

Welcome to the Longshot Brewing Instruction Packet!

If this is your first time brewing, welcome! In this document you'll find instructions on how to brew your first batch of craft beer using our Amber recipe kit. Each step is outlined, and we're always available help you brew.

Your Equipment

This kit contains all the equipment and sanitizer to craft your first batch, which is 5 gallons or approximately two cases of beer. Be sure to start saving bottles, you need them a week after brewing. Once the first batch is complete, get some caps and bottles for batch two!

Your Ingredients

We make each kit with freshly packed hops, yeast and malt; you supply the water! Be sure to read the instructions before starting; inventory your ingredients and walk through the brewing process. Ask lots of questions of your friends and colleagues or call us and we'll be sure to help you every step along the way!

Questions?

There are lots of ways to contact us with questions:

Our toll-free consulting line: **800-523-5423**
Facebook: **facebook.com/beerwinehobby**
Twitter: **@BeerWineHobby**
Email: **bwhinfo@beer-wine.com**

We're available on Facebook, Twitter & email so don't be shy to reach us anytime!

Enjoy your kit, and welcome to brewing!



Gennaro Cataldo
Owner
Beer & Wine Hobby

Our Classic Beer Recipe

Ingredients:

2 – 3.3 lb. cans Malt Extract	1 lb. Crystal Malt (grain) (crushed)
1 ½ oz Hop Pellets (Either Fuggles, Hallertau or Cascade)	1 pkg. Water Salts
1 Muslin Straining Bag	Yeast
¾ cup Priming Sugar	

Specific gravity: **Original** – 1.035-1.040 **Finished** 1.008-1.012

Equipment needed:

12- 16 qt stainless steel or enameled pot (NO aluminum pots!)
Single stage fermenter (plastic bucket) and 5 gallon glass carboy
Stopper and fermentation lock
Racking tube and siphon hose
Thermometer, hydrometer
Clean plastic milk jug and cap, or glass jug and cap for sanitizing solution
Ice – used in an ice bath to cool your wort

Instructions:

- 1. Steep Grains:** Creating wort (unfermented beer) by placing the Crystal grain into the muslin bag and tying a knot in the end of the bag. Add 1½ gallons of cold water and the filled muslin bag to the brew pot and bring to a boil. Once boiling, carefully remove the brewpot from heat and steep for 5 minutes. Stir the bag occasionally to keep the muslin bag from sticking to the bottom of the pot.
- 2. Continue ‘The Boil’:** Remove and discard grain bag (do not squeeze bag), then add 2 cans of malt extract, water crystals and hops to the brew pot. Heat to a boil. **Tip:** Do not let your wort boil over, and stir often to avoid burning the malt. Once boiling, reduce heat to medium and continue to boil gently for 30 minutes.
- 3. Sanitize:** While the wort is gently boiling, prepare one gallon of Star San solution according to the instructions on the bottle. Follow the instructions to sanitize the plastic fermenter, lid, hydrometer, and thermometer.
- 4. Cool the wort:** Remove your brew pot from the stove, and place it in an ice bath in your sink or bathtub. Allow to cool for 10 –15 minutes, stirring occasionally.
- 5. Set the volume:** Add 2 gallons of cool (70°) water to the primary fermenter, then add the cooled wort to plastic fermenter. Raise the volume to 5 ¼ gallons with more cool water.
- 6. Rehydrate yeast:** When the temperature of the wort is 70-80° F, rehydrate the yeast by adding the yeast packets to ½ cup lukewarm water. Let the yeast stand for about 10 minutes.

7. Take a Hydrometer Reading: Read and follow the instructions in the hydrometer tube to find your wort's specific gravity. Sanitize the hydrometer and hydrometer tube with the Star San solution. Immerse the hydrometer tube into your wort and fill $\frac{3}{4}$ full. Place the hydrometer into the wort-filled tube; float in the center of the tube for best results. Read and record the level from the Specific Gravity scale. *Starting gravity should be 1.035-1.040.* Consult us if your gravity is not in the expected range.

8. Pitch the yeast: Add the yeast mixture to your fermenter and stir vigorously for approx. 30 seconds. Secure the fermentation lid to the fermenter. Insert the fermentation lock into the grommet in the lid, and fill the lock halfway with water. Fermentation should begin within 24 hours. Keep the fermenter between 65-70° F, away from direct sunlight.

