

Steam Canning Workshop *Course Book*



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Steam Canning

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How Steam Canners Work

Steam canning is a fairly new development in the canning world. [A study done by the University of Wisconsin](#) in 2015 tested the safety of the atmospheric steam canner and determined that it is indeed safe for canning high acid foods.

Steam canning saves time because it takes just 2 ½ quarts of water to boil. It takes that amount of water regardless of the size of jars you are canning, and it holds up to 7 quart jars, making it an easy replacement or addition to your existing canning routine.

Regular water bath canning works- creates a safe seal, and germ-free environment- because jars of hot food are submerged in boiling water and that heat kills spoilers, sterilizes the jars, and brings the internal temperature of the jars up to 212 degrees, which creates an airtight seal and shelf stable product.

Steam canning works in exactly the same way as water bath canning, except it uses the heat of the steam rather than the heat of submersion in the boiling water.

It is important to note that all your favorite trusted water bath canning recipes will work and are safe for steam canning.

A steam canner is NOT a pressure canner. A pressure canner looks sort of similar to a steam canner but is much heavier, and has a locking lid and pressure gauge. A steam canner is light weight, has a shallow (about 2-3 inches tall) pan, a rack that fits inside, and a cake dome type of lid. There's

a temperature gauge on top that tells you when the inside of the steam canner is ready to start the processing time.

Differences between water bath canning and steam canning

The one point of difference that bears mentioning is that IF you have a recipe that is required to process for under 10 minutes in a water bath, you still must use the steam canner for a minimum of ten minutes as that is the time needed to sterilize the jars. That said, I can say that there are very few recipes out there that require such a short processing time (perhaps a small jar of something very acidic like lemon jam, being canned at sea level, for example) and for most canners, that would pose no inconvenience.

A steam canner is NOT tall enough to accommodate canning half gallon jars and at this time, the 3 cup wide mouth jars are also untested.

A steam canner cannot can any item that requires over 45 minutes total processing time. This is simply because the shallow pan will run dry. DO NOT let the steam canner run out of water. This does create some limitations for those canning at a higher elevation (as you have to add 5 minutes of processing time for every thousand feet above sea level) and/or canning larger sized jars or recipes with longer processing time.

This means that practically speaking, those canning at over 7000 feet elevation would not find a steam canner all that useful, as they have to add 35 minutes of processing time to their recipes, they'd only be able to can recipes with a 5 or 10 minute processing time. If you are canning over 7000 feet elevation, you'll probably find a water bath canning set up more useful than a steam canner.

When regular water bath canning, if the water stops boiling (when you add more water, to completely submerge the jars, for example) the USDA recommendation is to make note of how much time the jars were indeed in

boiling water, pause the time when the boil ceases, and resume the timer when the water is fully boiling again. It is my educated guess that because the steam canner is still newly approved and the study didn't test this scenario, there's no direction for what to do if you indeed accidentally run out of water in the steam canner mid-process. It is also my educated guess that a very similar method could be applied should this happen to you. Note this is just my best, but only an educated guess. If you find yourself mid process and you run out of water (or are very nearly out) a person could add water up to the fill line, (preferably boiling from a teakettle) bring it back up to boil, and resume processing time once the temperature indicator showed that it was up to temperature for your elevation zone. This is only my guess and I'd feel remiss to not suggest it as there is no information out there as to what a person should do in this scenario. If you try this, you should exercise extreme caution when lifting the lid off the steam canner, taking care to open it away from you so you do not suffer a steam burn.

An additional step you could take, should you run out of water, is mark the sealed jars at the conclusion of the processing time and simply eat them right away and store them in the refrigerator.

Advantages

Experienced canners and brand new beginners alike will appreciate several points that make steam canning easier and faster.

The time it takes for the water (just 2 ½ quarts) to come to a boil in a steam canner's shallow, wide pan is markedly faster, easily twice as fast if not more, than bringing a pot of water to boil to water bath can. I timed the steam canner coming to a boil in just 5 minutes, and I live at 3000 feet elevation. A water bath canning process easily requires 4 or more quarts so waiting for that to boil is far, far longer. This difference in required water alone eliminates the mess of potential overboiling, and of moving the heavy water bath to the sink or another burner.

Pro Tip: Use up to a quarter cup of white vinegar in the water to prevent minerals from forming an unsightly film on your jars, and on the inside of the pot.

