



شبكة المعلومات الجامعية

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ





شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكرو فيلم

جامعة عين شمس

التوثيق الالكتروني والميكرو فيلم

قسم

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
على هذه الأفلام قد اعدت دون أية تغيرات



يجب أن

تحفظ هذه الأفلام بعيداً عن الغبار

في درجة حرارة من 15 – 20 مئوية ورطوبة نسبية من 20-40 %

To be kept away from dust in dry cool place of
15 – 25c and relative humidity 20-40 %



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بعض الوثائق الأصلية تالفة



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بالرسالة صفحات
لم ترد بالأصل

**COMPARATIVE STUDY BETWEEN
PHONOPHORESIS AND ULTRASOUND
IN THE TREATMENT OF CERTAIN
DERMATOLOGICAL DISEASES**

Thesis

Submitted In Partial Fulfillment of

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In

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ABSTRACT

Ultrasonic waves are a form of acoustic vibrations occurring at frequencies too high to be perceived by the human ear. They have the same properties of sound waves e.g. reflection and rarefaction (Lehman, 1957).

U.S. alone may have some therapeutic effect in skin disease.

Phonophoresis is the use of ultrasound to enhance the delivery of topically applied drugs through the skin (Byl, 1995).

The exact mechanism of drug delivery in phonophoresis is debatable; however, recent review of literature suggests it may occur through thermal, chemical and/or mechanical alteration of the skin (Kassan et al, 1996).

Key word:

(Phonophoresis- ultrasound and skin)

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Arabic Summary

