BANANA DNA Extraction

Pictures of importance
Banana
Glass or 250 mL beaker
Wooden sticks
Salt ¼ tsp.
Salt in water at Room Temperature
Dish detergent
Ready to filter
Mashed banana in baggy
Mashed banana after addition of salt water and detergent—note very few bubbles
Alcohol on top of filtered mixture
DNA Forming at the interface between alcohol and water layers.
EXTRACTION of BANANA DNA

• Activity from askabiologist.asu.edu/activities/banana-dna
• Some modifications as noted on uploaded file
• PLEASE USE DIRECTIONS I MODIFIED
• Good descriptions of why different substances were used in the experiment—there will be lab questions about those
• Instructions for teachers given on the ASU website
• TEACHERS: Do this experiment yourself before doing it with students to find the pitfalls
Comments about Experiment

• Water must be at room temperature, no warmer.
  – DNA is denatured in hot water. I had problems using hot water!

• Use either cheesecloth or an old white t-shirt that can be cut up. Coffee filters retain too much.

• Use about ½ tsp salt in ½ cup water
  - After adding detergent, gently agitate. Don’t want bubbles

• The Isopropyl alcohol must be 70% concentration. They sell 50%, but that won’t work

• Put bottle in freezer at least overnight. (It won’t freeze.) It must be very, very cold for experiment to work.

• May not be able to get DNA on the sticks, but can be seen at the interface of liquids