Name	Date
Lab. Instructor	Date

Pre-Laboratory Questions



1. Why was the standard NaOH solution not prepared by calculating the amount of solid NaOH needed for 100 mL of solution, weighing it accurately, and making it up to exactly 100 mL of total volume?

...Because ...NooH.is..a...Secondary ...Standard...Solution...which mean that

its concentration Changes with time and it may

2. Why not simply rinse the buret with distilled water rather than the solution to be used in it?

This assures that the Solution to be used in the puret will not be dilluted with distilled water adhering to the buret wall.

Why does the volume of water added to potassium hydrogen phthalate not have to be measured carefully?

Because the basis of this reaction is that if one

Partant Cearts completely with another reactions.

with no excess remaining the number of moles

of each reactant is the Same.

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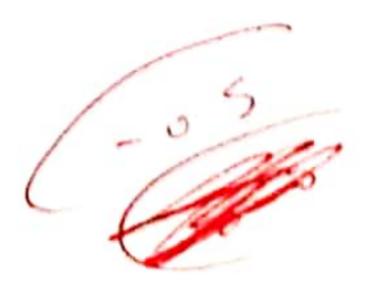
Results and Calculations

A. Standardization of NaOH Solution

7.			
	Trial (I)	Trial (II)	
Mass of flask	g	. g	
Mass of Flask + KHP	g	g	
Mass of KHP	0.50 , d	o.22 g	
Molar mass of KHP	204 7108 g/mol	子1.0% g/mol	6
Moles of KHP	9.80 ±10 mol	1.08×10 mol	
Initial buret reading	6,60 mL	14.5 mL	
Final buret reading	14.50 mL	121.30 mL	
Volume of NaOH من من تورکا	7.90 mL	6.80 mL	
Moles of NaOH = male	9.80 * 10 mol	1.08 × 103 mol	
Molarity of NaOH	-0.12 M	0.15 0.16 ·	1.
Average Molarity of NaOH		0.11 0.14	

W 10 L

B. Mass percent of acetic ac	cid in vinega	r.		
B. Wass Pour : 57	Trial (I)	1	Trial (II))
	10.00	mL	10.00	mL
Volume of vinegar	121.30	mL	34.00	mL
Initial buret reading Final buret reading	30.56	mL	39.90	mL
Volume of NaOH used	9.20	mL	8.90	mL
Average molarity of NaOH, From Part A:		Sh 2 0.15		M
Moles of NaOH used	1.38 + 103	mol	1.34 × 10	moi
Moles of CH ₃ COOH in vinegar Reacted with the NaOH	1.38 * 10	mol	1.34-153	moi
Molarity of CH ₃ COOH in vinegar	0.14	M	0.13	M
Average molarity of acetic acid in vinegar			0.14	M
Molar Mass of acetic acid, CH ₃ COOH		60		g/mol
Mass of CH ₃ COOH per liter of vinegar		8.4		9
Mass percent acetic acid in vinegar (assume that vinegar has a density of 1.00 g/mL)		8	.4 0.84	%
3.4			3	



QUESTIONS (Veal + 100'),
1. Calculate the percent error would have been in a titration that used 32.75 mL of a solution if a bubble with a volume of 0.25 mL had
peen swept said the titlation.
32.50
2. The label on the vinegar bottle used in this experiment claims that
the vinegar contains 3 % acetic acid by weight. Use your results and
a density of 1.0 g/mL to investigate this claim. Min=60.052 g/mo/
3.7 Cool \$ 60,052 × 100.7.
Concontration = 0.499.205.11
7. " M * M * 10

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