**Bacterial Adaptations and Their Application in Genetic Engineering: Student Lab Sheet Part 2**

**Part 2 – Cell Pelleting and Analysis**

**Materials:**

*To share with the entire class:*

* One micro-centrifuge

*Each group needs:*

* One 1000 µL micropipette
* Two 1000 µL micropipette tips (sterile)
* Two 1.5 ml micro-centrifuge tubes
* A micro-tube rack
* Fine-tip labeling marker

**Procedure:**

1. Put on protective equipment.
2. Pick up your group’s two culture tubes in a test tube rack.
3. Discuss and write down your observations of the cell cultures below.
4. Pick up a micro-tube rack with two micro-centrifuge tubes.
5. Label the tubes: Group # E. coli Aerobic and Group # E. coli Anaerobic.
6. Using the micropipettes, draw up all 1000 µL of the **aerobic** culture and transfer it to the corresponding micro-tube. Dispose of the tip.
7. Using the other tip, repeat the previous step with the **anaerobic** culture.
8. Take your group’s two tubes to your teacher to be placed into the centrifuge and spun for 5 minutes at a speed of around 6000 rcf.
9. After the spin, pick up your group’s tubes and analyze the resulting cell pellet.
10. Write down observations of the cell pellets below.

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| **Cell Culture Observations** | | |
|  | Before Spinning | After Spinning |
| Aerobic |  |  |
| Anaerobic |  |  |