The steam canner is especially advantageous for recipes that are prepared and cooked rather quickly. Many kinds of jam, fruit juices, and many kinds of pickles, for example, are ready to fill jars in a matter of a few minutes, and often times a water bath canner takes well over 30 minutes to come to a boil. This wait time is compounded by the hassle of filling a really big pot, hauling it to the stove, and having to empty it when it is done. Conversely, recipes that have a lengthy cook time like slow cooked pasta sauce, salsa that has a ton of ingredients to cut up, etc, the steam canner would be ready to process before your food would be ready. That's not to say you couldn't use the steam canner; it is still a wonderful tool with many advantages regardless of your cook time.

Specifically, when using a steam canner, choose recipes that

- Have a process time of **over 10 minutes total**, after adjusting for altitude
- Have a total process time of **under 45 minutes**, after adjusting for altitude
- Have a quick prep time- not many ingredients, probably that don't require peeling, etc
- Have a quick or no cook time- recipes that are simply veggies or fruit packed into the jars with hot brine or hot simple syrup poured on top take the greatest advantage of the steam canner's speed
- Have few ingredients total- the quicker it is to have the ingredients ready to be put into jars, the faster your total canning process will be

An aluminum Victorio steam canner weighs just 8.75 pounds when filled with the required 2 ½ quarts of water. This light weight makes it so much

easier to fill, use while in an RV or sailboat, or use if you aren't physically able or interested in lifting a really heavy pot of water.

When using a steam canner, you don't have to have a wire rack to lift jars from the water, nor do you need a separate rack to prevent the jars from rattling on the base of the canner (and subsequently breaking) because it comes with a rack. You don't need a silicone trivet either; the rack that comes with the canner does the job.

Parts of a Steam Canner

The steam canner has a shallow, wide bottom pan in which you rest the rack, and the 2 ½ quarts of water.

When you are ready to can, you'll put the jars full of food on the rack, and about half an inch of water that covers the rack, but not much more than the very base of the jar.

The canner has a large lid, which looks a lot like a cake stand lid. Note that there's no locking mechanism on the lid. You will just set the lid on top of the bottom pan and turn the heat on. Some steam will escape from the space where the lid and pan meet, and a fair amount of steam will escape from the vent, which is essentially just a hole, at about 6-8 inches.

On the top of the lid, there is a temperature indicator which will tell you, based on your elevation, when you can start your processing time.

A steam canner can boil dry in 20 minutes if left on the highest heat unattended. The heat should be reduced to a medium or medium high setting once the temperature dial indicates you are "in the zone." You will know that it is boiling too rapidly by the sound, tons of steam pouring from the vent AND from where the lid meets the pan.

Using the Steam Canner

Put 2 ½ quarts in the bottom of the steam canning pan. Put the rack in, and there should be about a half inch of water over the rack, so the jars, once resting on the rack, are only submerged about half an inch. The jars will be almost entirely OUT of the water, save their very bottoms. Rest on a burner, probably at the back of the stove for safety's sake, and have the lid off, but out of harm's way.

Prepare your preserve. This means cut up your veggies, cook your jam, or otherwise prepare the food product that will go into the jars.

While the preserve cooks, assemble jars, NEW lids, and rings. Jars should be clean, but will sterilize while in the steam canner. Rings and lids can be cold, and I find it helpful to have them nested in pairs.

Place a folded towel on the countertop beside the preserving pan, have a funnel, & ladle ready and a timer.

Turn the steam canner on low to medium low. Remember, canning is like driving; you can always take your foot off the gas or lower the heat if you feel like it is going too fast.

Fill one jar with hot preserve at a time. Use the funnel, take care to not get any food on the top edge of the jar and if you think even maybe you have a bit of food on the edge, wipe with a clean, wet cloth. Put on a new lid and tighten the ring just as tight as you'd tighten a bathroom faucet. You don't want it super tight because air actually will be forced out of that tiny space between the lid and the ring so that a vacuum seal can form.

Carefully, using a jar lifter if you have one or a hot pad, put the now warm jars full of hot preserve into the now warm rack of the steam canner. You can and should leave the lid of the steam canner off until all your jars are on the rack.

Repeat the process and fill the second clean jar with preserve, maintaining the headspace (distance from top of the food to the top of the jar) as indicated in the recipe, put on a new lid and tighten the ring, and place on the rack.

