

Perfectly Pickled Produce

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 |

Pickles

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 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

Quick Fresh Dill Pickles

Yield: 7-9 wide-mouth pints or 4-5 wide mouth quarts

8 pounds of 3 to 5-inch pickling cucumbers
2 gallons water
1-1/4 cups canning salt (divided)
1-1/2 quarts vinegar (5%)
1/4 cup sugar

2 quarts water
2 tablespoons whole mixed pickling spice
about 3 tablespoons whole mustard seed
about 14 heads of fresh dill or 5 tablespoons dill seed

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Wash cucumbers. Cut 1/16-inch slice off blossom end and discard. Leave 1/4-inch of stem attached. Dissolve 3/4 cup salt in 2 gallons of water. Pour over cucumbers and let stand for 12 hours. Drain.
3. Combine vinegar, 1/2 cup salt, sugar and 2 quarts water. Add mixed pickling spices tied in a clean white cloth. Heat to boiling.
4. Fill jars with pickles. Add 1 teaspoon mustard seed and 1-1/2 heads fresh dill (or 1-1/2 teaspoons dill seed) per pint jar. Cover with boiling pickling solution, leaving 1/2-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.
5. Process in a boiling water or steam canner:
 - a. Pints: 10 minutes at 0-1,000 feet, 15 minutes at 1,001-6,000 feet, 20 minutes above 6,000 feet.
 - b. Quarts: 15 minutes at 0-1,000 feet, 20 minutes at 1,001-6,000 feet, 25 minutes above 6,000 feet.
6. For boiling water canner, remove lid and wait 5 minutes; for steam canner, wait 3 minutes before removing lid.
7. 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: So Easy to Preserve, Cooperative Extension, The University of Georgia, 2015

Kosher Dills*Yield: 6-7 pints*

| | |
|---------------------------------------|----------------------------|
| 30-36 cucumbers (3- to 4-inches long) | 6 tablespoons canning salt |
| 3 cups vinegar (5%) | fresh or dried dill |
| 3 cups water | garlic |
| | mustard seed |

Wash the cucumbers. Slice 1/16-inch from blossom end and discard. Leave 1/4-inch of stem attached. Make a brine of the vinegar, water and salt. Bring to a boil. Place a generous layer of dill, 1/2 to 1 clove of garlic (sliced) and 1/2 teaspoon of mustard seed in bottom of each pint jar. Pack the cucumbers into the hot jars. When the jars are half-filled with cucumbers add more dill and complete the packing of the jars. Fill the jars 1/2-inch from top with the boiling brine. Remove air bubbles. Wipe jar rims. Adjust lids. Process 10 minutes in a boiling water or steam canner. Pickles will shrivel after processing. They will later plump in sealed jars.

Source: So Easy to Preserve, Cooperative Extension, The University of Georgia, 2015

Pickled Corn Relish*Yield: about 5 pints*

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|--------------------------------------|--|
| Three 10-ounce packages frozen corn | 2-1/2 cups vinegar (5%) |
| 1-1/4 cups diced sweet red peppers | 1-1/4 tablespoons canning or pickling salt |
| 1-1/4 cups diced sweet green peppers | 1-1/4 teaspoons celery seed |
| 1-1/4 cups chopped celery | 1-1/4 tablespoons dry mustard |
| 3/4 cups diced onions | 3/4 teaspoon turmeric |
| 4/5 cups sugar | |

1. Combine peppers, celery, onions, sugar, vinegar, salt, and celery seed in a saucepan.
2. Bring to boil and simmer 5 minutes, stirring occasionally.
3. Mix mustard and turmeric in 1/2 cup of the simmered mixture. Add this mixture and the corn to the hot mixture. Simmer another 5 minutes.
4. Fill jars with hot mixture, leaving 1/2-inch headspace. Adjust lids and process in a boiling water or steam canner. Half-pints or Pints: 15 minutes at 0-1,000 feet, 20 minutes at 1,001-6,000 feet, 25 minutes above 6,000 feet.

Source: USDA Complete Guide to Home Canning, 2015

Pickled Dill Beans*Yield: about 8 pints*

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|---|---|
| 4 pounds fresh tender green or yellow beans (5-6 inches long) | 1/2 cup canning or pickling salt |
| 8 to 16 heads fresh dill | 4 cups white vinegar (5%) |
| 8 cloves garlic (optional) | 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. Wash and trim ends from beans and cut to 4-inch lengths.
2. 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 1/2-inch headspace. Trim beans to ensure proper fit, if necessary.
3. Combine salt, vinegar water, and pepper flakes (if desired). Bring to a boil.
4. Add hot solution to beans, leaving 1/2-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.
5. 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.
6. For boiling water canner, remove lid and wait 5 minutes; steam canner, wait 3 minutes before removing lid.
7. 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

Bread-and-Butter Pickled Jicama*Yield: about 6 pints*

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

Combine vinegar, sugar and spices in a 12-quart Dutch oven or large saucepot. Stir and bring to boil. Stir in prepared jicama, onion slices, and red pepper. Return to boil, reduce heat and simmer 5 minutes.

