

INTISARI

Alginat untuk mencetak rongga mulut dapat terkontaminasi mikroorganisme patogen. Teknik perendaman adalah teknik yang direkomendasikan untuk disinfeksi cetakan alginat. Cetakan alginat jika bertemu dengan air akan menyerap air dan menyebabkan perubahan dimensi. Penelitian ini bertujuan untuk mengetahui pengaruh lama perendaman dalam larutan disinfeksi *chloroxlylenol* 5% terhadap stabilitas dimensi hasil cetakan alginat.

Penelitian menggunakan alginat (Aroma, Jepang), *chloroxlylenol* 5% (Dettol, Indonesia), dan *master cast* berbentuk balok berukuran panjang 3 cm, lebar 3 cm, dan tinggi 2 cm. Subyek penelitian dibuat dari alginat dicampur akuades ($p/w = 50,4 \text{ g}/120 \text{ ml}$) kemudian dicetakan pada *master cast*. Subyek penelitian berjumlah 16 sampel terbagi menjadi 3 kelompok perlakuan perendaman dalam larutan disinfektan *chloroxlylenol* 5% yaitu perendaman 5 menit, 10 menit, 20 menit dan 1 kelompok kontrol yaitu tanpa perlakuan. Selanjutnya, alginat diisi dengan *dental stone*. Cetakan *dental stone* dilakukan pengukuran dimensi (panjang, lebar, tinggi) dengan jangka sorong ketelitian 0,05 mm kemudian dihitung volumenya. Data yang didapatkan dilakukan pengujian statistik ANAVA satu jalur.

Hasil penelitian menunjukkan perubahan dimensi hasil cetakan alginat yang direndam dalam larutan disinfektan *chloroxlylenol* 5% yaitu $184,71 \pm 6,99 \text{ mm}^3$ (Perendaman 5 menit), $241,21 \pm 68,94 \text{ mm}^3$ (Perendaman 10 menit), $263,25 \pm 50,92 \text{ mm}^3$ (Perendaman 20 menit). Hasil uji ANAVA menunjukkan $p > 0,05$. Kesimpulan penelitian ini adalah lama perendaman dalam larutan disinfektan *chloroxlylenol* 5% tidak berpengaruh secara signifikan terhadap stabilitas dimensi hasil cetakan alginat.

Kata kunci: lama perendaman, *chloroxlylenol* 5%, cetakan alginat, stabilitas dimensi.

ABSTRACT

Alginate impression for the oral cavity can be contaminated with pathogenic microorganisms. The immersion technique is the recommended technique for disinfection of alginate impressions. If the alginate impressions converge with water, it will absorb water and cause dimensional changes. This study aims to determine the effect of immersion in 5% chloroxlylenol disinfection solution on the dimensional stability of alginate impressions.

The study used alginate (Aroma, Japan), 5% chloroxlylenol (Dettol, Indonesia), and a master cast in the form of a block measuring 3 cm long, 3 cm wide, and 2 cm high. The research subjects were made from alginate mixed with distilled water (p/w = 50.4 g/120 ml) and then the impression was taken on the master cast. The research subjects were 16 samples divided into 3 treatment groups of immersion in 5% chloroxlylenol disinfectant solution, namely immersion for 5 minutes, 10 minutes, 20 minutes and 1 control group, namely no treatment. Next, the alginate is filled with dental stone. The dental stone impression was measured in dimensions (length, width, height) with a caliper with an accuracy of 0.05 mm and then the volume was calculated. The data obtained were carried out by one-way ANOVA statistical testing.

The results showed that the changes in the dimensions of the alginate impressions immersed in 5% chloroxlylenol disinfectant solution were 184.71 ± 6.99 mm³ (5 minutes immersion), 241.21 ± 68.94 mm³ (10 minutes immersion), 263.25 ± 50.92 mm³ (20 min Immersion). ANOVA test results showed $p > 0.05$. The conclusion of this study was that the immersion time in 5% chloroxlylenol disinfectant solution had no effect significantly on the dimensional stability of the alginate impressions.

Keywords: immersion time, 5% chloroxlylenol, alginate impression, dimensional stability.