



15 New England IPA Clone Recipes



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THE ALCHEMIST'S FOCAL BANGER CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.063 FG = 1.012
IBU = 80 SRM = 5 ABV = 7%

While the recipe for Focal Banger has been known to change over the years, the Citra®/Mosaic® hop combo has been one thing that hasn't changed. Pilsner malt has been known to be part of the grain bill, so feel free to substitute in some for the Pearl malt.

INGREDIENTS

12 lbs. (4.3 kg) Thomas Fawcett Pearl malt
1.2 lbs. (0.54 kg) corn sugar (15 min.)
4 mL HopShot™ (60 min.)
1.5 oz. (43 g) Citra® hops (0 min.)
2.5 oz. (71 g) Mosaic® hops (0 min.)
2.5 oz. (71 g) Citra® hops (dry hop)
1.5 oz. (43 g) Mosaic® hops (dry hop)
The Yeast Bay (Vermont Ale), East Coast Yeast ECY29
(North East Ale), or Omega Yeast Labs
¾ cups (150 g) dextrose (if priming)

STEP BY STEP

This recipe is designed for homebrewers to achieve 5.5 gallons (21 L) wort in their fermenter on brew day. This will help offset the loss of volume to the heavy hopping rate of this beer. Build your water profile, starting with either very soft water or RO water. Target a water profile of 250:100 PPM sulfate:chloride. Crush the malt and add to 4 gallons (15 L) strike water to achieve a stable mash temperature at 154 °F (68 °C). Hold at this temperature for 60 minutes. Raise to mash out at 168 °F (76 °C) and begin to vorlauf.

Collect about 7 gallons (26.5 L) of wort in your kettle and bring to a boil. Boil for 60 minutes, adding the HopShot™ addition after the wort comes to a boil and the corn sugar with 15 minutes left in the boil. After you turn off the heat, add the final addition of hops, then stir the wort and let settle for 30 minutes with the lid on before cooling to yeast pitching temperature. Ferment at 68 °F (20 °C). As fermentation nears completion, transfer the beer to a keg and add the dry hops and attach a spunding valve. Let the beer sit on the hops for 3–4 days, then transfer to a serving keg or bottling bucket. Bottle with priming sugar or force carbonate the serving keg to 2.4 volumes CO₂.

THE ALCHEMIST'S FOCAL BANGER CLONE (EXTRACT WITH GRAINS)

(5 gallons/19 L, extract with grains)
OG = 1.063 FG = 1.012
IBU = 80 SRM = 5 ABV = 7%

INGREDIENTS

6.6 lbs. (3 kg) Maris Otter liquid malt extract
1.2 lbs. (0.54 kg) Pilsen dried malt extract
1.2 lbs. (0.54 kg) corn sugar (15 min.)
4 mL HopShot™ (60 min.)
1.5 oz. (43 g) Citra® hops (0 min.)
2.5 oz. (71 g) Mosaic® hops (0 min.)
2.5 oz. (71 g) Citra® hops (dry hop)
1.5 oz. (43 g) Mosaic® hops (dry hop)
The Yeast Bay (Vermont Ale), East Coast Yeast ECY29
(North East Ale), or Omega Yeast Labs
(DIPA Ale), or LalBrew New England Ale yeast
¾ cups (150 g) dextrose (if priming)

STEP BY STEP

Heat 5 gallons (19 L) soft or reverse osmosis water up to boil. As soon as the water begins to boil, remove from heat and stir in the liquid and dried malt extracts. Stir until all the extract is dissolved then return the wort to a boil. Boil for 60 minutes, adding the HopShot™ addition after the wort comes to a boil and the corn sugar with 15 minutes left in the boil. After you turn off the heat, add the final addition of hops, then stir the wort and let settle for 30 minutes with the lid on before cooling to yeast pitching temperature. Ferment at 68 °F (20 °C). As fermentation nears completion, transfer the beer to a keg and add the dry hops and attach a spunding valve. Let the beer sit on the hops for 3–4 days, then transfer to a serving keg or bottling bucket. Bottle with priming sugar or force carbonate the serving keg to 2.4 volumes CO₂.

TIPS FOR SUCCESS:

One of the secrets to John Kimmich's success at brewing these beers is making sure to minimize the amount of dissolved oxygen (DO) in the beer. To do the same at home, be cautious when racking. You can also purge your receiving vessel with CO₂ before transfer to minimize exposure to oxygen when you're moving the beer from vessel to vessel.

Also, minimize oxygen exposure when you add the dry hops. To do this, try vacuum packing your hops before adding them to your beer, or better yet, vacuum pack them and then gas flush them with CO₂.

THE ALCHEMIST'S HEADY TOPPER CLONE (ALL-GRAIN)

(5.5 gallons/21 L, all-grain)
OG = 1.076 FG = 1.014
IBU = 100+ SRM = 6 ABV = 8%

The Alchemist specializes in fresh, unfiltered IPAs, and Heady Topper is the brewery's crown jewel. Featuring a proprietary blend of six hops, this beer boasts a complex and unique bouquet of hop flavor without any astringent bitterness.

INGREDIENTS

15 lb. (6.8 kg) British 2-row pale malt
6 oz. (170 g) Caravienne malt
1 lb. (0.45 kg) turbinado sugar (10 mins.)
7 AAU Magnum hops (60 min.)
(0.5 oz./14 g at 14% alpha acids)
13 AAU Simcoe® hops (30 min.)
(1 oz./28 g at 13% alpha acids)
5.75 AAU Cascade hops (0 min.)
(1 oz./28 g at 5.75% alpha acids)
8.6 AAU Apollo hops (0 min.)
(0.5 oz./14 g at 17.2% alpha acids)
13 AAU Simcoe® hops (0 min.)
(1 oz./28 g at 13% alpha acids)
10.5 AAU Centennial hops (0 min.)
(1 oz./28 g at 10.5% alpha acids)
7 AAU Columbus hops (0 min.)
(0.5 oz./14 g at 14% alpha acids)
1 oz. (28 g) Chinook hops (primary dry hop)
1 oz. (28 g) Apollo hops (primary dry hop)
1 oz. (28 g) Simcoe® hops (primary dry hop)
1.25 oz. (35 g) Centennial hops (secondary dry hop)
1.25 oz. (35 g) Simcoe® hops (secondary dry hop)
1 Tbsp. polyclar
The Yeast Bay (Vermont Ale), East Coast Yeast ECY29
(North East Ale), White Labs WLP095 (Burlington Ale), or
Omega Yeast Labs (DIPA Ale) yeast (as a 3 L yeast starter)
⅓ cup (130 g) dextrose (if priming)

STEP BY STEP

Mash the grains at 153°F (67°C). Mash out, vorlauf, and then sparge at 170°F (77°C). Collect at least 6.5 gallons (25 L) of wort. Boil for 60 minutes, adding the hops as instructed. After the boil is complete, begin a whirlpool in the kettle and let the knockout hops rest in the hot wort for at least 30 minutes before chilling.

Chill the wort, pitch the yeast, and ferment at 68°F (20°C) for 1 week. After final gravity has been achieved, add a clarifying agent such as polyclar. Three days later, add your first set of dry hops to the primary fermenter. After 7 days, rack the beer off the dry hops and yeast cake into a keg or secondary fermenter. Purge with carbon dioxide if available. Add the second set of dry hops to the keg or secondary fermenter. After 5 days, add the priming sugar and bottle or keg.

THE ALCHEMIST'S HEADY TOPPER CLONE (EXTRACT WITH GRAINS)

(5.5 gallons/21 L, extract with grains)
OG = 1.076 FG = 1.014
IBU = 100+ SRM = 6 ABV = 8%

INGREDIENTS

9.9 pounds (4.5 kg) light liquid malt extract
1 pound (0.45 kg) extra light dried malt extract
6 oz. (170 g) Caravienne malt
1 lb. (0.45 kg) turbinado sugar (10 mins.)
7 AAU Magnum hops (60 min.)
(0.5 oz./14 g at 14% alpha acids)
13 AAU Simcoe® hops (30 min.)
(1 oz./28 g at 13% alpha acids)
5.75 AAU Cascade hops (0 min.)
(1 oz./28 g at 5.75% alpha acids)
8.6 AAU Apollo hops (0 min.)
(0.5 oz./14 g at 17.2% alpha acids)
13 AAU Simcoe® hops (0 min.)
(1 oz./28 g at 13% alpha acids)
10.5 AAU Centennial hops (0 min.)
(1 oz./28 g at 10.5% alpha acids)
7 AAU Columbus hops (0 min.)
(0.5 oz./14 g at 14% alpha acids)
1 oz. (28 g) Chinook hops (primary dry hop)
1 oz. (28 g) Apollo hops (primary dry hop)
1 oz. (28 g) Simcoe® hops (primary dry hop)
1.25 oz. (35 g) Centennial hops (secondary dry hop)
1.25 oz. (35 g) Simcoe® hops (secondary dry hop)
1 Tbsp. polyclar
The Yeast Bay (Vermont Ale), East Coast Yeast ECY29
(North East Ale), White Labs WLP095 (Burlington Ale), or
Omega Yeast Labs (DIPA Ale) yeast (as a 3 L yeast starter)
⅓ cup (130 g) dextrose (if priming)

STEP BY STEP

Steep the crushed grains in 2 quarts (1.9 L) water for 20 minutes at 155°F (68°C). Rinse the grain with hot water and add water to achieve 6.5 gallons (25 L) in your kettle. Turn off the heat, add the malt extract to your kettle, and stir until fully dissolved. Turn the heat back on and boil for 60 minutes, adding the hops as instructed. After the boil is complete, begin a whirlpool in the kettle and let the knockout hops rest in the hot wort for at least 30 minutes before chilling. Follow the remaining portion of the all-grain recipe.

