Rye P.A.
Your Brewmaking Companion

Your Kit includes:
- 1 Gallon Fermentation Jug
- Drilled Rubber Stopper
- Airlock
- Racking Cane
- Tubing (and Hard Tubing for Blow-off Assembly)
- Tube Clamp
- Thermometer
- Sanitizer Packet
- Grain, Hops, and Yeast for 1 Batch

What else you need:
- Stock Pot (a second one is handy if you have it – otherwise you can get away with a bowl and a quick cleaning after step 2.)
- 12 Empty Swing-top Bottles (ie: Grolsch) if you didn't get the capper and caps • Strainer
- Funnel
- Honey
- Ice

Step 1: Sanitize. Sanitize. Sanitize.
- You might be surprised to learn that Step 1: Sanitization might actually be the most important thing here. If things are not completely clean, your yeast will die. You will not drink good beer, and the next few steps will only provide you with a valuable learning experience instead of a decidedly more valuable drinking experience.
- Therefore, dissolve half of your C-Brite packet with a gallon of water in a container. Save the second half for when you bottle.
- Soak everything you are going to use, rinse with water, and let air dry on some paper towels. If it isn't totally dry when you are ready to start don't worry.
- Keep the extra sanitizer in a container for now. Chances are you'll want to re-sanitize something later.

Step 2: The Mash
- Heat 2 quarts of water to 160°F (71°C)
- Add grain (This is called "mashing in." Take note of jargon. Or don't.)
- Mix gently with spoon or spatula until mash has consistency of oatmeal.
- Temperature will drop to ~150°F (66°C)
- Cook for 60 minutes at 144-152°F (63-68°C). Stir every 10 minutes, and use your thermometer to take temperature readings from multiple locations in the grain.
- You probably don't need to apply heat constantly. Get it up to temperature, then put a lid on it.
- Monitor, stir, and adjust accordingly to keep in range.
- After 60 minutes, heat to 170°F (77°C) while stirring constantly ("Mashing Out").

Step 3: The Sparge
- Heat 1 gallon of water to 170°F (77°C).
- Set up your "lauter tun" (a strainer over a pot.)
- Carefully add the hot grain mash to the strainer, collecting the liquid that passes through.
- This liquid is called "wort" (pronounced "wert"). It will be your beer.
- Slowly and evenly pour 170°F (77°C) water over the mash to extract the grain's sugars.
- You want to collect a gallon and a quart of wort. You will lose about 20% to evaporation during the boil so you will want to start with a bit more.
- Discard the remaining unused hot water.
- Re-circulate wort through grain once.

Step 4: The Boil

- In a pot, heat wort until it boils.
- Keep boiling until you've hit the "hot break" (Wort will foam - you may need to reduce heat slightly so it doesn't boil over.)
- Stir occasionally. All you want is a light boil – too hot and you lose fermentable sugars and volume.
- The boil will last 60 minutes - start your timer and add in the rest of the ingredients at these times:
  - Add ½ Northern Brewer hops at the start of boil.
  - 15 minutes into the boil add remaining Northern Brewer hops.
  - 30 minutes into the boil add ¼ of Willamette hops.
  - 45 minutes into the boil add ¼ of Willamette hops.
  - 55 minutes into the boil add ¼ of Willamette hops.
  - 60 minutes into the boil turn off heat and add remaining Willamette hops.
- Twenty percent of the wort will have evaporated in this step leaving you with 1 gallon of wort. If your boil was a bit high, the surface area of your pot extra large, or brewed on a particular humid day you may have less than the full gallon. Don't worry – you just reduced your beer a bit too much. You can add a bit more water in the next step to get it up to the full gallon.

Step 5: Fermentation

- Place brew pot in an ice bath until it cools to 70°F (21°C)
- Remove brew pot from ice bath.
- Strain cooled wort through funnel into the glass fermenter.
  - Yeast needs oxygen, and this helps aerate your wort and clarify your beer.
- "Pitch" yeast. (Toss ½ the packet in.)
- Shake aggressively.
  - You're basically waking up the yeast and getting more air into the wort.
- Firmly insert sanitized stopper into bottle.
- Attach rubber tubing to short, hard plastic tube protruding from the stopper. (It comes attached in the kit, separate them to clean then reattach.)
- Place other end of rubber tubing into a bowl of sanitizer solution. (Bowl must be lower than jug.)
- You've just made a "blow-off tube". It makes sure your beer doesn't blow up because of the gas from the yeast eating sugars and producing alcohol.
- Let sit for two or three days or until bubbles subside.
- Remove blow-off tube and short, hard plastic tube sticking out of stopper.
- Assemble airlock, filling up to line with sanitizer.
- Firmly insert airlock into hole in stopper.
- Keep in a cool dark place for two weeks without disturbing other than to show off to friends. (If beer is still bubbling, leave sitting until it stops.)
- In the meantime drink beer with self-closing swing tops (or non-twist off if you have the capper) or go to a bar that has some and ask for empties.

Step 6: Bottling

- Thoroughly rinse bottles with water, removing any sediment.
- Mix remaining sanitizer with water.
- Fill each bottle with a little sanitizer and shake. Empty after two minutes, rinse with cold water and dry upside down.
- Attach sanitized tubing to the end of your sanitized "racking cane" (longer hard tube with bend.)

Step 6: Bottling (continued)

- It will probably be a snug fit, but you can get it on there.
- Dissolve 3 Tablespoons honey with ¼ cup water. Pour into a sanitized pot.
- Siphoning (It all happens pretty fast. You may want to practice on a pot of water first.)
  - Fill tubing, but not racking cane, with sanitizer.
  - Hold tubing below top of racking cane so sanitizer doesn't pour into your beer.
  - Remove stopper and place racking cane into jug, just above the yeast and sediment at the bottom ("trub").
  - Lower end of tubing not connected to racking cane into sink so that sanitizer flows out. Suction will force beer up and through the racking cane and tubing.
  - Let sanitizer flow into sink until beer just starts to flow out of the tubing, then clamp shut. Open clamp on tubing, allowing beer to flow into pot with honey.
  - Tilt jug when beer level is getting low, but be careful in not sucking up the trub. Siphon beer from pot into bottles, pinching tube clamp to stop flow after each bottle.
- Close bottles.
- Store in a cool dark place for 2 weeks.

Step 7: Enjoying

- Drink. Share with friends if you're the sharing type.

Step 8: Plan Your Next Brew

- Vist Brooklyn Brew Shop at the Brooklyn Flea or online at www.brooklynbrewshop.com New brews will be added regularly.

Happy brewing and drinking!
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