

The BOILER

Newsletter of the Minnesota Home Brewers Association January 2007

January MHBA CLUB MTG

The Upper Mississippi Mash-Out Banquet!
Saturday, January 27, 2006, 6:30pm-10pm
The Klub Haus, St. Paul, MN

The next MhBA club meeting will be the Awards Banquet at the Upper Mississippi Mash-Out, at the Klub Haus in St. Paul on Saturday, January 27, 2006 from 6:30pm-10pm (See article below.) Cost is only \$30 per person; it features an eight course meal and all the homebrew you can drink! Tickets will sell out soon – get yours TODAY!

The “Style of the Month” for January is Low Gravity beers, so if you have one brewed, bring it along and join the Style of the Month Club. Also bring your Dusseldorf Altbier from last month if you couldn’t attend, or any other homebrews you’d like to share with your fellow club members. The Recipe of the Month for January is Scottish Ale and Standard American Lager. (See article in this issue.)

THE FOAM FLOATS TO THE TOP (Greetings from the Prez)

Season’s Greetings!

Happy Holidays from the Prez. This time around, I would like to highlight **Chris Smith** for putting on one heck of a Christmas potluck. Helicopter reporters estimated the crowd between 80-100 people! And in the season of giving, we would be most remiss in not mentioning **Dave Luskey and Rahr Malting**, who both once again helped us out in a big way!

In the spirit of the holidays, I think it makes sense to stop and think about the less fortunate in our society of excesses. Please consider increasing your charitable contributions this time of year as you consider all the blessings you have. For many of us, our biggest concern is whether or not our pale ale will finish at an appropriate terminal gravity, or whether we should charge our keg with 20 or 25 psi. Let’s each please contemplate sending a little extra help this season in the direction of those for whom the concerns are much more serious in nature and consequence.

As you sip your 1.111 barleywines as well as your Imperial Stouts inspired by Russia, start planning your entries and volunteer opportunities for the 6th annual Upper Mississippi Mash-Out, January 26th and 27th. To prepare for this great contest, Chris Smith will be hosting a bottling party featuring the club’s counter-

pressure filler, so you can bring your kegs and fill some entries. The filler is checked out of the new **CLUB LIBRARY**, Joe Gerteis presiding. He has tons of cool books for dues-current members to borrow, so check it out. Speaking of dues, nearly EVERYONE WHO IS READING THIS has dues that are due! Almost all memberships now expire 12/31, so please send your \$15 to Jeff Cotton, 2001 Worcester Ave, Saint Paul, 55116. Then you will receive your 2007 membership card. February 3rd is the annual election meeting, this year at the new Granite City in Saint Louis Park.

Have a safe and joyous holiday season. May 2007 be the best year of your life, and the worst of all those to come.

- **John Longballa**
President, Minnesota Home Brewers Association

MhBA Club Calendar

Here are upcoming MhBA events for January-March 2007

JANUARY

Jan 3	BJCP Class #1 –Gera Exire LaTour’s house
Jan 8	Mash-Out Bottle Filling –Chris Smith’s House
Jan 10	BJCP Class #2 –Gera Exire LaTour’s house
Jan 10	Surly Beer Dinner – The Happy Gnome
Jan 12	Mash-Out Deadline
Jan 17	BJCP Class #3 –Gera Exire LaTour’s house
Jan 19	Mash-Out Late Entry Deadline
Jan 19	MCBG Winterfest
Jan 24	BJCP Class #4 –Gera Exire LaTour’s house
Jan 25-27	Upper Mississippi Mash-Out Judging
Jan 26	Great Northern Brew-Ha-Ha deadline
Jan 27	MhBA Club Mtg: Mash-Out Banquet!
Jan 30	Summit Beer Dinner – The Happy Gnome
Jan 31	BJCP Class #5 –Gera Exire LaTour’s house
Jan 31	AHA COC Low Gravity judging - @ BJCP class

FEBRUARY

Feb 2	KCBM / Boston HBC deadlines
Feb 3	MhBA Club Meeting –Granite City, St.Louis Park
Feb 4	OKRB House Concert – Peter Lang
Feb 7	BJCP Class #6 –Al Boyce’s house
Feb 10	Great Northern Brew-Ha-Ha HBC – Duluth, MN
Feb 10	MCAB IX deadline
Feb 14	Valentine’s Day
Feb 15	BJCP Class #7 –Curt Stock’s house
Feb 17	Kansas City Biermeisters HBC – K.C, MO
Feb 17	Babble Brew-Off deadline
Feb 21	BJCP Class #8 –Gera Exire LaTour’s house

Jan-Mar Mhba Calendar continued on Pg 2

Jan-Mar Mhba Calendar continued from Pg 1

Feb 21 **Bell's Beer Dinner** – The Happy Gnome
Feb 23 **Reggale/Dreadhop / IBU Open deadlines**
Feb 23 **Friday Before the Fhirst** – Loc. TBD
Feb 24 **MCAB IX** – St. Paul, MN
Feb 24 **Schell's Bockfest**
Feb 24 **World Cup of Beer deadline**
Feb 28 **BJCP Class #9** –Gera Exire LaTour's house
Feb 28 **Bluebonnet HBC deadline**

MARCH

Mar 3 **IBU Open HBC**
Mar 3 **Drunk Monk / Blessing of the Bock deadlines**
Mar 7 **BJCP Class #10** –Gera Exire LaTour's house
Mar 10 **MhBA Meeting: Chili Cook-Off**
Mar 14 **BJCP Class #11** –Steve Piatz' house
Mar 14 **March Mashness deadline – St. Cloud, MN**
Mar 16 **March Mashness judging**
Mar 17 **St. Patrick's Day**
Mar 21 **BJCP Class #12** –Gera Exire LaTour's house
Mar 21 **AHA COC Scottish Ale judging @ BJCP Class**
Mar 23 **BOSS Challenge HBC deadline**
Mar 24 **March Mashness Awards Ceremony** –St. Cloud
Mar 28 **BJCP Class #13** –Gera Exire LaTour's house
Mar 30 **Friday Before the Fhirst** – Loc. TBD

2007 UPPER MISSISSIPPI MASH-OUT

“JAMAICA IN JANUARY”

January 26-27, 2007

Get the details at the Mash-Out Website:

<http://www.mnbrewers.com/mashout>

Here are several highlights and deadlines to keep in mind:



Entries Due

Entries accepted Jan. 1-13. Back again this year: the Eis-Anything category and the New Entrant category.

Judging and volunteers

We'll need *a lot* of help, but you'll get a lot out of the experience, including:

- Free dinner Friday night
- Free breakfast and lunch on Saturday
- A special “Indoor Pub Crawl” on Friday evening
- A special Brewpub Brewers Forum on Saturday
- Free commemorative pint glasses
- Free commemorative bottle of last year's Best-of-Show kolsch
- A chance to pre-order growlers from brewpubs throughout the region, including brewpubs outside the metro area, such as Duluth's Fitgers.

Register on-line now! <http://www.mnbrewers.com/mashout>

“Jamaica in January” Banquet on Jan. 27

Chef Manfred Krug is going with an island-themed menu this

**LET'S GET
TOGETHER
AND FEEL
ALL RIGHT!**



year. The beer dinner is available for \$30 per person and precedes the awards ceremony at the Klub Haus on Saturday night. You can register now. This dinner **WILL SELL OUT**. The complete menu will be posted in the near future, but everyone knows that Manny (son of our own Al Krug) will do it up right.

COMING BACK THIS YEAR:

- Eis-Anything competition
- New Entrant competition
- Yellow Snow competition (most entries)
- Commemorative glass for volunteers
- 22 oz bottle of 2006 BOS beer for volunteers
- Indoor Pub Crawl for volunteers

You DO NOT need to be a volunteer to attend the Awards Ceremony. Even if you are not entering anything, or if you can't volunteer, plan to come to the awards ceremony, share some brews with your fellow club members, sign up for some door prizes, and cheer for the Mash Out winners!

WINTERFEST 2007

The Minnesota Craft Brewer's Guild proudly presents the Sixth Annual Winterfest. The event will be held Friday January 19th 2007 from 6:20 to 9:30 PM at the Landmark Center, 75 West 7th Street, in Downtown St Paul, MN. This event sells out year after year. Admission this year is \$42.50 and includes a commemorative glass.

