

# Make a Bloody Mary

## Fundamentals

### Food Safety Tips

- Wash hands and forearms frequently: after using toilet, after changing baby's soiled diaper, after touching animals, before handling food, and after touching raw meat, fish and poultry.
- 20-second rule: wash hands for 20-seconds.
- Use disposable gloves if you have a cut or sore on your hands.

### When in doubt - throw it out

- DANGER - Never taste food that looks or smells strange to see if it can still be used. Just discard it.
- Generally foods that contain bacteria will look, smell, and taste normal.
- Generally speaking most bacteria that cause food borne illness are odorless, colorless, and tasteless.

### General Cleaning Tips

- Run sponges and pot scrubbers through the dishwasher frequently. Change dish cloths daily.
- Mop up spilled juices from meat, fish or poultry immediately using a disposable paper towel.
- Use a disinfecting solution consisting of 1 ½ teaspoon of chlorine bleach to 1 pint of water. Dispense with a spray bottle to disinfect countertops, cutting surfaces, etc. Make a new solution every week.
- AVOID CROSS CONTAMINATION. ALWAYS wash your hands, knives, cutting boards, and food preparation surfaces well with soapy water before and after any contact with raw meat, fish, or poultry.
- Rinse all fresh fruits and vegetables well under running water before preparing or eating them. Do not soak.

### Use the Right Equipment

- Use standard canning jars, lids, and rings.
- Cook the product in a deep, non-reactive kettle, stainless steel, enameled, or glass.
- Use a reputable recipe for the best results; they have been tested for quality, flavor, and *safety*.

### Getting Ready: Be Prepared!

- Read the recipe thoroughly before you begin. Measure out all ingredients and have all needed utensils at hand. Make sure your vinegar is 5% acidity (read the label).
- Do not change the quantities of produce nor vinegar in any recipe, unless specified in a tested recipe. (If you cut a recipe in half, do the math right.)
- Check the jar for flaws. Wash jars, lids, and rings in hot soapy water and rinse well. Place clean jars into the canner to heat.

### Fill and Seal Jars Properly

- Fill hot jars using either a **Raw (Cold) Pack or Hot-Pack**.
  - The raw, or cold-pack, method means packing the cold or raw food into a hot jar, then adding boiling liquid brine. The jars are then processed in a boiling-water canner. Fruits such as apricots, berries, cherries, grapes, plums, rhubarb and tomatoes are best if packed raw. Most vegetables can be packed raw (cold-packed) if processed in the pressure canner.



- The hot-pack method requires a short pre-cooking period (boiling or heating in some manner). Then the boiling-hot product is packed into clean, hot jars and processed immediately. The hot-pack method is more satisfactory for some vegetables and fruits and it is recommended for peaches, pears and pineapple. Benefits include a tighter pack and, because food expels air when heated, less float.
- Use the method suggested in your tested recipe for best flavor and texture.
- Leave the headspace specified in the recipe.
- Wipe the rim with a clean, damp, paper towel.
- Place lids and rings on jars. Tighten the rings only fingertip tight.



### Processing

- Process jars of pickled products using either the boiling water or atmospheric steam canning method. This ensures that any foodborne pathogens in the jar are destroyed.
- **The USDA does not recommend open kettle canning**, which involves heating the food to boiling, pouring it into the jars, applying lids, and allowing the heat of the jar to cause the lid to seal, without further processing.
- Paraffin, as a sealing agent, is not recommended. No processing is involved and the wax can shrink during cold weather, exposing the food.
- **Alternative Low-Temperature Pasteurization Process:** Low-temperature pasteurization can produce a better pickle texture, but must be done very carefully to avoid spoilage and is only acceptable for certain recipes. Fill jars with room temperature pickles. Pour 165° to 180°F liquid over the product, leaving the appropriate headspace. Remove bubbles with a rubber spatula. Wipe the jars clean and adjust lids. Process at 180°F for 30 minutes. Be sure to use a thermometer. **Caution: Use this process only for cucumbers. Do not use this treatment on reduced-sodium pickles.**
- **Atmospheric Steam Canner Processing:** Use a research tested recipe and processing time developed for a **boiling water** canner when using an atmospheric steam canner. An atmospheric steam canner may be used with recipes approved for half-pint, pint, or quart jars. Processing time must be limited to **45 minutes or less, including any modification for elevation.**

### Adjusting for Altitude

- All recipes are developed using sea level as the criteria for processing times. At sea level, water boils at 212°F. At higher altitudes water will boil at a lower degree.
- Adjustments have to be made to ensure safe canning. If you are at a higher altitude you must increase the processing times according to the chart.

Altitude Chart	
Altitude in feet	Increase processing time
1,000 – 3,000	5 minutes
3,001 – 6,000	10 minutes
Above 6,001	15 minutes

## Pickled Products

A pickle is any fruit or vegetable preserved in vinegar or brine.

- **Brine pickles** are products fermented in salt brine. Regular dill pickles and sauerkraut are fermented and cured for about 3 weeks. They may be canned or stored in the refrigerator for 4-6 months.
- **Refrigerator dills** are not heat processed and must be stored in the refrigerator for 4-6 months.
- **Fresh-pack or quick-process pickles** are not fermented; some are brined several hours or overnight, then drained and covered with vinegar and seasonings.
- **Fruit pickles** are fruits that are pickled in spicy, sweet-sour syrup.
- **Relishes** are prepared using chopped products and cooked in a spicy vinegar solution.

Be sure to remove and discard a 1/16-inch slice from the blossom end of fresh cucumbers. Blossoms may contain an enzyme which causes excessive softening of pickles.

### Salt

- Salts are not interchangeable. Use canning or pickling salt. Table salt contains anti-caking ingredients which can cloud the brine. Kosher salt may also contain anti-caking ingredients so check the label.
- Since flake salt varies in density (grain size), it is not recommended for making pickled and fermented foods. (If you must substitute Kosher salt, it is lighter than canning salt so you need to use the same amount of salt by weight, not volume.
- In our class experiment, **1/2 cup pickling salt = 1 cup plus 2 Tablespoons Kosher salt.**

### Vinegar

The level of acidity in a pickled product is as important to its safety as it is to taste and texture. When pickling, always use high-quality commercial vinegars with 5% acidity or higher (also listed as 50-grain). The acidity should be listed on the label; if not, assume it is not 5%.

- Do not alter vinegar, food, or water proportions in a recipe or use a vinegar with unknown acidity. Doing so may alter its preservative effect and undermine the safety of the product.
- Use only recipes with tested proportions of ingredients.
- White distilled and cider vinegars of 5% acidity are recommended. White vinegar is usually preferred when light color is desirable.
- Do not use homemade vinegar as the acidity is unknown.

### Water

- Soft water makes the best brine for pickles.
- Hard water may cause cloudiness in the brine and discolor pickles. If only hard water is available, boil and let sit for 24 hours. Skim off scum and use water from the top of the container without disturbing the sediment.
- Fluoridated or chlorinated water may contribute to soft pickles or cloudy brine; bottled distilled water is always a good choice.

### Pickles with Reduced Salt Content

When making fresh-pack pickles, cucumbers are acidified quickly with vinegar. Use only tested recipes formulated to produce the proper acidity. While these pickles may be prepared safely with reduced or no salt, their quality may be noticeably lower. Both texture and flavor may be noticeably different than expected. You may wish to make small quantities first to determine if you like them.

### Sugars

White granulated and brown sugars are most often used. Corn syrup and honey, unless called for in reliable recipes, may produce undesirable flavors.

## Spices

Use fresh whole spices for the best quality and flavor in pickles. Powdered spices may cause the product to darken and become cloudy. Pickles will darken less if you tie whole spices loosely in a clean white cloth or cheesecloth bag and then remove the bag from the product before packing the jars.

