



Preserving Food: Pickled Products

Pickle products add spice to meals and snacks. The skillful blending of spices, sugar and vinegar with fruits and vegetables gives crisp, firm texture and pungent, sweet-sour flavor.

Various types of pickle products can be made depending on the ingredients used and the methods of preparation. There are four general classes:

Brined Pickles or Fermented Pickles go through a curing process in a brine (salt and water) solution for one or more weeks. Curing changes the color, flavor and texture of the product. If the product is a fermented one, the lactic acid produced during the fermentation helps preserve the product. In brined products that are cured but not completely fermented, acid in the form of vinegar is added later to preserve the food.

Fresh Pack or Quick Process Pickles are covered with boiling hot vinegar, spices and seasonings. Sometimes, the product is brined for several hours and then drained, before being covered with pickling liquid. These are easy to prepare and have a tart flavor. Fresh pack or quick pickles have a better flavor if allowed to stand for several weeks after they are sealed.

Fruit Pickles are prepared from whole or sliced fruits and simmered in a spicy, sweet-sour syrup.

Relishes are made from chopped fruits and vegetables cooked in a spiced vinegar solution.

The level of acidity in a pickled product is as important to its safety as to its taste and texture. Never alter the proportions of vinegar, food or water in a recipe and use only tested recipes. By using tested recipes and following proper procedures, you can prevent the growth of *Clostridium botulinum*, which causes a type of food poisoning that can be fatal (botulism).

Ingredients

Produce: Select tender vegetables and firm fruits that show no signs of mold or decay. For highest quality, plan to pickle the fruits or vegetables within 24 hours after they are picked.

Always use a pickling variety of cucumber. Do not expect good quality pickles if you use “table” or “slicing” cucumbers. If you buy cucumbers, select unwaxed ones for pickling whole because the brine or pickling solutions cannot penetrate the wax.

Just before pickling, sort the fruits and vegetables and select the size best suited for the specific recipe. Rinse well, especially around the stems. Soil trapped here can be a source of bacteria responsible for the softening of pickles. Be sure to remove a 1/16-inch slice from the blossom end of the vegetables since it contains enzymes that also can cause softening.

Salt: Pure granulated salt, such as “pickling” or “canning” salt should be used. Other salts contain anti-caking materials that may make the brine cloudy. Iodized salts may darken pickles. Do not alter salt concentrations in fermented pickles or sauerkraut. Proper fermentation depends on correct proportions of salt and other ingredients.

Vinegar: Use cider or white vinegar of five percent acidity. Cider vinegar has a good flavor and aroma, but may darken white or light-colored fruits and vegetables. White distilled vinegar is often used for onions, cauliflower and pears where clearness of color is desired. Do not use homemade vinegar or vinegar of unknown acidity in pickling. Do not dilute the vinegar unless the recipe specifies; you will be diluting the preservative effect.

Sugar: Use white sugar unless the recipe calls for brown. White sugar gives the product a lighter color, but brown sugar may be preferred for flavor. If you plan to use a sugar substitute, follow recipes developed for these products.

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 jars.

Water: When fermenting pickles, hard water may interfere with the formation of acid and prevent pickles from curing properly. If soft water is unavailable, hard water can be softened. Simply boil it 15 minutes and let set for 24 hours, covered. Remove any scum that appears. Slowly pour water from the container so the sediment will not be disturbed. Discard the sediment. The water is now ready for use. Distilled water can also be purchased to use in fermenting or quick pickling.

Firming Agents: If good quality ingredients are used and up-to-date methods are followed, lime and alum are not needed for crisp pickles. Since alum is unnecessary, it is not included in these recipes. The calcium in 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. Failure to remove lime adequately may increase the risk of botulism.

Equipment

The right equipment prevents pickle failure and saves time and energy. Read each recipe completely to make sure you have proper equipment before making pickled products.

Containers and Weights for Fermentation: Pickles and sauerkraut can be fermented in large stoneware crocks, large glass jars or food-grade plastic containers. If you are not sure whether a plastic container is safe for food, read its label or contact its manufacturer. Another option is to line the questionable container with several thicknesses of food-grade plastic bags. Do not use aluminum, copper, brass, galvanized or iron containers for fermenting pickles or sauerkraut.

