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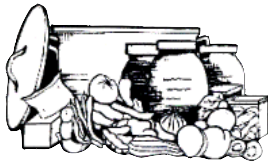


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Freezing Fruit at Home

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Freezing is one of the simplest and least time-consuming ways to preserve fruit. Frozen fruit is convenient to serve on short notice because most of the preparation is done before freezing.

Most fruits can be frozen satisfactorily. The quality of the product will vary with the kind of packaging, quality of fruit, stage of maturity, and type of prefreezing preparation.

Generally, flavor is well-retained by freezing. However, the texture of frozen fruit may be somewhat softer than that of fresh fruit. Some fruits require special prefreezing treatment to prevent undesirable changes in color, texture, or flavor during freezing and thawing. Slow freezing causes an inferior product and possible spoilage. If you have doubts about how well a fruit will freeze, test freeze three or four packages, using the directions given in this publication. Sample the food after freezing. This test shows only the effect of the freezing process. To test the effect of storage, try keeping the fruit frozen for a week and then a month to see if the quality is acceptable to you.

Selecting the right freezing container

Before you prepare fruit for freezing, assemble the containers you are going to use. No single factor in freezing is more important than the use of good packaging techniques and materials to protect food against moisture loss and transfer of flavor.

To retain highest quality in frozen food, packaging materials should prevent evaporation. Glass, metal, and rigid plastic containers made especially for freezing prevent evaporation. They are excellent packaging materials for freezing. Most bags, wrapping materials, and waxed cartons manufactured for freezing are sufficiently

moisture-resistant and vapor-resistant to retain a satisfactory quality in fruit during storage. Ordinary waxed papers and paper cartons from purchased dairy products are not sufficiently moisture- and vapor-resistant to be suitable for freezer packaging.

All containers should be easy to seal and leakproof. Packaging materials must be durable and must not become brittle and crack at low temperatures.

Preparing fruit for freezing

It is best to prepare only enough fruit for a few containers at one time, especially with those fruits that darken rapidly.

All fruit needs to be washed in several changes of cold water. Wash a small quantity at one time to avoid undue handling. Lift washed fruit out of the water, and drain thoroughly. Do not let the fruit stand in the water; some fruits lose food value and flavor and some get water-soaked. Once it has been washed, peel, trim, pit, and slice the fruit, and follow the directions for freezing fruit given in Table 2.

For any preparation of the fruit it is best to use aluminum, earthenware, enameled ware, glass, nickel, or stainless steel. Do not use galvanized ware in direct contact with fruit or fruit juices. The acid in fruit may dissolve zinc from the equipment into the fruit, and this might be unhealthy. Metallic off-flavors may result from the use of iron utensils, or chipped enameled ware.

Syrup, sugar, and unsweetened packing

Most fruits have better texture and flavor if packed in sugar or syrup. It's best to use fruits packed in a syrup for dessert. Fruits packed in dry sugar or unsweetened are best for most cooking purposes, because there is less liquid in the product.

Unsweetened pack may yield a lower-quality product. However, directions are given for such a pack, whenever it is satisfactory, because the pack is often required for special diets. Some fruits, such as gooseberries, currants, cranberries, and rhubarb, pack well with or without sugar.

Syrup pack

For some mild-flavored fruits, lighter syrups are desirable to prevent masking of flavor. Heavier syrups may be needed for very sour fruits. Table 1 will give you an idea of proportions to use for various syrups.

A 40 percent syrup is recommended for most fruits. Dissolve sugar in hot or cold water. If hot water is used, cool syrup before using. Syrup may be made the day before and kept cold in the refrigerator. Allow approximately 1 cup of syrup for each quart of fruit.

Table 1. Syrups for Freezing Fruit
All measurements are in cups.

Type of syrup	Sugar*	Water	Yield of syrup
30%	2	4	5
35%	2 ¹ / ₂	4	5 ¹ / ₃
40%	3	4	5 ¹ / ₂
50%	4 ³ / ₄	4	6 ¹ / ₂
60%	7	4	7 ³ / ₄
65%	8 ³ / ₄	4	8 ² / ₃

* In general, up to ¹/₄ of the sugar may be replaced by corn syrup. A larger proportion of corn syrup may be used if a very bland, light-colored type is selected.

