

## Successful Yeast and Malolactic Bacteria Co-inoculation: White Wine Vinification

### ► Why?

- Co-inoculating a must with yeast and malolactic bacteria accelerates the onset of malolactic fermentation (MLF) and makes it possible in difficult cases.
- This time savings can be decisive not only for finishing fruity and/or quick turnover wines, but also for carrying out MLF in a less oxidative medium, which reduces the production of buttery aromas.

### Key Points



#### ► ON WHICH JUICES?

- Juices intended for fruit-driven white wines or those that will be on the market quickly
- Must with a low pH (3.1 to 3.3): co-inoculation increases the chances of MLF success
- For MLF start-up when the cellar and wine temperatures are not too low.



- #### ► GOOD MANAGEMENT OF YEAST DEVELOPMENT.
- Yeast protection and complex nutrition must be utilized to avoid stuck alcoholic fermentation (AF) and to promote MLF.



- #### ► THERMAL CONTROL.
- Excessive fermentation temperatures are detrimental to both yeasts and malolactic bacteria.

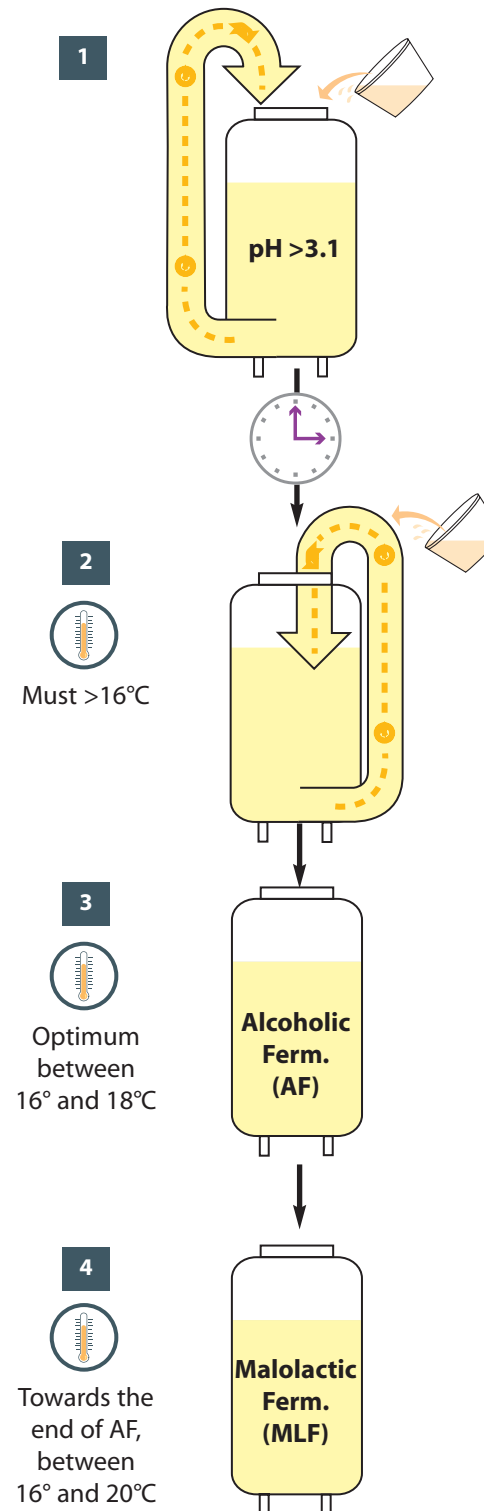


- #### ► AVOID EXCESSIVELY HIGH DEGREES OF POTENTIAL ALCOHOL (>14%).
- Such wines present a greater risk for problematic AF completion.



- #### ► AVOID EXCESSIVE SULPHITING.
- The SO<sub>2</sub> rapidly kills malolactic bacteria. Yeast/malolactic bacteria co-inoculation should not be implemented if the harvest is contaminated.

## Co-inoculation for White Wines



- Selected, rehydrated and protected yeast.\*
- Choose a yeast with low nitrogen requirements adapted to the style of wine desired.
- Avoid yeasts with high to very high nitrogen demands.

<50 ppm of SO<sub>2</sub> added: wait 24 hours  
50 to 80 ppm of SO<sub>2</sub> added: wait 48 hours  
>80 ppm of SO<sub>2</sub> added: wait 72 hours

Note: If measuring Free SO<sub>2</sub> 24 hours after addition, at pH >3.3 the Free SO<sub>2</sub> should be <25 ppm and when below 3.3 pH <10 ppm.

- Selected rehydrated MBR malolactic bacteria (1 g/hL of must).
- Choose a strain adapted to the conditions (pH, SO<sub>2</sub> and alcohol) and to the style of wine desired.
- Avoiding excessive air, stir bacteria into must until evenly mixed, based on the SO<sub>2</sub>/bacteria addition timing chart above.

- Complex yeast nutrition one third of the way through AF (see the Practical Guide to Vinification No. 3).
- Regular monitoring of temperature, malic acid and volatile acidity.
- Top off tank after AF.

- When MLF finishes during AF, monitor volatile acidity. If there is a 0.1 g/L increase per day, add 20 ppm SO<sub>2</sub> or use lysozyme.
- When MLF finishes after AF, rack and stabilize the wine after MLF.

\*For yeast rehydration and protection, please refer to the Practical Guides to Vinification No. 1 and No 2.