

Baker Wine & Grape Analysis

TTB Certified
COOC Lab

Newsletter

Harvest 2011

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Exporting your Wines out of the Country?

We have a special analysis for you!

You just got a big order for wine to be sent to China. Ka ching ka ching! But in the reams of paperwork, you see that you are required to have a laboratory analysis report for your wine. So you can just cut and paste lab results from Baker Wine & Grape Analysis, right? WRONG-O. Every country has their special requirements as to what chemical analysis is required for the wines that are being imported into their country. If you don't have the correct analysis on an approved lab's letterhead with original signatures – they may refuse to let the wine into their country and there it sits on the docks – in the hot sun – for who knows how long.

BWGA offers an Export Analysis that covers the majority of requirements for international exportation of wine. TTB requires that two bottles of wine (labeled and ready for international shipment) per sample be submitted to the lab for analysis. Some of the tests are pretty time consuming, so I ask that I have 3 days to analyze the wine. Each export analysis is \$150.

Why is my field measurement of Brix different from BWGA's reported Brix?

As harvest approaches, I'm gearing myself up for the most common questions that I receive for the season. One common question is people always want to know why lab results may vary from their field results. Here are a couple reasons why:

One issue is that there are different methods to measuring Brix – each with its own pros and cons. In the books that I've read on the subject, Brix is classified as an estimate of the sugar in fruit.



Hydrometers measure Brix (defined as grams of soluble solids per 100 mL solution) by density readings. It is a fast method, but prone to error due to buoyancy, temperature

and the amount of suspended solids in the juice. Refractometers measure Brix by comparing the bending of light through a sugar solution. Errors include temperature and again the amount of suspended solids that could change the bending of light.

Another way of measuring Brix using density is a Densitometer. Anton Paar offers the best densitometers in the world, which are used in many other industries other than winemaking. Typically the solutions going through a densitometer are temperature corrected, free of gas and non-turbid. The densitometer that I use to calibrate the Winescan with is Anton Paar's DMA 5000. A smaller handheld version of densitometer- called the DMA 35n – is very

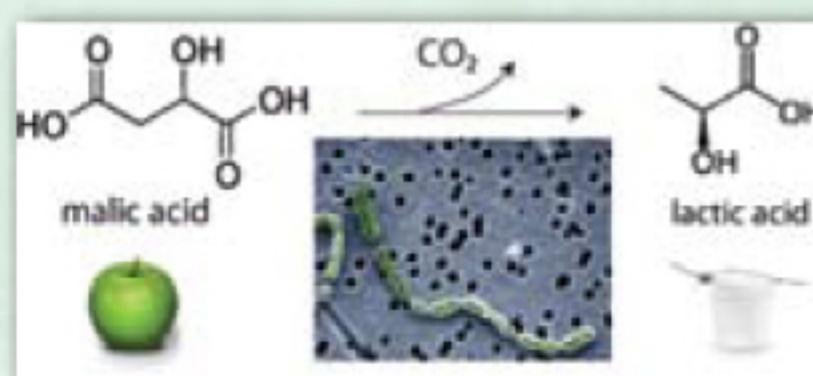
popular with winemakers, accurate and costs about \$2500 each.

Another difference I've noticed between field samples and how I measure Brix in the lab is that I centrifuge the juice to remove the insoluble solids. I also think there is a bit of soak factor (since there is a lag time between crushing the juice and actually running the samples) which causes more of the glucose and fructose (the fermentable sugars) to go into solution.



How can you tell if a wine is moving through Malolactic Fermentation?

Most winemakers are familiar with using malic acid measurements to monitor their malolactic fermentation. Another way to be sure that your ML fermentation is progressing is to also monitor the lactic acid numbers. As active culture of malolactic bacteria converts malic acid to lactic acid in a 1:1 ratio, you can follow a secondary fermentation by watching the malic acid go down and the lactic acid increase. Another reason to monitor the lactic acid is for lactobacillus infection, in which case your lactic acid concentration could skyrocket towards 3.0 g/L or above.



