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FINAL REPORT: PH METER

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ABSTRACT

PH meter can be used in daily life where a substance is very important. Each substance has their types and categories. When people need to know whether the substances are safe to touch, drink or use it, the pH meter will present to take a reading for the unknown substances. All these can be done through by pH meter reading. If a person wants to plant a tree but need a good pH value for the tree growth, the pH meter can provide a precise reading for the person. As for safety level, buzzer will vibrate which tells us that substance is neutral. The LCD will display the value of pH of a substance and state the types of pH of a substance. It is easy to use and by using this system, we can know the level of pH value of a substance without taking any risk.

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Acid, alkaline and neutral have existed for a decade. The scientist begins to do the research in order to create a device that can identify those acid, alkaline and neutral solutions. Acid and alkaline are usually found in the environment. PH measurements are important in medicine, biology, chemistry, agriculture, forestry, food science, environmental science, oceanography, civil engineering, chemical engineering, nutrition, water treatment & water purification, and many other applications. PH is a numeric scale used to specify the acidity or alkalinity of an aqueous solution. It is roughly the negative of the logarithm to base 10 of the concentration, measured in units of moles per litre, of hydrogen ions or H^+ .

By now, the pH value can be determined using litmus paper and ph meter. Meanwhile, there is a problem with the prediction of ph value of certain solution cause by pH meter and litmus paper. The accuracy is not accurate enough and may cause harm to eye, skin because of the corrosive. Therefore to overcome the problems, productive devices that can overcome the existed devices are need. A significant of study, our project of pH meter can minimize the effect of acid and alkaline. This pH meter can tell and alert whether the solution are harmful or harmless.

The electrode of the ph meter usually has a glass electrode, also has a calomel reference electrode or a combinational electrode. In addition, measuring a liquid substances sometimes use a special probe to measure the pH of semi-solid substances. Build one new basic pH meter, make sure the potential difference between two electrodes and the result calibrated in pH; the circuit is very simple and easily built. For your information, electrode or which always called probe need to be clean of after being use and remember not to touch by hand. Also, the probe is best to keep it moist with a medium when not used. Most important part of the probe is the bulb. If the bulb becomes contaminated, the display will give us false reading.