



## Finished Wine Starter Culture for freeze dried MCW

Rehydrate bacteria:

40 gram MCW, warmed to room temperature

400 mL water, 76-78°F

Mix then allow to stand for 10 minutes, mix again and add to prepared starter media.

Starter Media preparation for 10 gallon total volume:

5 gallon wine, free SO<sub>2</sub> < 10ppm, low total SO<sub>2</sub>

2.5 gallon apple juice

2.5 gallon water

10 gram Nutriferm ML or 30 gram yeast extract

Adjust pH of starter culture to 3.8 if needed with potassium carbonate.

Mix well and adjust temperature to 72°F.

Add rehydrated MCW to prepared media. Mix without aerating and position fermentation lock in place. Hold at 70-75°F.

After 4 hours, add 3 gram active dry yeast (not a strain that is a vigorous SO<sub>2</sub> producer)

Monitor malic acid degradation either enzymatically or by paper chromatography. When the initial malic acid has decreased by 2/3, expand culture by doubling volume with wine. Continue to expand until the starter volume is 5 to 10% of the total wine volume to be inoculated.