ABSTRACT

As laundry waste increases every year, a countermeasure is needed to reduce the environmental damage that has occurred. This research focuses on reusing laundry waste for other needs. In this research, a water filtration device is made that has a turbidity sensor and a ph sensor that will detect the feasibility of water for reuse. This tool uses Arduino Uno as a microcontroller and ESP8266 as a wifi module that can be connected to a smartphone as a monitoring medium. After passing through the filtration process, the filtration water will be used as a planting medium for hydroponic vegetables in the form of mustard greens and kale with a comparison of ordinary water. In the research, filtration water was successfully implemented on kale plants with the final result of an average plant height of 13 cm but failed in the mustard plant experiment. This laundry waste filtration water has the potential to be reused as a planting medium.

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Key Word**:** *Arduino uno, ESP8266, Monitoring, Hydroponics.*