

## Extracting DNA from Strawberries

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Did you know each living organism is made up of molecules? Similar to using lego to build a structure, DNA is what is used to build people!

DNA (deoxyribonucleic acid) is a long molecule that contains your unique genetic code. Just like a book full of recipe's, DNA holds the instructions for making all the proteins, or building blocks, in our bodies.

Here is a fun experiment you can try at home (**with adult supervision!**) to see what DNA looks like:

### What you will need:

- 2 strawberries (or any other soft fruit)
- 1 ziplock bag
- 1 funnel & beaker
- 50 ml shampoo
- 1 pipette to extract DNA
- 1 cheese clothe or small piece of gauze
- 450 ml of water
- 1 tsp salt
- 5 ml of 70% isopropyl alcohol (**USED BY AN ADULT ONLY**). Can be found at local drug store.

### Instructions:

1. Put 2 strawberries in a zip lock bag.
2. Pour 20 ml of extraction fluid into zip lock bag.
3. Close and seal bag, removing as much air as possible.
4. Use hands to gently mash the berries in the extraction solution for 5 min.
5. Place funnel in beaker (can also use a zip lock bag with a piece of cheesecloth).
6. Put a piece of cheesecloth inside the funnel.
7. Open zip lock bag and pour mixture of strawberries and extraction solution through the cheesecloth and into the funnel.
8. Gently squeeze the cheesecloth to get all the liquid solution out.
9. Once all the liquid has passed through the cloth, throw the cloth away and remove the funnel.
10. Add 5 ml of 70% isopropyl alcohol (in a tube at your station).
11. Hold beaker to eye level and observe.
12. The fine, white strands of cotton fiber that look like spider webs at the interface of the fruit extract and isopropyl alcohol is DNA!
13. Use pipette to remove DNA and store in another tube with isopropyl alcohol.

#### Extraction solution:

450 ml water  
50 ml shampoo/soap  
1 tsp salt

**Examine your DNA!**