

Isolation of DNA from Fruit



Purpose: To extract visible DNA from fruit. DNA extracted using this method is not pure enough to use for subsequent testing.

Materials:

Chemical/Biological

Banana
Rubbing alcohol (isopropanol)
Homogenizing solution
 30 mL liquid dish soap
 8 g NaCl
 Fill to 1 L with distilled water

Laboratory Apparatus

Gloves
2-250 mL beakers
Cheesecloth
Glass rods
Fork

Procedure:

1. The day before, prepare the homogenizing solution.
2. Cut the fruit into a bite-sized piece (approximately 1/3 banana, 1/2 kiwi, or 1 large strawberry).
3. Mash one piece of fruit into a beaker.
4. Add enough of the homogenizing medium to cover the mashed fruit.
5. Stir in the beaker for 2 minutes.
6. Filter the homogenate through 2 layers of cheesecloth into a second beaker. You may have to squeeze the solution slightly, as it is very thick.
7. Place the filtrate into a test tube and add an equal amount of rubbing alcohol. A white precipitate should appear, this is the DNA.
8. Wind the DNA around a glass rod.

Analysis (For class discussion only)

1. What is the purpose of the homogenizing mixture (particularly the dishsoap)?
2. What is the purpose of adding alcohol to the solution?
3. Why is it necessary that a glass rod be used to wind the DNA?
4. Although this DNA isn't pure, what could be done with DNA extracted using a similar procedure?