

# Pressure Canning



**Savoring**  
*summer's*  
*bountiful*  
*harvest*  
**throughout the year!**

## Answers to your canning questions!

*From the makers of  
Presto® Pressure Cookers  
and Canners*

### **Q** Why is it necessary to use a pressure canner for certain types of food?

**A** Canning destroys the natural enzymes, molds, yeasts, and bacteria that cause food spoilage. Most of these microorganisms are killed by processing food at boiling temperature (212°F) for a specified time period.

The temperature and time required to destroy bacteria is determined in part by the acidity of the food being canned. Along with heat, the natural acid in fruits and tomatoes retards bacteria growth.

Some bacteria, such as *Clostridium botulinum*, can be more difficult to destroy so canning at a higher temperature is

absolutely necessary. Low-acid foods (vegetables, meats, poultry, and fish) must be canned at a temperature of 240°F or higher and held there for the time specified in the recipe in order to destroy the bacterial spores naturally present in these foods.

Pressure canning utilizes pressurized steam to reach this superheated temperature. Therefore, the United States Department of Agriculture recommends pressure canning as the only safe method for preserving low-acid foods.

Low-acid foods must be canned at pressures and times stated in current, reliable published canning instructions.

### **Q** My grandmother has great canning recipes. Are they still reliable?

**A** Sometimes canning problems arise because of outdated recipes. If the recipe was handed down through the years, it may be seriously incorrect. Always use current instructions and tested canning recipes. There has been extensive research in this area through the years and exact processing pressures and times are vital to a safe and successful canning project.

Current canning information and tested canning recipes are available from your county cooperative extension service or

National Presto Industries, Inc. Using these scientifically tested recipes without modification will assure you of safe home-canned foods.

For up-to-date recipes and instructions, visit the Presto website at [www.GoPresto.com](http://www.GoPresto.com), or call (800) 368-2194.

### **Q Why do I need to use “Mason” canning jars?**

**A** Glass home canning jars, sometimes referred to as Mason jars, are designed for durability, reuse, and are the only jars recommended for safe home canning. They are constructed of heat-tempered glass and able to withstand the superheated steam of the pressure canner, time after time. These special jars feature a deep neck and a wide sealing surface that is essential for obtaining a tight seal. They are available in standard sizes to ensure proper processing times as specified in recipes.

Do not use commercial jars such as those from mayonnaise, pickles, and peanut butter. These jars are designed for one commercial use. They come in irregular sizes and shapes with uneven resealing capabilities. Commercial jars are not designed for durability and can become scratched during home use. These scratches weaken the glass and can cause breakage during processing.

### **Q Why are standard jar sizes important?**

**A** All canning recipes must be scientifically developed and tested for exact processing times, pressures, and methods. Research has been conducted using half-pint, pint, and quart jars. Half-gallon jars are not recommended for pressure canning.

### **Q How do you keep the interior of an aluminum canner from discoloring?**

**A** To prevent discoloration of aluminum canner interiors and canning racks, add 2 tablespoons of white vinegar to the water used for processing jars of food. This solution also prevents hard water stains on the canning jars. If discoloration of the canner has already occurred, use an aluminum cleaner to remove the stain.

### **Q Is it necessary to exhaust steam in my pressure canner before processing?**

**A** It is vitally important to allow steam to escape from the canner for 10 minutes before placing the pressure regulator on the vent pipe. This ensures that all air is exhausted from the canner as well as the jars. It eliminates any air pockets in the jars of food that would cause an uneven heat treatment to occur.

### **Q Do I use the same time and pressure when processing half a batch?**

**A** The processing pressure, time, and liquid in the canner must be the same regardless of the number of jars being processed.

### **Q Why do jars break during processing?**

**A** Jars break during processing for the following reasons:

- Canner became dry during the processing period. This is caused by either a steam leakage in your canner, which means you need a new part, or by using insufficient water for the processing period.
- Commercial jars (peanut butter, mayonnaise, etc.) were used instead of the recommended glass home canning jars.
- Cracked or nicked jars were used.
- Food was packed too solidly or jars were overfilled.
- Cold jars were immersed in boiling hot water. Food and jars should be hot when placed in the canner.
- Jars were placed directly on canner bottom. A canning rack should always be placed on the canner bottom. It is not necessary to place a rack between a layer of pint or half-pint jars. Stagger the jars by placing a top jar on two bottom jars (see Fig. A).

