

IOC SENTINEL

STABILIZATION

To control bacterial flora before and after malolactic fermentation

↓ OENOLOGICAL APPLICATIONS

IOC SENTINEL is an innovative completely allergen free and GMO free solution, for controlling bacterial flora before and after malolactic fermentation. **IOC SENTINEL** is a new natural and vegetable technological aid consisting in an innovative mixture of polysaccharides derived from chitin.

- Stabilizes red wines after MLF avoiding the onset of the classic wine diseases
- Prevents MLF where unwanted on white and rosé wines.
- Allows the proper conservation of the Charmat bases wherever low levels of SO₂ are required for optimal start of fermentation
- It is a major alternative for those who want to work with low doses of sulphur.
- Helps to reduce the appearance of volatile acidity due to the presence of acetic bacteria
- It has a clarifying/clearing action

↓ INSTRUCTIONS FOR USE

Dose in water or wine in a volume equal to 5 times its weight mixing the solution to obtain a homogeneous suspension (no lumps).

Add the suspension progressively into the mass to be treated and proceed with the mixing of same. Leave the product for a minimum of twenty days of contact.

The kinetics of the bacterial population is best carefully monitored by a specialized laboratory. *

**Our scientific technical service is available to give support to the client in order to assess the initial conditions of the wine to be treated, the ideal dosage to be used and monitor the effectiveness of treatment over time through chemical and microbiological testing.*

↓ DOSAGE

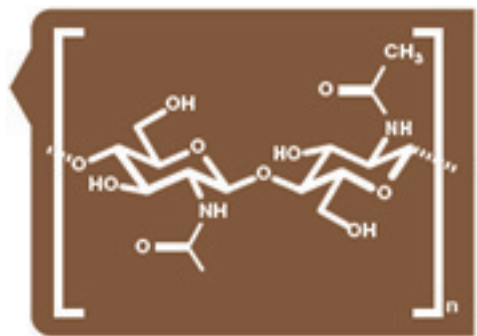
25-60 g/hl Disperse IOC-Sentinel in a volume of water or wine equal to 5 times its weight, in order to obtain a homogeneous suspension.

↓ PACKS AND STORAGE CONDITIONS

- Package 2.5 kg
- Once the solution has been prepared, use within one day. Store in a dry room, without odours, at a temperature between 10° and 25°C, protected from air and light.

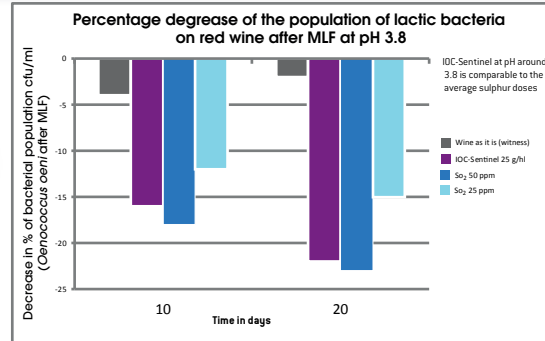
➤ **A TRULY INNOVATIVE PRODUCT: NATURAL, BIODEGRADABLE, NON ALLERGENIC AND GMO FREE. DOES NOT CONTAIN PRODUCTS OF ANIMAL ORIGIN OR SYNTHETIC PRODUCTS**

Present in many living organisms, chitin is the most abundant polysaccharide after cellulose. Among the polysaccharides of interest for humans, chitin and its main derivatives (chitosane and chitin-glucan) play an increasingly more important role. In 2003, KitoZyme innovated by developing a manufacturing process based on the use of a source of chitin of non-animal but rather plant origin. KitoZyme and IOC are working together to propose an innovative collage of products, in line with market expectations. In 2009, only chitin derivatives of vegetable origin, this new biotechnological tool, were recommended by the OIV and were authorized for use by the European Community in 2010.



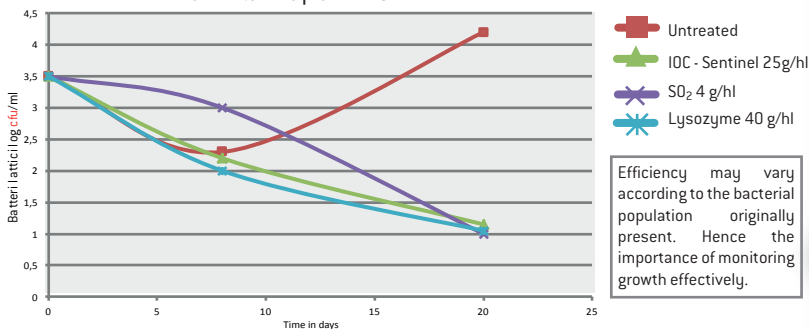
➤ **CONTROL OF POST-MLF STEPS IN RED WINE**

In red wines MLF is a very important stage in the vinification process. At the end of MLF, residual lactic bacteria can quickly become harmful through the attack of pentose, glycerol and tartaric acid developing classic organoleptic defects. The most common treatment which permits avoiding these undesirable phenomena is the use of SO₂.



➤ **DELAY OR BLOCKAGE OF MLF IN WHITE AND ROSE' WINES**

Impact on population of lactic bacteria on white wine pre MLF 2014



In white and rosé wines, MLF is undesirable in many cases, because it substantially changes the flavour of the product compromising organoleptic objectives of freshness. In sparkling wines produced using the Charmat method it is essential to maintain the base wine intact, which will be used for the second fermentation. The presence of lactic bacteria at this stage is very risky because it compromises the integrity of the mass.

As the result of the strategies and tools developed by IOC for the control of oxidation and microbiological contamination, during the pre-fermentation, fermentation and aging stages, **IOC SENTINEL** is a strong tool for the reduction of SO₂ concentrations.

