

MICROBIOLOGICAL QUALITY OF BEEF PATTIES
THAWING AT THREE DIFFERENT CONDITIONS
AND STORAGE TIMES

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**MICROBIOLOGICAL QUALITY OF BEEF PATTIES THAWING AT DIFFERENT
THAWING CONDITIONS AND STORAGE TIMES**

By

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**DEPARTMENT OF FOOD SCIENCE
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ENDORSEMENT

The project report entitled “Microbiological Quality of Beef Patties Thawing at Different Conditions and Storage Times” by Wan Suzilah bt Wan Kamaruddin, UK 17457 has been reviewed and corrections has been made according to the recommendations by examiners. This report is submitted to the Department of Food Sciences in partial fulfillment of the requirement of the Bachelor of Food Science (Food Service and Nutrition), Faculty of Agrotechnology and Food Science, University Malaysia Terengganu.



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DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged.

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ABSTRACT

This study was conducted to determine the microbial quality of beef patties after subjected at three different thawing conditions which were chiller, room temperature and microwave. Frozen beef patties was taken as a control. After thawing, each patty from different thawing conditions were cooked. The microbial quality was checked immediately after cooking and for perios of 5 hours. There was no significant difference ($p > 0.05$) of aerobic plate count and coliform count for samples thawed at three different conditions. However, there is significant difference ($p < 0.05$) of frozen beef patties. Cooked beef patties also showed a safe level of microbiological content for consumption after stored at ambient temperature up to 5 hours. Coliforms were sensitive to heat because no coliforms were detected in cooked beef patties. *S. aureus* were not present before and after cooked beef patties.

ABSTRAK

Kajian ini dijalankan untuk menentukan kandungan mikroorganisma di dalam daging burger setelah di nyah bekukan pada tiga keadaan berbeza iaitu di dalam peti sejuk, suhu bilik dan ketuhar gelombang mikro. Daging burger yang beku telah dijadikan kawalan. Kandungan mikroorganisma juga dikaji dengan segera setelah daging burger di masak, dan setiap jam sehingga jam kelima. Kandungan bakteria aerobik dan koliform tidak menunjukkan perbezaan yang signifikan ($p > 0.05$) setelah dinyah bekukan pada pada tiga keadaan berbeza tersebut. Walau bagaimanapun, terdapat perbezaan yang signifikan ($p < 0.05$) pada daging burger yang dibekukan. Daging burger yang telah dimasak juga menunjukkan aras kandungan bakteria yang selamat untuk dimakan walaupun telah disimpan pada suhu persekitaran sehingga 5 jam. Koliform adalah sensitif terhadap haba kerana ia tidak terdapat di dalam daging burger yang telah dimasak. *S. aureus* tidak terdapat di dalam daging burger sebelum dan selepas masak.