

# Baker Wine & Grape Analysis

TTB Certified  
COOC Lab

## Newsletter

Winter 2012

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**HOURS OF OPERATION: Mon-Fri: 8a – 6p | Saturdays: 10a – 4p**

### Run, Paso, Run

Brenda started running with a loose group of women 2 years ago because she wanted to do the impossible - run a half marathon. With the support of the group, Brenda not only ran three half marathons last year, she even ran the Harvest Marathon this past fall. This year, the group wants to give back to our community, so we are currently training for the SLO Marathon (April 22, 2012) and are raising money for the Wellness Center (local support for cancer patients and their families) here in Paso Robles as our inspiration. Most of us work in the wine industry and we welcome runners of all abilities to join us on our 7:00 AM Sunday morning training run. Contact Brenda if you would like to help support the Wellness Center or if you want to start running with us.



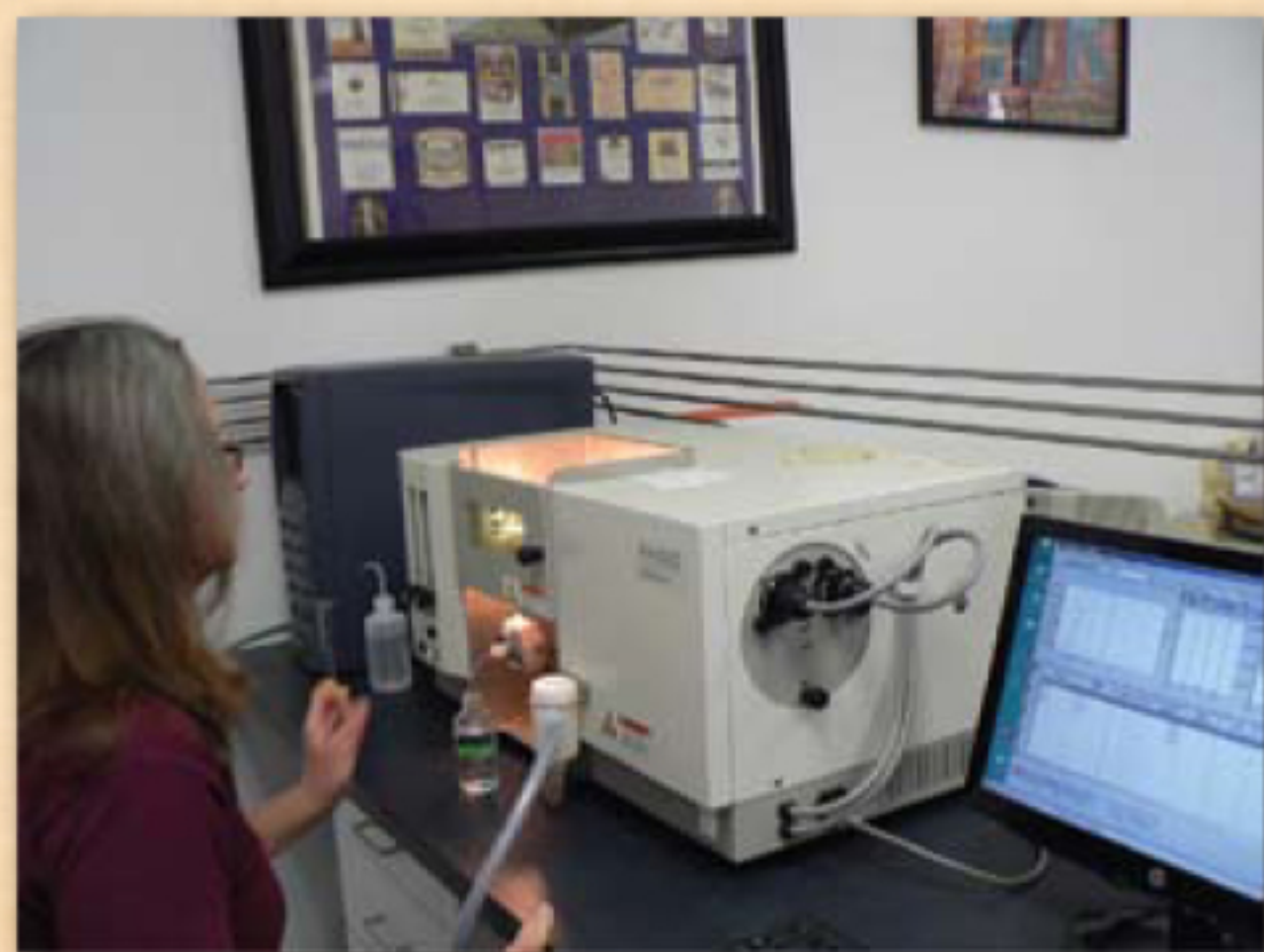
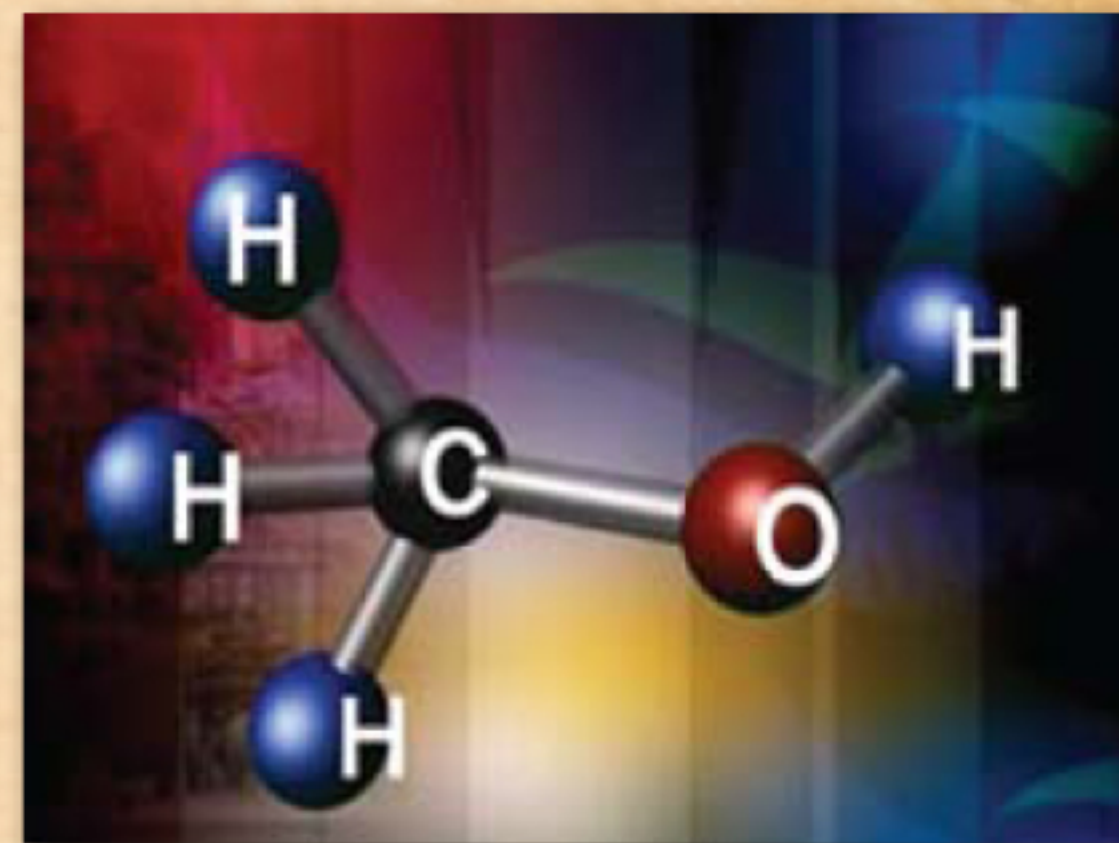


## New Analyses Available!

### Methanol

Did you know that your wine contains methanol? Small amounts of methanol are produced naturally during fermentation. Methanol does not come from the grape sugar, but is a byproduct of the metabolism of pectin, which is found mostly in grape skin. Normally wines have about 60-150 ppm methanol. Pectin treatment and prolonged skin contact during fermentation increases the amount of methanol. Although methanol is toxic, the amount in wine is pretty miniscule. The TTB legal limit for methanol in US wine is 1000 ppm. Methanol can sometimes be a problem in the distillation process, mainly because a distillery by definition concentrates the alcohol. Therefore wines with some methanol will become a distilled product containing more methanol. Methanol is also a byproduct of the breakdown of Velcorin, a sterilant often used in the wine industry for sweet wines. The amount of methanol generated is 47% of the amount of Velcorin used. Since the legal maximum dose of Velcorin is 200 ppm, only 94 ppm methanol is produced, well below the TTB legal limit.

