IOC
Révélons votre différence

DATA SHEET

ACTIVIT O

OPTIMIZATION OF FERMENTATION

100% organic balanced nutrient for top quality fermentation
Maximum legally permitted quantity (due to the presence of thiamine): 40 g/hL.

OENOLOGICAL APPLICATIONS

ACTIVIT O is a nutrient made exclusively from organic nitrogen and rich in thiamine. Based on deactivated yeasts, it also provides minerals and other essential vitamins for yeast cultures.

ACTIVIT O therefore aids the regulated growth of yeasts, allowing them to attain a biomass sufficient for full alcoholic fermentation whilst avoiding the occurrence of overpopulation, a source of difficulties during fermentation with the development of sulphurous odours. The physiological condition of each yeast cell is also optimised.

ACTIVIT O also helps the aromatic expression of:

- Fermentation aromas, by directly providing amino acids, sources of fruity and floral esters,
- Varietal aromas, by avoiding any inhibited release of fruity thiols due to an excess of ammonium salts.

In addition, **ACTIVIT O** limits the production of SO_2 sometimes found with the use of ammonium salts and increases the effectiveness of adding sulphites, since the presence of thiamine limits the combination issues.

It may be used for the production of organic wines(1) too, since **ACTIVIT O** satisfies both the yeast's nutritional requirements and the wine's sensorial quality targets whilst also conforming with the spirit of rational and natural winemaking where the science of oenology is used for prevention rather than cure.

DOSE RATE AND INSTRUCTIONS FOR USE

• 10 to 40 g/hLdepending on, amongst other things, the assimilable nitrogen in the must, the strain of yeast being used, the concentration of sugar to ferment and the target product.

We generally advise adding **ACTIVIT O** twice; once immediately after adding the yeast to the must and again at one third of the way through alcoholic fermentation. In cases of significant deficiency, top up with DIAMMONIUM PHOSPHATE (DAP) one third of the way through alcoholic fermentation.

Make a suspension of **ACTIVIT O** in 10 times its own volume of water or must. After incorporation, thoroughly blend into the must by pumping over or by stirring.

Deficiency of assimilable nitrogen in the must	Addition when adding yeast to the must	Addition at 1/3 of alcoholic fermentation (drop of 30 to 40 specific gravity points)
High	ACTIVIT O (20 g/hL)	ACTIVIT O (20 g/hL) + DAP
Average	ACTIVIT O (10 g/hL)	ACTIVIT O (10 à 30 g/hL)
Low	ACTIVIT O (10 g/hL)	ACTIVIT O (10 g/hL)

PROPERTIES

- Origin: *Saccharomyces cerevisiae*, thiamine hydrochloride.
- A solid format preparation containing insoluble particles.

PACKAGING AND STORAGE

• 1 kg bags

Store in a dry place at room temperature, free of odours. Once the bag has been opened, the product must be used quickly and cannot be kept. Once prepared, the product must be used within one day.

(1) As per EU Regulation 203/2012, Annex VIIIa amending CE Regulation 889/2008 concerning the application of the Council's CE Regulation 834/2007 in respect of organic wines. It is your own responsibility to check with your certifying body to ensure that this product complies with your charter. This document is an interpretation of current regulations that we have tried to make as accurate as possible. Under no circumstances can the IOC be held responsible for any errors of assessment or for any damages related to the use of this guide unless otherwise confirmed.