## Firming Agents

If good quality ingredients are used in pickling and up-to-date methods are followed, lime and alum are not needed for crisp pickles. If you choose to use firming agents, alum may be safely used to firm *fermented* cucumbers. Alum does not have an effect on quick-processes pickles.

- When pickling cucumbers, cut 1/16-inch slice off the blossom end and discard because enzymes in the blossom end causes soft pickles.
- Soaking cucumber in **ice** water for 4 to 5 hours prior to pickling is a safe method for making crisp pickles.
- The calcium in pickling lime does improve pickle firmness. Food-grade lime may be used as a lime-water solution for soaking fresh cucumbers 12 to 24 hours before pickling them. However, **EXCESS LIME ABSORBED BY THE CUCUMBERS MUST BE REMOVED TO MAKE SAFE PICKLES**. To remove excess lime, drain the lime-water solution, rinse and then re-soak the cucumbers in fresh water for 1 hour. Repeat the rinsing and soaking steps two more times.
- Calcium chloride for pickling is often sold where you buy canning supplies. It is usually added directly to the jars of pickles. Follow the instructions on the package.

## Other Considerations:

- **Yellow crystals on pickled asparagus:** Sometimes pickled asparagus will form yellow crystals. Do not panic!!! When asparagus is heated with acid (such as vinegar), rutin is drawn out of the asparagus plant. It then becomes insoluble in the vinegar and crystallizes on the exterior of the asparagus stems. It is safe to eat it; it is only a cosmetic concern. In commercially canned asparagus, a small amount of tin salts are added to the pickling solution, which prevents the rutin from crystallizing.
- **Blue garlic:** Garlic contains anthocyanins, water- soluble pigments that can turn blue or purple in acidic environments like vinegar or pickling brine - the garlic is still safe to eat. Garlic should be fresh and at the peak of maturity. Immature or sprouting garlic can turn blue in the jar.

## For Best Results ...

- Store fresh-pack/quick pickles for 4-6 weeks in a cool, dry, dark place to allow the flavors to mellow and blend.
- Marinate **refrigerator** pickles (they aren't processed in heat) in the refrigerator for at least two weeks before serving and use within 3 months.

## Preventing Spoilage

Pickle products are subject to spoilage from microorganisms, particularly yeasts and molds, as well as enzymes that may affect flavor, color, and texture. Processing the pickles in a boiling-water or steam canner will prevent these problems. Standard canning jars and self-sealing lids are recommended. Processing times and procedures will vary according to food acidity and the size of food pieces.

## Recipes

### Bloody Mary Mix

*Yield: About 5 pint jars*

2 quarts tomato juice (recipe below)	2 tablespoons hot sauce
½ cup finely minced celery hearts (light leafy green centers)	2 teaspoons garlic powder
6 tablespoons Worcestershire Sauce	1 teaspoon black pepper
6 tablespoons dill pickle juice	1 teaspoon celery seed
¼ cup prepared horseradish	1 teaspoon smoked paprika
	1 cup bottled lemon juice

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Combine all ingredients, except lemon juice, in a non-reactive pot (such as stainless steel or enamel). Bring to a boil; reduce heat, and simmer for 5 minutes. Remove from heat and stir in lemon juice.
3. Ladle hot juice into hot jars, leaving ½-inch headspace. Remove air bubbles; adjust headspace if necessary. Wipe rims; place lids and rings on jars. Tighten rings only fingertip-tight.
4. Process in a boiling water or steam canner: pints for 35 minutes, quarts for 40 minutes, adjusting for altitude: at 1,001-3,000 feet add 5 minutes, at 3,001-6,000 feet add 10 minutes, above 6,000 feet add 15 minutes.
5. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: adapted from freshpreserving.com, 2018*

