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The Journal of the American Homebrewers Association®

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## 1. MASH

Water for mashing is added to the 3-in-1 and heated. The Mash Colander is inserted into the 3-in-1 and grain is added. Mash temperature is precisely regulated by the temperature controller and heating element.



## 2. LAUTER

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## 4. FERMENT

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HOME BREWERS GEAR FOR BEGINNERS TO EXPERTS





# Brewing with Flowers

**I**an Clark jumped at the chance to create a beer for the Denver Art Museum's In Bloom exhibit, featuring Impressionist floral paintings from such artists as Édouard Manet, Edgar Degas, Pierre-Auguste Renoir, Paul Cézanne, and Vincent van Gogh.

"We brew with a lot of different adjuncts, and brewing with flowers is something we already do," said Clark, the founder, chef, and brewmaster at BRU Handbuilt Ales & Eats in Boulder, Colo. "I had a lot of fun with this."

The resulting beer, called DAM's Bloom BRU, is a Kolsch brewed with passion flowers, chamomile, orange blossoms, and rose hips. The beer was served on tap at BRU during the exhibit, which ran through mid-October, and at a special beer dinner at the brewpub on September 2.

Describing Kolsch as a German ale that is "clean and perfumey," Clark intended for the orange blossom and rose hips to enhance the perfume-like aspects of the beer, and the chamomile and passion flower to complement the subtle floral aspects.

Building on that further, Clark created a special In Bloom beer dinner using the four flowers separately as an ingredient in each course, and as ingredients in each of the four beers. The courses included:

- Blue crab toast with chamomile lemon crème fraiche, paired with 3B's ESB (brewed with chamomile)
- Cucumber and jicama salad with orange blossom and honey dressing, paired with SOLUS Patersbier (brewed with sour orange and coriander)
- Passion flower scented bouillabaisse, paired with DAM's Bloom BRU
- Rose hip flan, intended to pair with BEEZEL Belgian-style golden ale (brewed with bitter orange peel). However, a

Belgian quad with dark cherry notes was substituted for BEEZEL.

As a side note, Clark's house-made sourdough bread was served with two of the courses. Clark said he experimented with a sourdough starter for years, trying 20 different yeast strains. He finally settled on a blend of Brettanomyces, Lactobacillus, and Pediococcus for his starter.

For brewing with flowers, Clark recommends using a light hand. "It's the same mindset as with adjuncts," he said. Flavors should be subdued and should accentuate rather than overpower, Clark said. "Go really light [with the flowers], and use them in late additions. I think the longest I left something in was five minutes with the chamomile." Clark used dried chamomile, passion flower, and rose hips, and orange blossom water.

Clark has tinkered with many other special ingredients in his brews. His regular house lineup includes OBITUS brown ale, brewed with dates and caramelized sugar; CITRUM IPA with lemon zest and juniper; and BELUX Belgian-style pale ale, brewed with lemongrass and black pepper. Coffee, vanilla beans, tangerines, local honey, and local peaches have also found their way into his hand-built ales.

Clark readily agreed to share a homebrew version of his recipe for DAM's Bloom BRU, which can be found on page 6.

This isn't the first time the Denver Art Museum has collaborated with a Colorado brewery for a beer to pair with one of its exhibits. For the DAM's Becoming Van Gogh exhibit a few years ago, Dillon Dam Brewery created DAM Gogh, a bière de garde.

**Jill Redding is editor-in-chief of Zymurgy.**

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The purpose of the Brewers Association is to promote and protect small and independent American brewers, their craft beers, and the community of brewing enthusiasts. The Brewers Association is a not-for-profit trade Association under Section 501(c)(6) of the Internal Revenue Code.

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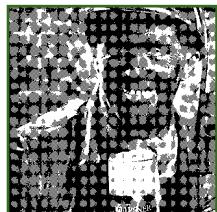
# zymurgy®

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*By Zymurgy Editors*

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Find more homebrewing recipes on our website @ [HomebrewersAssociation.org/homebrew-recipes](http://HomebrewersAssociation.org/homebrew-recipes)

## >> GET THERE!

### VALLEY FORGE BEER & CIDER FESTIVAL

The producers of the award-winning Philly Craft Beer Festival and Pour the Core: Hard Cider Festival return to the Philadelphia area with the Valley Forge Beer & Cider Festival on December 5. The event takes place at the Greater Philadelphia Expo Center in Oaks, Pa.

For the first time, cider is included in the festival tasting. The event will feature more than 150 beers and ciders for sampling, from more than 75 breweries and cidermakers.

Afternoon and evening sessions are included. The event will help raise funds for the Committee to Benefit the Children, a local Philadelphia charity that provides resources for treatment, care, and family support to benefit children with cancer, leukemia, and serious blood disorders.

For more information, go to [valleyforgebeefest.com](http://valleyforgebeefest.com).



#### November 6-15

#### San Diego Beer Week

San Diego, CA  
[sdbw.org](http://sdbw.org)

#### November 7

#### Maine Brewers Festival

Portland, ME  
[mainebrewersfestival.com](http://mainebrewersfestival.com)

#### November 7

#### Fall Craft Beer Festival

Pinellas Park, FL  
[cajuncafeonthebayou.com](http://cajuncafeonthebayou.com)

#### November 7

#### All Colorado Beer Festival

Colorado Springs, CO  
[allcoloradobeerfestival.com](http://allcoloradobeerfestival.com)

#### November 20-21

#### Festival of Barrel Aged Beers

Chicago, IL  
[illinoisbeer.com/events/fobab/](http://illinoisbeer.com/events/fobab/)

#### November 21

#### Treasure Coast Beer Fest

Port St. Lucie, FL  
[treasurecoastbeerfest.com](http://treasurecoastbeerfest.com)

#### December 2-6

#### Holiday Ale Festival

Portland, OR  
[holidayale.com](http://holidayale.com)

For more craft brewing events, go to [CraftBeer.com](http://CraftBeer.com)

## >> YOU'VE GOTTA DRINK THIS

### THREE FLOYDS SPACE STATION MIDDLE FINGER

Space Station Middle Finger is one of those APA hop bombs that brings all of the intensity of a more aggressive IPA without overdoing it. Tropical fruitiness and medium bitterness are moderated by a complementary malt profile that adds sweetness without being cloying. Perfectly balanced. Beautiful color. Very drinkable.

Reviewed by Daniel Berger, Libertyville, Ill.



Share your favorite beer with us! Send your description, in 150 words or fewer, to [zymurgy@brewersassociation.org](mailto:zymurgy@brewersassociation.org). Photos are welcome!



Photos courtesy of Karl Mischler (top); Three Floyd's Brewing Co., Jameson Irish Whiskey (opposite)

## >> BREW NEWS

### JAMESON DRINKING BUDDIES COLLABORATIONS

Jameson® Irish Whiskey wrapped up the second phase of its Jameson Drinking Buddies program, highlighting distinct craft beer collaborations with American breweries. Building on last year's successful collaboration with KelSo Beer Company of Brooklyn, N.Y., in 2015 Jameson partnered with five breweries from across the U.S. who exemplify devotion to the spirit of their neighborhoods and share Jameson's passion for craft and quality in the beer they produce.

Breweries selected included Angel City Brewery of Los Angeles, Captain Lawrence Brewing Company in New York, Deep Ellum Brewing Company in Dallas, Great Divide Brewing Company in Denver, and Hilliard's Beer in Seattle. Jameson invited each brewery to the distillery in Ireland, and then sent them home with Jameson Whiskey barrels to create a limited-edition beer inspired by both their experience in Ireland and their own unique neighborhood.

The story of each partner brewery in the Drinking Buddies program is showcased in a video series on JamesonNeighborhood.com. From visiting the Jameson distillery in Ireland to becoming buddies with the whiskey distillers, the series sheds light on each brewer's Drinking Buddies experience. Following the distillery visit, the brewers returned home to their neighborhood breweries with Jameson barrels, and the episodes chronicle the beers they ultimately brewed.

The breweries released the beers to their local customers. To see what styles of beer each brewery selected for the Jameson barrels, see The List on page 10.



### BEER QUOTE

*"You can't say that a beer smells like plums if you don't know what plums smell like."*

—Steamworks Brewing Co. executive chef Sean Clark on the importance of getting to know your ingredients



## >> GREAT RECIPE

### DAM's Bloom BRU Kölsch

RECIPE BY IAN CLARK, BRU  
HANDBUILT ALES & EATS,  
BOULDER, COLO.

(See Editor's Desk on page 2  
for more information on this beer.)

#### INGREDIENTS

for 5 U.S. gallons (19 L)

- 8.0 lb** (3.63 kg) American 2-row malt (1.8 L)
- 1.4 lb** (635 g) Belgian wheat malt (2.78 L)
- 0.25 lb** (113 g) Belgian aromatic malt (17.4 L)
- 0.5 oz** (14 g) Hallertau Hersbrucker, 4% a.a. (60 min)
- 0.65 oz** (19 g) Hallertau Hersbrucker, 4% a.a. (30 min)
- 0.65 oz** (19 g) Fuggle, 4.5% a.a., (15 min)
- 1 tsp** (5 g) rose hips (1 min)
- 2 tsp** (10 g) chamomile flowers (1 min)
- 0.5 tsp** (2.5 g) passion flower (1 min)
- 0.5 oz** (15 ml) orange blossom water (1 min)
- 0.5 tsp** (2.5 g) Irish moss (15 min)
- 0.5 tsp** (2.5 g) yeast nutrient (15 min)

Wyeast 1010 American Wheat yeast

**Original Gravity:** 1.048 (12 P)

**Final Gravity:** 1.010 (2.5 P)

**SRM:** 4.38    **ABV:** 5%    **Mash pH:** 5.3

**Boil time:** 60 minutes

**Pre-boil volume:** 7.5 gallons

**Pre-boil gravity:** 1.044 (11 P)

**Total Efficiency:** 70%

#### DIRECTIONS

Mash grains at 149° F (65° C) in 3 gallons (11.36 L) of water for 60 minutes (strike temperature of 163° F/73° C). The boil time is 60 minutes. Make additions as noted. Ferment at 60° F (16° C) for seven days, until final gravity is reached. Transfer into secondary and crash cool to 45° F (7° C) for seven days. Prime with 4 oz (113 g) dextrose.

#### PARTIAL EXTRACT RECIPE

Substitute 5.5 lb pale malt extract syrup for pale malt. Mash wheat and aromatic malts at 150° F (68° C) for 45 minutes. Drain, rinse grains, and dissolve extract thoroughly before proceeding with boil.



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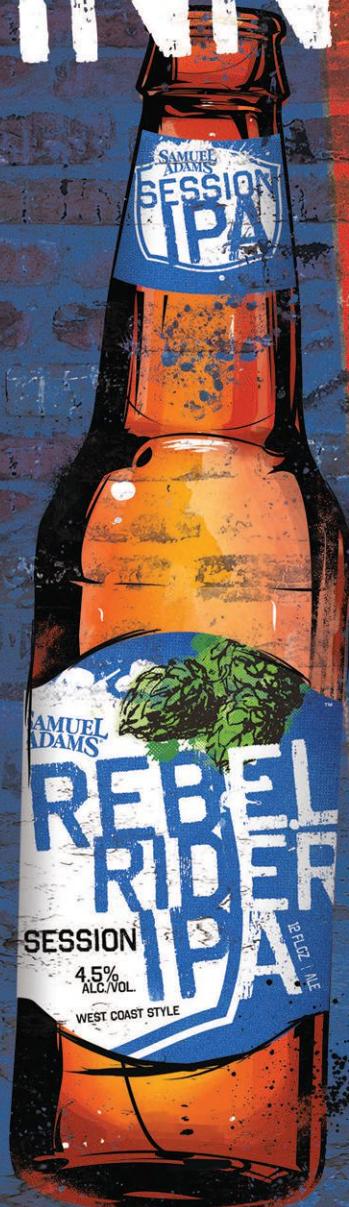
A collection of Briess malt and ingredients products and grain samples. At the top, there are six containers of CBW pure malt extract: Bavarian Wheat, Munich, Sparkling Amber, Traditional Dark, Pilsen Light, and Golden Light. Below them is a wooden tray containing samples of various grains, including light and dark malts, rye, and oats. In the foreground, a small sign reads "BRIESS MALT & INGREDIENTS CO. All Natural Since 1876". The bottom of the image features a call to action: "Ask your local homebrew store for handcrafted Briess malts and malt extracts today!"

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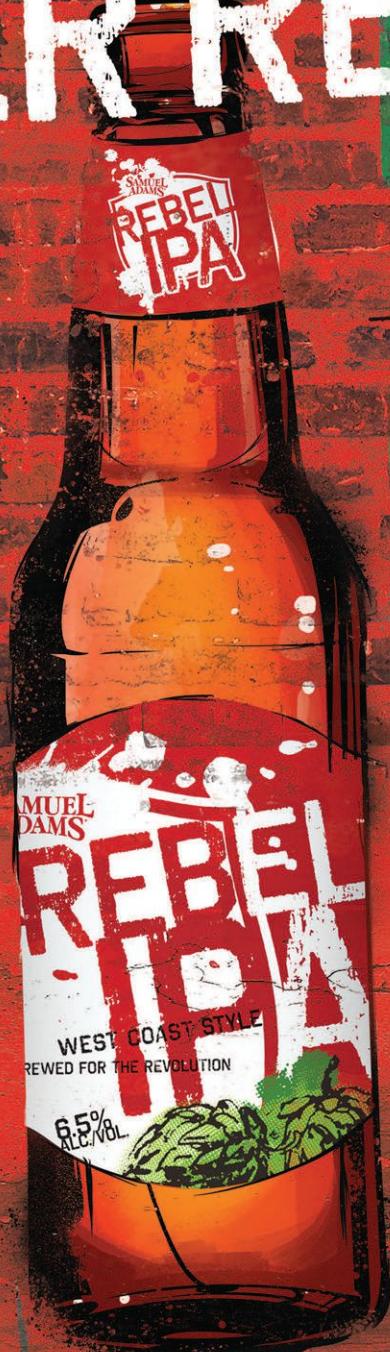
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Photo courtesy of Jill Redding

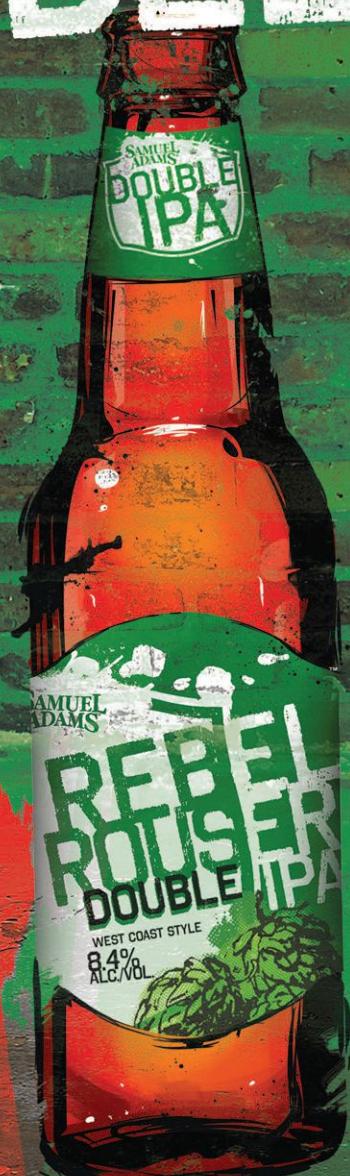
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# >> CRAFT BREWER PROFILE

## AN ALE OF TWO BREWERS

By Tom Hart



John Bullard



Brady McKeown

### Hoppiness Envy

RECIPE BY JOHN BULLARD AND BRADY MCKEOWN

The key to this recipe [which was scaled to homebrew size from the original recipe] is found in the grain bill, which, with the slightly higher mash temperature, provides a solid malt backbone to balance the dominant hops. The massive hop character is achieved by "hop blasting" as described in the recipe.

#### INGREDIENTS

for 5 U.S. gallons (18.93 L)

|                                |   |
|--------------------------------|---|
| 5.0 lb                         | (2.27 kg) Rahr 2-row malt                         |
| 5.0 lb                         | (2.27 kg) Rahr pale ale malt                      |
| 8.5 oz                         | (241 g) honey malt                                |
| 5.5 oz                         | (241 g) Weyermann Carahell® malt                  |
| 0.2 oz                         | (6 mL) CO <sub>2</sub> hop extract (90 min)       |
| 5.0 oz                         | (142 g) Chinook pellets, 11.8% a.a. (60 min)      |
| 2.5 oz                         | (71 g) Citra pellets, 12% a.a. (1 min)            |
| 2.5 oz                         | (71 g) Equinox pellets, 15% a.a. (1 min)          |
| Whirlfloc to clarify           |   |
| 2.8 oz                         | (80 g) Citra pellets, 12% a.a. (dry hop 6 days)   |
| 2.8 oz                         | (80 g) Equinox pellets, 15% a.a. (dry hop 6 days) |
| Wyeast 1056 American Ale yeast |   |

**Original Gravity:** 1.061 (15° P)

**Estimated Final Gravity:** 1.016

**SRM:** 6

**Estimated %ABV:** 6

**IBUs:** 100+ (calculated: 240)

**BU/GU:** 1.67

**Total Efficiency:** 75%

#### DIRECTIONS

Mash grains at 154° F (68° C) for 1 hour. Adjust mash pH with gypsum as needed. Sparge, boil 90 minutes. Chill to and ferment at 68° F (20° C). After fermentation is complete, chill to 64° F (18° C). Purge or rack off settled yeast. Dry hop with half the amount of each variety of dry hop for three days, then add remaining dry hops and hold another three days. Gently rouse hop material every other day if possible, being careful not to introduce oxygen.

**EXTRACT VERSION:** Substitute 8.5 lb (3.86 kg) pale malt extract for Carahell, honey, pale, and two-row malts. Expect a slightly darker color (8 SRM).

**I**t was the best of times; it was far from the worst of times. It was the age of celebrated IPAs, it was the age of foolish IBUs, it was the epoch of alpha acid and cohumulone, it was the season of imperials and Cascadian darkness. They had everything required, they had nothing held in reserve; they were going direct to hop lovers' heaven. In short, it was, for good or for evil, the superlative occasion for an epic IPA collaboration.

Two brewers from one city—Albuquerque, N.M.—had stormed the 2015 National IPA Challenge: John Bullard of Bosque Brewing Company with the champion Scale Tipper IPA, and Brady McKeown of Il Vicino's Canteen Brewhouse with the runner-up Exodus IPA. In celebration, these two IPA aficionados decided to come together to create a signature New Mexico hop monster: Hoppiness Envy IPA. "It was a lot of fun to see how Brady designs an IPA," Bullard reflected. "We come from very different brewing backgrounds so combining our knowledge to make this beer was awesome."

Brady felt likewise. "The IPA Challenge judges commented how John's IPA had a distinct malt profile that made it stand out. That profile comes from John's grain bill and the use of a higher mash temperature. So we combined our grain bills, used his mash schedule, and got great results."

Bullard and McKeown have impressive brewing pedigrees. McKeown has been brewing with the Il Vicino Brewing family for more than 20 years, working his way through the company's ranks to become the lead brewer at the Canteen

*Continued on page 11 >*



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## >> THE LIST

What type of beer would you create if you were given a Jameson® Irish Whiskey barrel? Here's what the five breweries in the 2015 Drinking Buddies program came up with.

| Brewery                          | Beer Name                                   | Overview  |
|----------------------------------|---|---|
| Angel City Brewery               | Imperial Irish Ale                          | <b>Color:</b> Rich mahogany hue<br><b>Aroma:</b> Ripe fig and toffee notes<br><b>Flavor:</b> Light vanilla, molasses, black cherries, and a distinct peppery finish. The beer has an indulgent yet subtle sweetness, full body, and lingering warmth.<br><b>ABV:</b> 15.0%  |
| Captain Lawrence Brewing Company | Trans-Atlantic Red (Imperial Red)           | <b>Color:</b> Deep auburn with red highlights<br><b>Aroma:</b> Rich and malty, with hints of chocolate and citrus<br><b>Flavor:</b> Deep and rich, with a big malt backbone, chocolate and coffee flavors, and restrained hop character. The Jameson barrels lend a layer of complexity highlighted by vanilla and toasted oak.<br><b>ABV:</b> 7.0% |
| Deep Ellum Brewing Company       | Local Legend - Jameson Edition (Milk Stout) | <b>Color:</b> Deep black<br><b>Aroma:</b> Notes of vanilla and caramel, hints of licorice<br><b>Flavor:</b> Rich mouthfeel from the flaked barley, notes of dark chocolate and roasted grains as well as an uncommon smoothness.<br><b>ABV:</b> 6.0%  |
| Great Divide Brewing Company     | The Smoothness (Black Lager)                | <b>Color:</b> Dark<br><b>Aroma:</b> Whiskey notes, chocolate, oak, and leather<br><b>Flavor:</b> Dark, smooth lager with a velvet/silky mouthfeel that accentuates roasted malt, vanilla, and oak. Medium malt backbone makes for a very balanced, quaffable lager that highlights the characteristics of the Jameson barrels.<br><b>ABV:</b> 8.5%  |
| Hilliard's Beer                  | Jameson Whiskey Barrel Sour (Saison)        | <b>Color:</b> Chestnut<br><b>Aroma:</b> Citrus, spiced wood, and a light sweetness<br><b>Flavor:</b> Kettle-soured saison with tart, lemony notes from the Belgian yeast and Lactobacillus. Flavors of caramel, vanilla, and charred oak imparted by the barrels.<br><b>ABV:</b> 5.5%   |

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>Continued from page 8

Brewhouse in Albuquerque. In that time, the brewery has won numerous awards including medals at the GABF, Australian Beer Challenge, and World Beer Cup®. McKeown is humble about his role in that success, yet even a short conversation with him reveals his talent as a brewer.

Bullard is likewise modest about his success, yet in his six years as a professional brewer he has won numerous awards including medaling at the GABF and this year's victory in the National IPA Challenge. Even more, the phenomenal quality of his beers has propelled the three-year-old Bosque Brewing to the highest ranks of the region's celebrated breweries.

In addition to their training and experience, both McKeown and Bullard tie their success to the collegial and competitive nature of the New Mexico brewing community. "Albuquerque has some of the best IPAs in the world," Bullard declares. "If you want to compete in this market you have to go big. That has always pushed me to make a bigger and better IPA. Not only do I want to make a great IPA that Bosque Brewing beer lovers want to drink, I want to do it better than everyone else. I know I'm not the only brewer in New Mexico with that mentality!"

That competitive drive came into focus in 2002 when a group of brewers created a public competition for their IPAs. The resulting New Mexico IPA Challenge allows the consumer to bestow coveted IPA bragging rights to one brewer through a series of regional, public judgments. McKeown has won the Challenge five times.

"The New Mexico IPA Challenge has fueled a healthy balance between camaraderie and competition and shaped the character of IPAs in New Mexico," McKeown believes. "That first year the beers were pretty predictable, but each year they have gotten bigger and bolder. It has come to the point where winning the New Mexico IPA Challenge is as great an accomplishment as any other competition."

Bullard, who has won the event the last two years, agrees. "The IPA Challenge

has pushed the envelope. With most brewers making a specialty IPA just for the Challenge you're sure to see some beastly beers. With so many big, top-notch IPAs, consumers come to demand such products, which then pushes us to brew them."

Hoppiness Envy is a brilliant example of the emergent New Mexico-style IPA. Its bold, piquant character echoes the spicy complexity of the region's chile-driven cuisine. As McKeown puts it, "It is as bold as our landscape and as complex as our sky."

If you want to take a shot at brewing one for yourself, Bullard offers the following advice: "Aim for balance. I know that seems crazy when you look at a recipe with 100+ IBUs. Mash a little higher so the hops have some malt to play with. That will lead to more complexity and balance. I don't like drinking thin IPAs that are overly dry and bitter. Keep it simple and add hops late."

