



SCIENCE OUTSIDE THE CLASSROOM

Banana DNA Extraction

Recommended age group: all ages

You will need:

- ½ tablespoon mashed banana
- 100ml warm water
- ½ teaspoon dishwashing detergent
- ¼ teaspoon salt
- 25ml ice cold methylated spirits
- Strainer
- Funnel
- Test-tube (or small sealable container)

Optional

- ¼ Teaspoon Meat Tenderizer
- ½ Teaspoon baking soda

What to do:

Measure 100ml of warm water (50-60 degrees Celsius) into a cup or small heat-proof jug. Add 1/2 tablespoon of mashed banana to the cup and stir well. Add 1/2 teaspoon of regular dishwashing detergent and stir for one minute. The solution will become thick as the detergent separates the DNA from the banana cells.

Optional: Add 1/4 teaspoon of meat tenderizer (available in most supermarkets) and 1/2 teaspoon of baking soda to the mix. The meat tenderizer keeps the DNA intact and the baking soda keeps the solution from being too acidic. Stir this slowly for 1 minute and then let the solution settle and cool for 4-5 minutes.

Pour the top half of the liquid through a strainer and funnel into a test-tube or sealable container.

Add 25ml ice-cold methylated spirits to the tube by pouring down the side of the glass gently and let it sit for 1 minute.

The DNA separates from the alcohol and moves to the bottom half of the tube. You should slowly see small filaments of DNA appear. Use a bent paperclip to collect the DNA.

You can store your DNA in alcohol in sealed containers or test-tubes.