

## ABSTRACT

*Chronic Obstructive Pulmonary Disease (COPD) is a disease of the airway obtruksi as chronic bronchitis or emphysema. One cause of COPD is smoking. Monitoring oxygen saturation SpO2 used to determine the value for one minute on passive and active smokers aimed at monitoring outpatient respiratory conditions and in the event of abnormal values can be used as an early warning of the risk of smoking lifestyle. The purpose of this study make SPO2 monitoring device via Android using MAX30100 sensor. MAX30100 sensor works by absorption of IR and LED light that enters the sensor, the data from the sensor MAX30100 into the pin I2C on minimum system arduino, and then processed to produce a percentage value of SpO2, which is then displayed on the LCD 16x2 and android by using Bluetooth as the delivery. In previous researchers produced an error of 0.6% and the results of research now to perform data collection by 6 times 5 respondents in getting the data retrieval error of 0,27%.*

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**Keywords:** SPO2, MAX30100, Android