

Koolatron™

DELUXE
TOTAL Chef

FOOD DEHYDRATOR

WITH FAN

DIRECTIONS FOR USE & RECIPES!



Koolatron™

Brantford, Ontario, Canada
Batavia, New York, USA
1-800-265-8456
www.koolatron.com

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Made in Taiwan

H1S007

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Read These Instructions Before Using This Unit!
Save These Instructions

TCFD-05

WARRANTY

This KOOLATRON product is warranted to the retail consumer for 90 days from date of retail purchase, against defects in material and workmanship.

WHAT IS COVERED:

- Replacement parts and labour.
- Transportation charges to customer for the repaired product.

WHAT IS NOT COVERED:

- Commercial or industrial use of this product.
- Damage caused by abuse, accident, misuse, or neglect.
- Transportation of the unit or component from the customer to Koolatron.

IMPLIED WARRANTIES:

Any implied warranties, including the implied warranty of merchantability are also limited to duration of 90 days from the date of retail purchase.

WARRANTY REGISTRATION:

Register on-line at www.koolatron.com AND keep the original, dated, sales receipt with this manual.

WARRANTY AND SERVICE PROCEDURE:

If you have a problem with your Food Dehydrator, or you require replacement parts, please telephone the following numbers for assistance:

North America **1-800-265-8456**

The Service Advisors will advise you on the best course of action. Koolatron has Master Service Centres at these locations:

Koolatron USA	Koolatron Canada
4330 Commerce Dr.	27 Catharine Ave.
Batavia, NY	Brantford, ON
14020-4102	N3T 1X5
U.S.A.	CANADA

A Koolatron Master Service Centre must perform all warranty work. Service after warranty may be obtained at a Master Service Centre or at an authorized service dealer. Purchase Receipt is required to establish warranty eligibility.

IMPORTANT SAFEGUARDS

With proper care, your *Total Chef Food Dehydrator* is designed to provide years of use. Be sure to follow these basic precautions when using this electrical appliance.

1. Do not touch heating coil.
2. Do not touch hot surfaces.
3. To protect against electrical hazards do not immerse cord, plugs, or the base assembly in water or other liquid.
4. Close supervision is necessary when any appliance is used by or near children.
5. Unplug from wall outlet when not in use and before cleaning. Allow to cool before putting on or taking off parts.
6. Do not plug in dehydrator while top is inverted (storage position) and do not invert top into bottom for storage until unit has completely cooled down.
7. Do not operate any appliance with a damaged cord or plug or after the appliance malfunctions, or has been damaged in any manner. Return appliance to the nearest authorized service facility for examination, repair or adjustment.
8. The use of accessory attachments not recommended by the appliance manufacturer may cause hazards.
9. Do not plug in outdoors.
10. Do not place on or near a hot gas or electric burner, or in a heated oven.
11. To clean, wipe with a damp cloth or sponge with mild soap.
12. Do not pour liquids in the dehydrator.
13. Do not use appliance for other than intended use.
14. Do not let cord hang over edge of table or counter.

FOR INDOOR USE ONLY
DO NOT PUT IN AUTOMATIC DISHWASHER
HAND WASH ONLY

SAVE THESE INSTRUCTIONS

PRINCIPLES OF DEHYDRATION

There are no absolutes and quite a few variables in food dehydration. The best way to become proficient is to experiment using this booklet as a guideline and then adjusting your drying technique according to your results.

Record keeping is helpful in food dehydration. Records of weight of produce before and after the dehydration, length of time required for drying, etc., can be useful information in attaining a good quality product. Information can be recorded on the labels of the food storage containers.

Tasty ready-to-eat snacks and confections are some of the versatile products you can create by drying fruits and vegetables at home. After soaking in water, the rehydrated foods can be used in favorite recipes for casseroles, soups, stews and salads. Rehydrated fruits and berries can also make excellent compotes or sauces.

Drying is appealing because the procedure is relatively simple and requires little equipment. Only minimal storage space is needed.

Dehydrating is a method of heating the food to evaporate the moisture present, and removing the water vapor formed.

