

# Dark & Balmy- All Grain Instructions

Style : English Dark Mild Ale

Hops : East Kent Goldings

Yeast : WY1968 London ESB or Omega OYL-016 British VIII

Hop Additions:

1 oz East Kent Golding at 60 mins

.5 oz East Kent Goldings at 15 mins

.5 oz East Kent Goldings at 1 min.

Target Original Gravity : 1.038 - 1.042

Target Final Gravity : 1.010 - 1.014

Target IBUs : 19

Color : 14 SRM

Target ABV : 3.5 - 4.0%

## All Grain Brewing Directions for Dark & Balmy English Dark Mild

\*\*\*\*\*Take your yeast out of the fridge now and smack it. Make sure you broke the little packet inside of it. Set it on your kitchen counter and allow it to swell for the next 3-4 hours\*\*\*\*\*

Recommended Mash Temperature for this recipe: 152F\*

1. Measure your strike water and heat it to your desired temperature. As a general rule, 1.25-1.5 quarts per pound of grain is sufficient and I like to use the Brewer's Friend software to calculate temperature. Remember that higher mash temperatures result in sweeter, less alcoholic beers and lower mash temperatures result in drier, more alcoholic beers. The strike water must be higher than your mash temperature because the grains will cool it down, the amount it cools is specific to your system but if your not sure how much heat loss you will have start with 8-10°F over your desired Mash Temperature Never mash above 170°F or below 140°F.

2. When your strike water hits the target temperature, pour it into your mash tun while you mix in your grains. Stir it very vigorously to break up clumps and avoid dry spots or temperature variations. Check the temperature, and if it is correct, put the lid on the mash tun and let it sit for an hour. If the temperature is too low, add some boiling water. If the temperature is too high, stir it vigorously.

3. Heat your sparge water to 170°F. We suggest you use an app called SpargePal to calculate your sparge volume.

4. When your mash is complete, pull about 1/2 gallon of wort from the mash tun and pour it back over the top of your mash. This recirculation is called a *vorlauf* and is very important. It seats your grains into a nice natural filter bed and will allow you to lauter smoothly.

5. Now you sparge. There are 2 different types of sparging: fly sparging and batch sparging.

**-Fly Sparging:** Fly sparging takes more time but is much more efficient, resulting in a greater extraction of fermentable sugars. To fly sparge: place your hot liquor tank (HLT, the kettle that you heated your sparge water in) above your mash tun so that the water will flow downhill into it. After you have done your *vorlauf* (recirculation) crack the valve of your mash tuns that the wort trickles into your boil kettle or other collection vessel. It is very important that you make sure the flow is as slow as possible. Meanwhile, slowly pour water over the top of your grain bed so that there is always one inch of hot water on top of the grains. Continue this process for 40-60 minutes and collect enough wort to do a full volume boil. You will not add any water at the end, so make sure you collect 6-6.5 gallons depending on your boil off rate.

**-Batch Sparging:** Batch sparging is much faster, but much less efficient, resulting in a lower extraction of fermentable sugars. To batch sparge: Pull your *vorlauf* and recirculate. Open the valve of your mash tun all the way and empty all of the wort from your mash. Now, pour all of your sparge water into your mash tun over all of the grains and pull another *vorlauf* to re-seat your grain bed. Open the valve all the way again and close it when you have collected your desired wort volume.

6. Put your wort into your brew kettle and put it on the burner.

7. Turn the stove back on and bring to a rolling boil. Set a timer for 60 minutes when it starts boiling and also add your first (bittering) hop addition (1 oz East Kent Golding). Be careful to add the hops slowly and stir vigorously to reduce your risk of a boil over. It might be a good idea to turn the heat down for this part.

8. At 15 minutes (meaning 45 minutes into the boil, 15 minutes remaining) add your 2nd (flavor) hop addition (.5 oz East Kent Golding). If you are adding whirl floc, Irish moss or 1/4 tsp. yeast nutrient do so now.

