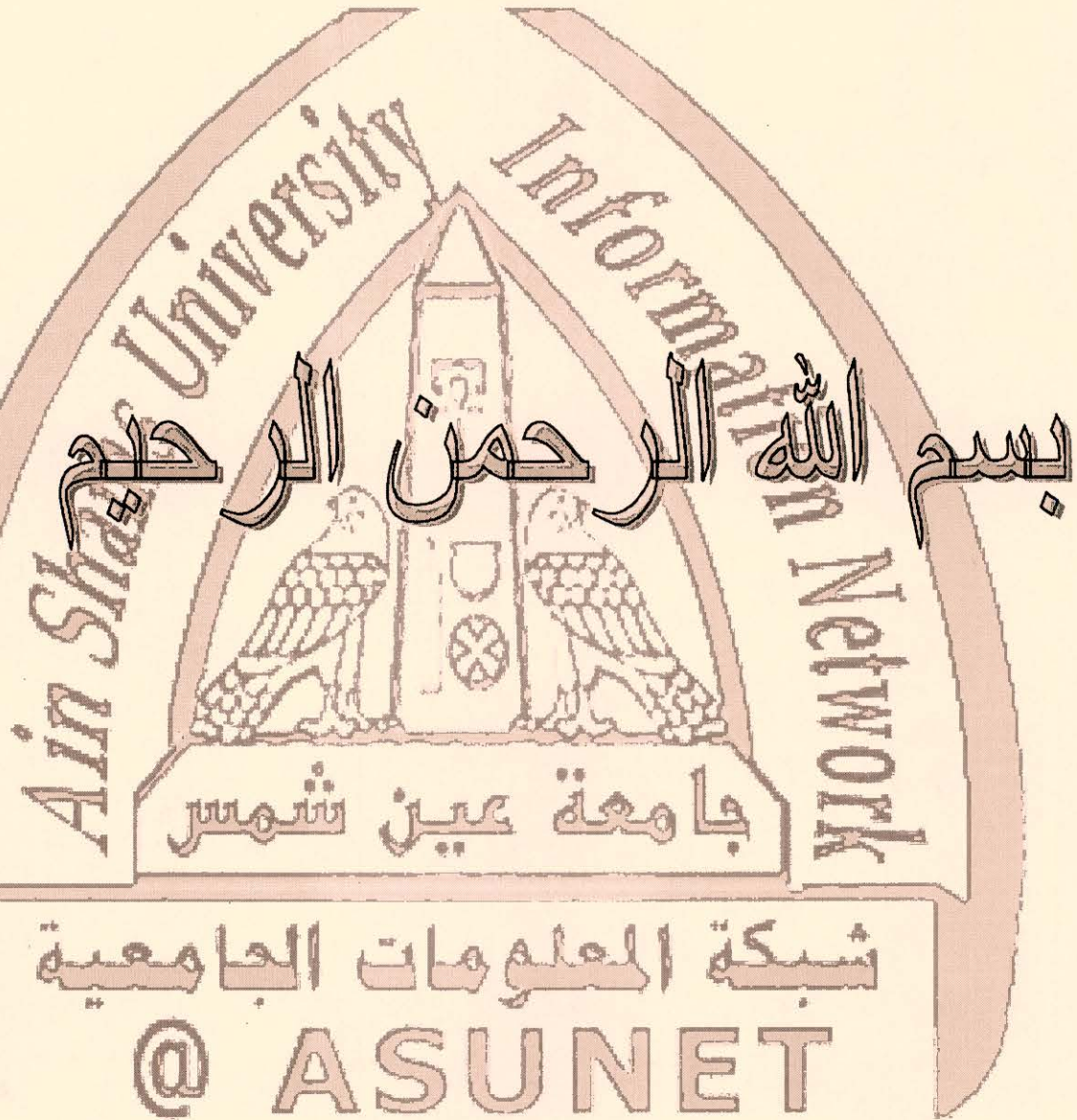




شبكة المعلومات الجامعية





شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

قسم

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



يجب أن

تحفظ هذه الأفلام بعيدا عن الغبار

في درجة حرارة من ١٥-٢٥ مئوية ورطوبة نسبية من ٢٠-٤٠%

To be Kept away from Dust in Dry Cool place of
15-25- c and relative humidity 20-40%



شبكة المعلومات الجامعية التوثيق الالكتروني والميكرو فيلم

بعض الوثائق الأصلية تالفة

بالرسالة صفحات لم ترد بالاصل

Low shrinkage silorane based and conventional methacrylate based resin composite systems.

A Thesis Submitted To The Faculty Of Oral and Dental Medicine -
Cairo University.

In Partial Fulfillment Of The Requirements Of The Doctors
Degree In Operative Dentistry.