Institut Œnologique de Champagne
ZI de Mardeuil - Allée de Cumières
BP 25 - 51201 EPERNAY Cedex France

Tél +33 (0)3 26 51 96 00
Fax +33 (0)3 26 51 02 20
www.ioc.eu.com

VERSION 04-03-14/A

IOC
Révélons votre différence

DATA SHEET

ACTIVIT O

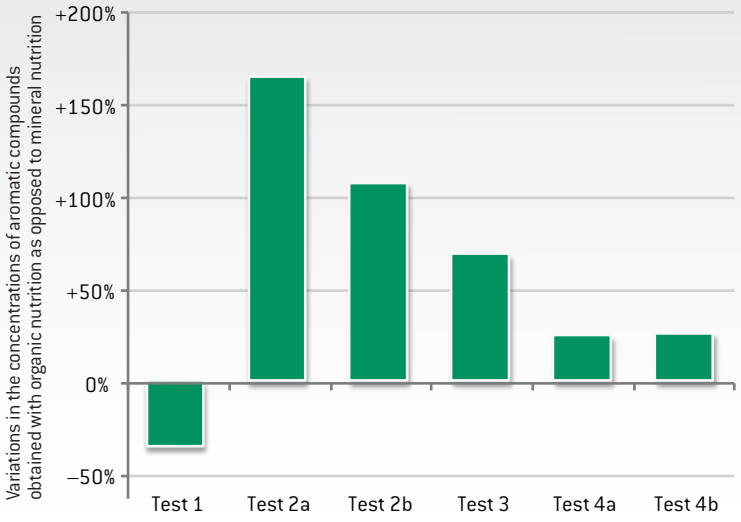
The essential nutrient for grapes to express their aromatic potential

Recent studies have revealed the phenomenon of an inhibited release of varietal thiols when a yeast is in the presence of excessive ammoniacal nitrogen. In short, the passage of thiol precursors into the yeast cells is suppressed.

During our experiments, we have also seen that feeding with **ACTIVIT O**, as opposed to DIAMMONIUM PHOSPHATE (DAP), significantly helps to release 3SH, the fruity thiol responsible for citrus and passion fruit notes.

Likewise, certain fruity and floral esters have been better expressed using organic nutrition.

The 'fruit' thiol, 3SH: Gains obtained using organic nutrition compared with DAP



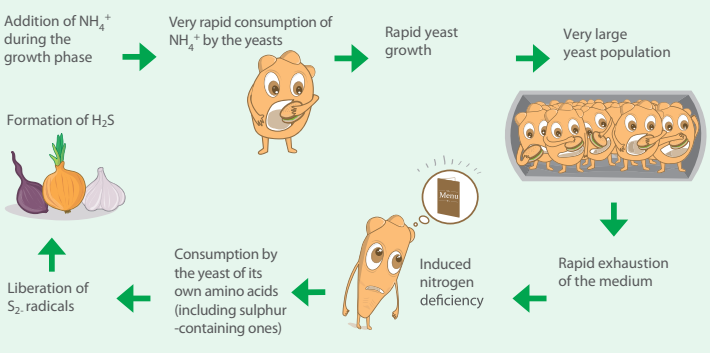
Sauvignon tests - Centre - IOC REVELATION THIOLS yeast – Addition of thiamine - 2010 and 2012 vintages

Overpopulation, the first harmful effect of malnutrition in yeasts

Ammoniacal, or mineral nitrogen is assimilated by the yeast in a few hours. At the start of fermentation, the addition of ammoniacal nitrogen is thus likely to cause overpopulation in the yeast. In order to feed itself, this gigantic biomass will quickly consume all the nutrients in the must, leading to a very harmful deficiency. In essence, the yeast must then use its own sulphur-containing amino acids, which will lead to the development of sulphurous odours. Any supplementary addition of ammoniacal nitrogen at this stage can only worsen the overpopulation situation.

Organic nitrogen, however, is made up of different amino acids that are assimilated in a slow and regular fashion by the yeast. The addition of **ACTIVIT O** therefore allows the yeast to combat the problems of overpopulation and induced deficiency.

The effect of adding ammoniacal nitrogen (NH_4^+) during the yeast's growth phase



Institut Œnologique de Champagne
ZI de Mardeuil - Allée de Cumières
BP 25 - 51201 EPERNAY Cedex France

Tél +33 (0)3 26 51 96 00
Fax +33 (0)3 26 51 02 20
www.ioc.eu.com

VERSION 04-03--14/A