YEAST PRODUCT

MANNOSPARK®

Specific yeast cell wall mannoprotein from *Saccharomyces cerevisiae* for the tartaric and colloidal stabilisation of of sparkling wines.

Qualified for the elaboration of products for direct human consumption in the field of the regulated use in Oenology.

In accordance with the current EU regulation n° 2019/934.

SPECIFICATIONS AND OENOLOGICAL APPLICATIONS

MANNOSPARK® results from expertise in the use of mannoproteins in oenology from **LAFFORT®** and in bubble physics from Prof. Gérard Liger-Belair, director of the "Effervescence and Champagne" unit in the GSMA physics laboratory at the University of Reims. This collaboration has made it possible to develop and select mannoprotein fractions suitable for the tartaric and colloidal stabilisation of sparkling wines.

MANNOSPARK®:

- **Contributes to stabilisation of tartrates and colloids in wine.**
- Respects the effervescence whatever the vinification method used.
- Respects the freshness and fruit of the wine.
- Does not affect wine filterability.

MANNOSPARK® is a liquid preparation, ready to use, and with an immediate action on the wine.

PHYSICAL CHARACTERISTICS

Appearance	liquid
Colour	dark brown
Density (g/L)	1080
Soluble in water, insoluble in ethanol.	

CHEMICAL AND MICROBIOLOGICAL ANALYSES

SO_2 (g/L)	1.5 ± 0.3
Dry content (%)	20 ± 0.5
Analysis on dry product:	
Ash (%)	< 8
Total nitrogen (g/kg)	[5 - 75]
Polysaccharides eq. mannose (g/kg)	> 600
Yeast (CFU/g)	$< 10^2$
Mould (CFU/g)	< 50
Lactic acid bacteria (CFU/g)	$< 10^4$
Aerobic mesophile bacteria (CFU/g)	$< 10^4$
Coliforms (CFU/g)	< 10
E. coli (/25 g)	none
Staphylococcus aureus (/g)	none
Salmonella (/25 g)	none
Heavy metals (Pb) (ppm)	< 30
Lead (ppm)	< 5
Arsenic (ppm)	< 1
Mercury (ppm)	< 0.15
Cadmium (ppm)	< 0.5

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PROTOCOL FOR USE

OENOLOGICAL CONDITIONS

MANNOSPARK® is even more effective when the wine spends only a short time on lees after the secondary fermentation.

MANNOSPARK® can be used regardless of the method used to make the wine sparkling.

MANNOSPARK® can be added before or after secondary fermentation, to perfectly clear wine.

DOSAGE

100 - 200 mL/hL.

IMPLEMENTATION

- Homogenise the **MANNOSPARK®** solution.
- **At bottling before secondary fermentation:** Add directly to the perfectly fined and clarified base wine (IC<30), then add the liqueur de tirage.
- **On dosage:** For perfect homogenisation, it is recommended to add **MANNOSPARK®** directly to the wine used to prepare the liqueur d'expédition, before dissolving the sugar.

  It is however possible to add **MANNOSPARK®** directly to the liqueur d'expédition 24 hours before its use.
- **Direct carbonation method:** Add **MANNOSPARK®** directly to the perfectly fined and clarified base wine (IC<30) 48 hours before the final filtration. Then carbonate continuously on the bottling line or discontinuously (using a counter-pressure buffer tank).

STORAGE RECOMMENDATION

- Store above ground level in a dry area not liable to impart odours. Ensure stock is kept at a moderate temperature (in frost-free conditions), in its original, unopened packaging.
- Optimal date of use: 2 years.
- Do not use opened packaging.

PACKAGING

1 L and 10 L can.

IMPORTANT: To the extent that the conditions of use are beyond its control, LAFFORT® cannot be held responsible for failure to successful treatment and the appearance of salt crystals of tartaric acid.

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