

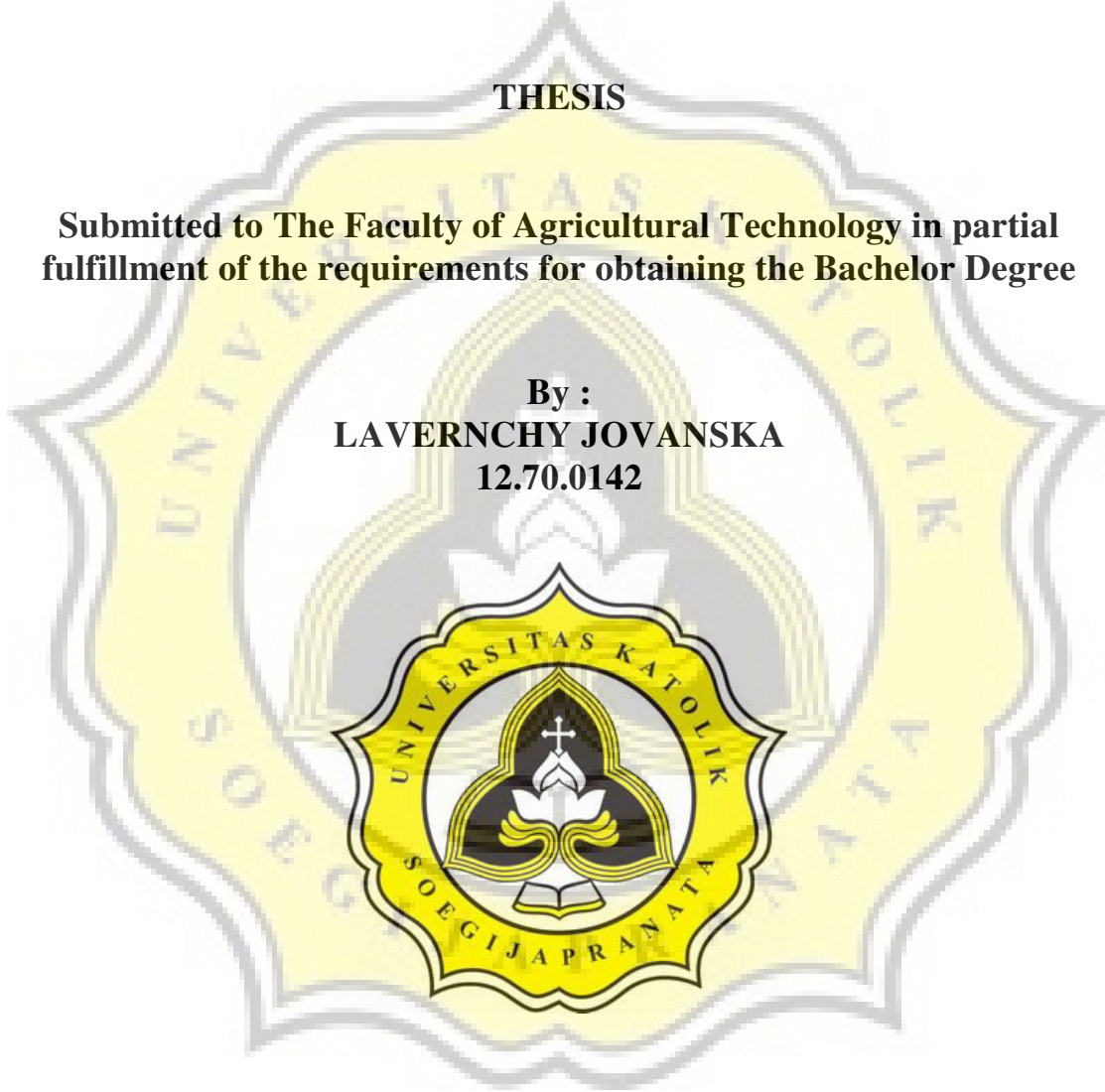
**IDENTIFICATION OF MOLD ON DRIED SALTED 'IKAN
KEMBUNG' (*Rastrelliger brachysoma*) ADDED WITH CLOVE AND
CORIANDER EXTRACT WHICH DISPLAYED
IN GAYAMSARI MARKET, SEMARANG**

