

Volume 7, Issue 10

October 2002



Next GEBL meeting will be **Thursday**, **October 10** at **The Flying Pig**, **7:00PM** 

# Geek Speak - Measuring pH during your Brew Session - Part II By: Lori Brown

Now that you know the target pH you are aiming at from Part I of this article, how do you actually measure for it? The first thing to know is that pH varies with temperature. The difference between measuring pH at 150 degrees F and 65 degrees F is about 0.35 pH. The second thing is to understand the basic pH scale which runs from 1 to 14: 7.0 is neutral, less than 7 is acidic, and more than 7 is alkaline. Since pH is a logarithmic scale, pH of 4.0 is ten times more acidic than a pH of 5.0, 100 times more acidic than 6.0 and 1,000 times more acidic than 7.0. For brewing, we are typically measuring in the 4 to 7 range.

There are two basic ways to measure pH: test strips or a pH meter. I have tried two different brands of test strips. Precision Labs Inc. (4.6 to 6.2) from Ohio and ColorpHast (4.0 to 7.0) from Germany. I always thought these were measuring pH correctly because I always got a reading of 5.3 with them. This was the target for my mash, so I was happy and did not question the results. After Rande Reed spoke at a GEBL meeting last year, I started to question the validity of the test strips. Always up for a new gadget, I started researching pH meters.

There is a huge range of meters both with and without automatic temperature correction (ATC). Without ATC, the meter is only accurate at the same temperature at which it was calibrated. With ATC, the meter gives you a reading at the temperature of the solution. However, the sensitive electrode will last much longer if it is used in the 60-80 degree F range. If you remove a small sample of wort form your 150-degree mash, it cools down to about 80 degrees rather quickly anyway.

After all this research and education, what pH meter did I finally settle on? I bought a Hanna Piccolo. It is calibrated at 2 points, either 4.01 and 7.01, or 7.01 and 10.01. It has ATC from 32 to 158 degrees, and has a resolution of 0.01 pH with an accuracy of +/- 0.01 pH. Yes, this is a meter for a true beer geek! I'll be the first to admit it.

So what happens when we actually compare the pH readings from the meter with the two different test strips. Moment of truth...an actual brew with a 152-degree single infusion mash. Sample removed from mash and set in fridge for a few minutes. Temperature of solution is 75 degrees. Piccolo read 5.32, Precision Labs test strip read 5.8, and the ColorpHast strip read 5.6. For comparison I also pulled a sample at 152 degrees and tested right away. (Hoping I did not damage the electrode in the meter.) The Piccolo meter still read 5.32, the Precision Labs strip read 5.2 and the ColorpHast strip read 5.3.

The meter is easy because you just read the digital display, with the strips, you have to be in good light and compare the strip color to the color scale on the side of the package and hope the package has not faded too much. The strips come with a scale that jumps 0.2 to 0.3 between colors so there is a bit of interpretation needed. The meter requires calibration and cleaning, the strips you just throw away. The accuracy of the three methods tested were very close at mash temperature, but varied greatly at lower temperatures. If you want to test at lower temperatures, during fermentation, or in the final product, I would recommend a meter. If you only test the mash at saccharification temperatures, the strips are the most economical way to go.

#### References:

Brewing Techniques, 2[4] p. 22, 3[3] p. 9-12, and 3[3] p. 22-25. DeClerck, Jean. *A Textbook of Brewing*. Fix, George. *An Analysis of Brewing Techniques*. Goldammer, Ted. *The Brewers' Handbook*.

Noonan, Gregory. New Brewing Lager Beer. Zymurgy, Vol 16 No. 1 Spring 1996 p. 45-48.





Lori's Kitchen

GEBL Newsletter Article

Thoughts on the Evergreen State Fair - 2002 as usey evaluation of the Evergreen State Fair - 2002 as used evaluations of the Eric J. Wilson manufactured and looking around the department of while stewarding and looking around the department of the Eric J. Wilson manufactured and looking around the department of the Eric J. Wilson manufactured and looking around the department of the Eric J. Wilson manufactured and looking and looking around the department of the Eric J. Wilson manufactured and looking around the Eric J. Wilson manufactured around the Eric J. Wilson manufactured and looking around the Eric J. Wilson manufactured and look

GEBLs - Great job supporting the Fair this year and great job in the results. We helped with set-up, entries, judging, stewarding, hosting, and, of course, entries. I wish I had a list of all the entries from our club - there were many. The beers, of course, were a strong enough showing to win the Homebrew Club of the Year again. Louise Fugier entered the Champion liqueur, I entered the Champion soda pop (root beer), and had the top country wine with a red ribbon on last year's rhubarb wine. I also entered beer, cider, mead, and a liqueur, so I tried to cover all the bases!

