

**Objective:** In this virtual lab, you will identify the resources and process of DNA Extraction.

**Introduction:**

1. Name two (2) reasons scientists isolate DNA.

**Step One: Collect Cheek Cells**

2. What is contained inside the nucleus of every cheek cell?

**Step Two: Burst Cells Open to Release DNA**

3. "Lysis" is a Greek word that means what? \_\_\_\_\_
4. The Lysis solution you added to your Eppendorf tube and placed in the warm water bath contained detergent and enzymes. What was the purpose of the detergent? What was the purpose of the proteinase K?

**Step Three: Separate DNA from Proteins and Debris**

5. What is the function of the salt solution?
6. What is the function of the centrifuge step?

**Step Four: Isolate Concentrated DNA**

7. Isopropyl alcohol is used to precipitate out the DNA because it is not soluble. What does this mean?
8. Why must the new tube be centrifuged?

**Analysis and Conclusions**

9. Why do you think it is important to have a "balanced" centrifuge?
10. Relate how shampoo performs the same function on your hair as it does on cell membranes in this lab.