الاستهلال

بسم الله الرحمن الرحيم

(وَإِنَّ لَكُمْ فِي الْأَنْعَامِ لَعِبْرَةً نُسْقِيكُمْ مِمَّا فِي بُطُونِهِ مِنْ بَيْنِ فَرْثٍ وَدَمٍ لَبَنًا خَالِصًا سَائِغ لِلشَّارِبِينَ)

صدق الله العظيم

النحل سورة الاية (66)

Dedication

I dedicate this study to:

My father

My mother

My family

Supervisor

Teachers'

My colleagues

And to all whom I love

Enass

Acknowledgment

Firstly thanks to my God who gave me force and health to perform this work .I would like to express, with greatest pleasure,deepest gratitute to my supervisor Dr.Omer Ibrahim Hamid for his supervision, continuous encouragement and assistance throughout writing this thesis. Thanks also extended to the staff of central lab of Khartoum and the laboratory of Dairy Technology of Sudan University of Science and Technology.

Deepest gratitute with full thanks to my mother, father and brother's .Also great thanks to my uncle Eltaher and my aunt Mahassin altoum.

Last but not least great full appreciation to my entire family members for their continuous support, my colleagues and everybody who helps me in this research whom I did not.

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ABSTRACT

This study was conducted in the Dairy Technology Laboratory of College of Animal Production Science and Technology, at Sudan University of Science and Technology and the Central lab of Khartoum University to characterize the fatty acids of Sudanese white cheese stored at room temperature during the month of January and February. Fresh whole cow's milk (30 liters) was used to make white cheese. The processed cheese was stored at of 28 days (0, 7, 14, 21 and 28 days).. Fatty acids profiles were analyzed using GC (Gas Chromatography) for each storage period interval. One way ANOVA was used for statistical analysis. The Results showed that 12 organic fatty acids were recorded during the storage period of sudanese White cheese (capric (C10), lauric (C12) myristic, cis10-pentadcanoic, pentadcanoic, palmitic, palmitolic, cis10-heptadcanoic, heptadcanoic, linoleic acid, oleic and steric) The results were revealed that Oleic acid area % was gradually increased from day 7 until day 21 then decreased at day 28. Also, the results showed that at day 28 of storage the concentrations of most fatty acids of the white cheese decreased **.** Results demonstrated that there were no significant differences' during storage periods of area % of all fatty acids except pentadecanoic acid($p \leq 0.01$), no significant differences' were observed during storage periods of all fatty acids coincentrations except cis10 pentadecanoic acid ($p \leq 0.05$).

ملخص البحث

أجريت هذه التجربة بمعمل الالبان فى كلية الانتاج الحيوانى لجامعة السودان للعلوم والتكنولوجيا والمعمل المركزى فى جامعة الخرطوم فى الفترة من يناير وحتى فبراير 2012م وذلك بهدف وصف الاحماض الدهنية للجبنة البيضاء السودانية 30. لتر من لبن الابقار الخام استخدمت لتصنيع الجبنة البيضاء .الجبنة المصنعة خزنت لمدة 28 يوم) فترات التخزين.(28 ,,21,14,7 0: على حرارة الغرفة تم تحليلالاحماض الدهنية حللت بواسطة جهاز الكروماتوغرافى الفازى لاى من فترات التخزين. استخدمتحليل التباين فى الاتجاه الواحد للتحليل الاحصائى.اظهرت النتائج أن هنالك 12 من الاحماض الدهنية العضوية للجبنة البيضاء السودانية وجدت اثناء فترة تخزينها وهى Cis 10, ,

pentadecanoic, Myristic ,Luric Capric Pentadecanoic,Palmatic,Palmitolic,Cis10 heptadecanoic,Heptadecanoic,Linoliec,Oliec,Sterric

اوضحت النتائج ان المساحة المئوية لحمض الاوليك فى زيادة تدريجية من اليوم7 وحتى اليوم 21 بينما إنخفضت عند اليوم 28 ايضا كشفت النتائج ان تركيز معظم الاحماض الدهنية للجبنة البيضاء إنخفض فى اليوم 28 من التخزين.

ايضا اوضحت النتائج انه لا توجد فروقات معنوية اثناء فترة التخزين لكل الاحماض الدهنية بالنسبة للمساحة المئوية ما عدا Pentadecanoic acid ($p<0.01$) ولا توجد فروقات معنوية اثناء فترة التخزين لتراكيز جميع الاحماض الدهنية ما عدا(Cis 10 pentadecanoic acid<0.05