Highland Heavy Scotch Ale

Imagine the Scottish Highlands, where the lovely green glens roll over the foothills with a serenity that's so heartbreakingly beautiful that it's almost bittersweet, and you'll have a sense of the merriment waiting for you in your pint. For how do you describe a strong ale of such beauty, with its locks of flowing brunette and chocolaty highlights and one simple purpose, which is to please? And like the mountains highlighting the horizon, this ale's immensity will impress you with its big, bright mouth of malt and the velvety smoothness of the kettle caramelization. And like the clouds pouring down the mountainside, you'll be impressed with the hints of roasted and nutty malts, the delicate kiss of smoke, and the comforting warmth of alcohol, as if you were warming yourself before a fire and admiring the majesty of the Scottish Highlands.

Just the Facts, Ma'am:

BJCP Style: 9E. Strong Scotch Ale
Original Specific Gravity: 1.075 - 1.079
Final Specific Gravity: 1.020 - 1.024
Alcohol by Volume: 7.2%
Color: 17 SRM (Caramel Brown!)
International Bittering Units: 26
Time to Awesome Drinkability: 10 Weeks!

Your recipe kit includes the freshest malt, hops and yeast. If you are not going to brew your recipe immediately, it is important to refrigerate your yeast and hops. If your recipe includes bags of malt syrup, these should be refrigerated too. Bags of dried malt do not require refrigeration. Also, all grains are best stored at dry room temperature.

Ingredients:

Fermentables:
6.6 lbs Light Malt Extract Syrup
3.3 lbs Munich Malt Extract Syrup

Grains & Wort Additives:
8 oz Special Roast Malt (Crushed)
4 oz Biscuit Malt (Crushed)
2 oz Roasted Barley (Crushed)

Hops:
1 oz Columbus Hops (Bittering, 60 Minutes)
1 oz East Kent Golding Hops (Bittering, 60 Minutes)

Yeast:
Liquid Yeast: Wyeast 1728 Scottish Yeast
Or
Dry Yeast: Mangrove Jack's Empire Ale Yeast OR Safale US-05 Yeast

Brewing Supplies & Flavors:
1 Muslin Bag
5 oz Priming Sugar

Pre-Brew Day Checklist:

If you are using liquid yeast, it is always desirable to make a yeast starter when fermenting higher alcohol brews. Making a yeast starter allows you to propagate to a greater (and necessary) cell count to ensure complete fermentation. For more information about yeast starters, please visit the 'Frequently Asked Questions' section on boomchugalug.com.

Brew Day Checklist:

On brew day, you will require the following equipment:

- Brew Pot - A 5 gallon brew pot is ideal, but never use a pot that is less than 4 gallons.
- Long-handled spoon or paddle for stirring the boiling wort.
- Primary Fermenter - A 6½ gallon (or greater) food-grade plastic bucket with lid, or a 6½ glass carboy.
- Airlock
- Stopper (if using a carboy)
- Funnel (if using a carboy)
- Hydrometer (Optional, if you want to measure your specific gravity)
- Sanitizing Solution
- Scissors

On the day you rack the beer into the secondary fermenter, you will require the following equipment:

- 5 gallon carboy
- Airlock
- Stopper
- Siphon Setup

The Magical Procedure:

Liquid Yeast Activation Before Brewing:
If you are fermenting with liquid yeast, you must activate the yeast packet before it is ready to pitch. Always check the manufacturing date stamped on the yeast packet. Yeast that is less than 1 month old may be activated on brew day. A yeast that is more than 2 months old may require additional preparation time. Always make sure your yeast has been properly activated before using. For more information about yeast starters, please visit the 'Frequently Asked Questions' section on boomchugalug.com.

Time to Brew!
Total Boiling Time: 60 Minutes. While your wort is boiling, you should sanitize your fermentation equipment, such as your primary fermenter, airlock, scissors, stopper, etc. After you have sanitized your fermenter, fill it with 2 gallons of cold water, into which you will later add your hot boiled wort.

Note: Genuine Scotch ales often achieve their distinct caramel character not from the use of crystal (caramel) malts, but by boiling and caramelizing a separate portion of the wort. This recipe achieves that same caramelization in step 4 .

1. Place the crushed grains in the large muslin bag and add to 1.5 gallons of water. Measure the water volume carefully to ensure you extract the proper amount of hop bitterness during the boil.
2. Heat water until the temperature is between 150° and 170°F. Steep the grains between this temperature range for 30 minutes. Steeping longer than 30 minutes does not hurt.

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Flip the sheet to continue the magic. Also, this is a good time to pour a cold one! →

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3. Remove and discard the grains, and bring this mixture to a boil. Remove the pot from the heat and add the malt extract. To prevent scorching, stir until all of the malt is dissolved. Then bring this mixture to a boil. Watch for boilovers!
4. Caramelizing the Wort:

Note: Step 4 requires at least 15 minutes. Consequently, you may proceed to step 5 during this time.

a. Using a glass oven-safe measuring cup with handle (standard kitchen equipment), carefully remove 24 fl. oz of the pre-boiled wort and transfer to a saucepan.
b. Boil this mixture until it becomes thick and syrupy. This may take 15 minutes or longer. During this time, the wort will darken as the sugars caramelize.

Caution: High temperatures are required to caramelize the wort. Thus, stir constantly to avoid scorching. Pay close attention, since thick, concentrated wort will quickly boil over.

c. When the wort has reached a syrupy consistency, mix in two cups of hot water. Return this caramelized wort back to the main boil.
5. When boiling begins again, add 1 oz of Columbus hops and 1 oz of East Kent Golding hops. Boil these hops for the entire 60 minutes.

