

## Comparing the Efficacy of two Types of Carbamide Peroxide used for Intracoronar Bleaching of Endodontically Treated Teeth (in vitro)

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### Abstract

**Background and Aim:** the demand for dental bleaching has increased because individual's appearance plays an important role in social relations. The present study aimed to compare the efficacy of an Iranian carbamide peroxide gel (Kimia) with its foreign counterpart (Opalescence PF 15%) used for intracoronar bleaching of discolored teeth.

**Materials and Methods:** This experimental study was performed on 30 extracted intact central incisors. Root canals were cleaned and shaped with step back technique and were filled with lateral condensation method. Afterwards, gutta percha was removed from 1mm below CEJ and 1mm thick zinc phosphate cement was placed as a liner. Then, the teeth were placed inside 5.25% sodium hypochlorite solution for 24 hours. Whole blood and centrifuge system were used to stain the teeth. Samples were randomly assigned to three groups: 1. Opalescence PF 15% carbamide peroxide 2. Kimia 16% carbamide peroxide 3. Control group (cotton ball impregnated with physiologic serum). Evaluation of the color changes was done once before bleaching and once on the seventh day after application of the bleaching gel. This evaluation was performed with digital camera and Adobe Photoshop 8.0 software. Data were analyzed by SPSS software and T-test.

**Result:** The bleaching value was significantly increased in Kimia group. There was a significant statistical difference between the control group and Kimia and Opalescence PF groups ( $p=0.001$ ) Moreover, there was a significant difference between Kimia and Opalescence PF groups. ( $p=0.038$ )

**Conclusion:** According to the results of the present study, Kimia carbamide peroxide gel is more efficient than Opalescence PF gel in bleaching the endodontically treated teeth.

**Keywords:** *Carbamide peroxide, Dental bleaching, Tooth discoloration, Endodontic therapy*