Dried Apples

Apples dry especially well and make a tasty, nutritious snack that is lightweight, easy to store and use.

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Increasing the temperature of food evaporates moisture, and air moving over the food carries moisture away. A balance of temperature and humidity is needed for successful drying of foods. High humidity and low temperatures can cause food to dry too slowly encouraging the growth of microorganisms. Penn State Extension *Let's Preserve Drying Fruits and Vegetables (Dehydration)* provides detailed instructions on important aspects of drying as discussed in this article. The University of Georgia Cooperative Extension's *Preserving Food: Drying Fruits and Vegetables* is another excellent resource to read.

Methods of Drying Foods

- Food dehydrators give a better quality dried product than other methods. Commercially made dehydrators are readily available.
- Oven drying works well if you can set the oven to a temperature of 140° to 150°F. Open the oven door about 2 inches to allow moisture to escape. A convection oven works well because it combines low heat with a fan to move the air.

- Sun drying can be used in areas where the humidity is low and there is lots of sunshine. Sun drying does not work well in Pennsylvania.

Selection

As with other methods of preserving food, the end quality of the product will only be as good as the food you start with.

- Select ripe fruit for drying.
- Trim away any bruised spots.
- Apple slices may be peeled or unpeeled, but peeled fruit will dry more quickly.

Pre-treatment

Apples need to be pre-treated to reduce oxidation. Soak freshly cut slices for 10 minutes in a solution of 3¾ teaspoons of powdered ascorbic acid (or crush twenty 500mg vitamin C tablets) or ½ teaspoon of powdered citric acid in 2 cups water. A solution of one part bottled lemon juice to one part water can be substituted for the ascorbic acid solution. Both pre-treatments help preserve color and improve vitamin C content. The process also acts as an antimicrobial agent against *E. coli* bacteria.

Other methods of pretreating the fruit include syrup blanching and steam or water blanching. Sulfuring and sulfite dips are not recommended due to sensitivity issues—particularly for people with asthmatic or respiratory conditions.

Syrup blanching involves simmering the prepared fruit for 10 minutes in a sugar syrup (1 cup sugar, 1 cup white corn syrup, and 2 cups water) and then letting it stand in the hot syrup 30 to 45 minutes before draining, rinsing, and placing on drying trays. Syrup blanched fruit is sweeter and also sticker than fruit treated by other methods. It tastes like candied fruit.

Preparation

- Cut apples into ⅛ to ½-inch slices. Thinly sliced apples will dry as apple chips. Uniform pieces allows for even drying across the entire piece.
- Peeling apples is an option. The skin tends to toughen as it dries and reduces surface area preventing moisture from escaping and increases the drying time.
- Place pre-treated slices on dryer trays in a single layer so that edges do not touch or overlap. Place trays in a preheated dehydrator.

Drying (dehydrator)

- Set initial temperature to 145°F when there is surface moisture on the fruit.
- After one hour, reduce temperature to 135 to 140°F to finish drying the slices.
- Note: If the fruit is dried at too high a temperature, the outer surface will harden preventing moisture from escaping from the center of the slice; this is called case hardening.
- Allow 6 to 12 hours for apple slices to dry.
- Test for dryness. Remove a few slices from the dryer and wait a few minutes until cool. Apples are dry when they are pliable and no beads of moisture form when pressed between your fingers. Thinly sliced apples can be dried to form apple chips.

Conditioning

Because not all slices will dry evenly, it will be necessary to condition the fruit.

- Pack the cooled slices loosely into an airtight glass or plastic container for several days to evenly distribute remaining moisture.
- If any moisture or condensation forms on the inside of the container, the fruit is not adequately dry.
- Put it back into the dehydrator and continue drying.

Pasteurization and Storage

Unpeeled fruit or uncovered fruit needs to be treated to destroy insect eggs that might have gotten on the fruits.

- Heat foods in the oven at 160°F for 30 minutes or place in the freezer at 0°F or below for 48 hours.
- Store in airtight containers in a cool, dark, dry place.
- The shelf life of dried fruits increases when stored in the freezer or refrigerator.

Fruit Leather from Applesauce

Applesauce can be dried by itself or in combination with other fruit purees to make fruit leather. Applesauce has a lower water content than many fruit purees and dries more quickly. Its mild flavor combines well with spices such as cinnamon and cloves.

The leather can be sprinkled with chopped nuts before drying. National Center for Home Food Preservation has guidelines for *Drying Fruit Leathers.*