



## ENZYMATIC FORMULATION FOR IMPROVING AGEING ON LEES AND WINE FILTERABILITY



### DESCRIPTION AND APPLICATION

LALLZYME MMX™ is a microgranulated enzymatic preparation for the improvement of wine filterability and clarification of must from botrytized grapes and for ageing on lees. It contains pectinases, obtained from *Aspergillus niger*, and  $\beta$ -glucanases, originated from *Thricoderma harzianum*.

The action of this special enzymatic formulation is possible in two different scenarios.

1. In case of contamination of *Botrytis cinerea*, glucans come from grapes to must and, then, to wine. These glucans create problems in wine clarification and filtration, with a reduction of wine quality and an increase of cost and time for processing it.  $\beta$ -glucanase activities contained in LALLZYME MMX™ are able to hydrolyse these undesired glucans. The effects are an easier wine fining and less problems of filter clogging.
2. The addition of LALLZYME MMX™ in wine during ageing on lees, accelerates yeast autolysis with a faster and more abundant release of all the compounds that are inside the yeast cells, that significantly contribute to aroma complexity. Moreover, the degradation of the yeast cell wall enriches the wine in mannoproteins that are positively correlated to mouthfeel, longer taste, longevity and colloidal stability.

LALLZYME MMX™ can be used on each type of wine, white, rosé and red, in presence of wine lees.

The increased richness in polysaccharides in wine helps the malolactic fermentation start and acts positively on proteic and tartaric stability.

### LALLZYME MMX™ MAIN BENEFITS

FAST AND EFFICIENT DEGRADATION OF GLUCANS FROM *BOTRYTIS*

FASTER AGEING ON LEES

EASIER FILTRATION



## INSTRUCTION FOR USE

Add LALLZYME MMX™ in wine, tank or barrel, after the alcoholic fermentation. For ageing on lees, for a better effect on wine quality, remove the heavy lees and leave only the fine lees.

Low temperature tolerance at 13°C (55°F); the temperature strongly influences the contact time.

At 15°C (59°F) the normal contact time is between 3 and 5 weeks; at lower temperatures and in case of high glucan content, the action of the enzyme needs to be prolonged until 6 weeks or more.

In case of ageing on lees, regular stirring of lees is strongly recommended.



## DOSAGE

- ✓ 2.5-3.0 g/hL for hydrolization of glucans from *Botrytis* at temperatures above 15°C (59°F)
- ✓ 2.5-3.0 g/hL for ageing on lees at temperature above 15°C (59°F)
- ✓ 3,5-4.0 g/hL for any treatment at lower temperature, from 13 to 15°C (55-59°F)



## NOTE

The enzyme activity is not affected by normal SO<sub>2</sub> additions

LALLZYME MMX™ is a protein, do not use bentonite during enzyme treatment

A glucan test may be used to check for any residual glucans from *Botrytis* contamination.



## PACKAGING

Plastic jars  
of 100 g



## STORAGE

Store LALLZYME MMX™ in a cool and dry place,  
preferably between 5 and 15°C (41-59°F).

LALLZYME MMX™ is a Lallemand recipe, formulated based on the results of research and trials performed by Lallemand and its research institute partners, in compliance with the most complete current legislation.

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