

BREWING TIPS & 101 RECIPES FOR MAKING GREAT STOUT

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STOUT STYLE GUIDE

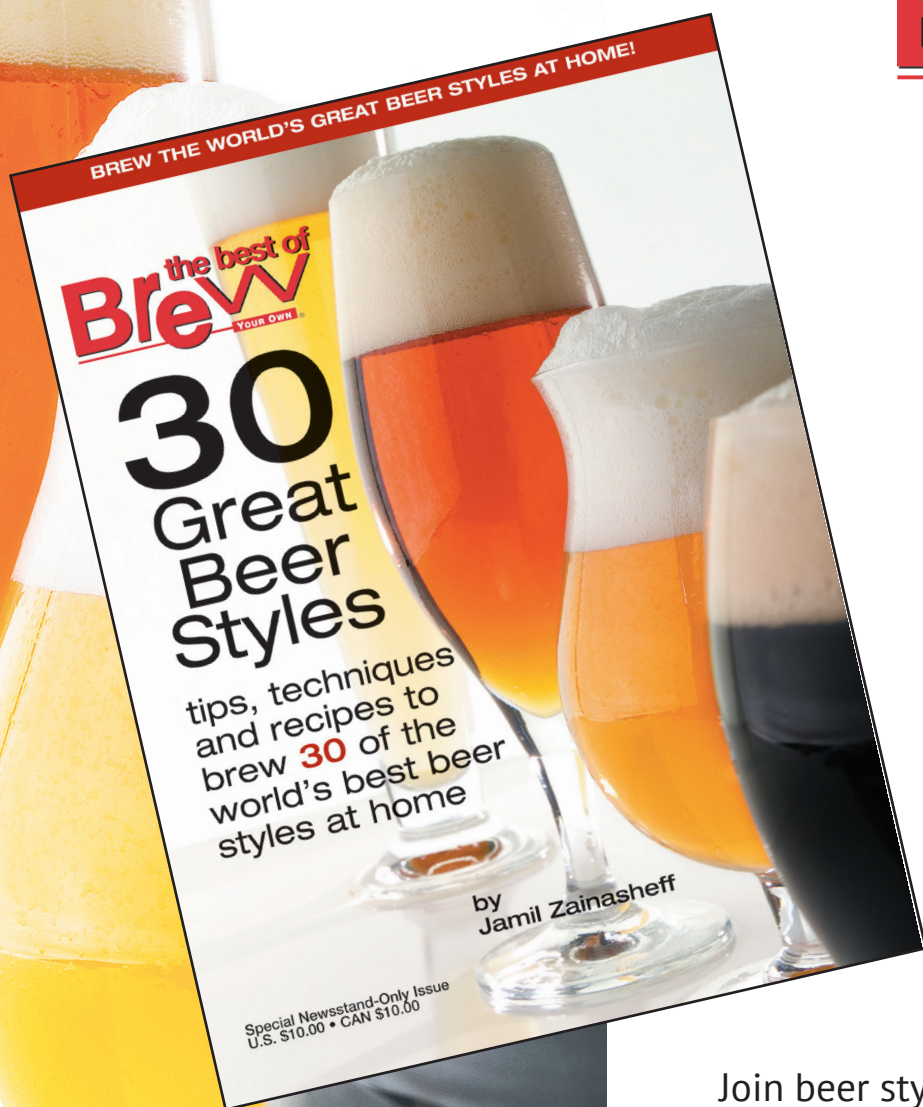
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brewing techniques & tips for
making your own American,
Irish, Imperial, Oatmeal,
Foreign Extra, Sweet,
and Specialty Stouts**

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STOUT STYLE GUIDE

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For all of the stout recipes that can't be defined, this is where you will find them. Whether it's cocoa nibs, coffee, oak aging, or some other elixir, these 30 recipes are hard to define, but easy to consume.



RECIPE STANDARDIZATION

EXTRACT EFFICIENCY: 65%

(i.e. — 1 pound of 2-row malt, which has a potential extract value of 1.037 in one US gallon of water, would yield a wort of 1.024.)

EXTRACT VALUES FOR MALT EXTRACT:

liquid malt extract (LME) = 1.033–1.037
dried malt extract (DME) = 1.045

POTENTIAL EXTRACT FOR GRAINS:

2-row base malts = 1.037–1.038
wheat malt = 1.037
6-row base malts = 1.035
Munich malt = 1.035
Vienna malt = 1.035
crystal malts = 1.033–1.035
chocolate malts = 1.034
dark roasted grains = 1.024–1.026
flaked maize and rice = 1.037–1.038

HOPS:

We calculate IBUs based on 25% hop utilization for a one-hour boil of hop pellets at specific gravities less than 1.050. For post-boil hop stands, we calculate IBUs based on 10% hop utilization for 30-minute hop stands at specific gravities less than 1.050. Increase hop dosage 10% if using whole leaf hops.

GALLONS:

We use US gallons whenever gallons are mentioned.

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STOUT STYLE GUIDE

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AMERICAN STOUT

by JAMIL ZAINASHEFF

I love the rich roastiness of a good American stout, but that was not always the case. Initially I was not impressed with the commercial examples that were supposedly in the American stout category. They were harsh, biting, and overly dry. Luckily, I had a chance to drink a Rogue Shakespeare Stout before giving up on liking this style. Filled with dark chocolate, coffee, and some citrusy hop notes, it is a great example of being bold, but remaining highly drinkable.

Like the Rogue stout, a good example of this style needs to have a big roasted malt aroma and flavor that is reminiscent of coffee and dark chocolate. American stout has more roasted malt flavors and aromas, almost bordering on burnt coffee in some examples, than all the other stout styles except Imperial. It is this high level of roasty character that also makes American stout appear anywhere from very dark brown to jet-black in color.

The overall balance of the beer is usually on the bitter side, although there should also be a low to medium malt sweetness. That sweetness helps balance the substantial bitterness of the roasted grains and hops. The finish ranges from medium to dry and may even present a slight roast grain astringency. While this is a medium to full-bodied beer, it should not be overly heavy or cloying. Generally, like most American-style ales,

this should have a clean fermentation profile, although light fruity esters are acceptable. Late hop character in this style varies from substantial hop character to relatively little. When present, the hop character is often of the citrusy or resinous American type.

The current 2015 Beer Judge Certification Program (BJCP) Style Guidelines list the ABV at 5 to 7%, but more and more you might see beers that many consider American stouts pushing past this 7% limit. Regardless, if you are brewing a beer in the upper range for alcohol, keep the alcohol character restrained. It should be clean and even though warming character is acceptable, it is better if it never gets too strong. You are not making a great example of the style if it has a hot alcohol character.

You have some flexibility in choosing base malt for American stout. My preference for almost all “American-style” beers is to use North American 2-row, which gives the beer a clean, subtle, background-malt character common to many fine American craft beers. For American stout you could also use North American pale ale malt, which adds a slightly richer background malt character. Again, this is the type of malt character found in many fine US-based craft brews. British pale ale malt or Pilsner malt has too much grainy and biscuit character for this style. Extract brewers should use a light color US-based malt extract. All-grain brewers can



Photo by Charles A. Parker/Images Plus

use a single infusion mash and a low enough mash temperature so that the resulting beer does not end up too viscous. A temperature range of 148–154 °F (64–68 °C) works well. Use a lower mash temperature when using lower attenuating yeasts or high starting gravities and use a higher temperature when using the higher attenuating yeasts or lower starting gravity beers.

The majority of the character that defines American stout comes from specialty malts and there is plenty of room for experimenting with specialty grains and rich malt flavors. Every American stout needs roasted malt notes and

// American stout has more roasted malt flavors and aromas, almost bordering on burnt coffee in some examples, than all the other stout styles except Imperial. //

many examples include caramel malt flavors. Experimenting with the amounts and colors of crystal and roasted malts is a great way to change the character of your beer.

The roast, chocolate, and coffee character of the style comes from the use of highly kilned grain. Roasted barley, black malt, and chocolate malt are most common. Keep in mind that highly kilned malts vary considerably from maltster to maltster, varying 100 °L or more for a similar named malt or roasted grain. Using highly roasted grain for 10% of the grist is about right for most recipes, but it can range from 7 to 15%. Keep in mind that beers at the higher end of this range can be acrid depending on the blend of roasted grain. A 50:50 mix of highly kilned and lighter kilned grain, like roast barley and choco-

late malt, strikes a nice balance of sharper roasted notes and less burnt coffee or chocolate notes. However, some commercial versions use mostly chocolate malt while others use almost all black malt. It really depends on the other balancing factors, which can either emphasize the acrid sharpness or mellow it out.

Crystal malts add caramel flavors and residual sweetness, which helps balance the bitterness of the roast grains and hops. For caramel flavors, I like a mid-color crystal for this style, but the type of crystal malt you use can range dramatically. I would not use lower than 40 °L crystal, but you can go higher. The quantity and the color of crystal malt is a key part of the balancing act. The lower the color of the crystal malt the sweeter it often seems. Darker crystal malts (80 to 150 °L) add caramelized, raisin-plum notes, but do not seem as sweet. You want to try to balance the sweetness of the crystal malt, the residual sweetness from unfermented sugars, the sharp, highly roasted grains, and the hop bittering to achieve a balanced, drinkable finish. In general, your crystal malt amounts are going to range from 5 to 10% of the total grist, though exceptions are possible.

If you are looking for more complexity, mouthfeel or increased head retention, it is possible to add other malts as well. Oats, wheat malt, Munich malt, and more are common additions. Just use restraint so the beer does not become saturated with unfermentable dextrins or cloying flavors. Target between 0 and 5% for these additional specialty grains.

Hop flavor and aroma varies from minimal to bold. Typical hop additions for this style are American varieties, but you have plenty of leeway when making your hop choices. Almost anything is fair game as long as you do not try to build a big German noble hop



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— FOR ANY STYLE STOUT —

- 1056 - American Ale®
- 1028 - London Ale
- 1084 - Irish Ale
- 1450 - Denny's Favorite 50
- 1098 - British Ale

— DRY IRISH STOUT —

- 1275 - Thames Valley Ale
- 1335 - British Ale II

— SWEET OR OATMEAL STOUT —

- 1332 - Northwest Ale
- 1318 - London Ale III
- 1469 - West Yorkshire Ale
- 1187 - Ringwood Ale

— FOREIGN EXTRA STOUT —

- 1728 - Scottish Ale

— AMERICAN STOUT —

Any of the above strains

— RUSSIAN IMPERIAL STOUT —

- 1762 - Belgian Abbey II

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character or something along those lines. It is the overall impression that matters. I like using citrusy or piney American variety hops such as Cascade, Centennial, Columbus, and Amarillo® for flavor and aroma. You can bitter with almost any hop as well, but clean, neutral hops are most common. In any interpretation, late hop additions are acceptable, but you need to have some idea of how any citrusy, acidic notes from the hops might play alongside the roast character.

To cut back on the amount of hop material at the end of the boil and subsequent wort loss, I prefer to use high-alpha hops for the bulk of the bittering. While all American stouts should have a medium to high bitterness, the balance of bittering versus malt sweetness can range from balanced to firmly bitter. The calculated bitterness to starting gravity ratio (IBU divided by original gravity) can range anywhere from 0.7 to 1.5, but I like to target in the range of 1.0 to 1.3.

Fermentation should result in a well-attenuated, low ester beer. If you prefer a cleaner, less fruity, more American ale version, ferment with one of the clean American-type strains, such as White Labs WLP001 (California Ale) or Wyeast 1056 (American Ale). You will not have to worry too much about leaving an overly sweet beer with these yeasts either, as they tend to attenuate well even in big beers and at a range of temperatures. Other good choices along these lines are White Labs WLP051 (California V Ale) and Wyeast 1272 (American Ale II), Wyeast 1450 (Denny's Favorite 50) or Wyeast 1764 (Rogue Pac-man). If you want a more complex beer, you can consider a British or Irish ale yeast, such as White Labs WLP004 (Irish Stout) or WLP002 (English Ale), and Wyeast 1968 (London ESB) or 1084 (Irish Ale).

Regardless of the yeast, you

// Regardless of the yeast, you want good attenuation and a relatively clean profile so make certain you oxygenate the wort and pitch an appropriate amount of clean, healthy yeast. //



Photo courtesy of Cabot Cheese

want good attenuation and a relatively clean profile so make certain you oxygenate the wort and pitch an appropriate amount of clean, healthy yeast. Most of the fermentations should be around the 65 to 70 °F (18 to 21 °C) range depending on the yeast strain and recipe. Try to pick a temperature and stick with it, holding the temperature steady throughout fermentation. Holding the temperature steady is important to getting a proper level of attenuation and avoiding off-flavors, especially if you are making a bigger beer. Large temperature swings can result in the yeast flocculating early or producing solventy and/or overly estery beers. If you wish, you can raise the temperature a few degrees

near the end of fermentation to help the yeast clean up some of the intermediate compounds produced during fermentation, but with an appropriate pitch and proper temperature control that shouldn't be necessary.

One thing about beers with a high level of roast character is that fresh out of the fermenter they can have an acrid, biting, sharp character. If you experience that in your beer, a little time can let some very dusty roast malt particles settle out and can help lessen that character. Time also affects the balance and intensity of other flavors, and can mellow some of the harsher aspects, so sometimes letting the beer sit for a few weeks before drinking is a wise move.

DIRTY HANDS BREWING CO.'S LIBERTY SHIP STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.057 FG = 1.012

IBU = 23 SRM = 33 ABV = 6%

This beer has a nice bittersweet chocolate and coffee profile, with just enough hop presence to offset any cloying sweetness.

Ingredients

- 8.7 lbs. (4 kg) 2-row pale malt
- 1.2 lbs. (0.54 kg) crystal malt (15 °L)
- 1.1 lbs. (0.5 kg) Munich malt (10 °L)
- 15 oz. (0.42 kg) chocolate malt
- 2 oz. (57 g) Briess Midnight Wheat malt
- 3.9 AAU Galena hop pellets (60 min.) (0.3 oz./8.5 g at 13% alpha acids)
- 3.2 AAU Centennial hop pellets (30 min.) (0.3 oz./8.5 g at 10.5% alpha acids)
- 13.2 AAU Simcoe® hop pellets (0 min.) (1 oz./28 g at 13.2% alpha acids)
- ½ tsp. Irish moss (15 min.)
- ½ tsp. yeast nutrient (15 min.)
- White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), or Safale US-05 yeast
- ⅔ cup corn sugar (if priming)

Step by Step

This recipe is a single step infusion mash. Mix all of the crushed grains with 4 gallons (15 L) of 166 °F (74 °C) water to stabilize at 153 °F (67 °C). This is a medium mash using 1.4 quarts of strike water per pound of grain (2.9 L/kg). This ratio will help to reduce fermentability. A less fermentable wort is also created by the medium-high mash temperature. Slowly sparge with 175 °F (79 °C) water.

Collect approximately 6 gallons (23 L) of wort runoff. Boil for 60 minutes. While boiling, add the hops, Irish moss, and yeast nutrient as per the schedule. During the boil, use this time to thoroughly sanitize your fermentation equipment.

Once the boil is complete, cool the wort to 75 °F (24 °C) and transfer to your fermenter. Pitch the yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at

that temperature until fermentation is complete. This may take 6–8 days. Gently transfer to a carboy, avoiding any splashing to prevent aerating the beer. Allow the beer to condition for an additional week. Prime and bottle condition or keg and force carbonate to 2.2 volumes CO₂. Allow the beer to age for at least two more weeks to fully develop the flavors and enjoy your Liberty Ship Stout clone.

DIRTY HANDS BREWING CO.'S LIBERTY SHIP STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.057 FG = 1.012

IBU = 23 SRM = 33 ABV = 6%

Ingredients

- 3.3 lbs. (1.5 kg) Briess light, unhopped, liquid malt extract
- 2 lbs. (0.9 kg) light dried malt extract
- 1.2 lbs. (0.54 kg) crystal malt (15 °L)
- 1.1 lbs. (0.5 kg) Munich malt (10 °L)
- 15 oz. (0.42 kg) chocolate malt
- 2 oz. (57 g) Briess Midnight Wheat malt
- 5.2 AAU Galena hop pellets (60 min.) (0.4 oz./11 g at 13% alpha acids)
- 4.2 AAU Centennial hop pellets (30 min.) (0.4 oz./11 g at 10.5% alpha acids)
- 13.2 AAU Simcoe® hop pellets (0 min.) (1 oz./28 g at 13.2% alpha acids)
- ½ tsp. Irish moss (15 min.)
- ½ tsp. yeast nutrient (15 min.)
- White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), or Safale US-05 yeast
- ⅔ cup corn sugar (if priming)

Step by Step

Steep the milled grain in 1 gallon (3.8 L) of water at 153 °F (67 °C) for 30 minutes. Remove grains from the wort and rinse with 2 quarts (1.8 L) of hot water. Top up with 1.5 gallons (5.7 L) water, add the liquid malt extract and boil for 60 minutes. While performing the boil, add the hops, Irish moss and yeast nutrient as per the schedule. During the boil, use this time to thoroughly sanitize your fermentation equipment. When the boil is complete add the wort to 2 gallons (7.6 L) of cold water in the sanitized fermenter and top off with cold water

up to 5 gallons (19 L).

Cool the wort to 75 °F (24 °C). Pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. This may take 6–8 days. Transfer to a carboy, avoiding any splashing to prevent aerating the beer. Allow the beer to condition for an additional week. Prime and bottle condition or keg and force carbonate to 2.2 volumes CO₂. Allow the beer to age for at least two more weeks to fully develop the flavors and enjoy your Liberty Ship Stout clone.

FISH BREWING CO.'S FISH TALE TROUT STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.059 FG = 1.016

IBU = 36 SRM = 36 ABV = 5.8%

Ingredients

- 8.5 lbs. (3.9 kg) 2-row pale malt
- 1 lb. (0.45 kg) Munich malt
- 1 lb. (0.45 kg) Carapils® malt
- 0.5 lb. (0.23 kg) crystal malt (15 °L)
- 0.5 lb. (0.23 kg) crystal malt (40 °L)
- 1 lb. (0.45 kg) pale chocolate malt (220 °L)
- 0.5 lb. (0.23 kg) black malt
- ¾ tsp. gypsum salt
- 1 tsp. Irish moss (15 min.)
- 8.4 AAU Chinook hops (60 min.) (0.7 oz./20 g at 12% alpha acids)
- 1.1 AAU Cascade hops (60 min.) (0.2 oz./5.6 g at 5.5% alpha acids)
- 1.1 AAU Cascade pellet hops (10 min.) (0.2 oz./5.6 g at 5.5% alpha acids)
- 1.1 AAU Cascade pellet hops (0 min.) (0.2 oz./5.6 g at 5.5% alpha acids)
- Wyeast 1332 (Northwest Ale) or White Labs WLP041 (Pacific Ale) yeast
- ⅔ cup corn sugar (if priming)

Step by Step

Heat 4 gallons (15 L) of strike water to 166 °F (74 °C) and add the gypsum salt. Mash grains at 155 °F (68 °C). Rest for 30 minutes, recirculate until clear, then sparge with 170 °F (77 °C) water until 6.5 gallons (24.6 L) of wort is collected in the kettle.

Employ a 90-minute boil, adding hops and Irish moss as indicated in the ingredients list. Following the boil, cool to 75 °F (24 °C). Pitch your yeast

and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature and ferment until final gravity is reached. When fermentation is complete, prime and bottle condition or keg and force carbonate.

FISH BREWING CO.'S FISH TALE TROUT STOUT CLONE

(5 gallons/19 L, extract with grains)
OG = 1.059 FG = 1.016
IBU = 36 SRM = 36 ABV = 5.8%

Ingredients

1 lb. (0.45 kg) Munich dried malt extract
5 lbs. (2.3 kg) light liquid malt extract (15 min.)
1 lb. (0.45 kg) Carapils® malt
0.5 lb. (0.23 kg) crystal malt (15 °L)
0.5 lb. (0.23 kg) crystal malt (40 °L)
1 lb. (0.45 kg) pale chocolate malt (220 °L)
0.5 lb. (0.23 kg) black malt
¾ tsp. gypsum salt
1 tsp. Irish moss (15 min.)
8.4 AAU Chinook hops (60 min.) (0.7 oz./20 g at 12% alpha acids)
1.1 AAU Cascade hops (60 min.) (0.2 oz./5.6 g at 5.5% alpha acids)
1.1 AAU Cascade pellet hops (10 min.) (0.2 oz./5.6 g at 5.5% alpha acids)
1.1 AAU Cascade pellet hops (0 min.) (0.2 oz./5.6 g at 5.5% alpha acids)
Wyeast 1332 (Northwest Ale) or White Labs WLP041 (Pacific Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Steep crushed grains in a nylon bag at 155 °F (68 °C) in 1.7 gallons (6.4 L) of water for 30 minutes. Rinse grains with 0.75 gallons (2.8 L) of water at 170 °F (77 °C). Add ~0.8 gallons (~3 L) of boiling water to make 3 gallons (11 L), add dried malt extract, and bring to a boil.

Boil for 60 minutes, adding hops at times indicated in the ingredient list. At 15 minutes remaining in the boil, stir in liquid malt extract and Irish moss or other finings.

After the boil, cool wort and top up to 5 gallons (19 L), aerate, and pitch yeast. Ferment at 68 °F (20 °C) until final gravity is reached. When fermentation is complete, prime and bottle condition or keg and force carbonate.

GOLDEN AGE STOUT

(5 gallons/19 L, all-grain)
OG = 1.064 FG = 1.016
IBU = 62 SRM = 26 ABV = 6.5%

Ingredients

10 lbs. (4.5 kg) 2-row pale malt
2 lbs. (0.91 kg) Munich malt (10 °L)
1 lb. (0.45 kg) caramel malt (80 °L)
0.5 lb. (0.23 kg) black malt
10.5 AAU Cluster hop pellets (90 min.) (1.5 oz./43 g at 7% alpha acids)
7 AAU Cluster hop pellets (0 min.) (1 oz./28 g at 7% alpha acids)
9 AAU Brewer's Gold hop pellets (0 min.) (1 oz./28 g at 9% alpha acids)
2 packs Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mash the grains at 150–152 °F (66–67 °C) with 16 qts. (15 L) of hot water for 60 minutes. Run off the wort and sparge with hot water to reach a pre-boil volume of about 6.5 gallons (24.6 L) in the brewpot.

Bring the wort to a boil and add the first portion of Cluster hops. Boil for 90 minutes, turn off the heat, and add the second portion of Cluster and Brewer's Gold hops. Let the wort stand for 30 minutes, run off from the trub, and cool to about 70 °F (21 °C). Pitch the yeast, preferably as a 2-qt. (2-L) starter. Ferment for five days at 65–70 °F (18–21 °C), then rack to the secondary for seven to 10 days. Bottle or keg in the usual manner, allowing two to three weeks before drinking.

GOLDEN AGE STOUT

(5 gallons/19 L, extract with grains)
OG = 1.063 FG = 1.015
IBU = 62 SRM = 29 ABV = 6.5%

Ingredients

6.6 lbs. (3 kg) amber liquid malt extract
1 lb. (0.45 kg) extra light dried malt extract
1 lb. (0.45 kg) caramel malt (80 °L)
0.5 lb. (0.23 kg) black malt
10.5 AAU Cluster hop pellets (90 min.) (1.5 oz./43 g at 7% alpha acids)
7 AAU Cluster hop pellets (0 min.) (1 oz./28 g at 7% alpha acids)
9 AAU Brewer's Gold hop pellets

(0 min.) (1 oz./28 g at 9% alpha acids)

2 packs Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Steep the grains with 3 qts. (3 L) of hot water at 140–150 °F (60–66 °C) for 30 minutes. Pull the grains out of the brewpot and drain the liquid into your brewpot, rinsing with an additional 3–4 qts. (3–4 L) of hot water. Add the dried malt extract and about a third of the liquid malt extract, stirring carefully to make sure it is properly dissolved, then top up the brewpot volume to 5 gallons (19 L).

Bring the wort to a boil, add the first portion of Cluster hops, and boil for 60 minutes, adding the remainder of the liquid malt extract 15 minutes before the end of the boil.

Turn off the heat, add the second portion of Cluster hops along with the Brewer's Gold hops, and allow the wort to rest for 30 minutes. Cool to 70 °F (21 °C), top off to 5 gallons (19 L) and pitch the yeast, preferably as a 2-qt. (2-L) starter. Ferment for five days at 65–70 °F (18–21 °C), then rack to secondary. After 7–10 days, bottle or keg in the usual manner, and allow two to three weeks before drinking.

GREEN LEAF BREWING CO.'S GREEN LEAF STOUT CLONE

(5 gallons/19 L, all-grain)
OG = 1.057 FG = 1.016
IBU = 36 SRM = 45 ABV = 5.5%

With a dense tan head, Green Leaf Brewing's Stout has a nose that exhibits notes of chocolate, coffee, and roasted malt. It's heavy-bodied with a balance of sweetness and bitterness.

Ingredients

8 lbs. (3.6 kg) 2-row pale malt
8 oz. (0.23 kg) crystal malt (60 °L)
8 oz. (0.23 kg) crystal malt (120 °L)
14 oz. (0.4 kg) chocolate malt (350 °L)
11 oz. (0.31 kg) roasted barley (450 °L)
10 oz. (0.28 kg) Carapils® (dextrin) malt
7 oz. (0.2 kg) flaked barley
10 oz. (0.28 kg) flaked oats
6.8 AAU Northern Brewer hops

(60 min.) (0.8 oz./23 g at 8.5% alpha acids)
3.4 AAU Northern Brewer hops (30 min.) (0.4 oz./11 g at 8.5% alpha acids)

½ tsp. Irish moss (30 min.)
½ tsp. yeast nutrient (15 min.)
White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), or Safale US-05 yeast
⅔ cup corn sugar (if priming)

Step by Step

This is a single step infusion mash. Mix all of the crushed grains with 4.75 gallons (18 L) of 171 °F (77 °C) water to stabilize at 154 °F (68 °C) for 60 minutes. Slowly sparge with 175 °F (79 °C) water. Collect approximately 6 gallons (23 L) of wort runoff to boil for 60 minutes. While boiling, add the hops, Irish moss and yeast nutrient as per the schedule. When done, add the wort to 2 gallons (7.6 L) of cold water in the sanitized fermenter and top off with cold water up to 5 gallons (19 L).

Cool the wort to 75 °F (24 °C). Pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete and then transfer to a carboy and allow the beer to condition for 1 week before bottling or kegging.

GREEN LEAF BREWING CO.'S GREEN LEAF STOUT CLONE

(5 gallons/19 L, extract with grains)
OG = 1.057 FG = 1.016
IBU = 36 SRM = 45 ABV = 5.5%

Ingredients

3.3 lbs. (1.5 kg) Coopers light, unhopped, liquid malt extract
2 lbs. (0.91 kg) extra light dried malt extract
1 lb. (0.45 kg) Carapils® (dextrin) malt
8 oz. (0.23 kg) crystal malt (60 °L)
8 oz. (0.23 kg) crystal malt (120 °L)
14 oz. (0.40 kg) chocolate malt (350 °L)
11 oz. (0.31 kg) roasted barley (450 °L)
8.5 AAU Northern Brewer hops (60 min.) (1 oz./28 g at 8.5% alpha acids)
4.25 AAU Northern Brewer hops (30 min.) (0.5 oz./14 g at 8.5% alpha acids)

½ tsp. Irish moss (30 min.)
½ tsp. yeast nutrient (15 min.)
White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), or Safale US-05 yeast
⅔ cup corn sugar (if priming)

Step by Step

Steep the crushed grains in 2.25 gallons (8.5 L) of water at 154 °F (68 °C) for 30 minutes. Remove grains from the wort and rinse with 2 quarts (1.9 L) of hot water. Add the malt extracts and boil for 60 minutes. While boiling, add the hops, Irish moss, and yeast nutrient as per the schedule. When done, add the wort to 2 gallons (7.6 L) of cold water in the sanitized fermenter and top off with cold water up to 5 gallons (19 L).

Cool the wort to 75 °F (24 °C). Pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete and then transfer to a carboy and allow the beer to condition for 1 week before bottling or kegging.

JAMIL'S AMERICAN STOUT

(5 gallons/19 L, all-grain)
OG = 1.072 FG = 1.017
IBU = 73 SRM = 46 ABV = 7.7%

Ingredients

13.5 lbs. (6.1 kg) Great Western pale malt (2 °L)
14.5 oz. (0.41 kg) Briess black barley (500 °L)
10.9 oz. (0.31 kg) crystal malt (40 °L)
10.9 oz. (0.31 kg) chocolate malt (420 °L)
14.3 AAU Horizon hops (60 min.) (1.1 oz./31 g at 13% alpha acids)
7.6 AAU Centennial pellet hops (5 min.) (0.84 oz./24 g at 9% alpha acids)
White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Mill the grains and dough-in targeting a mash thickness that will allow your system to achieve the necessary pre-boil volume and gravity. Hold the mash at 154 °F (68 °C) until enzymatic conversion is complete. Infuse the

mash with near boiling water while stirring, or with a recirculating mash system raise the temperature to mash out at 168 °F (76 °C). Sparge with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 6.5 gallons (25 L) and the specific gravity is 1.056.

The total boil time is 90 minutes. Add the hops at times indicated. Chill the wort to 67 °F (19 °C) and aerate thoroughly. The proper pitch rate is 2.5 packages of liquid yeast or 1 package of liquid yeast in a 3.1-liter starter. Ferment at 67 °F (19 °C) until the yeast drops clear. Allow the lees to settle and the brew to mature without pressure for another two days after fermentation appears finished. Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle. Target a carbonation level of 2.5 volumes.

JAMIL'S AMERICAN STOUT

(5 gallons/19 L, extract with grains)
OG = 1.072 FG = 1.017
IBU = 73 SRM = 45 ABV = 7.7%

Ingredients

8.7 lbs. (4 kg) light liquid malt extract
14.5 oz. (0.41 kg) Briess black barley (500 °L)
10.9 oz. (0.31 kg) crystal malt (40 °L)
10.9 oz. (0.31 kg) chocolate malt (420 °L)
14.3 AAU Horizon hops (60 min.) (1.1 oz./31 g at 13% alpha acids)
7.6 AAU Centennial pellet hops (5 min.) (0.84 oz./24 g at 9% alpha acids)
White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Mill or coarsely crack the specialty malt and place loosely in a grain bag. Avoid packing the grains too tightly in the bag. Steep the bag in about 1 gallon (~4 liters) of water at roughly 170 °F (77 °C) for about 30 minutes. Lift the grain bag out of the steeping liquid and rinse with warm water. Allow the bags to drip into the kettle while you add the malt extract. Do not squeeze the bags. Add enough water to the steeping liquor and malt extract

to make a pre-boil volume of 5.9 gallons (22.3 L) and a gravity of 1.061. Stir thoroughly to help dissolve the extract and bring to a boil.

Boil the wort 60 minutes, adding hops at times indicated. Chill the wort to 67 °F (19 °C) and aerate thoroughly. The proper pitch rate is 2.5 packages of liquid yeast or 1 package of liquid yeast in a 3.1-liter starter. Ferment at 67 °F (19 °C) until the yeast drops clear. Allow the lees to settle and the brew to mature without pressure for another two days after fermentation appears finished. Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle. Target a carbonation level of 2.5 volumes.

MCMENAMINS BREWRIES' TERMINATOR STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.065 FG = 1.016

IBU = 27 SRM = 40 ABV = 6.7%

McMenamins describes Terminator Stout with, "A wide array of toasted, chocolate, nutty, and coffee-like flavors."

Ingredients

10 lbs. (4.5 kg) 2-row pale malt
2.25 lbs. (1 kg) Munich malt
1 lb. (0.45 kg) crystal malt (40 °L)
1 lb. (0.45 kg) black barley (530 °L)
6.5 AAU Chinook hop pellets (60 min.)
(0.5 oz./14 g at 13% alpha acids)
1.4 AAU Cascade hop pellets (30 min.)
(0.25 oz./7 g at 5.5% alpha acids)
½ tsp. Irish moss (30 min.)
½ tsp. yeast nutrient (15 min.)
White Labs WLP001 (California Ale),
Wyeast 1056 (American Ale), or
Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

This is a single-step infusion mash. Mix all of the crushed grains with 4.75 gallons (18 L) of 171 °F (77 °C) water to stabilize at 156 °F (69 °C) for 60 minutes. Slowly sparge with 175 °F (79 °C) water. Collect approximately 6 gallons (23 L) of wort runoff to boil for 60 minutes. While boiling, add other ingredients as per the schedule.

Cool the wort to 75 °F (24 °C).

Pitch your yeast and aerate the wort

heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Transfer to a carboy and allow the beer to condition for 1 week and then bottle or keg.

MCMENAMINS BREWRIES' TERMINATOR STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.065 FG = 1.016

IBU = 27 SRM = 40 ABV = 6.7%

Ingredients

3.3 lbs. (1.5 kg) Briess, light,
unhopped, liquid malt extract
2.6 lbs. (1.2 kg) extra light dried malt
extract
2.25 lbs. (1 kg) Munich malt
1 lb. (0.45 kg) crystal malt (40 °L)
1 lb. (0.45 kg) black barley (530 °L)
7.8 AAU Chinook hop pellets (60 min.)
(0.6 oz./17 g at 13% alpha acids)
1.65 AAU Cascade hop pellets
(30 min.) (0.3 oz./9 g at 5.5%
alpha acids)
½ tsp. Irish moss (30 min.)
½ tsp. yeast nutrient (15 min.)
White Labs WLP001 (California Ale),

Wyeast 1056 (American Ale), or
Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Steep the crushed grains in 1 gallon (4 L) of water at 156 °F (69 °C) for 30 minutes. Then rinse the grains with 2 quarts (1.9 L) of hot water. Add the extracts, top off to 3 gallons (11 L), and boil 60 minutes. While boiling, add other ingredients as per the schedule. When finished, add the wort to 2 gallons (7.6 L) of cold water in a sanitized fermenter and top off with cold water up to 5 gallons (19 L).

Cool the wort to 75 °F (24 °C).

Pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Transfer to a carboy and allow the beer to condition for 1 week and then bottle or keg.

ROGUE'S SHAKESPEARE STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.060 FG = 1.018

IBU = 60 SRM = 48 ABV = 5.8%



Photo by Charles A. Parker/Images Plus

Rogue's Shakespeare Stout is a classic example of the style. Rogue describes it as, "Ebony in color with a rich creamy head, earthy flavor and a mellow, chocolate finish."

Ingredients

8.8 lbs. (4 kg) Great Western pale malt (2 °L)
 1.34 lbs. (0.61 kg) flaked oats (2 °L)
 1.45 lbs. (0.66 kg) Briess chocolate malt (350 °L)
 1.34 lbs. (0.61 kg) crystal malt (120 °L)
 3.17 oz. (90 g) black barley (500 °L)
 12.8 AAU Cascade hops (60 min.) (2 oz./57 g at 6.4% alpha acids)
 7.2 AAU Cascade pellet hops (15 min.) (1.13 oz./32 g at 6.4% alpha acids)
 Wyeast 1764 (Rogue Pacman) or Lallemend Nottingham yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mill the grains and dough-in. Hold the mash at 148 °F (64 °C) until enzymatic conversion is complete. Infuse the mash with near boiling water while stirring or with a recirculating mash system raise the temperature to mash out at 168 °F (76 °C). Sparge with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 6.5 gallons (25 L) and the gravity is 1.046.

The total wort boil time is 90 minutes. Add the hops according to the ingredients list. Following the boil, chill the wort to 60 °F (16 °C) and aerate thoroughly. The proper pitch rate is two packages of liquid yeast, one package of dry yeast, or one package of liquid yeast in a 2-liter starter.

Pacman yeast (and Nottingham) ferments well at cold temperatures, but you can let it warm a little as fermentation progresses to ensure complete attenuation. Pitch at 60 °F (16 °C) and ferment until the yeast drops clear. Allow the brew to mature without pressure for another two days after fermentation appears finished. Rack to a keg or bottle. Target a carbonation level of 2.5 volumes.

ROGUE'S SHAKESPEARE STOUT CLONE

(5 gallons/19 L, partial mash)
 OG = 1.060 FG = 1.018
 IBU = 60 SRM = 48 ABV = 5.8%

Ingredients

4 lbs. (1.8 kg) extra light dried malt extract
 1.34 lbs. (0.61 kg) Great Western pale malt (2 °L)
 1.34 lbs. (0.61 kg) flaked oats (2 °L)
 1.45 lbs. (0.66 kg) Briess chocolate malt (350 °L)
 1.34 lbs. (0.61 kg) crystal malt (120 °L)
 3.17 oz. (90 g) black barley (500 °L)
 12.8 AAU Cascade hops (60 min.) (2 oz./57 g at 6.4% alpha acids)
 7.2 AAU Cascade pellet hops (15 min.) (1.13 oz./32 g at 6.4% alpha acids)
 Wyeast 1764 (Rogue Pacman) or Lallemend Nottingham yeast
 ¾ cup corn sugar (if priming)

Step by Step

Place the crushed pale malt and flaked oats grains in a large muslin bag. Mix in with 7 qts. (6.7 L) water. Hold the mash at 148 °F (64 °C) for 60 minutes. Place the crushed crystal and roasted grains in a second muslin bag and add to the mash for 15 minutes longer. Heat the mash up to 168 °F (76 °C), then remove the bags and wash the grains with 1 gallon (4 L) hot water. Stir in the dried malt extract and add water until the pre-boil kettle volume is around 6 gallons (23 L) and the gravity is 1.050.

The total wort boil time is 60 minutes. Add the hops according to the ingredients list. Chill the wort to 60 °F (16 °C) and aerate thoroughly. The remainder of this recipe is the same as the all-grain version.

SIERRA NEVADA BREWING CO.'S STOUT CLONE

(5 gallons/19 L, all-grain)
 OG = 1.061 FG = 1.020
 IBU = 50 SRM = 45 ABV = 5.8%

Ingredients

9 lbs. (4.1 kg) American 2-row pale malt
 2 lbs. (0.91 kg) Munich malt (10 °L)
 0.67 lb. (0.3 kg) crystal malt (60 °L)
 8 oz. (23 kg) Carafa® II malt
 8 oz. (23 kg) roasted barley (300 °L)
 5 oz. (14 kg) chocolate malt (350 °L)
 5 oz. (14 kg) black patent malt (500 °L)
 12 AAU Bravo hops (60 min.) (0.75 oz./21 g at 16% alpha acids)
 5.75 AAU Cascade hops (10 min.) (1 oz./28 g at 5.75% alpha acids)

2 oz. (57 g) Yakima Golding hops (0 min)
 Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mash 154 °F (68 °C) for 60 minutes in 16 qts. (15 L) of water. Boil wort for 60 minutes. Ferment for 7 days at 68 °F (20 °C). Rack to secondary and condition for 14 days at 68 °F (20 °C). Bottle or keg as normal.

SIERRA NEVADA BREWING CO.'S STOUT CLONE

(5 gallons/19 L, extract with grains)
 OG = 1.061 FG = 1.020
 IBU = 50 SRM = 45 ABV = 5.8%

Ingredients

3 lbs. (1.4 kg) Briess extra light dried malt extract
 3.3 lbs. (1.5 kg) Munich liquid malt extract (15 min.)
 0.67 lb. (0.3 kg) crystal malt (60 °L)
 8 oz. (23 kg) Carafa® II malt
 8 oz. (23 kg) roasted barley (300 °L)
 5 oz. (14 kg) chocolate malt (350 °L)
 5 oz. (14 kg) black patent malt (500 °L)
 12 AAU Bravo hops (60 min.) (0.75 oz./21 g at 16% alpha acids)
 5.75 AAU Cascade hops (10 min.) (1 oz./28 g at 5.75% alpha acids)
 2 oz. (57 g) Yakima Golding hops (0 min)
 Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
 ¾ cup corn sugar (if priming)

Step by Step

Steep the crushed grains in 2 gallons (7.6 L) of water as the water heats up to 170 °F (77 °C). Wash the grains with 1 gallon (4 L) of hot water. Combine grain tea with dried malt extract and add enough water to total at least 3.5 gallons (13 L). Boil wort for 60 minutes. Add hops as per ingredient list and liquid malt extract with 15 minutes left in boil. Top off to 5 gallons (19 L) with cold water at the end of the boil and aerate the wort once it is chilled. Ferment at 68 °F (20 °C). Rack to secondary and condition beer for 14 days at 68 °F (20 °C). Bottle or keg as normal.

FOREIGN EXTRA STOUT

by JAMIL ZAINASHEFF

It was at least 90 °F (32 °C) and 90% humidity as I neared the end of my walk from one hot, dusty end of Barbados to the other. Thankfully, I spotted a roadside stand and even from a considerable distance, I could tell the bottles lining the bar were not the pale lagers common to most Caribbean islands. As I got closer to the ramshackle stand, I could see that these were bottles of Guinness Foreign Extra Stout. I was still fairly new to the world of craft brew, but I had read about this style in one of Michael Jackson's books. I knew that it was a unique beer brewed for tropical markets but I had never tried it. I thought it was quite odd that they'd sell a big, rich, roasty beer (something I'd drink on a frosty night at home) in a place that required wearing shorts year-round.

But hey, I was a budding beer geek and I wanted one, even if it was served a little warm. As I sat on the rickety barstool under the rusty tin roof sipping my beer, I began to appreciate the genius behind this style of beer in a hot climate. The beer wasn't freezing cold and it wasn't crisp and light. To this day I'm not 100% sure if it was the dryness of the roasted malt, the dilating effect of the alcohol on my blood vessels, or some other beery magic that occurs when you are hot, tired, and thirsty, but I can vouch for the fact that the beer was indeed refreshing.

There are eight different stout

styles defined in the 2015 Beer Judge Certification Program (BJCP) Style Guidelines and a common question is what exactly distinguishes one style of stout from another? How do I know if the recipe I created will make a mediocre sweet stout or an excellent foreign extra stout?

Many people think all stouts are the same. While the different sub-styles share many key attributes, there is still plenty to differentiate them. For example, all stouts are very dark beers and they all have roasted grain notes. They all have alcohol, fruity esters, hop bitterness, hop character, and residual sweetness too, but it is the prominence or subtlety of these attributes that differentiate one style from another.

Foreign extra stout has a moderate to high roasted grain flavor and aroma, reminiscent of coffee and chocolate. It can have some light burnt notes, but it will not have as dry and sharp of a roast character as a dry stout. Foreign extra stout is also a much bigger beer than Irish stout. It is usually bigger than oatmeal stout and sweet stout too. It can be big enough to have a gentle warming from the alcohol, but keep in mind that this should not be as big as Imperial stout and the alcohol should still be subtle. Foreign extra stout has very little to no hop flavor or aroma, while Imperial stout and American stout both tend to have a noticeable late hop character.



Photo by Jim Witmer

The style that used to be considered foreign extra stout for a long time had two common variants, however in the 2015 Beer Judge Certification Program (BJCP) Style Guidelines these two variants were appropriately broken up to form two unique beer styles with the addition of a unique category for tropical stout. According to the most recent guidelines, foreign extra (also called export stout) is medium-bodied, drier, less estery, more roasty, and more bitter, while tropical stouts are more full-bodied, sweeter, fruitier and have a smoother roast character. While the tropical stouts can have a high level of fruit esters, the export stouts tends to be more restrained, with some examples quite clean. In the end, the foreign extra stout style is very similar to a scaled-up dry stout, while tropical stout is more similar to a scaled up sweet stout. However, because of the great similarity between the two styles (and the fact that they were one style up until the 2015 BJCP revisions), will lump the two together for this column.

In competitions, I think many beer judges tend to favor the sweeter, fuller tropical style. The presence of higher alcohols, a little sweetness, dark malts, and some esters from fermentation lend dried fruit or dark fruit notes to these beers and that bit of character helps it stand out a little. Of course, this can be overdone and in a flight of estery beers with lots of alcohol, the cleaner, less aggressive beer can stand out too, so don't overdo it.

I prefer to use British pale ale malt as the base for foreign extra and tropical stout. This more highly-kilned malt adds a background biscuity-malty note that fills out the malt profile of the beer. While you can substitute North American 2-row malt, it has a lighter character better suited to American stout. If you must use North American 2-row, you might

want to add a touch (5% or less) of specialty grains, such as biscuit or Victory® malt to create a slightly more interesting malt profile. Extract brewers should also try to use a British pale ale-based extract.

The roast, chocolate, and coffee character of the style comes from the use of highly-kilned grain. While it has been said that

drier finish. For foreign extra stout, keeping the crystal malt to a maximum of 5% of the grist will help. Eliminating the mid-color crystal malt altogether and going just with a darker crystal malt also tends to leave less of a perception of sweetness in the finished beer.

A number of traditional commercial examples include some

// In the end, the foreign extra stout style is very similar to a scaled-up dry stout and tropical stout is more similar to a scaled up sweet stout. //

the flavor difference between black malt and roasted barley is small, my preference and the general opinion has always been that brewing stout requires unmalted, roasted barley. About 10% of the grist should be highly-kilned grains. A 50/50 mix of highly-kilned and lighter kilned grain, like roast barley and chocolate malt, strikes a nice balance of sharper roasted notes and less burnt coffee/chocolate notes. Playing with the ratio of lighter and darker grains is a nice way to add a subtle difference to your beer.

When making tropical stout, a fair portion of crystal malt (up to 10% of the grist) adds the required background sweetness. Just like the highly kilned grain, I like to split my crystal malt between darker and lighter varieties. A darker crystal malt (~80 °L) provides a slight raisin/fig note. A mid-color crystal malt (~40 °L) gives the beer a bit of caramel flavor and some residual sweetness. If you're trying to make more of a foreign extra stout, you'll want less crystal malt for a

simple sugar, which boosts the alcohol without increasing the body or malt character. Sugar isn't really needed, unless you're having trouble reaching a proper level of attenuation with the yeast that you are using. In which case, replacing a small portion of the base malt with sugar can help the beer finish a bit drier. Since this is a beer that can carry a touch of residual sweetness, I think it's rarely necessary to use sugar in this style.

Measured hop bitterness is substantial in foreign extra stout. The perceived level of bitterness is often higher in foreign extra than the tropical style. While the measured IBU level is higher in foreign extra as well, the difference in perceived bitterness between the two styles is also due to the higher residual sweetness in tropical stouts. For context, the BJCP lists the appropriate IBU for foreign extra to range from 50-70 and for tropical stouts the IBU range is 30-50.

The bitterness to starting gravity (IBU divided by original gravity) ratio for these styles can

range from a modest 0.5 to a bold 1.0. For the sweeter tropical style 0.6 to 0.7 is a good range and you can increase that if using a lower attenuating yeast or making a foreign extra stout. Be aware that highly bitter or hoppy versions are going to be more like American-style stouts than good foreign extra stouts.

There isn't a lot of hop flavor in foreign extra or tropical stout and hop aroma is often non-existent or very low. In the drier foreign extra style, a little hop flavor can peek through, but it is still restrained and tends to come from fairly mellow hop varieties, such as Kent Goldings. Even though there can be some hop flavor in this style, there is no need to add late hop additions. Much of the hop flavor comes from using lower alpha hops to create a high level of bitterness. Using a large amount of low alpha acid hops for bittering can add a subtle hop flavor to the beer. Keep in mind when developing any beer recipe that the flavor of the hops used for bittering often comes through in the flavor of the beer, so choose style-appropriate hop strains for bittering additions.

Much of the character of these styles comes from the yeast. In the Caribbean, where lager breweries reign, most examples of this style are brewed with lager yeast at warm temperatures. If you are looking to clone a particular beer you enjoyed while in the Caribbean, lager yeast will be the key. A good Pilsner yeast at a temperature around 60 to 65 °F (16 to 18 °C) should get you close. While lager yeast is common in tropical stouts, I prefer an English or Irish yeast strain when brewing the sweeter, fruitier tropical version of this style. These yeasts tend to be moderate to low attenuating, leaving a little more residual sugar and an ester profile that I prefer over the warm-fermented lager yeast. Wyeast 1028 (London Ale), White Labs WLP013 (London

Ale), Wyeast 1084 (Irish Ale), White Labs WLP004 (Irish Ale) or Danstar Nottingham dry yeast are all good choices for this style. If you want a sweeter finish, use Wyeast 1968 (London ESB Ale), White Labs

tion, you might need to perform a diacetyl rest near the last part of fermentation. To perform a diacetyl rest, warm your beer up a few degrees over the fermentation temperature for the last one-third

“ Much of the character of these styles comes from the yeast. In the Caribbean, where lager breweries reign, most examples of this style are brewed with lager yeast at warm temperatures. ”

WLP002 (English Ale) or Fermentis Safale S-04, but these less attenuating strains can be a little too sweet for export stouts.

I prefer to use a cleaner and more attenuating yeast for foreign extra stouts. Wyeast 1056 (American Ale), White Labs WLP001 (California Ale) or Fermentis Safale US-05 will make a drier, cleaner version. In fact, it can be a bit too clean if fermented on the cool side (67 °F/19 °C or lower). If you're going to use a neutral yeast like this, ferment at a slightly warmer temperature range, around 69 °F (21 °C). Since this yeast will attenuate a bit more, the beer is going to seem slightly roastier too. If you want an even drier export version, you'll need to either replace some base malt with simple sugar (adding 10% table sugar is fine) or find another yeast that can finish even drier.

These beer styles should not have much diacetyl. If you're using a yeast prone to diacetyl produc-

of fermentation.

If you can't control the temperature for a diacetyl rest, don't worry and don't be in a rush to package the beer. Keep the beer at fermentation temperature until it appears that fermentation is complete and then let it rest for a few additional days. If given enough time, healthy yeast will usually reduce the diacetyl in a beer to very low levels.

Most water in the United States is fairly hard, with enough buffering capacity to brew good stout. If you happen to have water very low in buffering capacity and you are an all-grain brewer, you might need to add calcium carbonate or other brewing salts to the mash to help buffer the acidity of the roasted grains.

Whether you choose to brew a foreign extra or a tropical stout, I recommend drinking either when you're extra hot and tired. I'm sure you'll find it just as refreshing as I did.

1820 BROWN STOUT**(5 gallons/19 L, all-grain)****OG = 1.070 FG = 1.022****IBU = 38 SRM = 36 ABV = 6.7%****Ingredients**

7.7 lbs. (3.5 kg) Maris Otter 2-row pale malt
 7.7 lbs. (3.5 kg) brown malt (65 °L)
 10 AAU Fuggle hops (90 min.)
 (2 oz./57 g at 5% alpha acids)
 Wyeast 1099 (Whitbread Ale) or White Labs WLP005 (British Ale) yeast
 ½ cup dried malt extract (if priming)

Step by step

Use a single-step infusion mash at 150–152 °F (66–67 °C) for 60 to 90 minutes. Sparge one hour, with water no hotter than 175 °F (80 °C), until 7 gallons (25.6 L) of wort are in the kettle.

Boil 90 minutes, with hops added at the start. Strain, or siphon off from the hops, and adjust wort volume with cold water, and cool to about 70 °F (21 °C). Pitch yeast (to ensure good fermentation, it is best to make a 2–3 quart/liter starter), and allow to ferment until final gravity is reached, usually 5–7 days. Rack into a secondary fermenter. One week later, rack again, prime with dried malt extract, and rack into keg or bottles. Mature the beer 3–6 months for best results.