Winterfest is a chance to gather and sample some of the finest Winter brews, listen to live local jazz from the Jaztronauts, and snack on appetizers provided by a caterer with servers. The Jaztronauts were named 2001/2002 Minnesota Acoustic Jazz Artist of the Year.

The list of the outstanding beers for that night has not be published but the list of attending breweries include Rock Bottom, Herkimer, Fitgers, Barley Johns, Town Hall, Summit, Brau Brothers, Mantorville, O'Haras, Surly, Great Waters, August Schell.

If you are one of the lucky people that got tickets this sold out event please enjoy and know that the rest of us are very jealous.

FILL BOTTLES FOR MASH-OUT!

by Chris Smith

Have you ever wanted to enter a contest but all your beer is sitting in a keg and not a bottle? Are you curious if your latest creation is medal worthy? Well, you won't have to wait any longer. With the recent opening of the MHBA club library comes a new counter pressure bottle filler. In order to put this new treasure to use I will be hosting a bottle filling event at my home just prior the club sponsored Upper Mississippi Mashout competition on Monday January 8th at 6:30 PM. We will provide expert knowledge on the proper filling techniques along with knowledgeable feed back from experienced BJCP judges for style placement of your homebrew for optimal results.

Keep this in mind as you plan your next brewing sessions and maybe save the last bit of that current brew in your fridge. All you will need are clean empty bottles and caps and the next potential best of show beer, mead, or cider. Sanitizer and cappers will be available but if you have a capper bring it along.

Kegs can be dropped off prior to the filling date to insure clearing of sediment on Thursday January 4th in the evening. You can also arrange a different time by contacting me. If you are interested in participating or volunteering your expertise you can email me at:

csmitty42@yahoo.com.

BOTTLE FILLING PARTY!

When: Monday, January 8th 6:30 PM

Where: Chris Smith's house
4733 13th Ave S
Minneapolis, MN 55407

MHBA HOLIDAY POTLUCK A HIT!

by Chris Smith

This year's annual MhBA Christmas party was again a huge hit! We had considerably more people at the party than we had last year, and all had a good time! There were numerous entries in both the beer and food people's choice contest. Mike Behrendt and Dave Luskey won the people's choice beer awards with a Double Chocolate Cream Stout and a Holiday Ale. The food dish receiving the most votes was my Cherry Black Russian cake made with New Glarus Belgian Red. The food prizes were deferred to the runner ups, Bing Norman for her sister-in-law's "Mona's Smokin' White Chicken Chili" and Harvey Holmes for "Harvey's Beans".

We also had the three variations of the British Bitter from the "Teach a Friend to Homebrew" day available for tasting. They differed only by the amount of boil time for the extract: 0 minutes by Greg VanDeMark, 30 minutes by Brock Ray, and 60 minutes by Chris Smith. It spurred great conversation and thoughtful critiquing by all.

Thanks to Al Boyce for running the beer exchange and to John Longballa for being our emcee.

Additional thanks to all of the great MhBA members and friends who helped set up and take down for the party. We'll see you next year!!



Mike Valentiner and Kim Olson sampling brew

MONA'S SMOKIN' HOT CHICKEN CHILI

From the kitchen of Mona and Bill Norman

All volumes approximated- Cooking is an art, not a science...

- 3 Tbsp olive oil
- 3 cloves garlic (pressed)
- ¾ cup onion (diced)
- 2 hot peppers (Serrano or Jalapeno)
- 1 tsp crushed red pepper
- ¼ tsp smoky hot peppers (crushed smoked peppers)
- 2 tsp cumin
- 1 pinch salt
- Some pepper (black or white)
- 1 ½ Lbs boneless skinless chicken breast (cubed)
- 2 Tbsp olive oil
- ¼ cup flour
- 2 ½ cups chicken broth or stock
- 2 (4oz.) cans chopped green chilies (drained)
- 2 (15.8 oz.) cans Great Northern Beans
- ¼ cup fresh cilantro

Sautee Garlic, Onion, peppers (minus green chilies) and seasoning in oil till onions are transparent. Add chicken. After chicken is "done", remove chicken only. Add two Tbsp oil heat oil. Whisk in flour (creates a roux). Gradually whisk in broth. Add remaining ingredients. ENJOY!

