

Purpose: to identify an unknown bacterium

Tube #: 3

The gram staining technique was used first to identify whether or not the bacterium was gram-negative or gram-positive. Based on my gram stain, I was able to identify the bacterium as being gram positive due to the purplish color observed (Figure 1). I was also able to observe that the morphology of the bacterium was cocci in clusters. Through this observation I was able to narrow down the gram-positive bacterium to being either *Staphylococcus aureus* or *Staphylococcus epidermidis*.

Using the selective media MacConkey Agar (Mac) and Phenylethyl Alcohol Agar (PEA), I gained more confirmation that the bacterium was gram-positive as it did not grow on Mac (Figure 2), which inhibits growth of gram-positive bacteria, but grew on PEA (Figure 3), which inhibits growth of gram-negative bacteria. The differential medium Blood Agar (BA) was then used to determine the identity of the bacterium. On the BA plate beta hemolysis occurred as there was colorless clearing observed around the colony (Figure 4) due to the breakdown of blood. *Staphylococcus epidermidis* is gamma hemolytic and does not break down blood and so this confirmed the bacterium in Tube 3 was beta hemolytic *Staphylococcus aureus*.

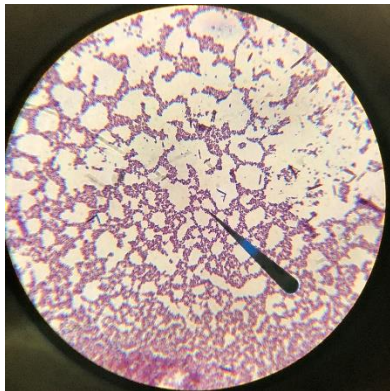


Figure 1



Figure 3



Figure 2



Figure 4