

Preserving Food: Canning Fruit

Organisms that cause food spoilage—molds, yeasts, and bacteria—are always present in air, water and soil. Enzymes that may cause undesirable changes in flavor, color and texture are present in raw fruits.

When fruits are canned, they are heated hot enough and long enough to destroy spoilage organisms. This heating (or processing) also stops the action of enzymes. Because fruits have a high acid content, processing can be done in a boiling water bath canner. Though it takes longer, fruits can also be processed in a pressure canner. For directions for canning fruits in a pressure canner, call your county Extension agent.

Equipment

Water-bath canners are available on the market. Any big metal container may be used as a boiling water-bath canner if it is deep enough so the water can cover the jars by one or more inches and still have ample room for boiling (two to four inches above jar tops—see illustration). The canner must have a tight-fitting cover and a metal rack.

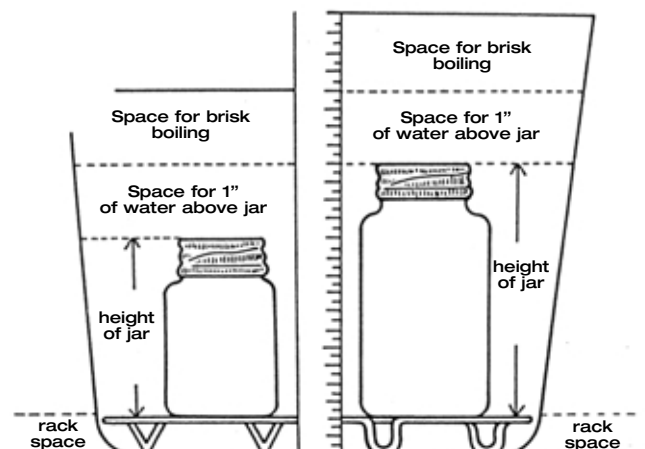
A pressure canner may be used, provided it is deep enough. Do not fasten the cover; leave the petcock open so steam can escape and pressure does not build up in the canner.

Canning jars should be checked closely for signs of cracks or chips. Jars specifically designed for home canning are best. Commercial food jars such as mayonnaise or coffee jars break easily and may not seal. Use only the half-pint, pint or quart sizes for fruits. Half-gallon jars may also be used for juices.

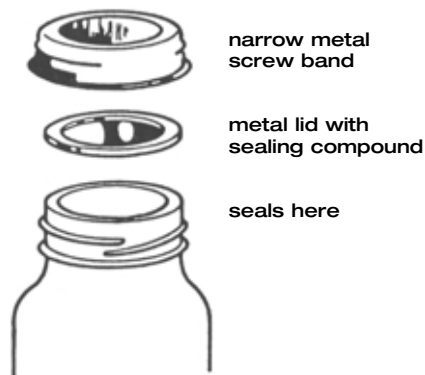
If jars will be processed in a boiling water bath for less than 10 minutes, they need to be sterilized by placing them in boiling water for 10 minutes before being filled. After the jars are sterilized, keep them hot by leaving them in the hot water until time to fill them. Jars processed in a boiling water bath for 10 minutes or more, or in a pressure canner, will be sterilized during processing and do not need prior sterilization. They do need to be washed in hot, soapy water, rinsed and kept hot until filled and placed in the canner.



Water Bath Canners



Two-piece metal canning lids need to be prepared for use. The lids can be used only once, but the screw bands can be reused as long as they are in good condition. Read the manufacturer's instructions on treating the lids. Some need to be covered with hot water, while others need to be boiled for a minute or more. Do not reuse lids from commercially canned foods for home canning.



Preparing the Fruit

Choose fresh, firm fruits. The faster you can get them from the garden to the jar, the better. If you buy fruits to can, try to get them from a nearby garden or orchard. For even cooking, sort the fruits for size and ripeness. Wash all fruits thoroughly, whether or not they are to be pared. Dirt contains some of the bacteria hardest to kill. Do not let fruits soak; they may lose flavor and nutrients. Handle them gently to avoid bruising.

To prevent darkening – Some peeled or cut fruits darken when exposed to air. Any of these simple treatments will help prevent darkening.

