

ABSTRACT

Blood Collection Monitor is a device used to determine the volume and shake up of the blood sac during a blood transfusion, so that the blood in the bag does not clot and is mixed with anticoagulant fluid in the bag properly. In this tool the authors develop from tools that have been made previously by adding LCD to find out each volume. Accompanied by the addition of a safety system in the form of a barrier indicator that is connected to the alarm, to warn the transfusion officer if there is an obstacle or there is no increase in volume as much as 20ml for 1 minute as recommended by the world blood bank association. This tool can work with three different sizes of blood bags, using a loadcell sensor to detect the amount of blood fluid that enters the bag, then convert it into units of milli liter volume, then shake using a motor that is all controlled by Arduino software. The method in this study is to use a pre-experimental method with the type of one group post design research, that is, the blood that is inserted into a blood bag is read every volume increase, and its compatibility is seen between what is read on the device and the comparative volume. From the whole process of making this module, the calculation results obtained from the measurement of the entire size of the blood bag with \bar{x} : 0, deviation: 0, SD: 0, UA: 0, % error: 0 So that it can be concluded that this tool can be used properly

Keywords: *Blood Transfusion, Load Cell, HX-711, Arduino, Blood Bags.*