

FOOD DEHYDRATOR USER MANUAL



PKFD16

Safety Guidelines

When using the electrical appliance it is important to follow basic safety precaution including the following:

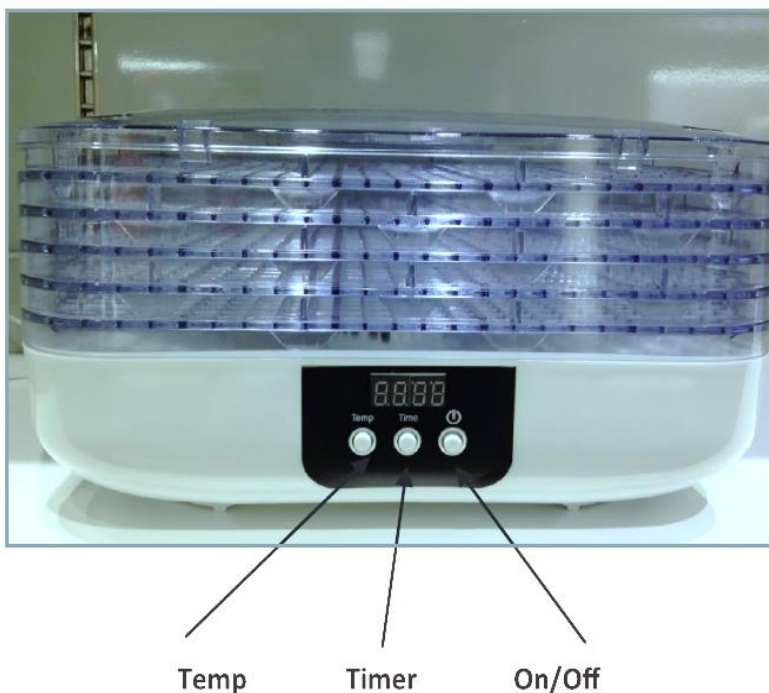
- Read all of the instructions and make sure you save them for future reference.
- Do not let the cord of the appliance hang over the edge of the work surface; this may cause a tripping hazard.
- Ensure that power cord does not come into contact with any hot surfaces.
- Always allow adequate space around the work surface when using Digital food dehydrator.
- Always supervise children when the appliance is in use.
- Any attachments not recommended by the manufacturer may cause damage to the appliance and injury to the user.
- Only operate the appliance on a heat resistant surface.
- Keep flammable objects away from the appliance at all times, this could cause a potential fire.
- Never operate the appliance if it has a damaged cord. Repairs and services of the appliance are only to be carried out by a fully qualified electrician or a service center.
- Always unplug the appliance before cleaning and removing parts. Ensure that the appliance is allowed a cooling period before attempting to clean, remove/repair parts and store the appliance.
- The appliance is designed for indoor use only.
- Do not place the appliance near electric or gas burners.
- Before unplugging the appliance ensure that the control is switched to the “off” position.
- We do not recommend that you use the appliance with an extension cable. However if it is totally necessary please ensure that it has an equal or exceeding rating of the appliance.
- The dehydrator is for domestic use and not for commercial use.
- To protect against electrical shocks do not immerse the plug, cord or the appliance in water or any other liquid.
- The appliance is not to be used by anyone with reduced physical, sensory or mental capabilities (including children) unless they are supervised or instructed how to use the appliance by

someone who is responsible for their safety.

- Do not use the appliance for any other than its intended use.
- NOTE: The sections it is recommended to put all 6 sections on to the appliance during using it, no matter how many sections are empty.

If the sections are adjustable, it is recommended to adjust high place to protect the device from over-heat.

Parts Description



Before First-time Use

- Wash all parts of the product with a damp cloth.
- Ensure that the appliance is dry before attempting to dehydrate food.
- Make sure that all parts are fitted correctly and are in working order.

