الإستـــــــــهلال

{وَهُوَ الَّذِي سَخَّرَ الْبَحْرَ لِتَأْكُلُواْ مِنْهُ لَحْماً طَرِيّاً وَتَسْتَخْرِجُواْ مِنْهُ حِلْيَةً تَلْبَسُونَهَا وَتَرَى الْفُلْكَ مَوَاخِرَ فِيهِ وَلِتَبْتَغُواْ مِن فَضْلِهِ وَلَعَلَّكُمْ تَشْكُرُونَ }

(النحل14)

DEDICATION

I dedicate this dissertation to

My father,

To my mother ,

To my brothers,

Colleagues,

and friends,

ACKNOWLEDGMENT

I would like to express the deepest gratefulness to my supervisor **Dr. Samia Hamid Ahmed,** for her support understanding during this work.

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ABSTRACT

The aim of this study to determine the levels of microorganisms in Kawara fish(*Alestes dentex)* fermented by adding salt for a period of time (15days) and to identify certain contaminant bacteria. This study was conducted in Sudan University of Science and Technology, College of Medical Laboratories. The samples were collected from El-murda Fish Market after that were divided into two groups the first group was transported to Sudan University of Science and Technology, College of Medical Laboratories, Laboratory of microbiology to determine the bacterial load. And the second group was treated by the fermentation process for (15days). Then the samples was tested microbiologically, the results were $3.6x10^{6} \pm 2.3x10^{7}$ CFU/g in fresh samples and $2.1x10^{6} \pm 1.1 \times 10^{6}$ CFU/g in fermented samples (Terkin) , from results the data showed significant decrease($P<0.04$) in the levels of microorganisms in fermented samples. Also from results only *Staphylococcus aureus* were isolated from Terkin samples while *E-coli* and *Salmonella* spp. were not recovered from the Terkin after 15 days of fermentation.

ملخص الدراسة

الهدف من هذه الدراسة تحديد مستوى البكتريا فى اسماك الكوارة *Alestes dentex* المخمرة بواسطة اضافة الملح اليها وتخميرها لمدة (15 يوم) مايعرف (بالتركين) والتعرف على بعض انواع البكتريا الموجوده.

اجريت هذه الدراسة فى جامعة السودان للعلوم والتكنولوجيا كلية المختبرات الطبية تم جمع العينات من سوق المورده حيث تم تقسيمها الى مجموعتين المجموعة الاولى تم ارسالها الى جامعة السودان للعلوم والتكنولوجيا كلية المختبرات الطبية معمل الاحياء الدقيقة لتحديد مستوى البكتريا عليها والمجموعة الثانية بعد تنظيفها تمت معالجتها باضافة نسبة من الملح وتخميرها لمدة15 يوم وبعد ذلك تم تحديد مستوى البكتريا فى المنتج المخمر(تركين) و النتيجة كانت $3.6x10^6 \pm 2.1x10^6$ CFU/g في العينات الطازجة وبينما العينات المخمرة سجلت $2.3x10^7 \pm 1.1 \times 10^6$ CFU/g لوحظ من النتيجةان هناك فرق معنوى فى مستوى البكتريا ($P<0.04$) بين اسماك الكوارة الطازجة والمخمرة باضافة الملح . اما بالنسبة لانواع البكتريا التى تم عزلها من الاسماك المخمرة من خلال الاختبار لوحظ وجود *Staphylococcus aureus* بينما وجد ان *Salmonella* spp. و *Escherichia coli* لاوجود لها فى جميع العينات.

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