

R A N G E

RAPIDASE®



### **The enological enzymes**

*Grape berry pectic polysaccharides are constituted of galacturonic acid hairy chains.*

*In grape must, the structure and quantity of these molecules depends mainly on the grape variety, its level of maturity and pre-ferment processes.*

*The physical and chemical properties of pectin (gel, water retention...) unease fundamental winemaking steps: pressing, clarification, color extraction and filtration.*

*Pectolytic enzymes are naturally present in grape berry cell walls where they play a role in the maturing process but they are inactive at must pH.*

*Glucans, macromolecules produced by Botrytis cinerea, unease must clarification and wine filtration.*

*Endogenous enzymes and clarification methods have no effect on glucan content.*

*Grape processing releases Terpenes, grape varietal aroma, in their odorless form.*

*Their spontaneous hydrolysis is slow.*

*The use of enological enzymatic preparations is an undeniable tool to improve winemaking processes: extraction, maceration, clarification, aroma release.*

## **Express the potential of your harvest.**

In winemaking, the complete break down of the pectin chain requires several specific enzymatic activities, one for each type of linkage: pectin Lyase, pectin methyl esterase, polygalacturonase, arabinase...

DSM Food Specialties research and application service, expert in Aspergillus niger fermentations in submerged cultures has developed a range of enzymatic preparations with specific activities perfectly suited to enological applications.

RAPIDASE® offers winemakers and enologists enzymatic formulations with an ideal balance between principal and side activities: pectinase, hemicellulase, glycosidase,  $\beta$ -glucanase...

Most of our products are N.F.C.E. (Naturellement Faible en Cinnamyl Estérase) which means that our products naturally contain negligible levels of unwanted side activities (Cinnamyl esterase, anthocyanase...).

DSM Food Specialties enzymes are produced and formulated in compliance with the OIV regulation under the strictest quality control norms (ISO 9002certified production).

Wine enzymes

Enzymes

Enzymes

Wine enzymes

# With RAPIDASE®, stay ahead of the game!



## POLYPHENOL EXTRACTION AND STABILISATION

RAPIDASE® EX COLOR contains pectinase and hemicellulases activities to allow advanced and fast grape phenolic compounds extraction during maceration.

RAPIDASE® EX COLOR

## RED WINES CLARIFICATION AND FILTRATION

RAPIDASE® CR contains specific pectinases that efficiently lower viscosity, easing filtration and fining agents action, allowing fast red wines clarification.

RAPIDASE® CR



## WHITE GRAPE PRE-FERMENT MACERATION

RAPIDASE® X-PRESS used at the crusher or in pre-ferment skin maceration increases free run juice yields, eases pressing and clarification.

RAPIDASE® X-PRESS

## AROMA RELEASE

AR2000 is a pectinase preparation with glycosidase side activities. Its use allows an optimization of the natural process that transforms odorless glycosilated aroma precursors into free aroma.

AR 2000



## WHITE CLARIFICATION

RAPIDASE® CB rapidly breaks down polysaccharides long chains. The reduction in viscosity and electrostatic interactions allows fast clarification and improved lees compaction.

RAPIDASE® CB

## MULTI-PURPOSE ENZYME

RAPIDASE® CX has been specifically developed for pectin break down in enology. Its use completes the action of grape endogenous pectinases.

RAPIDASE® CX



## FILTRATION AND AGEING ON LEES

RAPIDASE® FILTRATION pectinases and  $\beta$ -glucanases hydrolyse filter clogging molecules. Its use during ageing on lees, speeds up the natural yeast autolysis process and releases manoproteins.

RAPIDASE® FILTRATION



Most of our enzyme naturally contain negligible levels of cinnamyl esterase.