

Pickles & Relishes

HE-71

Pickles add zip and zest to your meals, snacks, and party refreshments—if they are good pickles. They enhance the flavor of some foods that contain nutrients essential to good health. However, the sweet variety of pickles adds calories that many people don't need.

There are several methods of making pickles. One is the slow, traditional way of soaking cucumbers in brine for 4 to 6 weeks, removing the salt, and then adding sugar, vinegar, and spices—or leaving them plain for salt pickles. Other methods take from several hours to 3 weeks. Some of these do not give as crisp a pickle with its characteristic green color unless a firming agent is used. However, if the homemaker's time is limited, the shorter methods can be satisfactory.

Fruits and Vegetables. Use only good-quality fruits and vegetables. Select tender vegetables and firm, ripe fruits. Pears and peaches may be slightly underripe for pickling.

A pickling-type cucumber makes a better pickle. Some varieties found to be good are Model, Chipper, Explorer, Carolina, Ashley, Poinsett, and Gherkin. Wax-coated cucumbers (bought from the vegetable counter) are not suitable for pickling.

Select cucumbers of a uniform size best-suited to the recipe being followed. Use cucumbers within 24 hours after gathering. If they are kept (even refrigerated) longer than 24 hours before the pickling process begins, you will have a poor-quality product. Always remove the blossom. It contains enzymes that will soften the cucumber. If whole cucumbers are to be brined, leave a 1/4-inch stem.

Salt. Pure granulated salt, with no noncaking material or iodine added, is best. It is sometimes called meat-curing salt or pickling salt and can be purchased from most farm supply or grocery stores. Iodine can cause pickles to darken, and noncaking material may prevent fermentation during the brining process. Refined table salt should not be used for brining cucumbers. Table salt may be used for quick-type pickles, which require 1 to 3 days to make. Never use ice cream salt or rock salt for pickles.

Lime. The type of lime to use is *calcium hydroxide*, commonly called pickling, slaked, or builder's lime. It is available from most building, farm supply, and grocery stores. Keep lime in a glass container with a tight-fitting lid. If lime is lumpy, it has lost its "activity" and should not be used. *Do not use quick (or rock) lime or agricultural (dolomitic) lime.*

Alum. If possible, do not use this ingredient because if too much is used or if it remains in the cucumbers, it could cause digestive disturbances. If alum is used, be sure to measure accurately. This ingredient can be purchased from a drugstore or grocery store. (When alum water and cucumbers boil, there usually is some foam.)

Vinegar. Use a good-grade, 4 to 6 percent acid (40- to 60-grain strength). Cider (red) vinegar, used in most recipes, has a good flavor and aroma, but it may turn pickles brown. Distilled (white) vinegar is often used for onions and cauliflower where clearness of color is desirable.

Spices. Tie whole spices in a thin cloth bag; remove them before pickles and relishes are packed. Whole spices, if left in the jar, will not only darken the pickles, but also may cause some off-flavor. Ground spices tend to darken pickles. Be sure to use *fresh* spices—ground or whole. Store spices in a cool place (about 70 degrees F) in airtight containers. If a substitution in spices has to be made, a rule of thumb is 1/4 teaspoon dried = 3/4 to 1 teaspoon fresh. For dill, 1 head = 1 teaspoon dillseed.

Sugar. Most recipes use white granulated sugar; however, some use brown sugar.

Hard Water. Do not use hard water from the tap. Boil hard water in a stainless steel or unchipped enamel boiler for 15 minutes and remove from heat. Cover and let sit for 24 hours. Remove any scum that may have formed. Slowly pour water from container so that sediment will not be disturbed. Discard sediment. Water is now ready to use.

Grape Leaves. Some old recipes list these as an ingredient. They help pickles keep their green color. Enzymes in the leaves also help keep cucum-

bers from becoming soft. Scuppernong leaves are best.

