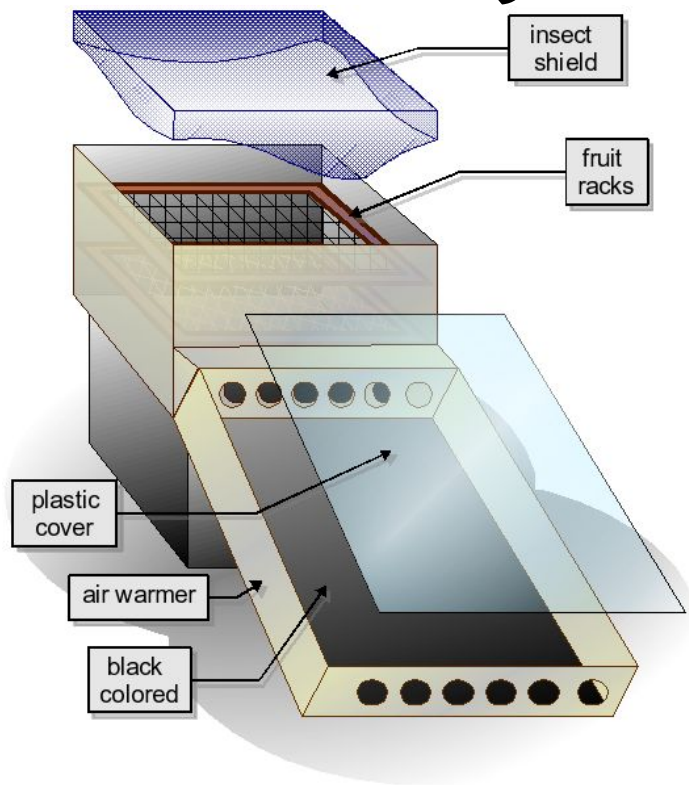


# Solar Food Dryer



## *Materials:*

- 2 Cardboard Boxes
  - Collector box: long and thin
  - Dryer box: tall and nearly square
- Stool
- Plastic Cling
- Tape or Sticks and String
- Black Paint or Black garbage Bag or Soot and Glue Mix
  - If you chose to use paint be sure to leave it in the sun for a day or two. This ensures all the toxins have been released.
- Drying Racks
  - I use wood frames with woven cisel, but any local material can be used as long as there is free airflow.
  - The ideal materials are wood slats or stainless steel screen mesh. Wooden frames covered with cheesecloth or loosely woven cloth is also good.
  - DO NOT use solid metal trays or cookie sheets.

# Pre~Drying Fruit Treatment

The purpose of pre-treating fruit is to keep the color of the fruit and to prevent the fruit from spoiling.

## *Salt Water Dip Pre-Treatment:*

Dissolve 4 tablespoons of table salt in 1 gallon (3.8 liters) of lukewarm water. Slice or drop fruit directly into water. Allow the fruit to soak for no more than 10 minutes or the fruit will absorb too much water and acquire a salty taste. (I only use 3 tablespoons and it works fine.)

## *Syrup Blanching Pre-Treatment:*

This treatment will hold natural color well during drying and storage, but will produce softer textures and sweeter flavored fruit. Prepare sugar syrup by mixing one-cup sugar, one-cup light corn syrup, and 2 cups water. Bring to a boil. Add prepared fruit and simmer about 10 minutes. Remove fruit from heat and let stand in the hot syrup for an additional 15 minutes. Drain fruit well and proceed with drying.

# Guidelines

## *Speed:*

- Once you start drying don't stop; it can cause mold and the like to grow.
- Food should be dried rapidly, but not so fast that the outside hardens before moisture inside has time to evaporate.

## *Temperature, Humidity, and Ventilation:*

- The temperature should not drop below 65 degrees Fahrenheit.
- Humidity will slow down the drying process (usually it will take between 3 to 10 days).
- Trapped air can only hold so much moisture; then drying can no longer occur. So be sure there is some type of airflow.

## *Type of Mangos and Final Stage:*

- The more flesh on the mango the better. You do not want to use any of the fibrous mangos as you can't slice them properly and the fibers will upset your stomach.
- Preparing the mangos when they are almost ripe will allow you to get the most amount of flesh without discarding spoiled parts.
- Be sure not to dry any part of the mango that rotten, it can spoil the whole batch.
- When fruit is almost dry, put it in an airy shady place to prevent scorching from occurring.

# Testing for Dryness

- Be sure to let the fruit cool before testing. Warm food will feel soft and moist even when it is dry.
- Test by squeezing a handful. If pieces of the fruit spring apart and there is no moisture left on your hand when you open it, then drying is complete.
- Cut a piece and look to see if the inside is moist.
- After food is dry cool it on a tray, then put pieces of fruit in a plastic jar, bag, or coffee can. Be sure food is cool; it will sweat if it is put into a container when it is still warm.
- Keep container covered in a warm, dry, airy room. Stir food once a day from one week to 10 days. Then package fruit in a smaller container that is airtight. Conditioning allows moisture from un-dried pieces to be absorbed in over-dried pieces. If any drops of moisture appear on the lid, or container, fruit is not dry and should be returned to dryer.