

uvaferm[®] 43[™] RESTART

YSEO[™]
PROCESS
Research in collaboration
with Washington State University

ORIGIN AND APPLICATION

Optimised and pre-acclimated, resulting in a very robust yeast: Uvaferm 43[™] RESTART. The most fructophilic yeast in the Lallemant portfolio.

Under oenological conditions, glucose and fructose are the main fermentable sugars used by *Saccharomyces cerevisiae*. Although both of these hexoses are generally present in musts in equivalent quantities, *Saccharomyces cerevisiae* prefers to consume glucose, which explains why the main residual sugar in stuck ferments is fructose. Our R&D showed that in oenological conditions where nitrogen, sugar and glucose/fructose ratios were varied, the yeast Uvaferm 43[®] proved to be the most efficient at metabolising fructose under conditions similar to those found in stuck ferments.

Uvaferm 43[®] is now available in a more robust form called **Uvaferm 43[™]Restart**. This new yeast adapts more quickly after inoculation as it has been optimised and pre-acclimatised to perform well under the challenging conditions of stuck fermentation. It is highly fructophilic.



MICROBIAL AND OENOLOGICAL PROPERTIES

- *Saccharomyces cerevisiae* var. *bayanus*
- Competitive factor: active
- Excellent for restarting stuck ferments with high fructose/glucose ratio
- Very fructophilic yeast
- Relatively low nitrogen demand, low H₂S and low SO₂ production
- High tolerance to alcohol: up to 16% * *Subject to conditions.*
- High fermentation vigor
- Neutral sensory effect on the finished wine

RESTARTING A STUCK ALCOHOLIC FERMENTATION

Where problem ferments have been going for some time it is best to remove the spent yeast which may contain or remain to be a source of inhibitory compounds to the fresh active culture. The addition of **ResKue[™]** (100% yeast walls) prior to yeast removal will help remove short and medium chain fatty acids and fungicides that are toxic to yeast cells.

Note on use of yeast nutrient in restart procedure

The conditions prevailing in a stuck fermentation present several challenges:

1. Minimising the risk of excess nutrient following a successful restart and completion of fermentation
2. Limiting the toxic effect of ethanol on the permeability of cell plasma membranes which affects the uptake of glucose/fructose and amino acids.
 - *The use of Fermaid AT[™] in the first fermentation phase of the restart procedure is a key prerequisite to limiting the impact of ethanol toxicity on the yeast cell membrane.*

The yeast is able to take up the α-amino nitrogen (provided by **Fermaid AT[™]**) in an environment where the cell membrane permeability and intracellular pH control ATPase functions are not compromised by the alcohol present. As a result, the intracellular reserve of alpha-amino nitrogen is increased and in readiness for an acceleration of metabolic activity when the yeast inoculum is introduced into the problem wine.

PROCEDURE TO RESTART A STUCK ALCOHOLIC FERMENTATION USING UVAFERM 43™

Products required:

- **ResKue™** – 65g/hL of stuck wine volume
- **Go-Ferm Protect Evolution™ (GPE)** – 30g/hL of stuck wine volume
- **Uvaferm 43®** – 50g/hL of Stuck Wine Volume
- **Fermaid AT™** – 50g/hL of initial starter mixture volume (in step 2).
- Juice or Grape concentrate.

Procedure for 10hL (1000L) of stuck wine

1. Preparation of the wine

- Ensure 7-8 ppm free SO₂.
- Rehydrate 400 g ResKue™ (40g/hL), as per the data sheet.
- Stir resuspended ResKue™ into the wine.
- Allow to settle for 48 hrs, then rack or filter the wine

2. Preparation of the 'initial starter mixture'

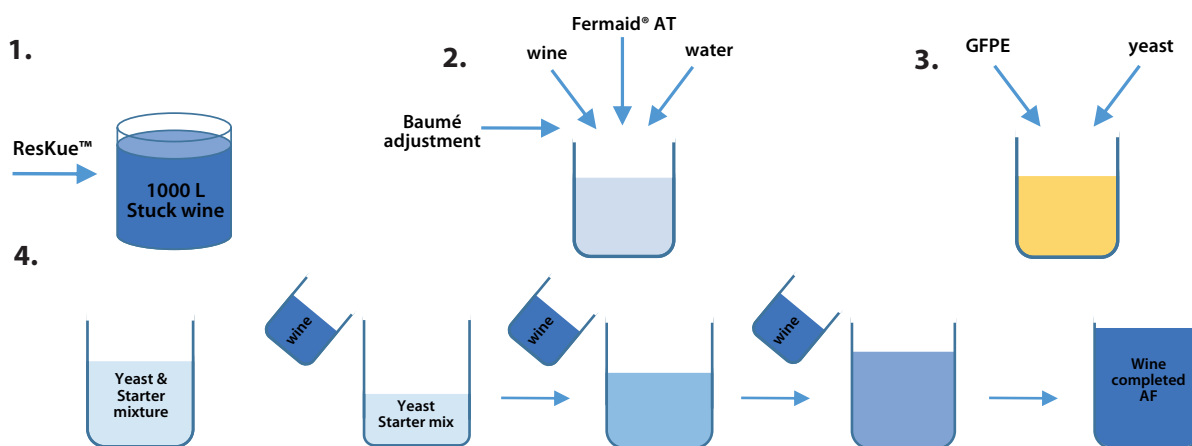
- Prepare the initial starter mixture and adjust temperature to 25-30°C.
- 25 L stuck wine.
- 25 L water.
- 25 g Fermaid® AT (50 g/hL)
- Adjust sugar to approx. 5° Baume (e.g. with grape juice or grape concentrate).

3. Preparation of the yeast

- Add 300 g GoFerm Protect Evolution™ (30 g/hL) into 6 L water, 40-43°C.
- Stir until a homogenous suspension.
- Leave for 10 minutes.
- Sprinkle 500 g Uvaferm 43 (50 g/hL) slowly & evenly onto GFPE/water, 35-40°C.
- Wait 20 minutes.
- Further gentle mixing.

4. Restart the fermentation of the stuck wine

- Slowly add yeast (Step 3) into the initial starter mixture (Step 2).
- Ensure temperature does not change more than 10°C.
- Mix well; maintain temperature at 20-24°C.
- Monitor the sugar level of the starter.
- When sugar has dropped by half, slowly double the volume with stuck wine
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- Maintain temperature at 20-24°C
- When sugar has dropped by half, slowly double the volume with stuck wine
- Maintain temperature at 20-24°C
- Repeat adding stuck wine, as above, until all the stuck wine has been added
- Only allow the last batch of added stuck wine to go to complete dryness



PACKAGING AND STORAGE

- All Active Dried Yeast should be stored dry, best practice between 4-12°C and the vacuum packaging should remain intact.

The information herein is true and accurate to the best of our knowledge; however, this data sheet is not to be considered as a guarantee, expressed or implied, or as a condition of sale of this product.

