

Data & Analysis for Vitamin C Analysis Lab Report

Name(s): _____

[*Note: brackets are used to provide instructions. These should be deleted from the final lab report.]

Data

Preparation data (complete if you prepared a solution):

	[Name of test]	[Name of test]
Mass of fruit / vegetable put in blender (g):		
Total volume of mixture after filtering solids and adding water (mL):		
Volume of sample titrated (mL):		

Titration data:

<i>*All measurements must be measured to the nearest tenth of a mL*</i>	Test 1	Test 2
a. Initial volume of iodine solution	mL	mL
b. Final volume of iodine solution	mL	mL
c. Amount of iodine solution added	mL	mL
d. Amount of iodine solution added in L (mL ÷ 1000)	L	L

Analysis

1. The iodine solution is 7.51×10^{-3} M with regard to I_2 . Calculate the number of moles of I_2 needed to titrate the red pepper solution.

Test 1:

Test 2:

2. Using the answer from the previous problem and equation #1, calculate the number of moles of vitamin C in the red pepper.

Test 1:

Test 2:

Name _____

Group letter _____

3. Calculate the molarity ($\frac{\text{moles}}{\text{L}}$) of vitamin C in each red pepper solution.

Test 1:

Test 2:

4. Calculate the number of milligrams of vitamin C in one liter of red pepper solution. Use equation #1 from the instructions to find the molar mass of vitamin C. Use $\frac{1000 \text{ mg}}{1 \text{ g}}$ to convert between grams and milligrams.

Test 1:

Test 2:

5. Use the information on the preparation of the red pepper solution in the lab instructions to calculate the number of milligrams of vitamin C per gram of red pepper ($\frac{\text{mg vitamin C}}{\text{g pepper}}$).

Test 1:

Test 2:

6. Vitamin concentrations are generally reported as milligrams of vitamin per 100 grams of food ($\frac{\text{mg vitamin C}}{100 \text{ g pepper}}$). How many mg of vitamin C are there per 100 g of red pepper?

Test 1:

Test 2: