

Fruit DNA Extraction

All living things have DNA and you can extract it and see it with just a few simple materials you can buy at the supermarket or the pharmacy.

- ❖ Start with your favourite fruit. Some options are strawberries, kiwi, orange, plums or anything nice and juicy.
- ❖ Use about a handful (you can use more or less depending on how much you have)
- ❖ Puree the fruit. There are a number of ways to do this:
 - Use the blender
 - Put the fruit in a ziploc bag and mash it with your hand/ rolling pin
 - Use a mortar and pestle
- ❖ Prepare some salt water – mix half a teaspoon salt per cup of water.
- ❖ Add double the volume of salt water to the fruit mush (if you have 0.5 of a cup of fruit mush, use a whole cup of salt water). If you used the blender, add the salt water together with the fruit.
- ❖ Strain the salty fruit mush into a new container/glass. Use cheese cloth folded over a couple of times or a very fine sieve. You can squeeze the juice out of the cloth. This separates the cellular contents (the liquid) from the rest of the cellular debris that we don't need (the mush).
- ❖ Add a teaspoon of dish soap (if you have more than a cup use more soap) and swirl gently. Wait 5-10 minutes. This will break apart the cell membranes.
- ❖ Add a pinch of meat tenderizer and wait 5 min. The meat tenderizer contains proteases that will degrade the proteins in the solution.
- ❖ Very slowly pour a layer of alcohol (isopropyl alcohol/ethanol) over the solution.
- ❖ As you wait you will see clumps of white stringy stuff at the border between the alcohol and the rest of the solution. This is the DNA. The DNA may eventually all clump together and float to the top.

