

## Recommended Method to Restart Stuck Fermentations

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 Evolution 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 restart yeast can acclimate more easily to the potentially hostile environments (including high alcohol and low temperature) associated with stuck fermentations.

When stuck wines include high residual sugar levels, an addition of a complex nutrient to the stuck wine is also recommended.

In addition, spoilage organisms like *Lactobacillus* and *Pediococcus* are often present in stuck fermentations. These microorganisms can compete for nutrients and release metabolites that inhibit yeast growth. Adding lysozyme to the stuck wine prior to restarting the fermentation may help control such unwanted bacteria and provide an improved environment for the restart to take place.

Adding Reskue™ to the stuck wine prior to restarting the fermentation may also help reduce accumulated toxins and improve chances for a successful restart.

### For Wines Stuck at >3°Brix:

#### Build-up for Stuck Wine

1. Add 40 g/hL (3.3 lb/1000 gal) of Reskue 24-48 hours prior to restarting the fermentation.
2. After 24-48 hours, rack off from the Reskue.
3. Add a complex yeast nutrient (Fermaid A, Fermaid K or Fermaid O) directly to the tank of stuck wine at a rate of 0.5-1.0 lb/1000 gal (6-12 g/hL). Many winemakers also add lysozyme at this time to reduce potential bacteria problems.
4. In another clean container mix equal volumes of stuck wine and water. Generally this would total 2% of the total wine volume. (Example: For 1000 gal of stuck wine, use 10 gal water + 10 gal wine.) This container will be the "Mother Restart Tank".
5. Calculate the amount of Go-Ferm or Go-Ferm Protect Evolution at the recommended rate. Dissolve this yeast rehydration nutrient in 20 times its weight of clean, chlorine free, 43°C(110°F) water. (Example: 5 lb Go-Ferm x 20 = 100 lb, divided by 8.33 lb/gal water = 12 gal water needed.) Mix the solution and cool to 40°C(104°F).
6. Select a yeast strain that is both alcohol tolerant and a vigorous fermenter such as 43, BC (Bayanus), K1 (V1116), Fermivin Champion or VIN 13. Calculate the amount of yeast required for the total volume of stuck wine at 3-5 lb/1000 gal (36-60 g/hL). When the rehydration nutrient/water solution temperature has cooled to 40°C(104°F), slowly (over 5 minutes) add yeast. Stir gently to mix and avoid clumping. Let this yeast suspension stand for 15-20 minutes.
7. Check the temperature of the yeast suspension. There should not be more than 10°C(18°F) difference between the yeast suspension and the diluted wine in the Mother Restart Tank. If there is too great a temperature difference, a temperature adjustment may be required. Cold temperatures may shock the yeast cells.
8. When the yeast suspension is properly rehydrated and proper consideration has been given to temperature differences, add the yeast to the Mother Restart Tank and wait 20-30 minutes.

### **INOCULATION OF STUCK WINE**

9. Add 10% of stuck wine to the Mother Restart Tank and wait 20-30 minutes. (Example: For 1000 gal stuck wine, add 100 gal wine.)
10. Add 20% of stuck wine to the Mother Restart Tank and wait 20-30 minutes. (Example: For 1000 gal stuck wine, add 200 gal wine.)
11. Repeat Step 10, three more times.
12. Add any remaining wine to the Mother Restart Tank.

#### **For Wines Stuck at 1-2°Brix:**

Follow this restart protocol, except in Step 3 reduce the complete yeast nutrient addition to 0.5 lb/1000 gal (6 g/hL).

#### **For Wines Stuck at <1°Brix:**

Follow this restart protocol, except in Step 3 eliminate the addition of a complete yeast nutrient.