

ENCAPSULATED YEAST: TECHNOLOGY FOR IMPROVED WINEMAKING

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Encapsulated yeast are alginate beads (a natural polysaccharide extracted from seaweed) containing *Saccharomyces* or *Schizosaccharomyces* yeast cells. Encapsulation allows substrates and metabolites to diffuse easily throughout the beads without releasing yeast cells into the must or juice. Once encapsulated, the beads are partially dehydrated in a fluidized bead column and are stored at 4°C until ready for use. The dry beads average 2 mm in diameter.

We used two encapsulated yeast products in our reaserch. Each has a unique winemaking application. ProDessert was used for fermenting white dessert wines and ProRestart for restarting sluggish or stuck primary fermentations at natural white dry wines.

The most difficult aspect of dessert wine production is arresting the primary fermentation at the desired residual sugar level. ProDessert® makes this process easier and more effective. When using ProDessert, the alcoholic fermentation is arrested by simply removing the beads from the wine. Precautionary measures (e.g. sulfur dioxide additions, chilling and/or filtration) may still be required to completely stop or remove indigenous yeast, although less overall intervention may be needed.

When restarting a sluggish or stuck fermentation, it is essential to address yeast biomass buildup together with the low nutrient levels. Appropriate yeast rehydration nutrients such as Go-Ferm and Go-Ferm Protect are useful tools. Both are rich in micronutrients and survival factors. When added to the rehydration water these factors promote increased biomass of the selected yeast strain. Consequently the selected yeast can acclimate more easily to the often hostile environments associated with stuck fermentations.