

**UNIVERSITI TEKNOLOGI MARA**

**THE USE OF HACCP IN TEMPERATURE CONTROL OF  
FOOD STORAGE IN THE REFRIGERATOR AND  
FREEZER**

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**Project paper submitted in partial fulfillment of the requirements  
for the degree of  
Bachelor in Environmental Health and Safety (Hons.)**

**Faculty of Health Sciences**

**JULY 2012**

## Declaration by Student

Project entitled The Use of HACCP in Temperature Control of Food Storage in the Refrigerator and Freezer is a presentation of my original research work. Wherever contributions of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions. The project was done under the guidance of Encik Nasaruddin bt Abdul Rahman as Project Supervisor and Prof. Madya Hazilia bt Hussain as Co-supervisor. It has been submitted to the Faculty of Health Sciences in partial fulfillment of the requirement for the Degree of Bachelor in Environmental Health and Safety (Hons).

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## ACKNOWLEDGEMENT

In the name of Allah, The Most Gracious and The Most Merciful.

Alhamdulillah, all praise to Allah, the Supreme Lord of the Universe, Peace and blessing to Prophet Muhammad s.a.w., all the prophets, their families and all the Muslims.

First of all, I would like to express my gratitude to Allah for giving me opportunity to complete my thesis work. Sincere gratitude for my supervisor, Mr. Nasaruddin bin Abd Rahman, for the entire valuable guidance, advices, comments and infinite patience from him throughout this project. Without him, I may not be able to finish up my project successfully.

I want to give my thanks to Prof Madya Hazilia bt Hussain as my co-supervisor for her support while I am finishing this project. Not to forget to all the Environmental Health and Safety lecturers for the input and reminder in order to complete the project paper, as well as my classmates for the help and support.

I would like to acknowledge and extend my heartfelt gratitude to Mr. Afiq Zaki for their assistance while finishing my project.

I also want to express my honest thanks to my kind father, Mustafa bin Abu; my lovely mother, Mrs.Morsini bt Mohd Noh ; and all my siblings for financial and moral support and their abundant love. Without all of you, I would never have finished my project.

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## Abstract

### The Use Of HACCP In Temperature Control Of Food Storage In The Refrigerator And Freezer

Aisahatikah bt Mustafa

**Introduction:** Hazard assessment and critical control points (HACCP) is worldwide considered as an effective method of guaranteeing food safety, which can be applied throughout the food chain from primary production to final consumption. Temperature control in food storage is one of the critical control point that should be considered when applied HACCP in the production of food. Refrigeration is one of the methods for controlling temperature in food by reducing the rate at which changes occur in food. These changes can be microbiological, physiological, biochemical and physical.

**Methodology:** This study was conducted at cafeteria at UiTM Puncak Alam and Shah Alam. The measurement of temperatures was taken at 30 refrigerator and 30 freezer. The study design used was cross-sectional study. The portable digital probe thermometer was used to measure the temperature refrigerator and freezer air. SPSS v18 (Statistical Package for the Social Sciences) was used for completing the statistical analysis part.

**Results:** There is no significant difference between refrigerator temperature at UiTM Puncak Alam Cafeteria and UiTM Shah Alam Cafeteria where ( $p = 0.901$ ). Besides, there is no significant difference between freezer temperature at UiTM Puncak Alam Cafeteria and UiTM Shah Alam Cafeteria where ( $p = 0.63$ ). The temperature in the refrigerator was complied with Food Hygiene Regulation 2009 which is below  $10^{\circ}\text{C}$ . Most of food handler has poor knowledge on temperature control in food storage and unaware about their refrigerator temperature.

**Conclusion:** In conclusion, the study showed that the means of temperatures in the refrigerator is followed temperature standard by Food Hygiene Regulation 2009 while the means of temperatures in freezer is not complied with standard. Implementation of HACCP in temperature control of food storage in refrigerator and freezer can easily control the critical limit in the food storage process.

*Keywords: HACCP, Refrigerator, Freezer, Temperature, Critical limit, Food Storage,*