Expt 1. Isolation of DNA from banana

Aim:

To isolate DNA from plant material such as banana

Materials Required:

Banana

Mortar and Pestle

Beakers

Strainer

Distilled water

Sodium Chloride (Nacl)

Liquid detergent

Chilled Ethanol

Procedure:

Take 90 ml 0f distilled water in a beaker.

Add 10 ml of liquid detergent to the beaker containing 90 ml distilled water.

Add 10 gm sodium chloride (Nacl) and mix thoroughly

Take a piece of banana in a mortar and add the detergent solution.

Grind the banana properly and gently with pestle.

Filter the banana detergent solution with the help of a strainer.

Add chilled ethanol to the filtrate.

Spool the DNA with a glass rod or needle.

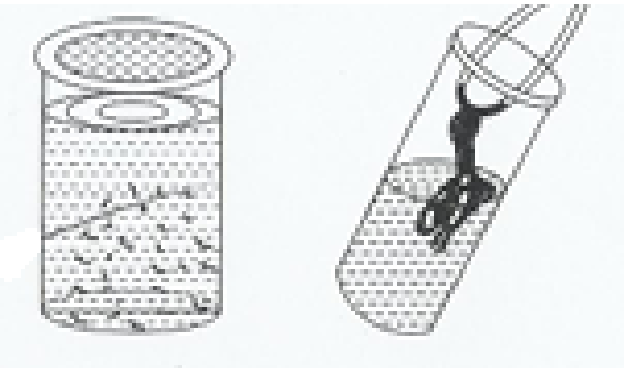
Observation:

The DNA appears as white precipitate of fine thread on the spool.

Precaution:

All the glassware used must be thoroughly cleaned and dried.

The enzyme and other chemicals used must be of standard quality.



Diagram

Points to understand, not for writing

Grinding helps to break cell wall.

Detergent breaks cell membrane and nuclear membrane.

Salt separates proteins that are attached to DNA.

Ethanol helps to visualize DNA by making it insoluble (DNA is normally soluble in water)

Spooling = Collecting the isolated DNA.

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