# FERMOPLUS<sup>®</sup> 11

High bioavailability organic nutrient

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# TECHNICAL DESCRIPTION

**Fermoplus 11** is a 100% organic complex nutrient based on yeast hulls preparations and autolysed yeasts, rich in amino acids and trace elements. It consists of an organic nitrogen source ensuring the yeast a constant assimilation. The yeast cell, in order to grow and multiply, needs to synthesize protein and metabolic enzymes indispensable for a correct development. The shortcomings of RAN (readily assimilable nitrogen) in musts may cause fermentation problems, generating risks such as: prolonged latency times, slow or irregular fermentations, stuck fermentation, etc. Fermoplus 11 also improves the fermentation kinetics, thanks to its easily assimilable components, allowing minimizing the production of hydrogen sulphide during the fermentation stage and improving the aromatic profile of wines because of the presence of the alpha-amino nitrogen sources, guaranteeing the production of esters and acetates of higher alcohols, according to the pathway described by Erlich. The immediate assimilation of arginine, isoleucine and leucine improves the conditions of musts with RAN values lower than 180 ppm, promoting a better yeast multiplication and producing a good biomass with lower latency times, thanks to the permease (GAP) carrier dedicated to the transport of amino acids inside the cell, which undergoes a negative feedback in the lack of amino acids. The specific amino acid profile allows obtaining wines with an interesting aromatic profile: citrusy, with light flowery notes and, in some cases, with notes of aromatic plants. Its balanced formulation, with adsorbent and nutritional components, grants the elimination of long chain fatty acids that, in the final stages of the alcoholic fermentation, could inhibit the yeast, causing a stuck fermentation. The assimilation of **Fermoplus 11** is particularly quick, thanks to a thermo-enzymatic hydrolysis of the yeast cells during the production stage. It is suggested a fractionated utilization in three steps from the start of the fermentation.

# -> COMPOSITION AND TECHNICAL CHARACTERISTICS

Yeast cell walls, yeast autolysates.

#### -> DOSAGE

From 20 to 40 g/hL. Fermoplus 11 supplies 3,6 ppm\* of RAN for a dosage of 10 g/hL.

## → INSTRUCTIONS FOR USE

Dissolve into the must and add into the rehydration container or the tank. Add to the must after the start of the tumultuous fermentation, not later than 72 hours from its start.

## STORAGE AND PACKAGING

Store in a cool dry place, away from direct sunlight and heat. 20 kg net bags.

\*Amount obtained by spectrophotometric-enzymatic analysis.

Spectrophotometric methods are used, that separately identify the values forming RAN: Ammonium ion and nitrogen from the primary groups of alpha amino acids, organic nitrogen. The analysis of organic nitrogen, N-OPA technique, is not specific for the amino acid Proline, as it is not detectable due to the presence of secondary groups; it is also an amino acid that is not readily assimilated by the yeast. These values may differ from the results obtained using the Total Kjeldahl Nitrogen (TKN) method, which identifies all the nitrogen present. The range of error in measurement and production is  $\pm 10\%$ .

