

## Worksheet 9 – Purifying DNA from a banana

Name: .....

### Take DNA out of a banana?

Not only humans have characteristics stored in DNA. Animals and plants also have this information in all of their cells. Complete DNA can be extracted from those cells, also called isolating. It's so easy you can do it in class.

Now imagine you want to make a banana, then you need the DNA from the banana. With this experiment, you can get the DNA out of a banana.

### What do you need?

Getting DNA out of a banana is a piece of cake but ensure that all the ingredients are ready so you can finish the experiment in one go.

- Half a banana
- Ananas juice
- 100 ml cold water
- Half a coffee spoon of kitchen salt
- A mixer
- A coffee filter with a filter holder
- A test tube (a long, narrow, glass tube)
- A bit of dish soap
- 70% alcohol
- A small wooden stick

### And this is how you go about it:

#### STEP 1

Cut the banana into small pieces and put the pieces into a blender with 100 ml cold water and half a coffee spoon of salt into the mixer/blender. Mix for 15 seconds with maximum power. You now have banana cell soup.

#### STEP 2

Filter the banana soup through the coffee filter and catch the juice in a test tube (about three fingers high).

#### STEP 3

Add a couple of droplets of dish soap and softly shake the test tube back and forth.

#### STEP 4

Add half a coffee spoon of ananas juice to the test tube. Again, softly shake for 5 minutes.

#### STEP 5

Now take the very cold alcohol from the freezer and add it carefully. Make sure that the alcohol softly runs down the side and that the volume in your test tube approximately doubles.

After a few seconds a white snot forms on the dividing line between the juice and alcohol.

Carefully stir with a wooden stick through the snot and wind it up.... The DNA of the banana!