Utensils. For brining, use a crock or stone jar (that has had no fat or milk in it), unchipped enamel-lined utensils, stainless steel, or large glass containers. *Do not use aluminum, plastic, copper, brass, galvanized, or iron utensils.* Cover vegetables while they are in brine with a heavy plate or large glass lid that fits inside the container. Place a full jar of water with a tight-fitting lid on top of the cover to hold it down so that the vegetables are kept below the surface of the brine.

IMPORTANT: Do not use lime in an aluminum container. It will pit the container. Also, alum will be formed. Do not use plastic containers either because there can be a reaction between the plastic and lime. Usually, the pickles become soft.

For heating cucumbers and pickling liquids, use utensils of glass, unchipped enamelware, stainless steel, or aluminum. **Do not use copper, brass, galvanized, or iron utensils.** These metals may react with acids or salts and cause undesirable color changes in the pickles or they may form compounds that could be poisonous. Spoons should be nylon or stainless steel.

Jars. Use standard canning jars. They should be boiled for 15 minutes and kept warm until they are filled. Glass lids are best, but these are not always available. When metal lids with screw bands are used, select those with enamel linings. Do not use lids or jars from commercially canned foods. They are designed for use on special packing machines and are not suitable for reuse in home canning. Before sealing the filled jars, remove air bubbles. Do this by sliding a plastic spatula down each side of the jar. Be sure to cover pickles or relish with liquid. Wipe jar mouth with a clean, damp cloth. Adjust lids according to the manufacturer's directions.

Heat. Heat is needed to destroy organisms that cause spoilage and to inactivate enzymes that may affect flavor, color, and texture. Pickles and relishes are usually precooked before they are packed. For most recipes, it is best to let cucumbers come to a boil and then simmer. High temperatures can cause cucumbers to become soft.

Waterbath. After jar lids have been adjusted, place filled jars on a rack and immerse into a deep vessel of boiling water if pickles are hot; if pickles are not hot, place in warm water. Be sure the water comes 2 inches over jar tops. Cover the vessel with a tight-fitting lid, and bring water to boiling as quickly as possible. When water starts to boil, start timing, and boil gently and steadily for the processing time recommended for the pickle or relish being canned. Remove jars immediately to a

wire rack, setting them several inches apart to cool. Do not let a draft blow on the hot jars. If the band becomes loose in the waterbath, do not tighten it unless specified by the manufacturer. The waterbath treatment is needed to remove air from the jar, to destroy mold and bacteria that could have gotten into the jar while it was being filled, and to make a firm seal.

IMPORTANT: For fermented cucumbers and fresh-packed dills, start counting the processing time as soon as filled jars are placed in the canner in actively boiling water. This helps prevent a loss of crispness and avoids a cooked flavor.

Storage. Pickles and relishes, like any other canned food, should be stored in a cool (below 70 degrees F), dark, dry place.

Pickle Problems and Their Causes

Soft, Slippery Pickles. (1) Cucumbers exposed above the brine, (2) brine too weak, (3) cucumbers stored in too warm a place, (4) cucumbers precooked too long or at too high a temperature, (5) seal not airtight, (6) insufficient heat treatment, or (7) blossom left on cucumbers

Shriveled Pickles. (1) Cucumbers placed in very strong salt, sugar, or vinegar solution, (2) cucumbers overcooked, (3) pickles overprocessed, or (4) cucumbers gathered too long before pickling

Hollow Pickles. (1) Faulty development of cucumber, (2) excessive delay in placing them in brine, (3) too rapid fermentation, (4) high temperature during fermentation, or (5) brine too strong or too weak during fermentation

Scum. Spoilage of top layer of cucumbers or cabbage fermented in brine is sure to occur unless scum is frequently removed. Scum is made up of wild yeast, molds, and bacteria that will attack and break down the structure of the cucumber or cabbage beneath. It may also weaken the acidity of the brine, thus causing spoilage.

Black Spots. (1) Iodine in salt, or (2) iron in water

Darkened Pickles. (1) Hard water used, (2) ground spices used, (3) whole spices left in jar, (4) pickles not covered with liquid, (5) iodized salt used, or (6) pickles stored in a light place (especially pickled peaches)

Cloudy Pickles. (1) Hard water used, (2) salt had noncaking agent, (3) storage temperature too warm, or (4) the curing process ended before fermentation was completed.

