HOW TO RESTART STUCK FERMENTATIONS
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The Anchor Wine Yeast protocol

**STEP 1**: Press and rack off the stuck lees if it is a red wine fermentation. Keep the press must separate.

**STEP 2**: Add 100 mg/L lysozyme if it is a red wine fermentation.

**STEP 3**: Add the maximum dosage pure yeast hulls (red and white wine).

**STEP 4**: If possible, rack the stuck wine onto the lees (skins) of a (compatible) wine that has already finished fermentation using a very alcohol tolerant yeast strain.

**STEP 5**: If step 4 is not possible, rehydrate new yeast at 60 – 100 g/hL depending on the residual sugar. The lower the sugar, the more yeast must be used. If juice is not available for rehydration - use a 5% cane sugar solution. Do not use juice that contains SO2.

**STEP 6**: After 20 minutes of yeast rehydration, add a volume of stuck wine equivalent to 50% of the volume of the rehydration mixture, to the rehydration mixture; e.g. if 1 kg of yeast was rehydrated in 10 L of water, add 5 L of stuck wine. Wait for 30 minutes.

**STEP 7**: Repeat step 6 taking the new total volume (e.g. 15 L) into account. Therefore add 50% of the total volume = 7.5 L of stuck wine. Wait 1 hour.

**STEP 8**: Continue using the same procedure of adding stuck wine to the new yeast mix in a 1:1 ratio (depending on the volume of the new mix, you may have to transfer to an empty tank at some stage). For example: 15 L + 7.5 L = 22.5 L (step 7). Therefore add 22.5 L of stuck wine to the 22.5 L of new yeast / wine mix. The new volume will be 45 L. Wait for active fermentation between each addition. This will take longer after each addition. The next volume to add is 45 L of stuck wine.

**STEP 9**: The new active fermentation produces CO2 and will be protected from oxidation and bacterial spoilage. The stuck tank however has no active CO2 production and it is advisable to add CO2 at the top of the tank to cover and protect the stuck wine from further spoilage.

**STEP 10**: Add a complex yeast nutrient in increments to the new yeast mixture.

The volumes of the additions appear very small at first but grow exponentially. The whole process should take a minimum of two days. The longer one waits between each addition of stuck wine to the new yeast, the more time (and a better chance) the new yeast has to acclimatize to the increasing alcohol levels. The success of the protocol therefore lies in the time it takes to transfer the stuck wine to the new yeast. Never transfer the new yeast to the stuck wine. Do not transfer the old stuck yeast with the stuck wine to the new tank. The old yeast contains medium chain fatty acids that will be toxic to the new yeast. This is why adding new yeast to a stuck tank is very often unsuccessful.
Remove the stuck wine from the stuck yeast lees by racking and pressing immediately if it is a red wine. Add lysozyme (100 mg/L) if it is a stuck red wine. Add the maximum dosage of pure yeast hulls to both white and red stuck wines.

The easiest way to restart a stuck ferment is to rack the stuck wine off its stuck yeast lees onto the lees of a wine that has successfully finished fermentation. This procedure will work if the yeast from the successful fermentation is a very alcohol tolerant strain and therefore still has a very high viability after completion of fermentation. These lees can therefore theoretically still ferment but have stopped due to sugar depletion. Adding the stuck wine containing residual sugar can cause it to restart fermentation and ferment the stuck wine to dryness. In the case of a red wine fermentation the stuck wine can be added directly to the lightly pressed skins of the successful fermentation. The use of this technique should be discussed with a wine or yeast consultant first before implementing since each situation is unique and there is a risk of increasing the problem.

If racking onto lees does not work then choose a strong fermenting, alcohol tolerant yeast strain with a good ability to utilize fructose to re-inoculate. More often than not the fructose content of a stuck fermentation is much higher than the glucose content. *Saccharomyces cerevisiae* yeasts prefer to ferment glucose and struggle to ferment when the glucose to fructose ratio is more than 1:10. It is believed that a ratio greater than 1:10 can even cause the stuck fermentation. This type of imbalance has been observed in stuck fermentations of Chardonnay and various red grape varieties. Choosing the right yeast and managing fermentation temperature can, to a large extent, prevent the occurrence of this imbalance.