Fill hot solids into clean, hot pint jars, leaving 1/2-inch headspace. Cover with boiling cooking liquid, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe rims of jars with a dampened clean paper towel. Adjust lids. Process 15 minutes in a boiling water or steam canner.

Source: So Easy to Preserve, Cooperative Extension, The University of Georgia, 2015

Spiced Pears*Yield: about 4 pints*

3-1/2 pounds medium-ripe pears (14-16) *Tie in a spice bag:*
 2-1/2 cups sugar 2 teaspoons whole ginger
 1-1/4 cups white vinegar (5%) 2 tablespoons whole cloves
 1 cup water 7 cinnamon sticks, 3-inch pieces

1. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
2. Wash, peel and core pears. Place immediately in a solution of 1/2 teaspoon ascorbic acid and 2 quarts water to prevent browning.
3. Combine sugar, vinegar, and 1 water; bring to a boil. Add spices in cheesecloth bag. Boil 5 minutes.
4. Drain pears and add to syrup. Simmer 5 minutes or until soft but still firm. Remove spice bag.
5. Pack pears into hot jars; leaving 1/2-inch headspace. Fill jars to 1/2-inch of top with boiling hot syrup. Remove air bubbles and adjust headspace if needed. Wipe rims with a dampened clean paper towel; adjust two-piece metal canning lids.
6. Process pint jars in either a boiling water or steam canner for 15 minutes at 0-1,000 feet elevation, 20 minutes between 1,001-3,000 feet, 25 minutes between 3,001-6,000 feet, and 30 minutes above 6,000 feet.
7. For boiling water canner, remove lid and wait 5 minutes; for steam canner, wait 3 minutes before removing lid.
8. 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 2-1/4 cups white distilled 1/4 cup canning salt
 3 large garlic cloves vinegar (5%) 1-1/2 teaspoons dill seed
 2-1/4 cups water 3 small hot peppers (optional)

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 1/2-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 1/2-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. For boiling water canner, remove lid and wait 5 minutes; for steam canner, wait 3 minutes before removing lid.
8. 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.
9. Allow pickled asparagus to sit in processed jars for 3 to 5 days before consumption for best flavor development.

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

Pickled Beets

Yield: about 8 pints

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|--|---|
| 7 pounds of 2 to 2-1/2 inch diameter beets | 2 cups water |
| 4 cups vinegar (5%) | 2 cinnamon sticks |
| 1-1/2 teaspoons canning or pickling salt | 12 whole cloves |
| 2 cups sugar | 4 to 6 onions (2 to 2-1/2 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 to 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 1/4-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.
6. Add beets and onions. Simmer 5 minutes. Remove spice bag.
7. Fill jars with beets and onions, leaving 1/2-inch headspace. Add hot vinegar solution, allowing 1/2-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.
8. 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.
9. For boiling water canner, remove lid and wait 5 minutes; for steam canner, wait 3 minutes before removing lid.
10. 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*

British Bread and Butter Pickles

Yield: about 5 pints

| | |
|---|-----------------------------|
| 10 cups sliced trimmed pickling cucumbers | 2 tablespoons mustard seeds |
| 4 medium onions, thinly sliced | 1 teaspoon celery seeds |
| 1/2 cup pickling or canning salt | 1 teaspoon ground turmeric |
| 3 cups cider vinegar (5%) | 1 teaspoon ground ginger |
| 2 cups brown sugar | |

1. In a glass or stainless-steel bowl, combine cucumbers, onions and salt. Mix well, cover with cold water and let stand at room temperature for 2 hours. Transfer to a colander placed over a sink, rinse with cool running water and drain thoroughly.
2. Wash and rinse canning jars, lids and rings; keep jars hot until ready to use.
3. In a large stainless steel pan, combine vinegar, brown sugar, mustard seeds, celery seeds, turmeric, and ground ginger. Bring to a boil over medium-high heat, stirring to dissolve sugar. Stir in vegetables and return to a boil.
4. Pack vegetables into hot jars to within a generous 1/2-inch of top of jar. Ladle hot pickling liquid into jar to cover vegetables, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace, if necessary, by adding hot pickling liquid. 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 – 3,000 feet, 20 minutes between 3,001 – 6,000 feet, 25 minutes between 6,001 – 8,000 feet, and 30 minutes between 8,001 – 10,000 feet.
6. For boiling water canner, remove lid and wait 5 minutes; for steam canner, wait 3 minutes before removing lid.
7. 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 Blue Book Guide to Preserving, 2012*

