

**A LITERATURE REVIEW OF THE FUNCTION OF RHIZOMES IN  
INDONESIAN SEASONING AND ITS HEALTH BENEFITS**

**KAJIAN PUSTAKA FUNGSI RIMPANG PADA BUMBU  
MASAKAN INDONESIA DAN MANFAAT KESEHATAN**

**BACHELOR THESIS**

Submitted to Faculty of Agricultural Technology as partial fulfillment of  
the requirements for obtaining the Bachelor Degree

**By:**

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**DEPARTMENT OF FOOD TECHNOLOGY  
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SEMARANG**

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

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## **PERNYATAAN KEASLIAN SKRIPSI**

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Menyatakan bahwa skripsi "A LITERATURE REVIEW OF THE FUNCTION OF RHIZOMES IN INDONESIAN SEASONING AND ITS HEALTH BENEFITS" merupakan karya saya dan di dalamnya tidak terdapat karya orang lain yang pernah diajukan untuk memperoleh gelar kesarjanaan di suatu perguruan tinggi. Sepanjang pengetahuan saya juga tidak terdapat karya atau pendapat yang pernah ditulis atau diterbitkan oleh orang lain, kecuali secara tertulis diacu dalam naskah ini dan disebutkan dalam daftar pustaka. Apabila saya tidak jujur, maka gelar ijazah yang saya peroleh dinyatakan batal dan akan saya kembalikan pada Universitas Katolik Soegijapranata Semarang.

Demikian pernyataan ini saya buat dan dapat dipergunakan sebagaimana mestinya.

Semarang, Juli 2015

Fadilla Faradian

## SUMMARY

The unique characteristics of Indonesian cuisine is due to the use of herbs and spices mixture. One material often used is rhizomes, there are some popular rhizomes used in Indonesia such as ginger, greater galangal, turmeric, finger root, and galangal. People mostly use this rhizome only for adding flavor (taste and aroma) in food, but rhizomes also have another benefit. The purpose of this study is to present an overview of the literature relates to the function of the rhizomes as flavoring agents in seasoning, natural coloring agents, and food preservative agents, as well as health benefit function. The rhizomes is usually used for cooking, hence the effect of heat treatment on the antioxidant activity, total phenolic and total flavonoid of rhizomes are also important to be studied in this research. The volatile and non-volatile compounds in each rhizome give specific and unique flavor (aroma and taste). These characteristics are important for seasoning. The rhizomes also can act as a natural coloring agent, e.g. turmeric, which contributes to the yellow-orange color. Many researchers also proof that rhizomes can be use as natural food preservative agents. Another important function of rhizomes is the health benefits. In some pharmaceutical research, rhizomes extract are proofed as preventing and curing agents for treating some diseases, this function also related to the antioxidant activity. The chemical analysis showed that rhizome has high antioxidant activity, which is does not denature by heating, as well as the phenolic and flavonoid content of all rhizomes studied. The heating treatment could increase those all chemical characteristics.

*Keywords: Rhizome, seasoning, flavor, preservative, health benefits*

## RINGKASAN

Keunikan dan keistimewaan rasa masakan Indonesia berasal dari penggunaan rempah-rempah yang beraneka macam di berbagai wilayah Indonesia. Salah satu rempah yang sering digunakan adalah rimpang-rimpangan, yaitu jahe, lengkuas, kunyit, temu kunci, dan kencur. Rimpang biasanya digunakan sebagai bumbu masakan untuk menambah rasa dan aroma, tetapi rimpang juga memiliki banyak fungsi lainnya. Tujuan dari penelitian ini adalah untuk mengkaji mengenai fungsi dari rimpang sebagai bahan penyedap (rasa dan aroma) dalam bumbu masakan Indonesia, serta fungsi lain yaitu sebagai pewarna, bahan pengawet makanan, serta peranannya untuk kesehatan. Konsumsi rimpang setelah dipanaskan akan mempengaruhi komponen bioaktif dalam rimpang, untuk itu dalam penelitian ini juga meneliti mengenai total phenolik, total flavonoid, dan aktivitas antioksidan pada rimpang setelah diberi pemanasan. Pada hasil pengkajian tentang fungsi dari rimpang dalam bumbu masakan, diketahui bahwa kandungan volatil dan non-volatile dalam rimpang memberikan aroma dan rasa yang spesifik serta unik pada setiap rimpang. Rimpang juga dapat bertindak sebagai zat pewarna alami, contohnya kunyit dengan warna kuning-oranyenya. Berbagai penelitian juga telah membuktikan bahwa rimpang dapat menjadi bahan pengawet alami. Fungsi lain yang juga penting adalah manfaat rimpang bagi kesehatan, dalam berbagai penelitian diketahui rimpang dapat mencegah dan menyembuhkan berbagai penyakit. Hasil ini didukung dengan hasil penelitian laboratorium yang menunjukkan rimpang mengandung total phenol, flavonoid dan aktivitas antioksidan yang tinggi, dimana dengan pemanasan akan meningkatkan kandungan antioksidannya secara signifikan.

*Keywords:* *Rimpang, bumbu, rasa&aroma, kesehatan, pengawet*

## PREFACE

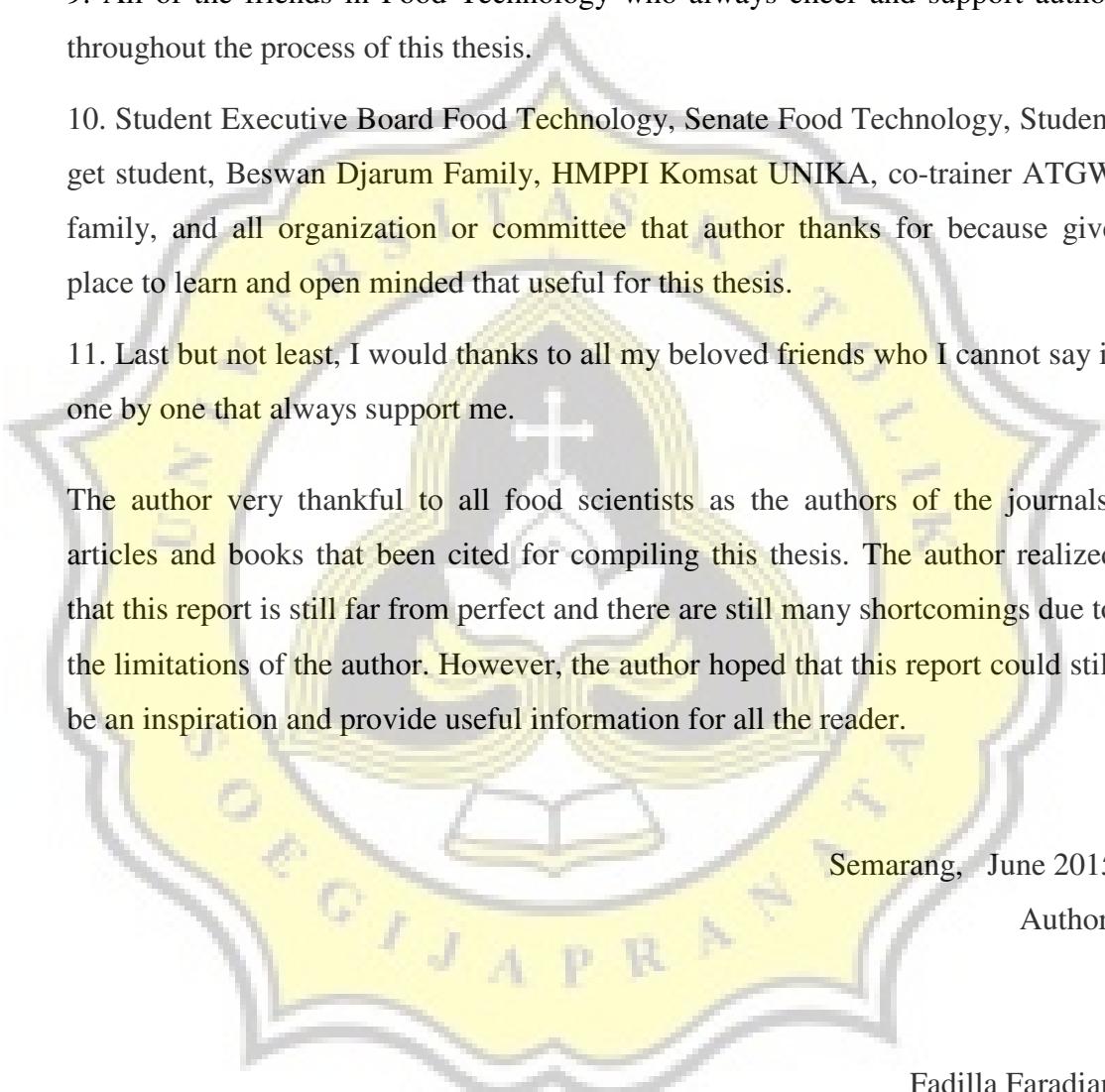
