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Confirmed Speaker

Tuesday, 06 September 2010 00:00

Speakers who have confirmed for PATPI International Seminar:

- A.S. Babji —Universiti Kebangsaan Malaysia, Malaysia
- Abu Amar —Institute Technology Indonesia, Indonesia
- Adi Hariono —PT Djasula Wangi, Indonesia
- Anton Rahmadi —Mulawarman University, Indonesia
- Asep Edi Kusnadi —Pasundan University, Indonesia
- Azis B. Sitanggang —Pelita Harapan University, Indonesia
- Bernatal Saragih —Mulawarman University, Indonesia
- Betty SL Jenie —Bogor Agricultural University, Indonesia
- Carmencita Tjahjadi —Padjajaran University, Indonesia
- Dahrul Syah —Bogor Agricultural University, Indonesia
- Darunee Edward —National Center for Genetic Engineering and Biotechnology, Thailand
• Marty Panganiban —PAFT
• Maruli Pandjaitan —Swiss German University, Indonesia
• Mary Astuti —Gadjah Mada University, Indonesia
• Melanie Cornelia —Pelita Harapan University, Indonesia
• Mery TD. Ambaria —Pelita Harapan University
• Mira Miranti —Padjajaran University, Indonesia
• Muhammad Assagaf —BPTP North Maluku, Indonesia
• Murhadi —Lampung University, Indonesia
• Mutiara Nugraheni —Yogyakarta State University, Indonesia
• Neti Yuliana —Lampung University, Indonesia
• Nik Ismail Nik Daud —Universiti Kebangsaan Malaysia, Malaysia
• Nugraha E. Suyatma —Bogor Agricultural University, Indonesia
• Nur Aini —Soedirman University, Indonesia
• Nur Wulandari —Bogor Agricultural University, Indonesia
• Nuri Andarwulan —Bogor Agricultural University, Indonesia
• Nurul Huda —Universiti Sains Malaysia, Malaysia
• Phan The Dong —Nong Lam University Ho Chi Minh City, Vietnam
• Posman Siboea —Katolik Santo Thomas University, Indonesia
• Purnama Darmadji —Gadjah Mada University, Indonesia
• Purwiyatno Hariyadi —Bogor Agricultural University, Indonesia
Bogor, 18 February 2013

To:
Melanie Cornelia
Pelita Harapan University, Indonesia

Dear author,

Your manuscript entitled “The effect of adding angkak into soybean for tempeh preparation: study of statin and texture” has been reviewed by the Scientific Program Committee of International Conference on Future of Food Factors. Based on our recommendations, we are delighted to inform you that your manuscript is going to be published in the Conference Proceeding. If you agree to publish your manuscript in the Conference Proceeding:

1. Please sign the letter of consent to publish article (attached) and send it back to us via email: seafast@ipb.ac.id (Cc: destygitapratwi@gmail.com) no later than February 25, 2013.

2. Your manuscript might have editorial revised by the Committee without changing the substance of the article itself.

3. The Conference Proceeding will be published within 3 months from now.

Thank you very much for your consent to publish your work in our Conference Proceeding.

Yours sincerely,

Dr. Harsi D. Kusumaningrum
Scientific Program Chair
International Conference on Future of Food Factors

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THE EFFECT OF ADDING ANGKAK INTO SOYBEAN FOR TEMPEH PREPARATION :
STUDY OF STATIN AND TEXTURE

Melanie Cornelia, Leonardus Broto S. Kardono, Allen Agatha

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Lippo Village, Tangerang Indonesia
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ABSTRACT

Tempeh is a highly nutritious fermented food traditionally made from soybeans and
typically made by cooking and dehulling soybeans, inoculating them with a culturing agent
(Rhizopus oligosporus), and then incubating the inoculated product overnight until it forms
a solid cake. Tempeh provides not only the protein found in soybeans but their many other
health benefits as well like anticholesterol, dietary fiber and fitostero. Angkak or dried
grain red yeast rice, is a bright reddish purple fermented rice which acquires its color as
white rice is cultivated with the mold Monascus purpureus. Red yeast rice naturally
contains lovastatin. Statin is a secondary metabolite of angkak, was also reported having
anticholesterol. This research has been performed for preparation tempeh as a functional
food. The angkak used was in grain and powder. Preliminary ratio of angkak and soy
concentration were 100:0%, 80:20%, 60:40%, 50:50%, 45:50%, 40:60%,
20:80%, and 0:100%. The best ratio of angkak and soy concentration was 50:50%.
Tempeh with 50:50% ratio was further analyzed for color analysis, pH, and also statin
amount during the fermentation time. After all the process, the final product of tempeh were
analyzed for the texture, proximate, crude fiber, dietary fiber, total microbe, salmonella, and
coliform. The statin content, pH, and color were affected by the fermentation time. Adding
angkak gave some effect on texture, dietary fiber, crude fiber, proximate, and total amount
of microbe.

Keywords: tempeh, angkak, statin

INTRODUCTION

Tempeh is a traditional soybean product originally from Indonesia and most people
favored tempeh which is made by a natural culturing and controlled fermentation process
that binds soybeans into a cake form. Tempeh’s fermentation process and its retention of
the whole bean give it a higher content of protein, dietary fiber, and vitamins. According to
National Standardization Agency of Indonesia, production of tempeh in Indonesia is
1,179,678.240 ton per year (BSN, March 2012). This figure informed that Indonesia is a
country which have big tempeh production per year. Angkak (red yeast rice) is a food that
is also derived from the fermentation of rice with Monascus purpureus. The fermentation
process will produce a red pigment that can usually be used as a natural dye. Angkak
usually applied in the medical world that is often used as a drug, which is anti-cholesterol
drugs, drugs for dengue fever and others. Some examples of food products that have used
the red dye is red yeast rice wine, cheese, vegetables, fish paste, fish sauce, alcoholic
beverages, cakes, and processed meat products (sausages, ham, corned beef).
THE EFFECT OF ADDING ANGKAK INTO SOYBEAN FOR TEMPEH PREPARATION: STUDY OF STATIN AND TEXTURE

Melanie Cornelia1) Leonardus Broto S. Kardono1) , Allen Agatha2)

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2) Alumnus Food of Technology Universitas Pelita Harapan, Jl. MH. Thamrin Boulevard 1100, Lippo Village, Tangerang Indonesia

ABSTRACT

Tempeh is a common Indonesian traditional fermented food which was consumed by many people. Tempeh was reported having anticholesterol activity, dietary fiber and fitosterol for human health. Statin was a secondary metabolite of angkak also reported having anticholesterol. Angkak was derived from fermentation of rice by Monascus purpureus produced a red pigment used as a natural dye and applied in medical as anticholesterol. This research has been performed for preparation tempeh as a functional food with addition angkak in grain and powder type. Preliminary research ratio of angkak and soy concentration were 100%:0%, 80%:20%, 60%:40%, 50%:50%, 45%:50%, 40%:60%, 20%:80%, and 0%:100%. The best ratio was 50%:50% in term of the highest statin content. Tempeh with 50%:50% ratio was further analyzed for colour, pH, and statin by GCMS qualitatively and Spectrophotometer quantitatively during the fermentation time. The statin content, pH, and colour increased by fermentation time while angkak in grain type had a bigger statin content (623.63 ppm) than powder (460.50 ppm). The final product of tempeh were analyzed for the texture, proximate, crude fiber, dietary fiber, total microba, salmonella, and coliform content. Addition angkak gave some effect in texture, dietary fiber, crude fiber, proximate, and total amount of microba.

Keywords: tempeh, angkak, statin