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In recent studies, copper's antimicrobial properties have been studied in hospitals where infections spread from contact with high-touch surfaces are common, often times using high expensive and advanced equipment. While these methods of analysis are not readily available for those in smaller laboratories or in classrooms; this research project aims to analyze copper alloys' antimicrobial properties compared to stainless steel, using a procedure that can be easily replicated and expanded upon. To test copper alloys' effectiveness, I first had to collect samples from traditional dumbbells and analyze if microbes were present on the weights. These samples were collected and analyzed for the presence of microbes. For the in-lab part, a ten-fold serial dilution was used to make the number of bacterial colonies present quantifiable; this method used non-pathogenic *Escherichia coli*. Both the copper and stainless-steel metals were incubated for 15 minutes to mimic the amount of time an individual would spend with a specific weight. After the incubation, the metal pieces were taken out of the solution and dried on a sterile plate for 15 minutes. After the drying period, the metals were placed into PBS baths and immersed for 10 minutes to recover bacteria. After the PBS bath, the ten-fold dilution was performed and then plated and incubated at 37°C for 24 hours. Once the 24-hour period was over, the colonies on the plates of both the copper and stainless-steel plates were counted, and it was determined that the plates of the copper metal had significantly fewer colonies.