Preparing the Food

Unlike tinned fruit there is no extra sugar added during the de-hydrating process (unless the user adds the sugar as an optional extra this can sometimes produces a bitter taste) it is important to follow these basic guide lines to produce the best quality food:

- Always ensure that the food is in date and good quality.
- It is best to use tree-ripened fruits as they contain the highest natural sugar content.
- Do not use over-ripe or rotting fruits and vegetables, if the food has bruised or discoloured parts please remove the discoloured section before de-hydrating the product.
- Some fruits such as apples, pears and apricots are pre-treated to slow the loss of vitamins and also to prevent discolouring. Always thoroughly wash the products to ensure they are rid of dirt, bacteria and other harmful substances.
- It's optional to peel fruit or vegetables before drying them, the peel can become tough during the drying process; however it is down to your personal reference.
- It may be necessary to steam/blanch vegetables before drying them, this is due to different texture of the vegetables.

Setup

Stacking the Trays

Before loading the trays with food it is good idea to make sure that they are all aligned right-side up by stacking them up near the preparation area. The narrow side of the tray is always the top. Trays have alignment arrows cast into the handle. The arrows should all be visible on top of the tray handles. Improperly stacked trays will hinder the drying process.

Once the trays are all correct side up you can stack them in two different ways.

Depending on the thickness of the food you can change the stacking height by simply rotating a tray 180 degrees to change it to either tall or short stacked. Refer to the two photos below to identify the difference between these two heights.

Any combination of stacking can be used to accommodate the foods being dried. An example would be some short tray stacking for banana chips and some tall stacking for large strawberry.

Operating your Food Dehydrator

1. Safely place the appliance on a flat and level surface. Load and insert the trays, then insert the plug into the electrical outlet.
2. To adjust the temperature press the “TEMP” button to select the desired temperature. To change the temperature in singular digits, press the button without holding it. To increase the temperature, rapidly hold the button.
3. Set the desired amount of time by pressing and holding the “Timer” button. The number displayed in the digital display represents the number of hours the appliance will operate at before automatically turning off. When pressing the button, the digital display will cycle from 1 through to 48 then restart at 1 again. Individual presses of the button will advance the count by one hour. Holding the button will advance the time quicker.
4. Press the ON/OFF button to begin the programme cycle. The colon in the timer display will begin to flash indicating it is running. The display shows the remaining time of operation in the format HH MM. You will also hear the fan

operating.

5. The appliance will stop automatically when the time expires or you can stop it any time using the ON/OFF button. Remove the plug from the outlet.

If you wish to add more time during the cycle or if you want to change the set temperature, press ON/OFF once to stop the process, change the desired setting as described above and then restart by pressing the ON/OFF switch again.

Dryness test

Fruits if dried properly should have a pliable and leather texture with little moisture (less than 20%). It is a frequent problem that people over dry fruit, this can lead to a lower quality taste and the fruit having less nutritional value. Therefore to ensure the best possible taste is achieved ensure the correct drying time is followed.

Vegetables should be chewy and brittle however different vegetables can vary in texture.

Storage of foods

It is vital to store de-hydrated food correctly in order to keep the quality and taste of the food at a premium. Ensure that all dried foods are stored in a cool dark place; the cooler the food is kept the longer the optimal quality will be maintained.

If it is possible please store the food in a refrigerator or freezer, alternatively you can store dried foods in a cool place in your home.

Be aware that light causes the quality and nutritional value of food to deteriorate.

When storing the food it is recommended to store it in a sealed bag or a darkened container.

Re-hydrating foods

Foods that have been dehydrated can be re-hydrated in water, this can be performed in 3 ways:

- Fruits and vegetables can be soaked in water for 2-6 hours, ensure that they are refrigerated during this process.
- They can soaked in boiling water for 5-10 minutes until they have reached the desired consistency.
- You can also rehydrate fruits and vegetables by cutting them. Do not add seasoning or sugar during this process. A good rule of thumb is to use 2 cups of water to the fruit to allow it to stew.

Vegetable Dehydration Tips

Dried vegetables are every bit as flavorful and versatile as dried fruits. With dried vegetables you can make delicious soups, stews, casseroles and more. Basically, anywhere you would use fresh vegetables, you can use dehydrated vegetables.

Before preparing and dehydrating your chosen vegetables, always wash them in cold water. A certain amount of coring, slicing, peeling or shredding is required. A food processor can be a handy tool when using vegetables.

