



November 2008 Newsletter

Next Club Meeting Sunday 16th November 2008 @12:30pm

THE PRESIDENTS REPORT

Greetings Fellow Brewers

Alas I was late to the late meeting due to family commitments but I did get there later in the day, and although I missed the bulk of the meeting I still enjoyed the short time that I had, there was still a number of beers to be sampled, beer topics to chat about, good food and great company. On this topic I probably won't be attending the coming meeting either, I'm going into hospital for surgery on my shoulder on Thursday and all being well I will get out of hospital on Saturday (the day before the meeting) and in a worst case scenario may not get out until Sunday, either way I doubt that I will be up to going to the meeting and drinking beer – A very sad state of affairs!

ANHC has now come and gone, it was a sensational event, extremely well organized, and very informative. I learned a lot about a number beer related topics, enjoyed two excellent dinners, a bus trip to a couple of breweries and of course sampled many many beers! Beer for morning tea, lunch, afternoon tea, pre dinner drinks, dinner drinks and post dinner drinks – it was truly a brewers dream. The club night was well run with a number of prizes up for grabs (Best represented club, best club beer, door prizes etc) Westgate was in the running for best beer for Michael Bowron Belgian Wit, which I must admit even though it is a style I don't particularly like Michael's brew was very good, but we were piped at the post by an outstanding American IPA from the Canberra Brewers. In my opinion the whole event was an outstanding success, at this point there is an intention to run the event next year and probably in Melbourne, so I would strongly encourage all Westgaters to sign up for next years conference as soon as it becomes available.

Our next meeting will once again be a "hardware" day when some of our more experienced and mechanically minded members will be available with tools in hand to assist and advise on all matters hardware, so bring along your roll of copper if you need a cooling coil, or kegs that you can't open, or perhaps a boiler that needs a hole drilled in it. We are hoping to cater for most standard tasks but if you have something more complicated or out of left field a phone call prior to the meeting may be in order.

As usual we will have a BBQ lunch, so please bring along all your own requirements and plenty of beer and have an enjoyable lunch with other club members and their families. Westgate Brewers is certainly a family friendly club and we encourage all members to bring along the family and join in.

A reminder that membership fees are now due and payable, it is important that the club remains financially sound and to achieve this it is important that membership fees are paid in a timely manner - Please assist by paying your membership ASAP. We have had a shuffle of committee position due to our Treasurer Mathew Sutton moving to Canberra, Colin MacEwan has taken on Treasurer and is still carrying the Secretary mantle which is a bigger work load than is fair – so we need a new Secretary, any volunteers?

Riggers
Passionate Craft Brewer



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- Old beer coasters



THE NEXT MEETING WILL BE AT THE NAVAL ASSOCIATION HALL, GRAHAM STREET, WEST FOOTSCRAY (OPPOSITE THE YMCA) MELWAYS 41 J3

Coming Events

February 2009

Melbourne Brewers Beerfest

May 2009

Kellybrook Cider Festival

July 2009

Westgate Stout Extravaganza

Contacts

President

Paul Rigby

Secretary

Colin MacEwan – 95347198

Treasurer

Do we have a new treasurer yet?

Newsletter Editor

Gavin Germon

Email

westgatebrewers@yahoo.com.au

Correspondence

New Address

PO Box 5043,
Garden City,
Vic 3207

Club Meeting Diary

November 2008

Club Meeting

December 2008

Club XMAS Party &

High Gravity Beer Competition

February 2009

Wheat beer Competition

April 2009

Low gravity beer Competition

June 2009

Stout Competition

Christmas Party

The date for the Christmas party is set for December 13th and will be held at Robin and Dawn Selwood's residence at:

45 Fisher St

Maidstone

Kick off time is tentatively somewhere between 11am and noon.

Always a great day, there is traditionally a range of roast meats provided by the club.

There will also be the beer brewed for the occasion at Paul's place recently. Feel free to bring along some bottles of your own and enjoy the beer, food, fun and good company. Further details to come.

