ISSN: 2089-5690 e-ISSN: 2406-9272

SQUALEN: BULETIN PASCAPANEN DAN BIOTEKNOLOGI KELAUTAN DAN PERIKANAN

(SQUALEN: BULLETIN OF MARINE AND FISHERIES POSTHARVEST AND BIOTECHNOLOGY)
Vol.19 No.1, May 2024

Publisher Managing Director : Agency for Marine and Fisheries Research and Human Resources, Indonesia

Editor in-Chief

Secretary of Agency for Marine and Fisheries Research and Human Resources, Indonesia
 Dr. Tatty Yuniarti (Marine and Fisheries Postharvest, Jakarta Technical University of Fisheries, Indonesia)

Associate Editor

- : 1. Dr. Endar Marraskuranto (Marine Natural Product, National Research and Innovation Agency, Indonesia)
 - 2. Dr. Hedi Indra Januar (Aquatic Ecology, National Research and Innovation Agency, Indonesia)
 - 3. Dr.-Ing. Azis Boing Sitanggang (Institut Pertanian Bogor University, Indonesia)
 - 4. Ima Wijayanti, Ph.D (Fisheries Processing Technology, Diponegoro University, Indonesia)
 - Dr. R. Haryo Bimo Setiarto (Functional Food microbiology, National Research and Innovation Agency, Indonesia)
 - 6. Dr. Mada Triandala Sibero (Institute of Medicinal Biotechnology, Chinese Academy of Medical Sciences and Peking Union Medical College, China)
 - 7. Ajeng Kurniasari Putri, M.Biomed (Food Safety, Ministry of Marine Affairs and Fisheries, Indonesia)

Editorial Board

- : 1. Prof. Dr. Hari Eko Irianto (Marine and Fisheries Postharvest, National Research and Innovation Agency, Indonesia)
 - 2. Prof. Dr. Ekowati Chasanah (Marine Biotechnology, National Research and Innovation Agency, Indonesia)
 - 3. Assoc. Prof. Noguchi Ryozo (Agricultural Environmental Engineering, University of Tsukuba, Japan)
 - 4. Dr. Singgih Wibowo (Marine and Fisheries Postharvest, National Research and Innovation Agency, Indonesia)
 - 5. Dr. Dewi Seswita Zilda (Marine Biotechnology, National Research and Innovation Agency, Indonesia)
 - 6. Dr. Noora Barzkar (Department of Marine Science, University of Hormozgan, Iran)
 - 7. Assoc. Prof. Dr. M. Mubarak (Marine Biotechnology, MEA Engineering College Perinthalmanna, Kerala, India)
 - 8. Olumide Odeyemi, PhD (Marine and Fisheries Postharvest, University of Tasmania, Australia)

Peer Reviewers

- : 1. Prof. Dr. Amir Husni (Universitas Gadjah Mada, Yogyakarta, Indonesia)
 - 2. Prof. Eko Nurcahya Dewi (Universitas Diponegoro, Indonesia)
 - 3. Prof. Ir. Tri Winarni Agustini, M.Sc., Ph.D (Universitas Diponegoro, Indonesia)
 - 4. Prof. Dr. Ir. Remy E. P. Mangindaan, M.Sc (Universitas Sam Ratulangi, Indonesia)
 - 5. Sylvia Indriani, P.hD (Suranaree University of Technology, Thailand)
 - 6. Muhammad Prima Putra, Ph.D. (Universitas Gadjah Mada, Indonesia)
 - 7. Dr. Bharathipriya Rajasekaran, MFSc., Ph.D. (Prince of Songkla University, Thailand)
 - 8. Dr. Joncer Naibaho (Department of Food Technology and Chemistry, Dublin, Ireland)
 - 9. Dr. Muhammad Nursid (National Research and Innovation Agency, Indonesia)
 - 10. Dr. Musfirah zulkurnain (Universiti Sains Malaysia, Malaysia)
 - 11. Mrs Kasmiati, Kasmiati STP, MP, Ph.D, (Universitas Hasanuddin, Indonesia)
 - 12. Dr. Siti Zaharah (Universiti Putra Malaysia, Malaysia)
 - 13. Dr. Mochammad Fitri Atho'illah (Universitas Brawijaya, Indonesia)
 - 14. Jasmin Naher (Hajee Mohammad Danesh Science and Technology University, Bangladesh)

Copy Editors

: 1. Muh. Azril, S.S.T.Pi., M.Sc.