Chill the wort, pitch the yeast, and ferment at 68°F (20°C) for 1 week. After final gravity has been achieved, add a clarifying agent such as polyclar. Three days later, add your first set of dry hops to the primary fermenter. After 7 days, rack the beer off the dry hops and yeast cake into a keg or secondary fermenter. Purge with carbon dioxide if available. Add the second set of dry hops to the keg or secondary fermenter. After 5 days, add the priming sugar and bottle or keg.

DREKKER BREWING CO.'S HYPER SCREAM CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.076 FG = 1.013
IBU = 25 SRM = 6 ABV = 8.4%

This imperial New England-style IPA has a silky mouthfeel from generous oat and spelt additions, and a massive hop aroma due to massive late-hop additions and kveik yeast.

INGREDIENTS

9 lbs. (4.1 kg) Rahr 2-row barley malt
3.25 lbs. (1.5 kg) Crisp naked oat malt
2.25 lbs. (1 kg) Weyermann Carafoam® malt
1.25 lbs. (0.57 kg) Weyermann spelt (dinkel) malt
0.25 lb. (113 g) Simpsons Golden Naked Oats™ malt
3 AAU Magnum hops (60 min.) (0.25 oz./7 g at 12% alpha acids)
12 AAU Vic Secret hops (0 min.) (0.75 oz./21 g at 16% alpha acids)
9 AAU Citra® hops (0 min.) (0.75 oz./21 g at 12% alpha acids)
1.5 oz. (42 g) Vic Secret hops (hopstand)
1.5 oz. (42 g) Citra® hops (hopstand)
3.75 oz. (106 g) Vic Secret hops (1st dry hop)
3.75 oz. (106 g) Citra® hops (1st dry hop)
1.75 oz. (50 g) Vic Secret hops (2nd dry hop)
1.75 oz. (50 g) Citra® hops (2nd dry hop)
Omega Yeast OYL061 (Voss Kveik), Imperial Yeast A43 (Loki), or
LalBrew Voss Kveik
¾ cups corn sugar (if priming)

STEP BY STEP

This is a single step infusion mash at 152 °F (67 °C) for 60 minutes. Vorlauf and sparge as usual to collect 6.5 gallons (24.6 L) of wort. Boil for 60 minutes, adding the first hop addition as the wort comes to a boil. Add the flameout hops at the end of the boil. Create a whirlpool and let settle for 10 minutes. Then cool the wort to 175 °F (79 °C) and add the hopstand addition and whirlpool for 10 minutes before cooling down to 80 °F (27 °C).

Aerate, pitch yeast, and let temperature free rise to 100 °F (38 °C) during fermentation. The first dry hop additions should be added at about 24 hours at peak of fermentation. The second dry hop additions should be added on day five. Keep the beer on the hops for three more days then package as normal. Kegging is preferred.

DREKKER BREWING CO.'S HYPER SCREAM CLONE (PARTIAL MASH)

(5 gallons/19 L, partial mash)
OG = 1.076 FG = 1.013
IBU = 25 SRM = 6 ABV = 8.4%

This imperial New England-style IPA has a silky mouthfeel from generous oat and spelt additions, and a massive hop aroma due to massive late-hop additions and kveik yeast.

INGREDIENTS

5 lbs. (2.27 kg) extra light dried malt extract
3.25 lbs. (1.5 kg) Crisp naked oat malt
2 lbs. (0.9 kg) Weyermann Carafoam® malt
1.25 lbs. (0.57 kg) Weyermann spelt (dinkel) malt
0.25 lb. (113 g) Simpsons Golden Naked Oats™ malt
3 AAU Magnum hops (60 min.) (0.25 oz./7 g at 12% alpha acids)
12 AAU Vic Secret hops (0 min.) (0.75 oz./21 g at 16% alpha acids)
9 AAU Citra® hops (0 min.) (0.75 oz./21 g at 12% alpha acids)
1.5 oz. (42 g) Vic Secret hops (hopstand)
1.5 oz. (42 g) Citra® hops (hopstand)
3.75 oz. (106 g) Vic Secret hops (1st dry hop)
3.75 oz. (106 g) Citra® hops (1st dry hop)
1.75 oz. (50 g) Vic Secret hops (2nd dry hop)
1.75 oz. (50 g) Citra® hops (2nd dry hop)
Omega Yeast OYL061 (Voss Kveik), Imperial Yeast A43 (Loki), or
LalBrew Voss Kveik
¾ cups corn sugar (if priming)

STEP BY STEP

Place all the crushed grains in a large grain bag. Heat 9.5 qts. (9 L) of water to 167 °F (75 °C) then submerge the grains into the water. Mix well and the mash should settle at 152 °F (67 °C). Try to maintain this temperature for 60 minutes. Remove the grain bag and rinse the grains with 2 gallons (7.6 L) of hot water. Top off the kettle to 6 gallons (23 L) then stir in the dried malt extract. Once all the extract is dissolved, bring wort up to a boil. Boil for 60 minutes, adding the first hop addition as the wort comes to a boil. Add the flameout hops at the end of the boil. Create a whirlpool and let settle for 10 minutes. Then cool the wort to 175 °F (79 °C) and add the hopstand addition and whirlpool for 10 minutes before continuing to cool down to 80 °F (27 °C).

Aerate, pitch yeast, and let temperature free rise to 100 °F (38 °C) during fermentation. The first dry hop additions should be added at about 24 hours at peak of fermentation. The second dry hop additions should be added on day five. Keep the beer on the hops for three more days then package as normal. Kegging is preferred.

**FAIR STATE BREWING COOPERATIVE
& ARBEITER BREWING CO.'S BIBBIDY
DRIPPIDY HOP CLONE
(ALL-GRAIN)**

**(5 gallons/19 L, all-grain)
OG = 1.059 FG = 1.010
IBU = 59 SRM = 4 ABV = 6.6%**

Some may call this recipe a “zero IBU IPA” as no hops are added in the boil. Of course, whirlpool and dip hop additions will contribute both bitterness and IBUs when measured using a spectrophotometer. This recipe is unique in that it employs the dip hopping technique.

INGREDIENTS

8.5 lbs. (3.9 kg) Rahr North Star Pils™ malt
3 lbs. (1.4 kg) Rahr white wheat malt
1.25 lbs. (0.57 kg) Simpsons malted oats
1 lb. (0.45 kg) rice hulls
3 oz. (85 g) Strata® hops (0 min.)
3 oz. (85 g) Strata® hops (dip hop)
2 oz. (57 g) Mosaic® Cryo hops (dry hop 1)
2 oz. (57 g) Citra® Cryo hops (dry hop 1)
3 oz. (85 g) Strata® hops (dry hop 2)
½ tsp. yeast nutrient (10 min.)
White Labs WLP013 (London Ale) or Wyeast 1028 (London Ale)
or SafAle S-04 yeast
¾ cup corn sugar (if priming)

STEP BY STEP

Mill the grains and dough-in targeting a mash of around 1.25 quarts of water to 1 pound of grain (2.6 L/kg) and a mash temperature of 150 °F (66 °C). While waiting for the run-off and boil to begin add 3 oz. (85 g) of Strata® “dip hops” directly to a clean, sanitized fermenter.

Total boil time is 60 minutes. No hops will be added until post-boil. With 30 minutes left in the boil, run un-hopped wort to the fermentation vessel with the Strata® hops at 170 °F (77 °C) until the hops are aggressively submerged (~0.5–1 gallon/2–4 L). Seal the fermenter with an airlock as soon as possible. Continue to boil the remaining wort. At 60 minutes turn off the heat and pitch your flameout addition and whirlpool for 20 minutes.

Chill the wort to lower than the target fermentation temperature. Once all the wort is in the fermenter, adjust the wort volume as needed to 5.5 gallons (21 L) and the wort temperature to 68 °F (20 °C), then aerate thoroughly and pitch yeast. Pitch rate is 1,000,000 cells per mL per degree Plato. Ferment at this temperature.

Track the gravity daily and at approximately 1.018 specific gravity dry hop with 2 oz. (57 g) each Mosaic® Cryo pellets and Citra® Cryo pellets.

Forty-eight hours later add 3 oz. (85 g) Strata® as the second dry hop. Track gravity until the beer is at terminal gravity. Chill the beer and carbonate the beer to around 2.5 volumes of CO₂.

**FAIR STATE BREWING COOPERATIVE
& ARBEITER BREWING CO.'S BIBBIDY
DRIPPIDY HOP CLONE
(PARTIAL MASH)**

**(5 gallons/19 L, partial mash)
OG = 1.059 FG = 1.010
IBU = 59 SRM = 4 ABV = 6.6%**

INGREDIENTS

5 lbs. (2.3 kg) Pilsen dried malt extract
1 lbs. (0.45 kg) wheat dried malt extract
1.25 lbs. (0.57 kg) Rahr white wheat malt
1.25 lbs. (0.57 kg) Simpsons malted oats
3 oz. (85 g) Strata® hops (0 min.)
3 oz. (85 g) Strata® hops (dip hop)
2 oz. (57 g) Mosaic® Cryo hops (dry hop 1)
2 oz. (57 g) Citra® Cryo hops (dry hop 1)
3 oz. (85 g) Strata® hops (dry hop 2)
½ tsp. yeast nutrient (10 min.)
White Labs WLP013 (London Ale) or Wyeast 1028 (London Ale)
or SafAle S-04 yeast
¾ cup corn sugar (if priming)

STEP BY STEP

Heat one gallon (3.8 L) of water in a large stockpot. Crush the grains and place in a large muslin bag. When water reaches 162 °F (72 °C), submerge the grains and stir to make sure there are no dough balls. The mash temperature should stabilize around 150 °F (66 °C). Try to maintain this temperature if possible. After 60 minutes, remove the grain bag and place in a large colander. Wash the grains with 1 gallon (3.8 L) of hot water, collecting the runoff. If you can, bring the volume up to 5 gallons (19 L) and add the dried malt extract off heat. Stir until completely dissolved then turn on heat and bring wort to a boil. Add 3 oz. (85 g) of Strata® “dip hops” directly to a clean, sanitized fermentation vessel.

