KARAKTERISTIK FISIK DAN KIMIA TEPUNG CANGKANG KIJING LOKAL (*Pilsbryoconcha exilis*)

Physical and Chemical Characteristic of Local Mussel Shell Flour (*Pilsbryoconcha exilis*)

Asadatun Abdullah[*], Nurjanah, Yulia Kusuma Wardhani

Departemen Teknologi Hasil Perairan
Fakultas Perikanan dan Ilmu Kelautan IPB

Abstract

Local mussel (*Pilsbryoconcha exilis*) is one aquatic commodity that has high enough potential. Mussel shell is solid waste that has not been used optimally. The purpose of this research is to study the physical and chemical characteristics shells and mussel shell flour with the different of size and body length. The observed parameters include the physical characteristics of shells, yield, chitin, flour yield, degree of white, proximate contents, pH, minerals and mineral solubility determination of mussel shell flour. Mussel obtained from waters Situ Gede has length between 72-103 mm, 31-47 mm high and 13-34 mm thick. Mussel shells in all size contained chitin ranging from 0,72% to 0,75%. Mussel shell flour measuring < 90 mm 20% larger than the size of mussel ≥ 90 mm. Mussel shell flour measuring < 90 mm has a value of 5% degrees whiter than white shell size ≥ 90 mm. Shell flour has a water content between 1,19-1,2%, 93,14-93,34% of ash, 1,85-2,31% of protein, 0,66-0,72% of fat, carbohydrate by difference 2,62-2,94% with a pH range of 8,5-8,9. Mussel shell flour has a mineral content, respectively from the largest which are calcium, phosphorus and magnesium. The calcium and phosphorus mussels flour shell has an optimal value for solubility at pH 2. Mussel shells contained chitin ranged from 0,72% to 0,75%. Mussel shell size difference gave a significantly different effect on the physical characteristics of the mussel shell flour produced but did not influence significantly different to the chemical characteristics of the mussel shell flour produced.

Keywords: mussel shells, mussel shell flour, chemical characteristics, calcium.

[*] Korespondensi: Asadatun Abdullah, Jln. Lingkar Akademik, Kampus IPB Darmaga-Bogor, 16680, email:sasa_thp@yahoo.com

KARAKTERISTIK *COMPOSITE BIOFIBER TEXTILE* BERBAHAN DASAR KITOSAN DAN POLIVINIL ALKOHOL (PVA) MELALUI PROSES PEMINTALAN BASAH

Characteristic Composite Biofiber Textile Made of Chitosan and Polyvinyl Alcohol by Wet Spinning Process

Bambang Riyanto[*], Ruddy Suwandi, Ikhwan Dimas Permana

Departemen Teknologi Hasil Perairan
Fakultas Perikanan dan Ilmu Kelautan Institut Pertanian Bogor

Abstract

The aim of this research is to obtain characteristics of composite biofiber textile prepared using 10% chitosan as base material with addition of polyvinyl alcohol at various levels of 20%, 22%, 24% and 26% (w/v) by wet spinning process. Stages of the study included solution formulation, viscosity solution measurement, wet spnining process and formation the biofiber composite textile, the last measurement of chemical and physical characteristics of biofiber composite textile such as tensile strength, the percentage of elongation at break and fourier transform infrared spectrophotometry (FTIR). The viscosity values of biofiber composite textile solution are 4,08 ± 0,00 cP - 5,43 ± 0,00 cP; the obtained biofiber composite has pale yellow colour with alkali smell and has appearance like rope with diameter for each ranges about 1,60 ± 0,08 mm - 1,50 ± 0,16 mm. The physical characteristics such as tensile strenght was 16,23 ± 2,23 cN - 24,05 ± 0,87 cN and percentage of elongation at break were 15,08 ± 1,04%-18,72 ± 0,93%. Chemical interaction between functional group of chitosan and polyvinyl alcohol indicated by the changes in the value of NH_2 long wave group of chitosan at the peak of spectrophotometric reading.

Keyword : chitosan, composite biofiber textile, polyvinyl alcohol (PVA), wet spinning

[*] Korespondensi: Bambang Riyanto, Jln Lingkar Akademik, Kampus IPB Darmaga-Bogor, 16680
Telp +62251 622915, Fax +62251 622915, email : bambangriyanto_ipb@yahoo.com

PENGGUNAAN KITOSAN SEBAGAI PENGISI DALAM PEMBUATAN SABUN TRANSPARAN

The Utilization of Chitosan as a Filler for Transparency Soap

Bustami Ibrahim[*], Pipih Suptijah, Hijrah Amin

Departemen Teknologi Hasil Perairan
Fakultas Perikanan dan Ilmu Kelautan Institut Pertanian Bogor

Abstract

Chitosan is a natural material extracted from deacetylated chitin of crustacean shell used for many kinds of functions, not only for food but also non food product. The research objective is to find out the effect of chitosan used for filler within transparency soap to the characteristic of physical, chemical and bioeffect of end product, and to find out which concentrate of chitosan will be used for the best product. The research was divided by two steps, pre-research and main research. Pre-research resulted that transparency soap with 5% chitosan was the best choice based on organoleptic test which was the best in toughness, and based on chemical also microbiological analyses. The soap with 5% chitosan has TPC (Total Plate Count) amount to $2.0x10^1$, while the one without chitosan contained TPC $6.5x10^1$. The main research showed that transparency soap with 5% chitosan has better quality compare to commercialized one.

Keywords : chitosan, filler, transparency soap.

