

ABSTRACT

pH meter is a device used to measure the acid levels - bassa in a solution. If the solution has a pH value that is read between 1-6, then the solution is quite acidic. If it reads 7 then classified as a neutral solution. Then, if legible means belonging to a solution of 8-14 bases.

The workings of this tool is the pH electrode is inserted into the sample solution, and then the electrode will detect the sample solution and converts the signals from the pH electrode into electrical signals and its output will be reinforced by the amplifier circuit in the form of analog voltages to be converted by the ADC IC 0804 where the analog data will be converted into digital voltages that can be read by the IC Mikrokontroler AT89s51 its data and measurement results are stored data will be processed by a microcontroller IC AT89s51 and the results will be displayed on the character LCD 2 x 16 cm.

Based on the results of measurements using three types of samples obtained solution, pH 1 to obtain an error factor of 0%, standard deviation 0, the uncertainty of 0; to pH 7 obtained 0.7% error factor, the standard deviation of 0.15, the uncertainty of 0.06; to pH 14 obtained an error factor of 0.3%, standard deviation 0, 0 and thus the uncertainty of this instrumen tcan be said to be appropriate.

Keywords:pHMeter,Electrodes,microcontroller.