



ANTIBOTRYTIS Varietal

Vinification aid for grapes affected by *Botrytis* or grey rot



→ TECHNICAL DESCRIPTION

During too wet seasons, grape is often subject to the attacks of grey rot *Botrytis*, developing on the surface of grapes: it penetrates them and creates the ideal conditions for the development of grey rot, caused by the pollution of yeasts and bacteria brought about by fruit flies. Sometimes the only swelling of the grapes caused by the rain is enough to break the skin and to let the must come out, whose sugars facilitate the quick development of the polluting microflora.

The musts obtained from such grapes are strongly compromised from the microbiological point of view: high concentrations of apiculated yeasts (*Hanseniaspora*, *Metschnikowia*, *Kloeckera*), acetic bacteria (*Acetobacter*, *Gluconobacter*) and lactic bacteria (above all *Lactobacillus*) are in fact present.

Even from the chemical point of view, the damages caused by the development of *Botrytis* and grey rot are considerable, as high concentrations of gluconic and acetic acid can be found. There is also a decrease in the sugar concentration and in the weight of the bunches.

The most important oenological problems are caused by the presence of the laccase, an oxidizing enzyme produced by *Botrytis cinerea*, composed by a protein part and a copper atom, which is indispensable for its functioning. laccase is a non-specific polyphenoloxidase oxidizing wine polyphenols and it causes, as an indirect consequence, the production of acetaldehyde, the reduction of the free sulphur dioxide, an increase in "faded" notes, the loss of primary aromas, the darkening of white wines and an increase of orange notes in red wines.

Laccase is a very stable enzyme, it is not inactivated by alcohol, and its dangerous effects, if not inhibited, remain also in finished wines. In order to limit the effects of the laccase released by *Botrytis cinerea*, it is necessary to intervene promptly, so as to prevent as much as possible contact with air oxygen and minimize the contact of the must or wine with the affected skins, while at the same time accelerating maceration and clarification times.

Antibotrytis Varietal is a preparation based on potassium caseinate, bentonite and yeast cell wall preparations. Its particular formulation enables an early inhibition of the oxidizing activity of *Botrytis* enzymes, the removal of catechins and of the oxidized proanthocyanidins, the copper inhibition that, besides catalyzing oxidations, is indispensable for the laccase activity. The yeast cell wall preparations contained in **Antibotrytis Varietal**, besides having an antioxidizing effect, facilitate the alcoholic fermentation.

→ COMPOSITION AND TECHNICAL CHARACTERISTICS

Activated bentonite, potassium caseinate, yeast cell walls, yeast autolysates.





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→ DOSAGE

From 30 to 100 g/hL of must or per 100 kg of grapes depending on the severity of the *Botrytis* attack.

→ INSTRUCTIONS FOR USE

Dissolve in 10 parts of water and add directly to must.

→ STORAGE AND PACKAGING

Store in a cool dry place, away from direct sunlight and heat.

5 kg net bags.

