CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)
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Project Number
J2215

Project Title
The Effect of Natural vs. Synthetic Insecticides on the Mortality Rate of Cockroaches

Abstract

Objectives/Goals
The objective of this study is to test natural and synthetic insecticides on the mortality rate of cockroaches.

Methods/Materials
Used neem oil (2.5 mL), neem extract (2.5 mL), vinegar (2.5 mL), borax (2.5 mL), 30 cockroaches, 3 droppers, measuring teaspoon (2.5 mL), and 12 jars (8cm by 5cm). The dropper was used to get a measured 2.5mL of neem oil and put into the measuring teaspoon. Then it was poured into one of the jars. One cockroach was put in each jar. On a separate jar with no insecticides, a cockroach was put.

Results
Several trials were run with the same method. Out of all insecticides, neem oil (0.05 hr.) was found to be most effective, followed by neem extract (0.09 hr.), vinegar (0.09 hr.), and borax (36 hr.).

Conclusions/Discussion
The goal of this experiment was to test the effect of different types of natural and synthetic insecticides on the mortality rate of cockroaches. In the future, different dosages of neem oil and neem extract will be tested to find the minimum amount required to kill cockroaches without any harmful effects on other beneficial insects and pets.

Summary Statement
I used natural and synthetic insecticides to test the mortality rate of cockroaches.

Help Received
My teacher gave me the idea of using neem oil and neem extract. Overall I did the project by myself.