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*Kitchen Wars*

I read that plastic cutting boards are contaminated and difficult to clean. I decided to test a "green" cleaner, 5% distilled white vinegar, against harsher cleaners, bleach and Dawn antibacterial dishwashing liquid. Cleanliness would be determined by how clean a knife scarred cutting board infected with E. coli was after exposure to the cleaners. A solution of E. coli was prepared and then smeared on the boards. The different cleaning solutions were prepared and applied to the boards. The solutions were rinsed off with distilled water and the boards swabbed. Blood agar plates were streaked, and then incubated at 35.1 degrees Celsius for 24 hours. Independent variable is the cleaner used while the dependent variable is the number of E. coli colonies and the controlled variables are same amount of cleaner, E. coli, growth time, and same cutting boards. Results were: controls #1, #2, #3 -no growth; E. coli stock petri dish -too many colonies to count; soap #1, #2, #3 -too many colonies to count; bleach #1 had ~115 colonies, bleach #2 had ~65 colonies, and bleach #3 had 2 colonies. Vinegar #1 had ~32 colonies, vinegar #2 had 2 colonies, and vinegar #3 had ~23 colonies. The end results supported my hypothesis that vinegar would work as a more effective cleaner. Soap may need hot water to work and bleach may need to be higher concentration. No cleaner was proven completely effective, but vinegar is a better and safer alternative cleaner than the others.