***IDENTIFIKASI KAPANG PADA IKAN KEMBUNG (*Rastrelliger
brachysoma*) ASIN DENGAN PENAMBAHAN EKSTRAK CENGKEH
DAN KETUMBAR SELAMA PEMAPARAN
DI PASAR GAYAMSARI, SEMARANG***

THESIS

**Submitted to The Faculty of Agricultural Technology in partial
fulfillment of the requirements for obtaining the Bachelor Degree**

**By :
LAVERNCHY JOVANSKA
12.70.0142**



**FOOD TECHNOLOGY DEPARTMENT
FACULTY OF AGRICULTURAL TECHNOLOGY
SOEGIJAPRANATA CATHOLIC UNIVERSITY
SEMARANG**

2016

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**This thesis has been approved and defended in front of the examination committee
on June 2016**

Semarang, June 2016

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THE AUTHENTICITY OF A THESIS STATEMENT

I hereby declare that the thesis entitled “**IDENTIFICATION OF MOLD ON DRIED SALTED ‘IKAN KEMBUNG’ (*Rastrelliger brachysoma*) ADDED WITH CLOVE AND CORIANDER EXTRACT WHICH DISPLAYED IN GAYAMSARI MARKET, SEMARANG**” contains no work that ever proposed to acquire a bachelorship title in a University, and along to my knowledge, there is no work ever written or published by others, except the ones used as references in this thesis and mentioned in the list of references.

If it is proven in the future that partially or whole thesis is the result of plagiarism, therefore I will be willing to be revoked with all the consequences in accordance with the law and regulations applied at Seogijapranata Catholic University and/or valid law and regulations.

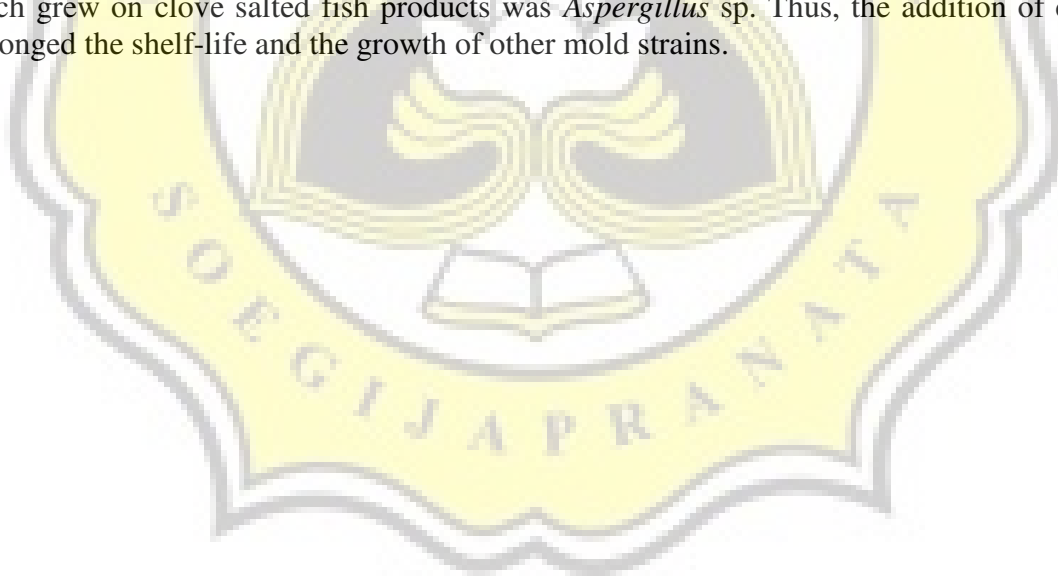
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SUMMARY