9. At 1 minute remaining, add your 3rd (aroma) hop addition (.5 oz East Kent Golding). Shortly after this addition, your timer should go off. Time to shut off the burner and proceed with the cooling process.

\*\*\*\*\*From this point onward EVERYTHING that touches your beer MUST BE SANITIZED\*\*\*\*\*

- I like to fill up a 5 gal. bucket with water and 1 oz. of sanitizer for this purpose-

10. Chill your wort to 68°F as rapidly as possible while it is still in the kettle. This can be achieved with a wort chiller, or an ice bath in your sink.

11. Gently pour your wort into your primary fermenter being careful to leave as much of the sludge at the bottom in your kettle as possible. If you have our deluxe kit, your primary fermenter is your 6.5 gallon bucket with the spigot attached. I like to make sure the spigot attachment is sealed properly and water tight before I add my wort to it. **Also, make sure the spigot is in the CLOSED position!**

12. Top your beer up to 5 gallons with more water. Using cold, clean water can help you finish chilling the wort to the ideal 68°F before adding your yeast (For best results, do not add yeast until wort temp is at least within 10 degrees of 68°F. The closer to 68°F, the better).
13. Put your unopened yeast pack into your bucket of sanitizer. Place your sanitized hydrometer into your wort and take an original gravity reading. There are three units of measurement on the hydrometer, you want to be looking at the smallest one.
14. Vigorously stir your wort to introduce as much oxygen as possible into the wort. This is the ONLY time you want to get oxygen in your beer.
15. Cut a corner off of the top of your yeast pouch with a pair of sanitized scissors and pour the yeast into your wort.
16. Seal the top of your fermenter and put an airlock partially filled with sanitizer into the hole on top.
17. Pace the floor anxiously for the next 10-14 days while your beer goes through primary fermentation.
18. When the airlock stops bubbling and the yeast cake has dropped to the bottom, remove the lid and take a reading with your hydrometer.
19. If you have reached your desired final gravity (give or take a couple points) you are ready to rack it over into your secondary fermenter.
20. If you are using our deluxe kit, the 5 gallon plastic carboy is your secondary. As always, everything MUST be sanitized.
21. Use your auto-siphon to gently rack the beer into your secondary fermenter, leaving as much of the trub behind as possible.
22. Seal the fermenter and go back to pacing the floor for another 7-10 days. Ideally, brew another beer now so the wait is less excruciating next time.
23. Now you are ready to bottle. Boil 5 ounces of priming sugar in 2 cups of water and stir it to dissolve. Allow the solution to cool and gently pour it into your bottling bucket. Remember, everything must be sanitized.
24. Rack your beer into your bottling bucket so that the beer mixes with the priming solution evenly. If you are using our deluxe kit, your bottling bucket is the 6.5 gallon bucket w/ the spigot attached that you used for primary fermentation.
25. Attach one end of a tube to your spigot and the other end to your bottling cane.
26. Sanitize every bottle and all of your caps. DO NOT USE DETERGENT if you run your bottles through your dishwasher on the sanitary cycle.

27. Put your bottling cane into a bottle so that the tip is depressed against the bottom of the bottle.
28. When the beer reaches the very top of the bottle, pull the cane out and set the bottle aside to be capped.
29. Repeat this step 45-50 more times, then cap the bottles.
30. DO NOT REFRIGERATE YOUR BOTTLES. They will not carbonate.
31. Continue to pace the floor for 10-14 days. Ideally, put your next beer into secondary and brew another beer so the wait is even less excruciating next time.
32. Refrigerate a couple of bottles.
33. Open and enjoy. Repeat as necessary.
34. Brew more beer. Repeat as necessary.

We hope this helps, and have fun on your brew day! Remember, it wouldn't be home brewing without a mishap, so don't freak out if you forget something or make a mistake. It happens to everyone, and you are likely to still end up with a mighty fine beer. Cheers!