Westgate Brewers is committed to encouraging responsible drinking
REMEMBER– If you Drink and Drive-You're a Bloody Idiot

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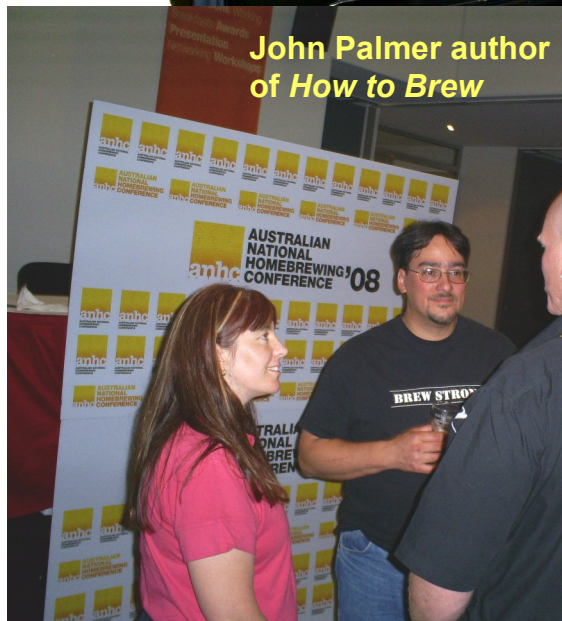
Westcoast Brewers



"On the one hand...." Jamil Zainasheff



John Palmer author of *How to Brew*



John Preston & co taking a beer break.



Mini kegs





AABC National Judging 2008





Australian Amateur Brewing Championship 2008

Full results available at
<http://vicbrew.org/>



Champion Beer of Show (Sponsor: Bintani)

GEOFF PRINCE (VIC) 128 points Russian Imperial Stout

Runner-up: Paul Hyatt (WA), 127 points, American Barleywine

Champion Brewer (Sponsor: Grain & Grape)

Opportunity to brew a one-off seasonal beer with Mountain Goat Brewery to be on tap at The Local Taphouse in Melbourne and Sydney (Awarded 3 points for a First, 2 points for a Second, 1 point for a Third in each Category)

ROSS MITCHELL (ACT) 9 points (2 firsts, 1 second, 1 third)

Runner-up: Craig Webber (ACT), 8 points

Champion State (Sponsor: Artisan)

(Awarded 3 points for a First, 2 points for a Second, 1 point for a Third in each Category)

Winner: Victoria	18 points
=2nd New South Wales	17
=2nd Australian Capital Territory	17
4th South Australia	13
5th Queensland	10
6th Western Australia	3

State Qualifying Championships

A total of 1230 beers were entered from 297 brewers in the 6 first-round state/territory qualifying championships

WA 113 entries from 30 brewers. Champion Brewer: Asher Mitchell

ACT 128 entries from 26 brewers. Champion Brewer: Ross Mitchell

NSW 162 entries from 46 brewers. Champion Brewer: Barry Cranston

SA 212 entries from 43 brewers. Champion Brewer: Adam Beauchamp

QLD 247 entries from 56 brewers. Champion Brewer: Andrew Clark

VIC 367 entries from 96 brewers. Champion Brewer: Chris Taylor

Brewer	State	Score	Beer Style	Name of Beer	Yeast	OG	FG
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1. LOW ALCOHOL CATEGORY (Sponsor: CraftBrewer) 15 entries

Judges: Aaron Caruana BJCP (SA), Megan Watson BJCP (ACT), Linton Young (VIC). Steward: Charles Pedder (VIC)

1st	Scott Simpson	NSW	116	English Ordinary Bitter	Wy1469	1036	1010
2nd	Chris Taylor	VIC	106	English Mild	Little Brown	Wy1187	1041 1016
3rd	Mark Leatham	VIC	104.5	Scottish Light	Wy1056	1035	1008

2. BRITISH & IRISH ALE CATEGORY (Sponsor: Artisan Brewing) 15 entries

Judges: Mike Day (ACT), Peter Winch (SA), Michael Hillery BJCP (VIC). Steward: Mark Herron (NSW)

1st	Ross Mitchell	ACT	123	English Pale Ale	Saf US-56	1054	1014
2nd	Jason Burdett	SA	122	Scottish Export			
3rd	Andrew Hearl	SA	121.5	English ESB			

3. PALE ALE CATEGORY (Sponsor: Grain & Grape) 15 entries

Judges: Stephen Neilsen BJCP (ACT), Neil Kay (VIC), Stuart Behrend BJCP (VIC). Steward: Mike Carter

1st	Lyndon Wilson	SA	126	American IPA	Wy1028	1065	1015
2nd	Tony Brown	QLD	121	American IPA	Wolf Creek IPA	Saf US-56	1069 1016
3rd	Mark Rasheed	SA	113.5	American IPA	Rat Turd Lite IPA	Wy1056	1060 1012

4. DARK ALE CATEGORY (Sponsor: 5 Star Chemicals) 15 entries

Judges: Paul Rigby BJCP (VIC), Robert Smith BJCP (VIC), Dan Rayner (ACT), Colin Penrose (VIC). Steward: Mike Leupold (SA)

1st	Adam Beauchamp	SA	106.5	American Brown Ale	US-05	1052	1010
2nd	Aaron O'Neill	VIC	103.5	Brown Porter	Danstar Nottingham	1052	1014
3rd	Lyndon Wilson	SA	93.8	Northern English Brown Ale	Wy1318	1050	1012

Brewer	State	Score	Beer Style	Name of Beer	Yeast	OG	FG
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5. STOUT CATEGORY (Sponsor: CraftBrewer) 12 entries

Judges: Jess Caudill BJCP (USA), Garry Mansfield BJCP (NSW), Robin Brown (VIC). Steward: Bryce van Denderen (VIC)

1st	Geoff Daly	VIC	126	Dry Stout	Black Velvet Stout	Saf US-05	1058	1020
2nd	Niall Berry	VIC	123	Australian/Foreign Extra Stout		Dry		1028
3rd	Barry Cranston	NSW	110.5	Australian/Foreign Extra Stout	Neale's Old Dark	WLP004	1070	1014

6. STRONG ALE CATEGORY (Sponsor: Foster's Group) 15 entries

Judges: Grant Stott (VIC), Michael Meissner BJCP (NSW), Craig Webber (ACT). Steward: Cameron Turner (VIC)

1st	Geoff Prince	VIC	128	Russian Imperial Stout		Wy1007	1070	1026
2nd	Paul Hyatt	WA	127	American Barleywine		Wy1056+1272	1084	1020
3rd	Robin Brown	VIC	115.5	Strong Scotch Ale		Wy1728	1080	1016

7. PALE LAGER CATEGORY (Sponsor: Bintani) 15 entries

Judges: Jamil Zainasheff BJCP (USA), Chris Taylor BJCP (VIC), George Theodoridis (VIC). Steward: Grame Ward (VIC)

1st	Craig Webber	ACT	110	German Pilsener		Wy2042	1054	1010
2nd	Ross Mitchell	ACT	106	German Pilsener		Wy2278	1052	1013
3rd	Lyall Cotram	QLD	105	German Pilsener		Wy2206	1046	1010

8. DARK LAGER CATEGORY (Sponsor: Hickinbotham of Dromana) 15 entries

Judges: Andrew Wash BJCP (QLD), John Strantzen (VIC), Peter Fitzsimons BJCP (SA), Ray Mills (NSW). Steward: Haig Jason (VIC)

1st	Grant Moss	NSW	113.3	Vienna Lager		WLP833	1052	1010
2nd	Craig Webber	ACT	106.5	Munich Dunkel		Wy2042	1048	1010
3rd	Dan Walker	VIC	105.8*	Vienna Lager		Wy2206	1048	1013

9. STRONG LAGER CATEGORY (Sponsor: Cryer Malt) 15 entries

Judges: Paul Hyatt BJCP (WA), Justin Murphy BJCP (NSW), Gregory Crellin (VIC). Steward: Ian Amsden

1st	Craig Webber	ACT	123	Maibock/Helles Bock		Wy2007	1070	1020
2nd	Duane Wright	NSW	122	Doppelbock		Wy Hella Bock	1080	1018
3rd	Michael Bowron	VIC	120	Doppelbock		Saf S-23	1093	1024

10. WHEAT & RYE BEER CATEGORY (Sponsor: Wig & Pen) 17 entries

Judges: Ross Mitchell BJCP (ACT), Peter Symons BJCP (NSW), Michael Guenzel BJCP (VIC). Steward: Ian Amsden