ML: \$20

Lactic: \$10



Artwork by Richard (Dad) Baker

What else does Baker Wine & Grape Analysis Do?

We are coming up on our 10 year anniversary this March, and over the years several different sample types have come into the lab. Brenda is always happy to see if there is a way that she can help out people in the community. Here are a few examples of some of the things that have been analyzed aside from wine and juice:

Olive Oil: I first started analyzing olive oil in 2003 when I was approached by a local olive grower. The closest olive oil analysis lab was in Lodi and this grower was sure the olive oil industry was going to take off in our region. Boy, was he right. I went from 3 olive oil samples per year to over 200 samples last year. Most are local growers but I get samples from all over the nation and even a few international submissions. Unlike wine, olive oil only needs to be analyzed once before sale. Mostly, premium olive oil producers are checking that their oil meets the low acidity requirements that are set by the California Olive Oil Council, for which I am a recommended lab. To get this recommendation, I undergo a biannual olive oil testing proficiency test conducted by the American Oil Chemist Society.

Limestone: Did you know that we have a premium quarry in our area that produces high grade limestone, aka calcium carbonate? They sell their high quality product to specialty glass makers who require at least 90% calcium carbonate in their ore, which of course has to be analyzed. This resulted in one of the most colorful pieces of lab equipment that I have - a Chittick Apparatus.

Potatoes: Sometimes these odd projects are big learning experiences also. I was contracted to determine the sugar level in a series of potatoes that the client wanted to evaluate for potato chip suitability. Apparently, high sugar potato chips tend to burn during processing, resulting in undesirable brown and black splotches on the chips.

Strawberries: One absolutely delicious project was strawberry trials. Not only was I asked to evaluate the various sugar content of a series of strawberries, we were also asked to setup an informal tasting panel. My lab got very popular for a while as I invited a few people in to taste test some amazing strawberries. We were sad to see that trial end.

Organic herbicides: Not all of my analyses are pleasing to the customer. I was contracted once to determine the labeling accuracy of certain organic herbicides, in which my client was sure their competitor had the inferior product. Through a series of analyses that were performed blind, I determined that my client's product was actually the inferior product. Not a happy ending....



Chittick Apparatus



Heat Stability - We now offer more choices!

Heat Stab Long – 65°C for 24 hours: \$30 (50 mL)

Heat Stab Short – 80°C for 6 hours: \$30 (50 mL)

Bentonite Trial Long - 65°C for 24 hours: \$70* (750 mL)

Bentonite Trial Short - 80°C for 6 hours: \$70* (750 mL)

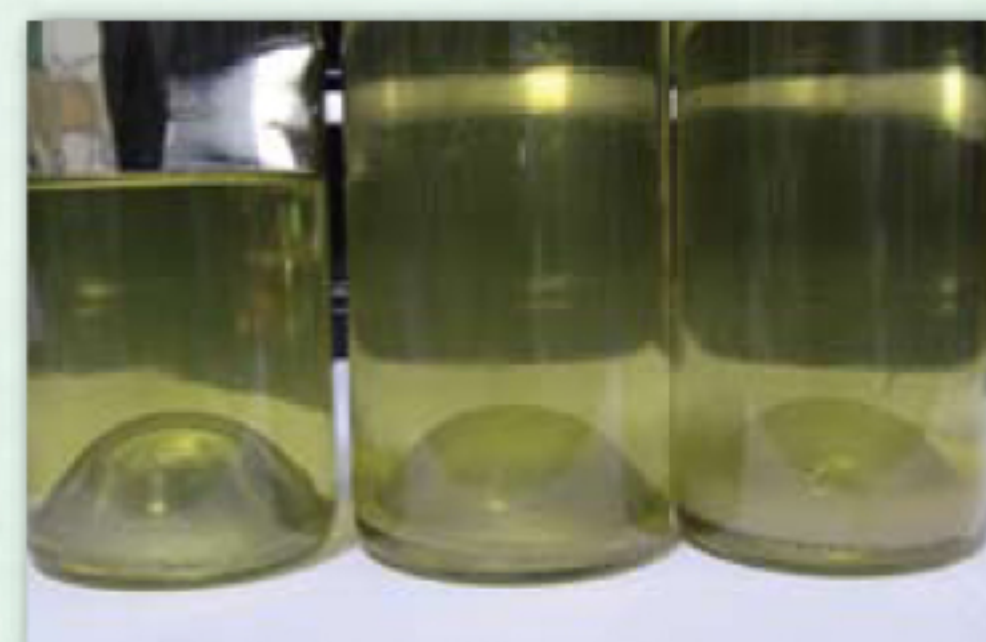
All wines contain some protein. Some of these proteins become insoluble under different environmental conditions, such as increased temperature or simply over time. When these proteins precipitate, they cause a haze visible in white and rosé wines.

