

ABSTRACT

Water quality is one of the important and influential aspects for the daily life of living things that can be used as one of the health barometer. Poor water quality will cause problems with living things that use it, so the water used must meet health standards. River water is one source of water. A measuring device is then designed to determine whether the river water is safe for use or not for humans.

This final project makes a tool to know the quality of river water. On the attached device two sensors, the pH sensor and turbidity sensor, where the analog input pH value and turbidity will be converted to digital in ADC, then the value will be processed by using fuzzy logic sugeno method to get the results or conclusion of whether or not safe water of the river to use. For the values and the results already obtained will be displayed on the LCD. For the maximum allowable level has been determined by the Minister of Health (Regulation of the Minister of Health of the Republic of Indonesia number 416 / MENKES / PER / IX / 1990 on the Terms and Supervision of Water Quality) [3].

From the results of tests conducted, river water quality measuring tool capable of processing data input from sensors using fuzzy logic sugeno method to determine the river water is safe to use or not and display the results via LCD. In the test, the minimum pH value obtained is 7.03 and the maximum value is 8.21. For the minimum turbidity value obtained is 589.7 and its maximum value is 2751.5, with the overall status being unsafe for humans, both for bathing, washing and consumption.

Keywords: Arduino UNO, PH, Turbidity, Fuzzy, Sugeno Method