CLIMAX® PRIME

Yeast autolysate to ensure the bioavailability of vitamins in the musts

CHARACTERISTICS

CLIMAX® PRIME is a yeast autolysate rich in vitamins of oenological interest.

- **CLIMAX® PRIME** provides the must with vitamins and amino acids from yeast autolysates in a form that is directly available to yeasts. It thus promotes optimal alcoholic fermentation.
- **CLIMAX® PRIME** facilitates the implementation of *Saccharomyces cerevisiae* and accelerates fermentation.
- **CLIMAX® PRIME** prevents nitrogen deficiencies that could lead to the production of undesirable sulfur compounds such as H_2S.
- **CLIMAX® PRIME** is particularly recommended for bioprotection after the use of *non-Saccharomyces* yeast. Indeed, it provides the must with vitamins and amino acids partially consumed by non-*Saccharomyces*.

TECH POINT

Climate change and bioavailability

Vitamins are essential compounds in yeast metabolism where they are involved in several key reactions. The most recent studies have made it possible to know more precisely the major role they play within yeast and the latter's preferential needs. More broadly, OENOFRANCE® has been able to observe their impact on the winemaking process and in particular alcoholic fermentation.

Global warming is changing the composition of musts and the bioavailability of vitamins observed is increasingly reduced. **Given their importance, it is necessary to readjust the must using carefully identified vitamins.**

TEST RESULTS

1 – THE VITAMIN DIVERSITY OF GRAPE MUST

The comparison of Chardonnay musts from Burgundy and Champagne showed that **the geographical region of origin has a significant influence on the vitamin composition of the musts**. Of the 19 vitamers* analysed, 9 are more concentrated, mainly in Burgundy musts and in particular for vitamin B6. These results are illustrated on the heatmap opposite (Figure 1).

This diversity of forms and concentration, illustrated here with the regional factor, highlights **the need to supplement the must with vitamins**.

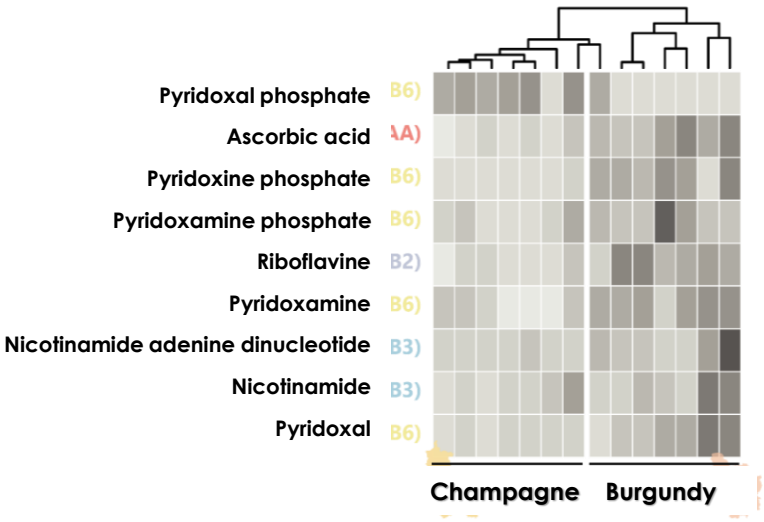

Figure 1. Heatmap of the concentrations of vitamers* of Chardonnay musts from Burgundy and Champagne. A darker block indicates a higher concentration, a lighter block a lower concentration.
*A vitamer is a chemical form of a specific vitamin.

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2 – THE VITAMIN REQUIREMENTS OF YEAST

Vitamins play a key role during fermentation. The absence of some of them in the must leads to a **lengthening of the exponential growth phase**, a **decrease in the kinetics of multiplication** and can lead to an **overall slowing down of the AF** (Figure 2).
The formulation of **CLIMAX® PRIME** has been designed to compensate for this imbalance and ensure the smooth running of fermentation.

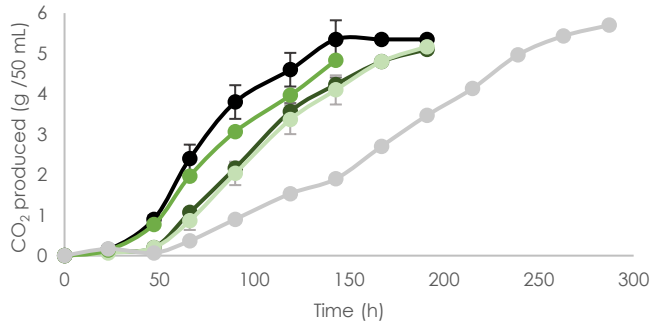

Figure 2. Monitoring of the fermentation kinetics of a strain of *Saccharomyces cerevisiae* yeast selected and inoculated at 20 g/hL in the presence or absence of a more or less diluted vitamin pool. Results subject to statistical analysis (Kruskal-Wallis; p<0.05).

- Control
- Vitamines diluted at 1/2
- Vitamines diluted at 1/5
- Vitamines diluted at 1/10
- No vitamines

APPLICATIONS

- 100% organic nutrient, rich in vitamins and amino acids essential to yeast.
- Supplements the availability of the must's vitamin pool.
- Ensures yeast growth and smooth fermentation.
- Targets a current problem and responds to a future challenge.
- Tool for your sustainable agro-oenology programs.

INSTRUCTIONS FOR USE

Disperse **CLIMAX® PRIME** in 10 times its weight of water or wort and homogenize well.
Incorporate into the volume to be treated at yeasting and at the latest before the first third of alcoholic fermentation. Homogenize by pumping over.

Precautions for use:
Product for oenological and exclusively professional use.
Use in accordance with current regulations.

DOSAGE

Recommended dose: 20 to 40 g/hL.
In case of high temperatures (>35° C), use the maximum dose.

PACKAGING

1 kg and 10 kg bags.

STORAGE

Solid, original sealed packaging, protected from light in a dry, odor-free place.
Open packaging: use quickly.

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