

ABSTRACT

Nowadays, cultivating chili plants is very potential in economic aspects because chili plants are very needed by everyone. In post-harvest handling, chilies have to sorting process, where farmers still use manual system that is sorted by their own hands and it takes long time. The chili sorting process is an important process because the sorting results will be collected to collectors or others. One of indicators for chili sorting is color, because it shows the chili maturity. Therefore, a tool is needed to help sorting process of chili color. Inside tool, there is TCS3200 color sensor which to get the color value of the chili that will be sorted. After color sensor has detected chili color, chilies will be moved into a container that matches chili color using servo motor. Then in the sorted container, there is a full or no detection of contents in the container using the PING sensor. After testing, chili sorting tool can sorted 4 chili colors, namely red, orange, light green, and dark green with level of accuracy 85%. The entire system can sort colors and detect distances with an accuracy of 65%.

Keywords: *Sorting Based Color, Automatic Sorting Tools, Color Sensor TCS3200, Motor Servo, PING Sensor*