

Pure Fermentation SIHA® Active Yeast 4

Saccharomyces Bayanus, Strain CH 158

SIHA Active Yeast 4 is a highly active dry yeast formulated especially for making champagne and for fermentation in the bottle by the “Méthode traditionnelle”. Through permanent selection a yeast with excellent oenological properties has been developed. It is equally suitable for completing the fermentation of wine that has stopped fermenting.

The specific advantages of SIHA Active Yeast 4:

- Secondary fermentation soon starts
- Very good fermentation properties in the cold
- Formation of a fine champagne bouquet with simultaneous intensification of the typical wine aroma
- Easy separation of the yeasts by agitation
- Produces a sparkle with fine bubbles
- Good properties for re-fermentation and fermentation of wines that have stopped fermenting

Application

For rapid start of fermentation and suppression of undesired extra-neous organisms the addition of a high number of living yeast cells is recommended. In the case of champagne one should operate with an inoculation of approx. 3.7 mio cells/fl dr (1 mio cells/ml).

In the case of wine that has stopped fermenting the number of cells must be two to three times higher in order to achieve rapid completion of the fermentation process. In such wines the yeast multiplication is usually negligible.

The following quantities are given as a guide and should be adapted according to the respective conditions of the wine to be fermented such as health, temperature, presence of residual fungicides, tank size, possibility of temperature control and regulation.

Application	Quantity required lb/1,000 gal (g/hl) under	
	normal fermentation conditions	difficult fermentation conditions
Champagne and sparkling wine	1.3 – 2 (15 – 25)	2.5 – 3.3 (30 – 40)
Fermentation in bottle	1.3 – 2 (15 – 25)	2.5 – 3.3 (30 – 40)
Final fermentation of wines that have stopped fermenting		3.3 – 5 (40 – 60)

Wines that have stopped fermenting

Final fermentation of wines that have come to a stop always involves a risk. Frequent and careful inspections of the fermentation process must be carried out. We recommend the following procedure:

1. Before re-inoculation of the wine, check whether excessive bacteria have started to develop (formation of volatile acid, excessive development of lactic acid, microscopic control!). Check the degree of fermentation (sugar content) in order to get an idea of how the fermentation process will continue. If a lot of bacteria have developed, it may be possible to suppress this by means of sulphurization with approx. 0.8 lb SO₂ per 1,000 gal (10 g/hl). If addition of SO₂ is not desired or prevented by legislation, the partly fermented wine should be flush pasteurized at approx. 176 °F (80 °C). Counter pressure during heating will prevent froth formation in the wine. During clarification with normal separators (not fine separators) bacteria are only separated to a small extent. Normal centrifuging is therefore not a substitute for heating or sterile filtration (with filter sheets such as BECO® Steril 40 or BECO Steril 60).
2. Wetting or suspension of the yeast is best done using must at a temperature of 86 °F (30 °C).

3. The fermentation conditions in wines that have stopped prematurely fermenting are very unfavorable (high alcohol content, reduction of yeast nutrients, possible products of bacteria metabolism such as lactic acid or acetic acid, temperature too high or too low). Such unfavorable influences should therefore be compensated as much as possible prior to adding the yeast. The temperature should be between 60 – 77 °F (16 – 25 °C). In the case of bright wines, approx. 0.8 – 1.7 lb (10 – 20 g) cellulose in powder form (BECOCEL™ 150 filter cellulose) are added per 1,000 gal (per hl) to increase the “inner surface”. If the content of lactic or acetic acid is high, Eaton recommends blending with fresh must. Adding 0.8 – 1.7 lb (10 – 20 g) SIHA Fermentation Salt yeast nutrient fermentation aid per 1,000 gal (per hl) will facilitate the yeast growth.
4. It is better to get the yeast accustomed to the fermentation conditions. This is done by first adding the necessary quantity of yeast to a part of the total volume of wine to be fermented (approx. 10%) and allowing it to ferment until about half of the sugar present has been consumed. This start is then added to the remaining 90% of wine. Yeasts that have been adjusted in this way usually ferment faster and are less likely to die than yeasts that are added to the total quantity of wine directly.