The container needs to be large enough to allow several inches of space between the top of the food and the top of the container. Usually a 1-gallon container is needed for each 5 pounds of fresh vegetables.

After the vegetables are placed in the container and covered with brine, they must be completely submerged in the brine. A heavy plate or glass lid that fits down inside the container can be used. If extra weight is needed, a clean glass jar(s) filled with water and sealed can be set on top of the plate or lid. The vegetables should be covered by 1 to 2 inches of brine.

Another option for submerging the vegetables in brine is to place one food-grade plastic bag inside another and fill the inside bag with more of the pickling brine. Close the end securely. Then use this filled bag as the weight on top of the vegetables. Filling the bag with brine instead of water is a precaution in case the bags are accidentally punctured.

Equipment for Fresh-Pack Pickles: Pickling liquids should be heated in stainless steel, aluminum, glass or unchipped enamelware saucepan. Do not use copper, brass, galvanized or iron utensils. These metals can react with acids or salts and cause undesirable color changes and/or form toxic compounds in the pickles.

For short-term brining or soaking, use crocks, saucepans or bowls made from stoneware, glass, stainless steel, aluminum or unchipped enamelware. Except for the aluminum, the same containers can be used for soaking vegetables in lime. Lime pits the aluminum and can cause an increased level of aluminum in the pickles.

Boiling Water Canner for Processing Pickles: Use a boiling water bath canner or any deep pot that has a rack on the bottom and a lid.

Canning Jars and Lids: Use half-pint, pint or quart canning jars specially designed for home canning. Commercial jars such as mayonnaise jars break more easily than canning jars and may not seal. Check all jars carefully for cracks or chips. Wash the jars in hot soapy

water, rinse well and then keep hot until filled. The jars need to be kept hot to prevent breakage when they are filled with a hot product and then placed in a canner for processing.

Jars that will be filled with food and then processed for less than 10 minutes need to be pre-sterilized. To do this, cover the jars with hot water and boil for 10 minutes. If you are at an altitude of 1000 feet or more, add 1 additional minute of boiling for each 1000 feet of additional altitude. Keep the jars hot until filled.

Jar lids need to be prepared as instructed by the manufacturer ahead of filling time. Read the manufacturer's instructions on preparing and attaching lids. Instructions will not be the same for all lid types. With two-piece metal canning lids, the flat lid should be used only once for sealing new products, but the ring bands can be reused as long as they are in good condition. Ring bands should be free of rust and not bent out of shape. Flat lids should be free of dents, scratches and gaps or flaws in the sealing compound. Do not reuse lids from commercially canned foods for home canning.

Processing

Processing is necessary for all pickled products stored at room temperature to destroy yeasts, molds and bacteria that may cause the products to spoil and also to inactivate enzymes that could affect the color, flavor and texture of the pickled product. As in all canning, a vacuum seal is necessary on the jar to prevent recontamination during storage.

These pickles and relishes are acidified, high-acid products because of the large amount of vinegar added or because of the acid produced during the fermentation. Since they are high acid products, these pickled products are processed in a boiling water canner.

To Fill the Jars: Follow the directions in the recipe and pack the pickled product into the jar, leaving the appropriate headspace (usually 1/2-inch). Remove any trapped air bubbles by sliding a non-metal spatula around the edge of the jar. Wipe the jar rim clean with a damp cloth. Place the prepared lid on the jar and apply following the manufacturer's directions.

For All Pickled Products: Place each jar as it is filled onto a rack in the canner containing hot water (140°F for raw packs or 180°F for hot packs). Make sure jars are covered by 1 to 2 inches of water. Cover canner and bring water to a boil. Start counting the processing time (found in each recipe) when water reaches a boil.

As an Option: Sometimes processing cucumber pickles in simmering water (180°F) for 30 minutes results in crisper products. To do so, pack the product into hot pre-sterilized jars. Fill jars with 165°F to 180°F pickling liquid, leaving 1/2-inch headspace. Remove air bubbles, wipe jar rims, adjust lids and process at 180°F for 30 minutes. *Be sure to use a thermometer* to monitor the water temperature. This temperature is hard to determine and maintain without one. (Do not use this method for reduced-sodium pickles.)