1820 BROWN STOUT**(5 gallons/19 L, partial mash)****OG = 1.070 FG = 1.020****IBU = 38 SRM = 32 ABV = 6.9%****Ingredients**

5 lbs. 5 oz. (2.4 kg) pale dried malt extract
 1 lb. 11 oz. (0.77 kg) 2-row pale ale malt
 1 lb. 11 oz. (0.77 kg) brown malt
 1 lb. 11 oz. (0.77 kg) extra dark crystal malt (160 °L)
 10 AAU Fuggle hops (90 min.)
 (2 oz./57 g at 5% alpha acids)
 Wyeast 1099 (Whitbread Ale) or White Labs WLP005 (British Ale) yeast
 ½ cup dried malt extract (if priming)

Step by Step

Place all the milled grains in a muslin bag, add to 2 gallons (7.6 L) of water at 165 °F (74 °C), and keep at 150–

155 °F (66–68 °C) for 60 minutes. Remove the bag, rinse with hot water, and combine this water with that from the partial mash. Add the malt extract, stirring well to ensure it is properly dissolved, then bring to a boil. Add hops and boil 90 minutes. Turn off heat, adjust wort volume with cold water, and cool to about 70 °F (21 °C). Pitch with 2–3 qt. (~2–3 L) yeast starter, oxygenate the wort if possible, and allow to ferment.

By 5–7 days, the final gravity should have been reached. At this point, rack into a secondary fermenter. One to two weeks later, rack again, prime with dried malt extract and rack into keg or bottles. Condition for two to three months.

1879 DUBLIN XXX STOUT**(5 gallons/19 L, all-grain)****OG = 1.086 FG = 1.015****IBU = 78 SRM = 51 ABV = 10%****Ingredients**

10.25 lbs. (4.7 kg) British pale ale malt
 1 lb. (0.45 kg) crystal malt (75 °L)
 1.5 lbs. (0.68 kg) roasted barley (500 °L)
 3.5 lbs. (1.6 kg) corn sugar (15 min.)
 10 AAU Fuggle hops (120 min.)
 (2 oz./57 g at 5% alpha acids)
 10 AAU Fuggle hops (60 min.)
 (2 oz./57 g at 5% alpha acids)
 10 AAU Fuggle hops (10 min.)
 (2 oz./57 g at 5% alpha acids)
 Safale S-04 or Wyeast 1099 (Whitbread Ale) yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mash grains at 154 °F (68 °C) in 16 qts. (15 L) of water. Collect enough wort in the kettle to account for the extended boil. Boil for 120 minutes, adding hops at times indicated and sugar for final 15 minutes. Ferment at 68 °F (20 °C). As an option, you can add a *Brettanomyces* culture once the primary fermentation slows, as there most assuredly would also be a little twang brought on by *Brettanomyces* in 1879, giving this beer a finishing funk.

1879 DUBLIN XXX STOUT**(5 gallons/19 L, partial mash)****OG = 1.086 FG = 1.015****IBU = 78 SRM = 51 ABV = 10%****Ingredients**

1.5 lbs. (0.68 kg) Muntons light dried malt extract
 3.3 lbs. (1.5 kg) Maris Otter liquid malt extract (15 min.)
 3 lbs. (1.4 kg) British pale ale malt
 1 lb. (0.45 kg) crystal malt (75 °L)
 1.5 lbs. (0.68 kg) roasted barley (500 °L)
 3.5 lbs. (1.6 kg) corn sugar (15 min.)
 10 AAU Fuggle hops (120 min.)
 (2 oz./57 g at 5% alpha acids)
 10 AAU Fuggle hops (60 min.)
 (2 oz./57 g at 5% alpha acids)
 10 AAU Fuggle hops (10 min.)
 (2 oz./57 g at 5% alpha acids)
 Safale S-04 or Wyeast 1099 (Whitbread Ale) yeast
 ¾ cup corn sugar (if priming)

Step by Step

Begin by heating 5.5 qts. (5.2 L) of soft or distilled water to 165 °F (74 °C) in a large kitchen pot. Stir ½ tsp. of calcium sulfate (gypsum) or calcium chloride into this water. In another pot, heat 2.25 qts. (2.1 L) of soft water to around 164 °F (73 °C). Stir 1 tsp. calcium carbonate (chalk) or ½ tsp. sodium bicarbonate (baking soda) into this water. In your brewpot, begin heating 2 qts. (2 L) of water to around 170 °F (77 °C). Place crushed pale and crystal malts in a grain bag and place in cooler. Put remaining roasted barley (crushed) in the other bag. Add the 5.5 qts. (5.2 L) of water to the malts in the cooler and stir it in. Let this mash, starting at 154 °F (68 °C), for 45 minutes. Likewise, steep the specialty grains in the pot of carbonate-rich water for 45 minutes (around 153 °F/67 °C), although this exact temperature is not critical. While grains mash and steep, heat about 8 qts. (7.6 L) of water to 180 °F (82 °C).

When mashing and steeping is complete, scoop 1 qt. (~1 L) of 170 °F (77 °C) water from your brewpot with a large measuring cup or beer pitcher. Lift the specialty grains out of their steeping pot and place them in a colander over your brewpot. Pour the "grain tea" through the grain bag (to strain out any large bits of grain) and then rinse the grains with the water pulled from your brewpot. Start heating this "grain tea" while you collect the wort from the cooler.

To collect wort from mash, recirculate about 2.5 qts. (2.4 L) of

wort, then add 180 °F (82 °C) water to cooler until it is full to the rim. Draw off wort and add to brewpot until the liquid level in the cooler is just above the grain bed. Add 180 °F (82 °C) water to the rim again. Repeat this process until you have collected 2 gallons (7.6 L) of wort. Add dried malt extract and bring wort to a boil. Add first dose of hops and boil for 60 minutes.

Add hops at times indicated in the ingredient list. Stir in sugar and liquid malt extract for the final 15 minutes of the boil. Cool wort, in sink or with wort chiller, to 70 °F (21 °C) and transfer to fermenter. Add water to top up to 5 gallons (19 L), aerate and pitch yeast. Ferment at 68 °F (20 °C). As an option, you can add a *Brettanomyces* culture once the primary fermentation slows, as there most assuredly would also be a little twang brought on by *Brettanomyces* in 1879, giving this beer a finishing funk.

1879 DUBLIN XXX STOUT

(5 gallons/19 L, extract with grains)
OG = 1.086 FG = 1.015
IBU = 78 SRM = 51 ABV = 10%

Ingredients

6 oz. (170 g) Muntons light dried malt extract
6.6 lbs. (3 kg) Maris Otter liquid malt extract
1 lb. (0.45 kg) crystal malt (75 °L)
1.5 lbs. (0.68 kg) roasted barley (500 °L)
3.5 lbs. (1.6 kg) corn sugar (15 min.)
10 AAU Fuggle hops (120 min.)
(2 oz./57 g at 5% alpha acids)
10 AAU Fuggle hops (60 min.)
(2 oz./57 g at 5% alpha acids)
2 oz. (57 g) Fuggle hops (10 min.)
Safale S-04 or Wyeast 1099
(Whitbread Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Begin by heating 2 gallons (7.6 L) of water to 165 °F (74 °C) in a large kitchen pot. Place crushed grains in a large muslin bag and stir into the water. Steep the grains for 30 minutes. Remove the grains and wash grains with 1 gallon (4 L) hot water. Top off to 6.5 gallons (24.6 L) and stir in the dried and liquid malt extract. Bring wort to a boil. Add first dose of hops and boil for 60 minutes. Add the sec-

ond dose of hops and boil for 50 minutes longer. Add in the final hop addition and boil for the remaining 10 minutes.

Cool wort, in sink or with wort chiller, to 70 °F (21 °C) and transfer to fermenter. Add water to top up to 5 gallons (19 L), aerate and pitch yeast. Ferment at 68 °F (20 °C). As an option, you can add a *Brettanomyces* culture once the primary fermentation slows, as there most assuredly would also be a little twang brought on by *Brettanomyces* in 1879, giving this beer a finishing funk.

AMSINCK NO. II DUBLIN STOUT

(5 gallons/19 L, all-grain)
OG = 1.085 FG = 1.026
IBU = 83 SRM = 33 ABV = 8.4%

Ingredients

17 lbs. (7.7 kg) Maris Otter 2-row pale malt (4 °L)
0.75 lb. (340 g) Bairds black malt (550 °L)
23 AAU Target pellet hops (90 min.)
(2.3 oz./65 g at 10% alpha acids)
White Labs WLP004 (Irish Ale) or
Wyeast 1084 (Irish Ale) yeast (as a
1.5-qt./1.4-L yeast starter)
¾ cup corn sugar (if priming)

Step by Step

Mash at 151 to 153 °F (66 to 67 °C) with 22 quarts (21 L) of water. Add all of the hops at the start of the boil and boil the wort for 90 minutes.

When the boil is complete, chill the wort rapidly to yeast-pitching temperatures. Pitch an appropriate amount of yeast using a yeast starter of 1.5 quarts (1.4 L), ferment, and mature for three to six weeks.

AMSINCK NO. II DUBLIN STOUT

(5 gallons/19 L, extract with grains)
OG = 1.085 FG = 1.026
IBU = 83 SRM = 33 ABV = 8.4%

Ingredients

11.5 lbs. (5.2 kg) Maris Otter liquid malt extract
0.75 lb. (340 g) Bairds black malt (550 °L)
23 AAU Target pellet hops (90 min.)
(2.3 oz./65 g at 10% alpha acids)

White Labs WLP004 (Irish Ale) or
Wyeast 1084 (Irish Ale) yeast (as a
1.5-qt./1.4-L yeast starter)
¾ cup corn sugar (if priming)

Step by Step

Steep the black malt separately in a muslin bag with 1.5 quarts (1.4 L) of water at around 160 °F (71 °C). Strain off the black malt and rinse the grains with two lots of 1.5 quarts (1.4 L) hot water and use this wort to dissolve the extract. Top off to 6.5 gallons (24.6 L) wort. Boil for 90 minutes, adding the hops at the beginning of the boil.

When the boil is complete, chill the wort rapidly to yeast-pitching temperatures. Pitch an appropriate amount of yeast using a yeast starter of 1.5 quarts (1.4 L), ferment, and mature for three to six weeks then bottle or keg.

BROUWERIJ DE DOLLE BROUWERS' DE DOLLE EXTRA EXPORT STOUT CLONE

(5 gallons/19 L, all-grain)
OG = 1.086 FG = 1.023
IBU = 53 SRM = 70 ABV = 9%

Ingredients

10 lbs. (4.5 kg) Dingemans pale ale malt (4 °L)
1 lb. (0.45 kg) Special B malt (125 °L)
0.5 lb. (0.23 kg) chocolate malt
1.25 lbs. (0.57 kg) roasted barley (450 °L)
3 lbs. (1.4 kg) Belgian dark candi sugar (15 min.)
14 AAU Nugget hops (60 min.)
(1 oz./28 g at 14% alpha acids)
7 AAU Nugget hops (20 min.)
(0.5 oz./14 g at 14% alpha acids)
White Labs WLP510 (Bastogne Belgian Ale) or Wyeast 3942 (Belgian Wheat) yeast
¾ cup corn sugar (if priming)

Step by Step

Step mash at 125 °F (52 °C) for 15 minutes, 145 °F (63 °C) for 35 minutes, 165 °F (74 °C) for 25 minutes, and 172 °F (78 °C) for 5 minutes. Boil for 60 minutes adding hops at times indicated. Cool the wort, aerate, and pitch yeast. Ferment at 72 °F (22 °C). Once fermentation is complete, bottle or keg as usual.

BROUWERIJ DE DOLLE BROUWERS' DE DOLLE EXTRA EXPORT STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.086 FG = 1.023

IBU = 53 SRM = 70 ABV = 9%

Ingredients

- 3.3 lbs. (1.5 kg) Maris Otter liquid malt extract
- 1 lb. (0.45 kg) extra light dried malt extract
- 3 lbs. (1.4 kg) Dingemans pale ale malt (4 °L)
- 1 lb. (0.45 kg) Special B malt (125 °L)
- 0.5 lb. (0.23 kg) chocolate malt
- 1.25 lbs. (0.57 kg) roasted barley (450 °L)
- 3 lbs. (1.4 kg) Belgian dark candi sugar (15 min.)
- 14 AAU Nugget hops (60 min.)
(1 oz./28 g at 14% alpha acids)
- 7 AAU Nugget hops (20 min.)
(0.5 oz./14 g at 14% alpha acids)
- White Labs WLP510 (Bastogne Belgian Ale) or Wyeast 3942 (Belgian Wheat) yeast
- ¾ cup corn sugar (if priming)

Step by Step

Begin by heating 5.5 qts. (5.2 L) of soft water to 163 °F (73 °C) in a large kitchen pot. Stir ½ tsp. calcium sulfate (gypsum) or calcium chloride into this water. In another pot, heat 2.5 qts (2.4 L) of soft water to around 163 °F (73 °C). Stir 1 tsp. calcium carbonate (chalk) or ½ tsp. sodium bicarbonate (baking soda) into this water. In your brewpot, begin heating a half-gallon (2 L) of water to around 170 °F (77 °C). Place crushed pale malt and Special B in one grain bag and place in mash tun. Put remaining dark grains (crushed) in the other bag. Add the 5.5 qts. (5.2 L) of water to the pale grains in the mash tun and stir it in. Let this mash, starting at 152 °F (67 °C), for 45 minutes. Likewise, steep the specialty grains in the pot of carbonate-rich water for 45 minutes (around 152 °F/67 °C). While grains mash and steep, heat 2 gallons (7.6 L) of water to 180 °F (82 °C). When mashing and steeping is complete, scoop 1 qt. (1 L) of 170 °F (77 °C) water from your brewpot. Lift the specialty grains out of their pot and place in a colander over your brewpot.

Pour the "grain tea" through the grain bag and then rinse the grains with the water pulled from your brewpot. Start heating this "grain tea" while you collect the wort from the cooler.

To collect wort from mash, recirculate about 2.5 qts. (2.4 L) of wort, then add 180 °F (82 °C) water to cooler until it is full. Draw off wort and add to brewpot until the liquid level in the cooler is just above the grain bed. Add 180 °F (82 °C) water to fill cooler again. Repeat this process until you have collected 2 gallons (7.6 L) of wort. Add dried malt extract and bring wort to a boil. Add first dose of hops and boil for 60 minutes. Add hops at times indicated in the ingredient list. Stir in liquid malt extract and Belgian candi sugar for the final 15 minutes of the boil. Cool wort to 72 °F (22 °C) and transfer to fermenter. Add water to top up to 5 gallons (19 L), aerate and pitch yeast. Ferment at 72 °F (22 °C). After fermentation is complete, rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle.

CAPT. LEO'S FOREIGN EXTRA STOUT

(5 gallons/19 L, all-grain)

OG = 1.074 FG = 1.020

IBU = 40 SRM = 40 ABV = 7.6%

Ingredients

- 10 lbs. (4.5 kg) 2-row pale malt
- 2 lbs. (0.91 kg) Munich malt (10 °L)
- 1 lb. (0.45 kg) wheat malt
- 1 lb. (0.45 kg) flaked barley
- 8 oz. (0.23 kg) crystal malt (80 °L)
- 8 oz. (0.23 kg) crystal malt (120 °L)
- 8 oz. (0.23 kg) roasted barley (300 °L)
- 6 oz. (170 g) chocolate malt (350 °L)
- 6 oz. (170 g) black patent malt (500 °L)
- 1 tsp. Irish moss (15 min.)
- 7.5 AAU Amarillo® hops (60 min.)
(1 oz./28 g at 7.5% alpha acids)
- 3.75 AAU Amarillo® hops (30 min.)
(0.5 oz./14 g at 7.5% alpha acids)
- 2.5 AAU Willamette hops (15 min.)
(0.5 oz./14 g at 5% alpha acids)
- White Labs WLP007 (Dry English Ale) or Wyeast 1275 (Thames Valley) yeast
- ¾ cup corn sugar (if priming)

Step by Step

Mill the grains with the exception of the flaked barley. Dough in (including

the unmilled flaked barley) using 5 gallons (19 L) of water and a target mash holding temperature of 154 °F (68 °C). Hold the mash temperature for approximately 60 minutes or until the conversion is complete. Raise the temperature of the mash to 168 °F (76 °C) and begin sparging with 170 °F (77 °C) water until you collect 6.5 gallons (25 L) of wort in the kettle.

Boil for 90 minutes, adding hops and finings as indicated. After the boil, cool the wort to 70 °F (21 °C), transfer to your fermentation vessel and aerate the wort adequately. Add the contents of your yeast (prepared in a starter) to the chilled wort. Ferment around 70 °F (21 °C) until the final gravity is reached, which should be in 5 to 7 days. Rack to a secondary vessel and allow the beer to mature another 5 to 7 days around the same temperature. After fermentation, rack to a keg or add priming sugar and bottle.

CAPT. LEO'S FOREIGN EXTRA STOUT

(5 gallons/19 L, extract with grains)

OG = 1.074 FG = 1.020

IBU = 40 SRM = 40 ABV = 7.6%

Ingredients

- 6.6 lbs. (3 kg) light liquid malt extract
- 1 lb. (0.45 kg) Munich dried malt extract
- 1 lb. (0.45 kg) wheat dried malt extract
- 4 oz. (133 g) Carapils® malt
- 8 oz. (0.23 kg) crystal malt (80 °L)
- 8 oz. (0.23 kg) crystal malt (120 °L)
- 8 oz. (0.23 kg) roasted barley (300 °L)
- 6 oz. (170 g) chocolate malt (350 °L)
- 6 oz. (170 g) black patent malt (500 °L)
- 1 tsp. Irish moss (15 min.)
- 7.5 AAU Amarillo® hops (60 min.)
(1 oz./28 g at 7.5% alpha acids)
- 3.75 AAU Amarillo® hops (30 min.)
(0.5 oz./14 g at 7.5% alpha acids)
- 2.5 AAU Willamette hops (15 min.)
(0.5 oz./14 g at 5% alpha acids)
- White Labs WLP007 (Dry English Ale) or Wyeast 1275 (Thames Valley) yeast
- ¾ cup corn sugar (if priming)

Step by Step

Mill the specialty grains. Place the milled grains in a grain bag. Steep them in 5.8 qts. (5.5 L) of 150 °F–160 °F (66 °C–71 °C) water for

20 minutes. Rinse the grain bag with 2 qts. (1.9 L) of hot water and allow it to drip into the kettle for about 15 minutes.

Add enough water for a pre-boil volume of 6.5 gallons (25 L). Stir in all three malt extracts and begin the boil. Boil for 90 minutes, adding hops and finings at times indicated. (If you can't manage a 90-minute, 6.5-gallon (25-L) boil, try to boil at least 3.5 gallons (13 L) for 60 minutes. Add bittering hops immediately after the boil starts and withhold half of the malt extract until late in the boil.)

Cool the wort to 70 °F (21 °C), transfer to your fermentation vessel and aerate the wort adequately. Add the contents of your yeast starter to the chilled wort. Ferment around 70 °F (21 °C) until the final gravity is reached, which should be in 5 to 7 days. Rack to a secondary vessel and allow the beer to mature another 5 to 7 days around the same temperature. Your beer is now ready to rack into a keg or bottles along with the priming sugar.

DESNOES & GEDDES' DRAGON STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.075 FG = 1.020

IBU = 35 SRM = 53 ABV = 7.5%

Ingredients

12 lbs. (5.4 kg) 6-row pale malt
14 oz. (0.40 kg) crystal malt (75 °L)
0.75 lb. (0.34 kg) Simpsons debittered black malt (550 °L)
1.75 lbs. (0.79 kg) corn sugar (15 min.)
2 oz. (57 g) SINAMAR® (add at bottling)
10.7 AAU Yakima Magnum hops (60 min.) (0.67 oz./19 g at 16% alpha acids)
Wyeast 2112 (California Lager) or White Labs WLP810 (San Francisco Lager) yeast
¾ cup corn sugar (if priming)

Step by Step

Mash grains at 153 °F (67 °C) for 60 minutes. Boil wort for 120 minutes, adding hops with 60 minutes left in boil. Add sugar for final 15 minutes. Cool the wort, pitch yeast and aerate. Ferment around 70 °F (21 °C) until the final gravity is reached, which should be in 5 to 7 days. Condition at

58 °F (14 °C) for 2 weeks. Add SINAMAR® when kegging or bottling for added color.

DESNOES & GEDDES' DRAGON STOUT CLONE

(5 gallons/19 L, extract with grains)

OG = 1.075 FG = 1.020

IBU = 35 SRM = 53 ABV = 7.5%

Ingredients

1 lb. (0.45 kg) extra light dried malt extract
6.6 lbs. (3 kg) Briess golden light liquid malt extract (15 min.)
14 oz. (0.40 kg) crystal malt (75 °L)
0.75 lb. (0.34 kg) Simpsons debittered black malt
1.75 lbs. (0.79 kg) corn sugar (15 min.)
2 oz. (57 g) SINAMAR® (added at bottling)
10.7 AAU Yakima Magnum hops (60 min.) (0.67 oz./19 g at 16% alpha acids)
Wyeast 2112 (California Lager) or White Labs WLP810 (San Francisco Lager) yeast
¾ cup corn sugar (if priming)

Step by Step

Place crushed grains in a nylon steeping bag. In a large kettle, steep grains in 3 qts. (2.8 L) of water at 153 °F (67 °C) for 30 minutes. While steeping, begin heating 2 gallons (7.6 L) of water to a boil. After steep, place bag in colander over brewpot. Pour "grain tea" through bag (to strain out "floaties"), then rinse bag with 1.5 qts. (1.5 L) of 170 °F (77 °C) water. Bring brewpot to a boil, then stir in dried malt extract. Add hops and boil wort for 60 minutes. Stir in liquid malt extract for final 15 minutes of the boil. Cool wort and transfer to fermenter. Top up to 5 gallons (19 L) and aerate well. Pitch yeast and ferment at 70 °F (21 °C). Condition at 58 °F (14 °C) for 2 weeks prior to bottling or kegging as normal.

GUINNESS FOREIGN EXTRA STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.075 FG = 1.021

IBU = 40 SRM = 40 ABV = 7.5%

Ingredients

12.5 lbs. (5.7 kg) 2-row pale ale malt (3 °L)

2 lbs. 4 oz. (1 kg) flaked barley
1 lb. 2 oz. (0.5 kg) roasted barley (500 °L)
11.9 AAU Challenger hops (60 min.) (1.7 oz./48 g at 7% alpha acids)
Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast (2 qt./2 L starter)
¾ cup corn sugar (if priming)

Step by Step

Several days before brewing, make a 2-qt. (2-L) yeast starter. One day prior to brewing, place the starter in a fridge so you can decant the liquid prior to pitching the yeast.

Mash grains for 60 minutes at 152 °F (67 °C) in 5.2 gallons (19.6 L) of water. Collect about 6.5 gallons (24.6 L) of wort and boil for 90 minutes, adding hops with 60 minutes left in boil. At the end of the boil, cool wort, siphon to fermenter, aerate and pitch yeast from big starter.

Ferment at 68 °F (20 °C). Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle.

GUINNESS FOREIGN EXTRA STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.075 FG = 1.021

IBU = 40 SRM = 40 ABV = 7.5%

Ingredients

6.6 lbs. (3 kg) Maris Otter liquid malt extract
3 lbs. (1.4 kg) 2-row pale ale malt (3 °L)
2 lbs. 4 oz. (1 kg) flaked barley
1 lb. 2 oz. (0.5 kg) roasted barley (500 °L)
11.9 AAU Challenger hops (60 min.) (1.7 oz./48 g at 7% alpha acids)
Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast (2 qt./2 L starter)
¾ cup corn sugar (if priming)

Step by Step

Several days before brewing, make a 2-qt. (2-L) yeast starter. One day prior to brewing, place the starter in a fridge so you can decant the liquid prior to pitching the yeast.

Place the crushed grains in a large muslin bag. Mash the crushed grains for 60 minutes at 152 °F (67 °C) in 2 gallons (7.6 L) of water.

Place the grain bag in a colander and slowly wash with 1 gallon (4 L) hot water. Add the liquid malt extract and top off to about 6.5 gallons (24.6 L) of wort and boil for 90 minutes, adding hops with 60 minutes left in boil. At the end of the boil, cool wort, siphon to fermenter, aerate and pitch yeast from big starter.

Ferment at 68 °F (20 °C). Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle.

JAMIL'S MOONLESS TROPICAL NIGHT

(5 gallons/19 L, all-grain)

OG = 1.071 FG = 1.017

IBU = 45 SRM = 44 ABV = 7.6%

Ingredients

12.5 lbs. (5.7 kg) British pale ale malt (3 °L)
 12 oz. (0.34 kg) black roasted barley (500 °L)
 10 oz. (0.28 kg) crystal malt (40 °L)
 10 oz. (0.28 kg) crystal malt (80 °L)
 8 oz. (0.23 kg) chocolate malt (420 °L)
 12 AAU Kent Golding hops (60 min.) (2.4 oz./68 g at 5% alpha acids)
 1 tsp. Irish moss
 Wyeast 1028 (London Ale), White Labs WLP013 (London Ale), or Danstar Nottingham yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mill the grains and dough-in targeting a mash of around 1.5 quarts of water to 1 pound of grain (a liquor-to-grist ratio of about 3:1 by weight) and a temperature of 152 °F (67 °C). Hold the mash at 152 °F (67 °C) until the conversion is complete, about 60 minutes. Raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 6.5 gallons (24.6 L) and the gravity is 1.055.

The total wort boil time is 90 minutes. Add the hops with 60 minutes remaining in the boil. Add Irish moss or other kettle finings with 15 minutes left in the boil. Chill the wort rapidly to 67 °F (19 °C), let the break material settle, rack to the fermenter and aerate thoroughly.

Pitch 12 grams (0.4 oz.) of properly rehydrated dry yeast or use two

liquid yeast packages. Alternatively, make a three-liter (3-qt.) starter using one package of liquid yeast. Ferment at 67 °F (19 °C), raising the temperature to 70 °F (21 °C) during the last ½ of fermentation to help reduce diacetyl and assure complete attenuation. Allow the lees to settle and the brew to mature without pressure for another two days after fermentation appears finished.

Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle. Target a carbonation level of 2 to 2.5 volumes.

JAMIL'S MOONLESS TROPICAL NIGHT

(5 gallons/19 L, extract with grains)

OG = 1.071 FG = 1.017

IBU = 45 SRM = 44 ABV = 7.6%

Ingredients

6.6 lbs. (3 kg) Maris Otter liquid malt extract
 1.5 lbs. (0.68 kg) light dried malt extract
 12 oz. (0.34 kg) black roasted barley (500 °L)
 10 oz. (0.28 kg) crystal malt (40 °L)
 10 oz. (0.28 kg) crystal malt (80 °L)
 8 oz. (0.23 kg) chocolate malt (420 °L)
 12 AAU Kent Golding hops (60 min.) (2.4 oz./68 g at 5% alpha acids)
 1 tsp. Irish moss
 Wyeast 1028 (London Ale), White Labs WLP013 (London Ale), or Danstar Nottingham yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mill or coarsely crack the specialty malts. Mix them well and place loosely in a grain bag. Avoid packing the grains too tightly in the bag, using more bags if needed. Steep the bag in about 2 gallons (8 L) of water at roughly 170 °F (77 °C) for 30 minutes.

Lift the grain bag out of the steeping liquid and rinse with warm water. Allow the bags to drip into the kettle while you add the malt extract. Do not squeeze the steeping bags. Add enough water to the steeping liquor and malt extract to make a pre-boil volume of 5.9 gallons (22.3 L) and a gravity of 1.061. Stir thoroughly to help dissolve the extract and bring the liquid to a boil. Once the wort is boiling, add the bittering hops. The total

boil time is one hour. Add Irish moss or other kettle finings at 15 minutes.

Chill the wort to 67 °F (19 °C). Aerate thoroughly and pitch 12 grams (0.4 oz.) of properly rehydrated dry yeast or use two liquid yeast packages. Alternatively, make a three-liter (3-qt.) starter using one package of liquid yeast. Ferment at 67 °F (19 °C), raising the temperature to 70 °F (21 °C) during the last ½ of fermentation to help reduce diacetyl and assure complete attenuation. Allow the lees to settle and the brew to mature without pressure for another two days after fermentation appears finished.

Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle. Target a carbonation level of 2 to 2.5 volumes.

MAULDONS' BLACK ADDER CLONE

(5 gallons/19 L, all-grain)

OG = 1.055 FG = 1.015

IBU = 37 SRM = 25 ABV = 5.3%

A dark bitter stout. Roast and nut aromas with a fruity balance of hops and dark malt provide an excellent lingering finish.

Ingredients

5.25 lbs. (2.4 kg) Maris Otter pale malt
 5.25 lbs. (2.4 kg) Halcyon pale malt
 5 oz. (141 g) crystal malt (60 °L)
 8.25 oz. (234 g) black malt
 9.8 AAU Challenger hops (90 min.) (1.4 oz./39 g at 7% alpha acids)
 5 AAU East Kent Golding hops (0 min.) (1 oz./28 g at 5% alpha acids)
 1 tsp. Irish moss (15 min.)
 White Labs WLP022 (Essex Ale), White Labs WLP005 (British Ale), Wyeast 1099 (Whitbread Ale), or Wyeast 1318 (London Ale III) yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mash grains at 154 °F (68 °C) for 60 minutes. Sparge with enough water to collect approximately 6.5 gallons (24.6 L) wort in the kettle. Boil wort for 90 minutes adding the first addition of hops when the wort reaches a boil, the Irish moss with 15 minutes left in the boil and the final hop addition as the boil ends. Stir the wort and let settle for 10 minutes. Chill to yeast pitch temperature and aerate the

wort. Ferment at 70 °F (21 °C). Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle. Target carbonation levels around 2.4 volumes CO₂.

MAULDONS' BLACK ADDER CLONE

(5 gallons/19 L, extract with grains)

OG = 1.055 FG = 1.015

IBU = 37 SRM = 25 ABV = 5.3%

Ingredients

6.6 lbs. (3 kg) Maris Otter liquid malt extract (15 min.)
 8 oz. (227 g) Muntons light dried malt extract
 5 oz. (141 g) crystal malt (60 °L)
 8.25 oz. (234 g) black malt
 10.5 AAU Challenger hops (60 min.) (1.5 oz./43 g at 7% alpha acids)
 5 AAU East Kent Golding hops (0 min.) (1 oz./28 g at 5% alpha acids)
 1 tsp. Irish moss (15 min.)
 White Labs WLP022 (Essex Ale), White Labs WLP005 (British Ale), Wyeast 1099 (Whitbread Ale), or Wyeast 1318 (London Ale III) yeast
 ¼ cup corn sugar (if priming)

Step by Step

Steep crushed grains in 3 qts. (3 L) of water at 154 °F (68 °C) for 30 minutes. Combine "grain tea," water and dried malt extract to make 3 gallons (11 L) of wort. Boil for 60 minutes, trying to keep topped up to 3 gallons (11 L) of wort. Add the first addition of hops when the wort reaches a boil, the liquid malt extract and Irish moss with 15 minutes left in the boil and the final hop addition as the boil ends. Stir the wort and let settle for 10 minutes. Chill to yeast pitch temperature and aerate the wort. Ferment at 70 °F (21 °C). Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle. Target carbonation levels around 2.4 volumes CO₂.

SUMMIT BREWING CO.'S FOREIGN EXTRA STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.076 FG = 1.014

IBU = 65 SRM = 52 ABV = 8.5%

Ingredients

13.7 lbs. (6.2 kg) Irish stout malt (2 °L)

1.5 lbs. (0.68 kg) Simpsons black malt (550 °L)
 1 lb. (0.45 kg) Crisp amber malt (27 °L)
 7 AAU German Select hops (60 min.) (1.4 oz./40 g at 5% alpha acids)
 7 AAU German Select hops (25 min.) (1.4 oz./40 g at 5% alpha acids)
 3.5 AAU German Select hops (10 min.) (0.7 oz./20 g at 5% alpha acids)
 3.4 AAU UK Phoenix hops (10 min.) (0.7 oz./20 g at 4.8% alpha acids)
 8.4 AAU UK Progress hops (0 min.) (1.4 oz./40 g at 6% alpha acids)
 0.7 oz. (20 g) Brewer's Gold hops (dry hops)
 ½ Whirlfloc® tablet
 Wyeast 1084 (Irish Ale) yeast or White Labs WLP004 (Irish Ale) yeast
 ⅓ cup corn sugar (if bottling)

Step by Step

Add calcium chloride (CaCl₂) to the brewing water for a minimum 100 ppm of calcium (Ca²⁺). Mash the grains at 144 °F (62 °C) and hold at this temperature for 30 minutes. Raise grain bed to 151 °F (66 °C) and hold at this temperature for 30 minutes. Raise grain bed to mash out at 172 °F (78 °C) then begin the sparge. Sparge until you collect 6 gallons (23 L) in your kettle or until pre-boil gravity in the kettle reaches about 1.063 specific gravity. Total boil time is 60 minutes, adding hops at the times indicated and Whirlfloc® tablet with 10 minutes left in the boil. At 0 minutes, add the last addition of hops then give the wort a stir for at least a minute and let settle for 20 minutes. If your wort pH needs adjusting, add lactic acid to be sure your wort is at 5.2 at this point. Chill the wort to 68 °F (20 °C), let the cold break settle, pitch the yeast and aerate.

Ferment at 70 °F (21 °C) for five days or until signs of fermentation have subsided. Add dry hops and let the beer sit on the dry hops for five days. Drop the temperature to 54 °F (12 °C) and condition the beer for three weeks at this temperature. Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle. Target carbonation levels around 2.4 volumes CO₂.

SUMMIT BREWING CO.'S FOREIGN EXTRA STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.076 FG = 1.014

IBU = 65 SRM = 52 ABV = 8.5%

Ingredients

7 lbs. (3.2 kg) extra light dried malt extract (2 °L)
 1 lb. (0.45 kg) Irish stout malt (2 °L)
 1.5 lbs. (0.68 kg) Simpson black malt (550 °L)
 1 lb. (0.45 kg) Crisp amber malt (27 °L)
 7 AAU German Select hops (60 min.) (1.4 oz./40 g at 5% alpha acids)
 7 AAU German Select hops (25 min.) (1.4 oz./40 g at 5% alpha acids)
 3.5 AAU German Select hops (10 min.) (0.7 oz./20 g at 5% alpha acids)
 3.4 AAU UK Phoenix hops (10 min.) (0.7 oz./20 g at 4.8% alpha acids)
 8.4 AAU UK Progress hops (0 min.) (1.4 oz./40 g at 6% alpha acids)
 0.7 oz. (20 g) Brewer's Gold hops (dry hops)
 ½ Whirlfloc® tablet
 Wyeast 1084 (Irish Ale) yeast or White Labs WLP004 (Irish Ale) yeast
 ⅓ cup corn sugar (if bottling)

Step by Step

Place the crushed stout malt and amber malt into a muslin bag for mashing in 1 gallon (~4 L) of water. Mash the grains at 144 °F (62 °C). Hold at 144 °F (62 °C) for 30 minutes. Raise the mash to 151 °F (66 °C) and hold at this temperature for 30 minutes. Add the black malt, then raise grains to mash out at 172 °F (78 °C) and hold for 5 minutes.

Raise the grains out of the mash water and rinse the grain bag with 1 gallon (~4 L) of hot water. Top off kettle to 6 gallons (23 L) water and bring to a boil. Once at a boil, remove the kettle from heat and add the dried malt extract. Stir until all the malt extract is dissolved, then return to a boil. Total boil time is 60 minutes, adding hops at the times indicated and Whirlfloc® tablet with 10 minutes left in the boil. At 0 minutes, add the last addition of hops then give the wort a stir for at least a minute and let settle for 20 minutes. If your wort pH needs adjusting, add lactic acid to be sure your wort is at 5.2 at this point. Chill the wort to 68 °F (20 °C) and aerate.

Follow the fermentation, dry hopping, and conditioning instructions in the all-grain version.

IMPERIAL STOUT

by JAMIL ZAINASHEFF



Photo by Charles A. Parker/Images Plus

Imperial stout was one of the first beer styles that caught my interest. I remember tasting North Coast Old Rasputin as I read and reread the Beer Judge Certification Program (BJCP) Style Guidelines for the style. I also liked the idea that this was, according to the Courage Brewery, the beer of “Catherine II, Empress of all the Russias” as far back as the late 18th century. How cool is that? I would be happy brewing beer for my local city councilperson. Two hundred years ago, brewers were exporting this beer from England to the Russian Imperial Court and around the Baltic states. It is wonderful to see that this beer has survived so many changes of fortune over the past 200 years. One of the few things that has changed, as recently as the revisions made to the 2015 BJCP Style Guidelines, is a renaming of the style from “Russian imperial stout” to simply “imperial stout.”

There are two variants of the style, English and American. As you might expect, the American versions are bolder, cleaner and often feature American hops. The English versions are more complex and feature more fermentation character. No matter what the variant, imperial stout is as big, rich, and intensely flavored as a stout can be. It seems that in this style there are no upper limits, only minimums. At a minimum, a good version of this beer needs to have a big roasted malt character that is

reminiscent of coffee, dark chocolate, and even tar-like notes. There should also be dark fruits, hops, and warming alcohol, although the alcohol should never be hot or harsh.

Imperial stout ranges from dark reddish-brown to jet black. The overall balance is often bittersweet, though some examples might be more bitter and others might be more sweet. Regardless, there is always some sweetness to help balance the substantial bitterness of the roasted grains and hops. The finish ranges from sweet to dry, though the best examples finish closer to balanced. While this is a full-bodied, creamy beer, it should not be syrupy-thick or cloying. Fruity esters range from low to medium-high. It can be a variety of esters, but the ones that really seem to fit well with the style are dark, dried fruit flavors such as raisin, prune, and fig.

Late hop character in this style varies from substantial hop character to relatively little. Of course, the amount of hop character present depends on aging. Young samples tend to be hoppy, while aged beers have progressively less hop character over time.

While this style has a substantial amount of alcohol, it should never be hot or solventy. This is one of the most common mistakes brewers make when brewing a big beer. Paint thinner is never an acceptable flavor or aroma.

You have some flexibility in

choosing base malt for imperial stout. Using North American two-row gives the beer a clean, subtle, background-malt character common to many American craft beers. Using North American pale ale malt adds a slightly richer background malt character, somewhat of a light bready note. Again, this is the type of malt character found in many fine American craft brews. I prefer British pale ale malt for the base. British pale ale malt provides an even greater depth of malt character to the beer, mainly a biscuit-like taste and aroma common in many British beers. In a beer this big and bold, it can handle the extra malt character of British pale ale malt. Extract brewers can use an English pale ale extract if they want a richer malt background or a light color North American malt extract if they want a more subtle taste. All-grain brewers should use a single infusion mash and a low enough mash temperature so that the resulting beer does not end up too viscous. A temperature range of 149 to 154 °F (65 to 68 °C) works well. Use a lower temperature when using lower attenuating yeasts or very high starting gravities. Use a higher temperature when using the higher attenuating yeasts or lower starting gravity beers.

Even when using British pale ale malt for the base grain, the majority of the character that defines imperial stout comes from specialty malts. A traditional British recipe would utilize a fairly simple recipe such as pale, amber, and black malts, plus some sort of simple sugar. However, this is such a big, rich style with so many variations that there is plenty of room for playing with other specialty grains and rich malt flavors.

Every imperial stout needs roasted malt notes and many examples include caramel malt notes also. Experimenting with the amounts and colors of crystal and roasted malts is a great way to change the character of your beer.

The roast, chocolate, and coffee character of the style comes from the use of highly kilned grain. I use roasted barley, but the word is that some traditional commercial examples use black malt. A range of 7 to 20% of the grist should be highly kilned grains. Keep in mind that beers at the higher end of the range are somewhat acrid when

// A range of 7 to 20% of the grist should be highly kilned grains. Keep in mind that beers at the higher end of the range are somewhat acrid when young and will require considerable aging time. //

young and will require considerable aging time. A 50:50 mix of highly kilned and lighter kilned grain, like roasted barley and chocolate malt, strikes a nice balance of sharper roasted notes and less burnt coffee/chocolate notes. For caramel flavors, I always use dark crystal (80–150 °L) as it adds those caramelized, raisin-plum notes that go so well in this style. I also likely to include some mid-color crystal (40–60 °L), which adds some caramel flavors and some residual sweetness to help balance the bitterness of the roasted grains and hops. Even though you have a lot of leeway, you do not want to add a lot of low color crystal malt (< 30 °L), as it adds sweetness without much caramel character. Also, watch the total amount of crystal malt in your recipe. If the total amount exceeds 10% of the grist, it can result in an overly sweet and heavy beer.

If you are looking for more complexity or increased head retention you can add other malts as well. Wheat malt, Victory®, Munich, and more are common additions in many recipes. Just use restraint so the beer does not become saturated with unfermentable dextrins or cloying flavors. Keep in mind that with such a big beer

there tends to be plenty of body and head-building compounds in the large quantity of base malt, so it isn't really necessary to try and boost those aspects of the beer. Target between 0 and 5% for these additional specialty grains.

Traditional British commercial examples often include some simple sugar, which boosts the alcohol without increasing the body or malt character. Sugar can be a useful tool if you're having trouble reaching a proper level of attenuation. In which case, replacing a small portion of the base malt with sugar can help the beer finish a bit drier.

Hop flavor and aroma also varies from minimal to bold. In any interpretation, late hop additions are acceptable, but you need to have some idea of when you will be drinking the beer. The longer the period before drinking, the more the late hops will fade. If you want

late hop character a couple years down the road, you will need big late hop additions. Typical hop additions for this style are British or American varieties. You do have plenty of leeway when making your hop choices, including hops from the southern hemisphere. Almost anything is fair game as long as you do not try to build a big German noble hop character or something along those lines. When targeting more of an American interpretation, I like using citrusy or piney American variety hops such as Cascade, Centennial, Columbus, and Amarillo® for flavor and aroma. For more of a traditional interpretation, any British hop is fine as long as you feel it has a pleasant character. It is the overall impression that matters. You can bitter with almost any hop as well, but clean, neutral hops are most common. The big picture is that you want to have some hop character and a firm bitterness, but both should complement your malt and yeast choices.

In order to cut back on the amount of hop material at the end of the boil and subsequent wort loss, I prefer to use high-alpha hops. Even so, with the large hop additions of many recipes, you might want to increase your batch size to account for increased loss at the end of the boil. While all imperial stouts should have a medium to aggressively high bitterness, the balance of bittering versus malt sweetness can range from sweet to boldly bitter. The bitterness to starting gravity ratio (IBU divided by original gravity) can range anywhere from 0.5 to 1.0 or more, but I like to target in the range of 0.6 to 0.8. Keep in mind that beers designed for long-term aging should target the higher end of the scale, as a good amount of the bitterness can drop out of the beer over time.

If you prefer a cleaner, less fruity, more American ale version, ferment with White Labs WLP001 (California Ale) or Wyeast 1056

// **In order to cut back on the amount of hop material at the end of the boil and subsequent wort loss, I prefer to use high-alpha hops.** //

(American Ale). You will not have to worry too much about leaving an overly sweet beer with these yeasts either, as they tend to attenuate well even in big beers and at a range of temperatures. If you want a more complex beer, you should consider yeasts that produce more characterful esters and alcohols such as British ale yeasts. Try to stick with the British strains that still attenuate well, such as White Labs WLP007 (Dry English Ale), Wyeast 1028 (London Ale), or Danstar Nottingham if you use dry yeast. If you decide to use a strain that does not attenuate as well, you will need to account for lower attenuation in your recipe. You do not want the beer to be overly sweet, cloying, or worty tasting. My friend Mike Riddle, well known for his award-winning imperial stout, does use a lower attenuating Irish ale strain. He counters this with very high levels of roasted malt and hops to try to balance out the residual sweetness. He also keeps the amount of crystal malts to one modest addition of dark crystal.

Even so, he advises waiting years for the drinkability to improve. Unless you are going that route, either use a more attenuative yeast strain or back down on the starting gravity and substitute a portion of simple sugar.

In any case, this is a big beer so make certain you oxygenate the wort and pitch an appropriate amount of clean, healthy yeast. Most of the fermentations should be around the 65 to 70 °F (18 to 21 °C) depending on the yeast strain and recipe. Try to pick a temperature and stick with it. Holding the temperature steady is important to getting a proper level of attenuation and avoiding off-flavors, especially if you are making a bigger beer. Letting the beer go through large temperature swings can result in the yeast flocculating early or producing solventy and/or overly estery beers. If you wish, you can raise the temperature a few degrees near the end of fermentation to help the yeast clean up some of the intermediate compounds produced during fermentation, but with an appropriate pitch and proper temperature control, it should not be necessary.

I have been told that classic examples of the style are brewed, fermented, packaged, and on the store shelves in as little as two weeks. While there is no denying these can be great beers fresh out of the brewery, they certainly do mellow and develop complexity over time. For this style, I believe it is better to go for a big beer and anticipate aging it for at least six months if not more. Time affects the balance and intensity of flavors, mellowing some of the harsher aspects and exposing some of the more delicate aromas and flavors. With time, it is also possible to develop vinous or Port-like qualities, which just add to the complexity. No matter what recipe you start with, always try to stash a few bottles for at least a year or two. With a really big beer, a decade wouldn't be too much.

1850 IMPERIAL BROWN STOUT

(5 gallons/19 L, all-grain)

OG = 1.108 FG = 1.019

IBU = 100+ SRM = 44 ABV = 13%

Due to the high percentage of brown malt in this recipe, an approximate extract version would be very difficult to achieve.

Ingredients

13.5 lbs. (6.1 kg) British pale ale malt
3 lbs. (1.36 kg) brown malt
2 lbs. (0.91 kg) amber malt
0.75 lb. (0.34 kg) black malt
2 lbs. (0.91 kg) Piloncillo sugar (15 min.)
28 AAU Challenger hops (120 min.) (4 oz./113 g at 7% alpha acids)
18 AAU East Kent Golding hops (30 min.) (4 oz./113 g at 4.5% alpha acids)
0.67 oz. (19 g) East Kent Golding hops (dry hop)
Wyeast 1028 (London Ale) or White Labs WLP013 (London Ale) yeast
White Labs WLP645 (*Brettanomyces clausenii*) yeast (optional)
½ cup corn sugar (if priming)

Step by Step

You will either need to make a large starter several days in advance or make a smaller beer such as a bitter and use the yeast cake to pitch into this beer.

Mash at 158 °F (70 °C) for 120 minutes at 1.32 qt./lb. (2.8 L/kg). Collect enough wort to boil for 120 minutes. Half of black malt is added to the boil (in a hop bag). Add the raw sugar with 15 minutes left in the boil. Ferment at 65 °F (18 °C).

As an option, you may wish to add *Brettanomyces anomalus* (*B. clausenii*) to secondary fermenter. Let bulk age on *Brett* for at least 6–8 months, then bottle. Add the dry hops about 10 days prior to bottling.

BARCLAY'S IMPERIAL BROWN STOUT

(5 gallons/19 L, all-grain)

OG = 1.109 FG = 1.040

IBU = 100+ SRM = 59 ABV = 10.4%

Due to the high percentage of brown malt in this recipe, an approximate

extract version would be very difficult to achieve.

Ingredients

13 lbs. (5.9 kg) Maris Otter 2-row pale malt (4 °L)
6.5 lbs. (2.95 kg) Crisp brown malt (65 °L)
3 lbs. (1.36 kg) Crisp amber malt (27 °L)
1 lb. (0.45 kg) Bairds black malt (550°L)
36 AAU Columbus pellet hops (90 min.) (3 oz./85 g at 12% alpha acids)
Wyeast 1098 (British Ale) or White Labs WLP007 (Dry English Ale) yeast (as a 3-qt./3-L starter)
⅔ cup corn sugar (if priming)

Step by Step

Mash at 150 to 151 °F (66 °C) with 29 quarts (27 L) of water; you will probably need to sparge to collect at least 7 gallons (26.5 L) and boil down to 5 gallons (19 L) to obtain the target gravity. If so, add the bittering hops for the last 90 minutes of the boil.

At the end of the boil, chill the wort rapidly to fermentation temperatures and pitch the yeast. Ferment using a yeast starter of 3 quarts (2.8 L) from three packs of yeast, and mature six months minimum prior to keging or bottling.

BREWDOG'S RIP TIDE CLONE

(5 gallons/19 L, all-grain)

OG = 1.075 FG = 1.018

IBU = 65 SRM = 47 ABV = 8%

Ingredients

10.6 lbs. (4.8 kg) 2-row pale malt
1.5 lbs. (0.68 kg) dark crystal malt (80 °L)
1 lb. (0.45 kg) British caramalt (35 °L)
0.5 lb. (0.23 kg) chocolate malt
0.4 lb. (0.18 kg) Carafa® Special III malt
1 lb. (0.45 kg) flaked oats
0.75 lb. (0.34 kg) wheat malt
17 AAU Galena pellet hops (90 min.) (1.3 oz./37 g at 13% alpha acids)
0.75 oz. (21 g) Cascade hops (0 min.)
0.75 oz. (21 g) Columbus hops (0 min.)
Wyeast 1028 (London Ale) or White Labs WLP013 (London Ale) yeast (1-qt./~1-L yeast starter)
¾ cup corn sugar (if priming)

Step by Step

Mash grains at 150 °F (65 °C) for 90 minutes, then runoff and sparge to collect about 6.5 gallons (24.6 L) of wort. Boil for 90 minutes with Galena hops at start and add the Cascade and Columbus hops at flameout. Cool, and add yeast as a 1-quart (1 L) starter prepared 2–3 days earlier. Oxygenate well and let ferment for 5–7 days. Rack into a secondary fermenter and age for one to two weeks. Bottle or keg as usual.

BREWDOG'S RIP TIDE CLONE

(5 gallons/19 L, extract with grains)

OG = 1.075 FG = 1.018

IBU = 65 SRM = 47 ABV = 8%

Ingredients

1.5 lbs. (0.68 kg) Briess extra light dried malt extract
6.6 lbs. (3 kg) Briess golden light liquid malt extract
1.5 lbs. (0.68 kg) dark crystal malt (80 °L)
1 lb. (0.45 kg) British caramalt (35 °L)
0.5 lb. (0.23 kg) chocolate malt
0.4 lb. (0.18 kg) Carafa® Special III malt
0.5 lb. (0.23 kg) Carapils® malt
17 AAU Galena pellet hops (90 min.) (1.3 oz./37 g at 13% alpha acids)
0.75 oz. (21 g) Cascade hops (0 min.)
0.75 oz. (21 g) Columbus hops (0 min.)
Wyeast 1028 (London Ale) or White Labs WLP013 (London Ale) yeast (1-qt./~1-L yeast starter)
¾ cup corn sugar (if priming)

Step by Step

Add all the crushed grains to a muslin bag and bring 6 qts. (5.7 L) strike water up to 163 °F (73 °C). Steep grains at 150 °F (65 °C) for 30 minutes, then remove the grains and wash with 4 qts. (3.8 L) hot water. There should be ~2 gallons (7.8 L) of wort. Combine with 3 gallons (11.4 L) of boiling water in kettle. Add dried malt extract and half the liquid malt extract and bring to a boil. Boil 90 minutes, adding hops as indicated. Stir in the second half of the liquid malt extract with 15 minutes left in the boil. Cool the wort and top off with cold water to 5 gallons (19 L).

Add yeast as a 1-quart (1 L) starter. Oxygenate well and let ferment for 5–7 days. Rack into a second-

ary fermenter and age for one to two weeks. Bottle or keg as usual.

BYO 10TH ANNIVERSARY IMPERIAL AMERICAN STOUT

(5 gallons/19 L, all-grain)

OG = 1.103 FG = 1.026

IBU = 60 SRM = 41 ABV = 11.3%

When BYO turned 10 in 2005, we celebrated by brewing this anniversary imperial stout that includes 10 grains, 10 hop additions, and rings in at 10%+ ABV.

