

ABSTRACT

Wet noodles have a short shelf life because they are spoiled more quickly by microorganisms. Because of this, some irresponsible wet noodle producers add formalin to make the noodles last longer. However, formalin is a food additive (BTP) which is prohibited from being used because it is dangerous to health. So that in this research an instrument will be made that can detect formalin levels in wet noodles which have formalin concentrations of 0 ppm, 40 ppm, 95 ppm and 150 ppm. The instrument was made using a TCS3200 color sensor and an ATmega328P microcontroller. The color detected by the TCS3200 sensor is the result of a color change from mixing formalin wet noodle samples with reagent Schiff's. The sample will be selected by the instrument based on the RGB color value detected by the TCS3200 color sensor. The reliability of the instrument in selecting formalin wet noodle samples with a concentration of 0 ppm worth 92.5%, 40 ppm worth 95%, 95 ppm worth 97.5% and 150 ppm worth 100%.

Keywords: *wet noodles, formalin, Schiff reagent, sensor TCS3200, RGB, microcontroller ATmega328P*