

Smoke Taint Sample Testing in Wine

In an effort to provide help to the grape and wine industries during this smoke crisis, UC Davis and CDFA have partnered to offer analytical services related to smoke. UC Davis will be offering wine analysis and CDFA will be offering the grape analyses. Here, we focus on the wine testing to be performed at UC Davis. The analytical methods used are based on those developed in the laboratory of Dr. Anita Oberholster at UC Davis. While these methods have been tested and are accurate and reliable to the best of our knowledge, neither lab has been specifically certified to perform these tests. Therefore, please check with your insurance provider/legal counsel prior to submitting samples to these service providers, depending on how you will use the data you will receive. The assays for wine will measure **7 smoke-related compounds (guaiacol, 4-methylguaiacol, o-cresol, p-cresol, m-cresol, syringol, and 4-methylsyringol)** and should be fine for internal process decision making and evaluation of wines post fermentation. It is important to note that the assays used do NOT measure bound (non-volatile) phenols that can later hydrolyze to their volatile form. To measure bound (non-volatile) phenols, samples should be submitted to ETS or other providers for HPLC-MS analysis. Wine samples will be received at the UC Davis Analytical Lab and analyzed in the Department of Viticulture and Enology.

1. Please note that only wine samples may be submitted to UC Davis for smoke taint testing.
2. Place 50 mL of sample in a 50 mL centrifuge tube (preferred) or small plastic bottle, tightly sealed. Glass containers are not recommended due to possible breakage during shipping. Samples should remain cold while in-transit to the lab. If dry ice is used, it is important that the sample container is insulated from contact with the dry ice as it may cause the container to crack.
3. Go to <https://anlab.ucdavis.edu> and use the “sign in” selection in the top right corner. **You will need a google email address** to access the ordering system but you can specify a different email for reports and other correspondence with the lab later in the ordering process. Use the Order dropdown menu and select create order. The process is fairly intuitive but if you have any questions, detailed instructions for creating an account and ordering can be found on the website homepage using the **Lab Information** dropdown menu and selecting **Order Completion Help**. When you confirm your order, there will be instructions to print the page. Please include that printed page when shipping your samples.
4. Helpful hints on using the ordering system.
 - a. When entering information for a new client ID, use your own name and email in the “PI name” and “PI email” fields.
 - b. In the comment field enter the unique sample IDs for your samples in the order you would like them to appear on the report.
 - c. When Soil, Plant Material and Water options appear, **use the water testing section and then choose the TAINT-W** selection which will be at the top of the water test list.
5. The price for testing is \$150 per sample. A processing fee of \$45 will appear on the estimate but will be removed when samples are received at the lab.
6. Please see information on where to ship or deliver samples on the <https://anlab.ucdavis.edu> website homepage under the **Contact** dropdown menu.
7. When results are ready, an email will be sent from anlab-notify@ucdavis.edu with a credit card payment button labeled “Confirm Payment.” After the credit card information is entered, the report will be available for download.