1-STEP™
MALOLACTIC FERMENTATION UNDER CONTROL

ALPHA™
Oenoccocus oeni

SECURITY AND MOUTHFEEL FOR A WIDE RANGE OF WINE CONDITIONS

Lactic acid bacteria selected from nature

APPLICATION

ALPHA™ was selected by the Institut Français de la Vigne et du Vin (IFV) for its high survival rate after inoculation into wine, its dominance during malolactic fermentation (MLF) and its capacity to achieve reliable MLF in very different conditions of white and red wines.
ALPHA™ improves wine aroma complexity and mouthfeel. ALPHA™ isn't capable of producing histamine or other biogenic amines. Thanks to its good implantation, ALPHA™ helps to secure and preserve wine quality.

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 allowing that activates their metabolism to induce a fast onset of malolactic fermentation.

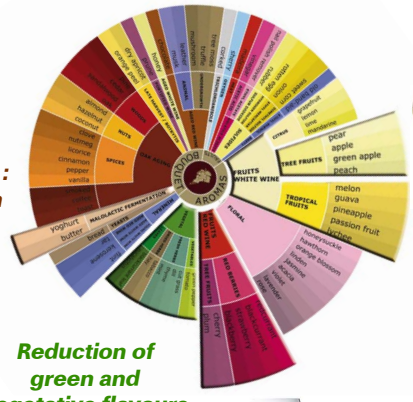
OENOLOGICAL AND MICROBIOLOGICAL PROPERTIES

- **pH tolerance > 3.2**
- **Alcohol tolerance : up to 15,5 % vol.**
- **SO_2 tolerance: up to 50 mg/L total SO_2**
- **T° tolerance : ⩾ 14 °C**
- **Low nutrition demand**
- **Good implantation**
- **MLF Kinetic : Fast**
- **Low volatile acidity production**
- **Bacteria cinnamoyl esterase negative : cannot produce precursors for ethylphenol production by *Brettanomyces***
- **No production of biogenic amines**
- **Co-inoculation recommended**
- **Sensitive to excessive O_2 exposure**

ORGANOLEPTICAL PROPERTIES

Beyond bio-deacidification, ALPHA™ is a true winemaking agent,
which contributes to the sensory complexity and the quality of wine as follows :

Buttery impact (Diacetyl production) :
- ***Moderate in Sequential inoculation***
- ***Low in Co-inoculation***



Reduction of green and vegetative flavours

Mouthfeel
Respect varietal aromas
High in ethyl propanoate

Velvet red fruits
Roundness
Mouthfeel

This sensory contribution can be further supported by the combination with an appropriate selected yeast strain and timing of ML bacteria inoculation.

LALLEMAND

INSTRUCTION FOR USE

• SEQUENTIAL INOCULATION (POST-ALCOHOLIC FERMENTATION)

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

	1A	2
1-Step® Kit	Volume of drinking water (L)	Volume of wine (L)
For 25 hL	2,5	2,5
For 100 hL	10	10
For 500 hL	50	50
For 1000 hL	100	100

1B. Add content of the lactic acid bacteria sachet and dissolve carefully by gently stirring. Wait for 20 minutes.

2. Add to this suspension the appropriate volume of wine (see table above) pH > 3.5, total SO_2 <45 ppm, no free SO_2 (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.

3. Transfer the activated malolactic bacteria starter culture into the wine according to the volume indicated on the kit.

Check malolactic fermentation activity (malic acid degradation) every 2 to 4 days.

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 SO_2 > 45 ppm) : from 18 to 22°C.

• CO-INOCULATION (SIMULTANEOUS ALCOHOLIC FERMENTATION)

The 1-STEP™ activator and lactic acid bacteria can be used in co-inoculation without doing an acclimatization step when the conditions and must are suitable (pH >3.4 and sulphite addition to the grapes <8 g/hL).

1A. 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 25 hL	2,5
For 100 hL	10
For 500 hL	50
For 1000 hL	100

1B. Add content of the lactic acid bacteria sachet and dissolve carefully by gently stirring. **Wait for 10 mn to 2 hours maximum.**

2. Transfer the rehydrated mix (activator and lactic acid bacteria) into the fermenting must / wine 24 hours after the yeast is added.

3. 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

- Available in sachet for inoculation of 25hL, 100hL, 500hL and 1000hL.
- 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/40°F or 36 months at -18°C/0°F in original sealed packaging.
- Sealed packets can be delivered and stored for 3 weeks at ambient temperature (<25°C/77°F) without significant loss of viability.

Distributor

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