THE EFFECT OF IMMERSED of LIME JUICE (*Citrus Aurantifolia*) ON THE MICROLEAKAGE OF NANOHYBRID COMPOSITE RESIN

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Abstract

Introduction: *Microleakage* of filling can occur in every filling, one of them is a *nanohybrid* composite resin filling. The microleakage of filling can be caused by several factors, one of which is acidic pH, such as lime juice. The exposure time and the acidity degree can affect the microleakage of *nanohybrid* composite resin filling. **Aim:** To determine the effect of lime juice soaking time with 2,5% concentration on the microleakage of *nanohybrid* composite resin filling. **Method:** The research method used is laboratory experiment with a post test only control group design. This study is consisted of 6 groups, namely J30, J60, J120, A30, A60, A120 with 2 different soaking liquids, namely lime juice with 2,5% concentration and Aqua Destilata (purified water). The microleakage is measured using a score afterwards the data are analyzed by using the *Kruskal wallis* and *Mann Whitney* test. **Results:** The influence of long time immersion in lime juice influences the *microleakage* of *nanohybrid* composite resin ($p < 0.05$). In the duration of 60 and 120 minutes in the lime juice immersion group there was a significant difference from the *microleakage* of the composite resin ($p < 0.05$). **Conclusion:** The longer the exposure time the higher the occurrence of *microleakage*.

Keywords: 2,5% of lime juice, *Nanohybrid* Composite Resin, *Microleakage* of Composite Resin.