



شبكة المعلومات الجامعية
التوثيق الإلكتروني والميكرو فيلم

بسم الله الرحمن الرحيم



HANAA ALY



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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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جامعة عين شمس التوثيق الإلكتروني والميكروفيلم

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Comparative analysis between two lithium disilicate materials with different thickness on the final color reproduction after thermocycling

Thesis

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By

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

لسببناك لا علم لنا
إلا ما علمتنا إنك أنت
العليم العظيم

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Introduction

Patient demand for esthetic restorations that look like natural teeth is increasing and became one of the patients most concerns. The most conservative approach is bleaching but in some cases bleaching does not solve other problems like : teeth have minor defects or sever discolored teeth. Ceramic veneers considered another conservative solution with minimal preparation for anterior teeth in cases like : spacing , severe discoloration , fractured teeth, enamel defects , slight mal-positioning. There are different techniques and materials that can be used for ceramic veneers construction which differ from case to another and according to the clinical situation.¹

Through the last few decades dental ceramics has developed rapidly, both in manufacturing techniques and material properties. One of this advancement is the introduction of glass ceramics which are highly esthetic and good mechanical properties.²

Now ceramic materials are highly used in fixed prosthodontics. Lithium disilicate (emax) and initial lithium disilicate (lisi press) are glass ceramic materials with excellent esthetic quality and high mechanical properties. These materials are extensively used for anterior teeth. So a better knowledge of the material is important for its successful in clinical use.³

Color stability in dental ceramics is effectual by intrinsic and extrinsic factors. Intrinsic factors such as: the ceramic composition and the glaze layer. Extrinsic factors such as : food ,dietary habits and liquid colorant.⁴

One of the most important goals in dentistry today is matching the color of the restorations with the existing dentition. However fabricating a restoration and selecting the correct shade to match the same color is subjective and it varies between individuals.⁵

Restoration thickness is important in masking colors while laminate veneers typically range from 0.5 to 1 mm in thickness. Therefore, the final color change should be investigated at different restoration thicknesses.⁶

Artificially accelerated aging is a term used to simulate the different oral environmental conditions to check the color stability of restorative materials.¹

Several studies evaluated the effect of accelerated aging or in another name (thermocycling) on the color stability of different veneers with variety of ceramic types, thicknesses, and different types of resin cement. Ceramic restorations in the oral cavity are exposed to a range of circumstances, such as temperature