

ABSTACT

Hydroponics is a method of planting with water as a substitute for concentrated soil and nutrients in water known as Total Dissolve Solid (TDS) which is an important measuring component that needs to be considered in hydroponics. Therefore, keeping plants from getting sufficient nutrients can be done by using a monitoring system for the concentration and nutrients present in the water. , the DS18B20 sensor which is used to measure the water temperature, the LCD which will display the output of the water density and temperature values, and the ESP8266 which is in charge of sending data to the web. The performance scheme of this tool uses wireless fidelity intermediary media to transmit sensor reading data to the web. . Action or action if the ppm value is less than the set ppm value that has been determined then the nutrition pump will turn on, and if the ppm value exceeds the set ppm value that has been determined then the raw water pump will turn on to the nutrient reservoir so that the ppm value returns to the range value that has been set. The results of the control and monitoring carried out on the first tool test on the 1059 ppm tool and have a difference value of 5 ppm with the standard tool value of 1064 ppm. In the second test on the 990 ppm tool the difference on the standard tool is 22 ppm and the ppm value on standard tool is 1012 ppm. In the third test on the 937 ppm tool, the difference with the standard tool is 4 ppm while the ppm value on the standard tool is 933 ppm..

Keyword : DS18B20 sensor, ESP8266, Hydroponics, IoT, LCD, NodeMCU, ppm, website.