Microbiology Lab Experiment Changes

Experiment #: 2-6

Title: Aerotolerance – Agar deep method (alternate!)

Live Organisms: *B. cereus, E. coli, M. luteus, Clostridium sporogenes*

Changes:

Note: We are not using the fluid thioglycollate medium. We are going to perform an alternate procedure using melted sterile Brain Heart Infusion (BHI) agar deeps.

Procedure
(Work in same groups; each group does all 4 bacteria)

1. You will need 4 BHI deeps. The BHI deeps have been melted for you. They are cooling in a 45 - 50°C water bath. **Do not get them until you are ready to inoculate!** The molten agar will solidify as it cools.

2. Label and inoculate each tube with a different organism.

3. Add two drops (equivalent to 0.2mL) of each culture to a different tube using a sterile 1mL pipette.

4. Rotate molten inoculated deep between your hands to mix.

5. Place in rack for incubation.

6. Next period record the distribution of growth in the tube using the diagram in the lab manual.

Take Home Lesson: Define aerobe, strict aerobe, microaerophile, obligate-, aerotolerant- and facultative anaerobe. Know how the enzymes **superoxide dismutase, peroxidase and catalase** function to protect bacteria. Why are these enzymes necessary and for which groups of organisms are they necessary? Given a set of inoculated and incubated agar deeps, determine the organism's oxygen requirement.