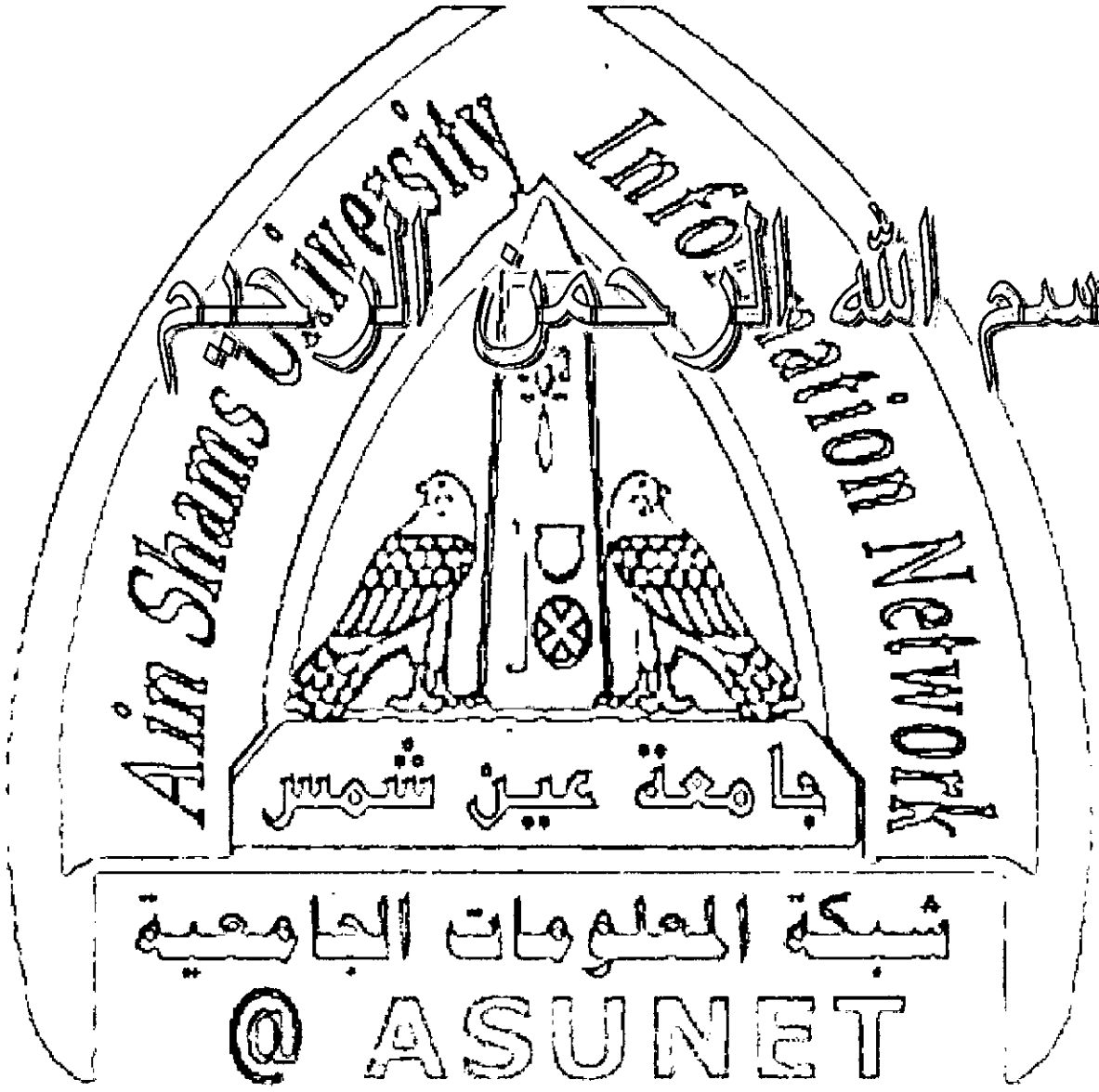
شبكة المعلومات الجامعية



شبكة المعلومات الجامعية

