**DNA extraction from strawberries**

**Materials**

* Zip lock plastic bag
* 1/2 strawberry (fresh or defrosted)
* Dish Soap
* Cheesecloth cut into squares
* Funnel
* Ice cold ethanol
* Clear test tube, glass
* Glass Stir rod

Steps:

1. Wash the strawberry, remove the sepals (the green leaves) and put it into a zip lock plastic bag.
2. Add 5 drops of dish soap and seal the bag tightly, making sure any air bubbles are pushed out and \*crush the strawberries with your fingers on the bench surface for 1 minute.

* **\*Note: Do not crush the strawberries too much as this will cause the DNA to shear/degrade.**

1. Place the funnel lined with cheesecloth into the test tube.
2. Pour the strawberry DNA dish soap mixture into the cheesecloth and filter the mixture into the tube through the cheesecloth.
3. Keep the liquid filtered into the tube in the tube and discard the cheesecloth and the strawberry pulp. Wash funnel at this step.
4. Layer an equal volume of ice-cold ethanol on top of the strawberry solution in the test tube using the plastic bottle provided. **NOTE: Teacher will demonstrate!!!**
5. Observe what happens at the interface of the alcohol and strawberry solution when you twirl a glass stir rod through the interface. Keep the tube still at eye level and do not shake it.
6. You can collect the DNA strands onto a glass stir rod. The whitish, gooey, stringy stuff is DNA containing strawberry genes! This contains the code for all of the proteins required by the strawberry throughout its life.

State your Hypothesis: What do you think will happen?

Pre-Lab Questions:

1. Why do strawberries produce more DNA than human saliva cells when you conduct this experiment?
2. Do you think that other fruits would produce the same amount of DNA? Why or why not?

Post-Lab:

* Write a lab report including the following (make sure to attach this page):
  + Hypothesis
  + Procedure
  + Data
  + Sources of Error
  + Conclusion
  + Questions that you would like to research based on what you learned in this lab

Lab Report Due: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_