

## Evaluation of three disinfectant materials: Nanosil D2, Deconex 2% and Sodium 5.25% Hypochlorite on dimensional changes of Bayer Alginate

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### Abstract

**Background and Aim:** Dimensional changes of the impression materials after disinfection is a serious problem in dentistry which could fail the treatment. The aim of this study is to determine the effect of three disinfectants: 2% Deconex, 5.25% sodium hypochlorite and Nanosil D2, on dimensional changes of Bayer Alginate.

**Materials and Methods:** This experimental study was conducted on 32 impressions were taken from one model. The impressions were divided in to four groups: one group was considered as the control and the other three case groups were disinfected with the mentioned materials. After disinfection and pouring the casts, measurement was done in different dimensions using Electronic Digital Caliper. The acquired data were analyzed with One Way ANOVA test.

**Result:** Dimensional changes of Bayer Alginate after disinfection with two mentioned disinfectants 5.25% Sodium Hypochlorite and Nanosil D2 was significant but they were within standard limit. (P. value < 0.05) but about 2% Deconex, P. value was not significant. (P. value > 0.05)

**Conclusion:** Evaluating the results showed that 2% Deconex caused less dimensional changes in comparison to 5.25% Sodium Hypochlorite and Nanosil D2 statistically. However percentage dimensional changes of three materials were in standard limit of alginate dimensional changes. Each of them can be used to disinfecting alginate by immersion technique.

**Keywords:** Dental Impression Material, Alginate, Sodium Hypochlorite Solution, Dental Disinfectant