9. Choose single or dual-stage brewing

Single Stage Brewing:

Allow the beer ferment for 7-10 days. Check the hydrometer reading after 7 days. If the finished gravity has been reached, prepare to bottle. If the beer is not finished, replace lid (do not sample), and let sit a day or two longer. Take another reading. **Skip to the Bottling Section when the finished gravity is reached.**

Dual Stage Brewing:

Dual stage brewing removes beer from the sediment, making this recipe slightly less bitter. This method is also used to age beer with flavorings such as vanilla beans, oak or spices.

Calculate the halfway gravity point: Take the higher number in the starting gravity range and subtract it from the lower number in the finished gravity range. In this craft recipe: $1.040 - 1.008 = .032$. *Divide* this number in half and add to 1.000, to equal **1.016**.

After **3-4 days**, check the hydrometer reading. If it has fallen to the halfway mark, sanitize your glass carboy, Autosiphon and siphon tubing with the Star San solution. A great way to sanitize the Autosiphon and tube is to place them in a bucket or large bowl filled partway with Star San, and pump the solution through the Autosiphon for at least one minute. Be sure Star San contacts the exterior of the Autosiphon and tubing, i.e. every part that will touch the beer.

Rack the beer into the carboy: Use the Autosiphon and tubing to transfer your beer to the glass carboy. Place the primary fermenter (bucket) on a table, and the carboy on the floor. Place the siphon tubing into the carboy and the Autosiphon halfway into the primary fermenter. Pump the Autosiphon fully to begin the beer transfer. **Be sure not to splash or add air to your beer!** Slowly lower the bottom of the Autosiphon to the bottom of the fermenter, taking care not to disturb the sediment. Tip the primary fermenter as you reach the end, taking care to leave the sediment behind in the plastic bucket. Use books under the high end of the fermenter to maintain the pitch to the Autosiphon. In 7-10 days, check the reading again. When the finished gravity is achieved, prepare to bottle.

Bottling

Equipment:

- Primary fermenter, carboy, Autosiphon, tubing, and (48) 12 oz bottles or (36) 22 oz bottles
 - A large book or set of books to raise one edge of the primary/secondary fermenter during racking
 - Bottle capper and caps
 - StarSan solution - diluted in the proper ratio with water
 - Finished beer and priming sugar
1. Sanitize all equipment and bottles with your Star San solution.
 2. Dissolve priming sugar by heating it in 8 oz water or finished beer.
 3. Place 4oz. of Star San solution in a bowl; place the caps in the Star San to sanitize them.
 4. If you followed the **single-stage brewing method**, place the primary fermenter (finished beer) on a countertop or table, and set the carboy on the floor. Add the sugar solution to the carboy. Transfer the beer into the carboy using the Autosiphon and siphon tube; this is called racking. When the primary is nearly empty, tip the primary gently and place a large book under the end to maintain the angle. Be sure to leave the sediment behind. Note that this process may also leave a small amount of beer in the primary fermenter. Skip step 5 and follow steps 6-8.
 5. For the **dual-stage brewing method**, add the priming sugar solution to the carboy. Stir gently. Follow steps 6-8.
 6. Move the carboy to the table, and set sanitized bottles on floor. Attach the bottling stick to the siphon tube; have a helper place the bottling stick in a bottle and depress the stick to open the system. You can now pump the Autosiphon to start the flow of beer. Your helper should keep pressing the bottling stick until the bottle is filled to the top; remove the stick fill all bottles. Place caps in sanitizer for at least a minute; use the capper and sanitized caps to seal each bottle.
 7. Store upright at room temperature for about 2 1/2 weeks to allow carbonation to develop. After beer is fully carbonated, it can be stored in a cool place. Beer will continue to improve in flavor for about 3 months, and will remain fresh until it is about 6 months old.

Brewing Record

As you continue to make beer, keep a log of your activity – what you brewed, observations and your impressions of the beer! It's fun and rewarding, especially as you continue to brew.

Beer name: _____

Primary fermenter:

Starting Specific Gravity: _____ Actual Temperature: _____

Adjusted Starting Specific Gravity: _____ Date: _____

Potential Alcohol reading (%) _____

Notes:

Ending Specific Gravity: _____ Actual Temperature: _____

Adjusted Ending Specific Gravity: _____ Date: _____

Potential Alcohol reading (%) _____

True alcohol by volume calculation:

Adjusted starting specific gravity = _____

Minus Adjusted ending specific gravity = _____

Multiply by 131 = _____

Alcohol by volume (percent) = _____

Bottling Date: _____

Observations:

Comments:

Frequently Asked Questions

Why sanitize and what is the best method?

