



## CLARIFICATION - FINING OF MUSTS

**Qi No(OX)™** is an “alternative to casein” and, to that end, the first non-allergenic, biodegradable formulation that contains no substances from animal or artificial origins. It has been developed especially for its anti-oxidant properties, whether with must or with wine.

### ↘ ŒNOLOGICAL APPLICATIONS

**QI NO[OX]™** is a 'technological auxiliary' consisting of polysaccharides of vegetable origin (by-products of chitin) and bentonite that assists the rapid sedimentation of the complex.

**QI NO[OX]™** has been developed especially to be used with both must and wine. It is intended for musts of white wine that have a tendency to oxidation (e.g., spoiled grape harvests) or for wines, even when oxidated.

**QI NO[OX]™** helps remove the brown colouration that forms a visual wine fault. It removes caramel and Madeira notes, bringing freshness to the wine, whilst reducing the vegetal notes and bitterness often associated with oxidation problems.

### ↘ INSTRUCTIONS FOR USE

Disperse **QI NO[OX]™** in 10 times its own volume of water over about an hour whilst stirring. There must be no lumps.

Incorporate this suspension into the must or wine through the top of the barrel and blend it in by drawing off and returning the entire volume of the barrel.

Rack off the preparation after sedimentation is complete (about 16 hours for settlement with must or one to two weeks with wine).

### ↘ DOSE RATE

- Must: 30 to 80 g/100L, from the moment the grape juice begins to flow, right up to settlement. For badly spoiled juices, the process may be carried out in the fermentation barrel using the same quantities.

- Wine(white or rosé): 20 to 60 g/100L, incorporated whenever a problem is detected or as a preventive measure wherever a risk has been discovered in the vats.

Since this product is insoluble, the product will be much more effective if blending is carried out carefully.

### ↘ PACKAGING AND STORAGE

- 1 kg, 5 kg and 15 kg

Store in a dry, well-ventilated place, free of odours, at temperatures of between 5 and 25°C.

Once prepared, the suspension is to be used the same day.



# Qi No[OX]<sup>TM</sup>

A truly innovative clarification product that is natural, biodegradable, non-allergenic and contains no substances from animal or artificial origins.

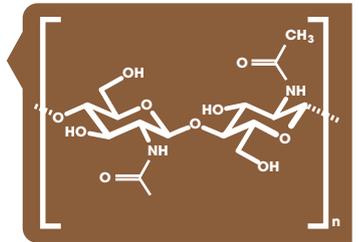
Found in numerous living organisms, chitin is the most common polysaccharide after cellulose.

Amongst the polysaccharides used by humans, chitin and its principal by-products, chitosan and chitin-glucan, are becoming more and more important.

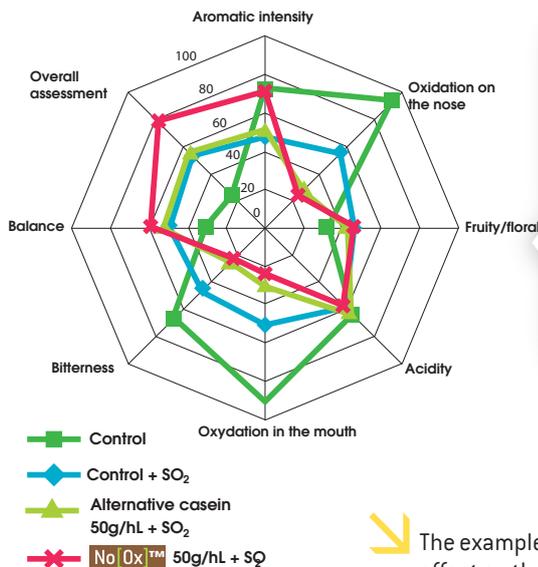
In 2003, KitoZyme started to develop a new manufacturing process based on a vegetable chitin source, rather than animal.

KitoZyme and IOC are working in partnership to provide new fining products to meet market requirements.

Only vegetable-based chitin by-products, a new biotechnology process, were recommended by the OIV in 2009 and authorised by the European Community in 2010.



In the example below, we compared an 'alternative casein' currently used with white wines that have revealed an oxidation fault. The wine was a blend of white wines from the 2010 harvest and described by the head cellar man as strongly oxidated (uncontrolled air recirculation during various transfers).



We found a strong reduction in oxidation on the nose and in the mouth – but not enough – from simply adding SO<sub>2</sub>.

Adding the Alternative Casein helped remove all the classic wine faults, proof of serious oxidation. The wine, however, was deemed to be rather 'dried up' (blamed on the presence of PVPP).

Qi No[OX]<sup>TM</sup> helped obtain a wine whose sensorial properties were significantly better than the control. There is a reduction in the 'bitterness' and 'oxidation' indicators although there is no change in the product's aromatic intensity.

In this example, 90% of the jury preferred the wine treated with Qi No[OX]<sup>TM</sup>.

The example opposite shows the colour-removal effect on the must for a quantity of 40 g/100L of Qi No[OX]<sup>TM</sup>. A product designed for identical properties and at the same concentration (containing 50% PVPP) performed less well.

