

# Fermentation Notes

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# Chapter 1

## Introduction

Just a place to archive / backup my fermentation notes while as an added benefit learning a little bit about R, RStudio, bookdown, version control, and hosting a site on GitHub

- Resources:
  - Getting started with Git and R
  - Bookdown tutorial.

Note: entries before May 2022 weren't kept well and may lack enough information to be reproducible. Remediating this moving forward is a major goal of these notes.



## Chapter 2

# Kombucha

### 2.1 Grapefruit

#### Bulk Ferment

*Sunday, 23 May, 2021*

Scoby and starter donated from Daniella.

Method: <https://food52.com/blog/13548-my-adventures-in-brewing-kombucha-how-you-can-do-it-too>

- 6 cups boiled, then steeped with 8 bags of black tea, 20 minutes
- 1 cup of sugar dissolved in hot water
- 6 cups cold added + 1 more when added to crock
- Added Daniela's mother and the starter it came in
- Covered with tea towel

#### Second Ferment

*Wednesday, 2 June, 2021*

- Bottled
- Output: 5 ~16 oz bottles
- Flavor: all 5 (2 tbsp) ~25 ml grapefruit juice

### 2.2 Ginger and Honey

#### Bulk Ferment

*Wednesday, 2 June, 2021*

- Made a new batch using same instructions as listed above; kept the mother in the crock and just added new tea to it

### **Second Ferment**

*Saturday, June 12, 2021*

- Bottled second batch
- Output: 5 bottles
- Flavor: ginger (~1in worth of matchsticks) + ~.5 teaspoon honey

## **2.3 Grapefruit**

### **Bulk Ferment**

*Saturday, June 12, 2021*

- Made another batch, same instructions

### **Second Ferment**

- ~30 ml grapefruit juice added to each bottle

## **2.4 Grapefruit and Orange**

### **Bulk Ferment**

*Tuesday, June 22, 2021*

Made another batch, same method

### **Second Ferment**

*Tuesday, June 27, 2021*

- Flavor for second ferment was one grapefruit and one orange.
- ~25 ml in each
- Did a plastic bottle for first time; had meant to leave more air.
- Next time fill to base of tapered neck.

## **2.5 Watermelon, Lime, and Mint**

### **Bulk Ferment**

*Sunday, June 27, 2021*

Same recipe, a little extra water.

### **Second Ferment**

*Tuesday, July 6, 2021*



- Watermelon, mint, and lime.
- Juiced half a watermelon.
- Muddled about a dozen mint leaves with a little sugar and splash of water.
- Added juice of two limes
- ~40-50 ml of this juice added to each bottle, filled with kombucha
- Used old kirkland kombucha bottles from a friend and one plastic coke bottle as a carbonation gauge.

## 2.6 Peach and Ginger

### Bulk Ferment

*Tuesday, July 6, 2021*

Brewed new batch as usual. Added one 16 oz bottle of water to fill the crock.

Plastic bottle was hard after a few days, put in fridge. Could have let it get harder, as bottles didn't have much carbonation, but gained some in fridge (we were gone July 11-16).

### Second Ferment

*Sunday, July 18, 2021*

- 12 day first ferment
- Peaches and ginger
- One plastic bottle as carbonation gauge

## 2.7 Peach

### Bulk Ferment

*Sunday, July 18, 2021*

No notes.

### Second Ferment

Flavored with just peach. Opinion: ginger and peach is better.

## 2.8 Strawberry Kiwi

### Bulk Ferment

*No dates / notes*

### Second Ferment

*Sunday August 29, 2021*

Flavor: **strawberry kiwi**, Cara and Arlo liked best yet.

## 2.9 Nectarine and Blueberry

### Bulk Ferment

*Sunday August 29, 2021*

No notes.

### Second Ferment

*Saturday September 18, 2021*

Nectarine and frozen blackberries

## 2.10 Ginger and Mint

### Bulk Ferment

*Saturday September 18, 2021*

### Second Ferment

Ginger and mint

## 2.11 Apple and Ginger?

*No date / notes*

### Second Ferment

Apple and ginger maybe?

## 2.12 Mystery?

### Bulk Ferment

*Sunday October 31, 2021*

### Second Ferment

*No date*

Ginger and lemon

## 2.13 Pear and Ginger

### Bulk Ferment

*No date / notes*

Left for a few months. Checked periodically to ensure nothing looked off.

**Second Ferment**

*Sunday January 23, 2022*

Had reduced to <4 bottles during F1, trying f2 for science. One plastic bottle for carbonation gauge.

- Flavor: pear and ginger
  - 1 cc size cubes
  - Sugar: 1/2 tsp in each bottle

*Unknown date*

Update: none carbonated, f2 for a couple of weeks at room temp. Tasted fine though, maybe a bit more tart than usual.

## 2.14 Strawberry

**Bulk Ferment**

*Sunday January 23, 2022*

**Second Ferment**

*May 17, 2022*

Again let sit for several months.

- Quantity: 4 soda bottles filled to top of label
- Flavor: about 12 strawberries and a sizable scoop full of sugar
  - Macerated the strawberries in the sugar. ~60 ml per bottle

*May 26, 2022*

All four soda bottles firm enough to not give, refrigerated

- Thoughts: a bit too sweet

## 2.15 Contam?!

**Bulk Ferment**

*Tuesday, May 17*

**Update**

*June 2, 2022*

Checking in on it, looked like there was some mold growing on top layer of scoby. Scared me enough to compost it.



## Chapter 3

# Ginger Beer

### 3.1 Batch 1

#### Bug

*Early September 2021*

Started a ginger bug, chlorine evaporated water from starter sourdough jug. Arbitrary amount of grated ginger in small amount of initial water. After about a week added more ginger and a bit of sugar. Started shaking it, got bubbly.

#### Bulk Ferment

*September 18 2021*

- Cut up a few chunks of skinned ginger and simmered in 2 qts of tap water for ~15 minutes.
- Strained out ginger solids
- Added 2 cups sugar, stirred too dissolve
- Added 2 qts of tap and let cool
- Added strained ginger bug
- F1 in cloth covered crock

#### Second Ferment

No notes, but it was pretty good. Definitely different than commercial versions.

### 3.2 Batch 2

#### Bug

*May 24-ish, 2022*

Started bug with occasional feedings of arbitrary amounts. Grew vigorous after a few days, but ran out of ginger mid-covid quarantine so had to wait for a grocery pick up and bug grew stagnant. Revived with a couple (two) feedings, noticed a *few* bubbles on May 31st. All feedings used de-chlorinated water left out overnight and ginger (skin included) grated on the fine side of a box grater.

### **Bulk Ferment**

*May 31, 2022*

Loosely followed The Art of Fermentation method.

- Simmered 2 quarts of water with ~5 in of coarsely grated ginger (skin included, not sure if appropriate to have left it on) for about 15 minutes
- Dissolved ~~2-cups~~ 400 g sugar
- Added 2 quarts cool water to dilute, tasted and let cool to room temp for several hours (very warm day)
- Added bug (slightly less than ~2 cups)
- Mixed then strained through fine mesh sieve

### **Output**

Split perfectly between a half-gallon mason jar and a 2 liter kliner jar.