

# STUCK FERMENTATION PROTOCOL



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## Stage 1

- Earth filter the stuck fermentation to remove old yeast cells that may inhibit the fresh yeast inoculum.
- Dilute approximately 1,000 litres of filtered wine with approximately 1,000 litres of filtered tank water to arrive at 6% by volume alcohol.
- Warm the wine to 18 – 20° C.
- Add: 300 ppm DAP, 5ppm Yeast Nutrient (Cerevit or equivalent),
- Inoculate with 1,000 ppm rehydrated yeast. Use a commercial yeast that is a vigorous fermenter (eg Prisse de mousse or Fermichamp or equivalent) followed by normal protocol for the preparing yeast cultures.
- Wait until fermentation has started or moved at least 0.5° Baume, then sparge with sterile air at 5 – 10 litres per minute using a 15 – 20 micron sinter (Micro-Ox head)
- Monitor cell counts including % budding.



## Stage 2

- Prepare approximately 4,000 litres of a wine by adjusting alcohol down to approximately 10% by vol.
- Adjust to 3° Baume with neutral grape concentrate.
- Warm the wine to 18 – 20° C.
- Inoculate from Stage 1 when Stage 1 is less than 3° Baume.

The cell count should be near maximum, ie 100 – 200 million cells/ml, ( $2 \times 10^3 \times 2$  cells/ml) with 30 – 50% yeast cells budding. If the Baume is decreasing, DO NOT WAIT for the yeast count to increase as it may never reach the above counts.

- After inoculation, the volume should be approximately 6,000 litres or 1/3 more than Stage 1.
- Mix the fermentation with an agitator continuously.



## Stage 3

- When Stage 2 has fermented to a sugar level slightly below that of the stuck wine, transfer an equal volume of the stuck wine on to the Stage 2 re-fermentation. **Do not transfer the culture into the stuck wine as this will shock the yeast.**
- Mix the fermentation with an agitator continuously.



## Stage 4

- Repeat Stage 3 until all stuck wine has been transferred into the fermentation tank.
- Monitor the baume and temperature on a daily basis until the ferment is reading under 0.5, then check reducing sugars levels regularly (at least once every three to five days) to gauge fermentation activity.
- When the wine has reached the appropriate dryness, stop the ferment by reducing the temperature, top the tank full and add SO<sup>2</sup> to allow the yeast to settle so that the wine can be filtered.