

**Workshop On Detector of Water Hardness Based On Light Dependet Resistor In Giritontro Village,  
Giritontro District, Wonogiri Regency**

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ABSTRACT

Some areas in Wonogiri contain hardness in its soil, while some people consume water that come from the soil. *In community service activity in 2016, we found problems in the community in Giritontro, Wonogiri that is the difficulties to detect the hardness in the water that people consume. As a result, many people who suffer from internal diseases caused by the deposition of lime in their bodies such as kidney disease. Therefore, the PPM team of the Faculty of Mathematics and Natural Sciences of Yogyakarta State University built a hardness detection system in liquid based Light Emitting Diode (LED) and Light Dependent Resistor (LDR). LEDs are used to irradiate fluids with different lime levels, then LDR will detect the LED light passing through the liquid. The size of the LDR output value will depend on the lime content in the liquid. People are very enthusiastic and start using this tool to detect the presence of limestone in the water they consume.*

Kata Kunci: *Hardness, LDR, LED*