

# Brewing Your First Beer



Good beer is made from quality water, barley malt, hops and yeast. With the proper use of these ingredients and good fermentation equipment you can easily make beer that compares with those available commercially.

Before brewing there are a couple of important things to be aware of. The most important consideration for successful brewing is cleanliness and sanitation. The work surface, and all of the utensils that you use during the fermentation and bottling process must be cleaned and sanitized.

### **Sanitize Everything**

Everything that comes in contact with your beer during preparation must be clean and sanitized. This is accomplished by rinsing everything in hot tap water, then a bleach/water solution, and again hot water. Ordinary **unscented** household chlorine bleach is used. With all of the newer cleaning and laundry products on the market make sure you **use the old fashioned unscented chlorine bleach** like Clorox. Any brand of bleach will do but it must be the unscented chlorine type. Other cleaner/sanitizers are also available from your home brewing supplier. Check with them for proper concentrations and techniques.

All of the equipment included in your kit should be thoroughly rinsed, cleaned as necessary, and sanitized. Other things such as counter tops, spoons and pans should be washed as usual and rinsed very thoroughly with hot water to remove all traces of soap or detergent and sanitize as directed.

### **Water**

If you are happy with your drinking water you will be happy with the beer it makes. If you usually use bottled water for drinking you can use it for brewing.

If your water is low in dissolved minerals it may be necessary to add some minerals depending on the style of beer you are brewing. The recipe you are using should indicate when this is needed. In general, brewing with water straight from the tap will produce very good beer.

## **Brewing Temperature**

The type of beer you will be making is ale and is best fermented at temperatures near room temperature. The best temperature range for fermentation is 65 to 75 degrees F. If the temperature exceeds this range the fermentation will proceed too quickly and off flavors can be produced. If the temperature drops below the range, fermentation can stop completely.

## **What You Will Be Doing**

You are going to be making some of the best beer you have ever tasted. First you will boil some fresh hops in water to extract the bitter flavor characteristic in beer. Then you will add barley malt which provides the malty beer flavor and also sugar. Next you add brewing yeast which will convert some of the sugars in the malt to alcohol. This will take about 10 days to complete.

After the tenth day you will bottle it. Your beer is truly draft beer, carbonated naturally, not artificially like the big brewers do. When bottling, you will put a little priming sugar into the beer. This will react with the yeast to produce carbon dioxide. Since the carbon dioxide cannot escape the sealed bottle it will dissolve into the beer and produce the carbonation you see when you open the bottle.

After the yeast produces the carbon dioxide it will settle to the bottom of the bottle and the beer will get clear. This brings up an important point. When the beer is consumed it is important not to disturb the yeast sediment when pouring. It is best to pour the beer directly from the bottle into a large mug or pitcher without tipping the bottle back. This will ensure the yeast stays in the bottle.

## Let's Get Started

First, make sure you have the following items available.

Home Brewery consisting of,

fermenter

airlock

bottling bucket

bottling valve

racking tube

plastic tubing

beer bottles with caps

bottle capper ( if your using glass bottles)

Additional items,

household chlorine bleach

measuring spoons

measuring cups

large brewing pot

long handled spoon for stirring

## Ingredients For 5 Gallons Of Beer

1 can of hopped malt extract *plus* 2 pounds of dried malt extract (about 4.5 cups)

*or*

5 pounds of dried malt extract

*and*

hops for bittering

hops for flavor and aroma

1 package of ale yeast

3/4 cup of priming sugar

## Procedure

### Clean And Sanitize

1. Clean everything with hot water. Try to avoid the use of soaps and especially detergents when cleaning. Detergents are very difficult to completely rinse out. If not removed from your fermenter they can cause a flavor or result in a reduction in head retention of the finished beer. Rinse everything thoroughly in hot water.
2. Using a 1 gallon water jug measure 5 gallons of water into the primary fermenter (larger pail). Mark the outside of the pail with a permanent marking pen. Pails vary slightly in volume so this must be done individually.
3. Empty about half of the water out of the fermenting pail.
4. Measure about 3 tablespoons of unscented chlorine bleach (about 1 tablespoon per gallon) into the remaining water in the fermenter and stir to mix completely. This solution is your sanitizing solution and will be used to sanitize everything that comes in contact with your beer.
5. Dip or rinse everything you will be using for pre-fermentation such as any funnels, thermometer, hydrometer, airlock, and fermenter lid.

Bottling equipment must be cleaned and sanitized just prior to use so leave them for now.

6. Drain the fermenter, rinse all of the sanitized equipment with plenty of hot water and set aside on a sanitized surface.