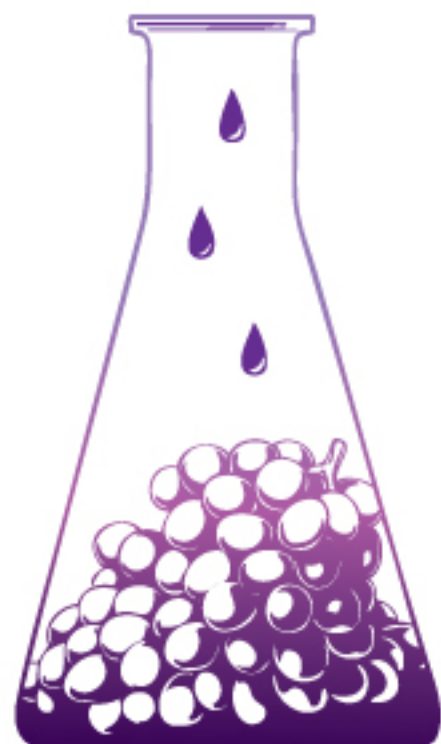
A Heat Stability test is the most common, but not fool proof, test for protein haze.

All proteins precipitate when exposed to heat, but they can differ at which temperature and the length of time exposed to heat as to when they precipitate. The higher the temperature, the more likely the protein will precipitate.

BWGA is now offering two types of heat stability (and also bentonite trials) –the more traditional long time, lower temperature (24 hours at 65°C), or a shorter time, higher temperature (6 hours at 80°C). The higher temperature test is more severe (which means you would need more bentonite to achieve stability), so you as a winemaker need to determine what conditions your wine may face in its lifetime when you are choosing which heat test to use.

*Bentonite trial includes two free heat stab rechecks after you've made your addition;





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What's in a Name?

In 2004, Kevin and Paula Jussila decided to pack their bags and move the family to Paso Robles. They purchased 80 acres on Chimney Rock Road in the Adelaida area. The property was mostly planted with mature walnut trees, and a small slice of Cabernet (own rooted and irrigated). The mission was to create a label focused on blends with a Rhone-centric approach. Kukkula was born!

Kevin's parents are from Finland, and kukkula is a Finnish word, meaning "a hill, or high place". If you visit the property, you'll see that it's a very prominent hill that overlooks the historic one-room school-house in Adelaida. The logo for Kukkula is basically 3 arcs connected horizontally, and is what you'll see as you drive to the property from Paso Robles along Chimney Rock Road.

Download Labels for your samples on
our website: www.bwga.net/services
Labels are formatted for Avery 5163, and you can
download it in Microsoft Word, or pdf format.

Baker Wine & Grape Analysis
Tom's Wine Cellars

Customer: _____
Sample ID: 08' merlot

☐ Preharvest Fast Pack ☐ Juice Fast Pack
☒ Wine Fast Pack ☐ Alcohol ☐ pH ☐ TA
☐ VA ☐ GF ☐ Malo ☒ Free SO₂ ☐ Total SO₂
☐ Heat Stab ☐ Cold Stab ☐ Bent. Fining Trials
Other: _____