

Alex Miller
Beat the Bacteria

The purpose of this investigation was to determine if football shoulder pads containing bacteria can effectively be sanitized using cleaning wipes, commercial spray, or hot water. I hypothesized that if cleaning agents such as wipes, spray, and hot water are used to sanitize football shoulder pads then the amount of bacteria will decrease. Also, the use of the spray will provide the most significant decrease. This experiment involved gathering bacteria off pads and transferring it to a petri dish. I started by labeling three shoulder pads, A1, A2, and A3. Cells were gathered off the front left panel of the pads with a sterile cotton swab. I labeled the first one A1B (before cleaning). I then carefully discarded the swab in the bio-hazard wastebasket. Using the swabs from A2, and A3, I repeated the process. I then took the wipes and cleaned the right front panel of the pads. I swabbed the clean portion of the pad and created a lawn on a new petri dish that I labeled A1A (for after cleaning). I did this for all three trials of all three products. The data collected did conclusively support the hypothesis. On average, the spray showed the greatest decrease in bacteria with 99.7% loss of bacteria. The wipes showed a decrease of 76.7% in bacteria and water showed a decrease of only 18.7%. While there was a decrease in bacteria with all three products, the findings lead me to conclude that the spray sanitized the pads the most effectively.