

Restoring the American Chestnut

DNA Extraction

Materials & Equipment per group:

2 bananas (peeled)	distilled water
Blender	Two Plastic cups
1 tsp. dish detergent/shampoo	2 pinches table salt
1 Plastic spoon	Cheese cloth
Rubber bands	Plastic transfer pipette/medicine dropper
95% ethanol	Small test tubes with caps
Ice and bucket	

Procedure

1. Add two peeled bananas (or some other fruit) and enough distilled water to cover the fruit to a blender. Blend for 15 to 20 seconds, until the solution is in a slurry.
2. In one of the 5 oz. plastic cups make a solution of 1 teaspoon of shampoo and two pinches of table salt. Add 20ml (4 teaspoons) of distilled water. Dissolve the salt and dish detergent/shampoo by stirring slowly with the plastic spoon to avoid foaming.
3. To the solution from step 2, add two heaping spoonfuls of the banana slurry from step one. Gently swirl the solution for 5-10 minutes.
4. Loosely stretch a piece of cheese cloth over the second plastic cup and secure with a rubber band.
5. Now filter the mixture from step three by pouring it over the cheese cloth filter from step 4 and let the solution drain for several minutes until it covers the bottom of the cup.
6. Obtain a test tube filled half full of the cold ethanol.
7. Fill the plastic pipette or medicine dropper with solution from step four and add it to the alcohol. Be sure to cap the test tube when you are done.
8. Let the solution sit for 2 to 3 minutes without disturbing it. It is important not to shake the tube. You can watch the white DNA precipitate out into the alcohol layer. DNA has the appearance of white, stringy mucus.