UNIVERSITI TEKNOLOGI MARA

EFFECT OF WEATHER VARIABLES ON THE DENSITY OF *Aedes* MOSQUITOES IN JOHOR BAHRU TENGAH : A RETROSPECTIVE STUDY FROM 2014 - 2016

FARIDATUL AKMA BINTI ABDUL GHANI

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

Faculty of Health Sciences

July 2018

DECLARATION BY STUDENT

I hereby declare that this project report is based on my original work except for citations and quotations which have been duly acknowledged. I also declare that it has not been previously and concurrently submitted for any other degree or award at UITM or other institutions.

Student's signature :

…………………………………...

(Faridatul Akma Binti Abdul Ghani)

2014807544

900212 - 01 - 6172

Date :…………………………

ACKNOWLEDGEMENT

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

TABLE OF CONTENT

ABSTRACT

Dengue fever is one of the common diseases in Malaysia. Dengue fever is a communicable disease that known as vector borne disease. The vector of dengue fever is *Aedes* mosquitoes. The objective of this study to assess the effect of weather variables on the density of *Aedes* mosquitoes in Johor Bahru Tengah. This study using a retrospective cross study from 2014 to 2016. The data of *Aedes* indices and weather variables was collected by epid week for the three year. The *Aedes* indices data are represent by using cumulative percentage curve with the dengue fever cases. The Pearson's correlation coefficient is calculated for each year by weekly cumulative percentage of *Aedes* index, breteau index and dengue cases. The weather pattern characteristics with *Aedes* indices are represent in the histogram and the line graph. While for each weather variables is present in the scatter plot graph. The relationship between *Aedes* indices and weather variables is measured using the Pearson's correlation coefficient. The result showed no significant and low correlation between the *Aedes* indices and weather variables. Even the result showed low correlation, this study data collection can be used as the predicted outbreak of dengue fever. In addition, this study can identify the issue in the outbreak localities with the high *Aedes* index and breteau index.

Keywords : *Aedes* index, breteau index, temperature, rainfall, relative humidity.