LET'S PRESERVE

Apples

Freezing Procedure

For freezing, select apple varieties that are crisp and firm and not mealy textured, such as Golden Delicious, Rome Beauty, Jonathan, York Imperial, or Granny Smith (Table 1).

Don't freeze more than 2 pounds of food per cubic foot of freezer capacity per day.

Applesauce

Prepare applesauce as usual. Cool quickly by placing pan of cooked sauce in cold water and stirring occasionally; replace water as it warms. Pack sauce in plastic containers or tapered wide-mouth freezer jars. Allow ½ inch of headspace for pints and 1 inch of headspace for quarts. Freeze. Thaw in the refrigerator. Suggested storage time is 8 to 10 months.

Sliced Apples

PROCEDURE. Syrup pack is preferred for apples to be used for uncooked desserts or fruit cocktail. A sugar or dry pack is good for pie making. Select full-flavored apples that are crisp and firm, not mealy, in texture. Wash, peel, and core. Slice medium apples into twelfths, large ones into sixteenths.

- **Syrup pack:** Use cold 40 percent syrup (3¼ cups sugar to 5 cups water). To prevent browning, add ½ teaspoon (1,500 mg) of ascorbic acid to each quart of syrup. Slice apples directly into syrup in container starting with ½ cup of syrup in a pint container. Press fruit down in containers and add enough syrup to cover. Leave ½ inch of headspace for pints and 1 inch of headspace for quarts. Place a small piece of crumpled water-resistant paper on top to hold fruit down. Seal and freeze.
- **Sugar pack:** To prevent darkening, dissolve ½ teaspoon (1,500 mg) of ascorbic acid in 3 tablespoons of water. Sprinkle over the fruit. Or, steam blanch slices for 1½ to 2 minutes. Cool in very cold water and drain. Mix ½ cup of sugar with 1 quart (1¼ pounds) of fruit. Pack apples into containers and press fruit down, leaving ½ inch of headspace. Seal and freeze.
- **Dry pack:** Follow directions for sugar pack, omitting sugar. Treated apple slices can also be frozen first on a tray and then packed into containers as soon as they are frozen. Fill plastic freezer containers, tapered wide-mouth freezer jars, or zip-type freezer bags. Remove air from freezer bags; seal, label, and freeze. Sealed bags may be frozen flat on a tray and stacked when completely frozen. Do not freeze in containers with a capacity over one-half gallon.

Canning Procedure

For canning, use Jonathan, Golden Delicious, McIntosh, Braeburn, Crispin, York Imperial, or other apple varieties that are crisp and firm and will retain their shape and texture (Table 1). Wash jars. Sterilize jars for products that will be processed in less than 10 minutes. To sterilize empty jars, put them right side up on a rack in a boiling water canner. Fill the canner and jars with hot (not boiling) water to 1 inch above the top of jars. Boil jars for 10 minutes. Remove and drain hot, sterilized jars one at a time and fill immediately with food. Prepare lids according to manufacturer's instructions. Place products hot into jars. Wipe sealing edge of jars with a clean, damp paper towel. Add lids and tighten screw bands. Process jars in a boiling water canner. Another option for applesauce and sliced apples is to process them in a pressure canner.

NOTE: Canned products are best if eaten within a year and are safe as long as lids remain vacuum sealed.

To Process in a Boiling Water Canner

Preheat canner filled halfway with water to 180°F. Load sealed jars onto the canner rack and lower with handles or load one jar at a time with a jar lifter onto rack in canner. Add water, if needed, to 1 inch above jars and cover. When water boils vigorously, lower heat to maintain a gentle boil and process jars of the product for the time given in the recipe. After processing is complete, set canner off heat and remove canner lid. Wait 5 minutes before removing jars and placing on a towel or rack. Do not retighten screw bands. Air-cool jars for 12 to 24 hours. Remove screw bands and check lid seals. If the center of the lid is indented, wash, dry, label, and store the jar in a clean, cool, dark place. If the lid is unsealed, examine and replace jar if defective, use new lid, and reprocess as before. Wash screw bands and store separately.

To Process in a Pressure Canner

Place jar rack, 2 inches of water, and sealed jars in canner. Fasten canner lid and heat canner on high setting. After steam exhausts for 10 minutes, add weighted gauge or close petcock to pressurize the canner. Start timing the process when the desired pressure is reached. Regulate heat to maintain a uniform pressure, and process jars for the time given in the recipe. When processing is complete, remove canner from heat. Air-cool canner until it is fully depressurized. Slowly remove weighted gauge or open petcock, wait 10 more minutes, and carefully remove canner lid.

Remove jars from canner with jar lifter and place on a towel or rack. Finish cooling and storing as directed in processing in a boiling water canner above.

To Process at High Altitudes

Process times in each recipe are for altitudes at or below 1,000 feet above sea level. If you are processing in a boiling water bath at altitudes above 1,000 feet, follow process times in Table 2.

