

# Home Canning of Fruit and Fruit Products

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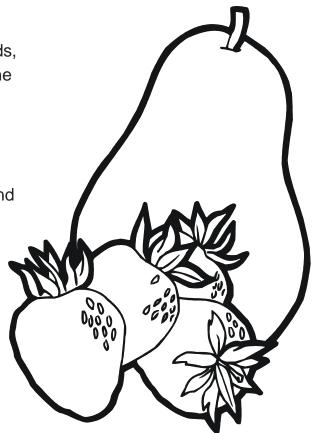
Processing is essential to ensure safety when canning fruits. Fruits, being acid foods, can be safely processed in a boiling water bath. However, some people prefer to pressure-process fruits. This is also an acceptable method.

Organisms that cause food spoilage — molds, yeasts and bacteria — are always present in the air, water and soil. Also, enzymes that may cause undesirable changes in flavor, color and texture are present in raw fruits. Use recommended processing methods and times when canning fruits to destroy spoilage organisms and stop the action of enzymes.

Based on "Complete Guide to Home Canning," Agriculture Information Bulletin 539, September 1994 revision.



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# General canning procedures

#### Jars and Lids

Mason-type canning jars are the best choice. The standard jar mouth is about 2% inches. Widemouth jars have openings of about 3 inches, making them more easily filled and emptied. Halfgallon jars may be used for canning very acid juices only.

Most commercial pint- and quart-size mayonnaise or salad dressing jars may be used with new two-piece lids for canning acid foods. However, you may expect more sealing failures and jar breakage. These jars have a narrower sealing surface and are tempered less than Mason jars. Mayonnaise-type jars are not recommended for use with foods that will be processed in the pressure canner.

Use two-piece self-sealing lids. Buy only the quantity of lids that will be used in a year and follow the manufacturer's directions for preparing the lids.

#### Sterilize Jars

To sterilize empty jars, put them right side up on the rack in a boiling-water canner. Fill the canner and jars with hot (not boiling) water to 1 inch above the tops of the jars. Boil 10 minutes, at altitudes of less than 1,000 feet. At higher elevations, boil one additional minute for each additional 1,000 feet elevation. Remove and drain hot sterilized jars one at a time just before filling. Save the hot water for processing filled jars. Fill jars with food, apply lids, and tighten screw bands.

It is unnecessary to presterilize jars for fruits that will be processed 10 minutes or longer in a boilingwater canner.

## Filling Jars

After filling jars with food, release air bubbles by inserting a flat plastic (not metal) spatula between the food and the jar. Slowly turn the jar and move the spatula up and down to allow air bubbles to escape. Adjust the headspace and then clean the jar rim (sealing surface) with a dampened paper towel. Place the lid, gasket down, onto the cleaned jarsealing surface. Uncleaned jar-sealing surfaces may cause seal failures.

Then fit the metal screw band over the flat lid. Follow the manufacturer's guidelines enclosed with or on the box for tightening the jar lids properly.

### Prevent Darkening

Follow these guidelines to ensure that your canned foods retain optimum colors and flavors during processing and storage:

- Use only high-quality foods which are at the proper maturity and are free of diseases and bruises.
- Use the hot-pack method, especially with acid foods to be processed in boiling water.
- Don't unnecessarily expose prepared foods to air. Can them as soon as possible.
- While preparing a canner load of jars, keep peeled, halved, quartered, sliced, or diced apples, apricots, nectarines, peaches, and pears in a solution of ascorbic acid. This procedure is also useful for preventing stem-end discoloration in cherries and grapes. You can get ascorbic acid in several forms:

**Pure powdered form** – seasonally available among canners' supplies in supermarkets. One level teaspoon of pure powder weighs about three grams. Use one teaspoon per gallon of water as a treatment solution.

**Vitamin C tablets** – economical and available year-round in many stores. Buy 500-milligram tablets; crush and dissolve six tablets per gallon of water as a treatment solution.

**Commercially prepared mixes of ascorbic and citric acid** – seasonally available among canners' supplies in supermarkets. Sometimes citric acid powder is sold in supermarkets, but it is less effective in controlling discoloration. If you choose to use these products, follow the manufacturer's directions.

- Fill hot foods into jars and adjust headspace as specified in recipes.
- Store the jars in a relatively cool, dark place, preferably between 50 degrees and 70 degrees Fahrenheit.
- Can no more food than you will use within a year.

