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### *Your Kitchen Cleaners Might Kill E Coli But What Else Do They Kill?*

The purpose of this experiment is to determine which type of cleaner, bleach, vinegar, or Biokleen All Purpose Natural Cleaner is most effective at destroying E coli bacteria. Also, to see how this cleaner affects living plants and its impact on the environment. I hypothesized that the bleach will kill E coli the most effectively, vinegar will destroy most of the E coli and Biokleen will kill most of the bacteria. Also for the radish plants, bleach will have the most detrimental affect, vinegar will destroy the plants after approximately five drops, and the plants will not be affected by the Biokleen. My procedure for the E coli is to swab the bacteria onto a Petri dish, put in an incubator and repeat these steps with Biokleen and vinegar. My procedure for the radish plants is to have four sets of plants, including a control group, and taking one drop of cleaner to give to the plants. Wait one day to see if the plants can withstand the drop, and continue the process until reaching ten drops. The data collected provided mixed results regarding my hypothesis. The bleach destroyed all of the bacteria and radish plants quickly. The vinegar destroyed most of the bacteria while destroying the plants after around eight drops. Biokleen destroyed none of the bacteria but didn't affect the plants. This proves that bleach is great for destroying things, but not so great for the environment. Vinegar is good for both, and Biokleen doesn't destroy E coli but it is great for the environment.