

# ECORCES DE LEVURES

## YEAST HULLS FOR PREVENTIVE AND CURATIVE TREATMENTS OF FERMENTATION PROBLEMS

### CHARACTERISTICS

- ◆ **Ecorces de levures** are yeast hulls for enological applications. They result from the autolysis by their own proteolytic enzymes of *Saccharomyces cerevisiae* yeasts.
- ◆ These insoluble cell walls are obtained by centrifugation, washed with a hydro-alcoholic solution to limit the risks of yeast aromas and dried using a method, which respects their surface and thus, their adsorption capacity.
- ◆ They are sold as a fine, cream colored, non-hygroscopic powder with a slight aroma. They do not leave harmful residues in grape musts and wines.
- ◆ **Ecorces de levures efficiently stimulate alcoholic fermentations** by acting as a survival factor. The stimulating action of the hulls is based on their capacity to adsorb certain substances that are toxic to yeasts such as decanoic acids, pesticides residues, which are produced by the yeasts themselves during their growth in must. Additionally, **Ecorces de levures** release sterols that protect yeasts from stress during the fermentation (particularly alcohol related stress).

Recent experiments showed the benefits of using **Ecorces de levures** to improve the vinification of musts containing pesticide residues.

**Ecorces de levures** partially removed pesticide residues with different results according to the type of pesticide (figure 1). Additionally, the course of the fermentation was improved, the amount of volatile acidity decreased and more higher esters were produced (Figure 2).

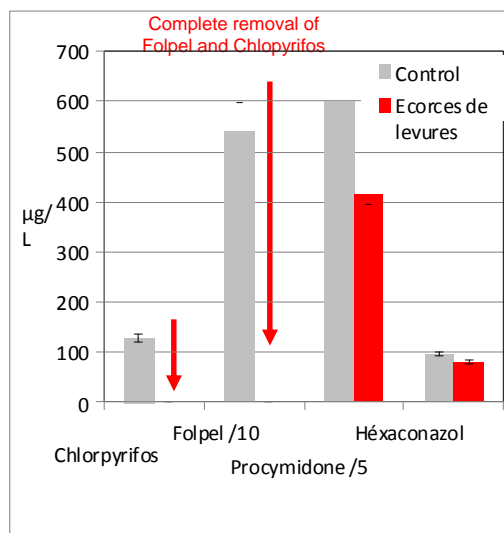


Figure 1: Pesticide analysis at the end of the AF in a control and a must treated with 40g/hL of **Ecorces de levures** (Viura grape variety, 2008)

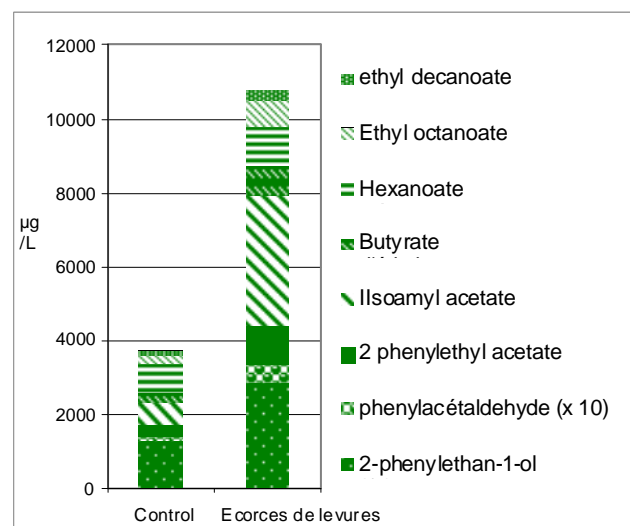


Figure 2: Aroma analysis after AF in a control and a must treated with 40g/hL of **Ecorces de levures** (Viura grape variety, 2008)

## FIELD OF APPLICATION

- ◆ Can be used as preventive or curative treatment with potentially difficult alcoholic fermentations:
  - Highly clarified grape musts with high amount of sugars (above 200 g/hL),
  - Poor quality grapes (particularly grey rot),
  - Presence of pesticide residues,
  - High temperature fermentation (up to 34 °C),
  - Sluggish or stuck fermentations.

## APPLICATION RATES

- ◆ Preventive must detoxification:  
Add 20 to 40 g/hL to the must before clarification, ensure proper homogenization and remove the hulls together with the sediments.
- ◆ Stuck fermentation: prevention  
Add 10 to 30 g/hL (depending on risks) to the must once the first 50 g/L of sugars have been fermented.  
Red vinification: add during pumping over under the cap.
- ◆ Stuck fermentation: treatment  
Add 30 to 40 g/hL to the wine treated with 2 to 3 g/hL of SO<sub>2</sub> after draining. Carry out two pumping over to improve the contact of hulls with the wine. Add the yeasts that have been acclimatized in a pied de cuve 24 hours after treatment.

## REGULATION

- ◆ The use of yeast hull preparations is authorized by the Regulation No1493/1999: maximum application rate: 40 g/hL.

## QUALITY – SAFETY – ENVIRONMENT

- ◆ Traceability: the lot number on every **Ecorces de levures** package allows tracing (origin of the product) and tracking (from product to consumer).
- ◆ Safety – environment: handling of **Ecorces de levures** does not constitute any hazard to the user.

## PACKAGING

- ◆ 500 g sachet - 20 x 500 g box.

## STORAGE

- ◆ Keep full, unopened package away from light in a dry and odourless area.
- ◆ Open package: use rapidly.

## BIBLIOGRAPHY

**Martin A.**, 2011, Amélioration de la vinification des moûts présentant des résidus de pesticides, *Rhône en VO n°5* (à paraître en juillet 2011)