Ingredients

13 lbs. (5.9 kg) 2-row pale malt
2.75 lbs. (1.25 kg) Munich malt (10 °L)
5 lbs. (2.3 kg) flaked barley
2 oz. (57 g) biscuit malt
5 oz. (0.14 kg) crystal malt (40 °L)
3 oz. (85 g) crystal malt (60 °L)
2 oz. (57 g) crystal malt (90 °L)
4 oz. (113 g) chocolate malt
12 oz. (0.34 kg) roasted barley (500 °L)
2 oz. (57 g) black patent malt
25 AAU Centennial hops (10 additions)
(2.5 oz./71 g at 10% alpha acids)
¼ tsp. yeast nutrients
1 tsp. Irish moss
Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast (4 qt./4 L yeast starter)
¾ cups corn sugar (if priming)

Step by Step

To develop a highly-fermentable and less viscous wort, follow this step-mash procedure. Heat 7.25 gallons (27 L) of water to 142 °F (61 °C) and stir the grains into this water (in your kettle). Adjust temperature, if needed, to 131 °F (55 °C) and rest for 15 minutes. Heat mash to 140 °F (60 °C) and hold for 15 minutes. (Stir nearly constantly when heating mash. Raise temperature at rate of about 2 °F (1 °C) per minute).

Heat again to 149 °F (65 °C) and hold for 45 minutes. Heat to 162 °F (72 °C) and hold for 5 minutes, then heat to 167 °F (75 °C) and transfer mash to lauter tun. Recirculate for 15–20 minutes, then begin running off wort. Heat about 7 gallons (26 L) of sparge water to 170 °F (77 °C). (Use 180–190 °F/82–88 °C sparge water if grain bed temperature drops below

165 °F/74 °C.) Collect 11.5 gallons (44 L) of wort and boil for about 5 hours to reduce volume to about 5.33 gallons (20 L) at the end of the boil. If you do not follow the multi-step mash procedure, you will want to add some re-hydrated rice hulls to the mash before lautering, maybe 8 oz. (0.23 kg) to help keep the wort moving through the mash bed.

Divide hops into ten 0.25 oz. (7 g) charges and add one charge with 90, 80, 70, 60, 50, 40, 30, 20 and 10 minutes left in the boil. Add the final hop addition at the end of the boil. Add Irish moss and yeast nutrients with 15 minutes left in boil.

After the boil is complete, cool your wort, let hops and trub settle and transfer clear wort to fermenter. Aerate wort (preferably with a 2-minute shot of oxygen) and pitch yeast sediment from starter. Ferment at 68 °F (20 °C) until fermentation is complete (about 2–3 weeks). Rack to secondary and condition about 2 months at around 40 °F (4.4 °C), if possible. Keg or bottle with corn sugar. You may want to add 1 tsp. of dried yeast at bottling to facilitate carbonation.

BYO 10TH ANNIVERSARY IMPERIAL AMERICAN STOUT

(5 gallons/19 L, partial mash)

OG = 1.103 FG = 1.026

IBU = 60 SRM = 41 ABV = 11.3%

Ingredients

4 lbs. (1.8 kg) Coopers light dried malt extract
6.6 lbs. (3 kg) Muntons light liquid malt extract (15 min.)
2.66 lbs. (1.2 kg) Munich malt (10 °L)
2 oz. (57 g) biscuit malt
5 oz. (0.14 kg) crystal malt (40 °L)
3 oz. (85 g) crystal malt (60 °L)
2 oz. (57 g) crystal malt (90 °L)
4 oz. (113 g) chocolate malt
12 oz. (0.34 kg) roasted barley (500 °L)
2 oz. (57 g) black patent malt
25 AAU Centennial hops (10 additions)
(2.5 oz./71 g at 10% alpha acids)
¼ tsp. yeast nutrients
1 tsp. Irish moss
Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast (4 qt./4 L yeast starter)
¾ cups corn sugar (if priming)

Step by Step

For best results, you will need a brewpot big enough to boil 4 gallons (15 L) of wort and a grain bag big enough to hold 4.5 lbs. (2 kg) of grain. In your brewpot, bring 1.75 gallons (6.6 L) of water to 163 °F (73 °C). Put crushed grains in grain bag and submerge bag in the brewpot water; the temperature should drop to about 152 °F (67 °C). Hold at this temperature for 45 minutes. (When temperature drops below 150 °F (66 °C), heat to 155 °F (68 °C).)

Place grain bag in a colander over brewpot and rinse grains with 1 gallon (3.8 L) of water at 170 °F (77 °C). Discard grains, add about 2 qts. (2 L) of water to make 4 gallons (15 L) and heat to a boil.

Shut off heat and stir in dried malt extract. Resume heating and boil for 90 minutes, add 0.25 oz. (7.1 g) of hops every 10 minutes with the final hop addition coming at the end of the boil. Add liquid malt extract, Irish moss and yeast nutrients with 15 minutes left in boil. (Shut off heat when you stir in the extract.) Cool wort, let hops and trub settle, and transfer clear wort to fermenter.

Add water to make 5 gallons (19 L), aerate wort and pitch yeast sediment from starter. Ferment at 68 °F (20 °C) until fermentation is complete (about 2–3 weeks). Rack to secondary and let condition about 2 months at around 40 °F (4.4 °C), if possible. Keg or bottle with corn sugar. You may want to add 1 tsp. of dried yeast at bottling to facilitate carbonation.

C.H.A.O.S. COUNTY BRAND STOUT

(5 gallons/19 L, all-grain)

OG = 1.129 FG = 1.040

IBU = 50 SRM = 94 ABV = 13.7%

This recipe comes from the C.H.A.O.S. Brew Club (Chicago Homebrew Alchemists of Suds), located one mile from ground zero of where all Bourbon County Brand Stout is produced (Goose Island's Fulton & Wood Brewery), so it is only natural the club has a homebrew recipe for their own take on the imperial stout.

Ingredients

19 lbs. (8.6 kg) British 2-row pale malt
1.62 lbs. (0.73 kg) Munich malt (10 °L)

2.16 lbs. (0.98 kg) roasted barley (450 °L)
 2.16 lbs. (0.98 kg) crystal malt (60 °L)
 1.35 lbs. (0.61 kg) chocolate malt
 13 oz. (0.37 kg) Belgian debittered black malt (550 °L)
 10 AAU Willamette hops (75 min.) (2 oz./57 g at 5% alpha acids)
 5 AAU Willamette hops (30 min.) (1 oz./28 g at 5% alpha acids)
 1 oz. (28 g) Willamette hops (0 min.)
 ½ tsp. yeast nutrient (15 min.)
 2 sachets Safale US-05, White Labs WLP001 (California Ale), or Wyeast 1056 (American Ale) yeast
 ¾ cup corn sugar (if priming)
 Lallemend CBC-1 yeast (if priming)

Step by Step

If opting to use a liquid yeast strain, make a large starter several days in advance or brew a smaller beer and use the yeast from that beer to re-pitch into this beer.

This is a single step infusion mash. Mix all of the crushed grains with 7.75 gallons (29.5 L) of 170 °F (77 °C) water to stabilize at 155 °F (68 °C). Sparge with enough water to collect 7.5 gallons (28.4 L) wort. Your pre-boil gravity should be about 1.086. Supplement with dried malt extract if your gravity reading is low. Total boil time is 120 minutes. Add your hops and yeast nutrient per the schedule in the ingredients list.

After the boil is complete, cool the wort to 66 °F (19 °C). Pitch your yeast and aerate the wort heavily. Hold at that temperature until primary fermentation is complete. Gently transfer to a secondary vessel or bourbon barrel. If you don't have a barrel but want to add some oak character, you can substitute oak cubes or staves that have soaked in a bourbon of your choice. Allow the beer to condition for an additional 1–6 months or until the beer is to your liking.

Prime and bottle condition or keg and force carbonate to 2.2 volumes CO₂. Prime with a bottling yeast strain like Lallemend CBC-1 if the beer has aged several months.

C.H.A.O.S. COUNTY BRAND STOUT

(5 gallons/19 L, extract with grains)
 OG = 1.129 FG = 1.040
 IBU = 50 SRM = 94 ABV = 13.7%

Ingredients

9 lbs. (4.1 kg) extra light dried malt extract
 3.3 lbs. (1.5 kg) Munich liquid malt extract
 2.16 lbs. (0.98 kg) roasted barley (450 °L)
 2.16 lbs. (0.98 kg) crystal malt (60 °L)
 1.35 lbs. (0.61 kg) chocolate malt
 13 oz. (0.37 kg) Belgian debittered black malt (550 °L)
 10 AAU Willamette hops (75 min.) (2 oz./57 g at 5% alpha acids)
 5 AAU Willamette hops (30 min.) (1 oz./28 g at 5% alpha acids)
 1 oz. (28 g) Willamette hops (0 min.)
 ½ tsp. yeast nutrient (15 min.)
 2 sachets Safale US-05, White Labs WLP001 (California Ale), or Wyeast 1056 (American Ale) yeast
 ¾ cup corn sugar (if priming)
 Lallemend CBC-1 yeast (if priming)

Step by Step

If opting to use a liquid yeast strain, make a large starter several days in advance or brew a smaller beer and use the yeast from that beer to re-pitch into this beer.

On brew day, place the crushed grains in a large muslin bag. Steep the milled grain in 3 gallons (11.5 L) of water at 160 °F (71 °C) for 20 minutes. Remove the grain bag and place in a colander. Wash with 1-gallon (3.9-L) hot water. Add the liquid and dried malt extract and stir until fully dissolved. Top off to 6.5 gallons (24.6 L) and bring to a boil. When the wort comes to a boil, add the first hop addition and boil for a total of 75 minutes. Add the remaining hops and yeast nutrient per the schedule.

After the boil is complete, cool the wort to 66 °F (19 °C). Pitch your yeast and aerate the wort heavily. Hold at that temperature until primary fermentation is complete. Gently transfer to a secondary vessel or bourbon barrel. If you don't have a barrel but want to add some oak character, you can substitute oak cubes or staves that have soaked in a bourbon of your choice. Allow the beer to condition for an additional 1–6 months or until the beer is to your liking. Prime and bottle condition or keg and force carbonate to 2.2 volumes CO₂. Prime with a bottling yeast strain like Lallemend CBC-1 if the beer has aged several months.

CAROLINA BREWING CO.'S GROUNDHOG IMPERIAL STOUT CLONE

(5 gallons/19 L, all-grain)
 OG = 1.093 FG = 1.027

IBU = 45 SRM = 49 ABV = 9.5%

Ingredients

16 lbs. (7.3 kg) 2-row pale malt
 2.25 lbs. (1 kg) caramel malt (60 °L)
 1.3 lbs. (0.6 kg) roasted barley (300 °L)
 8 oz. (0.23 kg) black malt
 12 AAU Nugget hops (90 min.) (1 oz./28 g at 12% alpha acids)
 0.25 oz. (7 g) Willamette hops (10 min.)
 0.25 oz. (7 g) Willamette hops (5 min.)
 0.25 oz. (7 g) Willamette hops (1 min.)
 Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mash for 60 minutes at 152 °F (67 °C). Boil for 90 minutes, adding hops at times indicated. Cool the wort after the boil and ferment at 68 °F (20 °C) for 3 weeks, then drop temperature 10 °F (5 °C) per day until it reaches 30 °F (-1.1 °C). Hold at 30 °F (-1.1 °C) for one week.

CAROLINA BREWING CO.'S GROUNDHOG IMPERIAL STOUT CLONE

(5 gallons/19 L, extract with grains)
 OG = 1.093 FG = 1.027

IBU = 45 SRM = 49 ABV = 9.5%

Ingredients

3.5 lbs. (1.6 kg) extra light dried malt extract
 6.6 lbs. (3 kg) golden light liquid malt extract
 2.25 lbs. (1 kg) caramel malt (60 °L)
 1.3 lbs. (0.6 kg) roasted barley (300 °L)
 8 oz. (0.23 kg) black malt
 12 AAU Nugget hops (90 min.) (1 oz./28 g at 12% alpha acids)
 0.25 oz. (7 g) Willamette hops (10 min.)
 0.25 oz. (7 g) Willamette hops (5 min.)
 0.25 oz. (7 g) Willamette hops (1 min.)
 Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
 ¾ cup corn sugar (if priming)

Step by Step

Place crushed grains in a steeping bag

and steep in 5 qt. (4.6 L) of water at 152 °F (67 °C) for 45 minutes. Remove grain bag and rinse with 2.5 qt. (2.4 L) of water at 170 °F (77 °C). Add water to make 3.5 gallons (13 L), stir in dried malt extract and bring to a boil. Boil for 90 minutes, adding hops at the appropriate times. Keep a small pot of boiling water handy and do not let boil volume drop below 3 gallons (11 L). Stir in liquid malt extract during final 15 minutes of the boil, stirring until extract has dissolved completely.

Cool wort after the boil is complete and transfer to fermenter. Top up to 5 gallons (19 L) and aerate. Pitch yeast and ferment at 68 °F (20 °C). If possible, cold condition the beer for a few days before packaging.

FREETAIL BREWING CO.'S LA MUERTA IMPERIAL STOUT CLONE

(5 gallons/19 L, all-grain)
OG = 1.092 FG = 1.029
IBU = 50 SRM = 66 ABV = 9.1%

Freetail describes La Muerta as, "A big, lush imperial stout . . . full of roast, smoke and chocolate flavors from an array of specialty malts."

Ingredients

10 lbs. (4.5 kg) 2-row pale malt
4.5 lbs. (2 kg) Weyermann smoked barley malt
2 lbs. (0.91 kg) chocolate malt (350 °L)
1.4 lbs. (0.62 kg) Munich malt
1 lb. (0.45 kg) crystal malt (120 °L)
14 oz. (0.4 kg) roasted barley (450 °L)
15.8 AAU Summit™ hop pellets (60 min.) (0.9 oz./26 g at 17.5% alpha acids)
½ tsp. Irish moss (15 min.)
½ tsp. yeast nutrient (15 min.)
White Labs WLP007 (Dry English Ale), Wyeast 1335 (British Ale II), or Safale S-04 (English Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

This is a single-step infusion mash. Mix all of the crushed grains with 6 gallons (23 L) of 168 °F (76 °C) water to stabilize at 152 °F (67 °C) for 60 minutes. Slowly sparge with 175 °F (79 °C) water. Collect approximately 7 gallons (26.5 L) of wort runoff to boil for 60 minutes.

Add the hops 30 minutes after the

start of the boil and the yeast nutrients and Irish moss with 15 minutes left in the boil. Cool the wort to 75 °F (24 °C). Once cooled, pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Transfer to a secondary fermenter and allow the beer to condition for one week and then bottle or keg. Allow the beer to carbonate and age for two weeks and enjoy your La Muerta Imperial Stout clone.

FREETAIL BREWING CO.'S LA MUERTA IMPERIAL STOUT CLONE

(5 gallons/19 L, partial mash)
OG = 1.092 FG = 1.029
IBU = 50 SRM = 66 ABV = 9.1%

Ingredients

6.6 lbs. (3 kg) Briess, special dark, unhopped, liquid malt extract (90 °L)
2.5 lbs. (1.1 kg) traditional dark, dried malt extract (30 °L)
3 lbs. (1.36 kg) Weyermann smoked barley malt
1.5 lbs. (0.68 kg) chocolate malt (350 °L)
4 oz. (113 g) Munich malt
2 oz. (57 g) crystal malt (120 °L)
2 oz. (57 g) roasted barley (450 °L)
17.5 AAU Summit™ hop pellets (60 min.) (1 oz./28 g at 17.5% alpha acids)
½ tsp. Irish moss (30 min.)
½ tsp. yeast nutrient (15 min.)
White Labs WLP007 (Dry English Ale), Wyeast 1335 (British Ale II), or Safale S-04 (English Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mash the crushed grain in 2.5 gallons (9.5 L) of water at 152 °F (67 °C) for 60 minutes. Remove grains from the wort and rinse with 2 quarts (1.9 L) of hot water. Add the liquid and dried malt extracts and boil for 60 minutes. While boiling, add hops, Irish moss and yeast nutrient as per schedule.

After the boil is complete, add the wort to 2 gallons (7.6 L) of cold water in your sanitized fermenter and top off with cold water up to 5 gallons (19 L). Cool the wort to 75 °F (24 °C). Once cooled, pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature

until fermentation is complete. Transfer to a secondary fermenter and allow the beer to condition for one week and then bottle or keg. Allow to carbonate and age for two weeks and enjoy your La Muerta Imperial Stout clone.

GREAT DIVIDE BREWING CO.'S YETI IMPERIAL STOUT CLONE

(5 gallon/19 L, all-grain)
OG = 1.090 FG = 1.023
IBU = 75 SRM = 56 ABV = 9.5%

Describing YETI, Great Divide says, "It starts with big, roasty malt flavor that gives way to rich caramel and toffee notes. YETI gets its bold hop character from an enormous quantity of American hops. It weighs in at a hefty 75 IBUs."

Ingredients

15 lbs. (6.8 kg) American 2-row pale malt
1 lb. (0.45 kg) crystal malt (120 °L)
12 oz. (0.34 kg) chocolate malt
12 oz. (0.34 kg) black patent malt
10 oz. (0.28 kg) roasted barley
8 oz. (0.23 kg) flaked wheat
8 oz. (0.23 kg) flaked rye
14.3 AAU Chinook hops (60 min.) (1.1 oz./31 g at 13% alpha acids)
7.2 AAU Chinook hops (30 min.) (0.55 oz./16 g at 13% alpha acids)
5.3 AAU Centennial hops (15 min.) (0.5 oz./14 g at 10.5% alpha acids)
0.5 oz. (14 g) Centennial hops (5 min.)
Wyeast 1056 (American Ale) or White Labs WLP001 (California Ale) yeast (3 qt./~3 L yeast starter)
¾ cups corn sugar (if priming)

Step by Step

Heat 6 gallons (23 L) strike water to achieve a mash conversion rest at 150 °F (66 °C). Hold at this temperature for 60 minutes. Sparge with enough water to collect approximately 7 gallons (26.5 L). Boil for 90 minutes, adding hops at times indicated above. After the boil is complete, cool and ferment at 70 °F (21 °C).

GREAT DIVIDE BREWING CO.'S YETI IMPERIAL STOUT CLONE

(5 gallon/19 L, partial mash)
OG = 1.090 FG = 1.023
IBU = 75 SRM = 56 ABV = 9.5%

Ingredients

9 lbs. (4.1 kg) Muntons light liquid malt extract
2 lbs. (0.91 kg) American 2-row malt
1 lb. (0.45 kg) crystal malt (120 °L)
12 oz. (0.34 kg) chocolate malt
12 oz. (0.34 kg) black patent malt
10 oz. (0.28 kg) roasted barley
8 oz. (0.23 kg) flaked wheat
8 oz. (0.23 kg) flaked rye
14.3 AAU Chinook hops (60 min.)
(1.1 oz./31 g at 13% alpha acids)
7.2 AAU Chinook hops (30 min.)
(0.55 oz./16 g at 13% alpha acids)
5.3 AAU Centennial hops (15 min.)
(0.50 oz./14 g at 10.5% alpha acids)
0.5 oz. (14 g) Centennial hops (5 min.)
Wyeast 1056 (American Ale) or White Labs WLP001 (California Ale) yeast
(3 qt./~3 L yeast starter)
¾ cups corn sugar (if priming)

Step by Step

Heat 2.3 gallons (8.7 L) of water to 161 °F (72 °C). Submerge grain bag(s) and partial mash at 150 °F (66 °C) for 60 minutes. (Note: This is just over 6 lbs./2.7 kg of grains so you may need more than one grain bag.) Putting your brewpot in the oven on its lowest heat setting may help maintain partial mash temperature.)

Remove grains, rinse grain bag(s) slowly with 1 gallon (3.8 L) of water at 170 °F (77 °C). Add water to brewpot to make at least 4 gallons (15 L) of wort; stir in roughly two-thirds of the malt extract. Bring to a boil. Boil for 60 minutes, adding hops at the times indicated. Add remaining malt extract with 15 minutes left in boil. Cool wort and transfer to fermenter. Top up to 5 gallons (19 L), aerate, and pitch yeast. Ferment at 70 °F (21 °C).

GREAT SMOKY STOUT

(5 gallons/19 L, all-grain)

OG = 1.096 FG = 1.026

IBU = 80 SRM = 37 ABV = 10.1%

Ingredients

16 lbs. (7.3 kg) 2-row pale malt
3 lbs. (1.4 kg) smoked malt
0.5 lb. (0.23 kg) Caramunich® III malt
0.5 lb. (0.23 kg) roasted barley
0.5 lb. (0.23 kg) black patent malt
2 oz. (57 g) British chocolate malt
18 AAU Nugget hops (90 min.)
(1.5 oz./43 g at 12% alpha acids)
4.5 AAU Tettnanger hops (60 min.)

(1 oz./28 g at 4.5% alpha acids)
4.5 AAU Tettnanger hops (10 min.)
(1 oz./28 g at 4.5% alpha acids)
2 oz. (57 g) Cascade hops (0 min.)
Wyeast 1728 (Scottish Ale) or White Labs WLP028 (Edinburgh Scottish Ale) yeast
¾ cups corn sugar (if priming)

Step by Step

Choose your favorite smoked malt or you may want to try smoking your own malt starting with 2-row pale malts. Mash the grains at 152 °F (67 °C) for 60 minutes. Sparge with enough water to collect 6.5 gallons (24.6 L) of wort. Total boil time is 90 minutes, adding the hops at the times indicated.

Cool the wort, add water to top up to 5 gallons (19 L), and pitch the yeast. Follow your typical fermentation procedure, priming with corn sugar before bottling.

GREAT SMOKY STOUT

(5 gallons/19 L, partial mash)

OG = 1.096 FG = 1.026

IBU = 80 SRM = 37 ABV = 10.1%

Ingredients

10.5 lbs. (4.8 kg) golden light liquid malt extract
3 lbs. (1.4 kg) smoked malt
0.5 lb. (0.23 kg) Caramunich® III malt
0.5 lb. (0.23 kg) roasted barley
0.5 lb. (0.23 kg) black patent malt
2 oz. (57 g) British chocolate malt
24 AAU Nugget hops (60 min.)
(2 oz./57 g at 12% alpha acids)
4.5 AAU Tettnanger hops (60 min.)
(1 oz./28 g at 4.5% alpha acids)
4.5 AAU Tettnanger hops (10 min.)
(1 oz./28 g at 4.5% alpha acids)
2 oz. (57 g) Cascade hops (0 min.)
Wyeast 1728 (Scottish Ale) or White Labs WLP028 (Edinburgh Scottish Ale) yeast
¾ cups corn sugar (if priming)

Step by Step

Choose your favorite smoked malt or you may want to try smoking your own malt starting with 2-row pale malts.

Add all the crushed grains to 2 gallons (7.8 L) of water and bring up to 160 °F (71 °C). Then allow the grains to steep for approximately 45 minutes at this temperature. Remove the grains and wash with 1 gallon (3.8 L) of hot water. Bring the wort to

a boil. Add the malt extract and boil for 60 minutes, adding the hops as per the schedule. Try to keep the liquid topped up to at least 3 gallons (11.6 L) at all times.

Cool the wort, add water to top up to 5 gallons (19 L), and pitch the yeast. Follow your typical fermentation procedure, priming with corn sugar before bottling.

INDIA INK IMPERIAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.083 FG = 1.021

IBU = 100+ SRM = 35 ABV = 8.8%

Somewhere between an imperial stout and a black IPA, you will find India Ink Imperial Stout

Ingredients

6.5 lbs. (3 kg) American 2-row pale malt
6.5 lbs. (3 kg) Maris Otter pale malt
2 lbs. (0.91 kg) light Munich malt
0.75 lb. (0.34 kg) crystal malt (80 °L)
0.75 lb. (0.34 kg) Caramunich® II malt
10 oz. (0.28 kg) roasted barley (300 °L)
0.5 lb. (0.23 kg) chocolate malt
21 AAU Magnum hops (60 min.)
(1.5 oz./43 g at 14% alpha acids)
24.5 AAU Magnum hops (20 min.)
(1.75 oz./50 g at 14% alpha acids)
12 AAU Cascade hops (0 min.)
(2 oz./57 g at 6% alpha acids)
1 tsp. gypsum (15 min.)
1 tsp. Irish moss (15 min.)
Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Single step infusion mash using 5.75 gallons (22 L) water to mash at 150 °F (66 °C) for one hour. Sparge with 170 °F (77 °C) water and collect 7 gallons (26 L) of wort and bring to a boil. The total boil time is 75 minutes with hop additions as listed in the ingredient list.

After the boil, allow the beer to rest 15 minutes and then cool to 70 °F (21 °C) and pitch a 2-qt. (1.9-L) yeast starter. Ferment two weeks in primary. When fermentation is finished rack to secondary fermenter. Bottle or keg as normal and allow this beer to age a couple of months.

INDIA INK IMPERIAL STOUT

(5 gallons/19 L, extract with grains)
OG = 1.083 FG = 1.021
IBU = 100+ SRM = 35 ABV = 8.8%

Ingredients

3.3 lbs. (1.5 kg) golden light liquid malt extract
3.3 lbs. (1.5 kg) Maris Otter liquid malt extract
3.3 lbs. (1.5 kg) Munich liquid malt extract
0.75 lb. (0.34 kg) crystal malt (80 °L)
0.75 lb. (0.34 kg) Caramunich® II malt
10 oz. (0.28 kg) roasted barley (300 °L)
0.5 lb. (0.23 kg) chocolate malt
21 AAU Magnum hops (60 min.) (1.5 oz./43 g at 14% alpha acids)
24.5 AAU Magnum hops (20 min.) (1.75 oz./50 g at 14% alpha acids)
12 AAU Cascade hops (0 min.) (2 oz./57 g at 6% alpha acids)
1 tsp. Irish moss (15 min.)
Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Place all the crushed grains in a large muslin bag and steep in 2 gallons (7.6 L) water at 160 °F (71 °C). After 15 minutes remove the bag and place in a colander. Wash with 1 gallon (4 L) of hot water. Add the liquid malt extract and top off to 7 gallons (26 L) of wort and then bring to a boil. The total boil time is 75 minutes with hop additions as listed in the ingredient list.

After the boil, allow the beer to rest 15 minutes and then cool to 70 °F (21 °C) and pitch a 2-qt. (1.9-L) yeast starter. Ferment two weeks in primary. When fermentation is finished rack to secondary fermenter. Bottle or keg as normal and allow this beer to age a couple of months.

JAMIL'S THE CZAR'S REVENGE

(5 gallons/19 L, all-grain)
OG = 1.098 FG = 1.030
IBU = 77 SRM = 61 ABV = 10%

Ingredients

17 lbs. (7.71 kg) Crisp pale ale malt (3 °L)
22 oz. (0.62 kg) roasted barley (500 °L)

14 oz. (0.4 kg) Dingemans Special B malt (120 °L)
8 oz. (0.23 kg) caramel Munich malt (60 °L)
7 oz. (0.2 kg) chocolate malt (350 °L)
7 oz. (0.2 kg) pale chocolate malt (200 °L)
16 AAU Horizon hops (60 min.) (1.23 oz./35 g at 13% alpha acids)
8.3 AAU Kent Golding hops (10 min.) (1.66 oz./47 g at 5% alpha acids)
8.3 AAU Kent Golding hops (1 min.) (1.66 oz./47 g at 5% alpha acids)
White Labs WLP001 (California Ale), Wyeast 1056 (American Ale) or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

The proper pitch rate is 16 grams of properly rehydrated dry yeast, three packages of liquid yeast or one package of liquid yeast in a 6-liter starter. Mill the grains and dough-in targeting a mash thickness that will enable your system to achieve the necessary pre-boil volume and gravity. Hold the mash at 154 °F (68 °C) until enzymatic conversion is complete. Infuse the mash with near boiling water while stirring or with a recirculating mash system raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 6.5 gallons (25 L) and the gravity is 1.076 (18.4 °P). If your system loses efficiency on big beers, start with an additional 4 to 5 lbs. (2 kg) of base malt or make sure you have a couple of pounds (1 kg) or more of malt extract on hand to make up any deficiency in efficiency.

The total wort boil time is 90 minutes. Add the bittering hops with 60 minutes remaining in the boil. Add Irish moss or other kettle finings with 15 minutes left in the boil. Add the remaining hop additions at 10 minutes and 1 minute. Chill the wort to 67 °F (19 °C) and aerate thoroughly, then pitch the yeast. Ferment at 67 °F (19 °C) until the yeast drops clear. Allow the lees to settle and the brew to mature without pressure for another two days after fermentation appears finished. Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle. Target a carbonation level of 2 to 2.5 volumes. Store the beer in a cool, dark

place and allow to age. The beer will improve over time and should mature six or more months before drinking.

JAMIL'S THE CZAR'S REVENGE

(5 gallons/19 L, extract with grains)
OG = 1.098 FG = 1.030
IBU = 77 SRM = 61 ABV = 10%

Ingredients

11.5 lbs. (5.2 kg) Muntons liquid malt extract
22 oz. (0.62 kg) roasted barley (500 °L)
14 oz. (0.4 kg) Dingemans Special B (120 °L)
8 oz. (0.23 kg) caramel Munich (60 °L)
7 oz. (0.2 kg) chocolate malt (350 °L)
7 oz. (0.2 kg) pale chocolate malt (200 °L)
16 AAU Horizon hops (60 min.) (1.23 oz./35 g at 13% alpha acids)
8.3 AAU Kent Golding hops (10 min.) (1.66 oz./47 g at 5% alpha acids)
8.3 AAU Kent Golding hops (1 min.) (1.66 oz./47 g at 5% alpha acids)
White Labs WLP001 (California Ale), Wyeast 1056 (American Ale) or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

The proper pitch rate is 16 grams of properly rehydrated dry yeast, three packages of liquid yeast or one package of liquid yeast in a 6-liter starter.

Mill or coarsely crack the specialty malt and place loosely in a grain bag. Avoid packing the grains too tightly in the bag, using more bags if needed. Steep the bag in about 1.5 gallon (~6 liters) of water at roughly 170 °F (77 °C) for about 30 minutes. Lift the grain bag out of the steeping liquid and rinse with warm water. Allow the bags to drip into the kettle for a few minutes while you add the malt extract. Do not squeeze the bags. Add enough water to make a pre-boil volume of 5.9 gallons (22.3 L) and a gravity of 1.084. Stir thoroughly to help dissolve the extract and bring to a boil.

The total wort boil time is 60 minutes. Add the bittering hops as soon as the wort begins to boil. Add Irish moss or other kettle finings with 15 minutes left in the boil. Add the remaining hop additions at 10 minutes and 1 minute. After the boil is com-

plete, chill the wort to 67 °F (19 °C) and aerate thoroughly. Ferment at 67 °F (19 °C) until the yeast drops clear. Allow the lees to settle and the brew to mature without pressure for another two days after fermentation appears finished. Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle.

Target a carbonation level of 2 to 2.5 volumes. Store the beer in a cool, dark place and allow to age. The beer will improve over time so you should allow it to mature six or more months before drinking.

MICROBREW-STYLE STOUT

(5 gallons/19 L, all-grain)

OG = 1.080 FG = 1.016

IBU = 70 SRM = 56 ABV = 9%

Ingredients

14.5 lbs. (6.6 kg) 2-row pale malt
8 oz. (0.23 kg) UK extra dark crystal malt (130–150 °L)
6 oz. (0.17 kg) UK medium crystal malt (45–55 °L)
6 oz. (0.17 kg) roasted barley (500 °L)
6 oz. (0.17 kg) chocolate malt (350 °L)
1 lb. (0.45 kg) Weyermann Carafa® Special III malt (450–500 °L)
15 AAU Nugget hops (60 min.) (1 oz./28 g at 15% alpha acids)
6 AAU Cascade hops (20 min.) (1 oz./28 g at 6% alpha acids)
8 AAU Centennial hops (5 min.) (1 oz./28 g at 8% alpha acids)
1 tsp. Irish moss (15 min.)
Wyeast 1056 (American Ale) or White Labs WLP001 (California Ale) or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

This is a single step infusion mash. Mix crushed grains with 5.5 gallons (21 L) water to stabilize the mash temperature at 150 °F (66 °C) and hold for 60 minutes. Sparge with enough water to collect 7 gallons (26.5 L) wort in the kettle. Boil for 90 minutes, adding the first hop addition 30 minutes after boil starts. Add the remaining hop additions and the Irish moss per the ingredients list.

Cool wort down to 70 °F (21 °C), aerate, pitch yeast, and ferment at 70 °F (21 °C). Rack after about 14 days and a second time in another 21 days.

Then keg or prime, bottle, and hold for at least 14 days before drinking. This beer can be consumed young or can be laid down for aging.

MICROBREW-STYLE STOUT

(5 gallons/19 L, extract with grains)

OG = 1.080 FG = 1.016

IBU = 70 SRM = 56 ABV = 9%

Ingredients

2.5 lbs. (1.1 kg) Briess light dried malt extract
6.6 lbs. (3 kg) Coopers light liquid malt extract (15 min.)
8 oz. (0.23 kg) UK extra dark crystal malt (130–150 °L)
6 oz. (0.17 kg) UK medium crystal malt (45–55 °L)
6 oz. (0.17 kg) roasted barley (500 °L)
6 oz. (0.17 kg) chocolate malt (350 °L)
1 lb. (0.45 kg) Weyermann Carafa® Special III malt (450–500 °L)
18.8 AAU Nugget hops (60 min.) (1.25 oz./35 g at 15% alpha acids)
6 AAU Cascade hops (20 min.) (1 oz./28 g at 6% alpha acids)
8 AAU Centennial hops (5 min.) (1 oz./28 g at 8% alpha acids)
1 tsp. Irish moss (15 min.)
Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Place crushed grains in a nylon steeping bag and heat 1 gallon (4 L) of water to 162 °F (72 °F). Steep grains in this water for 45 minutes. The temperature should be around 150 °F (66 °C) for the duration of the steep.

Combine 1.7 gallons (6.4 L) of water and dried malt extract with “grain tea” and heat to a boil. (To save time, heat water and extract while steeping the grains.) Boil wort for 60 minutes, adding hops at times indicated. With 15 minutes left, stir in the liquid malt extract (LME) and add Irish moss. Stir in LME thoroughly to prevent extract from sinking in kettle and scorching to the bottom.

After the boil is complete, cool wort down to 70 °F (21 °C), aerate, pitch yeast, and ferment at 70 °F (21 °C). Rack after about 14 days and a second time in another 21 days. Then keg or prime, bottle, and hold for at

least 14 days before drinking. This beer can be consumed young or can be laid down for aging.

MIKE RIDDLE'S TRICENTENNIAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.100 FG = 1.037

IBU = 94 SRM = 106 ABV = 9.3%

Ingredients

14 lbs. (6.35 kg) British pale ale malt (3 °L)
2.25 lbs. (1 kg) chocolate malt (475 °L)
2.25 lbs. (1 kg) roasted barley (575 °L)
1.88 lbs. (0.85 kg) wheat malt (2 °L)
0.75 lb. (0.34 kg) crystal malt (120 °L)
14 AAU Northern Brewer hops (60 min.) (2.15 oz./61 g at 6.5% alpha acids)
10.7 AAU Northern Brewer hops (30 min.) (1.65 oz./47 g at 6.5% alpha acids)
5.5 AAU Northern Brewer hops (15 min.) (0.84 oz./24 g at 6.5% alpha acids)
8.3 AAU Kent Golding hops (15 min.) (1.65 oz./47 g at 5% alpha acids)
12.5 AAU Kent Golding hops (3 min.) (2.5 oz./71 g at 5% alpha acids)
1.65 oz. (47 g) Kent Golding hops (dry hop)
White Labs WLP004 (Irish Ale) or Wyeast 1084 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mill the grains and dough-in targeting a mash thickness that will enable your system to achieve the necessary pre-boil volume and gravity. Hold the mash at 149 °F (65 °C) until enzymatic conversion is complete. Infuse the mash with near-boiling water while stirring or with a recirculating mash system raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 6.5 gallons (25 L) and the gravity is 1.078 (18.8 °P). If your system loses efficiency on big beers, start with an additional 4 to 5 lbs. (1.8 to 2.3 kg) of base malt or make sure you have a couple of pounds (about 1 kg) or more of malt extract on hand to make up any deficiency in efficiency.

The total wort boil time is 90 minutes. Add the bittering hops

with 60 minutes remaining in the boil. Add the other hop additions according to the schedule. Add Irish moss or other kettle finings with 15 minutes left in the boil. Chill the wort to 70 °F (21 °C) and aerate thoroughly. The proper pitch rate is 17 grams of properly rehydrated dry yeast, about 4 packages of liquid yeast, or 1 package of liquid yeast in a 6.3-liter starter.

Ferment at 70 °F (21 °C) until the yeast drops clear. Allow the lees to settle and the brew to mature without pressure for another two days after fermentation appears finished. Transfer to secondary and add dry hops. Allow it to finish fermenting until completely settled, about seven additional days. Rack to a keg and force carbonate or rack to a bottling bucket, add priming sugar, and bottle. Target a carbonation level of 2 to 2.5 volumes.

Once carbonated, store the beer in a cool, dark place and allow to age. The beer will improve over time and should mature one to three years before drinking.

MIKE RIDDLE'S TRICENTENNIAL STOUT

(5 gallons/19 L, extract with grains)

OG = 1.100 FG = 1.037

IBU = 100 SRM = 106 ABV = 9.3%

Ingredients

8 lbs. (3.63 kg) Muntons light liquid malt extract
3 lbs. (1.36 kg) wheat liquid malt extract
2.25 lbs. (1 kg) chocolate malt (475 °L)
2.25 lbs. (1 kg) roasted barley (575 °L)
0.75 lb. (0.34 kg) crystal malt (120 °L)
14 AAU Northern Brewer hops (60 min.) (2.15 oz./61 g at 6.5% alpha acids)
10.7 AAU Northern Brewer hops (30 min.) (1.65 oz./47 g at 6.5% alpha acids)
5.5 AAU Northern Brewer hops (15 min.) (0.84 oz./24 g at 6.5% alpha acids)
8.3 AAU Kent Golding hops (15 min.) (1.65 oz./47 g at 5% alpha acids)
12.5 AAU Kent Golding hops (3 min.) (2.5 oz./71 g at 5% alpha acids)
1.65 oz. (47 g) Kent Golding hops (dry hop)
White Labs WLP004 (Irish Ale) or Wyeast 1084 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mill or coarsely crack the specialty malt and place loosely in a grain bag. Avoid packing the grains too tightly in the bag, using more bags if needed. Steep the bag in about 1.5 gallons (~6 liters) of water at roughly 170 °F (77 °C) for about 30 minutes. Lift the grain bag out of the steeping liquid and rinse with warm water. Allow the bags to drip into the kettle for a few minutes while you add the malt extract. Do not squeeze the bags. Add enough water to the steeping liquor and malt extract to make a pre-boil volume of 5.9 gallons (22.3 liters) and a gravity of 1.085. Stir thoroughly to help dissolve the extract and bring to a boil.

The total wort boil time is 60 minutes. Add the bittering hops as soon as the wort begins to boil. Add Irish moss or other kettle finings with 15 minutes left in the boil and the remaining hop additions according to the hops schedule. Chill the wort to 70 °F (21 °C) and aerate thoroughly. The proper pitch rate is 17 grams of properly rehydrated dry yeast, about 4 packages of liquid yeast, or 1 package of liquid yeast in a 6.3-liter starter.

Follow the fermentation schedule of the all-grain recipe.

OSKAR BLUES BREWERY'S TEN FIDY CLONE

(3 gallons/11 L, all-grain)

OG = 1.106 FG = 1.034

IBU = 98 SRM = 100 ABV = 10.5%

This recipe was developed to be brewed using a parti-gyle technique, producing 3 gal (11 L) of finished Ten FIDY and a second, larger volume, small beer. Ten FIDY is a first runnings beer. Oskar Blues often utilizes second runnings in a different beer. If you are not looking to utilize the parti-gyle process, then a partial mash will probably be your best bet to achieve a beer closest to Ten FIDY.

Ingredients

10.6 lbs. (4.8 kg) 2-row pale malt (2 °L)
2.85 lbs. (1.3 kg) Munich malt (9 °L)
1.43 lbs. (0.65 kg) Simpsons caramalt (25 °L)
1.43 lbs. (0.65 kg) Simpsons dark crystal malt (95 °L)
1.43 lbs. (0.65 kg) chocolate malt (350 °L)

1.22 lbs. (0.55 kg) roasted barley (550 °L)
1.43 lbs. (0.65 kg) flaked oats
4 oz. (113 g) re-hydrated rice hulls (added during lautering)
18 AAU Summit™ hops (60 min.) (1 oz./28 g at 18% alpha acid)
3.4 AAU Columbus hops (10 min.) (0.25 oz./7 g at 14% alpha acid)
½ Whirlfloc® tablet (10 min.)
Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
Lallemand CBC-1 yeast (if priming)
⅔ cup corn sugar (if priming)

Step by Step

Target the mash ratio to be about 1.3 quarts of water to 1 pound of grain (2.7 kg/L), or 37% malt by weight. Be sure to add in the volume of dead space liquid that is left in the mash tun after it is drained. For this recipe, that means ~28 qts. (26.5 L) of strike water estimating 2 qts. (2 L) dead space in the mash tun. Mash the grains at 152 °F (67 °C) and hold at this temperature for 60 minutes. Raise the temperature of the grain bed to mash out at 168 °F (76 °C), add the rice hulls, then begin lauter phase by recirculating the wort back on top of the grain bed (vorlauf). Vorlauf until the wort runs clear, then drain all the wort in the mash tun into your kettle.

There should be about 4 gallons (15 L) in your kettle with a gravity reading around 1.086. Add an appropriate amount of dried malt extract if this gravity is too low. Total boil time is 60 minutes, adding hops at the times indicated in the ingredients list, and Whirlfloc® tablet with 10 minutes left in the boil. At 0 minutes, turn off the heat and give the wort a stir for at least a minute and let it settle for 10 minutes. The total volume in the kettle should be about 3.25 gallons (12.3 L). You can add some cold tap water to correct the volume if necessary. Chill to yeast pitching temperature, pitch the yeast, then heavily aerate the wort. After 12 hours, hit the wort with a second dose of oxygen if possible. Ferment at 67 °F (19 °C) for 2–3 weeks or until target gravity has been achieved. Transfer to a secondary vessel and drop the temperature to 54 °F (21 °C) and condition the beer for a minimum of 3 weeks. At this point you have the option of leav-

ing the base beer as is or adding an array of ingredients such as vanilla or whiskey soaked oak chips to suit your tastes. Rack to a keg and force carbonate, or rack to a bottling bucket, add priming sugar, and bottle. If the beer was aged in secondary for more than a few months, adding priming yeast such as Lallemand's CBC-1 is suggested if bottle conditioning.

OSKAR BLUES BREWERY'S TEN FIDY CLONE

(5 gallons/19 L, partial mash)

OG = 1.106 FG = 1.034

IBU = 98 SRM = 71 ABV = 10.5%

Ingredients

5.5 lbs. (2.6 kg) extra light dried malt extract
 3.3 lbs. (1.5 kg) Munich liquid malt extract
 1 lb. (0.45 kg) Munich malt (9 °L)
 1.43 lbs. (0.65 kg) Simpsons caramalt (25 °L)
 1.43 lbs. (0.65 kg) Simpsons dark crystal malt (95 °L)
 1.43 lbs. (0.65 kg) chocolate malt (350 °L)
 1.22 lbs. (0.55 kg) roasted barley (550 °L)
 1.43 lbs. (0.65 kg) flaked oats
 30.6 AAU Summit™ hops (60 min.) (1.7 oz./48 g at 18% alpha acid)
 3.4 AAU Columbus hops (10 min.) (0.25 oz./7 g at 14% alpha acid)
 ½ Whirlfloc® tablet (10 min.)
 Wyeast 1056 (American Ale) or White Labs WLP001 (California Ale) or Safale US-05 yeast
 Lallemand CBC-1 yeast (if priming)
 ⅓ cup corn sugar (if priming)

Step by Step

Place the crushed Munich malt in a muslin bag with the flaked oats. Submerge the grain bag in 1 gallon (4 L) of hot water to hold the mash at 152 °F (67 °C) for 60 minutes. Raise the temperature of the mash to 168 °F (76 °C), then remove the grain bag and wash with 2 qts. of 168 °F (76 °C) water. Add an additional 2 gallons of 168 °F (76 °C) water to the wort, then add the remainder of the crushed specialty grains in a second muslin bag. Hold for 20 minutes at this temperature. Remove the specialty grain bag and rinse with 1 gallon (4 L) of hot water.

Top off kettle to about 6 gallons (23 L) water and bring to a boil. Once at a boil, remove the kettle from heat and add the liquid and dried malt extract. Stir until all the malt extract is dissolved, then return the wort to a boil. The wort gravity at this point should be 1.089 at room temperature. Total boil time is 60 minutes, adding hops at the times indicated and Whirlfloc® tablet with 10 minutes left in the boil.

After the boil is complete, turn off the heat then give the wort a stir for at least a minute and let settle for 10 minutes. Chill to yeast pitching temperature, pitch the yeast then heavily aerate the wort. After 24 hours, hit the wort with a second dose of oxygen.

Now follow the remainder of the all-grain recipe.

PA ALERS 10TH ANNIVERSARY RUSSIAN IMPERIAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.115 FG = 1.035

IBU = 84 SRM = 49 ABV = 12%

Ingredients

13 lbs. (5.9 kg) Maris Otter pale ale malt (3 °L)
 3.4 lbs. (1.5 kg) Munich malt (10 °L)
 1.1 lbs. (0.5 kg) wheat malt (2 °L)
 9 oz. (0.26 kg) Weyermann Carafa® III malt (525 °L)
 9 oz. (0.26 kg) chocolate malt (350 °L)
 9 oz. (0.26 kg) roasted barley (300 °L)
 9 oz. (0.26 kg) Special B malt (135 °L)
 2.4 lbs. (1.1 kg) Muntons extra light dried malt extract (3 °L)
 20.7 AAU Galena hops (60 min.) (1.8 oz./51 g at 11.5% alpha acids)
 19 AAU Simcoe® hops (10 min.) (1.5 oz./43 g at 12.7% alpha acids)
 1 Whirlfloc® tablet (15 min.)
 ½ tsp. yeast nutrient (15 min.)
 White Labs WLP007 (Dry English Ale) yeast (1.5 L/1.6 qts. yeast starter)
 White Labs WLP099 (Super High Gravity Ale) yeast (1 L/1 qt. yeast starter)
 ⅓ cup corn sugar (for priming)

Step by Step

One week before brew day, get a WLP007 yeast starter going. When starter activity slows, decant the spent wort and add fresh wort.

On brew day, mill the grains and

dough-in with 28 quarts (26.5 L) hot water, targeting a mash at 154 °F (68 °C). Hold until enzymatic conversion is complete. If your system allows, raise the mash temperature to 168 °F (76 °C) and recirculate the wort until clear. Sparge with 170 °F (77 °C) water to collect 6.5 gallons (25 L) of wort. Take a specific gravity reading and add the dried malt extract until the specific gravity is 1.088. Boil for 90 minutes, adding the Galena and Simcoe® hops at 60 and 10 minutes respectively. Add Whirlfloc® and yeast nutrient with 15 minutes remaining in boil. Chill the wort to 70 °F (21 °C), aerate, and add WLP007 starter (decanting the spent wort first). When fermentation slows, take a gravity reading and add the WLP099 starter (if needed) to achieve a final specific gravity of 1.035. Keg or bottle carbonate, aiming for a carbonation level of 2.0–2.2 volumes of CO₂. Once carbonated, condition at cellar temperature for several months. Flavor should peak at about one year and remain there for at least another year.

PA ALERS 10TH ANNIVERSARY RUSSIAN IMPERIAL STOUT

(5 gallons/19 L, extract with grains)

OG = 1.115 FG = 1.035

IBU = 84 SRM = 49 ABV = 12%

Ingredients

10 lbs. (4.5 kg) Muntons extra light dried malt extract (3 °L)
 1.7 lbs. (0.8 kg) table sugar (sucrose) (0 °L)
 9 oz. (0.26 kg) Weyermann Carafa® III malt (525 °L)
 9 oz. (0.26 kg) chocolate malt (350 °L)
 9 oz. (0.26 kg) roasted barley (300 °L)
 9 oz. (0.26 kg) Special B malt (135 °L)
 20.7 AAU Galena hops (60 min.) (1.8 oz./51 g at 11.5% alpha acids)
 19 AAU Simcoe® hops (10 min.) (1.5 oz./43 g at 12.7% alpha acids)
 1 Whirlfloc® tablet (15 min.)
 ½ tsp. yeast nutrient (15 min.)
 White Labs WLP007 (Dry English Ale) yeast (1.5 L/1.6 qts. yeast starter)
 White Labs WLP099 (Super High Gravity Ale) yeast (1 L/1 qt. yeast starter)
 ⅓ Cup corn sugar (for priming)

Step by Step

One week before brew day, get a

WLP007 yeast starter going. When starter activity slows, decant the spent wort and add fresh wort.

On brew day, crush the grains and place in two steeping bags. Steep the bags at 155 °F (68 °C) in 16 quarts (15 L) of water for 20 minutes. Rinse the grains with 2 quarts (2 L) of 170 °F (77 °C) hot water. Add dried malt extract (DME) and table sugar. Boil for 60 minutes, adding the hops at the specified times. Chill the wort to 70 °F (21 °C) and add water to achieve 5 gallons (19 L) of wort. Aerate the wort and add WLP007 starter (decanting the spent wort first). When fermentation slows, take a gravity reading and add WLP099 starter (if needed) to achieve a final specific gravity of 1.035. Keg or bottle carbonate, aiming for a carbonation level of 2.0–2.2 volumes of CO₂. Once carbonated, condition at cellar temperature for several months. Flavor should peak at one year and remain there for at least another year.

Tips for Success:

Pitching plenty of healthy yeast is paramount for a high gravity brew. When in doubt, pitch more. Be patient with the fermentation and conditioning process. For bottle carbonation, pitch fresh yeast at bottling time if the WLP099 wasn't needed during the brew day. Give the bottles adequate time to carbonate. This beer needs to age, anyway. If you would like, try aging this beer in a bourbon barrel. How long to barrel condition is a matter of individual taste. Our club likes a full bourbon flavor, so we age the beer for several months. We don't worry about temperature. The barrel's alive, and varying temperatures allow the wood to expand and contract, imparting those wonderful oak and bourbon flavors.

RUSSIAN ÉMIGRÉ IMPERIAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.101 FG = 1.025

IBU = 78 SRM = 40 ABV = 11%

Ingredients

12.5 lbs. (5.7 kg) US 2-row pale malt (2 °L)
 2 lbs. (0.91 kg) Munich malt (10 °L)
 2 lbs. (0.91 kg) rye malt (4 °L)
 2 lbs. (0.91 kg) Thomas Fawcett

crystal rye malt (75 °L)
 2 lbs. (0.91 kg) Briess Carabrown® malt (55 °L)
 1.5 lbs. (0.68 kg) Thomas Fawcett pale chocolate malt (200 °L)
 21 AAU Magnum pellet hops (90 min.) (1.5 oz./43 g at 14% alpha acids)
 White Labs WLP007 (Dry English Ale) or Wyeast 1098 (British Ale) yeast (3-qt./2.8-L starter)
 ¾ cup corn sugar (if priming)

Step by Step

Mash at 150 to 152 °F (66 to 67 °C) with 27 quarts (26 L) of water. You will need to sparge to collect 7 to 8 gallons (26 to 30 L) of wort, and then boil down to 5 gallons (19 L) in order to achieve your target gravity. Add the hops only for the last ninety minutes of the boil. After the boil, cool and use a yeast starter of at least 3 quarts (2.8 L) made from three packs of yeast, and preferably to oxygenate the wort before pitching the yeast. At the end of the boil, chill the wort rapidly to fermentation temperatures and pitch the yeast. Mature three to six months then bottle or keg.