White Sediment. In dill pickles, this sediment is generally harmless yeast that has grown on the surface and then settled.

ably in a refrigerator. Drain and soak for 3 days in 1 gallon water to which 2 tablespoons of powdered alum have been added, and store in refrigerator. Wash tomatoes in clear water. Drain, and bring to a boil in fresh alum water (2 tablespoons alum and 1 gallon water). While boiling hard, remove tomatoes from range, and set vessel in sink. Add 1 tablespoon soda to tomatoes (mixture may run over after the soda has mixed well). Drain. Boil tomatoes for 5 minutes in strong ginger tea ($\frac{1}{2}$ cup ginger root in 1 gallon water for 10 pounds of tomatoes). Drain. Add 1 pound of sugar to 1 pound of fruit; cover well with cider vinegar. For each gallon of vinegar used, add 2 teaspoons whole allspice, 1 teaspoon whole cloves, and 1 teaspoon mace chips (tie spices in a thin cloth bag). Let boil slowly until vinegar is thick. Pack in standard canning jars; cover with liquid. Wipe jar mouth. Adjust lid. Process in a boiling waterbath canner (212 degrees F) for 10 minutes. Yield: about 12 pints

Quick-Method Pickled Peaches

5 qt. peeled peaches $\frac{1}{4}$ t. mixed pickling spices
 $6\frac{1}{2}$ c. sugar 10 cloves
 1 qt. cider vinegar 5 small pieces of stick cinnamon

Use firm, ripe peaches suitable for pickling—Hiland, Cardinal, Red Haven, Dixie Red, Cornet, Redcap, etc. Make syrup of $6\frac{1}{2}$ cups sugar and 1 quart cider vinegar. Heat syrup, and add peeled peaches. Let fruit and syrup simmer for 10 minutes. To each quart-sized standard canning jar, add $\frac{1}{4}$ teaspoon mixed pickling spices, 2 cloves, and 1 small piece of stick cinnamon. Add hot fruit to the jar; cover with hot syrup, and adjust the lid. Process in boiling waterbath canner (212 degrees F) for 25 minutes. **Let peaches “season” at least 1 week. To develop their best flavor, wait 6 weeks.** Yield: 5 quarts

Pear Pickles

4 qt. pears 2 T. whole allspice
 (peeled, cored, and cut $2\frac{1}{2}$ sticks cinnamon
 in halves or quarters) 2 qt. sugar
 1 pt. water 1 qt. cider vinegar

Boil pears in a covered vessel in 1 pint water for 10 minutes. Tie spices loosely in a thin cloth bag. Combine the water the pears were cooked in, sugar, vinegar, and spices, and heat to boiling. Pour over pears, and let stand overnight in covered vessel. Drain, and boil syrup until thick. Add pears and cook until tender. Do not stir, but keep pears under syrup. Pack into hot standard canning jars, and cover with syrup. Wipe jar mouth, and adjust lid. Process in a boiling waterbath canner (212 degrees F) for 10 minutes. Yield: about 8 pints

If Kieffer pears are to be used, you get best results by gathering pears when about $\frac{2}{3}$ to $\frac{3}{4}$ mature. The best stage is when the green in immature fruit gradually fades and the fruit becomes lighter or slightly yellow. Spread out—one layer deep—in a cool (about 60 to 65 degrees F), dry place for about 2 weeks. The pears will have better flavor and texture. Then proceed according to recipe.

