ABSTRACT

Most people consume refilled drinking water at drinking water depots. The quality of drinking water at refill water depots has a different quality from one water depot to another. Water quality has decreased due to poorly maintained reservoirs or delivery by tank trucks that are no longer suitable, causing low drinking water quality or questionable quality. So many people are not aware of the quality of a refill drinking water. In this research, an Internet of Things (IoT) based drinking water quality monitoring system will be created. The measuring parameters to determine the quality of refill drinking water used are pH levels, and TDS (Total Dissolved Solid). This monitoring system is made using Arduino Nano as a microcontroller, NodeMCU ESP8266 to transmit data to the thingspeak platform, pH-E-201-C sensor to measure pH levels, and a TDS (Total Dissolved Solid) sensor to measure water dissolved solids. The data communication used for data transmission uses WiFi, while the monitoring process used uses the Thingspeak platform. The test results on the pH sensor with levels in the pH buffer of 4.00, 6.83 and at 9.18 got good results. And in the TDS (Total Dissolved Solid) test, they tested 20 experiments using 5 different types of water and got results with an accuracy value above 90%. The QoS results obtained from the Delay test results obtained a medium category. Throughput obtained very good category. Packet Loss obtained very good category.

Keywords*: Water Monitoring, Internet of things, pH Sensor, TDS Sensor, Arduino Nano.*