Total boil time is 60 minutes. No hops will be added until post-boil. With 30 minutes left in the boil, run un-hopped wort to the fermentation vessel with the Strata® hops at 170 °F (77 °C) until the hops are aggressively submerged (~0.5–1 gallon/2–4 L). Seal the fermenter with an airlock as soon as possible. Continue to boil the remaining wort. At 60 minutes turn off the heat and pitch your flameout addition and whirlpool for 20 minutes.

Chill the wort to lower than the target fermentation temperature. Once all the wort is in the fermenter, adjust the wort volume as needed to 5.5 gallons (21 L) and the wort temperature to 68 °F (20 °C), then aerate thoroughly and pitch yeast. Pitch rate is 1,000,000 cells per mL per degree Plato. Ferment at this temperature.

Track the gravity daily and at approximately 1.018 specific gravity dry hop with 2 oz. (57 g) each Mosaic® Cryo pellets and Citra® Cryo pellets.

Forty-eight hours later add 3 oz. (85 g) Strata® as the second dry hop. Track gravity until the beer is at terminal gravity. Chill the beer and carbonate the beer to around 2.5 volumes of CO₂.

FOUNDATION BREWING CO.'S EPIPHANY CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.073 FG = 1.015
IBU = 85 SRM = 7 ABV = 8.1%

Foundation Head Brewer and Co-Owner Joel Mahaffey says, "The characteristics that I feel are the hallmarks of a Maine IPA are a soft body, modest but solid malt backbone, low bitterness (but sufficient to avoid cloying sweetness), and a dominating hop flavor and aroma profile. Characteristics should lean towards fruit, be it citrus or tropical, but notes of pine and resin are also perfectly acceptable."

INGREDIENTS

7.25 lbs. (3.3 kg) Pilsner malt
5.5 lbs. (2.5 kg) 2-row pale malt
2 lbs. (0.91 kg) Golden Naked Oats® malt
1 lb. (0.45 kg) corn sugar (10 min.)
7.25 AAU Columbus hops (first wort hop)
(0.5 oz./14 g at 14.5% alpha acids)
7 AAU Cascade hops (10 min.)
(1 oz./28 g at 7% alpha acids)
14.5 AAU Columbus hops (10 min.)
(1 oz./21 g at 14.5% alpha acids)
0.5 oz. (14 g) Columbus hops (0 min.)
0.5 oz. (14 g) Cascade hops (0 min.)
1 oz. (28 g) Citra® hops (0 min.)
0.75 oz. (21 g) Mosaic® hops (0 min.)
0.75 oz. (21 g) Ella hops (0 min.)
2 oz. (57 g) Citra® hops (dry hop)
1 oz. (28 g) Mosaic® hops (dry hop)
1 oz. (28 g) Ella hops (dry hop)
Wyeast 1318 (London Ale III) or White Labs WLP013
(London Ale) or Wyeast 1028 (London Ale) yeast
¾ cups corn sugar (if priming)

STEP BY STEP

This recipe is designed for homebrewers to achieve 5.5 gallons (21 L) wort in their fermenter on brew day. This will help offset the loss of volume to the heavy hopping rate of this beer.

Build your water profile to achieve a 100:100 PPM sulfate:chloride profile. Crush the malt and add to 5 gallons (19 L) strike water to achieve a stable mash temperature at 154 °F (68 °C). After 60 minutes, begin to lauter. Collect approximately 7 gallons (26.5 L) of wort in the kettle. Boil for 60 minutes, adding the first hop addition and corn sugar with 10 minutes left in the boil. After the boil, remove from heat then add the second hop addition. Stir the wort, then let settle for 30 minutes before cooling to yeast pitching temperature. Ferment at 68 °F (20 °C). As the krausen begins to fall, typically day 4 or 5, add the dry hops and let the beer sit on the hops for 3 days. Bottle with priming sugar or keg and force carbonate to 2.4 volumes CO₂.

FOUNDATION BREWING CO.'S EPIPHANY CLONE (PARTIAL MASH)

(5 gallons/19 L, partial mash)
OG = 1.073 FG = 1.015
IBU = 85 SRM = 6 ABV = 8.1%

INGREDIENTS

4 lbs. (1.8 kg) Pilsen dried malt extract
3.3 lbs. (1.5 kg) light liquid malt extract
2 lbs. (0.91 kg) Golden Naked Oats® malt
1.3 lbs. (0.6 kg) corn sugar (10 min.)
7.25 AAU Columbus hops (first wort hop)
(0.5 oz./14 g at 14.5% alpha acids)
7 AAU Cascade hops (10 min.)
(1 oz./28 g at 7% alpha acids)
14.5 AAU Columbus hops (10 min.)
(1 oz./21 g at 14.5% alpha acids)
0.5 oz. (14 g) Columbus hops (0 min.)
0.5 oz. (14 g) Cascade hops (0 min.)
1 oz. (28 g) Citra® hops (0 min.)
0.75 oz. (21 g) Mosaic® hops (0 min.)
0.75 oz. (21 g) Ella hops (0 min.)
2 oz. (57 g) Citra® hops (dry hop)
1 oz. (28 g) Mosaic® hops (dry hop)
1 oz. (28 g) Ella hops (dry hop)
Wyeast 1318 (London Ale III) or White Labs WLP013
(London Ale) or Wyeast 1028 (London Ale) yeast
¾ cups corn sugar (if priming)

STEP BY STEP

Place the crushed malt in a large muslin bag. Soak the grains in 1.5 gallons (6 L) water at 154 °F (68 °C) for 60 minutes. Remove the grain bag and wash with 2 qts. (2 L) hot water. Top off the kettle to 6 gallons (23 L) and heat up to boil. As soon as the water begins to boil, remove from heat and stir in the dried and liquid malt extracts. Stir until all the extract is dissolved then return the wort to a boil.

Boil for 60 minutes, adding the first hop and corn sugar with 10 minutes left in the boil. After the boil, remove from heat then add the second hop addition. Stir the wort, then let settle for 30 minutes before cooling to yeast pitching temperature. Ferment at 68 °F (20 °C). As the krausen begins to fall, typically day 4 or 5, add the dry hops and let the beer sit on the hops for 3 days. Bottle with priming sugar or keg and force carbonate to 2.4 volumes CO₂.

HILL FARMSTEAD BREWERY'S ABNER CLONE (ALL-GRAIN)

(5.5 gallons/21 L, all-grain)
OG = 1.077 FG = 1.014
IBU = 100+ SRM = 7 ABV = 8%

Part of Hill Farmstead's "Ancestral Series," Abner was named for Brewmaster Shaun Hill's great-grandfather, who once owned the land where the brewery now stands. Described as "aromatic and flowery, bursting with notes of citrus and pine," Abner is just one of the reasons why so many beer lovers make the pilgrimage to Vermont's Northeast Kingdom to visit the brewery each year.

INGREDIENTS

15 lbs. (6.8 kg) 2-row pale malt
0.75 lbs. (0.34 kg) caramalt (37 °L)
1 lb. (0.45 kg) corn sugar (10 min.)
15.5 AAU Warrior® hops (60 min.)
(1 oz./28 g at 15.5% alpha acids)
10.5 AAU Columbus hops (30 min.)
(0.75 oz./21 g at 14% alpha acids)
13 AAU Simcoe® hops (knockout)
(1 oz./28 g at 13% alpha acids)
10 AAU Centennial hops (knockout)
(1 oz./28 g at 10% alpha acids)
6.5 AAU Chinook hops (knockout)
(0.5 oz./14 g at 13% alpha acids)
3 oz. (84 g) Simcoe® hops (dry hop)
2 oz. (56 g) Chinook hops (dry hop)
1 Tb. Polyclar
Wyeast 1028 (London Ale) or White Labs WLP013
(London Ale) or LalBrew Nottingham yeast
¾ cup corn sugar (if bottling)

STEP BY STEP

This is a single infusion mash. Achieve a target mash temperature of 149 °F (65 °C). Hold for 45 minutes, then proceed to mash out or begin lautering phase. Collect about 7 gallons (27 L) in your kettle. Boil for 75 minutes, adding the hops as instructed. After boil is complete, begin a whirlpool in the kettle and let the knockout hops rest in the hot wort for at least 30 minutes before chilling. Target pitching rate at 1.0 million cells/ milliliter/degrees Plato (~2 L starter). Ferment at 68 °F (20 °C) for one week. Add a fining agent to clear yeast from beer. Add the dry hops and let the beer sit on the dry hops for an additional seven to ten days. You are now ready to bottle or keg.

