

VITILACTIC® H+

49A1 strain, selected by IFV, Beaune

To implement a malolactic fermentation under difficult conditions: for white or rosé wines with a low pH, red wines with high alcohol level, low temperature fermentations (optimum temperature between 16 and 18°C).

FIELD OF APPLICATION

VITILACTIC® H+ was isolated from a low pH Chardonnay (Burgundy). It was selected for its capacity to adapt to the difficult conditions found in white and rosé wines of the Northern Hemisphere and to implement fast and safe malolactic fermentations.

Thanks to its excellent acclimatization capacity, VITILACTIC® H+ can also carry out malolactic fermentation in red wines with a high alcohol content.

The optimum fermentation temperature of VITILACTIC® H+ is between 16 and 18°C, which reduces cellar heating needs.

VITILACTIC® H+ is presented in the form of a malolactic inoculation kit, developed using the 1-Step technology elaborated by Lallemand.

This kit contains:

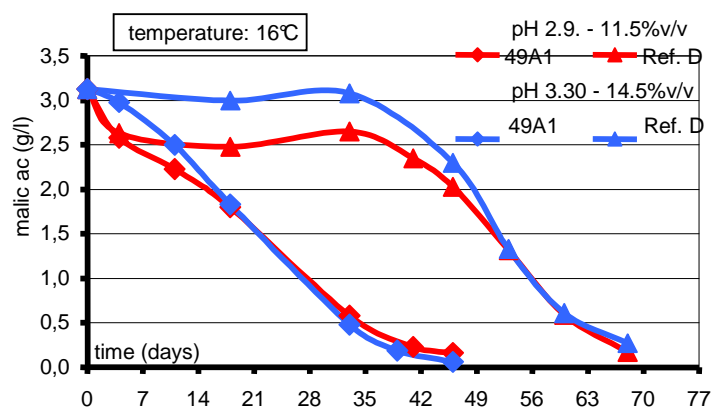
- H+ lactic bacteria (strain 49A1), *Oenococcus oeni*
- An H+ activator specific to H+ lactic bacteria in order to carry out the short reacclimatisation phase prior to inoculation.

VITILACTIC® H+ also contributes to the quality of the wines thanks to its low production of volatile acidity and biogenic amines.

CHARACTERISTICS

- ◆ H+ lactic bacteria *Oenococcus oeni*, strain 49A1 selected by ITV France, Beaune unit
- ◆ Capacity for adapting to wines presenting low pH (>2,90)*
- ◆ Temperature > 12 °C, optimal performance at 16°C*
- ◆ Tolerance to alcohol (up to 14,5% vol.)*
- ◆ Low production of biogenic amines
- ◆ Low production of volatile acidity

(*): Comparison between VITILACTIC® H+ (49A1) and a reference biomass for two physico-chemical conditions of 2006 chardonnay wines. Experimental results ITV Beaune



According to vintages and wine analytical profiles (pH, alcohol content, malic acid concentration), the lag phase can vary from a few days to a few weeks.
However, once the MLF has started, the course of the fermentation is very fast.

CONDITIONS OF USE

- ◆ **pH:** above or equal to 3
- ◆ **SO₂:** do not add SO₂ to the wine after alcoholic fermentation.
Control SO₂ application during pre-*vinification* steps in order to achieve **total SO₂** levels **below 50 mg/l** and **free SO₂** levels **below 10 mg/l** upon inoculation with **VITILACTIC® H+**.
Consult your enologist.
- ◆ **Alcohol:** maximum 14.5%.
Within the frame of red wine production, if alcohol content is the only limiting factor, **VITILACTIC® H+** can tolerate an alcohol content of 15% (vol.)
- ◆ **Residual sugars:** below 5 g/l
- ◆ **Nutrition:** under limiting conditions (low pH, high alcohol...), it is highly recommended to add a malolactic fermentation activator to the tank to be inoculated such as **MALOVIT** for red wines and **MALOVIT B** for white and rosé wines.
- ◆ **Temperature:** between 16 and 18°C
- ◆ As a precaution, it is recommended to submit a sample of the wine to be inoculated to an enological laboratory in order to measure the main analytical parameters (Acidity, pH, SO₂, Alcohol, Residual Sugars if inoculation intended in wine with completed alcoholic fermentation).

IMPLEMENTATION PROTOCOL

*This protocol is determined for the inoculation of 50 hL of wine, using the complete **VITILACTIC® H+** malolactic inoculation kit (dose for 50 hL).*

1/ Rehydration phase:

1A/ Dilute the contents of the **Activator H+** sachet in 5 L of drinking water (temperature between 17 and 25°C)

1B/ Add and carefully dilute the contents of the **H+ lactic bacteria** sachet in the above mixture.

Wait for 20 minutes.

2/ Acclimatisation phase:

Carefully mix the rehydrated **Vitalactic® H+** preparation following phase 1/ in 5 litres of wine with a pH >3,5 (temperature between 17 and 21°C).

Leave the inoculation to acclimatise at a temperature of between 17 and 21°C for 18 to 24 h.

3/ Transfer to tank

Incorporate the inoculation into 50 hL of wine to be inoculated. Maintain the temperature between 17 and 21°C. Regularly control the malolactic fermentation activity (malic acid analysis every 2-4 days).

On white and rosé wines presenting low pH or high alcohol, it is highly recommended to maintain the temperature at around 16-17°C. A higher effectiveness of inoculation has been observed in these conditions.

For implementing a dosage for 250 hL, follow the same procedure multiplying the volumes of water and wine by 5.

PACKAGING

- ◆ Doses for 50 hL and 250 hL

QUALITY – SECURITY – ENVIRONMENT

- ◆ Traceability: the batch number, present on all **VITILACTIC H+** packaging, makes it possible to trace back to the traceability plan in both directions (product origin through to user).
- ◆ Security – environment: **VITILACTIC H+** is non toxic to the user.
Please refer to the security data sheet available on our internet site.

STORAGE AND TRANSPORT CONDITIONS

Our products constantly benefit from the last technological developments concerning the production process, which is a fully integrated part of our know-how and expertise. As a result, the production process for our **VITILACTIC®** lactic acid bacteria has considerably evolved, thus enhancing their excellent stability.

Indeed, the quality of the **VITILACTIC®** bacteria is preserved if the product is stored at room temperature at a temperature below 25°C. Similarly, their quality is not affected by temperature variations during transport provided that their frequency and intensity are limited:

- Do not expose the product at a temperature above 30°C
- Limit the number of temperature peaks between 25 and 30°C

- ◆ Storage :

Store unopened original package:

- 18 months at 4°C
- 30 months at -20°C

Once opened, use rapidly.

- ◆ Transport :

Can withstand a few days at room temperature.

BIBLIOGRAPHY

Internal reports of experiments carried out on 2006 wines in Champagne, in the Gers and Val de Loire, Martin Vialatte Oenologie.

Confidential final report of the work programme carried out by ITV France, Beaune unit on the strain 49A1.

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