

Lacto-Fermented Red Onions

Catherine Brown, Plant-based Chef and Culinary Nutritionist at [A Seat at My Table](#)



Recently, someone asked me to describe the difference in flavor between lacto-fermented onions and the quick-pickled onions often used as a condiment. I took a bite of my most recent batch of fermented onions and thought about how to describe the distinction.

A quick pickle is accomplished by pouring a hot vinegar (often enhanced with spices) over prepared vegetables and letting it hang out for a bit to absorb the flavors. The acidity of the vinegar also preserves the vegetables, giving them a long shelf life in your refrigerator. Fermented vegetables require more time and rely on healthy bacteria (often Lactobacillales) to feed on the carbohydrates and sugars present, converting them into acids, carbon dioxide and alcohol to preserve the food. Salt catalyzes the process and lactobacilli thrive in this environment.

Both can take on nuances of any additional ingredients paired with them; both are slightly salty and tangy. After a few more bites, the differences are distinct. Lactic acid fermentation results in layers of complex flavors in addition to a host of healthy gut microorganisms. The acidity is less pronounced than vinegar-based pickles. The onions are still crisp and less intense than raw onions.

The process is simple. The results outstanding. I use these wherever I would use a raw onion or a pickle!

High temperatures will kill off these healthy microbes, so if adding these onions to other cooked ingredients be sure to add them at the end.

Let's get started!

Total Time: 5-10 days Prep Time: 15 minutes Cook/Bake Time:
none

Here's what you'll need to make one quart and one pint (or three pints):

4 cups filtered water*
2 Tbsp unrefined, non-iodized sea salt without any anti-caking agents, etc.
1.5 lbs purple onions
1 med fennel bulb (10-12 oz)
3 large cloves of garlic
1-2 fresh rosemary sprigs
1 tsp whole peppercorns

* Non-chlorinated water is important so the naturally-occurring bacteria is not destroyed.

You can use whatever combination of herbs, spices or even other vegetables like jalapeno peppers!

The Process:

1. Wash your containers, knife, cutting board, peeler and spoon in hot soapy water. They do not need to be sterilized, but they do need to be thoroughly clean.
2. Wash and dry the fennel bulb and the rosemary (and jalapeno or other vegetables if using). Do not use any vegetable soap.
3. The onions and garlic cloves do not need to be washed. If the root ends are dirty, wash your knife and cutting board after peeling them. Slice the onions as thick or thinly as you like. I prefer thin half-moon slices. Place the slices in a large glass, ceramic or stainless steel (non-reactive bowl).
4. Remove the top portion of the fennel bulb. This can be chopped and added to the onions or saved for a salad. Since I am using rosemary, I opted not to use the fennel fronds. Slice the bulb in half across the widest part, remove the tough core and thinly slice each half. Add the slices to the bowl.

5. The garlic cloves can be smashed and chopped or sliced. Add these to the bowl. Use a CLEAN hand, tongs or a spoon to combine.

6. There are two methods used to introduce the salt to the vegetables. I used the brine method.

Brine Method: Bring 1 cup of the filtered water to a boil and dissolve the salt into the hot water and allow to cool. Add three more cups of cold filtered water to the salt water. Stir with a clean spoon to combine. Add the peppercorns to the bottom of your jars and some of the vegetables. Next, insert the sprig of rosemary so it stands up against the side of the jar. Continue adding vegetables, packing them down tightly. Cover all with the brine, leaving 1-2" of head space. You may have some extra brine left over. Save this in case you need to add a little extra to your jar if leakage brings the level down too far.

Massage Method: Combine all ingredients except the peppercorns in a medium glass or non-reactive bowl. Sprinkle 1-2 tablespoons of sea salt on top. With a CLEAN hand, massage everything together for five minutes. This will start the process of the salt extracting the juices and moisture from the vegetables. Allow to sit for five minutes and then massage again for another five minutes. Add the peppercorns to the bottom of each jar. Pack the vegetables tightly into your clean jars. While you are filling, add the springs of rosemary to the jars. Leave 1-2" of headspace in each jar. Use a clean, non-reactive spoon to press down the mixture. You should have enough moisture extracted to cover the vegetables. If not, make up a little brine as described above and add enough so the veg are completely covered.

