

**UNIVERSITI TEKNOLOGI MARA**

**QUALITATIVE ANALYSIS OF SAFETY AND  
HEALTH RISKS ASSOCIATED WITH WORKING IN  
COLD CONDITIONS AND ITS INFLUENCE ON  
ACCIDENT OCCURRENCE**

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

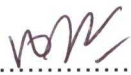
**Faculty of Health Sciences**

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### Declaration by Student

Project entitled "Qualitative Analysis of Safety and Health Risks Associated with Working in Cold Conditions and Its Influence on Accident Occurrence" 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 Mr. Amir Heberd bin Abdullah as Project Supervisor and Ms. Farah Ayuni binti Shafie as Project 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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## Abstract

### Qualitative Analysis of Safety and Health Risks Associated With Working in Cold Condition and Its Influence on Accident Occurrence

Rozi Abdullah Bin Nawang

**Introduction:** Food retail chains in the milk industry are flourishing rapidly and generate high income. At the same time awareness among the public on health benefits from the consumption of milk is on the rise. Majority of the milk products need to be placed in a cold condition which means that the products need to be refrigerated. This is to maintain the quality of the product. To meet the markets' demand, the dairy production needs to be increased. More workers are needed to fulfil orders from the customers. Lack in number of workers will affect other workers.

**Objectives:** General objective for this study is to determine the relative risk of working in the cold conditions as well as the job performance of the worker. The specific objectives are (1) to measure the adaptation of body temperature with working in the cold conditions, (2) to identify the health problems when exposed to cold conditions and (3) to identify the association between cold conditions and job performance.

**Methodology:** The study was conducted at Fonterra Brands (M) Sdn Bhd – DairyMas (Cold Conditions Area). The design of this study is a cross sectional study. Then subjects involved are all logistics assistant who are also authorised forklift driver. The result was obtained based on the workplace environment measurement (operative temperature, relative humidity & air velocity) and personal monitoring (body temperature). The information about the job accident cases and health effect was obtained by using questionnaire survey and observation. The study was conducted with a quantitative and a qualitative analysis. A statistical analysis that is statistical package for the social science (SPSS) version 17.0 was used in this study.

**Results:** The  $p$ -value for adaptation of body temperature to working in the cold conditions is less than 0.05 and it is significant. All the subjects are complaining about a symptom which is the whole body feels uncomfortable where as 97% complained disturbances in peripheral circulation in hand or feet. All respondents (100%) stated that the concentration will deteriorate the working performance in the cold conditions. For example, cold conditions are distracting them to drive the forklift safely.

**Conclusion:** There is no significant relationship between cold conditions and accident occurrence. However, working in cold conditions can affect health which also can influence the workers' performance. This can lead workers to be exposed to health problems which can affect their performance.

**Keywords:** Cold Conditions, Accident Occurrence, Logistics Assistant