Biology 12 NAME:

Chp. 24 DNA

**LAB: DNA EXTRACTION FROM WHEAT GERM**

**PURPOSE**: To isolate DNA and remove it from a sample of wheat germ that could then be used for further analysis.

**MATERIALS AND APPARATUS:**

* Wheat germ
* Test tube
* Distilled water
* Glass stir rod
* Dish soap
* Ethanol
* Paper clip or glass rod

**PROCEDURE**:

1. Put one scoopula of wheat germ into a large test tube so it is about 0.5 cm.
2. Add approximately 10 mL about 1-2 cm of distilled (NOT TAP) water
3. Use the glass stir rod to gently crush the wheat germ for about 1 minute.
4. Add one squirt of dish soap.
5. Use the glass stir rod to gently crush the wheat germ for 2 minutes.
6. Slowly pour the alcohol down the side of the test tube in order to create a distinct layer (about 1-2 cm).
7. Wait for the DNA to precipitate out and observe. (you can use a paper clip or wooden splint to observe the DNA further).
8. Clean up.

**ANALYSIS**:

1. Where does wheat germ come from and how is it prepared?
2. Describe the extracted DNA… colour, shape, texture etc.
3. Why is it necessary to crush the wheat germ in this activity?
4. Do you think the DNA from another organism (ie) the DNA from the cells in your body would have a different appearance? Support your answer.
5. Using human as an example, name a cell type that you would think would contain a lot of DNA and little RNA. Give a reason for your choice.

**CONCLUSION**: