

شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلو

بسم الله الرحمن الرحيم





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شبكة المعلومات الجامعية التوثيق الإلكتروني والميكرونيله



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



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شبكة المعلومات الجامعية التوثيق الإلكترونى والميكروفيلم

جامعة عين شمس التوثيق الإلكتروني والميكروفيلم قسم

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



يجب أن

تحفظ هذه الأقراص المدمجة بعيدا عن الغبار



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"Effect of Ionizing Radiation on Mechanical Properties of Two Esthetic Restorative Materials and on Microhardness and Surface Topography of Primary Teeth"

A thesis submitted to the Department of Pediatric Dentistry and Dental Public Health, Faculty of Dentistry, Ain Shams University

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Dedicated to

My Father

Who taught me that Persistence and hard work are the essentials for a successful life.

My Mother

My first word, who always inspires me with her love, guidance and prayers.

My Husband

Without his love, encouragement, patience, tremendous support and help, this piece of work would have been a long lonely trip.

And last, but certainly not least, my beloved son and daughter

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List of Abbreviations

- 1. $\mu m = micrometer$
- 2. AFM= atomic force microscopy
- 3. ANOVA = Analysis of variance.
- 4. Bis-EMA = Bisphenol A ethoxylated dimethacrylat
- 5. Bis-GMA = Bisphenol glycidyl methacrylate.
- 6. C=carbon.
- 7. Ca =calcium.
- 8. DEJ= Dentioenamel junction
- 9. EBPDMA = ethoxylated bisphenol-A-dimethacrylate
- 10. EDX= Energy Dispersive X-ray spectroscopy
- 11. FTIR= Fourier transform infrared spectroscopy
- 12. GIC= Glass ionomer cement
- 13. Gy = Grays
- 14. h = Hour
- 15. HNC = head and neck cancer
- 16. HSV= Herpes simplex virus
- 17. HVGIC= High viscous glass ionomer cement.
- 18. ICP-OES= Inductively Coupled Plasma-Optical Emission Spectrometry
- 19. ISO =International Standards Organization
- 20. IU= international unit
- 21. KHN = Knoop Hardness Number.
- 22. LCU =Light curing unit
- 23. LED =Light emitting diodes.
- 24. min = minutes.
- 25. mm = millimeters.
- 26. MPa = Mega Pascal.