Chill out, Man! (Chill the Wort)

1. At the end of the 60 minute boil, cool the wort to approximately 75°F as quickly as possible. With extract brewing, the easiest way to quick-chill the wort is to place your brew pot into a sink full of ice. For more information about cooling your wort quickly, please see 'Fast Wort Chilling' in the 'Frequently Asked Questions' section on our website.
2. Add your chilled wort to the 2 gallons of water already in your fermenter.
3. Add any extra water needed to bring the total volume in your fermenter to 5 gallons.
4. If you would like to measure the specific gravity, now is a good time. To get an accurate reading, it is important to make sure all of the heavy wort extract you added to the fermenter has been completely mixed in the water.

Pitch the Yeast! (Into the Wort, But Not Out the Window!)

1. When your wort has cooled to approximately 75°F (70° - 78°F is okay), aerate the wort before adding the yeast. Simply close the fermenter and swirl around to mix in oxygen. If you are swirling a carboy, it is helpful to place the carboy on a thick, folded blanket to avoid damaging the vessel.
2. After aerating, pitch (add) the yeast. Use the sanitized scissors to cut open the yeast packet. If you are using liquid yeast, sanitize the pack before opening. If you are using dried yeast, simply sprinkle the yeast over the wort. No mixing is necessary.
3. Close the fermenter, attach the airlock, and keep the fermenter warm (between 70° - 78°F) until you see fermentation beginning, such as the airlock bubbling once every 30 seconds. Wrapping the fermenter with a blanket is an easy way to keep the fermenter warm.

Fermentation:

There are several ways to know when fermentation has begun. First, you will begin to see bubbling through the airlock. If you are using a carboy, then you will usually see the yeast begin to form a layer over the beer's surface.

1. Once fermentation begins, move the fermenter to a room with the proper temperature. If you're using Wyeast 1728 Scottish ale yeast, the ideal temperature to ferment this beer is between 55° - 75°F. For the US-05 yeast, the ideal temperature range is 60° - 75°F. Do not let the temperature drop below the minimum specified temperature. If you do, fermentation may stop too soon. That's a bummer, man.
2. Active fermentation may take as long as two weeks after pitching the yeast, although fermentation may finish in 3 to 5 days.

Secondary Fermentation:

After about one week, fermentation will begin to slow. This is a good time to siphon the beer into the 5 gallon glass carboy. If you will not be using a secondary, allow fermentation to complete in the primary fermenter.

Time to Bottle!

There a several ways to tell when fermentation is complete (besides your drooling). If you correctly pitched the yeast and fermentation quickly began, and if the beer fermented vigorously and the fermenter was always within the correct temperature range (Wyeast 1728: 55° - 75°F, S-04: 60° - 75°F), then fermentation should finish in two weeks or less. You should see virtually no activity in the airlock. For example, if the airlock only bubbles once a minute or longer, then fermentation should be complete. If you are unsure if fermentation has ended, you may use your hydrometer to measure the specific gravity. If your specific gravity does not change after two or more days, then fermentation is complete and you are ready to bottle!

1. Before bottling, sanitize your bottling bucket, auto siphon (or racking cane), hose, bottle filler, caps and bottles. Glass bottles may be sanitized one day in advance by baking them in the oven. More information about baking your bottles can be found under 'Baking Beer Bottles' in the 'Frequently Asked Questions' section on our website.
2. Dissolve 5 ounces (by weight) or 3/4 cup of corn sugar in 16 oz of water. Boil for 5 minutes. Corn sugar is sometimes called dextrose or priming sugar.
3. Place your fermenter on the counter and your bottling bucket on the floor. Pour the sugar solution into the bottling bucket, and siphon the beer from the fermenter into the bottling bucket. Siphon carefully, trying to minimize splashing and aeration of the beer. Also when siphoning, be sure to leave behind the sediment at the bottom of the fermenter. There's no problem if you should siphon up a little sediment. When you're done siphoning, gently stir the beer in the bottling bucket to make sure all of the sugar solution has been dissolved. Your racking cane makes a convenient stirring wand.
4. Place your bottling bucket on the counter, and attach your siphon hose and bottle filler to the bucket's spigot. Fill the bottles to about 1 inch from the top, and cap each bottle.

Carbonation and Maturation!

Now that your bottles are primed and capped, the remaining yeast will undergo a second fermentation in the bottle whereby they eat the priming sugar and produce carbon dioxide, which is trapped in the bottle to produce the carbonation. While your beer is carbonating, it will also be clearing and maturing - the young, rough undeveloped flavors develop into your magical beverage! Your wondrous elixir reaches awesome drinkability about 10 weeks from the day you began the brew, but don't be surprised if it keeps getting better as time goes on.

1. Place your bottles in a dark place at room temperature (62 °F - 75 °F), and wait at least two weeks for the beer to carbonate. It is important that you keep the beer between 62 °F - 75 F° for carbonation to develop. If the beer cools below 62 °F, it may not properly carbonate. In brewing, this is officially known as the buzzkill. Keep it warm, let it carbonate!
2. Get your bottle opener handy dude (or dudette), because it's time to drink a beer! When pouring the beer into your glass, be sure to leave the bottle's sediment behind. That sediment is the yeast which carbonated your beer, and if you pour it into your glass, you'll make the beer cloudy and taste yeasty.
3. Once your beer is carbonated, you may store it in a cool place. Keep in mind that home-brewed is unfiltered, and unfiltered beers actually continue to improve with time. If your beer seems rough-around-the edges or tastes yeasty, these qualities usually morph into a smooth, clean beer over time. Cheers!