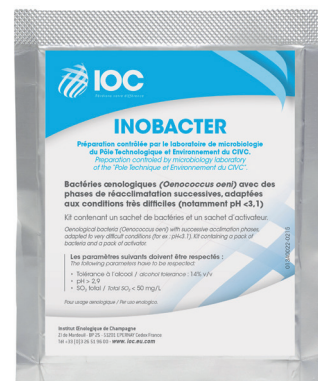# INOBACTER™
FOR CO-INOCULATION

APPLICATION

The ideal bacterial strains for conducting MLF in low pH wines, such as sparkling wine.

Adding selected bacteria safely initiates malolactic fermentation for white and rosé wines.

INOBACTER™ is used following a three stage protocol (reactivation, acclimatisation, and seeding the tank) which enables bacteria to adapt to the lowest pHs.

INOBACTER™ can be used as co-inoculation with yeast or inoculated after the completion of alcoholic fermentation (Sequential; see data sheet '**IOC INOBACTER™** for sequential inoculation')

The excellent tolerance of this strain to extreme wine conditions enables an effective malic acid metabolism.

MICROBIAL AND OENOLOGICAL PROPERTIES

- pH tolerance > 2.9
- Alcohol tolerance: up to 14 % vol.
- SO_2 tolerance: up to 50 mg/L total SO_2
- Low production of volatile acidity
- Limited production of diacetyl
- No production of biogenic amines

CHARACTERISTICS

Oenococcus oeni selected by CIVC.
The micro-organisms are not genetically modified.
Each batch is rigorously controlled by the CIVC.

WINE YEASTS   WINE BACTERIA   NUTRIENTS /PROTECTORS   SPECIFIC YEAST DERIVATIVES   ENZYMES   CHITOSAN   VINEYARD SOLUTIONS

LALLEMAND
LALLEMAND OENOLOGY
Original by culture

INSTRUCTIONS FOR USE

FOR USE IN CO-INOCULATION

STEP 1: Prepare the Bacteria Starter (BS) Medium

a. Allow must to settle first day of harvest
- Remove at least 3% of the volume of the tank into a separate vessel (see Table 1). Ensure the SO_2 <40ppm, pH 3.2 - 3.3
- Add 20-30g/hL of yeast (the one to be use to ferment the base wine) and 50g/hL of **Fermaid® AT**. Maintain the temperature between 20-25°C. This will be used later in step 3.

STEP 2: Reactivate the Bacteria

b. Prepare the Reactivation Medium (RM)
- Make up a juice / non-chlorinated water mixture as per the volumes in Table 1.
- The volume is based on the size of Inobacter™ kit used.
- Ensure it's at 25°C, pH 3.2-3.3, total SO_2 <40 ppm. Add the Activator and mix well.

c. Bacteria Rehydration (BR)
- Remove a volume of Reactivation Medium into separate container. The volume (see Table 1) depends on the size of **INOBACTER™** sachet used.
- Ensure the temperature of the medium is 23-25°C.
- Add the contents of the bacteria sachet to this medium. Wait for 15 mins

d. Incorporate the Bacteria Rehydration (BR) mixture (Step C) into the Reactivation Medium (RM) (Step B). Maintain at 23-25°C.
- **WAIT** – This Reactivation Medium is ready when malic mcid is <1g/L

