

## **Lab Exercise #2**

### ***Moles, Concentration, Acid-Base Reactions and Quantitative Analysis by Titration***

1. How many significant figures are possible when recording the following measurements?
  - a) A buret reading
  - b) A sample delivered by a 25 mL pipette
  - c) A sample prepared in a 100 mL volumetric flask
2. In the analysis of the vinegar solution, why does the beaker used to collect the supplied vinegar sample need to be dry?
3. Why is the inside wall of the Erlenmeyer flask rinsed with a spray of distilled water just before the endpoint?
4. Calculate the pH and pOH for a solution of 0.09952 M NaOH.
5. How many acidic protons are there in 0.6137 g of KHP?
6. What volume of 0.1157 M NaOH is required to obtain the endpoint of a reaction with 0.5938 g of KHP?
7. What volume of 0.13 M HCl is required to neutralise a 120 mL sample of 0.52 M NaOH?
8. What is included in References and what is the correct format?