DETERMINATION OF OPTIMUM TEMPERATURE AND RATIO OF DRIED *TEMULAWAK* EXTRACTION USING WATER FOR HYGIENIC *JAMU CEKOK* PRODUCTION

By

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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

DETERMINATION OF OPTIMUM TEMPERATURE AND RATIO OF DRIED *TEMULAWAK* EXTRACTION USING WATER FOR HYGIENIC *JAMU CEKOK* PRODUCTION

By

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Jamu cekok is a traditional herbal medicine, which is given by force into the throat of toddlers and it is originated from Yogyakarta, Central Java. One of the main ingredients is *Temulawak* (*Curcuma xanthorrhiza)*, which has been used for treating appetite problem on toddlers. The active compound of *temulawak,* which are curcumin and xanthorrhizol, is known to be promoting its functional benefits. However, the utilization or preparation of *jamu cekok* remains to be in traditional way and commonly done in unhygienic method (using the same handkerchief for treating several patients). In this research, *temulawak* was extracted hygienically using water as solvent at various temperature (50°C, 75°C, 100°C) and various solvent to mass ratio (10:5, 10:2, 10:1) with responses of curcumin content, microbial growth, and xanthorrhizol content. The results had shown in higher curcumin content in drying temperature of 50°C, high extraction temperature (100°C) and 10:2 ratio and lower microbial content in higher extraction temperature (100°C) and higher xanthorrhizol content at 50°C.

Keywords: Curcumin, Jamu cekok, Microbial Growth, Temulawak, Xanthorrhizol

DEDICATION

To my beloved parents;

To my beloved brother and sister;

To those who have always been there and supported me;

And to the better nutrition of my beloved country, Indonesia;

This thesis work is dedicated for you.

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