RUSSIAN ÉMIGRÉ IMPERIAL STOUT

(5 gallons/19 L, extract with grain)

OG = 1.101 FG = 1.025

IBU = 78 SRM = 40 ABV = 11%

Ingredients

4 lbs. (1.8 kg) extra light dried malt extract
 3.3 lbs. (1.5 kg) Munich liquid malt extract
 3.3 lbs. (1.5 kg) rye liquid malt extract
 1.25 lbs. (0.57 kg) Thomas Fawcett crystal rye malt (75 °L)
 1.25 lbs. (0.57 kg) Briess Carabrown® malt (55 °L)
 1.5 lbs. (0.68 kg) Thomas Fawcett pale chocolate malt (200 °L)
 21 AAU Magnum pellet hops (90 min.) (1.5 oz./43 g at 14% alpha acids)
 White Labs WLP007 (Dry English Ale) or Wyeast 1098 (British Ale) yeast (as a 3-qt./2.8-L starter)
 ¾ cup corn sugar (if priming)

Step by Step

Steep the crushed malt in a large muslin bag with 2 gallons (7.6 L) of water at around 160 °F (71 °C). Strain off the grains and rinse them with two lots of

1-gallon (3.8-L) hot water and use this wort to dissolve the extract. You will need at least 6 gallons (23 L) of wort to boil down to 5 gallons (19 L) in order to achieve target gravity. Boil the wort for 90 minutes. Add the hops at the start of the boil. At the end of the boil, chill the wort rapidly to fermentation temperatures and pitch the yeast. Ferment using a starter of at least 3 quarts (2.8 L) made from three packs of yeast, and preferably to oxygenate the wort before pitching the yeast. Mature three to six months then keg or bottle.

SMOKED "IMP" IMPERIAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.092 FG = 1.018

IBU = 55 SRM = 32 ABV = 10.6%

Ingredients

11.5 lbs. (5.2 kg) Crisp Maris Otter pale malt
 1.5 lbs. (0.68 kg) Caramunich® I malt (35 °L)
 1 lb. (0.45 kg) crystal malt (60 °L)
 8 oz. (0.23 kg) pale chocolate malt
 8 oz. (0.23 kg) roasted barley
 2 lbs. (0.91 kg) Briess Cherry Wood Smoked Malt
 1 lb. (0.45 kg) light brown sugar (15 min.)
 ¼ cup molasses (0 min.)
 ½ tsp. yeast nutrient (10 min.)
 1 Whirlfloc tablet (15 min.)
 5.5 AAU Galena hops (first wort hop) (0.5 oz./14 g at 11% alpha acids)
 11 AAU Galena hops (90 min.) (1 oz./28 g at 11% alpha acids)
 1 oz. (28 g) Fuggles hops (0 min.)
 White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), or Safale US-05 yeast (1 qt./1 L yeast starter)
 ¾ cup corn sugar (if priming)

Step by Step

Mash in with 166–168 °F (74–76 °C) water to settle at 149–150 °F (65–66 °C) for 60 minutes. Raise temperature to 168–170 °F (76–77 °C) for ten minutes. Sparge with 175 °F (79 °C) water for 60–90 minutes. Add first wort hops and collect at least 7 gallons (26 L) of wort to be boiled for 90 minutes. After the boil, cool quickly to 65 °F (18 °C) and pitch yeast. Let temperature rise naturally

to between 68 and 70 °F (20–21 °C) and hold. This beer should take 7 to 10 days to complete and then rack to secondary for a week to ten days. Keg to 2.5 volumes of CO₂ or bottle with ¾ cup of corn sugar in 750 mL corked and hooded bottles. This beer will age well for years or can be consumed a few weeks after bottling.

SMOKED “IMP” IMPERIAL STOUT

(5 gallons/19 L, partial mash)

OG = 1.092 FG = 1.018

IBU = 55 SRM = 32 ABV = 10.6%

Ingredients

6 lbs. (2.7 kg) Muntons light dried malt extract
0.5 lb. (0.23 kg) Crisp Maris Otter malt
1.5 lbs. (0.68 kg) Caramunich® I malt (35 °L)
1 lb. (0.45 kg) crystal malt (60 °L)
8 oz. (0.23 kg) pale chocolate malt
8 oz. (0.23 kg) roasted barley
2 lbs. (0.91 kg) Briess Cherry Wood Smoked Malt
1 lb. (0.45 kg) light brown sugar (15 min.)
¼ cup molasses (0 min.)
½ tsp. Wyeast yeast nutrient (10 min.)
1 Whirlfloc tablet (15 min.)
5.5 AAU Galena hops (first wort hop) (0.5 oz./14 g at 11% alpha acids)
11 AAU Galena hops (90 min.) (1 oz./28 g at 11% alpha acids)
1 oz. (28 g) Fuggle hops (0 min.)
White Labs WLP001 (California Ale) or Wyeast 1056 (American Ale) or Safale US-05 yeast (1 qt./1 L yeast starter)
¾ cup corn sugar (if priming)

Step by Step

For the partial mash adaptation of this recipe, you will need a large voile or nylon bag capable of holding 6 lbs. (2.7 kg) of grain, or use two bags. Place crushed grains in the large steeping bag and place in a large pot. Heat 12 qts. (11.4 L) of water to 161 °F (72 °C) and stir into grains so that the temperature hits 149–150 °F (65–66 °C). Place either in a warm oven at 150 °F (66 °C) or wrap up in blanket or other form of insulation. After 60 minutes, remove the bag and wash the grain with 1 gallon (4 L) hot water, collecting the wash in your brew kettle. You should have collected 3–3.5 gallons (11–13 L) of wort in the kettle. Add

first wort hops while heating the wort up to a boil. Add roughly half of the malt extract and boil wort for 90 minutes. (Keep some boiling water handy and don't let the boil volume dip below 3 gallons/11 L.) Add hops at times indicated and carefully stir in remaining malt extract in final 15 minutes of the boil.

Cool wort quickly to 65 °F (18 °C) and pitch yeast. Let temperature raise naturally to 68–70 °F (20–21 °C) and hold. This beer should take 7 to 10 days to complete and then rack to secondary for a week to ten days. Keg to 2.5 volumes of CO₂ or bottle with ¾ cup of corn sugar in 750 mL corked and hooded bottles. This beer will age well for years or can be consumed a few weeks after bottling.

Tips for Success:

When making a dark beer, water chemistry can make the difference between a beer that seems too acidic and one in which the roasted flavors taste pleasant. If you were starting from distilled water, adding 0.25 oz. (7 g) of calcium carbonate (chalk) and 0.25 oz. (7 g) of sodium bicarbonate (baking soda) per 5 gallons (19 L) of brewing liquor (brewing water) would benefit this beer. (If you have a pH meter, check the mash pH. It should fall between 5.2 and 5.6.)

Also, as with any big beer, thorough wort aeration, adding yeast nutrients in the boil, and making a yeast starter will yield a better fermentation.

STONE BREWING CO.'S IMPERIAL RUSSIAN STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.097 FG = 1.023

IBU = 65 SRM = 69 ABV = 10.6%

According to Stone Brewing Co., "This massive and intensely aromatic beer abounds with notes of chocolate, coffee, black currants, anise, and roastiness, and its heavy palate is nothing to be trifled with."

Ingredients

16.5 lbs. (7.5 kg) 2-row pale malt
2 lbs. (0.91 kg) amber malt
1.25 lbs. (0.57 kg) roasted barley (500 °L)
1.25 lbs. (0.57 kg) black malt

19 AAU Warrior® hops (90 min.) (1.2 oz./34 g at 16% alpha acids)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB Ale) yeast (3 qt./3 L yeast starter)
¾ cup corn sugar (if priming)

Step by Step

If possible, make a smaller beer 2–4 weeks prior to brewing this beer and use the yeast from the small beer to pitch into this beer. If not, make a 3 qt./3 L yeast starter several days prior to brew day.

Mix crushed grains with 7 gallons (26.5 L) strike water in order to stabilize the mash temperature at 150 °F (66 °C). Hold at this temperature for 75 minutes, then sparge with enough water to collect 6.5 gallons (24.6 L). Boil for 90 minutes, adding the hops at the start of the boil. After the boil is finished, chill to yeast pitch temperature. Ferment at 68 °F (20 °C) for 5 days, then increase the temperature to 72 °F (22 °C) and hold for 5 days. Transfer to a secondary fermentation vessel and age for 1–3 months at cellar temperatures. Bottle or keg as normal.

STONE BREWING CO.'S IMPERIAL RUSSIAN STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.097 FG = 1.023

IBU = 65 SRM = 69 ABV = 10.6%

Ingredients

8 lbs. (3.6 kg) light dried malt extract
1.5 lbs. (0.68 kg) 2-row pale malt
2 lbs. (0.91 kg) amber malt
1.25 lbs. (0.57 kg) roast barley
1.25 lbs. (0.57 kg) black malt
21 AAU Warrior® hops (60 min.) (1.3 oz./37 g at 16% alpha acids)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB Ale) yeast (3 qt./3 L yeast starter)
¾ cup corn sugar (for priming)

Step by Step

Place the crushed 2-row pale malt and amber malt in a large muslin bag and mash in 2 gallons (7.6 L) of water at 150 °F (66 °C) for 45 minutes. Add the crushed black malt and roasted barley to the musling bag then stir to incorporate. Remove the grain bag and place in a colander. Slowly wash the

grains with 1 gallon (4 L) hot water. Add water to the brew kettle to make 6 gallons (23 L) of wort. Add dried malt extract and bring to a boil. Boil for 60 minutes, adding hops as the wort comes to a boil.

After the boil is finished, chill to yeast-pitching temperature. Ferment at 68 °F (20 °C) for 5 days, then increase the temperature to 72 °F (22 °C) and hold for 5 days. Transfer to a secondary fermentation vessel and age for 1-3 months at cellar temperatures. Bottle or keg as normal. This beer will age well.

VICTORY BREWING CO.'S STORM KING IMPERIAL STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.089 FG = 1.025

IBU = 82 SRM = 53 ABV = 9.2%

Victory Brewing Co. says, "Storm King is dense and full-bodied, with deep, dark chocolate flavors of roasted malts under a massive hop aroma."

Ingredients

14 lbs. (6.4 kg) Pilsner malt
2.5 lbs. (1.13 kg) Vienna malt
1 lb. (0.45 kg) Carafo® II malt (425 °L)
1 lb. (0.45 kg) roast barley (450 °L)
20 AAU Centennial hops (60 min.)
(1.9 oz./54 g at 10.5% alpha acids)
5.25 AAU Cluster hop pellets (30 min.)
(0.75 oz./21 g at 7% alpha acids)
2.9 AAU Cascade hop pellets (5 min.)
(0.5 oz./14 g at 5.75% alpha acids)
½ tsp. yeast nutrients (15 min.)
½ tsp. Irish moss (15 min.)
White Labs WLP001 (California Ale),
Wyeast 1056 (American Ale), or
Safale US-05 yeast
¾ of corn sugar (if priming)

Step by Step

This is a single step infusion mash. Mix all of the crushed grains with 6 gallons (22.7 L) of 170 °F (77 °C) water to stabilize at 155 °F (68 °C) for 60 minutes. Sparge slowly with 175 °F (79 °C) water. Collect approximately 6 gallons (23 L) of wort runoff to boil for 60 minutes adding the hops, Irish moss and yeast nutrients according to the schedule.

After the boil, cool the wort to 75 °F (24 °C). Pitch your yeast and aerate the wort heavily. Allow the

beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Transfer to a carboy, avoiding any splashing to prevent aerating the beer. Condition for 1 week. Bottle or keg. Allow the beer to carbonate and age for two weeks.

VICTORY BREWING CO.'S STORM KING IMPERIAL STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.089 FG = 1.025

IBU = 82 SRM = 53 ABV = 9.2%

Ingredients

6.6 lbs. (3 kg) Briess Pilsen, unhopped,
liquid malt extract
2.5 lbs. (1.13 kg) Pilsen light dried
malt extract
2.5 lbs. (1.13 kg) Vienna malt
1 lb. (0.45 kg) Carafo® II malt (425 °L)
1 lb. (0.45 kg) roast barley (450 °L)
20 AAU Centennial hops (60 min.)
(1.9 oz./54 g at 10.5 % alpha acids)
7 AAU Cluster hop pellets (30 min.)
(1 oz./28 g at 7 % alpha acids)
2.9 AAU Cascade hop pellets (5 min.)
(0.5 oz./14 g at 5.75% alpha acids)
½ tsp. yeast nutrients (15 min.)
½ tsp. Irish moss (30 min.)
White Labs WLP001 (California Ale),
Wyeast 1056 (American Ale), or
Safale US-05 yeast
¾ of corn sugar (if priming)

Step by Step

Steep the crushed grain in 2 gallons (7.6 L) of water at 155 °F (68 °C) for 30 minutes. Remove grains from the wort and rinse with 2 quarts (1.8 L) of hot water. Add the liquid and dried malt extracts and boil for 60 minutes. While boiling, add the hops, Irish moss and yeast nutrients as per the schedule. During the boil, use this time to thoroughly sanitize a fermenter.

After the boil, transfer the wort to the sanitized fermenter and top off with cold water up to 5 gallons (19 L). Cool the wort to 75 °F (24 °C). Pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Transfer to a carboy, avoiding any splashing to prevent aerating the beer. Condition for one week. Bottle or keg as normal and allow the beer to carbonate and age for two weeks.

WEYERBACHER FIFTEEN (SMOKED IMPERIAL STOUT) CLONE

(5 gallons/19 L, all-grain)

OG = 1.101 FG = 1.027

IBU = 52 SRM = 74 ABV = 10.8%

To celebrate their 15th anniversary release, Weyerbacher brewed an imperial stout described as "an intense, full-bodied smoke experience. Fifteen has a rich flavor profile balancing notes of dark roast, burnt toast and spicy rye with a deep earthy aroma of smoke and wood." Due to the high percentage of smoked malt, an approximate extract version of this recipe would be very difficult to achieve.

Ingredients

15 lbs. (6.8 kg) smoked malt
1.88 lbs. (0.85 kg) Weyermann
Caraaroma® malt (150 °L)
1.25 lbs. (0.57 kg) Weyermann
Carafo® Special II malt (425 °L)
1.25 lbs. (0.57 kg) rye malt
1.25 lbs. (0.57 kg) pale malt
0.75 lb. (0.34 kg) black malt
0.75 lb. (0.34 kg) roasted barley
15.75 AAU Centennial hops (90 min.)
(1.5 oz./43 g of 10.5% alpha aids)
1 oz. (28 g) Fuggle hops (2 min.)
Wyeast 1272 (American Ale II) or
White Labs WLP051 (California Ale V)
yeast
¾ cup corn sugar (if priming)

Step by Step

We recommend making a small beer with your yeast in order to get the yeast count up to an appropriate level to pitch into this beer. You could also make a 1 gallon (4 L) starter several days in advance then place the starter in the fridge prior to brewday. Decant the liquid once the yeast has properly settled.

On brewday, mash in to 130 °F (54 °C), rest for 20 minutes, then ramp up the mash to 154 °F (68 °C) for 30 minutes rest. Raise temperature to 172 °F (78 °C) to mash out. Collect approximately 7 gallons (27 L) of wort and boil for 90 minutes, adding the hops as indicated.

After the boil is complete, cool and ferment at 68 °F (20 °C). Condition in a secondary vessel for four weeks at 50 °F (10 °C) prior to bottling or kegging as normal.

IRISH STOUT

by JAMIL ZAINASHEFF

Several months ago I was enjoying an evening out at a local brew pub with several non-beer geek friends. One friend asked me what I would recommend from the pub's beer list. I began describing the various beers and what they might expect from each. And then it happened again. When I began to describe the pub's award-winning Irish stout, he said, "Oh I don't like dark beers. They are too thick and have too much alcohol." Then another person chimed in, "I want something with a lot of flavor, but not so much alcohol."

Argh! I find it frustrating when people speak of all stouts as if they were the equivalent of used motor oil with enough alcohol to launch a rocket. Not all stouts are big and heavy and misconceptions keep a lot of people from trying some wonderful beers. While some stout substyles do have significant levels of alcohol and can be full-bodied, Irish stout, or dry stout, is usually a lower alcohol beer, with a dry finish and light body that makes it easy to consume. It is a great choice when you want to have a few flavorful beers without being overwhelmed by alcohol.

Irish stout is a very dark, roasty, bitter, and sometimes creamy ale. The commercial example most people know is Guinness Draught (4.1 to 4.3% ABV). It is a fine example of the style, right in the middle of the road as compared to some other commonly

available Irish stouts, such as Murphy's (4 % ABV) and Beamish (4.1% ABV). Like all Irish stouts, Guinness Draught is a fairly low gravity, low alcohol, and low body beer with a relatively high level of hop bittering. It is dry and bitter, but easy to drink by the pint because of its dryness, low alcohol, and low carbonation.

Guinness starts with an aroma full of coffee and chocolate. The ester levels are fairly low, with some fruity/grape notes. The flavor is rich with coffee, chocolate, and a touch of pear/grape fruit esters. Overall, it is far more bitter than Murphy's. The finish is sharp and dry with a long coffee and bittersweet chocolate finish. Murphy's is less roasty than Guinness and is sweeter. The aroma is much fruitier than either Guinness or Beamish, with apples and pears mixed in with moderate coffee notes. The flavor, like all good dry stouts, starts with coffee. It continues with a little bit of cocoa and more fruity esters.

Beamish is my favorite of the big three. It has a touch more acrid roast character than Guinness, almost to the point where it is biting. Guinness is less acrid, chocolatier. Beamish has minimal fruity esters, slightly more than Guinness, but less than Murphy's. It also has something in the flavor and aroma that neither Guinness nor Murphy's display — hops. The floral hop character is moderate and is obvious alongside the coffee, chocolate, and slight fruitiness. While

Photo by Charis A. Parker/Images PPlus



Beamish has more roast notes than Guinness and slightly more sweetness up front, in the end it has a drier finish.

Much has been made of Guinness sourness or Guinness "twang." It is said that Guinness adds a portion of soured beer back to achieve that balance. To my palate, Beamish has as much "twang" as Guinness and reportedly they don't add soured beer. I prefer to skip any sort of sour beer, sour wort, or acid malt addition. If you feel the beer you're making needs something sour however, you can experiment with those methods.

The roasted character of this style comes primarily from highly kilned, unmalted barley. There is conflicting information out there about the flavor difference between roasted malt and roasted barley, with some sources saying there is no difference and others saying that roasted malt provides more coffee-like character, but it is more acrid too. The difference is reportedly because the malted grain forms far more melanoidins when kilned. I've always been in the camp that believes there is a difference between the two, and when making a dry beer, it is best to avoid the more acrid roasted malt and use only roasted barley.

Optionally, a touch of a lighter roasted malt, such as chocolate (350–450 °L) can add a nice complexity to the roast character (more nutty/chocolate). The combination of dark malts in this style should add up to around 10% of the grist, give or take a couple points. While caramel malts are appropriate for some of the bigger stout styles, especially those with a sweeter finish, it is a mistake to include large amounts of caramel malt in a dry stout recipe. Caramel malts add non-fermentable sugar and caramel flavor, which negatively affect the dryness of the beer. If you're trying to make a sweeter version, similar to Murphy's, then perhaps a tiny bit of crystal malt is accept-

able. You can also increase the perception of sweetness by reducing the amount of highly kilned grain, reducing hop bitterness, or by using a less attenuative yeast.

There is also some debate over the role of unmalted barley in dry stout, with one side saying it is important to the mouthfeel of the beer and the other saying the brew-

glucan rest, then a protein rest, and finally a saccharification rest when making a dry stout. I often combine the beta glucan rest and the protein rest at a temperature of 120 °F (49 °C) to simplify things. If you prefer a single infusion mash, a temperature around 150 °F (65 °C) strikes the proper balance between fermentable and non-fermentable

// If your water is low in alkalinity, you might need to tweak your water chemistry a bit to deal with the acidity of the dark malt. //

eries use it only for cost efficiency. If you're an all-grain brewer, it is simple enough to use flaked unmalted barley for a portion of your grist. If you're an extract brewer, you can skip the flaked barley, otherwise you should convert it via a partial mash.

I prefer British pale ale malt as the base for Irish stout. It provides a nice background biscuit-like malt character. British pale ale malt is kilned a bit darker (2.5 to 3.5 °L) than the average American 2-row or pale malt (1.5 to 2.5 °L) and this higher level of kilning brings out the malt's biscuity flavors. If you're brewing with extract, your best choice is an extract made from British pale ale malt. Look for products labeled English pale, Maris Otter, or British-style malt extract.

Irish stout generally has a light body, some would say medium-light. Commercial breweries use all sorts of mash schedules, with the goal of converting the flaked barley and making a fermentable wort. You might hold the mash for a beta

sugars. I've read that Beamish uses a rest temperature of 143 °F (62 °C), so it seems that there is leeway for the saccharification rest. For extract brewers, most light colored extracts will get you fairly close. If not, you can make your extract-based wort more fermentable by replacing a portion of your extract with table or corn sugar or by doing a partial mash with some 2-row malt and your extract.

Some brewers report various problems with the mash when making Irish stout. One thing to keep an eye on is the mash pH as the dark grains can push the mash below 5.2 pH. If your water is low in alkalinity, you might need to tweak your water chemistry a bit to deal with the acidity of the dark malt. Adding a small amount of calcium carbonate and sodium bicarbonate to the mash to correct the pH is all it takes. Don't try to replicate the water of Dublin or anything like that. In more locations than not, the water you have is fine for brewing dry stout.

Another common issue is

the recirculation or runoff of the mash. Unmalted, flaked barley can be gummy (especially if you do not perform a beta glucan rest). To make matters worse, when a grain is highly kilned, it becomes brittle and when milled it produces a much higher percentage of flour and stuck mashes.

A good friend of mine believes in cold steeping his roasted malt. He adds the crushed malt to cold water the day prior and then adds the roasty liquor to the boil kettle as needed. He tells me that this method reduces any roasted grain harshness. Personally, I've not had a harshness issue, but this might be a useful tool in your arsenal if you wish to give it a try.

It is the highly kilned grain along with substantial hop bitterness that enhances the dry finish of this style. Target a bitterness-to-starting gravity ratio (IBU divided by original gravity) between 0.9 and 1.1. Normally, a single addition at 60 minutes is all you need. If you want a beer with some hop character, along the lines of Beamish, then a moderate later addition, say 1/2 ounce (14 g) around 20 minutes or later is appropriate. Hop choice for bittering and flavor is fairly flexible. Kent Goldings, Fuggle, Challenger, Target, Perle, and Magnum all work well. Don't use any citrusy or catty American-type hops.

Two great yeasts for brewing this style are White Labs WLP004 (Irish Ale) and Wyeast 1084 (Irish Ale). Irish ale yeast provides the right low-ester profile but is only moderately attenuative. You'll need to pitch the proper amount of clean, healthy yeast and keep a close eye on fermentation temperatures to ensure good attenuation. As an alternative, you can use a neutral ale yeast with higher attenuation, such as White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), or Fermentis Safale US-05 with acceptable results. For a more fruity inter-



Photo by Charles A. Parker/Images PPlus

“ It is the highly kilned grain along with substantial hop bitterness that enhances the dry finish of this style. ”

pretation, similar to Murphy's, ferment warmer with the Irish ale yeast or switch to an English-style ale yeast. White Labs WLP007 (Dry English) or Wyeast 1098 (British Ale) work well. Some commercial breweries have been known to use lager yeasts for some stout styles. Whatever you use, pick a yeast that will finish dry enough for the style.

The final step in brewing a great example of this style is proper carbonation. Too much CO₂ can make smaller beers seem thin and harsh. Carbonation of 1 to 1.5 volumes and a serving temperature of 52 to 55 °F (11 to 13 °C) is ideal. If you really want to go stout crazy, you can serve your dry stout with beer gas (a nitrogen/CO₂ mix) on a stout faucet. (For more information about nitrogenating beer, read "The Nitrogen Effect," in the May 1999 issue of *BYO* or "Achieving Nitro Nirvana" in the January-February 2005 issue.)

**AN BODHRÁN
DRY STOUT****(5 gallons/19 L, all-grain)****OG = 1.047 FG = 1.012****IBU = 40 SRM = 34 ABV = 4.7%****Ingredients**

7 lbs. (2 kg) British pale ale malt
 1.5 lbs. (0.68 kg) flaked barley
 1 lb. (0.45 kg) English dark crystal malt (75 °L)
 12 oz. (0.34 kg) black barley
 10.5 AAU German Magnum hops (60 min.) (0.75 oz./21 g at 14% alpha acids)
 White Labs WLP004 (Irish Ale), Wyeast 1084 (Irish Ale), or Safale S-04 yeast
 $\frac{3}{4}$ cup corn sugar (if priming)

Step by Step

Two or three days before brew day, make a 1-qt. (1-L) yeast starter, aerating the wort thoroughly (preferably with oxygen) before pitching the yeast.

On brew day, bring 15 qts. (14 L) of strike water to 163 °F (73 °C) in order to stabilize the mash at 150 °F (66 °C). Hold at this temperature for 60 minutes. Sparge with enough water to collect 6 gallons (23 L) of wort in the kettle. Bring wort to a boil. Add bittering hops and boil for 60 minutes.

After boiling, cool wort quickly to 70 °F (21 °C). Aerate wort and pitch yeast. Ferment for 5–7 days at 69–72 °F (21–22 °C) then rack to a sanitized secondary fermenter. Let the beer clarify 5–7 days, then bottle or keg. This beer will taste best after 3 weeks or more of conditioning.

**AN BODHRÁN
DRY STOUT****(5 gallons/19 L, extract with grain)****OG = 1.047 FG = 1.012****IBU = 40 SRM = 34 ABV = 4.7%****Ingredients**

6 lbs. (3.7 kg) Muntons dark liquid malt extract
 8 oz. (0.45 kg) English dark crystal malt (75 °L)
 8 oz. (0.23 kg) black barley
 11.9 AAU German Magnum hops (60 min.) (0.85 oz./24 g at 14% alpha acids)
 White Labs WLP004 (Irish Ale), Wyeast 1084 (Irish Ale), or Safale S-04 yeast

 $\frac{3}{4}$ cup corn sugar (if priming)**Step by Step**

Two or three days before brew day, make a 1-qt. (1-L) yeast starter, aerating the wort thoroughly (preferably with oxygen) before pitching the yeast.

On brew day, bring 2.5 gallons (9.5 L) of water to 150 °F (66 °C) and turn off the heat. Soak the grains for 15 minutes. Remove grain bag, allowing liquid to drip into brewpot. Discard the grains and heat liquid until boiling. Shut off heat again and stir in malt extract, and top off to 3 gallons (11 L). Heat to a boil once extract is dissolved, stirring occasionally. Add bittering hops and boil for 60 minutes. After boiling, cool wort quickly to 70 °F (21 °C). Pour wort into the sanitized fermenter and add cool water to make 5 gallons (19 L). Aerate wort and pitch yeast. Ferment for 5–7 days at 69–72 °F (21–22 °C) then rack to a sanitized secondary fermenter. Let the beer clarify 5–7 days, then bottle or keg. This beer will taste best after 3 weeks or more of conditioning.

DETH STOUT**(5 gallons/19 L, all-grain)****OG = 1.038 FG = 1.008****IBU = 26 SRM = 31 ABV = 4%****Ingredients**

5.5 lbs. (2.5 kg) 2-row pale ale malt
 2 oz. (57 g) crystal malt (90 °L)
 10 oz. (0.28 kg) roasted barley (500 °L)
 3 oz. (85 g) chocolate malt
 12 oz. (0.34 kg) raw sugar (15 min.)
 6 AAU Columbus hops (60 min.) (0.5 oz./14 g at 12% alpha acids)
 0.5 oz. (14 g) Kent Golding hops (10 min.)
 White Labs WLP007 (Dry English Ale) or Wyeast 1098 (British Ale) yeast
 $\frac{3}{4}$ cup corn sugar (if priming)

Step by Step

This is a single infusion mash. Mix grains with 2.5 gallons (9.2 L) water to stabilize the mash at 152 °F (67 °C). Add 0.75 tsp. of sodium bicarbonate to the steep water. Heat 3 gallons (11.4 L) sparge water to 170 °F (77 °C) and slowly sparge the grain bed. After sparge is complete, top off the brew kettle with water to 6 gallons (23 L) and bring to a boil.

Boil for 60 minutes, adding hops at times indicated in ingredient list. Add sugar with 15 minutes left in boil. Ferment at 70 °F (21 °C).

DETH STOUT**(5 gallons/19 L, extract with grains)****OG = 1.038 FG = 1.008****IBU = 26 SRM = 31 ABV = 4%****Ingredients**

4 lbs. (1.8 kg) light liquid malt extract (15 min.)
 2 oz. (57 g) crystal malt (90 °L)
 10 oz. (0.28 kg) roasted barley (500 °L)
 3 oz. (85 g) chocolate malt
 12 oz. (0.34 kg) raw sugar (15 min.)
 6 AAU Columbus hops (60 min.) (0.5 oz./14 g at 12% alpha acids)
 0.5 oz. (14 g) Kent Golding hops (10 min.)
 White Labs WLP007 (Dry English Ale) or Wyeast 1098 (British Ale) yeast
 $\frac{3}{4}$ cup corn sugar (if priming)

Step by Step

Steep crushed grains in a muslin bag at 152 °F (67 °C) in 2 qts. (2 L) of water for 20 minutes. Heat 2 qts. (2 L) of water to 170 °F (77 °C) in brewpot while grains steep. After the 20 minutes is up, wash the grains with the hot water. Add 0.75 tsp. of sodium bicarbonate to brewpot and top off to 3 gallons (11.4 L). Boil for 60 minutes, adding hops at times indicated in ingredient list. Add sugar and liquid malt extract with 15 minutes left in boil. Ferment at 70 °F (21 °C).

DRY CORK STOUT**(5 gallons/19 L, all-grain)****OG = 1.041 FG = 1.008****IBU = 30 SRM = 29 ABV = 4.3%****Ingredients**

6.7 lbs. (3 kg) pale ale malt (3 °L)
 1 lb. (0.45 kg) flaked barley
 10 oz. (0.28 kg) roasted barley (300 °L)
 3 oz. (85 g) chocolate malt (350 °L)
 3 oz. (85 g) black malt (525 °L)
 1 tsp. Irish moss
 6.6 AAU Fuggle hops (60 min.) (1.3 oz./37 g at 5.1% alpha acids)
 5 AAU East Kent Golding hops (15 min.) (1 oz./28 g at 5% alpha acids)
 Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast

¾ cup corn sugar (if priming)

Step by Step

Mix the unmilled barley flakes with the milled grains and mash at 148 °F (64 °C). Let rest for at least an hour. Start lautering while sparging with near-boiling water to raise the grain-bed temperature as quickly as possible to 172 °F (78 °C). Then reduce the sparge water temperature to hold this grain bed temperature through the entire sparge. Continue the sparge until you collect about 6 gallons (23 L) and the kettle gravity is about 1.034. Assuming a normal evaporation loss during a 60-minute boil, the original gravity at the end of the boil should be at the target gravity. If not, extend the boil for a few minutes or liquor down the wort with cold water.

Add the hops and Irish moss as indicated. After the boil, cool the wort 60 °F (16 °C), pitch the yeast and hold the brew at that temperature throughout the entire fermentation and conditioning period. Rack the brew once after about 10 days and a second time after another 20 days. Prime and package your brew and it should be ready to drink after another week of conditioning.

DRY CORK STOUT

(5 gallons/19 L, extract with grains)

OG = 1.041 FG = 1.008

IBU = 30 SRM = 28 ABV = 4.3%

Ingredients

3.5 lbs. (1.6 kg) extra light dried malt extract
10 oz. (0.28 kg) roasted barley (300 °L)
3 oz. (84 g) chocolate malt (350 °L)
3 oz. (84 g) black malt (525 °L)
0.8 lb. (0.36 kg) brewers corn syrup
1 tsp. Irish moss
6.6 AAU Fuggle hops (60 min.)
(1.3 oz./37 g at 5.1% alpha acids)
5 AAU East Kent Golding hops
(15 min.) (1 oz./28 g at 5% alpha acids)
Wyeast 1084 (Irish Ale) or White Labs
WLP004 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Crack the 1 lb. (0.45 kg) of specialty grains (roasted barley, chocolate malt, and black malt) and place them in a muslin bag. Immerse the bag in 1–2

gallons (4–8 L) of cold water. Heat slowly for 30 minutes to about 180 °F (82 °C). Steep for another 30 minutes before lifting out the bag. Rinse the bag slowly with 2–3 cups of cold water, but do not squeeze it. Discard the bag. Combine the grain tea and enough water in the kettle to make three gallons (11 L). Bring to a boil. Turn off the heat to avoid scorching and add the malt extract and the syrup. Stir and bring to a boil. Add the bittering hops. Continue to boil for one hour, adding the flavor hops and Irish moss as indicated. Top the kettle off with enough cold water to reach the target gravity of approximately 1.040.

After the boil, cool the wort 60 °F (16 °C), pitch the yeast and hold the brew at that temperature throughout the fermentation and conditioning period. Rack the brew once after about 10 days and a second time after another 20 days. Prime and package your brew and condition one week.

DRY IRISH STOUT

(5 gallons/19 L, all-grain)

OG = 1.040 FG = 1.008

IBU = 35 SRM = 30 ABV = 4.2%

Ingredients

7.5 lbs. (3.4 kg) 2-row pale ale malt (preferably Maris Otter)
12 oz. (0.34 kg) roasted barley (450 °L)
2 oz. (57 g) chocolate malt (350 °L)
½ tsp. baking soda (added to mash)
1 tsp. Irish moss
9.6 AAU Perle hops (60 min.)
(1.2 oz./33 g of 8% alpha acid)
Wyeast 1084 (Irish Ale) or White Labs
WLP004 (Irish Ale)
¾ cup corn sugar (if priming)

Step by Step

Bring 11 qts. (10 L) of water to 166 °F (74 °C) and mix in the malts and baking soda. The temperature should fall between 154–156 °F (68–69 °C). Hold mash for 60 minutes before sparging. Recirculate the wort until clear and then run off wort to the kettle. Once the top of the grain bed is covered by an inch of wort, begin sparging with 176 °F (80 °C) water. Collect 6 gallons (23 L) of wort. Bring wort to a boil, add hops and boil for 60 minutes. Add the Irish moss 5 minutes before the end of boil. Cool wort to 70 °F (21 °C), aerate, pitch

yeast and ferment at 70 °F (21 °C). Rack after 10 days and a second time in another 14 days. Then prime, bottle and hold 7 days before drinking.

DRY IRISH STOUT

(5 gallons/19 L, extract with grains)

OG = 1.040 FG = 1.008

IBU = 35 SRM = 30 ABV = 4.2%

Ingredients

5 lbs. (2.3 kg) light liquid malt extract
12 oz. (0.34 kg) roasted barley (450 °L)
2 oz. (57 g) chocolate malt (350 °L)
1 tsp. Irish moss
9.25 AAU Perle hops (60 min.)
(1.2 oz./33 g of 8% alpha acid)
Wyeast 1084 (Irish Ale) or White Labs
WLP004 (Irish Ale)
¾ cup corn sugar (if priming)

Step by Step

Steep the malts in a muslin bag in 6 gallons (23 L) of water for 30 minutes. Remove the bag and bring the wort to a boil. Add the malt extract off flame so it does not scorch and return to heat. Add hops and boil for 60 minutes. Add the Irish moss 5 minutes before the end of boil.

After the boil is complete, cool wort to 70 °F (21 °C), aerate, pitch yeast and ferment at 70 °F (21 °C). Rack after 10 days and a second time in another 14 days. Then prime, bottle and hold 7 days before drinking.

GUINNESS DRAUGHT CLONE

(5 gallons/19 L, all-grain)

OG = 1.038 FG = 1.006

IBU = 45 SRM = 36 ABV = 4.2%

Guinness Draught, the kind found in widgee cans or bottles, is an Irish dry stout. Guinness has a sharper roast character and more hop bitterness than Murphy's. The key to making a great clone is using roasted unmalted barley (or black barley) with a color rating around 500 °L.

Ingredients

5 lbs. (2.3 kg) English 2-row pale ale malt
2.5 lbs. (1.1 kg) flaked barley
1 lb. (0.45 kg) roasted barley (500 °L)
12 AAU East Kent Golding hops
(60 min.) (2.4 oz./68 g at 5% alpha

acids)

Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast (1 qt./1 L yeast starter)
 ¾ cups corn sugar (if priming)

Step by Step

Heat 2.66 gallons (10 L) of water to 161 °F (72 °C) and stir in crushed grains and flaked barley. Mash at 150 °F (66 °C) for 60 minutes. Stir boiling water into grain bed until temperature reaches 168 °F (76 °C) and rest for 5 minutes. Recirculate until wort is clear, then begin running wort off to kettle. Sparge with 170 °F (77 °C) water.

Boil wort for 90 minutes, adding hops with 60 minutes left in boil. Cool wort and transfer to fermenter. Aerate wort and pitch yeast. Ferment at 72 °F (22 °C). Rack to secondary when fermentation is complete. Bottle a few days later, when beer falls clear. If beer is kegged, consider pushing with a nitrogen (beer gas) blend.

GUINNESS DRAUGHT CLONE

(5 gallons/19 L, partial mash)

OG = 1.038 FG = 1.006

IBU = 45 SRM = 36 ABV = 4.2%

Ingredients

3.3 lbs. (1.5 kg) Maris Otter liquid malt extract
 1.25 lb. (0.57 kg) English pale ale malt (3 °L)
 1.25 lb. (0.57 kg) flaked barley
 1 lb. (0.45 kg) roasted barley (500 °L)
 12 AAU East Kent Golding hops (60 min.) (2.4 oz./68 g at 5% alpha acids)
 Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast (2 qt./2 L yeast starter)
 ¾ cups corn sugar (if priming)

Step by Step

Place crushed pale ale malt and flaked barley in a steeping bag. In a large kitchen pot, heat 4.5 qts. (4.3 L) to 161 °F (72 °C) and submerge grain bag. Let grains mash for 45 minutes at around 150 °F (66 °C). While grains are steeping, begin heating 2.1 gallons (7.9 L) of water in your brewpot. Add in the crushed roasted barley and steep an additional 15 minutes. When steep is over, remove 1.25 qts. (1.2 L) of

water from brewpot and add to the "grain tea" in steeping pot. Place colander over brewpot and place steeping bag in it. Pour diluted grain tea through grain bag. Bring to a boil, then stir in liquid malt extract and hops and begin the 60-minute boil. At the end of the boil, cool and transfer to fermenter. Add water to make 5 gallons (19 L), aerate wort and pitch yeast. Ferment at 72 °F (22 °C). Rack to secondary when fermentation is complete. Bottle when beer falls clear. If beer is kegged, consider pushing with a nitrogen (beer gas) blend.

Tips for Success:

To get that "Guinness tang," try this: After pitching the yeast to your stout, siphon 19 oz. of pitched wort to a sanitized 22 oz. bottle. Pitch bottle with a small amount of *Brettanomyces* and *Lactobacillus*. Cover bottle with aluminum foil and let ferment. When beer in bottle is done fermenting, pour it in a saucepan and heat to 160 °F (71 °C) for 15 minutes. Cool the beer and pour back in the bottle. Cap bottle and refrigerate. Add to stout when bottling or kegging.

HOOK NORTON BREWING CO.'S DOUBLE STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.049 FG = 1.013

IBU = 30 SRM = 39 ABV = 4.8%

Hook Norton describes Double Stout as, "smooth and full-bodied with a refreshing hoppy aftertaste. A blend of dark malts give it a character all of its own. Black malt enriches the color and teases the palate, and brown malt gives it the dryness."

Ingredients

3.25 lbs. (1.5 kg) mild malt
 3.25 lbs. (1.5 kg) English pale malt
 2 lbs. (0.91 kg) brown malt
 13 oz. (0.37 kg) black malt
 1 lb. (0.45 kg) No. 1 invert sugar (15 min.)
 5.6 AAU Challenger hops (75 min.) (0.75 oz./21 g at 7.5% alpha acids)
 1 AAU Fuggle hops (15 min.) (0.25 oz./7 g at 4% alpha acids)
 1.25 AAU East Kent Golding hops (15 min.) (0.25 oz./7 g at 5% alpha acids)

0.25 oz. (7 g) East Kent Golding hops (dry hop)
 Wyeast 1318 (London III) yeast (1 qt./1 L yeast starter)
 ¾ cup corn sugar (if priming)

Step by Step

Mash at 156 °F (69 °C) for 60 minutes at a mash thickness of 1.15 qt./lb. (2.4 L/kg). Collect about 6.5 gallons (24.6 L) of wort in the kettle. Boil wort for 90 minutes, adding hops at times indicated and sugar for final 15 minutes of boil. After the boil, cool and ferment at 68 °F (20 °C). Bottle or keg as usual.

HOOK NORTON BREWING CO.'S DOUBLE STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.049 FG = 1.013

IBU = 30 SRM = 39 ABV = 4.8%

Ingredients

3.3 lbs. (1.5 kg) Maris Otter liquid malt extract (15 min.)
 1.5 lbs. (0.68 kg) mild malt
 2 lbs. (0.9 kg) brown malt
 13 oz. (0.37 kg) black malt
 1 lb. (0.45 kg) No. 1 invert sugar (15 min.)
 5.6 AAU Challenger hops (75 min.) (0.75 oz./21 g at 7.5% alpha acids)
 1 AAU Fuggle hops (15 min.) (0.25 oz./7 g at 4% alpha acids)
 1.25 AAU East Kent Golding hops (15 min.) (0.25 oz./7 g at 5% alpha acids)
 0.25 oz. (7 g) East Kent Golding hops (dry hop)
 Wyeast 1318 (London III) yeast (1 qt./1 L yeast starter)
 ¾ cup corn sugar (if priming)

Step by Step

Place the crushed grains in a large muslin bag. Mash the crushed grains in 1 gallon (4 L) at 156 °F (69 °C) for 45 minutes. Remove the grains and place in a colander. Wash with 1 gallon (4 L) hot water. Collect the partial mash wort, add water to make 3 gallons (11 L), and bring to a boil. Boil for 60 minutes, adding hops at times indicated in ingredient list. Stir in liquid malt extract and invert sugar for final 15 minutes of boil. Cool wort and transfer to fermenter. Top up to 5 gallons (19 L) with cool water and

aerate wort. Pitch yeast and ferment at 68 °F (20 °C). Bottle or keg as usual.

IRISH STOUT

(5 gallons/19 L, all-grain)
OG = 1.050 FG = 1.012
IBU = 40 SRM = 38 ABV = 5%

This recipe from Brett Gent won the 2015 Pacific Brewers Cup.

Ingredients

8 lbs. (3.6 kg) Maris Otter pale malt
12 oz. (340 g) flaked barley
8 oz. (227 g) crystal malt (15 °L)
8 oz. (227 g) black malt (500 °L)
8 oz. (227 g) chocolate malt (350 °L)
8 oz. (227 g) roasted barley (300 °L)
10 AAU East Kent Golding hops
(60 min.) (2 oz./57 g at 5% alpha acids)
1.4 AAU Willamette hops (15 min.)
(0.25 oz./7 g at 5.5% alpha acids)
1 tablet Whirfloc® (15 min.)
½ tsp. yeast nutrients (15 min)
White Labs WLP004 (Irish Ale) or
Wyeast 1084 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Two or three days before brew day, make a 1-qt. (1-L) yeast starter, aerating the wort thoroughly (preferably with oxygen) before pitching the yeast.

On brew day, prepare your ingredients; mill the grain, measure your hops, and prepare your water. Water profile: Calcium – 70 ppm, Magnesium – 10 ppm, Sodium – 15 ppm, Sulfate – 75 ppm, Chloride – 50 ppm. Mash grains at 151 °F (66 °C) for 60 minutes (mash pH: 5.4) in 16 qts. (15 L) of water. Sparge with 168 °F (76 °C) water until 6.5 gallons (25 L) of wort is collected. Boil the wort for 90 minutes, adding the hops at times indicated in the recipe.

Chill to 64 °F (18 °C). Oxygenate, then pitch the yeast starter. Hold fermentation temperature 4–5 days, then slowly increase temperature to 70 °F (21 °C) until fermentation is complete. Keg or bottle as normal.

IRISH STOUT

(5 gallons/19 L, extract with grains)
OG = 1.050 FG = 1.012
IBU = 40 SRM = 38 ABV = 5%

Ingredients

6 lbs. (2.7 kg) Maris Otter liquid malt extract
8 oz. (227 g) crystal malt (15 °L)
8 oz. (227 g) black malt (500 °L)
8 oz. (227 g) chocolate malt (350 °L)
8 oz. (227 g) roasted barley (300 °L)
10 AAU East Kent Golding hops
(60 min.) (2 oz./57 g at 5% alpha acids)
1.4 AAU Willamette hops (15 min.)
(0.25 oz./7 g at 5.5% alpha acids)
1 tablet Whirfloc® (15 min.)
½ tsp. yeast nutrients (15 min)
White Labs WLP004 (Irish Ale) or
Wyeast 1084 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Use 6 gallons (23 L) of water in the brew kettle; heat to 158 °F (70 °C). Steep grains for 30 minutes, then rinse. Turn off heat.

Add the malt extract and stir thoroughly to dissolve the extract completely. You do not want to feel liquid extract at the bottom of the kettle when stirring with your spoon. Turn the heat back on and bring to a boil. Boil the wort for 60 minutes, adding the hops at the times indicated in the recipe.

The remainder of this recipe is the same as the all-grain version.

JAMIL'S BEAMISH-STYLE DRY STOUT

(5 gallons/19 L, all-grain)
OG = 1.041 FG = 1.009
IBU = 35 SRM = 38 ABV = 4.1%

Beamish has a touch more acrid roast character than Guinness, almost to the point where it is biting. Beamish has minimal fruity esters, slightly more than Guinness, but less than Murphy's. The floral hop character is moderate and is obvious alongside the coffee, chocolate, and slight fruitiness. While Beamish has more roast notes than Guinness and slightly more sweetness up front, in the end it has a drier finish.

Ingredients

6 lbs. (2.72 kg) Crisp Maris Otter pale ale malt
1.75 lbs. (0.8 kg) flaked barley
17 oz. (482 g) roasted barley (500 °L)
7.6 AAU Challenger pellet hops
(60 min.) (0.95 oz./27 g at 8% alpha

acids)

2.5 AAU Kent Golding pellet hops
(15 min.) (0.5 oz./14 g at 5% alpha acids)
White Labs WLP004 (Irish Ale), Wyeast 1084 (Irish Ale), or Safale US-05 yeast
½ cup corn sugar (if priming)

Step by Step

Crush the roasted barley very fine. Run it through a coffee mill or use a rolling pin to turn it almost to dust. That is critical to getting the right flavor and color with this recipe. Mill the remaining grains as normal and dough-in targeting a mash of around 1.5 quarts of water to 1 pound of grain (a liquor-to-grist ratio of about 3:1 by weight) and a temperature of 120 °F (49 °C). Hold the mash at 120 °F (49 °C) for 15 minutes then raise the temperature to 148 °F (64 °C) until enzymatic conversion is complete. Raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 6.5 gallons (24.4 L) and the gravity is 1.032 (8 °P).

The total wort boil time is 90 minutes. Add the bittering hops with 60 minutes remaining in the boil. Add Irish moss or other kettle finings and the last hop addition with 15 minutes left in the boil. After the boil is complete, chill the wort rapidly to 69 °F (21 °C), let the break material settle, rack to the fermenter, pitch the yeast and aerate thoroughly.

Ferment at 69 °F (21 °C). Slowly raise the temperature during the final ½ of fermentation by 6 °F (3 °C) to reduce diacetyl levels in the beer. When finished, carbonate the beer to approximately 1 to 1.5 volumes and serve at 52 to 55 °F (11 to 13 °C).

JAMIL'S BEAMISH-STYLE DRY STOUT

(5 gallons/19 L, partial mash)
OG = 1.041 FG = 1.009
IBU = 35 SRM = 38 ABV = 4.1%

Ingredients

3.5 lbs. (1.6 kg) Maris Otter liquid malt extract
1 lb. (0.45 kg) Crisp Maris Otter pale ale malt
1.75 lbs. (0.8 kg) flaked barley

Photo by Charles A. Parker/Images Plus



17 oz. (482 g) roasted barley (500 °L)
 7.6 AAU Challenger pellet hops
 (60 min.) (0.95 oz./27 g at 8% alpha
 acids)
 2.5 AAU Kent Golding pellet hops
 (15 min.) (0.5 oz./14 g at 5% alpha
 acids)
 White Labs WLP004 (Irish Ale),
 Wyeast 1084 (Irish Ale), or Safale
 US-05 yeast
 ½ cup corn sugar (if priming)

Step by Step

Crush the roasted barley very fine either by running it through a coffee mill or using a rolling pin to turn it almost to dust. That is critical to getting the right flavor and color with this recipe. Place the crushed pale ale malt and flaked barley in a steeping bag. Heat 5 quarts (~ 5 L) to 160 °F (71 °C), add grain bag, and let steep for approximately 45 minutes. Add the roasted barley and steep an additional 15 minutes. Rinse the grains with water and top off to 6 gallons (23 L), adding the extract and water to the steeping liquor.

The total wort boil time should

be 60 minutes. Add the bittering hops with 60 minutes remaining in the boil. Add Irish moss or other kettle finings and the last hop addition with 15 minutes left in the boil. Chill the wort rapidly to 69 °F (21 °C), let the break material settle, rack to the fermenter, pitch the yeast and aerate thoroughly.

Ferment at 69 °F (21 °C). Slowly raise the temperature during the final ½ of fermentation by 6 °F (3 °C) to reduce diacetyl levels in the beer. When finished, carbonate the beer to approximately 1 to 1.5 volumes and serve at 52 to 55 °F (11 to 13 °C).

JAMIL'S GUINNESS- STYLE DRY STOUT

(5 gallons/19 L, all-grain)
 OG = 1.041 FG = 1.010
 IBU = 41 SRM = 35 ABV = 4.1%

Guinness starts with an aroma full of coffee and chocolate. The ester levels are fairly low, with some fruity/grape notes. The flavor is rich with coffee, chocolate, and a touch of pear/grape fruit esters.

Overall, it is far more bitter than Murphy's. The finish is sharp and dry with a long coffee and bittersweet chocolate finish.

Ingredients

6.25 lbs. (2.8 kg) Crisp British pale ale malt
 1.75 lbs. (0.8 kg) flaked barley
 14 oz. (397 g) roasted barley (500 °L) (crushed to powder)
 10 AAU Kent Golding hops (60 min.) (2 oz./57 g at 5% alpha acids)
 White Labs WLP004 (Irish Ale), Wyeast 1084 (Irish Ale), or Fermentis Safale US-05 yeast
 ½ cup corn sugar (if priming)

Step by Step

Crush the roasted barley very fine. Run it through a coffee mill or use a rolling pin to turn it almost to dust. That is critical to getting the right flavor and color with this recipe. Mill the remaining grains as normal and dough-in targeting a mash of around 1.5 quarts of water to 1 pound of grain (a liquor-to-grist ratio of about 3:1 by weight) and a temperature of 120 °F (49 °C). Hold the mash at 120 °F (49 °C) for 15 minutes then raise the temperature to 150 °F (66 °C) until enzymatic conversion is complete. Raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 6.5 gallons (24.4 L) and the gravity is 1.032.

The total wort boil time is 90 minutes. Add the bittering hops with 60 minutes remaining in the boil. Add Irish moss or other kettle finings with 15 minutes left in the boil. Chill the wort rapidly to 65 °F (18 °C), let the break material settle, rack to the fermenter, pitch the yeast and aerate.

Ferment at 65 °F (18 °C). Slowly raise the temperature during the final ½ of fermentation by 6 °F (3 °C) to reduce diacetyl levels in the beer. When finished, carbonate the beer to approximately 1 to 1.5 volumes and serve at 52 to 55 °F (11 to 13 °C).

