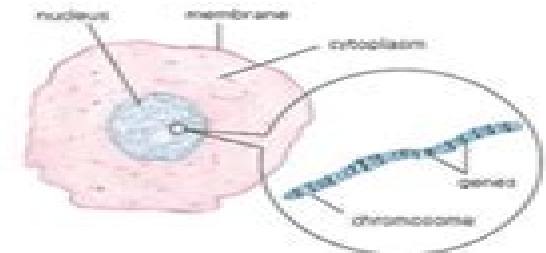


# Lab method for extracting DNA from human CHEEK CELLS

## See Your DNA = Crack the Code of Life

### Materials

- Light colored Gatorade = 10 ml
- Liquid detergent = 1 ml
- Ethyl Alcohol (COLD) = 5 ml (Put on ICE)
- 1 plastic cup
- 1 - 50 ml beakers
- 1 - Graduated cylinder - small
- Glass stirring rod or wooden stick for stirring mixture
- Eye dropper or paper towel – may be needed to remove foam
- Paper clip hook for collecting DNA



1. Pour 10 milliliters of Gatorade into a plastic cup. Take the 10 ml Gatorade and **vigorously** swish it in your mouth, making sure to rub your tongue along your cheeks and chew on your cheek (use your teeth, but **NO BLOOD**) for 30 seconds. This amount of swishing will actually become quite laborious—hang in there! Just remember: "spit happens".
2. **CAREFULLY** spit Gatorade back into cup; then pour 10 ml of spit into clean 50 ml beaker.
3. Add 1 milliliter (15 – 18 drops) of liquid detergent to the beaker.
4. Using stirring rod **gently** mix the contents for 5 minutes. **DO NOT MAKE FOAM**. Use paper towel to remove foam that might be made. *(The detergent will break open the cell membrane to release the DNA into the soapy solution. Do not be too vigorous while mixing! DNA is a very long molecule. Physical abuse can break it into smaller fragments, a process known as shearing.)*
5. Slightly tilt beaker and pour 5 ml fluid ounces of the chilled ethyl alcohol **SLOWLY** down the side of the beaker so that it forms a layer on the top of your soapy solution. **DO NOT TIP, SHAKE, OR MIX THE BEAKER** or you may not see the DNA. *Put beaker down on table and then "get down" and look.*
6. Wait for about 5 minutes and watch as the DNA floats to the surface. If you look to the line of separation between the two layers, or the interface, you will start to see bubbles attached with tiny hair like white strings. These strings are your DNA
7. Use the glass rod or wooden stick to remove DNA from beaker by twirling the rod or stick in a circular motion. Be careful to minimize mixing of alcohol and soapy layers. If too much shearing has occurred, the DNA fragments may be too short to wind up, and they may form clumps instead. Place on paper towel and dry DNA **OR**
8. If time permits, place small sample of DNA on slide; look at it with microscope.



**Be sure to share results with all lab partners!!!**

**TEACHER SIGNATURE: CLEAN UP!!!!**

# Dna Extraction Lab Cheek Cells Analysis Questions

**N Noddings**



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epidemiology clinical features pathogenesis and molecular genetics Differential diagnosis is addressed and information is also provided on staging prognosis and therapy The authors include foremost experts in the field some of whom are senior members of the Working Group on Head and Neck Pathology of the European Society of Pathology

**Gene and Environment Interactions in Neurodevelopmental Disorders** Lorenzo More,Carmem Gottfried,Patricia Pelufo Silveira,2022-04-25

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**Science Citation Index** ,1995 Vols for 1964 have guides and journal lists

**Ancient DNA Typing** Susanne Hummel,2013-03-09 This is the definitive source of information on techniques for the identification and sequencing of old DNA pieces and their use in biological and medical research and application Application of aDNA techniques are useful tools for investigations reaching from evolutionary studies to law enforcement approaches What brings them together is the interest in specific methods of handling aDNA i e elaborated PCR and sequencing techniques and the interpretation of the results This books serves as an ideal guideline for it demonstrates how problem solving strategies can be applied in various areas

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