Making of Champagne and Sparkling Wine

1. Fermentation in fermenting tank

When making champagnes, sparkling wines or dessert wines SIHA Active Yeast 4 can be added directly. To achieve optimum distribution we recommend the following procedure:

Mix the weighed quantity of yeast into approx. 5 to 8 times the amount of water at a temperature of 100 °F (38 °C) in a suitable vessel. This water temperature should be maintained.

Continue mixing until there are no lumps in the mixture and then allow to swell for 15 minutes. The yeast will froth up.

Then dilute the yeast solution with must or the sugary wine that is to be inoculated, stirring well. This mixture now contains highly active yeast cells and can be used for inoculation immediately or after a short standing time.

2. Fermentation in the bottle

With fermentation in the bottle “Méthode traditionnelle” it is recommended that the base wines are filtered sterile once more prior to inoculation through filter sheets, e.g. BECO Steril 40 or BECO Steril 60. This prevents a possible decomposition of acid on the bottle. With wines that have passed through a complete acid decomposition stage this risk is not present.

The dry yeast should be reactivated in a wine-water-mixture at 86 °F (30 °C) (2.2 lb (1 kg) dry yeast suspended in 5 gal (20 l) of mixture consisting of 4 gal (15 l) wine and 1 gal (5 l) water).

Adjust the yeast mixture with “tirage liqueur” to 0.5 – 0.7 lb sugar per gallon (60 – 80 g/l).

After a standing time of 3 – 6 hours and a distinct CO₂ development, the mixture can be inoculated into the main batch. After inoculation of champagne base wines the content of free SO₂ should not be higher than 0.17 lb/1,000 gal (20 mg/l). If this figure is over 0.21 lb/1,000 gal (25 mg/l) initial fermentation will be delayed by at least 2 – 3 weeks. The toxic effect of the free SO₂ is retained until the SO₂ has dropped to less than 0.17 lb/1,000 gal (20 mg/l).

Adding SIHA Brillant liquid riddling aid and SIHA Tannin liquid fining agent prevents the yeasts from sticking to the surface of the bottle and therefore considerably facilitates the separating (agitating) process.

Product Characteristics

SIHA Active Yeast 4 was selected especially for making sparkling wines and champagnes and is excellently suited for fermentation in the bottle by the “Méthode traditionnelle”.

In breeding this yeast strain, particularly high requirements were made with respect to the fruitiness, juiciness and purity of the typical bouquet of champagne wines that are fermented with this product.

The selected mother strain of the *saccharomyces bayanus* family is therefore monitored regularly for positive oenological properties.

SIHA Active Yeast 4 will still develop sufficient fermentation strength under difficult conditions, e.g. wines with a small “inner surface” or higher alcohol or CO₂ contents. For this reason, it is suitable for fermentation of champagnes and sparkling wines as well as for the treatment of wines that have stopped fermenting.

SIHA Active Yeast 4 settles quickly after the fermentation process and can therefore be easily and neatly separated from the wine when making champagne and sparkling wine. It can be easily re-suspended thanks to a special drying process and almost completely dispersed into single cells.

The yeast is multiplied under ideal conditions and is dried in a particularly careful and gentle process. A special inert gas combination prevents detrimental effects due to oxygen when it is packaged into gas-tight aluminum sandwich foil.

Safety

No safety data are required for SIHA Active Yeast 4 as this product is used directly in food manufacture. Storage, handling and transport involve no risk to people or the environment.

Storage

SIHA Active Yeast 4 is supplied in airtight aluminum sandwich foil using inert gas. The package is vacuum sealed and can be easily checked for intactness.

The packaging date is engraved in the seam. The yeast can be stored for four years at 39 – 50 °F (4 – 10 °C) in an undamaged package. Temperatures up to 68 °F (20 °C) are briefly possible if the package is undamaged.

Delivery Information

SIHA Active Yeast 4 is sold under article no. 93.040 and is available in the following package sizes:

0.28 lb (125 g) aluminum sandwich foil, package
25 x 0.28 lb (125 g) package in cardboard box

1.1 lb (500 g) aluminum sandwich foil,
block package

20 x 1.1 lb (500 g) block packages in cardboard box

1 x 22 lb (10 kg) aluminum sandwich foil in
cardboard box

Certified Quality

SIHA Active Yeast 4 is monitored constantly during the production process to ensure consistently high quality. This covers the technical function criteria as well as approval in accordance with the law governing the production and sale of foodstuffs. Strict controls are carried out immediately before and during final packing.

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