



THE BEER BARONS OF MILWAUKEE

DEDICATED TO THE EDUCATION AND ENJOYMENT OF FERMENTED MALT BEVERAGES

BARE BONES BASIC BREWING

Part 1 - Making the Wort



EQUIPMENT NEEDED FROM THE KIT

- Grain Bag
- Hop Bag
- Bottling Bucket
- Hydrometer
- Test Jar
- Carboy & Handle
- Funnel & Filter
- Siphon
- Blow Off Tubing



EXTRA EQUIPMENT NEEDED

- 🍷 Steel Pot (16 to 20 qt) & Big Spoon
- 🍷 Blow Off Bucket
- 🍷 2 to 4 Cup Pyrex Measuring Cup
- 🍷 Beer ingredient kit & 6 gallons of water



BARON TIPS

Heat Source

- Heat Source
 - Glass top stove tops won't work. Not hot enough.
 - Stove Top: Electric Coil or Gas
 - Better Yet: Propane Burner (Outside)

Sanitizer

- Sanitizer
 - Forget bleach. Too risky and error prone.
 - One Step, Star San, or BTF Iodophor.

Get Good Yeast

- Get Good Yeast
 - Forget dry yeast pack from ingredient kit.
 - Better off with a fresh dry or liquid smack pack.

Tighten Bottle Bucket Faucet Assembly



BEER SCIENCE 101

- Wort – Unfermented Beer.
- Add Yeast to Wort.
- Yeast feeds on sugars in Wort.
- Feast by product – CO₂ & Alcohol.
- End result -> Beer!

WortYeast Feast Beer !





WORT BOILING OBJECTIVES

- Extract color and some fermentable sugars from specialty grains.
- Dilute malt extract.
- Kill water micro-organisms.
- Extract hop flavor and preservatives.
- Prepare for yeast.



STEP 1 AND 2

1. If you have it, smack the yeast pack
 - 🍷 Yeast nutrient needs to interact with liquid yeast to stimulate growth.
 - 🍷 Do this night before brewing.

2. Put 2 gallons of water in the freezer.
 - 🍷 Will need this later to cool boiled Wort.
 - 🍷 Do this approximately 1 hr prior to brewing.



STEP 3 - SANITATION

- Most important part of the brewing process
- Always keep sanitation in mind!
- Fill 5 gallon carboy with sanitized solution.
- Fill bottling bucket with sanitized solution.
- Add to bucket - Siphon, Blow Off Tubing, Funnel and Filter.



STEP 4 – BEGIN WORT

- Steep Specialty Grains
- Not To Be Confused With Mashing
- Mashing - enzyme activity taking place to convert grain or adjunct starches to sugars.
- Steeping - is entirely a leaching and dissolution process, the addition of existing sugars to the wort.

John Palmer, How to Brew, Chapter 13



STEP 5 – STEEP & EXTRACT

- Fill up pot with 2 to 3 gallons of water
- Heat water to 150° F
- Specialty grain to bag and into 150° water
- Let bag sit in 150° water for 30 minutes
- Remove grain bag from 150° water.
- Drain bag of liquid - Don't squeeze!
- Take pot off heat and stir in malt extract.



STEP 6 - BOIL

- Add pot back to burner and bring to boil.

BEWARE BOIL OVERS

- Controlled rolling boil:
 - Add bittering hops to bag and bag to pot.
 - Start the 60 minute clock.



STEP 6 – BOIL

- Stir pot regularly – avoids caramelization.
- If recipe calls for it, add flavor hops at when 30 min remain. Add to same bag.
- When 5 min remain:
 - Add aroma hops.
 - Drain sanitized solution from Carboy.
 - Add freezer water to Carboy.



STEP 7 – POT TO CARBOY

- Remove pot from burner.
- Drain liquid from hop bag – Don't squeeze!
- Need to cool the Wort to 80° F or less.
- Add some remaining water to pot.
- Add ice from freezer water to pot or funnel.
- Pour pot contents into Carboy via funnel and filter.
- If needed, top off Carboy with water.



STEP 8 – HYDROMETER & TEMPERATURE READING

- Siphon sample of Wort from Carboy into Test Jar.
- Take temperature. Verify $\leq 80^{\circ}$ F.
 - Greater than 80° F and yeast will die.
- Gently put Hydrometer into Test Jar.
- Write down Estimated Alcohol Value.
 - Estimated alcohol value now minus estimated alcohol value at bottle = actual alcohol value.



STEP 9 – PITCH YEAST & ADD BLOW OFF TUBE

- Yeast pack swell to 3” it’s ready to pitch.
- Wort $\leq 80^{\circ}$ F the it’s ready for yeast.
- Add yeast and carefully shake Carboy.
- Put some water and few drops of bleach into blow off bucket.
- Put one end of blow off tube into Carboy, other end into blow off bucket.
- Put Carboy in 62° F to 74° F location.



STEP 9 – BLOW OFF TUBE

Make sure:

- ❊ Blow Off Tube does not go into Carboy more than one inch.
- ❊ Blow Off Tube end in Blow Off Bucket is submerged in water and will remain submerged.



WHAT HAPPENS NEXT?

- Yeast starts to feast on Wort sugars.
- CO₂ and Kraeusen head will escape Carboy via Blow Off Tube
- Should see activity within 24 hours.
- After 3 to 4 days – time to Rack.



FIRST BATCH SHOPPING LIST

- 🍷 Beer Ingredient Kit
 - 🍷 Recommend ales for first few batches
 - 🍷 Red, Stout, Brown Ale, Porter, Pale Ale
- 🍷 Liquid Yeast Smack Pack or Fresh Dry Yeast Packet
- 🍷 One Step or BTF Iodophor
- 🍷 If it didn't come with kit:
 - 🍷 Siphon
 - 🍷 Test Jar
- 🍷 6 gallons of water



QUESTIONS / NEXT



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www.beerbarons.org