



ANALYTICAL SERVICES, CONSULTING & SUPPLIES FOR THE WINE INDUSTRY

Feature of the Month

Past Features of the Month

Options for Post-Fermentation Analysis

Once fermentation has finished, a number of analyses, such as alcohol, glucose/fructose, titratable acidity, volatile acidity, pH, SO₂, and malic acid, are needed for confirmation of fermentation success and for spotting possible sources of trouble. There are various options that a winery has to choose from to run these analyses including basic methods that can be performed in a winery laboratory or outsourcing to a certified wine lab.

Outsourcing to a Certified Laboratory:

Vinquiry recommends two of our analytical panels upon the completion of primary fermentation; the **Basic Chemistry Panel (Panel 1)** and the **Post Fermentation Panel (Panel 8)**. Vinquiry's Basic Chemistry Panel covers baseline chemistry tests for assessing wine. The panel includes:

- Alcohol
- Titratable Acidity
- pH
- Volatile Acidity
- Free SO₂
- Total SO₂
- Malic Acid
- Glucose/Fructose

The Post Fermentation Panel is intended to verify fermentation to 'dryness' in both sugar and malic acid. This panel also establishes a baseline value for volatile acidity in order to monitor potential spoilage problems throughout a wine's life. If VA increases over time, spoilage organisms are possibly present. The panel includes:

- Volatile Acidity
- Malic Acid
- Glucose/Fructose

Vinquiry's Windsor laboratory has been awarded ISO/IEC 17025:2005 accreditation by the American Associated of Laboratory Accreditation (A2LA).

Performed in a Winery Laboratory:

Enzymatic Test Kits by Vintessential Laboratories

The Vintessential Enzymatic Test Kits include the reagents needed to run 30 or 100 tests on a spectrophotometer. Other equipment such as cuvettes and pipettors must be purchased separately. Vintessential Enzymatic Test Kits use the same TTB approved chemistry as the Boehringer method. Kits for the following analyses are now available through Vinquiry:

- L-Malic Acid
- Glucose + Fructose
- Ammonia
- Amino Acid Nitrogen (NOPA)
- Acetic Acid

Paper Chromatography for Monitoring Malolactic Fermentation

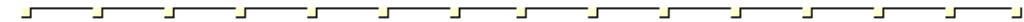
The paper chromatography method is designed to detect organic acids present in juice, must or wine. The technique, when applied to a wine sample, allows the separation of tartaric, citric, malic, lactic, and succinic acids. The test can be used for monitoring malolactic fermentation in a wine by monitoring the degradation of malic acid and the formation of lactic acid. This method is simple and inexpensive.

Reflectoquant® Analysis System from EMD Chemicals

The Reflectoquant® system was developed for malic and lactic acid determination as an alternative to paper chromatography, but can also perform a variety of other tests. The analysis system requires the purchase of the RQflex® meter and test strips. Each single-use test strip is specific to the analyte

being tested. Red wine may need to be decolorized prior to analysis and dilutions may be necessary. Although Vinquiry has multiple tests available, we have found the ones that work best for wine are malic, lactic, sugars, and free SO₂.

For more information on your Options for Post-Fermentation Analysis, please call 707-838-6312.



Past Features of the Month

[October 2008 - Malolactic Bacteria](#)
[September 2008 - Winemaking for Spanish Varietals](#)
[August 2008 - What's New at Vinquiry](#)
[July 2008 - Harvest Analysis](#)
[June 2008 - CUNO Filters](#)
[May 2008 - Bottling Analysis](#)
[April 2008 - Finishing Tannins](#)
[March 2008 - Ascent Cork Aroma Evaluation](#)
[February 2008 - Wine Improvement Panel](#)
[January 2008 - PCR for Spoilage Yeast and Bacteria](#)
[November and December 2007 - Post Harvest Specials](#)
[October 2007 - Stuck Fermentations](#)
[September 2007 - Subliwhite](#)
[August 2007 - Juice Panels](#)
[July 2007 - YSEO yeast](#)
[June 2007 - Instrument Calibration](#)
[May 2007 - Adams Tannin Assay](#)
[April 2007- Laboratory Set-Up](#)
[March 2007- PCR Analysis](#)
[February 2007- ISO Accreditation](#)
[December 2006- Lab Equipment Sale](#)
[November 2006- Restart Stuck Fermentations](#)
[October 2006- Malolactic Bacteria](#)
[September 2006- New Yeast](#)
[August 2006- Juice Analysis Panels](#)
[July 2006- Thermo Orion Meters](#)
[June 2006- Sparkling Wine Products](#)
[May 2006- Ochratoxin Analysis](#)
[April 2006- Calibration Services](#)
[March 2006- Sensory Services](#)
[February 2006- Fining Trials and Products](#)
[January 2006- Unified Symposium](#)
[December 2005- Efferbaktol SO₂ Granules](#)
[November 2005- ML Bacteria](#)

[Home](#) | [Products](#) | [Services](#) | [Technical Information](#) | [News & Events](#) | [Feature of the Month](#) | [Vinquiry Travels](#) |
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