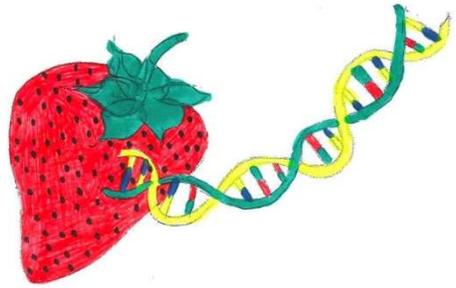


Strawberry DNA

Materials

- Plastic baggie with strawberry
- One large and one small plastic cup
- Funnel and cheesecloth
- Chilled isopropyl alcohol
- Fork
- Extraction mixture (1 tsp salt, 1 cup water, 1 Tsp dish soap)



Procedure

- Put the strawberries into a resealable plastic sandwich bag and push out all of the extra air. Seal the bag tightly.
- With your fingers, squeeze and smash the strawberries for two minutes.
- Add three tablespoons of the extraction liquid to the strawberries in the bag. Push out all of the extra air and reseal the bag.
- Squeeze the strawberry mixture with your fingers for one minute.
- Pour the strawberry mixture from the bag into the funnel. Let it drip through the cheesecloth and into the tall glass until there is very little liquid left in the funnel.
- Pour the filtered strawberry liquid from the tall glass into the small glass.
- Slightly tilt the glass and very slowly pour the alcohol down its side. Pour until the alcohol has formed approximately a one-inch-deep layer on top of the strawberry liquid. Do not let the strawberry liquid and alcohol mix.
- Study the mixture inside of the cup. The strawberry DNA will appear as gooey clear/white stringy stuff.
- Dip the fork into the jar where the strawberry liquid and alcohol layers meet and then pull up the stick.
- Place the collected DNA into the small plastic container.

During a DNA extraction, a detergent will cause the cell to pop open, or lyse, so that the DNA is released into solution.

Then alcohol added to the solution causes the DNA to precipitate or come out of the solution.

Strawberries will be used because each strawberry cell has eight copies of the genome, giving them a lot of DNA per cell. (Most organisms only have one genome copy per cell.)