**Tom Hart lives, brews, and writes in Corrales, N.M., where he can often be found enjoying a bowl of chile and beans under a turquoise sky.**

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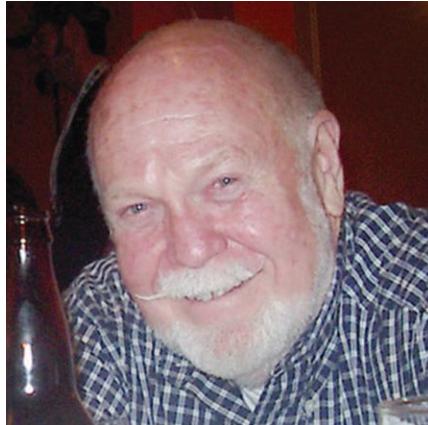
By Gary Glass



# Homebrewing Legends

In August, the homebrewing community lost two icons, Fred Eckhardt and Byron Burch. These two gentlemen laid the groundwork for the current homebrew era in U.S. history. Eckhardt published the first modern American book on homebrewing, *A Treatise on Lager Beer*, in 1970. Burch followed shortly thereafter with *Brewing Quality Beers* in 1974. These two books, along with decades of sharing of information and promoting the hobby, led the way for all that followed.

It is impossible to imagine homebrewing in the U.S. without the contributions of Fred and Byron. These homebrewing legends will live on in every batch of



Fred Eckhardt



Byron Burch

homebrew we make. See AHA founder Charlie Papazian's remembrance of his

friends Fred and Byron on page 48 in this issue of *Zymurgy*.

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## Learn To Homebrew Day

Celebrated every year on the first Saturday of November, Learn To Homebrew Day is a fun day of service for the homebrewing community. On November 7, I hope you will be taking up the cause and teaching your friends, family, and/or neighbors how to

homebrew. By teaching others the joy of homebrewing, we pass the torch to the next generation of homebrewers and help keep our favorite hobby vibrant. See [HomebrewersAssociation.org](http://HomebrewersAssociation.org) for more details on Learn To Homebrew Day, to register a site, or to find a registered site in your area.

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## 2016 AHA National Homebrew Competition Styles

Earlier this year, the Beer Judge Certification Program (BJCP) released its latest edition of the BJCP Style Guidelines. The new guidelines comprise a much wider range of styles and substyles with 40 total categories, up from 28 in the previous version. For the 2016 AHA National Homebrew Competition (NHC), the AHA staff and AHA Governing Committee competition subcommittee have incorporated all of the new BJCP substyles into 31 categories, retaining most of the categories from the previous guidelines. This will hopefully ease the transition for entrants and judges alike. Switching to a new set of categories offered the opportunity to break up some of the competition's largest categories, including IPA and Stout. Limiting the competition to 31 categories, rather than 40, will ensure the competition remains manageable to judge in both the first and final rounds. Check out the Competition section of [HomebrewersAssociation.org](http://HomebrewersAssociation.org) for more information on the 2016 NHC categories.

## 2016 National Homebrewers Conference Speaker Proposals

The 2016 AHA National Homebrewers Conference returns to Baltimore for the first time in 11 years next June 9-11. The AHA Governing Committee's conference subcommittee is currently accepting proposals for seminars and poster presentations at the conference. We'll have more than 50 individual seminars in Baltimore, sharing the latest information on homebrewing with the 2,500+ anticipated attendees. Seminars are one hour long, with approximately 45 minutes of presentation and 15 minutes of Q & A. If you have a topic to share with your fellow homebrewers, let us know! Proposals are due by November 20. Go to [AHAConference.org](http://AHAConference.org) for more information and to submit your proposal.

## AHA Governing Committee Seats

The AHA Governing Committee is taking nominations for candidates for the 2016 election, which will take place in February and March next year. Three open seats on the Governing Committee will be filled in the 2016 election. Members of

the AHA Governing Committee provide guidance and advice to AHA staff and play a direct role in determining the direction of the organization. Members of the Governing Committee participate in monthly conference calls as well as the annual in-person meeting at the AHA National Homebrewers Conference. Committee members also serve on various subcommittees focused on particular areas of interest such as competitions, clubs, and the homebrew industry. If you are interested in running for election or know someone who would make a great candidate, please submit a nomination. For more information, see the Governing Committee pages under the Membership section of HomebrewersAssociation.org.

### **Legislative Update**

The AHA is anticipating homebrew legislation in the states of California and Colorado in 2016. In California, the aim of homebrew legislation is to allow homebrew to be brought onto licensed premises, such as a brewery or restaurant, for homebrew club meetings, competitions, and other homebrew events. In Colorado, the aim is to clarify where homebrew can be transported and served to include premises that are not licensed. One goal of the anticipated legislation would be to allow homebrew supply shops to accept and store entries for homebrew competitions. The AHA has also heard of interest in potential legislation from homebrewers in New Jersey, though we have no further details at this point.

The AHA will provide updates on any pending legislation to our members in affected states, as well as in this column in *Zymurgy*.

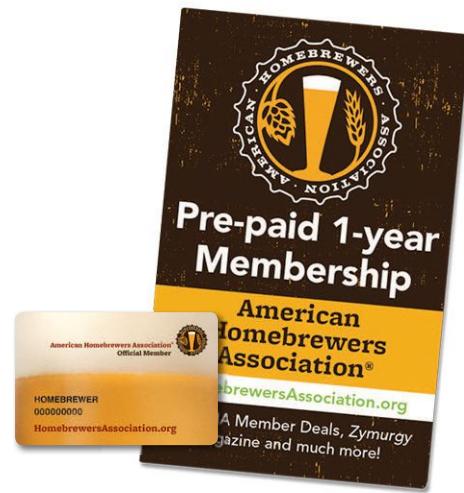
### **Give the Gift of Membership**

The holidays will soon be upon us. Make things easy on yourself this year and get your loved ones the perfect gift: an AHA membership gift card. Gift cards are easy to ship (they fit conveniently into an envelope) and are sure to please. With more than 1,200 businesses offering discounts to members, membership offers great benefits even if the recipient isn't the most active homebrewer. Plus, during the holiday season you get your choice of one of three additional free gifts: a copy of the newly released *Modern Homebrew Recipes*

by Gordon Strong; a pair of AHA socks; or a Craft Beer Deconstructed poster (it's up to you if you wish to pass your free gift along or keep it for yourself—they'll never know). Most importantly, you will be supporting the AHA and our mission to protect and promote homebrewing. See HomebrewersAssociation.org for more details.

Until next time, happy homebrewing!

**Gary Glass is director of the American Homebrewers Association.**




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London ESB Ale – 2000 Budvar Lager – 2001 Urquell Lager – 2007 Pilsen Lager – 2035 American Lager

2042 Danish Lager – 2112 California Lager – 2124 Bohemian Lager – 2206 Bavarian Lager – 2278 Czech

Pils – 2308 Munich Lager – 2565 Kolsch – 2633 Octoberfest Lager Blend – 3056 Bavarian Wheat Blend

3068 Weihenstephan Weizen – 3278 Belgian Lambic Blend – 3333 German Wheat – 3463 Forbidden

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by Our Readers

# Getting an Early Start on Zymurgy

Dear *Zymurgy*,

I thought I'd share these images of my daughter Zoe enjoying the July/August issue of *Zymurgy*. I was reading the issue while rocking her. When she awoke, she had the biggest smile on her face, and you could tell she really enjoyed looking at the magazine.

Zoe's been a big help to her dad on brew day. She's helped out with three brews now by napping through them, entertaining guests, or helping me understand why I'm not getting the efficiencies I want. She has all of the makings of a homebrewer, since she seems very curious about everything, and she's definitely willing to experiment. I'm looking forward to the first batch of homemade root beer that we will make together in a few years.

Ethan Baumann  
Rosamond, Calif.

## Cherry Picking

Dear *Zymurgy*,

In the July/August 2015 Winners Circle, page 74, for the Belgian Cherry recipe, it states in the Directions to rack to secondary and add cherry purée and dried cherries tied into a mesh bag, and allow to ferment for an additional month.

But under Ingredients, it lists dried cherries for 30 days and cherry purée for 14 days. With the different lengths of time listed for the purée, I was wondering which one is correct.

Thanks,  
David Robinson

**Zymurgy associate editor and article author Amahl Turczyn responds:** Our apologies for the confusion. I believe the puree would ferment out faster than the dried cher-



ries, which is probably the rationale behind leaving the whole fruit in longer. It probably wouldn't hurt to leave both puree and dried fruit in secondary for a month. So even though it says 14 days for the purée in the Ingredients, I think the "allow to ferment for an additional month" in the Directions can apply to all added fruit.

## Brew Dogs

Dear *Zymurgy*,

This is Chase (left) and Oscar (right), and they are an integral part of my brew team. Chase can always be relied on to monitor the mash tun, brew kettle, or whatever other brewing-related job is happening in the garage. Oscar, on the other hand, only



graces us with his presence during the small breaks he finds in his busy schedule of sleeping and eating. While they're not much help with the physical aspects of homebrewing, they definitely add some excitement to my garage on brew days.

Jake White-Diemand  
Windsor, Colo.



Dear *Zymurgy*,  
This is my brew pup Casey, a four-year-old Lab mix who is always there waiting to help clean up the mess I make! She's more excited about the dog cookies I make out of the spent grains.

Rory Lusic  
Virginia Beach, Va.



**PSA: Hops are poisonous to dogs. Learn more @ [HomebrewersAssociation.org/hops&dogs](http://HomebrewersAssociation.org/hops&dogs)**

#### READER-SUBMITTED HOMEBREW LABEL

My father, Alf Dunn, was a well-known watercolorist. I used a photo of one of his paintings for my beer labels.

**Jim Dunn**  
San Juan Island, Wash.

#### Hey homebrewers!

If you have a homebrew label that you'd like to submit for the Dear *Zymurgy* section, send it to magazine art director Jason Smith at [jason@brewersassociation.org](mailto:jason@brewersassociation.org).



Dear *Zymurgy*,  
I am an Italian homebrewer and a member of the AHA. I live (and brew) in Italy with my dog Ozzy, a miniature pinscher. He is always around when I am milling the grain since he really likes to eat the ones I inevitably drop on the floor. I hope you enjoy the picture. We say a big hallo from Italy to all the American homebrewers!

Francesco Antonelli  
Rome, Italy



Dear *Zymurgy*,  
Here are my dogs Bella and Molly on a typical brew day. Cheers!

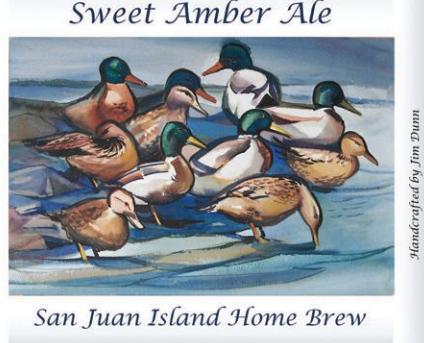
Karl Vernon  
Livonia, Mich.

#### Brew Deer

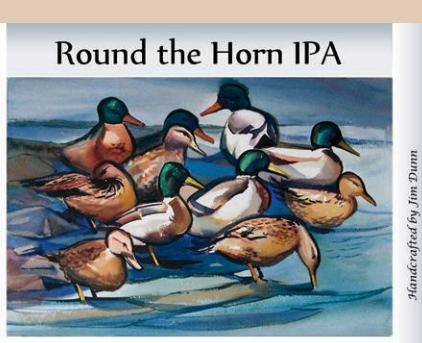
Dear *Zymurgy*,  
I had just finished brewing a double IPA when my "brew buddies" showed up to help out. You usually feature brewers with their dogs or cats. Since I have no pets, it's the wildlife.

Great magazine.

Bob Bryceson  
Shingletown, Calif.



Sweet Amber Ale is one I have brewed for eight years and is the yardstick by which I judge all other beers I brew. It seems to be the one that disappears from my beer locker first. It is a California Common steam ale. It was entered in the San Juan County Fair in August, and took best of all beers!



Round the Horn IPA is based on an extract recipe I ordered from Cellar Homebrew in Seattle. It was also entered in the San Juan County Fair in August, and took second place overall in the IPA category.



### Small Brewer on Board

Dear Zymurgy,

What an exciting time of the year! The picture (above) shows how I told my family we are having a child. This will be the first child for my wife and me, and we couldn't think of a better way to tell my family.

My brother (who lives in Texas), my dad (who lives in Florida), and I are all home-brewers. Every Christmas we have a brew competition among us to see who will be the top brewer of the year. We found a trophy at the local thrift shop and it is passed on every time a new winner is crowned.

Well, this year I had to let them know that I had something special brewing. On the top of the mash tun in the center you can see

the ultrasound picture and below you can see the small brew paddle next to mine.

My wife and I enjoy reading Zymurgy, especially the Dear Zymurgy section. We have been members of the AHA for four years now and love how the community is growing. Cheers to all and have a great rest of the year.

Zach and Kristin Kutch  
Chicago, Ill.

**Send your Dear Zymurgy letters to [zymurgy@brewersassociation.org](mailto:zymurgy@brewersassociation.org). Letters may be edited for length and/or clarity.**

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by Professor Surfeit



# Yeast Revolts over RIS



Dear Professor,

I recently brewed a Russian imperial stout. I fermented it for 10 days. It was in secondary for 20 days, then transferred to a third conditioning vessel where it spent another 30 days. I then transferred it into a freshly emptied bourbon barrel for eight weeks. Wonderful flavor! It clocked in at 13.5 percent.

For bottling, I figured I'd better re-yeast it. At bottling time, I added the same yeast I used for fermenting to the bottling bucket with the beer and priming sugar. The beer never carbonated. What should I have done to carbonate this beer? Did the high ABV overwhelm the yeast? Should I have used a higher alcohol-tolerant yeast? Would this have changed the flavor? This was my first attempt at barrel aging.

Thanks for the help,  
Bill Bartman  
Portland, Ore.

Dear Bill,  
I'm not in shock, but your yeast seems to have been. It revolted and refused to contrib-

ute to your noble cause. Adding fresh yeast in any form to a 13.5-percent ABV brew will stress the cell walls and well-being of most yeast. It's kind of like you or me being asked to build a house in the midst of a Category 5 hurricane.

There are a number of things you could try next time. Yes, you could introduce a yeast at bottling that is tolerant to high alcohol. How you introduce the yeast would be important to consider. I'd recommend rehydrating a quality dry yeast that is known to be alcohol tolerant. I've used Champagne yeasts with success in the past. The advantage to rehydrating dry yeast is that the dissolved oxygen requirement is not needed. Dried yeast has already gone through the oxygen take-up stage just before it is dried. Introducing a wet cultured yeast is a bit trickier; you should build a wet culture with plenty of oxygen in the wort culture medium. Simply introducing tired yeast sediment is not as effective.

The other concern is the initial shock that any yeast will experience going from its initial environment to a high ABV environment. I'd first rehydrate dried Champagne yeast in warm water for 20 minutes. Then I'd add some of your "finished" beer in two or three stages over a 24- to 36-hour period. This gradually acclimates the yeast to the stressful environment of high ABV. Then add the yeast culture to your beer and priming sugar and bottle.

In regards to saving your existing bottled batch, I've successfully rehydrated appropriate yeast and then uncapped the beer, added several drops of rehydrated yeast slurry into the bottle, and immediately recapped. That works most of the time; at least well enough to salvage a total loss.

Salvation is yours,  
The Professor, Hb.D.

## American Pale Ale

Dear Charlie Papazian,

I'm a longtime participant in, and an observer of, the craft brewing scene, and have been since the beginning. I don't blog or write books, but I comment a lot on the blogs of historical writers.

I was re-reading *Microbrewed Adventures* recently. This is a great book and needs to be better known. You should do a second edition. A lot has changed in 10 years and I think you could make the book even better now.

In the book, you mention that Sierra Nevada was the first brewery to use Cascade hops in quantity. (Founders Ken Grossman and Paul Camusi would have used them in homebrewing earlier.) I believe Anchor Brewing was the first in this regard with its version of Liberty Ale (the bicentennial) released in 1975. Also, various Anchor "Our Special Ales" of the late 70s and early 80s used a lot of Cascade hops and one of them became the model for Liberty Ale, which has been in regular production since 1983. No question Sierra Nevada and Boulder Beer were also pioneers, but I believe the idea to use Cascade for heavy aroma really started with Anchor.

Second, since you have been homebrewing since 1970, can you say whether homebrewers in effect developed the American pale ale style before its commercial exploitation? Before Anchor used Cascade for aroma in '75, were you or other homebrewers making similar beers? I don't think this has ever been pinned down. I know that Coors and other large brewers used relatively small amounts of Cascade hops after their release in 1972 for bittering primarily, but Anchor's (and later New Albion's, Boulder's and Sierra Nevada's) use was quite different. How

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did it start—is it all really attributed to early homebrewing in 1972-75?

Finally, you mention Anchor very little in the book and I wonder why. Conceivably, it was not considered a “true” craft brewery due to its long history. Perhaps you would consider enlarging the discussion in any update of the book you issue.

Best wishes,  
Gary Gillman  
Toronto, Canada

Dear Gary,  
Charlie asked me to answer your questions. I have extensive communications with Charlie, so I know exactly what his thoughts are. First of all, thanks for your message. Microbrewed Adventures was a fun book for Charlie to write; however, its sales probably don't warrant a sequel. Charlie put a lot of effort into it and would have liked it to be a bit more popular, but that is the way publishing/writing goes.

You're pointing out that Anchor was using Cascade hops first, and Charlie apologizes for not mentioning this in his book. If there ever is a sequel to that book, he would include Anchor.

Charlie doesn't think American brewers were consciously using Cascade hops in the mid-70s to dry hop their beers too much. Cascade was about the only fresh hop they could get in those early days, so at best homebrewers were usually late hopping in the kettle and that certainly brought out a lot of the character. Charlie recalls tasting the original Sierra Nevada Pale Ale and thinking that it wasn't that much different than the general character of a lot of homebrewed pale ales. Of course, Sierra Nevada's was cleaner, more consistent, and a superbly great example. The distinction of what Cascade could potentially contribute to beer was still to be discovered in the early and mid-70s. Charlie also noted that a lot of pale ales in those days were being designed to replicate British-style pale ales, because that was the only commercial standard at the time. So homebrewers would often use Fuggle and Golding hops to make pale ales.

Hope that answers your questions.

Channeling Charlie,  
The Professor, Hb.D.

**Send your questions to professor@brewersassociation.org.**

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By Amahl Turczyn

# Patersbier

**I**t seems like every craft brewery these days has a session IPA in its lineup. And no wonder: light, refreshing, and hoppy, these pale, effervescent beers are perfect for work breaks or play breaks, since they offer full-flavored beer character without being overly intoxicating.

But this style of beer isn't a new idea. When it comes to Trappist beers, it's natural to envision something highly carbonated, in a uniquely classy or nobly simple bottle, with strong, yeast-derived complexity of character, along with high alcohol content. But the monks who brew those beers brew them for sale, rather than for personal consumption. It would be counterproductive, and indeed somewhat debilitating, to drink a 9 percent ABV tripel with lunch.

The beer the monks brew for themselves, for day-to-day consumption, is much more like a session IPA. Many people know it as Patersbier (father's beer) or a Trappist single, and while nearly every Trappist brewery makes one, few of them are distributed for sale to the public. They are beers brewed by monks, for monks, and are therefore among the rarest of beers.

## Trappist Singles

The Order of the Cistercians of the Strict Observance, known collectively as the Trappist order, included seven brewing abbeys in Europe, at least until 2012: Achel, Chimay, Orval, Rochefort, Westmalle, Westvleteren, and La Trappe/De Konigshoeven. Since that year, four more have been added, namely Engelszell in Austria, Abdij Maria Toevlucht in the Netherlands, Saint Joseph's Abbey in Spencer, Mass., and just recently Tre Fontane in Rome. Of these, Achel, Chimay, Orval, Westmalle, Westvleteren, La Trappe, and Saint Joseph's make their own version of Patersbier.



A Trappist monk oversees the bottling of Trappistes Rochefort beer at Notre-Dame de Saint-Rémy in Rochefort.

Achel has the distinction of being the first Trappist brewery to make a Patersbier (in this case, the Dutch *Patersvaatje*, or "friar's barrel" would be more appropriate). Achel 5, brewed since 1852, is available to the public on tap at its café. It is pale amber to blonde, amply carbonated, with cereal grain notes, grassy hops, stone fruit esters from the brewery's signature yeast, and a mineral finish. Appropriately, it is 5 percent ABV.

Chimay Dorée was previously available only from the brewery's tasting room, but has since become a little easier to find in the rest of the world. It is 4.5 percent ABV, hazy yellow with typically high carbonation; a wheaty, lemony character up front laced with a touch of bubble gum and banana esters, hay, and bread on the palate; and lingering bread and clove in the dry, well-attenuated finish. Dorée is brewed with dried orange peel and coriander.

Orval's Patersbier is simply a lighter version of its regular Orval, toned down to 3.5 percent ABV. Petite Orval can only be purchased at the tavern owned by the monastery, A l'Ange Gardien. Petite Orval is in fact very similar to the regular-strength version, and appears to have the same color, probably from an extra dose of caramel, but it definitely drinks lighter.

Westmalle Extra is 4.8 percent ABV, and has much in common with a Belgian Pilsner on first sip. But as it warms, more complex character emerges: floral, grassy hops, citrus, toasted nuts, bread, and apple and grape esters. Bitterness is also part of its profile; while not as pungent as a session IPA's bitterness, there is a definite, spritzy dryness uncommon in most Belgian beers and very rare in most Trappist ales.

The Saint Sixtus monks at Westvleteren call their single beer Blond. According

to Stan Hieronymus in his informative *Brew Like a Monk*, it was created in 1999 by Brother Filip, who oversaw brewing operations at the time. Before then, the monastery beers were numbered 4, 6, 8 and 12, but the new Blond, which marked the opening of the brewery's café In de Vrede, ended up replacing both the 4 and the 6. At 5.8 percent ABV, it is one of the strongest Patersbiers, and with substantial hop additions and very thorough attenuation, one of the driest and hoppiest. As with other Trappist singles, yeast-driven esters and phenols create biscuit, hay, citrus, banana, clove, cardamom, and earthy nuances. There are more than a few similarities to Westmalle Extra, unsurprisingly, since the Saint Sixtus monks brew their beers with Westmalle's yeast. Westvleteren Blond is difficult but not impossible to obtain; as with the brewery's other beers, the best way to get a bottle is from the brewery shop or café.

La Trappe's single beer is called PUUR, and as its name suggests, quality is taken very seriously—the monks at De Konigshoeven insist on only using organic malt for the beer, which is a drinkable 4.7 percent ABV. Pale golden-yellow in color, a crisp, underlying Pilsner malt character



**Westvleteren 12** is brewed by Belgian monks at Saint Sixtus Abbey.

is adorned with tropical fruit aromas, orange zest, wheat, coriander, and of course herbal, noble hops. Despite the complexity, there is a smoothness of character to this beer that reminds one, like Westmalle Extra, of Pilsner. PUUR, like its brethren, is not fiercely hopped, but has a dry and delicately herbal hop edge.

The monks at Saint Joseph's in Spencer, Mass. currently brew only one beer, which they consider a "refectory ale," or Patersbier: Spencer Trappist ale. It is the strongest among the Trappist mon-

astery singles at 6.5 percent ABV, and is made with Canadian malt, Yakima Valley hops, and water from a well on the premises. Though he makes use of American Nugget and Willamette hops for his American Trappist beer, Spencer brewmaster Hubert de Halleux keeps the emphasis on yeast. The 24 IBUs balance rather than lead, and the use of caramel malt further softens the beer. But the grain bill provides a solid backdrop for the yeast: tropical fruit, rose petals, and orange for esters; pepper and clove for phenols. Their "house

## Westvleteren Blond Clone

### INGREDIENTS

for 5.5 U.S. gallons (20.82 L)

|                |  |
|----------------|--|
| <b>9.25 lb</b> | (4.2 kg) Dingemans pale malt                                 |
| <b>0.75 lb</b> | (340 g) clear candi sugar                                    |
| <b>1.25 oz</b> | (35 g) Northern Brewer pellets, 8% a.a. (60 min)             |
| <b>2.0 oz</b>  | (57 g) Styrian Golding pellets, 5.4% a.a. (10 min)           |
| <b>2.0 oz</b>  | (57 g) Hallertau Mittelfrueh pellets, 4% a.a. (steep 10 min) |

White Labs WLP530 Abbey or Wyeast 3787 Trappist High Gravity ale yeast (2 L starter)

**6.5 oz** (184 g) clear candi sugar to prime

**Original Gravity:** 1.051 (12.75° P)

**Finishing Gravity:** 1.006 (1.5° P)

**IBUs:** 41

**SRM:** 4.1

**ABV:** 5.8%

**Boil Time:** 90 minutes

**Assumed Brewhouse Efficiency:** 75%

### DIRECTIONS

Mash at 147° F (64° C) for 75 minutes. Heat mash to 168° F (76° C) and mash out for 10 minutes. Sparge, boil 90 minutes, and add hops at stated intervals. Chill. Oxygenate when wort temperature falls below 80° F (27° C). Pitch a strong starter of yeast at 68° F (20° C). Fermentation temperature may be allowed to rise as high as 74° F (23° C). When fermentation is finished, chill to 50° F (10° C) and cellar for four weeks. Rack clear beer onto priming sugar, blending thoroughly. Bottle and allow beer to condition for eight days at 75° F (24° C). Cellar beer for four to six weeks.

