ABSTRACT

Oranges are a fruit that is very popular with the public because it contains a high amount of vitamin C. Besides being intended for daily fruit consumption, citrus fruits are also often used for beverages and medicinal products, but so far, citrus farmers are still using conventional processes that only use their hands. Therefore, to support farmers' performance to be better, a prototype conveyor for citrus fruit sorting based on quality based on a microcontroller was made. The working system of this tool is a control tool that is able to sort citrus fruits based on the color detected by the TCS3200 color sensor, and then the data obtained will be processed by the Arduino Uno microcontroller. The fruit that has read the color data will be moved by a conveyor, which will then be sorted automatically by the servo. The results of this study indicate that the accuracy of this tool is 80% and the average color reading time by the TCS3200 sensor is 01.93 seconds (s).

Keywords: Orange Fruits,Microcontroller, Color Sensor, TCS3200, Sort