

## 03 Prep of a Primary Standard and Standardization (1954678)

Question

[1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) [10](#) [11](#)**Description**

Goal: To make a primary standard solution and use it to standardize.

Part II: Standardization of solutions.

1. Obtain about 100 mL of primary standardized solution of potassium hydrogen phthalate in a 150 mL beaker.
2. Perform a titration with the NaOH solution prepared by the instructor and 10.0 mL increments of your primary standard using phenolphthalein as the indicator. Put the NaOH in the buret. Determine the concentration of the NaOH to three significant digits. (each student should perform at least one trial)
3. Submit your data to the instructor. Determine the mean, mode, and median values of the class data.
4. Titrate the HCl solution prepared by the instructor in 10.0 mL increments with the NaOH solution analyzed in step 2. Determine the concentration of the HCl solution to three significant digits. (run at least three trials)
5. Submit your data to the instructor. Determine the mean, mode, and median values of the class data and record all results in your lab notebook..

**Instructions**

Use this periodic table which rounds off at two places past the decimal.

[Basic Periodic Table](#)

**1.** Question Details

Lab Partners [1837468]

Enter the name(s) of your lab partner(s). (If you worked by yourself, enter "none").

**2.** Question Details

Prep of KHP [1853720]

What mass of potassium hydrogen phthalate (KHP)  $\text{KHC}_8\text{H}_4\text{O}_4$  should be used to make 4.00 L of a 0.200 M solution?

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3. Question Details

Prep of a primary standard [1853727]

What is the name of the piece of lab equipment that is used to make solutions of a certain concentration?(two words)

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4. Question Details

Prep of a primary standard 2 [1853729]

What type of water should be used to make solutions in a chemistry lab?

- R.O. water
- distilled water
- tap water
- a mixture of tap water and distilled water
- ocean water

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5. Question Details

Prep of a primary standard 3 [1853732]

Put the following steps in the proper order for making a solution of KHP:

*first* -

-

-

-

-

-

-

*last* -

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6. Question Details

Prep of a primary standard 4 [1853733]

Why is it necessary to standardize solutions of hydrochloric acid and sodium hydroxide?

## 7. Question Details

Standardization of solutions [1856714]

Click the submit after each entry. Answers further down depend on previous answers.

Concentration of the NaOH:

Trial 1: Initial buret reading:  mL

Trial 1: Final buret reading:  mL

Trial 1: Volume of base used:  mL

Trial 2: Initial buret reading:  mL

Trial 2: Final buret reading:  mL

Trial 2: Volume of base used:  mL

Average Volume of base used:  mL

Molarity of the NaOH:  M

Concentration of the HCl:

Trial 1: Initial buret reading:  mL

Trial 1: Final buret reading:  mL

Trial 1: Volume of base used:  mL

Trial 2: Initial buret reading:  mL

Trial 2: Final buret reading:  mL

Trial 2: Volume of base used:  mL

Average Volume of base used:  mL

## 8. Question Details

Upload Lab Photo [3413757]

Upload a photo of the lab apparatus with your face in the photo as you perform some part of the lab. Title the image with a unique file name before you upload it. (Maybe use your initials and part of the lab title)  no file selected It must be less than 5 MB in size.

## 9. Question Details

Observations, Skills utilized and learning [3413764]

What observations did you make during the lab? What chemistry concepts, laws, and/or skills were necessary to complete this lab? What did you learn or re-learn? Use complete sentences.

10. Question Details

Objective and procedure summary [3413760]

Restate the objective in your own words using complete sentences. Summarize the steps in your procedure. (Be sure and include any safety concerns).

Empty text input box for student response.

11. Question Details

Upload Calculations (Show Work) [3418656]

Upload a photo of your calculations, showing your work. Make sure your name and the date are written on the page. Title the image with a unique file name before you upload it.(Maybe use your initials and part of the lab title and the word Calcs)

Choose File no file selected

Assignment Details

Name (AID): 03 Prep of a Primary Standard and Standardization (1954678)

Submissions Allowed: 5

Category: Homework

Code:

Locked: Yes

Author: Ryan, Matt ( mryan@allsaintsschool.org )

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