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I. INTRODUCTION TO HOME BREWING



Welcome to the 52Brews Top 5 Craft Beer Recipes E-book! Here, we provide you with the basic steps for brewing quality pale ale, a stout, a pilsner, a lager, and an IPA, right in your own home.

We've selected the most popular variants in each category, so this is by no means an exhaustive guide to brewing every type of beer ever made. Instead, it is our hope that this e-book serves as a primer that will inspire you to explore the vast universe of craft beer in all its exciting styles and flavors.

We also go over the essential equipment you will need in order to produce beers of outstanding quality. In addition to the essentials, we include a list of useful add-ons that will make beer making easier, more efficient, and more rewarding.

This e-book is brought to you by Mark Nielsen, the creator and author of 52 Brews. A blog dedicated to the art and craft of home brewing, 52 Brews has extensive content on most every aspect of home brewing, including processes, techniques, and equipment reviews. The site also features profiles on new craft beers as they are released, and it even has a beer of the month clubs where the top brews are highlighted.

Mark himself is an avid home brewer who has devoted a significant part of his life to perfecting the craft of beer making. A graduate of the San Diego Culinary Institute with a Diploma in Cuisine, Mark has always been fascinated with the beer making process. With this e-book, he hopes to share with you some of the essential techniques and methods that he has learned from over a decade of home brewing.

You can reach Mark Nielsen at mark@52brews.com.



II. HOME BREWING SUPPLIES

1. The Essentials

Brew kettle - Used for boiling the wort or unfermented beer. A kettle with a capacity of 10 gallons or more is recommended.

Burner - Used for heating and boiling wort.

Fermenter - Used to hold the beer during the fermentation process, which results in the transformation of sugar to alcohol.

Wort Chiller - Used for cooling down the wort after boiling.

Mash Tun - Used for mashing the grain during all-grain brewing.

Bottle Filler - Used for filling bottles if you opt to bottle your beer.

Keg - This is used for storing your beer if you would prefer not to bottle it.



2. Add-Ons

Brewing Thermometer - Useful for improving quality and ensuring consistency.

Hydrometer - Measures the amount of dissolved sugars in your wort. This helps you determine the alcohol content of your beer.

Brewing Spoon - For stirring large pots of boiling wort.

Funnel - Can be used for transferring wort to the fermentation tank.

Strainer - Filters out the grain from the wort. Especially useful for extract brewing.

Muslin Bags - Also used in extract brewing, this holds the grains and hops.

Sanitizer - Ensures that your beer and anything it comes in contact with is clean and free from contaminants.

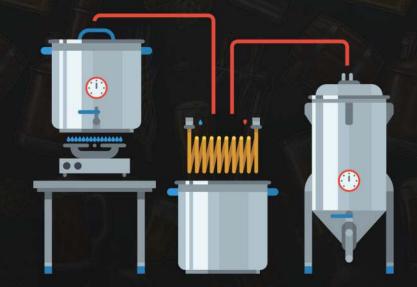


III. HOW TO MAKE BEER

Brewing your own beer can be as simple-or as complex-as you make it. To be sure, there are complex recipes that require advanced techniques and a considerable degree of experience. However, some of the most flavorful and rewarding beers aren't all that complicated to make, as you will see from some of the recipes below.

Brewing beer basically boils down to a few steps:

- Crushing the grain
- Steeping
- Boiling
- Cooling the wort
- Transferring the wort
- Pitching the yeast
- Fermentation
- Priming
- Bottling/Kegging
- Aging



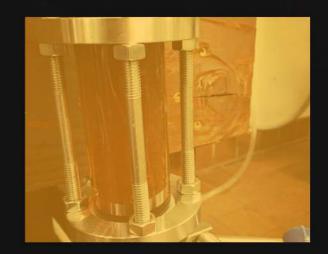
Crushing the grain. This involves preparing the grain to make it easier to mash. You don't necessarily have to powder the grain; a coarse grind is usually sufficient.

Steeping. In this step, you will be extracting the flavors from the grains you have just crushed. It involves adding the crushed grains into water and heating up the mixture to about 155°F. Afterwards, the heat is turned off and the pot is set aside.

Boiling. During this stage, the mixture is brought to a boil. Malt extract is stirred in after the pot is temporarily removed from the heat. The pot is then heated and brought to a boil again, after which hops are added. This adds the characteristic bitter flavor and aroma to the beer.

Cooling the wort. It is at this stage that the mixture can be called 'wort', which is essentially unfermented beer. Cooling the wort as quickly as possible is important, so you might want to immerse the pot into a cold water bath.

It is also important to maintain sanitation during every step from this point on. Contaminants can result in anything from off-flavors to spoiled beer, so make sure that everything that your beer comes in contact with is sanitary.



Transferring the wort.

