



شبكة المعلومات الجامعية  
التوثيق الإلكتروني والميكروفيلم

# بسم الله الرحمن الرحيم



**MONA MAGHRABY**



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التوثيق الإلكتروني والميكروفيلم



# شبكة المعلومات الجامعية التوثيق الإلكتروني والميكروفيلم



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# 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



**MONA MAGHRABY**



# **Shaping Ability and Canal Cleanliness of Different Rotary Nickel Titanium Systems**

**Thesis**

*Submitted to Faculty of Dentistry, Ain Shams  
University in partial Fulfillment of the  
Requirement for Master's Degree in Endodontics*

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*Hend Shaken*



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قالوا

لسبب انك لا تعلم لنا  
إلا ما علمتنا إنك أنت  
العليم العظيم

صدق الله العظيم

سورة البقرة الآية: ٣٢



# *Dedication*

*I would like to dedicate this  
work to **my parents** for  
their support.*



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# *List of Abbreviations*

<b>Abb.</b>	<b>Full term</b>
<b>3D</b>	<i>3 dimension</i>
<b>CR</b>	<i>Centering ratio</i>
<b>AT</b>	<i>Apical transportation</i>
<b>CD</b>	<i>Compact Disk</i>
<b>VI</b>	<i>Volume increase</i>
<b>CBCT</b>	<i>Cone beam computed tomography</i>
<b>EDM</b>	<i>Electric discharge Machining</i>
<b>EDTA</b>	<i>Ethylenediaminetetraacetic acid</i>
<b>Mb</b>	<i>Mesio-buccal</i>
<b>ML</b>	<i>Mesio-lingual</i>
<b>Md</b>	<i>Mesio-Distal</i>
<b>BL</b>	<i>Bucco-lingual</i>
<b>μCT</b>	<i>Microscopic computerized tomographic</i>
<b>mA</b>	<i>Milli ampere</i>
<b>NiTi</b>	<i>Nickel-titanium</i>
<b>PG</b>	<i>ProGlider</i>
<b>PF</b>	<i>Path file</i>
<b>RS</b>	<i>Revo-S</i>
<b>PTU</b>	<i>Protaper Universal</i>
<b>OS</b>	<i>One Shape</i>
<b>TF</b>	<i>Twisted File</i>

<b><i>TFA</i></b>	<i>Twisted Adaptive File</i>
<b><i>R</i></b>	<i>Recipro</i>
<b><i>PTN</i></b>	<i>Protaper next file</i>
<b><i>R-phase</i></b>	<i>Rhombohedral microstructure-phase</i>
<b><i>SEM</i></b>	<i>Scanning electron microscope</i>
<b><i>NaOCl</i></b>	<i>Sodium hypochlorite</i>
<b><i>SMI</i></b>	<i>Structure Model Index</i>
<b><i>TS</i></b>	<i>Two shape file</i>
<b><i>WL</i></b>	<i>Working length</i>
<b><i>MC</i></b>	<i>Maximum curvature</i>
<b><i>VC</i></b>	<i>Vertical to maximum curvature</i>



