

Baron Mind

A Monthly Publication for the Beer Barons of Milwaukee
Dedicated to the Education and Enjoyment of Fermented Malt Beverages
February 1996



February Meeting

The February monthly Meeting is at 7:30 PM on February 28th, at Cliffords (10418 W. Forest Home Avenue, Hales Corners). As usual, the meeting is \$5.00 per person for members and guests.

Calendar of Events

- March 8-9 Bidal Society Homebrew Competition, AHA Sanc. Comp., Kenosha, WI. Entries due March 2. Contact Carol DeBell at (414)654-2211. E-mail to: OBCTS@ccmail.ceco.com..
- March 24 Blessing Of The Bock, Milwaukee, WI Noon-4:00pm Cost:\$20 Call 372-8800
- March 10 Brewmasters Pub and Armanetti's Liquors will be hosting a five course dinner at Brewmasters Pub, 4017 80th St., Kenosha, WI, 53142. Contact Shawn Quigley at 414-694-9050.
- April 20-21 AHA First Round National Homebrew Competition in selected cities. Contact the AHA (303)447-0816. E-mail to: aha@aob.org or info@aob.org. World Wide Web <http://www.aob.org/aob/>
- May 5 Ninth Evanston First Homebrew Challenge, AHA Sanc. Comp., Evanston, IL. Entries due April 27. Contact Christopher Nemeth at (708)869-3621. E-mail to: NEMETH@ID.IIT.EDU.
- May 17-19 The Midwest Int'l Beer Expo will be held at the Bismarck Hotel in Chicago, concurrent with the National Restaurant Association. Contact Lucy Saunders Beerscribe@aol.com.
- May 19 Wisconsin Microbrewers Festival Chilton, WI PM Cost \$18 in advance only. Tickets on sale in April. Call 414-849-2534

What's Hopping

by Peter McMullen

After a brief hiatus due to lost article, family strife, holidays and baby classes; my column returns in a somewhat different format...boy, can I use a brew!...Congrats to our own Dennis Davison for his featured article in the Winter issue of Zymurgy. Great piece Dennis, and I know his Eisbock will get anyone through the winter...Rumor has it that a new brewpub and Cajun restaurant is coming to Wauwatosa. If this is true, Tosa will have a brewpub and brewery if Mark May gets his up and running...Speaking of brewpubs and micros, I once submitted a list to a certain past editor of a Wisconsin listing of both. This list would be out of date anyway by now if found, but I was wondering if any one would have access to a current listing and locations. I think it would be great to publish once a year or to have it available at the State Fair...I hear Miller is coming out with a new premium beer that is not too filling or too bitter, sounds like the same old-same old. Another lost opportunity...I would like to also thank Randy Cruise from Randy's Funhunters for speaking to the club last year. His name was omitted from the list in the December newsletter...This column is made up of mostly speculation and subjective input. I can't be held to whatever you would want to hold me to...This hop is for you!

Upcoming Meetings

February 28th	Stout
March 27th	Boch
April 24th	TBA
May 22nd	TBA
June 26th	Home Brew Night

Bitch's Brew Oatmeal Stout

by Peter Glen Berger

This beer improves substantially after about 2 weeks in the bottle, as hop aroma subsides and the large amount of roasted barley assumes it's place in the forefront. It's my favorite beer to date, but if I were going to brew it again I might cut back on the roasted barley by about .25 pound, and lessen the boiling hops (either to 1 oz of Bullions, or 1.5 oz of some lower alpha hop). Whitbread ale yeast was used because of the low attenuation rate: this stout is NOT sweet, but has lots and lots of body.



Ingredients:

6 pounds, dark dry malt extract
 2 pounds, amber dry malt extract
 1 pound, crystal malt, cracked
 3/4 pound, roasted barley, cracked
 1/2 pound, black patent malt, cracked
 2 ounces, Bullions hops (boiling)
 1/2 ounce, Willamette hope (finishing)
 2 cups, Quaker Oats
 2 packages, Whitbread Ale Yeast

Procedure:

Steep the Oats, and the cracked grains for 1/2 hr in cold water. Heat mixture and remove grains as boil is reached. Throw in malts and make your wort. Boil Bullions for 45 minutes, Willamette for 5-7 minutes. Have fun.

Specifics:

O.G.: 1.052
 F.G.: 1.029

Bees

Hello all, while brewing outdoors this weekend, the honey bees came out of the woodwork. Must have been the mid 70 degree weather here in South Texas.

Anyway they found my runoff while sparging, and then my homebrew glass! Not bad though, they taste kinda like chicken.

THaby@swri.edu

Tim.