Be creative when drying vegetables. Placing vegetables in diluted lemon juice or similar flavors for approximately 2 minutes will add a hint of flavor to vegetables such as green beans and asparagus.

Pre-treatment of Vegetables

For the most part, vegetables need little in the way of special treatment for dehydration although there are some exceptions. A few vegetables, such as onions, garlic, peppers, tomatoes and mushrooms can be dried and reconstituted successfully without pre-treatment. In general, if vegetables must be steamed or blanched for freezing, they have to be treated for drying.

With the above-named exceptions in mind, most remaining vegetables will need to be

steamed or blanched before drying. Many vegetables have enzymes that help the food ripen; leaving these enzymes active in the food will cause them to continue to bring about changes in flavor and aroma which can be undesirable. Although untreated vegetables which are dehydrated can still be good for as long as three to four months, heat-treated vegetables reconstitute in less time, keep longer, and generally retain more flavor when reconstituted.

Steaming

Steaming is the best method of pre-treatment. Place a single layer of chopped or sliced vegetables in a colander or steam-basket. Shredded vegetables can be 1/2 inch deep in the colander or basket. Set vegetables in a pot above a small amount of boiling water and cover. Water should not touch the vegetables. Begin timing immediately. When they are ready to remove, the vegetables should be barely tender. Drop in a bowl of cold water to stop cooking and for food to retain its color. Pat dry and spread on trays to dehydrate.

Blanching

Blanching is recommended for green beans, cauliflower, broccoli, asparagus, potatoes and peas. Since these vegetables are often used in soups or stews, blanching will ensure that they retain a desirable color. To blanch, place prepared vegetables in a pot of boiling water for 3 to 5 minutes only. Strain and pat dry; then place the vegetables in the dehydrator.

Blanching is faster than steaming, but many nutrients are lost in the water. It is not recommended for chopped or shredded vegetables, which would easily overcook during blanching. To blanch sliced vegetables, drop the prepared vegetables into a large pot of boiling water. Do not add more than 1 cup food per quart of boiling water. Begin timing immediately. For timing, follow standard freezing directions. Timing is approximately one-third to one-half that of steaming or until vegetables are barely tender.

Fruit Dehydration Tips

Dried fruit is a superb food treat. Try it plain as fruit leather, or in ice cream cobblers and pies. It's hard to imagine a better tasting or more nutritious snack than dried fruit.

Dried fruit is naturally sweet, has no preservatives, and is inexpensive.

Your food dehydrator makes drying fruit easy. With all fruits, it is best to wash them before starting. After that, most fruits just need halving, coring or pitting and slicing before placing them in the dehydrator.

You do not have to pre-treat fruits to get good results, but some fruits, such as apples, pears, peaches, apricots and bananas tend to darken somewhat with drying or storage beyond six to seven months. Although they are still edible when dark, they tend to not look appealing. If you don't mind the change in color of your dried fruit, there is no need to pre-treat. Fruits like bananas turn brown without pre-treatment, but at the same time they become very sweet with pure banana flavor by simply slicing and placing directly into the dehydrator. For drying times of fruits, refer to the Fruit Preparation Table.

To avoid fruits from darkening, fruit pieces can be dipped in solutions of lemon pineapple, or orange juice, or any other ascorbic acid. Prior to dehydration, dip the fruit in the solution for two minutes. Drain on paper towels and place in drying trays.

Lemon, Pineapple or Orange Juice

Fresh or bottled lemon, pineapple or orange juices are the best because of their natural sweetness. Pineapple and orange juice can be used full strength or diluted to taste. If you use lemon juice, it is best to dilute it with 1 part juice to 8 parts water and soak the fruit pieces for two minutes. Be aware that the taste of these juices can overpower the taste of the fruit being dried and may not always prevent discoloration of food. Experiment with the dilution and soaking times to suit your taste.

Ascorbic Acid

Crystalline ascorbic or products with ascorbic acid made for preserving fruits for canning may be obtained from drug stores. Most grocery stores sell it with their

canning supplies as well. Mix 1 tablespoon in four cups of water and soak the fruit for about two minutes. Like lemon juice, the taste can be quite overpowering, so experiment with concentrations and soaking times.

