ABSTRACT

Some babies who are treated with phototherapy devices experience side effects that must be watched out for, including watery green stools, temporary skin rashes and other disease disorders, therefore the dose of phototherapy should always be checked using a phototherapy radiometer to ensure the intensity value matches the value. standard, this module is made using nine TSL 2561 light intensity sensors that measure each increase in light intensity received, the goal is to analyze the appropriate and effective intensity distribution value, the measurement results are processed on the microcontroller then displayed on the TFT LCD and SD Card is used as a storage place for the reading the intensity value, the method used is comparison with standard devices with a measuring distance of 20,30,40,50cm and distribution analysis at nine measuring points, the measurement involves 5 samples of phototherapy device of various brands and models, the results of intense distribution analysis The most even distribution value is located at a distance of 50cm, with the highest difference value of 173 µW / cm² in sample 4 and the lowest difference value of 124 µW / cm² in sample 1, meaning that the distance of 50cm is the most recommended distance for therapy, it is hoped that this research can be developed. by analyzing more phototherapy devices and can measure the type of LED phototherapy.

Keywords : Phototherapy, Radiometer Phototherapy, Sensor TSL 2561