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|  | Conclusion Our data is inconclusive. Although there is some evidence there may be a trend that directly contradicts our prediction (the average zone of inhibition is greater for the treated colonies), the sample size of the exerpiment is too small to be sure that this result may not be simply due to random chance. Further experimentation would need to use a much larger sample size in order to insure that chance would not play such a major role in the experiment.  In addition, we encountered several issues with the antimicrobial agent, ethyl alcohol, that would have to be dealt with in order to do an effective study. Primarily, it tends to evaporate rather quickly, which makes it difficult to cause stress-induced resistance. At the same time, however, providing a contiual supply would not be consistent with how the product is applied in real life. A compromise would be to use some sort of gel agent, as is common in hand lotions nad other products, in order to slow down evaporation so that a stress-reduced reistance could occur.  It is also very possible that such resistance is not feasible--perhaps the ethyl alcohol merely causes a progressive weakening and there is no way for it to develop resistance. This study provides some evidence to suggest that this may be the case, but futher resaerach would be necessary. In addition, biochemical theory may provide some insight into the bactericidal properties of ethyl alcohol, thus suggetsing the ways in which resistance could potentially occur.  In short, the question of ethyl alcohol reistance is still open. A more carefully designed study may be able to find connections that his study has missed. | |
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