SKRIPSI

PENGARUH PERENDAMAN JUS JERUK TERHADAP KEKUATAN TEKAN *GLASS IONOMER CEMENT* DAN *RESIN MODIFIED GLASS IONOMER CEMENT*

Oleh:

CLAUDIA FLORENCITA EDIHARSI

No. BP1511411015

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Skripsi

Sebagai salah satu syarat untuk memperoleh gelar sarjana pada

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Claudia Florencita Ediharsi, Dedi Sumantri, Arymbi Pujiastuty

ABSTRAK

Glass ionomer cement dan *resin modified glass ionomer cement* adalah salah satu bahan restorasi yang digunakan oleh dokter gigi. Keberadaannya dalam rongga mulut menyebabkan *glass ionomer cement* dan *resin modified glass ionomer cement* sering berkontak dengan makanan dan minuman seperti jus jeruk yang dapat mempengaruhi nilai kekuatan tekan. Tujuan penelitian adalah mengetahui pengaruh perendaman jus jeruk terhadap kekuatan tekan *glass ionomer cement* dan *resin modified glass ionomer cement*. Penelitian ini merupakan eksperimental murni dengan rancangan *post test only with control group design*. Sampel dibuat dari *GC Fuji 9 GP* dan *GC Gold Label 2 LC* masing-masing sebanyak 36 buah. Sampel dibagi menjadi 2 kelompok perlakuan. Kelompok pertama (18 sampel *GC Fuji 9 GP* dan 18 sampel *GC Gold Label 2 LC*) direndam jus jeruk selama 24 jam dan disimpan dalam inkubator 37°C. Kelompok kedua (18 sampel *GC Fuji 9 GP* dan 18 sampel *GC Gold Label 2 LC)* sebagai kontrol direndam saliva buatan selama 24 jam dan disimpan dalam inkubator 37°C. Pengujian kekuatan tekan menggunakan alat Uji Tekan. Hasil penelitian menunjukan rata-rata kekuatan tekan *glass ionomer cement* pada kelompok perlakuan sebesar 14,03±0,48 MPa dan kelompok kontrol sebesar 52,08±0,67 MPa. Rata-rata kekuatan tekan *resin modified glass ionomer cement* pada kelompok perlakuan sebesar 58,98±0,97 MPa dan kelompok kontrol sebesar 68,28±0,67 MPa. Analisis statistik dilakukan dengan *Independent T – test* menunjukan hasil $p<0,05$. Kesimpulan penelitian ini adalah terdapat pengaruh perendaman jus jeruk berupa penurunan kekuatan tekan *glass ionomer cement* dan *resin modified glass ionomer cement*.

Kata kunci: *glass ionomer cement*, jus jeruk, kekuatan tekan, *resin modified glass ionomer cement*

THE EFFECT OF IMMERSION IN TANGARINE JUICE TOWARDS THE COMPRESSIVE STRENGTH OF GLASS IONOMER CEMENT AND RESIN MODIFIED GLASS IONOMER CEMENT

Claudia Florencita Ediharsi, Dedi Sumantri, Arymbi Pujiastuty

ABSTRACT

Glass ionomer cement and resin modified glass ionomer cement are one of the restoration materials that are widely used by dentists. Its presence in the oral cavity causes glass ionomer cement and resin modified glass ionomer cement often in contact with food and beverages such as tangerine juice which can affect the compressive strength. The purpose of this study is to determine the effect of immersion in tangerine juice towards the compressive strength of glass ionomer cement and resin modified glass ionomer. This study was a true experimental with a post test only with control group design. Samples were made from GC Fuji 9 GP and GC Gold Label 2 LC with 36 samples each. Samples were divided into two groups. The first group (18 samples of *GC Fuji 9 GP* and 18 samples of *GC Gold Label 2 LC*) was immersed in tangerine juice for 24 hours in an incubator at 37°C. The second group (18 samples of *GC Fuji 9 GP* and 18 samples of *GC Gold Label 2 LC*) as a control was immersed in artificial saliva for 24 hours in an incubator at 37°C. The compressive strength was determined using a compression machine. The results showed that the mean compressive strength of glass ionomer cement immersed in tangerine juice was 14,03±0,48 MPa and immersed in artifical saliva was 52,08±0,67 MPa. The mean compressive strength of resin modified glass ionomer cement immersed in tangerine juice was 58,98±0,97 MPa and immersed in artifical saliva was 68,28±0,67 MPa. Data were analyzed with Independent T-test showing the results of $p<0.05$. The conclusion of this study was that there was an effect of immersion in tangerine juice towards the decreasing of the compressive strength of glass ionomer cement and resin modified glass ionomer cement.

Keywords : compressive strength, glass ionomer cement, resin modified glass ionomer cement, tangerine juice