### Tomato Juice

*Yield: About 4 quart jars*

14 pounds tomatoes, cored and quartered	1 tablespoon salt or celery salt
1 large red beet, peeled and cut into ¼-inch cubes	2 teaspoons citric acid or ½ cup bottled lemon juice

1. Core tomatoes and cut into quarters. Bring tomatoes, any accumulated juice, and diced beet to a boil in a large stainless steel or enameled stockpot, stirring often; reduce heat and simmer, uncovered, 15 minutes or until vegetables are very tender, stirring often.
2. Press tomato mixture, in batches, through a food mill, into a large bowl; discard skins and seeds. Return tomato juice to stockpot. Cook over medium heat, stirring often, until a thermometer registers 190°F; remove from heat. Stir in salt and citric acid or lemon juice.
3. Ladle hot juice into hot quart jars, leaving 1-inch headspace. Remove air bubbles. Wipe jar rim. Center lid on jar, apply band, and adjust to fingertip-tight.
4. Process in a boiling water or steam canner for 40 minutes at 0-1,000 feet elevation, 45 minutes at 1,001-3,000 feet, 50 minutes at 3,001-6,000 feet, 55 minutes above 6,000 feet.
5. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: ballmasonjars.com, 2023*

**Pickled Pearl Onions***Yield: About 3 to 4 pints*

8 cups peeled white pearl onions	2 cups sugar
5 ½ cups white vinegar (5%)	8 teaspoons mustard seed
1 cup water	4 teaspoons celery seed
2 teaspoons canning salt	

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. To peel onions, place a few at a time in a wire-mesh basket or strainer, dip in boiling water for 30 seconds, then remove and place in cold water for 30 seconds. Cut a 1/16-inch slice from the root end, and then remove the peel and cut 1/16-inch from the other end of the onion.
3. Combine vinegar, water, salt and sugar in an 8-quart Dutch oven or stockpot. Bring to a boil and boil 3 minutes. Add peeled onions and bring back to a boil. Reduce heat to a simmer and heat until half-cooked (about 5 minutes).
4. Place 2 teaspoons mustard seed and 1 teaspoon celery seed into each empty hot pint jar. Fill with hot onions, leaving 1-inch headspace. Fill with hot pickling liquid, leaving ½-inch headspace. Remove bubbles and adjust headspace if needed. Wipe rims of jars with a dampened paper towel, adjust lids.
5. Process pints in a boiling water or steam canner for 10 minutes at 0-1,000 feet elevation, 15 minutes at 1,001-6,000 feet, 20 minutes above 6,000 feet.
6. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: USDA Complete Guide to Home Canning, 2015*

**Marinated Whole Mushrooms***Yield: About 9 half-pints*

7 pounds small whole mushrooms	1 tablespoon canning salt
½ cup bottled lemon juice	½ cup finely chopped onion
2 cups olive or salad oil	¼ cup diced pimiento
2 ½ cups white vinegar (5%)	2 cloves garlic, cut in quarters
1 tablespoon oregano leaves	25 black peppercorns
1 tablespoon dried basil leaves	

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Select very fresh unopened mushrooms with caps less than 1 ¼ inch diameter. Wash, cut stems, leaving ¼-inch attached to cap. Add lemon juice and water to cover, bring to boil, simmer 5 minutes, drain.
3. Mix olive oil, vinegar, oregano, basil, and salt in a saucepan. Stir in onions and pimiento and heat to boiling.
4. Place ¼ garlic clove and 2-3 peppercorns in a half-pint jar. Fill jars with mushrooms and hot, well-mixed oil/vinegar solution, leaving ½-inch headspace. Adjust lids.
5. Process half-pints in a boiling water or steam canner for 20 minutes at 0-1,000 feet elevation, 25 minutes at 1,001-3,000 feet, 30 minutes at 3,001-6,000 feet, 35 minutes above 6,000 feet.
6. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: National Center for Home Food Preservation, 2018*

