ABSTRACT

Many water refill stations still do not meet the provisions and standards set by the Ministry of Health Regulation. The quality of water that does not meet the standards during the drinking water treatment process is a source of contamination in the water intended for drinking. Ultraviolet (UV) technology and Reverse Osmosis (RO) are used in water treatment to produce safe drinking water. This study discusses monitoring the quality of ultraviolet and Reverse Osmosis water using pH and TDS sensors based on the Internet of Things (IoT). This system uses an ESP32 as the microcontroller, a pH sensor to detect the acidity level in the water, and a TDS sensor to detect the dissolved solids in the water. The results are displayed on the Blynk platform. The test results for the RO water system show an average pH of 6.7 and an average TDS of 17.75 ppm, while UV water has an average pH of 6.10 and an average TDS of 125.3 ppm. These results conclude that RO water has lower pH and TDS values compared to UV water, and both types of water are still suitable for daily consumption. The system performance results show the lowest delay of 114 ms, while the highest delay occurs at a distance of 6 meters with a value of 657 ms. The average delay recorded is 481 ms, which is categorized as good.

Keywords: *drinking water, IoT, pH, TDS..*