HILL FARMSTEAD BREWERY'S ABNER CLONE (EXTRACT WITH GRAINS)

(5.5 gallons/21 L, extract w/grains)
OG = 1.077 FG = 1.014
IBU = 100+ SRM = 7 ABV = 8%

INGREDIENTS

9.9 lbs. (4.5 kg) light liquid extract
0.5 lbs. (0.23 kg) extra light dried malt extract
0.75 lbs. (0.34 kg) caramalt (37 °L)
1 lb. (0.45 kg) corn sugar (10 min.)
15.5 AAU Warrior® hops (60 min.)
(1 oz./28 g at 15.5% alpha acids)
10.5 AAU Columbus hops (30 min.)
(0.75 oz./21 g at 14% alpha acids)
13 AAU Simcoe® hops (knockout)
(1 oz./28 g at 13% alpha acids)
10 AAU Centennial hops (knockout)
(1 oz./28 g at 10% alpha acids)
6.5 AAU Chinook hops (knockout)
(0.5 oz./14 g at 13% alpha acids)
3 oz. (84 g) Simcoe® hops (dry hop)
2 oz. (56 g) Chinook hops (dry hop)
1 Tb. Polyclar
Wyeast 1028 (London Ale) or White Labs WLP013
(London Ale) or LalBrew Nottingham yeast
¾ cup corn sugar (if bottling)

STEP BY STEP

Steep the crushed caramalt in 2 qts. (1.9 L) water at 155 °F (68 °C) for 20 minutes. Top off kettle to 7 gallons (27 L). Off heat, add the liquid and dried malt extract and bring to a boil. Boil for 75 minutes. Follow the remainder of the all-grain recipe.

TIPS FOR SUCCESS:

The mouthfeel of this beer is incredible, which may mean that chlorides are one key to Shaun Hill's success at Hill Farmstead Brewery. To try and duplicate this in your homebrewery, start off with soft water and make sure the chloride level in your brewing water is at least 50 ppm to help boost the mouthfeel. Try experimenting with different chloride levels in test batches until you get the one you like. Also, don't forget sulfate levels. A good starting point is 50 ppm with the addition of gypsum salt. No matter what type of brewer you are, carbon filtering your water or treating it overnight with Campden tablets is recommended, especially if your water comes from a town or city source that is chlorinated (as opposed to well or spring water). Adding one Campden tablet in 20 gallons (76 L) of water (left overnight) will rid your water of chlorine compounds that can lead to off flavors in your beer.

When transferring your finished beer, make sure you are either flushing the receiving vessel with CO₂ or using a closed transfer system. This is because hop compounds are especially sensitive to oxidation and their flavors diminish quickly when exposed to oxygen.

JESTER KING & YAZOO BREWING CO.'S A PALE GREEN HORSE CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.063 FG = 1.011
IBU = 68 SRM = 5 ABV = 6.7%

INGREDIENTS

9.5 lbs. (4.3 kg) Blacklands Pale Moon pale ale malt
1.25 lbs. (0.57 kg) flaked oats
1.25 lbs. (0.57 kg) hard red wheat
0.66 lb. (300 g) oat groats (hulled, unmalted oats)
5 oz. (113 g) dextrine malt
5 oz. (113 g) Munich malt (20 °L)
8.4 AAU Mosaic® hops (first wort hop)
(0.7 oz./20 g at 12% alpha acids)
4.9 AAU Galaxy™ hops (first wort hop)
(0.35 oz./10 g at 14% alpha acids)
10.8 AAU Citra® hops (0 min.)
(0.9 oz./21 g at 12% alpha acids)
15.4 AAU Galaxy™ hops (0 min.)
(1.1 oz./31 g at 14% alpha acids)
13.2 AAU Mosaic® hops (0 min.)
(1.1 oz./31 g at 12% alpha acids)
0.7 oz. (20 g) Citra® hops (hopstand)
0.7 oz. (20 g) Galaxy™ hops (hopstand)
0.7 oz. (20 g) Mosaic® hops (hopstand)
0.7 oz. (20 g) Strata® hops (1st dry hop)
0.9 oz. (26 g) Citra® hops (1st dry hop)
0.7 oz. (20 g) Galaxy™ hops (1st dry hop)
0.25 oz. (7 g) Mosaic® hops (1st dry hop)
0.9 oz. (26 g) Strata® hops (2nd dry hop)
0.7 oz. (20 g) Citra® hops (2nd dry hop)
0.5 oz. (14 g) Galaxy™ hops (2nd dry hop)
0.5 oz. (14 g) Mosaic® hops (2nd dry hop)
0.9 oz. (26 g) Strata® hops (3rd dry hop)
0.7 oz. (20 g) Citra® hops (3rd dry hop)
0.5 oz. (14 g) Galaxy™ hops (3rd dry hop)
0.6 oz. (17 g) Mosaic® hops (3rd dry hop)
Omega Yeast OYL091 (Hornindal Kveik), Imperial Yeast A46
(Bartleby), or White Labs WLP521 (Hornindal Kveik Ale)
¾ cups corn sugar (if priming)

STEP BY STEP

This is a single step infusion mash at 154 °F (68 °C) for 60 minutes. Vorlauf and sparge as usual to collect 6.5 gallons (24.6 L) of wort. Add the hops to the kettle during the sparge phase. Boil for 60 minutes. Add the flameout hops at the end of the boil. Create a whirlpool and let settle for 20 minutes. Then cool the wort to 175 °F (79 °C) and add the hopstand addition and whirlpool for 20 minutes before continuing to cool down to 80 °F (27 °C). Aerate, pitch yeast, and let temperature free rise to 100 °F (38 °C) during fermentation. The first dry hop additions should be added on day three of fermentation. The second dry hop addition should be added on day seven. The final dry hop addition should be added on day 10. Keep the beer on the hops for three more days then package as normal. Kegging is preferred.

JESTER KING & YAZOO BREWING CO.'S A PALE GREEN HORSE CLONE (PARTIAL MASH)

(5 gallons/19 L, partial mash)
OG = 1.063 FG = 1.011
IBU = 68 SRM = 5 ABV = 6.7%

A NEIPA with loads of dry hops across three rounds of additions and fermented with kveik (Hornindal) yeast at temperatures up to 100 °F (38 °C).

INGREDIENTS

4.4 lbs. (2 kg) extra light dried malt extract
1.5 lbs. (0.68 kg) 2-row pale malt
1.25 lbs. (0.57 kg) flaked oats
1.25 lbs. (0.57 kg) hard red wheat
0.66 lb. (300 g) oat groats (hulled, unmalted oats)
5 oz. (113 g) dextrine malt
5 oz. (113 g) Munich malt (20 °L)
8.4 AAU Mosaic® hops (first wort hop)
(0.7 oz./20 g at 12% alpha acids)
4.9 AAU Galaxy™ hops (first wort hop)
(0.35 oz./10 g at 14% alpha acids)
10.8 AAU Citra® hops (0 min.)
(0.9 oz./21 g at 12% alpha acids)
15.4 AAU Galaxy™ hops (0 min.)
(1.1 oz./31 g at 14% alpha acids)
13.2 AAU Mosaic® hops (0 min.)
(1.1 oz./31 g at 12% alpha acids)
0.7 oz. (20 g) Citra® hops (hopstand)
0.7 oz. (20 g) Galaxy™ hops (hopstand)
0.7 oz. (20 g) Mosaic® hops (hopstand)
0.7 oz. (20 g) Strata® hops (1st dry hop)
0.9 oz. (26 g) Citra® hops (1st dry hop)
0.7 oz. (20 g) Galaxy™ hops (1st dry hop)
0.25 oz. (7 g) Mosaic® hops (1st dry hop)
0.9 oz. (26 g) Strata® hops (2nd dry hop)
0.7 oz. (20 g) Citra® hops (2nd dry hop)
0.5 oz. (14 g) Galaxy™ hops (2nd dry hop)
0.5 oz. (14 g) Mosaic® hops (2nd dry hop)
0.9 oz. (26 g) Strata® hops (3rd dry hop)
0.7 oz. (20 g) Citra® hops (3rd dry hop)
0.5 oz. (14 g) Galaxy™ hops (3rd dry hop)
0.6 oz. (17 g) Mosaic® hops (3rd dry hop)
Omega Yeast OYL091 (Hornindal Kveik), Imperial Yeast A46
(Bartleby), or White Labs WLP521 (Hornindal Kveik Ale)
¾ cups corn sugar (if priming)

STEP BY STEP

Place all the crushed grains in a large grain bag. Heat 8 qts. (7.6 L) of water to 169 °F (76 °C) then submerge the grains into the water. Mix well and the mash should settle at 154 °F (68 °C). Try to maintain this temperature for 60 minutes. Remove the grain bag and rinse the grains with 8 qts. (7.6 L) of hot water. Top off the kettle to 6 gallons (23 L) then stir in the dried malt extract. Once all the extract is dissolved, add the first wort hops and bring wort up to a boil. Boil for 60 minutes. Follow the remainder of the all-grain recipe instructions.

KNOTTED ROOT BREWING COMPANY'S PERPETUALLY UNIMPRESSED CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.076 FG = 1.015
IBU = 80 SRM = 7 ABV = 8.1%

Perpetually Unimpressed is a double dry hopped, unfiltered double IPA whose flavors focus on one of the Head Brewer's favorite hops: Nelson Sauvin from New Zealand.

INGREDIENTS

6 lbs. (2.7 kg) Pilsner malt
5.5 lbs. (2.5 kg) Simpsons Golden Promise pale ale malt
1.6 lbs. (0.71 kg) flaked oats
1 lb. (0.45 kg) Rahr white wheat malt
1 lb. (0.45 kg) Golden Naked Oats® malt
7 oz. (200 g) honey malt
4 oz. (113 g) acidulated malt
6 oz. (170 g) Citra® hops (hop stand)
10 oz. (283 g) Nelson Sauvin hops (dry hop #1)
10 oz. (283 g) Nelson Sauvin hops (dry hop #2)
Wyeast 1318 (London Ale III) yeast or Omega OYL-052
(Conan) or LalBrew New England yeast
¾ cup corn sugar (if priming)

STEP BY STEP

Mill the grains, then mix with 4.9 gallons (18.5 L) of 167 °F (75 °C) strike water to achieve a single infusion rest temperature of 152 °F (67 °C). At this time add 50 ppm of gypsum. Hold at this temperature for 60 minutes. Mashout to 170 °F (77 °C) if desired.

