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**A COMPARATIVE STUDY OF PLAQUE
ACCUMULATION ON TWO TYPES OF DENTURE
BASE RESINS**

**Thesis Submitted to the Prosthodontic Department,
Faculty of Oral and Dental Medicine, Cairo
University**

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2002

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَانَكَ لَا عِلْمَ لَنَا إِلَّا مَا
عَلَّمْتَنَا إِنَّكَ أَنْتَ الْعَلِيمُ الْحَكِيمُ.

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Introduction

INTRODUCTION

Polymethylmethacrylate is the most commonly used denture base material since 1940, *Uzun et al (1999)*. The properties that have contributed to the success of this material as a denture base are excellent appearance, ease in processing and ease in repair.

An inherent disadvantage is the liability to break during service and the allergic tissue reactions as well as the accumulation of denture plaque and candida over the denture surfaces.

Many approaches to strengthen the acrylic resin prosthesis have been studied, one of them is to increase the impact strength by the incorporation of a rubber phase in the bead polymer (polybutadiene based polymer) to produce the high impact resin (*Rodford, 1986*).

The materials produced have been optimized with respect to impact strength and modulus of elasticity, additionally, the system has been evaluated by *Rodford (1990)* with respect to viscoelastic properties and water absorption.

Further work on the biocompatibility and tissues reaction to high impact resin was done by *Abdel Shafy (2001)*, however, no study was carried out on its effect on plaque accumulation and candidal growth, which is of great clinical significance on denture stomatitis. This study was conducted to evaluate the plaque accumulation and candidal growth on the fitting surface of maxillary dentures fabricated from high impact polymerized resin and conventional heat cured polymerized resin.