Most food products release moisture rapidly during early stages of drying. This means they can absorb large amounts of heat and give off large quantities of water vapor while remaining at a temperature well below that of the drying air.

PROCEDURE

Fruits and vegetables selected for drying should be the highest quality obtainable - fresh and fully ripened. Wilted or inferior produce will not make a satisfactory dried product. Immature produce lacks flavor and color. Overmature produce may be tough and fibrous or soft and mushy.

Prepare produce immediately after gathering, and begin drying at once. Wash or clean all fresh food thoroughly to remove any dirt or spray. Sort and discard defective food; decay, bruises, or mold on any piece may affect the entire batch.

For greater convenience when you finally use the food, and to speed drying, it is advisable to peel, pit or core some fruits and vegetables. Smaller pieces dry more quickly and uniformly.

VEGETABLE	PREPARATION	DRYNESS TEST	TIME
Hot peppers	Wash and dry whole. Wear rubber gloves to protect hands when preparing hot peppers.	Leathery	4-12 hrs.
Potatoes	Peeling optional. Slice into 3/16" to 1/4" or dice, grate, cut French Fry style. Steam as for beets.	Brittle	5-12 hrs.
Pumpkin (also Hubbard Squash)	Cut into small pieces. Bake or steam until tender. Cut into strips 1-3" wide, peel and remove pulp. Slice strips 1/2" thick. Scrape pulp, place in blender to puree. Dry with paper towels.	Leathery	5-15 hrs.
Rutabagas	Same as carrots, but slice thin.	Leathery	4-12 hrs.
Tomatoes	Wash, remove stems. Dip in boiling water to loosen skin. Cut in halves, or slices.	Leathery	6-24 hrs.
Turnips	Same as carrots, but slice thin.	Leathery	4-12 hrs.
Zucchini	See Eggplant.		
Garlic	Tear into small pieces, dry, then chop if desired.	Brittle	2-10 hrs.
Greens (Spinach, Kale, Chard, Mustard, Turnip, Beet Greens)	Wash thoroughly, trim tough stems. Steam until wilted but not soggy. Use bottom tray of dehydrator but be careful not to scorch.	Very Brittle	4-10 hrs.
Mushrooms	Select mushrooms with cap curling under - these are young and tender. Brush off dirt or wipe with damp cloth. Slice, chop or dry whole, depending on size.	Leathery to brittle, depending on size and age	3-10 hrs.

VEGETABLE	PREPARATION	DRYNESS TEST	TIME
Carrots	Select young tender roots. Steam until tender. Cut into pieces, shreds, cubes, or strips.	Leathery	4-12 hrs.
Cauliflower	Dip cauliflower into 3 table- spoons salt per 2 quarts of water for 2 minutes. Steam until tender.	Leathery	5-15 hrs.
Celery	Separate stalks from leaves. Wash both thoroughly. Cut stalks into 1/4" slices. Leaves dry first, so remove when dry. Flake leaves after drying, for use in soups, stews, etc.	Brittle	4-12 hrs.
Corn	Remove husks, silk and blemishes just before steaming. Blanch on cob until milk is set. Cut from cob and spread over tray. Stir several times for even drying.	Brittle	4-15 hrs.
Cucumber	Pare, slice in 1/8" slices and dry.	Leathery	4-14 hrs.
Eggplant (Summer and Italian Squash, Zucchini)	Trim, wash and slice 1/4" to 1/2" thick, and spread on tray.	Brittle	4-14 hrs.
Onions and Leeks	Remove peels and cut into 1/2" slices, nuggets, or chop. Stir several times during drying.	Leathery	4-10 hrs.
Okra	Use young, tender pods. Wash, trim and slice into 1/4" discs.	Leathery	3-10 hrs.
Parsley	Tear into small pieces, dry, then chop if desired.	Brittle	2-10 hrs.
Parsnips	Same as carrots.	Leathery	4-12 hrs.
Peas	Use only tender, sweet varieties. Shell and blanch gently, 3-5 minutes.	Brittle	4-10 hrs.
Peppers (Green and Pimentos)	Cut in 1/4" strips or rings. Remove seeds, wash and dry. May also be chopped. Chopped, dried pimentos are Paprika.	Brittle	4-10 hrs.

