



# Claristar™

## The natural solution for tartrate stabilization of white and rosé wines

### High Tartrate Stability Index Mannoproteins.

*With more than a century of expertise in yeast technology and wine ingredients, DSM has developed an easy-use product to prevent potassium tartrate crystallization.*

*Claristar™ is a solution of mannoproteins extracted from yeast (*Saccharomyces cerevisiae*). Mannoproteins are a large family of molecules with different types of activities and stability level in wine. DSM has developed and patented an extraction and separation technique that isolates mannoproteins with the highest Tartrate Stability Index (TSI).*

*For greater effectiveness and in order to eliminate any component that might cause clouding, mannoproteins with very high TSI are selected for Claristar™, purified then maintained in their natural state of hydration.*

### Applications and properties

- Claristar™ is used for potassium tartrate stabilisation of white and rosé wines.
- Claristar™ does not prevent calcium tartrate precipitation.
- Claristar™ complies with OIV and EU regulations.
- Claristar™ does not alter wine organoleptic profile: color, aroma, turbidity...
- Claristar™ is perfectly miscible and soluble in wine.
- Claristar™ preserves the natural acidity of the wine.
- Claristar™ contains sulphite (100 ml/hl of Claristar™ = 1.5 mg/l of SO<sub>2</sub> in wine).

### Dosage

- Recommended dosage is 100 ml/hl.
- Highly unstable wines may require a higher dosage (see User Recommendations).

### How to use

- Add directly into wine before bottling with a good homogenisation.
- May be added before or after final filtration. (see User Recommendations).
- Addition may be continuous using a dosing pump.

### Packaging and storage

- Store in a cool dry place (< 10° C).
- Once a pack has been opened, any unused product should be stored refrigerated and used within 2 weeks.
- Claristar™ may be frozen, but any previously frozen product must not be refrozen.
- Unopened product still in its sealed pack may be kept for 18 months.
- Claristar™ is available in 2.5 and 20 litres packs. Larger conditioning are available upon request: please contact your distributor.



# Claristar™ User Recommendations

## 1. Preparing the wine

Protein stabilization operations, fining, racking, and blending as well as clarifying by alluvium, press or rotating filters using filter aids (diatomaceous / kieselguhr, perlite or cellulose fibers) must be completed before adding Claristar™.

## 2. Evaluation initial wine instability to determine the dose of Claristar™

Choose one of these four tests to establish the level of instability in non stabilized wine and validate the dose of 100 ml/hl de Claristar™. A level of instability that is too high requires the efficiency of Claristar™ to be checked using the test at -4° C for doses above 100 ml/hl.

Choice of 1 test before Claristar™ addition	Stabulation test at -4° C for 6 days	≥ 3 days	≤ 2 days
	Mini Contact	≤ 135 ΔμS	≥ 136 ΔμS
	Saturation temperature	≤ 21,5° C	≥ 21,6° C
	Degree of tartrate instability	≤ 20 %	> 20 %

The recommended dose is 100 ml/hl.

Instability low to average

Instability high to very high

The recommended dose is determined by testing instability (cold stabulation test: -4° C for 6 days) in wine samples with Claristar™ added at 125 and 150 ml/hl. If crystals appear, with our current understanding, DSM does not recommend Claristar™ as the only method of stabilization (see the protocol below).

## 3. Addition of Claristar™

Claristar™ acts as a nucleation inhibitor but does not prevent the growth of crystals.

In order to eliminate crystal particles and nuclei, the wine must be filtered through a 1.2 μm minimum porosity filter. Claristar™ does not clog filters, nor does it change either the filtration flow or the life expectancy of the filtering medium.

A perfect homogenisation of Claristar™ into the wine must be done.

### ■ Addition before final filtration.

Claristar™ may be added prior to filtering using a plate and lenticular filters non cellulose at 100 %, tangential or membrane filters.

### ■ Addition after filtration.

Claristar™ must be added after filtration when using alluvium, press or rotating filters with filter aids (diatomaceous / kieselguhr, perlite or cellulose fibers).

## 4. Checking wine stability

Tartaric stability after the addition of Claristar™ can easily be measured with a cold stabulation test (-4° C for 6 days). If no crystals appear, the wine is considered stable.

***In order to minimize organoleptic loss due to subjecting all the wine to chilling, we recommend the following protocol:***

- Stabilize some of the wine by chilling.
- Blend the wine that has been stabilised with the unchilled wine.
- Conduct the cold stabulation test (-4° C for 6 days) on two samples of the wine thus obtained by adding 100 ml/hl and 125 ml/hl of Claristar™. This test shows whether tartrate stability of the new wine has been achieved and the dose of Claristar™ to be used.

**A detailed protocol is available on request from your distributor or via [www.claristar.com](http://www.claristar.com)**

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