

**STUDY OF CARRAGEENAN AND
CARBOXYMETHYLCELLULOSE COATING INCORPORATED
WITH CLOVE ESSENTIAL OIL ON MICROBIAL QUALITY OF
FISH**

By

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, 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

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This research is aimed to evaluate the effect of coating incorporated with clove essential oil to microbiological and sensory quality of the yellow striped scad fish (*Selaroides leptolepis*). In this research, 0.5% and 0.75% (ml/g biopolymer) of clove oil incorporated into carrageenan and carboxymethylcellulose (CMC) coating solution. The pH and microbial analysis were conducted every 6 hours for fish stored in room temperature and every 2 day for refrigerated fish. The result showed that there were no significant changes of pH value for all the treatment. In addition, carrageenan coating gave no inhibitory effect, while the inhibitory effect from CMC coating only could be found after 12 hours storage. From the sensory evaluation, could be known that clove oil affect the taste and aroma of the coated fish.

Keywords: coating, fish, carrageenan, carboxymethylcellulose, clove oil, microbial quality

DEDICATION

I dedicate this thesis to my parents, my family, my friends and all the people in the world.



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First of all, I would like to show my gratitude to God for His blessing throughout the making of this thesis. I would also like to thank my family and my parents and also to everyone who has helped me throughout all difficulties to complete this thesis.

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Lastly, I hope this thesis can be useful for all readers to enhance knowledge about the subject and give good contribution for academic purposes. Furthermore, I would like to apologize for any errors that occur in this thesis. Comments and suggestions are appreciated for better improvement in the future.

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