**EXTRACT VERSION:** Substitute 5.75 lb (2.61 kg) extra light dry malt extract or 7 lb (3.18 kg) extra light malt extract syrup for the Belgian pale malt.

yeast" is not commercially available, according to the Spencer monks, but in the monastic spirit of sharing between breweries in the order, there's a good chance the yeast is sourced from one of the older Trappist breweries.

### Brewing a Patersbier

Several elements must be considered when brewing one of these monastic single ales. First, recognize that these are simple beers. Since the style most likely evolved from the parsimonious practice of doing a second sparge after first runnings are collected for a strong brew, Patersbier is usually just a lighter version of one of the brewery's bigger brews. Some, like Westmalle Extra, can be considered SMaSH beers—a single malt and a single hop. Simple recipes need not yield simple beers, however. These are yeast-driven brews, with much of the character complementing and even overpowering malt and hops. So it's important to be confident of yeast quality and vitality.

Many Trappist yeast strains are available from commercial labs, including White Labs WLP530 Abbey and Wyeast 3787 Trappist High Gravity ale yeast. These are generally considered to be the same strain: Westmalle's house yeast. Others, like the Spencer beer, are not available yet, but that doesn't mean you can't purchase a fresh bottle or two and culture the yeast yourself. (For tips on how to culture yeast from a bottle, see the Style Spotlight in the January/February 2014 *Zymurgy*.) It's definitely an advantage to American homebrewers to have our own "local" Trappist brewery!

Another trait all these beers share is very thorough attenuation, and again, this depends on yeast vitality and pitching rate, in addition to long, low mash temperatures and the judicious use of sugar in the kettle. Dryness brings balance and drinkability, and allows the modest hop doses to shine brighter than they would in heavier, sweeter beers.

Carbonation also brings dryness and balance, and all these brews are bottle conditioned with a high (3 to 3.5 volumes CO<sub>2</sub>) level of carbonation. One common practice among all monastery brewers is



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### THEY ARE BEERS BREWED BY MONKS, FOR MONKS, AND ARE THEREFORE AMONG THE RAREST OF BEERS

---

bottling with fresh yeast to encourage fast and thorough bottle conditioning. Most homebrewers rely on primary yeast still in solution after conditioning to carbonate bottled beer, and with these low-gravity Patersbiers, that's a perfectly reasonable approach. Yeast viability should still be very good, and it should be able to re-ferment an evenly blended dose of sugar at bottling. Cap the bottles and keep them at 75° F (24° C) for eight days.

Base malt for these beers is usually either pale or Pilsner, sometimes with minor additions of light caramel malt. Some Patersbiers are very light in color, and feature only the base malt with no other specialties or color malts. Belgian Pilsner and pale malts are very appropriate for the Continental Trappist singles, and for the included recipes, Dingemans would be most authentic, but because the yeast complexities are such a large component of these beers, the particular brand of malt is not as important. Mashing those base malts is important, though—you want at least an hour at 147 to 149° F (64 to 65° C) followed by a brief mash-out. Pulling a decoction for that final step is best, or you can add heat to the mash tun to get to 168° F (76° C) if your system is capable.

Sugar is often a part of the bill of fermentables when brewing Trappist beer,

# Gerry Lynch 1st-Category 18 NHC 2015



I went through 4 recipe variations, entered several local competitions and took in everyone's advice before I entered the final version of my NHC Gold medal winning Tripel to the National Homebrew Competition. The one thing that didn't change is my use of PBW and Star San throughout the entire process. My guarantee to a clean brewing process every time.

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## Westmalle Extra Clone

### INGREDIENTS

for 5.5 U.S. gallons (20.82 L)

**9.5 lb** (4.31 kg) Dingemans Pilsner malt

**2.0 oz** (57 g) Saaz pellets,  
4% a.a. (FWH)

**2.0 oz** (57 g) Saaz pellets,  
4% a.a. (10 min)

White Labs WLP530 Abbey or Wyeast 3787

Trappist High Gravity ale yeast (2 L starter)

**6.5 oz** (184 g) clear candi sugar  
to prime

**Original Gravity:** 1.047 (11.75° P)

**Finishing Gravity:** 1.007 (1.75° P)

**IBUs:** 31    **SRM:** 3.1    **ABV:** 5.3%

**Boil Time:** 90 minutes

**Assumed Brewhouse Efficiency:** 75%

### DIRECTIONS

Mash at 147° F (64° C) for 75 minutes. Heat mash to 168° F (76° C) and mash out for 10 minutes. Sparge, boil 90 minutes, and add hops at stated intervals. Chill. Oxygenate when wort temperature falls below 80° F (27° C). Pitch a strong starter of yeast at 64° F (18° C). Fermentation temperature may be allowed to rise as high as 68° F (20° C). When fermentation begins to slow, usually in six days, chill to 50° F (10° C) and cellar for four weeks. Rack clear beer onto priming sugar, blending thoroughly. Bottle and allow beer to condition for eight days at 75° F (24° C). Cellar beer for four to six weeks.

**EXTRACT VERSION:** Substitute 7.25 lb (3.29 kg) Pilsner malt extract syrup for the Belgian Pilsner malt. Color may be slightly darker with extract recipe (3.8 SRM).

and most Patersbiers feature a modest amount, though usually less than 10 percent. Syrups are more often used in Belgium than rock or granulated sugar, and caramelized sugar or dark caramel often provides color for some of the stronger Trappist beers. Regardless of the form, invert sugar (glucose and fructose) is always a good choice for brew-

ing, but for the modest original gravities we're brewing with, table sugar is fine for both kettle and priming additions. The yeast strains for these beers are capable of stupendous feats of attenuation in high-alcohol environments, so a little sucrose shouldn't slow them down much. That said, clear candi sugar is recommended for the Westvleteren Blond recipe.

Hops vary by monastery and location. Noble hops are always a good choice, as they lend a softer, more floral, and less obtrusive signature. A first wort addition and late flavor addition are usually sufficient for Patersbier, though it would be fun to experiment with fresh hop aromatics in this style via late kettle and even dry hop additions.

Water also varies, but in locations like Westvleteren, where the water is particularly hard (most Trappist breweries depend upon a well water supply), the water is treated. Westvleteren's water is high in bicarbonates, chloride, and sulfate. Since the Blond is such a pale beer, treating your water with baking soda is not recommended, but soft or reverse osmosis (RO) water with additions of calcium chloride and calcium sulfate at a rate of 1 gram per gallon would help to bring out malty flavors and the snappiness of the hops. If you are brewing the extract versions of the recipes, remember to only use untreated RO or distilled water—extracts include mineral content already, so you merely want to dilute them.

Keep things simple, dry, and highly carbonated, and these light, nourishing beers will provide all the dash and complexity of Trappist brewing without all of the heady alcohol.

## Resources

1. Hieronymus, Stan. *Brew Like A Monk*, Brewers Publications, Boulder, Colo., 2005.
2. Dornbusch, Horst. "America's First Trappist Brewery," *Zymurgy*, July/August 2014.

**Amahl Turczyn** is associate editor of *Zymurgy*.

# Blending





# Creating Homebrew Synergy

By Kyle Kohlmorgen

**F**rom Bordeaux wine to Kentucky Bourbon, many of the world's finest beverages are a thoughtful balance of flavors. Despite using a stark contrast of ingredients and production methods, their makers often share a common technique: blending portions of their wares to create a superior end product.

Homebrewers can (and should!) adopt these techniques to improve their beer or create flavor profiles not possible from a single brew.

Commercially, brewers primarily blend their beer for two reasons: consistency and character. Most often, batches are blended to balance the subtle differences between them—a final control point in producing the consistent flavor profile expected by consumers.

Brewers also use blending to produce a finished beer that is, in some way, more desirable than any of its components. This method of blending has been used in brewing throughout history, especially before pure culture fermentation.

# The creativity of U.S. craft brewers and homebrewers has led to innovation in all brewing processes, including blending.

## Blends of the Past

Porter was the drink of choice for 18th century Londoners. The most desirable porter was often aged for a year or more, commanding a considerably higher price. The old or “stale” porter was often blended with young beer, more often at the bar than the brewery, for a more affordable pint<sup>1</sup>. At the same time, the acidic ales of Flanders were produced in a strikingly similar method to English porter; it is unclear in which region the practice originated.<sup>1,2</sup>

Lambic producers of Belgium began to blend and bottle gueuze in the mid- to late 19th century, shortly after adopting the *Méthode Champenoise* to keep carbonation in their casks and bottles<sup>2</sup>. Instead of the traditional sugar solution, gueuze is primed only with the residual sugar from young lambic. Given the influence from French winemaking, the use of smaller conditioning vessels (wine barrels instead of large tanks), and the effort required to replace sugar with beer, gueuze may be the earliest example of a commercial beer blended primarily for character, rather than for price and volume.

To this day, gueuze blenders celebrate variation between batches and conditioning vessels. The character of each barrel or *foeder* is carefully evaluated before composing a complex yet balanced blend. This method survives not only because gueuze is a wonderful beverage, but because technology cannot replace a discerning palate.

## Blending Methods

The creativity of U.S. craft brewers and homebrewers has led to innovation in all brewing processes, including blending. Though the possibilities of flavor combinations are endless, blending for character can be broken down into two general methods.

### Method 1: Blending for Adjustment

If a beer lacks balance or complexity, adding a relatively small amount of “character beer” can bring the flavors into focus. The character beer can either be pulled from another batch or brewed specifically to blend, depending on your goal and beers available. Here are a few examples:

- Firestone-Walker ferments a portion (approximately 20 percent) of its English-style pale ale in oak barrels. This portion is blended with the rest of the batch (fermented in stainless steel) to create Double Barrel Ale. Double Barrel Ale is then blended at about 15 percent with an American-style pale ale to create Pale 31<sup>3</sup>.
- Homebrewer and author Gordon Strong often blends a small portion of young, American-style barley-wine into an aged batch to refresh hop character<sup>4</sup>.
- Brewery Ommegang blends a small portion (2 percent) of Liefmans Kriek into its Belgian-style quadrupel to make Three Philosophers. The Kriek’s intense cherry flavor adds a subtle, balancing counterpoint to the brewery’s phenol-driven yeast profile. The cherry flavor also accentuates the dried cherry and plum components from the malt.
- My favorite blending application is adding acidity and depth to fresh, hoppy (but lightly bitter) saison with an aged sour beer.

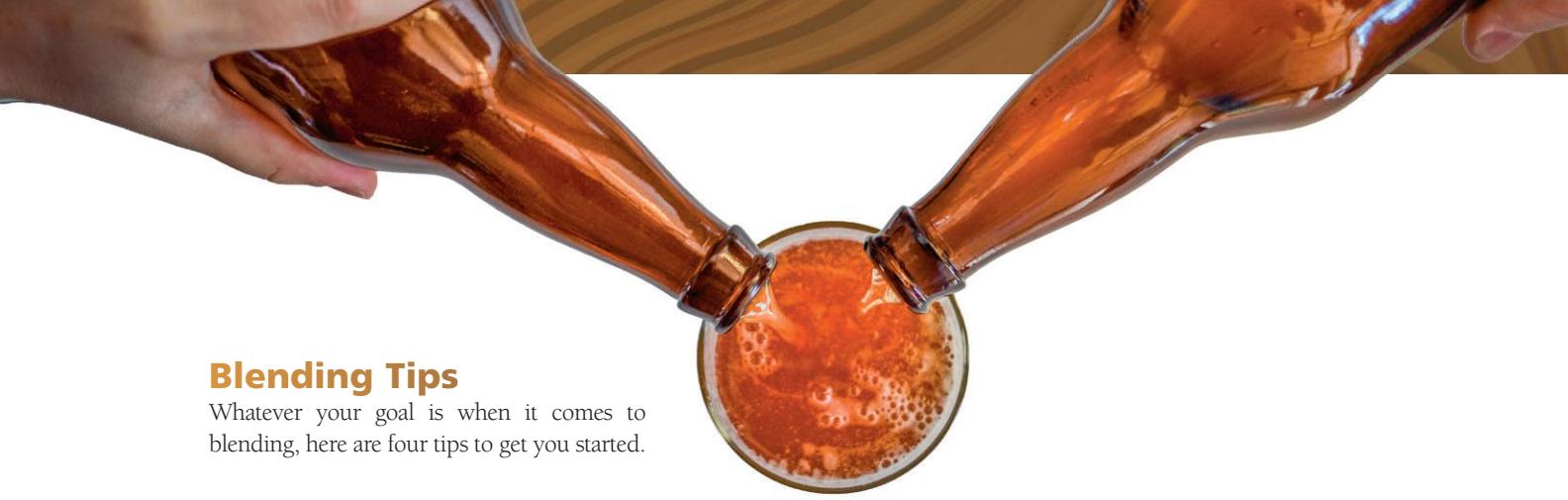
### Method 2: Beer Composition

Drawing inspiration from Bordeaux and Brussels, this method uses additional beer more prominently in a greater recipe. Generally, more even proportions of character beers make up an entirely new beer

as opposed to an adjustment blend, and a single beer may or may not be designated as the “base.”

My definition of the method is general for good reason: there are no rules. You are limited only by your creativity and the beers you have available to blend. Instead of giving guidelines or recipes, let’s take a look at some examples:

- Traditional Belgian gueuze is the archetype of this blending method. One-, two-, and three-year-old lambic is blended to balance acidity, flavor, dryness, and residual sugar. My favorites are produced by Cantillon, 3 Fonteinen, Gueuzerie Tilquin, and Boon.
- The Bruery’s Mélange series showcases the breadth of blending possibilities. The first blend in the series included Oude Tart, a fantastic, fruity Flanders red with Black Tuesday, a bombastic, 18-percent barrel-aged Russian imperial stout.
- Every year, Firestone Walker gathers local winemakers to compose its Anniversary Ale blend. The majority of components hail from the brewery’s extensive spirit barrel-aging program, but winemakers have also included Double Barrel Ale and even Union Jack, the brewery’s flagship IPA, in the blend. Though this is definitely an advanced blending technique, a similar approach would be a great project to take on as a homebrew club or with a few friends.
- Blending batches of a similar recipe can expedite recipe formulation. For instance, splitting a batch of IPA, dry hopping with different hops, and blending back to taste can help structure the recipe’s dry hop schedule.



## Blending Tips

Whatever your goal is when it comes to blending, here are four tips to get you started.

### 1 “Begin with the end in mind.”

One of *The 7 Habits of Highly Effective People*, this advice from businessman and author Stephen Covey is as applicable to brewing as it is to business. Whether or not blending is part of the plan, start with your desired flavor profile of the finished

beer. This goal profile should drive all decisions from recipe development through packaging. The beer might be brewed with blending in mind, or blending may be used to adjust a beer that is off-target.

### 2 Start with good beer.

Blending should be used to make good beer better. Off-flavors from stressed fermentation, poor ingredient quality, or infection normally permeate the entire blend, masking the quality of the previously unblemished components. Trying to “blend out” an off-flavor is like dousing a burnt steak with a lovingly-prepared pan sauce.

Consider your own drinking experience. Even if you can reduce the concentration of an off-flavor and produce a reasonably palatable blend, you will continue to focus in on that off flavor, because you know it is there. You will know the time, effort, and good beer spent on masking it. The flavor of your perfect pan sauce is forgotten as you choke down the tough, chewy, over-cooked piece of premium beef.

### 3 Use test blends to guide your final composition.

After evaluating the components individually, make small-scale test blends with samples. Taste, evaluate, and take detailed notes. Use a hops scale or graduated cylinder to make accurate measurements. When I’m blending two beers for composition, I start with a 50/50 blend and opposing 70/30 blends. Normally none of these end up being the final composition, but selecting the favorite allows me to narrow my sights, significantly decrease tasting/blending iterations, and reduce the chance of measuring error or palate fatigue.

When blending for adjustment, the intensity of the character beer will guide your approach. If your goal is accentuating or balancing with a malt, hop, or fruit bomb (like Ommegang’s Three Philosophers), take a measured and conservative approach, as if you were adding an intense spice or concentrated extract. With more forgiving blends (like my sour saison), I am much less meticulous, blending to taste after a few rough tests in the glass.

### 4 Practice!

I encourage you to drink more beer.

A skilled blender’s greatest tool is a finely-tuned palate. The most effective method of evolving your palate is thoughtful, repetitive tasting. Practicing with homebrew or commercial beer is easy and always enjoyable.

Open bottles of two seemingly compatible styles and make test blends in the glass. Think about the interactions (both good and bad) of the two flavor profiles at different proportions. Try adding small amounts of one component or the other until you reach the ideal blend. Is the sum greater than the parts? Are there flavor tradeoffs when attempting to balance assertive flavors?

I enjoy conducting this exercise using a seasonal variety pack or assortment of bottles. I also suggest trying it during your next bottle share. A few of my favorite blends include:

- “Pumpkintoberfest”: creating new flavors from fall seasonal variety packs.
- Perennial Artisan Ales’ Abraxas and La Bohème: a riff on Bruery’s Melange 1 and a bottle share showstopper. Abraxas is an imperial stout brewed with ancho chili peppers, cacao nibs, vanilla beans, and cinnamon sticks, while La Bohème is a wild ale aged in wine barrels with Michigan tart cherries.
- Boulevard Tank 7 and Firestone Walker Union Jack: a hoppy, American-style saison from two beer fridge regulars.



Blending in kegs has several advantages over blending in fermenters.



## Getting One into the Other

Kegs are supremely handy when it comes time to blend. Though it is definitely possible without them, blending in kegs has several advantages over blending in fermenters:

1. The risk of oxygen pickup and infection is significantly reduced during sampling and transfers.
2. Sampling and transfers require minimal effort and additional cleaning.
3. Blend components can be carbonated and chilled to serving temperature before evaluation.
4. Blend ratios can be accurately measured by weight.
5. Blends can be served immediately if desired (although they normally benefit from additional conditioning).

Here is my process of blending two beers with kegs.

### Equipment needed:

- Cornelius-style kegs (at least three)  
*Note: Weigh each keg when empty for easy and accurate volume calculations.*
- Keg transfer tool: a 3' to 5' length of draft tubing with "out" quick-disconnects at each end
- Malt scale, minimum 50-lb capacity
- A spare set of soft parts for segregating beers with Brettanomyces and/or lactic acid bacteria (optional)

### Weight-to-Volume Calculations

$$\frac{\text{Current Keg Weight (lb)} - \text{Empty Keg Weight (lb)}}{8.34 \text{ lb/gallon}} = \text{Keg Volume (gal)}$$

OR

$$\frac{\text{Current Keg Weight (kg)} - \text{Empty Keg Weight (kg)}}{1 \text{ kg/L}} = \text{Keg Volume (L)}$$

*Note: This formula assumes a constant beer density (8.34 lb/gallon). Though the finishing gravity of the beer may fluctuate, it is relatively insignificant for these measurements.*

### Process:

1. Start by properly cellaring component beers in kegs. Essentially, the components should be considered finished beer.
2. Clean, sanitize, and purge an empty keg (the "blend keg") and the transfer tool.
3. Transfer the first component from its keg (the "source keg") into the blend keg with CO<sub>2</sub> pressure. Keep a small amount of CO<sub>2</sub> pressure on the source keg while venting excess pressure from the blend keg. If the beers are carbonated, use a slightly higher pressure for transfer and only vent off enough pressure from the blend keg to move liquid. Otherwise, the rapid change in pressure may cause foaming, loss of carbonation, and CO<sub>2</sub> bite.
4. As the blend keg fills, monitor the change in weight with the malt scale.
5. When the desired amount of beer has been transferred, disconnect the transfer tool from the source keg.
6. Repeat the previous steps to transfer the remaining blend components.

### Using Weight to Measure Transfer Volume

Because beer has a relatively constant density, the weight of beer is about the same in a given volume. I like to use BeerSmith's weight-to-volume calculator to convert the scale measurement, but you can also do the calculation manually with the formula above.

### Go Forth and Blend

Making beer does not have to be a linear, batch-wise process. Blending

gives us the ability to adjust a beer's finished flavor profile or compose an entirely new beer from other batches. It doesn't require an excess amount of beer, oak barrels, or even a Flemish accent. Brainstorm flavor combinations, practice with commercial beer or your own homebrew, and dive in!

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2. Sparrow, Jeff. *Wild Brews: Beer Beyond the Influence of Brewer's Yeast*. Boulder, CO: Brewers Publications, 2005.
3. Hieronymus, Stan. *For The Love of Hops: The Practical Guide to Aroma, Bitterness and the Culture of Hops*. Boulder, CO: Brewers Publications, 2013.
4. Strong, Gordon. *Brewing Better Beer: Master Lessons for Advanced Homebrewers*. Boulder, CO: Brewers Publications, 2011.
5. BeerSmith software: [BeerSmith.com](http://BeerSmith.com)

6. Kohlmorgen, Kyle. South House Pilot Brewery: [southhousepilotbrewery.blogspot.com](http://southhousepilotbrewery.blogspot.com)

**Kyle Kohlmorgen's passion for beer began in college, where he devoted his small reserve of internship cash to**

**Bell's Two Hearted Ale and eventually a homebrew kit. After tasting La Folie, he began brewing sour beer, and his basement has been littered with pellicle-laden carboys ever since. He is a member of the STL Hops Homebrew Club in St. Louis, Mo.**

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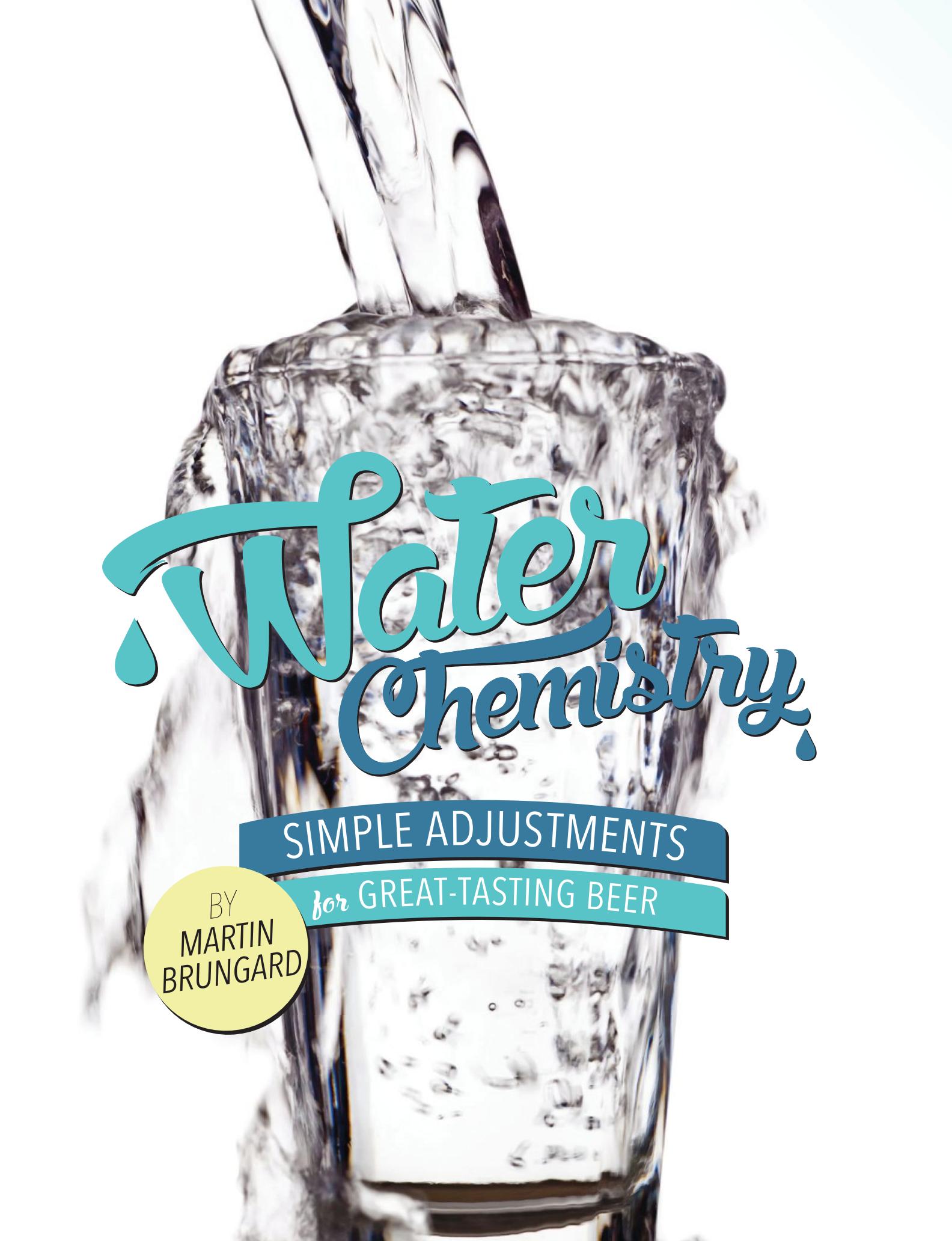


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# Water Chemistry

SIMPLE ADJUSTMENTS

for GREAT-TASTING BEER

BY  
MARTIN  
BRUNGARD

**"IF YOUR WATER TASTES GOOD, YOU CAN BREW WITH IT" IS AN AGE-OLD AXIOM IN BREWING, BUT IT'S NOT NECESSARILY TRUE. GOOD BREWERS SHOULDN'T IGNORE THEIR BREWING WATER, EVEN IF IT TASTES GOOD. ABOUT THE ONLY TRUE ASPECT OF THE SAYING IS THE REVERSE: "IF YOUR WATER TASTES BAD, YOU CAN'T BREW WITH IT."**

Bad-tasting water can be an obvious problem for brewing. Many water problems can affect the resulting beer. Table 1 presents some common water problems and their signature characteristics.

