ANTHOCYANIN RICH EXTRACT FROM CLITORIA TERNATEA FLOWER UTILIZATION AS A SENSOR FOR MEAT DETERIORATION

By

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11405003

BACHELOR'S DEGREE
in

FOOD TECHNOLOGY
LIFE SCIENCES TECHNOLOGY

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June 2018

STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

ANTHOCYANIN RICH EXTRACT FROM CLITORIA TERNATEA FLOWER UTILIZATION AS A SENSOR FOR MEAT DETERIORATION

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Smart packaging is defined as a packaging with sensors that could define the quality its contained in real time. One important aspect of a food product is its expiration date label but its its mostly inaccurate especially for perishable food products. Beef and fish as a perishable food product produces nitrogen gas which has high pH in characteristic as result in its deterioration by microorganism and *Clitoria ternatea* anthocyanin however has the capability to change in color by exposal to pH change. This study is to observe whether the anthocyanin from *Clitoria ternatea* has any correlation to meat deterioration factors when its fabricated and immobilized to a potential media to be further produced as a sensor. The possible media are filter paper and fabric as claimed to be better in microfluidic properties. It is also observed why fabric could be a better choice than filter paper as the most common base as a sensor and why a certain treatment is necessary to be done in producing smart sensor for meat deterioration.

Keywords: *Clitoria ternatea, Butterfly Pea flower, smart, sensor, meat deterioration, TVB-N, basic gas, microorganism, packaging, perishable food.*

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DEDICATION

I dedicate this book for my future and for people all over world in the name of science.

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ACKNOWLEDGEMENTS

First and foremost, a deepest grateful was given to God for the health and fortune blessed upon.

Nevertheless to Dr. Ir. Abdullah Muzi Marpaung, M., M.P and Dr. Dedy H.B. Wicaksono, S.T., M. Eng for the endless support and guidance throughout this thesis work and very grateful for them to be writer's advisor and co-advisor

My parents for their trust and never ending love in every way.

My mentioned friends who gave their hand in this thesis process. For Gabriella P. Gunawan, Rara Purwanty Azura, and Jennifer S. (TPC guidance), Michelle Salim, Jennifer S, Gabriella Putri Gunawan, and Elizabeth Meilyana, S.E. (Thesis book writing), William (Extraction and flower acquiring), Deby E. Parung (ImageJ guidance), James A. Soetjipto (Providing exclusive sample storage), Elfrida Vanessa Heriawan and Joshua E, Wijaya (Providing cotton cloth), Dimas P. Wahono and Bilhan Benhanan (Providing help in sample preparation), Deborah Arief and Rebecca Wirawan (Providing lab materials)

My accompanying friends in Savehouse who always support me in this thesis duration with laughter and anti-depressants, My lab assistants for their priceless time and various valuable sacrifices, My friends from Swiss German University especially people from Food Technology and Biomedical Engineering who are in a similar journey and mutualism support through ups and downs to finish our thesis.

Also Arya Pratama, C. Alexander, Mariah Cherubim, Putri Indes, who have request for their name to be in this acknowledgement.

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