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abstract book FAIZA A. DALI

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IBOC INTERNATIONAL BIOLOGY CONFERENCE
10th
KOREA - ASEAN BIOMASS SYMPOSIUM 2016

Biodiversity and biotechnology for human welfare

October 15th, 2016
ITS Campus - Surabaya, Indonesia

hosted by

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Department of Biology
Faculty of Mathematic and Natural Sciences
Institut Teknologi Sepuluh Nopember

Kampus ITS Sukolilo
Jl. A.R. Hakim, Keputih, Sukolilo, Surabaya 60111 – Indonesia
www.bio.its.ac.id

PREFACE

We would like to thank God for the blessing since the joint 3rd International Biology Conference (IBOC) and 10th Korea-ASEAN Biomass Symposium could be held in 15th October 2016 by The Biology Department of Institut Teknologi Sepuluh Nopember (ITS). This conference is purposed to build a promising international networking between our department and international institutions which have a similar biological interest for saving the environment and enhancing human welfare, as the theme of conference is 'Biodiversity and Biotechnology for Human Welfare'.

Through the conference we would like to achieve many personal contacts, ideas, biological-environmental problem solve sharing and fruitful discussions in order to save the earth together. Therefore we are really grateful and thankful that the participants who are interested to joint with are from Italy, Korea, Thailand, Japan, Singapore, Philippine, Malaysia and Indonesia.

We would like also to thank to the Mathematics and Natural Sciences Faculty and the ITS for supporting the conference. The big remarkable applause is also going to our seminar committee who are giving their excellent hands for keeping the conference running on schedule.

Last but not least, we have a big hope that a real excellent networking in the future may arise from this event.

Thank you and best regards

Surabaya, October 10th 2016
Head of Biology Department
Institut Teknologi Sepuluh Nopember

Dr. Dewi HIDAYATI, M.Si

3rd IBOC INTERNATIONAL BIOLOGY CONFERENCE
10th KOREA - ASEAN 2016 BIOMASS SYMPOSIUM

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3rd IBOC INTERNATIONAL BIOLOGY CONFERENCE
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Microbiological quality of flavoring products based different raw fish and carbohydrate concentration

Faiza Abdurrahim DALI and Rita M HARMAIN

Department of Fisheries Product Technology, Faculty of Fisheries and Marine Science, State University of Gorontalo

Email: vian.dali@gmail.com

Abstract

Research focuses on the microbiological quality of flavoring products made from different raw fish and carbohydrate concentration aims to analyze the effect of different raw fish materials and carbohydrate concentration on microbiologis quality of flavoring, especially with regard to the value of Standard Plate Count (SPC). Raw materials for sampling used in this study are Nike fish (*Awaous melanocephalus*), Manggabai fish (*Glossogobius giuris*), Carborhydrate (rice flour) concentration of 20% and 40%. The method used is an experimental method in laboratory, technical data analysis using quantitative descriptive. Based on the experimental results showed that the quality of microbiological of flavoring is influenced by differences in raw materials of fish and concentrations of carborhydrate, the average value of the highest SPC there are Manggabai fish with a carborhydrate concentration 20% amounting to 1.75×10^3 (cfu/ g) and the lowest average SPC there are Nike fish with a carbohydrate concentration of 20% amounting to 0.60×10^3 (cfu/g). SPC value is still acceptable by SNI 01-4273-1996. Microbiological quality of flavoring shows that Nike fish is the raw material of fish better than Manggabai fish.

Keywords: flavoring, microbiological quality

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MICROBIOLOGICAL QUALITY OF FLAVORING PRODUCTS BASED DIFFERENT RAW FISH AND CARBOHIYRATE CONCENTRATION

Faiza A. Dali [*], Rita M. Harmain
Teknologi Hasil Perikanan, Fakultas Perikanan dan Ilmu Kelautan, Universitas Negeri Gorontalo
[*]Email:vian.dali@gmail.com

ABSTRACT

Research focuses on the microbiological quality of flavoring products made from different raw fish and carbohydrate concentration aims to analyze the effect of different raw fish materials and carbohydrate concentration on microbiologis quality of flavoring, especially with regard to the value of Standard Plate Count (SPC). Raw materials for sampling used in this study are Nike fish (*Awaous melanocephalus*), Manggabai fish (*Glossogobius giuris*), Carborhydrate (rice flour) concentration of 20% and 40%. The method used is an experimental method in laboratory, technical data analysis using quantitative descriptive. Based on the experimental results showed that the quality of microbiological of flavoring is influenced by differences in raw materials of fish and concentrations of carborhydrate, the average value of the highest SPC there are Manggabai fish with a carborhydrate concentration 20% amounting to 1.75 x 10^3 (cfu/ g) and the lowest average SPC there are Nike fish with a carbohydrate concentration of 20% amounting to 0.60 x 10^3 (cfu/g). SPC value is still acceptable by SNI 01-4273-1996. Microbiological quality of flavoring shows that Nike fish is the raw material of fish better than Manggabai fish.

