



Step-by-Step Canning: Low-Acid Foods

Introduction

Vegetables, meats, poultry, and seafood are such a natural part of family meal planning that preserving these low-acid foods ensures an economical and well-balanced diet throughout the year. Low-acid foods are easy to preserve, yet require special handling to eliminate the risk of spoilage caused by the bacteria *clostridium botulinum* and its toxin-producing spores. In order to prevent this type of spoilage, low-acid foods **MUST** be heat processed at a temperature of 240°F for the established processing time in a tested home canning recipe. The only way for a fresh preserver to achieve 240°F is in a pressure canner. (Boiling water canners heat to only 212°F which is the temperature of boiling water.) Because *clostridium botulinum* spores do not grow in the presence of acid, high-acid foods can be safely processed in a boiling-water canner.

Low-acid foods include vegetables, soups, stews, stocks, meats, poultry, and seafood. Recipes that combine high-acid foods, such as tomatoes, with low-acid foods are considered low-acid foods.

You Will Need

- A tested canning recipe such as one found in the Ball Blue Book®.
- A Pressure Canner
- Glass preserving jars, lids, and bands (always use new lids)
- Common kitchen utensils.
- Fresh vegetables, meats, poultry, or seafood and other quality ingredients



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Step 1

READ through the recipe and instructions. Assemble equipment and ingredients. Follow guidelines for recipe preparation, jar size, preserving method, and processing time.



Step 2

CHECK jars, lids, and bands for proper functioning. Jars with nicks, cracks, uneven rims, or sharp edges may prevent sealing or cause jar breakage. The underside of lids should not have scratches or uneven or incomplete sealing compound as this may prevent sealing. Bands should fit on jars. Wash jars, lids, and bands in hot, soapy water. Rinse well. Dry.

Step 3

HEAT jars in an oven until ready for use. Keeping jars hot prevents them from breaking when hot food is added. Jars can also be heated in a hot water bath or in a dishwasher.

Place lids in a small saucepan. Cover lids with water and bring to a simmer over medium heat. Keep the lids hot until ready to use. Do not boil lids as this may cause seal failure. Leave bands at room temperature for easy handling.



Step 4

PREPARE pressure canner. Fill canner with 2 to 3 inches of water. Place over medium-high heat. Keep water at a simmer until the jars are filled and placed in the canner. Follow the canner manufacturer's instructions for usage instructions. *For a pressure canner diagram refer to the last page of this guide.*

Step 5

PREPARE test preserving recipe using fresh vegetables, meat, poultry, or seafood and other quality ingredients.

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Step 6

REMOVE hot jar from the oven using an oven mitt. Fill the jars one at a time with prepared food using a funnel leaving the headspace recommended in the recipe ($\frac{1}{4}$ inch for soft spreads such as jams and jellies and fruit juices; $\frac{1}{2}$ inch for fruits, pickles, salsa, sauces, and tomatoes).

Remove air bubbles, if stated in the recipe, by sliding a rubber spatula between the jar and the food to release trapped air and ensure proper headspace during processing.

Step 7

CLEAN rim and threads of the jar using a clean, damp cloth to remove any food residue. Remove lid from hot water using a fork or magnetic lid lifter. Center the hot lid on the jar allowing the sealing compound to come in contact with the jar rim. Apply band and adjust until it finger tight.

Place filled jars in the canner until the recipe is used up or the canner is full. Check that the water level is about 2 to 3 inches high or in accordance with the manufacturer's instructions.



Step 8

LOCK the canner lid in place, leaving the vent pipe open. Adjust heat to medium-high. Allow steam to escape through the vent pipe. Once there is a steady stream of steam escaping, vent for 10 more minutes to ensure there is no air (only steam) left inside the canner. Close the vent using the weight or method described for your canner. Gradually adjust heat to achieve and maintain the recommended pounds of pressure.

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Step 9

PROCESS jars at the recommended pounds pressure for the processing time indicated in the tested preserving recipe. When processing time is complete, cool the canner by removing from heat. **Do not remove the weight.** Let the canner stand undisturbed until the pressure returns to zero naturally. Follow manufacturer's instructions. After the pressure reaches zero, wait 2 more minutes, remove the weight, and unlock the lid, tilting it away from you to prevent steam burns.

Step 10

REMOVE the jars from the canner and set upright on a towel to prevent jar breakage that can occur from temperature difference. Leave the jars undisturbed for 12 to 24 hours. The bands should not be retightened as this may interfere with the sealing process.

Step 11

CHECK the lids for a good seal. The lids should not flex up and down when the center is pressed. Remove the bands. Try to lift the lids off with your fingertips. If the lid cannot be lifted off, the lid has a good seal. If the lid does not seal within 24 hours, the product can be immediately reprocessed or refrigerated. Clean the jars and lids, label, and store in a cool, dry, dark place for up to 1 year.

