

# Bleaching of teeth using traditional light activated versus laser activated gel

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**Abstract:** An in-vitro study was designed to investigate the efficacy of traditional visible light (Zoom!<sup>TM</sup> machine) versus diode laser (Doctor Smile) for the activation of bleaching gel bleaching teeth. Forty human permanent maxillary central incisors were selected. The teeth were divided into two groups of 20 each, cleaned and polished with pumice slurry using low speed handpiece. 1 to 2 mm thick layer of the whitening agent containing 38% hydrogen peroxide (Opalescence Xtra) was applied over the labial surfaces. The bleaching gel was activated in group (I) by visible light set at 2.5 inch distance for 15 mins and in group (II) by diode laser, 1 Watt in a continuous mode and 5 min of irradiation time from 2mm distance. The shade of each tooth was determined using spectrophotometer, VITA Easyshade, before and after bleaching. Un-paired t tests of the test samples showed that the difference between bleaching after bleaching shade was 1-2 times lighter than the tooth color before bleaching in both groups.i.e.,an A3 shade becomes either A1 or A2. No statistical difference of existed between the treated groups ( $p>0.05$ ). The results of this study suggest that diode laser (Doctor Smile) and Zoom!<sup>TM</sup> machine are both effective to provide brighter teeth when used to activate Opalescence Xtra.

Key words: Bleaching, Laser Bleaching, Light Bleaching