### Boil The Wort

7. Measure 2 gallons of cold tap water into a large pot. A 16 quart stock pot is good for this.

8. Place on the stove and bring the water to a boil.

9. If you are using unhopped malt extract, put the bittering hops into the boiling water and boil for 20 minutes. If not, then go to step 10.

10. Pour the malt extract into the boiling water and boil for 15 minutes. Take care to not to boil over.

11. At the end of this time put the finishing hops into the pot and boil very gently for 5 minutes.

12. Take the pot off the burner, cover and set aside to cool down until you comfortably can hold your hand on it.

13. Measure 3 gallons of cold tap water into the sanitized fermenter.

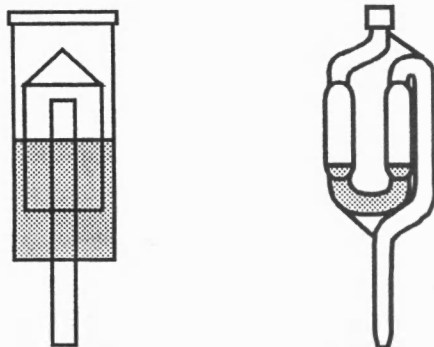
14. Pour the cooled beer mixture from the pot into the water in the fermenter. If necessary, use the pot to bring the level to 5 gallons.

15. The resulting mixture should be about room temperature, 65 to 75 degrees F. If it is not, let it cool with the fermenter lid in place.

*Note: At this point the beer is very susceptible to contamination from stray yeast. Make sure it is exposed to air as little as possible and that anything that comes in contact with the beer has been sanitized.*

16. When at room temperature sprinkle the contents of the yeast packet into the beer.

17. Snap the lid on the fermenter, fill the airlock with water and install the airlock into the fermenter lid. The two different types of airlocks are shown below. The shaded portion indicates the water level.



That's all for now. Place the fermenter in a place where the temperature will be between 65 and 75 degrees F. and out of direct sunlight. Within 24 to 36 hours the fermentation process will begin and you will see the fermentation lock bubbling. This activity will continue up to 4 days. After 7 days you can bottle.

### Bottling

1. Clean the bottling equipment with hot water. This includes the bottling bucket, siphon/filler hose, bottling valve, bottles, and bottle caps.
2. Fill the bottling bucket half way with cold water.
3. Measure 3 tablespoons of chlorine bleach into the bucket and stir.
4. Dip all of the bottling equipment and bottles into this solution and rinse with hot water. Drain the bucket and rinse with hot water. Place the equipment and bottles on a sanitized work surface.
5. Measure 2 cups of water into a sauce pan and bring to a boil.
6. Pour  $\frac{3}{4}$  cup of priming sugar or 1  $\frac{1}{4}$  cup of dry malt extract into the boiling water and stir until dissolved.
7. Pour the sugar solution into the bottling bucket.

8. Place the fermenter on a counter top with the bottling bucket on the floor below
9. Remove the lid from the fermenter and transfer the beer into the bottling bucket using the plastic tubing, racking tube and siphoning. This is done by connecting the plastic tubing to the racking tube (that's the clear tube with the large tip attached). A siphon can be started by filling the tubing with water, put your clean thumb over the open end of the tube and quickly insert the racking tube into the beer. *Do not put your hand into the beer.*
10. Place the bottling bucket full of primed beer on the counter with the fermenter on the floor below.
11. Just as you did in step 9, start a siphon and let the water from the siphon hose go into the fermenter until the beer begins to flow. At this point quickly pinch off the flow and attach the bottle filler. Siphoning can be eliminated if you are using a bottling spigot.
12. Fill each bottle to the top using the bottle filler.
13. Cap each bottle and set aside as you go.

*Note: The beer may appear cloudy at this time. This is normal. The beer will slowly clear during the next few days as it carbonates.*

## Aging

Place the bottled beer in a place where the temperature is 70 to 75 degrees. After a week the beer should be clearing and fairly carbonated. It is best to leave it for 2 weeks before tasting. The beer will be much better after 4 to 5 weeks depending on the beer style and ingredients.

## Drinking

Your beer has been carbonated naturally, in the bottle, not artificially by pumping carbon dioxide into it. This results in a slight yeast layer in the bottom of each bottle. To drink your beer, pour it into a mug or pitcher gently with one motion so as not to disturb the yeast sediment too much. When the yeast starts to come out stop pouring. A little yeast won't taste bad, so don't worry.



We want your first batch and every batch of beer to be the best it can be.  
If you have any questions, please call (10am to 6 pm Pacific time  
Monday-Saturday) or write to us at the address below.

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