2. Syahnada Jaya Syaifullah, Ssi, Msc, PhD

3. Kartika Winta Apriliany, M.Dev.Pract.

Assistant Editor :

1. Ir. Andi Soesmono, M.EM. 2. Asep Sutiana, S.St.Pi., M.Si.

3. Merissa Nur Asih, S.IKom.

4. Ofan Bosman, S.Pi., M.Si.

5. Erki Herdian, A.Md.

6. Darwanto, S.Sos.

Cover Image Title : Image Credit :

Administration Address:

Research Center for Marine and Fisheries Product Processing and Biotechnology (RCMFPPB)

JI. K. S. Tubun Petamburan VI, Jakarta, 10260 Phone/Fax: +62 (21) 53650157/+62 (21) 53650158

E-mail : squalenbulletin@kkp.go.id; squalenbulletin@gmail.com

CITATION IS PERMITTED WITH ACKNOWLEDGEMENT OF THE SOURCE

Squalen: Buletin Pascapanen dan Bioteknologi Kelautan dan Perikanan (Squalen: Bulletin of Marine and Fisheries Postharvest and Biotechnology) published periodically three times a year i.e. May, August, and December by Research and Development Center for Marine and Fisheries Product Processing and Biotechnology

Accredited Number: 148/M/KPT/2020

FOREWORD

It is exciting to explore elements related to marine and fisheries industry. Research of biomaterials from fisheries is crucial in the field of biotechnology to promote scientific understanding and, of course, applications in the food industry, health care and other fields. The Squalen Bulletin of Marine and Fisheries Postharvest and Biotechnology (CiteScore 2024 of 1.4; SJR 0.22-Q3 (2023) and SNIP 0.404 (2023)) presents the latest update on marine and fisheries biotechnology research.

In Volume 19, Issue 1 on May 2024 edition contained seven titles involving researchers from Indonesia, namely 1. Physicochemical Properties and Microstructure of Mixed-species Surimi Made from Decapterus sp. and Priacanthus sp.; 2. Effects of Sun and Oven Drying on The Physicochemical Composition of Indonesian Sandfish (Holothuria scabra); 3. Production of Antioxidant Peptides from Snakehead Fish Using Batch and Continuous Enzymatic Hydrolysis; 4. The Effect of Alkali Pretreatment and Different Parts of Sargassum polycystum Thallus on Alginic Acid Attributes; 5. Antioxidant and Anti-Arthritic Activities of Green Seaweed Halimeda tuna Methanolic Extract; 6. The Ameliorating Effect of Artificial Coffee from Mangrove Fruits (Rhizophora mucronata) on T Lymphocyte Cells and Renal Histopathology of BALB/c Mice Induced by Lipopolysaccharide; 7. Physical and Chemical Characteristics of Green Algae Halimeda opuntia Calcium Powder Extracted Using Hydrochloric Acid.

We believe that the results of these studies will be useful and have important implications for science and postharvest marine and fisheries sustainability and biotechnology. Therefore, on behalf of the editorial board, we would like to express our deep gratitude to the reviewers for their in depth constructive comments and criticism of the published articles.

We also thank all the authors who participated in the preparation of this publication.

