APPLICATION

Guidelines on CMC
VINOPROTECT®
(Carboxymethylcellulose solution or CMC)

NEW

The use of CMC on rosé wines was forbidden since December 2018, and is authorised again from 08/02/2022 by the OIV. This is an opportunity to review the benefits and guidelines for CMC!

You said CMC ?

Carboxymethylcellulose (E466) is a derivative of cellulose gum extracted from wood designed for tartaric stabilization. This protective colloid has a **dual action**, inhibiting the nucleation and growth of potassium bitartrate crystals. The risk of tartar precipitation at the pH and T°C of the wine is greatly reduced, which ensures tartaric stabilisation.

The quality and efficiency of CMC depends on 2 factors:

- The **degree of substitution (DS)** expresses the solubility of the gum and thus its effectiveness. The higher the solubility, the more the CMC interacts with wine and blocks the development of tartar crystals.
- The **degree of polymerisation (DP)** reflects the viscosity of the gum. The lower it is, the easier it is to incorporate the product into the wine, which means a time saving for the operator.

VinoProtect® is designed to offer the best compromise between **solubility** and **efficiency**!

PROTOCOL FOR PRACTICAL USE

Before treatment, it is recommended to establish the optimal dose using a laboratory test. Vinoprotect® should be added at least 48 hours before bottling, preferably to a wine that has already been fined and prefiltered. Make sure the dilution is complete (no clumps) as the product is viscous. **Maximum authorised dose: 20 g/hL or 40 cL/hL (50 g/L solution).**

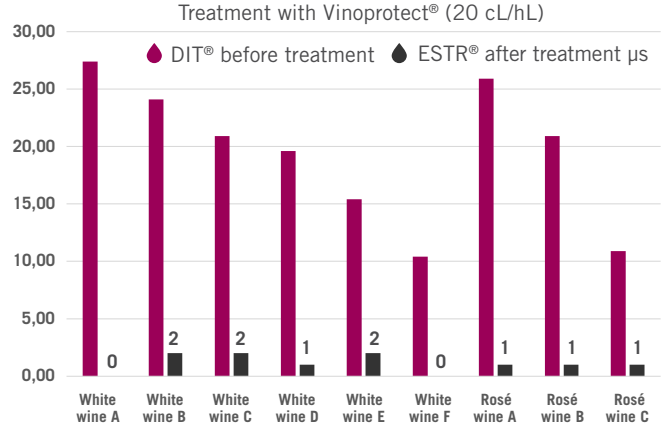
BEFORE FINAL BOTTLING FILTRATION

Dilute in wine then add with a dosing pump during pumping over.

POST FINAL BOTTLING FILTRATION

Add VinoProtect® to the wine after filtration with a dosing pump.

Test results on tartaric stabilisation
Treatment with Vinoprotect® (20 cL/hL)



GENERAL GUIDELINES

- Always apply to protein-stable wines (perform a heat test beforehand).
- Fining, acidification and de-acidification steps should be carried out as early as possible before the application of CMC.
- Do not use on red wine or lysozyme stabilised wines.
- If the wine to be treated has a high level of tartaric instability, reduce it by cold stabilisation.
- During the treatment, keep the wine at a temperature of 15°C to limit the risk of forming compact clumps.
- Always check the compatibility of the CMC with the bentonite usede.
- For rosé wines with intense colours, validate the compatibility with the colouring matter by a cold test for 6 days at -4°C after addition (loss of colour).

Treatment with VinoProtect® (20 cL/hL) on 6 white wines and 3 rosé wines. For each wine, the Degree of Tartaric Instability (DIT®) before treatment and the State of Real Tartaric Stability (ESTR®) after treatment were measured by conductimetry (Stabilab® - Eurodia patent). A wine is perfectly stable if its ESTR® is ≤3. Here, the wines are all stable after treatment