1. Drop the fruit in a solution made from 1 teaspoon or 3000 mg ascorbic acid (vitamin C) and 1 gallon of water. (Crush tablets thoroughly.)
2. Use a commercial ascorbic acid mixture, available in grocery stores and drug stores, according to instructions on the container.

Hold the fruit in one of these solutions until you are ready to pack the fruit. Then drain the fruit well.

Canning Liquids for Fruits

Fruits may be canned in water, juice or a sweet syrup. The sweet syrup helps the fruit holds its shape, color and flavor but does not preserve the fruit.

Directions for canning each fruit will specify the canning liquid that results in the product most like the commercially-canned product. Most canning liquids contain sugar. However, you may want to experiment. You may be pleased with a water, juice or lighter syrup packed product.

Syrup Packs – Sugar syrup is made by mixing water or juice extracted from some of the fruit (see "Juice Packs") with sugar. The mixture is heated to dissolve the sugar and is kept hot until ready for use. Choose one of the syrups given in the chart below, to suit the sweetness of the fruit and your own taste.

Juice Packs – Commercial unsweetened apple juice, pineapple juice or white grape juice make good packing liquids for many fruits. These may be used as is or diluted with water. Juice can also be extracted from some of the fruit that is being canned or from fresh apples, pineapple or white grapes.

Syrups for Use in Canning Fruits

Type of Syrup	Percent Sugar *	Cups of Sugar ** Per Quart Liquid	Yield of Syrup in Cups *	How Syrup is used Commercially
Very Light	10%	1/2	4 1/2	
Light	20%	1	4 3/4	Very sweet fruit
Medium	30%	1 3/4	5	Sweet apples, sweet cherries, berries, grapes
Heavy	40%	2 3/4	5 1/3	Tart apples, apricots, sour cherries, gooseberries, nectarines, peaches, pears, plums.
Very Heavy	50%	4	6	Very sour fruit

* Approximate

** In general, up to one-half of the sugar may be replaced by corn syrup or mild flavored honey. A larger proportion of corn syrup may be used if a very bland, light-colored type is selected.

To extract juice – Thoroughly crush ripe, sound fruit. Heat to simmering over low heat. Strain through cheesecloth or a jelly bag.

Artificial Sweeteners

It is best to add these just before serving the fruit. Saccharin-based sweeteners can turn bitter during processing. Aspartame-based sweeteners lose their sweetening power during processing.

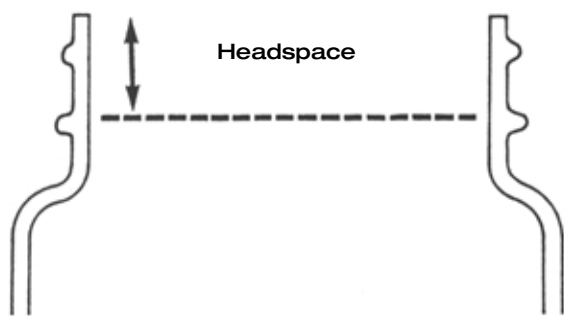
Filling the Jars

Fruits may be packed raw into jars or preheated and packed hot. Read directions for each fruit to determine which methods may be used. Remember, have the jars hot to prevent breakage as they are filled.

To raw pack – Put raw fruits into jars and cover with boiling-hot syrup, juice or water. Most raw fruits should be packed tightly into the jars because they shrink during processing.

To hot pack – Heat fruits in syrup, water or juice before packing. Pack hot food loosely. Food should be at or near boiling temperature when it is packed.

For either pack, use enough syrup, water or juice to fill around the solid food in the jar and to cover the food. See directions for each fruit for the correct amount of headspace to leave between the top of the food and the top of the jar. This head space is important for obtaining a good seal.



Closing the Jars

To remove any trapped air bubbles, slide a non-metallic spatula between the food and the sides of the jar. Add more liquid if necessary to obtain the proper headspace. Wipe the jar rim with a clean, damp cloth to remove any food particles.

Place the treated lid on the jar. Screw the metal screw band down fingertip tight.

