

UNIVERSITI TEKNOLOGI MARA

**EFFECT OF DIFFERENT TEST CONDITION ON
COLOUR VISION TESTING**

MUHAMMAD IZZATFIKRI BIN ITHNIN

**BACHELOR (HONS) OF OPTOMETRY
FACULTY OF HEALTH SCIENCES**

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ABSTRACT

The aim of this study was to investigate the effect of different level of natural illumination on colour vision testing result using Farnsworth D-15. The subject recruited were among the UiTM Puncak Alam population. 13 male and 10 female were enrolled as the subjects in this study. The age of subjects are between 21 to 25 years old. Three different test condition were tested. In 100-200 lux of illumination, 26.1% or 6 subjects have deutan shift while 17 have normal colour vision. In 700-750 lux of illumination, all subjects have normal colour vision while in 1100-1200 lux of illumination, 30.4% or 7 subjects had protan shift, 4.3% or 1 subjects had deutan shift and 65.2% or 15 subjects had normal colour vision. The value for normality for all condition were same ($p < 0.05$) and not normally distributed. At moderate level of illumination, 700-750 lux shown all subject had perfect score and ideal for performing visual task. Based on this research, Farnsworth D-15 need to be done in the proper illumination and need to ensure the factors such as present of glare that may affect the result of the test. Proper illumination level need to be considered in doing visual performance otherwise the score of the result may be effected due to incorrect level of illumination used.

Keyword: Colour Vision, Illumination, Farnsworth D-15