**Methanol: \$80**



### Ethyl Acetate

Ethyl acetate (EA) is a normal byproduct of fermentation, along with its companion, acetic acid (aka vinegar). Together they comprise the analytical measurement of volatile acidity (VA). EA is the stinkier of the two, and the odor has often been described as 'finger nail polish'. It is produced in the early stages of fermentation by some strains of yeast and also by infections of acetic acid bacteria. Normal levels in wine are about 70 ppm and can add character to a wine, but higher levels become objectionably noticeable at about 150 ppm

**Ethyl Acetate: \$100**

### Copper

Copper is not found naturally in wine, but is sometimes added to remove unpleasant odors from sulfides (hydrogen sulfide and mercaptans). The legal limit for copper in wine is 0.5 ppm. Adding high amounts of copper can also lead to 'copper casse'. This is a white haze in white wines that may lead to reddish brown sediment in bottled wines over time.

**Copper: \$30**

### Other Analyses that have been done:

A box of solid fat arrived in the mail one day years ago – yellow and chunky. But when we opened it up – it smelled like chocolate. It was cocoa butter!

We were given the task to analyze the acidity levels to see if this product could qualify as a base ingredient for a certain famous chocolate maker in San Francisco. It did! And we got a lot more boxes of fat in the mail after that.



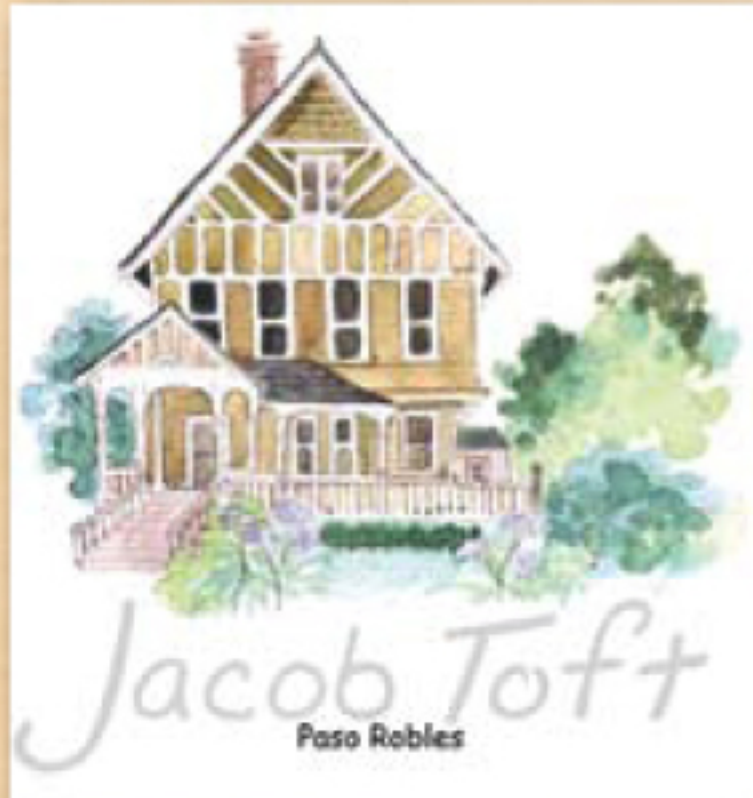


## 10 year anniversary! - How time flies....

Many of you have been curious about how I started BWGA. Like most things in life, it wasn't something I really planned and a whole lot of people helped me along the way. I moved to California from Colorado in 1998 to accept a teaching position in chemistry at Cal Poly. Over that first summer, I had no teaching duties, and from my backyard I could see this winery called Meridian. On a lark, I knocked on their door and got a job as a seasonal part time lab tech for \$8/hr. It was just fun to learn about wine chemistry. Signe Zoller, the winemaker at the time, taught me my first Ripper method for  $\text{FSO}_2$ . Four years later, in one of those after dinner wine soaked conversations, Stephan Asseo (L'Aventure) talked about how there is a wine lab in every village in France and suggested that I might start up my own wine lab in the village of Paso Robles! At the same time, I heard about a new technology called the WineScan that gives multiple results in minutes and only costs a gazillion dollars. Hmm, if I had a gazillion dollars, maybe this would work out.



