

Unknown lab report for microbiology assignment



**ASSIGN
BUSTER**

There are many reasons for identifying an unknown bacterium. The reasons range from medical purposes, such as determining if the unknown could cause ailments in living things or knowing what microorganisms are needed to make antibiotics to other purposes such as knowing the exact microorganism has to be used to make certain foods. This experiment was done by applying methods in order to identify an unknown bacterium. An unknown bacterium was handed out by the lab instructor. The methods that have been learned so far in identifying bacteria were applied to this unknown.

Procedures were followed as stated in the lab manual and biochemical test handouts. The first procedure that was done was a gram stain followed by a streak of the unknown on a TTS plate in order to determine the gram reaction and observe the colony morphology. After that, specific biochemical tests were performed for gram positive, since unknown number five was determined to be gram positive rod. The other tests were performed in this order: Imitation Salt (MASS) streak, Blood Agar streak, Catalane test, Nitrate Reduction test, and Phenyl Red Broth test for lactose and sucrose fermentation.

After performing a gram stain on unknown number five, number five was determined to be gram positive rod. On the TTS plate, number five had the following morphology: very large, raised, opaque cream color colonies that covered the entire plate and had beta-hemolytic. All the results from the biochemical tests performed are listed in Table 1 and are also shown in the preliminary (Figure 1) and final (Figure 2) flow charts that are included at the

end of the lab report. Table 1: Results from Biochemical Tests Test Results Interpretations Imitation Salt (MASS)

No growth Organism is not Staphylococcus Blood Agar Clear zone around colonies Organism homeless Orbs completely so its Beta- hemolytic Catalane bubbles Catalane is present Nitrate Reduction Turned red after addition of Nitrate A and B Nitrate reduced to Nitrite Phenyl Red Broth – lactose Pink broth with no bubble Lactose is not utilized Phenyl Red Broth – sucrose Yellow broth with no bubble Sucrose is utilized After several tests, it was concluded that unknown number five was Bacillus. Cereus. All of the biochemical tests worked well except for the lactose test of the Phenyl Red Broth.

It gave a false negative result at first and was inconsistent with the rest of the results. The lactose test was repeated and gave a result that was consistent with the other data. Therefore, it was concluded that the unknown was Bacillus cereus. B. Cereus is one cause of food poisoning that has two types of illnesses associated with it. The emetic illness causes nausea and vomiting due to ingestion of a heat-stable toxin of the microorganism. The other illness, which is called diarrhea, causes diarrhea and abdominal pain due to ingestion of a large amount of the microorganism.