For those of you who did a hosting shift, these top 5 asked questions will sound familiar:

- 5) What are the rabbit pellets for? (Hops) beginning a sound bluod ow it ook bluods ow
- 4) Why do the caps blow off all of my bottles? The standard of the caps blow off all of my bottles?
- 3) Do you spit it out like on the TV commercial? boog s ad bluow bas noiseusanomab
- 2) What are you running through the still? (Wort chiller) was a rounge blue and And the number one asked question:
  - 1) Are you giving out free samples? gestages of a few judges of selfund really take advantage of a few judges of selfund really take advantage of a few judges of selfund really take advantage of a few judges of selfund really take advantage of a few judges of selfund really take advantage of a few judges of selfund really take advantage of a few judges of selfund really take advantage of a few judges of selfund really take advantage of selfund really take ad

Beyond these silly, but seriously asked questions, it's obvious there is a lot of interest in home brewing. While most Fair-goers will not be inspired to buy a cow or build a roller coaster, many seem to connect to the idea of making soda pop, beer or wine. Many admit that they brew a little, or used to, and wish they could do so better. The most rewarding part of hosting for me is steering folks in the direction of our club, or to the homebrew supply store, or giving a little advice on equipment and techniques. I especially like the chance to encourage folks who aren't entering in the fair to consider trying next year. What our club already knows holds true on a larger scale: home brewing is a social art and folks really like to talk about it.

I wonder if one of the regrettable outcomes of the mid 20<sup>th</sup> century is the row of case beer in every grocery store, and the TV commercials that lead folks to it. Many grandfathers and grandmothers are remembered as brewers, but few mothers and fathers are. We have little choice but to compare our home brewing to available commercial styles, and not to a rich heritage of home brewing experience and memory. Who can have grandpa say "Kid, your beer is pretty close to what my dad made in 1912!" I guess I come close; my grandmother likes my rhubarb wine, which comes from her old recipe. In perfect world, our ESB could always match up to the best home brewed ESB we remember, rather than trying to match any commercial brew.

On to next year, and possibly our 4th consecutive year as Homebrew Club of the Year. It is a state of There are a few things I thought of while stewarding and looking around the department.

- We should openly challenge other local clubs, like Boeing and CBG, to enter and compete with us. If Homebrew Club of the Year included both wine and beer search and entries, the Boeing club would be a huge challenge right now. They have few the quality really outstanding winemakers there and I have to guess a few great brewers.
- Our display looked very good. We should keep that in mind next year during the role aguing big brew and work on another one.
- GEBL lapel pins would be good self-promotion when working at the fair, pouring a driw entire at festivals, etc.

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- Business cards with our club information would be a good handout anytime for
  potential members.<sup>2</sup> lilw another of good a book and a bib own wood of you who did a hosting shift, these top 5 asked questions.
- We should see if we could have a brewing demonstration, outside, during the fair. 

  It couldn't really be any more dangerous than chainsaw carving or a black-smith we demonstration, and would be a good demonstration of a heritage art and craft.
- Our club could sponsor a few special prizes, such as Best NW IPA, Best Hot 18dW (\$\sqrt{2}\$
   Pepper Beer, etc.
- Kim could really take advantage of a few judges qualified and really interested in A (1 judging mead, cider, and fruit wines. Many beer and wine judges don't have a lot of personal experience with those beverages
- The competition, for both beer and wine, needs to attract more judges who haven't entered in many categories. A few of the most experienced wine judges had to pass on the Best of Show round because they had several of the entries. This year, keep in mind judges you know and pass their names on to Kim.

