

## INTISARI

*Thermoplastic nylon* merupakan salah satu bahan basis gigi tiruan yang populer digunakan di bidang kedokteran gigi. *Thermoplastic nylon* memiliki kekurangan yaitu bersifat mudah menyerap air dan mudah terpolarisasi oleh unsur radikal bebas. Susu fermentasi kefir merupakan salah satu minuman kesehatan yang sering dikonsumsi oleh masyarakat. Susu kefir mempunyai pH yang asam yaitu 3,4-4,6. Tujuan dari penelitian adalah untuk mengkaji pengaruh lama perendaman dalam susu fermentasi kefir terhadap perubahan warna basis gigi tiruan thermoplastic nylon.

Penelitian yang dilakukan menggunakan sampel penelitian berupa spesimen plat *thermoplastic nylon* berukuran 10x10x1 mm yang dibagi menjadi tiga kelompok: kelompok pertama yang direndam dalam susu fermentasi kefir selama 18 jam, kelompok kedua yang direndam dalam susu fermentasi kefir selama 36 jam, dan kelompok ketiga yang direndam dalam susu fermentasi kefir selama 108 jam. Perubahan warna diukur menggunakan sistem warna CIELab. Data dianalisis menggunakan uji ANAVA satu jalur dilanjutkan dengan uji Post Hoc LSD dengan tingkat kepercayaan 95%.

Hasil dari penelitian terdapat perbedaan yang bermakna ( $p < 0,05$ ) antara kelompok 1,2, dan 3. Kesimpulan dari penelitian ini adalah lama perendaman dalam susu fermentasi kefir dapat mempengaruhi perubahan warna basis gigi tiruan *thermoplastic nylon* dan perubahan warna yang paling besar adalah *thermoplastic nylon* yang direndam didalam susu fermentasi kefir selama 108 jam.

**Kata kunci** : *Thermoplastic Nylon, susu fermentasi kefir, perubahan warna.*

### **ABSTRACT**

*Thermoplastic nylon is one of denture basis materials that popularly used in the dentistry field. The deficiency of thermoplastic nylon is easy to absorb water and discoloration. Kefir fermented milk is one of the health drinks that are often consumed by the community. Kefir milk has an acidic pH of 3.4-4.6. The purpose of this research was to find out the effect soaking time in kefir fermented milk on the color changes of thermoplastic nylon denture base.*

*The research was conducted by using experiment sample in form of thermoplastic nylon specimens measuring 10x10x1 mm which was divided into three groups: the first group was soaked in kefir fermented milk for 18 hours, the second group was soaked in kefir fermented milk for 36 hours, and the third group was soaked in kefir fermented milk for 108 hours. Color changes were measured using CIELab color system. The data were analyzed by one-way ANOVA test continued by the Post Hoc LSD test with trust-rate 95%.*

*The results of the research have significant differences ( $p < 0.05$ ) between groups 1,2 and 3. The conclusion of this research was the soaking time in kefir fermented milk can affected color changes of thermoplastic nylon denture base and the biggest color change was thermoplastic nylon soaked in kefir fermented milk for 108 hours.*

**Keywords:** *Thermoplastic Nylon, soaing time kefir fermented milk, color changes.*