

General Directions for Canning Fruit

Canning is a method of preserving food that involves heating filled jars of food to a specified temperature for a specified time. This heating is known as "processing" and is essential for the food safety of all home canned foods. Processing destroys microorganisms that enter the jar upon filling and allows air to be vented from the jar to create an airtight vacuum seal as the product cools.

1. Before beginning, review the following information and assemble all equipment and ingredients.
2. Visually inspect canning jars for nicks, cracks, uneven rims or sharp edges that may prevent sealing or cause jars to break. Screw bands may be reused. Check to ensure screw bands show no rust, are in good condition and fit properly on jars. Discard any jars and screw bands that are not in good condition. Use new metal lids each time to ensure a vacuum seal. Wash jars, screw bands and lids in hot soapy water. Rinse well.
3. Sterilize jars just before use. To sterilize jars, place upright into rack in a boiling water canner. Cover with room temperature water. Cover canner with lid. Place over high heat and bring to a boil; boil rapidly for 15 minutes or as required (see **CANNING AT HIGH ALTITUDES**). Raise rack holding jars and hook handles on sides of canner. Leave water-filled jars in canner until ready to fill with fruit. Prepare metal lids according to manufacturer's instructions; leave in hot water until ready to use. Screw bands do not need to be sterilized.
4. Prepare firm ripe fruit according to chart (see **CANNING FRUIT CHART**).
5. Drain one jar at a time into sink and fill immediately with prepared fruit using either a Hot Pack or Raw Pack. The Hot Pack allows more fruit to be packed into jars and helps to maintain the colour and texture of fruit.

Hot Pack: Simmer fruit in syrup (see **CANNING LIQUIDS**) in a saucepan for 5 minutes. Fill jars with hot fruit; cover with boiling syrup, leaving 1/2 inch (1.25 cm) headspace. Headspace is the space at the top of the jar between the underside of the lid and the top of the food or liquid.

Raw Pack: Pour boiling syrup over raw fruit in jars, leaving 1/2 inch (1.25 cm) headspace.
6. Remove air bubbles by sliding a nonmetallic utensil, such as a narrow rubber spatula or plastic knife, between jar and fruit. After removing air bubbles, add additional syrup, if required, to maintain 1/2 inch (1.25 cm) headspace. Wipe jar rim thoroughly with a clean damp cloth.
7. Center lid on jar. Apply screw band just until "fingertip tight". **Do not** overtighten. "Fingertip tight" allows some give between the lid and jar and allows air to escape during processing. This creates a vacuum seal as the product cools.
8. Place filled jar into the raised canner rack. Repeat process with remaining jars. When all jars are filled or canner is full, lower rack into hot water. Be sure jars are covered by at least 1 inch (2.5 cm) of water; add boiling water, if required. Place lid on canner and turn heat to high.
9. When water returns to a full rolling boil, begin counting processing time (see **CANNING FRUIT CHART**). Reduce heat to maintain a gentle and steady boil for the required time. Turn off heat and remove canner lid. Allow boil to subside, then lift jars without tilting and place them upright on a rack, dry towel or a cutting board to cool in a draft-free place. **Do not** retighten screw bands or turn jars upside down as seals may be broken. Allow jars to cool undisturbed for 24 hours.
10. After cooling, check jars for vacuum seal by pressing on center of each lid. Sealed lids curve downward and do not move. Refrigerate any unsealed jars and use fruit within one week, or freeze or reprocess within 24 hours. Reprocessing fruit is not recommended as it gives a significantly overcooked product. However, if reprocessing is desired, empty jars, reserving fruit and syrup. Repeat **all** steps. If a sealed jar becomes unsealed after some time in storage, this indicates spoilage from microbial growth. Discard the contents of the jar.
11. To store sealed jars, wipe with a clean damp cloth. Remove, wash and dry screw bands. Store separately or replace loosely on jars, as desired. Label jars and store in a cool dark place. As a guideline, use home canned foods within one year.

CANNING AT HIGH ALTITUDES

In most home canning recipes, recommended processing times for boiling water canners are given for elevations of 0 – 1000 ft. (sea level – 305 m). When using a boiling water canner at altitudes higher than 1000 ft. (305 m), **sterilizing and processing times must be extended**. Air is thinner at higher elevations, so water boils at temperatures lower than 212 F (100 C). These lower temperatures are less effective in destroying microorganisms, therefore, increased processing times are necessary to ensure the safety of home canned foods preserved at higher altitudes.

The times given in this publication are for altitudes of 1001 – 3000 ft. (305 – 914 m). For higher altitudes of 3001 – 6000 ft. (915 – 1829 m), add 5 minutes to sterilizing time for jars and to processing times shown in chart (see CANNING FRUIT CHART).

