

Drying Fruits at Home

► Drying is the oldest method of preserving fruits. Instead of canning or freezing, most fruits can be dried. It is easy and can also be the least expensive method. Many fruits can be stored for 6 months to a year.

Selecting and Preparing Fruit

Select sound, ripe, firm fruit. Fruit ripened on the tree, vine, or bush will have a better flavor and color. Wash fruit thoroughly to remove dirt and insecticides. Discard all that are mushy, decayed, bruised, or molded. Some will need to be peeled or to have seeds removed; others can be dried as is (table 1).

Pretreating

Many fruits, especially apples, peaches, and pears, tend to darken during drying and storage. Pretreating preserves color and keeps fruit from darkening. Pretreating by the steam blanch method also decreases loss of vitamins A and C and minimizes microbial spoilage and insect infestation. Figs and berries do not need pretreating.

Following are methods to pretreat fruits:

Ascorbic Acid/Vitamin C Method. Ascorbic acid is the same as vitamin C. Volume for volume, it is the most effective of the pretreatment solutions. You can buy pure crystalline ascorbic acid or vitamin C tablets at drugstores, grocery stores, and some natural-food stores. Vitamin C tablets must be finely crushed before mixing with water. Ascorbic acid is used most often with apples, peaches, apricots, nectarines, and pears. For apples, use 1 tablespoon of pure crystalline ascorbic acid for each cup of cold water. For peaches, apricots, nectarines, and pears, use 1½ teaspoons for each cup of water. One cup of the solution will treat about 5 quarts of cut fruit. Sprinkle it over the fruit as it is peeled, pitted, cored, or sliced. Turn pieces over gently and sprinkle all sides to make sure each is coated thoroughly.

Citric Acid Method. It takes three times as much citric acid as ascorbic acid for the same amount of fruit. Mix ¼ cup of citric acid to each quart of cold water. Soak prepared fruit about 15 to 30 minutes. Drain well.



Lemon Fruit Juice Method. Fruit juices high in vitamin C can also be used to reduce browning in pretreatment. Examples include lemon, pineapple, orange, grape, and cranberry juices. Each juice adds its own color and flavor to the fruit, so select the best one for your desired preference. Simply cover the fruit with juice, and allow to soak for 3 to 5 minutes. Drain well, and place on drying tray. Draining is important because excess moisture can increase drying time.

Lemon Juice Solution: For the lemon juice solution, mix equal parts lemon juice and cold water (i.e., 1 cup lemon juice and 1 cup water). Cut the peeled fruit directly into the lemon juice solution. Allow to soak 10 minutes, drain well, and place on drying tray. It takes six times as much lemon juice as ascorbic acid to pretreat the fruit. Mix 1 to 1½ cups of lemon juice to each quart of water. Soak prepared fruit about 15 to 30 minutes. Drain well.

Commercial Color Preservers. These mixtures contain crystalline ascorbic acid and sugar or ascorbic acid, sugar, and citric acid. Sold under various trade names, these mixtures are not quite as effective, volume for volume, as plain ascorbic acid, but they are readily available and easy to use. Follow the manufacturer's instructions.

Fruit	Preparation	Blanching Time
Apples	Peel, core, and cut into rings $\frac{1}{8}$ to $\frac{1}{4}$ inch thick, then steam.	5 minutes, depending on texture
Berries	Leave whole.	Do not need pretreating.
Figs	Cut in half or prick whole figs with ice pick.	Do not need pretreating.
Grapes (seedless)	Leave whole.	$\frac{1}{2}$ to 1 minute.
Peaches	Steam whole first then peel, pit, and slice into rings $\frac{1}{2}$ inch thick.	8 minutes
Pears	Peel, core, and cut into rings $\frac{1}{4}$ inch thick and then steam.	2 to 6 minutes, depending on texture

Steam Blanch Method. Water blanching gives fruit a cooked flavor, so it is not generally recommended. Steam blanching does not give a cooked flavor. To steam blanch, put $1\frac{1}{2}$ to 2 inches of water in a double boiler or large pot; let water come to a boil. Place fruit loosely, not more than 1 inch deep, into the top of the double boiler or a colander or basket. Put it into the boiler, above the water, and cover with a tight-fitting lid. Follow directions in the table 1.

Sulfites. Although sulfites have been used in the past to prevent oxidation, details on this method have been excluded because sulfites found in the food after treatment have been found to cause asthmatic reactions in some individuals. If this method is used, food should be dried outdoors for safety reasons. For more information, contact your county Extension office.

Drying Methods

Sun Method. Fruits are high in acid and sugars. This makes it safer to dry them in the sun. There are certain weather conditions to consider when choosing this method. Sunny, hot, breezy days with a minimum temperature of 86 degrees F are preferred. The higher the temperature, the better. Using this method does slow down the drying process and could take several days to complete. Because the weather is uncontrollable, sun drying can be risky. The high humidity in the south is also a problem. A humidity below 60 percent is best for sun drying. These ideal conditions are often not available when fruit ripens.

Drying Foods Indoors. Most foods can be dried indoors using food dehydrators, convection ovens, or conventional ovens.

Food Dehydrator Method. An electric food dehydrator is a small electrical appliance that has a fan and heating element built inside. It designed to allow heated air to blow throughout the unit. It can dry foods

at temperatures up to 140 degrees F. Some units are expandable to several trays in capacity. Follow manufacturer's instructions.

