

ACTIFERM 1 & 2

Complete fermentation activator--Dual action

Actiferm 1 favors the multiplication of yeast and a rapid onset of fermentation. Actiferm 2 increases resistance of yeast to ethanol and accelerates the end of fermentation.

CHARACTERISTICS

ACTIFERM 1

Actiferm 1 contains:

- ◆ Thiamin (vitamin B1)
Studies done at the INRA Montpellier (IPV) have shown that at the moment of inoculation with yeast, musts are often depleted of thiamin due to early consumption by indigenous yeast that develop during prefermentation periods. In order to ensure healthy development of added yeast, thiamin needs are about 0.2 to 0.3 mg/L in practice.
- ◆ Assimilable nitrogen (ammonia and amino)
The nitrogen taken up at the onset of fermentation activates yeast protein synthesis and leads to a higher number of yeast. The maximum rate of fermentation is directly related to the assimilable nitrogen content of musts.
- ◆ Atomized cellulose & Inactivated yeast
Cellulose increases must turbidity, playing the role of a support for yeast and favoring gas release. Recent studies show a relationship between the level of turbidity and the ability of must to ferment due to the effect the lipid fraction of sediment plays to limit the production of inhibitory fatty acids. Inactivated yeast provide additional vitamins, trace elements, amino acids, and proteins to promote yeast biomass plus sterols, to work synergistically with oxygen to increase yeast ethanol resistance.
- ◆ **ACTIFERM 1 MUST BE ADDED AT THE TIME OF YEAST ADDITION**

ACTIFERM 2

Actiferm 2 contains:

- ◆ Ammonia nitrogen (phosphate) This nitrogen confers a higher ethanol resistance on the yeast. When nitrogen is added at the mid-point of fermentation, it does not cause an increase in the number of yeast cells, but leads to increased nitrogen content of the yeast. Protein synthesis resumes and there is a renewal of the sugar transport system. A nitrogen addition at mid-fermentation is very often more effective than an addition at the onset of fermentation.
- ◆ Inactivated yeast
Inactivated yeast supply nitrogen, vitamins and sterols that will lead to better ethanol resistance. Sterols participate in the cohesion of the yeast cell membrane. Similarly, these inactivated yeast supply cell walls that will adsorb C8 and C10 fatty acids and thereby limit their inhibitory action on yeast.
- ◆ **ACTIFERM 2 MUST BE ADDED AT THE MID-POINT OF FERMENTATION OR AFTER A BRIX DROP OF 10°.**

APPLICATION

Dosage to use of **Actiferm 1**: **20g/hL** (1.7 lb/1000gal)
Dosage to use of **Actiferm 2**: **20g/hL** (1.7 lb/1000gal)

PREPARATION & USE

- ◆ **Actiferm 1** should be dissolved in 10 times its weight of must and incorporated at the moment of inoculation with active dry yeast or directly in the must. Mixing is required to conduct a surface rise to homogenize.
- ◆ Aeration: After a 5° brix drop, the addition of oxygen leads to additional multiplication of the yeast and increases their resistance to ethanol. This oxygen addition of about 10mg/L can be done by bubbling in air at the bottom of the tank for about 15 minutes or by direct injection through a sintered disk (more precise method). The injector is calibrated to determine the addition time when using the oxyfritte.
- ◆ **Actiferm 2** should be dissolved in 10 times its weight of fermenting must and incorporated in the tank at mid-fermentation (or after a 10° brix drop). Add fairly slowly and the movement created by gas release is normally sufficient for mixing.

PACKAGE

ACTIFERM 1 & 2: Available in three package sizes

- ◆ 1 kg in two sacks: 500 g of Actiferm 1, 500 g of Actiferm 2
- ◆ 5 kg in two sacks: 2.5 kg of Actiferm 1, 2.5 kg of Actiferm 2
- ◆ 40 kg in two sacks: 20 kg of Actiferm 1, 20 kg of Actiferm 2

STORAGE

- ◆ Store unopened original packaging in a dry and odor free environment away from light.
- ◆ Once opened use rapidly or store in a closed, air tight container as above.