

# EnartisStab Micro & Micro M

## FAQS

### Frequently Asked Questions

#### How does chitosan work?

Chitosan is positively charged and acts on the negatively charged cell walls of bacteria leading to the breakdown of cell membranes. Its affinity to metal cations facilitates removal of prooxidant metals from solution while also destabilizing the structure of cell walls by removing structural cations. Furthermore, chitosan's ability to bind to microbial DNA effectively blocks its transcription and hinders microbial reproduction.

#### Why are Enartis' chitosan-based products more effective than the competitors?

Ours are the only chitosan products on the market in which the chitosan is pre-activated. Pre-activation with organic acids increases the charge, improves reactivity with a wider spectrum of spoilage microorganisms, and increases solubility, making it a more rapid and effective product.

#### What is the difference between EnartisStab Micro & Stab Micro M?

EnartisStab Micro M contains inactivated yeast (yeast hulls) and is designed for use in turbid juice/must and wine. EnartisStab Micro does not contain inactivated yeast and is intended for use in less turbid wines.

#### How soon do I need to rack-off after treatment with these products?

Chitosan works on contact and settles out in 2 – 3 days. Once the product is removed via racking, the wine is no longer protected. For improved efficacy when treating a wine, an initial contact time of at least half an hour via mixing is important. After initial treatment, EnartisStab Micro can remain in the wine for prolonged periods (up to 4 months) and periodic stirring/resuspension (every 1 – 2 weeks) will help prevent spoilage during ageing.

#### Can EnartisStab Micro M and Stab Micro replace SO<sub>2</sub>?

While EnartisStab Micro and Stab Micro M are TTB approved for eliminating spoilage microorganisms, wines will also benefit from this treatment by removing oxidative precursors (catechins), inhibiting oxidative enzymatic activity (laccase from rotten grapes), and chelating metals (copper and iron) responsible for oxidation reactions. For this reason, this treatment can help to replace SO<sub>2</sub> in the case of low or no SO<sub>2</sub> winemaking. Using EnartisStab Micro M in combination with [Hideki](#) is a very effective way of preventing MLF, microbial deviations, and oxidation, while keeping SO<sub>2</sub> levels low.

#### Can I use the EnartisStab Micro products instead of lysozyme to delay or prevent MLF, and stabilize my wine?

Absolutely! Lysozyme is considered an allergenic product, while EnartisStab Micro is allergen-free. Additionally, lysozyme is only effective against lactic acid bacteria, while EnartisStab Micro products can control *Brettanomyces*, wild yeast, *Acetobacter*, *Zygosaccharomyces*, and *Lactobacillus*. At 10 g/hL it is highly effective at preventing MLF and once settled and removed, MLF can proceed as normal using the [EnartisML](#) range.

**The TDS states that EnartisStab Micro products can help prevent the formation of reductive compounds, but which ones do these products help to minimize?**

EnartisStab Micro M can prevent the formation of sulfur compounds when used during fermentation by limiting microbe/yeast interactions. They have been shown to significantly reduce methyl mercaptan (rotten cabbage, stagnant water), ethyl mercaptan (burnt match, earthy), diethyl sulfide (rubber), dimethyl sulfide (canned corn, asparagus), and other associated sulfur compounds, although their effect on elevated levels of hydrogen sulfide is negligible.

**What about other volatile phenols such as those associated with *Brettanomyces*?**

Significant reductions, up to around 50%, have been demonstrated on the most commonly found volatile phenols, 4-ethylguaiacol (4-EG) and 4-ethylphenol (4-EP), as well as significant reductions in both 4-vinylguaiacol (4-VG) and 4-vinylphenol (4-VP).

**The TDS suggests using ‘quickly’ once opened, do you have a suggestion for how quickly it should be used?**

Chitosan is hygroscopic and moisture absorption affects the stability of the product. If stored in a cool, dry container with little air contact, it should be okay for a few months.

**Can I use it on wines that will be exported?**

Yes! In August 2022, the TTB elevated chitosan to their 24.246 list.

## EnartisStab Micro M

**Now that the TTB has increased the maximum dose, what kind of dose rates should I be using depending on the type of spoilage microorganism?**

The table below provides an idea of the amount of EnartisStab Micro M we would suggest using for major spoilage microorganisms.

CONTAMINATION LEVEL (CELL/mL)	SUGGESTED DOSAGE OF STAB MICRO M (g/hL)						g/hL
	BRETT	LACTOBAC	OENOCOC	ZYGO	PEDIOCOC	ACETOBACT	
10-10 <sup>2</sup>							5
10 <sup>2</sup> -10 <sup>3</sup>							10
10 <sup>3</sup> -10 <sup>4</sup>							20
10 <sup>4</sup> -10 <sup>5</sup>							30
10 <sup>5</sup> -10 <sup>6</sup>							40

**What is the purpose of the inactivated yeast (yeast hulls) in EnartisStab Micro M?**

The combination of chitosan and chitin-glucan maximizes chitosan's effect in turbid wine and must. The yeast hulls are rich in beta-glucans and interact with suspended solids preventing chitosan from binding with them, allowing for more efficient use.

**Can I use EnartisStab Micro M in wine maturing in barrel to prevent microbial growth?**

Yes, Stab Micro M is approved for use in juice and wine.

### **How many ppm SO<sub>2</sub> protection does EnartisStab Micro M provide at a given dose rate?**

EnartisStab Micro M does not have any direct SO<sub>2</sub> protection equivalent. It acts by removing microbes, small phenolic compounds, and metals, thereby creating conditions that allow for use of lower SO<sub>2</sub> dosages.

### **Can EnartisStab Micro M be used for sluggish/stuck fermentations?**

Absolutely. You can avoid a time-consuming restart or make it more successful by using EnartisStab Micro M to [eliminate competition](#) for the inoculated yeast. It kills all bacteria and *Brettanomyces* while barely affecting *S. cerevisiae*, so you can rest easy knowing that the sugar and nutrients are only consumed by friendly microbes.

## **EnartisStab Micro**

### **Can I use EnartisStab Micro during fermentation if I add inactivated yeast to replicate EnartisStab Micro M?**

No. The yeast hulls in EnartisStab Micro M have been specially selected and an alternative will not provide the same synergistic effect rendering the chitosan less effective and therefore requiring a higher dose.

### **Does EnartisStab Micro reduce the impact of TCA (cork taint)?**

It can certainly help! A trial done on white wine exhibiting a moldy TCA note at 39 ng/L of 2,4,6 trichloroanisole showed a reduction of more than 50% and was determined to be clean by a panel of tasters following a 17 g/hL addition of Stab Micro.

*If you have any further questions, please contact Technical Support on (707) 838-6312, or email [support@enartis.com](mailto:support@enartis.com).*