**Roasted Red Pepper Spread***Yield: About 5 half-pint jars*

6 pounds red bell peppers (about 14 medium)	½ cup red wine vinegar
1 pound Italian plum tomatoes (about 5 medium)	2 tablespoons finely chopped fresh basil
2 large cloves garlic, unpeeled	1 tablespoon sugar
1 small white onion	1 teaspoon salt

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Roast red peppers, tomatoes, garlic and onion under a broiler or on a grill at 425°F, turning to roast all sides, until tomatoes and peppers are blistered, blackened and softened and garlic and onions are blackened in spots. Remove from heat.
3. Place peppers and tomatoes in paper bags, secure opening and let cool 15 minutes. Allow garlic and onion to cool. Peel garlic and onion. Finely chop garlic; set aside. Finely chop onion, measuring ¼-cup; set aside. Peel and seed peppers and tomatoes. Place peppers and tomatoes in a food processor or blender, working in batches, and process until smooth.
4. Combine pepper and tomato puree, garlic, onion, vinegar, basil, sugar and salt in a large saucepan. Bring to a boil, reduce heat, simmer until mixture thickens and mounds on a spoon, about 20 minutes.
5. Ladle hot spread into hot jars leaving ½-inch headspace. Wipe rim, center hot lid on jar, apply band and adjust until fingertip tight.
6. Process in a boiling water or steam canner for 10 minutes at 0-1000 feet elevation, 15 minutes at 1,001-3,000 feet, 20 minutes at 3,001-6,000 feet, 25 minutes over 6,000 feet.
7. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: Ball Complete Book of Home Preserving 2020*

**Serving Suggestion:****Roasted Red Pepper Dip***Yield: About 1 cup*

8 ounces Roasted Red Pepper Spread  
½ cup Greek style whole milk yoghurt  
1 teaspoon extra virgin olive oil  
½ teaspoon smoked paprika  
Salt and freshly ground pepper, to taste  
½ lime, zested

1. Whisk roasted red pepper spread, yoghurt, olive oil, paprika and salt and pepper together in a small bowl.
2. Cover and refrigerate for 1 hour.
3. Garnish dip with zested lime peel.
4. Serve with fresh vegetables.

**Bread and Butter Pickled Jicama***Yield: About 6 pint jars*

14 cups cubed jicama	4 ½ cups sugar
3 cups thinly sliced onion	2 tablespoons mustard seed
1 cup chopped red bell pepper	1 tablespoon celery seed
4 cups white vinegar (5%)	1 teaspoon ground turmeric

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Combine vinegar, sugar and spices in a Dutch oven or large saucepot. Stir and bring to a boil. Stir in prepared jicama, onion slices, and red bell pepper. Return to a boil, reduce heat and simmer 5 minutes. Stir occasionally.
3. Fill hot solids into clean, hot pint jars, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel; apply two-piece metal canning lids.
4. Process pints in a boiling water or steam canner for 15 minutes at 0-1,000 feet elevation, 20 minutes at 1,001-6,000 feet, 25 minutes above 6,000 feet.
5. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: USDA Complete Guide to Home Canning, 2015*

**Pickled Dill Beans***Yield: About 8 pints*

4 pounds fresh tender green or yellow beans (5-6 inches long)  
8 to 16 heads fresh dill  
8 cloves garlic (optional)  
½ cup canning or pickling salt  
4 cups white vinegar (5%)  
4 cups water  
1 teaspoon red pepper flakes (optional)

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use. If under 1,000 feet, sterilize the jars by boiling for 10 minutes.
2. Wash and trim ends from beans and cut to 4-inch lengths.
3. In each sterile pint jar, place 1 to 2 dill heads and, if desired, 1 clove of garlic. Place whole beans upright in jars, leaving ½-inch headspace. Trim beans to ensure proper fit, if necessary.
4. Combine salt, vinegar water, and pepper flakes (if desired). Bring to a boil.
5. Add hot solution to beans, leaving ½-inch headspace. Remove air bubbles and adjust headspace, if necessary, by adding hot solution. Wipe rims with a dampened clean paper towel; adjust two-piece metal canning lids.
6. Process in a boiling water or steam canner for 5 minutes at 0-1,000 feet (only in sterilized jars), 10 minutes at 1,001-6,000 feet, 15 minutes above 6,000 feet.
7. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: National Center for Home Food Preservation, 2018*