Caution! Altitude Adjustments: The processing times given for the pickle products in this publication are for altitudes of 0-1000 feet. If you are processing at an altitude over 1000 feet, see the chart at the end of this publication for the correct processing time.

Day-After Canning Jobs: Test the seal on the jar lids. Once cool, press flat metal lids at the center of the lid. It should be slightly concave and not move. Ring bands should be removed from thoroughly cooled jars; wash, rinse and dry the sealing area. Label sealed jars with contents and date. Store the sealed jars in a cool, dry place. Stored properly, canned pickles should retain good quality for about one year unless otherwise specified.

Unsealed jars of food need to be treated as fresh. The food can be eaten immediately, refrigerated or recanned. Recanning will make pickles softer.

On Guard Against Spoilage

Always be on the alert for signs of spoilage. Before opening a jar, examine it closely. A bulging lid or leakage may mean the contents are spoiled. When a jar is opened, look for other signs of spoilage, such as spurting liquid, off-odor, color change or unusual softness, mushiness or slipperiness. If there is even the slightest indication of spoilage, do not taste contents. If suspect jars are still sealed, place them in a heavy garbage bag. Close and place the bag in a regular trash container or dispose in a nearby landfill. If suspect jars are unsealed, open, or leaking, they should be detoxified before disposal. To detoxify, wear disposable rubber or heavy plastic gloves. Carefully place the suspect jars and lids on their sides in an 8-quart volume or larger stock pot, pan, or boiling-water canner. Wash your gloved hands thoroughly. Carefully add water to the pot and avoid splashing. The water should completely cover the containers with a minimum of 1-inch above their tops. Place a lid on the pot and heat the water to boiling. Boil 30 minutes to ensure detoxifying the food and all container components. Cool and discard the containers, lids, and food in the trash or dispose in a landfill.

Pickle Recipes

FERMENTED DILL PICKLES

RECIPE

Use the following quantities for each gallon capacity of your container:

4 pounds of 4 inch pickling cucumbers
2 tablespoons dill seed or 4 to 5 heads fresh dill
2 cloves garlic (optional)
2 dried red peppers (optional)
2 teaspoons whole mixed pickling spices (optional)
½ cup canning or pickling salt
¼ cup vinegar (5%)
8 cups water

Rinse cucumbers. Cut 1/16th-inch slice off blossom end and discard. Leave ¼-inch of stem attached. Place half of dill and spices on bottom of a clean, suitable container. Add cucumbers, remaining dill and one or more of the optional spices. Dissolve salt in vinegar and water. Pour over cucumbers. Add suitable weight.

Store where temperature is between 70°F and 75°F for about 3 to 4 weeks while fermenting. Temperatures of 55°F to 65°F are acceptable, but the fermentation will take 5 to 6 weeks. Avoid temperatures above 80°F, because pickles will become soft.

Fermenting pickles cure slowly. Check the container several times a week and promptly remove surface scum or mold.

CAUTION: If the pickles become soft, slimy or develop a disagreeable odor, discard them.

Fully fermented pickles may be stored in the original container for about 4 to 6 months, provided they are refrigerated and surface scum and molds are removed regularly. Canning fully fermented pickles is a better way to store them.

To Process Fermented Dill Pickles – Pour the brine into a pan. Heat slowly to a boil and simmer 5 minutes. Filter brine through paper coffee filters to reduce cloudiness, if desired. Fill hot jars with pickles, leaving ½-inch headspace. Fill jars to ½-inch from top with hot brine. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 10 minutes for pints; 15 minutes for quarts in a boiling water canner.

QUICK FRESH PACK DILL PICKLES

RECIPE

(about 7-9 pints)

8 pounds of 3- to 5-inch pickling cucumbers
2 gallons water
1¼ cups canning or pickling salt (divided)
1½ quarts vinegar (5%)
¼ 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

Rinse cucumbers. Cut 1/16th-inch slice off blossom end and discard. Leave ¼-inch of stem attached. Dissolve ¾ cup salt in 2 gallons water. Pour over cucumbers and let stand 12 hours. Drain. Combine vinegar, ½ cup salt, sugar and 2 quarts water. Add mixed pickling spices tied in a clean white cloth. Heat to boiling. Fill jars with pickles. Add 1 teaspoon mustard seed and 1½ heads fresh dill (or 1½ teaspoons dill seed) per pint jar. Cover with boiling pickling solution, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 10 minutes for pints; 15 minutes for quarts, in a boiling water canner.

