

## ABSTRACT

*Microscope Storage cupboard is one of the medical support that serves as a place to store the microscope. The operation of this tool is automatically, first, the user must put the microscope on the cabinet, then press the on / off to start the operation. This tool is used in the laboratory.*

*Microscope Storage cupboard usually used to save the microscope has been used. At the hospital rarely found Microscope Storage Cupboard, usually the microscope is not provided a special place for place to save it.*

*So the tool is made with purpose and also expected to help ease the work of users, especially users of laboratory space. Because the tool is operated automatically. AT89s51 microcontroller is a control of the existing system on the microscope storage cupboard.*

*Based on the results of measurements of the temperature in the refrigerator at a temperature range of 25-30 and humidity measurements, where measurements were made 5 times then get the average error rates (% error) of 1.25% on the measurement of temperature and by 0.52% the moisture measurement.*

*Based on the testing and trial that testers do it can be concluded that the "STORAGE CABINET MICROSCOPE EQUIPPED WITH TEMPERATURE AND HUMIDITY BASED MONITORING microcontroller AT89S51" can be said to be feasible for use.*

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**Keyword:** *Microscope Storage Cupboard, AT89s51 microcontroller*