#### Sweetening Fruit

Adding syrup to canned fruit helps to retain its flavor, color and shape. It does not prevent spoilage of these foods. The following guidelines for preparing and using syrups offer a new "very light" syrup, which approximates the natural sugar content of many fruits. Quantities of water and sugar to make enough syrup for a canner load of pints or quarts are provided for each syrup type.

**Procedure:** Heat water and sugar together. Bring to a boil and pour over raw fruits in jars. For hot packs, bring water and sugar to boil, add fruit, reheat to boil, and fill into jars immediately.

**Other sweeteners:** Light corn syrups or mildflavored honey may be used to replace up to half the table sugar called for in syrups.

### Canning Without Sugar

In canning regular fruits without sugar, it is very important to select fully ripe but firm fruits of the best quality. Prepare these as for hot-packs but use water or regular unsweetened fruit juices instead of sugar syrup. Juice made from the fruit being canned is best. Blends of unsweetened apple, pineapple and white grape juice are also good for filling over solid fruit pieces. Adjust headspaces and lids and use the processing recommendations given for regular fruits. Add sugar substitutes, if desired, when serving.

#### Canning Fruit-Based Baby Foods

You may prepare any chunk-style or pureed fruit with or without sugar, using the procedure for preparing each fruit as given in this circular. Pack in half-pint, preferably, or pint jars and use the following processing times.

### Process time for fruit-based baby foods in a boiling-water canner

		Process Time at Altitudes of		
Style of Pack	Jar Size	0-1,000 ft	1,001-6,000 ft	
Hot	Pints	20 minutes	25 minutes	

#### Preparing and using syrups

		Measures of Water and Sugar				
Syrup Approx. Type % Sugar		For 9-Pt. Load*		For 7-Qt. Load		
		Cups Cups Water Sugar		Cups Cups Water Sugar		Fruits commonly packed in syrup**
Very light	10	6½	3⁄4	10½	1¼	Approximates natural sugar level in most fruits and adds the fewest calories.
Light	20	5¾	1½	9	2¼	Very sweet fruit. Try a small amount the first time to see if your family likes it.
Medium	30	5¼	2¼	8¼	3¾	Sweet apples, sweet cherries, berries, grapes.
Heavy	40	5	3¼	7¾	5¼	Tart apples, apricots, sour cherries, gooseberries, nectarines, peaches, pears, plums.
Very heavy	y 50	4¼	4¼	6½	6¾	Very sour fruit. Try a small amount the first time to see if your family likes it.

\*This amount is also adequate for a 4-quart load.

\*\*Many fruits that are typically packed in heavy syrup are excellent and tasteful products when packed in lighter syrup. It is recommended that lighter syrups be tried, since they contain fewer calories from added sugar.

## Water-Bath Canners

Water-bath canners are made of aluminum or of porcelain-covered steel. They have removable perforated racks and fitted lids. The canner must be deep enough so that at least 1 inch of briskly boiling water will be over the tops of jars during processing. Some boiling-water canners do not have flat bottoms. A flat bottom must be used on an electric range. Either a flat or ridged bottom can be used on a gas burner. To ensure uniform processing of all jars with an electric range, the canner should be no more than 4 inches wider in diameter than the element on which it is heated.

#### Using boiling-water canners

Follow these steps for successful boiling-water canning:

- 1. Fill the canner halfway with water.
- 2. Preheat water to 140 F for raw-packed foods and to 180 F for hot-packed foods.
- 3. Load filled jars, fitted with lids, into the canner rack and use the handles to lower the rack into the water; or fill the canner, one jar at a time, with a jar lifter.
- 4. Add more boiling water, if needed, so the water level is at least 1 inch above jar tops. Cover canner.
- 5. Turn heat to its highest position until water boils vigorously.
- 6. Set a timer for the minutes required for processing the food.
- 7. Lower the heat setting to maintain a gentle boil throughout the process schedule.
- 8. Add more boiling water, if needed, to keep the water level above the jars.
- 9. When jars have been boiled for the recommended time, turn off the heat and remove the canner lid.
- 10.Using a jar lifter, remove the jars and place right side up on a towel, leaving at least 1-inch spaces between the jars during cooling.

