ABSTRAC

Tapai or also called tape is a type of traditional food that is in great demand by the general public. As a food product, tape is quickly damaged due to further fermentation after the optimum fermentation conditions are reached, so it must be consumed immediately. Because the fermentation process usually takes a long time to produce the desired tape texture, it takes the right time to know the maturity of glutinous rice tape well. Therefore, it is necessary to monitor and control the temperature and humidity in fermentation sticky rice tape. The purpose of this study is to help monitor temperature and humidity by storing data automatically with periodic checks and can be done remotely. The sensor used in this study is the DHT22 sensor to monitor temperature and humidity and the MQ3 sensor serves to monitor ethanol levels in fermentation. The test results conducted on the DHT22 sensor resulted in a temperature value with an average error of 0.7% and a humidity value with an average error of 0.98%. It can be concluded that the difference in the designation of temperature and humidity values on the DHT22 sensor is in accordance with the DHT22 sensor data sheet, namely the measured humidity must have a range between ± 2% to ± 5% and ± 5°C for temperature values. The MQ3 sensor obtained test results on craftsmen producing good tape with a temperature of 31 ° C, humidity 97.50% and ethanol 3.35 mg / L, in this test obtained results close to the results with a temperature of 29.7 ° C, humidity 100% and ethanol 3.23 mg / L. The results of testing QoS parameters with the TIPHON standard obtained a delay value of 126.6 ms and packet loss of 1%.

Keywords : Glutinous Rice Tape, DHT22, MQ3, Fermentation