

## Examination of Flute, Saxophone, and Trumpet for *S. aureus*, *B. cereus*, and *N. mucosa*.

Instrumentalists cannot begin to understand the amount of bacteria that is found within their instruments. Most do not clean instruments daily, allowing bacteria to build up overtime. Bacteria that can be found within the musical instrument can live for up to 72 hours as epithelial tissues and food particles provide nutrients. The purpose of this experiment was to examine a flute, saxophone, and trumpet for *S. aureus*, *B. cereus*, and *N. mucosa*. All of these bacteria can be pathogenic in the right environment. It was thought that *S. aureus* would be found within and on the keys of the instruments, while *B. cereus* and *N. mucosa* would be found within the instruments. The keys, inside the mouth piece, and the body of the instrument -or the spit valve on trumpets were swabbed and then placed onto Brain-heart agar plates. The plates were allowed to incubate for 24-48 hours; they were then gram-stained and subsequent test were performed for identification. Upon compilation of the data it was observed that Flutes had the least amount of growth of bacteria, for Saxophones, there was more bacterial growth. The trumpet was mainly positive in all aspects of testing for each bacterium observed. When looking at the overall positives in the instruments it was observed that there was bacterium present, but overall most test came back with no growth. In conclusion, it was thought that in each instrument there were trace amounts of each bacterium tested for.