The Resistance of Bacteria

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Disinfectant has been a prominent tool to clean surfaces, and now more than ever it is important for it to be used effectively. The purpose of the experiment was to see if the dilution of a disinfectant has an effect on the resistance of bacteria, in this case a non-pathogenic strain of E. Coli. The experiment consisted of 4 different dilutions of bleach being diffused onto plates cultured with E. Coli. The control concentration had no bleach and was just distilled water, the second had a concentration of 10%, the third had a concentration of 1%, and the fourth had a concentration of 0.1%. Each agar plate was split into 4 sections with a diffusion disk placed in the center of each. Measurements of the inhibition zone around each plate were recorded and then the closest colony from each plate was cultured onto a new plate to regrow. The first round of testing showed 10% with the least resistant bacteria and 0.1% with the most. As the rounds continued into the third day, each plate had bacteria growing closer, showing their increase of resistance. Both the 1% and the 0.1% ended up with less than a .5 mm range. Overall, decreasing the concentration of disinfectant allowed the E. Coli to become more resistant.

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