- In a pressure canner, the processing time remains the same and the pressure is increased at higher altitudes.
- In a dial gauge pressure canner at altitudes of 0 to 2000 feet, process at 6 pounds pressure.
- At altitudes of 2,001 to 4,000 feet, process at 7 pounds pressure.
- At altitudes of 4,001 to 6,000 feet, process at 8 pounds pressure.
- At altitudes of 6,001 to 8,000 feet, process at 9 pounds pressure.
- In a weighted gauge pressure canner at altitudes above 1,000 feet, the processing time remains the same, but the food must be processed at 10 pounds pressure.

Apple Butter

RECOMMENDED VARIETIES. Jonathan, Winesap, Stayman, Golden Delicious, or McIntosh

8 lb apples
2 cups cider
2 cups vinegar
2¼ cups white sugar
2¼ cups packed brown sugar
2 Tbsp ground cinnamon
1 tsp ground cloves

Yields approx. 8 to 9 pints

PROCEDURE. Remove stems and wash, quarter, and core apples. Cook slowly in cider and vinegar until soft. Press apples through a colander, food mill, or strainer. Cook fruit pulp with sugar and spices, stirring frequently.

To test for doneness, remove a spoonful and hold it away from steam for 2 minutes. It is done if the apple butter remains mounded on the spoon. Another way to determine when the butter is cooked adequately is to spoon a small quantity onto a plate. When rim of liquid does not separate around the edge of the butter, it is ready for canning. It will take 1 to 3 hours for apple butter to cook to this stage, depending on the juiciness of the apples. Fill hot product into sterile half-pint or pint jars, leaving ¼ inch of headspace. Quart jars need not be presterilized. Adjust lids and process jars in a **boiling water bath**.

Half-pints or pints: 5 minutes
Quarts: 10 minutes

Apple Juice

QUALITY. Good-quality apple juice is made from a blend of apple varieties. For best results, buy fresh juice from a local cider maker within 24 hours after it was pressed.

PROCEDURE. Refrigerate juice for 24 to 48 hours. Without mixing, carefully pour off clear liquid and discard sediment. If desired, strain clear liquid through a paper coffee filter or double layers of damp cheesecloth. Heat quickly, stirring occasionally, until juice begins to boil. Fill immediately into sterile pint or quart jars, or fill into clean half-gallon jars, leaving ¼ inch of headspace. Adjust lids and process jars in a **boiling water bath**.

Pints or quarts: 5 minutes
Half-gallons: 10 minutes

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Applesauce

QUALITY. Select apples that are sweet, juicy, and crisp, such as Golden Delicious, Rome Beauty, Jonathan, Fuji, York Imperial, and McIntosh. For a tart flavor, add 1 to 2 pounds of tart apples to every 3 pounds of sweeter fruit (Table 1).

QUANTITY. An average of 21 pounds is needed per canner load of 7 quarts; an average of 13½ pounds is needed per canner load of 9 pints. A bushel weighs about 48 pounds and yields 14 to 19 quarts of sauce. An average of 3 pounds makes a quart of canned applesauce.

PROCEDURE. Wash, peel, core, and slice apples. If desired, keep slices in water containing ascorbic acid to prevent browning, as described for making sliced apples below. Place drained slices in a large 8- to 10-quart saucepan. Add ½ cup of water or enough water to barely cover the bottom of the pan. Stir occasionally to prevent browning. Heat quickly until tender (5 to 20 minutes, depending on maturity and variety). Press through a sieve or food mill, or skip the pressing step if you prefer chunky-style sauce. If desired, add ⅛ cup of sugar per quart of sauce. Taste and add more sugar, if preferred. Reheat sauce to boiling. Fill jars with hot sauce, leaving ½ inch of headspace. Remove air bubbles. Wipe jar rims. Adjust lids and process jars in a **boiling water bath**.

Pints: 15 minutes
Quarts: 20 minutes

PRESSURE CANNER OPTION. Process in a dial gauge pressure canner at 6 pounds pressure or in a weighted gauge pressure canner at 5 pounds pressure.

Pints: 8 minutes
Quarts: 10 minutes

NOTE: To prevent siphoning, make sure that applesauce is boiling hot when it is put into jars, allow adequate headspace, and remove all air bubbles. Allow jars to sit 5 minutes after processing in uncovered boiling water bath canner before removing.

Sliced Apples

QUANTITY. An average of 19 pounds is needed per canner load of 7 quarts; an average of 12¼ pounds is needed per canner load of 9 pints. A bushel weighs 48 pounds and yields 16 to 19 quarts—an average of 2¾ pounds per quart.

QUALITY. Select apples that are juicy, crisp, and preferably both sweet and tart. Raw packs make poor-quality products.

