

INOZYME CRYO

ENZYMATIC PREPARATIONS

Powerful, easy-to-use, low-temperature enzyme action.

↓ OENOLOGICAL APPLICATIONS

INOZYME CRYO is a liquid preparation of highly concentrated pectolytic enzymes that accelerate the settling out of particles from the wine must by hydrolysing the pectin, even at low temperatures (above 5°C).

Grape pectins are polysaccharides that form a tight lattice and increase the must's viscosity, thus making the settling out of the particles particularly slow. Numerous factors may increase the pectin content (e.g., a thick-skinned grape variety, osmotic stress, mechanical harvesting, forced pressing, immaturity, etc).

INOZYME CRYO offers an extremely powerful pectolytic action that, additionally, remains particularly strong at low temperatures. This formula therefore helps accelerate the clarification process whilst working at low temperatures to ease sedimentation and limit microbial growth.

Its liquid format makes it easy to use, especially in large vinification units.

↓ PROPERTIES

-Origin: concentrated and purified extracts of various strains of the *Aspergillus niger* yeast.

-Main enzymatic composition: endo- and exo-polygalacturonase, pectin esterase and pectin lyase. Contains secondary pectolytic enzymes for hydrolysing the pectic hairy regions.

-Format: liquid.

↓ DOSE RATE

1 to 8 mL/100L when clarifying musts. The concentrations to use will vary with the conditions of the process:

	Clarification of white or rosé wine musts
Minimum concentration (simple conditions)	1 mL/100L
Juice pH <3.0	+ 1 mL/100L
Juice temperature: <7°C	+ 3 mL/100L
Juice temperature: between 7 and 10°C	+ 1 mL/100L
Grape variety rich in pectin	+ 1 mL/100L
Mechanical harvesting	+ 0.5 mL/100L
Forced pressing	+ 0.5 mL/100L
Immature grapes or significant osmotic stress	+ 1 mL/100L
Pectin test positive after 2 hours	+ 2 mL/100L

↓ INSTRUCTIONS FOR USE

In order to promote uniform blending of the product, it is best to dilute the quantity of enzyme drawn off in 10 times its own volume of water. Incorporate this as soon as possible e.g., at the outlet of the wine press basket or, failing that, with the wine must in the sedimentation tank. Use a drip system, a metering pump or some other distribution system to provide uniform blending within the harvested grapes or must.

Precautions in use: Do not treat with bentonite and enzymes at the same time since bentonite has the property of adsorbing enzymes. If treatment with bentonite is necessary, this should be done after sedimentation.

Enzymes are proteins so they may have an allergenic effect on sensitive individuals. It is preferable to wear gloves when handling this product.

INOZYME CRYO

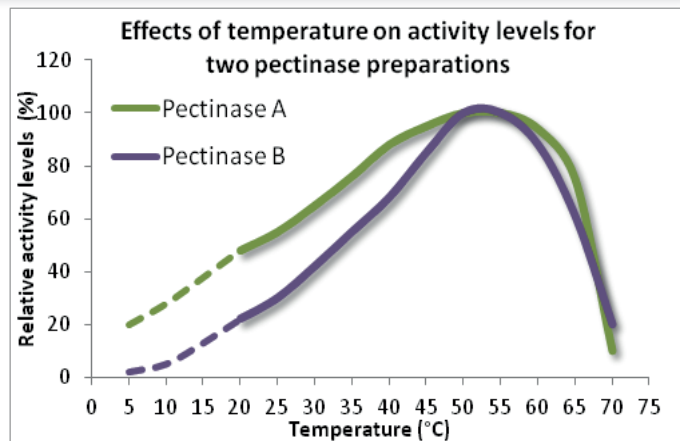
ENZYMATIC PREPARATIONS

SELECTED ENZYMES FOR LOW TEMPERATURE WORKING

The activity level of certain pectolytic enzymes increases with temperature until it reaches an optimum level (a bell curve) and then decreases until the molecules break down. The activity curves vary with the strain of the generating microorganism and the yeast's fermentation conditions.

Some enzymes therefore still have an activity level of 30% at 10°C whilst other enzymes will only have an activity level of 5% at this temperature.

In order to work quickly and effectively at low temperatures, **INOZYME CRYO** has been prepared from enzymes that work at their best under the thermal conditions found when clarifying wine musts at low temperatures.



CLARIFICATION FAQs

When clarifying, must I increase the concentration of INOZYME CRYO if the grape harvest is spoiled (Botrytis)?

Not necessarily, because **INOZYME CRYO** has no glucanase properties. In such cases it is better to use **INOZYME CLEAR**, either on its own or in combination with **INOZYME CRYO**.

If the must is too settled out (low turbidity), will I have greater difficulties with fermentation and thus an increase in volatile acidity?

Well, that's a risk but you just have to reincorporate some of the lees in order to raise the turbidity somewhat. Moreover, the use of a yeast protector when rehydrating the yeast will reduce the dangers of fermentation stress arising from low turbidity. In all cases, and especially when working at low temperatures, rapid elimination of sediments using **INOZYME CRYO** is still a good safety measure in terms of micro-biology and thus fermentation.

What are the differences between INOZYME CRYO and INOZYME LIQUIDE?

INOZYME CRYO is a preparation with a far higher pectinase concentration than **INOZYME LIQUIDE**. It is thus far more effective under difficult sedimentation conditions where **INOZYME** might prove inadequate. Moreover, its activity level low temperatures is also much higher, thus extending the performance gap even further.

PACKAGING AND STORAGE

1 L and 25 kg.

Store in a dry, well-ventilated place, free of odours and at a temperature of between 4 and 8°C. Once opened or stored at room temperatures, the product must be used quickly.