#### Do not retighten lids after processing jars.

## **Cooling Jars**

Cool the jars at room temperature for 12 to 24 hours. Jars may be cooled on racks or towels to minimize heat damage to counters. The food level and liquid volume of raw-packed jars will be noticeably lower after cooling. Air is exhausted during processing and food shrinks. If a jar loses excessive liquid during processing, do not open it to add more liquid. Check for sealed lids as described below.

#### **Testing Jar Seals**

After cooling jars for 12 to 24 hours, remove the screw bands and test seals by one of the following options:

**Option 1:** Press the middle of the lid with a finger or thumb. If the lid springs up when you release your finger, the lid is unsealed.

**Option 2:** Tap the lid with the bottom of a teaspoon. If it makes a dull sound, the lid is not sealed. If food is in contact with the underside of the lid, it will also cause a dull sound. If the jar is sealed correctly, it will make a ringing, high-pitched sound.

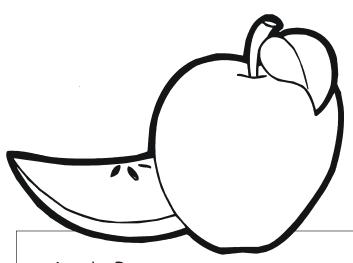
**Option 3:** Hold the jar at eye level and look across the lid. The lid should be concave (curved down slightly in the center). If center of the lid is either flat or bulging, it may not be sealed.

### **Reprocessing Unsealed Jars**

If a lid fails to seal on a jar, remove the lid and check the jar-sealing surface for tiny nicks. If necessary, change the jar, add a new, properly prepared lid, and reprocess within 24 hours using the same processing time. Headspace in unsealed jars may be adjusted to 1½ inches and jars could be frozen instead of reprocessed. Foods in single unsealed jars could be stored in the refrigerator and consumed within several days.



# Directions for canning fruits



#### **Apple Butter**

Use Jonathan, Winesap, Stayman, Golden Delicious, MacIntosh or other tasty apple varieties for good results.

- 8 pounds apples
- 2 cups cider
- 2 cups vinegar
- 2¼ cups white sugar
- 2¼ cups packed brown sugar
- 2 tablespoons ground cinnamon
- 1 tablespoon ground cloves

#### Yield: About 8 to 9 pints

**Procedure:** Wash, remove stems, quarter, and core fruit. Cook slowly in cider and vinegar until soft. Press fruit through a colander, food mill or strainer. Cook fruit pulp with sugar and spices, stirring frequently. To test for doneness, remove a spoonful and hold it away from steam for two minutes. It is done if the butter remains mounded on the spoon. Another way to determine when the butter is cooked adequately is to spoon a small quantity onto a plate. When a rim of liquid does not separate around the edge of the butter, it is ready for canning. Fill hot into sterile half-pint or pint jars, leaving ¼-inch headspace. Quart jars need not be presterilized. Adjust lids and process according to Table 1.

## Apple Juice

**Quality:** Good quality apple juice is made from a blend of varieties.

**Procedure:** Refrigerate juice for 24 to 48 hours. Without mixing, carefully pour off clear liquid and discard sediment. Strain clear liquid through a paper coffee filter or double layers of damp cheesecloth. Heat quickly, stirring occasionally, until juice begins to boil. Fill immediately into sterile pint or quart jars or fill into clean half-gallon jars, leaving ¼-inch headspace. Adjust lids and process according to Table 1.

#### Apples – Sliced

**Quantity:** An average of 2<sup>3</sup>/<sub>4</sub> pounds per quart.

**Quality:** Select apples that are juicy, crispy and preferably both sweet and tart.

**Procedure:** Wash, peel and core apples. To prevent discoloration, slice apples into water containing ascorbic acid (see page 2). Raw packs make poor quality products. Place drained slices in large saucepan and add 1 pint water or very light, light or medium syrup (see page 3) per 5 pounds of sliced apples. Boil 5 minutes, stirring occasionally to prevent burning. Fill jars with hot slices and hot syrup or water, leaving ½-inch headspace. Adjust lids and process according to Table 1, 2 or 3.

#### Applesauce

Quantity: An average of 3 pounds per quart.

**Quality:** Select apples that are sweet, juicy and crisp. For a tart flavor, add 1 to 2 pounds of tart apples to each 3 pounds of sweeter fruit.

