CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY

Name(s)

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Project Number

33278

Project Title

Detecting Vitamin C in Fruits

Abstract

Objectives/Goals

My hypothesis for detecting what fruit has the most vitamin C is that oranges will have the most. People always say how healthy oranges are for you and that they are Vitamin C rich.

Methods/Materials

Step 1: Gather all your supplies. Step 2: Create a starch mixture by making a paste with 1 tsp. of corn starch and 1 tbsp of cold water. Add paste to 1.5 cups of water in a small saucepan and bring to boil. Step 3: Creating the Control - Create Vitamin C solution by crushing 500 mg of a Vitamin C supplement and add 500 ml of water. Put 20 ml of the Vitamin C solution into a glass and mix in ½ cup of water. Stir in 1 tsp of the starch mixture. This will be the Control number. Step 4: Place one drop at a time of 2% Iodine into the Vitamin C solution, counting the number of drops it takes to turn the Vitamin C solution dark blue. As you add each drop of Iodine remember to stir it in. Count the number of drops and record this as your Control sample. Step 5: Testing Fruits # Squeeze 20 ml of juice from the selected fruit. Strain out any pulp. Place juice into a clean glass and add 1 tsp of the starch mixture, stirring to dissolve. Drip Iodine one drop at a time into the juice unit the solution changes to dark blue. Record the number of drops. Step 6: Repeat Step 5 for each fruit you want to test. Step 7: Determining which fruit has the most Vitamin C # Calculate and record the Vitamin C content by dividing the number of drops used for each fruit tested by the control number to determine how much Vitamin C per ml each fruit has.

Kiwi, Lime, Mango, Lemon, Orange, Tomato, Tangerine, Red Grapes, Raspberries, Green Grapes, Cups, Bowls , Iodine, Corn Starch, Eye Dropper, Science Journal, Tri-Fold Board, Measuring Cups , 500 mg Vitamin C Supplement.

Results

Based on my testing, the fruits with the most Vitamin C are listed from greatest to least:

1. RASPBERRIES # 0.5142 mg of Vit. C per ml.
2. TANGERINE - 0.4285 mg of Vit. C per ml.
3. ORANGE - 0.2857 mg of Vit. C per ml.
4. LEMON - 0.2571 mg of Vit. C per ml.
5. MANGO # KIWI - 0.2285 mg of Vit. C per ml.
6. LIME - 0.2 mg of Vit. C per ml.
7. TOMATO - 0.1142 mg of Vit. C per ml.

Summary Statement

Determining which fruit has the most Vitamin C out of ten selcted fruits.

Help Received

My dad took me to get the materials and assisted me with typing.

Preliminary