Dried salted fish products found on the traditional markets generally didn't meet the standard quality as there are minimum effort placed in order to suppress the production cost. The growth of molds was constantly prevented by redrying products everyday. However, this method can't be done on rainy season which causes product shortage. In order to prevent the growth of molds on dried salted fish, spices extract were added to the brine solution. Spice extracts were efficient to prevent the growth of molds. The products were not redried throughout the study in order to replicate the condition during rainy season. The growth of molds on products were observed by noting the time of molds appearance after the display and the strains of molds which grew on the products. The spices extracts used were clove and coriander water on 5%, 10%, and 15% concentrations. The treatments were also divided by salt addition. The controlled samples were salted fish products, dried fish products, and commercial products. The research consists of preliminary study that determines the time of drying on Solar Tunnel Dryer (STD), the spice used in this research, and the concentration of the spice selected. On the main study, the products were displayed on Gayamsari traditional market and observed every 7 days. The growth of molds were observed organoleptically and by Total Plate Count (TPC). Other factors which might support the growth of molds such as water content and water activity were also studied. After the research, it was concluded that the best spice for the product was clove on 15% concentration. The controlled samples and clove dried fish were overgrown by molds after merely days. The best result was achieved by clove salted products which were overgrown by molds after 28 days. of display. The mold strains found on controlled samples were *Mucor* sp and *Aspergillus* sp. Meanwhile, the only mold strain which grew on clove salted fish products was *Aspergillus* sp. Thus, the addition of clove prolonged the shelf-life and the growth of other mold strains.



RINGKASAN

*Produk ikan asin kering pada umumnya tidak memenuhi standard kualitas yang ada karena rendahnya proses pengolahan untuk menekan biaya produksi. Pertumbuhan kapang pada produk dicegah dengan penjemuran produk setiap harinya. Namun, metode ini tidak dapat dilakukan pada saat musim hujan, sehingga terjadi kelangkaan produk pada musim hujan. Untuk menghambat pertumbuhan jamur pada produk ikan asin, ekstrak rempah-rempah ditambahkan pada larutan garam yang digunakan pada pembuatan ikan asin. Rempah-rempah telah terbukti dapat menghalangi pertumbuhan kapang. Selama penelitian, produk tidak dijemur untuk mereplikasi kondisi pada saat musim hujan. Pertumbuhan kapang diamati dengan pengamatan hari tumbuhnya kapang pada produk setelah pemaparan di pasar dan jenis kapang yang tumbuh pada produk. Rempah yang digunakan pada penelitian ini adalah cengkeh dan ketumbar pada konsentrasi 5%, 10%, dan 15%. Selain itu, sampel juga dibagi berdasarkan penambahan garam pada produk. Sampel yang digunakan sebagai kontrol adalah ikan asin yang dibuat dengan metode pasar, ikan kering, dan ikan asin produk komersial. Penelitian ini terdiri dari uji pendahuluan yang berfungsi menentukan lama pengeringan ikan pada Solar Tunnel Dryer (STD), jenis rempah, dan konsentrasi rempah yang digunakan. Pada uji utama, seluruh sampel diletakkan pada pasar Gayamsari dan diamati setiap 7 hari. Pertumbuhan kapang diamati secara organoleptik dan dengan metode Total Plate Count (TPC). Faktor lain yang dapat mempengaruhi pertumbuhan kapang seperti kadar air dan aktivitas air juga diamati. Dari hasil penelitian, diperoleh hasil dimana rempah yang terbaik merupakan cengkeh konsentrasi 15%. Seluruh sampel kontrol dan ikan cengkeh kering ditumbuhi oleh kapang setelah 7 hari pemaparan. Hasil terbaik terlihat pada produk ikan cengkeh asin dimana produk tersebut ditumbuhi oleh kapang setelah 28 hari pemaparan. Jenis kapang yang tumbuh pada sampel kontrol adalah *Mucor sp* dan *Aspergillus sp*. Pada produk ikan cengkeh asin, hanya ditemukan *Aspergillus sp*. Sehingga dapat disimpulkan, penambahan cengkeh memperpanjang umur simpan dan menghambat pertumbuhan kapang jenis lainnya.*