7. If you have fermentation weights, fermentation water-sealed crocks or pressure-release lids you can use those, but they are not necessary to achieve a safe and delicious product. You can use smaller ceramic or glass ramekins or lids to help keep the vegetables submerged.

8. If you are using mason jars (or any other type of regular screw-top jar), do not tighten the lid completely. Leave it secure, but easily removed with one hand. If you have fermentation lids with pressure-release valves, you can tighten them as usual. You can also use a tightly weaved cloth secured with a rubber band during the fermentation process.

9. Store your jar/s at room temperature on a dark shelf or out of direct light where you can attend to it easily (don't put them somewhere where you might forget about them).

10. The warmer the room temperature, the quicker the fermentation will happen. Ideal ambient temperature is 60-70 degrees Fahrenheit. If you are concerned at all about your room temperature, just leave the jar/s out for 24-48 hours to begin the fermentation process and then store the jar in the refrigerator, cold root cellar or basement. It will take much longer for the veg to acquire a nice tanginess, but they will eventually get there.

11. If left at room temperature, begin tasting after about three days. If you prefer more tanginess and a softer texture, allow the veg to continue fermenting at room temperature. When you are satisfied with the flavor and texture, tighten the lid and refrigerate or store in a cold (not freezing) basement or root cellar. The veg will keep for at least nine months.



I ended up needing more lids and jars than I had on hand, so my jars pictured above were intentionally packed too full just to get the process started while I ran to the store.

Try my Lacto-Fermented Moroccan-Spiced Carrots [HERE](#).

Try my Lacto-Fermented Spicy Carrots [HERE](#).

GENERAL NOTES:

~ Expect the veg to change color. Some vegetables will brighten or become a much deeper color, others will lose some or most of their color.

~ Expect the liquid to become cloudy. You may also see white mold on top. This is perfectly NORMAL and a sign that good bacteria are doing their job. No need to panic. If it bothers you, remove it with a CLEAN non-reactive utensil.

~ Expect to see bubbles, both around the edges at the top and coming up from the bottom. This is NORMAL. You may hear a slight release of pressure when you unscrew the lids. If you've tightened your lids a bit too much, a bit of the liquid may spew out. Replace as needed to keep the veg covered.

~ By day 3-4 you will notice a slightly sour or acidic smell, not like vinegar, but sort of sour. This is also NORMAL and a good indicator that it's time to start tasting. Be sure to use a CLEAN non-reactive utensil each time you taste.

~ If you are using regular, finger-tightened lids, some liquid may seep out. I am keeping my jars on a paper towel-lined tray to avoid messy clean-up.

~ If you notice ANY red or pink mold or black scum, or you smell an unmistakable putrid, rotten-egg smell, this is a sign that something has gone wrong. Toss the batch and start over. I have yet to see this happen.

~ Any combinations that include garlic and/or onions are going to permeate the room while fermenting if you are using regular, loosely tightened lids. This is not necessarily a concern, just something to be aware of.

~ Can you reuse the fermented brine? Food scientist, Joel MacCharles recently answered that question [HERE](#), and Jacquelyn Byers of LittleOwlCrunchyMomma provides 20 reuses [HERE](#).

~ Regular servings of lacto-fermented vegetables are one of the most delicious ways to increase the healthy microflora in your gut. The process has also been shown to increase absorption of nutrients contained in the vegetables and/or reduce phytic acid levels. Phytic acid can inhibit the absorption of certain nutrients. In fact, a push is being made to have fermented foods included in world-wide food guide. You can read more about this [HERE](#).

Let me know how it goes. I'm here to help you! If you make this recipe, I'd love to hear how you and your guests liked it! Snap a photo and tag me too, #chefcatherinebrown. I love seeing what you make!

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