PICKLED PEARL ONIONS

RECIPE

(about 3-4 pints)

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

To Peel Onions – Dip a few onions at a time in boiling water for 30 seconds, then place in cold water for 30 seconds. Cut 1/16th-inch slice from both ends of onions and remove peel.

To Make Pickles – Combine vinegar, water, salt and sugar in 8-quart stockpot. Bring to a boil and boil 3 minutes. Add peeled onions; bring back to a boil. Reduce heat and simmer until half-cooked (about 5 minutes). Meanwhile, place 2 teaspoons mustard seed and 1 teaspoon celery seed into each clean, hot pint jar. Fill jars with hot onions, leaving 1-inch headspace. Fill with hot pickling liquid, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 10 minutes in a boiling water canner.

PICKLED GREEN BEANS

(about 4 pints)

RECIPE

2 pounds green beans
1 teaspoon cayenne pepper
4 heads dill or 4 teaspoons dill seed
4 cloves garlic
2½ cups water
2½ cups vinegar (5%)
¼ cup canning or pickling salt

Sterilize canning jars. Rinse, trim ends and cut beans into 4-inch pieces.

Pack beans, lengthwise, into hot jars, leaving ½-inch headspace. To each pint, add ¼ teaspoon cayenne pepper, 1 clove garlic, and 1 dill head or 1 teaspoon dill seed. Combine remaining ingredients and bring to a boil. Pour boiling hot liquid over beans, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 5 minutes in a boiling water canner. Let beans stand for at least two weeks before tasting to allow the flavor to develop.

PEACH PICKLES

(about 6 pints)

RECIPE

8 pounds peeled peaches (small to medium sized)
6¾ cups sugar
4 sticks cinnamon (2 inches long)
2 tablespoons whole cloves, crushed
1 tablespoon ginger
1 quart vinegar (5%)

Rinse and peel peaches with sharp knife, and drop into a solution of ½ teaspoon ascorbic acid and 2 quarts of water.

Dissolve sugar in vinegar in saucepot and put on range to heat. Boil 5 minutes and skim. Add spices (tied loosely in cheesecloth).

Drain peaches. Drop drained peaches into boiling syrup and cook until they can be pierced with a fork, but not soft. Remove from range and allow peaches to set in syrup overnight to plump. Bring to a boil and fill into hot jars, leaving ½-inch headspace. Cover with syrup, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 20 minutes in a boiling water canner.

QUICK SWEET PICKLE SLICES OR STRIPS

(about 8 pints)

RECIPE

8 pounds 3- to 4-inch pickling cucumbers
⅓ cup canning or pickling salt
Crushed or cubed ice
4½ cups sugar
3½ cups vinegar (5%)
2 teaspoons celery seed
1 tablespoon whole allspice
2 tablespoons mustard seed
1 cup pickling lime (optional)

Preparation Without Lime – Rinse cucumbers. Cut 1/16th-inch off blossom end and discard. Cut cucumbers into slices or strips. Place in a bowl and sprinkle with ⅓ cup salt. Cover with 2 inches crushed or cubed ice. Refrigerate 3 to 4 hours. Add more ice as needed.

Preparation With Lime – Rinse cucumbers. Cut 1/16th-inch off blossom end and discard. Cut cucumbers into slices or strips. Mix 1 cup pickling lime, ⅓ cup salt and 1 gallon water in a 2- to 3-gallon crock, glass or enamelware container.

CAUTION: Avoid inhaling lime dust while mixing the lime-water solution. Soak cucumber slices or strips in the lime water solution for 12 to 24 hours, stirring occasionally. Remove from lime solution, rinse and re-soak one hour in fresh cold water. Repeat rinsing and re-soaking two more times. Handle carefully because slices or strips will be brittle.

