

APPLICATION OF RICE BRAN β -GLUCAN ENRICHMENT IN CHOLESTEROL LOWERING FOOD PRODUCT

By

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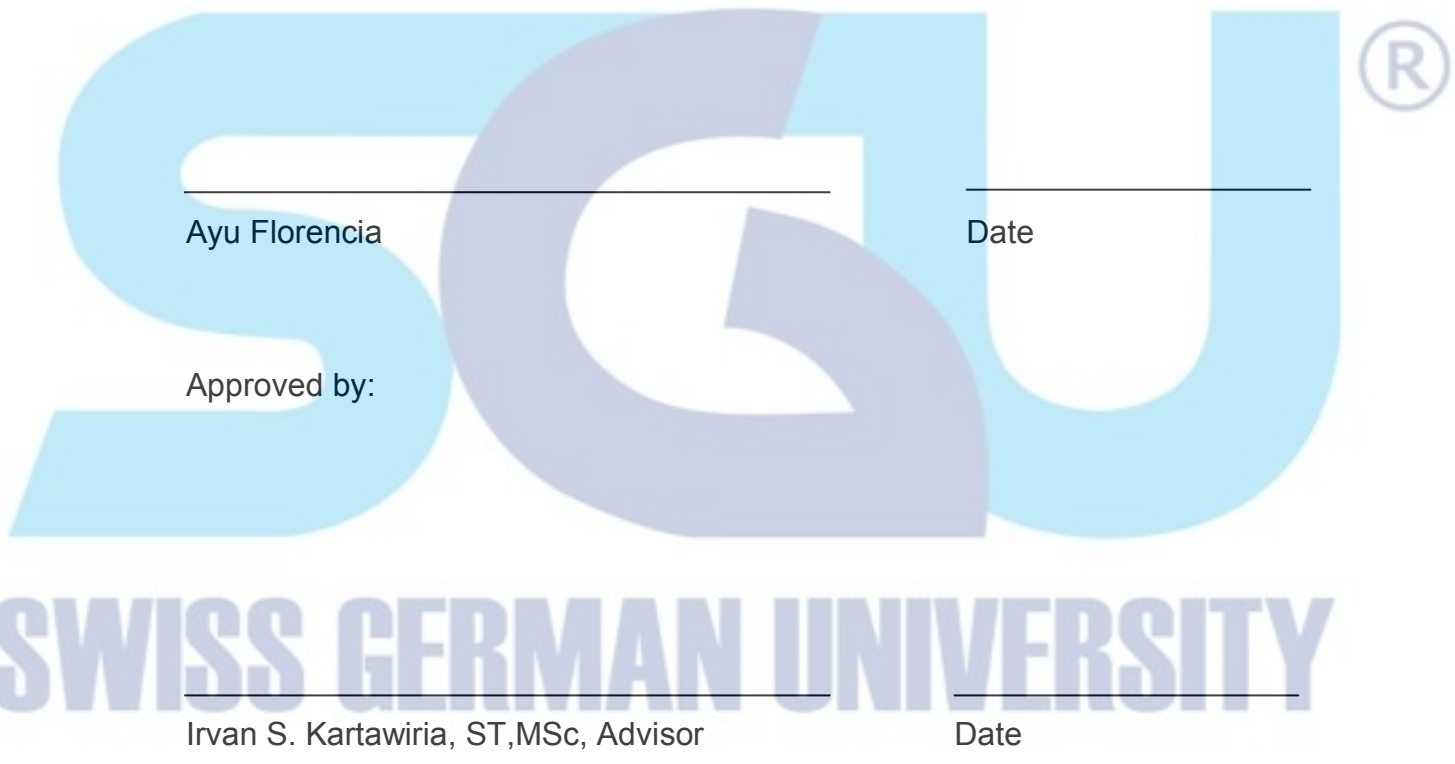
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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, 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 of diploma at any educational institution, except where due acknowledgement is made in this thesis.



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ABSTRACT

APPLICATION OF RICE BRAN β -GLUCAN ENRICHMENT IN CHOLESTEROL LOWERING FOOD PRODUCT

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Irvan S. Kartawiria, ST,MSc, Major Advisor

Many Indonesian have problem with high content of cholesterol in blood, even in younger generation because of the high-fat diet and lack of exercises (Disastro, 2010). This research aim is to develop cholesterol lowering food product, containing rice-bran β -glucan. β -glucan is effective for blood cholesterol lowering (Braaten et al., 1994). Extraction of rice bran β -glucan was done according to Wang et al. (1996). Extraction process with modification using cold ethanol produces β -glucan fine powder with yield 1.36 - 2.46% containing 52.5 - 55.1% β -glucan. Beverage product was selected as it gives highest score (4.8) compared to soup (2.9), cookies (2.9) and pudding (1.3) in term of portion size, consumers convenient, and production process. Formulated product which suitable for consumers based on sensory evaluation is pre-mixed beverage powder consist of 20.48% soy bean powder, 20.48% non-dairy creamer, 20.48% strawberry flavor, 34.13% β -glucan and 4.43% CMC. In-vitro evaluation shows capability of product to coagulate edible fat and oil with increasing viscosity 10.72% in oil and 16.52% in margarine. The simulation testing in human led to inconclusive result.

