

*To my father
To my mother for her continuous
Encouragement and blessings
And to whom I am always indebted
To my brothers and sister and friends
To the memory of the late Shazlia Salim
To all whom I love*

Fawzi

Above all my deeply thanks and gratitude to Almighty Allah for giving me health and patience to complete this study.

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Abstract

The Aim of this study is to compare the proximate chemical composition and sensory evaluation of *Clarias sp* smoked fresh and dried with firewood and sawdust using traditional kiln using Teak (*Cordia Africana*) as source of energy.

20 kg of fresh *Clarias sp* fish were collected from Elmawarda Fish Market, Omdurman, and these fish were in the range of 26 – 36 cm in length and 140 – 350 gm in weight. The fish were divided into two main groups fresh and dried and this main groups divided into subgroups one smoked using firewood and the other using sawdust.

After approximate chemical analysis and sensory evaluation were done, the study revealed that no significant difference ($p > 0.05$) in moisture content, protein content, fat content, ash content and NFE content of fish studied.

Also in case of sensory evaluation of the smoked product, the fish smoked with firewood give better overall acceptability.

More results could be obtains if there is enough time in future Research using this method of preservation.

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

خلاصة الأطروحة

الهدف من هذه الدراسة مقارنة القيمة الكيميائية والتقييم الحسي لسماك القرموط الطازج والمجفف المدخن بحطب ونشارة اشجار القميل في مدخنة تقليدية.

20 كيلو جرام من سمكة القرموط جمعت من سوق المورد بام درمان ذات وزن كلي يتراوح ما بين 140 – 350 جرام وطول كلي يتراوح ما بين 26 – 36 سم في الفترة من فبراير الي ابريل 2010 م.

قسمت العينات الي مجموعتين رئيسيتين طازجة و جافة و كل مجموعة تم تقسيمها الي مجموعتين صغيرتين ودخنت كل مجموعة بواسطة الحطب والنشارة في فرن تقليدي.

بعد ذلك تم تحليل العينات كيميائيا لكل من الرطوبة والبروتين والدهن والرماد والنيتروجين الغير بروتيني. والتقييم الحسي لكل من اللون والملمس والطعم والرائحة والمظهر العام.

و قد اظهرت النتائج انه لا توجد فروقات معنوية في كل من الرطوبة والبروتين والدهن والرماد والنيتروجين الغير بروتيني في السمك المدخن طازج او مجفف بالحطب والنشارة.

كما اظهرت الدراسة ان الحطب افضل من النشارة حسب التقييم الحسي للمنتوج.

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