






BOILING WATER BATH CANNING

Background Information


Boiling water bath canning is recommended for processing high-acid foods. The temperature of the boiling water bath canner is 212 degrees F (100 degrees C) and will kill bacteria in high-acid foods. The boiling water bath canning method is used for processing fruits, pickles, relishes, acidified tomatoes, fruit jellies, jams, butters, marmalades, and preserves. Always check up-to-date canning information for correct processing times. For higher altitudes, processing times will need to be extended one minute for each 1000 feet above sea level. The time needed to process high-acid foods in boiling water ranges from 5 to 85 minutes depending on the food, style of pack, and jar size.

EQUIPMENT PREPARATION

Steps to Follow




-  Assemble all equipment and utensils.
-  Place boiling water bath canner, filled half full with water, on the stove burner and begin to heat. Make sure canner has a removable rack that will fit inside the canner. The canner should be large enough to allow the water to boil 1 to 2 inches over the jars when they are placed on the rack in the canner.
-  Place an extra kettle of water on the stove burner in case extra boiling water is needed to cover the jars in the canner.
-  Check all canning jars for nicks or cracks. Discard if damaged.
-  Wash jars and bands in hot soapy water; rinse in hot water. Jars should be boiled in hot water for at least

10 minutes. Each 1000 feet above sea level will require 1 additional minute.

-  Use new canning lids for each jar. Prepare lids according to manufacturer's directions.

NOTE: Use only standard canning jars for boiling water bath canning. Peanut butter or mayonnaise jars are not acceptable for canning.

FOOD PREPARATION


-  Select only the best fruit...firm but not overripe. Select only enough for one canner load at a time. Rinse fruit under cold running water. Peel fruit if necessary, remove pits, etc., and trim away bruised areas. Cut into serving sizes.
-  To prevent some fruit (apples, apricots, peaches, pears, etc.) from darkening, use commercial ascorbic and citric acid mixtures according to manufacturer's directions, or add 2 tablespoons each of salt and vinegar to a gallon of water. As the fruit is prepared, drop it in the solution. Do not keep fruit in the solution longer than 20 minutes. Fruit may also be dipped in lemon juice to prevent darkening.
-  If a sugar syrup is desired, prepare according to sweetness as follows:

Syrup	Sugar	Water	Yield
Light (less sweet)	1 cup	4 cups	4 1/2 cups syrup
Medium	3 cups	4 cups	5 1/2 cups syrup
Heavy	4 3/4 cups	4 cups	6 1/2 cups syrup


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Boil sugar and water together in a pan until sugar is dissolved - about 5 minutes. (Note: Fruit juice or water may be used to cover the fruit instead of a sugar syrup.)

 Pack fruit firmly into jars. Leave 1/2 inch headspace at the top of the jar.


Note: Some fruits will need to be precooked before packing into jars. This is called the “hot pack” method. To “hot pack,” the fruit is brought to a boil in the syrup, juice, or water, cooked briefly, and packed into hot jars. Hot liquid is poured over the fruit. Hot packing helps to prevent fruit from floating in the jar.


 Pour boiling fruit juice, water, or syrup over the fruit in the jar. Fill within 1/2 inch of the top of the jar. Run a non-metal knife or spatula along the inside of the jar to remove air bubbles. Wipe off the top of the jar rim with a clean cloth.


 Place hot sealing lid on packed jar next to glass. Screw band on jar until just tight.

Always refer to reliable up-to-date canning information to determine the best way to prepare fruit for processing.

PROCESSING

 Make sure water in canner is boiling.*

 Place jars in canning rack, then place rack in canner while water is boiling. ** Place jars far enough apart to allow for circulation of water around jars. Water should be 1 to 2 inches over the tops of the jars when boiling.

 Begin timing for processing as soon as the water returns to a rolling boil. Use the table as a processing guide; however, at higher altitudes (over 1,000 feet) you will need to adjust processing times.

The canner should be covered during processing. The hot boiling water should cover the tops of the jars during the entire processing time.


After processing time is completed, remove hot jars and place on a towel or rack to cool. Keep jars out of drafts. **DO NOT TURN JARS UPSIDE DOWN.** When jars have cooled, check for sealing.


Processing Times For High-Acid Foods Using A Boiling Water Bath Canner (212° F)


Fruits & Vegetables	Pints	Quarts
Apples (hot pack)***	20 minutes	20 minutes
Apricots (raw pack)***	25	30
Berries (raw pack)	15	20
Cherries (raw pack)	20	25
Dill Pickles (raw pack)	10	15
Sweet Pickles (raw pack)	10	15
Fruit Juices (hot pack)	15	15
Fruit Jams and Jellies	10	10
Peaches (hot pack)	20	25
Pears (hot pack)	20	25
Plums (hot pack)	20	25
Pickle Relish (hot pack)	10	–
Rhubarb (hot pack)	10	10
Tomatoes (hot pack)****	35	45
Tomato Juice (hot pack)****	35	40


TESTING THE SEAL

3-Way Test For Checking The Seals On The Jars:

 **Hear the seal** - Hear the “plink” as lid snaps down while jar is cooling, or tap lid with spoon when jar is cold. A clear ringing sound means a seal.

 **Observe the seal** - If the lid is curved down, the jar is sealed.

 **Press the seal** - After the jars have cooled, press the center of the lid. If it is down and will not move, the jar is sealed.

 Remove ring bands from jar and store in a cool, dark, dry place. Ring bands free of rust may be reused. Never reuse lids for canning purposes.

NOTE: If a jar is not sealed within 24 hours, reprocess contents with a new lid or refrigerate and use in the next 1 to 2 days.

CAUTION: Never taste or eat food from a jar with an unsealed lid, swollen lid, or if the food shows signs of spoilage.

REFERENCE: Complete Guide to Home Canning, Extension Service, USDA, 1994.

Contact the local Virginia Cooperative Extension office for the most recent information on canning for your area.

*If using the raw pack method, have the water in the canner hot, not boiling. Placing raw pack jars in boiling water may cause the jars to break.

**If the rack does not have handles, leave the rack in the canner and place the jars in the rack using a jar lifter.

***When fruit is hot packed the fruit is heated before it is placed in the jar. Raw packed fruit is not heated, but it is still covered with boiling liquid.

****Tomatoes are normally considered to be an acid food. However, some varieties may have pH values above 4.6. Therefore, if tomatoes are to be canned as acid foods, they must be acidified with lemon juice or citric acid. Add 2 tablespoons of bottled lemon juice or 1/2 teaspoon of citric acid per quart of tomatoes. For pints, use 1 tablespoon bottled lemon juice or 1/4 teaspoon of citric acid.