

# Botanical Syrups Recipe Development

## Part 1 - Triangle Testing

1. Do research on which steps for making a simple syrup are important and which are not with the goal of creating an improved recipe.
2. Make a simple syrup using botanical ingredient(s)
3. Test variation(s) on the recipe and assess results

\*Note: There are a large variety of dandelion recipes available. For example, some syrup recipes say to make a “tea” first with the petals and water, remove the petals, and then add sugar. Others say combine all the ingredients at the same time. Some recipes instruct boiling the ingredients for 5 minutes and strain immediately, while others advise to let it sit overnight and then strain. A few recipes said not to let the mixture reach a boil at all.

## The Basics

- Simple Syrup is a 1:1 ratio (by volume) of water to sugar
- Heavy Syrup is a 1:2 ratio (by volume) of water to sugar
- Light Syrup is a 2:1 ratio (by volume) of water to sugar
- Here is a reference for syrup: <https://en.wikipedia.org/wiki/Syrup>

## Make a Two Simple Syrups

### Ingredients:

- 2 cups of open yellow dandelion flowers
- 2 cups of water
- 2 cups of sugar

### Directions:

1. Pick 2 cups of open yellow dandelion flowers, measure, then rinse.
  - When picking dandelion flowers, there is often a white liquid oozing from the base. That is latex and it is very bitter. Do not include it in your simple syrup.
  - Try to find flowers that have not been sprayed with pesticide.
  - If dandelions are not available, try this with any other edible flower. For example: roses, lilacs, and lavender (only use ¼ cup of lavender).
  - Dried flowers are usually more potent so use ¼ cup instead.
  - If flowers are not possible, examine other available botanicals. For example: ginger (fresh or dried), rosemary, bay leaf, cinnamon, cloves, and/or garlic.
2. Use 1 cup for batch “A” and 1 cup for batch “B”.
  - Batch “A” Dandelion Syrup recipe: equal parts dandelion flowers, sugar, water
  - Ex: If there is 1 cup of dandelion flowers, then use 1 cup of water and 1 cup of sugar for the recipe.
3. Separate the petals from the green base/stems/leaves.
4. Heat the water.
5. Add the sugar and stir until sugar dissolves and liquid is simmering.

6. Turn off the heat and add the dandelion petals.
7. Cover and let steep for 5 min.
8. Strain out the petals (you can turn petals into candy by dehydrating them).

Enjoy your botanical simple syrup - it can be used to make lemonade, drizzled on pancakes, substituted for honey in tea, combined with sparkling water or used for cocktails.

### **Batch “B” - Each person in your class picks a different variable to change.**

Suggestions:

1. Change the length of the steep: allow to steep overnight in the fridge and then strain.
2. Change the order: bring water to a boil, add petals, allow to steep for 5 min with heat off, then strain to remove petals, add sugar, and heat until sugar dissolves.
3. Change steep to boil- Instead of steeping for 5 min, boil all ingredients together before steeping
4. Quality of petals: Compare “pure yellow petals” with “mostly pure petals” “Pure yellow petals means no hint of any green leaves, dark stripes, etc.) - take pictures of the two batches of petals so a difference can be seen.

### **Write a Report**

- Describe the process and results
- Do the two versions look/taste the same?
- Do a “triangle test” (assuming there is a person(s) to test this on)
  - <https://www.sensorysociety.org/knowledge/sspwiki/pages/triangle%20test.aspx>
  - <https://flavorman.com/triangle-testing-101>
- In the conclusion, describe which method is preferred and what other changes could be tested.

### **Part 2 - Develop a New Recipe**

- It could be a dandelion based recipe, a combination of dandelion and ginger, or a completely different type of botanical. Use this as an opportunity to research the health benefits of various botanicals, and test their palatability.
- Consider various types of sweetener, or making a jam, jelly, hard candy, cough drops, lozenge and/or taffy.

Directions:

1. Research - Look at existing recipes, what do they have in common? Where do they differ?
2. Start with two different recipes, and follow both of them. Assess the results.
3. Use those results to create a personalized recipe and assess results accordingly.
  - a. It is suggested to only change one variable at a time.
4. Continue changing and testing until a satisfactory product is made.
  - a. If there is sufficient time and interest, repeat Part 2, developing different botanical products.