**5.01 Bacterial Growth**

**Objective:** *Understand microorganisms associated with food quality and safety.*

In this lab, each group will be collecting four (3) bacteria sample from foods, and places foods are stored or placed on. Each group will collect a sample from a part of the refrigerator, countertop/desk in the class, and the exterior of a fruit.

Pre-lab question:

1. Which surfaces that foods come in contact with would you expect to find the most bacteria?

**Procedure:**

1. Gather your materials. You will need an inoculating loop, petri dish with agar, sharpie, rubbing alcohol and parafilm.
2. The petri dishes with agar have already been prepared for you.
3. Sterilize the inoculating loop by placing the tip in rubbing alcohol and flaming very quickly.
4. Using the inoculating loop, swab an area of your choice (see the above list of areas).
5. Open your petri dish lid at this point.
6. Use the technique demonstrated, to transfer the bacteria onto the agar.
7. Close the lid and wrapped parafilm around the edge to seal tightly.
8. Label the container using the sharpie with the place you collected the sample, your group name/names, date, and class.

**Data:**

Name the 3 surfaces/places you collected the bacteria. Be specific.

1.

2.

3.

Draw a picture of what you see in the petri dish and state your observations about what you see and the number of colonies you count.

1. Location this bacteria culture was obtained from:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 days after

1 day after

Observations of bacteria in petri dish after 1 day:

Number of colonies:

Observations of bacteria in petri dish after 2 days:

Number of colonies:

1. Location this bacteria culture was obtained from:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 days after

1 day after

Observations of bacteria in petri dish after 1 day:

Number of colonies:

Observations of bacteria in petri dish after 2 days:

Number of colonies:

1. Location this bacteria culture was obtained from:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2 days after

1 day after

Observations of bacteria in petri dish after 1 day:

Number of colonies:

Observations of bacteria in petri dish after 2 days:

Number of colonies:

**Post- lab questions:**

1. Which sample location showed the most colonies of bacteria?
2. How would we be able to determine if this bacteria would cause a food borne illness?
3. How does this change your behavior in regards to food safety?