



# STUCK FERMENTATION

## PROTOCOL DE RESTART

### Principal causes of stuck/sluggish fermentation:

- **Yeast nutrient deficiency:** YAN, vitamins and salts determine yeast biomass population and activity
- **Survival factor deficiency:** Sterols and unsaturated fatty acids improve yeast cell resistance to stress conditions and increases their viability.
- **Temperature shocks** can be responsible for an abrupt stop or sluggish late fermentation.
- **High alcohol content:** Alcohol degrades cell membrane and reduces yeast viability. Brix adjustment and a

proper yeast choice are necessary to deal with high Brix juices.

- **Presence of toxins** such as residual pesticides, medium chain fatty acids, acetic acid, ... inhibit the metabolic activities of yeast.
- **Spoilage microbes** inhibit yeast growth and activity, leading to a stuck fermentation and wine spoilage. For a wide spectrum of action, Kill Brett combined with 2 g/hL of SO<sub>2</sub> can reduce populations of spoilage yeast, lactic acid bacteria and acetic acid bacteria in wine.

### Fixing a stuck fermentation – Example for 100 hL

Regardless of the cause of the stuck/sluggish fermentation, it is necessary to detoxify and treat wine before attempting to reinoculated the fermentation.

#### STEP 1: Treat stuck wine

- Press off skins
- Add **30 g/hL Actibiol** to detoxify the wine.
- Rack wine off gross lees, without aeration
- Add **2 g/hL of SO<sub>2</sub> and 2 g/hL KillBrett** to limit spoilage microbes development

#### STEP 2: Prepare the restart tank (5 %)

- Transfer 5% of the wine (5 hL) into another tank
- Adjust wine sugar content at ~3°Brix and alcohol content at 6-7%vol, with acidified water and sugar additions.
- Add **100 g OptiFerm®** (20 g/hL) for a healthy yeast nutrition
- Maintain temperature of the restart tank at 20°C



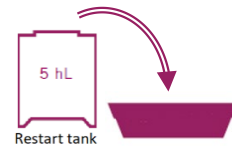
#### STEP 3: Rehydrate and acclimate yeast

- Add **30 g/hL of Oenostim®** to 60 L of hot water (~104°) stirring continually to avoid forming clumps.
- Add **30 g/hL of L.A Bayanus** and stir gently
- Wait 20 minutes



#### STEP 4: Acclimate yeast

- Add 60 L of the restart tank to the yeast culture
- Once Brix drops by 1/2, add same volume of wine from the restart tank
- Repeat previous step until full volume of the restart tank has been transferred to the yeast culture



#### STEP 5: Restart fermentation

- Once Brix <0.3, add restart tank to the stuck tank.
- Add **20 g/hL OptiFerm** to the stuck tank
- Maintain the tank at 20°C



#### PRODUCT LIST FOR 100 HL:

- 3 kg ACTIBIOL
- 200 g KILLBRETT
- 3 kg OENOSTIM
- 3 kg L.A. BAYANUS
- 2 kg OPTIFERM

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