ABSTRACK

Water is an inorganic compound that has tasteless, transparent, colorless and odorless properties under standard temperature and pressure conditions. When using water that is commonly used, namely well water, each source of well water produced has different contents in the water, including the pH content and also the turbidity of the water. There are many problems in using clean water for daily life, for example the level of clarity is not good around the house for use in toilets and toilets (MCK), to minimize the occurrence of danger due to water content, water filtering is carried out, in filtering there are several examples of filters, three type of filtration with different types of filters, namely filters A, B, and C. To measure pH and water clarity levels, tools or sensors are needed, namely pH sensors and also turbidity sensors, to process all these sensors using an Arduino Uno microcontroller and for displays results using a 16x2 LCD. In this testing process, what are the expected results between three different spring sources and also three different filters. When using turbidity sensors and pH sensors, after obtaining experimental results with different characteristics, the pH sensor has an accuracy level of 97.63%, while the turbidity sensor has an accuracy of 79.66%. For comparison of filtering performance, of the three filters used, filters A and B have the same results, namely a clarity level of 0 NTU, while filter C gets different results for each well water source. Of the three well water sources, the best result is well X water source, because the clarity level is still below 355 NTU and the pH level contained is 7.19 compared to other well water sources.

Keywords: *Clarity, pH Sensor, Turbidity Sensor, Arduino Uno, Filter*