CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY

Name(s)
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Project Number
29701

Project Title
Banana DNA Extraction

Abstract

Objectives/Goals
The objective is to determine if the banana#s DNA denatures overtime. In this experiment, the bananas are categorized into three different ripening stages: the under-ripe, ripe, and over-ripe. If the banana is in the under-ripe ripe stage, then it is expected to have the most amount of DNA.

Methods/Materials
For this experiment, the methods are spilt into two parts. The first method requires an online #Banana DNA Extraction# protocol to extract the banana#s DNA from its content. This method requires primarily of an antibacterial hand soap, ethanol, pipettes, mortar, pestle, salt, coffee filters, and beakers. As for the second procedure, it involves analyzing the DNA with a centrifuge, vortex, and spectrophotometer. This will give the concentration of the DNA, the DNA/ Protein Absorbance, and its purity. Three trials are done for each stage of the banana.

Results
The banana in the under-ripe stage holds the greatest concentration of DNA. In addition, this stage of the banana holds the highest value in DNA/ Protein Absorbance, and its purity when compared to the other stages.

Conclusions/Discussion
The results support the project#s hypothesis. This project may indicate that, as time passes, the banana#s DNA denatures overtime. Based on an article by Frank Sherwin, the banana#s DNA resembles fifty percent of the human DNA. This provides information that possibly the human DNA may deteriorate also.

Summary Statement
My project is about extracting the DNA from a banana#s content and then analyzing the DNA to see if aging occurs overtime.

Help Received
Sister provided access to lab and lab equipment; Parents bought me bananas; Mr. Ho gave great advice about experimental design