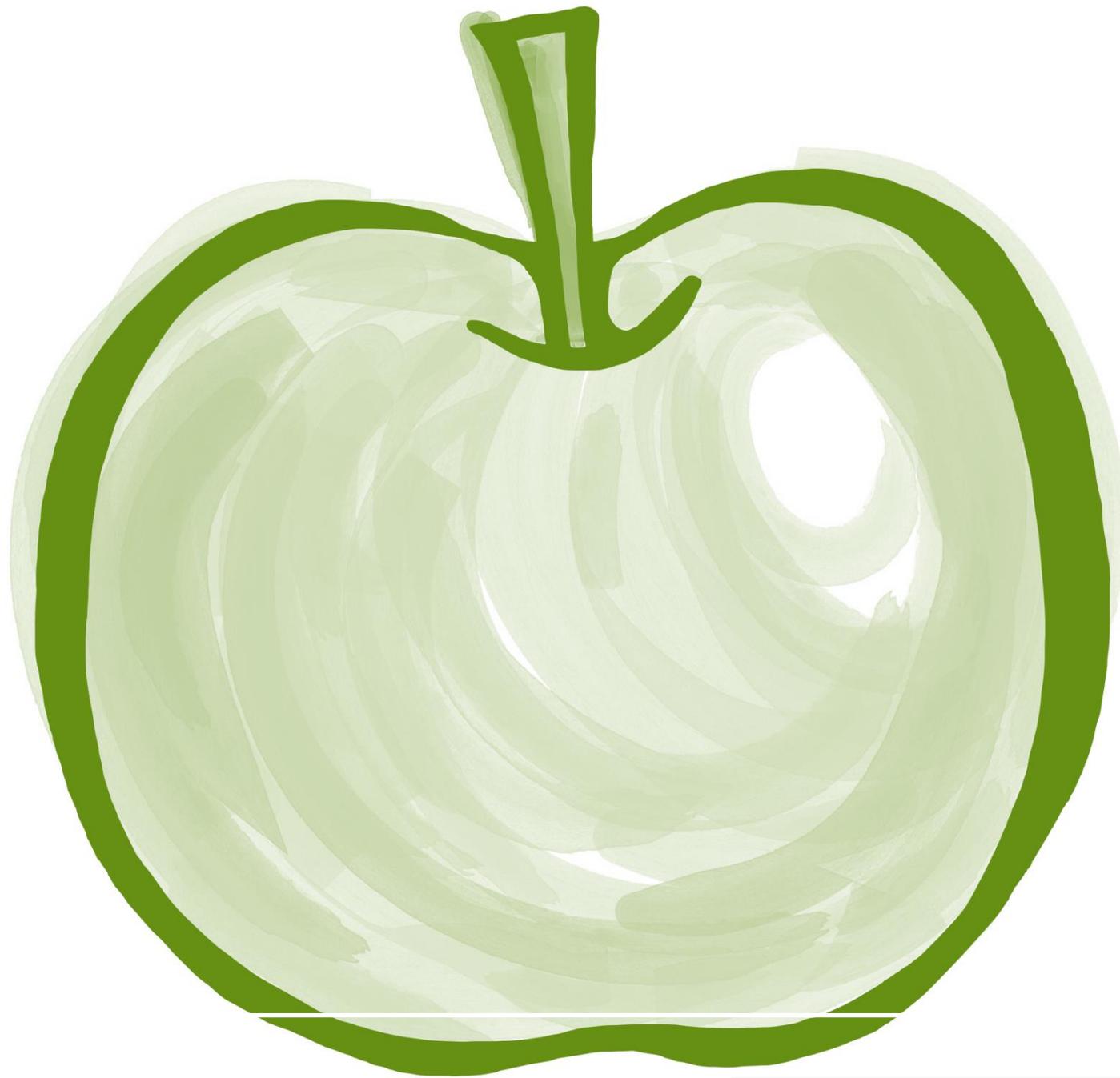


THE APPLE PROJECT





QUESTION:

What mixtures can be used to keep an apple from turning brown the longest and still taste good?

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Introduction

Apples are considered one of the common snacks in the United States, with the country growing over 100 apple varieties. These are general lunch menu items served in schools and institutions. They are served as a healthy snack or side dish for students and workers alike, usually diced and sliced fresh. However, the texture and quality of an apple changes once harvested. Apples kept at room temperature last for a few days; however, it loses its crispness and flavor after a few hours. For the following days, it will continue to shrivel and lose flavor. This means that the apple is losing its nutritional value and taste. There are several preservation methods, such as freezing. The research focuses on comparing alternative ways to preserve sliced apples longer.