1st	Michael Meissner	NSW	118.5	Weizen		WLP300		
2nd	Grant Moss	NSW	114	Dunkelweizen		WLP300	1050	1010
3rd	William Steudler	QLD	110.5	Weizenbock		Wy3068	1069	1010

11. HYBRID BEER CATEGORY (Sponsor: Bridge Road Brewers) 13 entries

Judges: John Palmer BJCP (USA), Barry Cranston BJCP (NSW), Tony Wheeler BJCP (VIC). Steward: Andrew Tierney (VIC)

1st	Andrew Clark	QLD	114	Düsseldorfer Altbier	Andrew's Alt	Danstar Nottingham	1053	1014
2nd	Adam Beauchamp	SA	105	California Common Beer		Saf US-05	1052	1010
3rd	Ross Mitchell	ACT	103.5	Düsseldorfer Altbier		Wy1007	1048	1010

12. BELGIAN, FRENCH & SOUR BEER CATEGORY (Sponsor: Bayside Brewers Club) 15 entries

Judges: Brian Fitzgerald (WA), Trevor Harris BJCP (NSW), Brett Schubert (VIC), Charles Newton BJCP (ACT). Steward: Colin MacEwan

1st	Michael Carter	QLD	126.4	Belgian Strong Golden Ale		T58	1072	1012
2nd	Geoff Daly	VIC	125.3	Biere de Garde	Biere de Bananaman	Wy3787	1072	1018
3rd	Ian Walker	WA	124.1	Saison	Farmer's Arse	Wy3726	1050	1004

13. FRUIT & OTHER SPECIALTY BEER (Sponsor: Ballarat University) 16 entries

Judges: Tony Steeper BJCP (ACT), Joe Valente BJCP (NSW), Richard Whitebrook BJCP (VIC). Steward: Colin MacEwan

1st	Ross Mitchell	ACT	117	Christmas/Winter Beer		Saf US-05	1068	1015
2nd	Ben Bassett	NSW	104.5	Classic Rauchbier		WLP833	1056	1014
3rd	Rod Campbell	NSW	102	Raspberry Wheat Beer		US-05	1042	1012

Dried Yeasts Types

These descriptions were gathered from manufacturers websites or online shop information. Some of the descriptions I found were conflicting. This I think is due to differences in fermentation temperature. In fact with all these yeasts, most characters will increase or decrease depending on temperature.



Safale S-04: A well known English ale yeast (reputedly Whitbread) selected for its fast fermentation character and ability to form a very compact sediment at the end of fermentation, helping to aid clarity. Ferments dry and crisp, slightly tart, fruity and well balanced. Suitable for a large range of ales.

Temp range: 15c-22c

Sedimentation: High

Final gravity: Medium



Safbrew WB-06: A speciality yeast selected for wheat beer fermentations. The yeast produces subtle estery and phenol flavour notes typical of wheat beers.

Temp range: 15c-22c

Sedimentation: Low

Final gravity: High



Safale K-97: A German ale yeast selected for its ability to form a large head when fermenting. This top cropping ale yeast is suitable for top fermented beers with low ester levels. Sometimes used in open fermentation. Good for wheat/light ales.

Temp range: 15c-24c

Sedimentation: Low

Final gravity: Low



Safale S-33: General purpose English yeast (reputedly Edme). Consistent clean finish with good attenuation and flavour profile.

Temp range: 15c-22c

Sedimentation: Medium

Final gravity: High



Safale US-05: Dried version of the widely used American ale yeast. Produces well balanced beers with low diacetyl and a very clean, crisp end palate. It accentuates the hop flavours and is extremely versatile. Numerous placings at AABC 2008.

Temp range: 15c-22c

Sedimentation: Low to Medium

Final gravity: Medium.



Safbrew T-58: A specialty ale yeast selected for its estery , somewhat peppery and spicy flavour. This yeast forms a solid sediment at the end of secondary fermentation, and is therefore widely used for bottle and cask conditioning. Used by the winner of the Belgian category at AABC 2008.

