

**RANCANGAN ALAT SORTASI PEMISAH BUAH BERDASARKAN
WARNA MENGGUNAKAN ARDUINO BERBASIS
METODE *K-NEAREST NEIGHBOR* (KNN)**

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ABSTRACT

Fruit separation is generally still done manually. Manual separation has weaknesses, especially if there is an error in separating the fruit (human error), then the separation is not practical. In this research, a system that can utilize apples and lemons' colours is an indicator of separation. Using apples and lemons colours for separating the two is not easy because each fruit has an RGB colour close to one another. Based on the description above, the researcher tried to make a design for sorting a fruit separator based on colour using Arduino using the K-Nearest Neighbor method. This study aims to obtain a fruit classification method referring to the RGB colour feature image produced through the TCS3200 colour sensor scanner, which is more objective. The working system of this tool will be carried out automatically controlled by the Arduino Uno microcontroller. With this system, it is hoped that it will increase the efficiency of sorting the fruit according to the predetermined classification based on the fruit's colour. The results of the processing of the tool will be displayed on the LCD.

Keywords: Food Selector, RGB, TCS3200, K-Nearest Neighbor