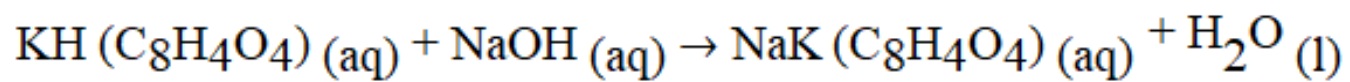


Chemical Reaction: The standardization depends upon the reactions expressed as follows:



Practical - 7

Date: / /

Aim: To Prepare and standardize 0.1M Sodium hydroxide Standard solution.

Reference:.....
.....

Requirements:

Apparatus/Equipment required:.....

Chemical required:.....
.....

Principle

The standardization is based on the neutralization reaction between potassium hydrogen phthalate and sodium hydroxide in equimolar concentration using phenolphthalein solution as an indicator. The endpoint is the appearance of permanent pale pink colour.

Procedure:

Preparation of 0.1M Sodium hydroxide Standard solution

1. Take about 100 ml of distilled water in a cleaned and dried 1000 ml volumetric flask.
2. Add about 4.2 gm of Sodium hydroxide with continues stirring.
3. Add more about 700 ml of distilled water, mix and allow to cool to room temperature.
4. Make up the volume 1000 ml with distilled water. Mix solution thoroughly.
5. Keep the solution for at least an hour and then carry out the standardization.

Standardization of 0.1M Sodium hydroxide Standard solution

1. **Weigh potassium hydrogen phthalate:** Weigh accurately about 0.5 g of potassium hydrogen phthalate, previously powdered and dried at 120° for 2 hours
2. **Dissolve in Water:** Dissolve in 75 ml of carbon dioxide-free water
3. **Addition of phenolphthalein solution:** Add 0.1 ml of phenolphthalein solution
4. **Titration with the sodium hydroxide solution:** Titrate with the sodium hydroxide solution until a permanent pink color is produced.

Result:.....
.....

Questions Bank

1. Write the chemical formula of phenolphthalein.
2. What is the meaning of carbon dioxide-free water?
3. Draw the diagram of volumetric flask.
4. Write the chemical formula of potassium hydrogen phthalate.
5. What is the meaning of endpoint?
6. Calculate the sodium hydroxide quantity for the preparation of 0.1M Sodium hydroxide.
7. Write a short note of titration process.
8. What is the room temperature in $^{\circ}\text{C}$?
9. What is the continues stirring?
10. What is the meaning of equimolar concentration?