Sugar pack

Sprinkle the sugar over the fruit. The amount of sugar to use is given in the specific directions in Table 2. Turn the fruit gently over and over until each piece is completely coated with sugar. Put fruit and juice into the container.

Unsweetened pack

Pack prepared fruit into containers, without added liquid or sweetening, or cover with water containing ascorbic acid. Crushed or sliced fruit may be packed in its own juice without sweetening.

Keeping fruit from darkening

Some fruits darken during preparation and freezing if not pretreated. Antidarkening treatments are given when necessary as part of the directions for freezing fruits. Several types of antidarkening treatments are recommended, because all fruits are not protected equally well by all treatments.

Ascorbic acid

For most light-colored fruits that need antidarkening treatment, ascorbic acid (vitamin C) may be used. This is very effective in preserving color and flavor of fruit and adds nutritive value.

Crystalline ascorbic acid is recommended and is available at drugstores. To use, dissolve ascorbic acid in a little cold water. The amount to use is listed under directions for freezing fruits in Table 2. Solutions of ascorbic acid should be made up as needed.

- **Syrup pack.** Add the dissolved ascorbic acid to the cold syrup shortly before using. Stir it in gently so you won't stir in air. Keep syrup in refrigerator until used.

Table 2. Preparation for Freezing Fruit

Fruit	Preparation
Apples (full-flavored, firm, crisp, ripe, free from bruises and decay)	<p>Wash, peel, and core.</p> <p>Syrup pack: Slice apples directly into cold 40% syrup to which $\frac{1}{2}$ teaspoon of crystalline ascorbic acid for each quart of syrup is added. Press fruit down in containers, and add enough syrup to cover.</p> <p>Sugar pack: To prevent darkening during preparation, slice apples into a solution of 2 tablespoons of salt to a gallon of water. Hold in this solution no more than 15 to 20 minutes. Drain. To retard darkening during freezing, steam single layers of sliced apples $1\frac{1}{2}$ to 2 minutes. Cool in cold water, and drain. Sprinkle $\frac{1}{2}$ cup of sugar over each quart of apple slices, and mix well.</p> <p>Unsweetened pack: Follow directions for sugar pack, omitting sugar.</p> <p>Applesauce: Pack cool applesauce into container.</p>
Apricots (firm, -ripe, and uniformly yellow)	<p>Sort, wash, halve, and pit. Peel, and slice if desired. If apricots are not peeled, heat them in boiling water $\frac{1}{2}$ minute to keep skins from toughening during freezing. Cool in cold water, and drain.</p> <p>Syrup pack: Slice apricots directly into cold 40% syrup to which $\frac{3}{4}$ teaspoon of crystalline ascorbic acid is added for each quart of syrup.</p> <p>Sugar pack: Dissolve $\frac{1}{4}$ teaspoon of crystalline ascorbic acid into $\frac{1}{4}$ cup of cold water, and sprinkle over 1 quart of fruit. Sprinkle $\frac{1}{2}$ cup of sugar over each quart of apricots, and mix well.</p>
Berries: Blackberries Blueberries Boysenberries Cranberries Dewberries Elderberries Gooseberries Huckleberries Loganberries Raspberries Strawberries Young berries (full, ripe, flavorful fruit)	<p>Wash gently, discarding immature and overripe berries. Remove stems and leaves. Drain well. If desired, steam blueberries, huckleberries, and elderberries for 1 minute to tenderize skins and make a better-flavored product.</p> <p>Syrup pack: Cover berries with cold 40% to 50% syrup, depending on flavor and sweetness of fruit. Lighter syrups are desirable to prevent masking of flavor for mild-flavored berries. Sour berries require a heavier syrup.</p> <p>Sugar pack: Sprinkle $\frac{3}{4}$ cup of sugar on 1 quart of berries, and gently mix.</p> <p>Unsweetened dry pack: Pack berries into containers.</p> <p>Crushed berries or sauce: Crush berries, and sweeten to taste.</p>
Cherries (well-colored, tree-ripened; red varieties best for freezing)	<p>Stem, sort, wash, and, if desired, pit. Sweet cherries should be prepared quickly to avoid color and flavor changes.</p> <p>Syrup pack: Cover sour cherries with 60% to 65% syrup and sweet cherries with 40% syrup. To improve color retention in light cherries, add $\frac{1}{2}$ teaspoon of crystalline ascorbic acid to each quart of syrup.</p> <p>Sugar pack: Add $\frac{3}{4}$ cup of sugar to each quart of whole cherries, and mix well.</p> <p>Crushed cherries: Add 1 to $1\frac{1}{2}$ cups of sugar to each quart of sour cherries. Add $\frac{1}{2}$ to 1 cup of sugar and $\frac{1}{4}$ teaspoon of crystalline ascorbic acid to each quart of sweet cherries. Mix well.</p>

