Title: evaluation of the efficacy of diode laser (810nm) and titanium dioxide (tio2) as an absorber in bleaching with hydrogen peroxide 35% with digital photography.

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Abstract: introduction and objective:
although the use of heat and light is not a new technique in speeding of bleaching process, the application of laser and also absorbers used for specific wavelength of some lasers is a noble event in improving and reducing treatment time for bleaching and hence requires much further research and studies to answer the remained questions.the purpose of this study is invtro evaluation of the efficacy of diode laser (810nm) and titanium dioxide as an absorber in bleaching with hydrogen peroxide 35% with digital photography.

materials and methods: 
36 extracted bovine anterior teeth were used in this study. samples were divided to 3 groups,each containing 12 teeth.group A hydrogen peroxide gel with the use of both diode laser and Tio2 powder, group B hydrogen peroxide without use of diode laser and Tio2 powder, group C hydrogen peroxide with diode laser but without powder were used for bleaching.tooth calor was determined by digital photography.data were analyzed with SPSS software using Oneway ANOVA test and Paired T.test.

result:
no significant statistical difference of Lab amount change after treatment and also their delta E were seen between the 3 treated groups.(p>0.05)
in each group comparing the Lab parameters before and after treatment, L parameter was significantly increased in all 3 groups.(p<0.05) and there was no significant difference in the a,b parameters.(p>0.05)

conclusion:
bleaching with diode laser and Tio2 or without them causes significant increase in tooth lightness (L).but in this study the increase was not influenced by laser or Tio2.

diode laser,Tio2,bleaching,digital photography

Presentation: Oral