

SIY INACTIVE YEAST HULLS

VI-A-DRY inactive yeast is a dried preparation of the insoluble fraction of whole yeast cells, namely the cell wall membrane. In recent years a number of publications have appeared showing the effect of inactive yeast on the prevention of stuck or sluggish fermentations.

SLUGGISH & STUCK FERMENTATIONS

Sluggish or stuck fermentations are microbiologically unstable. Wild yeast and bacteria can gain a foothold and create problems in the wine. Slow fermentations also place a strain on the tank space. Modern winemaking techniques for white wines require, in many cases, extreme clarification prior to fermentation. Solids content is often reduced to less than 0.1%. While the organoleptic properties of the finished wine are improved, these highly fined musts tend to produce sluggish fermentations, with higher than normal risks of sticking.

Inactive yeast in the grape must have several roles. They provide some nutrient value. They also supply small amounts of sterols, as well as increasing the surface area of the must.

Stuck fermentations are the result of several factors. High temperatures and alcohol sensitivity are two common causes. Nutrient deficiencies and yeast inhibiting factors, such as residual fungicides can also have an inhibiting effect on the fermentation, as can small amounts of antibiotics produced by *Botrytis* infections.

INACTIVE YEAST

Inactive yeast is comprised of the cell wall and membrane with minor amounts of insoluble cell cytoplasm. The inactive yeast has two unique qualities which make them very useful in preventing sluggish or stuck fermentations.

1. The cell wall and the cell membrane are important sources for lipids and sterols which improve the fermentation kinetics and improve the fermenting yeast's resistance to alcohol.
2. The addition of inactive yeast to the must increases the solids slightly and also increases the surface area of must. The Inactive yeast adsorbs inhibiting substances that lead to stuck fermentations.

Inactive yeast is effective in many fermentation applications where solids content of the medium is very low. One such application is the fermentation of corn syrup to be used in white vinegar production. It can also be used in the conversion of alcohol to acetic acid, whether it is by traditional generator or by submerged culture.

RECOMMENDED DOSAGE

The recommended addition for inactive yeast is 25 grams per hectoliter, 2 lbs. per 1,000 gallons. For severe conditions, such as Botrytized musts, high sugar musts, over fined musts, or warm cellar conditions, higher doses are recommended. Racking will remove yeast hulls. To retain effectiveness, another addition is required.

PACKAGING and STORAGE

Inactive yeast is packaged in 20 kg (44 lb) multi-wall bags with poly liner. It can also be purchased per pound (minimum order is 1 lb). Unopened, inactive yeast has a shelf-life of 3 years. It should be stored in a cool, dry environment.

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