

ABSTRACT

Rivers must meet the relevant water quality criteria in order to supply water to people in Indonesia. Despite significant advancements in water quality monitoring systems, sensors are still immersed directly in water samples for measurements of water samples. This approach of water sampling could result in decreased sensor performance. In order to check water quality using an IoT-based pump, a water sample system was developed. The pump in this study was made to direct water from the river to the control tank. The water sample from the control tank was then tested for pH and TDS quality before being returned to the river following the test. The calibration outcomes demonstrate the precision of the 99% for the pH sensor and 94% for the EC sensor. The study's findings showed that using a water pump with 36 watts of power allowed water to be drained at a height of 2 meters. The pump needed a delay of 30 seconds to fill the control tank and a delay of 60 seconds to empty the control tank. The river's pH and TDS parameters were used to monitor water quality for seven days, and the findings showed that the river was still within the usual range with an average pH of 7.4 and a TDS value of 387 ppm.

Keywords: water quality, pH, TDS, water pump, Antares, IoT