

THE IRRIGATION DIFFERENCE BETWEEN SAPONIN EXTRACTS OF MANGOSTEEN PEEL (*Garcinia mangostana L.*) 0.002% AND EDTA 17% AGAINST ROOT CANAL CLEANLINESS

PERBEDAAN BAHAN IRIGASI EKSTRAK SAPONIN KULIT MANGGIS (*Garcinia mangostana L.*) 0.002% DENGAN EDTA 17% TERHADAP KEBERSIHAN SALURAN AKAR

ABSTRACT

Background: EDTA 17% is considered as the best material to clean the root canal walls because EDTA acts as a chelating agent that can demineralize dentine. But EDTA can only remove the inorganic components in the root canal walls. In mangosteen peel (*Garcinia mangostana L.*) there is one content called saponin. Saponin is known as surfactant. Surfactant has polar and non-polar group that can lower the surface tension and dissolving the organic and inorganic debris. In this study began with preliminary test to determine the concentration of saponin extract of mangosteen peel in cleaning the root canal walls ant the result were at concentration 0.002%. **Purpose:** To determine the difference between saponin extract of mangosteen peel and EDTA 17% agaist root canal cleanliness. **Method:** 21 non caries mandibular premolars extracted and randomly put into three treatment groups (n=7). Group I (control) were irrigated with aquadest, Group II ere irrigated with saponin extract of mangosteen peel 0.002% and Group III were irrigated with EDTA 17%. Then the samples were shaped using K-File number 15-60. During instrumentation, each canal was irrigated with solution according to each treatment group. After that, the results of root canal cleanliness was observed by using Scanning Electron Microscope (SEM). **Result:** There were no significant difference between saponin extract of mangosteen peel and EDTA 17% ($p>0.05$) **Conclusion:** There is no difference between saponin extract of mangosteen peel and EDTA 17% in irrigation of root canal cleanliness.

Key words: Mangosteen peel extract (*Garcinia mangostana L.*), EDTA 17%, saponin, surfactant