

## SAI MITHRA'S LAB REPORT

Vitamin C is a water-soluble vitamin that is present in some types of foods, as well as the different types of juices that this lab will be testing.

### Problem Statement:

How does the iodine and starch solutions tell us the amount of vitamin C in a fruit juice? Why do some fruits have much higher vitamin C concentrations than others? Vitamin C is an antioxidant and will react with the iodine reactions. This reaction has a very distinctive dark blue color. The starch acts as an indicator. Which show that all the vitamin C has reacted with the iodine

### Hypothesis:

When all the vitamin C is oxidized, iodine will be present, which will react with starch to form a blue-black complex. This process will then indicate which fruits have a higher concentration of vitamin C and which ones have a lower concentration of vitamin C based on the iodine drops. Independent variable: the presence of vitamin C, starch and iodine. Dependent variable: number of iodine drops per sample. Control variable: the amount of starch and vitamin C added.

### Materials:

1. Iodine Solution
2. Eye dropper
3. Beakers
4. Starch
5. Vitamin C Tablets
6. Apple juice
7. Pineapple juice
8. Tomato juice
9. Spoon

### Methods:

1. Dissolve 1 teaspoon of starch with a small amount of cold water (1-2 tablespoon) and add it to 250ml of boiling-hot water.
2. Stir it well until the starch dissolves and then let it cool.
3. Take 1 teaspoon of starch solution and add to the glass with 20mg of vitamin C.
4. Using an eye dropper take iodine solution and slowly, drop by drop start adding it to the vitamin C and starch mixture and make use to count the drops.
5. Stir the mixture well at the same time.
6. The iodine will oxidize all the vitamin C in the solution, once it has all been oxidized, the iodine begins to react with starch.
7. Make sure to take note of the number of iodine drops it took to oxidize and turn the solution dark blue.

Lab Set-up:

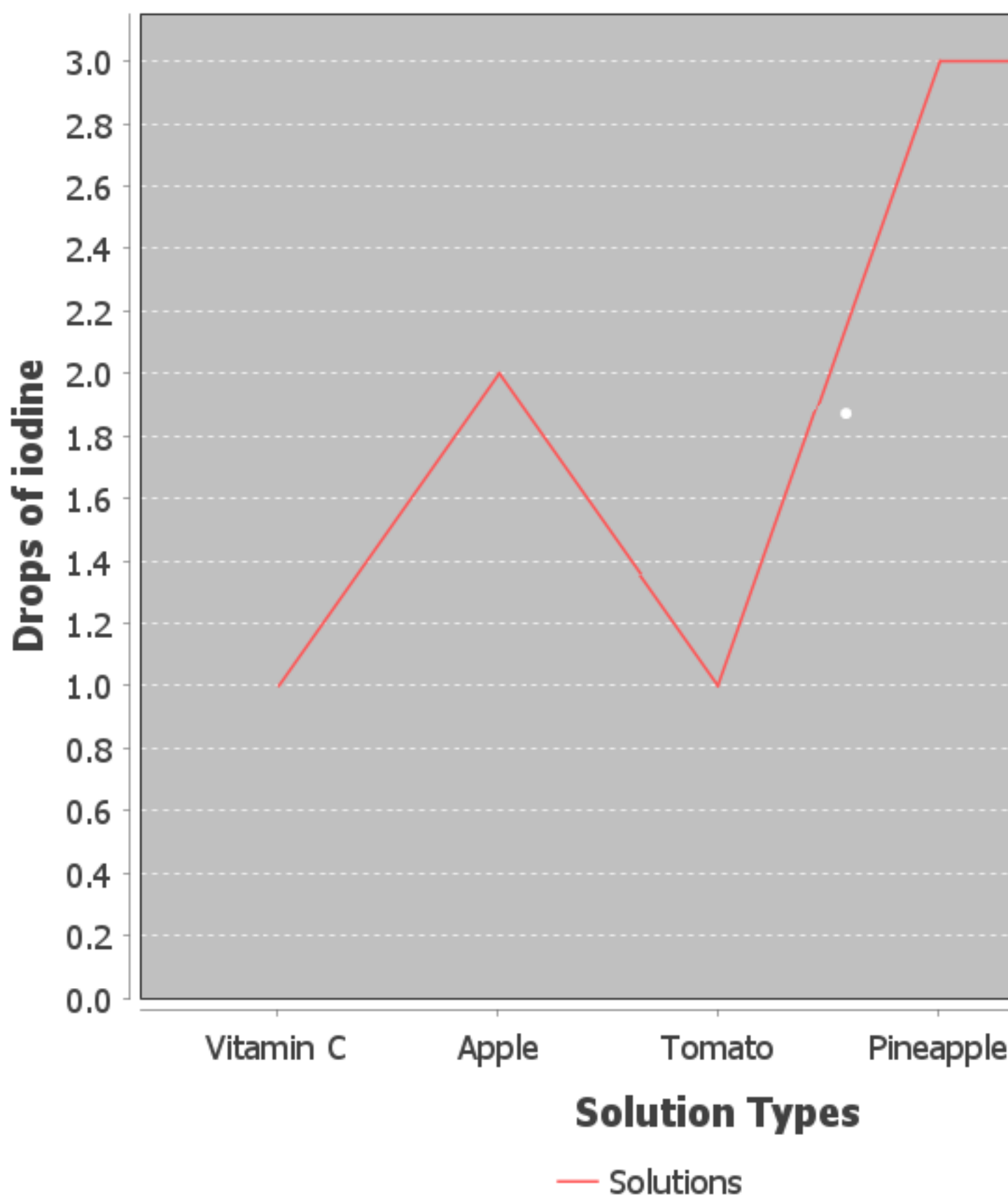


Data Results:



## Vitamin C Concentration

# Concentration Of Vitamin C In Differ



### Conclusion:

What the iodine solution and starch made us see was that the juice that is not altered in any way is the one that has the most vitamin c in it and that can be done to all the substances that are in the juices that are from a big company.