JAMIL'S GUINNESS- STYLE DRY STOUT

(5 gallons/19 L, extract with grains)
 OG = 1.041 FG = 1.010
 IBU = 41 SRM = 35 ABV = 4.1%

Ingredients

5.25 lbs. (2.4 kg) Maris Otter liquid malt extract
 14 oz. (397 g) roasted barley (500 °L) (crushed to powder)
 10 AAU Kent Golding hops (60 min.) (2 oz./57 g at 5% alpha acids)
 White Labs WLP004 (Irish Ale), Wyeast 1084 (Irish Ale), or Fermentis Safale US-05 yeast
 ½ cup corn sugar (if priming)

Step by Step

Crush the roasted barley very fine. Run it through a coffee mill or use a rolling pin to turn it almost to dust. That is critical to getting the right flavor and color with this recipe. Place the crushed roasted barley in a muslin bag and steep in 5.5 gallons (21 L) water as it heats up to 170 °F (77 °C). Remove the grain bag and let drip back into the kettle. Now remove the kettle from heat and stir in the liquid malt extract. The pre-boil kettle volume should now be around 6 gallons (23 L) and the gravity is 1.034.

The total wort boil time is 60 minutes. Add the bittering hops with 60 minutes remaining in the boil. Add Irish moss or other kettle finings with 15 minutes left in the boil. Chill the wort rapidly to 65 °F (18 °C), let the break material settle, rack to the fermenter, pitch the yeast and aerate.

The remainder of this recipe is the same as the all-grain version.

JAMIL'S MURPHY'S-STYLE DRY STOUT

(5 gallons/19 L, all-grain)

OG = 1.040 FG = 1.010

IBU = 38 SRM = 33 ABV = 4%

Murphy's is less roasty than Guinness and is sweeter. The aroma is much fruitier than either Guinness or Beamish, with apples and pears mixed in with moderate coffee notes. The flavor starts with coffee and continues with a little bit of cocoa and more fruity esters.

Ingredients

6 lbs. (2.72 kg) British pale ale malt
 1.75 lbs. (0.79 kg) flaked barley
 14 oz. (0.4 kg) roasted barley (500 °L)
 8.8 AAU Kent Golding hops (60 min.) (1.75 oz./50 g at 5% alpha acids)
 White Labs WLP007 (Dry English), Wyeast 1098 (British Ale), or Danstar

Nottingham yeast
 ½ cup corn sugar (if priming)

Step by Step

Mill the grains and dough-in targeting a mash of around 1.5 quarts of water to 1 pound of grain (a liquor-to-grist ratio of about 3:1 by weight) and a temperature of 152 °F (67 °C). Hold the mash at 152 °F (67 °C) until enzymatic conversion is complete. Infuse the mash with near boiling water while stirring or with a recirculating mash system raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 6.5 gallons (24.4 L) and the gravity is 1.031.

Boil 90 minutes. Add the bittering hops with 60 minutes remaining in the boil. Add Irish moss or other kettle finings with 15 minutes left in the boil. After the boil is complete, chill the wort rapidly to 69 °F (21 °C), let the break material settle, rack to the fermenter, pitch the yeast and aerate thoroughly.

Ferment at 69 °F (21 °C). Slowly raise the temperature during the final ½ of fermentation by 6 °F (3 °C) to reduce diacetyl levels in the beer. When finished, carbonate the beer to approximately 1 to 1.5 volumes and serve at 52 to 55 °F (11 to 13 °C).

JAMIL'S MURPHY'S-STYLE DRY STOUT

(5 gallons/19 L, partial mash)

OG = 1.040 FG = 1.010

IBU = 38 SRM = 33 ABV = 4%

Ingredients

3.3 lbs. (1.58 kg) Maris Otter liquid malt extract
 1.5 lbs. (0.68 kg) British pale ale malt
 1.75 lbs. (0.79 kg) flaked barley
 14 oz. (0.4 kg) roasted barley (500 °L)
 8.8 AAU Kent Golding hops (60 min.) (1.75 oz./50 g at 5% alpha acids)
 White Labs WLP007 (Dry English), Wyeast 1098 (British Ale), or Danstar Nottingham yeast
 ½ cup corn sugar (if priming)

Step by Step

Place the crushed pale ale malt and flaked barley in a steeping bag. Heat 5 quarts (~ 5 L) to 165 °F (74 °C) then add the grain bag. Hold the mash

at 152 °F (67 °C) for approximately 45 minutes or until enzymatic conversion is complete. Add the roasted barley and steep an additional 15 minutes. Rinse out the grains and top off to 6 gallons (23 L), adding the extract and water to the steeping liquor.

Boil 60 minutes, adding hops at times indicated. After the boil, chill the wort rapidly to 69 °F (21 °C), let the break material settle, rack to the fermenter, pitch the yeast and aerate.

Ferment at 69 °F (21 °C). Slowly raise the temperature during the final ½ of fermentation by 6 °F (3 °C) to reduce diacetyl levels in the beer. When finished, carbonate the beer to approximately 1 to 1.5 volumes and serve at 52 to 55 °F (11 to 13 °C).

NOT TOO DRY STOUT

(5 gallons/19 L, extract with grains)

OG = 1.042 FG = 1.010

IBU = 30 SRM = 38 ABV = 4.2%

This recipe was created to be brewed using malt extract. Due to the high percentage of amber malt extract, an approximate all-grain version of this recipe would be very difficult to achieve.

Ingredients

4 lbs. (1.8 kg) amber liquid malt extract (10 °L)
 0.8 lb. (0.36 kg) amber dried malt extract (10 °L)
 0.8 lb. (0.36 kg) Belgian Special B malt
 0.75 lb. (0.34 kg) dehusked black malt
 8.1 AAU US Golding hops (60 min.) (1.8 oz./51 g at 4.5% alpha acids)
 1 oz. (28 g) Liberty hops (0 min.)
 Wyeast 1084 (Irish Ale) yeast
 ½ cup corn sugar (if priming)

Step by Step

Steep the grains (in a muslin bag) in 2 qts. (2 L) water at 150–160 °F (65–71 °C) for 20 to 30 minutes. Remove the bag and rinse with 2 qts. (2 L) hot water. Transfer the liquid to the boiler. Carefully dissolve the malt extracts in the wort and top up to 5 gallons (19 L) of water. Boil for 60 minutes and add the hops as listed above. Siphon wort from the trub and cool to around 68 °F (20 °C), then pitch with yeast, preferably as a 1–2 qt. starter. Ferment 5–7 days, and rack to secondary for seven more days. Bottle or keg as normal.

OATMEAL STOUT

by JAMIL ZAINASHEFF

From time to time, a person will ask me, “What is the difference between stout and porter?” Of course, there are several types of each, so my first thought is what kind of porter and what kind of stout? Most people do not want such precision when asking about beer and soon they lose interest in my rambling answer. I’m guessing you feel differently or you would not be reading this stout issue.

In the stout family, the question of what differentiates the three lower gravity styles (Irish, sweet, and oatmeal) is a good question. In brief terms, think of Irish (or dry) stout as having a very dry character, not big and full. Think of sweet stout as similar, but with a sweeter, fuller character. Think of oatmeal stout as between the two, with a little bit of silkiness from the oatmeal. Of course, you can find examples of oatmeal stout that are sweeter than sweet stout and some drier than dry stout, but conceptually that is one of the key differences.

Oatmeal stout just might be my favorite of the stout family. Oatmeal stout is traditionally an English style, although there are more and more “Americanized” versions available. Oatmeal stout uses oats to build body and add a touch of silkiness to the mouthfeel. It is dark and rich, full of roasted flavors and aromas. It is full-bodied and has substantial cof-

fee and chocolate notes. The appearance is dark brown to black in color. Think of oatmeal stout as similar to dry stout in roastiness, but much fuller and sweeter. Commercial examples vary considerably, with some sweeter, some drier, and many showing a wide range in oatmeal character. They range from more British (obvious fruity esters, rich malt character) to more American (lower ester levels, a little less malt character, and sometimes a touch of late hop character). I prefer the traditional British character in this style, but there are some nice Americanized examples. If you want to impress the judges in a competition, you will tend to have more success with a slightly sweet rendition of the style with enough specialty malt character that makes them think of oatmeal cookies.

To brew a great example of this style, start with high-quality British pale ale malt as the base. It provides that background rich malt character that is a key component in fine British beers. British pale ale malt is kilned a bit darker (2.5 to 3.5 °L) than the average North American two-row or pale malt (1.5 to 2.5 °L) and this higher level of kilning brings out the malt’s biscuit-toasty flavors. Some brewers use North American pale ale malt or North American two-row with the addition of some specialty malts, but this will not produce the same beer as using British pale ale malt. Spend the money, make the effort, and use



Photo by Charles A. Parker/Images Plus



the proper base malt if you want to make an excellent example of the style.

Similarly, extract brewers should make the effort to source an extract made from British pale ale malt. If you end up using North American two-row malt extract, you can try to compensate by partial mashing some additional specialty malts such as Munich, biscuit, or Victory®.

All-grain brewers should use a single infusion mash. A temperature in the range of 150 to 156 °F (66 to 69 °C) works well. Use a lower temperature when using lower attenuating yeasts or higher starting gravities. Use a higher mash temperature when using the higher attenuating yeasts or lower starting gravity beers. If you are unsure, a

// Think of oatmeal stout as similar to dry stout in roastiness, but much fuller and sweeter. //

great starting point is 152 °F (67 °C).

While using the proper base malt is important, oatmeal stout also requires a fair amount of specialty malt. To develop some sweetness and a caramel flavor component, you will want some crystal malt. An Irish stout uses no crystal malt, but sweet stout might use up to 10%. An oatmeal stout is in the middle, around 5% of a 40 to 120 °L crystal malt. I prefer to use crystal malt in the 80 °L range for darker British style beers. It provides a slightly raisiny caramel flavor that complements the fruity esters common to the style. To create the dark color and an espresso-like richness, British black malt, chocolate malt, and even roasted barley are good choices. The proper amounts are going to vary based on color and flavor. Generally, 10% of the grist is highly kilned malt in a stout. Be aware that malts of the same name from different suppliers can vary substantially in color and flavor. You might find both chocolate malt and black malt ranging from 300 °L to 500 °L, so the name the maltsters give a product is not always a reliable indicator. Always let flavor be your guide.

Many people expect to taste oatmeal in an oatmeal stout. In reality, oatmeal does not taste like much, which is why people add so much flavoring to a bowlful at breakfast. While oatmeal does add some to mouthfeel, it needs some help as far as flavor goes to produce that nutty/biscuity flavor and aroma people expect. One specialty grain that I like a lot for this is Victory® (~28 °L). It adds a toasty, nutty, bready character, which reinforces the impression of “oatmeal” in the beer. Another way to enhance the character of the oatmeal is by roasting the oats in the oven around 300 °F (149 °C). This toasting increases the oatmeal character and helps it stand out a bit more in the beer.

If you are looking for more complexity or increased head retention, you can add other malts as well. Wheat malt, Munich, biscuit, and others are common additions in many recipes, but keep in mind

that using too many specialty malts often ends up as a muddled malt character, not a more complex one. Emphasize one or two particular malt characters in your recipe by using two or three grains and selecting only high-quality British specialty malts such as Simpsons or Thomas Fawcett. These malts have a rich malt character, which is complex on its own. Some brewers like to experiment with other adjuncts, such as brown sugar, but keep in mind that simple sugars ferment out completely and result in a thinner body, which is the opposite of what you want in oatmeal stout.

All English-style beer is best brewed with English hops, such as East Kent Golding, Fuggle, Target, Northdown, or Challenger. A newer hop variety that I think might do well for an Americanized version of the style is Delta, which is a cross between Fuggle and Cascade. Hop flavor and aroma should be absent or at the most minimal. The bittering level for oatmeal stout has a wide range of 25 to 40 IBU, but you should be shooting for a balance that is even or slightly sweet. The bitterness to starting gravity ratio (IBU divided by original gravity) ranges from 0.4 and 0.8. What ratio you target depends on the amount and type of specialty malts and yeast attenuation. If you use more highly kilned malts or choose a more attenuative yeast, then you will want to target a lower bittering ratio. If you use more unfermentable crystal malts or a less attenuative yeast then you go with a higher bittering ratio. It is all a matter of balance, avoiding an overly sweet or bitter beer. Generally, skip any late hop additions. If you are trying to make a more “American” version of oatmeal stout, you could use a small touch of late hopping, perhaps ¼ to ½ ounce (7 to 14 g) during the last few minutes. Avoid this late hop addition in a classic British version. At most, any hop character detected would be from the bittering hop addition.

Fermentation creates most of the flavor and aroma in many British beers. “English” yeast

strains provide a variety of interesting esters and leave some residual sweetness to balance the hop bittering. Many English yeasts attenuate on the lower side (< 70%), but there are some that attenuate quite well (up to 80%). For many British-style beers you have to think about the final balance of the beer. If the beer has a high starting gravity, or you are using many specialty grains that add residual sweetness (such as crystal malts), you need to select a more attenuative strain. If you are brewing a beer with a lower starting gravity and/or with limited specialty grains, then you want to go with a less attenuative yeast. This is one of the most important things to know about crafting your own British-style recipes. My favorite yeast strains for brew-

ing oatmeal stout are White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB). They both provide a wonderful ester profile without being excessively fruity, and they both attenuate to a moderate level, leaving just the right amount of malt sweetness and fuller mouthfeel.

At lower temperatures (<65 °F/ 18 °C), these yeasts produce a relatively low level of esters and at high temperatures (>70 °F/ 21 °C) they produce abundant fruity esters and fusel alcohol notes. I start fermentation in the middle of this range (68 °F/20 °C), letting the temperature rise a few degrees over a couple days. This creates the expected level of esters, helps the yeast attenuate fully and keeps the amount of diacetyl in the finished beer to a minimum.

“ While oatmeal does add some to mouthfeel, it needs some help as far as flavor goes to produce that nutty/biscuity flavor and aroma people expect. ”

ANDERSON VALLEY BREWING CO.'S BARNEY FLATS OATMEAL STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.060 FG = 1.017

IBU = 14 SRM = 34 ABV = 5.8%

Anderson Valley describes Barney Flats Oatmeal Stout with "aromas of freshly baked bread, espresso, and dried cherries meld seamlessly with rich toffee flavors and a creamy mouthfeel."

Ingredients

8.75 lbs. (4 kg) 2-row pale malt
12 oz. (0.34 kg) crystal malt (40 °L)
12 oz. (0.34 kg) crystal malt (80 °L)
12 oz. (0.34 kg) Munich malt (20 °L)
1.3 oz. (37 g) roasted barley
14 oz. (0.39 kg) chocolate malt
15 oz. (0.42 kg) flaked oats
3.9 AAU Columbus hops (60 min.)
(0.28 oz./8 g at 14% alpha acids)
0.25 oz. (7 g) Northern Brewer hops
(0 min.)
Wyeast 1968 (London ESB) or White Labs WLP002 (English Ale) yeast
(2 qt./2 L yeast starter)
¾ cups corn sugar (if priming)

Step by Step

Mash at 154 °F (68 °C) in 18 qts. (17 L) of water. Collect wort until last runnings dip below original gravity 1.012. Adjust pre-boil volume to have enough for a 90-minute boil. Add hops at times indicated. After the boil, cool to 68 °F (20 °C) and ferment at that temperature. Bottle or keg as normal.

ANDERSON VALLEY BREWING CO.'S BARNEY FLATS OATMEAL STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.060 FG = 1.017

IBU = 14 SRM = 34 ABV = 5.8%

Ingredients

4.5 lbs. (2 kg) extra light dried malt extract
1 lb. (0.45 kg) Munich malt (10 °L)
15 oz. (0.42 kg) flaked oats
12 oz. (0.34 kg) crystal malt (40 °L)
12 oz. (0.34 kg) crystal malt (80 °L)
1.3 oz. (37 g) roasted barley
14 oz. (0.39 kg) chocolate malt
3.9 AAU Columbus hops (60 min.)

(0.28 oz./8 g at 14% alpha acids)
0.25 oz. (7 g) Northern Brewer hops
(0 min.)

Wyeast 1968 (London ESB) or White Labs WLP002 (English Ale) yeast
(2 qt./2 L yeast starter)

¾ cups corn sugar (if priming)

Step by Step

Place the crushed Munich malt and flaked oats in one muslin bag and the crystal and roasted grains in a separate bag. Mash the crushed Munich malt and flaked oats at 154 °F (68 °C) in 6 qts. (6 L) of water for 45 minutes. Add the second bag to the mash and steep for an additional 15 minutes. Remove both bags and place in a colander. Wash all the grains with 1 gallon (4 L) hot water. Top off to 6 gallons (23 L) and heat to a boil. Remove the kettle from heat and stir in the dried malt extract. When all the extract is dissolved, return the kettle to heat and resume boil. Add first hop addition once boil is achieved and the second hop addition at the finish of the boil. After the boil is complete, cool to 68 °F (20 °C) and ferment at that temperature. Bottle or keg as normal.

BREAKFAST OF CHAMPIONS (OATMEAL STOUT)

(5 gallons/19 L, all-grain)

OG = 1.052 FG = 1.013

IBU = 33 SRM = 25 ABV = 5.2%

Ingredients

8.5 lbs. (3.9 kg) pale ale malt
12 oz. (0.34 kg) flaked oats
10 oz. (0.28 kg) crystal malt (40 °L)
6 oz. (170 g) crystal malt (60 °L)
5 oz. (142 g) chocolate malt
4 oz. (113 g) black barley (500 °L)
1 tsp. Irish moss
9 AAU Kent Golding hops
(1.8 oz./51 g at 5% alpha acids)
Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
(1.5 qt./~1.5 L yeast starter)
⅔ cup corn sugar (if priming)

Step by Step

Although unusual for an English-style ale, a step mash will work well for this beer. In your kettle, heat 12 quarts (11 L) of water to 133 °F (56 °C). Mix hot water and grains in your kettle and mash in to 122 °F (50 °C). (This

is a thick mash at this point.) Let the mash stand for 30 minutes. In a large kitchen pot, heat 5 quarts (~5 L) of water to a boil and stir this into the mash after initial rest. (Now the mash will be at a "normal" thickness for an infusion mash.) Then, add direct heat to the kettle to bring the mash up to 154 °F (68 °C).

Let mash rest for 45 minutes. Heat mash to 170 °F (77 °C), transfer mash to lauter tun and let rest for 5 minutes (to settle). Recirculate wort until clear, then begin running off wort. Heat sparge water to point that grain bed temperature remains around 168 °F (76 °C) during sparge. Collect 6 gallons (23 L) of wort. Bring wort to a boil. Once hot break forms, add hops and boil for 60 minutes. Add Irish moss with 15 minutes left in boil. Cool wort and transfer to fermenter. (You should have 5 gallons/19 L at this point.) Aerate wort and pitch yeast. Ferment at 70 °F (21 °C). After fermentation is complete, bottle or keg as normal.

BREAKFAST OF CHAMPIONS (OATMEAL STOUT)

(5 gallons/19 L, partial mash)

OG = 1.052 FG = 1.013

IBU = 33 SRM = 25 ABV = 5.2%

Ingredients

3.3 lbs. (1.5 kg) Maris Otter liquid malt extract
1 lb. (0.45 kg) extra light dried malt extract
1 lb. 11 oz. (0.77 kg) pale ale malt
12 oz. (0.34 kg) flaked oats
10 oz. (0.28 kg) crystal malt (40 °L)
6 oz. (170 g) crystal malt (60 °L)
5 oz. (142 g) chocolate malt
4 oz. (113 g) black barley (500 °L)
1 tsp. Irish moss
9 AAU Kent Golding hops
(1.8 oz./51 g at 5% alpha acids)
Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
(1.5 qt./~1.5 L yeast starter)
⅔ cup corn sugar (if priming)

Step by Step

Heat 5.5 qts. (5.2 L) of water to 167 °F (75 °C) and pour it into a 2-gallon (7.6-L) beverage cooler. Add crushed grains and flaked oats to a large steeping bag and slowly submerge in cooler. Open bag and stir grains with

a spoon.

Break up any “lumps.” Note level of water in cooler after grains are added. Let partial mash rest, starting at 154 °F (68 °C), for 45 minutes. While mash is resting, bring 0.75 gallon (2.8 L) of water to a boil in your brewpot. Also, bring 5.5 qts. (5.2 L) of water to 180 °F (82 °C) in another pot. Open spigot on cooler and collect first wort. Add it to boiling water in brewpot. Begin heating this wort to a boil. Add 180 °F (82 °C) water to cooler until liquid level is the same as before.

Stir grains and let sit for 5 minutes, then collect second wort and add it — along with the dried malt extract — to your brewpot. Bring wort to a boil, add hops and boil for 60 minutes. Stir in liquid malt extract and Irish moss for final 15 minutes of the boil. Cool wort and transfer to fermenter. Add water to fermenter to make 5 gallons (19 L). Aerate, pitch yeast and let ferment at 70 °F (21 °C). After fermentation is complete, bottle or keg as normal.

ENGLISH CREAMY OATMEAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.048 FG = 1.011

IBU = 25 SRM = 25 ABV = 5%

Ingredients

8.5 lbs. (3.9 kg) pale ale malt (3 °L)
9 oz. (255 g) flaked oats (1.5 °L)
7.5 oz. (213 g) chocolate malt
3.5 oz. (99 g) black patent malt (500 °L)
1 tsp. Irish moss
6.7 AAU Fuggle hops (60 min.)
(1.6 oz./45 g at 4.2% alpha acids)
Wyeast 1318 (London III Ale) or White Labs WLP002 (English Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Begin a single-infusion mash with a 152–154 °F (67–68 °C) rest for about an hour. Infuse the grain bed until about one inch (2.5 cm) of water rises above the top of the grain. Then raise the mash to 168–170 °F (76–77 °C) during the sparge.

Boil your wort for 90 minutes, adding the hops as indicated. After the boil, cool the wort to 60 °F (16 °C), pitch the yeast, and hold the brew at that temperature through the fer-

mentation and conditioning period of about six weeks. Rack the brew once, after about three weeks. Then rack again before priming and packaging. Prime with ¾ cup of corn sugar or dried malt extract for a less effervescent, old-style draft taste.

ENGLISH CREAMY OATMEAL STOUT

(5 gallons/19 L, partial mash)

OG = 1.048 FG = 1.011

IBU = 25 SRM = 25 ABV = 5%

Ingredients

5 lbs. (2.3 kg) pale liquid malt extract
1.5 lbs. (0.68 kg) pale ale malt (3 °L)
9 oz. (255 g) flaked oats (1.5 °L)
7.5 oz. (213 g) chocolate malt
3.5 oz. (99 g) black patent malt (500 °L)
1 tsp. Irish moss
6.7 AAU Fuggle hops (60 min.)
(1.6 oz./45 g at 4.2% alpha acids)
Wyeast 1318 (London III Ale) or White Labs WLP002 (English Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Crack the pale ale malt and mix with the unmilled oats. Place the grains in a muslin bag. Immerse the bag in two gallons (7.6 L) of cold water. Heat slowly, over half an hour, to about 160 °F (71 °C). Add the roasted grains and hold at this temperature for another half hour. Lift the bag out of the liquid. Dunk in and let drip repeatedly, as with a tea bag. Rinse slowly with two to three cups of hot water and discard the spent grains.

Fill kettle to about 3 gallons (11.4 L) with water. Bring to a boil and take off the heat. Stir in the malt extract. Bring to a boil and boil for a total of 60 minutes. After the boil, cool the wort to 60 °F (16 °C), pitch the yeast, and hold the brew at that temperature through the fermentation and conditioning period of about six weeks. Rack the brew once, after about three weeks. Then rack again before priming and packaging. Prime with ¾ cup of corn sugar or DME for a less effervescent, old-style draft taste.

Tips for Success:

Compared to barley, oats have slightly more protein and slightly less starch. But they also have more than double

the fat and fiber. So they contribute a desirable, body-enhancing oiliness and an undesirable, flavor-impeding harshness to the beer. Therefore, most commercial breweries keep the oats portion in their mashes to no more than 5%, even though there are stouts available with an oats portion of around 20%. Taste is of course subjective, but if you want your oatmeal stout to be at once rich and elegant, go easy on the oats.

FIRESTONE WALKER BREWING CO.'S VELVET MERLIN CLONE

(5 gallons/19 L, all-grain)

OG = 1.061 FG = 1.020

IBU = 29 SRM = 46 ABV = 5.6%

Firestone Walker says Velvet Merlin, "offers robust cocoa and espresso aromas with subtle American hop nuances. Rich dark chocolate and roasted coffee flavors accentuate a creamy mouthfeel and dry finish to create perfect balance in this full-bodied stout."

Ingredients

8.75 lbs. (4 kg) Rahr Standard 2-row malt
1 lb. 9 oz. (0.71 kg) flaked oats
1 lb. 9 oz. (0.71 kg) Briess roasted barley (300 °L)
14 oz. (400 g) caramel malt (120 °L)
5 oz. (140 g) Carapils® malt
4 oz. (113 g) caramel malt (80 °L)
4 oz. (113 g) Weyermann Carafa® Special III malt
3.8 AAU Fuggle hops (60 min.)
(0.85 oz./24 g at 4.5% alpha acids)
3.8 AAU Fuggle hops (30 min.)
(0.85 oz./24 g at 4.5% alpha acids)
7 g calcium chloride (if using reverse osmosis water)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mill grains and mix with 5 gallons (19 L) of 156 °F (69 °C) strike water and optional calcium chloride to reach a mash temperature of 145 °F (63 °C). Hold this temperature for 15 minutes. Raise the mash temperature to 155 °F (68 °C) and hold for 30 minutes. Raise the temperature to a mash out of 168 °F (76 °C) Vorlauf until your run-

nings are clear. Sparge the grains with enough 168 °F (76 °C) water to collect 6 gallons (23 L) of 1.051 SG wort. Boil for 60 minutes, adding hops according to the ingredients list. Turn off the heat and chill the wort to slightly below fermentation temperature, about 66 °F (19 °C). Aerate the wort with pure oxygen or filtered air and pitch yeast. Ferment at 68 °F (20 °C). Once at terminal gravity (approximately seven days total) bottle or keg the beer and carbonate as usual.

FIRESTONE WALKER BREWING CO.'S VELVET MERLIN CLONE

(5 gallons/19 L, partial mash)

OG = 1.061 FG = 1.020

IBU = 29 SRM = 46 ABV = 5.6%

Ingredients

5 lbs. (2.27 kg) golden liquid malt extract
1.5 lbs. (0.68 lbs.) US 2-row malt
1 lb. 9 oz. (0.71 kg) flaked oats
1 lb. 9 oz. (0.71 kg) Briess roasted barley (300 °L)
14 oz. (0.44 kg) caramel malt (120 °L)
5 oz. (140 g) Carapils® malt
4 oz. (113 g) caramel malt (80 °L)
4 oz. (113 g) Weyermann Carafa® Special III malt
3.8 AAU Fuggle hops (60 min.) (0.85 oz./24 g at 4.5% alpha acids)
3.8 AAU Fuggle hops (30 min.) (0.85 oz./24 g at 4.5% alpha acids)
7 g calcium chloride (if using reverse osmosis water)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Place the milled 2-row malt and flaked oats in a muslin bag and steep in 10 qts. (9.5 L) of 149 °F (65 °C) water for 45 minutes. Remove the grains and rinse with 1 gallon (3.8 L) of hot water. Add the remaining crushed grains in separate muslin bag and steep an additional 15 minutes. Add water to reach a volume of 5.4 gallons (20.4 L) and heat to boiling. Turn off the heat, add the liquid malt extract and optional calcium chloride, and stir until completely dissolved. Top up to obtain 6 gallons (23 L) of 1.051 specific gravity wort. Boil for 60 minutes, adding hops according to the ingredients list.

Turn off the heat and chill the wort to slightly below fermentation temperature, about 66 °F (19 °C). Aerate the wort with pure oxygen or filtered air and pitch yeast. Ferment at 68 °F (20 °C). Once at terminal gravity (approximately seven days total) bottle or keg the beer and carbonate as usual.

Tips for Success:

For all-grain brewers: Oats contain a lot of large beta-glucan gums and contain a lot of undegraded proteins. While this is great for adding mouthfeel, a large percentage of oats can contribute to a stuck sparge. At 12% flaked oats in this recipe, adding a handful of rice hulls is a good idea if you often experience sticky mashes. Add them in prior to starting your lauter to save you some time and a headache later.

JAMIL'S MCQUAKER'S OATMEAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.055 FG = 1.016

IBU = 28 SRM = 37 ABV = 5.3%

Ingredients

8.5 lbs. (3.85 kg) Thomas Fawcett Maris Otter pale ale malt
14.1 oz. (0.4 kg) flaked oats
10.6 oz. (0.3 kg) Briess Victory® malt (28 °L)
10.6 oz. (0.3 kg) UK chocolate malt (350 °L)
7.1 oz. (0.2 kg) UK roasted barley (450 °L)
7.1 oz. (0.2 kg) Thomas Fawcett dark crystal malt I (85 °L)
7.5 AAU Kent Golding pellet hops (60 min.) (1.5 oz./43 g at 5% alpha acids)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB) yeast
¾ cup corn sugar (if priming)

Step by Step

Spread the flaked oats out on a cookie sheet and toast them in the oven around 300 °F (149 °C) until they begin to slightly color up and give off a nutty oatmeal cookie character. Mill all of the grains together and dough-in targeting a mash of around 1.5 quarts of water to 1 pound of grain (a liquor-to-grist ratio of about 3:1 by weight) and a temperature of 154 °F (68 °C). Hold the mash at 154 °F (68 °C) until

enzymatic conversion is complete. Infuse the mash with near-boiling water while stirring or with a recirculating mash system raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 5.9 gallons (22.3 L) and a gravity of 1.046.

The total wort boil time is 60 minutes. Add the hops once the wort reaches a full boil and then start your timer. Add Irish moss or other kettle finings with 15 minutes left in the boil.

Chill the wort to 68 °F (20 °C) and aerate thoroughly. The proper pitch rate is two packages of liquid yeast or 1 package of liquid yeast in a 2-liter starter. Ferment at 68 °F (20 °C). When fermentation is finished, carbonate the beer to approximately 2–2.5 volumes.

JAMIL'S MCQUAKER'S OATMEAL STOUT

(5 gallons/19 L, partial mash)

OG = 1.055 FG = 1.016

IBU = 28 SRM = 37 ABV = 5.3%

Ingredients

5 lbs. (2.27 kg) Maris Otter liquid malt extract
1.5 lbs. (0.91 kg) Maris Otter pale ale malt
14.1 oz. (0.4 kg) flaked oats
10.6 oz. (0.3 kg) Briess Victory® malt (28 °L)
10.6 oz. (0.3 kg) UK chocolate malt (350 °L)
7.1 oz. (0.2 kg) UK roasted barley (450 °L)
7.1 oz. (0.2 kg) Thomas Fawcett dark crystal malt I (85 °L)
7.5 AAU Kent Golding pellet hops (60 min.) (1.5 oz./43 g at 5% alpha acids)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB) yeast
¾ cup corn sugar (if priming)

Step by Step

Ask your local homebrew shop for an English-style liquid malt extract or an extract made from 100% Maris Otter malt. If you cannot get fresh liquid malt extract, it is better to use an appropriate amount of dried malt extract instead.

Spread the flaked oats out on a cookie sheet and toast them in the

oven around 300 °F (149 °C) until they begin to slightly color up and give off a nutty oatmeal cookie character. Mill or coarsely crack the oats with the rest of the specialty malt and place loosely in a grain bag. Avoid packing the grains too tightly in the bag, using more bags if needed. Steep the bag in about 7 qts. (~6.5 liters) of water at roughly 154 °F (68 °C) for about 30 minutes. Lift the grain bag out of the steeping liquid and rinse with warm water. Allow the bags to drip into the kettle. Do not squeeze the bags. Add the malt extract and enough water to make a pre-boil volume of 5.9 gallons (22.3 L) and a gravity of 1.046. Stir thoroughly to help dissolve the extract and bring to a boil.

The total wort boil time is 60 minutes. Add the hops once the wort reaches a full boil and then start your timer. Add Irish moss or other kettle finings with 15 minutes left in the boil.

Chill the wort to 68 °F (20 °C) and aerate thoroughly. The proper pitch rate is 2 packages of liquid yeast or 1 package of liquid yeast in a 2-liter starter. Ferment at 68 °F (20 °C). When fermentation is finished, carbonate the beer to approximately 2–2.5 volumes.

NOT TO BE OAT DONE

(5 gallons/19 L, all-grain)

OG = 1.065 FG = 1.016

IBU = 35 SRM = 44 ABV = 6.7%

Ingredients

11 lbs. (4.5 kg) 2-row pale malt
 18 oz. (0.51 kg) quick oats
 8 oz. (0.23 kg) Simpsons DRC™ malt (110 °L)
 4 oz. (113 g) Bairds chocolate malt (475 °L)
 8 oz. (0.23 kg) Bairds roasted barley (500 °L)
 8 oz. (0.23 kg) Weyermann Carafa® Special III malt
 8 AAU Nugget hops (60 min.) (0.64 oz./18 g at 12.5% alpha acids)
 1 oz. (28 g) Cascade hops (5 min.)
 White Labs WLP002 (English Ale),
 Wyeast 1968 (London ESB Ale), or
 Lallemand Windsor Ale yeast
 ⅓ cup of corn sugar (if priming)

Step by Step

Prior to brew day, make a yeast starter if using one of the liquid strains of

yeast. Be sure to place the starter in a fridge at least a day before brew day in order to decant off the liquid.

On brew day, begin by heating 21 qts. (20 L) of strike water up to 170 °F (77 °C). If you can, separate out the crushed roasted and crystal malts to be added for the final 15 minutes of the mash. If the grains are already mixed and you are using soft, reverse osmosis, or distilled water, you may want to consider adding some dissolved calcium carbonate and/or calcium chloride to the strike water. Mix crushed 2-row and quick oats into the strike water to achieve a mash temperature at about 156 °F (69 °C) and hold for 30 minutes. Add the roasted and crystal malt and steep for an additional 15 minutes. Begin to laut and sparge with water at 172 °F (78 °C). Collect approximately 6.5 gallons (24.6 L) and bring to a boil. Total boil is 90 minutes. Add hops at times indicated in the ingredient list.

After the boil, cool the wort down to yeast pitching temperature then aerate the wort. If you have a yeast starter, decant off the liquid and pitch the yeast. If using the dry yeast, pitch the re-hydrated yeast and ferment at 68 °F (20 °C). Primary fermentation should take about three days.

Do a two-day diacetyl rest at 72 °F (22 °C) after primary is complete, then cool to 52 °F (11 °C) and hold for four days. Then chill to 32 °F (0 °C) and hold for at least one week. Bottle or keg as usual.

NOT TO BE OAT DONE

(5 gallons/19 L, partial mash)

OG = 1.065 FG = 1.016

IBU = 35 SRM = 44 ABV = 6.7%

Ingredients

6.6 lbs. (3 kg) golden liquid malt extract
 18 oz. (0.51 kg) 2-row pale malt
 18 oz. (0.51 kg) quick oats
 8 oz. (0.23 kg) Simpsons DRC™ malt (110 °L)
 4 oz. (113 g) Bairds chocolate malt (475 °L)
 8 oz. (0.23 kg) Bairds roasted barley (500 °L)
 8 oz. (0.23 kg) Weyermann Carafa® Special III malt
 8 AAU Nugget hops (60 min.) (0.64 oz./18 g at 12.5% alpha acids)

1 oz. (28 g) Cascade hops (5 min.)
 White Labs WLP002 (English Ale),
 Wyeast 1968 (London ESB Ale), or
 Lallemand Windsor Ale yeast
 ⅓ cup of corn sugar (if priming)

Step by Step

Several days before brew day, make a yeast starter if using one of the liquid strains of yeast. Be sure to place the starter in a fridge at least a day before brew day in order to decant off the liquid.

On brew day, begin by heating 6 qts. (5.7 L) of strike water up to 163 °F (73 °C). Place the crushed 2-row and quick oats in a muslin bag and mix into the strike water to achieve a mash temperature at about 156 °F (69 °C) and hold for 30 minutes. Place the crushed roasted and crystal malt in a second muslin bag and mix into the mash. If you can, start slowly bringing the temperature up towards 168 °F (76 °C) or you can simply hold for 15 minutes. Remove both grain bags and place in a colander. Wash with 1 gallon (4 L) hot water. Mix in the liquid malt extract off of the heat and stir until fully dissolved. If you can, top off the brew pot to approximately 6 gallons (23 L) and bring to a boil. If your brew pot can't hold that much volume, add as much as your pot can comfortably hold. Total boil is 60 minutes. Add hops at times indicated in the ingredient list.

After the boil, cool the wort down to yeast pitching temperature and then aerate the wort. If you have a yeast starter, decant off the liquid and pitch the yeast. If using the dry yeast, pitch the re-hydrated yeast and ferment at 68 °F (20 °C). Primary fermentation should take approximately three days.

Do a two-day diacetyl rest at 72 °F (22 °C) after primary is complete, then cool to 52 °F (11 °C) and then hold for four days. Then chill to 32 °F (0 °C) and hold for at least one week. Bottle or keg as usual.

Tips for Success:

Oats contain a lot of large beta-glucan gums from undegraded cell walls and contain a lot of undegraded proteins. This is great for adding mouthfeel, but not so great in the mash – hence the addition of rice hulls in the all-grain recipe to prevent clumping and stick-



ing. Don't be shy about adding the rice hulls as they are flavorless and will not affect your finished beer. For more about building mouthfeel, check out <http://byo.com/story89>

ROASTY-TOASTY OATMEAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.057 FG = 1.018

IBU = 52 SRM = 47 ABV = 5.4%

Ingredients

8 lbs. (3.6 kg) 2-row pale malt
 2 lbs. (0.91 kg) flaked oats (toasted)
 0.75 lb. (0.34 kg) coffee malt (150 °L)
 1 lb. (0.45 kg) Carafa® Special II malt (425 °L)
 8 oz. (0.23 kg) crystal malt (80 °L)
 4 oz. (113 g) roasted barley (500 °L)
 12.8 AAU Galena hops (60 min.)
 (1 oz./28 g at 12.8% alpha acids)
 6 AAU Cascade hops (10 min.)
 (1 oz./28 g at 6% alpha acids)
 Wyeast 1098 (British Ale), White Labs WLP007 (Dry English Ale) or Lallemand Nottingham yeast
 ¾ cup corn sugar (if priming)

Step by Step

Prior to brew day, pre-heat your oven up to 350 °F (177 °C) and spread the flaked oats out on two large baking sheets. Toast the flakes for about

20 minutes shaking the sheet every couple of minutes. Use your nose as a guide to know when they are finished. Allow the toasted oats to cool.

Mill the grains and dough-in. Hold the mash at 154 °F (68 °C) until enzymatic conversion is complete. Infuse the mash with near-boiling water while stirring or with a recirculating mash system raise the temperature to mash out at 168 °F (76 °C). Sparge with 170 °F (77 °C) water.

The total wort boil time is 60 minutes. Add the hops according to the ingredients list. Chill the wort to 66 °F (19 °C) and aerate thoroughly. Pitch the yeast at 66 °F (19 °C) and ferment at 68 °F (20 °C) until the yeast drops clear. Allow the lees to settle and the brew to mature without pressure for another two days after fermentation appears finished. Rack to a keg or bottle. Target a carbonation level of 2.5 volumes.

ROASTY-TOASTY OATMEAL STOUT

(5 gallons/19 L, partial mash)

OG = 1.057 FG = 1.018

IBU = 52 SRM = 47 ABV = 5.4%

Ingredients

3 lbs. (1.4 kg) extra light dried malt extract

2 lbs. (0.91 kg) 2-row pale malt
 2 lbs. (0.91 kg) flaked oats (toasted)
 0.75 lb. (0.34 kg) coffee malt (150 °L)
 1 lb. (0.45 kg) Carafa® Special II malt (425 °L)
 8 oz. (0.23 kg) crystal malt (80 °L)
 4 oz. (113 g) roasted barley (500 °L)
 12.8 AAU Galena hops (60 min.)
 (1 oz./28 g at 12.8% alpha acids)
 6 AAU Cascade hops (10 min.)
 (1 oz./28 g at 6% alpha acids)
 Wyeast 1098 (British Ale), White Labs WLP007 (Dry English Ale) or Lallemand Nottingham yeast
 ¾ cup corn sugar (if priming)

Step by Step

Prior to brew day, pre-heat your oven up to 350 °F (177 °C) and spread the flaked oats out on two large baking sheets. Toast the flakes for about 20 minutes shaking the sheet every couple of minutes. Use your nose as a guide to know when they are finished. Allow the toasted oats to cool.

Place the crushed pale malt and flaked oats in a large muslin bag. Mix in with 10 qts. (9.5 L) water. Hold the mash at 154 °F (68 °C) for 60 minutes. Place the crushed crystal and roasted grains in a second muslin bag and add to the mash for 15 minutes longer. Heat the mash up to 168 °F (76 °C), then remove the bags and wash the grains with 1 gallon (4 L) hot water.

Stir in the dried malt extract and add water until the pre-boil kettle volume is around 6 gallons (23 L).

The total wort boil time is 60 minutes. Add the hops according to the ingredients list. Chill the wort to 66 °F (19 °C) and aerate thoroughly. Pitch the yeast at 66 °F (19 °C) and ferment at 68 °F (20 °C) until the yeast drops clear. Allow the lees to settle and the brew to mature without pressure for another two days after fermentation appears finished. Rack to a keg or bottle. Target a carbonation level of 2.5 volumes.

RPB'S IMPERIAL OATMEAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.088 FG = 1.032

IBU = 30 SRM = 71 ABV = 8%

This recipe was created by Roderick Reed, the Head Brewer at Anheuser-Busch's Research Pilot Brewery.

Ingredients

14.2 lbs. (6.4 kg) 2-row malt
2.1 lbs. (0.95 kg) chocolate malt
1.5 lbs. (0.68 kg) flaked oats
1.15 lbs. (0.52 kg) Briess Blackprinz® malt
1.75 AAU Cluster hop pellets (first wort hop) (0.25 oz./7 g at 7% alpha acids)
3.5 AAU Cluster hop pellets (60 min.) (0.5 oz./14 g at 7% alpha acids)
3.5 AAU Cluster hop pellets (30 min.) (0.5 oz./14 g at 7% alpha acids)
5 oz. (142 g) lactose powder (0 min.)
Wyeast 2035 (American Lager) or White Labs WLP840 (American Lager) yeast
2/3 cup corn sugar (if priming)

Step by Step

Ramp mash bed up through conversion, looking to target 55% real degree of fermentation (RDF). When the grain bed reaches mash out temperature of 168 °F (76 °C), begin the lautering. During the sparge phase, add the first wort hops to the brewpot. This is a 60-minute boil adding the hops at the times indicated and the lactose at the end of the boil.

After the boil, cool and ferment at 55 °F (13 °C) with lager yeast. After primary fermentation is complete, rack the beer to a secondary and condition

for one month. Bottle or keg as normal.

RPB'S IMPERIAL OATMEAL STOUT

(5 gallons/19 L, partial mash)

OG = 1.088 FG = 1.032

IBU = 30 SRM = 70 ABV = 8%

Ingredients

8 lbs. (3.6 kg) golden liquid malt extract
2 lbs. (0.91 kg) 2-row pale malt
2.1 lbs. (0.95 kg) chocolate malt
1.5 lbs. (0.68 kg) flaked oats
1.15 lbs. (0.52 kg) Briess Blackprinz® malt
1.75 AAU Cluster hop pellets (first wort hop) (0.25 oz./7 g at 7% alpha acids)
3.5 AAU Cluster hop pellets (60 min.) (0.5 oz./14 g at 7% alpha acids)
3.5 AAU Cluster hop pellets (30 min.) (0.5 oz./14 g at 7% alpha acids)
5 oz. (142 g) lactose powder (0 min.)
Wyeast 2035 (American Lager) or White Labs WLP840 (American Lager) yeast
2/3 cup corn sugar (if priming)

Step by Step

Mix the 2-row pale malt and flaked oats in a large muslin bag and place it in a large brew pot with 4.5 qts. (4 L) water. Heat the grains mixture slowly until the temperature reaches 168 °F (76 °C) over the course of 45–60 minutes.

While the mash is heating, begin heating a separate pot with 3 gallons (11.4 L) water up to 168 °F (76 °C). Add an additional gallon (3.7 L) of water plus the crushed chocolate malt and Blackprinz® malt in a separate muslin bag once the mash has reached 168 °F (76 °C). After roasted grains have steeped for 10 minutes at this temperature, remove both grain bags and place in a colander. Slowly pour the remaining 2 gallons (7.8 L) over the grains to wash out the sugars. Bring to a boil, adding the liquid malt extract and first wort hops off heat just prior to reaching a full boil. Stir until extract is fully dissolved. This is a 60-minute boil, adding the hops at the times indicated and the lactose at the end of the boil. After the boil is complete, chill the wort and top off the fermenter to 5 gallons (19 L) then aerate the wort and pitch the yeast.

Ferment at 55 °F (13 °C). After primary fermentation is complete, rack to a secondary and condition for one month. Bottle or keg as normal.

SAND CREEK BREWING CO.'S OSCAR'S CHOCOLATE OATMEAL STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.056 FG = 1.015

IBU = 30 SRM = 33 ABV = 5.6%

Sand Creek Brewing Co. describes Oscar's Chocolate Oatmeal Stout as, "A very full-bodied yet smooth-drinking stout with a complex nutty finish."

Ingredients

9 lbs. (4 kg) Briess 2-row pale malt
1 lb. (0.45 kg) Briess Munich malt (10 °L)
1 lb. (0.45 kg) wheat malt
1 lb. (0.45 kg) flaked oats
8 oz. (0.23 kg) black barley (500 °L)
8 oz. (0.23 kg) chocolate malt (350 °L)
7.1 AAU Golding hops (60 min.) (1.5 oz./43 g at 4.75% alpha acids)
4.75 AAU Golding hops (5 min.) (1 oz./28 g at 4.75% alpha acids)
1 tsp. Irish moss (15 min.)
Wyeast 1968 (London ESB) or White Labs WLP002 (English Ale) yeast
2/4 cup corn sugar (if priming)

Step by Step

This is a single step infusion mash. Mash the grains together at 150 °F (66 °C) for 60 minutes. Collect approximately 6.5 gallons (24.6 L) of wort and boil for 60 minutes, adding the first hop addition and Irish moss at the start of the boil. With five minutes remaining add the aroma hops.

Following the boil, cool the wort to 75 °F (24 °C). Pitch your yeast and allow the beer to cool over the next few hours to 68 °F (20 °C), and hold at this temperature until the beer has finished fermenting. Then bottle or keg your beer and enjoy!

SAND CREEK BREWING CO.'S OSCAR'S CHOCOLATE OATMEAL STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.056 FG = 1.015

IBU = 30 SRM = 33 ABV = 5.6%

Ingredients

6 lbs. (2.7 kg) Briess light unhopped liquid malt extract
1 lb. (0.45 kg) Briess Munich malt (10 °L)
1 lb. (0.45 kg) wheat malt
1 lb. (0.45 kg) flaked oats
8 oz. (0.23 kg) black barley (500 °L)
8 oz. (0.23 kg) chocolate malt (350 °L)
7.6 AAU Golding hops (60 min.) (1.6 oz./45 g at 4.75% alpha acids)
4.75 AAU Golding hops (5 min.) (1 oz./28 g at 4.75% alpha acids)
1 tsp. Irish moss (15 min.)
Wyeast 1968 (London ESB) or White Labs WLP002 (English Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mash the crushed malts in 1.5 gallons (5.8 L) of water at 150 °F (66 °C) for 60 minutes. Remove grains from wort and add water to make 3 gallons (11 L). Add the malt extract to your wort and bring to a boil.

At the first hop addition boil for 60 minutes total. Add the Irish moss with 15 minutes left and with five minutes remaining add the aroma hops. After the boil, add the wort to 2 gallons (7.6 L) of cool water in a sanitary fermenter, and top off with cool water to 5 gallons (19 L). Cool the wort to 75 °F (24 °C). Pitch your yeast and allow the beer to cool over the next few hours to 68 °F (20 °C), and hold at this temperature until the beer has finished fermenting. Then bottle or keg your beer and enjoy!

SELIN'S GROVE BREWING CO.'S SHADE MOUNTAIN OATMEAL STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.054 FG = 1.015

IBU = 33 SRM = 39 ABV = 5.1%

The aroma exhibits roasted grain characters followed by coffee and chocolate notes. A rich, light brown head tops the nearly opaque liquid and holds all the way to the bottom of the glass. The flavor exhibits a smooth roast grainy profile combined with chocolate and a slight nuttiness. A higher mash temperature will promote a slightly sweet finish.

Ingredients

8 lbs. (3.6 kg) 2-row pale malt
1.5 lbs. (0.68 kg) flaked oats

3 oz. (85 g) Carapils® malt
11 oz. (0.31 kg) crystal malt (20 °L)
5 oz. (0.14 kg) crystal malt (60 °L)
7 oz. (0.19 kg) chocolate malt (350 °L)
13 oz. (0.36 kg) roast barley (450 °L)
8.25 AAU Challenger pellet hops (60 min.) (1 oz./28 g at 8.25% alpha acids)
½ tsp. yeast nutrient (15 min.)
White Labs WLP013 (London Ale) or Wyeast 1028 (London Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mix the crushed grains with 3.75 gallons (14 L) of 172 °F (78 °C) water to stabilize at 156 °F (69 °C) for 60 minutes. Sparge slowly with 175 °F (79 °C) water. Collect approximately 6 gallons (23 L) of wort runoff to boil for 60 minutes. While boiling, add the hops and yeast nutrient as per the schedule in the ingredients list.

Cool the wort to 75 °F (24 °C). Pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Transfer to a carboy, avoiding any splashing to prevent aerating the beer. Allow the beer to condition for one week and then bottle or keg as normal. Allow the beer to carbonate and age for about two weeks.

SELIN'S GROVE BREWING CO.'S SHADE MOUNTAIN OATMEAL STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.054 FG = 1.015

IBU = 33 SRM = 39 ABV = 5.1%

Ingredients

3.3 lbs. (1.5 kg) Briess light, unhopped, malt extract
1 lb. (0.45 kg) light dried malt extract
1 lb. (0.45 kg) 2-row pale malt
1.5 lbs. (0.68 kg) flaked oats
3 oz. (85 g) Carapils® malt
11 oz. (0.31 kg) crystal malt (20 °L)
5 oz. (0.14 kg) crystal malt (60 °L)
7 oz. (0.19 kg) chocolate malt (350 °L)
13 oz. (0.36 kg) roast barley (450 °L)
9.9 AAU Challenger pellet hops (60 min.) (1.2 oz./34 g at 8.25% alpha acids)
½ tsp. yeast nutrient (15 min.)
White Labs WLP013 (London Ale) or Wyeast 1028 (London Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Steep the crushed pale malt and flaked oats in 1.5 gallons (5.6 L) of water at 156 °F (69 °C) for 30 minutes. Add the crystal, Carapils® and roasted grains and steep 15 minutes longer. Remove grains from the wort and rinse with 2 quarts (1.8 L) of hot water. Add the malt extracts and bring to a boil. While boiling, add the hops and yeast nutrient as per the schedule. After the boil, add the wort to 2 gallons (7.6 L) of cold water in the sanitized fermenter and top off with cold water up to 5 gallons (19 L).

Cool the wort to 75 °F (24 °C). Pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Transfer to a carboy, avoiding any splashing to prevent aerating the beer. Allow the beer to condition for one week and then bottle or keg as normal. Allow the beer to carbonate and age for two weeks.

