



## Berry Cool DNA

**Introduction:** Today, we are going to extract the DNA from strawberries!

**Approximate Time:** 20-30 minutes

**Materials:**

- ½ cup of rubbing alcohol
- ½ teaspoon of salt
- 1/3 cup of water
- 3 strawberries
- 1 tablespoon of dishwashing liquid
- Measuring cup for liquids
- Measuring spoons
- Glass or small bowl
- Funnel
- Tall Drinking glass
- Cheesecloth or coffee filter
- Ziploc bag
- Small glass jar
- Bamboo skewer or toothpick



**Procedure:**

1. Mix 1/3 cup of water, ½ teaspoon of salt, and 1 tablespoon of dishwashing liquid in a glass or small bowl. Set the mixture aside, as this will be the liquid you will use to extract the DNA.
2. Line your funnel with cheesecloth or coffee filter. Put the tube of the funnel in a tall drinking glass (not the one with the extraction liquid).
3. With the help of a trusted adult, cut off the tops of the strawberries and put the berries in the Ziploc bag. Make sure all the air is pressed out of the bag.
4. Squeeze and smash the strawberries for about 2 minutes.
5. Add 3 tablespoons of the extraction liquid into the strawberry bag. Push all the air out of the bag and then reseal it.
6. Squeeze the mixture for about a minute.
7. Pour the mixture into the funnel so the liquid is filtered through the cheesecloth.
8. Pour the strawberry liquid from the tall glass into the jar so it's 1/4 full.
9. Measure 1/2 cup of rubbing alcohol. Slowly pour it into the jar so there is about a 1-inch thick layer of alcohol above the strawberry mix. Do not let the alcohol and strawberry liquid mix.
10. Now you'll see the DNA! It appears to be a white/clear string.
11. Dip the skewer or toothpick into the jar where the liquid and alcohol layers meet and pull it up to see the DNA.

### Tips & Tricks:

- With the help of a trusted adult, you may want to cut the strawberries up into smaller pieces to make them easier to smash
- Make sure the bag is strong enough that it does not pop while you are smashing the strawberries
- If the mixture is taking too long to go through the funnel, you may want to try to use a spoon to push down the mixture

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