CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY

Name(s)
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Project Number
S0521

Project Title
Viability of a Simple "At-Home" Test of Relative Amounts of Ascorbic Acid

Abstract

Objectives/Goals
Carefully follow the lab instructions and record, in order from the most ascorbic acid to the least ascorbic acid. Compare relative concentration with the actual amount of ascorbic acid in each fruit.

Methods/Materials
What I did was I made a ramp out of wood and also I made a spacer that would hold the wood at exactly 16 degrees. I would then ensure that the ramp was perfectly even against table so that there would be no bounce effect. When all that was checked I would then start the testing. First I placed the ball bearing on a marked spot on the wood (180mm from the end of the ramp) and pulled away the pencil that was holding it. After it stopped rolling on the material I measured how far it went and recorded it in my log book. I repeated this 100 times for each material.

Results
In order from most ascorbic acid to least ascorbic acid according to my tests: Tangerine, Orange, Tomato, Grapefruit, Lemon, Lime.

In order from most ascorbic acid to least ascorbic acid according to their tests:
Orange, Lemon, Grapefruit, Tangerine, Lime, Tomato

Conclusions/Discussion
My hypothesis was incorrect. The lab is not consistent in showing which fruit has the most ascorbic acid. When the lab stayed consistent for three tests, I noted that the results were not the same as the results given. This particular test cannot be done by a simple "at-home" lab test.

Summary Statement
To test the viability of a simple "at-home" test for testing realative amounts of ascorbic acid in certain fruits.

Help Received