**Procedure:** Wash, peel and core apples. If desired, slice apples into water containing ascorbic acid to prevent browning (see page 2). Place drained slices in an 8- to 10-quart pot. Add ½ cup water. Stirring occasionally to prevent burning, heat quickly until tender (5 to 20 minutes, depending on maturity and variety). Press through a sieve or food mill, or skip the pressing step if you prefer chunk-style sauce. Sauce may be packed without sugar. If desired, add ½ cup sugar per quart of sauce. Taste and add more, if preferred. Reheat sauce to boiling. Fill jars with hot sauce, leaving ½-inch headspace. Adjust lids and process according to Table 1.

### Spiced Apple Rings

- 12 pounds firm tart apples (maximum diameter, 2½ inches)
- 12 cups sugar
- 6 cups water
- $1\frac{1}{4}$  cups white vinegar (5%)
- 3 tablespoons whole cloves
- 3/4 cup red hot cinnamon candies or 8 cinnamon sticks and 1 teaspoon red food coloring (optional)

#### Yield: About 8 to 9 pints

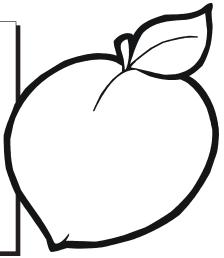
**Procedure:** Wash apples. To prevent discoloration, peel and slice one apple at a time. Immediately cut crosswise into ½-inch slices, remove core area with a melon baller, and immerse in ascorbic acid solution (see page 2). To make flavored syrup, combine sugar, water, vinegar, cloves, cinnamon candies, or cinnamon sticks and food coloring in a 6-quart saucepan. Stir, heat to boil and simmer three minutes. Drain apples, add to hot syrup and cook five minutes. Fill jars (preferably widemouth) with apple rings and hot flavored syrup, leaving ½-inch headspace. Adjust lids and process according to Table 1.

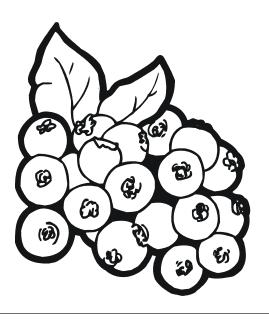
#### Apricots – Halved or Sliced

Quantity: An average of 2¼ pounds per quart.

**Quality:** Select firm, well-colored mature fruit of ideal quality for eating fresh.

**Procedure:** Follow directions for peaches except the boiling water dip and removal of skin is optional. Wash if skins are not removed. Either hot or raw pack, and use the same process time on Table 1, 2 or 3.





### Berries – Whole

Blackberries, blueberries, currants, dewberries, elderberries, gooseberries, huckleberries, loganberries, mulberries, raspberries.

**Quantity:** An average of 1<sup>3</sup>/<sub>4</sub> pounds per quart.

**Quality:** Choose ripe, sweet berries with uniform color.

**Procedure:** Wash 1 or 2 quarts of berries at a time. Drain, cap and stem if necessary. For gooseberries, snip off heads and tails with scissors. Prepare and boil preferred syrup (see page 3), if desired. Add ½ cup syrup, juice or water to each clean jar.

**Hot pack** — For blueberries, currants, elderberries, gooseberries and huckleberries. Heat berries in boiling water for 30 seconds and drain. Fill jars and cover with hot juice, leaving ½-inch headspace.

**Raw pack** — Fill jars with any of the raw berries, shaking down gently while filling. Cover with hot syrup, juice or water, leaving ½-inch headspace.

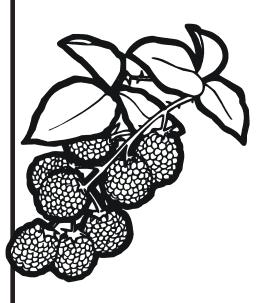
Adjust lids and process according to Table 1, 2 or 3.

## Berry Syrup

Juices from fresh or frozen blueberries, cherries, grapes, raspberries (black or red), and strawberries are easily made into toppings for use on ice cream and pastries.

Yield: About 9 half-pints.

