

ABSTRACT

Measuring the temperature on the dry sterilizer is very necessary because the temperature inside the dry sterilizer has the possibility that the temperature is not the same as the temperature that has been set and is displayed on the display. If the temperature in the dry sterilizer does not match the standard setting temperature for the sterilization process, then the sterilization process is said to be imperfect, so in this case measurement/calibration is needed. Temperature data logger is a something that used to measure the temperature of the sterilizer, which of the result will be stored on the SD Card. The purpose of this study is to make it easier to find out whether the temperature in the sterilizer is in accordance with the temperature setting or not. The temperature sensor used in the data logger is a thermocouple sensor. The temperature detected by the thermocouple will be processed by the PSA circuit, then enter the ATmega 2560 for further display on the 4x20 LCD character. The data will also be stored on the SD Card to make it easier if you want to see the result on the PC. Measurements were made at 9 sterilizer points according to the AS 2853 Rectangular Enclosure standard by comparing the module with the OctTemp2000 medgetech data logger. Based on data measurements and comparisons, the average error obtained in temperature data at a temperature of 50°C with the smallest error value is 6.4% and the largest value is 12.8%. At a temperature of 100°C, the smallest error value is 1.8% and the largest is 11.0%. Then at a temperature of 120°C the smallest error value is 1.9% and the largest is 6.4%. This tool can be used to record the temperature of the sterilizer from the time the device is turned on until the sterilization process is complete. So that way we can find out whether the sterilizer according the standard or not. The error value by the module is high. So, to minimize it by refining or using another PSA circuit.

Kata Kunci : Data Logger, Sterilizer, Thermocouple