

A thick black L-shaped frame surrounds the text. The top horizontal bar is on the left, the left vertical bar is on the left, and the bottom horizontal bar is on the right, with a vertical bar on the right side.

# DETECTION OF VITAMIN C CONTENT IN FRUIT JUICES

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What knowledge did I use to prepare the project?

Knowledge of the scientific methods

Knowledge of the macromolecules

# What is vitamin C?



# Video from the experiment

- <https://www.youtube.com/watch?v=T8bT5G0E3LQ>

# Research problem

- Do fruit juices contain vitamin C?

# Hypothesis

- Fruit juices contain vitamin C.

# Description of the research sample

- 10 ml of iodine-stained starch solution were poured into 7 glasses. Starch solution with iodine was poured into the first sample (control sample). 2 drops of vitamin C were added to the second sample and the solution became discolored. 22 drops of orange juice were added to the third attempt and the solution became discolored. It should be noted, however, that the manufacturer had previously added this vitamin to it. 80 drops of apple juice were added to make the solution discolour during the fourth attempt. 230 drops of cucumber juice were added to the fifth trial and the solution became discolored. 120 drops of lemon juice were added to the sixth attempt and the solution became discolored. For the seventh and final test, 150 drops of sauerkraut juice were added and the solution became discolored.

# Description of the control sample

- Negative control sample – starch solution with the addition of iodine
- Positive control sample – starch solution with the addition of vitamin C



# Materials



# Procedure of the experiment

- 1. Preparing the workplace and required materials
- 2. Preparing starch solution
- 3. Pouring starch solution into the cup
- 4. Pouring 2 drops of iodine into the starch solution and mixing to obtain a navy blue color
- 5. Pouring starch solution into seven cups
- 6. Pouring only the gruel with iodine into the first cup - control sample
- 7. Pouring vitamin C into the second cup
- 8. Pouring to the following cups: orange juice, apple juice, cucumber juice, lemon juice, sauerkraut juice
- 9. Writing the results into the table

# Table with the results of the experiment

<b>Substance</b>	<b>After how many drops of the substance the gruel became discolored?</b>
Vitamin C	2 drops
Orange juice (containing vitamin C from the manufacturer)	22 drops
Apple juice	80 drops
Cucumber juice	230 drops
Lemon juice	120 drops
Sauerkraut juice	150 drops

# Conclusions

- The content of vitamin C in each of the tested juices is different. The biggest amount of vitamin C was in orange juice, but it should be noted that the manufacturer added additional vitamin C to this juice during its production. The rest of the juices were completely natural. Apple juice is in the second position, followed by lemon juice, sauerkraut juice, and the least amount of vitamin C was in cucumber juice. This experiment showed that vitamin C was present in all of the tested juices, but in different amounts in each of the tested beverages.

What I learned from doing the experiment?



# Bibliography

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