

## **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. The purpose of this study is to record and monitor whether the temperature in the sterilizer room is in accordance with the setting temperature. The workings of the temperature data logger tool is that the type K thermocouple temperature sensor will detect the temperature which then enters the analog signal conditioning circuit which then enters the ATMegga 2560 which has been given a program and processed in such a way, then the temperature will be displayed on a 4x20 character LCD. Temperature measurement data will be saved to the SD Card every 10 seconds in the form of a TXT file. This research has been used to record 2 sterilizers and compared with the Madgetech OctTemp2000 data logger. Based on data measurements and comparisons, the average error was obtained at a temperature of 50°C with the smallest error value of 0.7% and the largest value of 3.9%. At a temperature of 100°C, the smallest error value is 1.6% and the largest is 10.5%. Then at a temperature of 120°C the smallest error value is 0.0% and the largest is 8.5%. This research can be used to help analyze the distribution of temperature in a room. With these measurement result, it can be said that this study still has a fairly high error value at several measurement points.*

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**Kata Kunci : Data Logger, Sterilizer, Thermocouple**