INTISARI

Material cetak alginat digunakan untuk membuat replikasi negatif dari rongga mulut. Material cetak harus memiliki kestabilan dimensi yang cukup agar replika cetakan gigi yang dihasilkan akurat. Hasil cetakan alginat rentan mengalami perubahan dimensi akibat perubahan kandungan air saat penyimpanan. Metode penyimpanan hasil cetakan alginat yang direkomendasikan adalah dalam dalam *humidor*, kantong plastik *ziplock*, dan tisu basah. Penelitian ini bertujuan untuk mengetahui apakah terdapat pengaruh metode penyimpanan terhadap kandungan air hasil cetakan alginat.

Penelitian dilakukan menggunakan material alginat (Hexalgin, Indonesia). Delapan belas sampel hasil cetakan alginat berbentuk silinder dibagi menjadi 3 kelompok (n=6). Hasil cetakan disimpan dalam humidor (kelompok A), kantong plastik *ziplock* (kelompok B), dan dibungkus tisu basah di ruangan terbuka (kelompok C) selama 4 jam pada ruangan bersuhu 25±1^{o}C. Kandungan air pada alginat diukur sebelum dan sesudah perlakuan. Perubahan kandungan air dihitung dengan *weight loss method*. Data kemudian di analisis menggunakan ANAVA satu jalur (<0,05).

Hasil penelitian menunjukkan nilai rerata perubahan kandungan air hasil cetakan alginat yaitu: 126,00±19,442 mg (kelompok A); 157,17±10,647 mg (kelompok B); 311,33±23,526 mg (kelompok C). Uji ANAVA satu jalur menunjukkan variasi metode penyimpanan berpengaruh signifikan terhadap perubahan kandungan air hasil cetakan alginat ($p<0,05$). Uji *post-hoc* LSD menunjukkan adanya perbedaan signifikan antara rerata perubahan kandungan air hasil cetakan alginat antar seluruh kelompok metode penyimpanan ($p<0,05$). Kesimpulan penelitian ini adalah metode penyimpanan berpengaruh terhadap perubahan kandungan air hasil cetakan alginat.

Kata kunci : Alginat, kandungan air, humidor, kantong plastik, tisu basah

ABSTRACT

Alginate impression material was utilized to produce negative replica of oral cavity. Impression material should have adequate dimensional stability to produce accurate teeth mold. Alginate impression was susceptible to dimensional changes due to changes in water content when it was stored. The recommended storage method for alginate impression were in humidor, ziplock plastic bag, and wet tissue. This study aims to determine the effect of different storage methods on water content of alginate impression.

This study was conducted using alginate material (Hexalgin, Indonesia). Eighteen samples of cylinder alginate impressions were divided into 3 grups. Alginate impressions was stored in humidor (group A), ziplock plastick (group B), and wet tissue in an open-air room (group C) for 4 hours at a room temperature of 25±1^{o}C. Water content of the alginate impression were weighed before and after stored. Changes in the water content of the alginate impression were calculated using weight loss method. The data were then analyzed using one-way ANOVA test (<0,05).

The result of this study showed the average value of changes in the water content of the alginate impressions were as follows: 126,00±19,442 mg (Group A); 157,17±10,647 mg (Group B); 311,33±23,526 mg (Group C). Statistical analysis that was carried out using one-way ANOVA showed that variation of the alginate impression storage had a significant effect on changes in the water content of the alginate impression ($p<0,05$). Post hoc LSD analysis revealed a significant difference between the mean of changes in water content of alginate impression between all groups of storage methods ($p<0,05$). This study concluded that that different storage methods influenced changes in water content of alginate impression.

Keyword: Alginate, water content, humidor, ziplock plastic, wet tissue