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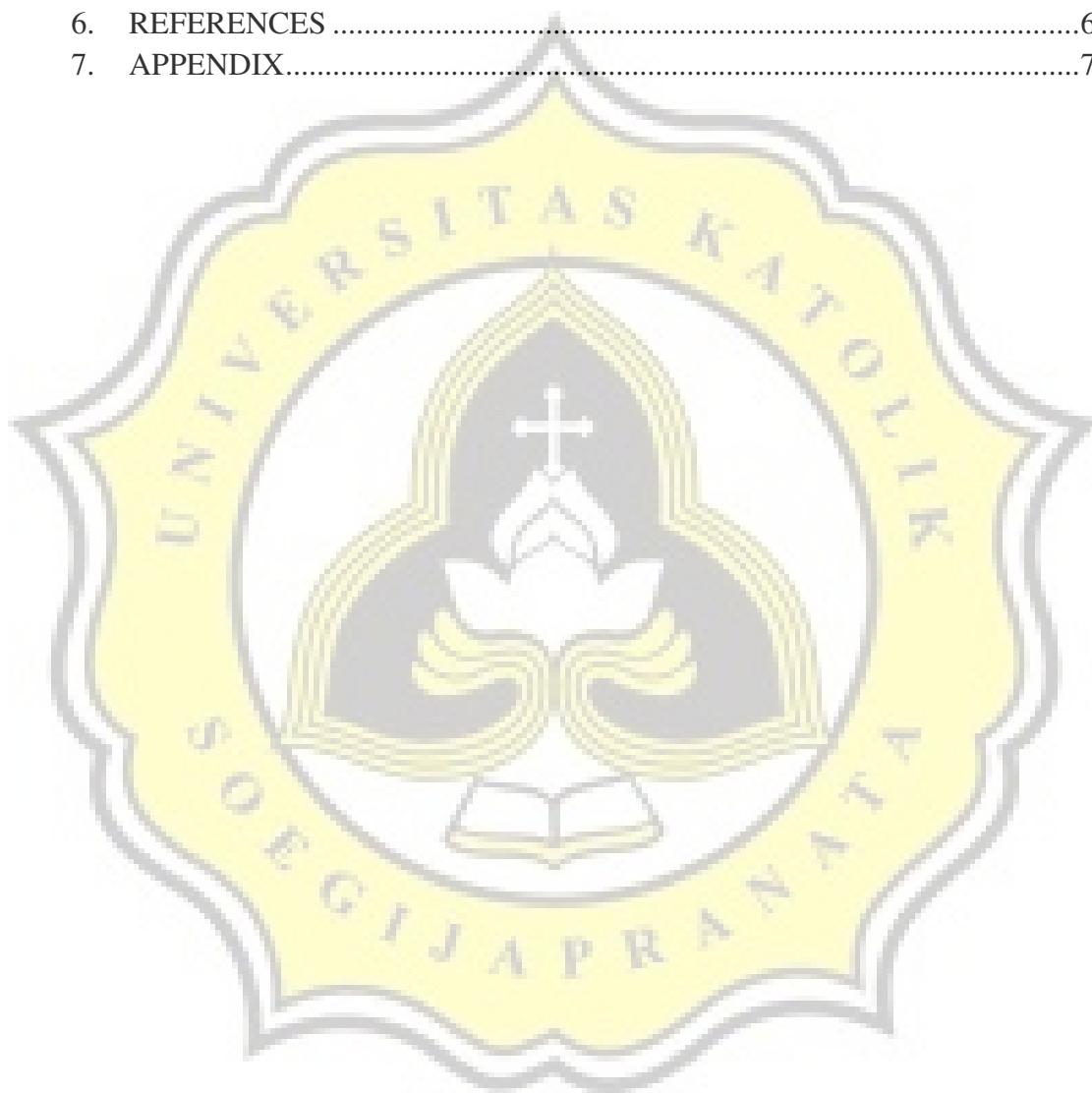
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