Vorlauf until your runnings are clear before directing them to your boil kettle. Batch or fly sparge the mash to obtain 6.5 gallons (25 L) of wort. Pre-boil pH should 5.2 to 5.4. Boil for 90 minutes.

After the boil, add 150 ppm of calcium chloride, cool the wort to approximately 190 °F (88 °C), and add the Citra® hops. Whirlpool for 40 minutes before further chilling the wort to 68 °F (20 °C). Pitch yeast. Maintain rough fermentation temperature but allow for a free rise to 72 °F (22 °C) by the end of primary fermentation for this beer.

Once primary fermentation is complete, rack the beer off the trub or drop the cone at ambient temperature. Add the dry hops sequentially as indicated and let them extract for 1 day each. During this time shake the carboy or degas with CO₂ to increase the rate of hop oil extraction. Cold crash for 24 hours before bottling or kegging the beer. Carbonate to approximately 2.3–2.4 volumes.

KNOTTED ROOT BREWING COMPANY'S PERPETUALLY UNIMPRESSED CLONE (EXTRACT WITH GRAINS)

(5 gallons/19 L, extract with grains)
OG = 1.076 FG = 1.015
IBU = 80 SRM = 7 ABV = 8.1%

INGREDIENTS

3.3 lbs. (1.50 kg) Pilsner dried malt extract
3 lbs. (1.36 kg) pale ale dried malt extract
0.75 lb. (0.34 kg) wheat dried malt extract
1.6 lbs. (0.71 kg) flaked oats
1 lb. (0.45 kg) Golden Naked Oats® malt
0.5 lb. (0.23 kg) honey malt
½ tsp. 88% lactic acid
6 oz. (170 g) Citra® hops (hop stand)
10 oz. (283 g) Nelson Sauvin hops (dry hop #1)
10 oz. (283 g) Nelson Sauvin hops (dry hop #2)
Wyeast 1318 (London Ale III) yeast or Omega OYL-052
(Conan) or LalBrew New England yeast
¾ cup corn sugar (if priming)

STEP BY STEP

Bring 5.5 gallons (21 L) of water to roughly 150 °F (66 °C). Steep both types of oats and the honey malt for 15 min before removing and draining. Add all the types of DME, with stirring, before heating to a boil. Add the lactic acid, then boil for 15 minutes.

After the boil, add 150 ppm of calcium chloride, cool the wort to approximately 190 °F (88 °C), and add the Citra® hops. Whirlpool for 40 minutes before further chilling the wort to 68 °F (20 °C). Pitch yeast. Maintain rough fermentation temperature but allow for a free rise to 72 °F (22 °C) by the end of primary fermentation for this beer.

Once primary fermentation is complete, rack the beer off the trub or drop the cone at ambient temperature. Add the dry hops sequentially as indicated and let them extract for 1 day each. During this time shake the carboy or degas with CO₂ to increase the rate of hop oil extraction. Cold crash for 24 hours before bottling or kegging the beer. Carbonate to approximately 2.3–2.4 volumes.

TIPS FOR SUCCESS:

With such a fruity, hop-forward beer, you could correctly assume that water chemistry is quite important. For the all-grain brewer, shoot for a 3:1 ratio of chloride-to-sulfate prior to pitching. Unfortunately, for the extract brewer, you're at the whims of the maltster. If you're feeling adventurous, add 50–100 ppm of calcium chloride to tilt the balance to chlorides. Personally, I'd err on the side of caution as too little will still make the batch drinkable but too much may cause it to leave a "chemical" taste on the tongue.

The other major consideration to concern yourself with is the yeast pitch rate. With an OG = 1.076, I'd recommend a fresh starter. A strong, healthy fermentation will afford a well-attenuated beer with proper biotransformation of hop oils.

LAWSON'S FINEST LIQUIDS' DOUBLE SUNSHINE CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.074 FG = 1.013
IBU = 100+ SRM = 6 ABV = 8%

Double Sunshine is a sought-after "Vermont-style" Double IPA. It's packed with juicy tropical fruit flavors and bright herbal aromas thanks to the abundance of US-grown Citra® hops.

INGREDIENTS

9.5 lbs. (4.3 kg) 2-row pale ale malt
2.5 lbs. (1.1 kg) Vienna-style malt
1 lb. (0.45 kg) flaked oats
12 oz. (0.34 kg) carapilsen malt (7–9 °L)
6 oz. (0.17 kg) caramunich-type malt (20–30 °L)
1 lb. (0.45 kg) corn sugar (10 mins.)
10.5 AAU Columbus hops (60 min.)
(0.75 oz./21 g at 14% alpha acids)
12.5 AAU Citra® hops (20 mins.)
(1 oz./21 g at 12.5% alpha acids)
37.5 AAU Citra® hops (5 mins.)
(3 oz./84 g at 12.5% alpha acids)
37.5 AAU Citra® hops (knockout)
(3 oz./84 g at 12.5% alpha acids)
3 oz. (84 g) Citra® hops (dry hop)
SafAle US-05 yeast or LalBrew BRY-097 or
Wyeast 1056 (American Ale) or White Labs WLP001
(California Ale).
¾ cup corn sugar (if bottling)

STEP BY STEP

This is a single infusion mash. (If your brew setup is prone to a stuck mash then a handful of rice hulls in the mash may help. Rice hulls are a great tool when using moderate to high percentages of gummy grains such as flaked oats.) Achieve a target mash temperature of 152 °F (67 °C). Hold for 45 minutes, then raise mash to mash out temperature and begin lautering phase. Collect enough wort to boil 6.5 gallons (25 L). Boil for 60 minutes, adding the hops as instructed in the ingredients list and the corn sugar with 10 minutes left in the boil. After boil is complete, begin a whirlpool in the kettle and let the knockout hops rest in the hot wort for at least 30 minutes before chilling.

Chill the wort rapidly to 68 °F (20 °C). Ferment at 68 °F (18 °C) for one week. Cool to 55 °F (13 °C) to settle yeast. Dump the yeast from the bottom of fermenter, or rack to a clean, sanitized vessel. Add the dry hops and let the beer sit on for an additional four to seven days at 55–57 °F (13–14 °C). Rack into a keg, or into bottles with priming sugar.

LAWSON'S FINEST LIQUIDS' DOUBLE SUNSHINE CLONE (EXTRACT WITH GRAINS)

(5 gallons/19 L, extract with grains)
OG = 1.074 FG = 1.013
IBU = 100+ SRM = 6 ABV = 8%

INGREDIENTS

6.6 lbs. (3 kg) light liquid malt extract
2.5 lbs. (1.1 kg) Vienna-style malt
1 lb. (0.45 kg) flaked oats
6 oz. (0.17 kg) caramunich type malt (20–30 °L)
1.5 lb. (0.68 kg) corn sugar (10 mins)
10.5 AAU Columbus hops (60 min.)
(0.75 oz./21 g at 14% alpha acids)
12.5 AAU Citra® hops (20 mins.) (1 oz./21 g at 12.5% alpha acids)
37.5 AAU Citra® hops (5 mins.) (3 oz./84 g at 12.5% alpha acids)
37.5 AAU Citra® hops (knockout) (3 oz./84 g at 12.5% alpha acids)
3 oz. (84 g) Citra® hops (dry hop)
SafAle US-05 yeast or LalBrew BRY-097 or
Wyeast 1056 (American Ale) or White Labs WLP001
(California Ale).
¾ cup corn sugar (if bottling)

STEP BY STEP

Mix the crushed Vienna, flaked oats and caramunich type malts into 2 gallons (7.6 L) water to achieve a mash temperature of 152 °F (67 °C) then hold at this temperature for 45 minutes. Rinse the grains with 2.5 qts (2.4 L) hot water, add liquid extract and bring to a boil. Top off kettle to 6.5 gallons (25 L). Boil for 60 minutes. Follow the remainder of the all-grain recipe.

TIPS FOR SUCCESS:

Having a strong and healthy fermentation as well as following good practices during downstream beer handling are key to trying to replicate a beer like Double Sunshine IPA. Be sure to run a clean fermentation and you also need to make sure oxygen has no chance for uptake post fermentation.

Make a yeast starter a day ahead of your brew day to generate a healthy population of yeast before pitching. Hop compounds are also especially sensitive to oxidation and their flavors diminish quickly when exposed to oxygen, so make sure you are either flushing the receiving vessel with CO₂ or using a closed transfer system when you transfer your beer from vessel to vessel.

Sean Lawson advises homebrewers to, "determine if you have hard or soft water. I recommend John Palmer's *How to Brew* for reference. If you have hard water, then cut by at least half with distilled or reverse osmosis (RO). With soft water, a basic guideline for IPAs would be to add equal parts gypsum and calcium chloride to bring total calcium content over 50 ppm." If you homebrew with a water source that is chlorinated, one Campden tablet in 20 gallons (76 L) of water (left overnight) will rid your water of chlorine compounds that can lead to off flavors in your beer.

LUPULIN BREWING CO.'S SOPHISTRY 06 CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.072 FG = 1.015
IBU = 27* SRM = 5 ABV = 7.5%

"Our Sophistry series of IPAs is our way of playing around with new hops, techniques, and combinations to find fun new flavors," said Matt Schiller, Head of Brewing Operations at Lupulin Brewing, in Big Lake, Minnesota. For the sixth Sophistry release, Lupulin focused on brand new hops Lotus™, Altus™, and Sultana™, in combination with Citra®, Lemondrop™, and Sabro™. "We were looking for a nice citrus/tropical effect with a kiss of vanilla and we got it."