This step involves transferring the cooled wort into your fermentation vessel. You will need to purchase the wort through a strainer to ensure that the grains are filtered out.

Pitching the yeast.

This simply means adding yeast to the wort, which initiates the fermentation process. The wort will have to be at room temperature before you pitch the yeast.

Fermentation.

This is when the yeast goes to work, converting the sugar to alcohol and producing carbon dioxide. The fermentation vessel should be left in a cool, dark place for seven to ten days.

Priming.

What you have at this stage is essentially beer, but you still have to induce carbonation by adding fermentable sugar to the brew. This will react with the remaining live yeast in the beer, producing the characteristic fizz and bubbles.

Bottling/Kegging.

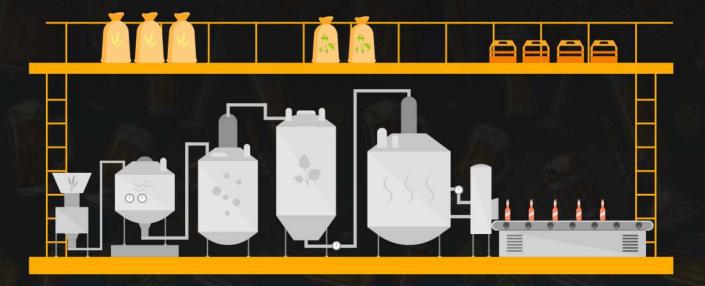
When it comes time to store your beer, your two options are bottling and kegging. Each of these has its benefits and drawbacks, and your choice will largely depend on your preferences. In general, kegging is the more cost-effective option, although it will require a higher initial investment.

Aging.

If you do opt to bottle your beer, it will have to undergo an aging process of at least a week. This will result in the additional fermentation process that will induce carbonation. The beer will also become clearer during this stage as the yeast settles to the bottom.

Links:

https://52brews.com/how-to-make-beer



Conclusion

Although beer making can be a fairly complex process, it all boils down to a number of fundamental steps. Consider the aforementioned guide as a blueprint with which you can learn and develop your own beer making processes.

IV. BEER RECIPES

1. "Beer In Hand" Pale Ale

This particular pale ale variant is an excellent choice for those just getting started with home brewing. Simple and easy to make, it is nevertheless tasty enough to stand up to repeat drinking, even as you develop a taste for more complex flavors. Best of all, you can continue to use this recipe to hone your brewing skills.

Type of beer: Pale Ale

Batch size: 5 gallons

Type: All-grain

Time Taken: 5 hours

Steps:

- 1. Mash for an hour at 152° F.
- 2. Mash out at 170° F before sparging.
- 3. Boil the wort.
- 4. Add 0.65 ounces of Centennial Hops.
- 5. Wait 45 minutes then add ½ ounces of Centennial Hops and Irish Moss.
- 6. Turn off the heat after 15 minutes and add ½ ounces of Centennial hops.
- 7. Stir the mixture thoroughly.
- 8. Chill the mixture to 68° F before racking to the fermenter.
- 9. Pitch yeast and ferment the wort at 68° F for seven to ten days or until the wort is fully fermented.
- 10. Bottle or keg the beer and carbonate to 2 ½ volumes of carbon dioxide.



Ingredients:

- 8½ pounds 2-row base malt
- 1½ pounds Crystal malt
- ½ pound CaraPils
- 0.65 ounces Centennial hops
- ½ ounces Centennial hops
- ½ ounce Centennial hops
- 1 teaspoon fining agent (recommended: Irish Moss)
- Fermentis SafAle US-05 (you may also use Wyeast 1056 or White Labs WLP001)

2. Russian Imperial Stout

Brewing this stout should be a rewarding experience for more advanced brewers! An all-grain recipe, this one requires a mash tun big enough to hold 21 pounds of grain. It can also be modified to use a light dry malt extract, with 0.65 pounds of extract substituted for every pound of malt that you leave out. If you do opt to use malt extract, it must be added after the sparging stage as the wort approaches the boiling point.

Type of beer: Stout

Batch size: 5 gallons **Type:** All-grain

Time Taken: 7 hours

Ingredients

17 pounds 2-row pale malt

1 pound chocolate malt

1 pound roasted barley

1 pound flaked oats

½ pound Black Patent malt

½ pound Crystal 120 malt

2 ounces Galena hops

1 ounce Northern Brewer hops

1 ounce Northern Brewer hops

Two to three liters starter Dry English Ale yeast (You may use White Labs WLP007 or Wyeast 1098.

