

Advanced Wine Chemistry

DECEMBER 16, 2009 • 8 AM–5 PM • WSU TRI-CITIES

Course Overview

The course is designed to demonstrate methodologies used for important grape and wine components that are typically measured either pre- or post-fermentation. The components that will be taught in this course are enzymatic based analysis (Glucose, Fructose, Malic Acid), and colorimetric tests (Free Amino Nitrogen (FAN), Protein Precipitable Tannins). We will also evaluate more sophisticated methods that require instrumentation that is typically too expensive for wineries to use, such as gas chromatographs for taints and volatiles and FTIR for the entire suite of common juice and wine parameters. Data evaluation and interpretation will be discussed as well as the costs, benefits, and drawbacks of using external laboratories. A new automated method for the measurement (dialysis) for sulfur dioxide will also be demonstrated. Proper laboratory techniques for standardization and dilution preparation will be discussed. This is a practical laboratory with audience members learning the new methodologies. *This is an all day course.*



Map to WSU Tri-Cities Campus
www.tricity.wsu.edu/campus.html

Instructors

James F. Harbertson
Allan Felsot
Vince Hebert

Location

173 Bioproducts Science & Engineering Laboratory

Time: 8:00 AM to 5:00 PM

Cost: \$100 (Lunch provided)

Registration & Payment

Contact Debbie Schwenson at (509) 372-7224 or schwenso@wsu.edu. Registration and payment due by December 15, 2009.

Schedule

8:00 Welcome and Introductions
8:15 Lecture on Laboratory Techniques and Standardization
8:35 Lecture on Enzymatic Techniques (Glucose, Fructose, and Malate) and automated measure of sulfur dioxide (FIAsTM)
Q&A—Split into groups
9:35 Group 1: Brix, Glucose, and Fructose
Group 2: Malic Acid
10:35 Switch Analysis
11:30 Lunch

12:00 Lecture on Colorimetric Tests (Tannins and Free Amino Nitrogen [FAN])
1:00 Group 1: Tannins
Group 2: FAN
2:00 Switch
3:00 Lecture on chromatography techniques for finished wines and what the wine maker should know when evaluating the significance of reported chemical values.
4:00 Demonstrations (HPLC, GCMS, WineScanTM)
5:00 Conclusion