

Dairy Kefir Guide

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Introduction

Kefir, a thick but liquid drink, is a probiotic food, meaning that it is a food rich in friendly bacteria and yeasts. (The yeasts are suitable for an anti-Candida diet.) Its consistency may vary from almost as thin as milk to as thick as yogurt and will vary throughout the year.

Because it is such a rich probiotic food, be sure to start with one teaspoon on the first day and work up slowly. Otherwise, the product can cause intense detox or die-off symptoms.

Hydrated kefir “grains” (not grains at all) are blobs that look like tiny cauliflower florets and feel a bit like gummy bears.

The kefir grains are used as a starter, fermenting the dairy added to them.

When people say they are drinking kefir, they are referring to the liquid created. However, it is fine and very health-giving to eat the grains themselves, too.

Materials Required

- an area in which to ferment
- glass jar(s)
- lid
- paper towel and elastic (optional)
- strainer or very clean hands
- kefir grains
- milk

For details on many of the items listed above, please see below.

Fermentation Temperature

The ideal temperature for kefir fermentation is 20-25 degrees Celsius (68-77 F). This will create a successful ferment after 24-36 hours.

Cooler is fine, but the cooler it is, the longer the ferment will take.

In warmer temperatures, kefir will culture very rapidly. On a day warmer than 25 degrees Celsius (77 F), you may want to culture it for twelve hours on the counter then twelve hours in the fridge.

According to a winter-time experiment in a cool house, an Excalibur dehydrator, set to its lowest possible spot on the temperature dial, generally runs 20-23 degrees C (68-73 F).

Lids

At some points in your kefir-ing, you will want a lid that allows air through while keeping dust, etc, out. This is what the loose-fitting lid, or the paper towel held by elastic, is for.

When shaking your kefir, or when storing it, you will want a tight-fitting lid. Because metal, aluminum and stainless-steel leach chemicals, especially when in contact with an acid medium like kefir, this type of lid should have parchment paper between it and the kefir. A plastic lid needs no barrier.

Strainer

Many say that kefir should never come in contact with stainless steel. Dom, a kefir-guru, does not feel this is an issue, especially considering the brief period of this contact. This said, many choose to use plastic or silicone.

Milk

Raw milk is preferable, but not everyone has access to or can afford it. So long as it has involved no growth hormones or antibiotics, pasteurized (but preferably non-homogenized) milk will work well. If at all possible, avoid ultra-pasteurized. While it will still make a great kefir, the effects of ultra-pasteurization may result in a kefir less easy for the body to process.

All materials must be truly clean. This said, in terms of the jar itself, you might choose to start with a new, clean jar only every few batches. This will support the growth and maintenance of the grains and kefiran (soft jelly-like goop, extremely health-giving, that eventually develops around the grains).

Step One – Obtaining Grains

Freeze-dried kefir starter can be purchased in health food stores. This starter will not reproduce so will need to continually be re-purchased. Also, having only about ten strains of bacteria and yeast to the grains' thirty-five, freeze-dried starter is less effective than whole kefir grains.

To obtain whole dairy kefir grains, post a request to your online support list or look online for someone offering them. One great source is this Yahoo Group, whose members will share grains for just the cost of postage: http://groups.yahoo.com/group/Kefir_making/

Have your supplies (except the milk) ready for when your grains arrive. Be prepared to purchase some milk upon their arrival.

Step Two – Upon Receiving Your Grains

Dehydrated Grains (hard and yellow)

Dehydrated grains will need several batches, possibly over the course of two or three weeks, to "revive" them.

1. Rinse the kefir grains with fresh milk.
2. Put the grains into a jar.
3. Pour just enough fresh milk to cover the grains.
4. Cover jar with loose-fitting lid (or paper towel secured by elastic).
5. Set jar at 20-25 degrees Celsius (68-77 F).
6. Every one to two days, dispose of this milk (but not the grains) and add a fresh supply of milk.
7. Repeat Step 4, immediately above, until the grains are fluffy, soft and look like tiny pieces of cauliflower. Then move on to the instructions under "Fresh Grains", below.

Fresh Grains (soft, look like cauliflower)

1. Rinse the grains with fresh milk. Take a general estimate of the grains (in tablespoons). Place the grains into a jar.
2. Over the grains, pour approximately four cups (one quart; one litre) of milk to every one tablespoon of grains. With time and experimentation, you may find that your grains desire a different ratio and that's fine.
3. Cover the jar with a loosely-placed plastic lid, or with a piece of parchment paper then metal lid, or with a piece of paper towel held by the elastic.
4. After approximately eight hours, shake the jar. (If your jar is quite full, you may want to put the fitting lid on for this. After shaking, replace the lid with the loose fit or with the paper towel again.) This will help the milk to stay mixed with the grains.
5. After 24 hours or so (12 in warm weather), look at the sides of the jar.

