

INTISARI

Resin *thermoplastic nylon* adalah suatu bahan basis gigi tiruan lepasan yang mempunyai kekurangan antara lain dapat berubah warna apabila terpapar stain ekstrinsik dan ini akan merugikan estetika basis gigi tiruan. Tujuan penelitian dilakukan adalah untuk mengetahui pengaruh lama perendaman dalam denture cleanser terhadap pelepasan stain ekstrinsik pada basis gigi tiruan *thermoplastic nylon*.

Penelitian menggunakan 27 plat *thermoplastic nylon* berbentuk *disc* dengan diameter 10mm. Subjek penelitian direndam dalam saliva selama 2 menit pada suhu 37°C kemudian dilanjutkan dengan perendaman dalam larutan teh selama 48 jam. Subjek dicuci dengan *waterspray* dan warna sebelum perendaman dalam *denture cleanser* diukur dengan alat *chromameter*. Subjek dibagi kepada 3 kelompok dan setiap kelompok dilakukan perendaman dalam *denture cleanser*, kelompok 1 selama 5 menit, kelompok 2 selama 10 menit dan kelompok 3 selama 15 menit. Setelah perendaman setiap sampel dicuci dengan *waterspray* dan diukur warna setelah perendaman dalam *denture cleanser* dengan alat *chromameter*. Perhitungan pelepasan stain dilakukan dengan mengukur perbedaan nilai warna (ΔE). Data dianalisis menggunakan Uji *Kruskal Wallis*.

Hasil analisis menunjukkan terdapat perbedaan perubahan warna yang signifikan antara ketiga kelompok sampel penelitian ($p < 0,05$). Pada Uji *Mann-Whitney* didapatkan bahwa terdapat perbedaan yang signifikan antara kelompok 1 dan 3 ($p > 0,05$), tidak ada perubahan yang signifikan antara kelompok 1 dan 2 ($p < 0,05$) dan tidak ada perubahan yang signifikan antara kelompok 2 dan 3 ($p < 0,05$). Kesimpulan penelitian adalah lama perendaman dalam *denture cleanser* berpengaruh terhadap pelepasan stain ekstrinsik pada basis gigi tiruan *thermoplastic nylon*.

Kata Kunci : *Thermoplastic nylon*, *denture cleanser*, lama perendaman, stain ekstrinsik

ABSTRACT

Thermoplastic nylon is used as denture base and has disadvantages such as could change colour when exposed to extrinsic stain. Purpose of the study is to determine the effect of duration of immersion on denture cleanser towards removal of extrinsic stain from thermoplastic nylon.

Twenty seven disc shaped thermoplastic nylon plates with diameter of 10mm were used. The samples were soaked in saliva for 2 minutes in an incubator at 37°C and then soaked in tea solution for 48 hours. Samples were washed using a waterspray and initial colour was measured using chromameter. Samples were divided into 3 groups and soaked in denture cleanser, group 1 was soaked for 5 minutes., group 2 was soaked for 10 minutes and group 3 was soaked for 15 minutes. Samples were washed with waterspray and the final colour was measured using chromameter. The removal of stain was calculated by measuring the value of colour difference (ΔE). The data obtained were then analyzed using Kruskal Wallis test.

The analysis shows a significant difference in colour between the three groups ($p < 0.05$). Mann-Whitney test shows that there is significant difference between group 1 and 3 ($p > 0.05$), there is no significant difference between group 1 and 2 ($p < 0.05$) and there is no significant difference between group 2 and 3 ($p < 0.05$). Conclusion of this study is the duration of immersion in denture cleanser influences the removal of extrinsic stain from thermoplastic nylon.

Keywords : Thermoplastic nylon, denture cleanser, duration of soaking, extrinsic stain