Temp range: 15c-22c

Sedimentation: Medium

Final gravity: High



Saflager S-23: Western European lager yeast strain. Performs at low temp in a wide variety of beers and can have a slight fruit or estery note.

Temp range: 9c-15c

Sedimentation: High

Final gravity: Medium



Saflager S-189: Originates from a brewery in Switzerland. Selected for its fairly neutral flavour development in a wide range of lagers and pilsen type beers.

Temp range: 9c-15c

Sedimentation: High

Final gravity: Medium



Saflager W-34/70: This is the equivalent of Wyeast 2124 bohemian lager yeast. Has become the most popular yeast for lager brewing worldwide. Well balanced profile in a wide range of lager beers.

Temp range: 9c - 15c

Sedimentation: High

Final gravity: Medium



Danstar Nottingham: Versatile English strain selected for its high flocculation and relatively high attenuation properties. Neutral ale yeast producing low concentrations of fruity and estery aromas, allowing the natural flavours of the malt and hops to develop. Used by the winner of the Hybrid category with an alt beer at AABC 2008.

Temp range: 14c - 21c



Danstar Windsor: English strain that is fruity and estery on the nose and palate. Used in wide range of English styles to produce traditional full bodied fruity ales. Moderate attenuation.

Temp range: 17c - 21c



Danstar Munich: Wheat beer yeast from Bavaria, Germany. Vigorous fermentation resulting in estery and fruity banana notes. Medium to high attenuation and low flocculation.

Temp range: 17c - 21c



Munton's Gold: General purpose English ale strain with a clean flavour profile. Very good flocculation characters result in clear beers.

Temp range: 15c - 22c

Interesting recent posts to the HBD

Contributed by Colin MacEwan

The Home Brewers Digest (www.hbd.com) is a very useful online resource for increasing our knowledge of brewing. Daily Posts by contributors to the HBD address a whole range of queries posted. These posts are distributed by email and whilst some of the posts to are not very informative, occasionally I come across the odd gem. This month I am beginning a regular column (subject to feedback !) with the idea of publishing some of those gems !

Here are responses to a post on Aeration on the hot and cold side:
Whilst parts are very technical I hope they are informative ...

Date: Tue, 05 Aug 2008 19:13:00 -0400
From: steve alexander <steve-alexander at roadrunner.com>
Subject: aeration/oxidation

>> I read tons of information regarding hot side aeration but very little
>> about the cold side. I'm trying to figure out how it will affect my beer.

Aeration is a bad term. Oxidation is the issue, and atmospheric oxygen is just the prime culprit. Oxidation of beer and beer components have flavor negative impact on beer. If you crush malt & grain days in advance of brewing you are likely to oxidize oils and also oxidize and polymerize phenolic materials. Hops contain a lot of anti-oxidant potential, but even hops age and stale. Studies and analysis clearly show that a lot of potential oxidation in the mash (when enzymes and metal ions determine the rate) and the boiler - where despite the low O₂ solubility a lot of oxygen uptake occurs.

Metal ions - iron and copper especially, can assist by transferring oxidation state thus increasing the oxidate rate.

Healthy yeast not only remove free oxygen rapidly but as a metabolic side-effect they reduce (the opposite of oxidize) the wort components and can actually reverse certain types of oxidation. After high kreusen, as the fermentation declines, the addition of any oxygen can be very detrimental and will certainly limit the storage-life of a beer, if not cause a clear decline in flavour.

HB scale brewing is particularly troublesome - since the ratio of open surface area to volume is many times larger than even a 10bbl microbrewery. Also any transfers are likely to be less well controlled.

I sometimes bottle condition excess as well as keg, and after a couple months when comparing the same beer side-by-side, the bottle conditioned beer is always superior. The hops flavour/aroma seem far better and there is a definite freshness perception. I believe this can be attributed to the anti-oxidant and oxygen removing feature of yeast and possibly due to excess iron ions in a corny keg.

One very obnoxious oxidation effect is the "stale cardboard" aroma associated with trans-N-nonenal. This aldehyde by-product of common fatty acids (linoleic) has been demonstrated by isotope studies that the oxidation occurs only by HSA. There are lipo-oxygenase enzymes in the mash that may be involved, but also non-enzymatic effects in the boiler. Normally yeast will consume the excess lipids in wort, but not these oxidized products. Some of the most obnoxious cold-side oxidation products are aldehydes of complex organic compounds and fusels formed as oxygen contacts finished beer.