STEP 3: Acclimitisation stage of the bacteria

e. Acclimitisation Mixture (AM)
- When the Reactivation Medium (RM, Step 2) is ready, add to the Bacteria Starter Medium (BS), (Step 1).
- Mix well and determine the malic acid concentration of this mixture.
- Maintain at 20°C
- When 2/3rds of the malic acid has been consumed in the Accclimatisation medium (AM), add it to the total volume of wine. Gently mix. Maintain at 18-20°C.
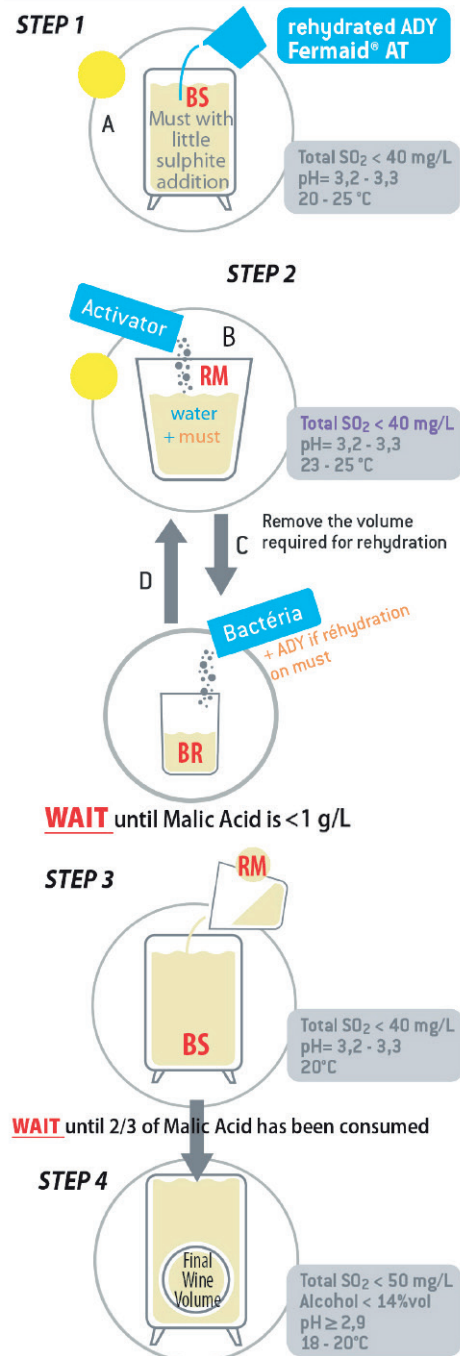
TABLE 1 – Guidelines for Co-Inoculation

Total volume of wine to be inoculated	Inobacter Kit	Step 1 (a) - AM 3% of total must volume	Step 2 (b) - RM Total reactivation volume	Step 2 (c) Volume to be used for bacterial rehydration
2500L	25hL	75L	5L (2.5L juice + 2.5L water)	1L
10,000L	100hL	300L	20L (10L juice + 10L water)	2L

PACKAGING AND STORAGE

- Product in powder form obtained by lyophilization.
- Available in dosage for 2.5 hL, 25 hL and 250hL.
- This product can be stored for 18 months at 4°C or 36 months at -18°C in original sealed packaging. Once opened, lactic acid bacteria sachet must be used immediately.
- During delivery, sealed packets can be held at ambient temperature for 3 weeks (<25°C) without significant loss of viability.

CO-INOCULATION

STEP 1
rehydrated ADY Fermaid® AT
A
BS Must with little sulphite addition
Total SO_2 < 40 mg/L pH= 3,2 - 3,3 20 - 25 °C

STEP 2
Activator
B
RM water + must
Total SO_2 < 40 mg/L pH= 3,2 - 3,3 23 - 25 °C
Remove the volume required for rehydration
C
D
Bactéria + ADY if réhydration on must
BR
WAIT until Malic Acid is <1 g/L

STEP 3
RM
BS
Total SO_2 < 40 mg/L pH= 3,2 - 3,3 20°C
WAIT until 2/3 of Malic Acid has been consumed

STEP 4
Final Wine Volume
Total SO_2 < 50 mg/L Alcohol < 14%vol pH ≥ 2,9 18 - 20°C

Ver 4 / 04.2022

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INOBACTER™
FOR SEQUENTIAL INOCULATION

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INOBACTER™ can be used as co-inoculation with yeast (see data sheet '**IOC INOBACTER™** for co-inoculation') or inoculated after the completion of alcoholic fermentation (Sequential)

The excellent tolerance of this strain to extreme wine conditions enables an effective malic acid metabolism.

