THE DIFFERENCE OF 0,78% SAPONIN FROM MANGOSTEEN PERICARP EXTRACT AND 6% CITRIC ACID FOR CLEANLINESS OF CAVITY

ABSTRACT

***Background**: Cleanliness of cavity is considered important for a restoration. Smear layer formed after cavity preparation should be removed in order not to disrupt the bond adhesion between restorative materials and dental cavities. Saponins contained in mangosteen pericarp (Garcinia mangostana L.) have surfactant properties that can eliminate the smear layer assessed. 6% citric acid is a chelating agent which can eliminate the inorganic particles of the smear layer. Until now, the research on the differences of 0,78% saponin from mangosteen pericarp extract and 6% citric acid for cleanliness of cavity has never been done.* ***Purpose**: To see the differences between 0,78% saponin from mangosteen pericarp extract and 6% citric acid as cavity cleanser.* ***Method:** Eighteen human teeth with complete crown, no caries, and no fractures were randomized in 3 groups (n≥6), in this experiment use (n=6). The cavity was prepared using wheels bur for hand use instrument. After instrumentation, each cavity on the first group used 0,78% saponin from mangosteen pericarp extract as cavity cleanser, the second group used 6% citric acid as cavity cleanser, and the control group used aquadest. Then, the teeth were split to be observed on Scanning Electron Microscope (SEM).* ***Result:** For Mann- Whitney test there were significant differences just between 078% saponin from mangosteen pericarp extract with 6% citric acid, and 6% citric acid with aquadest, but not for 0,78% saponin from mangosteen pericarp extract with aquadest. Median value of 6% citric acid showed 2,000 which is the smallest value compared to the value of the other groups.* ***Conclusion:** The cleanliness of cavity with 6% citric acid is better than that with 0,78% saponin from mangosteen pericarp extract.*

***Key words**: Smear layer, saponin, citric acid, cleanliness of cavity*