SHAMROCK SIMPLE OATMEAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.056 FG = 1.015

IBU = 55 SRM = 35 ABV = 5.6%

Ingredients

6.8 lbs. (3.1 kg) pale ale malt (3–4 °L)
10.7 oz. (0.3 kg) flaked oats (1.5 °L)
14.5 oz. (0.41 kg) roasted barley
1 oz. (28 g) black patent malt (500 °L)
2 lbs. (0.91 kg) corn sugar (0 min.)
12.5 AAU East Kent Golding hops (60 min.) (2.35 oz./67 g at 5.3% alpha acids)
4 AAU East Kent Golding hops (15 min.) (0.75 oz./21 g at 5.3% alpha acids)
1 tsp. Irish moss
Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Begin a single-infusion mash with a 152–154 °F (67–68 °C) rest for about an hour. Infuse the grain bed until about one inch (2.5 cm) of water rises above the top of the grain. Then raise the mash to 168–170 °F (76–77 °C) during the sparge.

Boil your wort 90 minutes, adding the hops at times indicated. Dissolve

the corn sugar at the end of the boil. This will slightly bump up your beer's starting gravity and alcohol content.

Heat-exchange to 60 °F (16 °C), pitch the yeast, and hold the brew at that temperature through the fermentation and conditioning period of about six weeks. This keeps the diacetyl level low. Rack the brew once, after about three weeks. Then prime and package as normal.

SHAMROCK SIMPLE OATMEAL STOUT

(5 gallons/19 L, partial mash)
OG = 1.056 FG = 1.015
IBU = 55 SRM = 35 ABV = 5.6%

Ingredients

4 lbs. (1.8 kg) pale liquid malt extract
1 lb. (0.45 kg) pale ale malt (3–4 °L)
10.7 oz. (0.3 kg) flaked oats (1.5 °L)
14.5 oz. (0.41 kg) roasted barley
1 oz. (28 g) black patent malt (500 °L)
2 lbs. (0.91 kg) corn sugar (0 min.)
12.5 AAU East Kent Golding hops
(60 min.) (2.35 oz./67 g at 5.3%
alpha acids)
4 AAU East Kent Golding hops
(15 min.) (0.75 oz./21 g at 5.3%
alpha acids)
1 tsp. Irish moss
Wyeast 1084 (Irish Ale) or White Labs
WLP004 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Crack the pale ale malt and mix with the unmilled oats. Place the grains in a muslin bag. Immerse the bag in two gallons (7.6 L) of cold water. Heat slowly, over half an hour, to about 160 °F (71 °C). Add the roasted grain in a second bag and steep for another half hour. Lift the bags out of the liquid. Dunk in and let drip repeatedly, as with a tea bag. Rinse slowly with two to three cups of hot water and discard.

Fill kettle to about three gallons (11.4 L) with water. Bring to a boil and take off the heat. Stir in the malt extract. Bring to a boil and boil for 60 minutes, adding the hops at times indicated. Dissolve the corn sugar at the end of the boil. This will slightly bump up your beer's starting gravity and alcohol content.

Heat-exchange to 60 °F (16 °C), pitch the yeast, and hold the brew at

that temperature through the fermentation and conditioning period of about six weeks. This keeps the diacetyl level low. Rack the brew once, after about three weeks. Then prime and package as normal.

Tips for Success:

Compared to barley, oats have slightly more protein and slightly less starch. But they also have more than double the fat and fiber. So they contribute a desirable, body-enhancing oiliness and an undesirable, flavor-impeding harshness to the beer. Most commercial breweries, therefore, keep the oats portion in their mashes to no more than 5%, even though there are stouts available with an oats portion of around 20%. Taste is of course subjective, but if you want your oatmeal stout to be at once rich and elegant, go easy on the oats!

WOLAVER'S OATMEAL STOUT CLONE

(5 gallons/19 L, all-grain)
OG = 1.059 FG = 1.018
IBU = 40 SRM = 35 ABV = 5.6%

Wolaver's describes its Oatmeal Stout as a "smooth-as-silk stout brimming with darkly roasted malts and rich notes of chocolate and coffee. A mocha-topped, black-as-night body gives way to a surprisingly smooth, full-bodied experience in this unfiltered offering."

Ingredients

9.5 lbs. (4.3 kg) organic 2-row malt
1.4 lbs. (0.64 kg) organic roasted
barley (300 °L)
0.7 lb. (0.32 kg) organic rolled oats
0.5 lb. (0.23 kg) organic crystal malt
(120 °L)
0.7 lb. (0.32 kg) organic Munich malt
(10 °L)
0.28 lb. (0.13 kg) organic unmalted
wheat
9.2 AAU Magnum hops (60 min.)
(0.67 oz./19 g at 14% alpha acids)
0.4 AAU organic Hallertau hops
(15 min.) (0.1 oz./4 g at 4 % alpha
acids)
2.5 AAU organic Cascade hops
(15 min.) (0.5 oz./14 g at 5% alpha
acids)
White Labs WLP036 (Dusseldorf Alt)
or Wyeast 1007 (German Ale) yeast
(1.5 qt./1.5 L yeast starter)

¾ cup corn sugar (if priming)

Step by Step

Heat 4.5 gallons (17 L) water up to 165 °F (74 °C). If you have soft water, you may want to mix in some dissolved chalk or baking soda. Mash at 152 °F (67 °C) for one hour. Sparge with enough water to collect 7 gallons (26.5 L) wort in the kettle. Total boil time is 90 minutes, adding hops at times indicated. After the boil is complete, cool, aerate and ferment at 68 °F (20 °C). Bottle or keg as normal.

WOLAVER'S OATMEAL STOUT CLONE

(5 gallons/19 L, partial mash)
OG = 1.059 FG = 1.018
IBU = 40 SRM = 60 ABV = 5.6%

Ingredients

6 lbs. (2.7 kg) Briess organic light
liquid malt extract (15 min.)
0.42 lb. (0.19 kg) organic 2-row malt
1.4 lbs. (0.64 kg) organic roasted
barley (300 °L)
0.7 lb. (0.32 kg) organic rolled oats
0.5 lb. (0.23 kg) organic crystal malt
(120 °L)
0.7 lb. (0.32 kg) organic Munich malt
(10 °L)
0.28 lb. (0.13 kg) organic unmalted
wheat
9.2 AAU Magnum hops (60 min.)
(0.67 oz./19 g at 14% alpha acids)
0.4 AAU organic Hallertau hops
(15 min.) (0.1 oz./4 g at 4 % alpha
acids)
2.5 AAU organic Cascade hops
(15 min.) (0.5 oz./14 g at 5% alpha
acids)
White Labs WLP036 (Dusseldorf Alt)
or Wyeast 1007 (German Ale) yeast
(1.5 qt./1.5 L yeast starter)
¾ cup corn sugar (if priming)

Step by Step

Mash mixed, crushed grains for 45 minutes at 152 °F (67 °C) in 5 qts. (4.7 L) of water. Bring wort volume to 3 gallons (11.4 L) and boil for a total of 60 minutes. Add the Magnum hops at the start of the boil and with 15 minutes remaining add the Hallertau and Cascade hop additions. Add liquid malt extract for final 15 minutes of the boil.

Cool and ferment at 68 °F (20 °C). Bottle or keg as normal.

SWEET STOUT

by JAMIL ZAINASHEFF

I have always defended style guidelines as providing a sort of “shorthand” when discussing beers. You tell someone you are brewing pale ale, and they know it is light in color and fermented with ale yeast. If you say, “I’m brewing an American pale ale” then they know it has some American brewing characteristics. Saves a lot of time and words when us beer geeks get together, right?

But the problem is, not all of the style names are as descriptive as they should be. For example, “cream ale” has always bothered me. If you do not know beer styles, the term cream ale can be misleading. It may be an ale, but it certainly is not creamy. I find it even more annoying when brewers ask what they should be putting in their recipe to make a cream ale taste creamier! Vanilla? Argh, the humanity! But I digress.

Contrast that with “sweet stout.” Now that is a good style name. Most people with a passion for beer and little understanding of style guidelines would have at least some idea of what a sweet stout might be: A stout, but sweeter than a regular stout. Okay, it is a simplified description of the style, but pretty darn accurate. Even if you were to call it by the more traditional name milk stout or cream stout, I think people would still have a pretty good shot at guessing what kind of beer they would get if they ordered one. Hooray for decent style names!

Sweet stout is traditionally an English style and historically known as milk or cream stout. The name comes from the practice of adding lactose (milk sugar) to sweeten the beer. Sweet stout is dark, sweet, rich, and full of roasted flavors and aromas. It is full-bodied and has substantial coffee and chocolate notes. The appearance is very dark brown to black in color. Think of sweet stout as similar to dry stout in roastiness, but much fuller and sweeter. While some commercial examples are drier than others, you will have more success in competitions focusing on the sweet side of the style. Sweetness in this style comes from reducing the bitterness of the beer and adding crystal malt and lactose powder. Lactose is only mildly sweet, but it is unfermentable by brewing yeasts, which also helps add to the mouthfeel.

To brew a great example of this style, start with high quality British pale ale malt as the base. It provides that background rich malt character that is a key component in fine British beers. British pale ale malt is kilned a bit darker (2.5 to 3.5 °L) than the average North American two-row or pale malt (1.5 to 2.5 °L) and this higher level of kilning brings out the malt’s biscuit-toasty flavors. Some brewers use North American pale ale malt or North American two-row with the addition of some specialty malts, but this will not produce the same beer as using British pale ale malt. Spend the



Photo by Charles A. Parker/Images PPlus

money, make the effort, and use the proper base malt if you want to make an excellent example of the style.

Similarly, extract brewers should make the effort to source an extract made from British pale ale malt. If you end up using North American two-row malt extract, you can try to compensate by partial mashing some additional specialty malts such as Munich, biscuit, or Victory®.

All-grain brewers should use a single infusion mash. A temperature in the range of 150 to 155 °F (66 to 68 °C) works well. Use a lower temperature when using lower attenuating yeasts or higher starting gravities. Use a higher mash temperature when using the higher attenuating yeasts or lower starting gravity beers. If you are unsure, a great starting point is 152 °F (67 °C).

While using the proper base malt is important, sweet stout also requires a fair amount of specialty malt. To develop some sweetness and a caramel flavor component, consider using 5% to 10% of 40–120 °L crystal malt. I prefer to use crystal malts in the 80 °L range, since it provides a dark caramel flavor. To create the dark color and an espresso-like richness, British black malt, chocolate malt, and even roasted barley are good choices. The proper amounts are going to vary based on color and flavor. Generally, 10% of the grist is highly kilned malt in a stout. Be aware that malts of the same name from different suppliers can vary substantially in color and flavor. You might find both chocolate malt and black malt ranging from 300 °L to 500 °L, so the name that the maltsters give a product is not always a reliable indicator. Let flavor be your guide.

If you are looking for more complexity or increased head retention, you can add other malts as well. Wheat malt, Victory®, biscuit, and others are common additions in many recipes, but keep in mind that using too many specialty malts often ends up as a muddled malt character, not a more complex one. Emphasize one or two particular malt characters in your recipe by using two or three grains.

// Think of sweet stout as similar to dry stout in roastiness, but much fuller and sweeter. //

Select high-quality British specialty malts such as Muntons, Simpsons, or Thomas Fawcett. These malts have a rich malt character, which is complex on its own. One specialty grain that I like a lot in this style is pale chocolate malt (~200 °L). It has a dark toast character that is not quite chocolate and it fills a void in the range of malt flavors in this beer. You might experiment with other adjuncts as well, such as treacle, but keep in mind that simple sugars will ferment out completely and will contribute toward a thinner body, which is the opposite of what you want in a sweet stout.

All English-style beer is best brewed with English hops, such as East Kent Golding, Fuggle, Target, Northdown, or Challenger. Hop flavor and aroma should be absent or at the most minimal, also similar to dry stout. The bittering level for sweet stout has a wide range of 20 to 40 IBU, but you should be shooting for a balance that is slightly to moderately sweet. A bitterness to starting gravity ratio (IBU divided by original gravity) in the range of 0.4 and 0.6 is good. Skip the late hop additions in this style. There should be no hop flavor or aroma. At most, any hop character detected in the finished beer would be from the bittering hop addition.

Fermentation creates most of

the flavor and aroma in many British beers. “English” yeast strains provide a variety of interesting esters and leave some residual sweetness to balance the hop bittering. Many English yeasts attenuate on the lower side (< 70%), but there are some that attenuate quite well (up to 80%). For many British-style beers you have to think about the final balance of the beer. Most British beer styles are near even or on the bitter side. If the beer has a high starting gravity, or you are using a lot of specialty grains that add residual sweetness (such as crystal malts), you need to select a more attenuative strain. If you are brewing a beer with a lower starting gravity and/or with limited specialty grains then you want to go with a less attenuative yeast. This is one of the most important things to know about crafting your own British-style recipes. My favorite yeast strains for brewing sweet stout are White Labs WLP006 (Bedford British) and Wyeast 1099 (Whitbread Ale). They both provide a wonderful ester profile without being excessively fruity, and they attenuate less than many English yeasts. Lower attenuation in this case helps preserve that rich malt sweetness and fuller mouthfeel.

At lower temperatures (<65 °F/18 °C), these yeasts produce a relatively low level of esters and at high temperatures (>70 °F/21 °C) they produce abundant fruity esters and fusel alcohol notes. I start my fermentation in the middle of this range (67 °F/19 °C), letting the temperature rise a few degrees over a couple days. This creates the expected level of esters, helps the yeast attenuate fully, and keeps the amount of diacetyl in the finished beer down to a minimum.

Serving British-style beers at cellar temperature, around 52 to 55 °F (11 to 13 °C), allows the character of the beer to come out and can improve drinkability. Colder temperatures prevent the drinker from picking up the interesting fermentation and malt flavors and aromas, so try serving your sweet stout above 50 °F (10 °C). Target a carbonation level around 1.5 to 2 volumes of CO₂.

CRÈME DE LA STOUT

(5 gallons/19 L, all-grain)

OG = 1.072 FG = 1.032

IBU = 20 SRM = 32 ABV = 5.6%

Ingredients

11 lbs. (5 kg) 2-row pale malt
12 oz. (0.34 kg) lactose sugar
8 oz. (0.22 kg) maltodextrin
12 oz. (0.34 kg) British crystal malt (60 °L)
12 oz. (0.34 kg) British chocolate malt (400 °L)
4 oz. (0.11 kg) roasted barley (300 °L)
4 oz. (0.11 kg) torrified wheat
1 tsp. gypsum
8 AAU Columbus hops (35 min.) (0.5 oz./14 g at 16% alpha acids)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Heat 4.5 gallons (17 L) of water to 163 °F (73 °C). Add the crushed grains to this water and mash at 150 °F (66 °C) for 45 minutes. Sparge with enough water to collect 6 gallons (23 L) wort in the kettle.

Bring the wort to a boil, turn off the heat and add maltodextrin and lactose. Resume boiling for a total of 60 minutes, adding the Columbus hops with 35 minutes left. After the boil is complete, cool your wort and transfer to the primary fermenter. Add cool water to obtain 5 gallons (19 L) in your fermenter. When the wort temperature is under 70 °F (21 °C), pitch your yeast. Ferment in the primary fermenter 5–7 days or until fermentation slows, then siphon into the secondary fermenter. Prime and bottle or keg and force carbonate as normal.

CRÈME DE LA STOUT

(5 gallons/19 L, extract with grains)

OG = 1.072 FG = 1.032

IBU = 20 SRM = 32 ABV = 5.6%

Ingredients

6 lbs. (2.7 kg) extra-light dried malt extract
12 oz. (0.34 kg) lactose sugar
8 oz. (0.22 kg) maltodextrin
12 oz. (0.34 kg) British crystal malt (60 °L)
12 oz. (0.34 kg) British chocolate malt (400 °L)

4 oz. (0.11 kg) roasted barley (300 °L)
1 tsp. gypsum
8 AAU Columbus hops (35 min.) (0.5 oz./14 g at 16% alpha acids)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Heat 1 gallon (3.8 L) of water to 155 °F (68 °C). Add the crushed grains to this water and steep at 150 °F (66 °C) for 30 minutes. Strain the grain water into your brew pot. Sparge the grains with 1 gallon (3.8 L) of 150 °F (66 °C) water.

Bring the water to a boil, turn off the heat and add malt extract, maltodextrin, and lactose. Resume boiling for a total of 60 minutes, adding the Columbus hops with 35 minutes left. After the boil is complete, cool your wort and transfer to the primary fermenter. Add cool water to obtain 5 gallons (19 L) in your fermenter. When the wort temperature is under 70 °F (21 °C), pitch your yeast. Ferment in the primary fermenter 5–7 days or until fermentation slows, then siphon into the secondary fermenter. Prime and bottle or keg and force carbonate as normal.

DAIRYLAND MILK STOUT

(5 gallons/19 L, extract with grains)

OG = 1.057 FG = 1.014

IBU = 40 SRM = 27 ABV = 5.6%

This recipe was created to be brewed using malt extract. While amber malt extract is what is recommended in this recipe, we encourage you to explore some other darker malt extracts if you would like a more robust stout.

Ingredients

6 lbs. (2.7 kg) Northwestern amber liquid malt extract (12 °L)
1 lb. (0.45 kg) lactose sugar
8 oz. (0.23 kg) maltodextrin
8 oz. (0.23 kg) dark crystal malt (120 °L)
4 oz. (113 g) black patent malt
4 oz. (113 g) roasted barley
12 AAU Eroica hops (60 min.) (1 oz./28 g at 12% alpha acids)
1 oz. (28 g) Fuggle hops (2 min.)
Wyeast 1056 (American Ale) or White Labs WLP001 (California Ale) yeast
¾ cup corn sugar (if bottling)

Step by Step

Crack all of the grain and steep in two quarts of water at 155 °F (68 °C) for 20 minutes. Discard spent grains and add 2.5 gallons (9.5 L) of water to brew kettle. Bring to a boil and remove from heat to add malt extract, maltodextrin, lactose sugar, and Eroica hops. Boil for 60 minutes, adding the Fuggle hops for the last two minutes of the boil.

After the boil is complete, pour the hot wort into 2.5 gallons (9.5 L) of cold water in your sterilized fermenter. Top off with cold water to make 5 gallons (19 L). After temperature falls below 75 °F (24 °C), aerate by stirring vigorously and pitch yeast. Ferment for 10–14 days at approximately 70 °F (21 °C). Bottle or keg as usual.

DOUG RHOADES' MILK STOUT

(5 gallons/19 L, all-grain)

OG = 1.072 FG = 1.023

IBU = 43 SRM = 37 ABV = 7%

Ingredients

7.9 lbs. (3.6 kg) 2-row pale malt
1.1 lbs. (0.5 kg) wheat malt
1 lb. (0.45 kg) flaked oats
0.5 lb. (0.23 kg) flaked rye
1.5 lbs. (0.91 kg) crystal malt (90 °L)
1 lb. (0.45 kg) Carapils® malt
0.75 lb. (0.34 kg) roasted barley (300 °L)
5 oz. (0.14 kg) black patent malt
1 lb. (0.45 kg) lactose sugar (30 min.)
1 tsp. Irish moss (15 min.)
11 AAU Galena hops (90 min.) (1 oz./28 g at 11% alpha acids)
2 AAU Willamette hops (10 min.) (0.5 oz./14 g at 4% alpha acids)
Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mash at 122 °F (50 °C) for 20 minutes, then ramp mash temperature up to 152 °F (67 °C) and hold for 60 minutes. Ramp mash temperature to 167 °F (75 °C) for 10 minutes to start lautering. Collect enough wort in the kettle for an extended boil. Boil for 90 minutes, adding hops, lactose, and Irish moss as indicated.

After the boil is complete, cool and ferment at 68 °F (20 °C). Bottle with corn sugar or keg as normal.

Photo by Charles A. Parker/Images Pillus



DOUG RHOADES' MILK STOUT

(5 gallons/19 L, partial mash)

OG = 1.072 FG = 1.023

IBU = 43 SRM = 37 ABV = 7%

Ingredients

4 lbs. (1.8 kg) extra light dried malt extract
 1.5 lbs. (0.68 kg) wheat malt
 1 lb. (0.45 kg) flaked oats
 0.5 lb. (0.23 kg) flaked rye
 1.5 lbs. (0.91 kg) crystal malt (90 °L)
 1 lb. (0.45 kg) Carapils® malt
 0.75 lb. (0.34 kg) roasted barley (300 °L)
 5 oz. (0.14 kg) black patent malt
 1 lb. (0.45 kg) lactose sugar (30 min.)
 1 tsp. Irish moss (15 min.)
 12 AAU Galena hops (60 min.)
 (1.1 oz./31 g at 11% alpha acids)
 2 AAU Willamette hops (10 min.)
 (0.5 oz./14 g at 4% alpha acids)
 Wyeast 1084 (Irish Ale) or White Labs

WLP004 (Irish Ale) yeast
 $\frac{3}{4}$ cup corn sugar (if priming)

Step by Step

Heat 2 gallons strike water in your brewpot to 164 °F (73 °C). Mash the wheat malt and flaked oats and rye at 152 °F (67 °C) for 45 minutes. Add the crystal and roasted grains to the mash and steep an additional 15 minutes. Remove the grains and wash with 1 gallon (4 L) hot water. Stir in the dried malt extract and top off to 6 gallons (23 L).

Boil for 60 minutes, adding hops, lactose, and Irish moss as indicated. After the boil is complete, cool and ferment at 68 °F (20 °C). Bottle with corn sugar or keg as normal.

JAMIL'S SWEET STOUT

(5 gallons/19 L, all-grain)

OG = 1.060 FG = 1.023

IBU = 22 SRM = 41 ABV = 5%

Ingredients

8.8 lbs. (4 kg) British pale ale malt
 14.8 oz. (0.42 kg) lactose sugar
 14.1 oz. (0.40 kg) Baird's black patent malt (525 °L)
 10.6 oz. (0.30 kg) Baird's crystal malt (80 °L)
 7.1 oz. (0.20 kg) Thomas Fawcett pale chocolate malt (200 °L)
 6 AAU Kent Golding hop pellets (60 min.) (1.2 oz./35 g at 5% alpha acids)
 White Labs WLP006 (Bedford British) or Wyeast 1099 (Whitbread Ale) yeast
 $\frac{3}{4}$ cup corn sugar (if priming)

Step by Step

Mill the grains and dough-in targeting a mash of around 1.5 quarts of water to 1 pound of grain (3.1 L/kg) (a liquor-to-grist ratio of about 3:1 by weight) and a temperature of 151 °F (66 °C). Hold the mash at 151 °F (66 °C) until enzymatic conversion is complete. Infuse the mash with near-boiling water while stirring or with a recirculating mash system raise the temperature to mash out at 168 °F (76 °C). Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is around 5.9 gallons (22.3 L) and a specific gravity of 1.051.

The total wort boil time is 60 minutes. I prefer to mix in the lactose with the first runnings, which gives me lots of time to make sure it gets dissolved before firing up the kettle. Add the first hop addition as soon as the wort reaches a full boil and then start your timer. Add Irish moss or other kettle finings with 15 minutes left in the boil.

Chill the wort to 68 °F (20 °C) and aerate thoroughly. The proper pitch rate is 2 packages of liquid yeast or 1 package of liquid yeast in a 2-liter starter. Ferment at 68 °F (20 °C). When finished, carbonate the beer to approximately 1.5 to 2 volumes.

JAMIL'S SWEET STOUT

(5 gallons/19 L, extract with grains)

OG = 1.060 FG = 1.023

IBU = 22 SRM = 41 ABV = 5%

Ingredients

6 lbs. (2.7 kg) Maris Otter liquid malt extract

14.8 oz. (0.42 kg) lactose sugar
 14.1 oz. (0.40 kg) Baird's black patent malt (525 °L)
 10.6 oz. (0.30 kg) Baird's crystal malt (80 °L)
 7.1 oz. (0.20 kg) Thomas Fawcett pale chocolate malt (200 °L)
 6 AAU Kent Golding hop pellets (60 min.) (1.2 oz./35 g at 5% alpha acids)
 White Labs WLP006 (Bedford British) or Wyeast 1099 (Whitbread Ale) yeast
 ⅔ cup corn sugar (if priming)

Step by Step

Mill or coarsely crack the specialty malt and place loosely in a grain bag. Avoid packing the grains too tightly in the bag, using more bags if needed. Steep the bag in about 1 gallon (~4 L) of water at roughly 170 °F (77 °C) for 30 minutes. Lift the grain bag out of the steeping liquid and rinse with warm water. Allow the bags to drip into the kettle for a few minutes while you add the malt extract and lactose powder. Do not squeeze the bags. Add the malt extract, lactose, and enough water to make a pre-boil volume of 5.9 gallons (22.3 L) and a gravity of 1.051. Stir thoroughly to help dissolve the extract and bring to a boil.

The total wort boil time is 60 minutes. Add the first hop addition as soon as the wort reaches a full boil and then start your timer. Add Irish moss or other kettle finings with 15 minutes left in the boil. Chill the wort to 68 °F (20 °C) and aerate thoroughly. The proper pitch rate is 2 packages of liquid yeast or 1 package of liquid yeast in a 2-liter starter. Ferment at 68 °F (20 °C). When finished, carbonate the beer to approximately 1.5 to 2 volumes.

KIUCHI BREWERY'S HITACHINO NEST SWEET STOUT CLONE

(5 gallons/19 L, all-grain)
 OG = 1.049 FG = 1.019
 IBU = 16 SRM = 42 ABV = 3.9%

The Kiuchi brewery's Hitachino Nest Sweet Stout is like a delicately sweetened cappuccino. Dark roasted coffee with dark fruit notes and the unmistakable aroma and flavor of lactose.

Ingredients

6 lbs. (2.7 kg) 2-row pale malt
 0.5 lb. (0.23 kg) wheat malt
 1 lb. (0.45 kg) crystal malt (55 °L)
 1.25 lbs. (0.57 kg) roasted barley (450 °L)
 1 lb. (0.45 kg) lactose sugar (15 min.)
 4.1 AAU Kent Golding hops (60 min.) (0.75 oz./21 g at 5.5% alpha acids)
 Wyeast 1099 (Whitbread Ale) or Safale S-04 yeast
 ⅔ cup corn sugar (if priming)

Step by Step

Mash at 153 °F (67 °C) in 11 qts. (10.4 L) of water. Boil wort for 60 minutes, adding hops and lactose at times indicated. After the boil, chill the wort to 68 °F (20 °C) and aerate thoroughly. Ferment at 68 °F (20 °C). Bottle or keg as normal.

KIUCHI BREWERY'S HITACHINO NEST SWEET STOUT CLONE

(5 gallons/19 L, extract with grains)
 OG = 1.049 FG = 1.019
 IBU = 16 SRM = 42 ABV = 3.9%

Ingredients

3.3 lbs. (2.7 kg) light liquid malt extract
 1 lb. (0.45 kg) wheat dried malt extract
 1 lb. (0.45 kg) crystal malt (55 °L)
 1.25 lbs. (0.57 kg) roasted barley (450 °L)
 1 lb. (0.45 kg) lactose sugar (15 min.)
 4.1 AAU Kent Golding hops (60 min.) (0.75 oz./21 g at 5.5% alpha acids)
 Wyeast 1099 (Whitbread Ale) or Safale S-04 yeast
 ⅔ cup corn sugar (if priming)

Step by Step

Place the crushed grains in a muslin bag and steep in 5 gallons (19 L) water as the water heats up. Remove the grain bag when the temperature reaches 170 °F (77 °C). Add the liquid and dried malt extracts off heat and stir until fully dissolved. Bring the wort to a boil and boil wort for 60 minutes, adding hops and lactose at times indicated. After the boil, cool and ferment at 68 °F (20 °C) and bottle or keg as normal.

MACKESON'S XXX STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.058 FG = 1.022
 IBU = 36 SRM = 43 ABV = 4.9%

Ingredients

9.1 lbs. (4.13 kg) 2-row pale malt
 1 lb. (0.45 kg) chocolate malt
 1.5 lbs. (0.68 kg) black patent malt (uncracked)
 12 oz. (0.34 kg) crystal malt
 12 oz. (0.34 kg) lactose sugar (0 min.)
 10 AAU Kent Golding leaf hops (60 min.) (2 oz./57 g at 5% alpha acids)
 1 tsp. salt (15 min.)
 1 tsp. citric acid (15 min.)
 1 tsp. yeast nutrient (15 min.)
 Wyeast 1099 (Whitbread Ale) or Safale S-04 yeast
 ¼ cup dried malt extract (if priming)

Step by Step

Mash the pale, chocolate, and crystal malts at 150 °F (66 °C) for 45 minutes. Add the uncracked black patent malt and begin the lauter. Collect 6 gallons (23 L) of wort in the kettle. Add bittering hops and boil for 60 minutes. Add remaining ingredients at times indicated. After the boil is complete, chill wort and pitch yeast. When fermented, keg or prime with ¼ cup of dried malt extract and bottle.

MACKESON'S XXX STOUT CLONE

(5 gallons/19 L, extract with grains)
 OG = 1.058 FG = 1.022
 IBU = 36 SRM = 43 ABV = 4.9%

Ingredients

6 lbs. (2.7 kg) Coopers light liquid malt extract
 1 lb. (0.45 kg) chocolate malt
 1.5 lbs. (0.68 kg) black patent malt (uncracked)
 12 oz. (0.34 kg) crystal malt
 12 oz. (0.34 kg) lactose sugar (0 min.)
 10 AAU Kent Golding leaf hops (60 min.) (2 oz./57 g at 5% alpha acids)
 1 tsp. salt (15 min.)
 1 tsp. citric acid (15 min.)
 1 tsp. yeast nutrient (15 min.)
 Wyeast 1099 (Whitbread Ale) or Safale S-04 yeast
 ¼ cup dried malt extract (if priming)

Step by Step

Place crushed crystal and chocolate

malt – and uncrushed black patent malt – in a grain bag. Steep grains at 150 °F (66 °C) for 30 minutes. Add water and malt extract to the grain tea to make 3 gallons (11 L) and bring to a boil. Add bittering hops and boil for 60 minutes. Add remaining ingredients at times indicated. After the boil is complete, chill wort and pitch yeast. When fermented, keg or prime with $\frac{3}{4}$ cup of dried malt extract and bottle.

SAMUEL ADAMS' CREAM STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.057 FG = 1.020

IBU = 28 SRM = 47 ABV = 4.9%

According to Samuel Adams, its Cream Stout is, "Inspired by the traditional English sweet stouts, this rich and creamy brew is full of deep roasted character, with a subtle sweetness and indulgently smooth finish."

Ingredients

- 8 lbs. (3.6 kg) 2-row pale malt (2 °L)
- 1.5 lbs. (0.68 kg) white wheat malt (2 °L)
- 0.9 lb. (0.41 kg) caramel malt (60 °L)
- 0.9 lb. (0.41 kg) chocolate malt (350 °L)
- 0.6 lb. (0.27 kg) roasted barley (500 °L)
- 4 oz. (113 g) Weyermann Carafa® I malt (350 °L)
- 0.7 AAU East Kent Golding pellet hops (60 min.) (0.1 oz./3 g at 6.9% alpha acids)
- 1.4 AAU East Kent Golding pellet hops (30 min.) (0.2 oz./6 g at 6.9% alpha acids)
- 0.6 AAU UK Fuggle pellet hops (30 min.) (0.1 oz./3 g at 5.7% alpha acids)
- 1.1 AAU UK Fuggle pellet hops (15 min.) (0.2 oz./6 g at 5.7% alpha acids)
- 4.8 AAU East Kent Golding pellet hops (5 min.) (0.7 oz./20 g at 6.9% alpha acids)
- $\frac{1}{2}$ tsp. yeast nutrients (15 min.)
- White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), Fermentis Safale US-05, or Lallemand BRY-97 yeast
- $\frac{3}{8}$ cup corn sugar (if bottling)

Step by Step

This is a single infusion mash. Mix the

crushed grains with 4.5 gallons (17 L) of 167 °F (75 °C) strike water to stabilize the mash at 155 °F (68 °C). Hold at this temperature for 45 minutes. Vorlauf for 15 minutes then begin sparge. Run off into kettle to achieve proper volume with a pre-boil gravity around 1.046 specific gravity. Boil for 60 minutes, adding hops and yeast nutrients according to the ingredients list. Once you turn off the heat, give the wort a stir for about a minute to create a whirlpool and let that spin and settle out for about 30 minutes before beginning to chill the wort. Cool the wort down to slightly below fermentation temperature, about 65 °F (18 °C). Aerate the wort with filtered air or pure oxygen and pitch yeast. Ferment at 68 °F (20 °C) for 1 week or until signs of fermentation have died down. Cool beer to 60 °F (16 °C) and condition for an additional 1-2 weeks. Bottle or keg and carbonate to 2 volumes of CO₂.

SAMUEL ADAMS' CREAM STOUT CLONE

(5 gallons/19 L, extract with grains)

OG = 1.057 FG = 1.020

IBU = 28 SRM = 55 ABV = 4.9%

Ingredients

- 3.3 lbs. (1.5 kg) light liquid malt extract
- 3.3 lbs. (1.5 kg) wheat liquid malt extract
- 0.9 lb. (0.41 kg) caramel malt (60 °L)
- 0.9 lb. (0.41 kg) chocolate malt (350 °L)
- 0.6 lb. (0.27 kg) roasted barley (500 °L)
- 4 oz. (113 g) Weyermann Carafa® I malt (350 °L)
- 0.7 AAU East Kent Golding pellet hops (60 min.) (0.1 oz./3 g at 6.9% alpha acids)
- 1.4 AAU East Kent Golding pellet hops (30 min.) (0.2 oz./6 g at 6.9% alpha acids)
- 0.6 AAU UK Fuggle pellet hops (30 min.) (0.1 oz./3 g at 5.7% alpha acids)
- 1.1 AAU UK Fuggle pellet hops (15 min.) (0.2 oz./6 g at 5.7% alpha acids)
- 4.8 AAU East Kent Golding pellet hops (5 min.) (0.7 oz./20 g at 6.9% alpha acids)
- $\frac{1}{2}$ tsp. yeast nutrients (15 min.)

White Labs WLP001 (California Ale), Wyeast 1056 (American Ale), Fermentis Safale US-05, or Lallemand BRY-97 yeast
 $\frac{3}{8}$ cup corn sugar (if bottling)

Step by Step

Place grains in a muslin bag and steep in 1 gallon (3.8 L) of water at 150–160 °F (66–71 °C) for 20 minutes. Remove the grain bag and slowly wash the grains with 2 qts. (1.9 L) hot water. Transfer the wort to brew kettle and top off to make 6 gallons (23 L) in your brew kettle. Just before the water reaches a boil, remove from the heat and stir until all the extract is dissolved. Your pre-boil gravity should be around 1.046 SG. Boil for 60 minutes, adding hops and yeast nutrients according to the ingredients list. Turn off the heat, give the wort a stir for about a minute to create a whirlpool and let that spin and settle out for 30 minutes before beginning to chill the wort. The remainder of this recipe is the same as the all-grain version.

SIMPLY SWEET STOUT

(5 gallons/19 L, all-grain)

OG = 1.041 FG = 1.015

IBU = 27 SRM = 21 ABV = 3.5%

Ingredients

- 6.5 lbs. (2.9 kg) 2-row pale malt
- 8 oz. (0.22 kg) crystal malt (80 °L)
- 6 oz. (0.17 kg) black barley
- 12 oz. lactose sugar (see step by step)
- 7.5 AAU Kent Golding hops (45 min.) (1.5 oz./43 g at 5% alpha acids)
- Wyeast 1028 (London Ale) or White Labs WLP013 (London Ale) yeast
- $\frac{1}{2}$ cup corn sugar (if priming)

Step by Step

Mash in with 2.5 gallons (9.5 L) of 165 °F (74 °C) water, aiming for 152 °F (67 °C) strike temperature. Hold 1 hour for conversion. Raise to 168 °F (76 °C) for mashout. Hold 10 minutes. Sparge with about 5 gallons (19 L) of water. Boil 90 minutes. Add hops at 45 minutes. Ferment at 65 °F (18 °C), rack to secondary then age for several weeks. When ready for bottling or kegging, boil the lactose for 10 minutes in a cup of water. Add the solution to your keg or the bottling bucket along with corn sugar if priming.

SIMPLY SWEET STOUT

(5 gallons/19 L, extract with grains)
OG = 1.041 FG = 1.015
IBU = 27 SRM = 21 ABV = 3.5%

Ingredients

3.5 lbs. (1.6 kg) extra light dried malt extract
 8 oz. (0.22 kg) crystal malt (80 °L)
 6 oz. (0.17 kg) black barley
 12 oz. lactose sugar (see step by step)
 7 AAU Kent Golding hops (45 min.)
 (1.5 oz./43 g at 5% alpha acids)
 Wyeast 1028 (London Ale) or White Labs WLP013 (London Ale) yeast
 ½ cup corn sugar (if priming)

Step by Step

Place crushed grains in a muslin bag and steep in about 5 gallons (19 L) of water as the water heats up. When the temperature reaches 170 °F (77 °C), remove the grain bag and let drip back into the kettle. Stir in the dried malt extract off heat and mix until dissolved. Top up to 6 gallons (23 L) and bring up to a boil. Boil for 45 minutes adding the hops at the beginning of the boil. Ferment at 65 °F (18 °C), rack to secondary then age for several weeks. When ready for bottling or kegging, boil the lactose for 10 minutes in a cup of water. Add the solution to your keg or the bottling bucket along with corn sugar if priming.

SWEET STOUT I

(5 gallons/19 L, all-grain)
OG = 1.064 FG = 1.014
IBU = 25 SRM = 31 ABV = 6.8%

Ingredients

10 lbs. (4.5 kg) 2-row pale malt
 0.5 lb. (0.23 kg) caramel malt (80 °L)
 0.5 lb. (0.23 kg) Crisp chocolate malt
 4 oz. (113 g) Briess Blackprinz® malt
 1.25 lbs. (0.57 kg) lactose sugar
 6.75 AAU East Kent Golding hops
 (90 min.) (1.5 oz./43 g at 4.5% alpha acids)
 White Labs WLP013 (London Ale) or Wyeast 1028 (London Ale) yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mash grains at 152–154 °F (67–68 °C) with 14 qts. (13 L) water and let rest 1 hour. Run off and sparge with hot

water at 160–170 °F (71–77 °C) to collect around 6 gallons (23 L) of wort. Once at a boil, add hops and boil for 90 minutes. Turn off heat and add lactose, stirring well to dissolve. Cool to 65–70 °F (18–21 °C), rack from trub and pitch yeast, preferably as a 1-qt. (1-L) starter. Ferment at same temperature for 5–7 days before racking to secondary. Leave for 1–3 weeks before bottling or kegging in the usual manner.

SWEET STOUT I

(5 gallons/19 L, extract with grains)
OG = 1.064 FG = 1.014
IBU = 25 SRM = 31 ABV = 6.8%

Ingredients

6.6 lbs. (3 kg) golden liquid malt extract
 0.5 lb. (0.23 kg) caramel malt (80 °L)
 0.5 lb. (0.23 kg) Crisp chocolate malt
 4 oz. (113 g) Briess Blackprinz® malt
 1.25 lbs. (0.57 kg) lactose sugar
 6.75 AAU East Kent Golding hops
 (90 min.) (1.5 oz./43 g at 4.5% alpha acids)
 White Labs WLP013 (London Ale) or Wyeast 1028 (London Ale) yeast
 ¾ cup corn sugar (if priming)

Step by Step

Steep the crushed grains in 2 gallons (7.6 L) water at 160 °F (71 °C) for 20 minutes. Rinse with 2 qts. (2 L) hot water and top off to 6 gallons (23 L). Once at a boil, turn off the heat and stir in the malt extract. Return to heat and add hops and boil for 90 minutes. Turn off heat and add lactose, stirring well to dissolve. Cool to 65–70 °F (18–21 °C), rack from trub and pitch yeast, preferably as a 1-qt. (1-L) starter. Ferment at same temperature for 5–7 days before racking to secondary. Leave for 1–3 weeks before bottling or kegging in the usual manner.

SWEET STOUT II

(5 gallons/19 L, all-grain)
OG = 1.054 FG = 1.018
IBU = 30 SRM = 25 ABV = 5%

Ingredients

5 lbs. (2.3 kg) 2-row pale malt
 4.5 lbs. (2 kg) Munich malt (9 °L)
 0.5 lb. (0.23 kg) black malt
 1 lb. (0.45 kg) lactose sugar (0 min.)

7.9 AAU Mt. Hood hop pellets (60 min.)
 (1.2 oz./34 g at 6.6% alpha acids)
 Wyeast 1968 (London ESB Ale) or White Labs WLP002 (English Ale) yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mash grains at 152–154 °F (67–68 °C) in 15 qts. (14 L) water and let rest 1 hour. Run off and sparge with hot water at 160–170 °F (71–77 °C) to collect around 6 gallons (23 L) of wort. Add Mt. Hood hops and boil 60 minutes. After the boil, turn off heat and add lactose, stirring well to make sure it is properly dissolved. Cool to 65–70 °F (18–21 °C), rack from trub and pitch yeast, preferably as a 1-qt. (1-L) starter. Ferment at same temperature for 5–7 days before racking to secondary. Leave for 1–3 weeks before bottling or kegging.

SWEET STOUT II

(5 gallons/19 L, extract with grains)
OG = 1.054 FG = 1.018
IBU = 30 SRM = 25 ABV = 5%

Ingredients

6 lbs. (2.7 kg) Munich liquid malt extract
 0.5 lb. (0.23 kg) black malt
 1 lb. (0.45 kg) lactose sugar (0 min.)
 7.9 AAU Mt. Hood hop pellets (60 min.)
 (1.2 oz./34 g at 6.6% alpha acids)
 Wyeast 1968 (London ESB Ale) or White Labs WLP002 (English Ale) yeast
 ¾ cup corn sugar (if priming)

Step by Step

Place the milled grain in a muslin bag, add to 2 gallons (7.6 L) of water at 165 °F (74 °C), and set at 150–155 °F (66–68 °C) for 30–60 minutes. Remove the bag and rinse with hot water. Add the malt extract, stirring well to ensure it is properly dissolved and then bring to a boil. Add Mt. Hood hops and boil 60 minutes.

After the boil is complete, turn off heat and add lactose, stirring well. Cool to around 65–70 °F (18–21 °C), rack from trub and pitch yeast, preferably as a 1-qt. (1-L) starter. Ferment at same temperature for 5–7 days before racking to secondary. Leave for 1–3 weeks before bottling or kegging in the usual manner.

SPECIALTY STOUT

There are eight different styles of stout in the 2015 Beer Judge Certification Program (BJCP)

Style Guidelines that help brewers define the unique characteristics and intricacies between one stout and another. Defining beer styles has a lot of benefits to consumers who know specifically what they want to drink and brewers who are looking to make an authentic beer of a style. And when it comes to entering competitions where judging is based on a beer hitting the style parameters, it's important to understand the difference between a foreign export stout and an American stout, or how much alcohol

a beer should have to fit into the imperial stout category.

However, one of the fun aspects of homebrewing is that you have the ability to brew beer that you enjoy drinking. The addition of coffee in your stout does not fit the mold of any of the BJCP stout styles, however most of us have tried a commercial or homebrewed version of a coffee stout and would be very disappointed if the style guidelines could not be broken to accommodate coffee stouts. Fortunately, there is no boundary to how you can shape your stout, and as you will find in the recipes in this "specialty stout" section, creativity trumps parameters. (The BJCP does include a "specialty-type beer" section, in which all of these recipes would be entered for competition).

Want to add an oaky, vanilla complexity to that dark chocolaty malt backbone? Try barrel-aging it. How about adding spices, chocolate, coffee, or cherries? All of these are terrific complementing ingredients to the characteristics we know and love about our favorite stout styles, but none of them fit the scope of what the BJCP classic stout styles outline. The possibilities in recipe development in any "specialty" category are endless, but we've gathered 30 of our favorite recipes that sit outside of style guidelines and run the gauntlet of ingredients and flavor. Don't let restrictions ever hold back your homebrewing. Celebrate diversity!

// **As you will find in the recipes in this 'specialty stout' section, creativity trumps parameters.** //



Photo by Charles A. Parker/Images Pillus

BETTER NOT POUT STOUT

(5 gallons/19 L, all-grain)

OG = 1.068 FG = 1.020

IBU = 18 SRM = 37 ABV = 6.6%

This recipe by Ben VanderMeer won Best of Show in the 2010 Great Arizona Homebrew Competition.

Ingredients

10 lbs. (4.5 kg) US 2-row malt
1.75 lbs. (0.79 kg) crystal malt (80 °L)
5 oz. (0.14 kg) black patent malt
7 oz. (0.20 kg) chocolate malt
4 oz. (0.11 kg) roasted barley
6 oz. (0.17 kg) flaked oats
5 AAU East Kent Golding hops
(60 min.) (1 oz./28 g at 5% alpha acids)
0.5 oz. (14 g) Cascade hops (15 min.)
1 lb. (0.45 kg) clover honey (15 min.)
1 Tbsp. cinnamon (15 min.)
1 Tbsp. nutmeg (15 min.)
2 oz. (57 g) freshly grated ginger (15 min.)
2 tsp. allspice (15 min.)
¾ tsp. cloves (15 min.)
Orange zest from 3 medium sweet oranges (15 min.)
1 tsp. brewing salts (in brewing liquor)
1 tsp. Irish moss (10 min.)
2 sachets Lallemand Nottingham or White Labs WLP039 (Nottingham Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mash 60 minutes at 155 °F (68 °C). Collect 7 gallons (26 L) in your brew pot and boil 90 minutes, adding ingredients according to the schedule. When the boil is complete, cool and ferment at 68 °F (20 °C) for 7 days and transfer to secondary for seven days at 68 °F (20 °C). Bottle or keg as normal.

BETTER NOT POUT STOUT

(5 gallons/19 L, partial mash)

OG = 1.068 FG = 1.020

IBU = 18 SRM = 37 ABV = 6.6%

Ingredients

6 lbs. (2.7 kg) light liquid malt extract
14 oz. (0.39 kg) US 2-row malt
6 oz. (0.17 kg) flaked oats
1.75 lbs. (0.79 kg) crystal malt (80 °L)
5 oz. (0.14 kg) black patent malt
7 oz. (0.20 kg) chocolate malt
4 oz. (0.11 kg) roasted barley

5 AAU East Kent Golding hops
(60 min.) (1 oz./28 g at 5% alpha acids)
0.5 oz. (14 g) Cascade hops (15 min.)
1 lb. (0.45 kg) clover honey (15 min.)
1 Tbsp. cinnamon (15 min.)
1 Tbsp. nutmeg (15 min.)
2 oz. (57 g) freshly grated ginger (15 min.)
2 tsp. allspice (15 min.)
¾ tsp. cloves (15 min.)
Orange zest from 3 medium sweet oranges (15 min.)
1 tsp. brewing salts (in brewing liquor)
1 tsp. Irish moss (10 min.)
2 sachets Lallemand Nottingham or White Labs WLP039 (Nottingham Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mash the crushed 2-row and flaked oats in 1 gallon (4 L) water at 155 °F (68 °C) for 45 minutes. Mix in the crystal and roasted grains and hold for 15 minutes. Remove the grains and wash with 1 gallon (4 L) hot water. Add in half of the liquid malt extract and top up to at least 3 gallons (11.4 L).

Boil for 60 minutes, adding the hops as the wort comes to a boil and the remaining liquid malt extract with the spices at 15 minutes left in the boil. When the boil is complete, cool and ferment at 68 °F (20 °C) for 7 days and transfer to secondary for seven days at 68 °F (20 °C). Bottle or keg as normal.

BIG BOURBON CHOCOLATE STOUT

(5 gallons/19 L, all-grain)

OG = 1.069 FG = 1.017

IBU = 42 SRM = 66 ABV = 7.1%

Ingredients

12 lbs. (5.4 kg) 2-row pale malt
1 lb. (0.45 kg) Simpsons roasted barley (550 °L)
0.5 lb. (0.23 kg) Simpsons chocolate malt (440 °L)
0.5 lb. (0.23 kg) Simpsons dark crystal malt (100 °L)
0.5 lb. (0.23 kg) Crisp black malt (600 °L)
0.5 lb. (0.23 kg) Crisp pale chocolate malt (220 °L)
8 AAU German Northern Brewer hops (90 min.) (1 oz./28 g at 8% alpha

acids)

4 AAU UK Fuggle hops (30 min.)

(1 oz./28 g at 4% alpha acids)

Wyeast 1098 (British Ale) or White

Labs WLP007 (Dry English Ale) yeast

¾ cup corn sugar (if priming)

Step by Step

This is a single infusion mash. Mix the crushed grains with 19 qts. (18 L) strike water to stabilize the mash at 150 °F (66 °C). Hold at this temperature for 60 minutes. Sparge with enough water to collect 7 gallons (26.5 L) wort in the kettle and bring to a boil. Add the Northern Brewer hops just after starting the boil. At 30 minutes add the UK Fuggle hops. After the boil is complete, chill your wort and transfer into your primary fermentation vessel. Aerate and pitch yeast starter.

Ferment the beer at 68 to 72 °F (20 to 22 °C) for 7–10 days. Transfer to a secondary fermenter and hold for seven to ten days. Finally, transfer the beer to your personal bourbon barrel and age for ten months. If a barrel is not available, use 1.5 oz. (43 g) of medium toast oak chips soaked in bourbon in the secondary. Also, add 0.4 oz. (11 g) of bourbon to secondary to give the finished beer the right flavor.

BIG BOURBON CHOCOLATE STOUT

(5 gallons/19 L, extract with grains)

OG = 1.069 FG = 1.017

IBU = 42 SRM = 66 ABV = 7.1%

Ingredients

8 lbs. (3.6 kg) pale liquid malt extract
1 lb. (0.45 kg) Simpsons roasted barley
0.5 lb. (0.23 kg) Simpsons chocolate malt
0.5 lb. (0.23 kg) Simpsons dark crystal malt (100 °L)
0.5 lb. (0.23 kg) Crisp black malt (600 °L)
0.5 lb. (0.23 kg) Crisp pale chocolate malt (220 °L)
8 AAU German Northern Brewer hops (90 min.) (1 oz./28 g at 8% alpha acids)
4 AAU UK Fuggle hops (30 min.) (1 oz./28 g at 4% alpha acids)
Wyeast 1098 (British Ale) or White Labs WLP007 (Dry English Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Steep the specialty grains in 150 to 170 °F (66 to 77 °C) water for 30 minutes. Remove steeping grains, and bring water to boil. Turn off flame and stir in the liquid malt extract. Return flame and add Northern Brewer hops.

The remainder of this recipe is the same as the all-grain version.

BISON BREWING'S ORGANIC CHOCOLATE STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.058 FG = 1.020

IBU = 25 SRM = 40 ABV = 5.1%

Bison Organic Chocolate stout is rich and roasty with charismatic flavors of dark chocolate and espresso, with a creamy, dry finish.

Ingredients

- 7.5 lbs. (3.4 kg) organic 2-row pale malt
- 1.5 lbs. (0.68 kg) organic Munich malt
- 2 lbs. (0.91 kg) organic Caramunich® malt (45 °L)
- 1 lb. (0.45 kg) organic chocolate malt (350 °L)
- 0.5 lb. (0.23 kg) organic roasted barley (300 °L)
- 1 oz. (28 g) cocoa powder
- 6 AAU Pacific Gem hops (60 min.) (0.5 oz./14 g at 12% alpha acids)
- 2 AAU Pacific Gem hops (2 min.) (0.4 oz./11 g at 5% alpha acids)
- White Labs WLP011 (European Ale) or Wyeast 2565 (Kölsch) yeast (1.5 qt./1.5 L yeast starter)
- ¾ cup corn sugar (if priming)

Step by Step

Mash at 152 °F (67 °C). To mash in, add one-third of the grains and stir in cocoa. Layer remaining two-thirds of grain bed over this. Collect enough wort in the kettle to account for an extended boil. Boil for 75–90 minutes, adding hops as per the ingredient schedule. Following the boil, cool and ferment at 70 °F (21 °C).

