

ABSTRACT

Sphygmomanometer is medical device used to measure arterial blood pressure indirectly with the help of a stethoscope. Digital Pressure Meter is a tool used to measure positive and negative pressures on medical devices. Calibration is a technical activity consisting of the determination, determination of a or more properties and characteristics of a product, process or service in accordance with the specific procedures that have been established. The purpose of the digital pressure mete tool is equipped with SD card (Secure Digital Card) storage as a solution to create a more informative blood pressure monitoring device effectively and accurately in measurements. The contribution of this research is that the system can be run using an inflatable pressure sensor, the measuring results are displayed on the 16x4 Liquid Crystal Display Character. In order for the system to run, an inflatable pressure is required that corresponds to Sphygmomanometer. Uses the MPX5050GP sensor as a positive pressure sensor. Requires a maximum pressure of 300 mmHg. This tool is also equipped with a leak test timer. The display used in this module is the 16x4 LCD Character. The results of data storage on the SD Card will be displayed in the form of a Notepad (txt) file. From the results of calibration measurements using Rigel Medical UNI-SiM, the smallest error is 0.00% and the largest error is 0.11% and the error from the leak test compared to the DPM module 0.26%. While the measurement results using the GEA medical MI-2001 Mercury Sphygmomanometer, the smallest error 0.00% and the largest error 0.81% and the error value from the leak test is compared to the DPM module which 0.9%.

Keywords: Sphygmomanometer, calibration, positive pressure, leakage test