PROCEDURE. Wash, peel, core, and slice apples. To prevent discoloration, keep slices in water with vitamin C (made by mixing 1 teaspoon of ascorbic acid crystals or six 500-milligram vitamin C tablets in 1 gallon of water). Place drained slices in a large saucepan and add 1 pint of water or very light or light syrup for every 5 pounds of sliced apples. (To make syrup, dissolve ¼ to ½ cup of sugar in 2 cups of water.) Boil for 5 minutes, stirring occasionally to prevent burning. Fill jars with hot slices and hot syrup or water, leaving ½ inch of headspace. Adjust lids and process jars in a **boiling water bath**.

Pints or quarts: 20 minutes

PRESSURE CANNER OPTION. Process in a dial gauge pressure canner at 6 pounds pressure or in a weighted gauge pressure canner at 5 pounds pressure.

Pints or quarts: 8 minutes

Spiced Apple Rings

12 lb firm, tart apples (small apples are required—maximum diameter 2½ inches)
12 cups sugar
6 cups water
1¼ cups white vinegar (5%)
3 Tbsp whole cloves
¾ cup red hot cinnamon candies or 8 cinnamon sticks
1 tsp red food coloring (optional)

Yields approx. 8 to 9 pints

PROCEDURE. Wash apples. To prevent discoloration, peel and core one apple at a time. Immediately cut crosswise into ½-inch slices and immerse in an ascorbic acid solution made as described in making sliced apples.

TO MAKE FLAVORED SYRUP. Combine sugar, water, vinegar, cloves, and cinnamon candies (or cinnamon sticks and food coloring) in a 6-quart saucepan. Stir and heat to a boil, stirring constantly; then simmer for 3 minutes. Drain apples, add to hot syrup, and cook 5 minutes. (Remove cinnamon sticks, if using.) Fill jars (preferably wide mouth) with apple rings and hot, flavored syrup, leaving ½ inch of headspace. Adjust lids and process jars in a **boiling water bath**.

Half-pints or pints: 10 minutes

Spiced Crab Apples

4½ lb crab apples
4½ cups apple vinegar (5%)
3¾ cups water
7½ cups sugar
4 tsp whole cloves
4 cinnamon sticks
6 half-inch cubes of fresh ginger root

Yields approx. 9 pints

PROCEDURE. Remove blossom petals and wash apples, leaving stems attached. Puncture the skin of each apple four times with an ice pick or toothpick. Mix vinegar, water, and sugar, and bring to a boil. Add spices tied in a spice bag or cheesecloth. Using a blancher basket or sieve, immerse one-third of the apples at a time in the boiling vinegar/syrup solution for 2 minutes. Place cooked apples and spice bag in a clean 1- or 2-gallon stainless steel or glass container and add hot syrup. Cover and let stand overnight in the refrigerator. Remove spice bag, drain syrup into a large saucepan, and reheat to boiling. Fill pint jars with apples and hot syrup, leaving ½ inch of headspace. Adjust lids and process jars in a **boiling water bath**.

Pints: 20 minutes

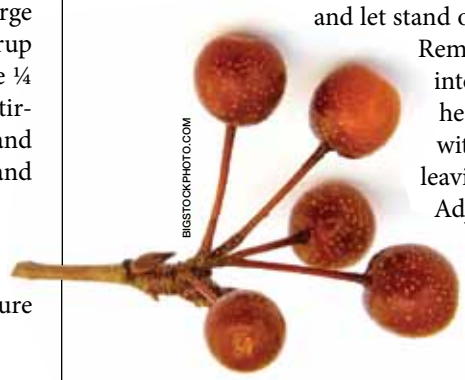

Table 1. Apple varieties and their characteristics.

Variety	Sweet	Tart	Firm	Crisp	Juicy	Availability
Lodi		X				July
Pristine		X		X		July
Ginger Gold	X	X	X		X	August
Summer Rambo		X	X			August
McIntosh		X		X	X	September
Cortland		X		X		September
Jonagold	X	X				September
Empire		X	X	X		September
Jonathon		X		X		September
Golden Delicious	X			X	X	September
Liberty		X	X			October
Crispin (Mutsu)	X		X		X	October
Braeburn	X	X	X	X	X	October
Fuji	X		X	X	X	October
Granny Smith		X		X	X	October
Rome		X	X	X	X	October
York Imperial		X	X			October
Goldrush		X		X		October

Table 2. Recommended processing times in a boiling water canner.

		Hot pack processing times (in minutes) at altitudes of			
Product	Jar size	0–1,000 ft	1,001–3,000 ft	3,001–6,000 ft	Above 6,000 ft
Apple butter	Half-pint or pints	5	10	10	15
	Quarts	10	15	15	20
Apple juice	Pints or quarts	5	10	10	15
	Half-gallons	10	15	15	20
Applesauce	Pints	15	20	20	25
	Quarts	20	25	30	35
Sliced apples	Pints or quarts	20	25	30	35
Sliced apple rings	Half-pints or pints	10	15	15	20
Spiced crab apples	Pints	20	25	30	35

For additional information about food preservation, visit the Penn State Food Safety website at **extension.psu.edu/food-safety** and select the Home Food Preservation website, or contact Penn State Extension in your county.

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