

Gone

FILM

-  **Aluminium in a Self-Experiment**
-  **Knietsche and Health**

KEY OBJECTIVES

- 1) **To understand the effect of adding iodine to the water that contains vitamin C**

INTRODUCTION

Vitamin C, also known as ascorbic acid, is a water-soluble vitamin. It means vitamin C dissolves in water and is delivered to the body's tissues but is not well stored, so it must be taken daily. Vitamin C has several important functions, such as helping to protect cells and keeping them healthy, maintaining healthy skin, blood vessels, bones and cartilage, and helping with wound healing. We as humans are unable to synthesize vitamin C. So, we must obtain it from the diet. Fruits and vegetables are the best sources of vitamin C. But, how do you know if vitamin C is really there in your meal? We will try. Prepare yourself because this experiment may look like magic, but in fact, it is science!

GUIDING QUESTIONS

- Which orange juice do you think contains the most vitamin C?
- How do you know whether the drink has vitamin C or not?

MATERIALS/PREPARATION

- Drinking glasses (3)
- An Orange (1)
- A bottle of conventional orange juice or a vitamin c tablet
- Water
- Antiseptic solution, containing povidone-iodine (1)

TOPICS

Titration Chemistry health

KEYWORDS

Titration oxidation-reduction reaction
vitamin C iodine

LEVEL

All ages

RESOURCE TYPE

Experiment

INTENDED AUDIENCE SIZE

10-100 students in one session

MODE OF DELIVERY

Live online

TIME FOR ACTIVITY

5-10 min.



Gone



Science
Film
Festival

Knowledge
Through
Entertainment

TASKS/PROCEDURE

- 1 Prepare 2 glasses; fill them up with water to a quarter of their volume.
- 2 Add 10 drops of antiseptic solution into each glass.
- 3 Squeeze an orange to get a fresh orange juice and pour it into one glass
- 4 Pour a conventional orange juice as much as a fresh orange juice or dissolve a vitamin c tablet into another glass
- 5 Observe which glass of water that turns more translucent?
- 6 Explain the reason!

FOSTERING DISCUSSIONS

- 1 Which glass of water that turns more translucent?
- 2 Which glass has the most vitamin C?

SAFETY INSTRUCTIONS

Be careful while using iodine because it can stain skin, clothing and countertops.

If iodine gets into your eyes, immediately flush with plenty of water.

Do NOT drink water even if it turns clear and looks like regular water because the iodine is still there. Discard the water immediately once the experiment is over.

POSSIBLE EXTENSIONS

Try comparing between fresh orange juice and mushy orange juice that has been stored in a fridge for days. Which one has the most vitamin C?

AUTHORS AND SOURCES

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