

Food Preservation

Pickling



Pickle Basics

Select fresh, firm, unwaxed pickling cucumbers, and cut 1/16 inch off the blossom end. Use recommended ingredients in recipes: canning or pickling salt, white granulated or brown sugar, and vinegar with 5% acidity.

Safety and Steps

Follow the directions and steps of tested recipes, and process pickles in a boiling-water bath canner as directed by the recipe. Pickles processed in a boiling-water bath canner for less than 10 minutes must be put in sterilized jars first.

For fermenting, use stone crockery, glass, or food-grade plastic. Heat the solution in aluminum, steel, or unchipped enamel for quick pickles. For best quality use home canned foods with one year.

Sterilizing Jars

Wash jars using soap, and rinse well. Place cleaned jars right-side-up on a rack in a canner and fill the jars and canner with water up to 1 inch above the tops of the jars. Bring water to a boil, and boil for 10 minutes.

Remove jars one at a time when ready to begin filling them, and empty water from the jars back into the canner.

Type	Characteristics
Brining pickles	Cured in brine, a salt and water solution, and preserved with vinegar.
Fresh pack or quick process pickles	Covered in vinegar, spices, and seasonings. For best flavor, let pickles stand for several weeks after being sealed in jars.
Fruit pickles	Made with fruits and a sweet-sour syrup, which includes vinegar or lemon juice.
Pickle relish	Made with fruits and vegetables and cooked to the desired consistency in a vinegar solution.

Troubleshooting

Soft or slippery pickles. If spoilage is evident, do not eat.

Cause	Prevention
Pickles not processed properly to destroy microorganisms	Process pickles according to an approved (USDA, Extension) recipe.
Blossom ends not removed from cucumbers	Slice at least 1/16 inch off the blossom end of the cucumbers and discard.

Strong, bitter taste

Cause	Prevention
Using salt substitutes	Potassium chloride, the ingredient in most salt substitutes, causes bitterness.

Shriveled pickles

Cause	Prevention
Overcooking or overprocessing	Follow a reliable recipe exactly.

Dark or discolored pickles. If brass, copper, or zinc utensils and bringing equipment were used, do not use pickles.

Cause	Prevention
Minerals in hard water	Use soft water.
Spices left in jars of pickles	Place spices loosely in a cheesecloth bag so they can be removed before canning.
Brass, iron, copper, or zinc utensils were used	Use food-grade unchipped enamelware, glass, stainless steel, or stoneware utensils.

For other causes and possible solutions for problems with pickles, see the National Center for Home Food Preservation website: nchfp.uga.edu.

PICKLED BREAD AND BUTTER ZUCCHINI

Yield: 8 to 9 pints

Ingredients

- 16 cups fresh zucchini, rinsed and sliced, 3/16 inch thick
- 4 cups onion, thinly sliced
- ½ cup canning or pickling salt
- 4 cups white vinegar, 5% acidity
- 2 cups sugar
- 4 tablespoons mustard seed
- 2 tablespoons celery seed
- 2 teaspoons ground turmeric
- 1 bag of ice

Procedure

- Wash hands with soap and water. Cover zucchini and onion with 1 inch of ice water and salt. Let stand for 2 hours; drain thoroughly.
- Combine vinegar, sugar, mustard seed, celery seed, and turmeric. Bring to a boil; add zucchini and onions. Simmer for 5 minutes.
- Fill jars with mixture and pickling solution, leaving ½ inch headspace. Remove air bubbles. Wipe jar rims. Adjust lids.

Source: [National Center for Home Food Preservation](#), University of Georgia Extension.

Processing in a Boiling Water Canner Using the Raw Pack Method

At altitude	Pint and Quart jar time
0 - 1,000 feet	10 minutes
1,001 to 6,000 feet	15 minutes
Over 6,000 feet	20 minutes

PICKLED PEPPER-ONION RELISH

Yield: 9 half-pints

Ingredients

- 6 cups finely chopped onions
- 3 cups finely chopped sweet red peppers
- 3 cups finely chopped green peppers
- 1-½ cups sugar
- 6 cups vinegar, 5% acidity, preferably white distilled
- 2 tablespoons canning or pickling salt

Procedure

- Wash hands with soap and water. Wash and chop vegetables. Combine all ingredients and boil gently until the mixture thickens and the volume is reduced by one-half, about 30 minutes.
- Fill sterile jars with hot relish, leaving ½ inch headspace, and seal tightly.
- Seal tightly if refrigerating and adjust the lids for processing. Store in the refrigerator and use within one month. For extended storage, process according to the recommendations.

Source: [National Center for Home Food Preservation](#), University of Georgia Extension.

Processing in a Boiling Water Canner Using the Raw Pack Method

At altitude	Half-pint and Quart jar time
0 - 1,000 feet	6 minutes
1,001 to 6,000 feet	10 minutes
Over 6,000 feet	15 minutes

Read resources from the [National Center for Home Food Preservation](#) for best practices, [Using Boiling-Water Canners](#) before beginning, and the USDA Complete Guide to Home Canning: [Principles of Home Canning](#), if new to canning.



