LAVA Meeting **25-01-16**

Wine Education, Determining a Successful Malolactic Fermentation

Client Sample ID: 22 NEGRO AMARO

LWL Sample ID: AB55339

Harvest Panel

Analyte	Result	Units	Method	Date Analyzed
Fructose	106.9	g/L		
Glucose	100.3	g/L		
Brix	22.14	°B		
Malic Acid	5.42	g/L		
pH	3.71			
Titratable Acidity	6.1	g/L		
N-OPA	286	mg/L		
Ammonia	112	mg/L		
Potassium	2486	mg/L		
Yeast Assimilable Nitrogen	378	mg/L		

Client Sample ID: 22 NEGRO AMARO

LWL Sample ID: AB92688

Wine Panel

Analyte	Result	Units	Method	Date Analyzed
Alcohol	12.87	% vol		
Free Sulfur Dioxide	13	mg/L		
Total Sulfur Dioxide	>250	mg/L		
Malic Acid	0.2	g/L (200 ppm)		
pH	3.66			
Titratable Acidity	6.7	g/L		
Residual Sugar	<0.1	g/L		
Molecular SO2	0.18	mg/L		
Volatile Acidity	0.77	g/L		

- Malolactic Fermentation (MLF) is typically referred to as secondary fermentation.
- Malolactic Bacteria consume Malic Acid creating Lactic Acid and Carbon Dioxide.
- MLF can start spontaneously or by addition of ML Bactria.
- MLF activity with <15 mg/L SO2, pH >3.2, Temp >64 F, nutrients (lees), and low oxygen levels.
- Malic Acid is the second largest contributor of total acidity after Tartaric Acid.
- Malic Acid levels in grapes can be as high or higher than 1500 ppm or 1.5 g/L
- Commercial wine makers like to have Malic Acid levels below 30 m/L to be considered stable.
- For home wine makers should strive for Malic Acid levels at or below 100 ppm.
- MLF can stabilize wine by removing food for other bad bugs while rounding out or mellowing the wine.
- Paper chromatography is a home testing procedure which can confirm MLF completion.
- Paper chromatography can indicate MLF has reduced Malic Acid to about 100 ppm.

Examples of paper chromatography testing results:

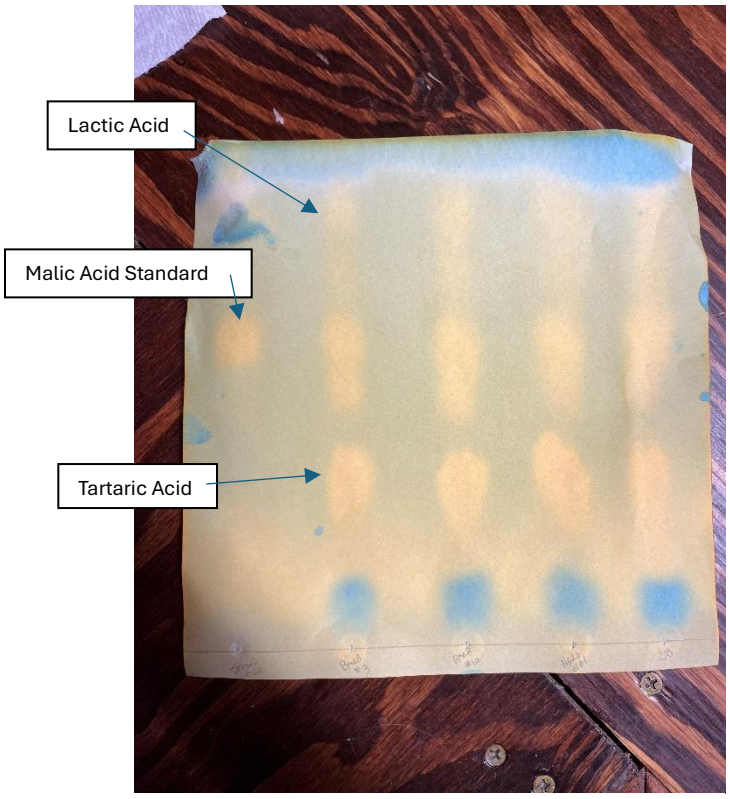

Figure 2: Incomplete MLF

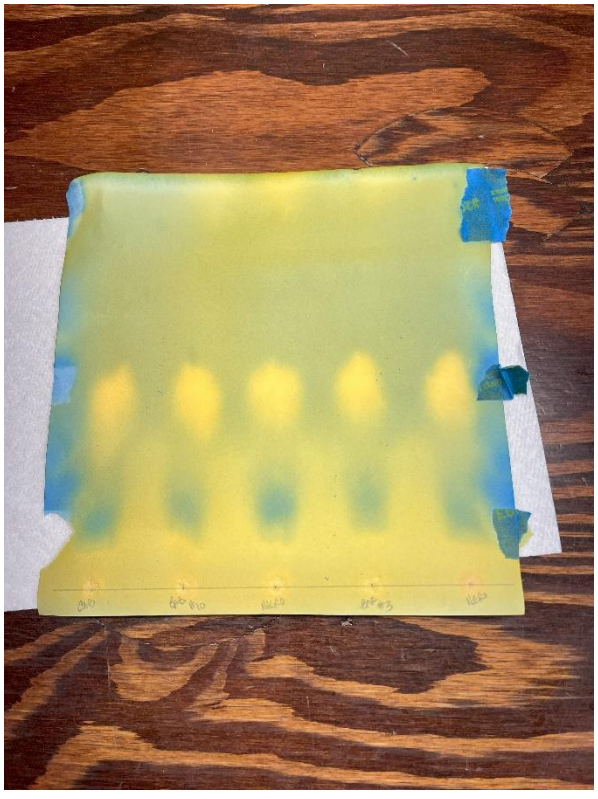

Figure 1: Complete MLF