

ABSTRACT

Temperature stability is one of the important things in the sterilization process. if the temperature is unstable, then the sterilization process does not run perfectly. Temperature measurement in sterilization is necessary to know if the temperature setting has been reached, because if the tool is operated continuously it will have an impact on the performance of the tool. Measurements are usually done by recording the time and temperature with a system that is still manual. Data logger is a tool used to record time and temperature with recording. The purpose of this study is to develop a technological advancement with an automated system with recording to be aware of changes in temperature rise and decrease. This study used 3 thermocouple sensors type K as a temperature gauge. The thermocouple is connected to the MAX6675 module to be converted into digital data. The at least atmega328 system family is used as a processor with the help of Arduino programming software. RTC is used in real-time when recording temperature. At the temperature setting of 50°C the highest error value is 1.9%, at the temperature setting of 100°C the highest error value is 1.2%, and at the temperature setting of 150°C the highest error is 0.8%. This tool has been compared using comparison from BPFK in the form of DATA Logger OMEGA OM-CP-OctTemp 2000 and Yokogawa MV2000 with Electro-mag sterilizer M6040P.

Keyword: Temperature, MAX6675, SD Card