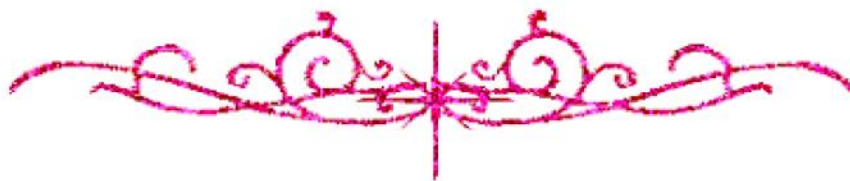


بسم الله الرحمن الرحيم





شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم



جامعة عين شمس

التوثيق الإلكتروني والميكروفيلم

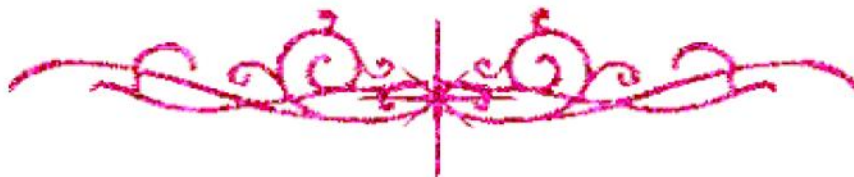
قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأقراص المدمجة قد أعدت دون أية تغيرات



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



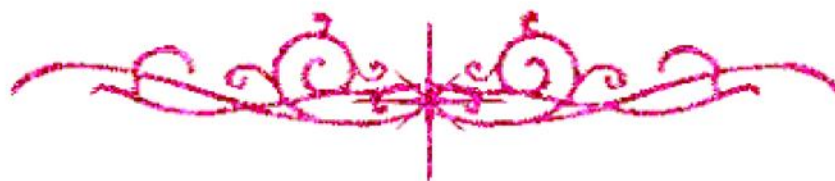


بعض الوثائق الأصلية تالفة





بالرسالة صفحات
لم ترد بالأصل



Effect of Er,Cr:YSGG laser debonding & two surface treatments on color & translucency of Lithium Disilicate restorations

A thesis submitted for the partial fulfillment of the Masters Degree
of science requirement in Fixed Prosthodontics, Faculty of
Dentistry, Ain Shams University

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Abstract

Debonding of lithium disilicate restorations represent challenges. To overcome these difficulties, the use of lasers was recently introduced as a more comfortable and more conservative restoration removal technique.

This study evaluated the effect of Er;Cr:YSGG laser debonding & two different surface treatments on color stability & translucency of lithium disilicate restorations

28 ceramic E.max CAD samples were prepared, samples were divided into 2 groups according to thickness whether 0.5 mm or 1mm (each group =14 samples). Each group divided into 2 subgroups according to different surface treatments, whether hydrofluoric acid (n=7) or laser surface modification (n=7). 28 freshly extracted, non-carious bovine permanent incisors were prepared to receive lithium disilicate discs, after bonding of samples to the prepared teeth they were subjected to laser irradiation using specific wavelength Er;Cr:YSGG (2780 nm), debonding time was calculated for each sample. 2 different surface treatments were applied to the samples (acid etching & laser etching) color & translucency was measured before & after debonding & surface treatments. Surface of the samples was analyzed by SEM to evaluate the difference between before & after debonding & surface treatments.

Color measurements for all specimens were performed with CIELab color system using a clinical spectrophotometer. To analyze the effects of surface treatment procedures, color difference was calculated before and after surface treatments on the gray background with the following equation.

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