Practical Guide to Vinification

No. 8

Timing the Inoculation with Malolactic Bacteria

▶ Why?

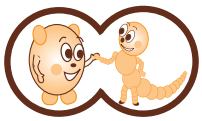
- Numerous parameters are involved in selecting bacteria for malolactic fermentation (MLF). Choosing the right moment for inoculating wine with selected bacteria is a factor in successful MLF.

- Choosing the right moment for lactic acid bacteria inoculation controls MLF according to the wine style desired, and lets you adapt to technical constraints.

Key Points

▶ **KNOW YOUR RESOURCES.** You need to have good knowledge of the technical resources (facilities, temperature controls, etc.) and human resources available (skill, availability) before choosing the moment to inoculate with malolactic bacteria. Certain processes, such as co-inoculation, require good technical skills and a higher level of attention.

▶ **KNOW YOUR MUST AND WINE.** As numerous conditions play a role in the feasibility of malolactic fermentation (see the Practical Guide to Vinification No. 7), it is important to have a thorough knowledge of them in order to orient your choice to the best form of bacteria, the strain and the timing of inoculation.



▶ **CHOOSE THE RIGHT PARTNERS FOR THE BACTERIA.** Lallemand has studied the synergies between yeasts and bacteria that can provide kinetic and sensory advantages. Studies also indicate that bacteria require amino acids for their metabolism, sometimes making it necessary to provide specific nutrients to facilitate MLF.

▶ **MAKE COHERENT CHOICES.** The wine production objective and technical constraints can be part of the initial evaluation for the vinification procedure and selecting the appropriate timing for bacteria inoculation. If, for example, the aim is to produce a structured, complex wine with long macerating time, the choice will be directed to inoculating after alcoholic fermentation. However, if there is a risk of microbiological contamination (high pH, *Brettanomyces*, etc.), the choice will be early inoculation or co-inoculation.

Timing MLF according to PRODUCT OBJECTIVE and/or TECHNICAL CONSTRAINTS