INGREDIENTS

5.4 lbs. (2.9 kg) 2-row pale malt
4.2 lbs. (1.9 kg) Golden Promise pale ale malt
1.6 lbs. (0.73 kg) flaked wheat
1.6 lbs. (0.73 kg) flaked oats
0.8 lb. (0.36 kg) maltodextrin (5 min.)
0.45 oz. (13 g) lemon peel (5 min.)
9 AAU Citra® hops (30 min.) (0.75 oz./21 g at 12% alpha acids)
30 AAU Lotus™ hops (hop stand) (1.9 oz./54 g at 16% alpha acids)
30 AAU Altus™ hops (hop stand) (1.9 oz./54 g at 16% alpha acids)
14 AAU Sultana™ hops (hop stand) (1 oz./28 g at 14% alpha acids)
25 AAU Citra® Cryo hops (hop stand) (1 oz./28 g at 25% alpha acids)
3.2 oz. (90 g) Citra® hops (dry hop)
1.9 oz. (54 g) Lemondrop™ hops (dry hop)
3.2 oz. (90 g) Sabro™ hops (dry hop)
Omega OYL-11 (British Ale V), or Wyeast 1318 (London Ale III),
or LalBrew Verdant IPA yeast
½ cup corn sugar (if priming)

STEP BY STEP

This is a single infusion mash. Begin by heating 20.5 qts. (19.5 L), this is 1.5 qts. strike water per pound of grain (3 L/kg), up to 164 °F (73 °C). Mix with grains to achieve a stable mash temperature at 150 °F (66 °C). After 60 minutes begin recirculation. Sparge with enough water to collect 6.5 gallons (24.6 L) of wort in your kettle. Boil wort for 60 minutes, adding the first addition of hops with 30 minutes remaining. With 5 minutes remaining in the boil add the lemon peel, maltodextrin, and a kettle fining agent such as Whirlfloc or Irish moss if desired.

After the boil, cool to 170 °F (77 °C). Add hop stand additions, stir the kettle to create a vigorous whirlpool, cover, and let stand 15 minutes before cooling to yeast-pitching temp.

Pitch yeast and begin fermentation at 66 °F (19 °C) and ramp to 72 °F (21 °C) throughout fermentation. When fermentation is complete, add the dry hops for three days then transfer off the hops. Cold crash to near freezing, but only if you have a vessel in which positive CO₂ pressure can be placed on the beer. You don't want any suckback of oxygen into your vessel. After two days, the beer is ready. You may want to transfer to a serving keg if dispensing on draft. Bottle and prime or force carbonate to 2.4 volumes CO₂.

LUPULIN BREWING CO.'S SOPHISTRY 06 CLONE (PARTIAL MASH)

(5 gallons/19 L, partial mash)
OG = 1.072 FG = 1.015
IBU = 27 SRM = 5 ABV = 7.5%

INGREDIENTS

3.9 lbs. (1.8 kg) extra light dried malt extract
3.8 lbs. (1.7 kg) Golden Promise pale ale malt
1.6 lbs. (0.73 kg) flaked wheat
1.6 lbs. (0.73 kg) flaked oats
0.5 lb. (0.23 kg) maltodextrin
0.45 oz. (13 g) lemon peel (5 min.)
9 AAU Citra® hops (30 min.)
(0.75 oz./21 g at 12% alpha acids)
30 AAU Lotus™ hops (hop stand)
(1.9 oz./54 g at 16% alpha acids)
30 AAU Altus™ hops (hop stand)
(1.9 oz./54 g at 16% alpha acids)
14 AAU Sultana™ hops (hop stand)
(1 oz./28 g at 14% alpha acids)
25 AAU Citra® Cryo hops (hop stand)
(1 oz./28 g at 25% alpha acids)
3.2 oz. (90 g) Citra® hops (dry hop)
1.9 oz. (54 g) Lemondrop™ hops (dry hop)
3.2 oz. (90 g) Sabro™ hops (dry hop)
Omega OYL-11 (British Ale V), or
Wyeast 1318 (London Ale III), or LalBrew Verdant IPA yeast
½ cup corn sugar (if priming)

STEP BY STEP

In a large muslin bag, add the crushed pale ale malt, flaked oats, and flaked wheat. Heat 10.5 qts. (10 L) of water to 164 °F (73 °C) and submerge the grains in the water. Mash at around 150 °F (66 °C) for 60 minutes. Remove the grains and place in a large colander. Slowly wash the grains with 1 gallon (4 L) of hot water. Bring volume up to 6.5 gallons (24.6 L) and stir in the malt extract. Once the extract is fully dissolved, bring the wort up to a boil. Total boil time is 60 minutes. Follow the remainder of the steps in the all-grain recipe.

TIPS FOR SUCCESS:

Beers heavily dry hopped can differ greatly from the calculated IBU levels that a beer calculator may provide. While our calculator says that this beer will contain 27 IBUs, when measured on a spectrophotometer, this beer actually reads around 50–60 IBUs.

SAPWOOD CELLARS' CHEATER X CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.079 FG = 1.026
IBU = 80+ SRM = 4.5 ABV = 7.1%

"This is the culmination of what we learned during our first year of brewing hazy IPAs. It utilizes two of our favorite 'cheater' hops for dry hopping for an intense aroma of passion fruit, gooseberry, and all sorts of citrus," says Co-Owner/Brewer Michael Tonsmeire.

INGREDIENTS

8.5 lbs. (3.9 kg) Rahr Standard 2-row malt
4 lbs. (1.8 kg) Weyermann Pilsner malt
1.5 lbs. (0.68 kg) Crisp naked malted oats
1.5 lbs. (0.68 kg) Rahr white wheat malt
0.75 lb. (0.34 kg) BestMalz chit malt
1 oz. (28 g) Comet hops (mash)
3 oz. (85 g) Simcoe® hops (0 min.)
2.5 oz. (71 g) Galaxy™ hops (0 min.)
5.5 oz. (156 g) Nelson Sauvin® hops (dry hop)
5.5 oz. (156 g) Galaxy™ hops (dry hop)
RVA 132 (Manchester Ale), Wyeast 1318 (London Ale III),
Imperial Yeast A38 (Juice), or LalBrew New England yeast
 $\frac{2}{3}$ cup corn sugar (if priming)

STEP BY STEP

Mash at 156 °F (69 °C) with the mash hops added at the outset. Adjust brewing water by adding calcium chloride to achieve 150 ppm chloride and gypsum to achieve 150 ppm sulfate. If needed, add phosphoric acid to achieve a mash pH of 5.2. Collect wort and boil for 60 minutes, adding hops as noted. When the boil is complete add the whirlpool hops without cooling the wort, and allow to sit for 45 minutes before force chilling to 66 °F (19 °C). Transfer the chilled wort to an oversized fermenter. Aerate the wort well as this yeast is sensitive to under-oxygenating, then pitch the yeast. Ferment at 68 °F (20 °C).

Once the gravity stabilizes, chill to 55 °F (13 °C). Transfer to a purged keg with dry hops placed in screens. Dry hop for three days at 55 °F (13 °C), agitating once or twice daily for 30 seconds. Transfer off the hops to a serving keg. Pressurize to reach 2.4 volumes of CO₂.

SAPWOOD CELLARS' CHEATER X CLONE (PARTIAL MASH)

(5 gallons/19 L, partial mash)
OG = 1.079 FG = 1.026
IBU = 80+ SRM = 4.5 ABV = 7.1%

INGREDIENTS

4 lbs. (1.8 kg) extra light dried malt extract
2 lbs. (0.91 kg) Pilsen dried malt extract
1.6 lbs. (0.73 kg) wheat dried malt extract
1.5 lbs. (0.68 kg) Crisp naked malted oats
0.75 lb. (0.34 kg) BestMalz chit malt
1 oz. (28 g) Comet hops (mash)
3 oz. (85 g) Simcoe® hops (0 min.)
2.5 oz. (71 g) Galaxy™ hops (0 min.)
5.5 oz. (156 g) Nelson Sauvin® hops (dry hop)
5.5 oz. (156 g) Galaxy™ hops (dry hop)
RVA 132 (Manchester Ale), Wyeast 1318 (London Ale III),
Imperial Yeast A38 (Juice), or LalBrew New England yeast
 $\frac{2}{3}$ cup corn sugar (if priming)

STEP BY STEP

In a muslin bag, heat the crushed oats, chit malt, and mash hops in 4 qts. (4 L) of water to 164 °F (73 °C). Mash at around 156 °F (69 °C) for 45–60 minutes. When the mash is done, remove the grains and wash with 1 gallon (4 L) of hot water. Bring volume up to 6 gallons (23 L) and stir in the malt extract.

Boil for 60 minutes, adding hops as noted. When the boil is complete add the whirlpool hops without cooling the wort, and allow to sit for 45 minutes before force chilling to 66 °F (19 °C). Transfer the chilled wort to an oversized fermenter. Aerate the wort well as this yeast is sensitive to under-oxygenating, then pitch the yeast. Ferment at 68 °F (20 °C).

Once the gravity stabilizes, chill to 55 °F (13 °C). Transfer to a purged keg with dry hops placed in screens. Dry hop for three days at 55 °F (13 °C), agitating once or twice daily for 30 seconds. Transfer off the hops to a serving keg. Pressurize to reach 2.4 volumes of CO₂.