BISON BREWING'S ORGANIC CHOCOLATE STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.058 FG = 1.020

IBU = 25 SRM = 40 ABV = 5.1%

Ingredients

- 4 lbs. (1.8 kg) Briess Maltoferm® organic light dried malt extract
- 1.5 lbs. (0.68 kg) organic Munich malt
- 2 lbs. (0.91 kg) organic Caramunich® malt (45 °L)
- 1 lb. (0.45 kg) organic chocolate malt (350 °L)
- 0.5 lb. (0.23 kg) organic roasted barley (300 °L)
- 1 oz. (28 g) cocoa powder
- 6 AAU Pacific Gem hops (60 min.) (0.5 oz./14 g at 12% alpha acids)
- 2 AAU Pacific Gem hops (2 min.) (0.4 oz./11 g at 5% alpha acids)
- White Labs WLP011 (European Ale) or Wyeast 2565 (Kölsch) yeast (1.5 qt./1.5 L yeast starter)
- ¾ cup corn sugar (if priming)

Step by Step

Mash crushed Munich grains for 45 minutes at 152 °F (67 °C) in 4 qts. (4 L) of water. Stir in the CaraMunich®, chocolate malt, roasted barley and cocoa along with 4 qts. (4 L) more of hot water. Steep for 15 minutes. Remove the grains and add dried malt extract to wort to bring wort volume to 3 gallons (11.4 L) and boil for 60 minutes. Add hops according to the ingredient list. Cool wort and transfer to fermenter. Top up to 5 gallons (19 L) and pitch yeast. Following the boil, cool and ferment at 70 °F (21 °C).

BLACK PEARL OYSTER STOUT

(5 gallons/19 L, all-grain)

OG = 1.052 FG = 1.013

IBU = 40 SRM = 41 ABV = 5.2%

This beer has a complex dark grain character and a slightly silky mouthfeel. There's no strong oyster flavor, but you may detect a slight salty/briney character. For best results, use hard water with a moderate to high level of carbonates.

Ingredients

- 9 lbs. (4.1 kg) 2-row pale malt
- 8 oz. (113 g) flaked oats
- 1 lb. (0.45 kg) roasted barley
- 8 oz. (227 g) chocolate malt
- 4 oz. (113 g) black patent malt
- 8.6 AAU Fuggle hops (60 min.) (1.5 oz./43 g at 5.7% alpha acids)
- 4.3 AAU Fuggle hops (20 min) (0.75 oz./21 g at 5.7% alpha acids)

10 oz. can raw oysters (and brine) (15 min.)

1 tsp. Irish moss (15 min.)

Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast

¾ cup corn sugar (if priming)

Step by Step

Mash grains for 45 minutes at 152 °F (67 °C). Boil wort for 120 minutes. Add hops at times indicated. Add oysters and Irish moss with 15 minutes left. After the boil is complete, cool wort and transfer to fermenter, leaving oyster bits behind. Aerate, pitch yeast, and ferment at 68 °F (20 °C).

BLACK PEARL OYSTER STOUT

(5 gallons/19 L, extract with grains)

OG = 1.052 FG = 1.013

IBU = 40 SRM = 41 ABV = 5.2%

Ingredients

- 3.3 lbs. (1.5 kg) Muntons light liquid malt extract (15 min.)
- 2 lbs. (0.91 kg) Briess extra light dried malt extract
- 4 oz. (113 g) dextrine malt
- 1 lb. (0.45 kg) roasted barley
- 8 oz. (227 g) chocolate malt
- 4 oz. (113 g) black patent malt
- 10 oz. can raw oysters (and brine) (15 min.)
- 1 tsp. Irish moss
- 8.6 AAU Fuggle hops (60 min.) (1.5 oz./43 g at 5.7% alpha acids)
- 4.3 AAU Fuggle hops (20 min) (0.75 oz./21 g at 5.7% alpha acids)
- Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
- ¾ cup corn sugar (if priming)

Step by Step

In a 3 gallon (11 L) or larger stock pot, heat 1.6 gallons (6 L) of water to 163 °F (73 °C). Placed crushed grains in a large steeping bag and submerge bag in hot water. Steep for 30 minutes. While grains steep, heat 1 gallon (3.8 L) of water to 170 °F (77 °C). Remove grain bag from steeping pot and place in colander over stockpot. Rinse grains with 3 qts. (2.8 L) of water from brewpot. Combine "grain tea" and dried malt extract with remaining hot water in brewpot and heat to a boil. Boil 60 minutes, adding hops at times indicated in recipe. With 15 minutes left in the boil, add liquid malt extract,

oysters and Irish moss. Stir thoroughly to dissolve extract. Cool wort and transfer to fermenter, leaving oyster bits behind. Add water to make 5 gallons (19 L). Aerate, pitch yeast, and ferment at 68 °F (20 °C).

BLUEJACKET MEXICAN RADIO CLONE

(5 gallons/19 L, all-grain)

OG = 1.076 FG = 1.023

IBU = 32 SRM = 46 ABV = 7.4%

Ingredients

5 lbs. (2.3 kg) North American 2-row pale malt
5 lbs. (2.3 kg) Maris Otter pale ale malt
1 lb. (0.45 kg) flaked barley
1 lb. (0.45 kg) chocolate malt (350 °L)
12 oz. (0.34 kg) crystal malt (80 °L)
12 oz. (0.34 kg) roasted barley
12 oz. (0.34 kg) flaked wheat
4 oz. (113 g) black patent malt
1 lb. (0.45 kg) lactose sugar (15 min.)
7 AAU Millenium hops (60 min.)
(0.5 oz./14 g at 14% alpha acids)
2.25 AAU Fuggle hops (60 min.)
(0.5 oz./14 g at 4.5% alpha acids)
2.25 AAU Fuggle hops (30 min.)
(0.5 oz./14 g at 4.5% alpha acids)
0.15 oz. (4.3 g) cinnamon sticks
(10 min.)
2.5 oz. (71 g) cocoa nibs (secondary)
1.25 oz. (35 g) dried Ancho chili peppers (secondary)
3 vanilla beans (secondary)
White Labs WLP001 (California Ale),
Wyeast 1056 (American Ale) or
Safale US-05 yeast
⅔ cup corn sugar (if priming)

Step by Step

Mill the grains and mix with 4.5 gallons (17 L) of 164 °F (73 °C) strike water to reach a mash temperature of 152 °F (67 °C). Hold this temperature for 60 minutes. Vorlauf until your runnings are clear. Sparge the grains with 3.5 gallons (13.2 L) and top up as necessary to obtain 6 gallons (23 L) of wort. Boil for 60 minutes, adding hops, lactose sugar and cinnamon sticks according to the ingredient list.

After the boil, turn off heat and chill the wort to slightly below fermentation temperature, about 65 °F (18 °C). Aerate the wort with pure oxygen or filtered air and pitch yeast.

Ferment at 68 °F (20 °C) for 7 days, then drop the temperature to

60 °F (16 °C) for 24 hours. Add the cocoa nibs, Ancho peppers, and vanilla beans, and age for 5-7 days. Crash the beer to 35 °F (2 °C) for 48 hours. After aging the spice addition, bottle or keg the beer and carbonate to approximately 2.25 volumes.

BLUEJACKET MEXICAN RADIO CLONE

(5 gallons/19 L, partial mash)

OG = 1.076 FG = 1.023

IBU = 32 SRM = 46 ABV = 7.4%

Ingredients

5 lbs. (2.3 kg) Maris Otter liquid malt extract
2.5 lbs. (1.13 kg) 2-row pale malt
1 lb. (0.45 kg) flaked barley
1 lb. (0.45 kg) chocolate malt (350 °L)
12 oz. (0.34 kg) crystal malt (80 °L)
12 oz. (0.34 kg) roasted barley
12 oz. (0.34 kg) flaked wheat
4 oz. (113 g) black patent malt
1 lb. (0.45 kg) lactose sugar (15 min.)
7 AAU Millenium hops (60 min.)
(0.5 oz./14 g at 14% alpha acids)
2.25 AAU Fuggle hops (60 min.)
(0.5 oz./14 g at 4.5% alpha acids)
2.25 AAU Fuggle hops (30 min.)
(0.5 oz./14 g at 4.5% alpha acids)
0.15 oz. (4.3 g) cinnamon sticks
(10 min.)
2.5 oz. (71 g) cocoa nibs (secondary)
1.25 oz. (35 g) dried Ancho chili peppers (secondary)
3 vanilla beans (secondary)
White Labs WLP001 (California Ale),
Wyeast 1056 (American Ale) or
Safale US-05 yeast
⅔ cup corn sugar (if priming)

Step by Step

Bring 2.2 gallons (8.3 L) of water to approximately 164 °F (73 °C). Place milled grains in grain bags and submerge in the water for 60 minutes. The temperature of the mash should stabilize at about 152 °F (67 °C). After 60 minutes, remove the grain bags, and let drain fully. Wash the grains with about 1 gallon (4 L) hot water, then top off to 6 gallons (23 L) in your brew kettle. Add liquid extract white stirring, and stir until completely dissolved. Bring the wort to a boil. Boil for 60 minutes, adding hops, lactose sugar and cinnamon sticks according to the ingredient list.

The remainder of this recipe is

the same as the all-grain version.

Tips for Success:

Mexican Radio adds some complexities to the average stout, in the form of a number of spice additions at two points in the production process. Add the cinnamon in the boil just as you would a hop addition, but add the cocoa nibs, vanilla, and Ancho peppers in secondary to limit the amount of oil extraction; to account for the head-killing oils that do get into the beer, the recipe includes a significant addition of flaked wheat and barley to aid in head retention. To prepare the vanilla (go with cheap beans, since the subtleties and nuance of more expensive vanilla will be lost in this beer – but don't use extract!) and peppers, slice lengthwise before adding to the secondary to increase surface area and impact on flavor. You might also consider a vodka tincture, and just add the entire product to the beer! Finally, keep an eye on water. With so much roasted grain, astringency and acidity are a real concern. Consider the addition of a buffer if your water profile is lacking it naturally. ¼ to ½ tsp. of baking soda in the mash (especially for the partial mash recipe) may be a good idea if you are using soft water.

BUZZ'ARD DOUBLE CHOCOLATE ESPRESSO STOUT

(5 gallons/19 L, all-grain)

OG = 1.072 FG = 1.020

IBU = 45 SRM = 40+ ABV = 7.2%

Ingredients

12 lbs. (5.4 kg) 2-row pale malt
1.5 lbs. (0.68 kg) Briess Victory® malt
4 oz. (113 g) crystal malt (80 °L)
0.5 lb. (0.23 kg) crystal malt (120 °L)
0.75 lb. (0.34 kg) chocolate malt
0.5 lb. (0.23 kg) roasted barley (300 °L)
11.25 AAU Northern Brewer hops
(60 min.) (1.5 oz./43 g at 7.5% alpha acids)
3.75 AAU Northern Brewer hops
(15 min.) (0.5 oz./14 g at 7.5% alpha acids)
1 lb. (0.45 kg) Ghirardelli unsweetened cocoa powder (60 min.)
0.5 lb. (0.23 kg) espresso beans
(fine ground)
Wyeast 1056 (American Ale), White

Labs WLP001 (California Ale), or Safale US-05 yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mash grains in 5 gallons (19 L) of water at 152 °F (67 °C), let sit for 60 minutes. Lauter as normal and boil 60 minutes, adding hops at times indicated in the ingredient list. Add chocolate at the start of the boil (add slowly and stir constantly so it doesn't stick and burn on the bottom of your brew pot). After the boil, chill to 68 °F (20 °C) and aerate the wort.

Pitch yeast (built up as a 1-qt./1-L starter) at 68 °F (20 °C). After primary fermentation is complete, rack to secondary, store in cool place (below 60 °F/16 °C) for 45 days. Cold steep the ground coffee beans in a carafe of water overnight. Filter out the coffee and while racking the beer to keg or bottling bucket, add the room temperature coffee. Stir well to mix and then bottle.

BUZZ'ARD DOUBLE CHOCOLATE ESPRESSO STOUT

(5 gallons/19 L, extract with grain)
 OG = 1.072 FG = 1.020
 IBU = 45 SRM = 40+ ABV = 7.2%

Ingredients

9 lbs. (4.1 kg) Briess porter liquid malt extract
 0.5 lb. (0.23 kg) crystal malt (120 °L)
 0.5 lb. (0.23 kg) chocolate malt
 0.5 lb. (0.23 kg) roasted barley (300 °L)
 11.25 AAU Northern Brewer hops (60 min.) (1.5 oz./43 g at 7.5% alpha acids)
 3.75 AAU Northern Brewer hops (15 min.) (0.5 oz./14 g at 7.5% alpha acids)
 1 lb. (0.45 kg) Ghirardelli unsweetened cocoa powder (60 min.)
 0.5 lb. (0.23 kg) espresso beans (fine ground)
 Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
 ¾ cup corn sugar (if priming)

Step by Step

Place grains in 2.5 gallons (9.5 L) of water, heat to 170 °F (77 °C), let sit for 25 minutes. Add extract and top up to 6 gallons (23 L). Boil 60 minutes,

adding hops at times indicated. Add chocolate at the start of the boil (add slowly and stir constantly so it doesn't stick and burn on the bottom). After the boil, chill to 68 °F (20 °C) and aerate the wort.

Follow the fermentation and aging instructions from the all-grain version of this recipe.

CHOCOLATE EMPIRICAL STOUT

(5 gallons/19 L, all-grain)
 OG = 1.060 FG = 1.016
 IBU = 30 SRM = 45 ABV = 6%

Ingredients

9 lbs. (4.1 kg) 2-row pale malt
 1.25 lbs. (0.57 kg) Crisp amber malt
 1.25 lbs. (0.57 kg) Briess caramel malt (80 °L)
 1.25 lbs. (0.57 kg) Simpsons chocolate malt (450 °L)
 4 oz. (113 g) cocoa nibs (15 min.)
 7.5 AAU Northern Brewer hop pellets (90 min.) (1 oz./28 g at 7.5% alpha acids)
 Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mash the grains at 154 °F (68 °C) with 16 qts. (15 L) hot water for 90 minutes. Run off and sparge with hot water to collect 6.5 gallons (24.6 L) of wort. Boil for 90 minutes, adding the hops and cocoa nibs at times indicated. Cool to 65–70 °F (18–21 °C), separate the wort from the trub and pitch the yeast; it is preferable to prepare a 2-qt. (2-L) starter beforehand. Ferment 5–7 days, then rack to a secondary fermenter for 7–10 days. Rack and keg or bottle in the usual manner.

CHOCOLATE EMPIRICAL STOUT

(5 gallons/19 L, partial mash)
 OG = 1.060 FG = 1.016
 IBU = 30 SRM = 45 ABV = 6%

Ingredients

4 lbs. (1.8 kg) extra light dried malt extract
 1.25 lbs. (0.57 kg) 2-row pale malt
 1.25 lbs. (0.57 kg) Crisp amber malt
 1.25 lbs. (0.57 kg) Briess caramel malt (80 °L)

1.25 lbs. (0.57 kg) Simpsons chocolate malt (450 °L)
 4 oz. (113 g) cocoa nibs (15 min.)
 7.5 AAU Northern Brewer hop pellets (90 min.) (1 oz./28 g at 7.5% alpha acids)
 Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
 ¾ cup corn sugar (if priming)

Step by Step

Mash the crushed 2-row pale and amber malts at 154 °F (68 °C) with 6 qts. (5.7 L) hot water for 45 minutes. Add in the caramel and chocolate malts and steep for an additional 15 minutes. Wash the grains with 1 gallon (4 L) hot water. Stir in the dried malt extract then top off to 6 gallons (23 L) of wort. Boil for 60 minutes, adding the hops and cocoa nibs at times indicated.

Cool to 65–70 °F (18–21 °C), separate the wort from the trub and pitch the yeast; it is preferable to prepare a 2-qt. (2-L) starter beforehand. Ferment 5–7 days, then rack to a secondary fermenter for 7–10 days. Rack and keg or bottle as usual.

CHOCHECHERRY STOUT

(5 gallons/19 L, extract with grains)
 OG = 1.068 FG = 1.022
 IBU = 45 SRM = 48 ABV = 6.3%

This recipe was designed to be brewed with extract. Due to the high percentage of dark malt extract, an approximate all-grain version of this recipe would be very difficult to achieve. Prepare the chokecherries by crushing and freezing them well in advance.

Ingredients

3.3 lbs. (1.5 kg) Briess Porter liquid malt extract
 3.3 lbs. (1.5 kg) Briess Sparkling Amber liquid malt extract
 1.5 lbs. (0.68 kg) Briess Traditional Dark dried malt extract
 1 lb. (0.45 kg) crystal malt (60 °L)
 4 oz. (113 g) chocolate malt (350 °L)
 8 oz. (227 g) black barley (500 °L)
 8 oz. (227 g) black patent (525 °L)
 11.25 AAU Northern Brewer hops (75 min.) (1.5 oz./43 g at 7.5% alpha acids)
 6.5 AAU Cascade hops (5 min.) (1.3 oz./37 g at 5% alpha acids)
 8 lbs. (3.63 kg) thawed chokecherries

(0 min.)
White Labs WLP004 (Irish Ale) or
Wyeast 1084 (Irish Ale) yeast
¾ cup corn sugar (for priming)

Step by Step

In 2 gallons (8 L) of cold water, add grains and heat to 155 °F (63 °C). Hold for 30 minutes. Sparge with 2 qts. (2 L) of 165 °F (74 °C) water. At boil, add malt extract and boil for 75 minutes. Turn off heat and add chokecherries. Hold for 20 minutes to pasteurize. Cool to 67 °F and transfer to fermenter, with the chokecherries. Pitch yeast and ferment at 65 °F (18 °C) for six days. Then rack to secondary and keep at 65–67 °F (18–19 °C) for nine more days. Bottle or keg as normal.

COFFEE DRY IRISH STOUT

(5 gallons/19 L, all-grain)

OG = 1.050 FG = 1.012

IBU = 38 SRM = 36 ABV = 5.1%

Ingredients

8.6 lbs. (3.9 kg) British pale ale malt
1 lb. (0.45 kg) roasted barley (500 °L)
1 lb. (0.45 kg) flaked barley
10 AAU East Kent Golding hops
(60 min.) (2.5 oz./71 g at 4% alpha acids)
1 cup (237 mL) cold-brewed coffee concentrate
Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mash grains at 149 °F (65 °C) and hold for 60 minutes. Sparge to collect 6 gallons (22.7 L) of wort. Bring to a boil and add the bittering hops; boil for 60 minutes. After the boil, turn off the heat, cool to 70 °F (21 °C), and pitch the yeast. Add the cold-brewed coffee concentrate in the bottling bucket or keg; the amount of coffee may be adjusted to taste. Bottle and prime or keg and force carbonate as usual.

COFFEE DRY IRISH STOUT

(5 gallons/19 L, partial mash)

OG = 1.050 FG = 1.012

IBU = 38 SRM = 36 ABV = 5.1%

Ingredients

5 lbs. (2.3 kg) Maris Otter liquid malt

extract
1.5 lbs. (0.68 kg) British pale ale malt
1 lb. (0.45 kg) roasted barley (500 °L)
1 lb. (0.45 kg) flaked barley
(60 min.) (2.5 oz./71 g at 4% alpha acids)
1 cup (237 mL) cold-brewed coffee concentrate
Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Place crushed grains in a muslin bag. Hold mash at 149 °F (65 °C) in 1 gallon (3.8 L) water for 60 minutes. Raise the grain bag out of the pot and place in a colander. Wash the grains with 1-gallon (3.8-L) hot water. Add your malt extract, then top off the kettle to 6 gallons (22.7 L). Stir until all the extract is dissolved, then bring to a boil and add the bittering hops. Boil for 60 minutes.

After the boil, turn off the heat, cool to 70 °F (21 °C), and pitch yeast. Ferment for 2 weeks. Add cold brewed coffee in the bottling bucket or keg; the amount of coffee may be adjusted to taste. Bottle and prime or keg and force carbonate.

COFFEE IMPERIAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.069 FG = 1.016

IBU = 70 SRM = 58 ABV = 7.3%

Ingredients

9 lbs. (4.1 kg) 2-row pale malt
1.5 lbs. (0.68 kg) wheat malt
2.25 lbs. (1 kg) dark crystal malt (75 °L)
1.25 lbs. (0.57 kg) chocolate malt
0.5 lb. (0.23 kg) roasted barley
0.5 lb. (0.23 kg) black patent malt
18.75 AAU Northern Brewer hops (75 min.) (2.5 oz./71 g of 7.5% alpha acids)
1.5 oz. (43 g) Northern Brewer hops (0 min.)
15 oz. (445 mL) espresso
Wyeast 1056 (American Ale) or White Labs WLP001 (California Ale) or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Mash in all grains at 149 °F (65 °C). Hold until converted, about 60–90 minutes. Mash off at 170 °F (77 °C)

and begin lautering. Sparge to achieve 7 gallons (26.5 L) of wort. Total boil is 75 minutes, adding the bittering hops at the start of the boil.

After the boil, add the finishing hops and whirlpool for five minutes. Cool to 70 °F (21 °C) and ferment. Add the espresso at end of primary fermentation. Bottle and prime or keg and force carbonate as usual.

COFFEE IMPERIAL STOUT

(5 gallons/19 L, extract with grains)

OG = 1.069 FG = 1.016

IBU = 70 SRM = 58 ABV = 7.3%

Ingredients

3.3 lbs. (1.5 kg) pale liquid malt extract
3.3 lbs. (1.5 kg) wheat liquid malt extract
2.25 lbs. (1 kg) dark crystal malt (75 °L)
1.25 lbs. (0.57 kg) chocolate malt
0.5 lb. (0.23 kg) roasted barley
0.5 lb. (0.23 kg) black patent malt
6 oz. (0.17 kg) raw sugar
19.5 AAU Northern Brewer hops (60 min.) (2.6 oz./74 g of 7.5% alpha acids)
1.5 oz. (43 g) Northern Brewer hops (0 min.)
15 oz. (445 mL) espresso
Wyeast 1056 (American Ale) or White Labs WLP001 (California Ale) or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Steep the crushed grains in 3 gallons (11.4 L) water as it heats up to 170 °F (77 °C). Remove the grain bag and place in a colander. Wash the grains with 2 qts. (2 L) hot water. Add the liquid malt extract, then top off the kettle to 6 gallons (23 L). Bring the wort to a boil. Total boil is 60 minutes, adding the bittering hops at the start of the boil. After the boil is complete, add sugar and final hops and whirlpool for five minutes. Cool to 70 °F (21 °C) and ferment. Add espresso at end of primary fermentation. Bottle or keg as usual.

COFFEE RUSSIAN IMPERIAL STOUT

(5 gallons/19 L, all-grain)

OG = 1.090 FG = 1.027

IBU = 55 SRM = 62 ABV = 9%

Ingredients

14.5 lbs. (6.6 kg) British pale ale malt
 2 lbs. (0.91 kg) roasted barley
 1 lb. (0.45 kg) chocolate malt
 1 lb. (0.45 kg) British extra dark crystal malt (150–160 °L)
 0.5 lb. (0.23 kg) flaked oats
 14.5 AAU Magnum hops (60 min.)
 (1 oz./28 g at 14.5% alpha acids)
 8 AAU East Kent Golding hops
 (10 min.) (2 oz./57 g at 4% alpha acids)
 1 stick brewer's licorice (10 min.)
 3 cups (710 mL) cold-brewed coffee concentrate
 Wyeast 1028 (London Ale) or White Labs WLP013 (London Ale) yeast
 $\frac{2}{3}$ cup corn sugar (if priming)

Step by Step

Mash in all grains at 152 °F (67 °C) and hold for 60 minutes. Sparge to collect 6 gallons (23 L) of wort. Bring to a boil and add the bittering hops, boil for 50 minutes, then add the flavoring hops and brewers licorice stick (broken into small pieces), and boil for an additional 10 minutes.

After the boil is complete, turn off the heat, cool to 70 °F (21 °C), and pitch the yeast. Add the cold-brewed coffee concentrate in the bottling bucket or keg; the amount of coffee may be adjusted to taste. Bottle and prime or keg and force carbonate as usual.

COFFEE RUSSIAN IMPERIAL STOUT

(5 gallons/19 L, extract with grains)
 OG = 1.090 FG = 1.027
 IBU = 55 SRM = 62 ABV = 9%

Ingredients

10.5 lbs. (4.8 kg) Maris Otter liquid malt extract
 2 lbs. (0.91 kg) roasted barley
 1 lb. (0.45 kg) chocolate malt
 1 lb. (0.45 kg) British extra dark crystal malt (150–160 °L)
 14.5 AAU Magnum hops (60 min.)
 (1 oz./28 g at 14.5% alpha acids)
 8 AAU East Kent Golding hops
 (10 min.) (2 oz./57 g at 4% alpha acids)
 1 stick brewer's licorice (10 min.)
 3 cups (710 mL) cold-brewed coffee concentrate
 Wyeast 1028 (London Ale) or White Labs WLP013 (London Ale) yeast

$\frac{2}{3}$ cup corn sugar (if priming)

Step by Step

Steep the crushed grains in 2 gallons (7.6 L) water as the water is heating up. Once the temperature reaches 170 °F (77 °C), remove the grain bag and let drip into the kettle. Add the liquid and dried malt extracts and top off to 6 gallons (23 L) of wort. Stir until all the extract is dissolved, then bring to a boil and add the bittering hops. Boil for 50 minutes, then add the flavoring hops and brewers licorice stick (broken into small pieces), and boil for an additional 10 minutes.

The remainder of this recipe is the same as the all-grain version.

DEFIANCE BREWING CO.'S FUZZY KNUCKLES CLONE

(5 gallons/19 L, all-grain)

OG = 1.100 FG = 1.028

IBU = 55 SRM = 43 ABV = 10%

Ingredients

16.5 lbs. (7.5 kg) 2-row pale malt
 1.5 lbs. (0.68 kg) Munich malt (10 °L)
 1.3 lbs. (0.6 kg) flaked oats
 15 oz. (0.43 kg) chocolate malt
 12 oz. (0.34 kg) roasted barley
 3 oz. (85 g) caramel malt (120 °L)
 3 oz. (85 g) Carafoam® Special III malt
 12.5 AAU Columbus pellet hops
 (90 min.) (0.82 oz./23 g at 15.5% alpha acids)
 4.5 AAU Willamette pellet hops
 (20 min.) (0.82 oz./23 g at 5.5% alpha acids)
 8 AAU Willamette pellet hops (0 min.)
 (1.33 oz./37 g at 5.5% alpha acids)
 $\frac{1}{2}$ tsp. yeast nutrient (15 min.)
 $\frac{1}{2}$ Whirlfloc® tablet (15 min.)
 1.1 oz. (31 g) ground Sumatra coffee
 (0 min.)
 1.2 oz. (34 g) cacao nibs (0 min.)
 White Labs WLP007 (Dry English Ale Yeast), Wyeast 1098 (British Ale), or
 Lallemant Nottingham yeast
 $\frac{1}{3}$ cup corn sugar (if priming)

Step by Step

Mill the grains (flaked oats don't need to be milled) and mix with 6 gallons (22.7 L) of 169 °F (76 °C) strike water to reach a mash temperature of 154 °F (68 °C). Hold this temperature for 60 minutes. Vorlauf until your runnings are clear. Now sparge the grains with 3.5 gallons (13.25 L) of 169 °F (76 °C)

water until 7 gallons (26.5 L) of 1.068 specific gravity wort is collected in your boil kettle. Boil for 90 minutes adding hops, yeast nutrient, and kettle finings according to the ingredients list.

After the boil, turn off the heat and add the 0 min. hop additions, coffee, and cacao nibs. Whirlpool the kettle by gently stirring with a mash paddle for 2 minutes and then let rest for an addition 28 minutes to achieve a 30-minute flame out steep. Next, chill the wort to 64 °F (18 °C) and transfer into a clean and sanitized fermenter. Aerate the wort with pure oxygen for 90 seconds and pitch yeast.

Allow fermentation to free rise up to 68 °F (20 °C) and hold it at that temperature until the beer reaches 60% apparent attenuation (1.035) then ramp fermentation temperature up to 72 °F (22 °C) and hold at this temperature for an additional 14 days. Begin to slowly crash cool the fermenter down at the rate of 5 °F (2.8 °C) per day for 8 days until the beer reaches 32 °F (0 °C) and then bottle or keg the beer. Carbonate to between 2.2 and 2.3 volumes of CO₂.

DEFIANCE BREWING CO.'S FUZZY KNUCKLES CLONE

(5 gallons/19 L, extract with grains)

OG = 1.100 FG = 1.028

IBU = 55 SRM = 43 ABV = 10%

Ingredients

2 lbs. (0.9 kg) Munich dried malt extract
 10 lbs. (4.5 kg) golden light liquid malt extract
 6 oz. (170 g) Carafoam® malt
 15 oz. (0.43 kg) chocolate malt
 12 oz. (0.34 kg) roasted barley
 3 oz. (85 g) caramel malt (120 °L)
 3 oz. (85 g) Carafoam® Special III malt
 12.7 AAU Columbus pellet hops
 (90 min.) (0.82 oz./23 g at 15.5% alpha acids)
 8 AAU Willamette pellet hops (20 min.)
 (0.82 oz./23 g at 5.5% alpha acids)
 8 AAU Willamette pellet hops (0 min.)
 (1.33 oz./37 g at 5.5% alpha acids)
 $\frac{1}{2}$ tsp. yeast nutrient (15 min.)
 $\frac{1}{2}$ Whirlfloc® tablet (15 min.)
 1.1 oz. (31 g) ground Sumatra coffee
 (0 min.)
 1.2 oz. (34 g) cacao nibs (0 min.)
 White Labs WLP007 (Dry English Ale

Yeast), Wyeast 1098 (British Ale), or Lallemand Nottingham yeast
½ cup corn sugar (if priming)

Step by Step

Place the crushed grains in a grain bag, then add the grain bag to 2 gallons (7.57 L) of 150 °F (66 °C) water. Allow grain bag (which will float) to steep for 20–30 minutes while you continue to heat the water up to no hotter than 170 °F (77 °C) in order to avoid extracting tannins. Next, remove the grain bag, top your kettle up with enough pre-heated water to reach a total pre-boil volume of 7 gallons (26.5L), and turn your heat source back on. Once you reach a boil, add your malt extract, hops, yeast nutrient, and kettle finings, according to the ingredients list.

The remainder of this recipe is the same as the all-grain version.

Tips for Success:

This is a high-gravity beer that will require lots (about 334 billion total cells) of yeast for a healthy fermentation. If you have 1 White Labs vial or 1 Wyeast Activator pack you will need to either make a 1.75-L stir plate starter or a 5-L non-stir plate starter in advance.

If you are unable to make a starter, be prepared to pitch at least 3.5 vials/packs of fresh yeast. Oxygenating your wort with pure oxygen for 90 seconds prior to pitching your yeast and (optionally) for an additional 30 seconds 12–18 hours after you initially pitch your yeast is recommended to ensure optimal yeast growth. Due to the high gravity and use of ground coffee in this beer, the extended fermentation and cold conditioning period outlined above is beneficial. It will allow the yeast ample time to ferment the beer completely, reabsorb diacetyl properly, and allow the ground coffee to completely settle before packaging which helps to avoid creating nucleation points that could lead to “gushers” if bottling.

FOUNDER'S BREWING CO.'S BREAKFAST STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.080 FG = 1.021

IBU = 60 SRM = 59 ABV = 8.3%

Ingredients

13.2 lbs. (6 kg) 2-row pale malt
22 oz. (0.62 kg) flaked oats
1 lb. (0.45 kg) chocolate malt (350 °L)
12 oz. (0.34 kg) roast barley (450 °L)
9 oz. (0.25 kg) debittered, black malt (530 °L)
7 oz. (0.19 kg) crystal malt (120 °L)
13 AAU Nugget hops (60 min.)
(1 oz./28 g at 13% alpha acids)
2 AAU Willamette hops (30 min.)
(0.4 oz./11 g at 5% alpha acids)
2.5 AAU Willamette hops (0 min.)
(0.5 oz./14 g at 5% alpha acids)
½ tsp. yeast nutrient (15 min.)
½ tsp. Irish moss (15 min.)
2 oz. (57 g) ground Sumatran coffee (0 min.)
2 oz. (57 g) ground Kona coffee (secondary)
2.5 oz. (71 g) dark, bittersweet baker's chocolate (0 min.)
1.5 oz. (43 g) unsweetened chocolate baking nibs (0 min.)
White Labs WLP001 (California Ale) or Wyeast 1056 (American Ale) or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Mix the crushed grains with 5.5 gallons (21 L) of 170 °F (77 °C) water to stabilize at 155 °F (68 °C) for 60 minutes. Sparge slowly with 175 °F (79 °C) water. Collect approximately 6.5 gallons (24.6 L) of wort runoff to boil for 60 minutes.

During the boil, add the hops and Irish moss as per the schedule. Add the Sumatran coffee and two chocolate varieties at the end of the boil. Give the wort a stir for one minute and let it settle for 30 minutes. The cool the wort to 75 °F (24 °C).

Pitch the yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Transfer to a carboy, avoiding any splashing. Add the Kona coffee and condition for one week, then bottle or keg as normal. Allow this beer to age a couple of weeks.

FOUNDER'S BREWING CO.'S BREAKFAST STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.080 FG = 1.021

IBU = 60 SRM = 59 ABV = 8.3%

Ingredients

6.6 lbs. (3.0 kg) Briess golden light liquid malt extract (15 min.)
1 lb. (0.45 kg) extra light dried malt extract
1.5 lbs. (0.68 kg) 2-row pale malt
22 oz. (0.62 kg) flaked oats
1 lb. (0.45 kg) chocolate malt (350 °L)
12 oz. (0.34 kg) roast barley (450 °L)
9 oz. (0.25 kg) debittered, black malt (530 °L)
7 oz. (0.19 kg) crystal malt (120 °L)
14.3 AAU Nugget hops (60 min.)
(1.1 oz./31 g at 13% alpha acids)
2.5 AAU Willamette hops (30 min.)
(0.5 oz./14 g at 5% alpha acids)
2.5 AAU Willamette hops (0 min.)
(0.5 oz./14 g at 5% alpha acids)
½ tsp. yeast nutrient (15 min.)
½ tsp. Irish moss (15 min.)
2 oz. (57 g) ground Sumatran coffee (0 min.)
2 oz. (57 g) ground Kona coffee (secondary)
2.5 oz. (71 g) dark, bittersweet baker's chocolate (0 min.)
1.5 oz. (43 g) unsweetened chocolate baking nibs (0 min.)
White Labs WLP001 (California Ale) or Wyeast 1056 (American Ale) or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Steep the crushed 2-row pale malt and flaked oats in 7 qts. (6.7 L) of water at 155 °F (68 °C) for 45 minutes. Stir in the crushed crystal and roasted malts and hold for 15 more minutes. Remove grains from the wort and rinse with 2 quarts (1.8 L) of hot water. Add the dried malt extract and top off to 3 gallons (11.4 L) then bring to a boil. Keep a separate pot of boiling water on hand to keep the wort topped off to at least 3 gallons (11.4 L) during the boil. Add the hops and Irish moss as per the schedule and the liquid malt extract with 15 minutes left in the boil. Add the Sumatran coffee and two chocolate varieties at the end of the boil. Give the wort a stir for one minute and let settle for 30 minutes.

After 30 minutes, cool the wort and add it to 2 gallons (7.6 L) of cold water in a sanitized fermenter and top off with cold water up to 5 gallons (19 L). Cool the wort to 75 °F (24 °C). Pitch the yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until

fermentation is complete. Transfer to a carboy, avoiding any splashing. Add the Kona coffee and condition for one week, then bottle or keg. Carbonate and age for two weeks.

GRANDPA OTIS'S CHOCOLATE OATMEAL COOKIE STOUT

(5 gallons/19 L, all-grain)

OG = 1.079 FG = 1.020

IBU = 37 SRM = 40 ABV = 8.2%

Ingredients

10 lbs. (4.5 kg) 2-row pale malt
2 lbs. (0.91 kg) Belgian caramel
Munich malt
8 oz. (0.23 kg) crystal malt (40 °L)
8 oz. (0.23 kg) honey malt
4 oz. (113 g) roasted barley (450 °L)
4 oz. (113 g) black patent malt
4 oz. (113 g) chocolate malt (350 °L)
1 lb. (0.45 kg) rolled oats (toasted)
1 lb. (0.45 kg) unsulfured, mild
molasses (90 min.)
10 AAU Willamette hops (60 min.)
(2.5 oz./71 g at 4% alpha acids)
4 AAU Willamette hops (30 min.)
(1 oz./28 g at 4% alpha acids)
8 oz. (0.23 kg) cocoa powder (10 min.)
3 cinnamon sticks (see step by step)
8 oz. (0.23 kg) raisins (see step by step)
1 pint (473 mL) your favorite Bourbon
(see step by step)
4 oz. (118 mL) Madagascar Bourbon
Pure Vanilla extract (see step by
step)
Wyeast 1764 (Rogue Pacman) or White
Labs WLP095 (Burlington Ale) yeast
½ cup corn sugar (if priming)

Step by Step

Before brew day begins, pre-heat your oven up to 350 °F (177 °C). Place the rolled oats spread out on a baking sheet. Toast the flakes for about 20 minutes shaking the sheet every couple of minutes. Use your nose as a guide to know when they are finished. Step mash all the grains at 121 °F (49 °C) for 30 minutes and then raise the temperature to 130 °F (54 °C) for 20 minutes. Raise the temperature to 152 °F (67 °C) for 60 minutes. Add the molasses directly to boil. After 30 minutes, add the first addition of hops and the cocoa powder in the last 10 minutes of the boil. After the boil is complete, give the wort a stir and let the wort settle for 10 minutes. Chill

the wort, then aerate heavily and pitch the yeast. Ferment at 68 °F (20 °C) for 10 days. Soak the cinnamon and raisins along with the Madagascar Bourbon Pure Vanilla extract in the bourbon for one to two weeks. Add to secondary and let age for two months. Bottle or keg as normal.

GRANDPA OTIS'S CHOCOLATE OATMEAL COOKIE STOUT

(5 gallons/19 L, partial mash)

OG = 1.079 FG = 1.020

IBU = 37 SRM = 40 ABV = 8.2%

Ingredients

6 lbs. (2.7 kg) pale liquid malt extract
1.5 lbs. (4.5 kg) 2-row pale malt
2 lbs. (0.91 kg) Belgian caramel
Munich malt
8 oz. (0.23 kg) crystal malt (40 °L)
8 oz. (0.23 kg) honey malt
4 oz. (113 g) roasted barley (450 °L)
4 oz. (113 g) black patent malt
4 oz. (113 g) chocolate malt (350 °L)
1 lb. (0.45 kg) rolled oats (toasted)
1 lb. (0.45 kg) unsulfured, mild
molasses (90 min.)
10 AAU Willamette hops (60 min.)
(2.5 oz./71 g at 4% alpha acids)
4 AAU Willamette hops (30 min.)
(1 oz./28 g at 4% alpha acids)
8 oz. (0.23 kg) cocoa powder (10 min.)
3 cinnamon sticks (see step by step)
8 oz. (0.23 kg) raisins (see step by step)
1 pint (473 mL) your favorite Bourbon
(see step by step)
4 oz. (118 mL) Madagascar Bourbon
Pure Vanilla extract (see step by
step)
Wyeast 1764 (Rogue Pacman) or White
Labs WLP095 (Burlington Ale) yeast
½ cup corn sugar (if priming)

Step by Step

Before brew day begins, pre-heat your oven up to 350 °F (177 °C). Place the rolled oats spread out on a baking sheet. Toast the flakes for about 20 minutes shaking the sheet every couple of minutes. Use your nose as a guide to know when they are finished. Start by placing the crushed pale malt, honey malt and toasted rolled oats in a large muslin bag. Heat 2 gallons (7.6 L) water up to 165 °F (74 °C) then mix the grain into the water. The temperature should stabilize at about 152 °F (67 °C). Hold at this tempera-

ture for 60 minutes. Add the crystal and roasted grains either in second bag or directly to the first muslin bag. Steep for 15 minutes. Remove all the grains and place in a colander. Rinse with 1 gallon (4 L) hot water. Stir in the molasses and liquid malt extract then top up to at least 3 gallons (11.4 L). Add hops according to the schedule and the cocoa powder in the last 10 minutes of the boil.

The remainder of this recipe is the same as the all-grain version.

GUTHRIE'S WOODY IMPERIAL STOUT (OAK AGED)

(5 gallons/19 L, all-grain)

OG = 1.088 FG = 1.028

IBU = 60 SRM = 53 ABV = 8.7%

Ingredients

15 lbs. (6.8 kg) 2-row pale malt
1 lb. (0.45 kg) amber malt
0.5 lb. (0.23 kg) crystal malt (60 °L)
0.75 lb. (0.34 kg) Belgian Special B
malt
1 lb. (0.45 kg) chocolate malt
0.75 lb. (0.34 kg) black malt
18.5 AAU Columbus hops (60 min.)
(1.5 oz./43 g at 12.3% alpha acids)
1.5 oz. (43 g) medium toasted French
oak cubes
Lallemand Nottingham Ale or
Safale S-04 yeast
¾ cup corn sugar (if priming)

Step by Step

This is a single infusion mash. Mix the crushed grains with 6 gallons (23 L) of water to achieve a stable mash temperature of 152 °F (67 °C). Hold at this temperature for 60 minutes. Sparge with enough water to collect 7 gallons (26.5 L) of wort in the kettle. Boil for 90 minutes, adding the hops with 60 minutes left in the boil.

Cool to 65–70 °F (18–21 °C) and pitch the yeast, preferably two sachets or having previously prepared it as a 2-qt. starter. When primary fermentation has finished, rack the beer onto the oak cubes in a secondary fermenter if you wish. I prefer not to add the oak at this time, but to rack a second time after about five to six days and add the cubes then. This is because I want the beer to be as clear as possible during oaking; if there is a significant amount of yeast in the

secondary it will merely coat the cubes and reduce the efficiency of extraction from the oak.

Leave the beer on the cubes for no more than two weeks before racking it and then bottle or keg in the usual way.

One other step I like to do with this beer is to very lightly rinse the cubes with bourbon whiskey before adding them to the beer in the secondary. This step helps to sanitize the cubes, and also adds just a hint of bourbon to the finished beer's flavor – a taste that goes well with this kind of stout.

GUTHRIE'S WOODY IMPERIAL STOUT (OAK AGED)

(5 gallons/19 L, extract with grains)
OG = 1.088 FG = 1.028
IBU = 60 SRM = 53 ABV = 8.7%

Ingredients

8 lbs. (3.6 kg) amber liquid malt extract
2.5 lbs. (1.13 kg) dark dried malt extract
0.75 lb. (0.34 kg) Belgian Special B malt
0.75 lb. (0.34 kg) chocolate malt
0.75 lb. (0.34 kg) black malt
18.5 AAU Columbus hops (60 min.) (1.5 oz./43 g at 12.3% alpha acids)
1.5 oz. (43 g) medium toasted French oak cubes
Lallemand Nottingham Ale or Safale S-04 yeast
¾ cup corn sugar (if priming)

Step by Step

Put the crushed grains in a muslin bag and steep in 2 qts. (2 L) of 150–160 °F (65–71 °C) water for 20 to 30 minutes. Rinse the grains with an additional 2 qts. (2 L) of hot water and transfer the liquid to a brewpot. Top up to 5 gallons (19 L) with water. Carefully dissolve the malt extracts and bring to a boil. Add hops and boil 60 minutes.

The remainder of this recipe is the same as the all-grain version.

HEINE BROTHERS COFFEE STOUT

(5 gallons/19 L, all-grain)
OG = 1.086 FG = 1.022
IBU = 27 SRM = 57 ABV = 9.1%

Ingredients

14 lbs. (6.4 kg) 2-row pale malt
1.75 lbs. (0.79 kg) roasted barley (300 °L)
1.75 lbs. (0.79 kg) flaked oats
12 oz. (0.34 kg) chocolate malt
8 oz. (0.23 kg) chocolate wheat malt (400 °L)
9 AAU Fuggle hops (45 min.) (2 oz./57 g at 4.5% alpha acids)
1.5 oz. (42 g) ground coffee (0 min.)
6.5 fl. oz. (192 mL) brewed coffee (at bottling)
White Labs WLP007 (Dry English Ale), Wyeast 1098 (British Ale), or Lallemand Nottingham yeast
¾ cup corn sugar (if priming)

Step by Step

Mash grains at 153 °F (67 °C) for 90 minutes. Collect 7 gallons (26.5 L) of 1.061 wort. Boil two hours, adding hops during the last 45 minutes and ground coffee at flameout. Give the wort a stir and let settle for 15 minutes. Cool the wort down to 68 °F (20 °C), aerate heavily and pitch the yeast, preferably as a 2-qt. (2-L) starter. Give the beer two weeks in fermenter and either keg or bottle the beer. Add the coffee directly to either to the keg or bottling bucket.

HEINE BROTHERS COFFEE STOUT

(5 gallons/19 L, partial mash)
OG = 1.086 FG = 1.022
IBU = 27 SRM = 57 ABV = 9.1%

Ingredients

8 lbs. (3.6 kg) light liquid malt extract
2 lbs. (0.91 kg) 2-row pale malt
1.75 lbs. (0.79 kg) roasted barley (300 °L)
1.75 lbs. (0.79 kg) flaked oats
12 oz. (0.34 kg) chocolate malt
8 oz. (0.23 kg) chocolate wheat malt (400 °L)
9 AAU Fuggle hops (45 min.) (2 oz./57 g at 4.5% alpha acids)
1.5 oz. (42 g) ground coffee (0 min.)
6.5 fl. oz. (192 mL) brewed coffee (at bottling)
White Labs WLP007 (Dry English Ale), Wyeast 1098 (British Ale), or Lallemand Nottingham yeast
¾ cup corn sugar (if priming)

Step by Step

Mash the crushed 2-row pale malt and

flaked oats in 2.1 gallons (8 L) of water at 153 °F (67 °C) for 45 minutes. Stir in the crushed roasted malts and hold for 15 more minutes. Remove grains from the wort and rinse with 2 quarts (1.8 L) of hot water. Stir in the liquid malt extract and top off to 6 gallons (23 L) of 1.061 wort. Boil for 60 minutes, adding hops with 45 minutes remaining and ground coffee at flameout. Give the wort a stir and let settle for 15 minutes. Cool the wort down to 68 °F (20 °C), aerate heavily and pitch the yeast, preferably as a 2-qt. (2-L) starter. Give the beer two weeks in fermenter and either keg or bottle the beer. Add the coffee directly to either to the keg or bottling bucket.

LAGUNITAS BREWING CO.'S CAPPUCCINO STOUT CLONE

(5 gallons/19 L, all-grain)
OG = 1.080 FG = 1.014
IBU = 30 SRM = 45 ABV = 9.6%

Ingredients

11.6 lbs. (5.3 kg) 2-row pale malt
1.75 lbs. (0.8 kg) wheat malt
1.25 lbs. (0.57 kg) crystal malt (60 °L)
9.5 oz. (0.27 kg) chocolate malt
9.5 oz. (0.27 kg) Carafa® Special III malt
9.5 oz. (0.27 kg) corn sugar (60 min.)
7.4 AAU Horizon hops (60 min.) (0.67 oz./19 g at 11% alpha acids)
0.72 AAU Willamette hops (30 min.) (0.14 oz./4 g at 5% alpha acids)
2.15 AAU Cascade hops (30 min.) (0.36 oz./10 g at 6% alpha acids)
4.9 AAU Willamette hops (hop stand) (1 oz./28 g at 5% alpha acids)
5.9 AAU Cascade hops (hop stand) (1 oz./28 g of 6% alpha acids)
0.07 oz. (2 g) Willamette hops (dry hop)
0.1 oz. (3 g) Cascade hops (dry hop)
3 oz. (85 g) ground coffee (hop stand)
Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
¾ cups corn sugar (if priming)

Step by Step

Mash at 155 °F (68 °C) for 45 minutes. Collect 6.5 gallons (24.6 L) of wort in your kettle. Boil 60 minutes, adding corn sugar at beginning of boil. Add hops according to the schedule and at flameout. After the boil is finished, remove from heat and cool the wort

down to 180 °F (82 °C). Add the final hop addition along with the ground coffee. Stir the wort into a whirlpool and let settle for 15 minutes. Chill the wort down 68 °F (21 °C), aerate the wort and pitch the yeast. Ferment at 70 °F (21 °C) for two weeks. Add the dry hops and let sit 3–4 days. Rack to keg or bottling bucket. If you want more coffee flavor, add some cold-brewed coffee to taste at this time. Bottle or keg as normal.

LAGUNITAS BREWING CO.'S CAPPUCCINO STOUT CLONE

(5 gallons/19 L, extract with grains)
OG = 1.080 FG = 1.014
IBU = 30 SRM = 35 ABV = 9.6%

Ingredients

1 lb. (0.45 kg) wheat dried malt extract
6.6 lbs. (3 kg) pale liquid malt extract (15 min.)
1.25 lbs. (0.57 kg) crystal malt (60 °L)
9.5 oz. (0.27 kg) chocolate malt
9.5 oz. (0.27 kg) Carafa® Special III malt
9.5 oz. (0.27 kg) corn sugar
7.4 AAU Horizon hops (60 min.) (0.67 oz./19 g at 11% alpha acids)
0.72 AAU Willamette hops (30 min.) (0.14 oz./4 g at 5% alpha acids)
2.15 AAU Cascade hops (30 min.) (0.36 oz./10 g at 6% alpha acids)
4.9 AAU Willamette hops (hop stand) (1 oz./28 g at 5% alpha acids)
5.9 AAU Cascade hops (hop stand) (1 oz./28 g of 6% alpha acids)
0.07 oz. (2 g) Willamette hops (dry hop)
0.1 oz. (3 g) Cascade hops (dry hop)
3 oz. (85 g) ground coffee (hop stand)
Wyeast 1056 (American Ale), White Labs WLP001 (California Ale) or Safale US-05 yeast
¾ cups corn sugar (if priming)

Step by Step

Heat 7 qts. (6.6 L) of water to 166 °F (74 °C). Place crushed grains in a steeping bag and steep at 155 °F (68 °C) for 45 minutes. In a separate pot, heat 5.25 qts. (5 L) rinse water to 170 °F (77 °C). Rinse grains and bring wort volume up to 3 gallons (11.4 L), then raise to a boil. Add dried malt extract and corn sugar and boil for 60 minutes, adding hops at times indicated in recipe and add liquid malt extract with 15 minutes left in boil.

The remainder of this recipe is the same as the all-grain version.

LEFT OF LEFSE EXTRA-DRY POTATO STOUT

(5 gallons/19 L, all-grain)
OG = 1.040 FG = 1.008
IBU = 25 SRM = 31 ABV = 4.3%

Potatoes don't add flavor to your beer, they simply add fermentable sugar. Like corn or rice – or the addition of sugars to the kettle – potatoes dry out a beer. In this case, it helps crate a dry session stout. Due to the starch in the potatoes, this recipe cannot accurately be converted to an extract version.

Ingredients

5.25 lbs. (2.4 kg) 2-row pale malt
0.75 lb. (0.34 kg) flaked barley
0.9 lb. (0.41 kg) roasted barley (450 °L)
4.7 lbs. (2.1 kg) Russet or Yukon gold potatoes
6.7 AAU East Kent Golding hops (60 min.) (1.33 oz./38 g at 5% alpha acids)
¼ tsp. yeast nutrient (15 min.)
Wyeast 1028 (London Ale) or White Labs WLP005 (British Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Prepare potatoes: Peel potatoes and cut into medium-sized cubes. Boil the potatoes for 15 minutes until softened, then drain water but keep the water to use for the mash. Mash potatoes with a potato masher until they are of an even consistency.

