



Chemistry

Name: _____

Section _____ VINEGAR TITRATION LAB Date: _____

Vinegar Concentration Using Standard NaOH

Lab #29

Now that the concentration of the NaOH standard solution is known, it can be used to find the concentration of a commercial vinegar solution. In order to more closely match the concentration of the NaOH, the vinegar has been diluted 1:10 with distilled water. In this lab, 25.00 mL aliquots of the diluted vinegar taken from a pipette will be titrated with the standard NaOH from a buret. The first run will be a quick one to establish the approximate endpoint. The next two runs will be used to determine the concentration of the vinegar. This means three runs must be carried out during the lab period.

Procedure:

Caution: remember the dangers of 0.1 M NaOH in the eyes. Be sure your standard NaOH bottle is tightly closed and shake it well to mix any condensation back into the solution. Caution: make certain the buret valve is closed before adding any solution. Rinse your buret four times running some of the NaOH through the tip to remove any water. Fill the buret as usual with the NaOH standard solution.

Using a 25 mL pipette, transfer vinegar to a 125 mL Erlenmeyer flask. Add a few drops of phenolphthalein indicator. Titrate to the first light pink that lasts 30 seconds. Be sure to record your data in the Data and Results Table below for all three trials.

Data and Results Table			
	Trial I	Trial II	Trial III
Pipette volume			
Buret Volume _{final} (b)			
Buret Volume _{initial} (a)			
Volume NaOH (b-a)			
<u>M</u> of NaOH			
<u>M</u> of HAc (tested)			
<u>M</u> of Vinegar (original)			