Are there tiny rivulets snaking down the sides? These indicate the beginning of whey separation and are one indication of readiness.

Do you see a slight separation of curds and whey? This, too, is a sign of readiness.

Does the product smell yeasty, like pizza dough, and sour, like yogurt? This, too, is a sign of readiness. Note: Occasionally, a first batch will have an “off” odor. Although safe, you may want to discard this batch. It may take several batches for the grains to acclimatize to your house and milk source.

Set a toothpick into it, standing vertically. If the kefir holds it up, it's ready.

Please note: Depending on the ambient temperature, your first few batches may take longer than 24 hours and even up to 36.

6. When the kefir is ready, you need to separate the kefir from the kefir grains.

Strainer Method: Set a strainer over a jar or bowl and pour everything in. You might need to let the kefir drip out over several minutes, or to stir what is in the strainer to help the liquid move through.

Hand Method: If your kefir is too thick for a strainer, wash your hands well, then pull the grains out. Note: The grains will feel firm and not fall apart; the curds, on the other hand, will fall apart.

7. Start over at Step 2. (Note: Except as noted below, do **not** rinse the grains.)

Step 3 – Preserving a Back-up Batch

Sometimes, bad things happen to good grains. One should have a back-up batch of grains. Once your grains start increasing in size, freeze or dehydrate some.

Freeze

Put the grains in ice cube trays or in small jars just covered with milk.

Dom, a kefir-guru, recommends grains spend no longer than six months in the freezer. However, some have had success reconstituting frozen grains after more than 2 years.

Dehydrate

1. In chlorine-free water, rinse grains.
2. Pat dry.
3. Lay out on linen or paper towels.
4. Cover with another towel.
5. Every day, agitate them a little (move them around a bit).

6. Depending on room temperature and humidity, drying usually takes 3-5 days. When the grains are completely dry (hard, small, yellowish) put them into a baggie and store in the refrigerator.

Dehydrated grains can successfully be reconstituted after a year or more.

Reducing Sugar Content – Secondary Ferment

Kefir uses up most of milk's lactose. However, if you are concerned about its remaining sugar content, you can do a secondary ferment.

After straining the grains out of a 24-36 hour batch, set the kefir at the usual fermentation temperatures for one more day, or else in the fridge for five to six days. The resulting kefir will be very tart. People put off by tartness might use it in a smoothie with fruits, etc.

Grains Not Growing

1. Make sure the milk you are using is from animals given no antibiotics.
2. Make sure your utensils are dry, and free of any chlorine from tap water.

If you have ensured the above two points:

1. Rinse the grains in chlorine-free filtered water, then rest them in plain organic yogurt for twenty-four hours.

Kefir Smells “Strange”

1. Most commonly the “off” smell is actually the kefir's characteristic yeasty scent (similar to pizza dough). This is normal and usually not a problem. However, a very strongly yeasty scent can be balanced via a yogurt rest: Rinse the grains in chlorine-free filtered water, then rest them in plain organic yogurt for twenty-four hours. The yogurt rest will restore the balance between the bacteria and yeast.
2. Sometimes kefir will smell strongly of a chemical (such as that used in varnish, etc). Kefir produces multiple aromatic compounds as it ferments. Long ferments are more likely to produce these at a noticeable level. The kefir is still safe to drink.
3. If it smells disgusting, there is a possibility that it is contaminated with something not good. You can try the yogurt rest mentioned above, but if resting in yogurt doesn't fix the nasty smell, throw out the kefir and the grains and start with new grains. (This is where your back up batch comes in!)
4. If mold (green, gray, fuzzy) ever forms, you should throw your kefir and grains away. Again, this is where your back up batch can come in!

Grains Get Large and Flat

This is normal. It occurs occasionally and is nothing to worry about.

It usually means you have too many grains for the quantity of milk you are using. Break the grains up then increase the grain-to-milk ratio (fewer grains or more milk).

Grains Very Large and Slow Growing

Break the grains into smaller pieces; this will rapidly increase their growth.

This is a trick you can try any time the grains are not growing well.

Storing Grains

When starting out, you will be building your dosage slowly. Thus, a small amount of kefir will go a long way and you will not desire large batches dependent on a lot of milk.

For other reasons, too, you might need to back off sometimes on kefir production.

At these points, the method for storing kefir grains is very helpful:

1. Without rinsing them first, put the grains into a jar.
2. Pour over just enough fresh milk to cover the grains.
3. Once a week, dispose of this milk (but not the grains) and add a fresh supply of milk.

This can go on for any length of time.

Too Many Grains

When you have more grains than you need for regular ferments and a back-up supply, you can eat the grains or offer them out.