Stir mashed potatoes into crushed grains and mash in to 148 °F (64 °C) with a combination of potato water and strike water. Mash for 60 minutes, stirring every 15 minutes. Recirculate for 10 minutes. Collect 4 gallons (15 L) of wort, add 1.75 gallons (6.6 L) of water and boil 60 minutes. Add hops at start of the boil. Chill the wort, aerate, and pitch yeast. Ferment at 70 °F (21 °C). Bottle or keg as normal.

MIKKELLER'S BEER GEEK BREAKFAST CLONE

(5 gallons/19 L, all-grain)
OG = 1.080 FG = 1.023
IBU = 86 SRM = 64 ABV = 7.5%

Beer Geek Breakfast, which adds French

press coffee to an oatmeal stout, is the beer that put Mikkeller on the map and was voted number one stout on Ratebeer.com. Due to the high percentage of flaked oats, smoked malts, and brown malt, an extract version of this recipe would be very difficult to achieve.

Ingredients

7 lbs. (3.2 kg) Pilsner malt
2 lbs. 3 oz. (1 kg) flaked oats
2 lbs. 3 oz. (1 kg) oat malt
1 lb. 2 oz. (0.5 kg) Belgian caramel Munich malt (45 °L)
10 oz. (0.27 kg) smoked malt
1 lb. 2 oz. (0.5 kg) brown malt
12 oz. (0.34 kg) pale chocolate malt
1 lb. 2 oz. (0.5 kg) chocolate malt
1 lb. 2 oz. (0.5 kg) roasted barley (450 °L)
12.3 AAU Centennial hops (90 min.) (1.4 oz./39 g at 8.8% alpha acids)
8.7 AAU Chinook hops (90 min.) (0.7 oz./20 g at 12.4% alpha acids)
2.8 AAU Cascade hops (90 min.) (0.4 oz./11 g at 7% alpha acids)
7 AAU Cascade hops (1 min) (1 oz./28 g at 7% alpha acids)
1.5 oz. (43 g) ground coffee
Wyeast 1056 (American Ale), White Labs WLP001 (California Ale), or Safale US-05 yeast
¾ cup corn sugar (if priming)

Step by Step

Mash in at 153 °F (67 °C) and hold for 75 minutes. You may want to add in a handful or two of rice hulls to aid with the lautering process. Lauter slowly to account for the high levels of glucans in the mash. Boil for 90 minutes, adding hops as indicated. Ferment between 68–72 °F (20–22 °C). Two days prior to bottling or kegging, add the ground coffee to a 1-L French press for hot extraction of the coffee. Press off and very gently pour into the fermenter. Two days later, bottle or keg as normal.

NINKASI BREWING CO.'S VANILLA OATIS OATMEAL STOUT CLONE

(5 gallons/19 L, all-grain)
OG = 1.072 FG = 1.022
IBU = 50 SRM = 40 ABV = 7%

Ninkasi describes Vanilla Oatis Oatmeal Stout as, "Characterized by a roasted front flavor, smooth rich oats, a touch

of chocolate flavor, and a rich vanilla complexity imparted by whole vanilla beans. To achieve this higher level of decadence, we added in whole vanilla beans to the final stage of conditioning – the same process we use to dry hop a beer. It is bigger than a traditional stout with more alcohol, body, and a touch more bitterness to keep it balanced.”

Ingredients

13 lbs. (5.9 kg) 2-row pale malt
 1 lb. (0.45 kg) extra dark crystal malt (135-165 °L)
 1 lb. (0.45 kg) chocolate malt (350 °L)
 1 lb. (0.45 kg) flaked oats
 12 oz. (0.34 kg) Vienna malt
 6 oz. (170 g) black barley
 4 oz. (113 g) rice hulls
 2 vanilla beans (added during fermentation)
 9.8 AAU Nugget leaf hops (60 min.) (0.75 oz./21 g at 13% alpha acids)
 9.8 AAU Nugget leaf hops (30 min.) (0.75 oz./21 g at 13% alpha acids)
 ½ tsp. Irish moss (30 min.)
 Wyeast 1968 (London ESB), White Labs WLP002 (English Ale), or Lallemand Windsor yeast
 ¾ cup of corn sugar (if priming)

Step by Step

This is a single step infusion mash. Mix the crushed grains with 5.5 gallons (21 L) of water at 163 °F (73 °C), stabilizing at 152 °F (67 °C) for 60 minutes until conversion is complete. Raise the temperature of the mash to 168 °F (76 °C) with approximately 3.1 gallons (11.7 L) of 200 °F (93 °C) water, and then collect 7 gallons (26.5 L) of wort to begin your 60-minute boil. Add hops and Irish moss at times indicated. At the end of the boil there should be 5.5 gallons (21 L) wort left in your kettle.

Chill the wort rapidly and pitch the yeast when the temperature is less than 75 °F (24 °C), and allow to cool to 68 °F (20 °C) for fermenting. Add the 2 vanilla beans to the fermenter after slicing one side of the bean open to expose the inside of the vanilla bean.

When fermentation is complete, wait three more days for a diacetyl rest, and then bottle or keg. Carbonate to approximately 2 to 2.5 volumes.

**NINKASI BREWING CO.'S
 VANILLA OATIS OATMEAL
 STOUT CLONE**

(5 gallons/19 L, partial mash)
OG = 1.072 FG = 1.022
IBU = 50 SRM = 40 ABV = 7%

Ingredients

6.6 lbs. (3 kg) pale liquid malt extract
 1.5 lbs. (0.68 kg) extra light dried malt extract
 1 lb. (0.45 kg) crystal malt (135-165 °L)
 1 lb. (0.45 kg) chocolate malt (350 °L)
 1 lb. (0.45 kg) flaked oats
 12 oz. (0.34 kg) Vienna malt
 6 oz. (170 g) black barley
 2 vanilla beans (added during fermentation)
 13 AAU Nugget leaf hops (60 min.) (1 oz./28 g at 13% alpha acids)
 9.8 AAU Nugget leaf hops (30 min.) (0.75 oz./21 g at 13% alpha acids)
 ½ tsp. Irish moss (30 min.)
 Wyeast 1968 (London ESB), White Labs WLP002 (English Ale), or Lallemand Windsor yeast
 ¾ cup of corn sugar (if priming)

Step by Step

Place the crushed Vienna and flaked oats in a muslin bag and mash in 2 qts. (2 L) of water at 150–160 °F (66–71 °C) for 30 minutes. Then, add 3 gallons (11.4 L) of 150–160 °F (66–71 °C) water and the crystal and roasted grains in a separate muslin bag. Hold for 30 minutes more. Remove both grain bags from the hot water and wash them with 1 gallon (4 L) hot water. Bring wort to a boil. When boiling starts, remove pot from the burner and slowly add all of the dried malt extract, stirring to dissolve. Return to a boil for 60 minutes, adding the hops and Irish moss as indicated.

After the boil, add the liquid malt extract and stir until dissolved. Strain the hot wort into a fermenter filled with approximately 2.5 gallons (9.5 L) of cold water and top off to the 5-gallon (19 L) mark. Follow the remainder of the all-grain version.

**OLD DOMINION BREWING
 CO.'S DOMINION OAK
 BARREL STOUT CLONE**

(5 gallon/19 L, all-grain)
OG = 1.056 FG = 1.017
IBU = 15 SRM = 42 ABV = 5.3%

Old Dominion's Oak Barrel Stout is a sweet stout infused with vanilla beans

and oak chips during conditioning.

Ingredients

8 lbs. (3.6 kg) 2-row pale malt
 1 lb. (0.45 kg) Munich malt
 6 oz. (0.17 kg) rauchmalz
 6.5 oz. (0.19 kg) wheat malt
 6.5 oz. (0.19 kg) Carapils® malt
 10 oz. (0.28 kg) crystal malt (40 °L)
 10 oz. (0.28 kg) chocolate malt
 12 oz. (0.34 kg) roasted barley (500 °L)
 3.6 AAU Mt. Hood hops (60 min.) (0.6 oz./17 g at 6% alpha acids)
 3.6 AAU Mt. Hood hops (5 min.) (0.6 oz./17 g at 6% alpha acids)
 2 vanilla beans
 2.5 oz. (71 g) oak cubes (medium toast, French oak)
 Wyeast 1056 (American Ale) or White Labs WLP001 (California Ale) or Safale US-05 yeast
 ¾ cups corn sugar (if priming)

Step by Step

Mash at 154 °F (68 °C). Sparge with enough water to collect 6.5 gallons (24.6 L). Boil for 90 minutes adding the hops at times indicated. After the boil is finished, give the wort a stir and let settle for 20 minutes. Ferment at 66 °F (19 °C). Add vanilla beans (sliced down center) and oak cubes after primary fermentation has died down. Once you have reached the taste you like, bottle or keg as normal.

**OLD DOMINION BREWING
 CO.'S DOMINION OAK
 BARREL STOUT CLONE**

(5 gallon/19 L, partial mash)
OG = 1.056 FG = 1.017
IBU = 15 SRM = 42 ABV = 5.3%

Ingredients

1.5 lbs. (0.68 kg) Briess extra light dried malt extract
 3.3 lbs. (1.5 kg) pale liquid malt extract (15 min.)
 1 lb. (0.45 kg) Munich malt
 6 oz. (0.17 kg) rauchmalz
 6.5 oz. (0.19 kg) wheat malt
 6.5 oz. (0.19 kg) Carapils® malt
 10 oz. (0.28 kg) crystal malt (40 °L)
 10 oz. (0.28 kg) chocolate malt
 12 oz. (0.34 kg) roasted barley (500 °L)
 3.6 AAU Mt. Hood hops (60 min.) (0.6 oz./17 g at 6% alpha acids)
 3.6 AAU Mt. Hood hops (5 min.) (0.6 oz./17 g at 6% alpha acids)
 2 vanilla beans

2.5 oz. (71 g) oak cubes (medium toast, French oak)
 Wyeast 1056 (American Ale) or White Labs WLP001 (California Ale) or Safale US-05 yeast
 $\frac{3}{4}$ cups corn sugar (if priming)

Step by Step

In your brewpot, heat 7.67 qts. (7.2 L) of water to 165 °F (74 °C). Place crushed grains in a steeping bag and steep at 154 °F (68 °C) for 45 minutes. Heat 5.75 qts. (5.4 L) of rinse water to 170 °F (77 °C) in a separate pot. Rinse grains and heat wort – of which you'll have about 12.6 qts. (12 L) – to a boil. Add dried malt extract and hops and boil for 60 minutes. Add liquid malt extract with 15 minutes remaining. Cool wort, transfer to fermenter and top up to 5 gallons (19 L). Aerate wort and pitch yeast. The remainder of this recipe is the same as the all-grain version.

PEANUT BUTTER CUP SWEET STOUT

(5 gallons/19 L, all-grain)

OG = 1.097 FG = 1.033

IBU = 53 SRM = 48 ABV = 9.3%

Ingredients

4.5 lbs. (2 kg) 2-row pale malt
 4 lbs. (1.8 kg) German Pilsner malt
 4 lbs. (1.8 kg) wheat malt
 1.2 lbs. (0.54 kg) flaked oats (toasted)
 8 oz. (0.23 kg) flaked wheat
 1 lb. (0.45 kg) crystal malt (60 °L)
 8 oz. (0.23 kg) dextrine malt
 1 lb. (0.45 kg) Belgian Special B malt
 1 lb. (0.45 kg) British chocolate malt (450 °L)
 4 oz. (113 g) roasted barley (500 °L)
 1 lb. (0.45 kg) lactose sugar (0 min.)
 8 oz. (0.23 kg) maltodextrin (0 min.)
 7.1 AAU Fuggle hops (60 min.)
 (1.5 oz./42 g at 4.75% alpha acids)
 7.5 AAU Kent Golding hops (60 min.)
 (1.5 oz./42 g at 5% alpha acids)
 2.4 AAU Fuggle hops (15 min.)
 (0.5 oz./14 g at 4.75% alpha acids)
 2.5 AAU Kent Golding hops (15 min.)
 (0.5 oz./14 g at 5% alpha acids)
 1 tsp. Irish moss (15 min.)
 $\frac{1}{2}$ tsp. yeast nutrient (15 min.)
 1 stick brewer's licorice (0 min.)
 6 oz. (170 g) Hershey's dark cocoa powder
 2 vanilla beans
 2-4 fl. oz. (59-118 mL) peanut butter

extract
 Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
 $\frac{3}{8}$ cup corn sugar (if priming)

Step by Step

Start by toasting the flaked oats for 30 minutes at 325 °F (162 °C) or until they have an aroma reminiscent of oatmeal cookies. Mash at 149 °F (65 °C) for 90 minutes in 5.5 gallons (21 L) water. Bring mash temperature up to 168 °F (78 °C) and sparge with enough water to collect 7 gallons (26.5 L) wort in the brewpot. Boil 90 minutes adding hops as indicated. With 15 minutes remaining in the boil, add the yeast nutrients and Irish moss. At the end of the boil, add the lactose sugar, maltodextrine, half the cocoa powder, the stick of licorice and one vanilla bean. Give the wort a stir and let settle 15 minutes.

Chill the wort and transfer to the fermenter. Pitch yeast between 68 °F–72 °F (20–22 °C). In 3 to 7 days, after fermentation has slowed down and the kräusen has settled, add the 2 fl. oz. (59 mL) of the peanut butter extract, the second half of cocoa powder, and the second vanilla bean, preferably soaked in either vodka or bourbon (your choice). Condition for 2–4 weeks. Add more peanut butter extract to taste at the time of bottling or kegging.

PEANUT BUTTER CUP SWEET STOUT

(5 gallons/19 L, partial mash)

OG = 1.097 FG = 1.033

IBU = 53 SRM = 48 ABV = 9.3%

Ingredients

3.3 lbs. (1.5 kg) light liquid malt extract
 3 lbs. (1.36 kg) dried wheat malt extract
 1 lb. (0.45 kg) German Pilsner malt
 1 lb. (0.45 kg) wheat malt
 1.2 lbs. (0.54 kg) flaked oats (toasted)
 8 oz. (0.23 kg) flaked wheat
 1 lb. (0.45 kg) crystal malt (60 °L)
 8 oz. (0.23 kg) dextrine malt
 1 lb. (0.45 kg) Belgian Special B malt
 1 lb. (0.45 kg) British chocolate malt (450 °L)
 4 oz. (113 g) roasted barley (500 °L)
 1 lb. (0.45 kg) lactose sugar (0 min.)
 8 oz. (0.23 kg) maltodextrin (0 min.)

7.1 AAU Fuggle hops (60 min.)
 (1.5 oz./42 g at 4.75% alpha acids)
 7.5 AAU Kent Golding hops (60 min.)
 (1.5 oz./42 g at 5% alpha acids)
 2.4 AAU Fuggle hops (15 min.)
 (0.5 oz./14 g at 4.75% alpha acids)
 2.5 AAU Kent Golding hops (15 min.)
 (0.5 oz./14 g at 5% alpha acids)
 1 tsp. Irish moss (15 min.)
 $\frac{1}{2}$ tsp. yeast nutrient (15 min.)
 1 stick brewer's licorice (0 min.)
 6 oz. (170 g) Hershey's dark cocoa powder
 2 vanilla beans
 2-4 fl. oz. (59-118 mL) peanut butter extract
 Wyeast 1084 (Irish Ale) or White Labs WLP004 (Irish Ale) yeast
 $\frac{3}{8}$ cup corn sugar (if priming)

Step by Step

Start by toasting the flaked oats for 30 minutes at 325 °F (162 °C) or until they have an aroma reminiscent of oatmeal cookies. Next, place the crushed Pilsner and wheat malt in a large muslin bag along with the flaked oats and flaked wheat. Mash at 149 °F (65 °C) for 60 minutes in 6 qts. (6 L) water. Heat an additional 6 qts. (6 L) water up to 168 °F (78 °C) and place that along with the crushed crystal and roasted grains in the mash. Steep for additional 15 minutes. Raise the entire mash up to 168 °F (78 °C). Remove all the grains and place in a large colander. Slowly wash the grains with 2 gallons (7.6 L) hot water. Stir in the liquid and dried malt extract then top off to 6.5 gallons (24.6 L). Boil 60 minutes and add hops as indicated. With 15 minutes remaining in the boil, add the yeast nutrients and Irish moss. At the end of the boil, add the lactose sugar, maltodextrine, half the cocoa powder, the stick of licorice and one vanilla bean. Give the wort a stir and let settle for 15 minutes.

The remainder of this recipe is the same as the all-grain version.

RPB'S MOLÉ

(5 gallons/19 L, all-grain)

OG = 1.054 FG = 1.015

IBU = 2 SRM = 33 ABV = 5.3%

Ingredients

9 lbs. (4.1 kg) 2-row pale malt
 1.15 lbs. (0.52 kg) flaked barley
 13.6 oz. (0.39 kg) roasted barley

6.4 oz. (181 g) caramel malt (20 °L)
 5.6 oz. (159 g) black malt
 0.4 AAU Hallertau hops (60 min.)
 (0.1 oz./3 g at 4% alpha acids)
 1 oz. (28 g) cocoa powder (alkaline processed) (5 min.)
 0.1 oz. (3 g) chili powder (5 min.)
 0.15 oz. (4.2 g) chipotle powder (5 min.)
 0.25 oz. (7 g) ground cinnamon (5 min.)
 4 mL rose water (5 min.)
 4 oz. (113 g) lactose powder (5 min.)
 0.1 oz. (3 g) anise (5 min.)
 3 vanilla beans, chopped (5 min.)
 3 cinnamon sticks (post fermentation)
 Wyeast 2035 (American Lager) or White Labs WLP840 (American Lager) yeast
 $\frac{3}{8}$ cup corn sugar (if priming)

Step by Step

This is a single step infusion mash. Mix grains with 4.3 gallons (17 L) strike water to achieve a mash temperature of 146 °F (63 °C). Hold at this temperature until starch conversion is complete. Raise temperature up to mash out at 168 °F (76 °C) then begin to lauter. Boil for 60 minutes adding a pinch of hops at the beginning of the boil just to control the foam. With 5 minutes remaining, add all the spices with the exception of the cinnamon sticks. Chill the wort down to yeast-pitching temperature. Aerate the wort and pitch the yeast. Hold at 50 °F (10 °C) for the duration of primary fermentation. After primary is complete, add the cinnamon sticks and hold for 10 days. Slowly chill to 45 °F (7 °C) over 24 hours then bottle or keg.

RPB'S MOLÉ

(5 gallons/19 L, partial mash)

OG = 1.054 FG = 1.015

IBU = 2 SRM = 33 ABV = 5.3%

Ingredients

3.75 lbs. (1.7 kg) extra light dried malt extract
 2 lbs. (0.91 kg) 2-row pale malt
 1.15 lbs. (0.52 kg) flaked barley
 13.6 oz. (0.39 kg) roasted barley
 6.4 oz. (181 g) caramel malt (20 °L)
 5.6 oz. (159 g) black malt
 0.4 AAU Hallertau hops (60 min.)
 (0.1 oz./3 g at 4% alpha acids)
 1 oz. (28 g) cocoa powder (alkaline processed) (5 min.)

0.1 oz. (3 g) chili powder (5 min.)
 0.15 oz. (4.2 g) chipotle powder (5 min.)
 0.25 oz. (7 g) ground cinnamon (5 min.)
 4 mL rose water (5 min.)
 4 oz. (113 g) lactose powder (5 min.)
 0.1 oz. (3 g) anise (5 min.)
 3 vanilla beans, chopped (5 min.)
 3 cinnamon sticks (post fermentation)
 Wyeast 2035 (American Lager) or White Labs WLP840 (American Lager) yeast
 $\frac{3}{8}$ cup corn sugar (if priming)

Step by Step

Place crushed grains in a large muslin bag. Mix grains with 2 gallons (7.6 L) strike water to achieve a mash temperature of 146 °F (63 °C). Hold at this temperature until starch conversion is complete. Raise temperature of the mash up to 168 °F (76 °C) then place the grains in a large colander. Slowly pour about 2 gallons (7.6 L) of 168 °F (76 °C) water over the grains to wash the sugar out. Bring the wort up to a boil, then turn off heat and stir in the dried malt extract. Return the wort to heat and boil for 60 minutes adding a pinch of hops at the beginning of the boil just to control the foam. The remainder of this recipe is the same as the all-grain version.

SNOWBLIND CHERRY VANILLA STOUT

(5 gallons/19 L, all-grain)

OG = 1.064 FG = 1.016

IBU = 25 SRM = 46 ABV = 6.6%

Each year, the August Schell Brewery (New Ulm, Minnesota) releases their holiday seasonal under the label "Snowstorm." This beer is an amped up interpretation of Schell's offering.

Ingredients

9.88 lbs. (4.48 kg) 2-row pale malt
 0.66 lb. (0.30 kg) chocolate malt
 0.75 lb. (0.34 kg) roasted barley
 2 oz. (56 g) black patent malt
 6.4 AAU Northern Brewer hops (60 min.) (0.85 oz./24 g at 7.5% alpha acids)
 6.1 lbs. (2.8 kg) cherry puree (0 min.) (two 49 oz. cans of Oregon Fruit Products Cherry Puree)
 2–4 vanilla beans, chopped
 Wyeast 1968 (London ESB) or White Labs WLP002 (English Ale) yeast

$\frac{3}{4}$ cup corn sugar (if priming)

Step by Step

Mash at 152–154 °F (67–68 °C) for 60 minutes. Collect approximately 5.5 gallons (21 L) of wort in the kettle. Total boil time is 60 minutes, adding bittering hops as the wort comes to a boil. The goal is to finish the boil with 4.5 gallons (17 L) wort at specific gravity around 1.059. At flame out, add the cherry puree to the hot wort. Hold wort at 160–170 °F (71–77 °C) for 20–25 minutes. Chill wort to 75 °F (24 °C) and transfer to fermenter. Aerate and pitch yeast (preferably in a 1-qt. (1-L) starter). Let ferment at 70–72 °F (21–22 °C) for 5–7 days, then rack to secondary for a week of conditioning. Add two vanilla beans (sliced down the center and chopped) at this point and let sit for three days. Sample beer and add more vanilla, if desired. Bottle or keg as normal.

SNOWBLIND CHERRY VANILLA STOUT

(5 gallons/19 L, extract with grains)

OG = 1.064 FG = 1.016

IBU = 25 SRM = 46 ABV = 6.6%

Ingredients

5.33 lbs. (2.4 kg) Muntons dried malt extract
 0.66 lb. (0.30 kg) chocolate malt
 0.75 lb. (0.34 kg) roasted barley
 2 oz. (56 g) black patent malt
 6.4 AAU Northern Brewer hops (60 min.) (0.85 oz./24 g at 7.5% alpha acids)
 6.1 lbs. (2.8 kg) cherry puree (0 min.) (two 49 oz. cans of Oregon Fruit Products Cherry Puree)
 2–4 vanilla beans, chopped
 Wyeast 1968 (London ESB) or White Labs WLP002 (English Ale) yeast
 $\frac{3}{4}$ cup corn sugar (if priming)

Step by Step

Steep grains in 1 gallon (3.8 L) of water at 153 °F (67 °C) for 30 minutes. Rinse with 2 qts. (1.9 L) of water at 168 °F (76 °C). Stir the dried malt extract into the grain tea, add water to make at least 3 gallons (11.4 L) and bring to boil. Add bittering hops and boil for 60 minutes. At knock out, add the cherry puree to the hot wort. Hold wort at 160–170 °F (71–77 °C) for 20–25 minutes. Chill wort to 75 °F

(24 °C) and transfer to fermenter. Add water to make 5 gallons (19 L) of wort.

The remainder of this recipe is the same as the all-grain version.

SOUTHERN TIER BREWING CO.'S CRÈME BRULÉE CLONE

(5 gallons/19 L, all-grain)

OG = 1.100 FG = 1.032

IBU = 55 SRM = 55 ABV = 10%

Ingredients

15.25 lbs. (6.9 kg) 2-row pale malt
1.5 lbs. (0.68 kg) flaked barley
1 lb. (0.45 kg) crystal malt (60 °L)
1.5 lbs. (0.68 kg) Belgian debittered black malt (600 °L)
10 oz. (0.28 kg) lactose sugar (0 min.)
12 oz. (0.34 kg) caramelized white cane sugar (0 min.) (see step by step)
10.8 AAU Columbus hops (60 min.) (0.75 oz./21 g at 14.5% alpha acids)
9.2 AAU Chinook hop pellets (30 min.) (0.75 oz./21 g at 12.3% alpha acids)
3 vanilla beans split and deseeded (0 min.)
1 tsp. ground cardamom powder (0 min.)
½ tsp. yeast nutrient (15 min.)
½ tsp. Irish moss (15 min.)
White Labs WLP007 (Dry English Ale) or Wyeast 1028 (London Ale) yeast
⅔ cup corn sugar (if priming)

Step by Step

This is a single step infusion mash. Mix the crushed grains with 5.5 gallons (21 L) of 168 °F (76 °C) water to stabilize at 155 °F (68 °C) for 60 minutes. Sparge slowly with 175 °F (79 °C) water. Collect approximately 6.5 gallons (25 L) of wort runoff to boil for 60 minutes.

During the boil you will want to make the caramelized sugar. Mix 12 oz. (0.34 kg) sugar in ¼ cup water in a sauce pan over medium heat. Stir constantly until it turns to a thick liquid and becomes a medium amber color. Add to boiling wort immediately before it hardens. Make the other kettle additions as per the schedule. At the end of the boil let the wort rest 20 minutes and remove the vanilla beans.

Cool the wort to 75 °F (24 °C). Pitch your yeast and aerate the wort heavily. Ferment at 68 °F (20 °C). After fermentation is complete, transfer to

a carboy, and condition for one week before you bottle or keg. Allow the beer to carbonate and age for two weeks if bottling.

SOUTHERN TIER BREWING CO.'S CRÈME BRULÉE CLONE

(5 gallons/19 L, extract with grains)

OG = 1.100 FG = 1.032

IBU = 55 SRM = 55 ABV = 10%

Ingredients

9 lbs. (4.1 kg) light liquid malt extract
1.5 lbs. (0.68 kg) 2-row pale malt
1.5 lbs. (0.68 kg) flaked barley
1 lb. (0.45 kg) crystal malt (60 °L)
1.5 lbs. (0.68 kg) Belgian debittered black malt (600 °L)
10 oz. (0.28 kg) lactose sugar (0 min.)
12 oz. (0.34 kg) caramelized white cane sugar (0 min.) (see step by step)
13 AAU Columbus hops (60 min.) (0.9 oz./26 g at 14.5% alpha acids)
9.2 AAU Chinook hop pellets (30 min.) (0.75 oz./21 g at 12.3% alpha acids)
3 vanilla beans split and deseeded (0 min.)
1 tsp. ground cardamom powder (0 min.)
½ tsp. yeast nutrient (15 min.)
½ tsp. Irish moss (15 min.)
White Labs WLP007 (Dry English Ale) or Wyeast 1028 (London Ale) yeast
⅔ cup corn sugar (if priming)

Step by Step

Steep the crushed grains in 2 gallons (7.6 L) of water at 155 °F (68 °C) for 30 minutes. Remove grains from the wort and rinse with 2 quarts (1.8 L) of hot water. Add the liquid malt extract and boil for 60 minutes.

During the boil you will want to make the caramelized sugar. Mix 12 oz. (0.34 kg) sugar in ¼ cup water in a sauce pan over medium heat. Stir constantly until it turns to a thick liquid and becomes a medium amber color. Add to boiling wort immediately before it hardens. Make other kettle additions as per the schedule. At the end of the boil let the wort rest 20 minutes and remove the vanilla beans. Add the wort to 2 gallons (7.6 L) of cold water in a sanitized fermenter and top off with cold water up to 5 gallons (19 L).

The remainder of this recipe is the same as the all-grain version.

STAR ANISE STOUT

(5 gallon/19 L, all-grain)

OG = 1.093 FG = 1.028

IBU = 64 SRM = 62 ABV = 9.5%

Ingredients

12.5 lbs. (5.7 kg) Gambrinus pale malt
4 lbs. (1.8 kg) Weyermann Pilsner malt
0.75 lb. (0.34 kg) Briess Extra Special malt (130 °L)
0.5 lb. (0.23 kg) Briess roasted barley (300 °L)
0.5 lb. (0.23 kg) chocolate malt (350 °L)
1.6 lbs. (0.73 kg) Weyermann Carafa® II malt (430 °L)
15.9 AAU New Zealand Pacific Gem hops (60 min.) (1 oz./28 g at 15.9% alpha acids)
6.8 AAU German Hallertauer Tradition hops (15 min.) (1 oz./28 g at 6.8% alpha acids)
1 oz. (28 g) Saaz hops (5 min.)
1 oz. (28 g) star anise, toasted
White Labs WLP013 (London Ale) or Wyeast 1028 (London Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Mash for 60 minutes at 158 °F (70 °C). Collect about 6 gallons (23 L) of wort and boil for 60 minutes. Add hops at times indicated. After the boil is complete, cool and ferment at 68 °F (20 °C) for 2 weeks in primary, rack to secondary, and add star anise that has been toasted and broken up. After conditioning for a week bottle or keg as normal.

STAR ANISE STOUT

(5 gallon/19 L, extract with grains)

OG = 1.093 FG = 1.028

IBU = 64 SRM = 62 ABV = 9.5%

Ingredients

9 lbs. (4.1 kg) light liquid malt extract
2 lbs. (0.91 kg) Pilsen light dried malt extract
0.75 lb. (0.34 kg) Briess Extra Special malt (130 °L)
0.5 lb. (0.23 kg) Briess roasted barley (300 °L)
0.5 lb. (0.23 kg) chocolate malt (350 °L)
1.6 lbs. (0.73 kg) Weyermann Carafa® II malt (430 °L)
15.9 AAU New Zealand Pacific Gem hops (60 min.) (1 oz./28 g at 15.9%

alpha acids)
6.8 AAU German Hallertauer Tradition hops (15 min.) (1 oz./28 g at 6.8% alpha acids)
1 oz. (28 g) Saaz hops (5 min.)
1 oz. (28 g) star anise, toasted
White Labs WLP013 (London Ale) or Wyeast 1028 (London Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

Place grains in a grain bag. Steep the crushed grains in 5 gallons (19 L) of water as it heats up to 170 °F (77 °C). Let the grain bag drip into the brewpot. Stir in the dried malt extract and bring up to a boil. Boil for 60 minutes adding hops according to the schedule. After the boil is complete, chill down to yeast-pitching temperature and top up fermenter to 5 gallons (19 L). Ferment at 68 °F (20 °C) for 2 weeks in primary, rack to secondary, and add star anise that has been toasted and broken up. After conditioning for a week bottle or keg as normal.

STONE BREWING CO.'S 12TH ANNIVERSARY BITTER CHOCOLATE OATMEAL STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.094 FG = 1.022

IBU = 45 SRM = 42 ABV = 10.3%

Ingredients

15 lbs. (6.8 kg) 2-row malt
0.75 lb. (0.34 kg) Carapils® malt
0.75 lb. (0.34 kg) crystal malt (15 °L)
2 lbs. (0.91 kg) flaked oats
1 lb. (0.45 kg) chocolate malt
0.25 lb. (113 g) roast barley
0.25 lb. (113 g) black malt
2 AAU Willamette hops (60 min.)
(0.4 oz./11 g at 5% alpha acids)
2 AAU Ahtanum™ hops (60 min.)
(0.4 oz./11 g at 5% alpha acids)
4 AAU Galena hops (60 min.)
(0.33 oz./9.4 g at 12% alpha acids)
6.5 AAU Summit™ hops (60 min.)
(0.38 oz./11 g at 17% alpha acids)
3.25 oz. (92 g) cocoa powder (15 min.)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB Ale) yeast
¾ cup corn sugar (for priming)

Step by Step

This is a single infusion mash. Mash in 25 qts. (23.7 L) of strike water at

150 °F (66 °C) for 45 minutes then begin the lautering process. Sparge to collect about 7 gallons (26.5 L) wort. Boil for 90 minutes, adding hops, and cocoa at times indicated in the ingredient list. Once the boil is complete, cool and ferment at 66 °F (19 °C).

STONE BREWING CO.'S 12TH ANNIVERSARY BITTER CHOCOLATE OATMEAL STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.094 FG = 1.022

IBU = 45 SRM = 42 ABV = 10.3%

Ingredients

2 lbs. (0.91 kg) light dried malt extract
6.6 lbs. (3 kg) light liquid malt extract (15 min.)
2 lbs. (0.91 kg) 2-row malt
0.5 lb. (0.23 kg) Carapils® malt
0.5 lb. (0.23 kg) crystal malt (15 °L)
2 lbs. (0.91 kg) flaked oats
1 lb. (0.45 kg) chocolate malt
0.25 lb. (113 g) roast barley
0.25 lb. (113 g) black malt
2 AAU Willamette hops (60 min.)
(0.4 oz./11 g at 5% alpha acids)
2 AAU Ahtanum™ hops (60 min.)
(0.4 oz./11 g at 5% alpha acids)
4 AAU Galena hops (60 min.)
(0.33 oz./9.5 g at 12% alpha acids)
6.5 AAU Summit™ hops (60 min.)
(0.38 oz./11 g at 17% alpha acids)
3.25 oz. (92 g) cocoa powder (15 min.)
White Labs WLP002 (English Ale) or Wyeast 1968 (London ESB Ale) yeast
¾ cup corn sugar (for priming)

Step by Step

Partial mash the 6 lbs. (2.7 kg) of crushed grains at 150 °F (66 °C) for 45 minutes in 9 qts. (8.5 L) of water. Add water to make 3 gallons (11 L) of wort, add dried malt extract and bring to a boil. Boil for 60 minutes, adding hops, liquid malt extract, and cocoa at times indicated in the ingredient list. Once the boil is complete, cool and ferment at 66 °F (19 °C). Bottle or keg as normal.

SWEETWATER TAVERN'S GIDDYUP STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.046 FG = 1.014

IBU = 28 SRM = 32 ABV = 4.3%

Ingredients

8 lbs. (3.6 kg) 2-row pale malt
11 oz. (0.31 kg) crystal malt (60 °L)
6 oz. (0.17 kg) chocolate malt
6 oz. (0.17 kg) roast barley
3 oz. (85 g) Carafa® III malt
2.5 oz. (71 g) lactose powder (0 min.)
7.6 AAU Galena hops (60 min.)
(0.63 oz./18 g at 12% alpha acids)
½ tsp. yeast nutrient (15 min.)
5 oz. (142 g) dark roast coffee (medium grind)
White Labs WLP023 (Burton Ale) or Wyeast 1275 (Thames Valley Ale) yeast
¾ cup corn sugar (if priming)

Step by Step

This is a single step infusion mash. Mix the crushed grain with 4 gallons (15.2 L) of 168 °F (76 °C) water to stabilize at 154 °F (68 °C) for 60 minutes. Sparge slowly with 175 °F (79 °C) water. Collect approximately 6 gallons (23 L) of wort runoff to boil for 60 minutes. Add the hops as the wort comes to a boil and the yeast nutrients with 15 minutes remaining. Stir in the lactose at the end of the boil.

Cool the wort to 75 °F (24 °C).

Pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Transfer to a carboy, avoiding any splashing to prevent aerating the beer. Let the beer condition for 1 week. One day prior to bottling or kegging make a coffee extract by steeping the ground dark roast coffee in 24 oz. (0.7 L) of cold water and refrigerate. Strain out the coffee grounds, add your extract and then bottle or keg.

SWEETWATER TAVERN'S GIDDYUP STOUT CLONE

(5 gallons/19 L, extract with grains)

OG = 1.046 FG = 1.014

IBU = 28 SRM = 32 ABV = 4.3%

Ingredients

3.3 lbs. (1.5 kg) Briess golden light liquid malt extract
1 lb. 10 oz. (0.73 kg) light dried malt extract
11 oz. (0.31 kg) crystal malt (60 °L)
6 oz. (0.17 kg) chocolate malt
6 oz. (0.17 kg) roast barley
3 oz. (85 g) Carafa® III malt
2.5 oz. (71 g) lactose powder (0 min.)

7.6 AAU Galena hops (60 min.)
 (0.63 oz./18 g at 12% alpha acids)
 ½ tsp. yeast nutrient (15 min.)
 5 oz. (142 g) dark roast coffee (medium grind)
 White Labs WLP023 (Burton Ale) or
 Wyeast 1275 (Thames Valley Ale)
 yeast
 ¾ cup corn sugar (if priming)

Step by Step

Steep the crushed grain in 3 gallons (11.4 L) of water at 154 °F (68 °C) for 30 minutes. Remove grains from the wort, add the dried malt extract and bring to a boil. Add the hops and boil for 60 minutes. With 15 minutes remaining, add the yeast nutrients and the liquid malt extract. Dissolve in the lactose at the end of the boil. Now add the wort to 2 gallons (7.6 L) of cold water in the sanitized fermenter and top off with cold water up to 5 gallons (19 L).

Cool the wort to 75 °F (24 °C). Pitch your yeast and aerate the wort heavily. Allow the beer to cool to 68 °F (20 °C). Hold at that temperature until fermentation is complete. Let the beer condition for 1 week. One day prior to bottling or kegging make a coffee extract by steeping the ground dark roast coffee in 24 oz. (0.7 L) of cold water and refrigerate. Strain out the coffee grounds, add your extract and then bottle or keg.

TERRAPIN BEER CO.'S WAKE-N-BAKE COFFEE OATMEAL IMPERIAL STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.086 FG = 1.020

IBU = 50 SRM = 49 ABV = 9.4%

Ingredients

12.25 lbs. (5.6 kg) UK 2-row pale malt
 1.75 lbs. (0.79 kg) flaked oats
 1.75 lbs. (0.79 kg) flaked barley
 12 oz. (0.34 kg) Simpsons chocolate malt
 12 oz. (0.34 kg) Thomas Fawcett dark crystal malt (85 °L)
 9 oz. (0.26 kg) Simpsons roasted barley
 9 oz. (0.26 kg) Simpsons black malt
 ½ tsp. yeast nutrient (15 min.)
 ½ Whirlfloc® tablet (15 min.)
 9.6 AAU Nugget pellet hops (60 min.)
 (0.75 oz./21 g at 12.8% alpha acids)
 7.7 AAU Nugget pellet hops (30 min.)

(0.6 oz./17 g at 12.8% alpha acids)
 2.5 oz. (71 kg) Jittery Joe's "Terrapin Wake-n-Bake" Coffee (coarsely ground)
 Wyeast 1272 (American Ale II) or
 White Labs WLP051 (California Ale V) yeast
 3.5 oz. (99 g) corn sugar (if priming)

Step by Step

Mill the grains (flaked oats and flaked barley don't need to be milled) and mix with 6 gallons (23 L) of 165 °F (74 °C) strike water to reach a mash temperature of 150 °F (66 °C). Hold at this temperature for 60 minutes. Vorlauf until your runnings are clear. Sparge the grains with 3.5 gallons (13.25 L) of 169 °F (76 °C) water until 7 gallons (26.5 L) of 1.065 gravity wort is collected in your boil kettle. Boil for 75 minutes adding hops and other additions at times indicated.

After the boil, turn off the heat and whirlpool the kettle by gently stirring with a mash paddle for two minutes and then let rest for an additional eight minutes to achieve a 10-minute flame out steep. Chill the wort to 66 °F (19 °C) and transfer to your fermenter. Aerate the wort with pure oxygen for 90 seconds and pitch yeast. Recommended pitch rate is 294 billion yeast cells, which can be obtained by using either 1 packet after making a 1.5-L stir plate starter, 1 packet after making a 4.4-L non-stir plate starter, or 3 vials/packets without a starter.

Allow fermentation to free rise up to 68 °F (20 °C) and hold until the beer reaches 60% apparent attenuation (1.033 specific gravity) then ramp fermentation temperature up to 72 °F (22 °C) and hold at this temperature for an additional 14 days. Slowly crash cool the fermenter down at the rate of 5 °F (-15 °C) per day for about 8 days or until you reach 32 °F (0 °C). Hold at this temperature for an additional 5-7 days. Then rack the beer onto the coarsely ground coffee. After 48 hours on coffee, transfer the beer into a keg or bottling bucket. Carbonate to 2.2 volumes of CO₂ and enjoy!

TERRAPIN BEER CO.'S WAKE-N-BAKE COFFEE OATMEAL IMPERIAL STOUT CLONE

(5 gallons/19 L, partial mash)

OG = 1.086 FG = 1.020

IBU = 50 SRM = 49 ABV = 9.4%

Ingredients

6 lbs. (2.7 kg) golden light liquid malt extract
 3.5 lbs. (1.6 kg) UK 2-row pale malt
 1.75 lbs. (0.79 kg) flaked oats
 1.75 lbs. (0.79 kg) flaked barley
 12 oz. (0.34 kg) Thomas Fawcett dark crystal malt (85 °L)
 12 oz. (0.34 kg) Simpsons chocolate malt
 9 oz. (0.26 kg) Simpsons roasted barley
 9 oz. (0.26 kg) Simpsons black malt
 ½ tsp. yeast nutrient (15 min.)
 ½ Whirlfloc® tablet (15 min.)
 16 AAU Nugget pellet hops (60 min.)
 (1.25 oz./35 g at 12.8% alpha acids)
 2.5 oz. (71 kg) Jittery Joe's "Terrapin Wake-n-Bake" Coffee (coarsely ground)
 Wyeast 1272 (American Ale II) or
 White Labs WLP051 (California Ale V) yeast
 3.5 oz. (99 g) corn sugar (if priming)

Step by Step

You will need either a small mash tun or 2 large brew-in-a-bag or paint strainer bags to make this partial mash work. Place the crushed 2-row pale malt, flaked oats, and flaked barley in the first bag. Add the grain bag to 3 gallons (7.57 L) of 160 °F (71 °C) water to reach a mash temperature of 150 °F (66 °C). Hold at this temperature for 45 minutes, then add the crystal, chocolate, barley and black malt in the second bag. Hold 15 minutes. Next remove both grain bags, and wash them with 2 gallons (7.6 L) hot water, then top your kettle up with enough pre-heated water to reach a total pre-boil volume of 7 gallons (26.5 L), and turn your heat source back on. Once you reach a boil, add your malt extract and hops. Boil for 75 minutes, adding hops, yeast nutrient, and kettle finings at times indicated. After the boil, turn off the heat then whirlpool the kettle by gently stirring with a mash paddle for two minutes and then let rest for an addition eight minutes to achieve a 10 minute flame out steep. Next, chill the wort to 66 °F (19 °C) and transfer into a clean and sanitized fermenter. Aerate the wort with pure oxygen for 90 seconds and pitch yeast.

Follow the yeast pitching and fermentation instructions from the all-grain version.

Tips for Success:

If opting for North American 2-row malt in the all-grain recipe, which generally has more beta amylase than most British 2-row malt, increase your mash temperature to 154 °F (68 °C) to properly limit yeast attenuation.

There are many ways to extract the coffee flavors in this beer. The above step by step outlines Terrapin Beer Co.'s method. Here we've outlined some other ways to go about adding coffee to your beer.

Coffee Addition Method #1: The 212 °F (100 °C) whirlpool addition. If you worry about sanitation (and don't mind extra acidity from hot brewing the coffee), steep coarse ground Jittery Joe's "Wake-n-Bake Blend" Coffee after flameout for 30 min., about 2 oz. (56 g) would suffice.

Coffee addition method #2: The 200 °F (93 °C) whirlpool addition. If you wish to minimize acidity derived from the coffee whirlpool addition, consider allowing your wort to chill down just below 200 °F (93 °C) before adding the coarse ground coffee.

Coffee addition method #3: Dry beaming. Essentially you dry hop with 2 oz. (56 g) of coarse ground coffee in a sanitized hop or grain bag for 48-72 hours before packaging.

Coffee addition method #4: Cold extract coffee addition. To further reduce acidity, consider making a cold extract coffee and adding it during packaging. Soak 4 oz. (112 g) of Jittery Joe's "Wake-n-Bake Blend" Coffee in 16 fl. oz. (473 mL) of pre-boiled and then chilled water for 12 hours. Strain the coffee through a regular kitchen strainer into a container. After the bulk of the coffee extract has been collected, place the strainer over a bowl for a few hours to get every last drop. Add coffee extract to packaging (bottling bucket or keg). For a well rounded and pungent coffee profile, I recommend utilizing a combination of methods #2, #3, and #4.

Due to the high gravity and use of ground coffee in this beer, the extended fermentation and cold conditioning period outlined earlier is beneficial. It will allow the yeast ample time to ferment the beer

completely, reabsorb diacetyl properly, and allow any residual ground coffee to completely settle before packaging which helps to avoid creating nucleation points that could lead to "gushers" if bottling.

YOUNG'S DOUBLE CHOCOLATE STOUT CLONE

(5 gallons/19 L, all-grain)

OG = 1.053 FG = 1.013

IBU = 28 SRM = 35 ABV = 5.2%

Ingredients

7 lbs. (3.2 kg) pale ale malt
11 oz. (0.31 kg) crystal malt (60 °L)
13 oz. (0.37 kg) chocolate malt (450 °L)
12 oz. (0.34 kg) lactose sugar (15 min.)
8 oz. (0.23 kg) invert sugar #3 (70 °L) (15 min.)
4 oz. (0.11 kg) cane sugar (15 min.)
6 oz. (0.17 kg) cocoa powder (15 min.)
7 AAU Fuggle hops (60 min.) (1.4 oz./40 g at 5% alpha acids)
1.25 AAU Kent Golding hops (15 min.) (0.25 oz./7 g at 5% alpha acids)
1 tsp. Irish moss (15 min.)
¼ tsp. yeast nutrients (15 min.)
0.33 oz. (9.4 g) natural chocolate extract (secondary)
Wyeast 1318 (London Ale III) yeast (1.5 quart/~1.5 L yeast starter)
¾ cup corn sugar (if priming)

Step by Step

Heat 10.5 quarts (9.9 L) of water to 164 °F (73 °C). Stir in crushed grains and mash at 153 °F (67 °C) for 60 minutes. Collect 6.5 gallons (24.6 L) of wort and boil for a total of 90 minutes. Add hops at times indicated in ingredient list. Add sugars, Irish moss, and yeast nutrients with 15 minutes remaining in the boil. Dissolve cocoa in hot water and also add with 15 minutes remaining.

After the boil is complete, cool wort, aerate, and pitch yeast. Ferment at 68 °F (20 °C). Add chocolate extract in secondary. Bottle or keg as normal.

YOUNG'S DOUBLE CHOCOLATE STOUT CLONE

(5 gallons/19 L, extract with grains)

OG = 1.053 FG = 1.013

IBU = 28 SRM = 35 ABV = 5.2%

Ingredients

5 lbs. (1.9 kg) Maris Otter liquid malt extract (late addition)
11 oz. (0.31 kg) crystal malt (60 °L)
13 oz. (0.37 kg) chocolate malt (450 °L)
12 oz. (0.34 kg) lactose sugar (15 min.)
8 oz. (0.23 kg) invert sugar #3 (70 °L) (15 min.)
4 oz. (0.11 kg) cane sugar (15 min.)
6 oz. (0.17 kg) cocoa powder (15 min.)
7 AAU Fuggle hops (60 min.) (1.4 oz./40 g at 5% alpha acids)
1.25 AAU Kent Golding hops (15 min.) (0.25 oz./7 g at 5% alpha acids)
1 tsp. Irish moss (15 min.)
¼ tsp. yeast nutrients (15 min.)
0.33 oz. (9.4 g) natural chocolate extract (secondary)
Wyeast 1318 (London Ale III) yeast (1.5 quart/~1.5 L yeast starter)
¾ cup corn sugar (if priming)

Step by Step

Place crushed grains in a nylon steeping bag. Heat 3 quarts (2.8 L) water to 164 °F (73 °C) and steep grains for 45 minutes at 153 °F (67 °C). Rinse grain bag with 1.5 quarts (~1.5 L) of water at 170 °F (77 °C). Add half of the liquid malt extract and water to make 3 gallons (11 L) of wort and bring to a boil.

Boil 60 minutes, adding hops according to the ingredient list. With 15 minutes left, turn off heat and stir in the rest of the liquid malt extract. Add sugars, cocoa powder (dissolved in hot water), Irish moss, and yeast nutrients and resume boiling.

After the boil is complete, cool wort, transfer to fermenter and top up to 5 gallons (19 L). Aerate and pitch yeast. Ferment at 68 °F (20 °C). Add chocolate extract in secondary. Bottle or keg as normal.

Tips for Success:

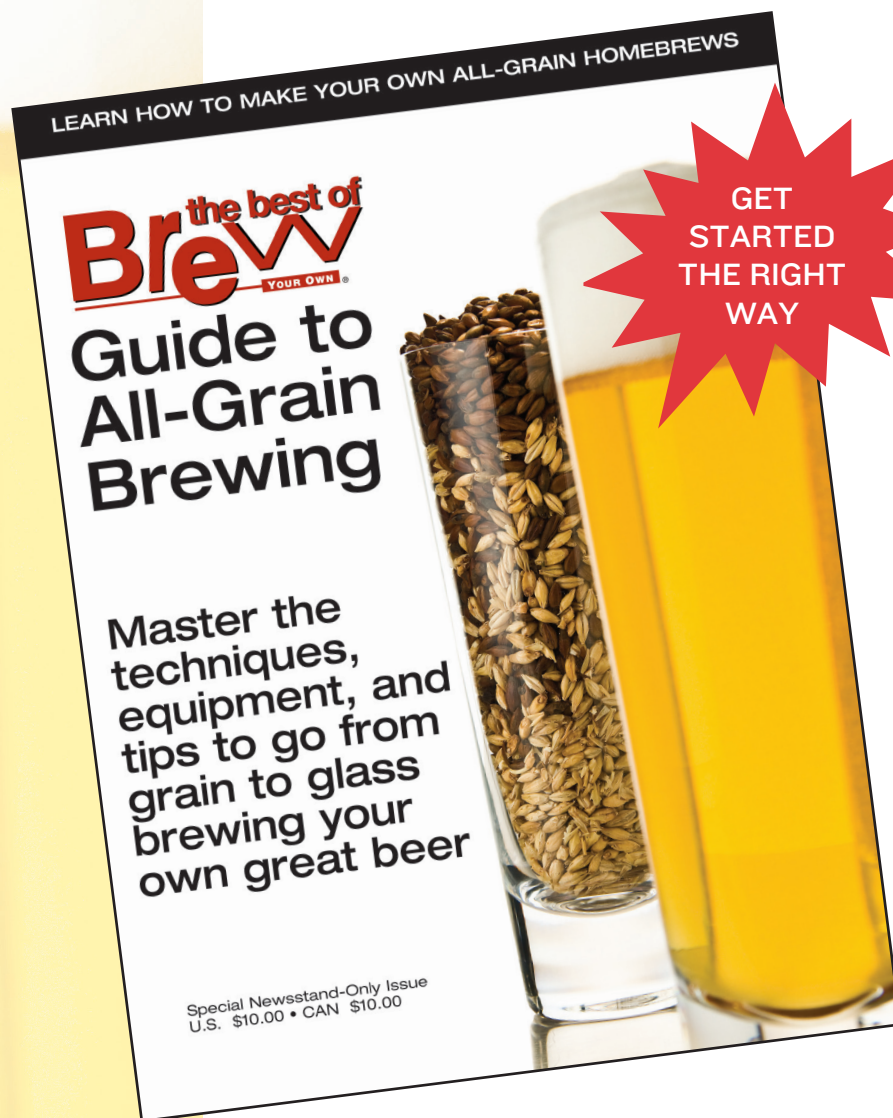
Young's website claims that their Double Chocolate Stout is made from pale, crystal, and chocolate malts, with a "special blend of sugars." This stout is fairly sweet and I suspect the brewery probably adds sugar before bottling and then pasteurizes the beer. I went with a bit of lactose, which brewer's yeast cannot ferment, instead. Young's also adds "real dark chocolate and chocolate essence" to this beer. You can add more or less chocolate extract to taste.

Learn How to Make Your Own All-Grain Homebrews



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