FALL 2006 BJCP CLASS COMPLETED

by Gera Exire LaTour

On Saturday, December 16th, eight people took the BJCP (Beer Judge Certification Program) exam.

The exam is the finale to the 14 week BJCP exam prep class, The 12 people in the class (from experienced all-grain brewers to newbies) each presented on a technical topic related to brewing and also brought bottles of classic styles and homebrewed examples of beer, mead, and ciders to share. The goal is not only to complete the BJCP exam, but to also become better, and more informed brewers in the process.

The Winter BJCP prep class is currently full, but email me at gera_latour@hotmail.com, to be placed on the waiting list.

MhBA JANUARY RECIPES OF THE MONTH – SCOTTISH ALE AND STANDARD AMERICAN LAGER

by Steve Piatz

This month the recipe of the month (ROTM) is for two very different styles. The Standard American Lager is for the June meeting (for lawnmower season) while the Scottish Ale is a quick beer for the March meeting.

The AHA Club-only-Competition in March is for the Scottish Ales (BJCP categories 9a, 9b, and 9c). A Scottish Ale can be ready to drink in as little as a week if you force carbonate it in a keg, it will take a couple of weeks longer if you want to bottle condition the beer. This article will only give a recipe for the Scottish Heavy 70/- Ale but your Scottish Light 60/- or Scottish Export 80/- ales are also eligible for the competition to represent the MhBA in the AHA CoC.

The Standard American Lager will take around a week to ten or perhaps twelve days to ferment plus a couple of days for a diacetyl rest followed by four to six weeks (longer won't hurt) of lagering, again bottle conditioning will add a couple of weeks to the time required.

Scottish Heavy 70/- Ale Description

Summarizing from the description of Scottish Heavy 70/- Ale in the BJCP Guidelines available at <http://www.bjcp.org> the **aroma** is of low to medium malty sweetness, sometimes with low to moderate kettle caramelization. May optionally have low hop aroma, light fruitiness, low diacetyl and/or moderate smoke aroma. The **appearance** is deep amber to dark copper in color. Very clear with a low to moderate, creamy off-white to light tan head. The **flavor** is primarily of malt but not overly strong. There can be some kettle caramelization behind the initial sweetness. Optionally there can be a low level of diacetyl. Hop bitterness is low to moderate with the balance always toward the malt. Hop flavor is low to none. A low to moderate peaty character is optional. Generally has a grainy, dry finish due to small amount of roasted unmalted barley. The **mouthfeel** has medium-low to medium body with low to moderate carbonation. May be a bit creamy but is often dry from the use of roasted barley. The **overall impression** is a cleanly malty beer with a drying finish, optionally a few esters, and occasionally a faint hint of peaty earthiness. Most examples finish fairly dry in contrast to the Strong Scotch Ales that finish relatively sweet.

The classic commercial examples are rarely available in our area. They include Caledonian 70/- and Belhaven 70/-. By the numbers a Scottish Heavy 70/- Ale is:

	Scottish Heavy 70 /-Ale
OG	1.035 – 1.040
FG	1.010 – 1.016
SRM	9 – 17
IBU	10 – 25
ABV	3.2 – 3.9%

Scottish Heavy 70/- Ale Background

First a little explanation of the naming scheme of these beers, the notation 70/- means the beer was priced at 70 shillings per barrel. Historically a barrel ranged from somewhere around 48 to perhaps as much as 54 imperial gallons. There were twenty shillings to a pound sterling so a 70 shilling beer was 3 and ½ pounds per barrel. Over time the original gravity of the style changed as prices of ingredients changed so until relatively modern times there was no true standard gravity range for the styles. Prior to about 1850 there wasn't even a true standard definition of the volume of a barrel. With today's cost of energy and ingredients you wouldn't get much of a beer for around \$0.15 per gallon that 70 shillings would convert to in modern currency.