Avoiding water with those contaminants or treating water to correct them should be a brewer's goal. However, an absence of these obvious problems does not mean that your water is ideal for brewing. Dissolved ions in water can affect brewing performance and beer taste. Proper levels of these ions in brewing water can improve beer flavor. Many other factors are important to understand in order to ensure you have good brewing water.

### A Blank Canvas

In some places of the world, tap water can be ideal for certain styles of beer. However, that water may not be ideal for other styles. That is one reason why some areas of the world are known for certain beer styles, as those styles evolved to suit the ingredients and water found in those areas. The hoppy, dry-finishing pale ales of Burton, the clean-tasting lagers of Pilsen, and the minerally, full porters of London are each unique to their locale. All were direct products of their local water and ingredients, and their quality was rarely equaled outside of those areas prior to an increased understanding of brewing chemistry. With those examples in mind,

it should be apparent that it would be difficult to brew a great Pilsner in Burton or a great pale ale in Pilsen without treating the local water. Adjustments to brewing water are often necessary to create great beer in a broad range of styles.

Although water makes up more than 90 percent of beer, it is not the dominant source of beer flavor. We know that most of beer's flavor comes from malt, hops, and yeast. Water is the nearly flavorless canvas upon which those flavors are painted.

**TABLE 1: WATER PROBLEMS**

| CONTAMINANT                        | SIGNATURE                          |
|------------------------------------|------------------------------------|
| <b>Chlorine or chloramines</b>     | Sharp chemical taste or aroma      |
| <b>Hydrogen sulfide</b>            | Rotten egg or sulfur aroma         |
| <b>Geosmin or methylisoborneol</b> | Earthy or pond scum taste or aroma |
| <b>Iron or manganese</b>           | Metallic or blood-like taste       |

**TABLE 2: pH-RELATED BEER FLAVOR PROBLEMS**

| COMPONENT    | pH TOO HIGH                                    | pH TOO LOW                     |
|--------------|--|--------------------------------|
| <b>Malt</b>  | Astringency and harshness from husk material   | Sharper and tarter flavor      |
|              | Duller, less crisp malt flavor                 | More acrid roast flavors       |
|              | Darker wort color than expected                | Lower beer body                |
| <b>Hops</b>  | Harsher hop flavor and bitterness              | Lower bitterness than expected |
|              | Green-tasting, chlorophyll flavor in beer      |                                |
| <b>Yeast</b> | Poorer yeast flocculation                      |                                |
|              | Greater potential for spoiling organism growth |                                |

However, water plays a critical role in beer quality and perception because it affects all of those other flavor producers.

Malt is the sugar and major flavor source of beer. Converting starch grain into fermentable and unfermentable sugars is accomplished through the mash. Water and malt combine to form a starch, raw wort that is converted into sugar through enzymatic action. That conversion is dependent upon the pH of the wort, which is directly dependent upon the water quality and the malts used in brewing. Hops are a source of flavor and bitterness in beer, both of which are influenced by wort pH.

Yeast is also affected by pH, which is a measure of a solution's acidity or alkalinity. Wort pH should fall into a narrow range to promote the proper enzymatic conditions necessary for starch conversion. Desirable mash and wort pH typically falls between 5.2 and 5.6. When wort pH ends up outside of that range, problems such as those highlighted in Table 2 can result.

While malt, hops, and yeast create almost all the flavor in beer, improper brewing water can negatively affect all of them. The primary concerns for brewing water are its mineral content and the pH of the resulting mash and wort. Proper wort pH is important for avoiding most of the problems mentioned above.

### Important Factors to Consider

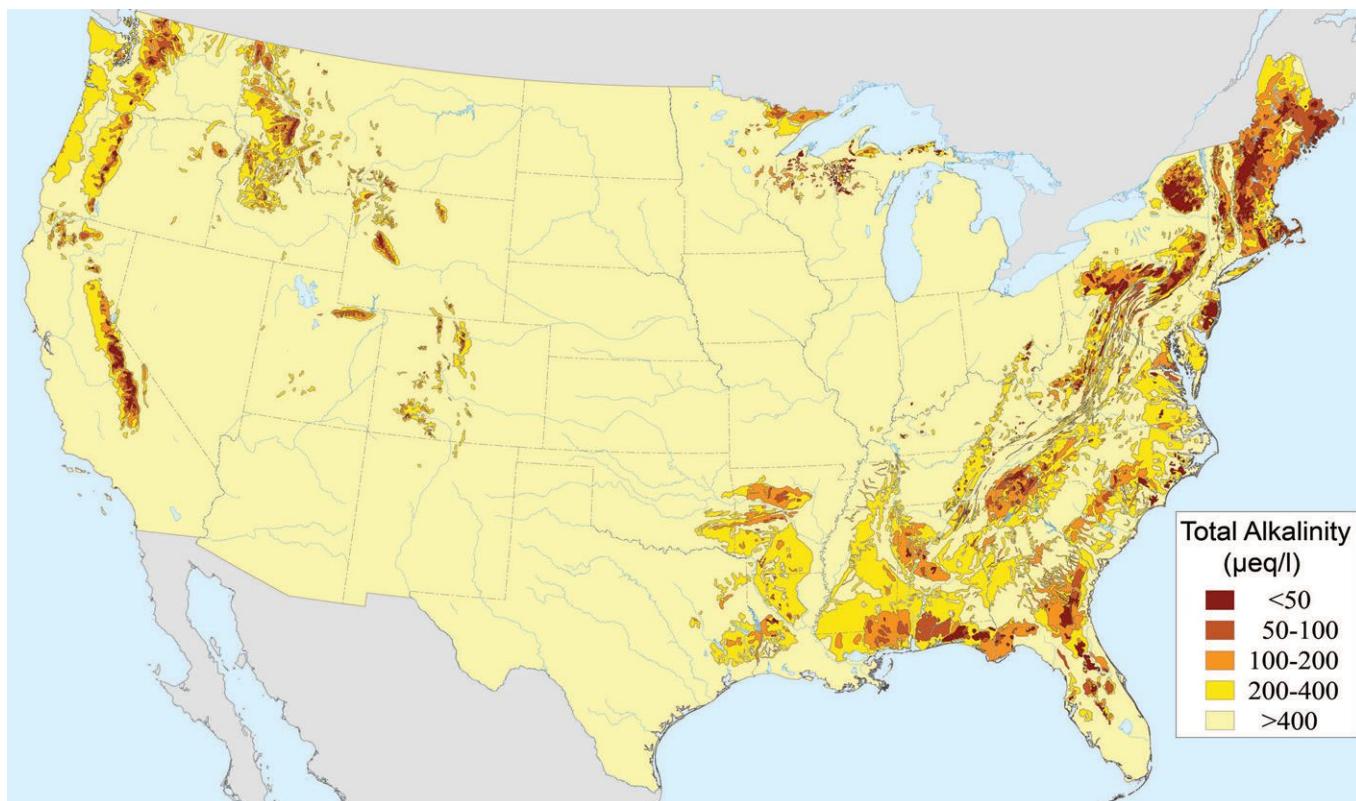
Producing a proper mash and wort pH is dependent upon the malts in the mash having enough acidity to drive the pH down. Pale base malts are typically the bulk of most mash grists. Due to the malt's plentiful phosphate buffers, a base malt mashed with distilled water has a natural tendency to produce a mash pH around 5.7 to 5.8. That is higher than the desirable range mentioned above, and distilled water has no alkalinity. Water with more alkalinity will drive the pH even higher.

Water alkalinity is a carbonate buffer system that neutralizes acidity and increases mash and wort pH. Alkalinity is naturally

present in most water supplies. Figure 1 shows that most areas of the U.S. have highly alkaline water. The pale yellow areas on the map represent highly alkaline water while the darker shades of yellow and brown indicate lower alkalinity. Most areas of the world also have substantial alkalinity in their drinking water. Greater water alkalinity increases the possibility that the malt, hop, and yeast problems mentioned in Table 2 will be more prevalent and more severe in brewing.

To drive pH down to the desirable range, all mashing requires some form of additional acid. That acid can come from a variety of sources. In the early days of brewing, the increased acidity of dark roasted malt and grain supplied additional acid to the mash. This is a reason why darker beers were popular in areas with more alkaline water. Crystal malts are also more acidic than base malts and can be used to supply more acid to the mash. Another acid-producing alternative relies on the acidifying reac-

FIGURE 1: TOTAL ALKALINITY OF SURFACE WATERS



The map is based on alkalinity data from approximately 39,000 lake and stream sites and the associations of the data values with factors such as land use, physiography, geology, and soils. Data were acquired from a variety of sources including federal and state agencies, university researchers, and private corporations. In many of the areas represented by a specific alkalinity range, an even greater range was observed in the water quality data. The shading on the map indicates the range of alkalinity within which the mean annual values of most of the surface waters of the area fall.

Figure 1 courtesy of Omernik, J.M., G.E. Griffith, J.T. Irish, and C.B. Johnson, 1988. Total alkalinity of surface waters: a national map. Corvallis Environmental Research Laboratory, U.S. Environmental Protection Agency, Corvallis, Oregon.

tion between calcium and magnesium ions and phytin found naturally in malt. Adding salts such as calcium chloride, calcium sulfate, or magnesium sulfate to the mash creates more acid, reducing mash and wort pH.

A final option for reducing mash pH is to add an actual acid! A variety of liquid or solid acids can be utilized in brewing. Phosphoric and lactic acid tend to be more prevalent in homebrewing since they can provide more acidification with minimal effect on beer flavor and do not produce dangerous fumes.

With the importance of bringing mash and wort pH down into a desirable range, you might ask: Why didn't early brewers worry about this? The answer is: they did! Their methods included:

- Pre-boiling the brewing water to reduce alkalinity and hardness
- Lime-softening the brewing water to reduce alkalinity and hardness
- Performing an acid rest on the mash
- Adding acid malt to the mash
- Adding soured wort (sauergut) to the mash
- Brewing beer styles that worked better with the local water

These options helped brewers make better beer without needing to understand much about water chemistry or its actions. Brewing was an apprenticed trade and brewers learned what made better beer through trial and error. They built upon what they'd been taught, then passed on that knowledge to their apprentice brewers. Science was not needed!

However, we as homebrewers don't have the benefit of a master and apprentice

relationship to guide us. More importantly, homebrewers are more prolific and adventurous than early brewers. Do you want to only brew and perfect one or two beer styles in your brewing hobby? Probably not. Most of us want to brew dozens of styles and we don't have the time to perfect them. Still, we want pretty darn good beer every time we brew. In order to achieve this level of quality and consistency, we need to use our knowledge to help our brewing succeed, including treating our water.

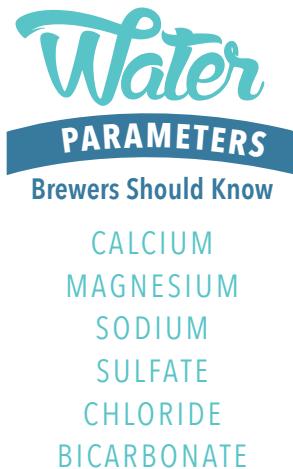
### Getting Started

Water treatment doesn't have to be complicated. While there are brewing water calculators and software that help fine-tune water treatment, simple steps can be taken that are likely to make noticeable improvements to your beer.

The first step to take when treating your local brewing water is finding out what's in it. There are a few options:

- Get a water report from your tap water provider.
- Send a tap water sample to a laboratory for testing.
- Test your tap water with a home kit.

Not all water companies provide water reports that are useful to brewers. In the U.S., municipal water companies are required by law to tell their customers if their water has hazardous contaminants. However, the things we brewers want to know about our water may not be tested for or reported by the water company. These are referred to as secondary parameters. Thus, other water testing options may be needed to find out what is in our water. See the sidebar for a list of these parameters.



Learn the basics about your water with Understanding Water for Homebrewing on our website @ [HomebrewersAssociation.org/water-for-homebrewing](http://HomebrewersAssociation.org/water-for-homebrewing)

Of course, if you don't get your water from a municipal water source, water reports are likely not available. In this case, sending your water to a testing laboratory is a good option with minimal costs. For as little as about \$30 in the U.S., you can find out the relevant concentrations of brewing parameters in your water.

Another option is to use individual test kits like those used by aquarium hobbyists. Since those often cost more than \$10, they may end up being more expensive than a lab test. The good thing is that you can get by with only a couple of the kits: calcium and alkalinity (bicarbonate).

TABLE 3: pH CORRECTIONS

| GENERAL BREWING PERCEPTION  | MASH WATER TREATMENT   | SPARGE WATER TREATMENT   | APPLIES TO |
|---|--|--|------------|
| <b>Brew better dark beers than pale beers (high alkalinity water)</b>     | Add 0.5 mL/gal (0.13mL/L) of 88% lactic acid OR 5 mL/gal (1.3 mL/L) of 10% phosphoric acid | Add 0.5 mL/gal (0.13mL/L) of 88% lactic acid OR 5 mL/gal (1.3 mL/L) of 10% phosphoric acid | Pale beers |
| <b>Brew better pale beers than dark beers (very low alkalinity water)</b> | Add 1/16 tsp/gal (0.08 mL/L) of baking soda for dark beers                                 | None   | Dark beers |



TABLE 4: FLAVOR ENHANCEMENTS

| DESIRED FLAVOR                           | WATER TREATMENT   |
|--|---|
| <b>Maltier and fuller beer flavor</b>    | Add 1/8 tsp (0.6 g) calcium chloride per gallon of mashing and sparging water |
| <b>Drier and more hop-focused flavor</b> | Add 1/4 tsp (1.2 g) gypsum per gallon of mashing and sparging water           |



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When the concentrations in your water supply frequently vary, individual test kit results can alert you of those changes.

Finding out what is in your water is a first step, but then you'll have to make use of the information. You can perform all sorts of calculations to help you figure out what treatment you should use for your brews, but a good first step is employing the simple treatments in the next section.

### Quick Fixes

The first treatment is specific to brewers who get their water from municipal sources. Water companies are required to disinfect their water to prevent water-borne illness. When they remain in your brewing water, chlorine or chloramines can create band-aid or medicinal off-flavors in your beer.

The easiest method for removing chlorine or chloramines is to use Campden tablets, which are composed of either sodium metabisulfite or potassium metabisulfite. Adding one tablet per 20 gallons (76 liters) should be sufficient to neutralize the typical amount of those disinfectants from the water supply. Another treatment method is to pass the water through an activated carbon filter. Chlorine is easily removed from water when the flow rate through the filter is low. Removing chloramines from water with a carbon filter is much more difficult and requires an extremely low flow rate. For example, the typical 10-inch (250 mm) activated carbon filter can remove chlorine when the water flow

rate is less than one gallon/minute (3.8 L/minute). However, the flow rate needs to be reduced to about one-tenth of that rate to remove chloramines. Many brewers don't have the time to wait for a trickle that slow, so activated carbon treatment might not be ideal for chloramine removal. An additional benefit of very slow filtration through activated carbon is that it can remove earthy or pond-scum flavor and aroma from the water.

Simple treatments can help correct mash and wort pH problems that can degrade beer flavor. As shown in Figure 1, most of the U.S. has high-alkalinity water. For brewers, that often means that they can brew better darker beers than pale beers. With highly alkaline water, pale beers tend to have poorer quality with dull, harsh, or lifeless flavor. They need more acid to help neutralize water alkalinity.

For brewers who live in areas with very low alkalinity water (the darker areas on Figure 1), darker beers can end up sharp and acidic with acrid roast flavors. Reverse osmosis and distilled water also have very low alkalinity and brewing with it tends to produce less pleasing dark beers. Darker beers need more alkalinity in mashing water to help buffer the higher acidity of the roasted grains.

Table 3 presents suggested pH corrections. Decide which general brewing perception or water type best describes your situation and try the corresponding treatment. Treatments for the high alkalinity water should be most

applicable to pale beers and the treatments for very low alkalinity water should be most applicable to darker beers.

Since most water supplies are alkaline, the treatments suggested in the first row of the table are more applicable for most brewers. The acids suggested in the table are typically available in local home-brew supply shops, while baking soda is available in grocery stores. Calculate the additions based on the individual volumes of mash and sparge water used in your brewing. Treat the mash and sparge water separately. Dosing minerals or acids does not require fancy or expensive equipment. A set of measuring spoons and a graduated medicine dropper are all that is needed.

While lactic acid in higher doses has been known to impart off-flavors, the lactic acid dose presented in Table 3 is low. For most people, the dosage would have to be almost tripled to taste it in beer. If taste is still a concern, using phosphoric acid can be a better option since it produces very little flavor in beer. For dark beer brewing, baking soda (sodium bicarbonate) is a reliable treatment for low-alkalinity mashing water. The low sodium addition from using baking soda for dark beers should not create a salty flavor in the beer. Minor sodium content in brewing water is actually known to improve the flavor of darker beers.

Brewing water often needs adequate levels of flavor ions to help prevent bland

## Helles Ale

RECIPE BY MARTIN BRUNGARD

Pale beer styles are especially prone to producing poor flavor when water treatment isn't included in the brewing plan. Here is a malty Munich Helles that includes a twist to make it easier for more brewers to produce tasty beer...clean ale yeast!

### INGREDIENTS

for 5.5 U.S. gallons (20.82 L)

|         |   |
|---------|---|
| 8.0 lb  | (3.63 kg) Pils malt                       |
| 1.0 lb  | (0.45 kg) Vienna malt                     |
| 0.25 oz | (7 g) Magnum pellets,<br>14% a.a., 90 min |
| 0.5 oz  | (14 g) Saaz Pellets,<br>3.5% a.a., 15 min |

Safale US-05 dry yeast

**Original Gravity:** 1.048

**Efficiency:** 78%

**IBU:** 19      **SRM:** 3.2

**Water Adjustments:** Use 1/8 tsp (0.6 g) of calcium chloride and 0.5 mL of 88% lactic acid per gallon (3.8 L) of brewing water. To aid in pushing the mash pH lower, use only very low mineral content water such as distilled or RO water. Calculate the total amount of calcium chloride based on the sum of the mashing and sparging water volumes. Mix the calcium chloride and acid into the water before adding the malts to ensure those additions are evenly distributed.

### DIRECTIONS

Mash all grains at 152° F (67° C) for one hour and sparge to produce about 7 gallons (26.5 L) of wort. Boil the wort for 90 minutes with hops added at the indicated times. Chill the wort and ferment at a chilly 53° F (12° C) to help this ale yeast produce a clean, almost lager-like flavor. Carbonate to about 2.5 volumes CO<sub>2</sub>.

**MINI MASH VERSION:** Perform mini mash with Vienna malt by steeping at about 152° F (67° C) for about an hour. Use only distilled or RO water. Squeeze and rinse grain bag to extract more sugars. Use 6.75 lb (3.06 kg) of the lightest colored, dry malt extract (DME) in the 7 gallons (26.5 L) of total brewing water along with the calcium chloride addition. Boil, hop, and ferment as per the all-grain version.



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beer flavor. As mentioned previously, beer flavor ions include magnesium, sodium, sulfate, and chloride. For the simple treatments presented here, only sulfate and chloride are explored. Sulfate is an important component for drying the finish of beer, which can help accentuate the perception of hop flavor and bitterness. Chloride helps improve the perception of fullness in the beer, which can accentuate the malt character.

Table 4 presents mineral additions that can be considered if you find your beer flavor bland or you know that the sulfate or chloride levels are very low in your tap water. Err on the side of caution when adding these minerals to water that already has adequate or high levels of sulfate or chloride, as it can end up producing a mineral flavor in beer. One way to assess whether mineral additions will improve your beer is to add them directly to the glass. Gypsum and calcium chloride will dissolve in beer. When adding minerals to your glass, a pint of beer should receive one-eighth the amounts presented in Table 4. Those are small amounts, so be cautious! Try it out in the glass before committing mineral additions to your whole batch.

## Conclusion

Brewing water treatment does not have to be complicated. However, it should be apparent that neglecting to treat your brewing water can ruin or diminish all the other components in the beer you've worked so hard to create. A popular thought in brewing is that novice brewers should leave brewing water treatment as the last refinement to their brewing skills. Paying closer attention to your water regardless of your brewing level can help push your beers from just OK to great.

**Martin Brungard** is an expert in brewing water chemistry and an engineer specializing in water treatment. He is the author of the Bru'n Water software for brewing water adjustment. He was a technical editor for Brewers Publications' *Water: A Comprehensive Guide for Brewers* by John Palmer and Colin Kaminski.



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# Adambier

A Modern Day Interpretation

By Horst Dornbusch

**A**dambier is an almost forgotten strong local ale from the Westphalian city of Dortmund in the northwest of Germany. The city is much better known as the home of Dortmunder Export lager. It is not exactly clear when Adambier first emerged as a beer style, but it was definitely popular in the 19th century.

We know this to be so from a reference in an obscure autobiography by a Prussian army colonel, Otto Julius B. von Corvin-Wiersbitzki, entitled *A Life of Adventure*, published in translation in London, in 1871. In it, the colonel assures us that Adambier, "for which Dortmund was renowned," was apparently well aged (for up to 10 years!) and was consumed in large quantities by "all the government employés and other people of education."

