

CALIFORNIA STATE SCIENCE FAIR 2007 PROJECT SUMMARY

Name(s)

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Project Number

J0401

Project Title

Vitamin C (Ascorbic Acid), Grapefruits, and Me

higativas/Caals

Objectives/Goals

How does shelf life affect the amount of Vitamin C (Ascorbic Acid) in grapefruits? Will there be more, less, or the same amount of Vitamin C in a grapefruit that has been sitting on a shelf for one to four weeks opposed to a freshly picked grapefruit?

Abstract

Methods/Materials

Two identical grapefruit trees in the same location and with the same sized fruit.

A black marker-for labeling, Ascorbic Acid Titrant-118Ml(4 oz)MDB*; Sulfuric Acid Standard

Solution, 5.25N-118Ml(4 oz)MDB*; Starch Indicator Solution-118Ml(4 oz)MDB*; Erlenmeyer Flask, 125 Ml; Centrifuge Tube, 15Ml, polystyrene; Demineralized water; MDB*: Marked Dropping Bottle

Results

TESTING DATE-2/18/07 (The grapefruits were picked on the date shown)

The results were:

1/14/07 - 48 drops of Ascorbic Acid Titrant(AAT)in Tree A's solution/43 drops into Tree B's.

1/18/07 - 39 drops of AAT into Tree A's solution/36 drops into Tree B's.

1/21/07 - 37 drops of AAT into Tree A's solution/35 drops into Tree B's.

1/25/07 - 36 drops of AAT into Tree A's solution/35 drops into Tree B's.

1/28/07 - 36 drops of AAT into Tree A's solution/33 drops into Tree B's.

2/1/07 - 41 drops of AAT into Tree A's solution/26 drops into Tree B's.

2/4/07 - 36 drops of AAT into Tree A's solution/30 drops into Tree B's.

2/08/07 - 31 drops of AAT into Tree A's solution/22 drops into Tree B's.

2/11/07 - 27 drops of AAT into Tree A's solution/17 drops into Tree B's.

2/15/07 - 20 drops of AAT into Tree A's solution/19 drops into Tree B's.

02/18/07 - 8 drops of AAT into Tree A's solution/4 drops into Tree B's.

Conclusions/Discussion

The research, data, and experiment results, proved my hypothesis to be correct! The grapefruits picked 4 weeks ago had less Vitamin C than those freshly picked.

Summary Statement

The purpose of this experiment is to figure out if a shelved grapefruit is better for your body than a freshly picked grapefruit.

Help Received

Mother helped with taking the pictures and putting the pictures and headings on the board.