CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)
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Project Number
J1524

Project Title
Plastic vs. Metal: Where Do Germs Prefer to Ride?

Abstract

Objectives/Goals
The objective is to determine which type of shopping cart, plastic or metal, will be a better place for growing bacteria.

Methods/Materials
I took samples from carts and allowed bacteria to grow in petri dishes. I measured the bacteria in two different ways to get the best results. One way that I measured was by the amount of bacteria colonies. I also measured the largest bacteria colony in millimeters.

Results
The results were that the plastic carts had an average amount of 47.2 millimeters of bacteria and the metal carts had an average amount of 36.6 millimeters of bacteria.

Conclusions/Discussion
My hypothesis was that plastic carts will grow more bacteria and be dirtier because they have a bigger surface area compared to the tiny metal rods. If I was to repeat this project I would start earlier because at the beginning of my project I made a mistake and had to restart. I would also try to be more careful when I swabbed the carts so that I wouldn't mess up the agar. I may even try the project on soap bottles, restaurants, and other places.

Summary Statement
In my project, I tried to find out which type of shopping cart, plastic or metal, was the best place for bacteria growth.

Help Received
My mom helped me glue parts on my board.