PREFACE

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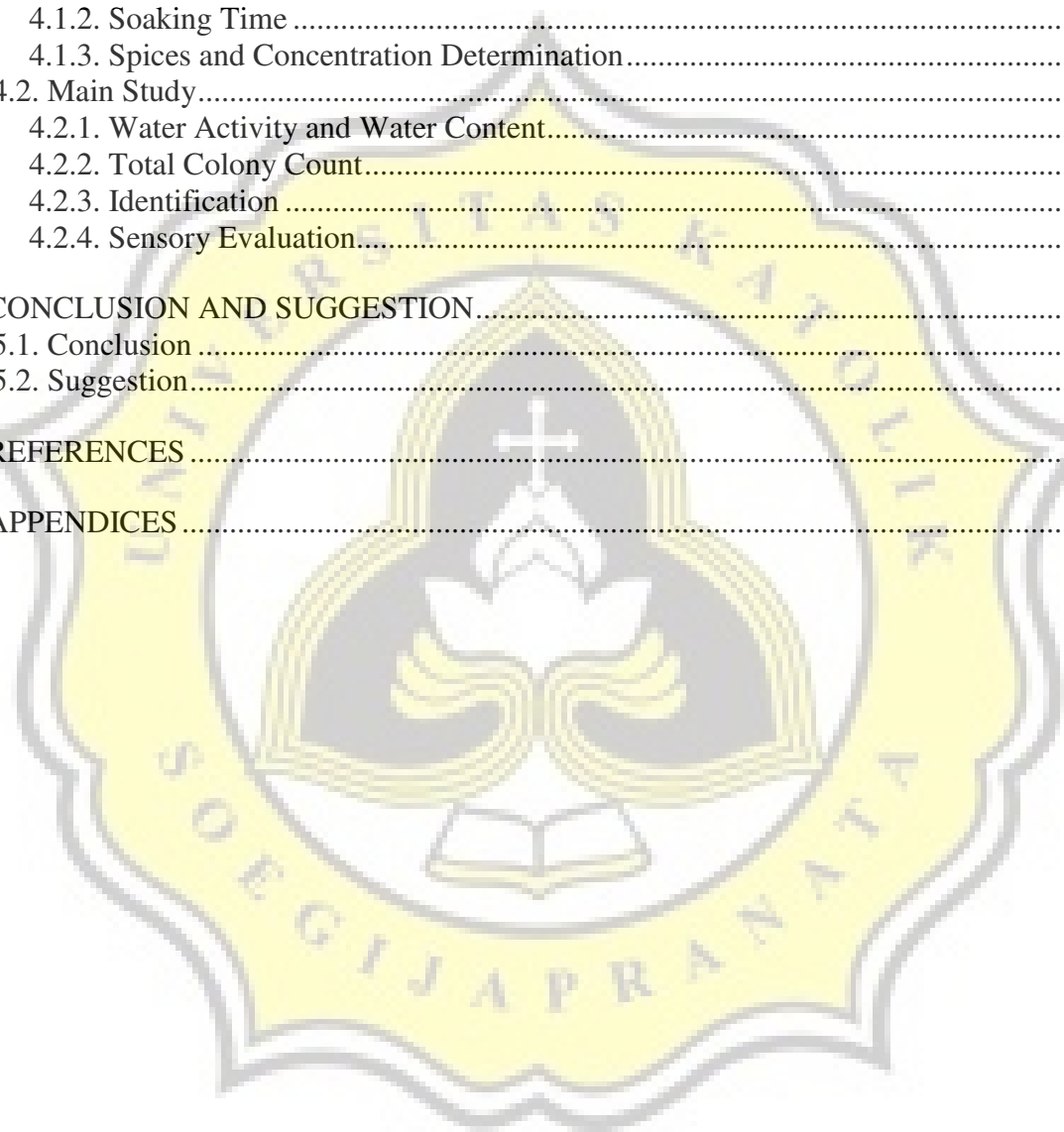
