

EFEK LAMA PERENDAMAN KOMPOSIT *NANOFILLER* DALAM LARUTAN TEH HIJAU TERHADAP PERUBAHAN WARNA

THE EFFECT OF DIFFERENT IMMERSION TIME IN GREEN TEA SOLUTION TOWARDS DISCOLORATION OF *NANOFILLER* COMPOSITE

ABSTRACT

Background. The usage of nanofiller composite resin has become a universal restorative material in dentistry due to its improvements in physic characteristics and being used widely as an esthetic restorative material in anterior as well as posterior teeth. Yet nanofiller composite has inadequacy against discoloration occurrence due to its capability to absorb any liquid including colorants. There are many beverages consist of colorants which can cause discoloration to nanofiller composite, such as catechins and tannins in green tea solution. **Purpose.** To evaluate the changes of nanofiller composite discoloration after being immersed in green tea solution within different immersion time. **Method.** Cylindrical nanofiller composite sample size of 5 mm diameter with 2 mm thickness, divided into two groups, control and treatment. Each group is divided into three sub-groups, based on immersion time day-1, day-7, and day-14. Color measurement using He-Ne light supply, spectrometer optic, and optical power meter. **Result.** There was significant difference of nanofiller composite discoloration between each day of treatment and between each group (control and treatment). Discoloration within day-1 to day-7 immersion period gave greater results than discoloration within day-7 to day-14. **Conclusion.** Immersion of nanofiller composite in green tea solution can cause discoloration becomes brownish darker, the first week of immersion period gave greater discoloration instead of the second week of immersion period.

Key words: Nanofiller composite, discoloration, immersion, green tea