ABSTRACT

In patients who do oxygen therapy, oxygen administration must be accompanied by humidity, so that there is no irritation of the respiratory tract and oxygen delivery based on flowmeter readings. The purpose of this study is to develop a gas flowmeter calibrator device equipped with humidity measurements. The study used the Arduino Mega while the gas flow sensor used by the OCS-3F, and the humidity sensor using DHT22 were then displayed on the TFT LCD. At the testing stage, the sensor reading value on the tool module that appears on the TFT LCD is compared to the results of the comparison tool with a measurement range of 1 LPM up to 10 LPM as much as 6 times at each point. The conclusion of the result that the calibrator tool module has a relative error (error value) is still within the allowable tolerance limit, which is ±10%. The gas flow sensor should be able to read 20 LPM gases, on a maximum module of 10 LPM due to the limitations of the sensor.

Kata Kunci: Oxygen, Flowmeter, Oxygen Flow, Calibration.