

UNIVERSITI TEKNOLOGI MARA

**EFFECT DIFFERENT LEVEL OF
ILLUMINATION ON COLOR VISION TESTING
AMONG COLOUR VISION DEFICIENCY
PATIENT**

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JULY 2015

AUTHOR'S DECLARATION

I declare that the work in this proposal is my own, and all any part that is not my own is been fully acknowledge in accordance with the standard referring practices of the discipline.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA regulating the conduct of my study and research.

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Date : JULY 2015

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ABSTRACT

Colour vision testing is one of the entrance test conducted by optometrists to differentiate between normal colour vision and colour vision anomalies. However different level of illumination can affect results of colour vision testing. The objective of this study is to identify the effect of different levels of illumination on Farnsworth D-15 colour vision test among subject with colour vision defect that came to Ui Vision Care Optometry Clinic UiTM Puncak Alam Campus. Thirty subjects were participates on this study. Each subject was been screened with Ishihara colour vision and VA test. However, seven subjects from the participants who had VA 6/6 and fail Ishihara were been tested using Farnsworth D-15 at range of 30 to 36 lux, 293 to 305 lux, 905 to 920 lux and 1893 to 1910 lux of illumination. The used of low illumination which is range from 30 to 36 lux shows 28.6% of normal and deutan result respectively but 42.9% of the subject are scotopic. For moderate level of illuminations which are from 293 to 305 lux, 57.1% of subject shows normal result, 42.9% of subject shows deutan result and no result of scotopic. Then, 57.1% of subject shows normal result, 42.9% of subject shows deutan result and no result of scotopic for range 905 to 920 lux and 1893 to 1910 lux indicated for high illumination. In conclusion, colour deficiency patient can be misclassified in low illumination whereas in moderate and high level of illumination, result of Farnsworth D-15 test is the same as the standard illumination.