

O-MEGA®



APPLICATION

Omega® was isolated and selected in South of France by the Institut Français de la Vigne et du Vin (IFV) for its capacity to quickly achieve malolactic fermentation (MLF) in a wide range of wines. **Omega**® is a secure and efficient strain which tolerates low pH or high alcohol conditions. Reliable in white, red and rosé wines, **Omega**® complements fresh and fruit driven wines and helps to stabilize red wine color because of its slower degradation of acetaldehyde.

PROCESS

The 1-Step® starter kit is a highly efficient starter culture to promote malolactic fermentation (MLF) of most red and white wines, in a wide range of oenological conditions. The 1-Step® starter kit consists of a malolactic active freeze-dried *Oenococcus oeni* strain and specific activator. The excellent activity and high vitality of the 1-Step® starter culture is achieved during a short acclimatization step that activates their metabolism to induce a fast onset of malolactic fermentation. After 1-Step® acclimatization, **Omega**® had proved it's capacity to induce MLF in very limiting wine.

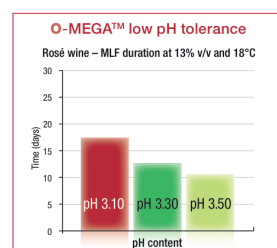
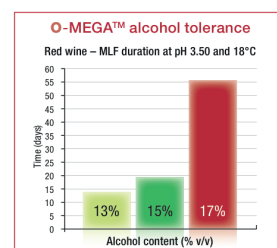


MICROBIAL AND OENOLOGICAL PROPERTIES

- pH tolerance ≥ 3.1
- T° tolerance $\geq 14^{\circ}\text{C}$
- Alcohol tolerance: up to 16 % vol. (can tolerate up to 17% v/v, under specific conditions).
- SO₂ tolerance: up to 60 mg/L total SO₂
- Good implantation - short lag phase
- MLF kinetics: very fast
- Very low volatile acidity production
- Very low diacetyl production
- Bacteria cinnamyl esterase negative: cannot produce precursors for ethylphenol production by *Brettanomyces*
- Low nutrient demand:
 - under more difficult MLF conditions, we advise to use a specific bacteria nutrient:
 - for white and rosé wines to avoid amino-acid deficiencies and ensure a good growth of the selected bacteria,
 - for structured red wines to avoid amino-acids deficiencies and increase the resistance of the selected bacteria against certain inhibitory polyphenolic fractions.
- Higher colour intensity

Omega® contributes to produce fresh and fruity wines from high maturity grapes. On normal mature grapes, **Omega**® reinforces the aging potential.

- No production of biogenic amines
- Late degradation of citric acid: very low production of diacetyl (no buttery or lactic notes).



INSTRUCTIONS FOR USE

SEQUENTIAL INOCULATION (Post-alcoholic fermentation)

- 1) Mix and dissolve contents of the activator sachet in drinking water (temperature between 18 and 25°C) according to the table below (1 in table).

	1	2
1-Step Kit	Volume of drinking water (L)	Volume of wine (L)
For 100hL	10	10
For 500hL	50	50
For 1000hL	100	100

- 2) Add content of the lactic acid bacteria sachet and dissolve carefully by gently stirring. Wait for 20 minutes.
- 3) Add to this suspension the appropriate volume of wine (see table above; 2) pH > 3.5, total SO₂ < 45 ppm, no free SO₂ (temperature between 18 and 25°C). Wait for 18 to 24 hours. If malic acid content is < 1.2 g/L, wait only for 8 to 12 hours.
- 4) Transfer the activated malolactic bacteria starter culture into the wine according to the volume indicated on the kit.

Recommended temperature range:

- White wine / rosé wine: from 16 to 20°C.
- Red wine: from 17 to 25°C.

If limiting conditions (high alcohol > 14.5% vol, or low pH < 3.1, or high SO₂ > 45 ppm), from 18 to 22°C, check malolactic fermentation activity (malic acid degradation) every 2 to 4 days.

CO-INOCULATION

(Simultaneous alcoholic fermentation)

The 1-Step® activator and lactic acid bacteria can be used in co-inoculation without waiting 24 hours when the conditions and must are suitable (pH >3.4 and sulphite addition to the grapes <8 g/hL).

- 1) Mix and dissolve content of the activator sachet in drinking water (temperature between 18 and 25°C) according to the table below.

1-Step Kit	Volume of drinking water (L)
For 25hL	2.5
For 100hL	10
For 500hL	50
For 1000hL	100

- 2) Add content of the lactic acid bacteria sachet and dissolve carefully by gently stirring. Wait for a maximum of 2 hours.
- 3) Transfer the rehydrated mix (activator and lactic acid bacteria) into the fermenting must/ wine 24 hours after the yeast is added.
- 4) Check malolactic fermentation activity (malic acid degradation) every 2 to 4 days, as well as volatile acidity.

In the case of must with pH <3.4 or sulphite addition >8 g/hL, it is recommended to use the 1-Step® activator and lactic acid bacteria after alcoholic fermentation.

Recommended temperature range:

Carefully monitor must temperature, which must be below 30 °C at lactic acid bacteria inoculation (alcohol < 5% vol) and below 27 °C when the level of 10 % of alcohol is reached.

PACKAGING AND STORAGE

- Product in powder form. The bacteria is obtained by lyophilisation.
- Available in sachet for inoculation of 25 hL, 100 hL, 500 hL and 1000 hL
- Once opened, activator and lactic acid bacteria sachet must be used immediately
- Activator and lactic acid bacteria sachet must not be used separately.
- This product can be stored for 18 months at 4°C or 36 months at -18°C in original sealed packaging.
- Sealed packets can be delivered and stored for 3 weeks at ambient temperature (<25°C) without significant loss of viability.

The information herein is true and accurate to the best of our knowledge; however, this data sheet is not to be considered as a guarantee, expressed or implied, or as a condition of sale of this product.