**TREE HOUSE BREWING CO.'S
JULIUS CLONE
(ALL-GRAIN)**

(5 gallons/19 L, all-grain)
OG = 1.061 FG = 1.014
IBU = 75 SRM = 8 ABV = 6.5%

This New England-style IPA is bursting with American hops filled with mango, passionfruit, and citrus.

INGREDIENTS

11 lbs. (5 kg) UK pale ale malt
1 lb. (0.45 kg) oat malt
5 oz. (142 g) honey malt
5 oz. (142 g) Carapils® malt
5 oz. (142 g) flaked oats
8 oz. (227 g) turbinado sugar (15 min.)
8 mL HopShot™ (60 min.)
2 oz. (57 g) Citra® hops (hop stand)
2 oz. (57 g) Mosaic® hops (hop stand)
1 oz. (28 g) Simcoe® hops (hop stand)
2.5 oz. (71 g) Citra® hops (dry hop)
2 oz. (57 g) Mosaic® hops (dry hop)
1.5 oz. (43 g) Simcoe® hops (dry hop)
Wyeast 1318 (London Ale III) or White Labs WLP022
(Essex Ale) or Wyeast 1335 (British Ale II) yeast
¾ cups corn sugar (if priming)

STEP BY STEP

This recipe is designed for homebrewers to achieve 5.5 gallons (21 L) wort in their fermenter on brew day. This will help offset the loss of volume to the heavy hopping rate of this beer.

Build your water profile to achieve a 100:200 PPM sulfate:chloride profile. Crush the malt and add to 4.5 gallons (17 L) strike water to achieve a stable mash temperature at 154 °F (68 °C). After 60 minutes, begin to laut. Collect 7 gallons (26.5 L) of wort in the kettle. Boil for 60 minutes, adding the hop extract after the wort comes to a boil and the turbinado sugar with 15 minutes left in the boil. After the boil, chill the wort down to 180 °F (82 °C) and then add the hop stand addition. Stir the wort, then let settle for 30 minutes before cooling to yeast pitching temperature. Ferment at 68 °F (20 °C). As the kräusen begins to fall, typically day 4 or 5, add the dry hops and spunding valve. Let the beer sit on the hops for 3 days. Bottle with priming sugar or keg and force carbonate to 2.4 volumes of CO₂.

**TREE HOUSE BREWING CO.'S
JULIUS CLONE
(PARTIAL MASH)**

(5 gallons/19 L, partial mash)
OG = 1.061 FG = 1.014
IBU = 75 SRM = 8 ABV = 6.5%

INGREDIENTS

6 (2.7 kg) extra light dried malt extract
1 lb. (0.45 kg) oat malt
5 oz. (142 g) honey malt
5 oz. (142 g) Carapils® malt
5 oz. (142 g) flaked oats
8 oz. (227 g) turbinado sugar (15 min.)
8 mL HopShot™ (60 min.)
2 oz. (57 g) Citra® hops (hop stand)
2 oz. (57 g) Mosaic® hops (hop stand)
1 oz. (28 g) Simcoe® hops (hop stand)
2.5 oz. (71 g) Citra® hops (dry hop)
2 oz. (57 g) Mosaic® hops (dry hop)
1.5 oz. (43 g) Simcoe® hops (dry hop)
Wyeast 1318 (London Ale III) or White Labs WLP022
(Essex Ale) or Wyeast 1335 (British Ale II) yeast
¾ cups corn sugar (if priming)

STEP BY STEP

Place the crushed malt in a muslin bag. Steep the grains in 1 gallon (4 L) water at 154 °F (68 °C) for 45 minutes. Remove the grain bag and wash with 2 qts. (2 L) hot water. Top off the kettle to 5 gallons and heat up to boil. As soon as the water begins to boil, remove from heat and stir in the dried malt extract. Stir until all the extract is dissolved then return the wort to a boil. Boil for 60 minutes, adding the first hop addition just after the wort comes to a boil and a second hop addition with 10 minutes left in the boil. After the boil, chill the wort down to 180 °F (82 °C) and then add the hop stand addition. Stir the wort, then let sit for 30 minutes before cooling to yeast pitching temperature. Top off the fermenter to 5.5 gallons (21 L). Ferment at 68 °F (20 °C). As the kräusen begins to fall, typically day 4 or 5, add the dry hops and spunding valve. Let the beer sit on the hops for 3 days.

Bottle with priming sugar or keg and force carbonate to 2.4 volumes of CO₂.

TRILLIUM BREWING CO.'S SLEEPER ST. CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.066 FG = 1.013
IBU = 75 SRM = 5 ABV = 7.2%

Trillium brewers describe this beer on their website as, "Opaque orange-yellow in color with floral aromas of lime zest, grapefruit peel, pine sap, and candied orange."

INGREDIENTS

11 lbs. (5 kg) 2-row pale malt
1.5 lbs. (0.68 kg) wheat malt
12 oz. (0.34 kg) dextrin malt
4 oz. (113 g) pale crystal malt (15 °L)
12 oz. (0.34 kg) dextrose sugar
14 AAU Columbus hops (60 min.)
(1 oz./28 g at 14% alpha acids)
14 AAU Columbus hops (10 min.)
(1 oz./28 g at 14% alpha acids)
2.5 oz. (71 g) Columbus hops (hop stand)
5 oz. (142 g) El Dorado™ hops (dry hop)
1.5 oz. (43 g) Columbus hops (dry hop)
½ Whirlfloc® tablet (10 min.)
White Labs WLP007 (Dry English Ale) or Wyeast 1098
(British Ale) yeast
¾ cups corn sugar (if priming)

STEP BY STEP

This recipe is designed for homebrewers to achieve 5.5 gallons (21 L) wort in their fermenter on brew day. This will help offset the loss of volume to the heavy hopping rate of this beer.

Build your water profile, starting with either very soft or RO water. Target a water profile of 200:100 PPM sulfate:chloride. Crush the malt and add to 4 gallons (15 L) strike water to achieve a stable mash temperature at 150 °F (65.5 °C). After 60 minutes, begin to lauter. Boil for 60 minutes, adding the first hop addition after the wort comes to a boil and a second hop addition with 10 minutes left in the boil. After the boil, chill the wort to 180 °F (82 °C) and then add the hop stand addition. Stir the wort, then let settle for 30 minutes before cooling to yeast pitching temperature. Ferment at 68 °F (20 °C). As the kräusen begins to fall, typically day 4 or 5, transfer to a keg with the dry hops and add a spunding valve. Let the beer sit on the hops for 4-5 days, then transfer to a serving keg or bottling bucket. You may want to cold-crash the beer prior to the transfer by dropping the temperature of the beer to 35 °F (2 °C) for 24 hours.

Bottle with priming sugar or force carbonate the serving keg to 2.4 volumes CO₂.

TRILLIUM BREWING CO.'S SLEEPER ST. CLONE (EXTRACT WITH GRAINS)

(5 gallons/19 L, extract with grains)
OG = 1.067 FG = 1.014
IBU = 75 SRM = 5 ABV = 7.2%

INGREDIENTS

6.6 lbs. (3 kg) golden liquid malt extract
2 lbs. (0.91 kg) wheat dried malt extract
4 oz. (113 g) dextrin malt
4 oz. (113 g) pale crystal malt (15 °L)
12 oz. (0.34 kg) dextrose sugar
14 AAU Columbus hops (60 min.)
(1 oz./28 g at 14% alpha acids)
14 AAU Columbus hops (10 min.)
(1 oz./28 g at 14% alpha acids)
2.5 oz. (71 g) Columbus hops (hop stand)
5 oz. (142 g) El Dorado™ hops (dry hop)
1.5 oz. (43 g) Columbus hops (dry hop)
½ Whirlfloc® tablet (10 min.)
White Labs WLP007 (Dry English Ale) or Wyeast 1098
(British Ale) yeast
¾ cups corn sugar (if priming)

STEP BY STEP

Place the crushed malt in a muslin bag. Steep the grains in 6 gallon (23 L) water at 160 °F (71 °C) for 20 minutes. Remove the grain bag and wash with 2 qts. (2 L) hot water. Be sure to remove the wort from heat then stir in the dried and liquid malt extracts. Stir until all the extract is dissolved then return the wort to a boil.

Boil for 60 minutes, adding the first hop addition after the wort comes to a boil and a second hop addition with 10 minutes left in the boil.

After the boil, chill the wort down to 180 °F (82 °C) and then add the hop stand addition. Stir the wort, then let settle for 30 minutes before cooling to yeast pitching temperature. Top off the fermenter to 5.5 gallons (21 L) then aerate the wort. Ferment at 68 °F (20 °C). As the kräusen begins to fall, typically day 4 or 5, transfer to a keg with the dry hops and add a spunding valve. Let the beer sit on the hops for 4-5 days, then transfer to a serving keg or bottling bucket. You may want to cold-crash the beer prior to the transfer by dropping the temperature of the beer to 35 °F (2 °C) for 24 hours. Bottle with priming sugar or force carbonate the serving keg to 2.4 volumes CO₂.

URBAN CHESTNUT BREWING CO.'S HALLERTAU HAZE CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.050 FG = 1.011
IBU = 25 SRM = 5 ABV = 5.2%

A departure for a brewery known for its lagers, this groundbreaking hazy IPA, designed for Urban Chestnut's tenth anniversary, uses the best of Old World brewing tradition and modern craft innovation, and is brewed using 100% German hops and kveik yeast.

