

Abstract-

Title: Kill Corona with Cleanliness

ID: 928

Introduction/Explanation:

My experiment tested which cleaning substance eliminates the most germs. By using hand sanitizer, dish soap, liquid soap, and bar soap, I found surprising results. This testing was very important because people needed to know which cleaning substance is most efficient to keep themselves safe from Covid-19, and other dangerous illnesses.

Problem and Hypothesis:

The problem is that there are many germs and bacteria that can cause people to become sick. In extreme cases, these illnesses can even lead to death, which is why finding the most effective cleaning substance is very useful to society.

Before starting this experiment, I thought that hand sanitizer would be the most effective in cleaning chicken juice from hands. At the time, I knew that hand sanitizer actually kills germs, so I believed that it would easily destroy the most bacteria left by the raw chicken.

Procedure and Materials:

I processed my data by measuring all of the bacteria every 24 hours. When I get my results, I will average the bacteria growth of each separate substance.

1. Put on Latex Gloves.
2. Wash gloved hands.
3. Rub one gloved hand on raw chicken.
4. Wash the gloved hand.
5. Swab that gloved hand with cotton swab.
6. Swab the cotton swab with your hand bacteria in an X figure into a petri dish.
7. Immediately close, and tape the petri dish shut.
8. Repeat the first 7 steps in the exact same way (with all new materials) onto 7 more petri dishes.
9. Swab hand sanitizer with a cotton swab.
10. Swab that cotton swab into one of the 8 petri dishes.
11. Immediately close, and tape the petri dish shut.
12. Repeat steps 8-11 for each cleaner (with all new materials) onto the other 3 petri dishes.
13. Every 24 hours, log any growth of bacteria in each of the 8 petri dishes.

- Hand Sanitizer
- Liquid Soap
- Dish Soap
- Bar Soap
- 12 Petri Dishes
- Cotton Swabs
- Raw Chicken
- Latex Gloves

Results/Explanation:

By using hand sanitizer, dish soap, liquid soap, and bar soap, I found surprising results. Liquid soap succeeded the most, by not growing bacteria for almost ten days. On the contrary, hand sanitizer's bacteria started growing almost immediately, with 1/3cm² of bacteria at day five. I think this is because the liquid soap is made of petroleum and stabilizers, in order to help maintain consistency. The hand sanitizer

eventually kept a steady pace because it took awhile for the hand sanitizer to actually start killing off the bacteria, but when it did, it kept a fairly constant amount. However, every bacteria had grown about every 24- 48 hours, depending on it's substance.

Conclusion:

I conducted my testing process four times; one for each of the four cleaning chemicals. Using their results, I found that the hand sanitizer started growing bacteria early, but kept a fairly steady pace. Also, bar soap and liquid soap both started growing bacteria later on, and kept a very slow and steady pace. On the contrary, dish soap's bacteria grew early, and rapidly increased in size.