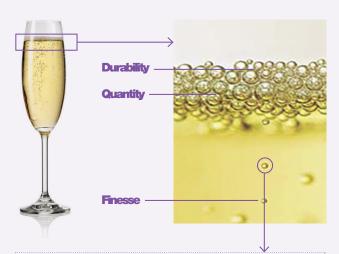
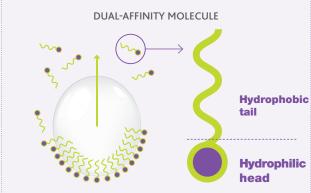


FOCUS

MANNOSPARK®, THE AESTHETICS OF EFFERVESCENCE

MECHANISM AND INTERACTIONS IN THE BUBBLE-FORMING PROCESS





Sparkling wines contain greater or lesser quantities of surfactant macromolecules from grapes and yeasts. They play a fundamental role in the lifespan and quality of the bubbles in a glass.

From its birth, the bubble is charged with ${\rm CO_2}$, its growth is directly linked to the concentration of dissolved ${\rm CO_2}$ in the wine. Then it detaches from its nucleation site and rises to the surface. During its journey, it captures the surfactant molecules in the wine, including mannoproteins.

When the bubbles reach the wine's surface, the surfactant macromolecules play their **protective role** by prolonging their lifespan and thus promoting the formation of the collar.

In terms of the aesthetics of effervescence in wine, the "pinnacle" for tasters is to observe fine, elegant and persistent bubbles in the glass regularly supplying a generous and stable collar (rim of foam) to form a harmonious foam.

ROLE OF MANNOPROTEINS IN BUBBLE AESTHETICS

The research programme (SPUM) on the aesthetics of effervescence, launched by LAFFORT® in 2014 in collaboration with Pr. Gérard Liger-Belair's team at the University of Reims Champagne Ardenne, allowed us to study the effect of the different mannoprotein fractions of yeast, then to demonstrate their impact on the quality and stability of the wine foam.

MANNOSPARK® is a specific formulation resulting from this study, for improvement in the size of the bubbles, and the thickness and stability of the collar, in order to obtain a harmonious and persistent foam in sparkling wines.



Comparison of bubble collar and size under standardised serving conditions for a Crémant rosé (bottle fermented, 12 months on lees). Photo taken 1 min, then 10 min after pouring. The wine treated with MANNOSPARK® shows a more generous collar of bubbles, which is more stable over time,



Molecular and Atmospheric Spectrometry Group (GSMA), a joint research unit between CNRS and the University of Reims Champagne Ardenne (URCA). Bubble Physics Laboratory, Pr. Gérard Liger-Belair.