Dilled Green Beans

4 lb. whole green beans 7 cloves garlic
 $1\frac{3}{4}$ t. crushed hot red pepper 5 c. cider vinegar
 $3\frac{1}{2}$ t. whole mustard seed 5 c. water
 $3\frac{1}{2}$ t. dillseed $\frac{1}{2}$ c. salt

Wash beans thoroughly; drain and cut into lengths to fill pint-sized standard canning jars. Pack beans into clean, hot jars, and add to each pint jar $\frac{1}{4}$ teaspoon crushed hot red pepper, $\frac{1}{2}$ teaspoon whole mustard seed, $\frac{1}{2}$ teaspoon dillseed, and 1 clove garlic. Combine vinegar, water, and salt; heat to boiling. Pour boiling liquid over beans, filling to $\frac{1}{2}$ inch from top of jar. Wipe jar mouth. Adjust jar lid. Process in boiling waterbath canner (212 degrees F) for 5 minutes. Yield: 7 pints

Pickled Okra

2 pt. small okra (2 to 3 in. long; 2 T. salt
 leave $\frac{1}{4}$ -in. stem) 2 t. dillseed
 1 c. cider vinegar 4 garlic cloves
 $\frac{1}{4}$ c. water 2 pods hot pepper

Boil pint-sized standard canning jars for 15 minutes. Wash okra, using a vegetable brush. Bring the vinegar, water, and salt to a boil. Remove hot jars, and place washed okra in each jar. Add to each pint jar 1 teaspoon dillseed, 2 garlic cloves, and 1 pod of hot pepper. Pour boiling liquid mixture into each jar, covering okra. Leave $\frac{1}{2}$ inch headspace. Wipe jar mouth. Adjust lid. Process in boiling waterbath canner (212 degrees F) for 5 minutes. **Pickled okra will be ready to use in 4 to 6 weeks.** Yield: 2 pints

IMPORTANT: If there is any sign of spoilage, discoloration, odor, etc., burn the contents. *Clostridium botulinum*, a very poisonous bacterium, is present in vegetables. These bacteria are generally destroyed at 10 pounds pressure for a given time; however, this recipe does not use pressure as a method of preserving. These bacteria do not readily live in an acid liquid, but it is possible. Therefore, it is extremely important that this pickled okra be given special care.

Bread and Butter Squash Pickle

8 c. thinly sliced yellow 3 c. sugar
 summer squash 2 t. celery seed
 2 c. thinly sliced white onions 2 t. mustard seed
 2 T. salt (not iodized) 4 sweet bell peppers,
 $2\frac{1}{2}$ c. cider vinegar thinly sliced

Combine squash and onions. Sprinkle with salt. Set aside 1 hour. Drain off liquid. Combine vinegar, sugar, celery seed, mustard seed, and pepper. Bring to a hard boil. Add squash mixture. Bring to a boil. Pack into hot, pint-sized standard canning jars. Adjust lids and bands. Process in boiling waterbath canner (212 degrees F) for 5 minutes. Yield: about 6 pints

Fresh-Packed Dill Pickles

17 lb. cucumbers, 3 to 5 in. long	2 T. whole, mixed pickling spices
2 gal. water	14 t. whole mustard seed
1½ c. pure granulated salt	7 to 14 cloves garlic
6 c. cider vinegar	21 heads fresh or dried dill plant (or 7 T. dillseed)
¾ c. pure granulated salt	
¼ cup sugar	
9 c. water	

Wash cucumbers thoroughly; scrub with vegetable brush, and drain. Mix 2 gallons of water and 1½ cups salt together thoroughly, and cover cucumbers. Let sit overnight; drain.

Combine vinegar, salt, sugar, and water. Tie mixed pickling spices in a thin, white cloth. Add to vinegar mixture, and heat to boiling. Pack 7 to 10 cucumbers into each clean, hot, quart-sized standard canning jar. Add to each quart jar 2 teaspoons whole mustard seed, 1 or 2 cloves of garlic, and 3 heads of dill plant (or 1 tablespoon dillseed). Cover with boiling liquid to within ½ inch of top of the jar. Wipe jar mouth. Adjust lid. Process in boiling waterbath canner (212 degrees F) for 20 minutes. (Start counting the processing time as soon as the hot jars are placed in the actively boiling water.)

