

Abstract

The use of infusion in health is one important thing because infusion fluid can replace the lost body fluids rapidly and the infusion fluid is easily absorbed by the body. In the use of infusion, this tool should be observed periodically to avoid things like infusion fluid runs out or the blood clotting in an infusion hose. When there is blood clotting detected in the infusion hose, the blood can clog the blood capillaries in the lungs, causing an embolism in the lungs. In an effort to prevent the blood clotting due to depleted infusion fluid, a warning system should be needed when the infusion is impaired. On this final assignment is proposed an infusion monitoring tool by using a color sensor to monitor the blood that rises to the infusion hose. If there is blood detected in the infusion hose, the notification will be given through the LED light and sound using a buzzer. The fuzzy logic implementation of color detection with sensors is used as a research method. The test result is obtained that the notification through the red LED lights and the buzzer reads if the infusion is impaired with the average uptime of the LED light which is 5,6 seconds when blood is detected in the infusion hose. The accuracy of this tool is 100% to detect blood red color.

Keywords: blood clotting, fuzzy logic, sensor TCS3200