PRETREATING

Enzymes in fruit and vegetables are responsible for color and flavor changes during ripening. These changes will continue during drying and storage unless the produce is pretreated to slow down enzyme activity.

Blanching can be used in the pretreatment of vegetables, as it helps set color and hastens drying by relaxing tissues. Blanching may also prevent undesirable changes in flavor during storage, and improve reconstitution during cooking.

Many light-colored fruits (especially apples, apricots, peaches, nectarines, and pears) tend to darken during drying and storage. To prevent this darkening, the fruit may be pretreated by blanching or by a suitable dip, but effectiveness of pretreatment methods varies.

Fruit may be dipped in the following:

Pineapple or lemon juice as a natural alternative to other pretreatments to reduce browning. Slice fruit directly into juice. Remove promptly (about 2 minutes) and place in trays. Fruits may also be dipped into honey, spices, lime or orange juice, jello powders, or sprinkled with coconut to give them a snappy dried flavor. Use your imagination and make your own flavorful dip.

Sodium Bisulfite: Ask for food safe, (USP) grade only. Dissolve 1 teaspoon of sodium bisulfite in one quart of water. Prepare small amounts of fruit and dip for 2 minutes in the solution. This helps prevent loss of Vitamin C and maintains a bright color. Sodium bisulfite may be obtained from a local pharmacy.

A solution of salt.

A solution of ascorbic acid or citric acid. Commercial antioxidant mixtures containing ascorbic acid may also be used, but often are not as effective as pure ascorbic acid.

Fruits may be steam-blanching. However, blanched fruits may turn soft and become difficult to handle.

Syrup blanching may help retain the color of apples, apricots, figs, nectarines, peaches, pears and plums. A sweetened candied product will result.

Fruits with tough skins (grapes, prunes and small dark plums, cherries, figs, and some berries) may be water-blanching to crack the skins. This will allow moisture inside to surface more readily during drying.

Dried or reconstituted fruits and vegetables can be used in a variety of ways.

Use dried fruit for snacks at home, on the trail, or on the ski slopes. Use pieces in cookies or confections.

Serve reconstituted fruit as compotes or as sauces. It can also be incorporated into favorite recipes for breads, gelatin salads, omelets, pies, stuffing, milkshakes, homemade ice cream and cooked cereals.

Add dried vegetables to soups and stews or vegetable dishes. Use as dry snacks or in chip dip.

Include reconstituted vegetables in favorite recipes for meat pies and other main dishes, as well as gelatin and vegetable salads.

Powdered vegetables in the dried form make a tasty addition to broths, raw soups, and dressings.

For optimum maintenance of nutritional value, we suggest::

- Blanching, the correct length of time.
- Packaging dried foods properly and storing containers in a cool, dry, dark place.
- Checking dried foods periodically during storage to insure that moisture has not been re-absorbed.
- Eating dried foods as soon as possible.
- Using liquid remaining after reconstitution in recipes.

DRYING

Drying time varies according to fruit or vegetable type, size of pieces, and tray load.

Before testing foods for desired dryness, remove a handful and cool for a few minutes. Foods that are warm or hot seem softer, more moist, and more pliable than they will when cooled.

Foods should be dry enough to prevent microbial growth and subsequent spoilage. Dried vegetables should be hard and brittle. Dried fruits should be leathery and pliable. For long term storage, home dried fruits will need to be drier than commercially dried fruits sold in grocery stores.

FRUIT	PREPARATION	DRYNESS TEST	TIME
Pineapples (canned)	Drain and pat dry.	Leathery	6-36 hrs.
Plums	Wash, leave whole or cut in half and remove pits or pop them out when half dried.	Pliable	5-24 hrs.
Prunes	Same as plums, but soak in boiling water for 2 minutes first.	Leathery	8-36 hrs.
Rhubarb	Use only tender stalks. Wash, cut in 1" lengths.	No visible moisture	5-24 hrs.