**Procedure:** Select 6½ cups of fresh or frozen fruit of your choice. Wash, cap and stem fresh fruit and crush in a saucepan. Heat to boiling and simmer until soft (five to ten minutes). Strain hot through a colander and drain until cool enough to handle. Strain the collected juice through a double layer of cheesecloth or jelly bag. Discard the dry pulp. The yield of the pressed juice should be about 41/2 to 5 cups. Combine the juice with 6<sup>3</sup>/<sub>4</sub> cups of sugar in a large saucepan, bring to boil, and simmer 1 minute. To make a syrup with whole fruit pieces, save 1 or 2 cups of the fresh or frozen fruit, combine these with the sugar, and simmer as in making regular syrup. Remove from heat, skim off foam, and fill into clean half-pint or pint jars, leaving <sup>1</sup>/<sub>2</sub>-inch headspace. Adjust lids and process according to Table 1.



#### Cherries – Whole Sweet or Sour

Quantity: An average of 2½ pounds per quart.

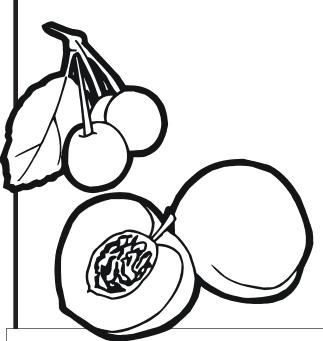
**Quality:** Select bright, uniformly colored cherries that are mature (of ideal quality for eating fresh or cooking).

**Procedure:** Stem and wash cherries. Remove pits if desired. If pitted, place cherries in water containing ascorbic acid to prevent stem-end discoloration (see page 2). If canned unpitted, prick skins on opposite sides with a clean needle to prevent splitting. Cherries may be canned in water, apple juice, white grape juice, or syrup. If syrup is desired, select and prepare preferred type (see page 3).

**Hot pack** — In a large saucepan add ½ cup water, juice, or syrup for each quart of drained fruit and bring to boil. Fill jars with cherries and cooking liquid, leaving ½-inch headspace.

**Raw pack** — Add ½ cup hot water, juice or syrup to each jar. Fill jars with drained cherries, shaking down gently as you fill. Add more hot liquid, leaving ½-inch headspace.

Adjust lids and process according to Table 1, 2 or 3.



# Nectarines – Halved or Sliced

**Quantity:** An average of 2½ pounds per quart.

**Quality:** Choose ripe, mature fruit of ideal quality for eating fresh or cooking.

**Procedure:** Follow directions for peaches except do not dip in hot water or remove skins, wash, either hot or raw pack, and use the same process time.

#### Fruit Purees of any fruit except figs and tomatoes

**Procedure:** Stem, wash, drain, peel and remove pits if necessary. Measure fruit into large saucepan, crushing slightly if desired. Add 1 cup hot water for each quart of fruit. Cook slowly until fruit is soft, stirring frequently. Press through sieve or food mill. If desired for flavor, add sugar to taste. Reheat pulp to boil, or until sugar dissolves if added. Fill hot into clean jars, leaving ¼-inch headspace. Adjust lids and process according to Table 1, 2 or 3.

#### Peaches – Halved or Sliced

Quantity: An average of 2½ pounds per quart.

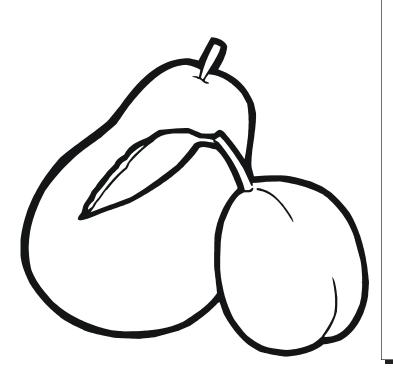
**Quality:** Choose ripe, mature fruit of ideal quality for eating fresh or cooking.

**Procedure:** Dip fruit in boiling water for 30 to 60 seconds until skins loosen. Dip quickly in cold water and slip off skins. Cut in half, remove pits and slice if desired. To prevent darkening, keep peeled fruit in ascorbic acid solution (see page 2). Prepare and boil a very light, light or medium syrup (see page 3) or pack peaches in water, apple juice or white grape juice. Raw packs make poor quality peaches.

**Hot pack** — In a large saucepan place drained fruit in syrup, water, or juice and bring to boil. Fill jars with hot fruit and cooking liquid, leaving ½-inch headspace. Place halves in layers, cut side down.

