UNIVERSITI TEKNOLOGI MARA

THE EXISTENCE OF TOTAL COLIFORM AND E.COLI BACTERIA IN WATER USED BY STREET HAWKERS IN MELAKA TENGAH DISTRICT IN MIXING WITH THE VARIOUS FLAVOUR OF DRINKING WATER

NORHIDAYAH BINTI MORSAD

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 2014

Declaration by Student

Project entitled "The existence of total coliform and e.coli bacteria in water used by street hawkers in Melaka Tengah district in mixing with the various flavour of drinking water" 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. Razi Ikhwan Bin Md. Rashid as Project Supervisor and Mr. Nasaruddin bin Abd. Rahman 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.)

Student's Signature:

Nohidayah Binti Morsad

2010415912

860702-30-5184

Date: 23 July 2014

ACKNOWLEDGEMENT

Bissmillahirrahmanirrahim,

Alhamdulillah. Thanks to Allah SWT, whom with His willing giving me the opportunity to complete this Final Year Project. The success and final outcome of this final year project required a lot of guidance and assistance from many people and I am extremely fortunate to have this all along the completion of my project work. Whatever I have done is only due to such guidance and assistance and I would not forget to thank them.

Firstly, I would like to express my deepest thanks to, Mr. Razi Ikhwan Bin Md. Rashid, in providing me support and guidance which made me completes the project on time. I am extremely grateful to him for providing such a nice support and guidance although he had busy with his schedule.

Deepest thanks and appreciation to my parents, family, special mate of mine, and others for their cooperation, encouragement, constructive suggestion and full of support for the report completion, from the beginning till the end. Also thanks to all of my friends and everyone, those have been contributed by supporting my work and help myself during the final year project progress till it is fully completed.

Last but not least, my thanks to all staff Department of Licensing and Health, Majlis Bandaraya Melaka Bersejarah (MBMB) for great commitment and cooperation during my Final Year Project.

TABLE OF CONTENTS

TITL	E PAGE	
ACK	NOWLEDGEMENT	ij
TABLE OF CONTENTS		" iii
LIST	OF TABLES	''' V
LIST	OF FIGURES	v vi
LIST OF APPENDICES		vi
ABSTRACT		vii
		VIII
CHAI	PTER ONE: INTRODUCTION	
1.1	Background Information	1-3
1.2	Problem Statement	4
1.3	Study Justification	5-6
1.4	Study Objectives	
	1.4.1 General Objective	6
	1.4.2 Specific Objectives	6
	1.4.3 Study dependent variables	7
	1.4.4 Study independent variables	7
1.5	Study Hypothesis	7
1.6	Conceptual Framework	8
		•
CHAP	TER TWO: LITERATURE REVIEW	
2.1	Total Coliform and E.coli bacteria	9-12
2.2	Law requirement	13-14
2.3	Health Effect	15

ABSTRACT

THE EXISTENCE OF TOTAL COLIFORM AND *E.COLI* BACTERIA IN WATER USED BY STREET HAWKERS IN MELAKA TENGAH DISTRICT IN MIXING WITH THE VARIOUS FLAVOUR OF DRINKING WATER.

Norhidayah Binti Morsad

Food safety is a key public health concern, because a large number of people take their meals outside the home and are exposed to food borne illnesses. Food handlers play an important role in ensuring food safety throughout the chain of storage, processing production, preparation and retailing. The objective of this study is to determine the relationship of hygiene practices and food safety knowledge among the streets hawkers in Melaka Tengah District with the existence of total coliform and E.coli bacteria in the water that they use in mixing with the various flavor of drinking water selling by them. A cross sectional study was conducted among the street hawkers in Melaka Tengah District. A total of 31 (n=31) street hawkers were selected using nonprobability sampling technique. Data were collected by face to face interview using a structured questionnaire. Result showed that not all water samples have been contaminated with the total coliform and E.coli bacteria. Findings of this study may help in planning health intervention programs for food handlers for their improvement of knowledge, attitude and practice towards food-borne diseases and food safety. Furthermore, this will reduce the morbidity and mortality of food-borne diseases if the early stage of precaution is taken in reducing the diseases by increasing the level of awareness and knowledge on food safety among the streets hawkers.

KEYWORDS. Attitude, food safety, food borne diseases, total coliform, E.coli bacteria.