



CELLULOSE GUM-BASED TARTRATE STABILIZING AGENT

COMPOSITION

Aqueous solution composed of 20% E466 carboxymethyl cellulose (CMC) and about 0.3%± 0.15% E220 sulfur dioxide.

GENERAL FEATURES

Appearance: opalescent, colorless solution with a sulfur dioxide odor

Cellogum LV 20 is an aqueous solution containing sodium carboxymethyl cellulose (CMC) with low viscosity and high substitution degree. It is formulated for enological use.

To be used during wine processing to inhibit the formation and growth of potassium bitartrate crystals which could precipitate after bottling.

CMC is a stable product that does not hydrolyze under normal wine storage conditions. For this reason, **Cellogum LV 20** has a long-lasting effect and can reduce, and in some cases, completely eliminate the use of physical stabilization treatments such as cold stabilization and electro dialysis. This significantly reduces energy costs and processing times.

The liquid form allows for an easy and immediate application of carboxymethyl cellulose and can be used in wineries that do not have access to hot water. It also avoids long and laborious preparation needed for powdered products.

Because of its low viscosity, **Cellogum LV 20** has a low impact on wine filterability and this makes it the ideal solution to be used when CMC is added before microfiltration.

The carboxymethyl cellulose component of **Cellogum LV 20** does not have any negative impacts on wine sensory qualities, is non-allergenic and is GMO free.

APPLICATIONS

Tartrate stabilization of still and sparkling wines.

DOSAGE

From 25 to 50 mL/hL (maximum dosage permitted in the EU)

INSTRUCTIONS FOR USE

Adding the product to wine

1. Dilute **Cellogum LV 20** in at least 3-4 times its volume of wine (for example, add 1 liter of **Cellogum LV 20** to 3-4 liters of wine).
2. Stir well to assure a perfect homogenization of **Cellogum LV 20** in the wine.
3. Mix the **Cellogum LV 20** and wine solution and add to wine to be treated, if possible using a Venturi system and being careful to homogenize well throughout the wine.

When and how to treat wines

Sparkling wines

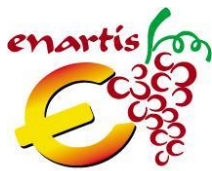
At *tirage*: use **Cellogum LV 20** in base wine already clarified and ready for *tirage*. Add homogeneously before the other riddling aids. A. **Cellogum LV 20** use during *tirage* does not cause any clarification problems during *remuage*.

Still white wines

Cellogum LV 20 must be added to clarified, perfectly clear (turbidity < 1 NTU), not very cold (temperature > 12°C or 53.6°F) and protein stable wine that is ready for bottling.

CMC reacts strongly with proteins, in particular with lysozyme, consequently causing turbidity and precipitate formation. Before using **Cellogum LV 20** it is essential for the wine to:

- be protein stable
- not contain residual fining proteins



CELLOGUM LV 20

- not contain lysozyme
- not be treated later with lysozyme.

Cellogum LV 20 can be added to wine at least 24 hours before bottling. Shorter time intervals between product application and bottling could lead to slower filtration and potential filter clogging. In any case, checking the filtration index before bottling is advised.

WARNING: do not cross-filter wines added with **Cellogum LV 20**.

Still red and rosé wines

Cellogum LV 20 can be added to wine at least 24 hours before bottling, to clarified, perfectly clear wine that is free of unstable color substances and that is ready for bottling. Shorter time intervals between product application and bottling could lead to slower filtration and potential filter clogging. In any case, checking the filtration index before bottling is advised.

CMC is negative-charged and reacts with positive charged color compounds causing their precipitation. Therefore, stabilizing color (clarification and/or cold treatment) and conducting preliminary laboratory trials is advised before adding **Cellogum LV 20**, especially for young wines. Nevertheless, color precipitation or the appearance of cloudiness can't be excluded, especially if wine is exposed to low temperatures. The use of a gum Arabic effective for color stability like **MAXIGUM** in combination with **Cellogum LV 20** helps to prevent color precipitation.

WARNING: do not cross-filter wines with **Cellogum LV 20**.

For the above described applications, determine the right **Cellogum LV 20** dosage by first conducting laboratory trials with increasing dosages and consequent protein and colloid stability evaluations with commonly used methods (cold test, conductivity, color stability, heat test etc.).ee

No negative interactions between **Cellogum LV 20** and other enological coadjuncts such as metatartaric acid, tannins and gum Arabic have been observed.

For a more detailed protocol of use of **Cellogum LV 20**, please refer to Enartis technical assistance.

PACKAGING AND STORAGE

25 Kg
200 Kg
1000 Kg

Sealed package: store away from sunlight, in a cool, dry, well-ventilated area.
Opened package: carefully reseal and store as described above.

Product approved for winemaking, in accordance with:

Reg. (CE) N. 606/2009

21 CFR 182.1745 – Authorized by the TTB to stabilize wine by preventing tartrate precipitation.

The amount used must not exceed 0.8% of the wine.

Product composed of substances that conform to the characteristics required by the:

Codex Œnologique International

Reg. (EU) N.231/2012