

CALIFORNIA STATE SCIENCE FAIR 2002 PROJECT SUMMARY

Name(s)

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Project Number

J0920

Project Title

Pop! Go the Kernels

Abstract

Objectives/Goals

The objective is to determine whether popcorn kernels stored in the freezer will yield more popcorn kernels than those stored in room temperature.

Methods/Materials

Three groups of popcorn kernels were tested. Each group consisted of 10 plastic bags with 200 kernels in each bag. The bags in the first group, the control group, were stored at room temperature in a cupboard. The second group was stored in the refrigerator, and the third was stored in the freezer. After 5 days, a hot air popper was used to pop the kernels. After a popping time of 3 minutes for each batch, the number of kernels that remained unpopped was counted, and the number of popped kernels was determined. The mean, the median and the mode for each group were calculated and graphed.

Results

Popcorn kernels stored in the freezer yielded fewer poppped kernels than those stored in the refrigerator or at room tempearature. Popcorn kernels stored at room temperature yielded the most popped kernels.

Conclusions/Discussion

Popcorn stored in refrigrerators or freezers can dry out quickly. Since the moisture in the popcorn causes the kernels to pop, then the drying effect of storage in the refrigerator or freezer results in fewer popped kernels as compared to those stored at room tempearature.

Summary Statement

The project is about the effect of freezing popcorn on the number of popped kernels.

Help Received

Father taught me how to use Excel to graph results.