

LALLEMAND Duo Riesling

FERMENTATION KIT YEAST / BACTERIA SPECIAL CO-INOCULATION

Saccharomyces cerevisiae /
Oenococcus oeni

*The couple for
Aromatic White Wine*



Selected and produced by:

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For more than 20 years, Lallemand has been selecting the best winemaking yeasts and bacteria from Nature. Intensive research programs by Lallemand and partners on yeasts and bacteria interactions revealed the positive synergies between the two. Thanks to its expertise and taking in account these new criteria and results of worldwide field trials, Lallemand has developed DUO products, new integrated solutions to control and manage AF and MLF, specific solutions for must conditions and desired wine style.

Application

Reducing harshness associated with malic acid while retaining the aromatic freshness of white wines is sometimes challenging since they are often masked by strong lactic and buttery notes after malolactic fermentation (MLF). Several studies reported that wines subjected to co-inoculation are fruitier, less lactic/buttery, better structured and more complex, without excessive acetic acid production.

Duo Riesling is the most suitable combination of selected yeast and bacteria known for their synergy and performance used with a co-inoculation protocol in fruity white wines. This couple has been studied and chosen for its capacity to help to insure the success of MLF in a timely manner but also for its capacity to express the character of the grape variety such as Riesling.

Bibliographic references

- Henick-Kling, Arnink K., Conterno L., Shively C., Krieger S, 2004. *Wine quality and malolactic fermentation*. Proceedings of Les XIth Entretiens Scientifiques Lallemand, 25-31.
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- Rauhut D., Jungwirth S, Krieger S, Grossmann M, 2001. *Nutritional aspects, synergy between yeasts and bacteria*. Proceedings of Les IXth Entretiens Scientifiques Lallemand, 39-47.
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- Taillandier, P. Tataridis, P. Strehaiano, A, 2002. *A quantitative study of antagonism between Saccharomyces cerevisiae and Oenococcus oeni*. Proceedings of Les Xth Entretiens Scientifiques Lallemand, 21-26.

Microbiological and Enological properties

Yeast Strain *Sacharomyces cerevisiae* selected by Lallemand for its capacities to enhance floral and varietal aromas such as Lemon and Grapefruit in aromatic white grape varieties, and its quick autolysis after AF.

Characteristics:

- Killer Factor K2
- Medium lag phase
- Medium to fast fermentation rate
- Low requirement in FAN and oxygen
- Low SO₂ production: less than 40 mg/L
- Low H₂S production

The combination of both micro-organisms in co-inoculation allows a fast and reliable MLF in comparison to the sequential inoculation, due to the progressive acclimatization during alcoholic fermentation.

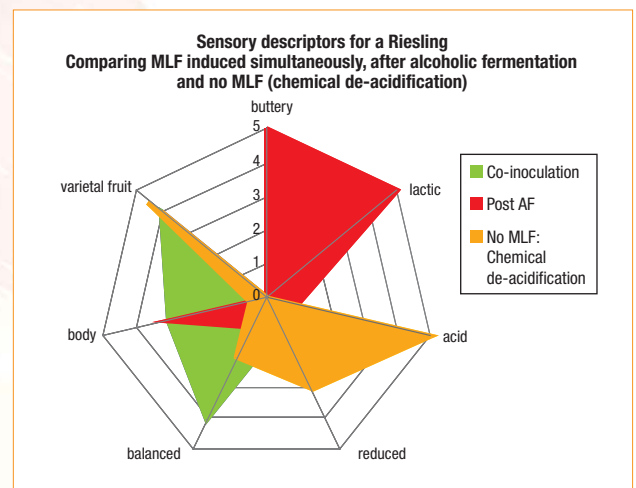
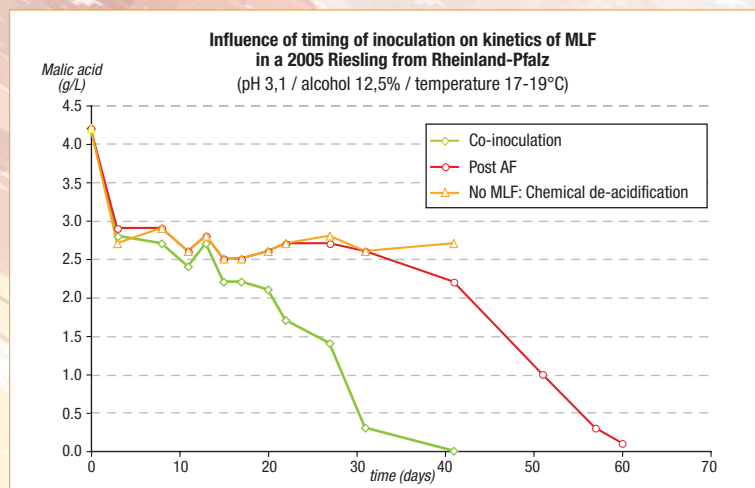
The following winemaking conditions should be respected for best success.

- Potential alcohol: < 14,5 % Vol.
- Fermentation temperature above 14°C
- pH>3.1

Bacteria Strain *Oenococcus Oeni* selected by Lallemand for its excellent activities under difficult wine conditions and its low potential to produce buttery flavour compounds, such as ethyl lactate and diacetyl when used in co-inoculation with yeast.

Characteristics:

- Strain with good yeast compatibility
- Medium lag phase
- Induces a fast and safe MLF, when AF is finished
- No biogenic amine production
- Low production of volatile acidity
- Medium to high nutrient requirement
- SO₂ total tolerance: maximum 50-60 ppm



Co-inoculation Protocol

1/ YEAST ADDITION

Rehydrate selected dry yeast according to the instructions. Preferably in presence of a rehydration nutrient (Go-Ferm Protect®) and inoculate the must.

2/ BACTERIA ADDITION

Depending on the SO₂ addition at crush:

- Sulfitage < 5 g/hL : wait for 24 hours
- Sulfitage 5-8 g/hL : wait for 48 hours
- Sulfitage > 8 g/hL : wait for 72 hours

- Rehydrate 1 packet of freeze-dried bacteria in 20 times its weight of clean chlorine free water at 20 °C for a maximum of 15 minutes.
- Add the suspension to the fermenting wine.
- Assure a good distribution.
- Complex nutrients (such as Fermaid®) addition at 1/3rd of alcoholic fermentation is recommended.
- Monitor malic acid and volatile acidity.
- If MLF takes place during AF and an unusual increase in volatile acidity is observed add Lysozyme (150-200 mg/L).
- Top the wine after AF.
- Otherwise rack and stabilize after MLF.

Packaging size • Kit available for the inoculation of 25 hL of wine.

Storage • Refer to the information on the package.