



Baker Wine & Grape Analysis

NEWSLETTER

FALL 2014



FAST BRETT ANALYSIS

Brettanomyces bruxellensis is a hardy yeast species that produces strong odors. Too much of these strong odors (4-EP and 4-EG) are considered unpleasant. Brett can withstand high levels of Free SO₂ and resists sanitation procedures, especially in wood. Plus, it can feed on other nutrients, even if there is no sugar left in the wine. What a pain!

One Brett cell can multiply into millions, but knowing if you have a Brett infection early on gives you time to

fight it. We are now utilizing a 4 hour PCR technology to detect Brett DNA at levels less than 50 cells/mL.



Get your Samples Tested!

Interested in checking out your wine or juice?

Sample Size: 50mL of a well mixed sample
Brett DNA:..... \$60
Results within 24 hours

Go to: www.bwga.net
for a video describing the process



GROWER QUALITY IMPROVEMENT PROGRAM

Again this year, Baker Labs will support and play a major role in executing the 2014 version of the Grower Quality Improvement Program. We team with the Paso Robles Wine Country Alliance (who initiated the program in 2011) and ETS Laboratories, providing analytical chemical services to local growers and wineries. The program, which is open to all local growers and wineries, provides measurement of key winegrape phenolics—catechin, total tannin, anthocyanin, complex anthocyanin and quercetin—as well as measuring Brix, TA, pH and berry weight to

participating growers. These measurements have proven valuable in, among others, determining harvest timing, differentiating quality zones within vineyard blocks and in evaluating specific viticulture practices, all aimed at improving the quality of winegrapes.

The 2013 GQIP was a great success with a total of 126 samples processed from 19 growers and wineries. While individual results are confidential and reported only to the sample submitter, many growers freely shared their results in the annual, post-harvest feedback session. In the 2013 session,

growers shared results from hang-time trials, leafing trials, pruning trials, fruit thinning trials, irrigation trials, etc. Wineries shared results relating wine phenolics (tannin, anthocyanin, etc.) to fruit composition. Participants ended the season feeling that they had developed valuable information that will empower them to take actions to improve the quality of their product.

Anyone interested in participating in the 2014 program should contact Katie Nellesen, Membership Coordinator for the PRWCA, at knellesen@pasowine.com or 805-239-8463 x 210.

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COLD STABILIZATION

MORE OPTIONS AVAILABLE

With the advent of new products available to winemakers, cold stabilization is no longer limited to chilling down a tank and hoping for the best. Carboxymethyl cellulose (CMC) and yeast derived mannoproteins are now approved for use in commercial wines. Both of these products work by inhibiting tartrate crystal formation as opposed to chilling wines to precipitate out tartrate crystals. And from what we've seen in the lab, they work great.

If you do use these products on your wines (Celstab, Mannostab, Claristar, etc.) PLEASE let us know at the lab when you bring your wine in for

testing. We can verify that your wine is cold stable, but we have to test differently if CMC or mannoproteins are added.



Did you make your wine in a concrete fermenter? Concrete is calcium rich and causes calcium tartrate formation in wine. We can still test for cold stability on these wines, but again, PLEASE let us know ahead of time so we can set up the proper testing procedure.

Get your Samples Tested!

Sample size: 350 mL
 Cold Stability:.....\$30
 Calcium Stability:.....\$40
Results within 24 hours

IRON

We have added Iron analysis (along with Copper and Potassium) to our lineup utilizing the Flame Atomic Absorption Spectrophotometer.

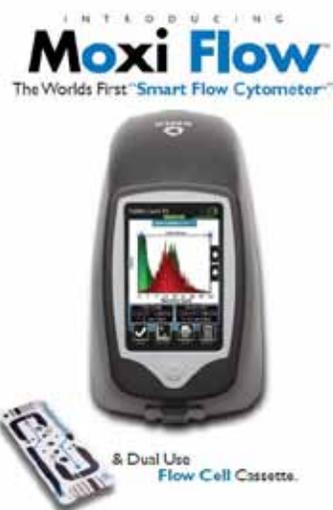
Normally, iron levels in grapes are pretty low (1-5 mg/L), but iron levels can shoot up over 5 mg/L if wine is processed with non-stainless steel metals. And THEN you can get all kinds of wine problems, including a haze called iron casse.

In addition, some countries require iron to be analyzed for wines being imported into their countries.

Get your Samples Tested!

Sample Size: 50mL
 Iron: \$30
 Copper: \$30
 Potassium: \$30
Results within 2 days

YEAST CELL COUNTS AND VIABILITY



quickly obtain an accurate count of your yeast cell population as well as verifying your yeast cell viability to make sure your fermentation is going the way you want.



We finally bought a great instrument called a flow cytometer, used to count yeast cells. A healthy fermentation needs about 10^6 yeast cells/mL with greater than 90% of them alive and kicking. The flow cytometer is marketed with a rather unfortunate name (Moxi Flow), so we are just going to call it Max. But regardless of the name, now we can

Get your Samples Tested!

Sample Size: Min. 50mL's of a well mixed sample
 Cell Count + Viability: \$40
Results within 24 hours

WHO WORKS HERE!??!