Keywords: Rice-bran, β -glucan, cholesterol



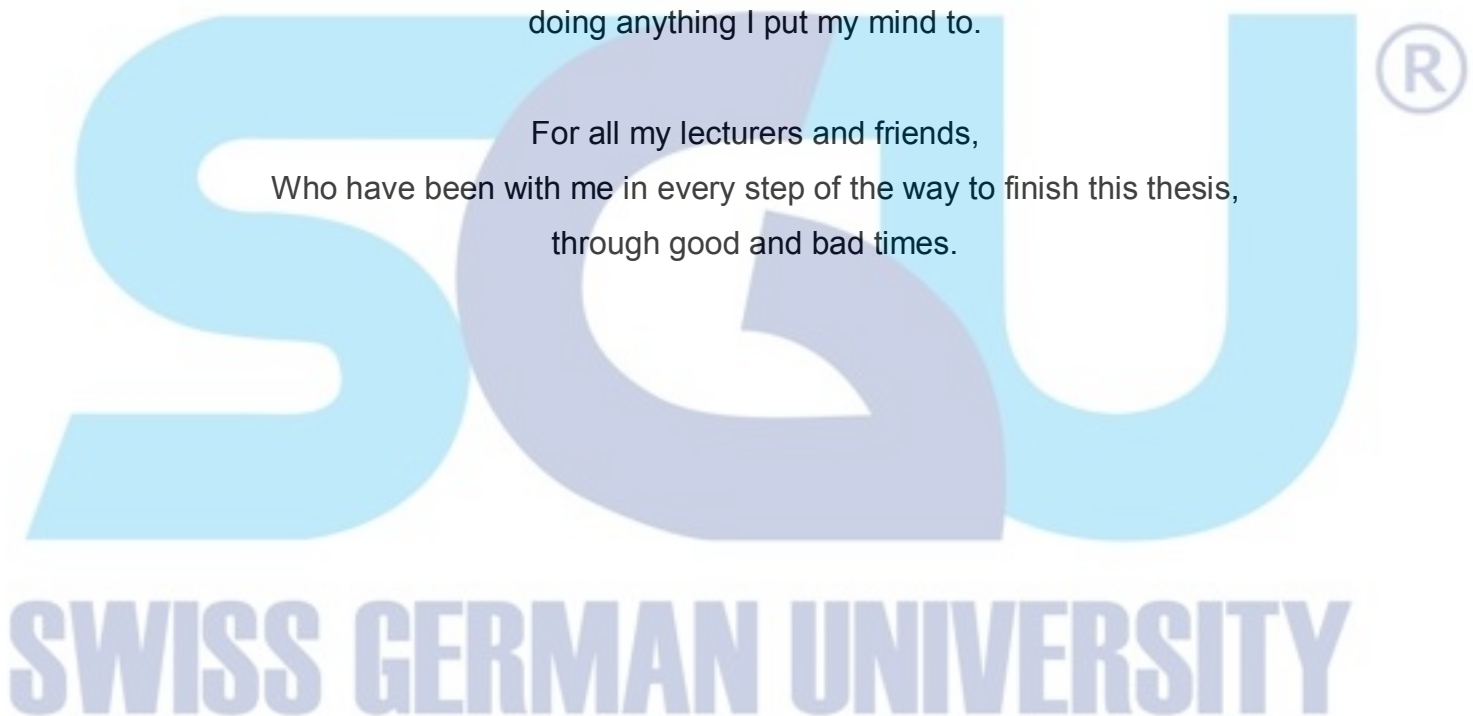
DEDICATION

I dedicate this thesis to

For my beloved parents;

Handy T and Lina W who have raised me to be the person I am today and
Thank you for all the patience, support, and guidance that you have always
given me, helping me to succeed, and encourage me that I am capable of
doing anything I put my mind to.

For all my lecturers and friends,
Who have been with me in every step of the way to finish this thesis,
through good and bad times.



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The author already gives the best effort to complete this thesis. However, any comments and critics would be welcomed for improvement of this thesis. The author hope this thesis can give benefits for the readers.

Jakarta, July 2011

Ayu Florencia

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