التوثيق الالكتروني والميكروفيلم

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%

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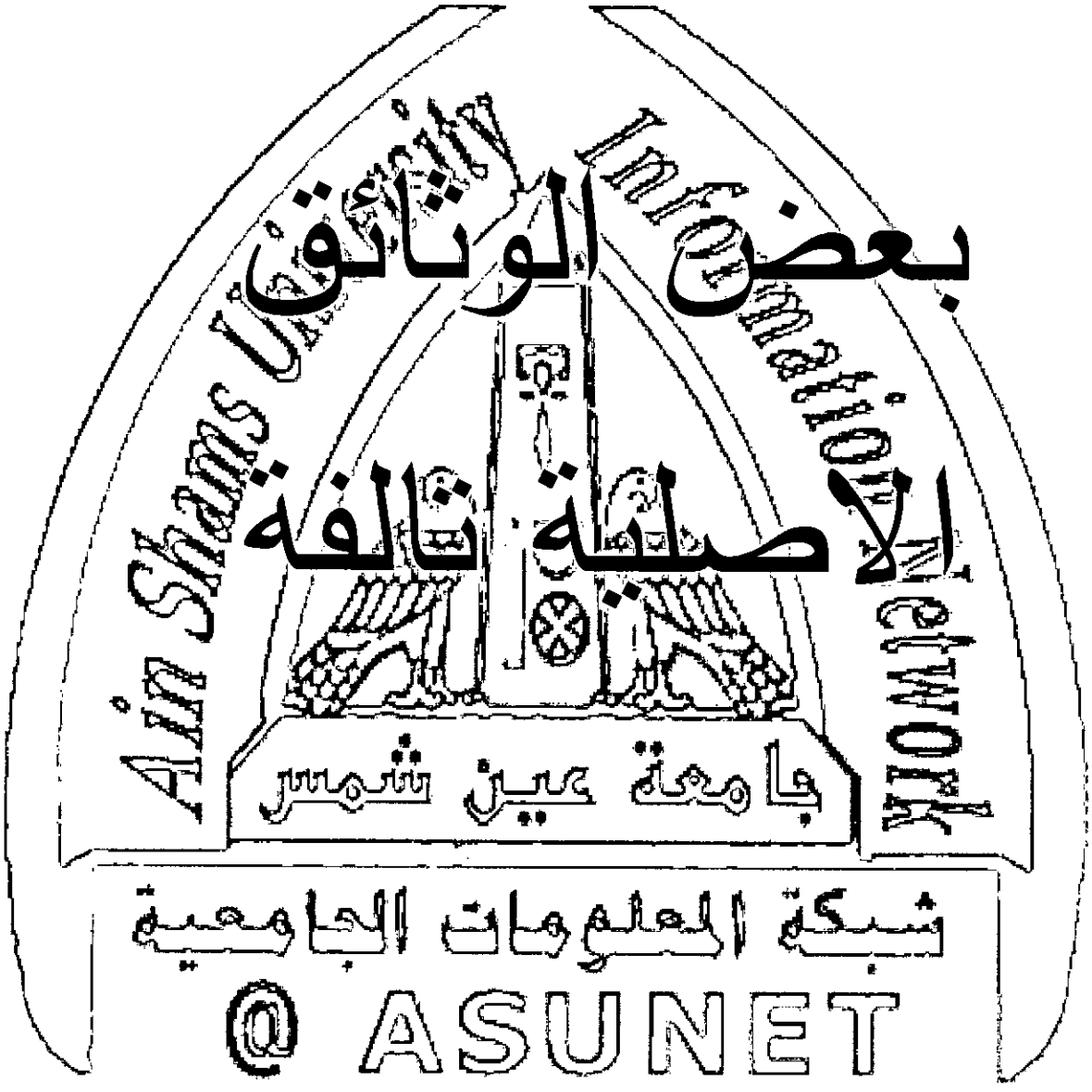
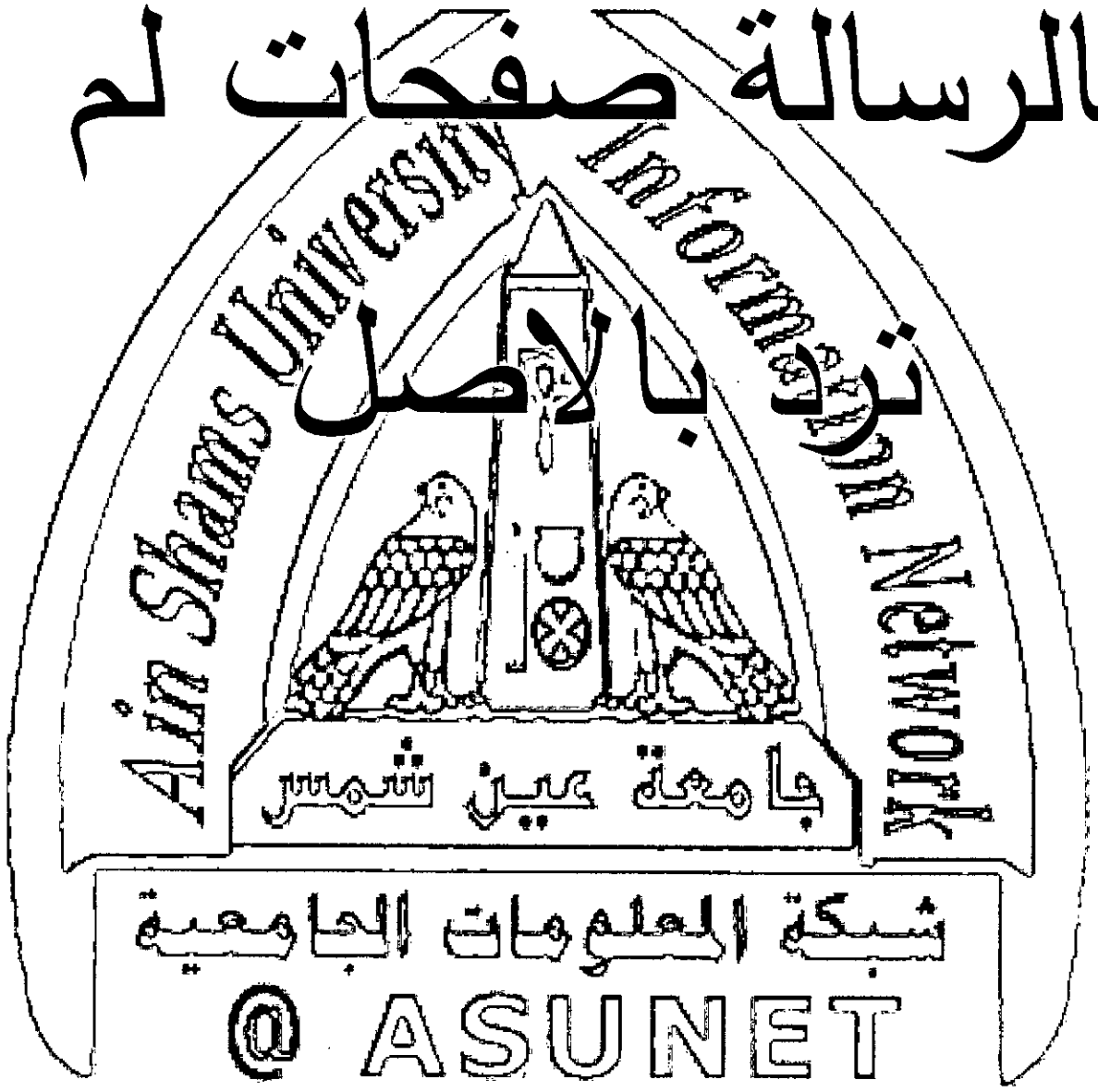