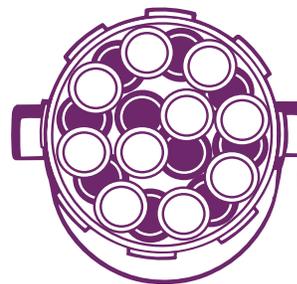


Fig. A

- Pressure was reduced quickly after processing. Always let pressure drop of its own accord.
- Air was exhausted from canner at too high a temperature. Adjust heat so a steady, gentle flow of steam emerges from the vent pipe.
- Pressure fluctuated during the processing period. This can be caused by an unsteady heat source or steam leaking from the canner.
- Jars were placed in a cold, drafty place to cool. Cool jars on a towel or rack at room temperature.
- The jars themselves are very often the cause of difficulty. They eventually weaken with age and repeated use.

## **Q** Why do some jars not seal properly?

**A** Jars do not seal after pressure canning for the following reasons:

- Jars were packed too solidly with food or were overfilled. Allow ½-inch headspace for fruits and tomatoes, and 1-inch headspace for vegetables, meats, poultry, and fish. This is necessary since food expands during canning.
- Air bubbles were not worked out before placing the lid on the jar.
- Food particles were left on the sealing surface of jar. Wipe sealing surface with a damp cloth before placing lids on jars.
- Air was exhausted from the canner too rapidly. Canner should be vented at a slow to moderate rate.
- Fluctuation of pressure during processing caused by an unsteady heat source or steam leakage.
- Removing or bumping the pressure regulator before the pressure had dropped completely. Pressure must always drop of its own accord.
- Rapid temperature changes or drafts blowing on the canner. This causes uneven pressure which forces liquid from jars.
- Lids were not adjusted according to manufacturer's directions.

When jars fail to seal, determine the cause and reprocess or freeze within 24 hours, or refrigerate and use within 3 days.

## **Q** Why do some lids become unsealed during storage?

**A** Lids may seal during processing and then unseal during storage for the following reasons:

- Food was processed incorrectly (wrong method or insufficient processing time or pressure).
- Hairline cracks in jars permitted entry of spoilage organisms during storage.
- Tightening screw band after processing dislodged the seal.
- Loss of liquid during processing caused food particles to lodge on rim of jar.
- Thin or uneven layer of sealant on canning lid.

All jars that become unsealed during storage should be considered spoiled and discarded.

## **Q** Why do the underside of metal lids sometimes discolor?

**A** The black or brown deposit sometimes found on the underside of a lid is caused by natural compounds in

some foods which are released from the food by the heat of processing. This deposit is harmless and does not indicate spoilage.

## **Q** Why do my jars lose liquid during processing?

**A** Liquid is drawn from jars during processing for the following reasons:

- Jars were packed too solidly with food or were overfilled. Allow ½-inch headspace for all fruits and tomatoes, and 1-inch headspace for vegetables, meat, poultry, and fish. This is necessary since food expands during canning.
- Exhaust period was insufficient.
- Pressure regulator on the weighted-gauge canner rocked vigorously during processing. Always maintain a slow, steady rocking motion.
- An unsteady heat source or steam leakage caused a fluctuation of pressure during processing.
- Removing or bumping the pressure regulator before pressure had completely dropped. Pressure should always drop of its own accord.
- Uneven pressure from rapid temperature changes or drafts blowing on the canner.
- Lids were not adjusted according to manufacturer's directions.
- Failure to precook food before packing in jars thus allowing shrinkage to occur in the jar. It is especially important to preheat fruit.
- Failure to allow the canner to remain closed for 10 minutes after pressure had completely dropped.

If all canning procedures have been followed and the lids have sealed, the food is safe to store and eat. However, because liquid was lost during canning, food above the liquid line may discolor during storage. Plan to use these jars first.

## **Q** How should pickled foods and jams and jellies be canned?

**A** Pickles, pickled beets, sauerkraut, jams, jellies, and salsas should NOT be canned under pressure. They should be preserved by using the boiling water bath method. This process results in a more acceptable product.

## **Q** Why does my food float?

**A** Though this does not affect the quality, some foods (most often fruits) do have a tendency to float to the top of the jar for the following reasons:

- Food was overripe. Always use firm, fully ripened fruits or vegetables.
- Food was packed too loosely.
- Temperature became too high during processing.
- Raw-packed foods were used instead of hot-packed. Heat foods throughout before pressure canning.

## **Q** Can I use a pressure canner as a boiling water canner?

**A** Your pressure canner can easily interchange as a boiling water canner. Be sure the waterline is one to two inches above the jars to allow for boiling water. Prepare canner cover by removing the overpressure plug and the pressure regulator. When water begins to boil, place cover on canner with sealing ring in place and close securely.

# PRESTO®

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