

Dehydrating 101

Have a new dehydrator? Or new to dehydrating? Questions? Your dehydrator instruction manual is a good place to start

Dehydrators can be split into three categories: **Bottom fan** **Top fan** **Back fan**

Back fan models are the most popular because they provide the most even drying.

Make sure you have the right temperature

The temperature and time required to adequately dehydrate will vary depending on the type of dehydrator, as well as the food selected to dehydrate. General time and temperature guidelines will be printed on the dehydrator label or included in the instruction manual. The temperature range is about the same for most dehydrating, the unknown variable is the amount of time.

Make sure foods are well dehydrated

The objective in dehydrating is getting almost all the water out of the food. 80% is not enough. The goal is 90 – 95% dehydrated. Some items, like pineapple are still going to feel a *little* bit sticky even when dehydrated properly.

If your dehydrated food feels soft, spongy, or sticky it's probably not dehydrated enough. Put the product back in for additional time. Hard and crunchy or breakable pieces are done. Yes, items can be over-dried and as a result are more difficult to rehydrate. There is a balance and experience will provide answers.

High indoor humidity, air conditioning or breezes may alter the time needed to dehydrate foods. Ideally, find a dry, warm place away from air vents and windows to set up your dehydrator.

Don't try to dry foods *faster*

It's not wise to turn the temperature setting up in an attempt to dry foods faster. This may seal the outside layer of the food, leaving moisture trapped within, which could possibly lead to food spoiling before you have a chance to eat it.

Preparation is key

Before you dehydrate anything, make sure you thoroughly wash all plant foods with an anti-bacterial vegetable cleaner. Wearing gloves is a good idea. Steam all low-acid vegetables for 10 minutes prior to dehydrating. After they have been steamed, pat them dry before placing them in the food dehydrator. Spritz bananas and apples with lemon juice to help avoid browning.

Become more efficient

If your intention is to immediately start dehydrating as soon as you finish preparing the food, start your dehydrator first and let it pre-heat for a few minutes while you finish preparing. If you plan to combine different types of foods, it is best to select items that require the same temperature and dehydrate at about the same time.

Tip

Dehydrator trays stack. You will probably need to rotate trays at least once from bottom to top during the drying process.

Reason

Doing so will ensure more even and consistent drying regardless of the type of dehydrator you own.

Some fruits & vegetables should be blanched before you dehydrate them

It's not required, but doing so will keep the colors brighter, help retain the vitamins, and make your dehydrated food taste fresher after you rehydrate it. You can use a metal cullender to lower your food into boiling water for a few minutes, then quickly place into ice-cold water to stop the built-up heat from continuing to cook the food.

Dehydrate only one family of foods at a time

If you are dehydrating tomatoes, you can also do hot peppers, but be aware that the tomatoes will end up being spicy. Any brassica should be dehydrated on its own, otherwise the sulfur taste will permeate into the other foods. Fruits can be mixed but mixing them with strong tasting or smelling vegetables is not recommended.

Tip

Never overlap pieces. They can touch but not overlap. This is less important if you are using a Silicone sheet.

Reason

Overlapping food will block airflow and prevent the food from drying properly. The exception is greens (like green beans), as they are loose and dry easily even with a few layers stacked on top of each other.

Tip

Always slice the product the same thickness. This is very difficult to do consistently with a knife. Use a mandolin or cutting device (meat slicer) where the thickness of the cut can be regulated. **The importance of this cannot be overemphasized.**

Reason

The timeframe of drying will be much more consistent. The product will all dry at about the same rate. Otherwise you will be picking off the thin pieces early and waiting for the thick pieces to dry. You become a slave to your dehydrator.

Fruits or vegetables don't have to look pristine

If something is too ripe and soft, you can always puree it and dehydrate the puree into leathers. Although using the best quality fruits and veggies will result in the best quality dried goods, remember that the goal is preservation, not perfection.

You can dehydrate bruised, overripe, and slightly damaged produce

There is a distinct difference between 'old' and 'bruised'. If you sample an old piece of fruit and your first thought is "Oh, that tastes old." Throw it out! If you dehydrate old produce the dehydration process will not make it young.

Tip

The age of the fruit or veggies and whether to dehydrate or toss is not a matter of 'how it looks, but how it tastes.'

Reason

Overripe fruit often has more flavor. If it tastes good, it's good, if it doesn't, it won't taste any better dehydrated.

Fruit purees are an awesome way to store and eat overripe, funny shaped, or otherwise damaged fruits

Small apples are awesome turned into fruit leather, and overripe plums, peaches, and berries also work amazing in fruit leather. You can combine most other fruits with apples to make a flexible leather that is perfect for snacks and to keep on hand for emergency energy.

Tip

Silicone bakery-style sheets make the best fruit leather sheets. Avoid Cerran-wrap or cello wrap.

Reason

A portion of cello wrap will, on occasion, blow over (fold back over) a portion of a tray, trapping whatever food is caught underneath. Trapped food will not dry and is not recoverable.

If you intend to dry hot peppers or onions, keep your dehydrator outside in a well-ventilated area

Be prepared to scrub the dehydrator trays with soap and water afterward. With hot peppers, the oils will become airborne in the early part of the dehydrating process and can be an eye irritant. The oils will also remain on the trays, so take care when cleaning them and packing the dried peppers. Onion vapor is more airborne than peppers, so make sure there is plenty of ventilation when working with them.

Tip

When dehydrating onions (or slicing onions for that matter) cut off the bottom ¼ of the onion – the root end and discard, or use the root end as a type of handle to hold onto while cutting slices off the other end.