Continue in this way until all the jars are filled, you run out of room in the canner, or you run out of preserve.

If you end up with half a jar of preserve, don't bother processing it. Put a lid on it (a used lid is fine) and store in the refrigerator. A safe seal cannot be achieved with either more or less than the prescribed headspace.

Put the lid of the steam canner on. Turn up the heat to medium high or high. Very soon, the water will come to a boil. You'll know it is boiling because there will be a change in the sound coming from the pot, there will be steam coming from the vent (just a hole in the side of the lid) and the lid might be vibrating or jiggling a bit. If at any point the water is boiling really rapidly, the lid is jumping around, and there is a ton of steam pouring from the vent and the edge of the lid, **TURN THE HEAD DOWN TO MEDIUM** or low. The goal is **NOT** to boil as hard and as fast as possible. In fact, allowing this to happen may cause the steam canner to boil dry and that is **NOT** what you want and that may ruin your steam canner.

Watch the temperature gauge and you'll see that in about 5 minutes, the gauge will show that you are ready to start your processing time. You'll also know the pot is getting close to ready by a column of steam that is extending from the vent about 6-8 inches.

When the gauge indicates you are ready, and you see 6-8 inches of steam coming from the vent, start your processing time exactly as your recipe indicates is necessary, remembering to adjust for altitude.

Keep an eye on the steam canner as the processing time progresses. You want a steady, not out of control boil. Reduce heat if necessary.

When the time is up, turn the heat off.

USE GREAT CAUTION WITH STEAM. STEAM WILL CAUSE GREATER, MORE TERRIBLE BURNS THAN BOILING WATER. Use hot pads to carefully open the steam canner, lifting the lid away from you after it has sat a few minutes with the heat off.

THERE IS NO REASON TO RUSH- You can let the pot sit there till it is completely cool if you'd like. There's no reason to hurry and burn yourself. Nothing negative will happen to the jam or salsa in the jars if you wait. WAIT UNTIL IT IS COOLED SIGNIFICANTLY TO LIFT THE LID OFF.

Set the lid on a nearby countertop and let jars cool further on the rack.

You may let them cool completely on the rack, especially if this is your only batch of the day. If you are canning another batch, you may remove the jars when they are cool to the touch or you can use a jar lifter (required in water bath canning) to move the jars from the rack to the towel-covered countertop.

At any point after you remove the lid all the way to 12 hours following the canning process, the lids will seal. You may hear them make a distinctive 'ping' noise as they seal, and you will know they are sealed because when they are cool, their lids will be concave and firm to the touch. If the lid springs up and down when you press it, it is not sealed. If the lid doesn't seal, that means you get to eat the food within and store it in the refrigerator.

If your lid did not seal, the most likely culprit is that there was a tiny bit of food on the edge which prevented the seal from forming. Or, you may have accidentally used a used lid, in which case it probably won't seal.

If you're not sure if your lids are sealed or not, you can take the rings off entirely and pick the jar up just by the edge of the metal lid. The seal should easily be strong enough to lift the jar.

After the first batch of jars is out of the steam canner, you can refill the water up to 2 ½ quarts and repeat the process. This is another place where time will really be saved because waiting for the second batch to be ready to process will be just about 5 minutes.

Steam Canner Recipes

Strawberry Syrup

Strawberry syrup is of course great on breakfast foods but it is very versatile in the beverage realm and after I read the suggestion for strawberry margaritas in “The All New Ball Book of Canning & Preserving” and I felt silly for not using the syrup that my kids love on Saturday morning in one of my favorite grown up drinks. Use this syrup however you like and remember it makes a great gift too.

I don't strain with cheesecloth because I personally don't care about things like tiny strawberry seeds and I am not interested in perfectly clear syrup. Feel free to strain of course as you wish.

To make the syrup, I will share my adaptation of the recipe from The All New Ball Book of Canning & Preserving.

You will need 3 ½ pounds of strawberries, stems removed

3 cups water

6 cups sugar

½ cup bottled lemon juice (I really like lemon + strawberry, but if it isn't your favorite flavor, you can safely use ⅓ cup.

Have ready 5 pint jars, new lids, and rings.