Yield: 7 quarts

Crosscut Pickle Slices

4 qt. sliced, medium-sized cucumbers (about 6 lb.)	⅓ c. salt
1½ c. sliced small white onions (12 to 15, about 1 lb.)	4½ c. sugar
2 large garlic cloves	1½ t. turmeric
2 qt. crushed ice or 2 trays ice cubes	3 c. white vinegar
	1½ t. celery seed
	2 T. mustard seed

Wash cucumbers thoroughly, using a vegetable brush; drain on rack. Slice unpeeled cucumbers into ⅛- to ¼-inch slices. Add sliced onions and garlic. Add salt and mix thoroughly. Cover with crushed ice or ice cubes, and allow to stand for 3 hours. Drain thoroughly; remove garlic.

Combine sugar, spices, and vinegar; heat just to a boil. Add cucumber and onion slices, and heat 5 minutes. Pack loosely into clean, hot standard pint-sized jars. Leave ½-inch headspace. Wipe jar mouth. Adjust lid. Process in boiling waterbath (212 degrees F) for 5 minutes. (Start to count processing time as soon as water in canner returns to boiling.)

Yield: 7 pints

Crisp Cucumber Pickles

7 lb. sliced cucumbers	1 t. ground cinnamon
2 gal. water	1 t. ground cloves
3 c. slaked lime	1 t. ground allspice
5 lb. sugar	1 t. celery seed
5 pt. distilled vinegar	

Select small cucumbers (about 1¼-inch diameter); wash, and slice about ⅛-inch thick. Mix 2 gallons water with 3 cups slaked lime. Pour over cucumbers, and cover. Let stand at room temperature for 24 hours. Stir several times during this period. Drain and cover cucumbers

with water. Change water each hour for 4 hours. Drain well. Make syrup of vinegar, sugar, and spices; bring to a boil, and pour over cucumbers; let stand overnight. Next morning, heat cucumbers and syrup to a boil, and let simmer about 1 hour. Pack into hot standard canning jars. Leave ½ inch headspace. Wipe jar mouth, and adjust lid. Process in boiling waterbath canner (212 degrees F) for 10 minutes. Yield: about 16 pints

Crunchy Cucumber Sticks

7 lb. large cucumbers	2 qt. distilled vinegar
2½ c. slaked lime	1 qt. water
2 gal. water	1 T. salt
4 oz. alum	2 T. mixed, whole pickling spices
2 gal. water	5 lb. sugar

First Day. Begin the process at 7:00 p.m. Use 7 pounds of very large cucumbers that have been peeled, seeded, and cut into sticks. Soak cucumbers in lime water for 24 hours. Use 2½ cups slaked lime in 2 gallons of water.

Second Day at 7:00 p.m. Take cucumbers out of lime water. Wash in clear water. Soak in alum water for 12 hours. Use 4 ounces of alum in 2 gallons of water.

Third Day at 7:00 a.m. Remove cucumbers from the alum water. Soak in clear water for 6 hours.

Make a syrup of the last five ingredients. Bring syrup to a boil and pour over well-drained cucumbers. Let stand 4 hours. Bring to a boil, and cook slowly until pickles are transparent or clear, about 30 minutes. Remove spices. Pack into standard canning jars. Wipe jar mouth. Adjust lid. Process in boiling waterbath canner (212 degrees F) for 10 minutes.

Yield: 11 pints

Dilled Green Tomato Pickles

10 lbs. green tomatoes	2 qt. water
Garlic	1 qt. cider vinegar
Stalk celery	1 c. salt
Sweet green peppers	Dill to taste

Use small, firm, green tomatoes. Wash. Pack into clean, standard canning jars. Add to each pint jar a clove of garlic, a 3-inch stalk of celery, and a wedge of green pepper. Mix the water, vinegar, salt, and dill. Boil for 5 minutes. Pour the hot mixture over the tomatoes in the jars, leaving ½ inch headspace. Wipe jar mouth, and adjust lid. Process in boiling waterbath canner (212 degrees F) for 15 minutes. **Pickles will be ready to use in 4 to 6 weeks.**

Yield: 10 to 12 pints

Green Tomato Iceberg Pickles

10 lb. sliced green tomatoes	10 lb. sugar
1 c. slaked lime	1 gal. cider vinegar
4 T. powdered alum	2 t. whole allspice
1 T. baking soda	1 t. whole cloves
½ c. ginger root	1 t. mace chips

