National Center for Home Food Preservation
College of Family and Consumer Sciences
UNIVERSITY OF GEORGIA

Crafting Kombucha at Home

Frequently Asked Questions

1) What is kombucha and how is it made?

Kombucha is a fermented tea beverage that is made by fermenting sweetened tea with a symbiotic culture of bacteria and yeast (SCOBY). The SCOBY uses the sugar in the tea, producing acids, enzymes, and trace amounts of alcohol, resulting in a tangy, slightly effervescent drink.

2) Is it safe to make kombucha at home?

Yes, making kombucha at home can be safe if: i) proper hygiene practices are followed, ii) a tested recipe is used, and iii) the fermentation process is done correctly. However, there is a risk of contamination if sanitation procedures are not observed, and higher alcohol production if fermentation days are not followed.

3) What ingredients do I need to make kombucha at home?

To make kombucha at home, you will need tea (for our recipe a combination of black or green), sugar, starter liquid (previously brewed kombucha accompanying the SCOBY), a SCOBY, and clean, potable water.

4) Where can I get a SCOBY?

SCOBYs can be obtained from various sources, including local kombucha brewers, online marketplaces, health food stores, or through friends who brew kombucha.

5) How long does it take to make kombucha?

For our recipe, the fermentation process takes between 7 to 10 days, depending on desired tartness.

6) What equipment do I need?

Basic equipment includes a large glass jar or brewing vessel (for our recipe at east 1.5 gallon food grade container), breathable cover (such as a clean cloth or coffee filter), rubber band, pH strips, masking tape for labeling, and clean containers for storing the finished kombucha.

7) How can I flavor my kombucha?

Kombucha can be flavored after the fermentation process is done. You can get creative and add fruit, herbs, spices, or fruit juices. Once flavors have been added kombucha should be stored under refrigeration and consumed within 2 days.

8) How do I know if my kombucha is fermenting properly?

Signs of proper fermentation include the formation of bubbles, a tangy aroma, and a slightly sour taste. A new SCOBY may also form on the surface of the liquid.

9) How do I troubleshoot common problems?

Common problems in kombucha brewing include mold growth, lack of carbonation, or slow fermentation. Troubleshooting involves investigating several factors:

a. **Water Source:** Ensure your water is potable and free from contaminants, as these can inhibit fermentation. Consider using filtered water.

b. **Starter Liquid:** Verify that the starter liquid has a pH of ≤ 4.0. Ensure that you have added enough amount of starter liquid from a previous batch of kombucha or with your commercially bought SCOBY. This provides an initial acidity necessary for the safety of the product, as well as bacteria and yeast for fermentation.

c. **Temperature:** Check the ambient temperature of the brewing environment. Kombucha ferments best at temperatures between 68°F to 77°F. Cooler temperatures may slow fermentation, while warmer temperatures can accelerate it.

d. **Tea Source:** Always use commercially produced tea to avoid contaminants that can harm the SCOBY.

e. **Brewing Environment:** Avoid placing your brewing vessel in areas with high air circulation, such as near vents or in busy spaces with lots of people and pets. These factors can introduce contaminants or disrupt the fermentation process.

10) What are the health benefits of kombucha?

Kombucha is known for its probiotic content, which may support gut health. It also contains antioxidants and small amounts of vitamins and minerals.

11) How much alcohol is produced in my kombucha?

Alcohol content varies according to the fermentation period. Longer fermentation periods will produce more alcohol. Our recipe recommends a fermentation period of 7-10 days. By following our guidelines and recipe, your kombucha may have trace amounts of alcohol (<0.016 % alcohol by volume – ABV).

12) How should I store homemade kombucha?

After the fermentation period (7-10 days), kombucha should be stored in the refrigerator at 40 degrees Fahrenheit or below to slow down fermentation and preserve flavor. It can be stored under refrigeration temperatures for up to 30 days.

13) Can I reuse my SCOBY?

Yes, SCOBYs can be reused for multiple batches of kombucha. After each batch, reserve 20% of the liquid and the SCOBY for the subsequent batch. If brewing is not consecutive, you can store the SCOBY and liquid for up to 30 days.

14) Is kombucha suitable for everyone to drink?

While kombucha is generally safe for most people, it may not be suitable for those with compromised immune systems, pregnant women, children, or individuals with certain health conditions. It is best to consult a healthcare professional if you have concerns.

15) Where can I find reliable recipes and resources for making kombucha at home?

Research-based recipes and reliable resources can be found within Cooperative Extension programs, as well as through the National Center for Home Food Preservation.

16) Can you make a half batch (1/2 gallon) of kombucha?

It's not recommended to make a half batch of kombucha. Doing so could lead to excessive acidity due to the same amount of SCOBY used, or fermentation issues may arise because the carbohydrates would deplete faster since only half of the ingredients would be available, but the same amount of microbes competing for the limited resources.

17) Can you use a dishwasher to sanitize the equipment?

Possibly. If your dishwasher can reach a temperature of at least 171°F, it may be suitable for use. However, keep in mind that soap residues, depending on how effectively the dishwasher can remove them, might interfere with the fermentation process and could potentially inhibit microbial activity.

18) Can you use turbinado sugar if you grind it up?

It is not recommended to use other sugar types with our recipe. Our research was conducted based on sugar concentration in grams per liter (g/L), but we've converted this to cups for a consumer-friendly recipe. However, depending on the coarseness of the sugar, you may end up using less sugar since larger particles take up more space in a cup, resulting in a different weight. At this time, we don't have the data to confirm that using alternative sugars will maintain the same level of safety.

19) How to store the SCOBY between batches?

The SCOBY can be stored in the fermentation vessel with about 20% of previously brewed kombucha for up to 30 days. To maintain a breathable environment and prevent contamination, cover the fermentation vessel with a clean coffee filter or cheesecloth secured with a rubber band. Using an airtight container may create an anaerobic environment, causing aerobic yeasts to die and potentially resulting in a failed next batch of kombucha.

20) If I avoid caffeine and both black and green tea contain it, what alternatives can I use to brew kombucha at home?

You can still make your own kombucha and use the tested recipe by using decaffeinated versions of black and green tea.