Sanitization is the single most important function in brewing. The primary reason beer spoils is that equipment is improperly sanitized. You don't need to worry about sanitizing, just be thorough! We provide C-Brite sanitizer in your kit.

To properly sanitize your equipment, prepare a sanitizing solution in a clean ½ gallon or gallon jug, and use it to clean all your equipment and bottles. Be sure that everything is cleaned – for example, the fermentation bucket, lid, grommet hole, gaskets...every part that can potentially touch beer! The same holds true for your hydrometer, thermometer and all other equipment. Clean the items with your hands, then thoroughly rinse in water. Be sure to clean spoon handles so you don't cross-contaminate equipment. You may even wish to sanitize a bucket beforehand to place all the clean equipment in after each item is sanitized.

Be sure to sanitize your hydrometer before and after each use. The same holds true for any siphon hoses, test tubes, and other items that contact your beer throughout the fermentation process. Clean both the inside and outside of your siphon tube. Let it air dry, preferably by hanging vertically. Those extra droplets of water inside a hose can harbor bacteria, so be sure the inside is thoroughly dry or clean before use.

What are “Single Stage” and “Two Stage” brewing?

Single Stage: the beer goes through the entire fermentation cycle in one bucket. It should be brewed at room temperature (65-75°F), take about 5-7 days, and be bottled as soon as it is finished fermenting.

Two Stage: the beer starts out in a **primary** fermenter (usually a bucket). The initial fermentation is very active, and forms a head (like a freshly poured glass of beer). This lasts about 3 days, and then will “fall” and become slower. This happens when the gravity has fallen by about half. At this point, the beer should be siphoned to a **secondary** fermenter (usually glass). The liquid should come to within an inch or so of the stopper. The beer finishes fermenting in this container. The advantage to Two Stage fermentation is that the beer can remain in the fermenter until it is clear and you are ready to bottle. Two Stage brewing must be used when lagering beer, as the secondary fermentation is done at a lower temperature.

What is “pitching” the yeast?

Pitching is another word for adding yeast.

How do I know my beer is fermenting?

Fermentation usually begins within 24 hours of pitching the yeast. Liquid yeast, if a yeast starter has not been made, can sometimes take a little longer. You should see vigorous bubbling or foam in the initial stages. About 4-5 days after the initial stages, the fermentation settles down to a “quiet” bubbling. If you are using a plastic bucket with an airlock, the initial fermentation is not always apparent by looking at the fermentation lock, but if you can see the foam, the beer is fermenting. Your hydrometer reading is the most accurate way of determining the progress of fermentation.

Can I keg my beer?

Sure! We have kegs specifically for home brewers that allow you to create a draft system at home. Some drafts are even portable! Check out drafting equipment on our website at www.beer-wine.com.

Can I grow my own hops?

Yes, you can grow hops quite easily. We sell fresh Hop Rhizomes each spring, just in time for planting. Hops need fertile soil, in full sun, with plenty of space to grow. Care Instructions are provided!

What is the sediment at the bottom of my beer bottles?

It is spent yeast. It is in all naturally carbonated beers and sodas. There will be more sediment with beers brewed single stage, as the beer has not cleared completely prior to bottling. It will not hurt you if you drink it. If you want to drink a clear beer, pour the beer carefully into a glass, and avoid disturbing the sediment.

How long before my beer is carbonated?

Naturally carbonated beers need about 2 weeks at room temperature to become fully carbonated. After the 2-week period, they can be stored at cooler (not necessarily cold) temperatures.

Help! My beer is over-carbonated!

The cause of over-carbonated beer is usually over-priming (adding too much priming sugar) or not achieving the correct final gravity reading for your particular recipe. Add less priming sugar next time, and be sure not to bottle until your final gravity reading has been reached. To reduce the carbonation, refrigerate the beer before opening. If the beer gushes (keeps foaming and foaming after opening), it has most likely become infected. Use proper sterilization techniques to avoid this in the future.

Where else can I find out more making beer?

Check out our website at www.beer-wine.com. We have lots of videos and information to help you learn more about brewing.

What's a good reference book for beer?

Several books are available. Look at as many as you can, talk to other brewers also for advice. Popular titles widely available are:

- *The Complete Joy of Brewing*, by Charlie Papazian, the “bible” of Homebrewing.
- *Basic Homebrewing* – A visual guide of the entire Homebrewing process.
- *Extreme Brewing*, by Sam Calagione, owner of Dogfish Head Craft Brewery.