INGREDIENTS

9 lbs. (4.1 kg) American 2-row pale ale malt
1.1 lbs. (0.5 kg) German wheat malt
0.1 lb. (45 g) Carahell® malt (11 °L)
1.5 AAU Hallertau Merkur hops (75 min.)
(0.13 oz./3.7 g at 11.4% alpha acids)
8.4 AAU Mandarina Bavaria hops (0 min.)
(1.1 oz./30 g at 8% alpha acids)
8.4 AAU Hallertau Blanc hops (0 min.)
(0.88 oz./25 g at 9.5% alpha acids)
2.65 oz. (75 g) Hallertau Blanc hops (dry hop)
1.76 oz. (50 g) Huell Melon hops (dry hop)
1.76 oz. (50 g) Hallertau Mandarina hops (dry hop)
½ tsp. yeast nutrient
White Labs WLP520 (Sigmund Kveik), Omega yeast 061
(Voss Kveik), LalBrew Voss yeast, or The Yeast Bay WLP4045
(Sigmund's Voss Kveik)
¾ cup corn sugar (if priming)

STEP BY STEP

Mash with 3.7 gallons (14 L) of water. Add 1 tsp. of gypsum and start your mash at 140 °F (60 °C). Raise temperature immediately to 153 °F (67 °C) and hold for 45 minutes. Next, raise temperature to 170 °F (78 °C) for mashout and recirculation. Begin collecting your wort and sparge with 176 °F (80 °C) water acidulated to a pH as close to 5.2 as possible.

Boil for 75 minutes, adding the bittering hop addition at the beginning of the boil. With 45 minutes to go, add 1 tsp. of gypsum to the boil. (Since some calcium ions get “consumed” during mashing, adding more during the boil assures a proper level required during fermentation.) Add ½ tsp. of yeast nutrient with 10 minutes to go in the boil.

Add flameout hop additions then whirlpool for 20 minutes. When settled, chill rapidly to 72 °F (22 °C) and oxygenate thoroughly. Ferment up to 75 °F (24 °C). Once attenuation is 50% complete, allow temperature to free rise to 79 °F (26 °C) for diacetyl rest and fermentation completion. When final gravity is reached, add the dry hops. 24 hours after dry hopping, chill to 41 °F (5 °C). Hold at this temperature for one day, then drop temperature to 34 °F (1 °C) for a 10-day maturation period. Keg and carbonate to 2.5 v/v or prime and bottle condition.

URBAN CHESTNUT BREWING CO.'S HALLERTAU HAZE CLONE (EXTRACT WITH GRAINS)

(5 gallons/19 L, extract with grains)
OG = 1.050 FG = 1.011
IBU = 25 SRM = 5 ABV = 5.2%

INGREDIENTS

4.5 lbs. (2 kg) extra light dried malt extract
1 lb. (0.45 kg) wheat dried malt extract
0.1 lb. (45 g) Carahell® malt (11 °L)
1.5 AAU Hallertau Merkur hops (75 min.)
(0.13 oz./3.7 g at 11.4% alpha acids)
8.4 AAU Mandarina Bavaria hops (0 min.)
(1.1 oz./30 g at 8% alpha acids)
8.4 AAU Hallertau Blanc hops (0 min.)
(0.88 oz./25 g at 9.5% alpha acids)
2.65 oz. (75 g) Hallertau Blanc hops (dry hop)
1.76 oz. (50 g) Huell Melon hops (dry hop)
1.76 oz. (50 g) Hallertau Mandarina hops (dry hop)
½ tsp. yeast nutrient
White Labs WLP520 (Sigmund Kveik), Omega yeast 061
(Voss Kveik), LalBrew Voss yeast, or The Yeast Bay WLP4045
(Sigmund's Voss Kveik)
¾ cup corn sugar (if priming)

STEP BY STEP

Bring 3 gallons (11.4 L) of water to 160 °F (71 °C). Remove from heat and add your grains to a grain bag and submerge. Allow grains to steep for 20 minutes then remove grain bag and rinse with warm water. Slowly stir in the extract until fully dissolved. Bring wort to a boil and boil for 60 minutes, adding the hop additions as indicated.

Follow the remainder of the all-grain recipe, making sure to top up the fermenter to 5 gallons (19 L) before pitching yeast.

TIPS FOR SUCCESS:

Fermentation temperatures in the mid- to upper-70s °F (24–26 °C) is on the cool end for kveik strains, which are often fermented in the 90s °F (mid-30s °C) and warmer. Florian Kuplent says there are a couple of reasons he does this, which he acknowledges is based on “gut feel” and experience, not scientific data to back it up. “I prefer to control fermentation and like to not overly stress yeast — high temps seem to do that more. (And) with a lower fermentation temperature the fermentation is less vigorous, which removes fewer volatiles (aroma compounds we look for in the beer).”

That said, you will notice yeast manufacturers suggest the optimal temperature to ferment this strain (depending on which manufacturer's yeast you use) ranges from around 70–100 °F (21–38 °C), so you have the option to turn up the heat.

VARIETAL BEER CO.'S AFRICANIZED WOLVES IPA CLONE (ALL-GRAIN)

(5 gallons/19 L, all-grain)
OG = 1.054 FG = 1.005
IBU = 42 SRM = 4 ABV = 6.5%

This New England-style IPA relies almost entirely on South African hops, giving it a unique flavor with notes of tangerine and strawberry.

INGREDIENTS

11 lbs. (5 kg) Rahr pale malt
5.9 oz. (167 g) Carafoam® malt
2.9 oz. (82 g) acidulated malt
5.2 AAU Mosaic® hops (30 min.)
(0.4 oz./11 g at 13.0% alpha acids)
5.6 AAU Southern Passion hops (15 min)
(0.5 oz./14 g at 11.2% alpha acids)
2.4 oz. (68 g) Southern Passion hops (hop stand)
2.6 oz. (74 g) African Queen hops (dry hop)
2.6 oz. (74 g) Southern Aroma hops (dry hop)
2.6 oz. (74 g) Southern Passion hops (dry hop)
Yeast nutrient (10 min.)
½ Whirlfloc tablet (5 min.)
Imperial Yeast Dry Hop A24 or
LalBrew New England and LalBrew Verdant IPA yeast blend
⅔ cup corn sugar (if priming)

STEP BY STEP

This recipe calls for reverse osmosis water. Build your water profile to achieve 113 ppm calcium, 62 ppm sulfates, and 41 ppm chloride.

Mill the grains and dough-in targeting a mash of around 1.25 quarts of water to 1 pound of grain (2.6 L/kg) and a temperature of 150 °F (66 °C). Hold the mash at 150 °F (66 °C) until conversion is complete and the gravity is stable as read by refractometer. Sparge slowly with 170 °F (77 °C) water, collecting wort until the pre-boil kettle volume is 7 gallons (26.5 L).

Total boil time is 75 minutes. Add the boil hops, yeast nutrients (per manufacturer's recommendation), and Whirlfloc as indicated. After the boil is complete, chill the wort to 185 °F (85 °C) and give the wort a thorough stir. Add hop stand hops to slowly turning wort and whirlpool the wort for 20 minutes. Knock out to 68 °F (20 °C), aerate thoroughly, and pitch yeast (note that if using dry yeast, you should pitch both dry strains recommended as Imperial's A24 is a blend of the two strains).

When fermentation has reached terminal gravity, add dry hops to fermenter and wait five days before transferring off the dry hops and packaging. Carbonate the beer to around 2.3–2.4 volumes of CO₂. If bottling conditioning, you may consider pitching fresh yeast at bottling.

VARIETAL BEER CO.'S AFRICANIZED WOLVES IPA CLONE (EXTRACT WITH GRAINS)

(5 gallons/19 L, extract with grains)
OG = 1.054 FG = 1.005
IBU = 42 SRM = 4 ABV = 6.5%

INGREDIENTS

6 lbs. (2.7 kg) extra light dried malt extract
4 oz. (113 g) Carafoam® malt
¾ tsp. 88% lactic acid
5.2 AAU Mosaic® hops (30 min.)
(0.4 oz./11 g at 13.0% alpha acids)
5.6 AAU Southern Passion hops (15 min)
(0.5 oz./14 g at 11.2% alpha acids)
2.4 oz. (68 g) Southern Passion hops (hop stand)
2.6 oz. (74 g) African Queen hops (dry hop)
2.6 oz. (74 g) Southern Aroma hops (dry hop)
2.6 oz. (74 g) Southern Passion hops (dry hop)
Yeast nutrient (10 min.)
½ Whirlfloc tablet (5 min.)
Imperial Yeast Dry Hop A24 or
LalBrew New England and LalBrew Verdant IPA yeast blend
⅔ cup corn sugar (if priming)

STEP BY STEP

This recipe calls for reverse osmosis water. Add ½ teaspoon each of gypsum powder and calcium chloride.

Start with 5 gallons (19 L) of water in your brew kettle. Place crushed grains in a muslin bag and steep as the water heats up to 170 °F (67 °C). Remove the grain bag and remove from heat. Stir in the lactic acid and dried malt extract. When all the extract has dissolved, continue heat to a boil.

Total boil time is 30 minutes. Add the boil hops, yeast nutrients (per manufacturer's recommendation), and Whirlfloc as indicated. After the boil is complete, chill the wort to 185 °F (85 °C) and give the wort a thorough stir. Add hop stand hops to slowly turning wort and whirlpool the wort for 20 minutes. Knock out to 68 °F (20 °C), aerate thoroughly, and pitch yeast (note that if using dry yeast, you should pitch both dry strains recommended as Imperial's A24 is a blend of the two strains).

When fermentation has reached terminal gravity, add dry hops to fermenter and wait five days before transferring off the dry hops and packaging. Carbonate the beer to around 2.3–2.4 volumes of CO₂. If bottling conditioning, you may consider pitching fresh yeast at bottling.