

Fermented drinks - Homemade sodas


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 Low-tech Lab




https://wiki.lowtechlab.org/wiki/Boissons_ferment%C3%A9es_-_Sodas_maison/en

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 Difficulty **Very easy**

 Duration **5 minute(s)**

 Cost **1 EUR (€)**

Description

Simple, healthy and zero-waste recipes for fermented drinks !

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Introduction

Fermented food is food that has been transformed by micro-organisms : bacteria, yeasts, fungi. This process usually happens without oxygen, in a anaerobic environment. Microbes multiply normally in the presence of oxygen. But without it, they struggle and produce molecules to fight rival microbes : alcohol, lactic acid, acetic acid. This leads to several types of fermentation : alcoholic, lactic, acetic, etc. Even if we tend to forget it, a lot of our daily food is actually a product of fermentation : bread, cheese, yogurt, wine, beer... It's a long list. Which is a good thing because they are beneficial for your health ! They make food easier to digest, improve your digestive health, contain vitamins and minerals, boost your immune system...

Many good reasons to eat or drink them regularly (careful not to make it your whole meal though !)

Here are several recipes for no-waste fermented drinks, made from natural micro-organisms. Try out the making of these homemade sodas !

More info on fermentation : [1] [2]

More info on natural fermented drinks : The Wildcrafting Brewer, Pascal Baudar

Crew member on the Nomade des Mers and founder of the Food Forest Lab, Claire Mauquié's Youtube channel

Materials

- Fruit peels or rinds (orange, lemon, ginger, kiwi, mango, pineapple...)
- Sugar (white, brown)
- Water

Tools

- Glass jars
 - Plastic bottles
 - Kitchen scale
 - Spoons
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Step 1 - How to make a fermentation starter / stock solution

A fermentation starter (also called "stock solution" depending on the drink) is a preparation that helps start the fermentation process of various food and fermented drinks. In practical terms, a starter is a microbiological culture that's at the heart of fermentation. These ferments are usually composed of a culture medium, like grain or seeds, or nutritive liquids that have been colonized by micro-organisms used for fermentation.

There are numerous starters depending on the food or drinks you want to ferment. Here are the ones used on the fermentation of fruit or vegetable juices.

Ginger bug :

Ginger contains a lot of natural yeast. Thus it is very simple to ferment it. It takes between 3 and 7 days depending on the room temperature. It lasts forever if nurtured properly.

The ingredients are simple :

- Water
- White sugar
- Fresh ginger, thinly sliced or diced, no need to peel it

1. Fill a big jar with 50 cl of water.
2. Add 100-150 gr of sugar and 40-50 gr (3 big spoons) of thinly sliced or diced ginger.
3. Don't close the lid completely to let out the fermentation gases ; 2-3 times a day, close it and shake it vigorously, then re-open it a bit.
4. Place it in a warm spot (south-facing window-sill, radiator, near the fireplace). Heat is important to start the fermentation.
5. After 24h, add 1 coffee spoon of sugar, 1 big spoon of ginger and 1 big spoon of water. Stir. Repeat every 24h for 4-5 days.
6. When the brewage is opaque and bubbly on the surface, it's ready. It may be used right away or kept in the fridge.
7. Nurture the ginger once or twice a month with 1 coffee spoon of sugar and some ginger to keep it alive. To reactivate it, put it back in a warm spot and feed it everyday as indicated above until it's opaque and bubbly again.
8. When used, replace the amount you've taken with the same amount of water and ginger.

How to use it ?

We use it to ferment every sweet drinks, fruit juice and sweet plant infusions.

- Add 5 cl of ginger bug / 1 l of liquid.
- Let ferment for a few days until it is effervescent.
- Filter and put in a bottle (a glass bottle with joint and metal lid or a plastic soda bottle)
- Use within 2-3 days if kept at room temperature or under 2 weeks if kept in the fridge.

Suggestions

Step 2 - Ginger ale / ginger beer

For 1 l of ginger ale :

- 1 l of non chlorinated water
- 50 gr of sugar
- 50 gr of fresh peeled and thinly chopped ginger
- 5 cl of lemon juice
- 5 cl of ginger bug (filtered liquid only)


This dosage of ginger is indicative and results in a slightly spicy beverage. The lemon juice only adds flavour and takes no part in the fermentation process.