## Pickled Asparagus

*Yield: about 3 wide-mouth pints*

5 pounds asparagus	2 ¼ cups white vinegar (5%)	¼ cup canning salt
3 large garlic cloves	3 small hot peppers (optional)	1 ½ teaspoons dill seed
2 ¼ cups water		

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Wash asparagus gently under running water. Cut stems from the bottom to leave spears with tips that fit into the canning jar with a little less than ½-inch headspace.
3. Peel and wash garlic cloves. Place a garlic clove at the bottom of each jar, and tightly pack asparagus into jars with the blunt ends down.
4. In a 6-8 quart pot, combine water, vinegar, hot peppers (optional), salt and dill seed. Bring to a boil.
5. If using, place one hot pepper in each jar over asparagus spears. Pour boiling hot pickling brine over spears, leaving ½-inch headspace. Remove air bubbles and adjust headspace if necessary, by adding hot solution. Wipe rims with a dampened clean paper towel; adjust two-piece metal canning lids.
6. Process in a boiling water or steam canner for 10 minutes at 0-1,000 feet elevation, 15 minutes at 1,001-6,000 feet, 20 minutes above 6,000 feet.
7. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.
8. Allow pickled asparagus to sit in processed jars for 3 to 5 days before consumption for best flavor development.

*Source: National Center for Home Food Preservation, 2018*

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## Pickled Beets

*Yield: About 8 pints*

7 pounds of 2 to 2 ½-inch diameter beets	2 cups water
4 cups vinegar (5%)	2 cinnamon sticks
1 ½ teaspoons canning or pickling salt	12 whole cloves
2 cups sugar	4 to 6 onions (2 to 2 ½-inch diameter) if desired

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Trim off beet tops, leaving 1-inch of stem and roots to prevent bleeding of color. Wash thoroughly. Sort for size.
3. Cover similar sizes together with boiling water and cook until tender, about 25 to 30 minutes.  
**Caution: Drain and discard liquid.** Cool beets. Trim off roots and stems and slip off skins.
4. Slice into ¼-inch slices. Peel and thinly slice onions.
5. Combine vinegar, salt, sugar, and fresh water. Put spices in cheesecloth bag and add to vinegar mixture. Bring to a boil. Add beets and onions. Simmer 5 minutes. Remove spice bag.
6. Fill jars with beets and onions, leaving ½-inch headspace. Add hot vinegar solution, allowing ½-inch headspace. Remove air bubbles and adjust headspace, if necessary, by adding hot solution. Wipe rims with a dampened clean paper towel; adjust two-piece metal canning lids.
7. Process in a boiling water or steam canner for 30 minutes at 0-1,000 feet elevation, 35 minutes at 1,001-3,000 feet, 40 minutes at 3,001-6,000 feet, 45 minutes above 6,000 feet.
8. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: National Center for Home Food Preservation, 2018*

**Bread and Butter Zucchini***Yield: 8-9 pint jars*

16 cups fresh zucchini, sliced	2 cups sugar
4 cups onions, thinly sliced	4 tablespoons mustard seed
½ cup canning or pickling salt	2 tablespoons celery seed
4 cups white vinegar (5%)	2 teaspoons ground turmeric