Reason

The bottom portion is where most of the eye irritant is located.

Berries, Cherries and Grapes offer a dehydrating challenge

Most berries are small enough to be dried whole, however, what remains after dehydrating is mostly seeds. Consider removing the seeds first with a Berry Press. Cut large grapes in half. Cut seeded grapes in half, remove the seeds and dehydrate. Berries can easily over-dry, check often to ensure that they remain slightly supple, and not too crispy. To dehydrate cherries, cut in half – make sure **every** pit is removed first. Food cut in half is best dried cut side up.

Different foods will require different dehydration temperatures

Check your dehydrator thermostat and make sure it is accurate before beginning to dehydrate. You might want to consider purchasing an oven thermometer even if your dehydrator has a built-in one.

Tip

Remember to clean your dehydrator between families of items, or between doing meat or fish and any fruit or veggie.

You can also use your dehydrator to make special foods

If you are making something like kale chips, which have oil and spices on them, you will want to ensure the trays get washed before drying fruit or something that doesn't go well with garlic.

With a dehydrator, you don't have to waste much of anything

Have an over-abundance of late-season lettuce, chard, beet greens, or carrot tops? Dry and then powder them in a food processor—it makes an easy to store vitamin powder for late winter soups and stews.

If you're making tomato sauce, take the skins you'd normally throw away and dehydrate them. Then powder the skins and you have your own tomato powder that is perfect for mixing into sauces or breads. You can dry tomato skins and hot peppers at the same time if you want a spicy tomato powder.

Long-term storage is very important for any preserved food, and dehydrated foods are no exception

Store in:

- Mylar bags (stored in a sturdy cardboard box, plastic bucket w/lid, or metal container w/lid for long-term storage. Hand force out as much air as possible, add an oxygenator packet, and seal tightly).
- Ziplock bags are not air-tight and are a distant second choice to mylar bags.
- Mason jars (stored in a cardboard box with cardboard dividers. These can be vacuum sealed for longer shelf life)

To prevent breakage in the event of an earthquake separate each glass jar from another with a piece of cardboard. Add retainage to shelf edges so that containers will not rattle off the shelf, fall and break, or cause damage to other food stored in the same proximity. Secure shelving to floor or walls (or both).

Storing Dehydrated Foods

During storage, be sure to protect your dehydrated foods from heat, light, and moisture. These shorten shelf life. Once your food is dehydrated, allow it to cool to room temperature *before* packaging to avoid condensation inside the packaging. After packaging, place in a cool, dark, dry area. Do not place in the freezer, ice crystals start to collect inside the packaging. To ensure overall quality, check your dehydrated items once or twice during the first few weeks to ensure that everything is OK. When dehydrated adequately and stored properly, most foods can last up to 20 years.

Not Everything Dehydrates Well

Tip

Melons are not necessarily a good candidate for dehydrating.

Reason

Melons, cantaloupes, and watermelon lose a lot of flavor and what flavor is left isn't all that appealing. Some people may be perfectly content with dehydrated melons; however, do a small batch first to see if you like the results.

Tip

Nuts and seeds are not good candidates for dehydrating.

Reason:

The natural oils in nuts and seeds do not have a long shelf life. Dehydrating does not change this fact.

Jerky

Tip

When making jerky, cut off ALL fat possible. If there is a lot of fat strands running through the piece of meat it is best to use that piece for some other cooked meal and not for jerky.

Reason

Fat in jerky does not dehydrate. It retains most of its original size and shape, becomes very hard, and is difficult to chew. After much chewing the fat portion remains in your mouth and most people spit it out. When rancid food is eaten it leaches vitamins out of our bodies. Jerky is uncooked meat and when properly dried it is very safe. It can be eaten without cooking. Do not ever store Jerky in a closed plastic bag, thus avoiding the potential for mold. A grocery paper sack folded over several times is best. Jerky does not have a long shelf life and should be eaten within 1 year. Any item that contains very much fat is not a good candidate for dehydrating. Butter is one example.

Rehydrating Dehydrated Foods

As a general rule-of-thumb to rehydrate fruits and veggies place 1 cup of dehydrated food in 1 cup of water (preferably Hot), depending on your planned use. Allow up to four hours for rehydration. If an excess amount of water is used in rehydrating, the excess liquid is usually discarded, along with some flavor and nutrients. An unnecessary loss.

Tip

If you dehydrate food (like a soup or casserole) and plan to rehydrate for immediate consumption you must simmer the food until it is soft and tasty. Prolonged soaking in water (even Hot water) will not 'cook' or soften the core of rock-hard dehydrated food. Freeze-dried food can be prepared for eating with hot water only, but not dehydrated food.

General Food Storage Tip

Don't store any kind of preserved food in a container that sits flat on a concrete floor. Instead, place a piece of wood between the concrete and the container. Same with stored water.

The cold (or heat) in the concrete will tend to draw moisture to the bottom of the container, either from outside or even from moisture dispersed inside the container. This concentration of water will start to damage the food that is in the lower portion of the container, and if it is a metal container it may start to rust.

Dehydrating without a Dehydrator - Not everything requires a dehydrator

Herbs and the like: Any leafy green; mint, lemon balm, sage, oregano, lettuce, or even carrot tops can be air dried. Herbs are particularly easy to dry. Hang up in a dry room – areas of high humidity should be avoided. Keep out of direct sunlight when drying. Depending on the size of the herb bunch, it can take a few days to a week to fully dry. Herbs should be crisply dried and crumble easily.