Editors

ISSN: 2089-5690 e-ISSN: 2406-9272

SQUALEN BULETIN PASCAPANEN DAN BIOTEKNOLOGI KELAUTAN DAN PERIKANAN (SQUALEN: BULLETIN OF MARINE AND FISHERIES POSTHARVEST AND BIOTECHNOLOGY) Vol. 19 (1) May 2024

CONTENT

	Page
FOREWORD	i
CONTENT	iii
Physicochemical Properties and Microstructure of Mixed-species Surimi Made from <i>Decapterus</i> and <i>Priacanthus</i> sp. Sihono Sihono, Agus Heri Purnomo, Singgih Wibowo, Subaryono Subaryono, Theresia Dwi Si Bagus Sediadi Bandol Utomo, and Fera Roswita Dewi	uryaningrum,
Effects of Sun and Oven Drying on The Physicochemical Composition of Indonesian Sandfish (Holothuria scabra) Dian Arsita Fitri, Nanik Purwanti, Muhammad Nursid, and Gintung Patantis	
Production of Antioxidant Peptides from Snakehead Fish Using Batch and Continuous Enzymat Selma Aprilla Kardinan, Sedarnawati Yasni, Slamet Budijanto, Nadine Kurniadi, and Azis Boi Sitanggang	ic Hydrolysis ng
The Effect of Alkali Pretreatment and Different Parts of Sargassum polycystum Thallus on Alginic A I Ketut Sumandiarsa, Joko Santoso, Ghifari Pandu Priasmoro, Uju, and Subaryono	
Antioxidant and Anti-Arthritic Activities of Green Seaweed Halimeda tuna Methanolic Extract Mohamad Gazali, Aden Nurin Fatimah, Amir Husni, Nurjanah, Zuriat, and Rina Syafitri	45-54
The Ameliorating Effect of Artificial Coffee from Mangrove Fruits (Rhizophora mucronata) on T Cells and Renal Histopathology of BALB/c Mice Induced by Lipopolysaccharide Eko Cahyono, Wendy Alexander Tanod, Frans Gruber Ijong, Novalina Maya Sari Ansar, Jefri Mandeno, Ely John Karimela, Frets Jonas Rieuwpassa, Jaka Frianto Putra Palawe, Yana Sa and Natalia Prodiana Setiawati	Anthonius mbeka,
Physical and Chemical Characteristics of Green Algae Halimeda opuntia Calcium Powder Extr Using Hydrochloric Acid Ima Wijayanti, Rania S. Nirwasita, and Apri D. Anggo	

AUTHORS GUIDELINES SQUALEN: BULETIN PASCAPANEN DAN BIOTEKNOLOGI KELAUTAN DAN PERIKANAN (SQUALEN: BULLETIN OF MARINE AND FISHERIES POSTHARVEST AND BIOTECHNOLOGY)

- 1. Scope: research paper, short communication and reviews (by invitation) in the field of postharvest, food safety and environment, and bio-discovery of marine and fisheries.
- 2. Language: English. <u>Authors of non-native speakers are required to use professional English editing service upon manuscript acceptance.</u> The abbreviated name or expression should be cited in full at first usage, followed by the accepted abbreviation in parentheses. Metric SI units should generally be used. Chemical formulas and solutions must specify the form used, e.g. anhydrous or hydrated and the concentration must be in clearly defined units. Common species names should be followed by the Latin binomial (Italic) at the first mention.
- 3. Manuscript: should be prepared max. 15 pages, composed of 3000-4000 words for a short communication; 4000-5000 words for a research article or 6000-8000 words for a review, double-spaced (except for title, tables, figures, and bibliography which is prepared in single-spaced) in Microsoft Word on A4 paper, font Arial 10 (except for abstract, tables and figures, please use Arial 8). Please provide continuous line numbers in your submitted manuscript to ease the reviewing process.

