



FOCUS // CELEBRATE 20 YEARS OF EXTRALYSE™

A **UNIQUE** enzyme formulation of pectinases and β -(1-3; 1-6) glucanases with secondary activity. Allows for optimisation and acceleration of winemaking and ageing processes.

ACCELERATES YEAST AUTOLYSIS

Ageing on lees is an enzymatic degradation of yeast cell compartments (commonly known as "yeast autolysis") leading to cell-wall degradation. This process results in a reduction in the molecular weight of soluble or insoluble compounds such as glucans, proteins, polypeptides, mannoproteins and polysaccharides. These smaller-sized subunits can be diffused and improve the structure, texture and stability of the wine.

Research work on enzymatic phenomena taking place during wine ageing. Anne Humbert (2005).

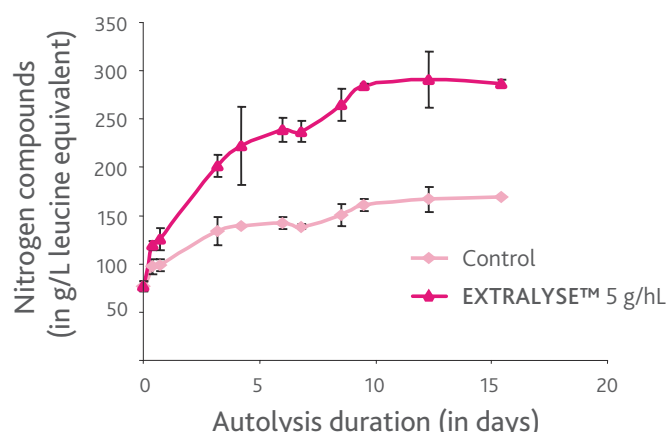


Table 1: Peptide fractions during yeast autolysis - 154 days.

Procedures compared	Molecular fraction 0.5 - 3KDa	Molecular fraction 3 -10 KDa	Molecular fraction >10KDa
Without added enzyme	110 mg/L	10 mg/L	60 mg/L
With EXTRALYSE™ 5 g/hL	200 mg/L	20 mg/L	90 mg/L

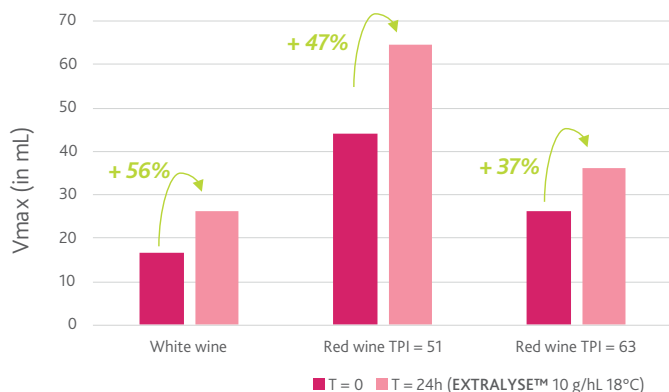
Figure 1: Monitoring yeast autolysis by measuring the concentration of nitrogen compounds released in a model medium (in mg/L leucine equivalents) with and without EXTRALYSE™ 5 g/hL. Experimental design: alcoholic fermentation of a synthetic must with the yeast *Saccharomyces cerevisiae* 522 D.

This study shows that the specific enzymatic formulation EXTRALYSE™ accelerates yeast autolysis by favouring the release of a larger quantity of molecules of interest, while also improving wine filterability and clarification.

This study allowed the isolation of three peptide fractions; the smallest sized (0.5 to 3 KDa) gave the wines an impression of sweetness, detectable after ageing on lees. The use of EXTRALYSE™ at 5 g/hL allowed the release of twice the quantity of this fraction compared to a control without enzyme (see table).

IMPROVES FILTERABILITY

Use of **EXTRALYSE™** favours hydrolysis of long-chain colloids, responsible for clogging filters. The Vmax index (Figure 2) shows a remarkable improvement in filterability for the wines treated with **EXTRALYSE™**.

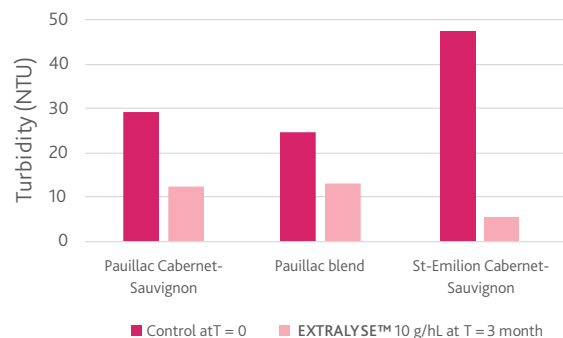


Impact of **EXTRALYSE™** on wine filterability, dose 10 g/hL, contact time 24h at 18°C.

VMax = maximum volume at clogging.
Makes it possible to assess wine filterability.

IMPROVES CLARIFICATION

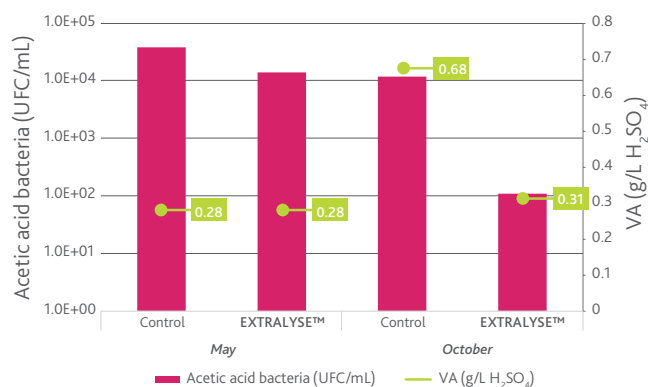
The use of **EXTRALYSE™** at a dose of 10 g/hL significantly reduces turbidity, thus improving wine clarification.



Turbidity values after treatment with **EXTRALYSE™** at 10 g/hL.

REDUCES THE MICROBIAL LOAD

EXTRALYSE™ decreases the microbial load on colloids by improving the sedimentation of suspended particles.



Impact of treatment with **EXTRALYSE™** on the acetic acid bacteria population and VA of a wine during aging.



Add from halfway through the alcoholic fermentation and up to 3 weeks before bottling your wines.



LAFFORT & YOU