It's Long After Ten

From: Alejandro Midence

At the pub on the crossroads there's whisky and beer,
 There's a brandy from Cognac that's fragrant but dear.
 But for killin' the first and for raisin' the gout,
 There's nothin' at all beats a pint of good stout

Drink it up, man, it's long after ten.

At the pub on the crossroads I first went astray,
 Where I drank and I'll drink for to fill Galloway Bay.
 Goin up in the marnin' I wore out me shoes
 goin' up to the cross for the best o' good booze

Drink it up, man, it's long after ten:

- Some folk o'er the water think bitter is fine.
 And others, they swear by the juice of the vine.
 But there's nothin' that's squeezed from the grape or the
 hop
 Like the black liquidation with the froth on the top

Drink it up, man, it's long after ten.

It's Guinness it's Porter that has me this way,
 For, 'tis sweeter than buttermilk and stronger than tay,
 (tea)

But when in the marnin' I feel kinda rough,
 Me curse on Lord Ivy who brews the damn stuff

Drink it up, man, it's long after ten.

I've traveled in England, I've traveled in France.
 At the sound a' good music I'll sing or I'll dance.
 So, hear me then, Mister and pour me one more,
 If I canna drink it up then throw me out the door

Drink it up, man, it's long after ten,

Drink it up, man, it's long after ten!

Stout

A stronger, darker variant of porter. Usually of modest strength, fairly well-hopped. Typified by two British interpretations: Dry Irish stouts such as Guinness, and the sweeter London stouts such as Mackesons.

American craft brewers are fond of the style, but make up their own rules with regard to bitterness, sweetness and strength.

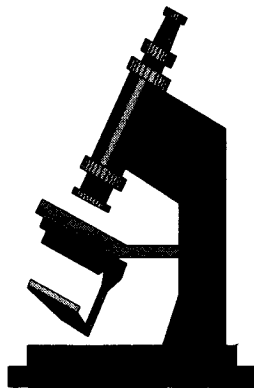
Metabolism Simplified

By A. J. deLange

C. D. Pritchard and John Wilkinson are interested in the metabolism discussions but are suffering some vertigo. If I really understand any of this stuff I ought to be able to explain it neatly and concisely without the jargon of the biochemist.

Here's my attempt:

1. All living things require energy.
2. This energy is required in a readily useable form. In living things it is stored in ATP (in a class of molecules known as "nucleotides") which is (mother nature's bio-chemical battery).
3. Living things not capable of getting energy from the sun must obtain it from a chemical source, i.e. sugar.
4. The simplest way to get ATP energy from sugar is to ferment it i.e. to break its 6-carbon structure down into a simpler 2 carbon structure.
5. Simple organisms are capable of this simple means of energy conversion.
6. Fermentation is not very efficient. It extracts only about a fifteenth of the total energy available from sugar (2 ATP molecules per glucose molecule).
7. In fermentation the 6 carbon glucose is split into two 3 carbon sugars (trioses) and these are oxidized ("oxidation" means to grab electrons in the same way that oxygen does. No oxygen is involved in fermentation.) to pyruvic acid (usually referred to as pyruvate). The reaction steps which describe this process are referred to as the "Embden-Meyerhof-Parnas Pathway" (or just "EMP Pathway").
8. The oxidizing agent is NAD⁺, the oxidized form of the nucleotide NAD. It grabs the electrons. In the course of oxidizing the trioses the NAD⁺ is reduced (whenever something is reduced something else is oxidized and conversely) to NADH which symbolizes the reduced state of NAD.
9. The NAD⁺ must be regenerated if the fermentation is to continue. This happens when pyruvate gives off CO₂ to form 2-carbon acetaldehyde and the acetaldehyde is reduced by NADH. When it reduces acetaldehyde the NADH becomes oxidized to NAD⁺ which is reused in Step 8.
10. The other product of the reduction of acetaldehyde is 2-carbon ethanol.
11. More evolved organisms are capable of oxidizing the 3 carbon pyruvate to obtain more energy (a total of 28 ATP molecules per molecule of glucose). This is called "respiration". Pyruvate gives up CO₂ forming the 2 carbon acetyl group which binds with "coenzyme A" to form AcCoA. AcCoA then enters a cyclical sequence of reactions called the "Citric Acid Cycle", the "Tricarboxylic Acid Cycle" or the "Krebs Cycle". In this cycle the 2 carbon acetyl group condenses with four carbon oxaloacetic acid forming 6 carbon citric acid which then goes through a series of reactions in which 2 carbons leave (as CO₂) thus producing the 4 carbon succinic acid which is eventually converted back to oxaloacetic acid completing the cycle.
12. In addition to the CO₂, electrons (bound to nucleotides) are also thrown off. These enter the "electron transport" chain where they eventually meet with hydrogen ions and oxygen to form water. The nucleotides are transformed into ATP in this process.
13. Yeasts are among the more evolved organisms. They are "facultative anaerobes" meaning that they can ferment in the absence of oxygen or respire in the presence of oxygen.



