

LAB: Growing Bacteria

Name _____ period ____ Date _____

Introduction

Bacteria are tiny micro-organisms that can be found almost anywhere. A host of different types of bacteria live within your body. Some bacteria can be beneficial while others can be harmful. Pathogen bacteria are sometimes referred to as germs.

Bacteria can be grown (cultured) in petri dishes with nutrient agar. Nutrient agar is a gelatin substance that contains the nutrients necessary for growing bacteria. Individual bacteria are tiny organisms which can only be seen through a powerful microscope. As they reproduce they form colonies. Hundreds of thousands of bacteria make up a colony and can be seen with the naked eye.

Companies that produce anti-bacteria products often claim that their product kills germs. An example of such a product is mouthwash. Do mouthwashes really prevent bacteria growth? To find out we are going to do the following experiment.

**I. Do bacteria live around your teeth?
Does mouthwash prevent bacteria growth?**

II. Write your **hypothesis**. _____

III. **Materials:** swab, petri dish / nutrient agar, mouthwash solution, filter paper pieces

IV. Procedure:

1. Obtain a sterile petri dish for each table of 4 students.
2. **Label the dish** with the table number and period
3. Divide the dish into fourths (1/4)
4. Gently swab your teeth with a swab. Then gently streak your quarter of the plate.
5. Using forceps, gently place one small piece of filter paper that has been soaking in mouthwash in the middle of your quarter of the plate.
6. When everyone is done, put a small piece of tape on opposite sides of the plate to fasten the lid.
7. Record your observations on day zero of your table.
8. Return the plates to your teacher. The plates will be incubated.
9. We will observe the color, size, and shape of the bacteria colonies on days 0, 3, and 6
10. **Draw a picture** of the plate set up below.

V. Data Table: Growing Bacteria

DAY	OBSERVATIONS ; color, size, and shape
0	
3	
6	

VI. Write your conclusions.
