شبكة المعلومات الجامعية

بسم الله الرحمن الرحيم

شبكة المعلومـــات الجامعية

التوثيق الالكتروني والميكروفيلم

شبكة المعلومات الجامعية

جامعة عين شمس

التوثيق الالكتروني والميكروفيلم

﴿ قـسـم ﴾

نقسم بالله العظيم أن المادة التي تم توثيقها وتسجيلها
علي هذه الأفلام قد اعدت دون آية 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 %

بعض الوثائق الأصلية تالفة

بالرسالة صفحات

لم ترد بالأصـــل

DETERMINATION OF SOME CONSTITUENTS OF APPARENTLY NORMAL MILK

Thesis Presented

By

Mahmoud Hassan Mahmoud Azab

(B.V.Sc., Fac. Vet. Med., Alex. Univ., 1993)

For

The Degree of M.V.Sc.

(MILK HYGIENE)

To

Department of Food Hygiene

Faculty of Veterinary Medicine

Alexandria University

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بسم الله الرحمن الرحيم

قرار لجنـــة الحكم و المناقشـه

قامت لجنة الحكم والمناقشه بفحص الرساله وترى انها اشتملت على بحث هادف و مواضيع لها أهميتها فى مجال الرقابة الصحية على الأغذية. كما قامت اللجنه بمناقشة المتقدم مناقشة مستفيضه ووجدت أنه ملم الماماً تاماً بكل ما جاء بها.

لـذ لـــــــــك

قررت اللجنـه ترشيح السيد ط. ب/ **محمود حسن محمود عزب** للحصـــول على درجة الماجستيرفى العلوم الطبيه البيطريـه – تخصص الرقابة الصحية على الألبان و منتجاتها.

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CONTENTS

Introduction

1. INTRODUCTION

During the last few years, the economic importance of dairy farms is increased in many parts of the world particularly in well-developed countries and at the same time udder diseases of lactating animals were became more important intensively.

Bovine mastitis is one of the most important problems in our dairy farms especially in small private farms where hygienic measures and milking sanitation are often insufficient ***(Zatoun and Manaa, 1992)***.

Subclinical mastitis is universally present in the dairy farms in one farm or other, and around 40% and above of cows were reported to be suffered from subclinical mastitis ***(Ramachandrainh et al., 1990)***.

The economic impact of both clinical and subclinical forms of mastitis is large in the current dairy industry. Losses occur from decreased milk production, treatment and labour costs, non deliverable milk, veterinary fees, reduced milk quality, reduced milk price, increased risk of subsequent mastitis and increased risk of culling or death of the cow ***(Nielen et al., 1992)***.

The widespread occurrence of mastitis in dairy herds creates an estimated loss to producer of approximately 2 billion $ in the USA alone. This number excludes the additional untold losses from altered milk quality and

composition and the effect on dairy products that occur once milk has left the farm ***(Harmon, 1994)***.

Mastitis is considered of quite vital importance due to its association with many zoonotic diseases in which milk acts as a vehicle of infection. *Staphylococcus aureus*; Tubercle bacilli, Paratyphoid enteritidis group, *Streptococcus epidimicus, Corynebacterium pyogenes* and Foot and Mouth Disease virus and others are amongst factors of zoonotic importance which induce mastitis in cattle and buffaloes ***(Mackey, 1941)***.

Early detection of mastitis especially in case of subclinical form where there is no obvious symptoms and secreted milk apparently normal is very important for most dairy farmers to reduce production losses and to enhance prospects recovery. Much efforts have been expended to provide veterinarians and farmers with efficient tool for mastitis detection ***(Emanuelson et al., 1987)***. Several methods for diagnosis of mastitis (specially subclinical form) have been reported. Bacteriological method is expensive and time consuming but it is still the most accurate method. The disadvantage of this method hence the need for simple sensitive and reliable method sufficient to be applied on large scale herd testing . Many tests based on the detection of pathological changes, often associated with inflammation, have been proposed while others are microscopic for detection of abnormal cellular material in milk ***(Moursy and Zakarya, 1972)***.

The aim of the present work is to evaluate the different tests currently used for diagnosis of mastitis as compared with microbiological methods to spot out an efficient simple and reliable test for detection of subclinical mastitis as:

- Determination of pH.
- Gel tests (Modified Whiteside Test, MWT; and California Mastitis Test, CMT).
- Direct microscopic somatic cell count.
- Qualitative chloride test.
- Determination of electrical conductivity.