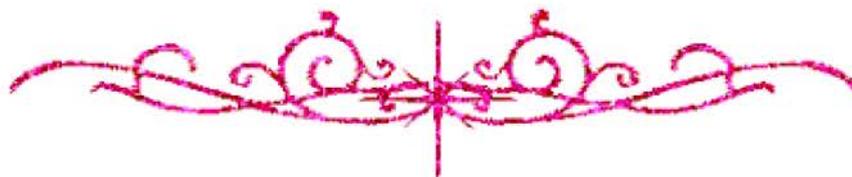


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شبكة المعلومات الجامعية

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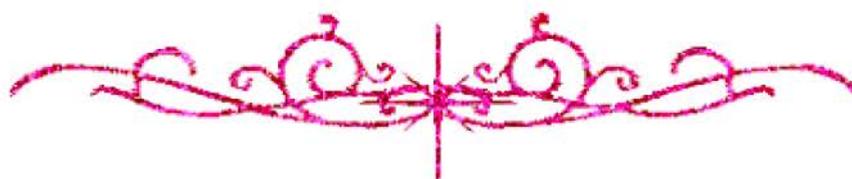
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شبكة المعلومات الجامعية



شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم



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التوثيق الإلكتروني والميكروفيلم

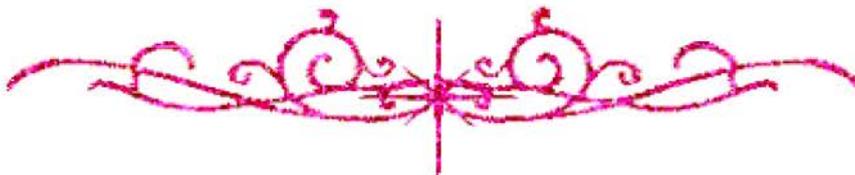
قسم

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



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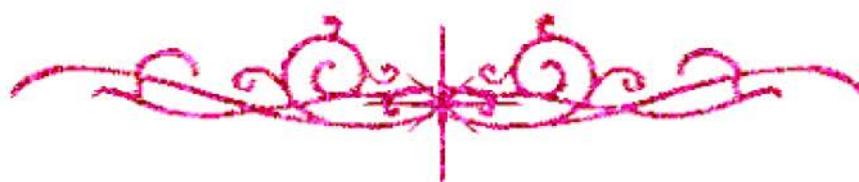
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بعض الوثائق الأصلية تالفة



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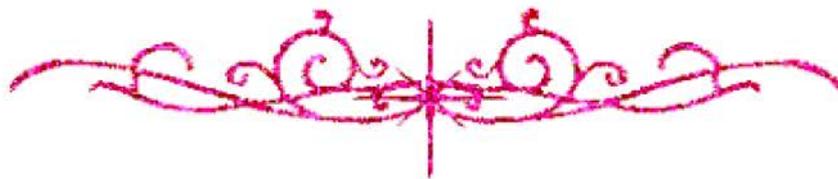


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B 19440

Trials For Freezing Of Buffalo Semen For Maximal Viability And Acrosomal Integrity

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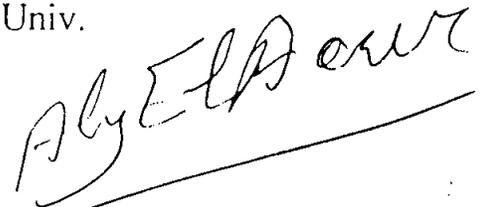
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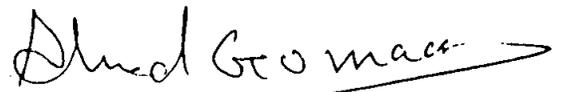
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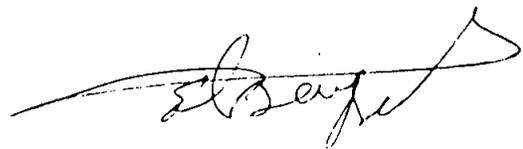
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INTRODUCTION

Introduction

Cryo-preservation of buffalo semen has gained much importance and acceptance in Egypt, for improving the role played by AI to upgrade the productivity and reproductivity of the local buffalo herds. There is general agreement that buffalo spermatozoa are more sensitive to cold and osmotic shocks than bull spermatozoa (Anand, 1979, Ganguli, 1979 and Kakar and Anand, 1984), so that they need special manipulation during freezing for maintaining the integrity of their plasma membrane (Bora and Roa, 1974, Anand, 1979 and Abd El--Rahman , 1988) .

The standardization of the freezing procedures engaged the attention of Animal Reproduction Research Institute teamwork plan aiming at optimizing the freezing conditions of buffalo semen. The ambition of this plan was to maximizing the number of viable spermatozoa per dose, which in turn resulted in increasing the conception rate of the superior buffalo bulls.

In line of this thought, Abd El- --Rahman (1988) studied the biological changes of buffalo semen during freezing and proved that freezing procedures of buffalo semen resulted in statistically significant increase in the amount of extra-cellular enzymes. El-Sheltawi (1989) indicated that during freezing procedures of buffalo spermatozoa the morpho-biological characteristics are significantly reduced. Ziada (1989) proved that the post-thawing characteristics of buffalo semen loaded in mini-tube depended on the thawing regime, diluent composition, glycerol level, the interaction between diluent and thawing rate as well as the bull difference. While Abd El--Malak (1989) adopted a tris-glucose – citric acid diluent for freezing buffalo semen. Ziada (1994) revealed that

freezing results have been significantly influenced by season, diluents and bull individuality, a fact that proved by the ultra-structure configuration of the buffalo spermatozoa after freezing processes and by the decreasing antigenicity of the spermatozoa after freezing. to Fulfil the gap in the field of buffalo semen processing , the present study aimed at optimizing the equilibration time , the cooling regime and the adaptation of buffalo spermatozoa to 5C during processing of buffalo semen

REVIEW OF LITERATURE

Review of Literature

Since the first report of **Smith and Polge (1950)** that bovine spermatozoa can be frozen in the presence of glycerol, the art and science of farm animal semen cryo-preservation has continued to develop. The wealth of researches and field application with frozen buffalo semen has led to the identification of many essential factors and potential pitfalls associated with the use of frozen semen. The technical information that follows is based primary upon researches with bovine spermatozoa. Although, specific procedures for the freezing and handling of buffalo semen are likely to differ, many of the same factors may be equally important.

Thus the present review is intended to point out the potentially important factors that build up the best techniques for cryo-preservation of buffalo semen.

1-Diluents

With the advent of artificial insemination, the use of extenders for proper semen preservation and utilization has acquired great importance. **Milovanov and Selivanova (1933)** demonstrated the proper characteristics of extenders to maintain spermatozoal metabolism.

1.1- Milk Diluent

As early as 1940 **Philips and Lardy** demonstrated the survival of bull spermatozoa for 48 hours in evaporated Milk, however, satisfactory survival of spermatozoa could be achieved only when Milk was boiled