At the start of the 20th century Nungate Brewery's 140 shilling ale had an OG of 1.084 whereas a century earlier that OG might have been a 70 shilling ale. The first part of the 20th century would devalue the shilling system even more what with various restrictions placed on breweries and ingredients during WW I.

Scottish brewers were early adopters of the hydrometer, the instrument allowed them to see that paler malts were worth more per unit weight in the original gravity than the equivalent weight of darker (brown or amber) malts. The Scottish brewing process was more like the continental lager process than the English ale process. The Scots used sparging while the English were still using a double mash process. Scots fermented their ales as cool as 50° F for up to three weeks versus the English process of fermenting as warm as 70° F for a much shorter period. The Scots also aged their beer in the cold (lagering) unlike the English. Scottish ales rarely use crystal malts, rather they use roast barley for color and for dryness in the finish.

The cool ale fermentation would accentuate the sulfur characteristics that are thrown by some yeast strains. The slower fermentation would also reduce the blow-off of fermentation byproducts and would also contribute to the sulfur characteristics. Overall, these fermentation characteristics combined with naturally selected yeast strains and even the water can result in some smoke like notes in the beers.

Scottish Heavy 70/- Ale Recipe Details

The ingredients are specified for creating 5.5 gallons of wort at the end of 90-minute boil and the wort chilling. The target is an OG of 1.039 (near the upper limit of the allowed range) with about 24 IBUs for bitterness (the upper limit for the style). The all-grain recipe assumes a mash efficiency of 75% so adjust accordingly for your system. Programs like ProMash generally make it really easy to adjust a recipe for your system's efficiency, just click the lock efficiency box and change the efficiency to your brewery's value.

All Grain Version

Pounds	Ingredients
7.90	Pale Ale Malt
0.11	Roasted Barley

The grist is mostly based on pale ale malt with just a hint of roasted barley to add some color and a little dryness to the finish.

Mash Profile

The mash is a simple single stop at 156° F followed by the optional mashout at 168° F.

Extract Version

Pounds	Ingredient
6.10	Light Liquid Malt Extract
0.11	Roasted Barley

The roasted barley can be steeped, no mini-mash is needed. Just steep the roasted barley until the water reached about 160° F.

If you don't have the ability to boil the full 7 gallons of wort in the extract recipe try for the largest boil you can handle. If your boil volume is significantly below 7 gallons you will probably want to increase the hop quantities (below) by 10% or more because the hop utilization will be reduced due to the higher specific gravity in the boil. Remember that a partial boil is going to result in a slightly darker colored beer than you would get from the same ingredients used in a full volume boil.

Water

The water for the style can tolerate a little carbonate in the water thanks to the roast barley but with the deep wells in much of the metro area you will still have to add acid to the sparge water to offset the alkalinity of our water.

The Boil

One unusual aspect of the Scottish styles can be attained at the start of the boil. To increase the caramelization in the beer take about a quart of the initial wort collected and put it in a separate kettle while you collect the rest of the wort to your main kettle. Bring the separated wort to a boil and continue to boil it until the volume is reduced to about one half of what you started with – then combine the resultant syrup with the main boil. This process applies for both the all-grain and the extract versions.

The hop bill for both the all grain and extract recipes is as follow:

Amount (oz.)	Hop Variety	Time Left
1.25	4.75% Whole East Kent Goldings	60

The 60-minute addition will provide the required bitterness while the 90 minute boil will help create a little more caramelization in the beer.

Use Irish moss or your equivalent fining agent for the last 15 to 20 minutes of the boil. If using Irish moss be sure to rehydrate it in cool water before adding it to the kettle.

Post Boil Processing and Fermentation

Primary yeast choices include Wyeast Scottish Ale (1728) and White Labs Edinburgh Ale (WLP028). The fermentation temperature should be the low end of acceptable range for the yeast you choose, follow the yeast vendor's recommendation for

the strain you choose. Typically primary fermentation for ales of this original gravity should only take 3 to 5 days to complete but at the lower temperatures used for Scottish ales that could be doubled. Rack to another carboy and wait for it to drop mostly clear and you are ready to package the beer.