Sodium Bisulfite

Sodium Bisulfite can be purchased at your local pharmacy. If you or anyone who will be eating the food has any known chemical allergies, you should check with your physician before using this chemical. Be certain to ask for food grade (safe) product only. Mix 1 teaspoon of Sodium Bisulfite in 1 quart of water. Dip the sliced fruit the solution for a few minutes. Remove, drain and place on the dehydrator tray.

Fruit Leather Dehydration Tips

Sometimes referred to as Fruit Rolls, Fruit Strips, or Fruit Jerky, fruit that is pureed and dried in thin sheets becomes a tasty, chewy, candy-like snack we call fruit leather. You have probably sampled the commercial versions from the market, but once you've tasted it made fresh at home with quality fruit, you'll never go back to store bought! Fruit leather is a good way to make use of leftover or overripe fruit that might otherwise be discarded.

Making fruit leather is very easy. Start by thoroughly washing the fruit in cold water and remove any stems or leaves left on the fruit. Remove the peel, skin, pits, or seeds as necessary. Then just puree the fruit or fruit combination of your choice, and add just enough liquid to the blender to make a smooth thick puree. Honey, fruit juice or water can be used but don't make the mixture too thin or it won't stay put on the dehydrator shelf. With fruits that have a high moisture level little or no liquid needs be added at all.

Since you are the cook, you get to taste the puree as you are making it. It is not only your privilege, but an important part of the process. If the puree tastes good, the leather will taste even better! Remember that the flavors and sweetness will concentrate when the leather is dry, so don't make it too sweet!

It is best to use a fruit leather sheet designed for this purpose, but if not available, you

can line one half of each drying tray with plastic wrap. To maintain adequate circulation, only half of each tray should be covered. If using more than one tray, place the plastic on alternate halves of the trays in the stack. Remember that the trays only go in one way, so stack the trays properly on the counter before lining them to assure proper placement of the plastic wrap.

When drying sticky purees (bananas, for instance), spray a small amount of vegetable oil spray on the fruit leather sheet or plastic wrap. After all fruit leather sheets are filled, stack the drying trays atop the base. Dehydrate until the fruit puree is the texture of leather. It should be easy to peel off of the fruit leather sheet. Wrap in plastic wrap and store at room temperature. Spices, chopped nuts or coconut may be added to the puree for extra flavor. For further variation, puree several types of fruit together.

Feel free to experiment with your recipes. Single fruit flavors will work just fine, but there are lots of various fruit combinations that combine to make flavorful snacks (Strawberry-Banana, Pineapple-Orange, Mixed Berries, etc).

Meats-Fish-Poultry Dehydration Tips

Dried meats are best when made for upcoming camping and backpacking trips. When reconstituted they yield a tasty meat, somewhat like fresh cooked.

IMPORTANT NOTE: Except for jerky, cooking of all meats and fish before drying is required to ensure safety. Do not store dried meat, fish or poultry longer than two months.

Use only very lean meats and cut away as much fat as possible. Meat should be marinated before drying to add flavor and to tenderize it. The marinade should contain salt, which helps extract water from the meat and also helps preserve it, but it should not have any oil. Most marinades contain some sort of acid (like tomato sauce or vinegar) because the acid breaks down the fibers making the meat tender.

Slicing meat while partially frozen will be easier, especially if you want very thin slices. A food processor or a specialized meat slicer will also do a great job. You can tell your butcher that you are making dried meat or jerky and they will be glad to thinly slice it for you.

When drying meat or game for stews, soups, etc., remember that these types of meats must be cooked prior to drying. Cook, cut into small cubes and then place the slices in the dehydrator. Dry until all moisture has been removed from the meat; anywhere from 2 to 8 hours. When ready to use in your favorite stew, simply rehydrate by soaking in water or broth for at least 1 ½ hours, or until tender and about the size they were before dehydrating.

BEEF

Choose lean cuts. Beef flank steak, round or rump work better than beef chuck or rib.

