Name(s)	Project Number
Nathan R. Howard	**34085**

Project Title

Kitchens vs. Bathrooms: A Study about Bacteria

Abstract

Objectives/Goals

My project was to determine if bathroom counters exposed to fecal matter and urine would have more bacteria than kitchens exposed to food-born bacteria. I believe bathroom counters will have more bacteria due to the small particles of fecal matter and urine contained in the water that splashes unseen out of a toilet when flushing.

Methods/Materials

Twenty agar plates and twenty cotton swabs were used in this experiment. Surfaces in bathrooms and kitchens in three houses were used for samples. One house was used for a control. The people living in the three houses were unaware that they had been selected for samples, so they would not be tempted to clean the surfaces in the sample areas. The control house did clean the surfaces before swabbing. A bathroom and kitchen surface at the same location in each house were swabbed three times using a different agar plate for a total of 18 samples. Two samples were taken at the same locations in the control house. Bacteria colonies were counted after seven days.

Results

From my results, I found out that in a common house, a kitchen counter appears to have more bacteria than a bathroom counter. This claim may not be valid, because my two house cats treated two of the agar plates as toys, and they were compromised. One was found well after the time in which data was recorded.

Conclusions/Discussion

My results may show that bathroom counters and kitchen counters cannot be considered dirtier than each other, but that they may contain different types of bacteria. The different types of bacteria might release more or less water during reproduction or other functions which create a humid environment in the agar dish causing the bacteria to multiply faster.

Summary Statement

Airborne droplets from toilets should make bathroom counters dirtier than kitchen counters.

Help Received

I dictated parts of the report for my mother to type.