THE CATALYST

FERMENTATION SYSTEM

GUIDE TO BREWING & FERMENTING

CRAFT A BREW

TURNING CRA
BEER LOVERS
INTO CRAFT
BEER BREWER
SINCE 2010.

WE MAKE HOMEBREWING EASY

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INTRODUCTION TO CRAFT BEER

Craft brewing is a unique outlook on brewing that aims to formulate beer that is flavorful and distinctive rather than most beer on the market that aims to have mass appeal in order to sell the most product. This mass produced beer has cheap alternative ingredients such as rice or corn, which keep costs down but don't add to the flavor or complexity of the beer.

Craft beer is the complete opposite. Craft brewers strive to source quality ingredients from all over the world using only the purest and most flavorful blends of malted barley, hops, water and yeast. Craft beer can also get fairly extreme, whether it is a highly hopped India Pale Ale created by adding copious amounts of the world's most potent hops or a strong Belgian ale pushed to its alcohol limit by adding a few pounds of Belgian candy sugar. Craft beer can be an experiment in how far you can push the traditional limits of brewing to create a one of a kind beer that no one has ever experienced.

SO ENJOY THOSE UNIQUE FLAVORS YOU'LL EXPERIENCE WHEN TASTING YOUR FIRST BATCH OF FRESH HOME BREW AND REMEMBER THAT YOU HAD A HAND IN BEING PART OF ONE OF THE OLDEST TRADITIONS OF MAN BY CRAFTING YOUR OWN BEER!

BEER INGREDIENTS

GRAINS

(Fermentation, Flavor)

Malted barley is the primary source of fermentable sugars in brewing. When the yeast is added to the wort (unfermented beer–pronounced “wert”) they will convert these sugars to alcohol. In our kits we use quality malted barley extract that is 100% natural with no additives. Using malt extract has some advantages over brewing with all-grain, the biggest being time and convenience. The all-grain brewing process generally takes 3+ hours, while extract brewing takes about 90 minutes without compromising quality or taste.

We also incorporate a variety of specialty grains into our kits which add to the complexity and color of the beer.

HOPS

(Bitterness, Flavor, Aroma)

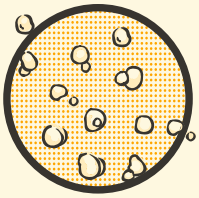
Hops are used to balance the flavors in beer. Without hops, beer would be sweet, yet the bitter acids and oils in the hops help to balance the flavor profile and add aroma. Hops are grown all around the world and come in many varieties, each having their own distinct characteristics. Hops also have the benefit of acting as a natural preservative; one of the most famous examples of this is seen in the Indian Pale Ale, or IPA-style of beer. The preservative quality of hops originally helped this highly hopped beer survive the long voyage from Britain to India and thus the popular IPA-style was born.

BEER INGREDIENTS

WATER

(H_2O)

Water is the main ingredient in beer and any imperfections in the water will come through in the finished product. Generally, if your water is safe to drink and tastes fine then it will be okay for brewing. If you're not sure about the quality of your water or just want the best possible beer, it is recommended to run the water through a filter (like a Brita® filter) or buy spring water to use in your beer. Do not use distilled water, as it's stripped of minerals that aid in fermentation.



YEAST

(Fermentation, Flavor, Carbonation)

Yeast is a living organism that is technically a fungus. It grows and multiplies by eating the sugar (malt), converting the sugar to alcohol and then releasing CO2 (yeast will eventually help to carbonate your beer). Different strains of yeast give different flavors to your beer. Some yeast produce fruity flavors while others may create a spicy character during fermentation. Different strains of yeast also have different tolerances to the alcohol levels they create. Eventually the yeast will die in the presence of alcohol and this will slow and eventually stop fermentation. This is why there are no beers as strong as spirits. The strongest a beer can get naturally is just over 20% Alcohol By Volume, which is not easily achieved.

WHAT'S IN THE BOX

If you've recently acquired a New Brewer's Package from us, you can expect to find the following items in your package.