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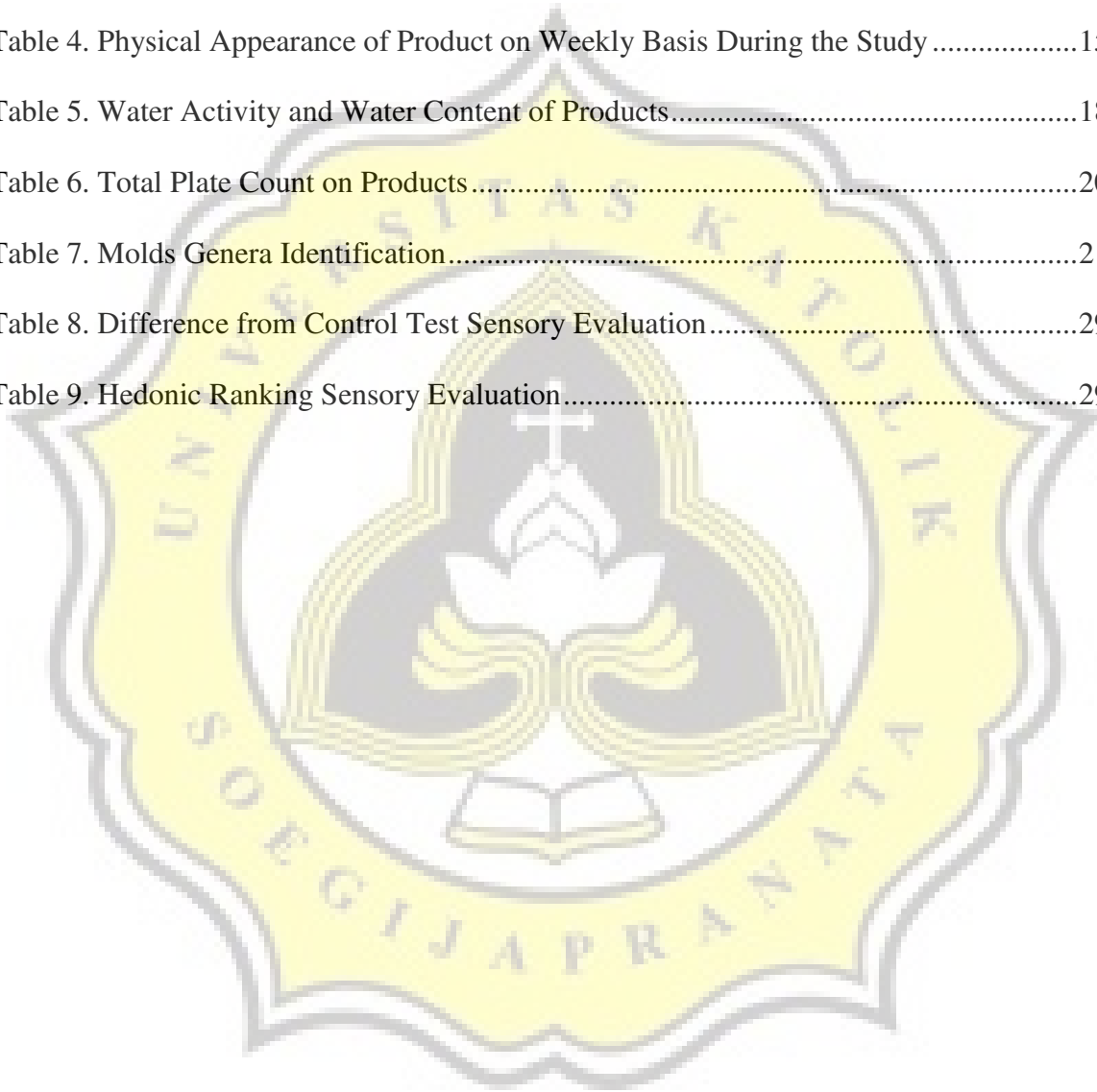
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