

ABSTRACT

The use of medical devices in the long term can cause changes in accuracy, therefore it is necessary to process calibration. Calibration is an activity comparing the measuring instrument with a standard tool, based Permenkes No. 54 Year 2015 Infusion Pump is one of the medical equipment that must be calibrated.

Research purposes is to make an infusion pump analyser design. This tool uses infrared photodiode sensor. Air issued by Syringe Pump into the chamber until filled tube and obstructing an infrared photodiode sensor. When the sensor is blocked, it will be processed by mikrokontoller. Furthermore flowrate directly displayed to the liquid crystal display 2x16 characters so that it can be known whether the equipment fit for use or not.

After testing and measuring the performance of the Syringe Pump, the average error value of the Multi Flo Infusion Pump Analyzer and Infusion Pump Analyzer was 1.13% and 1.86%.

Keywords: Calibration, Flow Rate, Microcontroller