

ABSTRACT

Instrument equipped with monitoring vaccine storage temperatures and time of expiration is a laboratory instrument used to store vaccines, the function of this tool for monitoring the temperature and time expired vaccine, the purpose of this tool to maintain vaccine potency quickly so as not to decrease. Principle of this device to keep the room temperature stable vaccines. The temperature of the vaccines needed by 2 ° C to 8 ° C

A store of existing vaccines is a problem we often encounter is too rapid decrease in potential vaccines that have not been used before approaching or reaching the expiration date because the users are too often or too long to open the fridge. Of the problem the author had the opportunity to make Armed Vaccine Storage Equipment Temperature Monitoring and Expiration Period Based Microcontroller AT 89s51.

Vaccine Storage Equipment Temperature Monitoring and equipped Expiration Period based AT89s51 microcontroller is a device consisting of a series of temperature sensors, sensor switches, IC AT 89s51 microcontroller as the main drivers and driver circuit functioned as switches to control compressors. Thus expected to monitor the temperature and time expired with a good vaccine.

Based on results of temperature measurement 2.0 ° C with an error (error%) of 21%, temperature measurement 3.1 ° C with an error (error%) of 9.6%, temperature measurement 4.0 ° C with an error (error%) of 7.5%, temperature 5.1 ° C with an error (error%) by 5.2%, temperature 6.0 ° C with an error (error%) for 5.3%, 7.1 temperature ° C with an error (error%) of 4.7%, temperature 8.0 ° C with an error (error%) of 4.2%.

Vaccine Storage Equipment Temperature Monitoring and equipped Expiration Period based Microcontroller 89s51 AT is suitable to be used because the average value of error of 8.2%.

Keywords: temperature sensor (LM 35), Sensor Expiration (Switch), Vaccines