

Bacterial Unknown Assignment

In this assignment you are working to identify 2 unknown bacteria that are in a mix supplied to you. Assume that you were able to obtain pure cultures of each of the unknown bacteria in your mix and were then able to gram stain and perform biochemical activity tests on each of the bacterial species. You will receive **gram stained images** of the 2 different bacteria in your mix (which will let you determine shape and gram reaction) as well as **biochemical activity test results** for each of these bacteria. From this data you will determine the identity of the 2 different bacteria.

The possibilities in your virtual mix are:

Bacillus subtilis

Enterobacter aerogenes

Alcaligenes faecalis

Escherichia coli

Enterococcus faecalis

Staphylococcus aureus

Staphylococcus epidermidis

Shigella flexneri

What you need to do for this Unknown Assignment:

1. Carefully read the **Biochemical Activities Background** document so that you understand how the different tests for biochemical activities work. Then, **complete the** quiz to determine your understanding of how the tests for biochemical activities used in this virtual lab work.
2. Prepare a **dichotomous key** for the entire list of possible bacteria (shown above) using the information in the **Biochemical Activities Background** document. A description of what a dichotomous key is can be found in this document – this will essentially be a flowchart of test results that will guide your identification of each of the bacteria in your mix.
3. **Determine the identity of the 2 bacteria** in your mix using your dichotomous key. For each of your bacteria write a short explanation of how you identified them using the data provided.

