



ABSTRACT

The use of *Spirulina platensis* can increase the beta-carotene level in crackers produced. The result showed that the variation percentage of *Spirulina platensis* had significant effect on beta-carotene level in crackers, based on its UV-Vis Spectra. The highest level of beta-carotene was 4897,21 IU in crackers with 40% of *Spirulina platensis*. In addition, *Spirulina platensis* can also decrease the hardness level of cracker, based on its Llyod Texture Analyzer. The hardness level of crackers decrease with increasing the percentage of *Spirulina platensis*.

CRACKERS MAKING PROCESS



Mixing Dough



Dough



Forming I



Forming II



Crackers *Spirulina platensis*

BACKGROUND

1. Beta-carotene has a good functions as provitamin A for body health.
2. In wheat, which is the main ingredient of bakery product included crackers, beta-carotene is present in only trace amount
3. *Spirulina platensis* is a blue-green microalgae which is rich in beta-carotene

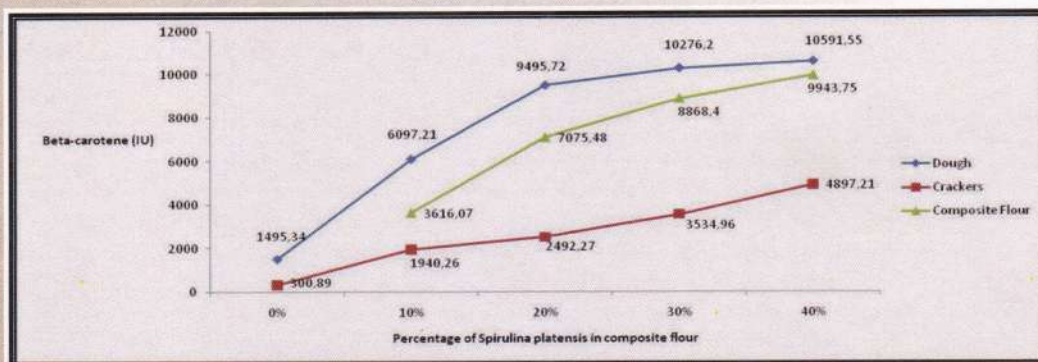
OBJECTIVE

The aim of this study was to know the influence of composite flour through the use of *Spirulina platensis* and wheat on beta-carotene level in crackers produced.

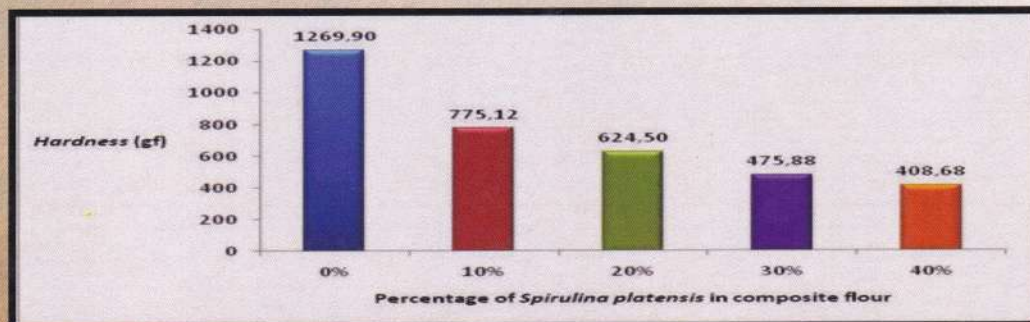
RESULTS



Picture 1. Dry *Spirulina platensis*



Picture 2. Beta-carotene level



Picture 3. Hardness of crackers

CONCLUSION

Use of *Spirulina platensis* given significant effect on beta-carotene and hardness level in crackers product. Increasing the percentage of *Spirulina platensis* made the increasing of beta-carotene level and decreasing the hardness level.

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International Food Conference 2011

“Life Improvement through Food Technology”

Surabaya, October 28th - 29th, 2011



Organized by:

**Faculty of Agricultural Technology
Widya Mandala Catholic University Surabaya
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INTRODUCTION

Healthy and high quality, acceptable foods will improve the quality of life in general, but they need the appropriate technology to produce. The development of food technology allows the growth of not only large-scale food industries but also home industries. It will give positive impacts to the welfare of society. That is why this conference will focus on the theme of Life Improvement through Food Technology.

The development of food technology and its application can't be separated from the role of various parties such as researchers, academicians, industrialists, and the government as policy makers. At the 25th anniversary of Food Technology Department of Agricultural Technology Faculty-Widya Mandala Surabaya Catholic University organize The International Food Conference to bring all parties together in order to contribute to the life improvement internationally through the dissemination and discussion of research results and their application for human health and well-being. In general, the problems can be classified in to four groups: development of food processing and engineering; availability of health and safe food, and functional food that support human health; and effectiveness of food marketing and management; so the technical session will be clustered based on those subject.

Various speakers from inside and outside of the country those have expertise in food technology field which related to life improvement will be present as keynote speakers. It is expected the conference will be able to strengthen the networking among the international and national partners and all industry partners to improve the quality of life. Hopefully this conference will be meaningful for all parties involved.

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Crackers with Highly Content of Beta-Karoten from *Spirulina Platensis***Marsela Arisa Shanty^{1*}, Rika Pratiwi¹, Inneke Hantoro²**¹Department of Food Technology, Soegijapranata Catholic University, Semarang

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Abstract

Beta-carotene has a good functions as provitamin A for body health. In wheat, which is the main ingredient of bakery product included crackers, beta-carotene is present in only trace amount. Beta-carotene usually added through the use of ingredients such as butter and eggs. But, that fortification not contribute significant amount of beta-carotene to our diet. So, we have to do innovation to increase the beta-carotene level in crackers product. *Spirulina platensis* is a blue-green microalgae which is rich in beta-carotene and had the same flavor with seaweed. Thus, appropriate for crackers product, which is had salty flavour. The aim of this study was to know the influence of composite flour through the use of *Spirulina platensis* and wheat on beta-carotene level in crackers produced. The experiment held with five variable percentage of *Spirulina platensis* in 100 gr of composite flour (0%; 10%; 20%; 30%; 40%). Beta-carotene level was determined by UV-Vis Spectrofotometry with 436 nm in wavelength. The result showed that the variation of composite flour had significant effect on beta-carotene level in crackers produced. The result of beta-carotene from the highest to the lowest percentage of *Spirulina platensis* alternately 4897,21 IU; 3534,96 IU; 2492,27 IU; 1940,26 IU and 300,89 IU.

Keywords: *Spirulina platensis*, beta-caroten, crackers, composite flour