To Make Pickles – Sterilize canning jars if processing a hot pack. Combine sugar, vinegar, celery seed, allspice and mustard seed in 6-quart saucepot. Heat to boiling. Drain cucumbers. Pack the cucumbers without heating or heat cucumbers just until hot in vinegar solution. Fill pickles into jars leaving ½-inch headspace. Fill jars to ½-inch from top with hot canning liquid. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. For a hot pack, process pints or quarts for 5 minutes in a boiling water canner. For a raw pack, process 10 minutes for pints, 15 for quarts. After processing and cooling, store jars for 4 to 5 weeks to allow pickles to develop ideal flavor.

Variation – Two slices of raw onion can be added to each jar before filling, if desired.

SUMMER SQUASH PICKLES

(about 5 pints)

4 pounds summer squash
¼ cup canning or pickling salt
1 quart vinegar (5%)
1 cup water
dill seed (1 teaspoon per pint)
garlic, if desired (1 clove per pint)

RECIPE

Rinse squash; trim off ends. Then slice squash into ⅛- to ¼-inch rounds. Bring vinegar, water, and salt to a boil; simmer 5 minutes. Pack garlic, dill seed, and squash into jars, leaving ½-inch headspace. Fill jars to ½-inch from top with the hot brine. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 15 minutes in a boiling water canner.

BREAD-AND-BUTTER PICKLES

(about 8 pints)

6 pounds 4- to 5-inch pickling cucumbers
8 cups thinly sliced onions (about 3 pounds)
½ cup canning or pickling salt
Crushed or cubed ice 1½ tablespoon celery seed
4 cups vinegar (5%) 1 tablespoon ground turmeric
4½ cups sugar 2 tablespoons mustard seed
 1 cup pickling lime (optional)

Preparation Without Lime – Rinse cucumbers.

Cut 1/16th-inch off blossom end and discard. Cut into 3/16th-inch rings. Combine cucumbers and onions in a large bowl. Add salt. Cover with 2 inches crushed or cubed ice. Refrigerate 3 to 4 hours, adding more ice as needed.

Preparation With Lime – Rinse cucumbers. Cut 1/16th-inch off blossom end and discard. Cut into 3/16th-inch slices. Mix 1 cup pickling lime, ½ cup salt and 1 gallon water in a 2- to 3-gallon crock, glass or enamelware container. **CAUTION:** Avoid inhaling lime dust while mixing the lime-water solution. Soak cucumber slices in lime water for 12 to 24 hours stirring occasionally. Remove from lime solution, rinse and re-soak one hour in fresh cold water. Repeat the rinsing and soaking steps two more times. Handle carefully, as slices will be brittle.

To Make Pickles – Add sugar and remaining ingredients to vinegar in a large pot. Boil 10 minutes. Add onions and well-drained cucumbers and slowly reheat to boiling. Fill pint or quart jars with slices, leaving ½-inch headspace. Fill to ½-inch from top with hot cooking liquid. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process pints or quarts 10 minutes in a boiling water canner. After processing and cooling, jars should be stored 4 to 5 weeks to develop ideal flavor.

RECIPE

CHOW-CHOW

(about 4 pints)

1 pint of each of the following:
sliced cucumbers
chopped sweet peppers
chopped cabbage
sliced onions
chopped green tomatoes
fresh lima beans
cut green beans
sliced carrots
1½ cups canning or pickling salt
2 quarts water
2 tablespoons celery seed
4 tablespoons mustard seed
1 quart white distilled vinegar (5%)
2 cups water
4 cups sugar
4 teaspoons turmeric

Soak cucumbers, peppers, cabbage, onions and tomatoes in salt water (1½ cups salt to 2 quarts water) overnight in refrigerator. Cook lima beans, green beans and carrots until tender. Drain both mixtures well. Mix all vegetables with remaining ingredients and boil 10 minutes.

Fill hot chow-chow into hot pint jars, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 10 minutes in a boiling water canner.

RECIPE

WATERMELON RIND PICKLES

(about 4 to 5 pints)

RECIPE

3 quarts (about 6 pounds) watermelon rind, unpared
¾ cup canning or pickling salt
3 quarts cold water
2 quarts ice cubes
9 cups sugar
3 cups white distilled vinegar (5%)
3 cups water
1 tablespoon (about 48) whole cloves
6 cinnamon sticks, 1-inch pieces
1 lemon, thinly sliced, with seeds removed

Pare rind and all pink edges from the watermelon. Cut into 1-inch squares or fancy shapes as desired. Cover with brine made by mixing the salt with 3 quarts water. Add ice cubes. Let stand 3 to 4 hours.