- 1. Mash the grain to 154°F in 5¾ gallons of water at 167°F. Stir for two minutes in order to prevent the grain from forming clumps.
- 2. Cover the mash, lifting the lid only briefly every 20 minutes in order to stir it.
- 3. Heat 4 ¼ gallons of water to 185°F. This will be used for sparging.
- 4. After 60 minutes of mashing, mash-out and sparge the wort. At this point, there should be 7 to 7 ½ gallons of wort.
- 5. Add two ounces of Magnum hops and bring the mixture to a boil.
- 6. Boil for another hour before adding an ounce Northern Brewer hops.
- 7. After the mixture has been boiling for an hour and twenty minutes, add another ounce of Northern Brewer hops.
- 8. After the mixture has been boiling an hour and a half, remove the pot from the heat and chill it in a wort chiller to 60°F. You may take a gravity reading at this point.
- 9. Ferment the wort at 60° to 65°F for about three weeks. Transfer it to a carboy and set in a cool dark place to age for three to six weeks.
- 10. Bottle or keg and add low to medium carbonation.



3. All-Grain Pilsner

This all-grain pilsner is best suited for intermediate brewers that have some experience with brew-in-a-bag (BIAB) brewing. Like all pilsners, this requires a refrigerator (preferably temperature-controlled) for the cold fermentation and lagering process.

With this recipe, you can use pretty much the same set-up that you would use for extract brewing. However, you will need to have a large mesh grain bag and a kettle that is large enough to hold at least 7.5 gallons. It would also be a good idea to have a second stockpot that can hold as much as 3 gallons of water for heating.

Type of beer: Pilsner

Batch size: 5 gallons

Type: All-grain

Time Taken: 8 hours

Ingredients:

- 7 pounds crushed pilsner malt
- 4 gallons of tap water and 4 gallons of distilled water
- 1½ pounds extra light dry malt extract
- 1 ½ ounces Saaz hops
- 1 ounce Saaz hops
- 1 ½ ounces Saaz hops
- 1 ounce Saaz hops (for flame out)

Two 11 ½ gram packages of dry lager yeast (Recommended: Saflager S-23)

- 1. Use a 7 ½ gallon kettle and line it with a mesh bag.
- 2. Fill the kettle with 2 ½ gallons of tap water. Heat to 157°F and then remove from heat.
- 3. Begin mashing in by adding seven pounds of pilsner malt into the mesh bag. The temperature should settle down to 148°F. Make sure to stir the mixture for two minutes in order to prevent the grain from forming into clumps.
- 4. Keep the mash covered, lifting the lid only to stir it briefly every 20 minutes.
- 5. Heat three gallons of water to 190°F.
- 6. After an hour, pour the boiling water into the mash. The temperature should settle down to about 170°F.
- 7. Lift the mesh bag slowly out of the kettle, letting the wort drain for 5 to 10 minutes.
- 8. Add enough water to the wort to bring the mixture up to 6 ½ gallons, then add 1 ½ pounds extra light dry malt extract.
- 9. Bring the wort back up to strong boil, adding 1½ ounces of Saaz hops in a mesh bag just when it starts to boil.
- 10. Boil for an hour and ten minutes, then add another ounce of Saaz hops, also in a mesh bag.



- 11. After the wort has been boiling for a total of one hour and 25 minutes, add another 1½ ounces of Saaz hops in a mesh bag.
- 12. After the mixture has been boiling for an hour and a half, remove the kettle from the heat and add another ounce of Saaz hops in a mesh bag. Note: After the wort has cooled down to below 180°F, make sure that everything that comes into contact with it is sanitary. You should also limit exposure to open air.
- 13. Cool the wort down to 70°F by placing the kettle in an ice bath or a wort chiller.
- 14. Transfer the wort to a fermentation vessel and place in a temperature-controlled refrigerator at 48°F.
- 15. Using an auto-siphon racking cane (make sure it's sanitized!), remove just enough wort to take a gravity reading. Take note of the reading as you will use it to determine the alcohol content of your beer after the fermentation process. At this stage, the specific gravity should be around 1.054.
- 16. Cover the fermentation vessel with a sanitized stopper and airlock.
- 17. After the wort has cooled down to 50°F, agitate it vigorously for five minutes or more, then add in two 11 ½ gram packs of Saflager S-23 yeast.
- 18. Ferment at 48°F for three weeks or more, until the fermentation process is complete.
- 19. Rack the beer to a sanitized secondary carboy, and let it get up to room temperature for 12 hours.
- 20. Place the carboy in a temperature-controlled fridge at 35°F to lager for four to six weeks.
- 21. Bottle the beer and add enough priming sugar to achieve medium carbonation.



4. German Lager

This is as close as you can get to an authentic German lager! It is a robust and complex brew that has an appealingly yeasty and smoky quality. Nevertheless, it is light and fruity, with a clean and crisp finish. This is one beer you can keep drinking throughout the night without getting a heavy aftertaste!

Type of beer: Lager

Batch size: 5 gallons

Type: All-grain

Time Taken: 5 hours

Ingredients:

Grains:

8 pounds German Pilsner

1 pound Vienna

½ pound CaraPils

Hops:

2 ounces Hallertau (For a spicier and less aromatic beer, you may use Mt. Hood in place of Hallertau. You may also use Tettnanger for another spicy option that is not quite as fruity as Hallertau.)

