

**APPLICATION OF MINT OIL AS AN ANTIMICROBIAL AGENT IN
HOMEMADE MAYONNAISE**

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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 or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

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The essential oil extract of *Mentha arvensis* and *Mentha piperita* from Lembang, West Java, Indonesia were analyzed for their antimicrobial activity in direct application and homemade mayonnaise. The antimicrobial activity was assessed using disk diffusion analysis for qualitative observation of the activity of the extract against *Salmonella sp.* The result was showing the activity of *Mentha sp.* essential oil extract to inhibit the growth of *Salmonella sp.*, where the clear zone diameter was increase proportionally with the oil concentration. The quantitative antimicrobial analysis was performed using macro broth dilution assay, which was followed by determination of minimum bactericidal concentration. Essential oil extract of *Mentha arvensis* was showing better antimicrobial activity in killing *Salmonella sp.*, where the minimum concentration required to kill the pathogen was 0.2929% and the minimum concentration required by essential oil extract of *Mentha piperita* was 0.3906%. Cornmint oil, the oil extract of *Mentha arvensis*, was applied in mayonnaise as it possessed the best antimicrobial activity. TPC was conducted for 14 days at 4°C storage temperature. The TPC results of total bacteria and *Salmonella sp.* were showing no preservative ability of cornmint oil in homemade mayonnaise.

Keywords: *Essential oils, Mentha sp., mayonnaise, antimicrobial, Salmonella sp.*



DEDICATION

I dedicate my work for The Lord and my family.



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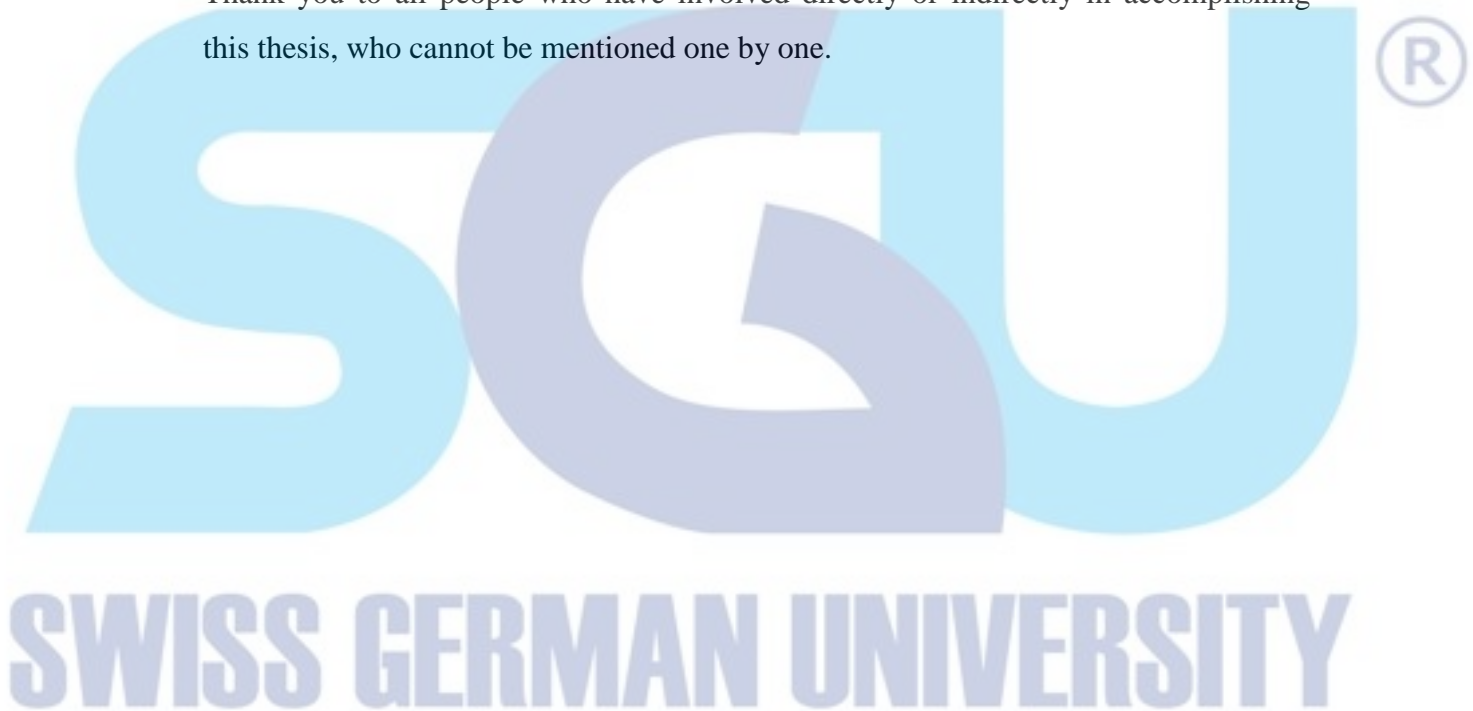


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