

AROMACTIVIT 1&2

OPTIMIZING FERMENTATION

Enhancement of the yeast's aromatic metabolism

↓ OENOLOGICAL APPLICATIONS

The **AROMACTIVIT 1&2** procedure is based on the combined actions of two specific nutrients, which are added in two stages:

- first, **AROMACTIVIT 1** is added, just after the yeasts have been introduced. The aim is to increase the biomass of the yeast to the point where it can guarantee a high level of aromatic release and avoid overpopulation or nutritional imbalances.
- secondly, **AROMACTIVIT 2** is added a third of the way through alcoholic fermentation, with the aim of redirecting the metabolic flows towards aroma biosynthesis.

This optimization of the secondary metabolism of the yeast brought about by **AROMACTIVIT 1&2** leads to higher levels of varietal and fermentative aromatic compounds.

↓ DOSAGE AND INSTRUCTIONS FOR USE

- 1- straight after adding the yeasts: add 25-30 g/hl of **AROMACTIVIT 1** to the must.
 - 2- 1/3 of the way through fermentation (after a 30-point reduction in density): add 15-25 g/hl of **AROMACTIVIT 2** to the fermenting must.
- In the event of severe imbalances (+/- 90 mg/l of bioavailable nitrogen): at the beginning of AF, supplement with ACTIVIT AD (10-20g/hL) and 1/3 of the way through AF, with diammonium phosphate (15-30g/hL).
- Stirring vigorously, make a suspension of **AROMACTIVIT 1** and **AROMACTIVIT 2** in either warm water or must (10 parts liquid to 1 part product). After the product has been incorporated into the must, perform a pump-over to ensure it is mixed in evenly. Once the formula has been prepared, it must be used the same day.

↓ CHARACTERISTICS

Composition of AROMACTIVIT 1 :

Yeast autolysate (*Saccharomyces cerevisiae*): organic nitrogen content <11.5% dry matter (nitrogen equivalent) and amino acid content between 10-20% dry matter (glycine equivalent).
Inactive yeasts (*Saccharomyces cerevisiae*): organic nitrogen content <9.5% dry matter (nitrogen equivalent).
Thiamine dichloride (0.1%)

Composition of AROMACTIVIT 2 :

Yeast autolysate (*Saccharomyces cerevisiae*): organic nitrogen content <11.5% dry matter (nitrogen equivalent) and amino acid content between 10-20% dry matter (glycine equivalent).
Diammonium phosphate
Thiamine dichloride (0.1%) 1 kg

↓ PACKAGING AND STORAGE

- 1 kg, 5 kg

Store in a dry and odour free environment at a temperature between 5 and 25°C.

Once the package has been opened, the product must be used rapidly and can no longer be stored.



Two key mechanisms linked to aroma release during fermentation

The yeast enables the release of the aromas contained in the grapes in two stages:

1) a transportation stage, where the inodorous aroma precursor already in the must is conveyed inside the yeast. This process is facilitated by the high level of stability of the yeast membrane, which depends on sufficient bioavailability of minerals and sterols.

This activity is enhanced by the presence of membrane transporters, made possible by bioavailable nitrogen. However, we should point out that this transportation across the membrane is repressed by ammoniacal nitrogen.

2) Enzymatic conversion of the aroma precursors into active aromas. These transformations are the result of complex balancing of the various metabolic paths of the yeast. The bioavailability of zinc helps direct the flow towards aroma release, thereby avoiding the accumulation of intermediate metabolites such as acetaldehyde and acetic acid.

Precursors (amino acids, thiol precursors)

1. Acquisition (transport) of the aroma precursors in the yeast (membrane mechanism)

Precursors (amino acids, thiol precursors)

2. Enzymatic conversion / liberation

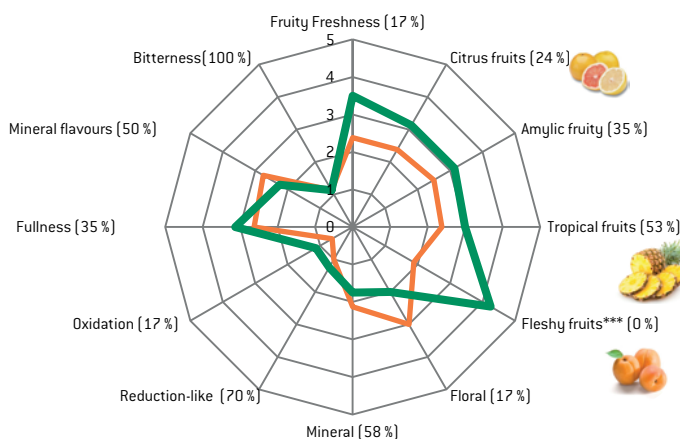
Aromas (thiols, esters)

Aromas (thiols, esters)



The **AROMACTIVIT 1&2** procedure performs a key role in these two mechanisms. It also leads to more yeast being in the right physical condition to release aromas, while avoiding some of the negative effects (repression of aromas, H₂S, etc.) of rising ammonium content (which increases the biomass to the detriment of the physical conditions of the yeasts).

Proven results on varietal aromas during fermentation



In the various tests performed, application of the **AROMACTIVIT 1&2** procedure brought about a significant increase in the expression of aromas associated with fermentation. This led to fuller expression of fruity and floral notes, both when the yeast nutrition was 100% mineral and when mixed nutrition was used. Therefore, there is a real release of varietal aromatic potential above and beyond the nutritional needs of the yeast.

— Activit AD (20 g/hL start Af + 20 g/hL 1/3 FA)
— Aromactivit 1&2 Procedure