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**TECHNICAL MANUAL v.3.7A**

**MEN IN WHITE**  
**M.I.W.**



# Extracting DNA from Fruit

Every living thing contains DNA. If you think of it as an instruction book then our book contains about 2 billion (that's 2,000,000,000) letters! That's the same as about 4000 normal reading books.

All these chemical letters are stuck together in long, sticky strings of DNA. The following recipe shows you how to get the DNA out of fruit.

## Materials

- One fresh Banana (not too green)
- Cheap washing up liquid (Lemon scented variety optional)
- Table salt
- Ice cold alcohol (Methylated spirits or vodka, gin, aftershave)
- Kitchen roll
- Knife, fork and chopping board
- Mug and glass (preferably thin)
- Tap water
- Cocktail sticks or straws



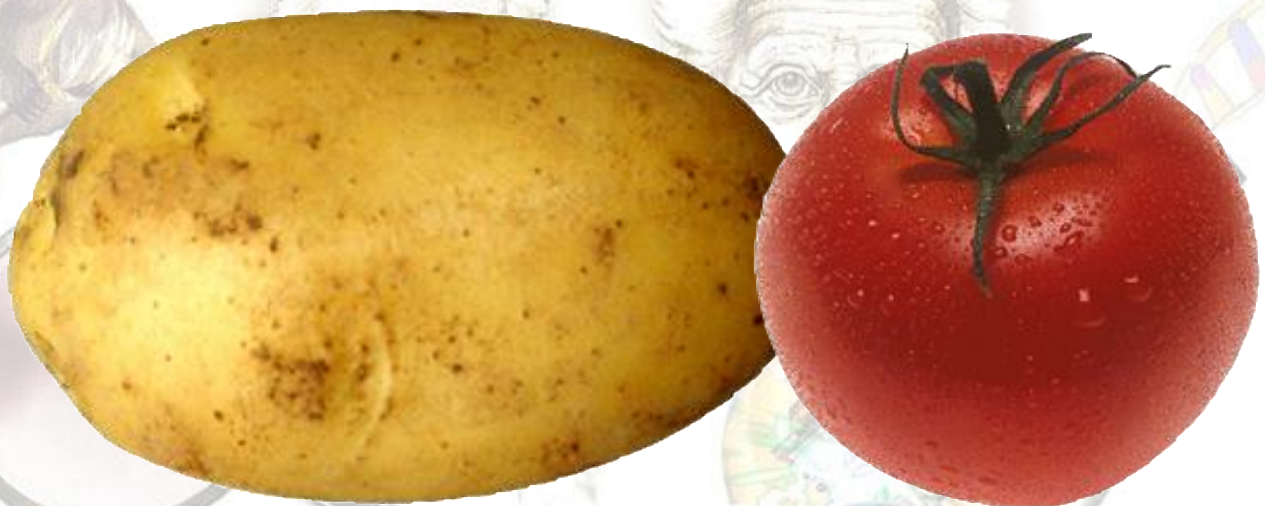
## Procedure

1. Place the alcohol in the freezer until it is chilled.
2. Cut a slice of banana about 1cm thick and place it in the mug. Add 1 level teaspoon of salt, a generous squirt of washing up liquid (about 1 teaspoon) and 2 tablespoons of tap water.
3. Mash up the mixture in the mug until the banana has turned runny and all the salt has dissolved.
4. Fold a sheet of kitchen roll in half and place it over the top of the glass, push it down slightly so that it forms a funnel shape.

