PRODUCTION AND EVALUATION OF CAMEL MEAT BURGER MIXED WITH DIETARY FIBERS

By

ABEER TALAAT AMR MOHAMED AMER
B.Sc. Agric. Sci. (Food Science), Fac. Agric., Cairo Univ., 2003

THESIS
Submitted in partial Fulfillment of the
Requirements for the Degree of

MASTER OF SCINCE
In
AGRICULTURAL SCINCE
(FOOD TECHNOLOGY)

DEPARTMENT OF FOOD SCIENCE
FACULTY OF AGRICULTURE
CAIRO UNIVERSITY
EGYPT
2017
APPROVAL SHEET

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ABSTRACT

The objective of this study was to produce camel meat burger and evaluate the chemical, physical and sensory characteristics of such burger samples as affected by replacing camel meat fat with different two levels (5 and 10%) of barley grains and wheat bran as dietary fiber sources. The obtained results of fat-replacer treatments recorded higher content of moisture, crude protein, total ash and crude fibers as well as a lower content of ether extract, compared with those of control camel sample. Also, total energy value was 254.49 kcal for fresh, while low-fat levels of treated samples were 175.10 kcal (10% fat) and 207.43 kcal (15% fat) before cooking, respectively. The pH values of all treatments were significant higher (P≥0.05) than those of control. Slight decrease in pH values was noticed in all treatments throughout the frozen storage. Meanwhile, Thiobarbituric acid values (TBA) of the treated burger samples were significantly lower (P≥0.05) than those of control sample. A progressive frozen storage caused increase in TBA values in all treatments. Water holding capacity (WHC) of the treatments with fat-replacers was significantly higher (P≥0.05) than the control counterpart. It decreased during frozen storage for all treatments. Cooking loss and shrinkage percentage of fat-replacer treatments were significantly lower than those of control. Progressive frozen-storage period, led to increase both of cooking loss and shrinkage, meanwhile, the cooking yield was decreased. The total bacterial counts as well as psychrophilic counts were significantly higher in fat–replacer treatments than the control one. The number of bacterial count increased with decreasing the fat level for 45 days of storage periods then number of bacterial count decreased until at the end of frozen storage time. Concerning the sensory evaluation, the overall acceptability was higher due to fat-replacer samples. It could be concluded that using wheat bran and barley grains for producing low fat burger have considerable importance in industrial as well as nutritional applications and also are useful for human weight control and some other diseases require low-calorie diets.

Key words: Camel burger, fat, wheat bran, barley, fat replacers.
DEDICATION

To my lovely family:
My late mother always rocking me to finish this work,
To the best father in the world,
To my Faithful Husband
To my sweet daughter and my lovely son
To my sisters and brother
For everyone who is
Special for me
All Friends and
My colleagues
ACKNOWLEDGMENT

Thanks to Allah for giving me the health and the knowledge to achieve the faith to believe and the courage to succeed in all parts of my endeavors. Without Allah's help and countless hours of prays, I know that this day would not have been possible.

I would like to express my sincere appreciation to Dr. Nadia Abdel Rahman Salama, Professor of Food Science, Food Science Department, Faculty of Agriculture, Cairo University for supervising this work. I am greatly indebted for her wise guidance, valuable suggestion during the whole period of this work, kind help and her weary effort to bring this work into the light.

I'm particularly grateful to Dr. Shahinaz Ahmed Helmy, Professor of Food Science, Food Science Department, Faculty of Agriculture, Cairo University for her valuable assistance, giving me the benefits of her experience in the laboratory work, encouragement, flexibility, availability and believing in me.

I would like to express my deep gratitude to Dr. Mohamed Farag Shehata, Researcher Professor of Meat Production and Technology, Desert Research Center, Ministry of Agriculture and Land Reclamation for his continuous supervision, endless help, fatherly attitude and great helping in providing facilities made possible the accomplishment of this work.

I'm very much indebted to Dr. Samir Al Sheikh, Professor of Animal Breeding at Desert Research Center, for his great help in statistical analysis part of the thesis and for supporting me.
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