GJALLARHORN ALE

REITERATED MASH BEER

This is a big ale made using an interesting method of wort production. The main wort for this beer is made by using wort as the brewing liquor. In short, you collect one batch of wort to use as brewing liquor, and use that to mash and sparge a second grist. I got this idea after learning that the Hürlimann Brewery, the original brewery to brew the strong lager Samichlaus, used the late runnings of one beer during wort production for Samichlaus. (I later learned that various breweries have tried something similar in the past.) You can make a very strong and very pale beer with this method.

5.0 GALLONS (19 L) AT UP TO 10% ABV
OG = UP TO 1.101, FG = 1.022 (OR LOWER)
56 IBU, 4.3 SRM (OR LESS)

+ Wyeast 1056 (American Ale), White Labs WLP001 (California Ale) or Fermentis Safale U.S.-05 yeast
+ A 5.2-qt. (4.9-L) yeast starter is recommended

FIRST MASH

+ 6.0 lb. (2.7 kg) U.S. 6-row pale malt
+ 1.0 lb. (450 g) U.S. 2-row pale malt
+ 3.0 lb. (1.4 kg) flaked maize

SECOND MASH

+ 6.0 lb. (2.7 kg) U.S. 2-row pale malt
+ 2.0 lb. (910 g) Vienna malt
+ 2.0 lb. (910 g) flaked maize

BOIL

+ 1.0 oz. (28 g) Magnum hops at 15% alpha acids, boiled for 60 minutes (56 IBU)
+ 1.0 tsp. Irish moss, boiled for 15 minutes
+ 5.0 oz. (140 g) corn sugar, to prime bottles for 2.5 volumes of CO_2

Make yeast starter two to three days ahead of time. The basic idea is to make a batch of wort and use this as your brewing liquor for your second mash. Make your first wort as quickly as possible. Don't bother to recirculate before running it off. Monitor the specific gravity of the wort from the second mash with a refractometer. It will take longer than an hour to reach a reasonable wort density. Run off the wort until the increase in wort density slows greatly.

Then, recirculate and collect your wort (chasing the last bit of wort used as sparge water with water). Boil wort and proceed as you normally would.

Make your yeast starter two to three days ahead of your brew day. You can use two 11.5-gram sachets of dried yeast instead of making a starter.

FIRST MASH

Mash flaked maize and crushed malts at 150°F (66°C) in 14 quarts (13 L) of strike water. After 20 minutes, test for starch conversion. If converted, run off wort to kettle, sparging with water hot enough to keep grain bed at 150–170°F (66–77°C). Collect around 6.5 gallons (25 L). Heat this wort to 161°F (72°C).

SECOND MASH

Quickly scoop and rinse mash tun and then mash flaked maize and crushed malts for second mash in 14 quarts (13 L) of wort from first mash. Mash temperature should be 150°F (66°C). Transfer remaining wort—a little over 3.0 gallons (11 L)—from kettle to a second brew pot. Heat this wort to 170°F (77°C). Stir mash frequently and monitor the specific gravity of wort from the grain bed with a refractometer every 5 minutes or so. Wort density will increase over time—quickly at first, then more slowly.

Decide when the rate of increase in wort density has slowed to the point that you wish to proceed. Recirculate and run off wort. Sparge with hot wort from first mash to yield roughly 5.0 gallons (19 L) of thick wort. Sparge with an additional 1.5 gallons (5.7 L) of water at 170°F (77°C) to make 6.5 gallons (25 L) of wort total.

BOIL AND BEYOND

Boil for 90 minutes, to reduce volume to just over 5.0 gallons (19 L). Add hops for final 60 minutes of boil. Add Irish moss for final 15 minutes of boil. Cool wort, aerate and pitch yeast. Ferment at 68°F (20°C). Finally, keg or bottle the beer.

REITERATED MASHING

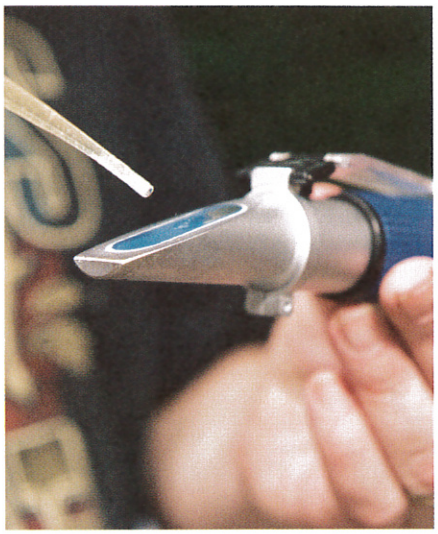
The basic idea of reiterated mashing is that you make two worts—the first for your brewing liquor and the second as the wort you will ferment into beer. It took me a couple of tries to work some of the kinks out, but now the procedures are more workable. Expect this to be a long brew day; don't waste time on the first mash. Let it go for about 20 minutes, then start running off the wort. Don't bother recirculating, as it won't hurt if your brewing liquor is cloudy. The big key to getting this to work is patience during the second mash. It takes time for the starches to dissolve when there is already a lot of sugar in the mash liquid. Monitor the specific gravity every 5 to 10 minutes with a refractometer (or hydrometer) and keep mashing if the specific gravity is still rising quickly.

This really works best if you have a heatable mash and can stir the mash after each specific gravity reading. If you have an extra kettle, you can mash in it and transfer the mash to your lauter tun when it comes time to collect the wort.

The only reason to try this—beyond wanting to do something adventurous—is to brew a very strong beer that is very light in color. There are other, much easier, methods to brew any dark, strong beer. If you try this, be prepared to make adjustments as you go. For example, if you don't collect the full volume of wort from the first mash, you will need to adapt what you do for the second mash. (In this case, the easiest thing to do would be to add water to make the volume of the brewing liquor the expected volume.)

RECIPE OPTIONS AND NOTES

You can use any combination of base malts you want, with or without adjuncts, to make a beer like this. I've tried it with just Pilsner malt once. Just make the weight of both grain beds 10 pounds (4.5 kg) and follow the procedures listed. You can also scale the recipe down and make a smaller batch (and yeast starter).



A refractometer comes in very handy when making this beer.