1. Fill a pot with water, ginger and lemon juice and sugar. Bring to boil until the sugar is dissolved.
2. Remove from heat and decant in a 1.5 l jar. Let cool at room temperature.
3. Add the ginger bug (don't forget to put back as much water as you took in the ginger bug, with a pinch of sugar).
4. Close hermetically and let ferment for 2-5 depending on the room temperature.
5. Filter and put in a bottle (a glass bottle with joint and metal lid or a plastic soda bottle).
6. Use within 2-3 days if kept at room temperature or under 2 weeks if kept in the fridge.

{{Tuto Step |Step_Title=Lemon soda |Step_Content=In a 2 l jar :

- Put 3 lemons or lemon peels. Try not to pick too bitter ones.
- Add 100-150 gr of sugar, to your taste.
- Fill the rest of the jar with water.

Option : add grated ginger to your taste.

 Lemon naturally contains yeasts and will ferment by itself. However, ginger or ginger bug, loaded with yeasts, will accelerate the fermentation.

1. Let the mixture ferment 3-5 days depending on room temperature. Stir everyday with a wooden stick.
2. When effervescent, filter and decant in a glass bottle or a soda plastic bottle.
3. Leave 1-2 days before drinking to let the sugar rate decrease.
4. Drink within 2-3 days. After a while, it turns into vinegar. If your drink is too vinegary, add sugar. If too sweet, wait a few days still or add ginger to extend the transformation.

Step 3 - Kiwi or orange soda

In a 2 l jar :

- Fill half of the jar with kiwi or orange peels.
- Add 250 gr, ajust to your taste.
- Fill the rest of the jar with water.
- Let ferment 5-7 days depending on room temperature.
- Filter and put in a bottle (a glass bottle with joint and metal lid or a plastic soda bottle).
- Drink within 2-3 days if kept at room temperature, or under 2 weeks in kept in the fridge.

Step 4 - Mango soda

In a 2 l jar :

- Fill half of the jar with mango peels + stone
 - Add 100-150 gr of sugar, ajust to your tast.
 - Fill the rest of the jar with water.
 - Let ferment 2 days.
 - Filter and put in a bottle (a glass bottle with joint and metal lid or a plastic soda bottle).
 - Wait 1-2 days for fermentation to end and sugar rate to decrease.
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Step 5 - Pineapple soda - Tepache

Tepache is a mexican traditionnal drink made from pineapple peels.

In a 2 l jar :

- 1 ripe pineapple
- 100 gr of sugar. Traditionnally, pinoncillo cones but you can use brown sugar or even maple sirup.
- 1 cinnamon stick.
- 1 or 2 cloves.
- 1 l of water.
- Option : 1 dehydrated red pepper.

1. Cut the pineapple into pieces (you can use the peel and core, or the whole fruit for more flavour)
2. Mix all the ingredients in the jar.
3. Cover with a clean towel and stir 3 times a day until fermentation starts.
4. When effervescent (usually 2-3 days), filter and decant in a bottle.

There's no ground rule for fermentation term. This brewage is usually drunk rightaway, but you can let ferment a few days more to increase the alcohol rate (some people even add beer). Don't wait too long though because it will eventually turn into vinegar.

Step 6 - Basil soda

In a 2 l jar :

- Fill a third of the jar with basil leaves.
 - Add 100-150 gr of sugar, ajust to your tast.
 - Fill the rest of the jar with water.
 - Let ferment 3-5 days.
 - Filter and put in a bottle (a glass bottle with joint and metal lid or a plastic soda bottle).
 - Wait 1-2 days for fermentation to end and sugar rate to decrease.
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Notes and references

Reference book to go further : *The Wildcrafting Brewer*, Pascal Baudar

Marie-Claire Frédéric on fermented food (in french)

Crew member on the Nomade des Mers and founder of the Food Forest Lab, Claire Mauquié's Youtube channel