Keywords: flavoring, microbiological quality

INTRODUCTION

Indonesian waters especially Gorontalo have biodiversity including Nike fish and Manggabai fish. Development of fishery products Nike and Manggabai need to be done in order to provide added value to the potential of Gorontalo fishery. Raw flavor made from fresh local fish processed with simple technology is a product that is rarely available in the market. Commonly marketed is instant flavored flavor with the addition of monosodium glutamate. Whereas in terms of potential fish raw materials, especially local fish is quite large, because Indonesia is a maritime country.

Fish fermentation technology is one of the processing by using enzyme or microorganism. Microorganisms grow and develop during the fermentation process by

utilizing raw materials to produce products that have many advantages in nutrition and health (Pawiroharsono, 2007). Yanti and Dali (2013), reported that the results of microorganism analysis in fish fermentation process 'bakasang' found total colonies of bacteria $5.0x10^2$-$1.6x10^5$ CFU/g.

Research focuses on the microbiological quality of flavoring products made from different raw fish and carbohydrate concentration aims to analyze the effect of different fish raw materials and carbohydrate concentration against microbiologis quality or flavor, especially with regard to the value of Standard Plate Count (SPC).

METHODS

The materials used in this study consisted of Nike fish (*Awaous melanocephalus*), Manggabai fish (*Glossogobius giuris*), salt, spices, aluminum foil, alcohol and microbiological materials. Equipment used includes a cool box, scales, incubators, ovens, mills and microbiological glassware.

Based on the research object, the method using experimental approaches in the laboratory, based on characteristics of the population, the sampling method used in raw materials of fish and fish Manggabai Nike, and based linkages with analysis, technical data analysis using quantitative descriptive.

Making the product flavorings using raw materials of fish Nike added salt 15% and Carbohydrates 20% (A), fish Nike added salt 15% and Carbohydrates 40% (B), fish Manggabai added salt 15% and Carbohydrates 20% (C) and fish Manggabai added salt Carbohydrates 15% and 40% (D). Once homogeneous, each sample is fermented for 15 days, then the sample is flavored with cloves, cinnamon, onion, pepper, ginger and tamarind. Furthermore, all samples were dried for 35 hours at a temperature of 90 °C, and then ground and sieved to obtain a powder product. The product obtained is microbiologically tested immediately refers to the procedures SNI 01-2332.3-2006.

RESULTS AND DISCUSSION

In theory microbiological examination of the characteristics of the use of raw materials Fish and carbohydrate concentration (K) is different is to know the value of Standard Plate Count (SPC) from the calculation of the number of bacteria (CFU / g). The results of this analysis adjusted for Quality Standard National Indonesia (SNI 01-4273-1996) on flavorings. Effect of fish raw materials and carbohydrate concentration (K) is different to the microbiological quality characteristics of flavoring products in this research can be described in Table 1.

Table 1. Microbiological Quality Characteristics (CFU / g) Seasonings Sense On Raw Fish and Karborhidrat Different Concentration

Symbol	SAMPLE	Average (cfu/gr)	SNI 01-4273-1996
A	Nike K-20%	0,60	Max 10^4
C	Manggabai K-20%	1,75	
B	Nike K-40%	1,26	
D	Manggabai K-40%	1,56	

Source: Results of the analysis

Based on Table 1, it can be explained that the use of raw materials Fish and concentration of different carbohydrates affect the quality standards Seasonings. Number of bacteria (CFU / g) in raw fish material Nike fish is lower than in the fish raw material Manggabai fish. This means that the value of quality standards flavorings made from raw fish Nike higher than flavoring made from raw fish Manggabai. Based on The figure shows that the microbiological quality standards of raw materials Nike fish better than fish Manggabai for flavoring. In histogram differences in the use of raw materials of different fish against microbiological characteristics (CFU / g) in the flavoring can be shown in Figure 1.