Select good, firm, green tomatoes about 2 inches in diameter. Wash and slice tomatoes ¼ inch thick. Soak 10 pounds of sliced tomatoes for 3 days in 1 cup slaked lime to 1 gallon water, and store in a cool place, prefer-

Green Tomato Mincemeat

1 t. whole allspice
1 t. whole cloves
1½ pt. finely chopped, peeled tart apples
1 pt. finely chopped green tomatoes
1 t. salt
2 t. ground cinnamon
3 c. sugar
1 lb. seedless raisins
¼ c. cider vinegar
1 c. ground suet (optional)

Tie allspice and cloves in a thin cloth bag. Mix all ingredients; bring to rapid boil, and simmer until thick. Pour into clean, standard canning jars to within 1 inch of top. Wipe jar mouth, and adjust lid. Process in boiling waterbath canner (212 degrees F) for 25 minutes.

Yield: 3 pints

NOTE: This is good to serve with meats, as a topping for ice cream, or as pie filling.

Cucumber Relish

2 qt. chopped cucumbers
2 c. chopped sweet green peppers
2 c. chopped sweet red peppers
1 c. chopped onion
1 T. turmeric
½ c. salt
2 qt. cold water
1 T. mustard seed
2 t. whole allspice
2 t. whole cloves
2 sticks cinnamon
1 qt. vinegar
1½ c. brown sugar, packed

Combine cucumbers, peppers, onions, and turmeric. Dissolve salt in cold water, and pour over vegetables. Let stand 3 to 4 hours. Drain. Cover vegetables with cold water, and let stand 1 hour. Drain thoroughly.

Tie spices in a thin cloth bag. Add to vinegar and brown sugar. Heat to boiling, and pour over vegetables. Cover, and let stand 18 to 24 hours in a cool place.

Simmer vegetables until they are hot; then bring to a boil. Pack into hot, standard canning jars while still very hot. Leave ½ inch headspace. Wipe jar mouth, and adjust lid. Process in a boiling waterbath canner (212 degrees F) for 10 minutes.

Yield: about 6 pints

Corn Relish

2 qt. corn (use 16 to 20 fresh medium-sized ears; or six 10 oz. packages frozen whole kernel)
1 pt. diced sweet red peppers (4 to 5 medium)
1 pt. diced sweet green peppers (4 to 5 medium)
1 qt. chopped celery (1 large bunch)
1 c. finely chopped or thinly sliced onions (8 to 10 small, ¾ lb.)
½ c. sugar
1 qt. cider vinegar
2 t. salt
2 t. celery seed
2 T. dry mustard, powdered
1 t. turmeric
¼ c. flour
½ c. water

Fresh Corn. Remove husks and silk. Cook ears of corn in boiling water for 5 minutes; remove, and plunge into cold water. Drain; cut, whole grain style, from cob. Do not scrape cob.

Frozen Corn. Defrost overnight in refrigerator or for 1 hour at room temperature. Place closed containers in front of a fan to hasten defrosting.

Combine peppers, celery, onions, sugar, vinegar, salt, and celery seed. Cover pan until mixture starts to boil; then boil uncovered for 5 minutes, stirring occasionally. Mix dry mustard, turmeric, flour, and water. Blend with liquid from boiling mixture; then add corn. Return to boiling and cook for 5 minutes. Frequent stirring will be necessary to prevent sticking and scorching.

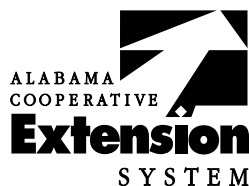
Pack loosely while still very hot into hot, standard pint-sized jars, filling to ½ inch from top. Wipe jar mouth. Adjust lid. Process in boiling waterbath (212 degrees F) for 15 minutes. Remove jars and complete seals if closures are not of the self-sealing type.

Yield: 7 pints

References

“Making Pickles and Relishes at Home,” USDA Home and Garden Bulletin No. 92.

Always Serve Pickles and Relishes Cold.



Your Experts for Life

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