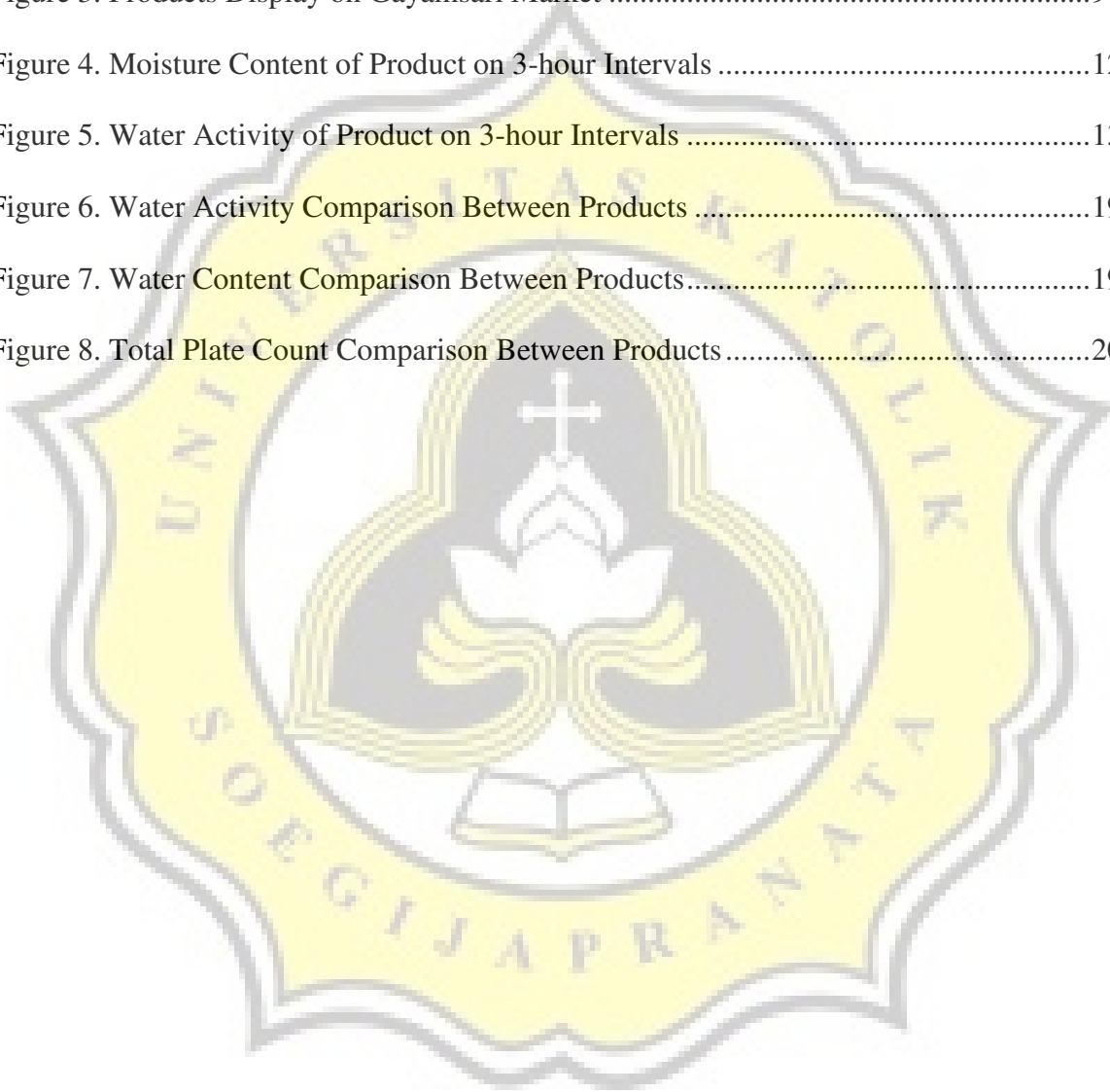
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