

EXTRACTING DNA

from Strawberries

In this experiment, you will extract DNA from strawberries and see it with your own eyes!



OVERVIEW

DNA (deoxyribonucleic acid) is the genetic material found in all living organisms. It carries instructions for how living things grow, function, and reproduce. In this experiment, we will break open strawberry cells and separate the DNA so it can clump together and become visible.



MATERIALS

- 2-3 fresh strawberries 
- Resealable plastic bag 
- Dish soap 
- Table salt 
- Warm water (about 1/2 cup) 
- Coffee filter or fine mesh strainer 
- Clear glass or cup 
- Rubbing alcohol (chilled in freezer for 20-30 minutes) 
- Wooden stick or skewer 

*Adult supervision is recommended.

PROCEDURE

- 1 Place the strawberries in a resealable plastic bag. Seal the bag and mash the strawberries for 1-2 minutes until they are completely crushed. 
- 2 In a cup, mix: 1/2 cup warm water, 1 teaspoon dish soap, and 1/4 teaspoon table salt. Stir gently. 
- 3 Pour the soap mixture into the bag with the mashed strawberries. Seal and gently mix by squeezing the bag for 1 minute. 
- 4 Set up a filter over a clean glass or cup. Pour the mixture through the filter to remove the solids. Let the liquid (strawberry extract) collect in the glass. 
- 5 Slowly and gently pour chilled rubbing alcohol down the inside of the glass so it forms a layer on top of the strawberry extract. Do not mix. 
- 6 Wait 1-2 minutes. Watch for white, cloudy strands of DNA to appear at the boundary between the alcohol and the strawberry liquid. 
- 7 Use a wooden stick or skewer to spool the DNA strands and lift them out. Look closely! 

SAFETY

-  Rubbing alcohol can be irritating. Avoid contact with skin and eyes.
-  Work in a well-ventilated area.
-  Wash your hands after the experiment.

OBSERVATIONS

Draw what you saw.

QUESTIONS

1. What did the DNA look like? _____
2. Why do you think the alcohol had to be added slowly? _____
3. What part of the strawberry do you think the DNA came from? _____
4. What other living things have DNA? Give some examples. _____



THINK LIKE A SCIENTIST! DNA is in the cells of almost all living things, including you!