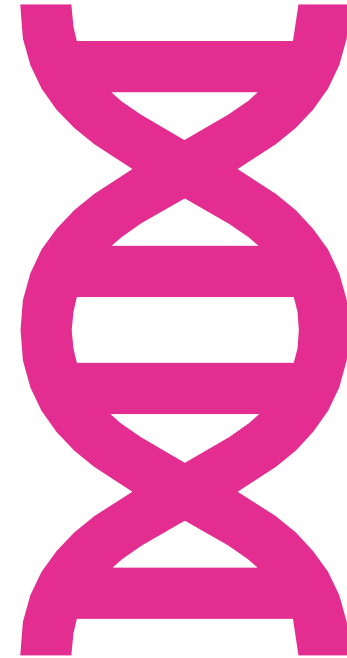


# Extract DNA From Strawberry

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# Objective

- Understand how cell barriers are broken and how to extract DNA from strawberry cells.

# Materials

- 17 50-mL tubes with lids and bases
- 33 15-mL tubes with lids
- resealable plastic bags
- wooden sticks
- funnels
- pack of cheesecloth
- transfer pipets
- bottle of ethanol, 95% (100 mL)
- bottle of liquid detergent
- 10 g salt (sodium chloride, NaCl)

## Procedure

- 1. Obtain one fresh or one frozen and thawed strawberry. If you are using a fresh strawberry, remove the green sepals (tops) from the berry.
- 2. Place the strawberry in a resealable plastic bag.
- 3. Close the bag slowly, pushing all of the air out of the bag as you seal it.
- 4. Being careful not to break the bag, thoroughly mash the strawberry with your hands for two minutes.
- 5. Pour the 10-mL of extraction buffer(salt with liquid detergent) into the bag with the mashed strawberry. Reseal the bag.
- 6. Mash the strawberry for one additional minute.

## Procedure

- 7. Place a funnel into a 50-mL centrifuge tube. Fold the cheesecloth in half along the longer side and place it in the funnel to create a filter. The cheesecloth will overlap the edge of the funnel.
- 8. Pour the strawberry mixture into the funnel, filtering the contents through the cheesecloth and into the 50-mL centrifuge tube.
- 9. Carefully pour 2 mL of the filtered contents from the 50-mL tube into a clean 15-mL tube. Use the lines on the side of the 15-mL tube to help measure the amount added.

## Procedure

- 10. Hold the 15-mL tube at an angle. Using a transfer pipet, carefully add 5 mL of cold 95% ethanol by running it down the inside of the tube. Add the 95% ethanol until the total volume is 7 mL (use the lines on the side of the tube to help you measure). You should have two distinct layers. Caution: Do not mix the strawberry extract and the ethanol!
- 11. Watch closely as translucent strands of DNA begin to clump together where the ethanol layer meets the strawberry extract layer.
- 12. Slowly and carefully rotate the wooden stick in the ethanol directly above the extract layer to wind (or “spool”) the DNA. Remove the wooden stick from the tube and observe the DNA .

# Reference

- [http://faculty.ksu.edu.sa/sites/default/files/358\\_bot.pdf](http://faculty.ksu.edu.sa/sites/default/files/358_bot.pdf)