<u>Alberta Altitudes</u>					
1001 – 3000 ft. (305 – 914 m)			3001 – 6000 ft. (915 – 1829 m)		
<u>Use processing times in</u>			<u>Add 5 minutes to times in</u>		
<u>CANNING FRUIT CHART</u>			<u>CANNING FRUIT CHART</u>		
Edmonton	2201 ft.	(671 m)	Banff	4534 ft.	(1382 m)
Fort McMurray	1001 ft.	(305 m)	Calgary	3557 ft.	(1084 m)
Grande Prairie	2149 ft.	(655 m)	Jasper	3470 ft.	(1058 m)
Lloydminster	2129 ft.	(649 m)	Lethbridge	2983 ft.	(909 m)
Peace River	1102 ft.	(336 m)			
Red Deer	2822 ft.	(860 m)			

CANNING LIQUIDS

Sugar syrups, fruit juice or plain water can all be used as the liquid when canning fruit. A sugar syrup is the recommended liquid as the sugar helps retain the best flavour, colour and texture of fruit.

1. Sugar Syrups

<u>Type of Syrup</u>	<u>Sugar</u>	<u>Water</u>	<u>Yield</u>
Very light	1 cup (250 mL)	3 cups (750 mL)	3 1/2 cups (875 mL)
Light	1 cup (250 mL)	2 cups (500 mL)	2 1/2 cups (625 mL)
Medium	1 cup (250 mL)	1 1/2 cups (375 mL)	2 cups (500 mL)
Heavy	1 cup (250 mL)	1 cup (250 mL)	1 1/2 cups (375 mL)

To prepare syrup, combine sugar and water. Bring to a boil, stirring occasionally to dissolve sugar. Allow 1 – 1 1/2 cups (250 – 375 mL) syrup for each quart (litre) jar. Syrup may be prepared and refrigerated for up to three days before use. Return syrup to a boil to pour over fruit in jars.

Sugar Substitutions: Up to one-half of the sugar may be replaced with an equal amount of mild-flavoured honey. Up to one-quarter of the sugar may be replaced by an equal amount of light corn syrup. Artificial sweeteners that are heat stable, such as Splenda and Original Formula Sugar Twin, may be used to sweeten the water to taste. All other artificial sweeteners should be added to fruit at serving time.

2. Fruit Juice

Fruit juice, such as apple, white grape juice or pineapple juice, may be used as a canning liquid. Fruit juice may be used full strength or diluted half-and-half with water, if desired. The fruit's own juice may also be used in place of a sugar syrup. To obtain juice from the fruit, combine and bring to a boil equal amounts of fruit and water. Simmer and cook until soft, mashing occasionally while cooking; strain. Refrigerate prepared juice for up to 3 days or freeze for later use. Bring to a boil to pour over fruit in jars.

3. Water

Boiling water may be used as a canning liquid, however, the fruit will not be as flavourful, plump or colourful as fruit canned with a sugar syrup. If desired, artificial sweeteners may be added to the fruit at serving time.

PREVENTING DISCOLOURATION

Some fruits, such as apples, apricots, nectarines, peaches and pears, darken after they are cut or peeled. To minimize darkening as fruit is being prepared for canning, it may be placed in a colour protecting solution made of one of the following:

1 tbsp. (15 mL) salt in 8 cups (2 L) cold water. Hold fruit in solution for a maximum of 20 minutes to ensure salt flavour is not transferred to fruit.

2 tbsp. (25 mL) Fruit Fresh in 4 cups (1 L) cold water.

1 tsp. (5 mL) ascorbic acid crystals (vitamin C) in 4 cups (1 L) cold water **or** nine 500 mg finely crushed vitamin C tablets to 4 cups (1 L) cold water.

1/4 cup (50 mL) bottled lemon juice in 4 cups (1 L) cold water. Lemon juice is not as effective as the above methods and may contribute an undesirable flavour.