DRYING TABLE FOR VEGETABLES

VEGETABLE	PREPARATION	DRYNESS TEST	TIME
Artichoke hearts	Cut hearts into 1/8" strips. Boil 5-8 minutes in 3/4 cups water containing 1 tablespoon lemon juice.	Brittle	4-12 hrs.
Asparagus	Wash and cut into 1" pieces. Tips yield better product. Stems, crushed after drying make excellent seasoning.	Brittle	4-10 hrs.
Beans (green or wax)	Cut into 1" pieces or cut French style. Steam until translucent. Stir beans on tray after partial drying, moving inside beans outside for more even drying.	Brittle	4-14 hrs.
Beets	Tear off all but 1" of tops and roots. Wash, blanch, cool. Remove tops, skin and roots. Dice or slice.	Brittle, dark red	4-12 hrs.
Brussel Sprouts	Cut sprouts from stalk, cut in half lengthwise through stem.	Brittle	5-15 hrs.
Broccoli	Trim, cut as for serving, wash thoroughly. Steam tender, about 3-5 minutes.	Brittle	5-15 hrs.
Cabbage	Trim, cut into strips 1/8" thick. Cut core into 1/4" thick strips. Use bottom shelf of dehydrator.	Leathery	4-12 hrs.

DRYING TABLE FOR FRUITS

The times are approximate. Your drying times will vary with room temperature, humidity, moisture content of the food and how thinly the food is sliced. The presence of natural juices in food will also vary. Some fruit sugars tend to be stickier than others.

FRUIT	PREPARATION	DRYNESS TEST	TIME
Apples	Pare, core and cut in slices or rings. Dip in pretreatment for 2 min. Drain and place on tray.	Pliable	4-15 hrs.
Apricots	Dry in halves and turn inside out or cut into quarters. Pretreat to help retain color without penetrating skin of fruit.	Pliable	8-36 hrs.
Bananas	Peel and cut into 1/8" slices.	Crisp	5-24 hrs.
Berries	Strawberries may be sliced in 3/8" slices. Leave other berries whole. Bathe wax-coated berries in boiling water.	No visible moisture	5-24 hrs.
Cherries	Do not stem, until ready to prepare. Pitting is optional, or pit when 50% dry.	Leathery but sticky	6-36 hrs.
Chives	Chop - spread on tray	Brittle	4-10 hrs.
Cranberries	Wash well, chop for flakes or leave whole.	No visible moisture	4-20 hrs.
Grapes (raisins)	Wash, remove stems and leave whole.	Pliable and leathery	6-36 hrs.
Nectarines	No need to peel. Dry with skin down on screen, or cut in 3/8" slices or circles.	Pliable	6-24 hrs.
Orange Rind	Peel in long strips and dry. Do not grate until ready to use.	Brittle	6-15 hrs.
Peaches	Remove peels during dehydration if desired. Pit when 50% dehydrated. Halve or quarter.	Pliable and leathery	5-24 hrs.
Pears	Peel, remove core and woody tissue. Cut into slices or rings, halves, quarters or eighths.	Pliable and leathery	5-24 hrs.
Pineapples (fresh)	Remove core, cut in slices or wedges or chunks.	Pliable	6-36 hrs.

PACKING AND STORAGE

Fruits cut into a wide range of sizes should be allowed to "sweat" or condition for a week after drying to equalize the moisture among the pieces before placing in long term storage. To condition, place fruit in a non-aluminum, non-plastic container and put in a dry, well-ventilated and protected area.

Dried foods should be thoroughly cooled before packing. Package in small amounts so that food can be used soon after containers have been opened.

Pack foods as tightly as possible without crushing into clean, dry, insect-proof containers. Glass jars or moisture-vapor proof freezer cartons or bags (heavy gauge plastic type) make good containers. Metal cans with fitted lids can be used if the dried food is first placed in a plastic bag.

Your dehydrated food should be checked about once a month. Should you find mold growing on a piece of the dried food, scrape it off and then pasteurize the contents.

To pasteurize the contents, spread food on a cookie sheet and bake in oven for 15 minutes at 175°F. Repack in a clean, air-tight container.

ROTATING THE TRAYS

Your new Food Dehydrator is scientifically designed to rely on natural heat convection to carry away moist air from the food. Trays should be rotated during the processing period to insure even drying. Trays nearest the bottom exposed to the hottest, driest air will dry more rapidly. So simply move them up and move the ones on top to the bottom.

