Microbiology Lab Experiment Changes

Experiment #: 2-13

Title: Chemical Germicides: Disinfectants and Antiseptics

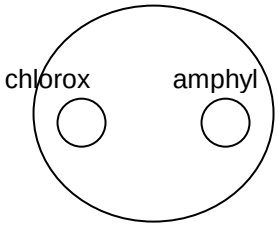
Live Organisms: *E. coli, S. aureus, B. cereus*

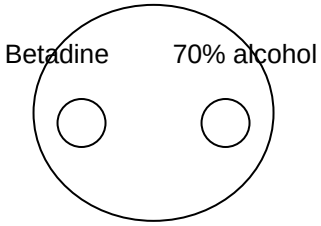
Changes: Procedure (work in groups)

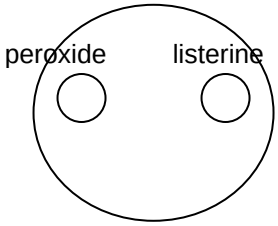
1. Obtain 3 TSA plates and label each one: *E. coli, S. aureus,* and *B. cereus*.

2. Using a sterile swab, inoculate the entire surface of the plate thoroughly with an organism. Each **table** will do only **one** organism.

3. Apply the antiseptic / disinfectant discs (instructor will demonstrate) using alcohol-dipped and flamed forceps to each plate. We are using the following agents:







disinfectants –	chlorox, Amphyl (Lysol)
antiseptics –	Betadine, 70% alcohol, hydrogen peroxide
mouthwash –	Listerine

4. Each group of 3 students will set their plates like the diagram on the right. Label bottom of plate with name of chemical agent.

5. Using a sterile loop or flamed forceps gently press the disks onto the agar to make sure they stick.

6. Wait 15 minutes then invert and incubate plates at 37°C.

7. Make note of the ingredients of each chemical agent if available.

8. Next lab period you will indicate the presence or absence of a zone of inhibition surrounding each disk. Compare the plates within your group and score the zones as follows: no zone (-), small zone (+), medium zone (++), and large zone (+++).

Take Home Lesson: In this case, a zone of inhibition surrounding a disk indicates that a particular agent is microbicidal.

If given an antiseptic / disinfectant plate, you should be able to determine the effectiveness of a particular chemical agent against a particular bacterium. You should be familiar with the difference between an antiseptic and disinfectant and the factors that affect their effectiveness.