- **Sugar pack.** Sprinkle the dissolved ascorbic acid over the fruit just before adding sugar.

- **Unsweetened pack.** Sprinkle the dissolved ascorbic acid over the fruit, and mix thoroughly just before packing. If fruit is packed in water, dissolve the ascorbic acid in the water.

- **Crushed fruits and sauces.** Add dissolved ascorbic acid to the fruit preparation and mix.

Ascorbic acid mixtures

There are special antidarkening preparations on the market — usually made of ascorbic acid and

citric acid mixed with sugar. Follow the manufacturer's directions when using these mixtures.

Citric acid and lemon juice

For a few fruits, citric acid or lemon juice make a suitable antidarkening agent. However, neither is as effective as ascorbic acid. Citric acid in crystalline or powdered form is available at drugstores. When using it, dissolve citric acid in a little cold water before adding to the fruit according to directions for that fruit.

Table 2. Preparation for Freezing Fruit

Fruit	Preparation
Currants	Follow directions for berries.
Melons: Cantaloupe Crenshaw Honeydew Persian Watermelon (firm-fleshed, well-colored, ripe melon)	Cut in half, remove seeds, and peel. Cut melons into slices, cubes, or balls. Syrup pack: Cover melons with cold 30% syrup.
Nectarines and Peaches (firm, ripe, well- colored, no green color on peaches)	Sort, wash, pit, and peel. For a better product, peel peaches without a boiling-water dip. Slice fruit into syrup or antidarkening solution to prevent darkening. Work with one container at a time to reduce exposure to air. Syrup pack: Slice directly into cold 40% syrup to which $\frac{3}{4}$ teaspoon of crystalline ascorbic acid is added for each quart of syrup. Sugar pack: Follow directions for sugar pack under apricots, but use $\frac{2}{3}$ cup of sugar. Water pack: Slice directly into container. Cover with cold water containing 1 teaspoon of crystalline ascorbic acid for each quart of liquid.
Pears (well- ripened, firm but not hard)	Wash, peel, and quarter. Heat in boiling 40% syrup for 1 or 2 minutes. Drain, and cool. Syrup pack: Cover pears with cold 40% syrup to which $\frac{3}{4}$ teaspoon of crystalline ascorbic acid is added for each quart of cold syrup.
Persimmons (orange-colored, soft, ripe)	Sort, wash, peel, and cut into sections. Press the fruit through a sieve. Add $\frac{1}{8}$ teaspoon of crystalline ascorbic acid or $1\frac{1}{2}$ teaspoons of crystalline citric acid to each quart of persimmon sauce to help prevent darkening and flavor loss. Sweeten if desired. Sauce pack: Pack persimmon sauce into container.
Rhubarb (firm, tender, well- colored stalks, good flavor, new fibers)	Wash, trim, and cut into 1- or 2-inch pieces or into lengths to fit the package. Heating rhubarb in boiling water for 1 minute and cooling promptly helps retain color and flavor. Syrup pack: Cover raw or preheated rhubarb with cold 40% syrup. Unsweetened dry pack: Pack raw or preheated rhubarb into containers. Sauce pack: Pack sweetened sauce into containers.

Heat treatment

For some fruits, such as apples, steaming for a few minutes over boiling water controls darkening. Other fruits, such as rhubarb and pears, may be heat treated in boiling water or syrup to provide for better color and flavor retention during freezing.