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Hypothesis:

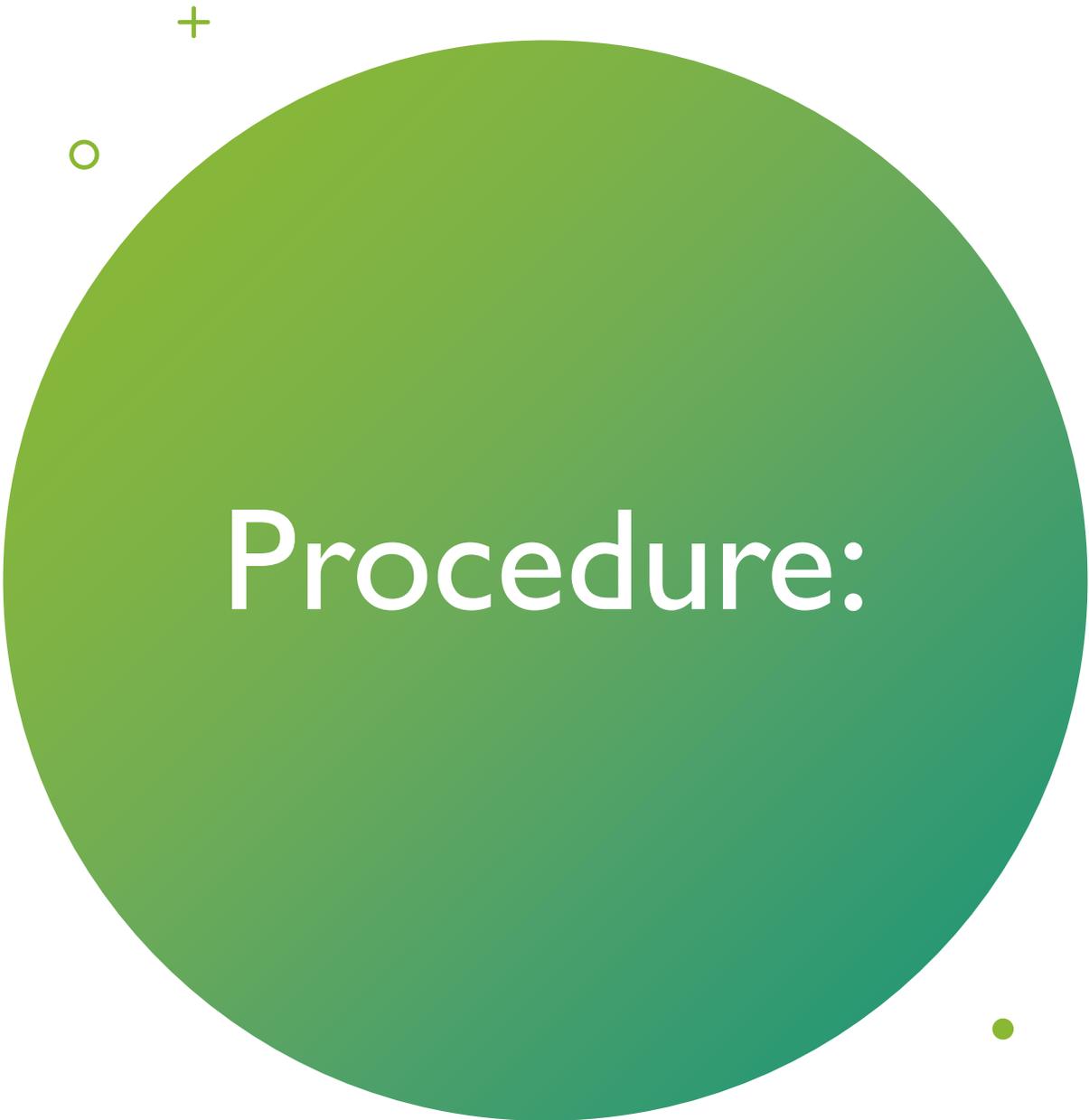
If we use plain water to preserve sliced apples, then the apple will keep its color the longest and not turn brown as quick compared to other mixtures. In addition, this will not affect the taste of the apple and will remain flavorful.



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Materials:

- 6 cups
- 6 Apple quarters
- Water
- Lemon
- Honey
- Vinegar
- Salt
- Napkins



Procedure:

- Fill five cups with different mixtures and place 1 apple quarter in each cup.
 - Mixture 1 - Plain Water
 - Mixture 2 - Salt Water
 - Mixture 3 - Honey and Water
 - Mixture 4 - Vinegar
 - Mixture 5 - Lemon Juice
- Let each apple quarter soak for 10 minutes in their assigned mixture.
- After 10 minutes, place each apple quarters on separate napkins to dry.
- Let the apple quarters dry for 1 hour.
- Record the changes in color and observations in taste.



Results and Discussions:

After soaking all the apples, I observed that 3 of them changed color. The following are the apple quarters soaked in vinegar, honey water, and plain water. After 10 minutes of drying, the vinegar starting turning a dark brown in the middle and got darker during the hour. The honey water and plain water turned a light brown, mostly in the middle area. There were no color changes in the salt water and lemon juice apples. As for the perceived taste, the salt water wasn't as sweet, the vinegar had a vinegar taste on the outside, the plain water had no change in the flavor, the lemon juice had a slight sour lemon taste on the outside and the honey water didn't change the taste.



Conclusions:

The project concludes that the best mixture for preserving the color of an apple the longest is the salt and water mixture. In addition, the perceived taste of the apple in the salt water is the best taste compared to the other mixtures. Based on my observations, the lemon juice kept the apples from turning brown, but the outer flavor turned overly sour. There was no observable changes in taste for the honey water and plain water mixtures; however, there was slight changes in the color — turning light brown. Lastly, there were changes in both color and taste for the sliced apple in the vinegar mixture. The apple had completely turned dark brown and had a bad vinegary taste.