PICKLED DILLED BEANS

Yield: 8 pints

Ingredients

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

Procedure

- Wash hands with soap and water. Wash and trim ends from beans and cut into 4-inch lengths.
- Place 1 to 2 dill heads in each sterile pint jar 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.
- Combine salt, vinegar water, and pepper flakes, if desired. Bring to a boil. Add hot solution to beans, leaving ½-inch headspace.
- Adjust lids and process according to the recommendations below.

Source: [National Center for Home Food Preservation](#), University of Georgia Extension.

Processing in a Boiling Water Canner Using the Raw Pack Method

At altitude	Pint and Quart jar time
0 - 1,000 feet	5 minutes
1,001 to 6,000 feet	10 minutes
Over 6,000 feet	15 minutes



PICKLED SWEET GREEN TOMATOES

Yield: about 9 pints, or 4-½ quarts

Ingredients

- 10 to 11 pounds or 16 cups of green tomatoes, sliced ¼ inch thick
- 2 cups thinly sliced onions
- ¼ cup canning or pickling salt
- 3 cups brown sugar
- 4 cups vinegar, 5% acidity
- 1 tablespoon each: mustard seed, allspice, celery seed, and whole cloves

Procedure

- Wash hands with soap and water. Wash and slice tomatoes and onions. Place in a bowl, sprinkle with ¼ cup salt, and let stand for 4 to 6 hours. Drain.
- Heat and stir sugar in vinegar until dissolved. Tie mustard seed, allspice, celery seed, and cloves in a spice bag. Add the vinegar with tomatoes and onions. If needed, add just enough water to cover the pieces. Bring to a boil and simmer for 30 minutes, stirring as needed to prevent burning. Tomatoes should be tender and transparent when properly cooked. Remove the spice bag.
- Fill the jars and cover with hot pickling solution, leaving ½ inch headspace. Remove air bubbles. Wipe jar rims. Adjust lids.

Source: [National Center for Home Food Preservation](#), University of Georgia Extension.

Processing in a Boiling Water Canner Using the Raw Pack Method

At altitude	Pint size jar time	Quart size jar time
0 - 6,000 feet	15 minutes	20 minutes
Over 6,000 feet	20 minutes	25 minutes

Read resources from the [National Center for Home Food Preservation](#) for best practices, [Using Boiling-Water Canners](#) before beginning, and the USDA Complete Guide to Home Canning: [Principles of Home Canning](#), if new to canning.



KOSHER DILL PICKLES

Yield: 6 to 7 pints

Ingredients

- 30 to 36 cucumbers, 3 to 4 inches long
- 3 cups vinegar, 5% acidity
- 3 cups water
- 6 tablespoons canning salt
- Fresh or dried dill
- Garlic
- Mustard seed

Procedure

- Wash cucumbers. Cut 1/16 inch from the blossom end and discard. Leave ¼ inch of stem attached. Make a brine of vinegar, water, and salt. Bring to a boil.
- Place a generous layer of dill, ½ to 1 clove of sliced garlic, and ½ teaspoon of mustard seed in the bottom of each jar.
- Pack cucumbers into the hot jars. When jars are half-filled with cucumbers, add more dill and complete the packing of the jars.
- Fill jars ½ inch from the top with boiling brine. Remove air bubbles. Wipe the jar rims. Adjust lids.
- Process for 10 minutes in a boiling-water bath canner. Pickles will shrivel after processing, but will later plump in a sealed jar.

Source: [National Center for Home Food Preservation](#), University of Georgia Extension.



BREAD AND BUTTER PICKLES

Yield: 12 to 13 pints

Ingredients

- 1-peck small cucumbers, ¼ bushel
- 12 medium onions
- 6 green peppers
- 6 cloves of garlic
- ⅔ cup canning salt
- 10 cups sugar
- 6 cups cider vinegar, 5% acidity
- 3 teaspoons ground turmeric
- 3 teaspoons celery seed
- 4 tablespoons mustard seeds
- 3 pounds of crushed bagged ice for crisping

Call Your Local Office

Contact your local Illinois Extension office with your food safety questions: go.illinois.edu/FindILExtension.

References and Resources

- [So Easy to Preserve](#), University of Georgia Extension
- [Complete Guide to Home Canning](#), National Center for Home Food Preservation
- [The Ball Blue Book](#)
- [What's Cooking with Mary Liz Wright](#), YouTube.com
- [Cottage Food](#), University of Illinois Extension
- [Food Preservation](#), University of Illinois Extension

Procedure

- Wash hands with soap and water. Rinse and thinly slice the cucumbers, onions, green peppers, and garlic. Place them all in a large pot and mix in salt. Cover with a 1-inch layer of crushed ice. Let the mixture stand for 3 hours, remove the remaining ice, and drain and squeeze the cucumber mixture thoroughly to eliminate excess moisture.
- In a large stockpot over medium heat, dissolve sugar, vinegar, turmeric, celery seed, and mustard seeds. Once it is all dissolved, add the cucumber mixture and stir to ensure everything is fully combined. Heat the cucumber mixture just to a boil and let it simmer for 1 minute.
- Ladle cucumber mixture into hot pint jars, leaving ¾ inch of space at the top. Ladle liquid over the cucumbers until there is ¼ inch of headspace. Adjust the lid and secure the rims. Process jars in a boiling-water bath canner for 10 minutes.
- Store pickles in a cool, dry place, and enjoy them for the best quality within a year.

Source: [Purdue Extension](#).

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