Packing procedure

There are some final steps in packing the fruit into containers. The object is to maximize the space without decreasing the quality.

- Pack cold fruit into cold, meal-size containers. Having materials cold speeds up freezing and helps retain the natural color, flavor, and texture of fruit.

- Pack fruit tightly to exclude air from the package.

- Keep fruit under syrup, juice, or water by placing a small piece of crumpled freezer paper or other water-resistant wrapping material on top of the packed fruit. Press fruit down before closing and sealing containers.

- Allow the recommended head space for expansion during freezing (see Table 3).

- If you pack fruit in bags, press air out of the unfilled part of the bag. Press firmly to prevent air from getting back in. Seal immediately, allowing the head space recommended for the product.

- Keep sealing edges free from moisture or food so that you can make a good closure. Seal carefully.

- Label packages plainly. Include the name of the fruit, date it was packed, and type of pack if you use more than one kind. Use gummed labels, colored tape, crayons, or waxed pens made especially for labeling frozen food packages.

Directions for freezing fruits

Table 2 contains specific directions for preparing fruit for freezing. The syrup pack is generally preferred for dessert use, and a dry sugar or unsweetened pack is best for most cooking purposes. To prevent color and flavor changes when using the syrup pack, be sure fruit is completely covered with syrup.

When syrup packing light-colored fruits, slice them directly into cold syrup, starting with 1/2 cup of syrup to a pint container. Press fruit down, and add more syrup if necessary to completely cover fruit. All fruit should be packaged in a durable, moisture- and vapor-resistant container. Allow adequate head space. Freeze as soon after packaging as possible.

Loading the freezer

Freeze fruit as soon after it is packed as possible. Freeze at 0° F or below. Put no more unfrozen food into a home freezer than will freeze within 24 hours. This is about two or three pounds of food for each cubic foot of freezer space. Overloading slows down the rate of freezing, and foods that freeze too slowly may lose quality or spoil. For quickest freezing, place packages against freezing plates or coils, and leave a little space between packages so air can circulate freely.

After packages are frozen, you may rearrange them so they are stored close together. Most fruit maintains high quality for eight to 12 months at 0° F. Unsweetened fruit loses quality faster than that packed in sugar or syrup. Longer storage will not make food unfit for use, but may impair quality.

It is a good idea to keep an up-to-date list of foods in your freezer by listing the foods as you put them in and checking them off as you remove them from the freezer.

Using frozen fruit

Serving uncooked

Frozen fruit needs only to be thawed if it is to be served raw. For best color and flavor, leave fruit in

the sealed container to thaw. Serve as soon as it is thawed; a few ice crystals in the fruit improve the texture for eating raw.

A one-pound package of frozen fruit packed in syrup may be thawed in the refrigerator in six to eight hours, at room temperature in two to four hours, or in a pan of cool water in a half hour to an hour. Turn the package several times for more even thawing.

Fruit packed with dry sugar thaws slightly faster. Both sugar and syrup packs thaw faster than unsweetened packs.

Table 3. Head Space (in Inches) Needed for Freezing Fruit

Type of Pack	Type of Container			
	Wide top*		Narrow Top**	
	Pint	Quart	Pint	Quart
Liquid pack (fruit packed in sugar, syrup, water, or juice)	1/2	1	3/4	1 1/2
Dry pack (fruit without added sugar or liquid)	1/2	1/2	1/2	1/2
Crushed or sauce	1/2	1	3/4	1 1/2

* Tall, straight, flared container with wide top opening
 ** Container with narrow top opening

Cooking

Thaw fruit until pieces can be loosened. Then cook as you would cook fresh fruit. If there is not enough juice to prevent scorching, add water as needed. Allow for any sweetening that was added before freezing if the recipe calls for sugar.

Frozen fruit often has more juice than called for in recipes for baked products using fresh fruit. Use only part of the juice, or add more thickening for the extra juice.

Using crushed fruit and sauces

Serve crushed fruit or sauce as raw fruit after it is partially or completely thawed. Or use it after thawing as a topping for ice cream or cakes, as a filling for sweet rolls, or for jam.

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