ADDITIONAL INFORMATION

1. Glass lids may be used for canning, however, new rubber rings must be used each time. Soften rubber rings in hot water for 5 minutes. Stretch gently onto glass lids that have been sterilized in boiling water for 15 minutes or as required (see **CANNING AT HIGH ALTITUDES**). After jar is filled, place lid on clean jar rim. Apply screw band tightly and then turn back 1/2 inch (1.25 cm) to allow the air to vent during processing. Once processing time is complete, **carefully** retighten the screw band immediately after jars are removed from canner. **Do not** turn jars upside down as seals may be broken.
2. Any deep pot with a lid, such as a stock pot, that allows for at least 1 inch (2.5 cm) of water above jars may be used in place of a boiling water canner. A rack, such as a cake cooling rack, may be used to elevate jars off bottom of canner. A deep pressure canner may also be used. Place the lid loosely on the pressure canner. Do not lock lid into place and leave vent open so that steam escapes and pressure does not build up inside.
3. Pressure canning fruit is safe but is not recommended. The texture of pressure canned fruit is very soft and fruit may have an overcooked flavour.
4. **Oven canning and open kettle canning are outdated and unsafe methods for preserving.** In oven canning, the dry uneven heating was insufficient to destroy spoilage microorganisms and could also have caused jars to explode. In open kettle canning, food was cooked and then packed into hot jars and sealed without processing. The temperature obtained in open kettle canning was not high enough to destroy all spoilage microorganisms that may have been present in the filled jars.

The ATCO Blue Flame Kitchen information and recommendations contained in this publication have been researched and are in accordance with current guidelines published by Bernardin Ltd. and the Cooperative Extension Service, University of Georgia. We acknowledge their assistance. The Bernardin Ltd. "Guide to Home Preserving" is available at retail outlets in Alberta.

The methods and procedures outlined in this publication are recognized as safe. Many factors over which we have no control may cause spoilage. The ATCO Blue Flame Kitchen assumes no responsibility for any failures or spoilage that may occur.

Call the ATCO Blue Flame Kitchen home economists, Monday to Friday, 10 a.m. to 4 p.m. Edmonton area, call 420-1010. Lloydminster, call toll-free 1-306-825-5010. Other locations in Alberta, call toll-free 1-877-420-9090. To purchase cookbooks, call the order desk toll free 1-800-840-3393. For cooking ideas and great recipes, visit our website at www.atcoblueflamekitchen.com.

CANNING FRUIT CHART

<u>Fruit</u>	<u>Preparation of Fruit</u>	<u>Syrup</u>	<u>Type of Pack</u>	<u>Processing Times in Minutes</u>	
				<u>Altitudes 1001 – 3000 ft. Pints (500 mL)</u>	<u>Quarts (1 L)</u>
Apples	Wash, peel, core and slice into a colour protecting solution.	Light syrup	Hot pack	25	25
Applesauce	Prepare applesauce. Sweeten to taste. Reheat applesauce to boiling.		Hot pack	20	25
Apricots	Wash; do not peel. Cut in half and remove pits. Place in a colour protecting solution.	Light syrup	Hot pack	25	30
			Raw pack	30	35
Berries: Blueberries, Currants, Gooseberries, Saskatoons, Huckleberries	Wash, a small amount at a time; drain. Remove stems. Blanch in boiling water for 30 seconds; drain.	Light syrup	Hot pack	20	25
			Raw Pack	20	25
Cherries	Wash and stem. Pit, if desired. If unpitted, prick skins to prevent splitting.	Light syrup	Hot pack	20	25
			Raw pack	25	30
Crabapples	Wash; remove stem and blossom ends. Prick skins to prevent splitting.	Medium syrup	Hot pack	25	30
			Raw pack	30	35
Fruit Juice	Wash and crush fruit. Add a small amount of water and simmer until fruit is soft. Strain through a double thickness of cheesecloth. Sweeten to taste, if desired. Reheat juice to boiling.		Hot pack	15	15
Nectarines	Wash; do not peel. Cut in half and remove pit. Slice, if desired. Place in a colour protecting solution.	Light syrup	Hot pack	25	30
			Raw pack	30	35
Peaches	Wash. Blanch in boiling water for 30 – 60 seconds. Place in cold water; peel. Cut in half and remove pits. Slice, if desired. Place in a colour protecting solution.	Light syrup	Hot pack	25	30
			Raw pack	30	35
Pears	Wash and peel. Cut in half and core. Place in a colour protecting solution.	Light syrup	Hot pack	25	30
			Raw pack	30	35
Plums	Wash and stem. If desired, cut in half and remove pits. To can whole, prick skins to prevent splitting. Use a light syrup for sweet varieties, a medium syrup for sour varieties.	Light syrup or Medium syrup	Hot pack	25	30
			Raw pack	25	30
Raspberries Strawberries	Wash lightly, a small amount at a time; drain. Hull strawberries. To minimize loss of colour and to maintain a firmer texture, use a heavy syrup.	Heavy syrup	Hot pack	20	25
			Raw pack	20	25
Rhubarb	Wash; cut into 1/2 – 1 inch (1.25 - 2.5 cm) pieces. Measure rhubarb into a large saucepan. Add 1/2 cup (125 mL) sugar for every 4 cups (1 L) rhubarb. Let stand until juice appears, about 10 – 15 minutes. Heat to boiling.		Hot pack	20	20