

## ABSTRACT

*Spectrophotometer as the name suggests is an instrument that consists of spectrometers and photometer. Spectrometer generates light of a specific wavelength spectrum and the photometer is measurement instrument of the light intensity that transmitted or absorption.*

*Development of spectrophotometer is needed, therefore, the authors plan to create " The Design of Spectrophotometer Use Optical Filter" so that can help operator to make analysis. Substances which are measured is Albumin using a sample of blood serum and light optical filters used is red with a wavelength (610-750nm).*

*Based on the results of the test and measurement as much as three times to standard solution and serum albumin, and the conclusion is serum albumin with low concentrations produce of low voltage, while serum albumin with high concentrations produce of high voltage also.*

*After study process literature, plan, research, test of modules, and data collection, in general can be concluded that "The Design of Spectrophotometer Use Optical Filters" still has a lot of fault among others the results are less sensitive, and therefore needed better of optical filter and light sensor and recommended to further research.*

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***Keywords: spectrophotometer, optical filter, Albumin, Light sensor TEMT 6000***