

# DNA from kiwifruit

(do this with supervision from an adult, read all the instructions before use)

DNA is the stuff of life that contains the genetic code. Kiwifruit is a good material for extracting DNA as it contains enzymes that digests proteins. These enzymes aid the release of DNA. You can also try this experiment with strawberries and onions.

## What You Need:

### Materials:

- Kiwifruit
- Lysis solution

12gm / 1 tbsp salt  
40ml / 3 tbsp detergent  
450ml / 1 pint water  
20ml methylated spirits\*\*

### Equipment:

Measuring spoons and cup  
Bowl  
Hot water  
Knife  
Fork  
Gloves(for adding the methanol)

1. Make the lysis solution:  
Dissolve the salt into the water, then gently mix in the detergent, don't let it foam too much.
2. Remove the skin of the kiwifruit (there is not much DNA in this)
3. Cut kiwifruit flesh with a knife into small cubes (need to increase the surface area)
4. Put into bowl and mash with a fork for around a minute
5. Add 100ml of the lysis solution to the mashed kiwifruit
6. Put in a pyrex bowl over some hot/not boiling water 15min
7. Strain the mixture using a sieve, keeping the green liquid
8. Put 50 ml of the liquid into a small glass jar or shot glass.
9. Dribble the methylated sprits down the edge.
10. Look for the DNA forming, it is the floaty white blob
11. If you have a toothpick you may be able to pick out some of this stringy DNA

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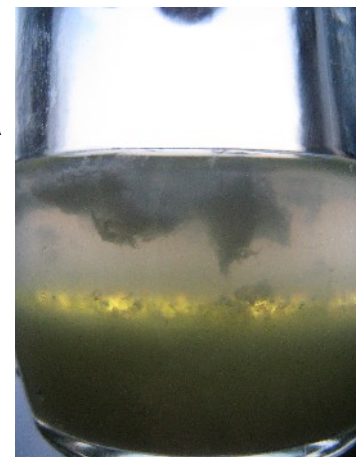
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## Curriculum links:

England-GCSE Biology 2009: Chromosomes are made up of large molecules of DNA (deoxyribose nucleic acid). A gene is a small section of DNA.  
Scotland-L4 SCN 3-14b : Extracting DNA I have extracted DNA and understand its function. I can express an informed view of the risks and benefits of DNA profiling.



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Kiwi DNA extraction using iso-propanol/rubbing Alcohol. This does the same thing as methanol, but is harder to get.

## Safety:

Methanol is flammable  
Keep away from naked flames.  
Clean up spills promptly, minimise contact with skin. Do not allow to get into eyes. Do not drink

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