بعض الوثائق الأصلية تالفة



بالرسالة صفحات لم ترد بالأصل

Faculty of Veterinary Medicine

Monitoring of Helicobacter species in selected chicken meat products with special reference to H. pylori

Thesis

Presented by

Mohamed Hamdy Mohamed

Submitted for

M. V. Sc.

(Hygiene and control of meat, fish and their products and Animal by – products)

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2006

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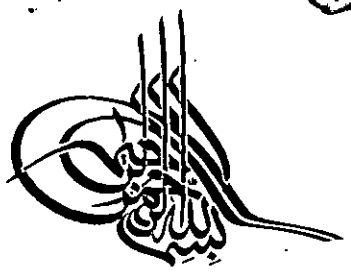

ربنا آتنا من لدنك رحمة

وهيئ لنا من أمرنا رشدا

سورة الكهف آية " ١٠ "

Approved Sheet

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THIS WORK IS DEDICATED TO

MY MOTHER

MY WIFE

MY DAUGHTERS

AYA

SAMA

Acknowledgment

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Mohamed Hamdy Mohamed

List of Contents

Abbreviations

E/M	Electronic Microscope
EO	Essential Oil
G cells	Gastrin producing cells
HP	Helicobacter pylori
MBCs	Minimum Bactericidal Concentrations
MICs	Minimum Inhibitory Concentrations
mM	mill Meter
PCR	Polymerase Chain Reaction


Introduction

Introduction

Microbiological hazard continue to be one of the biggest threats to food safety. In general food must be wholesome, nourishing and safe. The microbiological safety of meat, chicken and chicken products has been a major focus of regulatory agencies and consumers. Meat and chicken products provide a highly favourable media for many types of contaminating microorganism which may be pathogenic to human and ***Helicobacter*** was one of them.

Helicobacter species causes numerous medical conditions ***Helicobacters*** described as curved or S. shaped microaerophilic Gram-negative rods. However the characteristic morphology is less obvious in agar grown culture which reveals short plump rods (**Collee et al., 1996**), they have coccoid form when bacteria are exposed to adverse conditions. They are display remarkable motility in viscous solution and the flagellae play a central role in its motility. They are oxidase-positive, catalase-positive and gastric species are urease positive (**Shay and Axon, 1996**).

The genus ***Helicobacter*** evolved rapidly due to isolation of novel species from a wide range of animals and humans. The genus now include at least 24 formally named species as well as numerous ***Helicobacter*** not formally named (**Zhang et al., 1998**).

Helicobacters associated with gastritis, peptic ulcer and enteritis in human as ***H. pullorum, H. felis, H. hepaticus, H.***

candensis and ***H. helimanii***, also ***H. helmanii*** associated with T. cell lymphoma while ***H. hepaticus*** and ***H. pullorum*** causes also hepatic diseases as hepatitis which usually developed to hepato cellular tumors (**Tee et al., 2001 and On et al., 2002**). There is also ***H. cinaedi*** associated with lowel bowel disease in immunocompromised humans beside that there is ***H. pylori*** which is very important risk causes of human gastric and intestinal diseases and also non gasterenterological diseases (**Mendall et al., 1994**).

Salomon (1898) observed spiral bacterium in the gastric mucosa in animal (notably domestic pets) over a century ago. **Doenges (1938)** reported the presence of spiral shaped organisms within the gastric mucous layer without evidence that these organisms were associated with disease that identified by **Steer and Colin (1975)** as a ***H. pylori*** and its association with gastritis but misinterpretation of culture results lead to the conclusion that the organisms seen were ***Pseudomonas aeruginosa***. However, **Marshall and Warren (1983)** isolated a new-spiral shaped bacterium from the stomach of humans with gastric ulcers and named ***Campylobacter pyloridis*** and in 1984 they success to culture this organism and discover the association of it is presence and peptic ulceration. In **1989 Goodwin et al.**, concluded that spiral shaped bacterium which named ***Campylobacter pyloridis*** revealed significant morphological, biochemical and genetic differences from other campylobacter spp. and the microorganism was eventually renamed ***Helicobacter pylori*** .