BIO233 Lab. Microbes on the Spelman Campus.

Overview

Students will form several groups and investigate the microbial diversity on Spelman campus. Your results in this lab will be used in subsequent labs.

1. Read and discuss the manual (15 minutes), write a protocol in your own words.
2. Students form groups for sample microbes at water fountains, door knobs, elevator buttons, desk surfaces at various locations in the Science building, Manley building, Giles, dorms.
3. Collect necessary materials. Label plates on the edges.
4. Collect the microbial samples (One hour). A picture of the sampling location should be taken as record. At least two indepdent samplings should take at the same location. The plates should be labeled with names, locations, date, and replicate numbers.
5. Let the plates grow at room temperature for a few days.
6. Observe the morphology of colonies, estimate microbial density.
7. Stain the sample by Gram stain and examine them under microscope.
8. Summarize and merge results from the entire class.
9. Please add the required descriptions to the master Excel file on googleDoc; Please rename all the plate pictures and add descriptions to them on googleDoc.

**Lab report.**

(1) Can we conclude that there are associations between the kinds of microbes and environmental sources?

(2) There are many known common microbes in certain environment, such as human skin. Did we isolate some of these commonly known microbes?

(3) Quantitatively compare the number of microbes at different locations and draw conclusions based on statistical tests.

**Materials:**

Plates; maker pens; swaps; microscope