

## Dry Irish Stout:

Dry Irish Stout O.G. 1.050

9 lb Pale Malt (all grain) OR 6.5 lb pale malt and 3 lb pale malt extract (partial mash)

1 lb Roasted Barley

1 lb Barley Flakes

16 AAU

Ale Yeast

Classic dry Irish stout. The Barley flakes contribute creaminess and head retention. If you go for that kind of thing, use even more.

## Single Infusion Mashing

These instructions assume that you are using a mash tun made from a single plastic bucket. Mashing in your kettle will require rigorous temperature control not covered here.

1. Heat 1 litre of water for each pound of grain to 78 degrees Celsius. (don't you just love the Canadian metric system?)
2. Preheat mashtun with a good hot water rinse. As soon as the strike water is heated, transfer to mash tun, and then stir in malt, -- not malt extract. Check that the temperature is 66 to 68 degrees C. Temperature can be adjusted by adding cold or boiling water, but re-stir and check again before taking corrective measures, it does take a few minutes for the malt to absorb the water.
3. Put the lid on the mash tun and cover with towels, or anything insulating, as any heat loss likely to occur will be through the lid. My personal experience is that the temperature only drops a couple of degrees in the course of a one hour mash, even without insulation. A plastic bucket is pretty good insulation itself compared to a stainless steel kettle.
4. Let rest for 1 hour. The starch will convert to sugar during this rest. A longer rest will result in a more fermentable wort -- ie. more alcohol, less body, A shorter, hotter (70 C) rest will result in a less fermentable wort -- ie. higher terminal gravity.
5. Fill your kettle with water and bring it to a boil. This is your sparge water and you will need it ready at the end of the starch rest. Transfer this water to a bucket (your primary will work nicely).
6. 20 minutes or so into the starch rest, take a sample of a half litre or so from the spigot. You will notice that it is cloudy and starchy, but already turning quite sweet. Return sample to mash tun. Repeat this step every 10 minutes or so, observing the transformation to a sweet clear wort.
7. By the end of the starch rest, the wort should be fully converted, and quite sweet and clear. Slowly begin run off by opening the spigot. Use a hose on the spigot to run off directly into kettle while kettle is on stove, but wait until you have collected a few litres of wort before turning on heat.
8. As soon as water level falls below top of grain bed start adding sparge water a litre or so at a time, maintaining water level at grain bed level.
9. The temperature of the grain bed should be maintained between 70 and 75 degrees during the sparge. Since you are starting with near-boiling sparge water, which is cooling in your bucket throughout the sparge, this will pretty much take care of itself. However, if the temperature in the middle of the grain bed gets above 75 degrees, don't panic, but add cold water along with the hot sparge water.
10. When sparging is done and kettle is boiling, add hops and boil 1 hour. Mid boil hops go in as usual according to recipe.
11. 20 minutes before the end of the boil, re hydrate 1 tsp Irish Moss in a few ounces of

warm water. Add 10 minutes before the end of the boil.

12. If you are partial mashing, warm up the malt extract and add 15 minutes before the end of the boil. Once boiling resumes, submerge your wort chiller in the boiling wort and leave it there. This will effectively sterilize it.

13. Finishing hops go in as per recipe. I usually give whole hops an extra couple of minutes because they tend to clump around the wort chiller at first.

14. Chill your wort as fast as you can. If you don't have a wort chiller, use the bath tub.

15. If you are using whole hops pour the chilled wort through a strainer or colander held over your primary, this also adequately aerates the wort. If you are using pellets rack the wort to leave the hops and trub behind. You will need to aerate the wort.

16. brew as usual.

NOTES: 2009-10-17

Initial strike water was 10L

Initial water temp was 78. Did the infusion and it came down to 63, and added 2L boiling water to balance at 67.

Started sparge water boil immediately. Sparge water volume was also 10L

Waited 20 minutes for first starch check step. Water was cloudy, like creamed honey, and tasty :)

30 minute check was dark, and more guinnessy in color, although still somewhat cloudy.

40 minute was somewhat darker, and clearer

50 minute check was quite dark and clear, and sweet and malty tasting. Still some cloudiness. I may hold past 60 mins.

60 minutes: Drained the tun, and got a stuck mash! Lesson learned...

**DO NOT FUCK WITH THE MASH! STIRRING BROKE THE SEALING RING FREE! STUPID! STUPID! STUPID!**

Ahem, anyhow, I got it freed, and just needed to do an extra filter step at the end.

Lautered/sparged with 16 L of extra water in 4 steps. Much of the water remained in the mash, but it was running much lighter in color at the end.

Boiled for 60 minutes after nearly 40 to get to temp. I need a propane burner.

Added hops at 15, 30, and 45 minutes (approx 1oz totally pulling the measurement from my ass, each time).

Cooling took nearly an hour, as usual. Added #1728 scottish yeast at just under 80 degrees (room temp).

Final yield was just under 20L at 1.055 final gravity.