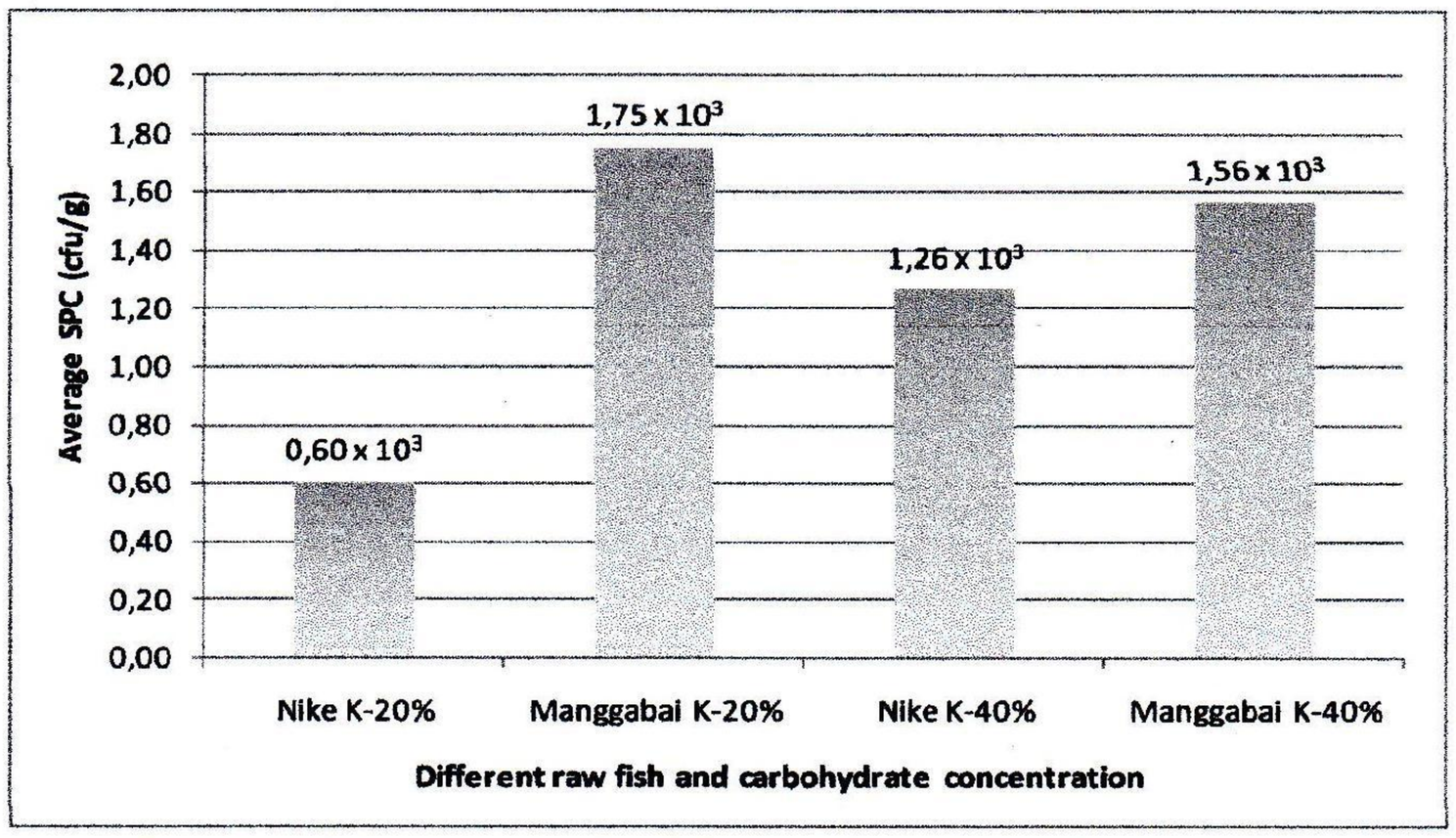

Figure 1. Differences Microbiological Characteristics (CFU / g) of flavoring

CONCLUSION

1. Based on the experimental results, the use of different raw Fish and Carborhydrate concentrations affect the quality standards Seasonings.
2. Four treatments were tested still be accepted by Indonesia National Standard 01-4273-1996. The highest average value SPC there are Manggabai fish with a carbohydrate concentration of 20% and the lowest in Nike fish with a carbohyrate concentration of 20%
3. Based on the results of microbiological observing the number of bacteria (CFU/g) in raw material of Nike fish is lower than the amount of bacteria in raw material of Manggabai fish. This means that the value of quality standards flavorings made from raw Nike fish is higher and better than the flavor made from raw Manggabai fish.

ACKNOWLEDGEMENT

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REFERENCES

Pawiroharsono S. 2007. Potensi Pengembangan Industri dan Bioekonomi Berbasis Makanan Fermentasi Tradisional. *Jurnal Ilmu Kefarmasian Indonesia* 5 (2): 85-91.

SNI 01-2332.3-2006. Cara uji mikrobiologi-Bagian 3: Penentuan angka lempeng total pada produk perikanan. BSN. Jakarta.

Yanti, DIW dan Dali, FA. 2013. Karakterisasi Bakteri Asam Laktat yang Diisolasi selama Fermentasi Bakasang. *Jurnal Pengolahan Hasil Perikanan Indonesia* 16 (2) :132-140.

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CERTIFICATE

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Microbiological quality of flavoring products based different raw fish and carbohydrate concentration

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