Anti-oxidants are merely chemicals that can oxidize without producing obnoxious flavor products. That doesn't mean that oxidation causes no deficits when anti-oxidants are present, just that it's not "too bad".

One point for the sci-oriented brewers, when you see an oxidation reaction where a single carbon-oxygen bond "O-C" is changed to a double bond "C=O" carbonyl group it should send up a red-flag. The carbonyl group is normally indicative of strong flavors, often but not always negative; aldehydes, ketones and carboxylic acids. Compare the single bonded ethanol, with the flavor impact of acetaldehyde, acetone (nail polish solvent) and acetic acid (vinegar). Esters also have a carbonyl group, but we don't generally consider these (ethyl acetate = banana aroma) as obnoxious as other carbonyl compounds. Most of the oxidation of fermentation process appears as CO₂ (O=C=O) which we find sharply acidic but not flavor/aroma obnoxious.

Hops and malt both contain phenolic anti-oxidants. Those from hops are the most active anti-oxidants. The un-oxidized form of these is likely to give a sense of freshness. Once oxidized they are likely fairly neutral but they polymerize into longer "tannins", and these can taste bitter and eventually astringent. Wine is chock-full of such anti-oxidant phenols, and as the wine ages in a sealed bottle the tannins can polymerize to the point where they actually drop out of solution. Beers are never aged so much, but a PVPP addition can remove these oxidized tannoids very effectively & rapidly. Wort phenolics are a flavor positive when un-oxidized, but are also an effective anti-oxidant.

S02 - many lager yeasts can produce a little (up to 15ppm) S02. The sulfite ions are anti-oxidant. They oxidize to sulfate and this is fairly innocuous at modest levels in most beer styles. The S02 is more effective at lower pH (beer rather than wort), but an early metabisulfite addition can substantially reduce mash & boil oxidation.

>> Hot side: This is obviously the hardest one for me to control.

Not very hard. Try crushing 2 campden tablets(sodium or potassium metabisulfite) into the mash water for a 5gal batch. I find that this has a noticeable impact on the "freshness" the resulting beer, especially light colored pils & lighter ales. It certainly makes the color lighter and paler. At that level much of the sulfite is oxidized to sulfate. I've used ~3+ times that level (not recommended) and have never had a fermentation problem.

>> One thought I had was that since that is preboil, perhaps the boil itself will drive off the oxygen I introduced while mixing.

Nice thought, but all-source brewery O2 uptake studies show otherwise. O2 in solution in the boiling wort is rapidly (microseconds) used to form oxidation products. So only surface O2 exists at a couple of ppm saturation (~3ppm IIRC). So boiling wort has essentially zero oxygen beyond the surface layer and the difference in O2 level from wort to atmosphere drives the oxygen surface diffusion rate. You must either remove much O2 from the headspace or reduce the boiling surface area to decrease the rate. Less surface area in a tall/narrow boiler is an advantage. You *might* be able to remove enough oxygen to make a difference in a pressure cooker, but a partially lidded boiler is not very effective.

>> Cold side: This is much easier to control but I'm wondering if it is more critical, especially at bottling time since the beer will just be sitting and aging. I don't know that I create any aeration at this point but I am wondering if it is more or less critical on the cold side.

Both are important. I suspect that HSA in excess can cause more spectacular damage, but CSA is probably a more common source of lesser damage. Meilgaard published a paper suggesting some extreme commercial O2 reduction methods have only little evidence for flavour/staling improvement, but even 10bbl micro breweries methods probably cause an order of magnitude less O2 uptake than common HB methods. HBs small scale and open transfer methods exaggerate the oxidation problems.

I don't think CSA is easy to control at all. Say you have a carboy full of nicely clearing un-oxidized beer with a fermentation lock. How can you transfer it to bottle or keg without introducing a lot of oxygen? As you drain the carboy you need to displace the missing beer with CO2 or nitrogen, Then you have to transfer it to a bottle or keg where all the O2 has been removed and there is no aperture to the atmosphere. Read up on partial pressures and Henry's law and you'll see why gas-flow through a partially lidded pot or a exit tube doesn't do much to exclude O2.

