



INDIAN SCHOOL MUSCAT
SENIOR SECTION
DEPARTMENT OF CHEMISTRY
CLASS XI - LAB SHEET

DETERMINATION OF pH

Experiment Number: _____

Date: ___/___/___

Aim: - To determine the pH of various samples of acids, bases, salts and fruit juices using pH paper.

Materials required: - Test tubes, glass rod, watch glass, different samples, pH paper etc

Theory: -

pH is the measurement of the hydrogen ion concentration. pH is defined as the negative logarithm of hydrogen ion concentration.

$$\text{pH} = -\log[\text{H}^+] \text{ OR } \text{pH} = \log \frac{1}{[\text{H}^+]}$$

If the hydrogen ion concentration is very high, the pH value is very low. Substances with pH lower than 7 are acidic, those with pH equal to 7 are neutral and those with pH greater than 7 are basic in nature.

Procedure:- Determination of pH using pH Paper

- Take a pH paper strip and place it on a clean watch glass.
- Pour a drop of the sample on the pH paper using a clean glass rod/dropper.
- Observe and compare the color obtained on the pH paper with the different colour shades of the standard color pH chart and record the pH value in the observation table.
- Similarly, find the pH of the remaining samples using a fresh strip of pH paper and a clean glass rod/ dropper for each sample and record your observations.

Observations

Sample name	Color produced on the pH Paper	Approximate pH

Precautions

- Use only the standard color pH chart supplied with the pH paper for assessing the pH value.
- Keep the pH strips away from chemical fumes.
- Either use fresh fine dropper or glass rod for each different sample, or wash the dropper or glass rod well with water every time.
- To correctly view the color produced on the pH paper, keep the pH paper on a white tile/white background while performing the experiment.

Result

The pH of various samples are