
STATEMENT BY THE AUTHOR

I hereby declare that this thesis with the topic:- “Determination of Thermal Diffusivity of Patin Fish Sausage in Heat Processing” is my own work and to the best of my knowledge under the supervision of my advisor and co-advisor. This thesis contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of may other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

DETERMINATION OF THERMAL DIFFUSIVITY OF PATIN FISH SAUSAGE IN HEAT PROCESSING

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Patin fish sausage is very new food product. The characteristics and properties of this product are unknown and unprovided very well. The most important thing that needs very deep attention is the safety of the food. The safety of the food described by the absence of pathogen microorganisms. Heat treatment is a very good and easy method to eliminate pathogen microorganisms. In order to make the heat processing in the application become efficient and effective, the thermal diffusivity of the product must be known. By using thermal diffusivity value, effective time to ensure the elimination of pathogen microorganisms can be predicted accurately, as well as efficient heat processing in terms of energy use.

The experiment uses numerical method. This method is chosen because it is applicable and the outline is precise. The equipments needed to run this method are also simple and widely available.

From the experiment, thermal diffusivity for Patin fish was known. Thermal diffusivity value for Patin fish sausage is $8.9280 \times 10^{-4} \text{ m}^2/\text{hr}$. The range of result accuracy is 84.56% to 97.93%. By this level of accuracy, thermal diffusivity value can be used in the application to predict the efficient heating time.



DEDICATION

I dedicate this thesis to my family especially my mother and father and also to all my friends at Swiss German University. I dedicate also this thesis to all of lecturers. Their understanding, support, help and encouragement, made the completion of this thesis possible.



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In conclusion, I hope that this thesis could be useful and provide knowledge for all the readers. However, this thesis may be far from perfect, therefore, any critics, suggestions and comments are welcome for the improvement of this thesis.

Tangerang, July 2009

Christian Mahesa Prayoga

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