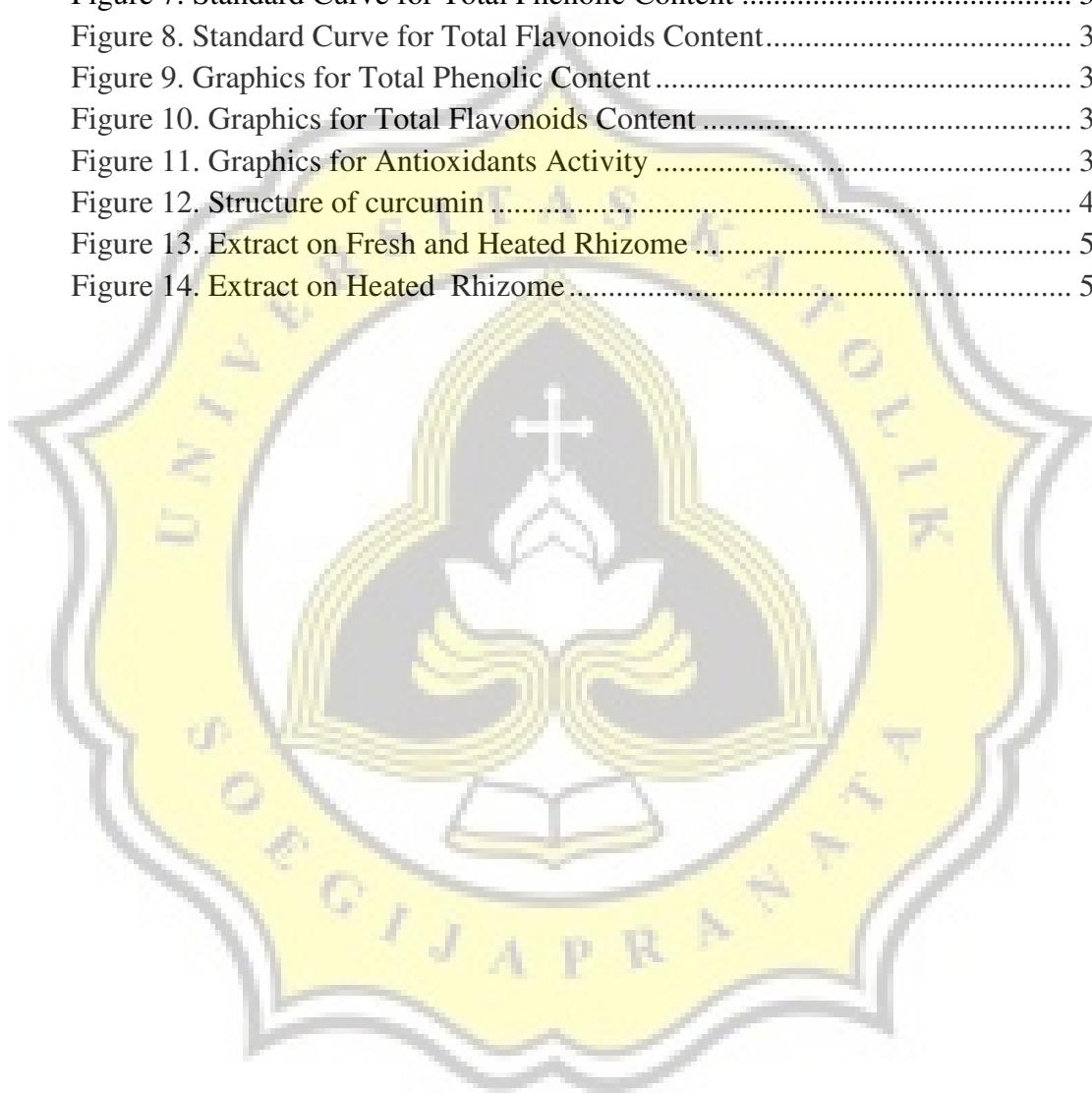


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