

ABSTRACT

Dehydration is often the case in the general public because the community is put aside drinking water according to the amount of needs that the body must fulfill. Often people consider that the amount to meet the fluid is the same everyone. In fact, it is wrong, because to meet the needs of the fluid depends by weight, age, daily activities etc. The purpose of this research is to facilitate the general public to measure the state of the society under normal conditions, mild dehydration, or moderate dehydration, and equipped with the amount of fluid needs. Contributions from this study are that people can use this tool without having to wait for someone who understands in reading the measurement results of dehydration. In order to be able to read the result of measurement of dehydration rate, the author makes automatic dehydration detection tool based on urine color with the amount of fluid needed. The TCS3200 color Sensor is used to detect urine color. Next Atmega328 is used to process the program to be executed. In addition there is a keyboard user used to start the color detection of urine and input the body weight. The result of measurement of dehydration rate and quantity of fluid needs in ML/day units will be displayed on the 16x2 character LCD. Readings of dehydration rate measurement have an error of 0.5%. The results of this study can be.

Keywords: *dehydration, TCS3200, Portable, color urine, amount of fluid needs*