

**DESIGN AND CONSTRUCTION OF HAND SANITIZER AUTOMATIC AND  
LIQUID OUT OF DETECTION THROUGH SMS NOTIFICATION GATEWAY  
BASED ON ARDUINO UNO**

*Name of Student* : Siti Sarah  
*Register Number* : 3103181148  
*Supervisor* : Hikmatul Amri, S.ST., M.T.

**ABSTRACT**

*Hand sanitizers that are currently circulating are still manual, and if they are circulating, there are still many manuals. people allow for the spread of a dangerous virus or germ. So we need an automatic hand sanitizer that can reduce the potential for the spread of the virus and keep it clean. The research methods are: potential problems, information gathering, product design, product manufacturing, product testing, product revision, and final testing. The tool is called Hand sanitizer Automatic and detects running out of liquid through SMS notification gateway. This tool is made to change the work system hand sanitizer that was previously manual to automatic, and is more clean. This tool works when the sensor detects the hand is less than 10 cm, then the servo will pull the lever and release the hand sanitizer. And when the hand sanitizer out then the red light on the sensor liquid XKC Y25 DC SIM900A dead and GSM module to send messages to mobile phones that hand sanitizer is up needing to be recharged. Based on the results of the research that has been done, hand sanitizers have been successfully made and can be used at the Bengkalis State Polytechnic. From the result of tests that have been done 70 times, the accuracy rate of the tool is 100 %.*

**Keywords:** *Liquid sensor, servo motor, GSM module.*