

Name \_\_\_\_\_ Section# \_\_\_\_\_ Station# \_\_\_\_\_ Date \_\_\_\_\_

Be sure to include the necessary units for the values reported in the table below. Attach sample calculations of each type necessary to obtain the results in the above table. These should include the equations used, substituted values, appropriate units, and results.

**I. Standardization of NaOH Solution (Quantitative Trials: Data and Calculations)**

	<b>Trial 1</b>	<b>Trial 2</b>	<b>Trial 3</b>
Mass of $\text{KHC}_8\text{H}_4\text{O}_4$			
<b>Moles of <math>\text{KHC}_8\text{H}_4\text{O}_4</math></b>			
<b>Moles of NaOH</b>			
Buret Reading (final)			
Buret Reading (initial)			
<b>Volume of NaOH used</b>			
<b>Molarity of NaOH</b>			

<b>Average NaOH Molarity</b>
------------------------------

M
---

**II. What-if questions:** *Predict the effect of the following experimental problems on the calculated molarity of the NaOH solution. Be sure to justify your answer.*

a. The endpoint in the titration of  $\text{KHC}_8\text{H}_4\text{O}_4$  with the NaOH solution is mistakenly surpassed and the solution is too pink

b. When dissolving the KHP, you add 100 mL of water instead of 75 mL of water

**III. Preparing for next week:** A student titrates 2.025 g of vinegar with 0.121 M NaOH. It takes 14.01 mL of NaOH to reach endpoint. What is the mass percent acetic acid in the vinegar sample? Show your calculations below.