**Raw pack** — Fill jars with raw fruit, cut side down, and add hot water, juice or syrup, leaving ½-inch headspace.

Adjust lids and process according to Table 1, 2 or 3.



#### Pears – Halved

**Quantity:** An average of 2½ pounds per quart.

**Quality:** Choose ripe, mature fruit of ideal quality for eating fresh or cooking.

**Procedure:** Wash and peel pears. Cut lengthwise in halves and remove core. A melon baller or metal measuring spoon is suitable for coring pears. To prevent discoloration, keep pears in an ascorbic acid solution (see page 2). Prepare a very light, light or medium syrup (see page 3) or pack pears in apple juice, white grape juice or water. Fill jars with hot fruit and cooking liquid, leaving ½-inch headspace. Adjust lids and process according to Table 1, 2 or 3.

#### Plums – Halved or Whole

Quantity: An average of 2 pounds per quart.

**Quality:** Select deep-colored, mature fruit of ideal quality for eating fresh or cooking. Plums may be packed in water or syrup.

**Procedure:** Stem and wash plums. To can whole, prick skins on two sides of plums with fork to prevent splitting. Freestone varieties may be halved and pitted. If you use syrup, prepare very light, light or medium syrup (see page 3).

**Hot pack** — Add plums to hot syrup and boil two minutes. Cover saucepan and let stand 20 to 30 minutes. Fill jars with hot plums and cooking syrup, leaving ½-inch headspace.

**Raw pack** — Fill jars with raw plums, packing firmly. Add hot syrup, leaving ½-inch headspace.

Adjust lids and process according to Table 1, 2 or 3.

#### Rhubarb – Stewed

**Quantity:** An average of 1½ pounds per quart.

**Quality:** Select young, tender, well-colored stalks from the spring or late fall crop.

**Procedure:** Trim off leaves. Wash stalks and cut into ½-inch to 1-inch pieces. In a large saucepan add ½ cup sugar for each quart of fruit. Let stand until juice appears. Heat gently to boiling. Fill jars without delay, leaving ½-inch headspace. Adjust lids and process according to Table 1, 2 or 3.

#### Zucchini-Pineapple

- 4 quarts cubed or shredded zucchini46 ounce canned unsweetened pineapple juice
- 1½ cups bottled lemon juice 3 cups sugar

Yield: About 8 to 9 pints

**Procedure:** Peel zucchini and either cut into ½-inch cubes or shred. Mix zucchini with other ingredients in a large saucepan and bring to a boil. Simmer 20 minutes. Fill jars with hot mixture and cooking liquid, leaving ½-inch headspace. Adjust lids and process according to Table 1.

### Table 1. Recommended Process Times for AcidFoods in Boiling Water Bath

			Process	s Time at Al	titudes of
	Style of Pack	Jar Size	0- 1,000 ft	1,001- 3,000 ft	3,001- 6,000 ft
Apple Butter	Hot	Half-pints or Pints	5 min	10 min	10 min
		Quarts	10 min	15 min	15 min
Apple Juice	Hot	Pints or Quarts	5 min	10 min	10 min
		Half-gallons	10 min	15 min	15 min
Apples, sliced	Hot	Pints or Quarts	20 min	25 min	30 min
Applesauce	Hot	Pints	15 min	20 min	20 min
		Quarts	20 min	25 min	30 min
Spiced Apple Rings	Hot	Half-pints or Pints	10 min	15 min	15 min
Berries, whole	Hot	Pints or Quarts	15 min	20 min	20 min
	Raw	Pints	15 min	20 min	20 min
		Quarts	20 min	25 min	30 min
Berry, Syrup	Hot	Half-pints or Pints	10 min	15 min	15 min
Cherries,	Hot	Pints	15 min	20 min	20 min
whole,		Quarts	20 min	25 min	30 min
sour or sweet	Raw	Pints or Quarts	25 min	30 min	35 min
Fruit Purees	Hot	Pints or Quarts	15 min	20 min	20 min
Peaches,	Hot	Pints	20 min	25 min	30 min
Apricots &		Quarts	25 min	30 min	35 min
Nectarines –	Raw	Pints	25 min	30 min	35 min
halved or sliced		Quarts	30 min	35 min	40 min
Pears, halved	Hot	Pints	20 min	25 min	30 min
		Quarts	25 min	30 min	35 min
Plums –	Hot and	Pints	20 min	25 min	30 min
halved or sliced	Raw	Quarts	25 min	30 min	35 min
Rhubarb, stewed	Hot	Pints or Quarts	15 min	20 min	20 min
Zucchini Pineapple	Hot	Half-pints or Pints	15 min	20 min	20 min

