

UNIVERSITI TEKNOLOGI MARA

**CORNEAL INTEGRITY AFTER WEARING CIRCLE
CONTACT LENSES BOUGHT FROM UNLICENSED
VENDORS**

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Project submitted in fulfilment of the requirements for the degree of

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AUTHOR'S DECLARATION

I declare that the work on this research project was carried out in accordance with the regulation on Universiti Teknologi MARA. It is original from me and is the result of my own work, unless otherwise it was indicated or acknowledged as a referred work. This write-up had not been submitted to any academic institution or non-academic institution of any degree or qualification.

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

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ABSTRACT

Purpose: To investigate the effects and complications of CCL bought from the unlicensed vendors towards the corneal integrity, which include tear break-up time, corneal epithelium and corneal topography. **Methods:** Eleven female subjects with age range of 21 to 25 years old who had been wearing hydrogel circle contact lenses (CCL) bought from unlicensed vendors had come to Contact Lens Clinic, UiTM Puncak Alam to participate in this cross-sectional study. To measure the tear break-up time, the time of the tears had evaporated to the air had been observed under the slit lamp and measured in seconds. Corneal epithelium had been observed under the slit lamp to see whether there was any corneal staining, neovascularization or infiltrates. The values of simulated keratometry, surface asymmetrical index and surface regularity index had been recorded from the corneal topography findings. The risk factors of the variation of corneal integrity obtained such as wearing time per day, wearing duration, lens tightness and technique used by the wearers to clean the lenses had been recorded. The correlation between the risk factors and the corneal integrity had been analysed. **Results:** There were seven subjects who only soaked the lenses in MPS without rubbing before and after wearing them. Ten subjects were found having TBUT lower than 5 seconds. Seven of the subjects came with tight lens fitting (>60%) while the others were optimum. Four subjects presented with no staining while the others had either trace, mild or severe staining on both eyes. There were mild and trace corneal infiltrates seen in two subjects. Corneal neovascularization was unremarkable on three subjects while trace, mild and moderate neovascularization were observed on the others' both eyes. The mean simK for both meridians on both eyes were within the normal limit. **Conclusion:** The contact lens wearers should be educated about proper contact lens care and regimen. The act of simply buying the CCL from the unlicensed vendors without any ongoing supervision from the authorized contact lens practitioner led to poor contact lens care practice. As there was no fitting assessment done by the unlicensed vendors, people who bought the CCL from them were under the risks of getting poor contact lens fitting, which could lead to several corneal complications.

Key Words: unlicensed, corneal integrity, circle contact lens, tightness, TBUT, rubbing, neovascularization, staining, deposits, SAI, SRI