

LABORATORY TECHNIQUES II: TITRATION

Date: _____ Name: _____ Lab Day/Time: _____

Objective

The objective of this experiment is to learn the technique of titration, and, using this, to determine the concentration of citric acid in various fruit juices.

Procedure

As in Chem 1094 lab manual, pp. _____.

Observations

Data

Table 1. Concentration of NaOH

Grams of acid neutralized by 1mL of NaOH	
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Table 2. Titration of unknown HCl solution

	First try	Second try
Volume of unknown acid pipetted into flask		
Initial volume of NaOH solution in buret		
Final volume of NaOH solution in buret		
Therefore volume of NaOH solution used		
Colour of solution at final buret reading		

Part III: Acidity of fruit juices

	First juice	Second Juice	Third Juice	Fourth Juice
Type of juice				
Mass of empty Erlenmeyer flask				
Mass of flask and fruit juice				
Therefore mass of fruit juice in flask				
Initial buret reading				
Final buret reading				
Therefore volume of NaOH used				
Colour of solution at final buret reading				

Calculations

The mass of fruit juice for each run

From the volume of NaOH added, and the grams of citric acid neutralized by one mL of NaOH, calculate the mass of citric acid present for each run.

Using the formula below, calculate the mass percent of citric acid in the fruit juice for each run.

$$\% \text{ citric acid} = \frac{\text{mass citric acid}}{\text{mass of fruit juice}} \times 100\%$$

Summary of Results

	First Juice	Second Juice	Third Juice	Fourth Juice
Type of Juice				
Mass Percent Citric Acid				

Questions

Answer any assigned questions here.