Bread and Butter Zucchini

Yield: 8-9 pints

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|----------------------------------|-----------------------------|
| 16 cups fresh zucchini, sliced | 2 cups sugar |
| 4 cups onions, thinly sliced | 4 tablespoons mustard seed |
| 1/2 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. Wash and rinse canning jars; keep hot until ready to use. Prepare lids and bands according to manufacturer's directions.
4. Combine vinegar, sugar, and spices. Bring to a boil and add zucchini and onions. Simmer 5 minutes.
5. Fill jars with mixture and pickling solution, leaving 1/2-inch headspace. Remove air bubbles and adjust headspace if necessary. Wipe rims with a dampened clean paper towel; adjust two-piece metal canning lids.
6. 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.
7. For boiling water canner, remove lid and wait 5 minutes; steam canner, wait 3 minutes before removing lid.
8. 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 Baby Carrots

Yield: about 4 pints

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

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 1/2-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. For boiling water canner, remove lid and wait 5 minutes; steam canner, wait 3 minutes before removing lid.
8. 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 1/4-inch-thick slices | 2 cups sugar |
| 2 pounds mild white onions, thinly sliced | 2 tablespoons mustard seeds |
| 1/4 cup salt | 1 tablespoon each: celery seeds 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 1/2-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. For boiling water canner, remove lid and wait 5 minutes; for steam canner, wait 3 minutes before removing lid.
9. 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 Figs*Yield: about 8 pints*

4 quarts firm-ripe figs
 3 cups sugar
 2 quarts water
 2 cups sugar
 3 cups vinegar (5%)
 2 sticks cinnamon
 1 tablespoon whole allspice
 1 tablespoon whole cloves

1. Peel figs. (If unpeeled are preferred, pour boiling water over figs and let stand until cool; drain.)
2. Add 3 cups sugar to water and cook until sugar dissolves. Add figs and cook slowly 30 minutes.
3. Add 2 cups sugar and vinegar. Tie spices in a cheesecloth bag; add to figs.
4. Cook gently until figs are clear. Cover and let stand 12-24 hours in refrigerator. Remove spice bag.
5. Heat figs in brine to the boiling point.
6. Pack hot figs and brine into clean, hot jars, leaving 1/2-inch head space. Remove air bubbles and adjust headspace if needed. Wipe rims of jars; adjust two-piece metal canning lids.
7. Process pint jars in either a boiling water or steam canner for 15 minutes at 0-1,000 feet elevation and 20 minutes above 1,000 feet.
8. Remove from canner. Let cool, undisturbed, 12-24 hours and check for seals. Clean and label jars. Store sealed jars in a cool, dry, dark location.

Source: So Easy to Preserve, 6th ed. 2014

Pickled Cherries

Yield: about 7 half pint jars

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|-------------------------------|-----------------------|-----------------------------|
| 2-1/4 cups white vinegar (5%) | 1 vanilla bean, split | 7 (3-inch) cinnamon sticks |
| 2 cups sugar | 7 whole cloves | 2-3/4 lb. sweet cherries, |
| 2 tablespoons canning salt | 7 star anise | washed, stemmed, and pitted |

1. Stir together vinegar, sugar and salt in a medium stainless steel or enameled saucepan. Scrape seeds from vanilla bean; add seeds and bean to vinegar mixture. Bring to a boil, stirring until sugar and salt dissolve.
2. Place 1 clove, 1 star anise, and 1 cinnamon stick into a hot jar. Pack cherries tightly into jar, leaving 1/2-inch headspace (about 12 cherries). Remove vanilla bean from pan; discard. Ladle hot pickling liquid over cherries, leaving 1/2-inch headspace. Remove air bubbles. Wipe jar rim. Center lid on jar. Apply band, and adjust to fingertip-tight. Place jar in boiling water or steam canner. Repeat until all jars are filled.
3. Process jars 10 minutes, adjusting for altitude. Turn off heat; remove lid, and let jars stand 5 minutes. Remove jars and cool.

Source: The All New Ball Book of Canning and Preserving, 2016.

Resources

National Center for Home Food Preservation: <http://nchfp.uga.edu/>

Complete Guide to Home Canning. 2015. http://nchfp.uga.edu/publications/publications_usda.html

So Easy to Preserve, Sixth Edition. 2016. Bulletin 989. Cooperative Extension/University of Georgia, Athens

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