

Pure Fermentation SIHAFERM™ Frio



Cold Fermentation Yeast, *Saccharomyces Cerevisiae*

SIHAFERM Frio yeast from Eaton's Begerow Product Line is a selected pure yeast with very good cold fermentation characteristics (fermentation temperatures: 54 – 59 °F (12 – 15 °C)). The formation of cold fermentation flavors (fruit flavors) is particularly pronounced in this temperature range. SIHAFERM Frio yeast is a *saccharomyces cerevisiae* strain that quickly starts fermenting at low temperatures and ensures formation of the required fruit flavors.

The specific advantages of SIHAFERM Frio yeast:

- Fast and speedy start of fermentation at fermentation temperatures of around 54 °F (12 °C)
- Enhanced formation of cold fermentation flavors at low temperatures
- Moderate to high nutrient requirements
- Moderate alcohol tolerance of up to 14% by vol.
- Safe final fermentation

Application

As a basic principle, musts and mashes should be inoculated with SIHAFERM Frio yeast as early as possible. Longer maceration times can lead to uncontrolled growth of wild yeasts (*Kloeckera/Hanseniaspora* strains are particularly viable at low fermentation temperatures) and undesired bacteria.

The dosages in the table are guide values and should be adapted to the individual conditions (health of the grapes, available nutrients etc.).

The fermentation range is between 54 and 73 °F (12 – 23 °C). The optimum fermentation temperature is 54 – 63 °F (12 – 17 °C). Ensure that large containers are adequately chilled.

For cold fermentation, we recommend adapting the yeast suspension to the lower temperature range.

Changes in temperature of more than 41 °F (5 °C) per hour should be avoided. At larger temperature differences, the yeast cell may enter a lag phase that could delay the start of fermentation considerably.

Stir SIHAFERM Frio yeast into 10 times the quantity of a fifty-fifty must-water mixture 95 – 99 °F (35 – 37 °C), then let it cool down slowly until the maximum temperature difference of 41 °F (5 °C) between the yeast batch and the must has been reached.

Application	Quantity required lb/1,000 gal (g/hl) under	
	normal 54 °F (12 °C) fermentation conditions	difficult
White grape must	1.7 – 2.0 (20 – 25)	2.0 – 2.5 (25 – 30)
Red grape must	1.7 – 2.0 (20 – 25)	2.0 – 2.5 (25 – 30)
White grape mash	1.7 – 2.0 (20 – 25)	2.0 – 2.5 (25 – 30)
Red grape mash	1.7 – 2.0 (20 – 25)	2.0 – 2.5 (25 – 30)
Fruit must for cider	1.2 – 1.7 (15 – 20)	1.7 – 2.0 (20 – 25)

Another measure to adapt the yeast to lower fermentation temperatures is partial start of fermentation. The most straightforward way to achieve this is to add the yeast quantity required for the total wine quantity to around 10% of the total quantity and leave it to ferment. This mixture is then added to the remaining 90% of the wine for final fermentation. Yeasts adapted in this way usually start fermenting more quickly and have a lower tendency to die off than if they are added directly to the total quantity.

Product Characteristics

The SIHAFERM Frio yeast strain offers high fermentation reliability, particularly at low fermentation temperatures. The yeast strain is characterized by low formation of fermentation byproducts, such as SO₂, acetaldehyde, pyruvic acid, and α-ketoglutarate. In addition, SIHAFERM Frio yeast suppresses wild yeasts through very fast start of fermentation and yeast cell multiplication.

For optimal and fast fermentation both during rehydrogenation and during alcoholic fermentation SIHAFERM Frio yeast requires DAHP and also complex yeast nutrients. 'Böckser' may form under unfavorable nutrient conditions.