Prepare your countertop with a towel (on which you will rest the hot jars), funnel, and ladle. Have a large bowl or a second preserving pan and a small-holed colander or sieve set on top of the bowl ready to strain the strawberries from their juice. If you desire perfectly clear syrup, have 2 layers of cheesecloth at the ready as well.

Combine the strawberries and water in a preserving pan and bring to a simmer for about 20 minutes. Heat using the medium low setting.

Pour carefully the strawberries and accumulated juice into the colander to drain. You can let it sit for up to two hours if you are patient and if you are me, you can use a spoon to gently encourage the berries to release more juice. You will get about 6 cups of juice as a result. The solids can be enjoyed with yogurt, or you can make delicious strawberry butter. I demonstrate how to make these two recipes at the same time in my canning course at www.startcanning.com .

Turn the steam canner on low.

Return the strawberry juice to the preserving pan and add the sugar and lemon juice. Stir to dissolve and heat to a full boil for a minute or two, stirring carefully.

Fill one jar at a time with the syrup, using the funnel and ladle, leaving a 1/4 inch headspace. Put on a new lid and ring and set on the steam canner rack. Repeat with remaining jars.

Put the lid on the steam canner and turn the heat up to medium high. Start the time when the dial indicates the steam canner is ready and process for 10 minutes at sea level, remembering to add 5 minutes for every 1000 feet you are canning above sea level.

When the time is up, turn the heat off and let the steam canner cool. USING GREAT CAUTION, use oven mitts to lift the steam canner lid AWAY from you and set it aside. When the jars are cooled significantly further, use either a jar lifter (required for water bath canning) or your fingers to lift the jars off the rack and place on the towel covered countertop. Label sealed, cooled jars and store.

Carrot Pickles

Carrot Pickles are IDEAL for a steam canner because they are quick to prepare, compounding the time savings of using a steam canner.

Carrots are delicious pickled in vinegar; they are salty and crisp and they plate beautifully. They are easy to spice up or keep simple for those pickier eaters in your charge.

These are easy to keep crisp, & are a healthy, savory snack!

You will need:

2 pounds good quality carrots, scrubbed.

5 1/2 cups apple cider vinegar

1 tablespoon salt

3 tablespoons sugar

4 cloves garlic, sliced

1/2 small white onion sliced thin, or diced

1 cup of water

Optional seasoning: 1/2 teaspoon black pepper, 1 bay leaf per jar, 1 sprig thyme or dill per jar, shake of red pepper flakes to taste, about 1/2 teaspoon per jar- choose any or all of the above to suit your taste!

Cut carrots into sticks that are about 1/2 inch thick and no more than 4 inches tall if you are using pint jars. Let rest in ice water while you fill your steam canner with 2.5 quarts water, a glug of vinegar if you have hard water, and assemble your clean jars, new lids, and rings. Have a funnel

nearby too. The only pot you need nearby other than the steam canner is a preserving pan.

In a preserving pan combine the vinegar, 1 cup of water, salt, sugar, and any seasonings. Bring to a simmer and then add the carrots until they are just tender, about 9 minutes.

While the carrots cook, turn your steam canner burner on low.

Using the funnel, pack the hot carrots into the jars (not tight, just full), and then ladle the hot brine carefully over the carrots, giving it a chance to seep to the bottom. You may have to distribute pieces of onion and garlic and seasonings jar by jar using a clean, long handled spoon.

After one jar is filled with carrots and covered with brine, put the lid and ring on fingertip tight and set gently in the warm water on the rack inside the steam canner.

Repeat with remaining jars. Jars in the steam canner should be about a quarter inch apart. There's no need to use a jar lifter if you don't have one but exercise caution as the water in the steam canner is getting hot.

Put the lid on the steam canner and turn the heat up to high. Bring the pot up to boil- you'll hear the sound of the water boiling, and see steam pouring from the vent. It should be ready in about 5 minutes. Watch the dial and start the processing time when you are in the green zone for your elevation.

Process for 15 minutes, and add 5 minutes for every 1000 feet you live above sea level.

When the time is up, turn the heat off, let the canner cool, and remove the lid with a oven mitts. Let the jars cool on the rack inside the steam canner. When cool, move jars carefully to rest and seal on the towel covered countertop. Label cool jars and store.

Conclusion

I hope this instructs you on the many ways steam canners are advantageous and the best ways to make them work for you. Thank you so much for reading!