Yeast:

German Lager Yeast (You may also try WLP820 Oktoberfest Lager Yeast, WLP833 German Bock Yeast, 2007 Pilsen Lager Yeast, 2124 Bohemian Lager Yeast, or 2308 Munich Lager Yeast)

Steps:

- 1. Mash at 150°F for an hour, then at 158°F for 30 minutes.
- 2. Boil the wort for an hour and a half.
- 3. Ferment the wort for three weeks in the primary vessel.
- 4. After three weeks, let the beer get up to room temperature for two days.
- 5. Rack the beer and let it rest for 4 to 6 weeks at 36°F.
- 6. Keg the beer and carbonate it, then let it age for 3 months.

Note: this beer really tastes best after it has aged sufficiently. Resist the urge to drink it too soon, and you will be rewarded by its rich and full-bodied flavor.



5. Single-Malt, Single-Hop IPA

This single malt, single hop IPA reveals a surprisingly varied array of flavors. You can certainly use most any type of hops you wish for this recipe. But the use of Mosaic hops especially brings out the cedar and fruit flavors and aromas, with delicate floral notes.

Type of beer: IPA

Batch size: 5 gallons

Type: All-grain

Time Taken: 5 hours

Ingredients:

12 pounds Golden Promise malt

1 ounce Mosaic hops

1 ½ ounces Mosaic hops

1 Whirlfloc tablet

½ teaspoon Wyeast yeast nutrient blend

1 ½ ounces Mosaic hops

Wyeast 1056 American Ale yeast

2 ounces Mosaic hops

- 1. Heat 15 quarts of tap water to 164°F and pour it into your mash tun.
- 2. Begin the mash-in process by adding the grains to the mash tun. Stir every two minutes or so to prevent the grain from forming into clumps. At this point, the mash temperature should be about 152°F.
- 3. In another pot, heat 8.4 guarts of water to 202°F.
- 4. Begin the mash-out process by adding the hot water to the mash tun while stirring. Let the mash rest for an hour. The temperature at this point should be about 168°F.
- 5. In another pot, heat 2.8 gallons of tap water to 172°F.
- 6. Drain off the wort and add it back to the mash tun. Recirculate the wort until it is clear.
- 7. Drain the mash tun into a boil kettle, and sparge with 2.8 gallons of tap water at 172°F. 8. When the kettle is full, add the first wort hops.
- 9. After the mash is drained, take note of the pre-boil gravity.
- 10. Boil the wort for an hour, then add the hops, the Whirlfloc tablet, and the yeast nutrients.
- 11. Chill the wort and transfer it to a carboy or a bucket. Aerate the wort with an oxygenation stone or simply shake the vessel vigorously.
- 12. Pitch yeast and let it ferment at 66°F to 68°F.
- 13. When you get within a few points of a final gravity reading of about 1.014, rack the beer to another carboy or bucket. Place a sanitized hop sack containing dry hops in the beer and leave it to condition for five to six days.
- 14. Bottle or keg the beer at 2.6 volumes.

V. BREW MAKING TIPS

Keep your equipment and workspace clean. The quality of your home brew depends largely on three things: the ingredients used, the process, and cleanliness. Making sure that your workspace and equipment are clean and free of contaminants is absolutely essential. It is especially important to ensure sanitation after the final boiling stage of the wort.

Prep your yeast properly. Always make sure your yeast is fresh and 'alive'. If it has been in the fridge for a few months, chances are that it will not work anymore. Pay close attention to the proper conditions for pitching the yeast, particularly the temperature.

Consider making your own yeast starters. They will save you a lot of money in the long run, reduce the risk of contamination, and ensure proper fermentation.

Pay attention to the boiling stages. Boil-overs can result in a sticky mess, so avoid them as much as possible.

Consider using glass fermenters. Plastic fermentation vessels have improved in quality over the years, but glass is still generally considered to be the superior choice. A good set will last you many years, and it is also much easier to ensure sanitation with them.

Go easy with the alcohol level at first. For your first few brewing attempts, it would be best to go for lower alcohol content. This will help ensure a more successful brew and you can always adjust your recipe for higher alcohol content as you gain more experience.

VI. CONCLUSION

Brewing your own beer can be a complex and nerve-wracking experience, but it can also be a thoroughly rewarding and enjoyable one. Hopefully, this guide has inspired you to embark on a journey of learning, discovery, and exploration, so that you too could eventually be brewing your own quality beer at home.

Don't forget to check out the 52 Brews website as well for more in-depth information, tips, and advice on making beer. Happy brewing!



For more quality resources on homebrewing, make sure to come back and visit 52Brews.

https://52brews.com/