

**EFFECT OF MIXING DIFFERENT SUBSTANCES TO THE REDUCTION
OF OMEGA CONTENT IN CANDLENUT OIL AND APPLICATION ON
YOGHURT DRINK**

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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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Essential oil helps to promote health. This type of oil needs to be extracted from plants since human body cannot produce it. In Indonesia, they are imported and having high cost. A more affordable is needed so that it can be easily obtained and cost relatively cheaper. Candlenut is a potential essential oil source where it contains approximately 60% of oil with the content of omega-3, omega-6 and omega-9. In the application of candlenut oil into food products, the omega content was highly reduced. Also in Tjhin (2014) stated that it was stable under heat treatment up to 170°C. The suspected factor that become the aims to obtain the interaction effect of other substances to the omega content of candlenut oil, where the candlenut oil was mixed with milk and water as they are the most common ingredients in the previous researches. Also yoghurt drink was produced as a product that mainly made up of water and milk. The extracted candlenut oil by cold expeller press extraction has the percentage yield ml oil/g kernels of 16.0% with the amount of 26,135.9mg/100g omega-3, 40,009.3mg/100g omega-6 and 24,308.5mg/100g. It was also known that milk and water does have an effect to the omega content of candlenut oil. The highest reduction was omega-3 as it has the highest amount of double bonds in the chemical structure. The candlenut oil yoghurt drink with 1% concentration of candlenut oil was the most preferred product and has fulfilled the requirements of the Indonesian National Standard (SNI) in regulation of SNI 7552:2009.

Keywords: Candlenut oil, Omega Content, Milk, Water, Yoghurt drink.



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DEDICATION

This work is dedicated to God, my beloved mother, advisor and co-advisor.

This research is also dedicated to everyone interested in this topic.



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