

CALIFORNIA STATE SCIENCE FAIR 2002 PROJECT SUMMARY

Name(s)

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Project Number

J0502

Project Title

C-trus Screening

Abstract

Objectives/Goals

This project aims to find out the citrus fruit that contains the most vitamin C from among nine selected citrus fruits.

Methods/Materials

Nine citrus fruits were selected and juiced separately. A vitamin C tablet was crushed and dissolved in water. The juices and the vitamin C solution were tested for vitamin C content using the titration technique with tincture of iodine, 2%. The vitamin C content of each of the citrus fruit juices was compared with the vitamin C tablet solution content.

Results

Five citrus fruit juices tested high and four tested low in vitamin C content compared to the vitamin C tablet solution. The navel orange showed the most vitamin C content; the tangelo, the least. It had four times (4x) more vitamin C than the tangelo. The pomelo came second and the tangerine came third high. The lime came second and the red grapefruit came third low.

Conclusions/Discussion

Citrus fruits had been noted as the richest sources of vitamin C. This project showed indeed that most citrus fruits contain excellent amounts of vitamin C. The result that the navel orange contains the most vitamin C ties in with similar studies done at the Columbia University in the late 1990's. The year-round availability, the sweet taste, the attractive color, and the reasonable cost of the navel orange make it the best source of vitamin C at all times.

Summary Statement

This project screens nine selected citrus fruits to find out which one contains the most vitamin C.

Help Received

Father gave me financial resources to purchase needed materials. Mother took pictures, helped with internet research and some typing.