Simple extraction of DNA from living material

Introduction

DNA is the hereditary material found in all living things. In this practical you will extract the DNA from strawberries. Strawberries can have up to 8 copies of each chromosome and so contain a lot of DNA. When extracted from the strawberry this DNA is visible.

Apparatus

re-sealable plastic bag
strawberry
10 cm^3 washing up liquid (detergent)
1 g sodium chloride
100 cm^3 water
2 × 250 cm^3 beakers (one beaker will be used for the filtering apparatus below)
filter funnel
coffee filter paper
ice-cold 90 % alcohol
ice lolly stick or plastic coffee stirrer

Method

1. Remove the green top from the strawberry.
2. Put the strawberry into the plastic bag, seal it and crush for about 2 minutes.
3. In a beaker mix together 10 cm^3 of washing up liquid, 1 g of salt and 100 cm^3 water. This mixture is the DNA extraction liquid.
4. Add 10 cm^3 of the extraction liquid to the bag with the strawberry.
5. Re-seal the bag and gently mix the extraction liquid with the strawberry for 1 minute.
6. Place the coffee filter inside the beaker and gently pour the strawberry mixture into it.
7. Pour 10 cm^3 of ice-cold 90 % ethanol down the side of the beaker into the strawberry mixture, do not mix or stir.
8. Within a few seconds you should see a white cloudy substance form in the clear layer above the strawberry mixture. Use a lolly stick to pull strands of this out of the top layer, this is the strawberry DNA.