

Lab #2: Effect of Antibiotics and Antiseptics on Bacterial Growth

Purpose:

To discover which antiseptics, if any, are effective against the bacteria found around the school.

Procedure:

1. Create a streak plate:
 - a. **Each** student will obtain a new agar plate. Divide the dish into 4 quadrants, labelled 1-4 on the agar side. Write your name and block on the lid. Keep the lid on.
 - b. Sterilize a wire inoculation loop by placing it in an alcohol burner flame until it turns orange. Partially lift the lid of your culture plate (from lab #1) and cool the loop by sticking it in the agar where there is no bacterial growth. Pick a colony that grew well (no fungus contamination) and scrape off a bit of it. Close the lid.
 - c. Using a very light touch go back and forth (streak) over quadrant one. **Be careful not to gouge the agar.** Replace the lid.
 - d. Sterilize the loop and cool it again. Rotate your streak plate and spread the bacteria from the first quadrant to the second quadrant by drawing 3 lines to drag the bacteria. Then lightly streak quadrant 2.
 - e. Repeat d) for quadrants 3 & 4. When you are done snuff out the alcohol burner.
 - f. Place one dot of antiseptic in the centre of each quadrant. Use a cotton swab and dip it in the cleaner. Then touch the swab to the middle of the quadrant.
2. Invert your streak plate and hand it in.
3. **WASH YOUR HANDS WELL.**

Observations:

Make a biological drawing of your agar plate showing the bacterial colony growth that has occurred in each quadrant and any plaques that may have formed. Label each quadrant by stating the antiseptic or antibiotic used. The name of the specimen can be the place where the bacteria were found.

Conclusions:

Discuss the purpose. Did any plaques (clear areas around your antiseptic or antibiotic) occur? What does this lead you to conclude about the effectiveness of the product? Were any of the antiseptics effective at controlling bacterial growth? Were there any surprises?