THE CATALYST FERMENTATION SYSTEM

Which includes:

- (A) 6.5 Gallon Tank, Lid & Lid Seal 2.0
- (B) Stand (Base, 2 Legs, 2 Support Beams, 8 Screws)
- (C) Trub Trap™ (3" Proprietary Butterfly Valve)
- (D) Bottling Funnel Attachment
- (E) Transfer Tubing
- (F) Tubing Clamp
- (G) Rubber Stopper
- (H) 16 oz Wide Mouth Mason Jar
- (I) Allen Wrench

WHAT'S IN THE BOX

5 GALLON RECIPE BOX

Our Craft a Brew recipes include the following ingredients:

- Specialty Grains & Grain Bag
- Dry Malt Extract
- Hops
- Yeast

Some recipes might include additional ingredients.

ADDITIONAL BREWING EQUIPMENT

We've made sure to include extra brewing equipment you'll need for your first homebrewing experience. These additional tools are:

- Thermometer
- Capping Kit – Capper and 100 Caps
- Sanitizer Packet

RECOMMENDED EQUIPMENT (NOT IN THE BOX)

But before you begin brewing, make sure you have:

- Large brew pot (3-6 gallons)
- Ice (20 pounds)
- 50 "Pry off" bottles

BREWING INSTRUCTIONS

This is a general guide to brewing with Craft a Brew's recipe kits. Not all brewing processes are the same for every beer, so if your kit came with additional instructions make sure to follow them.

1. Depending on your pot size pour as close to 5 gallons of water (at least 2.5 gallons) in your pot as you can, but leave at least 6 inches of room at the top to make room for the ingredients. Don't worry, you can always add more water to get to the 5-gallon mark in The Catalyst after brewing. Place your pot on the burner and turn up to high.
2. Place your specialty grains in the grain bag and tie off the top. Wait until your pot of water reaches 155° F and then steep the grains in the water for 20 minutes while closely maintaining the temperature.
3. Remove and discard the grains making sure NOT to squeeze the excess water from the grains (this can release unwanted tannins). Next, bring your wort (unfermented beer) up to a boil. Once you see the first boiling bubble turn off the burner.
4. Next, take out your malt extract and slowly stir it into the pot, making sure it does not clump or stick to the bottom. Once all of the malt extract is completely dissolved turn the heat up to high.
5. At this point you should be monitoring your brew pot at all times because the wort can easily boil over and this can be a very messy mistake! If you start to have a boil over, turn off the heat and wait for the foam to subside. Bring the wort up to a slow rolling boil. Once this is achieved, stir in your bittering hops and start timing for a 60-minute boil. If your kit includes additional hops add them as directed on the packets.

6. After the 60 minute boil, shut off your stove and take the brew pot off the burner. Next, create an ice bath in your sink using at least 10 pounds of ice and cool water then place your brew pot in the ice bath. This is done to cool the wort to prepare it for the yeast, which must be added below 75° F. Place a top on the pot while cooling to prevent contamination. You may need to replace the ice as it melts to get the temperature down. Stirring periodically with a sanitized spoon will shorten cooling time.

SANITATION

Proper sanitation is regarded as the most important step to brewing. It is the difference between great tasting beer and beer so bad you'll have to pour it down the drain. Yeast is the only organism you want touching your beer, any other bacteria will eat the sugar and spread quickly making the beer sour and undrinkable. So make sure everything that touches your beer after it is brewed is properly sanitized before using.

It is best to begin sanitizing your equipment when your brew is chilling in the ice bath. We recommend mixing half of your packet of sanitizer with a gallon of water in a bucket or large container. Next, sanitize all your smaller equipment* by soaking them for 60 seconds in the mix. Screw the valve back onto the tank, then place the other items on fresh paper towels.

To sanitize the tank, pour the sanitizer solution into the tank (valve closed), latch on the lid, insert the stopper into the hole, cover the stopper hole with your finger then shake the tank for 60 seconds to ensure sanitizer has splashed onto all surfaces. Dump all sanitizer and proceed to fermentation.

* Butterfly Valve, Mason Jar, Transfer Tubing and Rubber Stopper.