If served from a keg after forced carbonation the beer can be ready to drink within a week or two after the boil though bottle conditioning will add a couple of weeks while waiting for the beer to carbonate. Remember that to be true to style you don't need a lot of carbonation

Standard American Lager Description

Summarizing from the description of the Standard American Lager in the BJCP Guidelines available at <http://www.bjcp.org> the **aroma** has little or no malt though it can be grainy, sweet or even corn-like. Hop aroma ranges from none to a light, spicy or floral note. Low levels of green apple, DMS, or fruitiness are optional but acceptable. There should be no diacetyl. The **appearance** is of a very pale straw to medium yellow color. The white frothy head seldom persists. The beer should be very clear. The **flavor** is crisp and dry with a low level of sweetness. Hop flavor ranges from none to low levels. Hop bitterness is low to medium-low. Balance varies from slightly malty to slightly bitter, but is always close to even. High levels of carbonation may provide a slight acidity. No diacetyl. No fruitiness. The **mouthfeel** has light body from the use of a high percentage of adjuncts such as rice or corn. It is a very highly carbonated beer with a slight carbonic bite. The **overall impression** is of a very refreshing and thirst quenching beer – a lawnmower beer.

The classic commercial examples readily available in our area include Miller High Life, Budweiser, Molson Golden, and Foster's Lager. By the numbers a Standard American Lager is:

	Standard American Lager
OG	1.040 – 1.050
FG	1.004 – 1.010
SRM	2 – 4
IBU	8 – 15
ABV	4.2 – 5.1%

Standard American Lager Background

What can you say about the mass market American lager, watch the TV commercials: it tastes great, is less filling, isn't bitter and drinking it always improves your sex appeal.

The hop bitterness in the style is right around the perception level of the average human so it really is hard to call the beer bitter. There is typically background sweetness from either the corn or rice used in the recipe. The carbonation is high and the beer is typically served at a temperature just above the freezing point of water.

The style is based on North American grown six-row barley that is higher in nitrogen than the equivalent weight of two-row barley. Six-row barley is more suitable to production in the mid-America climate than two-row barley. If brewers used 100% six-row barley the excessive nitrogen levels would cause a number of problems

in the resultant beer. Using cereal grains that are low in nitrogen like rice and/or corn in the recipe allowed the developers of the style to reduce the overall nitrogen content of the wort down to the level near that of brewing with all, more expensive, two-row malt. The early American brewhouse needed to include a cereal cooker for processing the corn and/or rice though today many commercial producers have switched to using syrup forms of the adjuncts to reduce their processing costs.

Commercially the American lagers are typically brewed at a higher gravity than the style calls for and are diluted with water after fermentation and lagering just prior to packaging. When you are producing as much as these breweries are the savings in fermenters can be significant.

Finally, why might you make your own Standard American Lager? Why not? The style doesn't use any unusual ingredients but it will really allow you to evaluate your techniques since there is not much to hide any flaws.

Standard American Ale Recipe Details

The ingredients are specified for creating 5.5 gallons of wort at the end of 90-minute boil and the wort chilling. The target is an OG of 1.046 (near the upper limit of the allowed range) with about 14 IBUs for bitterness (the upper limit for the style). The all-grain recipe assumes a mash efficiency of 75% so adjust accordingly for your system. Programs like ProMash generally make it really easy to adjust a recipe for your system's efficiency, just click the lock efficiency box and change the efficiency to your brewery's value.

All Grain Version

Pounds	Ingredients
7.73	Six-row lager malt
2.50	Flaked Corn

Mash Profile

With the flaked corn the process is just a step mash with rests at 140 and 153° F. The split rests are to get a more fully attenuated beer.

Alternatively, you can substitute corn meal or polenta for the flaked corn though you will then need to do a full cereal mash. The cereal mash process is necessary when the unmalted adjunct exceed about 15—20% of the grist because the amount of starch starts to exceed the enzyme potential in the malt. The cereal mash requires you to start a separate mash with about 0.67 pounds of the six-row malt at around 150° F, once the initially available starch is converted bring the cereal mash to a boil for around 30 minutes. While the cereal mash is underway you want to bring the remainder of the six-row, in the main mash to around 122° F for a protein rest. Once the cereal mash has completed its boil it is mixed into the main mash and should raise the main mash to the saccharification temperature around 144 to 153° F. The enzymes still in the main mash now start working on the starch liberated during the cereal mash boil. Once fully converted you can do a mashout (or not) and start the sparge.