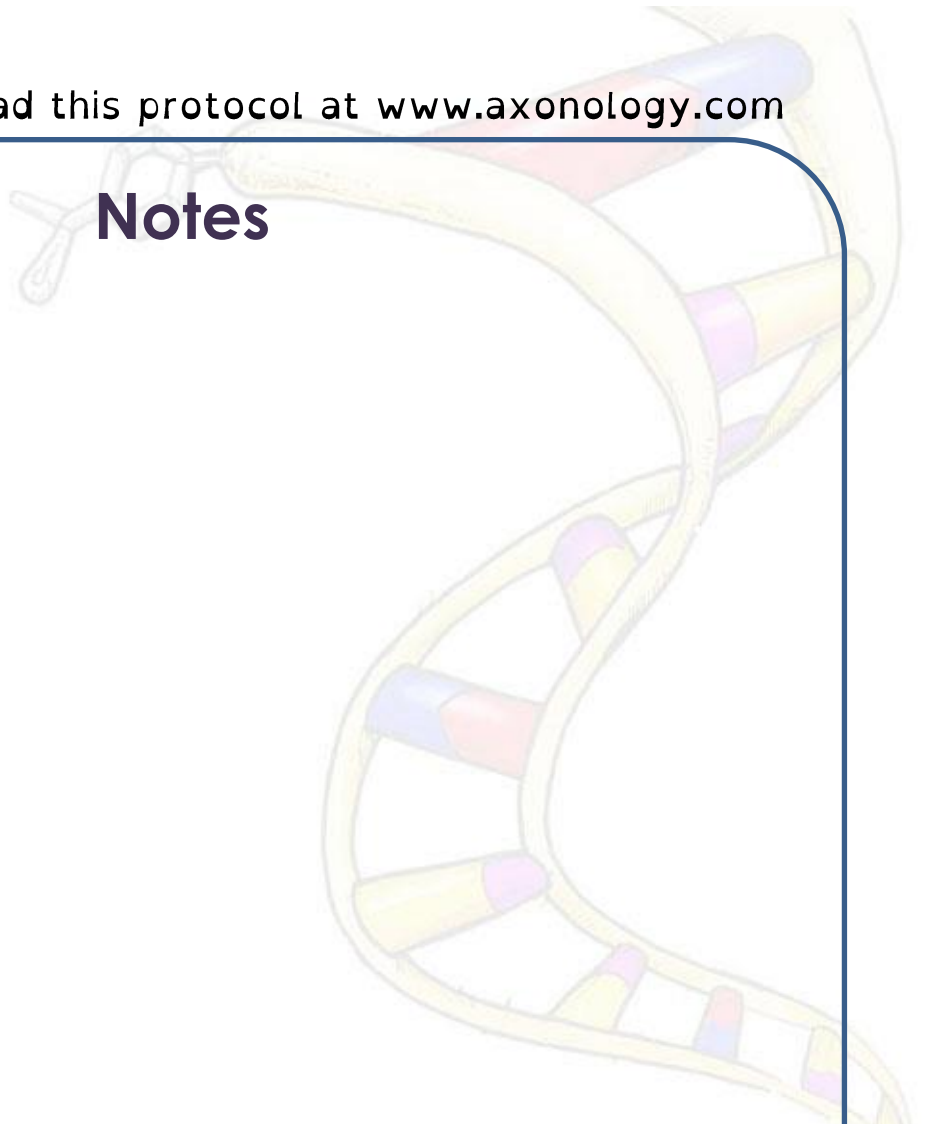
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5. Carefully pour the banana mixture into the middle of the tissue funnel so that it drips down into the glass. You may need to carefully draw up the edges of the tissue and give the bottom a gentle squeeze. Don't press too hard or it will rip!
6. Throw away the tissue with the remaining banana solids, you should have a translucent liquid in the glass.
7. Add cold alcohol to the glass to create an alcohol layer on top. For best results, the alcohol should be as cold as possible. The alcohol should be added to the solution by slowly pouring it down the inside of the glass.
8. Let the solution sit without disturbing it. It is important not to shake the glass. You can watch the white DNA appear between the two layers. DNA has the appearance of white mucus and air bubbles are often caught up in the DNA.
9. The DNA is stringy and sticky, you can use a cocktail stick or a straw to carefully slide it up the side and out of the glass

*Why not try this with other fruit and vegetables?  
Do some work better than others?*



# Notes



For more details visit [www.axonology.com/meninwhite.html](http://www.axonology.com/meninwhite.html)