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CHARACTERISTICS

Oenococcus oeni selected by CIVC.
The micro-organisms are not genetically modified.
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INSTRUCTIONS FOR USE
FOR USE IN SEQUENTIAL INOCULATION

STEP 1: Reactive the bacteria

a.   Reactivation Medium (RM)
* Make up a wine / non-chlorinated water mixture as per the volumes in Tab
* The volume is based on the size of Inobacter™ kit used.
* Ensure it's at 25°C, pH 3.2-3.3, total SO$_2$ <40ppm
* Add the Activator and mix well.

b.   Bacteria Rehydration (BR)
* Remove a volume of the Reactivation Medium into a separate container. The volume is specified in Table 1, dependent on the size of Inobacter sachet used.
* Ensure the temperature of the medium is 23-25°C.
* Add the contents of the bacteria sachet to this medium
* Wait for 15 mins

c.   Incorporate the Bacteria Rehydration (BR) mixture from step (b) into the Reactivation Medium (RM) from step (a).
* Maintain at 23-25°C.
* **WAIT** – This Reactivation Medium is ready when the Malic Acid is <1g/L

STEP 2: Acclimatisation stage

d.   Acclimitisation Mixture (AM)
* Remove 3% of the volume of wine to be inoculated into a separate tank. Refer to Table 1 for an example.
* Add the Reactivation Medium /Bacteria (from Step 1c) to this wine. Mix well and determine the malic acid concentration of this mixture.
* Maintain at 20°C
* This Acclimatisation medium is ready when 2/3rds of the malic acid has been consumed.

STEP 3: Wine inoculation

e.   Add the Acclimatisaton Mixture (AM) to the total volume of wine. Gently mix. Maintain at 18-20°C.

SEQUENTIAL INOCULATION

STEP 1

Activator

RM
water + wine

Total SO$_2$ < 40 mg/L
pH= 3,2 - 3,3
23 - 25 °C

B   Remove the volume required for rehydration
Add bacteria

Bacteria

BR

WAIT until Malic Acid is <1 g/L

STEP 2

RM

D   3%

Total SO$_2$ < 40 mg/L
pH= 3,2 - 3,3
20°C

STEP 3

E   Final Wine Volume

Total SO$_2$ < 50 mg/L
Alcohol < 14%vol
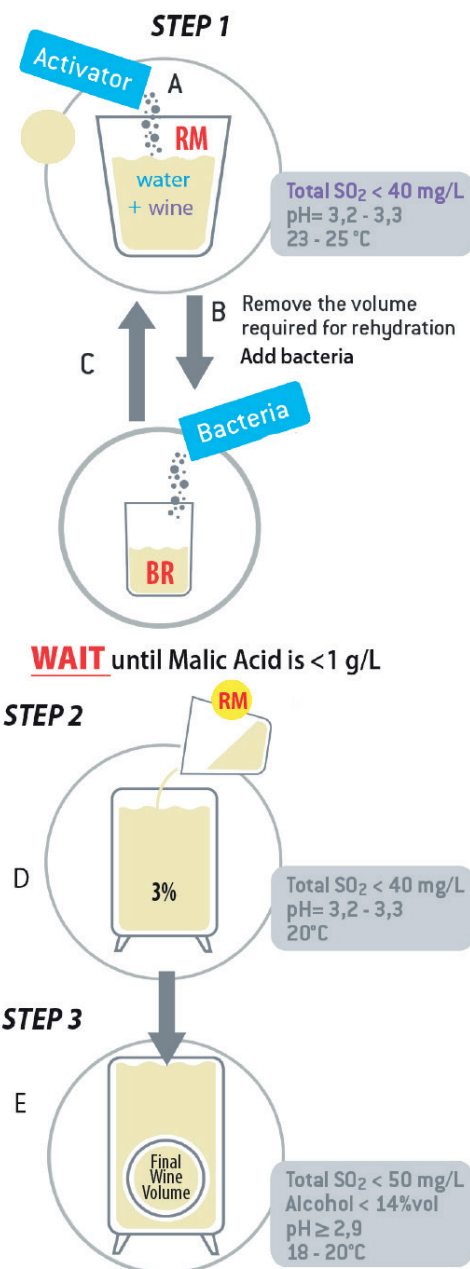pH ≥ 2,9
18 - 20°C

TABLE 1 – Guidelines for Sequential Inoculation

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