To Process Fruits

Put filled jars on a rack in a canner containing hot or simmering water. For the raw pack, have water in the canner hot but not boiling; for the hot pack have water simmering.

Add boiling water if needed to bring water an inch or two over tops of jars; do not pour boiling water directly on glass jars. Put cover on the canner.

When the water in the canner comes to a rolling boil, start to count processing time. Boil gently and steadily for the time recommended for the food being canned. Add boiling water during processing if needed to keep the jars covered.

Remove jars from the canner immediately when the processing time is up. Place them on a rack, dry towels, boards or newspapers to prevent the jars from breaking on contact with a cold surface. Allow the jars to cool untouched, away from drafts. Do not be alarmed at popping sounds as the jars cool and seal.

Day-After-Canning Jobs

Test the seal on the jar lids. Press flat metal lids at the center. They should be slightly concave and not move. Screw bands may be removed from thoroughly cooled jars. Label sealed jars with content and date.

Store the canned food in a cool, dry place. Stored properly, canned fruits should retain their high quality for about one year.

Treat unsealed jars of food as fresh. The food can be eaten immediately, refrigerated, frozen or recanned. If you recan the food, the whole process must be repeated.

On Guard Against Spoilage

Do not taste or use food that shows any signs of spoilage. Look closely at all jars before opening them. A bulging lid or leaking jar is a sign of spoilage. When you open a jar, look for other signs such as spurting liquid, an off odor or mold. Dispose of all spoiled canned fruit in a place where it will not be eaten by children or pets.

Directions for Canning Fruits

Preparation Methods and Processing Times for Canning in a Boiling Water Bath

CAUTION! ALTITUDE ADJUSTMENTS: The processing times given here are those recommended by the U.S. Department of Agriculture for altitudes of 0-1000 feet. If you are canning at an altitude over 1000 feet, see last page for adjusted processing times. **DO NOT DECREASE** processing times given.

Fruit	Pack	Preparation	Processing Time (Minutes)	
Apple Juice	Hot	For best results, buy fresh juice from a local cider maker within 24 hours after it has been pressed or press your own. 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 layer of damp cheesecloth. Sterilize jars. Heat juice, stirring occasionally, until juice begins to boil. Pour into hot jars, leaving 1/4-inch headspace.	Pints	5
			Quarts	5
			Half-Gallons	10
Apples	Hot	Make a very light, light or medium syrup. Wash, peel, core and slice apples. Treat to prevent darkening. Remove sliced apples from anti-darkening solution, drain and place in a large saucepan. Add 1 pint syrup, water or juice per 5 pounds apples. Boil 5 minutes, stirring occasionally. Pack hot apples into hot jars, leaving 1/2-inch headspace. Fill jar to 1/2 inch from top with hot syrup.	Pints	20
			Quarts	20
Applesauce	Hot	Wash, peel and core apples. Treat to prevent darkening. Remove slices from anti-darkening solution and place drained slices in an 8- to 10-quart pot. Add 1/2 cup water. Stirring occasionally to prevent burning, heat quickly and cook until tender (5 to 20 minutes, depending on maturity and variety). Press through a sieve or food mill, if desired. If you prefer chunk-style sauce, omit the pressing step. If desired, add 1/8 cup sugar per quart of sauce. Reheat sauce to boiling. Pack into hot jars, leaving 1/2-inch headspace.	Pints	15
			Quarts	20
Apricots		Follow directions and processing times for peaches.		
Berries (except strawberries and cranberries)	Hot	(Use for blueberries, currants, elderberries, gooseberries and huckleberries.) Heat to boiling, about 1 gallon of water for each pound of berries. Blanch berries in boiling water for 30 seconds. Drain. Place 1/2 cup of hot syrup, juice or water in each hot jar. Pack hot berries into hot jars, leaving 1/2-inch headspace. Fill jars to 1/2 inch from top, with more hot syrup, juice or water.	Pints	15
			Quarts	15
			Raw	(Use for any of the berries.) Place 1/2 cup of hot syrup, juice or water in each hot jar. Fill jars to 1/2 inch from the top with raw berries, shaking gently while filling. Add more hot syrup, juice or water, leaving 1/2-inch headspace.
			Quarts	20
Cherries		Stem and wash cherries. Remove pits if desired. If pitted, treat to prevent darkening. If cherries are 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. Heat to boiling, the liquid of your choice.		