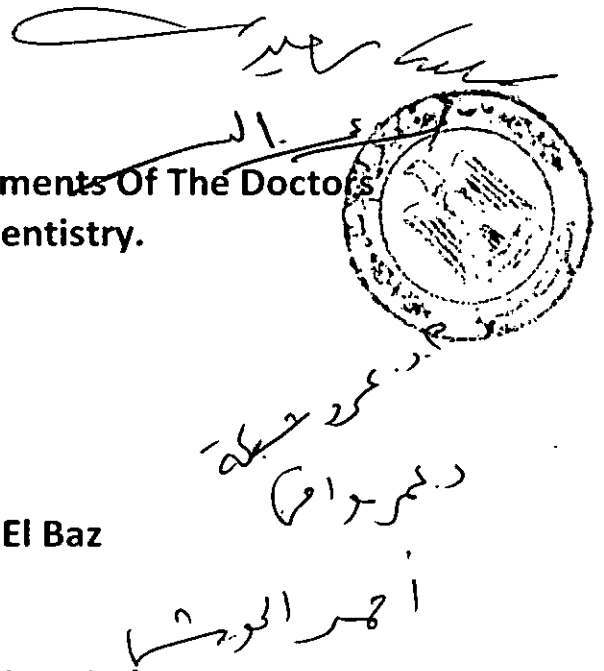
Maha Abd El Salam El Baz

B.D.Sc. 2001 (Cairo University)

M.D.Sc. 2007 (Cairo University)

2011

٢٠١١
٧٣



بسم الله الرحمن الرحيم

قالوا سبحانك لا علم لنا إلا ما علستنا إنك

أنت العليم الحكيم

صدق الله العظيم

(سورة: البقرة)

(آية: ٢٢)

Supervisors

Dr. Amr Ahmed Shabka

Professor of Operative Dentistry
Faculty of Oral and Dental Medicine
Cairo University

Dr. Omar Mohamed El Mowafy

Professor of Operative Dentistry
Faculty of Oral and Dental Medicine
University of Toronto

Dr. Ahmed Zoheir Elhoshy

Lecturer of Operative Dentistry
Faculty of Oral and Dental Medicine
Cairo University

Dedications

***To the soul of my grandmother,
My son, and
My loving family.***

Acknowledgment

I would like to express my sincere gratitude and respect to **Prof. Amr Ahmed Shabka**, Professor of Operative Dentistry, Cairo University, for his supervision, encouragement and great help.

I am deeply grateful to **Prof. Omar El Mowafy**, Professor of Operative Dentistry, University of Toronto, for his extreme generosity and great help.

I am indebted to **Dr. Ahmed Zoheir Elhoshy**, lecturer of Operative Dentistry, Cairo University for his guidance and valuable advice throughout this study.

With all gratitude, I am very grateful to my mother, **Prof. Faten Kamel** for her continuous moral and professional support, who is my continuous source of enthusiasm.

Finally, I would like to thank everyone who helped in completing this work, the **Head of Operative Dentistry Department and all my colleagues**.

Contents

• List of Tables.....	ii
• List of Figures	iii
• Introduction	1
• Review of Literature	5
• Aim of The Study.....	42
• Materials And Methods	43
• Results.....	66
• Discussion	92
• Summary And Conclusions.....	106
• References	110
• Arabic Summary	

List of Tables

• Table 1: Factorial design for polymerization shrinkage measurement.....	43
• Table 2: Factorial design for microshear bond strength measurement.....	43
• Table 3: Factorial design for dentine/restoration interface examination.....	44
• Table 4: Chemical composition of the two different resin composite systems used.....	46
• Table 5: Bonding systems used respectively with resin composite systems and their compositions.....	47
• Table 6: Wavelength and light intensity of the two different curing lights used.....	48
• Table 7: Two-way ANOVA results for the effect of different variables on polymerization shrinkage.....	68
• Table 8: Comparison between polymerization shrinkage of the two resin composites.....	69
• Table 9: Comparison between polymerization shrinkage with the two light curing lamps.....	70
• Table 10: Comparison between polymerization shrinkage with different interactions.....	72
• Table 11: Two-way ANOVA results for the effect of different variables on micro-shear bond strength.....	75
• Table 12: Comparison between micro-shear bond strength of the two resin composites.....	76
• Table 13: Comparison between micro-shear bond strength with the two light curing lamps.....	77
• Table 14: Comparison between micro-shear bond strength with different interactions.....	79
• Table 15: Three-way ANOVA results for the effect of different variables on gap distance.....	82
• Table 16: Comparison between gap distances of the two resin composite systems.....	83
• Table 17: Comparison between gap distances with the two light curing lamps.....	84
• Table 18: Comparison between gap distances at the three observation time intervals.....	86
• Table 19: Comparison between gap distances with different interactions.....	89