
**Fermaid® AT** contains the maximum permissible level of thiamine as stipulated by the OIV / EU.

This preparation is designed to assist wine yeast in the latter half of alcoholic fermentation (AF).

When **Fermaid® AT** is used in place of a DAP-only nutrient strategy, significant improvements in the sensory profiles of the wines are also evident. Fruit driven esters and a reduction in sulphidic characters can be achieved.



Complex yeast nutrient has better efficacy compared to DAP alone.



2017 Chardonnay - Tumbarumba (NSW, Australia) fermented with **Fermaid® AT** versus DAP



## 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-only can lead to a yeast biomass higher than required, hence leading to a higher nitrogen demand than initially anticipated.
- Maximum Dose for New Zealand produced wine destined for EU is 40g/hL (400 ppm)

## GUIDELINES FOR USE

**Re-suspend *Fermaid*<sup>®</sup> AT in 10x its weight in water. Ensure it is well dispersed with no lumps, then add immediately to the tank.**

### Dose Rate of *Fermaid*<sup>®</sup> AT:

*Fermaid*<sup>®</sup> AT is recommended for low YAN conditions. A 30g/hL (300 ppm) dose of *Fermaid*<sup>®</sup> AT provides 36mg/L of actual YAN.

For moderate to high YANs Lallemand recommends to use the product *Fermaid*<sup>®</sup> O.

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

### PACKAGING AND STORAGE

- Available in 1kg, 2.5kg and 10kg foil bags.
- Store in a cool (below 25°C) and dry environment away from direct sunlight and strong odours.
- Shelf life at the recommended storage conditions is 4 years from date of production.

*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.*