Fruit	Pack	Preparation	Processing Time (Minutes)	
Cherries		Stem and wash cherries. Remove pits if desired. If pitted, treat to prevent darkening. If cherries are 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. Heat to boiling, the liquid of your choice.		
	Hot	In a large saucepan add 1/2 cup water, juice or syrup to each quart of drained fruit. Bring to a boil. Pack cherries in hot jars, leaving 1/2-inch headspace. Fill jar to 1/2 inch from top with hot liquid.	Pints Quarts	15 20
	Raw	Add 1/2 cup hot water, juice or syrup to each hot jar. Fill jars to 1/2 inch from the top with drained cherries, shaking down gently as you fill. Add more hot liquid, leaving 1/2-inch headspace.	Pints Quarts	25 25
Fruit Purée (For any fruit except figs)	Hot	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, add sugar to taste. Reheat pulp to boiling. If sugar was added, boil until it dissolves. Pack purée into hot jars, leaving 1/4-inch headspace.	Pints Quarts	15 15
	Peaches	Peaches can be packed in very light, light or medium syrup. They can also be packed in water, apple juice or white grape juice. Prepare the liquid and keep it hot. 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. Treat to prevent darkening.		
	Hot	Remove slices from the anti-darkening solution and drain well. In a large saucepan heat drained fruit in syrup, water or juice to a boil. Pack hot fruit into hot jars leaving 1/2-inch headspace. When packing halves, place them cut side down. Fill jars to 1/2 inch from the top with hot liquid.	Pints Quarts	20 25
	Raw	Remove slices from the anti-darkening solution and drain well. Pack raw fruit into hot jars, leaving 1/2-inch headspace. When packing halves, place them cut side down. Fill jars with hot liquid, to 1/2 inch from the top.	Pints Quarts	25 30
Pears	Hot	Prepare a very light, light or medium syrup; or heat apple juice, white grape juice or water. Wash and peel pears. Cut lengthwise in halves and remove core. A melon baller or metal measuring spoon is suitable for coring pears. Treat to prevent darkening. Remove slices from the anti-darkening solution and drain well. Boil drained pears 5 minutes in syrup, juice or water. Pack hot pears into hot jars, leaving 1/2-inch headspace. Fill jars to 1/2 inch from top with hot liquid.	Pints Quarts	20 25
	Plums	Prepare a very light, light or medium syrup. 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.		
	Hot	Add plums to hot syrup and boil 2 minutes. Cover saucepan and let stand 20 to 30 minutes. Pack hot plums into hot jars, leaving 1/2-inch headspace. Fill jars with hot syrup to 1/2 inch from the top.	Pints Quarts	20 25
	Raw	Pack raw plums firmly into hot jars, leaving 1/2-inch headspace. Fill jars with hot syrup to 1/2 inch from the top.	Pints Quarts	20 25

Boiling Water Bath Processing Times for Fruits at Altitudes over 1000 Feet

Fruit	Style of Pack	Jar Size	Processing Time (Minutes) at Altitudes of		
			1001-3000 feet	3001-6000 feet	over 6000 feet
Apple Juice	Hot	Pints or Quarts	10	10	15
		Half-Gallons	15	15	20
Apples	Hot	Pints or Quarts	25	30	35
Applesauce	Hot	Pints	20	20	25
		Quarts	25	30	35
Berries	Hot	Pints or Quarts	20	20	25
	Raw	Pints	20	20	25
		Quarts	25	30	35
Cherries	Hot	Pints	20	20	25
	Raw	Quarts	25	30	35
		Pints or Quarts	30	35	40
Fruit Purée	Hot	Pints or Quarts	20	20	25
Peaches or Apricots	Hot	Pints	25	30	35
		Quarts	30	35	40
	Raw	Pints	30	35	40
		Quarts	35	40	45
Pears	Hot	Pints	25	30	35
		Quarts	30	35	40
Plums	Raw or Hot	Pints	25	30	35
		Quarts	30	35	40

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