Even the King of Prussia, Friedrich Wilhelm IV (1795–1861), once had a fleeting, though not entirely congenial, fling with this seemingly highly quaffable velvet hammer of a brew. On a visit to Dortmund in 1833, when Friedrich Wilhelm was still a Crown Prince, he inadvertently overindulged on Adambier. As von Corvin-Wiersbitzki reveals, "a deputation of the magistrates [of Dortmund] waited upon him, one of them bearing a salver [a tray] with a large tankard filled with Adam... [and Friedrich Wilhelm]

drained off the contents...at a draught. The members of the deputation, who were better acquainted with old Adam than the unsuspecting king, smiled at each other, for they knew what would be the result. His Majesty was unconscious for more than twenty-four hours."

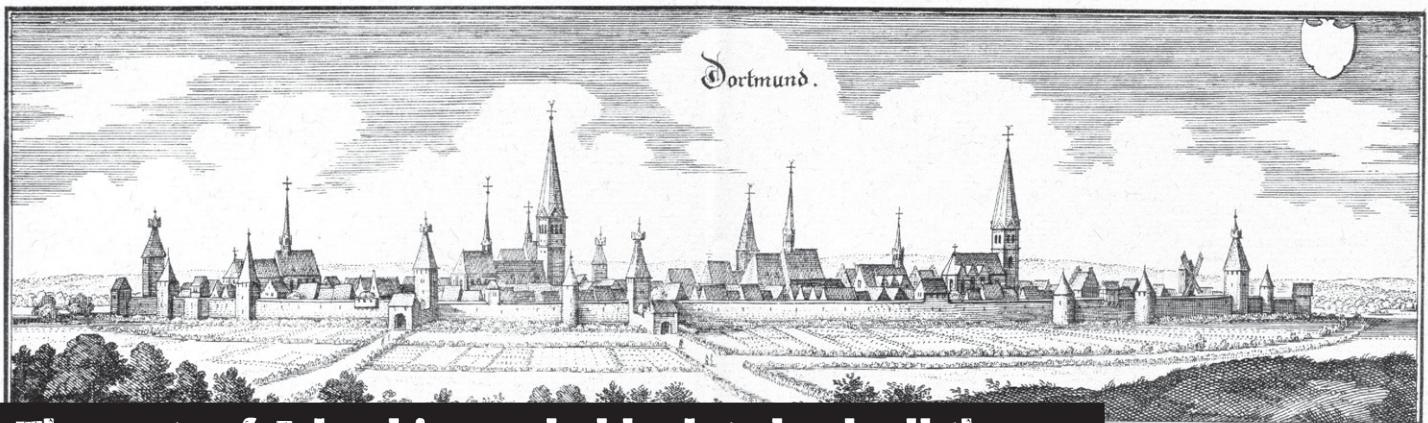
#### The Glory Days of Adambier

In the late 19th century, because of rich coal deposits in its vicinity, Dortmund became one of Germany's centers of heavy industry. It grew to about 150,000 inhabitants, who effortlessly supported some 30 breweries. At that time, Adambier, instead of being just an upper-crust quaff reserved for government officials and "people of education," took a definite slide down the social scale, as it gradually became popu-

lar with the area's coal miners and steel workers. These hard-working and invariably thirsty men swigged Adambier in copious quantities, out of wooden mugs, in their local pubs.

When a miner got off his shift after hours of hammering chunks of coal from the rock in a dark, dusty, hot, and dangerous shaft, sometimes 3,000 feet deep, what he needed was a beer he could respect. Likewise, when a steelworker left the blast inferno where he earned his daily bread, a place hotter than the world's hottest desert, he wanted a restorative draught. The strong, honest, and nourishing Adambier was just the ticket for many...a brew as tough and hearty as the people who drank it.

**When a miner got off his shift after hours  
of hammering chunks of coal from the  
rock in a dark, dusty, hot, and dangerous  
shaft, sometimes 3,000 feet deep, what he  
needed was a beer he could respect.**



**The roots of Adambier probably date back all the way**

**to the 14th century, shortly after the German King**

**Adolf of Nassau had conferred the brewing right**

**upon the good burghers of Dortmund in 1293.**

#### Medieval Precursors of Adambier

The oldest document referring to brewing in Dortmund dates from 1266. It mentions a gruit bier flavored with myrtle, rosemary, laurel, caraway, anise, and juniper. Juniper, because it grows well in the region, is still used to flavor Westphalia's wheat-based, gin-like clear schnapps. Juniper is also responsible for the unique flavor of smoke-cured Westphalian ham. The roots of Adambier probably date back all the way to the 14th century, shortly after the German King Adolf of Nassau had conferred the brewing right upon the good burghers of Dortmund in 1293.

In those days, the local brews were almost certainly top-fermented, kept in wooden casks, and dispensed by gravity. Considering the hygienic standards of the time, they were probably also infected with such microbes as Lactobacillus and Brettanomyces—just as the original porters of London. By around 1480, documents indicate that the brewers of Dortmund had switched from making gruit bier to making beers flavored entirely with hops.

These new brews were probably akin to Keutebier (also spelled Kuit, Kuyt, or Koyt), a gold to copper colored, slightly sour ale “with a grainy-bready accent,” mashed from a mixture of barley and wheat malts. Some Keutebiers were also

mashed with a substantial amount of oat malt. This brew remained popular in much of the lowlands of northwestern Europe—including present-day Belgium, Luxembourg, The Netherlands, the Rhineland, and Westphalia—well into the Renaissance. Keutebier is arguably a very distant forerunner of today's top-fermented Altbier and Kölsch of the Rhineland, as well as many of the ales of Belgium.

#### Reconstructing Adambier

The collieries and mills that were once the economic engine of Dortmund and its environs are long gone, and Adambier, the erstwhile working man's drink, declined in parallel with the structural transformation of the economy that once made the brew possible. By the 1960s, Adambier had become virtually extinct. Among the last breweries to make it were Dortmund's Thier-Brauerei and Dortmunder Hansa Brewery, both of which have since fallen

victim to major mergers and acquisitions in the German beer scene.

Lately, however, this obscure German blue-collar quaff has experienced a small renaissance among the world's craft brewers. It is now even featured in the Brewers Association Beer Style Guidelines. There,



**Even the King of Prussia, Friedrich Wilhelm**

**IV, once had a fleeting, though not entirely**

**congenial, fling with this seemingly highly**

**quaffable velvet hammer of a brew.**

# Modern Day Adambier

## Ingredients

for 5 U.S. gallons (19 L)

|         |  |
|---------|--|
| 7.92 lb | (3.59 kg) Pilsner malt (64%)                         |
| 2.48 lb | (1.12 kg) Munich II malt (20%)                       |
| 1.24 lb | (562 g) wheat malt (10%)                             |
| 0.37 lb | (168 g) smoked malt<br>(Rauchmalz) (3%)              |
| 0.12 lb | (54 g) Caraaroma® malt (1%)                          |
| 0.12 lb | (54 g) acidulated malt (1%)                          |
| 0.12 lb | (54 g) melanoidin malt (1%)                          |
| 1.0 oz  | (28 g) Hallertauer Mittelfrüh,<br>4.25% a.a., 60 min |
| 2.1 oz  | (60 g) Tettnanger, 4% a.a.,<br>20 min                |

Top-fermenting German specialty yeast,  
such as Altbier or Kölsch, or a  
Belgian Abbey yeast, but not  
Hefeweizen yeast

Original Gravity: 1.072 (18° P)

Final Gravity: 1.016 (4° P)

IBU: 30

Color: 15.3 SRM (39.5 EBC)

ABV: 7.4%

Total Efficiency: 79%

Boil: 75 minutes



## Directions

Mash in with a liquor-to-grist ratio (by weight) of 3:1 at a temperature of 149° F (65° C), the peak temperature of beta amylase activity. Rest 45 minutes for starch conversion into plenty of fermentable sugars. Raise the temperature (by infusion or decoction) to 162° F (72° C). Rest for 30 minutes for the conversion of the remaining starches into dextrins. Raise temperature (again by infusion or decoction) for a mash-out at a temperature of 171° F (77° C). Recirculate the wort until it runs clear. Lauter and sparge, while maintaining the mash-out temperature.

Boil 75 minutes. Add the bittering hop 15 minutes into the boil. Add the aroma hop 55 minutes into the boil. Whirlpool. Heat-exchange to the mid-range of the temperature tolerance of the selected yeast strain.

Primary-ferment the brew for seven days. Rack the brew or purge sediments from the tank. Secondary-ferment the brew on the yeast for two weeks or longer. Rack or purge again. To finish, condition/lager for three to six weeks in a capped tank. Filtration is optional. Adjust the effervescence to approximately 1.5 volumes (approx. 3 grams/liter) of CO<sub>2</sub> and package.

## Partial Mash Version

Omit Pilsner and acidulated malt. Mash Caraaroma, melanoidin, Munich, smoked, and wheat malts at 152° F (67° C) for 45 minutes, insulating the mini mash to maintain temperature as much as possible. Rinse grains, lauter desired volume of sweet wort into kettle, and dissolve completely 6.6 lb (3 kg) pilsner malt extract syrup, then proceed with boil.

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Adambier is defined as a medium-bodied, well-aged, light brown to very dark ale, with toast and caramel aromas, a moderate hoppiness, as well as some optional sourness and smokiness.

Hair of the Dog Brewing Co. in Portland, Ore. first produced its version, called Adam, in 1993. On the brewery's website, founder Alan Sprints describes it as a dessert beer that goes well with chocolate or cigars, "or just a warm fire and good company." The brewery also produces Adam from the Wood, aged in oak barrels, as well as a cherry version.

The recipe presented here is an adaptation of an Adambier recreation brewed in the Weyermann® Pilot Brewery in Bamberg, Germany, in December 2013. This version deliberately preserves a touch of the old ways by adding some acidulated and smoked malts to the grist, as well as a small amount of wheat malt for head retention and creaminess. Equally small amounts of melanoidin and Caraaroma® malts in the grist are intended to simulate the wort caramelization that must have occurred in the direct-fired kettles of yesteryear.

As for hop varieties, because Adambier is an old-style brew, they, too, should have roots in the distant past. Hallertauer Mittelfrüh and Tettnanger are reasonable choices, but any other Continental European "noble" hop type—including Spalt, Hersbrucker, Strisselspalt, Lublin, or Saaz—are equally justifiable. As a concession to modern drinkability expectations, the brew is conditioned with about 1.5 volumes (roughly 3 g/L) of CO<sub>2</sub>. Filtration is optional and probably superfluous after the brew's long maturation period. Those who are sticklers for historicity are reminded that beer filtration was not invented until 1878 (by German engineer Lorenz Enzinger).

**Horst Dornbusch** is a consultant in the international brewing industry, an international beer judge, brewer, and author of several books on beer, including *PROST! The Story of German Beer* (1997), *Altbier* (1998), *Bavarian Helles* (2000), and *Beer Styles from Around the World* (2015). He is also the associate editor of *The Oxford Companion to Beer* (2010).

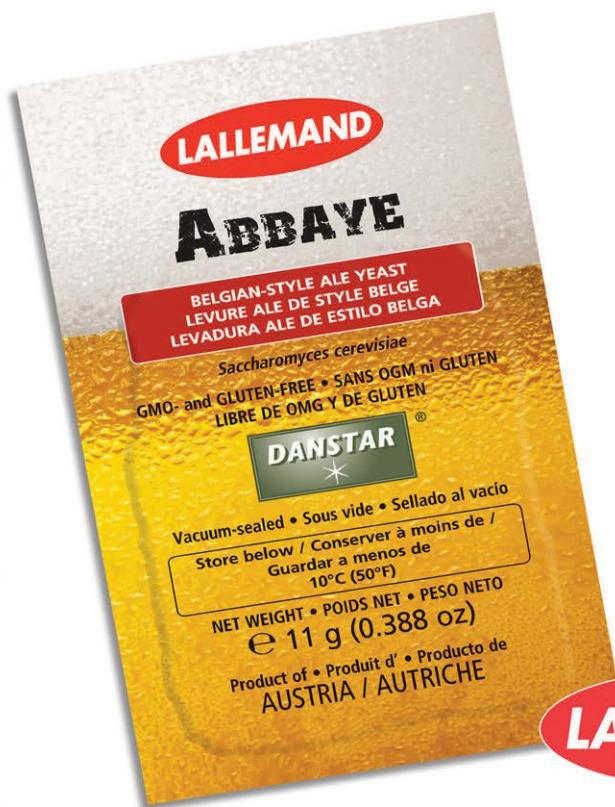


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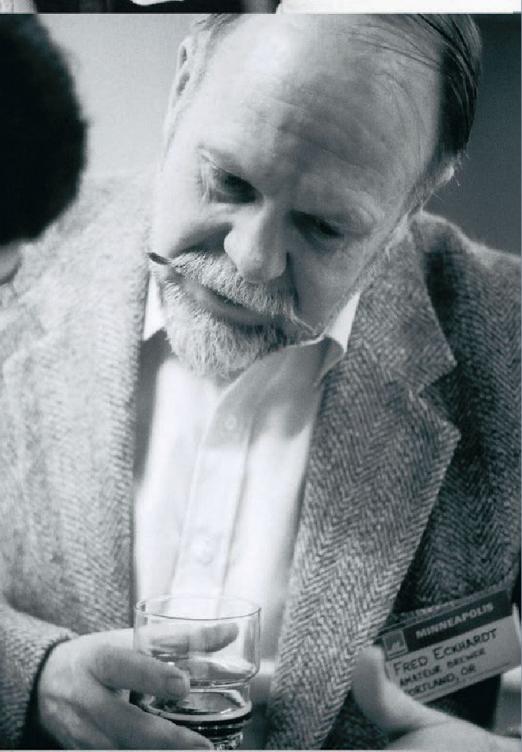


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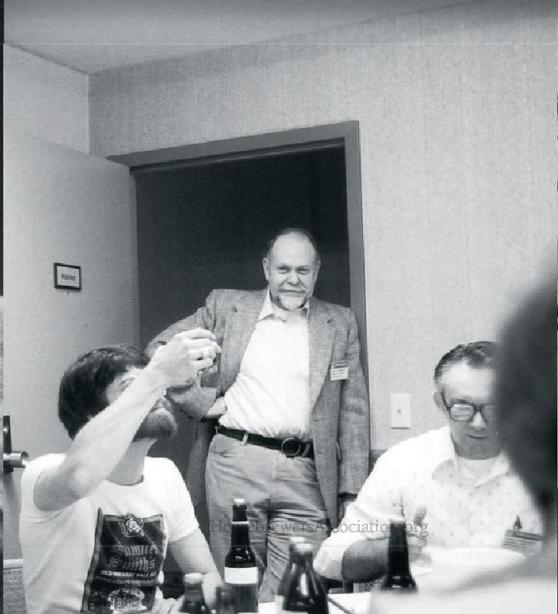


# Fred Eckhardt & Byron Burch

Remembering Two Homebrewing Pioneers

By Charlie Papazian

Charlie Papazian (left) with Byron Burch (center) and Fred Eckhardt at the Home Wine & Beer Trade Association Conference in Minneapolis in 1980.



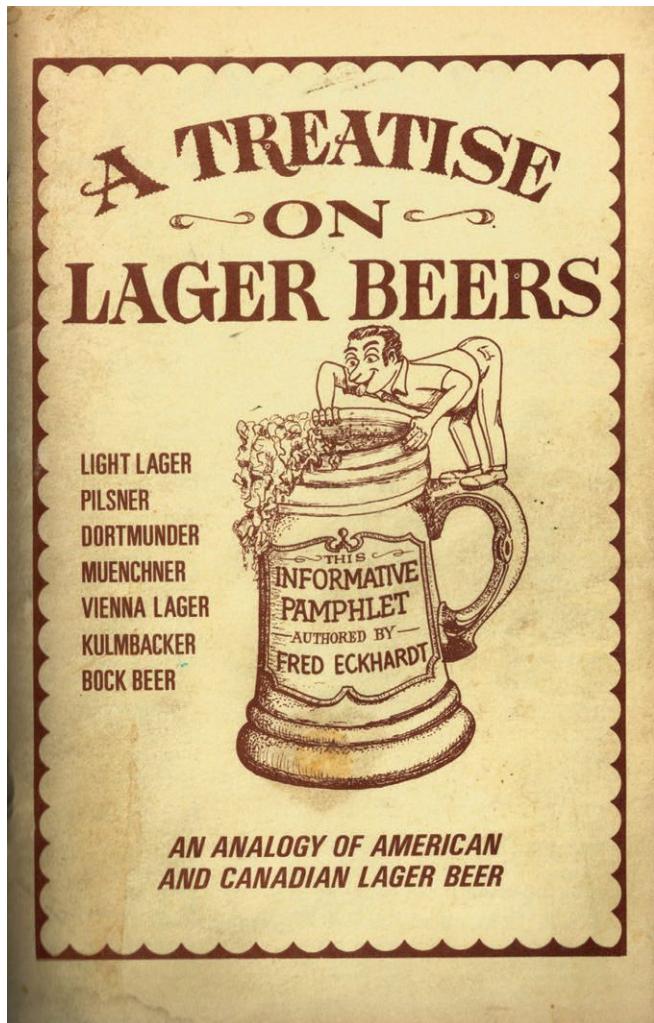


In August, the beer world lost two of the guiding lights and spiritual leaders of quality beer and brewing. Personal friends of mine, Fred Eckhardt and Byron Burch meant the beer and brewing world to me.

In those early years of homebrewing, Fred, Byron, and I were individually exploring the directions we thought homebrewing should be going. I had made my first batch of homebrew at the age of 21 in 1970. I taught homebrewing classes in Boulder, Colo. from 1973 through the early 80s. I self-published my “booklet” *The Joy of Brewing* in 1976. With my partner in homebrewing, Charlie Matzen, we founded the American Homebrewers Association and published the first issue of *Zymurgy* magazine in December 1978.

During that time, I had well-used copies of both Byron’s and Fred’s early books on beer and brewing. Fred published *A Treatise on Lager Beers* in 1970. In 1974, Byron published *Brewing Quality Beers*. Driven by the community of homebrewers in Colorado and my own passion for better beer, I felt like an upstart when I thought about the legendary Byron Burch and Fred Eckhardt.





Mr. Eckhardt, a professional photographer, but also a great lover of true beers, has pursued this subject to the degree of finding to his extreme disappointment there are no books available written on beer or the making thereof, (with the exception of pamphlets from some breweries). So, with the aid of a very good friend and with his dedication to brewing he decided to produce this tract in an informative pursuance of the knowledge of American and Canadian Lager beer making.

*A Treatise on Lager Beers* was my first homebrew book—ever. It was a beacon, encouraging Americans to explore the world of real beer and pursue a journey that would take all of us where few had ever gone.

I wondered what they would think of our early endeavors in Boulder. I wanted them to take us seriously, though I had my doubts that they would. One of my missions was to reach out to them. I knew many viewed us as not-so-serious beer-oriented hippies with a crazy magazine called *Zymurgy* that emphasized community and fun along with the best quality information we could mine from the disparate homebrewing community.

I met them both at the Home Wine & Beer Trade Association's Conference in Minneapolis in 1980. It was there that I lucked out and won the homebrew com-

petition, Best of Beer Award. Both Byron and Fred smilingly came forward and acknowledged my legitimacy. Their comments meant the world to me. I had found new passionate and dedicated colleagues.

Our first conversations together were cautious; we wondered curiously what paths we were going to pursue. We pondered the future of homebrewing. I felt deeply humbled in their presence.

Their spirit and passion inspired me from my early beer beginnings. Here are my brief personal reflections of both Fred and Byron's contributions to beer and brew-

ing. Admittedly, both essays barely do justice to their legacies, but I assure you I raise a toast to them every time I enjoy a homebrew. To both of them, I forever say thank you.

### *In the Beginning, There Was Fred*

**Fred Eckhardt**  
1927-2015

As one prominent Portland, Ore. craft brewing pioneer observed, "Before the pioneers, there were the explorers." Fred Eckhardt was a craft beer and homebrewing explorer. In the beginning, there was Fred.

He was ground zero for our current era of craft beer and homebrewing. His book, *A Treatise on Lager Beers*, was my first homebrew book—ever. It was a beacon, encouraging Americans to explore the world of real beer and pursue a journey that would take all of us where few had ever gone.

As so many other homebrewers have experienced, I had the privilege to hang out with Fred. In September 2011, I visited him and we toured a bit of Portland, talking of our lives. Fred told me stories that helped clarify for me Fred the rebel, Fred the teacher, Fred the creator, Fred the friend, and Fred the kid.

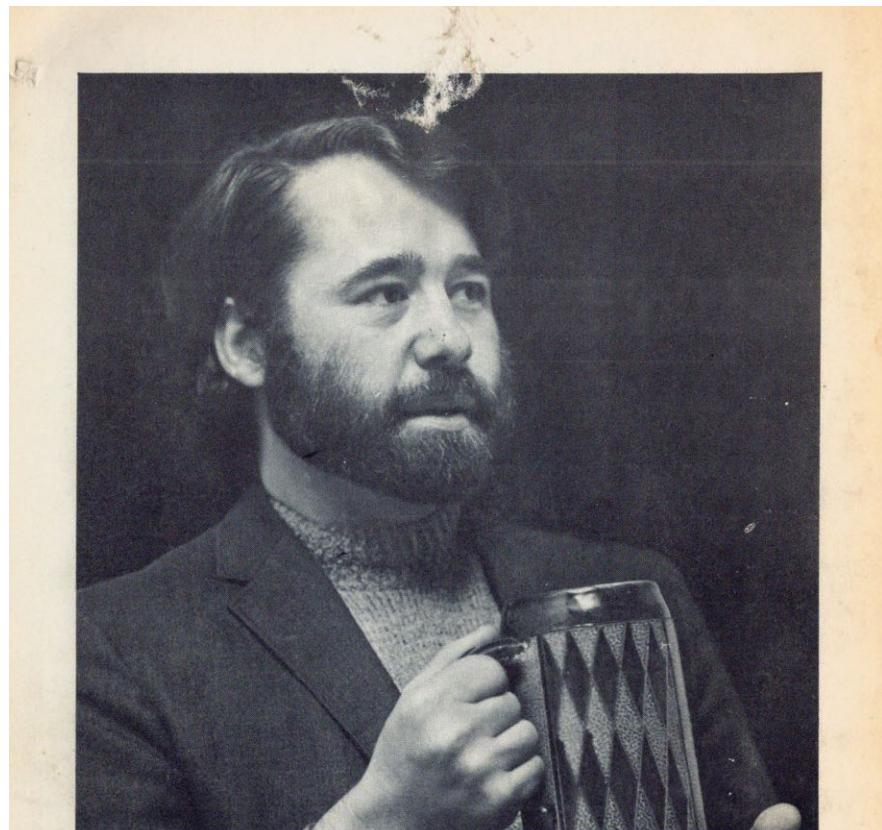
He was born Irish-American and was adopted by German Americans. He was named Otto Frederick Eckhardt, Jr. after his adoptive father. “I had a good mom... and my father homebrewed. His beer would explode every once in a while, especially if you knocked on the caps. Every time I got into trouble with my mom I’d smack the top of one of my dad’s homebrew bottles. My mom would get distracted and get on my dad.”

When his mom (“bless her heart”) caught him stealing engine valves, it was decided it was time for him to go to a Norwegian children’s home. For a while, he says he spoke “German, Norwegian, and a little bit of English.”

Fred grew up in Everett, Wash., then a very small town, north of Seattle. The Army, Navy, and Air Force all had a presence in Everett, but Fred wanted to see the world. The U.S. Marines were the only branch where he figured he’d get stationed elsewhere.

As a Marine, Fred fought in both World War II and Korea. When he landed in Okinawa, he noted that some of the first orders of business there were: 1. Get the mimeograph machine (the “printing press”) up and running to publish dirty jokes for morale; and 2. Start the fermentation process to later be able to distill alcohol. That was his first realization that one could make booze.

Fred vividly recounted one return from a mission while stationed on Okinawa. “I was flying in that bubble at the bot-



Here is a complete manual for the home brewer, providing all you need to know to brew superb beers at home. You will be guided through the fascinating world of lagers, ales, stouts, and steam beers by means of recipes and instructions.