POULTRY

All poultry **MUST** be cooked before drying. Steaming or roasting is the best method. Chicken breasts are leaner than dark meat.

FISH

A good idea is to steam the fish before dehydrating or, if you chose to bake it, preheat your conventional oven to 200°F and bake for 20 minutes or until the fish is flaky.

When you are drying fish, sole and flounder are good choices.

JERKY

Dehydrating meat without prior cooking will produce the rigid chewy style of meat known as jerky. It is one of the oldest known forms of meat preservation. Because jerky is made without cooking the meat first, it is important to start with quality meat, and to have a clean and sanitary work area. Also, be sure to thoroughly cleanse the work surfaces when done. Remember that Jerky is the only meat to be placed uncooked in the dehydrator.

Making Beef Jerky

As with nearly all foods, it is important to start with a quality cut of meat. Select a lean flank or round steak about 1 to 1/2 inches thick. Trim off all fat and connective tissue. Fat hampers the ability of the meat to dry, and the connective tissue will make for a tough jerky to chew.

For easier cutting, place meat in the freezer for about 30 minutes to partially freeze. Then turn it over and freeze for an additional 15 minutes. Cut across the grain into strips about 1/8 of an inch thick.

Marinate the strips for at least 3 hours, or even overnight. This gives the meat a unique flavor and at the same time tenderizes the meat. Increase the marinating time for a stronger flavored jerky.

Meat may be seasoned with salt, pepper, garlic, onion powder, or other spices.

Because flavors intensify during dehydration, use salt sparingly! There are lots of jerky recipes available. Try them or create your own unique flavor!

Drain marinated strips on paper towels, and place the strips on drying trays (remember to protect the dehydrator from dripping foods as described earlier in this manual). Dehydrate until the strips are really dry and stiff. This will take from 6 to 16 hours. Unlike other dried meats, Jerky should be slightly chewy but not brittle.

IMPORTANT NOTE: Remember that keeping a sanitary work area is crucial. Be sure to wash all work surfaces and your hands before handling the meat, and wash your hands after touching any other object or surface before handling meat again.

Flowers

Flowers being used for drying should be picked after the dew has dried and before the evening dampness. Flowers should be dried as quickly as possible after picking.

Discard any damaged or brown leaves. Place them in the trays without overlapping.

Drying times will vary depending upon the size and type of flower. Dry for approximately 2 to 36 hours.

Herbs

Rinse and shake off excess water and then pat them dry. Remove any dead or discolored leaves. If using seeds, pick them when the pods have changed color. You should leave herbs on the stem and remove them when the drying has been completed. Spread herbs loosely on the tray. Drying times will vary according to size and type. Dry for approximately 2 to 6 hours.

Storing Dried Foods

Once food is dried it is important to store it properly for best results. By following these storage techniques, your food will stay fresh and ready-to-use for the longest time possible.

Containers

Any container which is clean, airtight, and moisture-proof is suitable for storage. Heavy, zippered plastic bags or heat sealing cooking bags are excellent as well. Fill each bag as much as possible and squeeze out any excess air. Filled bags may be placed in metal cans with lids (coffee cans are good) to keep out insects. Glass jars with tight-fitting lids can be used with or without plastic bags. Quality plastic containers with tight-fitting lids are good but they must be airtight. Do not use paper or cloth bags, lightweight plastic bags, bread wrappers, or any container without a tight-fitting lid.

General Food Storage Tips

- Wait until food is cooled off completely before storing.
- Heat and light will cause food to deteriorate. Keep food in a dry, cool, and dark place.
- Remove all the air you possibly can from the storage container and close tightly.
- Ideal storage temperature is 60°F or lower.
- Never store food directly in a metal container.
- Avoid containers that breathe or have a weak seal.

- Check the contents of your dehydrated food for moisture during the weeks following dehydration. If there is moisture inside, you should dehydrate the contents for a longer time.
- For best quality, dried fruits and vegetables should not be kept for more than 1 year.
- Dehydrate your produce in the summer when it is at optimum freshness and replace it annually.
- Dried meats, game, poultry and fish should be stored for no more than 3 months if kept in the refrigerator, and no more than 1 year if kept in the freezer.
- Vacuum sealing can help to extend storage life by several months, if food has been properly and thoroughly dried.

