CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY

Name(s)	Project Number
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Project Title

The Effects of Seasonings on the Control of Escherichia coli in Hamburger

Abstract

Objectives/Goals

Part 1: How much Escherichia coli is found in Hamburger?
Part 2: Which spice affects Escherichia coli the best?

Methods/Materials

I will be using EMB agar to test the E.coli.
In addition, I will also be using four different types of spices. They are Cinnamon, Garlic, Oregano, and Sage.
One other item I will be using is five different meat sources. They vary from fast food chains, top of the line meat stores, and little corner stores.
The experimental test variables that I am using in my experiment are:

Results

Average of Non E.coli Coliform and E.coli in Hamburger Meat
The least number of bacteria growth was Meat From Store WM at 3.4 for Non E.coli Coliform and 0.55 for E.coli.
The largest number of bacteria growth was Processed at x Slaughter House at 16.6 for Non E.coli Coliform and 31 for E.coli.
  Average Non E.coli Coliform and E.coli in Hamburger Meat Mixed With Cinnamon
The least amount of bacteria change was Meat From Store WM with 21.6 for Non E.coli Coliform and .2 for E.coli.
The most amount of bacteria change was Processed at x Slaughter House with 3.4 for Non E.coli Coliform and 0 for E.coli.
Average Non E.coli Coliform and E.coli in Hamburger Meat Mixed with Sage
The least amount of bacteria change was Meat From Store WM with 3.8 for Non E.coli Coliform and 0.8 for E.coli.
The largest amount of bacteria change was Processed at x Slaughter House with 1.6 for Non E.coli Coliform and 0 for E.coli.
Average Non E.coli Coliform and E.coli in Hamburger Meat Mixed with Oregano
The least amount of bacteria change was Meat Form Store WM with 10 for Non E.coli Coliform and .32 for E.coli.
The largest amount of bacteria change was Meat From Store LC with 9.8 for Non E.coli Coliform and 0.2 for E.coli.

Summary Statement

My project is about finding the amount of e.coli in hamburger and to see what spice affects it the most.

Help Received

Mother helped buy supplies and cut paper