Mr. Burch manages Wine and the People, a home winemaking and brewing supply store in Berkeley, California. In this capacity he has come to know very well the questions that arise for the beginner. He also passes along a number of tips that will interest even the more advanced practitioners of the art.

tom of a plane. The only gun I had was a pistol. The walls were paper thin. One time we came in for a crash landing on Okinawa and I looked out to either side of me as we landed and the wings were falling apart. When we finally stopped, I was still alive. Someone came to me and said ‘Are you all right?’ I said, ‘Yes, I’m all right but I can’t get out. Get me out of here.’ The guy’s reply was ‘Unbuckle your seat belt [knucklehead].’” Fred was all laughs at the end of telling his stories.

Fred always remembered April 12, 1945. It was the day Franklin Delano Roosevelt

died. He was in Okinawa and had recently been given a gun while on KP [kitchen] assignment, even though he was a radio operator. On that day he was taking an exploratory hike in the north end of the island, where fighting wasn’t happening (he got one day off for every day on KP—“I thought that was a pretty good deal”). He was alone and decided to shoot off his gun, which he had never done before. It was a Browning Automatic, and he later got in trouble for it.

Decades later, the legacy of his war experiences continued to revisit him. “When I

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drink too much, even now, I come down with malaria," he said. One never saw Fred inebriated; he seemed always smiling, laughing, open to new friendships, and having a great time, but never overdoing his enjoyment of beer.

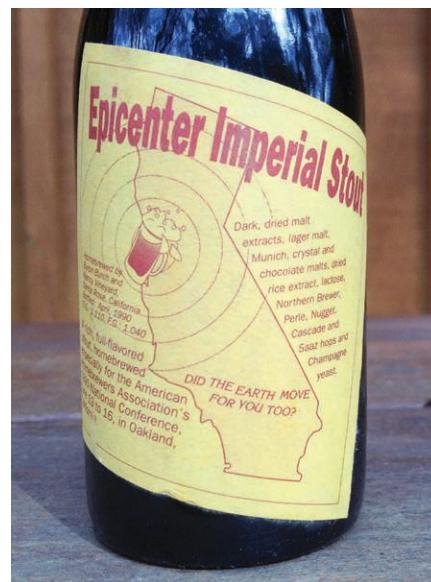
In 1981, I invited Fred to the third annual American Homebrewers Association National Homebrewers Conference in Boulder. It was at this event that I first met Michael Jackson. The three of us laughed, schemed, and discussed the sad state of American beer affairs and the promise of homebrew enthusiasm. We developed a triumvirate friendship that stood the test of time.

How did he embark on the homebrewing journey that would become part of his legacy? In 1969, Anne McCallum, who owned and managed Portland's Wine Art, asked him to decipher and rewrite English homebrew recipes for publication. In 1970, Wine Art of Canada published the first edition of Fred's 50-page *A Treatise on Lager Beers*. On the back cover is a distinguished photo of Fred (actually, every photo I've ever encountered of Fred portrays him as distinguished) with a short bio. At the time, Fred was a professional photographer. For many years he also worked as a swimming instructor for children.

During the rise of American homebrewing, Fred was instrumental in introducing the community to the various aspects of beer styles. He discussed them initially in his *Treatise* and later self-published *The Essentials of Beer Style* in the late 1980s.

Fred also led us to temptation by introducing us to a combination that always brought smiles: chocolate and beer. In a time before the emergence of artisanal chocolate, his M&M and beer tastings became legendary. Soon thereafter, Fred convinced us to put vanilla ice cream and brownies in our stout.

Fred became a visiting fixture at the most high-spirited homebrew events in the U.S. His humor, authenticity, knowledge, wackiness, and humbleness inspired thousands of homebrewers to celebrate Fred and his whereabouts. We came to love Fred. His laughter was infectious.



**Winning both Meadmaker and Homebrewer of the Year** was a feat only one other person has ever been able to duplicate.

He taught us many lessons. His spirit will always be present in every batch of homebrew I make. And I will take his legacy to heart as I continue my own journey.

**A Legacy of Quality**  
Byron Burch  
1940-2015

Grounded in Santa Rosa, Calif., Byron Burch did not seek the limelight, but whatever he did commanded a passion for quality. It manifested itself in the beer he made and the guidance he provided for others to brew. He also pursued excellence in mead and wine.

His store The Beverage People (originally Great Fermentations) was ground zero for California homebrewing excellence. He helped lead the Santa Rosa homebrew club, The Sonoma Beerocrats, to the American

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Homebrewers Association's coveted Homebrew Club of the Year title 10 years in a row from 1986-1995. Individually, Byron won the Homebrewer of the Year title in 1986, and Meadmaker of the Year in 1992, 1994, and 2001. Winning both Meadmaker and Homebrewer of the Year was a feat only one other person has ever been able to duplicate.

Byron's journey into wine and beer making began as he managed the legendary home wine and beer making shop Wine and the People in Berkeley, Calif. in the early 1970s. In 1974, he helped change the paradigm for homebrewing with the publication of his quintessential book, *Brewing Quality Beers*. It was a book written by an American for Americans. Along with Fred Eckhardt's *A Treatise on Lager Beers*, *Brewing Quality Beers* was on my early homebrewing book shelf front and center. These were two brightly guiding lights that helped me and thousands of others pursue the path to quality beer and brewing.

Innovation was also his legacy. With the help of his partner, Jay Conner, at Great Fermentations, Byron championed quality ingredients in the early days of homebrewing. At the time, access to fresh quality hops was extremely limited. Unknown varieties of brown hop "bricks" packaged simply in cheap pink paper were all that most homebrewers knew of hops. Most homebrewers in those early days didn't know that hops were supposed to be green.

I vividly recall Byron showing me his shop's innovation: freshly dried hops packaged in oxygen-barrier and vacuum-sealed plastic bags. The new frontier of fresh hops enabled homebrewers to embark on hoppy new journeys. Soon other suppliers followed, and craft brewers discovered hoppy beers from innovative homebrewers experimenting with new found hop freshness. The terms we already knew, "late hopping" and "finishing hops," took on a whole new meaning.

I recall my first visit to Byron's home in Santa Rosa. He showed me an extended full-size box he had added to his refrigerator, enabling him to cold ferment. It was full of wines, meads, and beers.

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In the other room, his wife, Nancy Vineyard (AHA Homebrewer of the Year in 1983, the second woman to claim the title) and their young daughter Sierra were taking a journey on their newly acquired first edition Macintosh computer. Byron and those surrounding him seemed always on the frontier.

We are all grateful for the beer journey that he shared with so many of us. In honor of Byron and all that he taught us, I cracked open a bottle of Epicenter Imperial Stout, homebrewed and bottled by Byron and Nancy to commemorate the 1990 AHA National Homebrewers Conference in Oakland, Calif. That was the conference following the earthquake that shook the San Francisco Bay Area in October 1989. On the label Byron asked, "DID THE EARTH MOVE FOR YOU TOO?" Twenty-five years later, I can assure you that it did.

**Charlie Papazian is founder of the American Homebrewers Association and author of *The Complete Joy of Homebrewing*.**

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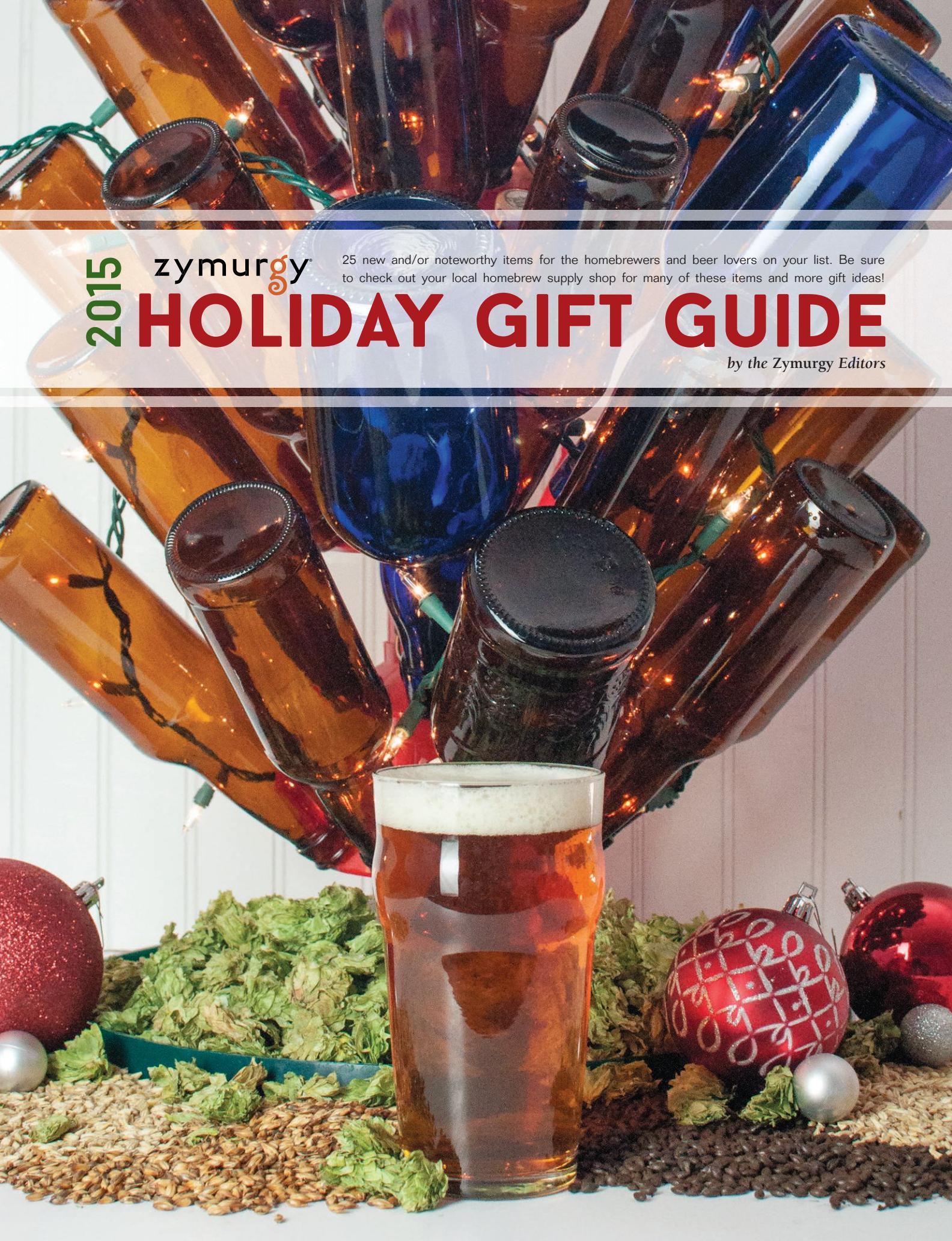
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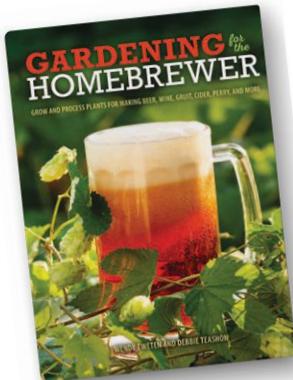
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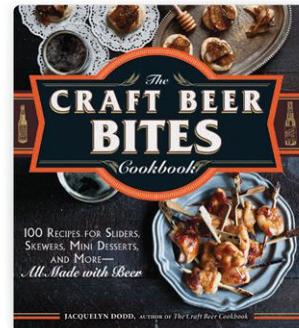
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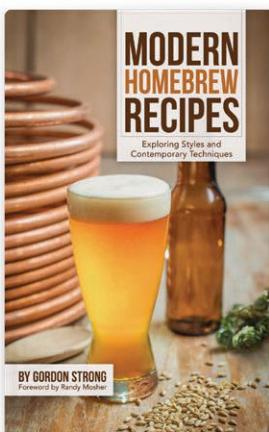
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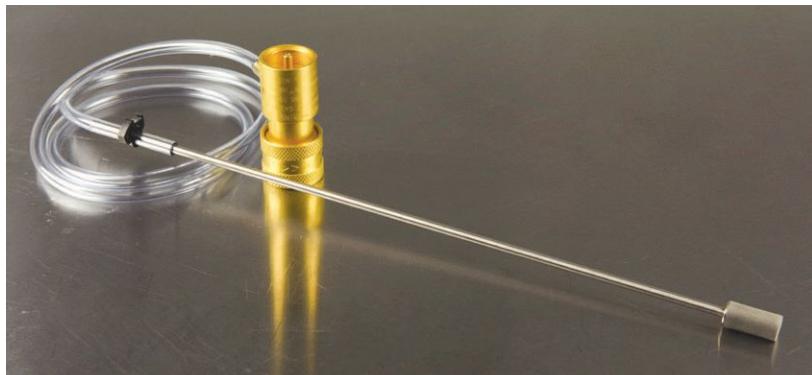


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[potlickerkitchen.com](http://potlickerkitchen.com)

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[duffysbrew.com](http://duffysbrew.com)

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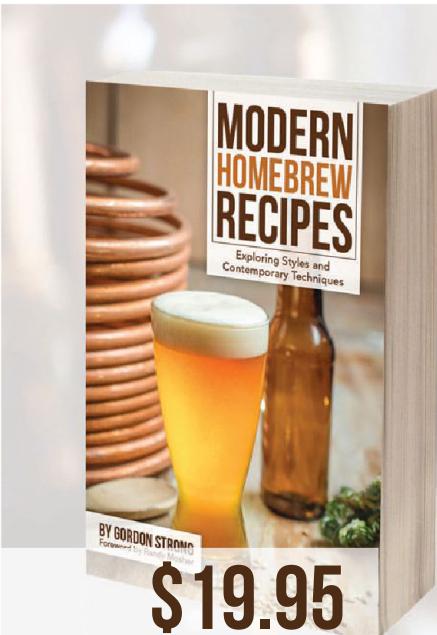
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## ABOUT THE AUTHOR

Three-time winner of the American Homebrewers Association Ninkasi Award, **Gordon Strong** is president and highest ranking judge in the Beer Judge Certification Program, and principal author of the BJCP Style Guidelines.



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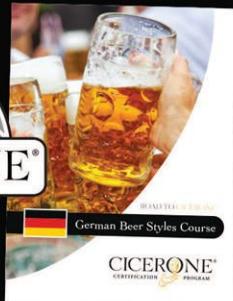
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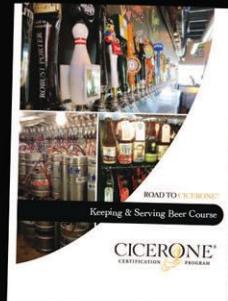
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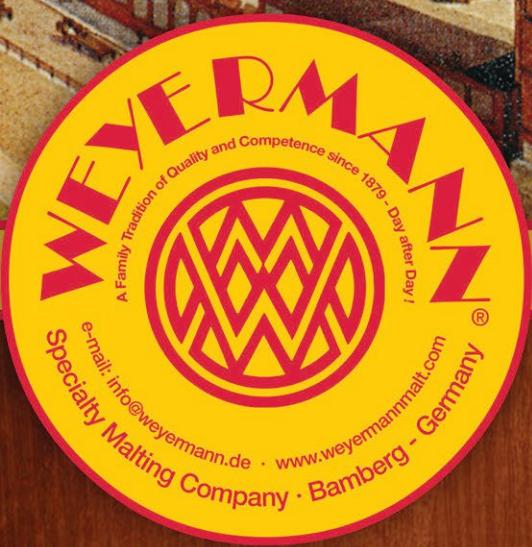
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by Amahl Turczyn

# Dominion Cup

The Dominion Cup is Virginia's largest homebrew competition, with 566 entries in 2015. The event is hosted by James River Homebrewers, one of Virginia's most active homebrew clubs, founded in 1983.

Final judging for the 22nd annual competition culminated at Center of the Universe Brewing Company in Richmond, Va. on August 1. With such a large number of entries, first-round judging was spread out over the three days leading up to the main event.

As the organizer of any large-scale homebrew competition is coming to realize, online registration is a huge factor for accessibility, and this translates directly to eventual number of entries—the better your registration system, the larger your competition can grow. This significance was not lost on competition coordinator Michael Boitnott and the club's Dominion Cup crew.

"One of the most challenging items for running a large competition has always been the software to manage entries, judges, stewards, etc.," Boitnott said. "The location for the Dominion Cup tends to be in areas without reliable Internet access, which precluded some of the online-only options available. Three years ago, our webmaster sat down to write our own competition software. We had already been running a successful online registration system, and hooking this up to an easy-to-use client seemed the next logical step. While there are still a few bugs to work out, the system seems to be running really well now."

"I based the system on Microsoft Access in order to combine the power of a relational database with portability and open source so others can improve it over the years,"

Photos courtesy of James River Homebrewers



explained John Van Itallie, author of the software. "While it does require a computer with Windows to run, Microsoft provides a free runtime version of Access which has allowed us to deploy it easily."

**Best of Show winner Richard Hogg,  
a member of the Greater Huntington  
Homebrewers Association.**

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"John hopes to release the software to other clubs soon," Boitnott noted. "The next steps include updating as needed for 2015 BJCP guidelines, adding a couple features from the 'wish list,' and transforming the

online registration system to something that can be used by other clubs." By the end of the year, Boitnott hopes to solicit a few clubs to beta test the system for their clubs before a wider release.

Another potential hurdle for competitions with such a large entry pool is ensuring sufficient time, space, and qualified personnel to judge them all. "We stretch our judging out to three days for the first round, with a final Best of Show round on the last day," commented Boitnott. "With 24 different tables over those three days, we are able to accommodate the large number of entries without an issue."

Best of Show this year went to Richard Hogg, a member of the Greater

## Stache Captain's Extra Strong Scotch Ale

Recipe by Kyle Brady, Plato Award winner, 2015 Dominion Cup

### INGREDIENTS

for 6 U.S. gallons (45.42 L)

|         |  |
|---------|--|
| 15.0 lb | (6.8 kg) pale 2-row malt                                 |
| 4.0 lb  | (1.81 kg) Vienna malt                                    |
| 1.5 lb  | (0.68 kg) home-toasted pale 2-row malt (15 min @ 350° F) |
| 0.5 lb  | (227 g) 120° L crystal malt                              |
| 0.25 lb | (113 g) 60° L crystal malt                               |
| 1.0 lb  | (0.45 kg) 10° L crystal malt                             |
| 0.75 lb | (340 g) dextrin malt                                     |
| 0.25 lb | (113 g) Carafa 2 malt                                    |
| 0.25 lb | (113 g) roasted barley                                   |
| 1.5 oz  | (43 g) Perle, 6.7% a.a. (60 min)                         |
| 1.0 oz  | (28 g) Mt. Hood, 4.4% a.a. (30 min)                      |
| 1.0 oz  | (28 g) Willamette, 5% a.a. (15 min)                      |
| 1.0 oz  | (28 g) US Golding, 5% a.a. (15 min)                      |
| WLP028  | Edinburgh Ale (1 liter starter)                          |

**Original Gravity:** 1.108

**Final Gravity:** 1.034

**Calculated IBU:** 38

**ABV:** 9.8%

**Boil Time:** 2 hours

### DIRECTIONS

Dough-in at 104° F (40° C) for 30 minutes. Decoction 1: Pull 3.5 gallons (13.25 L) of grist and bring to boil for 25 minutes. Beta rest at 140° F (60° C) for 30 minutes. Decoction 2: Pull 3 gallons (11.36 L) of grist and bring to boil for 25 minutes. Alpha rest at 158° F (70° C) for 30 minutes. Sparge with 170° F (77° C) water to produce an 8 gallon (30.28 L) pre-boil volume. Ferment five days in primary at 72° F (22° C), and two months in secondary at 62° F (17° C).

**NOTES:** To toast the grain, gently spray the grain with water and stir every few minutes. For decoction steps, keep a close eye on the decoction and stir constantly to prevent scorching the mash.

**EXTRACT VERSION:** Use 100% RO or distilled water. Substitute pale malt with 11.75 lb (5.33 kg) pale malt extract syrup. Mash Vienna, toasted, Carafa, dextrin, and crystal malts with roast barley at 155° F (68° C) for 45 minutes. Drain and rinse grains. Dissolve malt extract syrup into wort and proceed with boil.

Huntington Homebrewers Association in Huntington, W.V., for his Belgian Dark Strong Ale. Hogg is also a member of the James River Homebrewers.

Hogg has been brewing since 2006. He brews on an electric brew-in-a-bag setup at his home in Hawley, Pa., where he lives with his wife, Meredith, and their dogs. He won this large-scale competition with a Belgian quad, aptly named Simplicity Quad.

The competition also has a Plato Award, based on placement points much like the Ninkasi Award at the National Homebrew Competition. This year's Plato Award went to Kyle Brady, who took first place in two categories and was runner-up in the Best of Show for his Strong Scotch Ale.

## Simplicity Quad

Recipe by Richard Hogg, Best of Show, 2015 Dominion Cup

### INGREDIENTS

for 6 U.S. gallons (22.71 L)

|                   |   |
|-------------------|---|
| <b>11.0 lb</b>    | (4.99 kg) Dingemans Pilsner malt  |
| <b>5.0 lb</b>     | (2.27 kg) Dingemans Pale malt   |
| <b>1.0 oz</b>     | (28 g) U.S. Magnum pellets, 13.5% a.a. (60 min)                                   |
| <b>2.0 lb</b>     | (0.9 kg) D-180 candi syrup (flame out)  |
| <b>White Labs</b> | WLP500 Trappist Ale, 4L starter, plus 1 pack of Wyeast 3787 Trappist High Gravity |

**Original Gravity:** 1.090

**Final Gravity:** 1.010

**ABV:** 10.7%    **SRM:** 27    **IBU:** 40

### DIRECTIONS

Mash grains in 8.7 gallons (33 L) water at 150° F (66° C) for 90 minutes. Mash out at 170° F (77° C) for 15 minutes. Boil 90 minutes.

**EXTRACT VERSION:** Substitute 13 lb (5.9 kg) Pilsner malt extract syrup for pale and pilsner malts.



## Compare Plastic Conicals

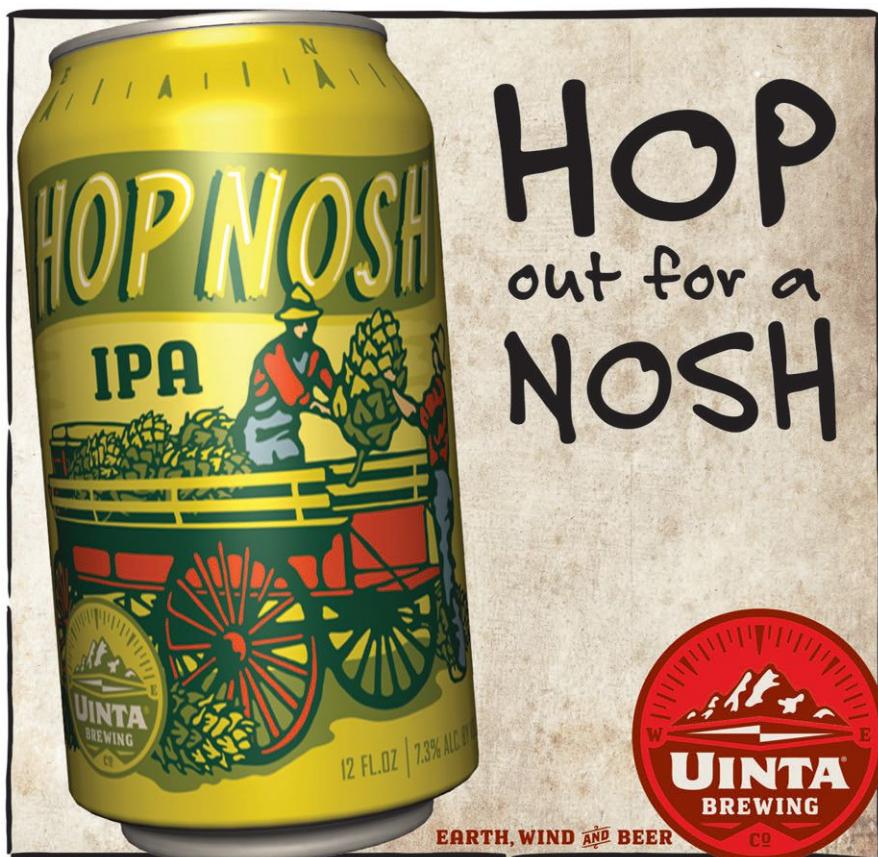
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The Plato Award had stiff competition in 2015. "This year we had a six-way tie, so we made the tie-breaker Best of Show, with the second-place BOS taking it home," said Boitnott.

