ABSTRACT

Water is a daily need for living beings. The importance of water for living things can be seen in the quality of the water consumed. Water has a neutral pH level which is regularly consumed as mineral water. Still, a alkaline pH level are devoured for health and are commonly brought up to as alkaline water. The circulation of alkaline water-producing devices that are sold on the market with numerous brands from cheap to relatively high prices, the researchers conducted research in the form of an automatic alkaline water-producing device with the selection of pH levels of 8.0 and 8.5.

In the power supply system for making alkaline water, a 24 VDC adapter is used as a one-phase voltage converter from the 220 VAC PLN input. After the voltage is changed using a DC Adapter, it will pass through the relay as a voltage breaker, then the voltage that has been lowered is used as a voltage output into the water electrolysis process.

In the research on making an alkaline water generator using several components, namely a power supply using a 24 VDC Power Supply and a relay, with microcontroller using Arduino Uno. In monitoring this tool will use a pH sensor, and LCD as a display output from the pH sensor. The results of this study can choose the desired pH level and when it reaches the desired pH level can turn off the system automatically. As well as analyzing the increase in the pH of the water every 10 minutes during the electrolysis process, the results of the analysis show an average increase every 10 minutes from pH 7 to 8 by 0.125 and 70 minutes, from pH 7 to 8.5 by 0.1 and 140 minutes. , and from pH 8 to 8.5 of 0.063 and 70 minutes.

Keywords: *Alkaline Water, Electrolysis, Relay, Water pH*