Extract Version

Pounds	Ingredients
4.75	Alexander's Pale Liquid Extract
2.00	Rice Syrup

The extract recipe uses one of the palest extracts around just to keep the color contribution down. The rice syrup will give a different character than the corn in the all-grain recipe but either rice or corn is appropriate in the style.

Water

The style can tolerate a little carbonate in the water but since there is just base malt you will have to adjust the mash pH as well as the sparge water if your water is the typical metro area deep well source.

The Boil

The recipe calls for a single hop addition and a 60 minute boil. Most American grown hop varieties could be used though it is best to avoid any of the varieties that could leave a citrus-like hop flavor that is inappropriate.

Amount (oz.)	Hop Variety	Time Left
0.25	13.7% Whole Nugget	60

Post Boil Processing and Fermentation

Since the beer is a lager you want to chill to fermentation temperature before pitching the yeast. Again, since this is a lager you really should use a starter twice as large as you use for an ale batch. If you can not chill all the way down to your primary fermentation temperature at the end of the boil one technique I have used is to put the carboy in the fermentation fridge and only pitch the yeast when the wort temperature drops to primary fermentation temp – pitching at the proper temp avoids the production of any inappropriate esters.

Diacetyl Rest

The primary fermentation should finish in about 10 to 14 days. Once the fermentation has dropped the SG at least two thirds of the total attenuation you can start a diacetyl rest. You do the diacetyl rest while the beer still has active yeast from the primary so I typically do it before racking the beer. The diacetyl rest takes place by letting the beer warm to the upper 60s° F (roughly room temperature). During the diacetyl rest the yeast will reprocess the unwanted diacetyl that was produced during the cool primary fermentation. The diacetyl rest will take a couple of days after which you can rack the beer off of the sediment. Then start slowly chilling the beer down to the lager temperature. You want to drop the temperature no more than about 4-5° F per day and you want to get the beer down to 28-34° F. The slow drop in the temperature avoids shocking the yeast cells that are still in suspension in the beer and allows them to keep slowly working during the lager phase.

If you plan to bottle condition the beer I would bottle the beer after the diacetyl rest but before starting the lagering process. Bottle the beer with the appropriate amount of priming sugar (tools like ProMash make it easy to calculate the amount of sugar to use), keep the bottle near room temperature for a couple of weeks to allow the yeast to ferment the priming sugar and then

start the slow cooling down to the lager temperature. You are going to lager the carbonated beer in the bottles.

References

Greg Noonan, *Scotch Ale*, Brewers Publications, 1993.
 Greg Noonan, *New Brewing Lager Beer*, Brewers Publications, 1996.
 Wolfgang Kunze, *Technology Brewing And Malting*, VLB Berlin, 1996.

ProMash recipe (*.rec) files.

- All grain recipes
- <http://www.mnbrewers.com/recipes/SOTM-0701-Std-Am-Lager-all-grain.rec/>
 - <http://www.mnbrewers.com/recipes/SOTM-0701-Scottish-70-all-grain.rec/>

Extract recipes

- <http://www.mnbrewers.com/recipes/SOTM-0701-Std-Am-Lager-extract.rec/>
- <http://www.mnbrewers.com/recipes/SOTM-0701-Scottish-70-extract.rec/>

In February the *Boiler* ROTM will be for both a Belgian Dubbel for the April 2007 MhBA meeting.

As always if you have recipe ideas, questions, or suggestions let me know.