Brady has been brewing for about five

years, and with a background in experimental biophysics and chemistry, he definitely takes a scientific approach. "It is most likely the reason that I find brewing so fascinating," Brady said. "The few years that I have had the pleasure of homebrewing, I have tried to read as much on the

science of brewing and fermentation as possible. One of the things I like most about brewing is that there is so much information out there that I can always learn something new and apply it."

Unsurprisingly, he's also a stickler for taking careful notes. "I always make sure to keep detailed records of my beers so I can go back and adjust as needed, kind of like keeping a notebook in the lab."

His winning Scotch ale recipe is one that Brady has found ways to improve for quite some time. "It has been continually developed over the past five years," he explained. "And this time I tried using a triple decoction technique. I wasn't getting that heavier body that is characteristic of so many great strong Scotch ales before, but the decoction technique seemed to solve that problem. Allowing a long time for the flavors to come together and mellow out also helps. If done right, this beer will age well for years to come."

**Amahl Turczyn is associate editor of Zymurgy.**



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## KUDOS—BEST OF SHOW

### AHA/BJCP Sanctioned Competition Program

#### June 2015

The Home Brew Festival Competition, 97 entries—Sharon Gilbert  
Red River Valley Fair Home Brew Competition—Stephen Ireland, West Fargo, ND  
Hangar 24 6th Annual Homebrew Competition, 285 entries—Jaclyn Sweet, Hesperia, CA  
Factotum & CO-Brew GABF Pro Am Homebrew Competition, 89 entries—Scott Kendall, Parker, CO

#### July 2015

Napa Town & Country Fair, 39 entries—Mike Riddle, Napa, CA  
Spirit of 76 Challenge, 12 entries—Noah Wallace, TX  
Copper Hills Brewfest, 33 entries—Jeff Kline, Sparks, NV  
2015 Ohio Brew Week Homebrew Competition, 256 entries—Eric Carman, Oxford, OH  
Devils Peak Homebrew Competition, 37 entries—Matthew Hurst, Cape Town, South Africa  
Indiana State Fair Indiana Brewers' Cup Competition, 1,320 entries—Tim Palmer, Fishers, IN  
Amador County Fair Homebrew Competition, 108 entries—Jeffrey Temple  
California Mid-State Fair Home Brew, 114 entries—Jeff Claxton, CA  
Club Only English and India Pale Ales, 9 entries—Brent Dingus, Lebanon VA  
Boom Island Brewing Company's Boom Days Belgian Beer Competition, 64 entries—JD Park, Minnetonka, MN  
GTA Brews Summer Club Competition, 36 entries—Matt Sulker, Toronto, Ontario  
Lane County Fair, 16 entries—Ross Johnson, Eugene, OR  
Concurso de Cervezas Caseras del Paraguay, 27 entries—Ernesto Stanley, Asunción, Paraguay  
Worthogs - East Rand Winter Beer Festival, 21 entries—Michelle Erasmus, Johannesburg, Gauteng  
E.T. Barnette Homebrew Competition, 76 entries—Rodney Kibzey, Portland, OR  
Deer River Bar-B-Que & Brewfest, 47 entries—Stephen Buss, Britt, MN  
El Paso County Fair Homebrew Competition, 44 entries—Aaron Fuss, Colorado Springs, CO  
Independence National Brewfest Pro:Am Competition, 10 entries—Sterling Pig/Michael Kinsley, Media, PA  
Dunn County Fair, 7 entries—John Susa, Eleva, WI  
Antelope Valley Fair, 71 entries—Bruce Helton, Palmdale, CA  
2015 Humpback Homebrew Competition, 90 entries—Curtis Jones, Pensacola, FL  
Stapleton Beer Festival Homebrew Competition, 84 entries—Matthew Eckhart, Denver, CO  
Brisbane Amateur Beer Brewing Society, 83 entries—Nicholas Barnes, Brisbane, Queensland

Spirits of Baker County, 11 entries—Charles Macaluso, St. Helens, OR  
ZZHops Club Only Comp IPA, 25 entries—Sean McCambridge, Lake Winnebago, MO  
Brew Haven Homebrew Competition, 97 entries—Paul Schamel, Maplewood, MO  
For What It's Worth, 146 entries—Jeff Muse, St. Louis, MO  
All American Brew Off - 6th Annual, 79 entries—Jed Reinhard, Fort Smith, AR  
Hail the Ale, 117 entries—Marshall Van Tuyl, Kansas City, MO  
Crystal Coast Brew Off - CCBO, 135 entries—Jeffrey Constantine, Lakewood, OH  
1st Annual Adams County Fair Homebrew Competition, 49 entries—John Moran and Art Dichard, Westminster, CO  
German Fest Stein Challenge, 222 entries—Kevin Last  
New Jersey State Fair Homebrew Competition - 19th Annual, 309 entries—Michael Marino, Burlington, MA  
Fugetaboutit, 230 entries—David Graham, Chattanooga, TN  
Best of the Bay, 185 entries—James Martini, Sedro Woolley, WA  
Denver County Fair Home Brew Competition, 140 entries—Will Herdrick, Loveland, CO

**August 2015**

MASH Out - Ales of Summer, 73 entries—Michael McCaffrey, Miamisburg, OH  
Summer Smash 3, 35 entries—Rodney Kibzey, Portland, OR  
Delaware State Fair Homebrew Competition, 192 entries—James Wilson, Queenstown, MD  
Tri-County Homebrew Competition, 44 entries—Nick Matulich, Bozeman, MT  
IAMNSOB Homebrewing Competition, 22 entries—Casey and Aimee Mussman, Mason City, IA  
Clash of the Carboys, 64 entries—Jeff Oberlin, Friendswood, TX  
Concurso Final Somos Cerveceros 2014-2015, 100 entries—Hernán Salanova  
Archuleta County Fair, 9 entries—Hal Stevens, Pagosa Springs, CO  
Concurso Cervejeiro Caseiro Bierland, 36 entries—Vinicius Carpentieri, Florianópolis, SC  
Lunar Rendezbrew 22, 328 entries—Janine Weber, Houston, TX  
2015 Los Angeles County Fair Homebrew Competition, 355 entries—Dana Cordes, Thousand Oaks, CA  
Canfield Fair Homebrew Competition 2015, 76 entries—Greg Gonda, Boardman, OH  
National Capital Homebrew Competition, 251 entries—Justin MacNeill, Ottawa, ON

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## KUDOS—BEST OF SHOW

Iowa State Fair, 252 entries—Chris Ford, Ankeny, IA

McHenry Rotary Blues, Brews and BBQs,  
48 entries—Jeff Rutter and Phil Bittolo, Algonquin, IL

6th Annual Beehive Brew-Off, 483 entries—  
Joe Johnson, Riverton, UT

2015 NSW Amateur Brewing Championship,  
319 entries—Barry Cranston

Austin ZEALOTS Homebrew Inquisition,  
350 entries—Keith and Pam Bradley, Austin, TX

LHG Homebrew Competition, 77 entries—  
Nathan Medeiros, London, Ontario

Nebraska State Fair Beer & Wine Competition,  
112 entries—Jared Young, Chadron, NE

Evergreen State Fair 2015, 167 entries—Jim  
Trimble, Lake Stevens, WA

Josephine County Fair, 18 entries—Troy Love,  
Medford, OR

Kentucky State Fair Homebrew Competition,  
358 entries—Greg Browne, Louisville, KY

West Virginia State Fair Homebrew Competition,  
17 entries—William Greene

MoM Hot Summer Brew Off, 122 entries—  
Bryan Shepard, Kansas City, MO

Western Idaho Fair Competition, 116 entries—  
Andrew Meimann, Boise, ID

Summer Beer Dabbler Home Brew contest,  
24 entries—Richard Pizarro, Minneapolis, MN

Summer Session Competition, 11 entries—  
Brendan Murphy

Babble Brew-Off: The American Cup, 89  
entries—Steve Martino, Frankfort, IL

Montgomery County Fair Amateur Homebrew  
Competition, 89 entries—Patrick Boyle, Rockville, MD

Minnesota State Fair Homebrew Competition,  
728 entries—Jeff Taylor, St Paul, MN

The Limbo Challenge, 177 entries—Ryan Pyle,  
Rockwall, TX

New South Brew Off, 127 entries—Chase Wilson,  
Nashville, TN

Castle Hill Homebrew Competition, 148  
entries—Michael Clarke, Sydney, NSW, Australia

Malt Madness IX, 365 entries—Darrell Hotnisky,  
Lansdale, PA

Intervarsity Beer Brewing Competition,  
47 entries—University of Cape Town, Cape Town,  
South Africa

SFHG Wheat Beers Competition, 9 entries—  
Matt Ahlstrand, San Francisco, CA

Colorado State Fair Homebrew and Craft Beer  
Competitions, 690 entries—Jeremy Franz

Crystal Lederhosen Homebrew Competition,  
151 entries—Rick Hogg, Hawley, PA

### September 2015

Big Dog Quest for the Best Homebrew  
Competition, 17 entries—Joe Hansen, Cape Coral, FL

Homebrew Competition at the Coconino  
County Fair, 18 entries—Jeff Ford, Flagstaff, AZ

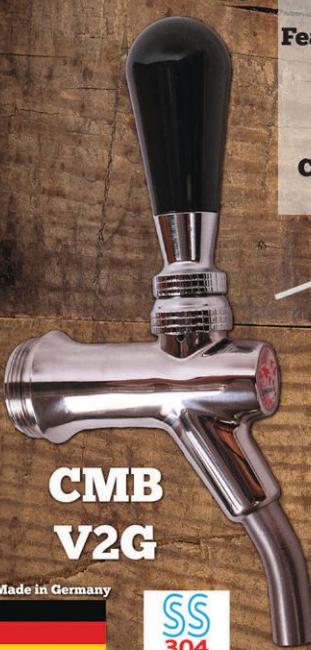
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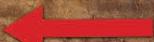


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COMPETITION PROGRAM CALENDAR**

For complete calendar, competition and judging information go to  
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**November 1**

**2015 Barley & Hops Hoopla**

Columbia, MO. Entry Deadline: 10/22/2015.  
[drinkmobeer.org](http://drinkmobeer.org)

**November 1**

**Best of Boston Homebrew Competition**

Cambridge, MA. Entry Deadline: 10/18/2015.  
[bob.beerbrew.com](http://bob.beerbrew.com)

**November 5**

**Santa Fe Open**

Santa Fe, NM. Entry Deadline: 10/24/2015.  
[santafeopen.org](http://santafeopen.org)

**November 7**

**M.A.L.T. 2015**

Montreal, Quebec, Canada. Entry Deadline:  
10/23/2015.  
[montrealers.ca](http://montrealers.ca)

**November 7**

**Op. Bravo**

Keller, TX. Entry Deadline: 11/7/2015.  
[opbravo.org](http://opbravo.org)

**November 7**

**Skirmish**

Greensboro, NC. Entry Deadline: 10/24/2015.  
[battlegroundbrewers.com](http://battlegroundbrewers.com)

**November 7**

**Son of Brewzilla Homebrew Competition**

Middleburg Heights, OH. Entry Deadline:  
10/31/2015.  
[beersnobs.org/cbwcomp/](http://beersnobs.org/cbwcomp/)

**November 7**

**Rocky Mountain Homebrew Challenge**

Denver, CO. Entry Deadline: 10/23/2015.  
[foamontherange.org](http://foamontherange.org)

**November 7**

**Tulare County Homebrew Competition**

Visalia, CA. Entry Deadline: 10/15/2015.  
[tchops.org](http://tchops.org)

**November 7**

**Motown Mash**

Randolph, NJ. Entry Deadline: 10/24/2015.  
[mashnewjersey.com/competitions/motown-mash/](http://mashnewjersey.com/competitions/motown-mash/)

**November 7**

**Concurso Sul Matogrossense de Cerveja Caseira**

Campo Grande, Mato Grosso do Sul, Brazil.  
[acervapantaneira.com.br](http://acervapantaneira.com.br)

**November 7**

**Music City Brew Off**

Nashville, TN. Entry Deadline: 10/25/2015.  
[musiccitybrewers.com](http://musiccitybrewers.com)

**November 7**

**McKenzie Cider & Craft Beer Festival**

**Homebrew Competition**

Springfield, OR. Entry Deadline: 10/24/2015.  
[mccbf.com/home-brew-contest/](http://mccbf.com/home-brew-contest/)

**November 7**

**B.A.M.M. Inaugural Home Brew Competition**

Big Rapids, MI. Entry Deadline: 10/24/2015.  
[beersoftear.com](http://beersoftear.com)

**November 7**

**2015 Badger Brewoff**

Madison, WI. Entry Deadline: 10/30/2015.  
[mhtg.brewcompetition.com](http://mhtg.brewcompetition.com)

**November 8**

**California State Homebrew Competition**

San Francisco, CA. Entry Deadline: 10/17/2015.  
[nchinfo.org/castatecomp/](http://nchinfo.org/castatecomp/)

**November 8**

**The Art of Craft: A Homebrew Competition & Pink Boots Society Benefit**

San Francisco, CA. Entry Deadline: 10/30/2015.  
[grisettenuouveaux.com/rules-and-regulations/](http://grisettenuouveaux.com/rules-and-regulations/)

**November 14**

**BrewDat!**

Houma, LA. Entry Deadline: 11/14/2015.  
[bayoubeersociety.org](http://bayoubeersociety.org)

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**November 14**

**Días Oscuro**

Denver, CO. Entry Deadline: 11/2/2015.  
[thefermentologists.com](http://thefermentologists.com)

**November 14**

**Knickerbocker Battle of the Brews**

Albany, NY. Entry Deadline: 11/5/2015.  
[thoroughbrews.org/kbotb/](http://thoroughbrews.org/kbotb/)

**November 14**

**SCH-ABC 8**

Phoenixville, PA. Entry Deadline: 10/22/2015.  
[schhomebrewers.com/sch-abc.html](http://schhomebrewers.com/sch-abc.html)

**November 14**

**Monster Homebrew Competition**

Cedar Park, TX. Entry Deadline: 11/10/2015.  
[thedigpub.com/monster-homebrew-competition/](http://thedigpub.com/monster-homebrew-competition/)

**November 14**

**FOAM Cup**

Tulsa, OK. Entry Deadline: 10/31/2015.  
[foamcup.us](http://foamcup.us)

**November 14**

**Star City Homebrew Throwdown**

Roanoke, VA. Entry Deadline: 10/22/2015.  
[throwdown.starcitybrewers.org](http://throwdown.starcitybrewers.org)

**November 14**

**MALT Turkey Shoot**

College Park, MD. Entry Deadline: 11/7/2015.  
[maltclub.org/MALT/Home.html](http://maltclub.org/MALT/Home.html)

**November 14**

**Joint Novembeerfest and Puget Sound Pro-Am**

Tukwila, WA. Entry Deadline: 11/9/2015.  
[wahomebrewers.org/novembeerfest/](http://wahomebrewers.org/novembeerfest/)

**November 14**

**Land of the Muddy Waters**

Rock Island, IL. Entry Deadline: 11/6/2015.  
[lotmwhome.brewcompetition.com/index.php?section=register](http://lotmwhome.brewcompetition.com/index.php?section=register)

**November 14**

**Clone Wars!**

Billings, MT. Entry Deadline: 11/7/2015.  
[rimrockbrewersguild.com](http://rimrockbrewersguild.com)

**November 14**

**Beer for Boobs V**

Zanesville, OH. Entry Deadline: 10/31/2015.  
[sodz.org/beer-for-boobs-competition](http://sodz.org/beer-for-boobs-competition)

**November 14**

**'Merica's Mug**

Savannah, GA. Entry Deadline: 11/4/2015.  
[savannahbrewers.com](http://savannahbrewers.com)

**November 14**

**Cham-Beers-Burg Homebrew Competition**

Chambersburg, PA. Entry Deadline: 11/14/2015.

**November 14**

**Fall Throwdown**

Seoul, South Korea.  
<https://m.facebook.com/events/147299600967083/4?context=%7B>

**November 21**

**Long Island Beer and Malt Enthusiasts 3rd Annual Beer, Mead, & Cider Competition**

Bay Shore, NY. Entry Deadline: 11/12/2015.  
[beermalt.net](http://beermalt.net)

**November 21**

**Butler Homebrew BASH**

Butler, PA. Entry Deadline: 11/07/2015.  
[bash.smythenet.com/bcoem/](http://bash.smythenet.com/bcoem/)

**November 21**

**4to. Concurso Cerveceros Santafesinos**

"LEANDRO LAFERRIERE"  
Santa Fe, Argentina. Entry Deadline: 11/1/2015

**November 22**

**5 Paddles Brewing Co.'s Brew to the Death**

Whitby, Ontario, Canada. Entry Deadline:  
11/13/2015. [reggiebeer.com/ReggieEntry.php?CompetitionID=BRPORE1000114](http://reggiebeer.com/ReggieEntry.php?CompetitionID=BRPORE1000114)

**November 27**

**Black Friday Homebrew Competition (Black Beer Only)**

London, UK. Entry Deadline: 11/15/2015.  
[mini-comp.londonamateurbrewers.co.uk](http://mini-comp.londonamateurbrewers.co.uk)

**November 28**

**The Great Quintessential English Ales Competition**

Belfast, UK. Entry Deadline: 11/7/2015.

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## AHA/BJCP SANCTIONED COMPETITION PROGRAM CALENDAR

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**November 28**

**3rd Annual Big Spruce Home Brew Challenge**  
Dartmouth, Nova Scotia. Entry Deadline: 11/27/2015. [brewnosers.org/forums/viewtopic.php?f=33&t=8711](http://brewnosers.org/forums/viewtopic.php?f=33&t=8711)

**December 1**

**2015 Reddit Homebrewing Competition**  
Bloomington, IL. Entry Deadline: 11/1/2015. [reddithomebrewing.com](http://reddithomebrewing.com)

**December 5**

**Pennsylvania Homebrew Open Competition**  
State College, PA. Entry Deadline: 11/20/2015. [statecollegehomebrewclub.com/phoc/](http://statecollegehomebrewclub.com/phoc/)

**December 5**

**2nd Annual Fermentationland Homebrew Competition**  
Richmond, ME. Entry Deadline: 11/20/2015. [malthomebrewclub.org/competition/](http://malthomebrewclub.org/competition/)

**December 5**

**Palmetto State Brewers Open (PSBO)**  
Lexington, SC. Entry Deadline: 11/21/2015. [palmettostatebrewers.com/PSBO](http://palmettostatebrewers.com/PSBO)

**December 5**

**Walk the Line on Barleywine**  
Dunedin, FL. [dunedinbrewersguild.com](http://dunedinbrewersguild.com)

**December 5**

**HOPOff Home Brewing Competition - Stout**  
Grove City, OH. Entry Deadline: 10/1/2015.

**December 6**

**1st Hellenic Homebrew Competition**  
Athens, Greece. Entry Deadline: 11/27/2015. [hellenichomebrewers.gr/#blog](http://hellenichomebrewers.gr/#blog)

**December 11**

**ABQ Beer Holiday Fiesta**  
Albuquerque, NM. Entry Deadline: 11/27/2015. [abqbeer.com/holiday-fiesta-brew-competition/](http://abqbeer.com/holiday-fiesta-brew-competition/)

**December 12**

**Happy Holidays Homebrew Competition**  
St. Louis, MO. Entry Deadline: 11/27/2015. [stlbrews.org/competition/hhhc/index.asp](http://stlbrews.org/competition/hhhc/index.asp)

**December 13**

**Local Homebrew Competition: Go Pro for SFBW 2016**  
San Francisco, CA. Entry Deadline: 12/5/2015. [localbrewingco.com](http://localbrewingco.com)

**January 8**

**Big Beers, Belgians & Barleywines Homebrew Competition**  
Vail, CO. Entry Deadline: 12/5/2015. [bigbeersfestival.com](http://bigbeersfestival.com)

**January 15**

**Big Bend Brewoff**  
Tallahassee, FL. Entry Deadline: 1/8/2016. [fnbl.org](http://fnbl.org)

**January 16**

**Mardi Gras Casino 3rd Annual Homebrew Competition**  
Hallandale Beach, FL. Entry Deadline: 1/8/2016. [mardigrascasinofl.com](http://mardigrascasinofl.com)

**January 30**

**Champion of the Pint**  
Maryland Heights, MO. Entry Deadline: 1/15/2016. [garagebrewers.com/champion-of-the-pint/](http://garagebrewers.com/champion-of-the-pint/)



For an up-to-date calendar of AHA and BJCP events go to the Events section of [HomebrewersAssociation.org](http://HomebrewersAssociation.org)

Jan/Feb 2012      Nov/Dec 2011      Mar/Apr 2011

FOR THE HOMEBREWER & BEER LOVER

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**One way beer judges check their palates is by using commercial “calibration beers”—classic versions of the style they represent. Zymurgy has assembled a panel of four judges who have attained the rank of Grand Master in the Beer Judge Certification Program. Each issue, they score two widely available commercial beers (or meads or ciders) using the BJCP scoresheet. We invite you to download your own scoresheets at [bjcp.org](http://bjcp.org), pick up a bottle of each of the beverages and judge along with them in our Commercial Calibration.**



**W**ith the first hints of fall in the air when this issue was being assembled, two Vienna lagers were sent to our judges.

According to the 2015 BJCP Style Guidelines, Vienna lager is “a moderate-strength amber lager with a soft, smooth maltiness and moderate bitterness, yet finishing relatively dry. The malt flavor is clean, bready-rich, and somewhat toasty, with an elegant impression derived from quality base malts and process, not specialty malts and adjuncts.”

Devils Backbone’s version is a perennial award winner, with gold medals from the World Beer Cup® and Great American Beer Festival® (GABF) among its many accolades, including a gold medal at the

2015 GABF. Vienna Lager is actually the brewery’s top-selling beer, and the best-selling craft beer in the brewery’s home state of Virginia, according to head brewer Jason Oliver.

“Two of my previous brewing jobs had Märzens as their flagship beers,” explained Oliver of the beer’s development. “While I appreciate that style, I thought Vienna lagers were a bit more delicate, streamlined, and elegant. While it might be true to an extent that one brewer’s Märzen may be similar to another’s Vienna, I brew ours to be a little leaner and more drinkable.”

Devils Backbone Vienna Lager is brewed with imported Vienna, Munich, caramel, and Pilsner malts, and hopped with German Northern Brewer for bittering and Czech Saaz added toward the end of the boil. It checks in at 4.9 percent ABV and 18 IBU.

“It is one of the most versatile beers in regards to pairing with food,” Oliver commented. “It is so flexible and works well with a diverse range of dishes. It’s a no-brainer for beer dinners.”

Chuckanut Brewery in Bellingham, Wash. brews another shining example of the style. Its Vienna Lager is also a past gold medal winner at the GABF.

“Due to the popularity of other Chuckanut brands, it has only been brewed once or

**OUR EXPERT PANEL** David Houseman, a Grand Master V level judge and competition director for the BJCP from Chester Springs, Pa.; Beth Zangari, a Grand Master II level judge from Placerville, Calif. and founding member of Hangtown Association of Zymurgy Enthusiasts (H.A.Z.E.); Scott Bickham, a Grand Master III judge from Corning, N.Y., who has been exam director or associate exam director for the BJCP since 1995; and Gordon Strong, a Grand Master IX judge, principal author of the BJCP Style Guidelines, and president of the BJCP board who lives in Beavercreek, Ohio.



**Devils Backbone Brewing Co.**  
[dbbrewingcompany.com](http://dbbrewingcompany.com)

**Chuckanut Brewery**  
[chuckanutbreweryandkitchen.com](http://chuckanutbreweryandkitchen.com)

**BJCP Style Guidelines**  
[www.bjcp.org](http://www.bjcp.org)

**Commercial Calibration Index**  
[HomebrewersAssociation.org/pages/zymurgy/commercial-calibration](http://HomebrewersAssociation.org/pages/zymurgy/commercial-calibration)

twice a year for the last few years,” commented Chuckanut owner and brewmaster Will Kemper. “With the advent of the new Chuckanut Brewery, it will be brewed much more.”