● **BRENDA BAKER** Born in Western Pennsylvania, Brenda earned her BS in Biology and Chemistry from Gannon University and her Ph.D in Biochemistry from Colorado State University in 1992. She started at Calpoly, SLO in 1998 as a Visiting Assistant Professor. In 2002, Brenda started Baker Wine & Grape. Married to Tony Pratt, she has no kids, but is responsible for feeding horses, dogs, cats, and chickens. Top three outdoor activities are currently horseback riding, running and learning to fly. Who knows what the top three will be next year?



● **HEATHER MIKELONIS** Heather has been with BWGA since 2006. She does all the laboratory analysis as needed, but her primary responsibility is accounts. She earned her MS in Recreational Therapy from Indiana University (Go Hoosiers!), and now enjoys all of the recreation available in Paso Robles.

Heather has been named "Director of Continuous Improvement" and I give her full credit for continually updating the technology of the laboratory. She works with her husband, Kevin, doing mysterious computer modeling of lighting systems. Heather loves baking bread (and pizza too) in the bread oven that she and Kevin built – check it out on Twitter: @pasobreadoven . . . all are welcome to come over whenever the oven is hot! Heather recently traveled with her husband biking through Denmark and rediscovering her Norwegian roots in Vikedal, Norway.



● **KATHY JOHNSON**



Kathy was born in New Jersey and has since lived in Tennessee, Colorado, and now California. She earned her Bachelor Degree in Biology (Chemistry minor) from Tennessee Technological University. In college, she also enjoyed exploring and mapping caves (Spelunking) with her then future husband Ron. Over the years at various locations, Kathy's laboratory work has included many fields. They include oil shale research, mining industry (Tungsten and Molybdenum), Environmental industry, and cheese production (Mozzarella).

Now in California, her work is focused on the wine industry. After working for two local Paso Robles wineries and venturing into home wine and beer making, she joined Baker Wine and Grape in August of 2008. Work duties include all of the laboratory analysis at BWGA, but she specializes

in Microbiology services, Gas Chromatography, and Atomic Absorption analysis. Kathy is a certified TTB (Alcohol and Tobacco Tax and Trade Bureau) chemist for wine and beer.

Kathy and her husband's current outside activities include escaping on a European Vacation, camping and restoring a vintage Shasta Travel Trailer (Canned Ham). They also always include their two little rescue Chihuahuas (Bruno and Ziggy).



● **MARIA OLIVARES**



Maria has been keeping the laboratory clean since 2007. She is very close to her family and we have enjoyed seeing her daughters, Edith, Wendy and Brenda growing up, as well as her granddaughter -Jenelle.

Maria runs an on call cleaning business with daughter, Wendy. You can call them at: Maria (805) 769-5228, or Wendy: (805) 806-5549. She also loves Chihuahuas.

● **NICK CROSS**

The newest addition to the BWGA lab, Nick became part of the team in June 2014. He is currently in-training to do all the laboratory analysis. Nick graduated from Cal Poly in 2013 in Biological Sciences with an emphasis in Molecular and Cellular Biology, Nick worked a season with Chamisal Vineyards where he 'volunteered' to run the lab when there was a vacancy.

Nick grew up in Ashland, Oregon where his parents ran a white water rafting business and Nick developed a true love of the outdoors, especially camping and rafting. He enjoys the company of his Springer Spaniel Beau, and two cats, Frodo and Nauto ('Now-Toe').

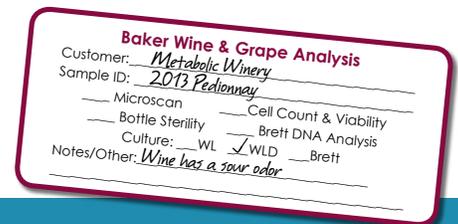




Baker Wine & Grape Analysis

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



Baker Wine & Grape Analysis Online at: www.bwga.net

BEYOND THE WINES



Beer Testing!

With the growing success of the wine industry comes the offshoots of fermentation.

of these measure alcohol and extract levels at TTB required precision. Both Kathy Johnson and Brenda Baker have become TTB certified chemists for Beer just in case you need to export your beer out of California.

Gourmet vinegars have also become a popular item. We can measure the acidity to quantify the strength of your vinegar.

If you would like your special liquids measured, help us out by telling us your processes. The more we know about what you put in, the better we can perform the proper analysis.

Skål!

We are so excited to see a burgeoning interest in microbreweries and distilleries and we are staying ahead of the curve in the testing requirements for those products.

To that end, we now have two new Anton Paar instruments – the Beer Alcolyzer and the Spirits Alcolyzer. Both

BEER, SPIRITS & VINEGAR

Testing & Pricing
Results within 4-6 hours

BEER

Sample Size: 300 mL

6-Pack: Alc %v/v, Alc %w/w, Real & Original Extract, Specific Gravity and Calories.....	\$45
Alc %v/v, or Alc %w/w	\$25
ABV/ABW.....	\$30
Bitterness units (IBU's).....	\$35
Beer Color	\$10
Specific Gravity	\$25
Calories	\$25
Original Extract.....	\$25
pH.....	\$10
Real Extract.....	\$25

SPIRITS

Sample size: 100 mL

Alc % v/v.....	\$25
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VINEGAR

Sample size: 50 mL

Vinegar Titration.....	\$20
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