

ABSTRACT

The number of vehicles in Indonesia which has now exceeded 115 million units resulted in increased fuel consumption [1]. In 2014 the Ministry of Energy and Mineral Resources recorded a fuel consumption in Indonesia reached 70.7 million kiloliters [2]. Along with the increased fuel consumption of the possibility of fraud on several General Fuel Filling Stations (Gas Station) is increasing. One of the fraud committed by the gas station is a mix of fuel types gasoline with water. With the emergence of these problems, the authors are interested in creating a tool Purity Gas Detector Portable C₈H₁₈ and C₁₀H₂₄ which facilitates the detection of the purity of the gasoline contained in the gas stations.

Portable tools that will be created using TCS3200 sensor to distinguish the color of the gas to be detected. The TCS3200 Sensor will distinguish colors by identifying the color based on the RGB (Red, Green, Blue) value that make up the color of the gasoline. RGB values will be used as a parameter purity gasoline is detected. The author will control this portable device using Arduino Uno ATmega328 microcontroller-based program that is loaded to read the RGB values of the gasoline that is directed at TCS3200 sensor is then stored in an EEPROM Arduino Uno. Data stored RGB values will then be used as reference to identify some gasoline products geared towards sensors TCS3200.

The success of this portable device is able to detect gasoline in accordance with the RGB value data that has been stored in an EEPROM Arduino Uno.

Keywords: TCS3200, RGB value, Arduino Uno, EEPROM