FERMENTING WITH THE CATALYST

1. Verify that the wort is below 75° F (so it is safe for the yeast) with the sanitized thermometer before proceeding to fermentation.
2. Screw on the Mason Jar and open the valve.
3. Pour the contents of the pot into The Catalyst leaving some of the sediment from the bottom behind. Do not pour hot wort (above 75° F) into the Catalyst with the valve open. The heat of the freshly brewed wort could shatter the attached Mason Jar.
4. Add cool water if needed to the 5 gallon fill line. Cut open your included packet of yeast and sprinkle this over the top of your brew.
5. Now you need to make a blow off assembly to ensure the beer foam does not overflow when fermenting. Place the end of the flexible tubing about a 1/2 inch into the hole of the rubber stopper and the other end into the bottom of a half full glass of water. Fermentation should begin within 24–48 hours and you will start to see bubbles of CO2. In a few days when fermentation calms if you have a plastic airlock you can use this in place of the blow off assembly for the remainder of the fermentation.
6. Expect to see a lot of fermentation activity between 12–72 hours after adding the yeast. This will then will slow dramatically for the remainder of the two weeks. Let your beer ferment for 2 weeks in a cool (65–75° F), dark place.

Be sure to ferment with the butterfly valve open so sediment can settle neatly in the attached Mason Jar.

MASON JAR TIPS

- Our Trub Trab™ butterfly valve is compatible with any Ball® Brand Wide Mouth Mason jar.
- You may need to dump your 16 oz Mason Jar more than once to remove the sediment (trub) during fermentation. After 10 days of active fermentation if the jar is nearly full, close the valve, remove the jar, rinse, reattach then slowly open the valve again. Dumping trub before day 10 may result in unwanted loss of beer volume.
- Have a plate under the jar to catch any excess beer overflow during jar changes.
- Some beers will require a larger jar (24 or 32 oz) to catch all of the trub during fermentation.
- When harvesting yeast for future brews you may require a smaller jar (8 oz) for yeast collection.
- To reduce the number of jar removals needed during fermentation, try a pre-fermentation trub dump. Before pitching yeast, allow sediment from brew day to collect in an attached jar for a few hours. Dump this pre-fermentation trub, attach a clean jar and pitch yeast to begin fermentation.

BOTTLING

We recommend sourcing “pry off” bottles and using our capping kit. Having a friend to help bottle your beer will make the job much easier.

1. Rinse bottles with warm water insuring there is no sediment at the bottom.
2. Next you will sanitize your bottles, bottling funnel, tubing, 50 caps and a spoon for mixing. Mix the rest of your sanitizer in a bucket or large pitcher with 1 gallon of warm water. Soak all of the bottles, caps and other components in the solution for 60 seconds each to sanitize. Place components on a fresh sheet of paper towels and set aside.
3. In a small pot add about 2 cups of water and exactly 2/3 cup of table sugar. The sugar will give the remaining yeast fuel to carbonate your beer once bottled. Heat the pot of water on medium-high and stir in the sugar until fully dissolved. Boil for 5 minutes then cover and let cool.
4. Once the pot and sugar water are completely cool it is now time to add the sugar mixture directly to The Catalyst. Close the valve before pouring in the priming sugar to avoid disturbing any sediment in the attached jar. Stir gently and thoroughly with a sanitized spoon.
5. Attach the tubing to the bottling funnel and the tube clamp at the end of the tubing. Remove the attached jar, set it aside and screw on the bottling funnel. There may be some spilling that occurs when removing the mason jar so be sure to have a plate under it to catch any liquid. Fill the bottles slightly higher than where the neck starts, cap and repeat, using the tube clamp to start and stop the flow of beer.
6. Store the bottles in a room temperature, dark place for two weeks to let the beer condition and carbonate.
7. After 2 weeks at room temperature you can refrigerate, drink and enjoy!

BREWMASTER'S TIP

Some beers will benefit from some extra aging in bottles. If there are any noticeable "off flavors" present when tasting your first bottle then it is a good idea to let the beer age for another 1–2 weeks.

If you run into problems or have any questions for our brewmaster, please visit our website at CraftaBrew.com and use the "contact us" page, we would be glad to help! If you make any mistakes or have any concerns DO NOT discard your beer before contacting us for assistance!

Cheers!

ADDITIONAL NOTES

Although The Catalyst was designed with the homebrewer in mind, this Fermentation System also works for wine, cider and even kombucha. For more information on how to use The Catalyst for these fermentation processes visit our instructions page on CraftaBrew.com.

CRAFT A BREW

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