

Brew & Grow

O.G. 1.082-1.087

F.G. 1.016-1.024

IBU's 46 ABV 8.6

Chocolate Mountain Stout

Before We Start. . .

Please take a moment to go over the Instructions and inventory check list to make sure you have all the ingredients before you get started. If you have a Wyeast smack pack, please smack it at this time. The pack will swell over time to show activation. We have a video on our website at Brewngrow.com and click on blogs, then Everything Beer. If you have any questions, please give us a call at (763) 780-8191.

Clean & Sanitize

Thoroughly clean and sanitize all brewing equipment that will come in contact with your wort or beer. Proper cleaning agents include PBW or 1 Step. Proper sanitizing agents include Star San or Iodophor.

How to Videos

We have how to videos on All Grain Brewing and also Brew in a Bag. Go to brewngrow.com, click on blogs, then Everything Beer.

Which Mash Process to Choose

If you have a smaller kettle or mash tun (10 gallons or less) you will need to Sparge or rinse your grain with hot water in order to extract more sugar and achieve a proper pre-boil wort volume. You would choose the Mash and Double Batch Sparge Process.

If you have a 15 gallon kettle you can do a no sparge process which saves time and is simpler. If so, then choose the No Sparge Brew in a Bag Process.

Mash and Double Batch Sparge Process

Total Water Solution (add the following amounts to your mash water.)

Gypsum – 1.6gr **Epsom Salt** – 1.1gr **Baking Soda** – 2.1gr **Calcium Chloride** – 2.9gr **Lactic Acid** - 0

The Mash

- Add 5.3 gallons of 172 degree water into your mash tun. Stir in your grain thoroughly making sure there are no dough balls. Check temperature. You should be very close to 155 degrees.
- Maintain mash temperature of 155° for 60 minutes.
- While you are mashing heat up 3 gallons of water to 170 degrees for your sparge.

Total Water Solution (add the following amounts to your sparge water.)

Gypsum – 0.9gr **Epsom Salt** – 0.6gr **Baking Soda** - 0 **Calcium Chloride** – 1.7gr **Lactic Acid** – 0.3ml

Inventory Check List

Grains

- 14 lbs 2 Row Pale Malt
- 10 oz Chocolate Malt
- 8 oz Caramel 120L
- 2 oz Black Malt

Hops

- 2 oz Fuggles (Bittering)
- .5 oz Columbus (Flavoring)
- 1 oz Goldings (Aroma)

Other Items

- 1 lb Maltodextrine
 - 8 oz Cacao Nibs
- #### Recommended Yeast
- Wyeast 1084 or Safale US-05

Water Needed

- Mash & Sparge – 8.3 gallons
- No Sparge Brew in a Bag – 7.4

The Double Batch Sparge

- Vorlauf and drain mash tun. Vorlauf procedure – Slowly open the valve on your mash tun and do not open more than 1/3rd or so. Using a 2 liter pitcher drain approximately 2 liters of wort and recirculate back into the wort. Do this 2 or 3 times until the wort runs clear of grain bits. Drain the mash tun again opening the valve slowly and not more than a third or half way open.
- Add approximately half the sparge water, stir thoroughly. Vorlauf and drain.
- Repeat with the remaining sparge water. Once you are done sparging you should have 6.2 gallons of wort in your boil kettle.
- Continue to the boil

No Sparge Brew in a Bag Process

Total Water Solution (add the following amounts to your water.)

Gypsum – 2.2gr Epsom Salt – 1.5gr Baking Soda – 1.5gr Calcium Chloride – 4.0 Lactic Acid - 0

- Add Brew Bag and 7.4 gallons of water to your kettle. Heat the water to 164 degrees.
- Add your grain to the water stirring thoroughly making sure there are no dough balls. Check your temperature. You should be very close to 155 degrees.
- Maintain mash temperature of 155 for 60 minutes.
- After 1 hour pull the Brew Bag and squeeze as much of the wort as you can from the bag. **Tip** – If you have an old oven or refrigerator rack, pull the bag, set the rack on top of your kettle and sit the bag on the rack. Use your lid to squeeze the bag.
- Once you are done squeezing you should have 6.2 gallons of wort in your boil kettle.
- Continue to the boil