MhBA "STYLE OF THE MONTH" CALENDAR

MTG	STYLE	ISSUE	BREW BY
JAN:	Session Beers (COC)	Nov 06	11/12/06
FEB:	American Amber Ale	Dec 06	12/10/06
MAR:	Scottish Ales (COC)	Jan 07	1/7/07
APR:	Belgian Dubbel	Feb 07	2/11/07
MAY:	Extract Beers (COC)	Mar 07	3/11/07
JUN:	Light Lager	Jan 07	1/7/06
JUL:	North English Brown	Apr 07	4/15/07
AUG:	Strong Ale	Apr 07	4/15/07
SEP:	Bock	May 07	5/15/07
OCT:	American Brown Ale	Aug 07	8/15/07
NOV:	Pilsner	Jul 07	7/15/07
DEC:	Sour Ales	Oct 06	10/15/06

DECEMBER STYLE OF THE MONTH PARTICIPANTS – DUSSELDORF ALTBIER

by Joel Stitzel

Thanks and congrats to these MhBA Brewers who brought Dusseldorf Altbier for the Style of the Month program at the December Meeting: Steve Piatz and Dave Luskey.

STYLE OF THE MONTH HALL OF FOAM

BREW-O-MANIAC (all 28 styles brewed)
Nobody yet
HOP HEAD (at least 21 styles brewed)
Nobody yet
WEEKEND WARRIOR (at least 14 styles brewed)
Nobody yet
MALT MONGER (at least 7 styles brewed)
<ul style="list-style-type: none"> • Steve Piatz (6/2006) • Gera Exire LaTour (8/2006) • Al Boyce (10/2006)

COMPETITION CORNER

The Great Northern Brew-Ha-HA!

by Steve Daiken

The name says it all! An AHA/BJCP sanctioned homebrew competition sponsored by the Northern Ale Stars Homebrewers Guild has returned to the Twin Ports of Duluth, MN and Superior, WI:

<http://www.northernalestars.org/greatnorthernbrewhaha.html>

All 28 BJCP beer, mead and cider categories are eligible. The Brew-Ha-HA will also be a part of the 2007 Midwest Homebrewer of the Year circuit, which will give you another opportunity to pile up points for the award.

Deadline:	Jan. 8 – 26, 2007
Judging:	Feb. 9, 2007 - Lake Superior Brewing Feb. 10, 2007 - Thirsty Pagan Brewery
Awards:	Feb. 10, 2007 - Thirsty Pagan Brewery

The Best of Show winner will get to brew their winning entry at Thirsty Pagan Brewery along side brewer Rick Sauer and their will beer be featured and served at the Pagan. (Sorry, you won't get a cut of the action, but if it makes you feel better, a portion of each beer sold will be donated to the Twin Ports Area Junior Achievement.)

Special Bonus to Twin Cities brewers: We will transport your entries back to the Twin Ports and save you the shipping costs! Simply bring your entries to the Mash-out on Saturday, Jan 27 and find one of the Northern Ale Stars members.

We also in need of judges and stewards and invite anyone who would like to volunteer to judge, steward, or just come up North and help out to join us. You can submit entries and volunteer online at:

<http://www.northernalestars.org/greatnorthernbrewhaha.html> .

Please e-mail any questions to northernalestars@hotmail.com .

Hope to see you there!

Is your MhBA membership expired?

Check the expiration date on your mailing label.
Send your check for \$15 to:

MhBA, c/o Jeff Cotton, Treasurer
2001 Worcester Ave
St. Paul, MN 55116-2616

I would like to receive The Boiler electronically.

Thanks for supporting your club!

The Boiler deadlines:

Do you have a brewing story, or a new technique you would like to share with club members in **The Boiler**?
Send it to:

Al Boyce, Editor - news@mnbrewers.com

Issue

February 2007
March 2007
April 2007
May 2007

Copy Deadline

Jan 12, 2007
Feb 9, 2007
Mar 16, 2007
Apr 13, 2006

CLASSIFIEDS

VINE PARK LOOKING FOR P/T EMPLOYEE

Andy Grage at Vine Park is looking for a part-time employee, weekday evenings and Saturday during the day.
Contact Andy at: 651-288-1355

DOWNLOAD 2007 MHBA YEAR-IN-BEER CALENDAR!

The MhBA's 2007 "Year In Beer" Calendar is now online! It contains not only the dates of the monthly MhBA club meetings, but also deadlines for the High Plains and Midwest Brewer of the Year qualifiers, the MCAB qualifiers, and other local competitions. Download yours today at :
<http://www.mnbrewers.com/2007BeerDates.pdf>

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