Research Paper manuscripts should contain the following sections :

- a. Title: brief, concise (do not exceed 15 words) and informative, reflecting the manuscript material. Avoid the abbreviation and formula where possible. Author's name, institution, and address are written under the title. Author names should include first name and last name. Middle name should be abbreviated. Authors with one name only should use their first name as surname. Example: Sukarno Sukarno. Affiliation numbers are not needed if all authors affiliated to the same institution.
- b. Abstract: a concise and factual abstract is required. The abstract should state briefly the purpose of research, the principle method, important findings and conclusion. Non-standard or uncommon abbreviation should be avoided, but if essential they must be defined at their first mention in the abstract itself. Abstract should not exceed 250 words.
- c. Key words: contain 3 to 5 words, should represent important terms related to the topic of research.
- d. Introduction: state the background and objective(s) of the work, mention previous relevant works (by your group or others), identify the gap of the research, explain how your study provides solution to the problem and describe the novelty of the current study. Ideally, introduction section should not exceed 1000 words.
- e. Material and Methods: provide sufficient detail to allow the work to be reproduced. Methods already published should be indicated by a reference; only relevant modification should be described. Mention explicitly all parameters used in the study, such as pH, temperature, time, concentration, etc. Mention the brand and purity of the important chemicals used in the study. Mention the brand and series of the important equipment used, such as HPLC, spectrometer, NMR, FT-IR, MS, etc.
- f. Results and Discussion: results should be clear and concise, compare the findings with those of other studies, describe any result differences if any, and propose the cause of the differences. Discussion should elaborate the significance of the results of the work, not repeat them. Avoid extensive citation and discussion of published literature.
 - -Tables: Short, clear and must be able to stand alone. Table should be prepared in MS Word using single-space and horizontal lines only. Indicate the statistical analysis by providing standard deviation and denote letters or signs to mark significant differences. Table header should be printed in bold with light grey shading. Table should have a title and number in sequence and are placed above the table, font (Arial 8).
 - Figures and graphics: Prepared in appropriate pattern with only black and white versions. Graphics should be prepared in MS Excel. Indicate the statistical analysis by providing standard deviation and denote letters or signs to mark significant differences. Figure should have a title and number in sequence. Figure and graphics title and their explanation or notes are placed below the figures or graphics, font (Arial 8).
 - Pictures/photograph: Prepared in contrast color or B/W. Pictures/photographs should have a title and number in sequence. TIFF: color or grayscale photographs (halftones) always use a minimum of 300 dpi; bitmapped line drawings use a minimum of 1000 dpi; combinations bitmapped line/halftone (color or grayscale) a minimum of 500 dpi is required.
- g. Conclusion: Concise considering the title, objectives and research results.
- h. Acknowledgement: Collate acknowledgements, if any, in separate sections at the end of the article before the references and do not, therefore, include them on the title page, as a footnote to the title or otherwise. <u>Acknowledgment should indicate grant number(s)</u> and the assistance of anyone involved during the analysis other than authors.
- i. Bibliography: Follow the APA (American Psychological Association) 7th style referencing. The use of a reference management, such as Endnote and Mendeley is highly recommended. Please use at least 70% of the latest and primary references (no more than 5 years).
- j. Supplementary materials (optional): should be prepared in a separate file than that of manuscript, consist of additional data and relevant material supporting the main article, such as chromatograms, photographs of specimens, raw data etc.

Review paper, manuscript should be written as a continuous articles sub headings that reflect the matter discussed, not necessarily the same as the sub heading of the research paper (Abstract, Introduction, Discussion, Conclusion, Acknowledgements, References)

- 4. **Submission of manuscript:** A soft copy of the manuscript should be submitted electronically by Open Journal System (OJS) at: www.bbp4b.litbang.kkp.go.id/squalen-bulletin. Manuscript should be uploaded as Word (.docx) files (not write-protected) or/ and MS Excel for the figures or graphics. The text file must contain the entire manuscript including title page, abstract, keywords, text, references, tables, and figures. All the manuscripts submitted to 'Squalen: Bulletin of Marine and Fisheries Postharvest and Biotechnology' will be reviewed by peer reviewers and editors.
- Cover Letter should be addressed to the chief editor, indicating the subject area of the submitted manuscript, novelty and significance of the study, and proposed reviewers.
- 6. Manuscript which does not meet the above requirements will be rejected.
- 7. Authors' Statement has to be attached at submission, indicating agreement of copyright transfer to the publisher, originality of paper, and author contributions. We highly encourage that all authors read the manuscript and actively contribute to the editing process prior to submission to ensure the readability of the manuscript.