CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)

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Project Number

38166

Project Title

Testing the 5 Second Rule: The Safety and Quality of Food Dropped on the Floor

Abstract

Objectives/Goals

The objective of this study is to measure bacteria growth on apples dropped on the floor for various time amounts to test the #5 second rule# which says food is safe to eat if it is removed from the floor in less than 5 seconds.

Methods/Materials

Petri dishes, nutrient agar, apple wedges and stopwatch. Tested the taste and amount of bacteria present on apple slices dropped on floor for various amounts of time.

Results

Apple wedges were dropped on the floor to test the amount of bacteria present after each trial. Various trials were run to determine if the increase in amount of time on the floor corresponds to the increase of bacteria found on the apple. The bacteria growth varied directly with the amount of time spent on the floor, however the taste was unaffected.

Conclusions/Discussion

An apple slice was dropped on the floor for five seconds. The surface of the apple was swabbed and collected in a petri dish to study the amount of bacteria present. The apple was also tested for taste. Although there was no significant change in taste, the amount of bacteria found on apple's surface increased with the amount of seconds left on the floor.

Summary Statement

Although the taste did not change, we found the growth of bacteria collected from food dropped on the floor proves the "5 Second Rule" is false.

Help Received

None, we designed and executed the experiment by ourselves.