

Name: _____



Fall 2014

QUIM3025L Section: _____

Date: _____

Experiment 6: Quantitative determination of potassium acid phthalate (KHP) by an acid-base titration

Pre-lab Exercise (10 pts)

***Include References**

1. What is a primary standard? Mention the characteristics of a primary standard (2 pts)

2. Identify the following in your experiment: (2 pts, 0.5 c/u)

- a. the analyte: _____
- b. the primary standard: _____
- c. the secondary standard: _____
- d. the titrant: _____

If you think that any of the above is not used in your experiment please answer "N/A"

3. What is the reaction that will take place in this experiment? What type of reaction is this? (2 pts)

4. What would happen if you don't boil the water used for the preparation of your titrant and sample solutions? (1 pt)

5. A student analyzed an unknown sample of KHP by titrating with NaOH. The NaOH solution was standardized with KHP 99.98 % pure. The data obtained are reported in the following table: (2 pts)

Primary Standard KHP	KHP Standard Mass (g)	NaOH Volume (mL)
1	0.6460	39.90
2	0.6496	39.98
3	0.7125	44.10
Unknown KHP Sample	Unknown KHP Mass (g)	NaOH Volume (mL)
1	0.6556	17.06
2	0.6611	17.10
3	0.6550	17.00

Determine: (a) Concentration of NaOH solution

(b) Average percentage of KHP in the unknown