Drain; rinse in cold water. Cover with cold water and cook until fork tender, about 10 minutes (do not overcook). Drain.

Combine sugar, vinegar, water and spices (tied in a clean, thin, white cloth). Boil 5 minutes and pour over the watermelon; add lemon slices. Let stand overnight.

Heat watermelon in syrup to boiling and cook slowly 1 hour. Fill hot pickles loosely into hot pint jars. To each jar add 1 piece of stick cinnamon from spice bag; cover with boiling syrup to ½-inch from top. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 10 minutes in a boiling water canner.

PICKLED HOT PEPPERS

(about 9 pints)

RECIPE

4 pounds hot long red, green, or yellow peppers
(Hungarian, Banana, Chile, Jalapeño)
3 pounds sweet red and green peppers, mixed
5 cups vinegar (5%)
1 cup water
4 teaspoons canning or pickling salt
2 tablespoons sugar
2 cloves garlic

CAUTION: Wear rubber gloves when handling hot peppers or wash hands thoroughly with soap and water before touching your face.

Rinse peppers. If small peppers are left whole, slash 2 to 4 slits in each. Quarter large peppers. Blanch in boiling water or blister in order to peel. Peppers may be blistered using one of the following methods: Oven or broiler method: Place peppers in a hot oven (400°F) or broiler for 6-8 minutes or until skins blister. Range-top method: Cover hot burner, either gas or electric, with heavy wire mesh. Place peppers on burner for several minutes until skins blister. Cool and peel off skin. Flatten small peppers. Fill jars, leaving ½-inch headspace. Combine and heat other ingredients to boiling and simmer 10 minutes. Remove garlic. Fill hot pickling solution over peppers, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 10 minutes in a boiling water canner.

PICKLED DILLED OKRA

(about 8-9 pints)

RECIPE

7 pounds small okra pods
8 to 9 garlic cloves
2/3 cup canning or pickling salt
6 small hot peppers
4 teaspoons dill seed
6 cups water
6 cups vinegar (5%)

Rinse and trim okra. Fill jars firmly with whole okra, leaving ½-inch headspace. Place 1 garlic clove in each jar. Combine salt, hot peppers, dill seed, water, and vinegar in large saucepan and bring to a boil. Pour hot pickling solution over okra, leaving ½-inch headspace. Remove air bubbles and adjust headspace if needed. Wipe jar rims. Adjust lids. Process 10 minutes in a boiling water canner.

BOILING WATER BATH PROCESSING TIMES FOR PICKLES AT ALTITUDES OVER 1000 FEET

Product	Style of Pack	Jar Size	Process Times (Minutes) at Altitudes of:		
			1001-3000 ft	3001-6000 ft	6001-8000 ft
Fermented Dill Pickles	Raw	Pints	15	15	20
		Quarts	20	20	25
Quick Fresh Pack Dill Pickles	Raw	Pints	15	15	20
		Quarts	20	20	25
Pickled Pearl Onions	Hot	Pints	15	15	20
Pickled Green Beans	Raw	Pints	10	10	15
Peach Pickles	Hot	Pints	25	30	35
Quick Sweet Pickle Slices or Strips	Hot	Pints or Quarts	10	10	15
	Raw	Pints	15	15	20
Quarts		20	20	25	
Summer Squash Pickles	Raw	Pints	20	20	25
Bread-and-Butter Pickles	Hot	Pints or Quarts	15	15	20
Chow-Chow	Hot	Pints	15	15	20
Watermelon Rind Pickles	Raw	Pints	15	15	20
Pickled Hot Peppers	Raw	Half-Pints or Pints	15	15	20
Pickled Dilled Okra	Hot	Pints	15	15	20



Edited by Elizabeth L. Address, Ph.D., Judy Harrison, Ph.D., and Kasey Christian, M.Ed.

The University of Georgia and Ft. Valley State University, the U.S. Department of Agriculture and counties of the state cooperating. UGA Extension offers educational programs, assistance and materials to all people without regard to race, color, national origin, age, gender or disability. The University of Georgia is committed to principles of equal opportunity and affirmative action.