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 exercises on ‘air’, ‘surfaces’, ‘body’, ‘soil’, and ‘water’.

The goal is to compare the ‘cleanness’ of air in different buildings, various surfaces, body areas, soils, and water sources.

1. Collect necessary materials. Label plates on the edges.
2. Collect the microbial samples (45 minutes). When open the paper bags of the sterile cottons, make sure you are open the side with the wooden ends.

Note: Please do not wear gloves outside of the lab classroom.

1. Let the plates grow at room temperature for a few days.
2. Observe the morphology of colonies, estimate microbial density.
3. Stain the sample by Gram stain and examine them under microscope by
4. Summarize and merge results from the entire class.
5. 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 many known common microbes in certain environment, such as human skin. Did we isolate some of these commonly known microbes?

(3) What other conclusions can you draw based on your analysis of the results from the entire class?

**Materials:**

Plates; maker pens; swaps; eppendorf tubes; microscope