The Boil

- **Step 1** - Bring your wort to a rolling boil.
- **Step 2** - Add your bittering hops, a few pellets at a time. Watch for boil overs at this stage. Start the timer and boil the wort for 40 minutes stirring occasionally to help prevent boil overs.
- **Step 3** - Add the flavoring hops. Boil the wort for 10 minutes.
- **Step 4** – (Optional but recommended. Add Whirlfloc tablet (clarifying agent) and Wyeast Beer Nutrient Blend.) Boil the wort for 5 minutes.
- **Step 5** - Add the aroma hops and the maltodextrine. Boil the wort for 5 minutes

Cooling Wort

Cool the wort down to approximately 70°F to 80°F. The fastest and most effective way to cool down the hot wort is with a wort chiller. If you don't have a wort chiller, set your covered brew kettle in a sink with ice water. Remove the cover and stir every couple minutes, as well as agitating the ice bath on the outside of the kettle.

Transfer

Pour or siphon the cooled wort into the primary fermenter and add enough sanitized water (water that has been boiled and allowed to cool to 60°F to 80°F) to the fermenter to bring your wort to approximately 5 gallons. Record the O.G. (original gravity) at this point in time.

Aerate

It is recommended that you add additional oxygen to the wort. The most effective way is to use an aeration system with a diffusion stone and oxygen tank. If you don't have this you can seal/cover the fermenter and rock back and forth vigorously for a constant 40 seconds.

Yeast

- Dry Yeast - Prepare the yeast by sanitizing a small glass and spoon. Fill the glass with approximately 3oz of sanitized water. Pour the dry yeast into the water and cover the glass with a piece of sanitized tin foil. Allow this to sit for 15 minutes, then stir before pitching (adding the yeast to your wort).
- Liquid Yeast - Confirm activation in the smack pack. Use sanitized scissors to cut off a corner of the smack pack and carefully pour the yeast into the primary fermenter.

Fermentation

Seal the fermenter and add approximately 1 Tablespoon of water or sanitizer to the airlock, insert the airlock into the rubber stopper or the grommet in the bucket lid. Place the fermenter in a cool, dark place to allow fermentation to take place. Ideal Ale fermentation temp is 62°F to 75°F. Let the beer ferment 5 to 10 days, then siphon the beer from your primary fermenter into your secondary fermenter. If you are using a single stage fermenter, add the dry hops to the fermenter. Let sit for 5 to 7 days.

Roasted Cacao Nibs

Before beginning the siphon, simply cut open the package and dump the cacao nibs into the secondary fermenter. Now siphon in the beer from the primary fermenter into the secondary fermenter. If you are using a single stage fermenter carefully put the cacao nibs into your beer. Let sit for 2 to 3 weeks.

Dry Hopping (skip this step if there are no dry hops in your kit)

Before beginning the siphon, simply cut open the package and dump the hops into the secondary fermenter. Now siphon in the beer from the primary fermenter into the secondary fermenter. If you are using a single stage fermenter carefully put the hops into your beer. Let sit for 5 days.

Bottling

Before you start your bottling day, take a hydrometer reading every other day until you get the same reading constantly to be sure that the yeast is done fermenting your beer. Boil 1 cup of water, dissolve 4-5 oz of corn sugar into the boiled water. Boil the sugar water for approximately 5 minutes. Cool the solution down to 70°F to 80°F. Record the F.G. (final gravity) of your beer at this point in time, then add the sugar solution to the bottom of the bottling bucket. Next, siphon your beer into your bottling bucket on top of the priming sugar solution. Fill and cap bottles, then move them to a cool dark place 64°F to 72°F for two weeks. Carbonation times vary depending on the temperature and beer style, so be patient. It could take 1 to 2 weeks to fully carbonate.

Drink Up & Enjoy!

Inspected____/____

Contact the professionals at BREW & GROW for any questions or concerns (763) 780-8191