

STABILITY EVALUATION OF CANDLENUT OIL CAPSULE

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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**STABILITY EVALUATION OF CANDLENUT OIL CAPSULE**

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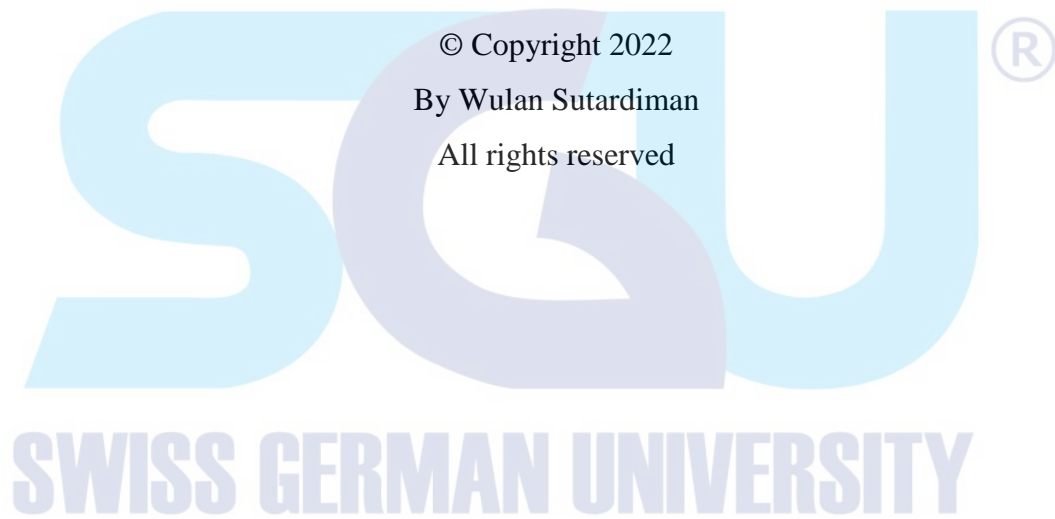
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Candlenut oil is a promising source of omega, it contains up to 90% of omega fatty acids. Due to its being rich in unsaturated fatty acids, the susceptibility of oxidation increases. In order to prevent the omega fatty acids degradation in candlenut oil, it is inserted into capsule as a food supplement product. The best capsule material, opacity, and storage condition to preserve candlenut oil quality were studied. Three factors, capsule material, opacity, and storage temperature were varied during this study, the capsules were gelatine based and seaweed based. The capsule opacity was classified into coloured and transparent capsule. The storage condition was differ in temperature, cool temperature (RH 33%, $\pm 8^{\circ}\text{C}$), and room temperature (RH 65%, $\pm 28^{\circ}\text{C}$). The best capsule material and optimum storing temperature of candlenut oil capsule were evaluated based on three parameters, such as disintegration time, iodine value analysis, and omega content analysis. There is no significant difference in disintegration time of both capsules, disintegration time of gelatine based and seaweed based capsule are 5.8 and 5.78 minutes, respectively. Both gelatine and seaweed capsule are capable of preventing omega degradation. It is recommended to store the capsule in cool temperature.

Keywords: Candlenut Oil, Omega Degradation, Omega Fatty Acid, Omega Food Supplement, Oxidative Stability.



DEDICATION

I dedicate this works for my parents, friends, and to my country, Indonesia.



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