CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY

Name(s)
Taylor R.K. Matsu

Project Number
34027

Project Title
What's in the Beef?

Abstract

Objectives/Goals
My project was to determine if the measured fat extracted from ground beef will be less than what is published on the label.

Methods/Materials
Purchase packages of ground beef, lean ground beef, extra lean ground beef from three different stores. Form a 4 oz patty of each grade. Place patty in a pot, measure 16 oz of water and add. Boil meat for two minutes using a spoon to break up the meat. Place pot in refrigerator for 4 hours to cool. Weigh plastic container for extracted fat and record mass in grams. Extract/skim off fat into plastic container. Weigh container of fat in grams and record the mass. Repeat the procedure 3 times for each type of ground beef (9 samples) and determine the % of fat in each patty (divide the fat weight in grams by the patty weight in grams x 100)

Results
The average % of fat extracted from extra lean (90/10) was 7-8%, lean(85/15) was 12% and regular (80/20) was 15-19%. Each type from 3 different stores were less than the published label and all similar in results except for regular ground beef. One store showed 4% higher in results than the others.

Conclusions/Discussion
Results showed extra lean ground beef has significantly less fat that standard ground beef making it a healthier choice. The % of fat are guidelines for the consumer. Experiment showed that the fat content was not always what was contained on the label but it was consistently shown to be lower that the packaged label.

Summary Statement
The amount of fat extracted from ground beef will be less than the published commercial label on the package.

Help Received
Mother purchased the 3 types of ground beef and supervised the boiling of the meat.