[*] Korespondensi: Bustami Ibrahim, Jln. Lingkar Akademik, Kampus IPB Darmaga-Bogor, 16680, email:bustamibr@yahoo.com

KOMPOSISI JUMLAH DAN UKURAN PANJANG IKAN CAKALANG DAN TONGKOL HASIL TANGKAPAN PAYANG DI PERAIRAN PALABUHANRATU DAN BINUANGEUN

The Amount and Length Size Composition of Skipjack and Frigate Mackerel Caught by Payang in Palabuhanratu and Binuangeun Waters

Domu Simbolon*

Departemen Pemanfaatan Sumberdaya Perikanan,
Fakultas Perikanan dan Ilmu Kelautan Institut Pertanian Bogor

Abstract

Palabuhanratu and Binuangeun waters are the central of potential fish catching activities in West Java and Banten Province. Fish resources which have important economic value from these waters are skipjack and frigate mackerel. Exploitation of these fish resources will be higher in future because demand of market from Jakarta tend to increase. The objective of this study is to know the amount and length size composition of skipjack and frigate mackerel cought by "payang" (surrounding net). The research method in this study was survey method through experimental fishing. The fish length composition of frigate mackerel cought in Binuangeun waters on period of March-May 2008 were dominated by large fish (65%), with the higher productivity found on May (482 kg/*setting*). Frigate mackerel cought in Palabuhanratu waters on period of March-May 2007 were dominated by small fish (73%), with the higher prouctivity on April (701 kg/*setting*). Moreover, skipjack catches in Palabuhanratu waters on period of Agust-October 2007 were dominated by small fish (71%), with the higher productivity on September (15,555 kg/vessel).

Keywords : catch composition, skipjack, frigate mackerel, payang, Benuangeun, Palabuhanratu

* Korespondensi: Domu Simbolon, Jln Lingkar Akademik, Kampus IPB Darmaga-Bogor, 16680
email: domu_psp@yahoo.com

PERUBAHAN KANDUNGAN MIKROFLORA AKIBAT PENAMBAHAN STARTER *Pediococcus acidilactici* F-11 DAN GARAM SELAMA FERMENTASI PEDA

Effect of Addition of Pediococcus acidilactici F-11 and Salt on Microflora during Peda Fermentation

Rinto*

Program Studi Teknologi Hasil Perikanan
Fakultas Pertanian Universitas Sriwijaya

Abstract

Peda is one of traditional fermented fish product. The addition of culture starter gives effect towards fermentation process. The purpose of this research was to know has present of microflora / microorganisms during fish fermentation by *Pediococcus acidilactici* F-11 as a starter. Peda was processed from Indiana mackerel fish (*Rastrelliger neglectus*) with different salt concentrations i.e. 20%, 25%, and 30%, with *P. acidilactici* F-11 was used as a starter. Batch without starter was used as a control. The result showed that peda with *P. acidilactici* as starter can decreased coliform number to 2 log cycles from 1,3 x 10^6 to 1,7 x 10^4 CFU and reduced histamine forming bacteria to 3 log cycle from 1,2 x 10^6 to 3,8 x 10^3 CFU in start of fish fermentation process, but in the end of process, the numbers of bacteria was not different, so *P. acidilactici* F-11 as starter was effective used in start of fish fermentation process.

Keywords: *Pediococcus acidilactici* F-11, microorganism, peda

* Korespondensi: Rinto, Departemen Teknologi Hasil Perikanan
Fakultas Pertanian Universitas Sriwijaya, email: rinto_thi@yahoo.co.id

ANALISIS REGULASI SISTEM MANAJEMEN KEAMANAN PANGAN TUNA DI INDONESIA DAN NEGARA TUJUAN EKSPOR

Analysis of Tuna's Food Safety Management System Regulation in Indonesia and Importing Countries

W Trilaksani[*1], M Bintang[2], DR Monintja[3], M Hubeis[4]

1 Departemen Teknologi Hasil Perairan FPIK IPB
2 Departemen Pemanfaatan Sumberdaya Perikanan FPIK IPB
3 Departemen Biokimia FMIPA IPB
4 Departemen Manajemen FEM IPB

Abstract

Tuna's exporting activities nowdays is still facing problem related with the stringent regulation and the complexity of sanitation program implemented in importing countries which triggers scores of rejection. This article discusses the analysis of regulation associated with seafood safety management system and tuna's technical regulation initiated by Codex Alimentarius Comission (CAC), importing countries and Indonesia. Study was accomplished with content analysis method for seafood safety management system regulation instigated in importing countries and Indonesia using CAC references. Scoring method was achieved in analyzing tuna end-product technical regulation covering various indicators explicitly histamine, heavy metal and microbiology. Result of content analysis which refer to elements of food quality and safety management system recomended by Codex namely determination of good food material criteria, implementation of risk analysis in identification and characterization of potential hazard, implementation of food safety control based on risk analysis outcomes and establishing guidelines for hygienic food handling show that United States dan European Union had already formularized and performed those recomendation, meanwhile Canada, Japan, China and Indonesia had yet entirely executed the regulation. In accordance with the criteria of organizational structure for National Food Control Systems, the European Union and Canada implement integrated agency system, Japan has single agency system, in the meantime Indonesia, United States and China possess multiple agency system. Scoring analysis on tunas technical regulation reveal that European Union has the strictest standard following by USA, Indonesia, Canada, Cina, Japan and Codex respectively.

Keywords: analysis, food safety, importing countries, Indonesia, management system, regulation, tuna

[*] Korespondensi: Wini Trilaksani, Jln Lingkar Akademik, Kampus IPB Darmaga-Bogor 16680
email: wini_trilaks@yahoo.com