



Malolactic Fermentation Assessment Panel - Panel 10

Malolactic bacteria, at times, have trouble adapting to the harsh environment of wine and become sluggish or stuck. Vinquiry offers the new Malolactic Fermentation Assessment Panel to determine the degree of malolactic fermentation (MLF) completion or possible reasons for a stuck or sluggish MLF. Vinquiry tests for the L(-) malic acid form, the form which is converted to L(+) lactic acid during malolactic fermentation, and considers MLF to be complete at or below 0.3g/L (30mg/100mL). The panel will provide winemakers with the key information needed to complete a successful malolactic fermentation.

Malolactic Fermentation Assessment Panel Includes:

- Quick Malic Assay
- Glucose/Fructose (enzymatic)
- Volatile Acidity (segmented flow analyzer or cash still)
- Total SO₂ (segmented flow analyzer or ripper)
- Alcohol (GC)
- pH (pH meter or autotitrator)
- Microscopic Scan

Components of the Panel

The **Quick Malic Assay** will determine if a stuck or sluggish malolactic fermentation is due to dead or incompatible malolactic bacteria. The assay involves inoculation with specific Vinquiry malolactic bacteria strains and 48 hours of monitoring and malic acid tests to determine the suitability of the strains. Clients may provide their own bacteria if they choose.

Glucose/Fructose is included to ensure that primary fermentation is complete.

The **Microscopic Scan** will determine what malolactic bacteria is present in the wine and the quantity. The amount of **Volatile Acidity (VA)** in wine may have an impact on whether malolactic bacteria can successfully complete malolactic fermentation. High amounts of acetic acid, the main component of VA, can inhibit MLF.

Alcohol above 14.5% can hinder ML bacteria growth. Knowing the alcohol concentration is also useful in bacterial strain selection for re-inoculation.

Total SO₂ is analyzed because total SO₂ above 30-50 ppm can inhibit malolactic bacteria during MLF. **pH** is another stress factor that can affect malolactic fermentation. Problems may arise in wine with pH below 3.4.

Sampling

- The panel requires at least 500mL of sample. Minimal headspace is essential. Please send samples in plastic containers only. Complementary plastic sample bottles are available from all three Vinquiry locations. Please call the phone number below to have sample bottles shipped to you.
- Do not add excessive amounts of potassium metabisulfite to the sample prior to analysis as it may interfere with results.

For further information on the Malolactic Fermentation Assessment Panel please call 707-838-6312.