

## Using Maurivin Active Dry Wine Yeast

- The proper preparation of Active Dry Wine Yeast (ADWY) is crucial for a successful fermentation.
- A simple process, done properly, can save a lot of time and anxiety down the track.
- Having an active starter culture minimises the lag phase (an important factor in achieving a healthy ferment) and decreases the chance of sluggish or stuck fermentations.

### Inoculation Rates

**Rehydrating 25g of ADWY in 100L of juice/must will achieve a minimum  $5 \times 10^6$  viable cells/ml.**

- To achieve an effective fermentation it's important to have a population of  $1.2-1.5 \times 10^8$  viable cells/ml present at the end of yeast growth (1/3-1/2 through fermentation).
- Therefore, a minimum starting population of  $5 \times 10^6$  viable cells/ml is required.
- Inoculation rate for red wines can be reduced due to the increased presence of nutrients (skins) and  $O_2$  (pump-overs). Industry average is ~ 17-25g/100L juice/must.
- For highly clarified whites, or for juices/must traditionally difficult to ferment, the rate of inoculation will be higher, between 30-40g/100L juice/must.

### Recommended procedure for rehydrating Maurivin ADWY

**Rehydrating 25g/L of ADWY in 100L of juice/must will achieve a minimum of  $5 \times 10^6$  viable cells per ml.**

**This process takes about 30 minutes.**

1. Rehydrate ADWY by slowly sprinkling it into 5-10 times its weight into clean water pre-heated to between 35-40°C.
2. Allow the yeast to stand for 15 minutes without stirring.
3. Adjust the temperature of the rehydrated yeast solution to within 5°C of the juice/must to be inoculated, by adding sufficient volumes of the juice/must (sulphite-free) to give successive 5°C reductions in temperatures.

4. Use the yeast within 30 minutes of rehydration.
5. It is recommended the juice/must to be inoculated must be 18°C or higher to avoid extended lag time.

Each step is vitally important for optimum yeast rehydration and is explained as follows:

## **Rehydrating ADWY - Step 1**

Rehydrate ADWY by slowly sprinkling it into 5-10 times its weight into clean water pre-heated to between 35-40°C.

- Any toxins or chemicals present in the water can harm/kill the yeast cells during rehydration.
- Rehydrating at a lower temperature will result in essential cytoplasmic material leaking from the cells (mainly carbohydrates), thus reducing cell viability.

## **Rehydrating ADWY - Step 2**

Allow the yeast to stand for 15 minutes without stirring.

- This is a very important step.
- Allows the cell membranes to regain maximum fluidity, without which stirring can physically damage the membranes.
- Stirring will also disperse micro-nutrients that had first escaped the cells upon contact with the water. These important micro-nutrients can be reabsorbed by the cells if within the immediate vicinity.
- It's best when first adding the yeast to water to mix gently, exposing all the yeast to the water.

## **Rehydrating ADWY - Step 3**

Adjust the temperature of the rehydrated yeast solution to within 5°C of the juice/must to be inoculated.

- Acclimatise the yeast to the juice/must.
- This should be done over a 15 minute period.

## Rehydrating ADWY - Step 4

Use the yeast within 30 minutes of rehydration.

- After 30 minutes, the activity of the yeast can start to decline due to lack of nutrients.
- This time can be extended if the yeast was acclimatised with juice or water containing nutrients.

## Rehydrating ADWY - Step 5

It's recommended the juice/must to be inoculated must be 18°C or higher to avoid extended lag time.

- An important factor for the cell population to reach  $1.2-1.5 \times 10^8$  viable cells/ml is for the temperature to remain above 18°C for the initial stage of fermentation.
- Within 20-30% of the sugar being metabolised (2-4 days), the temperature of the ferment can be reduced.

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