Lab Summary 1: Experiment 1 – Concentration and pH

Name:Utsav Acharya

Lab Section: 03

Instructor Name: Christina Minassian

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Reagents Used:

0.1 M Hydrochloric acid (HCl)

0.1 M Sodium hydroxide (NaOH)

pH indicator solution

Distilled water

0.1 M NaCl (Sodium chloride solution)

For this experiment, we will be exploring the relationship between solution concentration and pH. We will measure the pH of various solutions using a pH meter and observe color changes with a pH indicator. To begin, we will prepare a series of sodium chloride (NaCl) solutions with different concentrations, ranging from 0.1 M to 1.0 M. These solutions will be labeled accordingly. A calibrated pH meter will be used to measure the pH of each solution to ensure accurate readings. We will also utilize distilled water as a control to compare the pH of our test solutions. Additionally, hydrochloric acid (HCl) and sodium hydroxide (NaOH) solutions will be tested to observe the effects of strong acids and bases on pH values. By following these steps, we aim to understand how solute concentration influences pH and the importance of accurate measurements in biological systems.