



How to Distill Water in the Kitchen



by ButterMyBiscuits

“Distilled water is created through the process of distillation. Basically, in the process of distillation, the pure H₂O is boiled out of its contaminants. ... So, as the water (with its contaminants) is boiled, the pure water turns into steam and is captured and cooled and thus becomes distilled water.”-

drinkmorewater.com

For this instructable, I will show you how to make your own distilled water at home using the stovetop. I chose this project because my dad, who is 76, uses a

breathing machine at night called a CPAP (continuous positive airway pressure) machine. In order for this machine to work, he adds distilled water to it often. He also seems to be running out a lot. I wanted to see if I could create distilled water at home so that I could help him when he runs out.

I looked on the internet for different ideas and based my project on what I had on hand. One less trip to the store is great with me.



Step 1: Gather Supplies

For this instructable you will need:

Dutch oven or a large pot

2 mason jars

2 mason jar lids plus screw on rings

Large glass jar

Ice

Water

Rigid plastic tubing

Aquarium tubing 1/2" diameter about 8" long

Safety glasses

Saw for cutting rigid tubing

Hot glue gun

Stovetop burner



Step 2: Cut the Rigid Tubing

Using a hack saw or other cutting device, cut your rigid tubing into two 1" pieces. Make sure you wear safety glasses while cutting and use a clamp (not shown) to hold your tubing steady as you cut.

My rigid tubing is actually a plastic straw that came with a kit to turn Mason jars into drink containers.



Step 3: Preparing the Flexible Tubing

Use the rigid tubing piece and fit it into either end of the flexible tubing. Add screw on rings before you glue the tubing to the lid.

Use the hot glue gun to seal the rigid tubing to the jar lid. I used the lid that came with a kit that was intended to turn a Mason jar into a drink container. You could also drill a hole in the metal lids that are typically used to make jam/jelly jars. (Just make sure you wear safety glasses.)



Step 4: Adding Water and Assembling

Fill one of the jars almost to the top with about 1" headspace left. Leave the other jar empty and attach the lid with the tubing and screw on rings.



Step 5: Preparing the Cold Side

In order to condense the water vapor back into liquid water, you have to create a colder environment. Place the empty jar into a larger jar and fill the area surrounding the smaller jar with ice.



Step 6: Preparing the Dutch Oven

Fill the Dutch oven 2/3 full of tap water. Place the Mason jar contains water inside the Dutch oven. Place the structure on the stovetop burner and turn the burner to high heat. You want the water to boil so that water vapor will be created.

Initially, I was going to do this with my sous vide immersion cooker but then I realized it only got to 211.8 degrees Fahrenheit. I needed the water to boil and that just wasn't going to cut it. So close!



Step 7: The Result

As the water begins to heat up and vaporize, you will see a change in the flexible tubing. It will become fogged. In the cold side of the apparatus, you will notice condensation forming and droplets of water running down the inside. Water will begin to collect inside at the base of the jar and this will be your distilled water that is free from contamination.

In addition to using this water for a CPAP machine, you can also use it for:

Steam irons

Neto pots

Coffee machines

Automotive needs

Humidifiers

Using distilled water will keep minerals from building

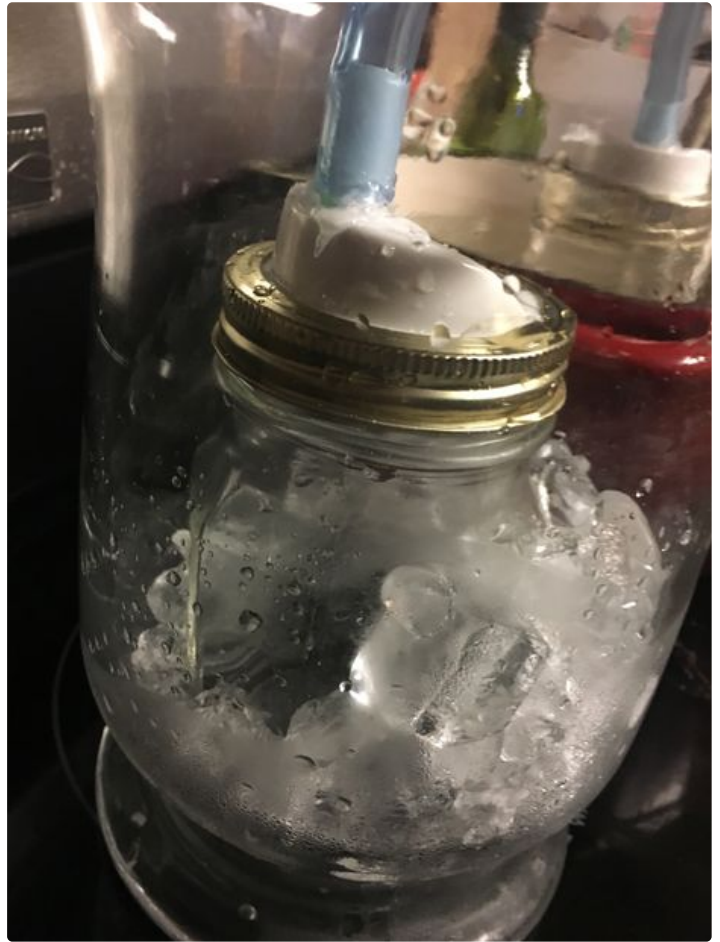
up in appliances and therefore, you won't have to use vinegar to clean your devices.

I'm very glad that I made this project. Having homemade distilled water on hand will be very useful. And best of all, my dad will have his very own supply so that he never has to run out again. (I just have to remember to take it to his house. LOL)

Thank you very much for reading my Instructable. I hope you found something of value that you can put to good use.

-Jennifer

ButterMyBiscuits



Wow! I never realized that distilling water was as simple as that!



Thank you for reading my Instructable. I love to find out the way things are made. Some things are easily created at home with common household items and don't have to be purchased. For instance, you can make your own baking powder in under five minutes with common kitchen ingredients such as baking soda and cream of tartar. Neat!

- Does it have to be distilled water for the machine? Mine stated cooled boiled water. It may be worth a check of the instructions if it saves having to buy/make distilled water.



Here is some information that I found online with regards to type of water best suited for a CPAP machine:

"Filtered water may remove some of the minerals but may not remove living organisms or other chemicals. Bottled water that has been distilled is certainly the safest option. As for whether you're required to use distilled water in the CPAP humidifier: most manufacturers do recommend the use of distilled water."-Mar 31, 2018 (Brandon Peters, MD, a board-certified physician)