14. Whether they ferment or respire depends, obviously, upon the presence of oxygen (they cannot respire without it) but also on a complex series of feedback control mechanisms involving dozens of enzymes whose activities are dependent upon the concentrations of the various sources and products of metabolism.

15. Pasteur observed that yeast which were fermenting (anaerobic)

reverted to respiration when oxygen was supplied. This makes sense because respiration is so much more efficient in terms of energy production.

16. Some yeasts, notably brewing yeasts, will not respire, even though oxygen is present, in the presence of glucose. They ferment (or continue to ferment if O₂ was introduced after fermentation was underway). This makes sense because a simple pathway is being used. The organism reverts to its most primitive method of metabolism. As Craig Amundsen noted, nature likes the KISS system.

17. When oxygen is present and Crabtree effect is operating the yeast respire the alcohol formed during fermentation. This is "diauxic" metabolism.

18. The alcohol is oxidized to acetate and the acetate then enters another cycle called the glyoxylate cycle. This cycle produces succinic acid which can then enter the Krebs cycle to be respired by the mechanism of Steps 11 & 12.

19. Once the glucose level is reduced significantly, the cells synthesize (this is called "induction") enzymes which allow maltose to enter the cell and which cleave it into a pair of glucose molecules.

20. If oxygen is present these glucose molecules will flow down the EMP pathway to form AcCoA. Rather than entering the Krebs cycle, much of this combines with oxygen to form sterol, the stuff of the cell wall. Most of the oxygen absorbed by brewing strains is not respired but rather used in this way. In baking strains of *S. cerevisiae* more respiration takes place. Some of the AcCoA is also used to synthesize amino acids and other products required by the cell (including glycogen).

When the oxygen is depleted the cells then revert to simple fermentation (although activities like growth and budding continue but at a lower rate).

This obviously attempts to cram the whole nine yards into a nutshell. Two questions follow. First, to those who understand all this "Does it look right?" Second, to those who don't: "Does this help to make it clear?"

A.J. deLange Numquam in dubio, saepe in errore!
ajdel@interramp.com

Surfin' ?

<http://www.aloha.net/~gak/BEER/BREWPUBS/PENNSYLVANIA/viccoryPR.html>

<http://www.gonix.com/jmherman/jmbeer.html>

<http://www.beeramerica.com/>

<http://www.maine.com/brew>

<http://www.celis.com>

mbqw54a@prodigy.com (Jim Jesse)

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 * **Membership Information** Annual membership dues are ten dollars. This just barely covers the cost of producing and mailing this newsletter. In addition, we charge a \$5.00 fee for each meeting attended. This pays for the cost of the beer that we taste that night. Membership dues can be paid at the monthly meetings or you can send a check for \$10.00 to: **Treasurer, Milwaukee Beer Barons P.O. Box 27012 Milwaukee, WI 53217**
 * We mail this newsletter free of charge to prospective members for three months. The date that appears on your newsletter address label is the end of that three month period. For current club members, it is up to you to remember to renew - we do not send out reminders, so check the date on your address label to see if its time to ante up.

Amusing Homebrew Story

by Jeff Hewit

I recently heard a second-hand (third-hand?) story about homebrew that I found rather amusing. A guy makes a batch of homebrew, and stores it in a closet. Somehow, a fire breaks out in the closet. The heat from the fire causes the bottles to burst, and the homebrew puts out the fire. Not only is homebrew a health drink (all those B vitamins in the yeast), it's also a fire safety device. Pretty versatile stuff, huh?

To Steep Or Not To Steep

By Ken Schwartz

Do it, dude!! Best to toss the grains into the cold brew water (in a nylon mesh bag for ease of removal), bring the temp up to about 155F (hi-60's C), hold for 30 minutes, then remove the grains and continue. Under no circumstances should you boil the grains -- much nastiness will result in your beer. The 155-degree "rest" is best-suited if you have grains of some diastatic power such as pale or Munich, in which case you will achieve somewhat of a "mini-mash". If no such grains are present, it still serves to fully extract all the goodness of the grain.

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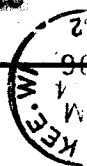
Clifford's allows us to use their banquet room at no charge to the Milwaukee Beer Barons. Our support will help show our appreciation.



PLUS - The food is VERY GOOD!!

Dave & Wendy Van Der Wegen
200 Trillium Terrace
Oak Creek WI 53154
Nov-96

1st Class Mail



Milwaukee Beer Barons
P.O. Box 27012
Milwaukee, WI 53227