Chuckanut uses classic lager production techniques from start to finish for its Vienna Lager, said Kemper. The malt bill is made up of 60 percent Vienna malt, with additional Pilsner malt and other dark malts contributing color. The beer is hopped with German Hallertau Perle and Hallertau Hallertau Tradition. Chuckanut Vienna Lager is 5.5 percent ABV and 20 IBU.

# THE SCORES

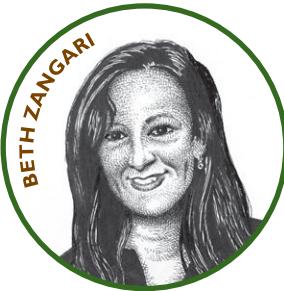


Vienna Lager—Devils Backbone Brewing Co., Lexington, Va.  
BJCP Category: 7A: Vienna Lager

## THE JUDGES' SCORES FOR DEVILS BACKBONE VIENNA LAGER



DAVE HOUSEMAN



BETH ZANGARI



SCOTT BICKHAM



GORDON STRONG

**Aroma:** Soft, lightly toasted malt note. No caramel but a touch of roasted malts. Bare hint of floral hop aroma. No overt alcohol aroma. No DMS, diacetyl, or fruity esters. Clean, crisp lager aroma. (10/12)

**Appearance:** Orange-amber color. Brilliant clarity. Dense, rocky, beige, long-lasting head. Moderate carbonation. A beautiful beer. (3/3)

**Flavor:** Toasty malt up front with moderate melanoidins and a bit of drying roasted malt but no caramel flavors (good). Balance is toward malt with sufficient hop bitterness to leave this with a relatively dry finish. Little floral hop flavor. No DMS or diacetyl. Little to no fruity esters or perceivable alcohol flavor. A very clean, well-made lager. Slight husky phenols are present as the beer warms. (16/20)

**Mouthfeel:** Medium to medium-thin body. Somewhat drying mouthfeel. Not particularly creamy but smooth without sharpness. Just a bit of alcohol warming. (4/5)

**Overall Impression:** A very well done Vienna lager. Well-made, showcasing the malt but nicely supported by hops. A little less dryness and a touch more malt melanoidins would put the icing on the cake. The bare hint of phenols may be the beginnings of a wild yeast contamination that might emerge with age. Still a very drinkable beer and a fine example of the style. The remainder of my bottle went very well with supreme pizza. (8/10)

**Total Score:** (41/50)

**Aroma:** Moderately pronounced honey-like toasted malt dominates at first, over a light floral and white pepper hop aroma that sits in the background. Clean fermentation. (10/12)

**Appearance:** Amber liquid of brilliant clarity is topped by frothy, persistent foam that seems dense enough to support a dime. The head stays to the end of the glass. (3/3)

**Flavor:** Rich but restrained toasted malt backbone supports low, soft honey malt sweetness, like honey on whole grain toast. A light bitterness dances on the tongue, and lingers lightly into the crisp finish, followed by an elegant graham cracker toastiness. Very clean. (18/20)

**Mouthfeel:** Medium-light body with firm, though not gassy, carbonation presents a clean, silky texture. A hint of alcohol warmth emerges at the end. (5/5)

**Overall Impression:** Elegant from the first impression to the last sip. Delicately balanced rich, toasted malt with firm but restrained bitterness and a white peppery spiciness. Extremely quaffable, it is the epitome of elegance in a glass. (9/10)

**Total Score:** (45/50)

**Aroma:** Moderate toasted malt with a light grainy-sweet character. Light caramel notes with a touch of toffee. Fruity esters; low apple and pear notes. Light floral notes in the background could be from hops. Very pleasant, malt-focused aroma. (11/12)

**Appearance:** Medium orange-copper with a low off-white head that fades a little too quickly. Brilliant clarity. (2.5/3)

**Flavor:** Balance is slightly to the malt. Initial moderate toasted and biscuit notes, along with light caramel. Grainy malt character permeates throughout, with lingering sweetness in the finish. Very low fruity esters indicate a clean lager fermentation. Hops are low key, with no flavor contribution. Low to moderate bitterness in the finish that almost balances the malt. Light mineral character at the end. (17/20)

**Mouthfeel:** Low to medium carbonation is appropriate for the style, as is the medium body that carries a little residual sweetness. A light metallic character leaves a slight mouth-puckering sensation. (4/5)

**Overall Impression:** Very pleasant, quaffable session beer with a nice toasted malt character. Pleasant grainy malt character is undercut by a little astringency that leaves a chalky sensation on the sides of the tongue. Nonetheless a well-crafted beer. (8.5/10)

**Total Score:** (43/50)

**Aroma:** Moderate toasty malt aroma. Clean fermentation character, no esters. Little, if any, hops. Clean toasty malt nose—malty, not sweet—dominates. Beautiful character. Seems very fresh. (11/12)

**Appearance:** Light amber-orange color. Fairly clear. Low off-white head, average persistence. (3/3)

**Flavor:** Toasted malt, medium intensity, dominates palate. Medium bitterness but malt just slightly forward in the balance. Very clean fermentation profile, well-lagered; not sulfury or green. The beer is well attenuated; the dry finish encourages another drink. Medium-low hop flavor, lightly floral, noticeable through the aftertaste but only as a complement to the malt. (18/20)

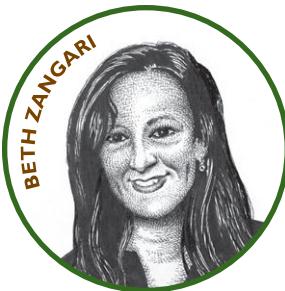
**Mouthfeel:** Medium body, slight warmth in finish. Medium carbonation. Not astringent or creamy. (5/5)

**Overall Impression:** Outstanding example that does a superb job illustrating the difference between a Vienna lager and a Märzen. Great toasty malt flavor, dry finish, moderate bitterness, clean lager fermentation, and nicely lagered. Captures the “elegant” aspect well—quality ingredients seem to have been used. I would love to see Anton Dreher try this beer; I think he would approve. One of the best beers I’ve had this year. World class. (9/10)

**Total Score:** (46/50)



## THE JUDGES' SCORES FOR CHUCKANUT VIENNA LAGER



**Aroma:** Light nutty and toasty malt profile. Hint of alcohol aroma. No hop aroma. No fruity esters, DMS, or diacetyl. This is a clean, crisp lager focusing on the malt. (10/12)

**Appearance:** Light amber with an orange note. Brilliant clarity. Dense, rocky, tan, long-lasting head. Well carbonated. A beautiful beer. (3/3)

**Flavor:** Toasted malt presence up front with substantial and balancing hop bitterness. No hop flavor. Noticeable alcohol flavor, but it's a clean ethanol, not fusel or hot. A hint of roasted malts adds to the dry finish. No DMS, diacetyl, or fruity esters, only a clean lagered beer. (17/20)

**Mouthfeel:** Medium to medium-thin body. Low to medium alcohol warming. Some roasty drying in the mouthfeel is offset by a creamy maltiness with a soft palate. (5/5)

**Overall Impression:** Well-made Vienna-style lager. The sense of the alcohol seems to nearly push this into the Märzen style, but the toastiness and body keep it in the Vienna style. Increasing hop aroma and flavor just a little would add a nice touch of complexity, but still an excellent beer that would replace wine with most elegant meat entrées such as Chateaubriand, roast beef, or roast pork. (8/10)

**Total Score:** (43/50)

**Aroma:** Honeysuckle with stone fruit esters, and a rich graham and lightly caramel toasted malt aroma, present equally and almost confectionary. (8/12)

**Appearance:** Copper with reddish highlights and bright clarity. A fluffy, off-white foam forms, but does not persist. (3/3)

**Flavor:** Honeysuckle floral, bready notes and toasted malt with a hint of caramel lead the first taste, then bow to a lean, crisp light hop bitterness. A hint of salt sneaks in mid-palate, accentuating the toasted malt and bitterness that combine in a clean, crisp, lightly lingering, and ever-changing finish. Dances between the malt and clean hop bitterness. Fermentation is clean. (17/20)

**Mouthfeel:** Medium bodied with a low but still spritzy carbonation. Finishes with a very low alcohol warmth that is accentuated by the carbonation level for a delightful crispness. (5/5)

**Overall Impression:** Well balanced between the rich, but not overbearing, maltiness and a light, yet firm bitterness. The caramel notes accent the roasty malt, adding light complexity without heaviness. Clean and elegant, with a definitive sophistication that begs for roasted foods and celebrations. (9/10)

**Total Score:** (42/50)

**Aroma:** Somewhat sharp grainy character supported by light malt sweetness with toasted and caramel malts. Light green apple notes. Esters evolve from pears into light tropical fruits. Not as clean as most amber lagers. No obvious hop character, but a light spiciness as the beer rolls across the tongue. (8/12)

**Appearance:** Copper color with attractive reddish highlights. Off-white head is low and does not persist. Excellent clarity. (2.5/3)

**Flavor:** Initial grainy and nutty malt sweetness gradually fades into a moderately bitter finish. Seems like an American interpretation of the Vienna style, with the balance toward the hops. Moderate fruity esters, with pear and light tropical fruit notes. Profile is cleaner than most ales, but a little too assertive for a European-style lager. Caramel malts leave a pleasant sweetness in the finish but the balance is still toward bitterness. (15/20)

**Mouthfeel:** Moderate carbonation with medium body. Light grainy astringency with a little alcoholic warmth. Pleasant, but not as soft as expected. (4/5)

**Overall Impression:** Very nice beer with pleasant nutty and toasted notes from the malt that are somewhat overshadowed by moderate hop bitterness and grainy notes. It doesn't have the finesse of a classic Vienna lager; the fermentation character is a little too prominent and the balance is skewed toward bitterness. It does get high marks for technical execution and intangibles, making it a good session beer. (7.5/10)

**Total Score:** (37/50)

**Aroma:** Initial sulfur. Light hops, floral. Low toasted malt follows, like darkly toasted bread. Seems fairly clean after the sulfur vented. Overall, fairly subtle with light malt and hops balanced. Intensities grow as it warms but remain balanced. (8/12)

**Appearance:** Crystal clear. Tall beige head, fine texture, average persistence. Light copper color. (3/3)

**Flavor:** Dry with a toasty, crackery malt flavor and moderate bitterness. A very slight, deeply toasted flavor like bread crusts lasts into the finish, along with a bit of bitterness. The malt-bitter balance is nearly even with the bitterness winning by a nose. Medium-low floral-spicy hop flavor underneath. Clean lager fermentation profile, although not super smooth. The delicate balance remains throughout. (15/20)

**Mouthfeel:** Medium to medium-full body. Medium carbonation. Slightly creamy, no astringency or warming. Body is a touch too robust. (4/5)

**Overall Impression:** Some additional lagering might help—seems a bit rough. Nice balance between the malt and hops. Lots of toast in the malt flavor but very dry underneath. No caramel flavors or rich maltiness, but that's not necessary. The body makes it a bit slow to drink. Aroma is fairly subtle. Well-balanced, dry, with a clean flavor profile. A somewhat dry interpretation favoring toasted bread crusts. Best enjoyed on the warmer side to allow the more subtle flavors to emerge. (8/10)

**Total Score:** (38/50)

by Charlie Papazian



# When Darkness and Lupulin Ruled the Day

**T**here are two or three beers in the world that don't need more hops, and none of them are mine." Craft brewing explorer and pioneer Bert Grant, with this oft-cited statement, left us with a vision for the future of beer. Grant specialized in hops before opening the Yakima Brewing and Malting Company in Yakima, Wash. in the early 1980s. He left us with a hoppy beer legacy that was unheard of up to that point in the history of beer. No one dared to be as forthright as Bert.

Grant served his beers at the 1984 Great American Beer Festival. A long line of people waited for a pour of his new creation, an imperial stout. Big-beer industry veterans in attendance were astounded as they observed with disbelief the crowds gathering to taste something new and unique—a high-alcohol, carbon-black, thick-with-roast-malt-goodness, and over-the-top hopped "imperial" stout. Lupulin and darkness ruled the day. Grant won the Consumer Poll that year for the most popular beer at the festival.

Before Grant's introduction, imperial stout was known in other parts of the world as a dark, 7- to 8-percent lager in Scandinavia, and a copper-colored, moderately hopped, malt-accented ale called Russian imperial stout in the UK (the classic brewed by Courage).

But Grant blew away beer drinkers' expectations with something unimaginable until he personally presented and served his beers at the 1984 GABF. His influence created the style we call American imperial stout. His other legacy was founding the first modern-day brewpub in the U.S. back in 1982. Grant passed away in 2001, but his legacy of beer with hops will never be diminished.

I originally published Bert Grant's Planet Imperial Stout recipe in my book,

*Microbrewed Adventures*, which goes more in depth about Grant's contributions to American beer history. In this recipe, the hop bitterness may seem moderate with an estimated 59 bitterness units, but rest assured the flavors and character of black and roasted grains amp up

the overall impression to high levels of assertive bitterness.

The addition of 28 ounces (780 grams) of roasted barley and black malts provides a foundation for highlighting the American hop experience that Grant was champi-

## Bert Grant's Planet Imperial Stout

### ALL GRAIN RECIPE

#### INGREDIENTS

for 5 U.S. gallons (19 L)

|                 |   |
|-----------------|---|
| <b>10.5 lb</b>  | (4.8 kg) American 2-row pale malt   |
| <b>1.0 lb</b>   | (454 g) crystal malt (80° L)  |
| <b>12.0 oz</b>  | (340 g) roasted barley  |
| <b>8.0 oz</b>   | (227 g) black malt  |
| <b>8.0 oz</b>   | (227 g) German black Carafa malt  |
| <b>0.5 oz</b>   | (14 g) Galena hops,<br>12% a.a. (6 HBU/168 MBU)<br>60 min                                   |
| <b>0.5 oz</b>   | (14 g) Northern Brewer hops, 8% a.a. (4 HBU/112 MBU) 60 min                                 |
| <b>1.0 oz</b>   | (28 g) Cascade hops,<br>5% a.a. (5 HBU/140 MBU)<br>60 min                                   |
| <b>1.0 oz</b>   | (28 g) Cascade hops,<br>5% a.a. (5 HBU/140 MBU)<br>30 min                                   |
| <b>1.0 oz</b>   | (28 g) Cascade hops, 1 min  |
| <b>0.25 tsp</b> | (1 g) powdered Irish moss,<br>10 min  |
|                 | American ale, Irish type ale or stout yeast   |
| <b>0.75 cup</b> | (175 ml measure) corn sugar (priming bottles)<br>or 0.33 cup (80 ml) corn sugar for kegging |

**Target Original Gravity:** 1.076 (18.4 B)

**Approximate Final Gravity:** 1.016 (4 B)

**IBUs:** about 59

**Approximate Color:** 67 SRM (134 EBC)

**Alcohol:** 8% by volume

#### DIRECTIONS

A step infusion mash is employed to mash the grains. Add 13 quarts (12.4 L) of 140° F (60° C) water to the crushed grain, stir, stabilize and hold the temperature at 132° F (56° C) for 30 minutes. Add 6.5 quarts (6.2 L) of boiling water and add heat to bring temperature up to 155° F (68° C) and hold for about 30 minutes. Raise temperature to 167° F (75° C), lauter and sparge with 3.5 gallons (13.25 L) of 170° F (77° C) water. Collect about 5.5 gallons (21 L) of runoff. Add 60-minute hops and bring to a full and vigorous boil.

The total boil time will be 60 minutes. When 30 minutes remain, add the 30-minute hops. When 10 minutes remain, add the Irish moss. When 1 minute remains, add the 1-minute hops. After a total wort boil of 60 minutes, turn off the heat and place the pot (with cover on) in a running cold-water bath for 30 minutes. Continue to chill in the immersion or use other methods to chill your wort. Strain and sparge the wort into a sanitized fermenter. Bring the total volume to 5 gallons (19 L) with additional cold water if necessary. Aerate the wort very well.

Pitch the yeast when temperature of wort is about 70° F (21° C). Ferment at about 70° F (21° C) for about one week or when fermentation shows signs of calm and stopping. Rack from your primary to a secondary and if you have the capability "cellar" the beer at about 55° F (12.5° C) for about one week. Prime with sugar and bottle or keg when complete.

# Bert Grant's Planet Imperial Stout

## MALT EXTRACT RECIPE

### INGREDIENTS for 5 U.S. gallons (19 L)

|                               |  |
|-------------------------------|--|
| <b>9.0 lb</b>                 | (4 kg) very dark extract syrup or 7.25 lb (3.3 kg) dark dried malt extract               |
| <b>1.0 lb</b>                 | (454 g) crystal malt (80° L)   |
| <b>12.0 oz</b>                | (340 g) roasted barley   |
| <b>8.0 oz</b>                 | (225 g) black malt   |
| <b>0.5 oz</b>                 | (14 g) Galena hops, 12% a.a. (6 HBU/168 MBU) 60 min                                      |
| <b>0.75 oz</b>                | (21 g) Northern Brewer hops, 8% a.a. (6 HBU/168 MBU) 60 min                              |
| <b>1.0 oz</b>                 | (28 g) Cascade hops, 5% a.a. (5 HBU/140 MBU) 60 min                                      |
| <b>1.0 oz</b>                 | (28 g) Cascade hops, 5% a.a. (5 HBU/140 MBU) 30 min                                      |
| <b>1.0 oz</b>                 | (28 g) Cascade hops, 1 min   |
| <b>0.25 tsp</b>               | (1 g) powdered Irish moss, 10 min  |
| Irish type ale or stout yeast |  |
| <b>0.75 cup</b>               | (175 ml measure) corn sugar (priming bottles) or 0.33 cup (80 ml) corn sugar for kegging |

**Target Original Gravity:** 1.076 (18.4 B)

**Approximate Final Gravity:** 1.016 (4 B)

**IBUs:** about 59    **Approximate color:** 67 SRM (134 EBC)

**Alcohol:** 8% by volume

oning at the time. If Galena hops are not available, good substitutions would be Nugget, Chinook, or Centennial, though amounts may vary depending on the alpha acid contribution.

After you brew this, be sure to raise a glass of dark, hoppy goodness to craft beer pioneer Bert Grant. Let's cut the shuck and jive and get on with the recipe.

## DIRECTIONS

Place crushed grains in 2 gallons (7.6 L) of 150° F (66° C) water and let steep for 30 minutes. Strain out (and rinse with 3 quarts [3 L] hot water) and discard the crushed grains, reserving the approximately 2.5 gallons (9.5 L) of liquid to which you will now add malt extract and 60-minute hops. Bring to a boil.

The total boil time will be 60 minutes. When 30 minutes remain, add the 30-minute hops. When 10 minutes remain, add the Irish moss. When 1 minute remains, add the 1-minute hops. After a total wort boil of 60 minutes, turn off the heat.

Immerse the covered pot of wort in a cold water bath and let sit for 30 minutes or the time it takes to have a couple of homebrews. Strain out and sparge hops and direct the hot wort into a sanitized fermenter to which 2 gallons (7.6 L) of cold water has been added. If necessary add cold water to achieve a 5 gallon (19 L) batch size. Aerate the wort very well.

Pitch the yeast when temperature of wort is about 70° F (21° C). Ferment at about 70° F (21° C) for about one week or when fermentation shows signs of calm and stopping. Rack from your primary to a secondary and if you have the capability "cellar" the beer at about 55° F (12.5° C) for about one week. Prime with sugar and bottle or keg when complete.

**Charlie Papazian is founder of the American Homebrewers Association and author of *Microbrewed Adventures*.**



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# Homebrew Crawl

I'm a 2006 transplant to Colorado from New Hampshire, where I had dabbled in extract brewing before dropping the hobby in favor of becoming a father. After settling into the Colorado lifestyle, in 2010 my wife suggested I get back to it. Not needing to be told twice, I eschewed extracts, embraced all-grain, and haven't looked back.

After a few brew sessions I was introduced (via my four-year-old's social circle) to my now-brew buddy Mike Munhall. Soon we were brewing together in Mike's garage; he helped ease me from my distaste for Belgian beers into a genuine appreciation for all sorts of "continental" ales, and while I doubt I actually taught him anything, he began to understand my love for the brews of the British Isles. Through my friendship with Mike I broadened my palate and my horizons, and discovered that the more I knew about beer, the more I loved it.

We soon found others in our corner of the Denver 'burbs who shared our love of the hobby: Kiel Downing, Kirk Blackmon, and Drew Hetherington. Soon we were meeting at the breweries popping up all around our hometown of Highlands Ranch and neighboring Littleton. But we knew we were part of a larger community of fairly close-knit suburbanians.

Our corner of Highlands Ranch, called Firelight, is a place where neighbors regularly get together for community picnics, street parties, and wine tastings. And that last one may be the seed from which our new tradition grew. What about a good old-fashioned "pub crawl," but with an emphasis on tasting and experiencing beer as a craft beverage every bit as refined as wine? Instead of pubs, we'd wander between homebrewers' homes.



Tracing a path through the neighborhood, we'd sample each brewer's special creations and learn about their style choices and unique perspectives on the hobby.

The past three Firelight Homebrew Crawls have almost doubled in participation, and with more awareness of the homebrewers in the community, we've seen increased interest not only for the beers, but for the hobby itself. More esoteric brews are put forth, including farmhouse ales and experimental beers. The most recent crawl, on May 9 this year, featured mead for the first time.

Of course, there is food to go along with the brews, and while no formal tasting themes have ever been discussed, the nosh is always excellent: homemade stuffed jalapeños, green chili, game stews, and sausages. Even those who don't necessarily like beer (gasp!) enjoy contributing to the festivities. The homebrewers

get satisfaction from handing friends old and new a glass of our handiwork; beer makes us happy, and we want to share that happiness.

With this most recent Crawl, many folks joined in just to see what was motivating their neighbors to go wandering back and forth through this past spring's freezing rain and snow. The newcomers all found open doors and warm welcomes.

We're all painfully aware that we live in an isolated world of electronic distractions and selfies. The Crawl is the antithesis of that mentality; there's no staring at phones and tablets going on here. It's about food, friends, and family—a walk together through the neighborhood to the next welcoming home where homebrewed creations are waiting.

**Christopher Child is a homebrewer and meadmaker in Highlands Ranch, Colo.**



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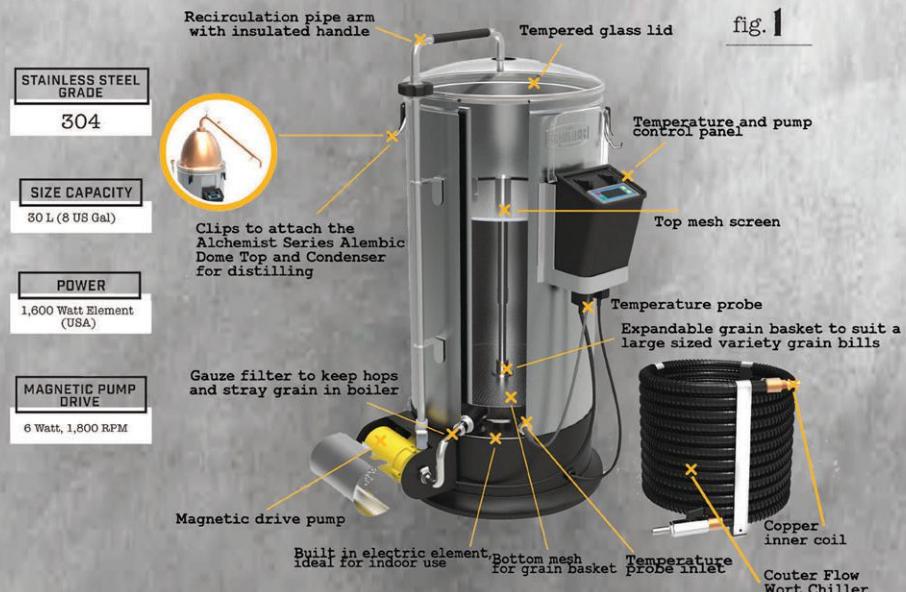
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