Location

Cool dark and dry are the keys to maintaining the quality of dried food. Shelves near a window may need to be covered to keep out light. Glass jars or plastic containers should be placed in a paper bag or in a closed cabinet. Cement walls and floors are often damp and cold. Therefore, dried food containers should not be placed directly on the floor, or touching a basement or cellar wall as this can cause condensation in the container. Do not store dried food near items with a strong odor (such as varnish, paint remover or kerosene).

Length of Storage

Dried fruits and vegetables should not be stored longer than one year. Plan to use all dried meats, fish, poultry or jerky within a month or two. Label dried foods, and rotate on a first-dried, first-to-be-used basis. Check dried foods periodically. If the food seems more moist than when packed, moisture is getting into the container. Spread food on drying trays and re-dry. Mold indicates that the food was not properly dried before being stored. Destroy moldy food; it is not safe to eat.

Reconstitution

Dehydration is the process of removing moisture from food. Reconstitution is the replacement of that moisture to bring the food back to its natural state. Although some dried foods such as fruit are excellent in their dehydrated state, you will often want to reconstitute other dried foods before eating them. Here are some tips on reconstitution:

Just Add Water

For chopped or shredded vegetables, and for fruits to be used in cookies, no reconstitution is usually needed. If the pieces are quite crisp and dry you can try sprinkling with 1 tablespoon of water per cup of dried food.

For vegetables and fruits to be used in soufflés, pies, quick breads, dough or batter, use 2 parts water to 3 parts (by volume) dried food.

For vegetables and fruits which will be cooked in liquids such as vegetable side dishes, fruit toppings, and compotes, use 1 to 1 ½ parts water to 1 part dried food. Extra liquid may be required for proper cooking.

Time for Reconstitution

Chopped and shredded foods reconstitute quickly. Generally, 15 to 30 minutes is sufficient. Larger vegetable or fruit slices, and meat cubes can be reconstituted overnight in water, while being left in the refrigerator. Alternately, you can also choose to place them in boiling water, remove it from the stove, and let stand 2 to 3 hours. Whole pieces of fruit take longest to reconstitute, and are best left to soak overnight.

Other Reconstitution Hints

If you drain reconstituted foods, save the liquid. This liquid has great nutritional value. Freeze this liquid for later use in soups, leathers, pies or compotes. There is no need to reconstitute ahead of time when making soups. Dried vegetables can be added directly to the soup about one hour before serving. Do not add spices, salt, bouillon cubes or tomato products until the vegetables are reconstituted and cooked. These items

considerably hinder rehydration. Some foods take longer to reconstitute than others. Carrots and beans require more time than green peas or potatoes. A rule of thumb: those that take the longest to dehydrate will take the longest to reconstitute. Try not to use more liquid than necessary for reconstitution because nutrients will be drained away with the excess water. Place dehydrated food in a container and use just enough water to cover the food. Add more water later as needed to replace what the food absorbs.

Care and Maintenance

After each use, clean the drying trays and dehydrator lid with warm soapy water.

Do not wash trays, lid or base in dishwasher.

Stubborn particles may be removed by soaking and / or using a plastic scrubber. Do not use abrasive materials or solvents to clean the plastic! To clean the dehydrator's base (the bottom part with the motor and heating element), unplug the dehydrator and wipe it clean with a damp sponge or cloth. NEVER immerse the base in water or allow liquid to flow into the area that contains the electrical parts.

Storage

After the dehydrator is cleaned, dry all the parts and store in a clean and dry place.

DEHYDRATION REFERENCE CHART

Food type	Recommended temperature
Herbs	95° F / 34° C
Living foods	105°F / 41° C
Raising bread	110°F / 43° C
Making Yogurt	115°F / 46° C
Vegetables	125°F / 52° C
Fruits, Fruit rolls	135°F / 57° C
Meats / Fish	155°F / 68° C
Jerky	155°F / 68° C