Oven Method. To dry fruits in the oven, first remove oven racks. Turn on oven to 140 degrees F. Place a clean, thin cloth on each rack, leaving 1 to $1\frac{1}{2}$ inches uncovered on all four sides to allow for circulation of heat. Put the fruit one layer deep on the cloth. Return racks to oven. Place a candy or deep fat frying thermometer in the oven to check temperature.

Keep temperature at 140 to 150 degrees F. Leave the oven door open 2 to 4 inches to allow moisture to escape. Turn over fruit every 2 hours to speed drying. Check thermometer every hour.

You can dry fruit on cookie sheets or similar pans, but it may stick. Use nonstick coated pans.

Testing for Dryness

Fruit must be dry enough to prevent microbial growth and spoilage. When testing a fruit for dryness, remove a handful and let it cool a few minutes. Fruit that is warm or hot seems softer, moister, and more pliable than it actually is.

When the fruit is cool, squeeze several pieces together. Open your hand. If the pieces separate, they are dry enough to store. If they stay in a ball, they have too much moisture and need additional drying. Fruit should be leathery and pliable when dry enough for storage.

Conditioning

Sun Dried Fruit. Fill a clean, dry jar $\frac{3}{4}$ full with the dried fruit. Tighten the lid securely. Leave it for 3 to 4 days, vigorously shaking the jar every day. This will equalize any remaining moisture that is in the fruit.

Next, place the fruit one layer deep on a baking pan in a 160 degree F oven. Heat 10 to 15 minutes, shaking pans every few minutes; do not scorch the fruit. The heat will destroy any insect eggs that could be on the fruit and will remove any remaining moisture. After 10 to 15 minutes, turn off the oven and leave the fruit in the closed oven until it reaches room temperature. Shake the fruit occasionally. Do not put warm or hot fruit in storage containers because moisture will develop.

Oven or Dehydrator Dried Fruit. For best results, let fruit stay in the closed oven or dehydrator until it reaches room temperature.

Storing

A glass jar with a tight-fitting lid is a good container to use. If using a jar fruit has been in, wash the jar, lid, and band with hot, soapy water. Rinse and dry thoroughly.

A metal container with a tight-fitting lid is also good if the fruit is first placed in a plastic freezer bag and then in the container. Moisture and vapor-resistant freezer containers with tight-fitting lids can also be used.

Fill each clean, dry container full, but do not pack. Make sure the lid fits tightly.

Store dried fruits in a cool, dark, dry place. Check every week for the first 6 weeks to be sure fruit is in good condition. Recommended storage time is from 6 to 12 months.

Reconstituting

One cup of dried fruit reconstitutes to about 1½ cups. Add water to just cover the fruit; more can be added later if needed. It takes 1 to 8 hours to reconstitute most fruits. The time varies with the kind of fruit, size of pieces, and temperature of the water. Using hot water takes less time. Oversoaking will produce a loss of flavor.

To cook reconstituted fruit, cover and simmer in the soak water to retain the nutritive quality and flavor. Add sugar near the end of the cooking process so it will not interfere with the fruit's absorption of water. Adding a few grains of salt helps bring out the natural sweetness of most fruits. Fresh lemon or orange juice added just before serving will help give a fresh fruit flavor.

How to Make Fruit Leather

Fruit leathers are homemade fruit rolls. They are a tasty chewy, dried fruit product. Fruit leathers are made by pouring pureed fruit onto a flat surface for drying. When dried, the fruit is pulled from the surface and rolled. It gets the name *leather* from the fact that when pureed fruit is dried, it is shiny and has the texture of leather.

Fresh, frozen, or drained canned fruit can be used to make fruit leathers. To make leathers from fresh fruit, follow these directions:

- Select ripe or slightly overripe fruit.
- Wash fresh fruit or berries in cool water. Remove peel, seeds, and stem.
- Cut fruit into chunks. Use 2 cups of fruit for each 13"x15" inch fruit leather. Puree fruit until smooth.
- Add 2 teaspoons of lemon juice or ⅛ teaspoon ascorbic acid (375 mg) for each 2 cups light-colored fruit to prevent darkening.
- Optional: To sweeten, add corn syrup, honey, or sugar. Corn syrup or honey is best for longer storage because it prevents crystals. Sugar is fine for immediate use or short storage. Use ¼ to ½ cup sugar, corn syrup, or honey for each 2 cups of fruit. Saccharin-based sweeteners could also be used to reduce tartness without adding calories. Aspartame sweeteners may lose sweetness during drying.

For more information on making fruit leather, visit the National Center for Home Food Preservation at https://nchfp.uga.edu/how/dry/fruit_leathers.html.



Edited by **Janice Hall**, *Regional Extension Agent*, and **Jean Weese**, *Extension Food Scientist*, Professor, Nutrition and Food Science, Auburn University. Written by **Evelyn Crayton**, former *Extension Assistant Director for Family and Community Programs*, Auburn University

For more information, contact your county Extension office. Visit www.aces.edu/directory.

The Alabama Cooperative Extension System (Alabama A&M University and Auburn University) is an equal opportunity educator and employer. Everyone is welcome! Please let us know if you have accessibility needs.

New July 2019, HE-0360

© 2019 by the Alabama Cooperative Extension System. All rights reserved.

www.aces.edu