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Cover zucchini and onion slices with 1 inch of water and salt. Let stand 2 hours and drain thoroughly.
3. Combine vinegar, sugar, and spices. Bring to a boil and add zucchini and onions. Simmer 5 minutes.
4. Fill jars with mixture and pickling solution, leaving ½-inch headspace. Remove air bubbles and adjust headspace if necessary. Wipe rims with a dampened clean paper towel; adjust two-piece metal canning lids.
5. Process in a boiling water or atmospheric steam canner for 10 minutes between 0-1,000 feet, 15 minutes between 1,001–6,000 feet, 20 minutes above 6,000 feet.
6. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: National Center for Home Food Preservation, 2018*

**Pickled Baby Carrots***Yield: About 4 pints*

8 ½ cups peeled baby carrots  
5 ½ cups white vinegar (5%)  
1 cup water  
2 cups sugar  
2 teaspoons canning salt  
8 teaspoons mustard seed  
4 teaspoons celery seed

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Wash carrots well.
3. Combine vinegar, water, sugar and canning salt in an 8-quart Dutch oven or stockpot. Bring to a boil and boil gently 3 minutes. Add carrots and bring back to a boil. Then reduce heat to a simmer and heat until the carrots are half-cooked (about 10 minutes).
4. Meanwhile, place 2 teaspoons mustard seed and 1 teaspoon celery seed in the bottom of each clean, hot pint jar.
5. Fill hot jars with the hot carrots, leaving 1-inch headspace. Cover with hot pickling liquid, leaving ½-inch headspace. Remove air bubbles and adjust headspace, if necessary, by adding hot liquid. Wipe rims with a dampened clean paper towel; adjust two-piece metal canning lids.
6. Process in a boiling water or steam canner for 15 minutes at 0-1,000 feet elevation, 20 minutes at 1,001-6,000 feet, 25 minutes above 6,000 feet.
7. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: National Center for Home Food Preservation, 2015*

**Zucchini Pickles***Yield: About 8 pints*

5 pounds medium zucchini, cut into ¼-inch thick slices	2 cups sugar
2 pounds mild white onions, thinly sliced	2 tablespoons mustard seed
¼ cup salt	1 tablespoon each: celery seed and ground turmeric
ice water	2 teaspoons ground ginger
4 cups cider vinegar (5%)	3 cloves garlic, minced

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Place zucchini, onions, and salt in a large kettle; cover with ice water and let stand for 1 to 2 hours.
3. Drain, rinse well and drain again.
4. In large kettle mix vinegar, sugar, mustard seeds, celery seeds, turmeric, ginger, and garlic. Bring to a boil over high heat, stirring to dissolve sugar. Boil for 2 to 3 minutes.
5. Stir in zucchini mixture, return to a boil and boil for 2 more minutes.
6. Pack hot mixture into hot pint jars, leaving ½-inch headspace. Wipe rims with a dampened clean paper towel; adjust two-piece metal canning lids.
7. Process in a boiling water or steam canner for 10 minutes at 0-1,000 feet elevation, 15 minutes at 1,001-3,000 feet, 20 minutes at 3,001-6,000 feet, 25 minutes at 6,001-8,000 feet, and 30 minutes at 8,001-10,000 feet.
8. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: Pickles, Relishes and Chutneys, UC Publication #4080*

**Pickled Cauliflower or Brussels Sprouts***Yield: About 9 half-pints*

12 cups of 1 to 2-inch cauliflower flowerets, or small Brussels sprouts	1 cup diced sweet red pepper
4 cups white vinegar (5%)	2 tablespoons mustard seed
2 cups sugar	1 tablespoon celery seed
2 cups thinly sliced onions	1 teaspoon turmeric
	1 teaspoon hot red pepper flakes

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Wash cauliflower flowerets or Brussels sprouts (remove stems and blemished outer leaves) and boil in salt water (4 teaspoons canning salt per gallon of water) for 3 minutes for cauliflower and 4 minutes for Brussels sprouts. Drain and cool.
3. Combine vinegar, sugar, onion, diced red pepper, and spices in large saucepan. Bring to a boil and simmer 5 minutes. Distribute onion and diced pepper among jars.
4. Fill jars with vegetable pieces and pickling solution, leaving ½-inch headspace.
5. Process either half-pints or pints in a boiling water or steam canner for 10 minutes at 0-1,000 feet elevation, 15 minutes at 1,001-6,000 feet, 20 minutes above 6,000 feet.
6. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: National Center for Home Food Preservation, 2018*