I wonder if one of the regrettable outcomes of the mid 20th century is the row of case beer in every grocery store, and the TV commercials that lead folks to it. Many grandfathers and grandmothers are remembered as brewers, but few mothers and fathers are. We have little choice but to compare our home brewing to available commercial styles, and not to a rich heritage of home brewing experience and memory. Who can have grandpa say "Kid, your beer is pretty close to what my dad made in 1912!" I guess I come close; my grandmother likes my rhubarb wine, which comes from her old recipe. In perfect world, our ESB could always match up to the best home brewed ESB we remember, rather than

What our club already knows holds true on a larger scale; home brewing is a social art

#### Novemberfest

For those of you who weren't able to make the last meeting, Lori Brown has volunteered to accept our Novembeerfest entries at the next GEBL meeting (on 10 October). She will drive them down to Mountain Homebrew. If you want to enter them yourself, you can drop your entries off at any of these three locations:

> Larry's Brewing Supply 7405 S. 212th St. #103 Kent, WA 98032, 253-872-6846

Mountain Homebrew and Wine Supply 8520 122nd Ave NE, Suite #B-6, Kirkland, WA 98033, 425-803-3996

Bob's Homebrew Supply same recipe contest will be held Saturday .td 4t6 3N 1282 mond Knot. It will start a 11:00AM. The 10 word double zeroward life vel at Seattle, WA 98105, 206-527-9283 may 8122 mg reave and bosoning of or

> The entry fee is \$5 per entry (three bottles). By the way, there weren't any Puget Sound Best of Show finalists last year. We know you all are brewing some great beer, so let's show them what we've got. Details are available

> > http://www.brewsbrothers.org

Even if you are not entering a brew, if

If you are giving your entries to Lori, please make sure to fill out the required entry form and include the entry fee. Make checks payable to Brews Brothers.



#### **GEBL Tasting Summary**

Style: Stout

town Ale House To check Date: 9/12/2002

in ;	Brewer	Brew	Cat.	Aroma	Appearance	Flavor	Mouthfeel	Overall	Total
Comm1	Samuel Adams	Cr. St. (Sweet)	16B	9.07	2.64	14.29	3.71	7.36	37.07
HB1 HB2	Fred Farris Will Fredin	Dry Stout Oatmeal Stout	16A 16C	8.93 7.62	2.14 2.46	14.93 13.54	3.50 3.54	8.00 7.38	37.50 34.54

#### Style Calendar - 2002 and Beyond

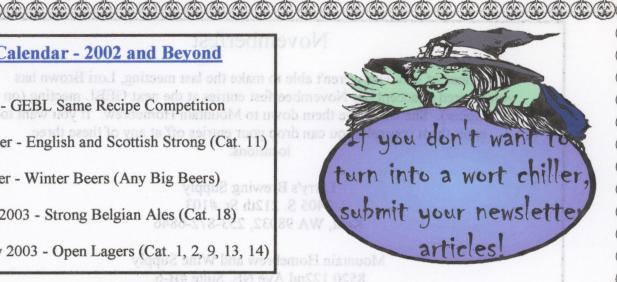
October - GEBL Same Recipe Competition

November - English and Scottish Strong (Cat. 11)

December - Winter Beers (Any Big Beers)

January 2003 - Strong Belgian Ales (Cat. 18)

February 2003 - Open Lagers (Cat. 1, 2, 9, 13, 14)



## The Same Recipe Contest

The same recipe contest will be held Saturday, October 12 at Diamond Knot. It will start a 11:00AM. The beers to be judged, this year an ESB, were brewed from the exact same ingredients by all brewers. Each brewer could use his or her own brewing technique.

The same recipe contest is meant to be an educational contest. This is a club tasting that will also be judged by experienced judges. Everyone will taste and judge the beers. After each beer is judged, the experienced judges will comment on the entry that was just tasted. Comments and questions are also welcomed after each tasting.

Even if you are not entering a brew, if you can, you should plan on attending this club event. Good Information, good beer and good company will be in attendance.

Hope to see you there! SA

### AHA Club Only Competition Schedule

September/October - Strong Belgian Ales (Cat.

November/December - Fruit and Spice Beer (Cat. 21 and 22)

January/February 2003 - Bitter and English Pale Ales (Cat. 4)

March / April 2003 - Brown Ale (Cat. 10)

May 2003 - English and Scottish Strong (Cat. 11)

August 2003 - European Pale Lagers (Cat. 2)

#### What's coming up

October 12 Same recipe competition at Diamond Knot. It starts at 11:00AM, Be there!

October 19 Hales, or whoever's, Pub Crawl

November Novemberfest (see page 3)

Every Tuesday Cask night at Fred's Rivertown Ale House To check the style of the night Go to: caskclub.com

2nd Tuesday of each month CBG meeting at Mountain Homebrew and Wine Supply shop

Beer Library...

Contact Librarian Shane Mields at horneybrew@aol.com if you would like a library book from the GEBL collection