REMEMBER

1. The best results are achieved when the quality of the food is high. Be sure to select ripe produce in good condition, as bad food may give an off-flavor to the entire lot.
2. Clean produce is important. Wash thoroughly, remove soft or spoiled areas, slice and pre-treat if necessary. Be certain that your hands, your cutting utensils and your food preparing area are also clean.
3. You can expect a variation in the drying times. Drying times are affected by the size of the load, thickness of the sliced produce, humidity of the air and the moisture content of the food itself.
4. Be sure to let the produce cool before testing for dryness.
5. Trays may be fully loaded, if desired, with pieces barely touching but not overlapping.

6. About six to ten percent of the moisture may remain in your foods without danger of spoilage. Many dried foods will have a leathery consistency, rather like licorice.
7. Rotate trays if you notice uneven drying or a very heavy load. Just move bottom tray up to the middle and the top one down.
8. To remove seeds or pits from prunes, grapes, cherries, etc., dehydrate 50% until the seeds pop out. This prevents juice from dripping out.

RECIPES

MIXED BAG OF FRUIT

2 bananas (peeled), 1/2lb strawberries, 1 cup pineapple chunks (canned)
Slice fruit uniformly, about 1/4 inch thick. Add 1/4 cup of mixed nuts after drying and cooling.

APPLE CINNAMON RINGS

5 lbs apples, 5 teaspoons of cinnamon
Peel and core apples with a cylindrical apple corer. Slice into 1/4 inch rings. Sprinkle with cinnamon prior to drying.

CITRUS THREESOME

3 lbs oranges, 5 lemons, 4 firm grapefruits
Wash fruit. Leaving rind on, slice all fruit uniformly into 1/4 inch thick pieces. Place in dehydrator trays and dry.

TROPICAL PARADISE

10 kiwis, 1 pineapple, 3 papayas
Peel papayas and kiwis. Remove core and skin from pineapple. Slice all fruit uniformly, about 1/4 inch thick. Place in dehydrator trays and dry.

STRAWBERRY TREATS

2 cups fresh strawberries - cleaned
Put into blender along with a small amount of apple juice to help liquify the berries. Line tray(s) with plastic wrap. Pour blended berries onto wrap, evenly spreading with a spatula. Dehydrate for 6 hours - approximately (depending on if you prefer brittle or chewy).

JERKY

In a 9x13 baking dish, marinate thinly sliced beef or turkey in 1/4 cup soy sauce, 2 Tbsp. brown sugar, and 2 Tbsp. liquid smoke (optional). Stir well, making sure to coat each piece of meat. Cover with plastic wrap and let stand 10-15 minutes. When marinating is through, line each piece of meat on tray so they are barely touching. The thinner the cut of meat, the shorter the dehydration process. 8-10 hours for 1/16" slices (depending on how chewy you prefer).

SACHETS AND POTPOURRIS

You can save the fragrance of spring and summer and enjoy whatever sweet smelling plants you have in your flower and herb garden with the Food Dehydrator. Select petals from the flower and place them loosely on the mesh tray and place them in your dehydrator. When perfectly dried (about 5 hours) store the petals in decorative containers or sachet bags and close with a ribbon. You can sprinkle the petals with spices like powdered cinnamon, whole cloves, a bit of dried rosemary or mint for variety. It is best to keep the container closed until all of the fragrances have blended.

CLEANING AND MAINTANANCE

- Not dishwasher safe.
- Do not rinse base, to clean wipe base with damp cloth or sponge only.
- Drying trays and top can be hand washed.
- Allow to dry completely before assembly for storage.

WARNING

USE OF EXTENSION CORDS

Because of potential safety hazards under certain conditions, we strongly recommend against the use of an extension cord. However, if you must use an extension cord, it is absolutely necessary that it be a UL-listed (in the United States) or a CSA-listed (in Canada), 3-wire grounding type appliance extension cord having a grounding type plug and outlet and that the electrical rating of the cord be 15 amperes (minimum) and 120 volts.