				Canner Pressure (PSi) at Altitudes of		
Type of Fruit	Style of Pack	Jar Size	Process Time	0- 2000 ft	2,001- 4000 ft	4,001- 6000 ft
Applesauce	Hot	Pints	8 min	6 lb	7 lb	8 lb
	Hot	Quarts	10 min	6 lb	7 lb	8 lb
Apples, sliced	Hot	Pints or Quarts	8 min	6 lb	7 lb	8 lb
Berries, whole	Hot	Pints or Quarts	8 min	6 lb	7 lb	8 lb
	Raw	Pints	8 min	6 lb	7 lb	8 lb
	Raw	Quarts	10 min	6 lb	7 lb	8 lb
Cherries,	Hot	Pints	8 min	6 lb	7 lb	8 lb
whole, sour or sweet	Hot	Quarts	10 min	6 lb	7 lb	8 lb
	Raw	Pints or Quarts	10 min	6 lb	7 lb	8 lb
Fruit Purees	Hot	Pints or Quarts	8 min	6 lb	7 lb	8 lb
Peaches, Apricots, and Nectarines	Hot and Raw	Pints or Quarts	10 min	6 lb	7 lb	8 lb
Pears, halved	Hot	Pints or Quarts	10 min	6 lb	7 lb	8 lb
Plums	Hot and Raw	Pints or Quarts	10 min	6 lb	7 lb	8 lb
Rhubarb, stewed	Hot	Pints or Quarts	8 min	6 lb	7 lb	8 lb

## Table 2. Process Times for Some Acid Foods in aDial-Gauge Pressure Canner

## Table 3. Process Times for Some Acid Foodsin a Weighted-Gauge Pressure Canner

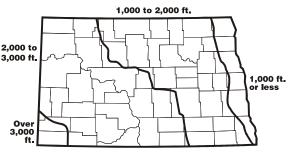
			(	Canner Pre at Altitu	· · ·
Type of Fruit	Style of Pack	Jar Size	Process Time	0- 1,000 ft	Above 1000 ft
Applesauce	Hot	Pints	8 min	5 lb	10 lb
	Hot	Quarts	10 min	5 lb	10 lb
Apples, sliced	Hot	Pints or Quarts	8 min	5 lb	10 lb
Berries, whole	Hot	Pints or Quarts	8 min	5 lb	10 lb
	Raw	Pints	8 min	5 lb	10 lb
	Raw	Quarts	10 min	5 lb	10 lb
Cherries,	Hot	Pints	8 min	5 lb	10 lb
whole, sour	Hot	Quarts	10 min	5 lb	10 lb
or sweet	Raw	Pints or Quarts	10 min	5 lb	10 lb
Fruit Purees	Hot	Pints or Quarts	8 min	5 lb	10 lb
Peaches, Apricots, and Nectarines	Hot and Raw	Pints or Quarts	10 min	5 lb	10 lb
Pears, halved	Hot	Pints or Quarts	10 min	5 lb	10 lb
Plums	Hot and Raw	Pints or Quarts	10 min	5 lb	10 lb
Rhubarb, stewed	Hot	Pints or Quarts	8 min	5 lb	10 lb

# Adjust for Altitude

As altitudes increase air becomes thinner, and this affects both pressures and boiling points in home canning. Using the process times for canning food at sea level may result in spoilage if you live at altitudes of 1,000 feet or more. Water boils at lower temperatures as altitude increases. Lower boiling temperatures are less effective for killing bacteria. Increasing the processing time or canner pressure compensates for lower boiling temperatures. Select the proper processing time or canner pressure for the altitude where you live.

The altitude in North Dakota varies from 800 feet above sea level in the east to 3,000 feet in the west. The map below shows the approximate altitude of areas of North Dakota.





For more specific information regarding altitude in your county, contact your county extension office.

#### For more information on this and other topics, see: www.ag.ndsu.nodak.edu

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