## Corn Relish

*Yield: About 9 pint jars*

10 cups whole kernel corn, fresh (16-20 medium size ears), or frozen (whole kernel, six 10-ounce packages)  
2 ½ cups sweet red pepper, diced  
2 ½ cups green pepper, diced  
2 ½ cups chopped celery  
1 ¼ cups chopped onion  
1 ¾ cups sugar  
5 cups vinegar (5%)  
2 ½ tablespoons canning salt  
2 ½ teaspoons celery seed  
2 ½ tablespoons dry mustard  
1 ¼ teaspoons turmeric

**Fresh corn:** Remove husks and silks. Cook ears of corn in boiling water for 5 minutes; remove and plunge into cold water. Drain; cut corn from cob. Do not scrape cob.

**Frozen corn:** Defrost in refrigerator overnight or in a microwave oven.

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Combine peppers, celery, onions, sugar, vinegar, salt and celery seed in large saucepot.
3. Cover pan until mixture starts to boil, then boil uncovered for 5 minutes, stirring occasionally.
4. Mix dry mustard and turmeric, then blend with a small amount of liquid from boiling mixture.
5. Add spice mixture and corn to boiling mixture. Return to boiling and cook for 5 minutes, stirring occasionally.
6. Pack loosely while boiling into hot pint jars, leaving ½-inch headspace. Wipe rims with a dampened clean paper towel; adjust two-piece metal canning lids.
7. Process either half-pints or pints in a boiling water or steam canner for 15 minutes at 0-1,000 feet elevation, 20 minutes at 1,001-6,000 feet, 25 minutes above 6,000 feet.
8. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: National Center for Home Food Preservation, 2018*

## Tomato Ketchup

*Yield: 6 or 7 pints*

24 pounds ripe tomatoes  
3 cups chopped onions  
 $\frac{3}{4}$  teaspoons ground red pepper (cayenne)  
3 cups cider vinegar (5 %)  
4 teaspoons whole cloves  
3 sticks cinnamon, crushed  
1  $\frac{1}{2}$  teaspoons whole allspice  
3 tablespoons celery seeds  
1  $\frac{1}{2}$  cups sugar  
 $\frac{1}{4}$  cup canning salt

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Wash tomatoes. Dip in boiling water for 30 to 60 seconds or until skins split. Dip in cold water. Slip off skins and remove cores.
3. Quarter tomatoes into 4-gallon stock pot or large kettle. Add onions and red pepper. Bring to boil and simmer 20 minutes, uncovered. Cover, turn off heat and let stand for 20 minutes.
4. Combine spices in a spice bag and add to vinegar in a 2-quart saucepan. Bring to boil. Remove spice bag and combine vinegar and tomato mixture. Boil about 30 minutes.
5. Put boiled mixture through a food mill or sieve. Return to pot. Add sugar and salt, boil gently, and stir frequently until volume is reduced by one-half or until mixture rounds up on spoon without separation.
6. Fill hot pint jars, leaving  $\frac{1}{8}$ -inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel, adjust lids.
7. Process pints in a boiling water or steam canner for 15 minutes at 0-1,000 feet elevation, 20 minutes at 1,001-6,000 feet, 25 minutes above 6,000 feet.
8. If using a boiling water canner, remove lid and wait 5 minutes. If using a steam canner, wait 3 minutes before removing lid. Remove jars from canner. Let cool, undisturbed, 12-24 hours and check for seals. Remove rings, clean and label jars. Store sealed jars in a cool, dry, dark location.

*Source: National Center for Home Food Preservation, 2015*

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### Sources

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