Bruce Shomler (Sycamore Farms) and Joe Mikelonis (Sunny Oak Vineyard) helped me write up a solid business plan, which we presented to Cindy Smith of Mission Community Bank, who in a fit of madness, offered me an SBA loan for a gazillion dollars if I could come up with the down payment. Cue the in-laws (Lou and Donna Pratt) who not only loaned me the down payment, but for several years drove out twice a year from Colorado to teach me how to run an office and help out during harvest. Lou will not let me pay him back that last \$1, as he wants to maintain his interest in the business.



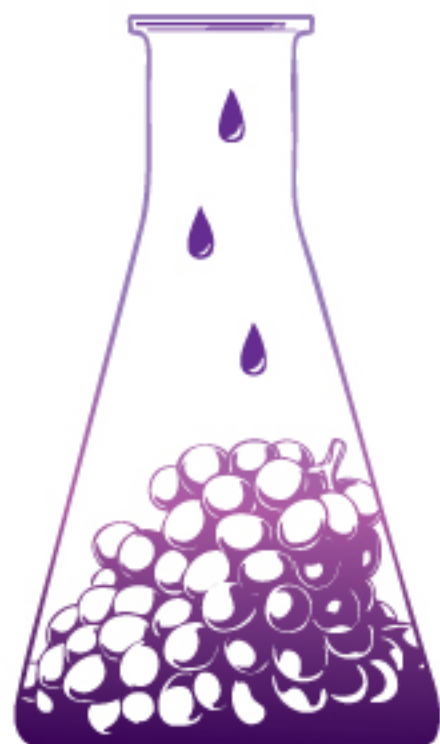
Now for a location. Tom Vaughan of Vaughan Surveys rented 300 square feet of his carpeted office space on the second floor (no elevator) to put in a lab. My husband Tony Pratt contributed shelves, cabinets and other infrastructure as well as moral support. Two of my girlfriends (Val and Karri) helped me carry a big centrifuge up the stairs when a delivery guy left it on the sidewalk.

In February of 2002, I received the WineScan from Foss and got to work setting up the instrumentation. My typical day for the next several months involved teaching at Cal Poly in the mornings and then heading to the lab to work on the WineScan. In order to calibrate the machine to the Central Coast wine profiles, I would then take those same samples to Meridian and use their equipment (with their permission) to fine tune all of my settings.

After four months of calibrations, I officially opened the lab in June 2002. Jacob Toft was my first customer with coincidentally his very first vintage of wine. I had 18 wineries use BWGA services that first summer. Seventeen of them are still in business 10 years later. Although I have added to my scope of services in the ten years, the majority of my prices are still where I originally set them in 2002. Thank you all for being great customers!







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Baker Wine & Grape Analysis online at: [www.bwga.net](http://www.bwga.net)

## TOPPING GASES

I've had a few questions about the types of gasses one can use to exclude oxygen from your product. Regular air is a mixture of gases: 78% nitrogen, 21% oxygen, 1% argon and the rest of the gases are found in percentages less than 1%. The molecular weight of air, then, would be 29 grams/moles. The idea would be to have a heavy gas displace oxygen, without affecting your product.

**Inert** gases are unreactive and are a popular choice. (Costs provided by Blake at Airgas West)

Gas	Weight (grams/mole)	Cost (per 125 cubic foot cylinder)
Nitrogen	28	\$32
Oxygen	32	\$25
Carbon Dioxide	44	\$60 (purchased as a solid)
<b>Helium</b>	<b>4</b>	<b>\$55</b>
<b>Neon</b>	<b>20</b>	<b>\$190</b>
<b>Argon</b>	<b>40</b>	<b>\$65</b>
<b>Krypton</b>	<b>84</b>	<b>\$190</b>
<b>Xenon</b>	<b>131</b>	<b>\$190</b>

Download Labels for your samples on  
our website: [www.bwga.net/services](http://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 SO<sub>2</sub> ☐ Total SO<sub>2</sub>  
☐ Heat Stab ☐ Cold Stab ☐ Bent. Fining Trials  
Other: \_\_\_\_\_