

Lab - Extracting DNA from Strawberries

Purpose - To measure the volume of DNA extracted from 3 strawberries.

Hypothesis - If DNA is extracted from 3 strawberries, then _____ mL of DNA will be obtained.

Materials -

- Zippered bag
- frozen strawberries
- cheesecloth
- 250 mL beaker
- detergent
- 100 mL graduated cylinder
- Table Salt
- Electronic balance
- water
- rubbing alcohol (on ice)
- Glass stirring rod
- 10 mL graduated cylinder
- Timer
- Weigh boat
- scoopula

Procedure -

1. Place 3 frozen strawberries onto the scale to measure their mass. Record this value in the observation table. Then place the strawberries into the zippered bag.
2. Crush the fruit thoroughly 2 minutes, using a timer to keep time.
3. Place the weigh boat on the electronic balance and press the "ZERO" button. Use a scoopula to transfer 1.5 g of salt into the weigh boat. Place the salt into the zippered bag.
4. Measure 90. mL water using the 100. mL graduated cylinder. Add detergent until it reads 100. mL. Place this mixture into the zippered bag.
5. Gently mix the contents of the zippered bag for 1 minute, using a timer to keep time.
6. Place the cheese cloth loosely over top of a 250. mL beaker.
7. Slowly pour bag contents onto cheese cloth to filter, allowing the cheese cloth to droop into the beaker to prevent any spills.
8. Use the cheese cloth to form a sack around the fruit mixture. Gently squeeze the sack to speed up the filtering process.
9. Add 50. mL of ice-cold rubbing alcohol to the beaker. DO NOT SHAKE the beaker.

10. Let the solution sit for 2 minutes, using a timer to keep time.
11. The DNA will appear as a slimy, whitish mucus which can spooled up with the glass rod or scooped out with a scoopula. Transfer the DNA to the 10. *mL* graduated cylinder to measure its volume. Record this value in the observation table.