



CALIFORNIA SCIENCE & ENGINEERING FAIR 2018 PROJECT SUMMARY

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Project Title Which Anti-Bacterial Substance Kills the Most Bacteria?	
Abstract Objectives/Goals We tested 2 different antibacterial substances, Clorox wipes and Lysol spray, to see which one eliminated more bacteria. We also added a factor of water and a paper towel because that is what many people use to clean their devices. We hypothesized that the Lysol spray would eliminate more bacteria because it claims to kill bacteria and fungi, whereas the clorox wipes claim to kill more flu and cold viruses. Methods/Materials The materials used for this project were Clorox wipes, Lysol spray, water, paper towel, iPad, and petri dishes. First, we wiped down a section of the screen with water and a paper towel. We then waited 30 seconds for it to dry. We swabbed the screen where we wiped, and placed that into a petri dish. We did the same for the Clorox wipes, Lysol spray, and with nothing on the screen. We labeled the petri dishes accordingly. The petri dishes were placed in a room with a temp. of 29 degrees celsius. According to research, 70-95 degrees, or 21-35 degrees celsius, is the ideal temperature for growing bacteria in a petri dish. We also found out that when growing bacteria in a petri dish, certain bacteria can grow faster than others, leading us to decide that we should not do a graph based on bacteria colony size. When we were using the Clorox wipes, instead of following the directions on the back that states that you should use enough wipes to leave the surface wet for 4 minutes, we just used 1 wipe and wiped the surface across 3 times, imitating what people would normally do. We followed the directions on the back of the Lysol spray, though, because that is what people commonly do anyways. The instructions stated to hold the spray can above the surface about 6-8 inches and spray the surface for 2-4 seconds. Results The results were very close, with the lowest amount of bacteria remaining after 7 days with the use of the Clorox wipe, followed by water and the paper towel. Lysol spray had the most amount of bacteria remaining. Conclusions/Discussion Our results do not support the hypothesis because Lysol actually eliminated the least amount of bacteria. There were very few bacterial colonies seen on the Clorox wipes petri dish, and same for the water and paper towel. In the Clorox wipe trials, 1 of the petri dishes did not grow any bacteria, and 2 grew very little, showing that the Clorox wipes eliminated almost all of the bacteria. The Lysol spray was the least effective of the three substances.	
Summary Statement In our science fair project, we tested 3 different antibacterial substances and compared them to see which one eliminated the most bacteria off of an iPad screen.	
Help Received None: This project was designed, researched, and performed by each member as a group.	