There have been some nonsense methods posted to remove oxygen (splashing boiling water into a corny key to supposedly void the atmosphere). Do the math; there is ~3psi of partial pressure pushing atmospheric O₂ into every nook and cranny. A layer of CO₂ or water vapour exposed to the atmosphere is no protection at all.

-Steve

Date: Mon, 04 Aug 2008 16:07:50 -0400

From: Kai Troester <kai at braukaiser.com>

Subject: Re: Aeration on the hot and cold side

Jim, the affects of hot side aeration and their relevance for home brewing have been widely discussed among home brewers. Even a few experiments have been done, many of which showed inconclusive results.

Hot side aeration (HSA) has been studied by the commercial brewing industry because it was found that it leads to staling compounds that reduce the shelf life of the final product which affects their revenue. As a result of that, modern breweries generally exclude O₂ as much as possible. Some even go as far as milling the grain in an O₂ free environment by either using an inert atmosphere or milling it while submerged in water.

In contrast to that I had beers brewed in a small German museum brewery that still uses very old equipment which leaves plenty of O₂ exposure to the wort by using an open lauter grant and the run-off simply drops 9 ft into the boil kettle. The beers were excellent and showed me that hot side aeration is not as detrimental to the beer quality as many of the studies make us believe. I did however not test how shelf stable these beers were.

While observing good brewing practices (no excessive splashing, don't let the wort cascade into the kettle) you don't have to worry about the unavoidable O₂ intake that comes from doughing in the grain and stirring the mash. High dough-in temps, as they are common these days, already help by quickly deactivating an enzyme called lipoxxygenase. This enzyme aids in HSA where oxygen forms a weak bond, is carried into the finished beer and later released to oxidize and form staling compounds.

In home brewing, the majority of the oxygen responsible for staling is picked up during the handling of the beer after fermentation. Here you should pay attention to splashing, air-leaks in the racking cane to hose connection and bubbling during bottling. Though yeast is known to scavenge O₂ during bottle condition, I have read a study that showed that there is still a shelf life difference between a bottle that was purged of O₂ before filling and one that was not purged. The conclusion was that the yeast isn't as good in O₂ scavenging as initially believed. O₂ scavenger caps could help here as well.

But from my own experience purging of bottles or scavenger caps are not necessary to avoid oxidation in bottled home brew. For one, our beers are not expected to be shelf stable for a year (except for some stronger beers, most of which actually benefit from some slight oxidation) and we have full control over the storage conditions (i.e. keeping them cool) as well.

If you don't have oxidation problems, don't worry too much about this but get in the habit of using (reasonable) low O2 beer handling practices.

Kai

Date: Wed, 6 Aug 2008 09:23:49 -0700 (PDT)
From: stevesveil-hbd at yahoo.com
Subject: Re: aeration/oxidation

Steve Alexander replies to Jim D ...

> I don't think CSA is easy to control at all. Say you have a carboy
> full of nicely clearing un-oxidized beer with a fermentation lock. How
> can you transfer it to bottle or keg without introducing a lot of
> oxygen ? As you drain the carboy you need to displace the missing
> beer with CO2 or nitrogen, Then you have to transfer it to a bottle or
> keg where all the O2 has been removed and there is no aperture to the
> atmosphere. Read up on partial pressures and Henry's law and you'll
> see why gas-flow through a partially lidded pot or a exit tube doesn't
> do much to exclude O2.

What if on the exit tube of a keg that's being filled, how about using a blow off tube into a bucket of water? Will that keep the partial pressure of O2 from mixing back into the CO2 filled keg?

I'm not well versed in Henry's law.

My procedure would be:

- 1.) Fill keg with no rinse sanitizer.
- 2.) Push sanitizer out of keg with CO2.
- 3.) Insert blow off tube into bucket of water.
- 4.) Attach other end of blow off to gas post of Corny keg using disconnect.
- 5.) Push beer out of conical with CO2 into liquid line of Corny keg.

Best regards,
Steve Seeley

The next postings will pertain to growing hops, harvesting and storage !

Cheers ... Colin

