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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL INTERNASIONAL**

Judul Jurnal Ilmiah (Artikel) : *Streptolysin Encoding Genes sagC and sagD as Biomarkers of Fish Pathogen Streptococcus iniae: An In Silico Study*

Nama Penulis : 1. **Stalis Norma Ethica**, 2. Sri Darmawati, 3. Sri Sinto Dewi, 4. Nurrahman, 5. Ayu Rahmawati Sulistyanyingtyas

Jumlah Penulis : 5 (lima) orang

Status Pengusul : **penulis pertama/penulis korespondensi** **

Identitas Jurnal Ilmiah : a. Nama Jurnal : Squalen Bulletin of Marine and Fisheries Postharvest and Biotechnology,
 b. Nomor ISSN : p:2089-5690 / e:2406-9272
 c. Volume, nomor, bulan, tahun : Vol. 15 No.1, 7 April 2020, hal. 31-39
 e. Penerbit : Squalen BMFPB
 f. DOI artikel (Jika ada) : <http://dx.doi.org/10.15578/squalen.v15i1.416>
 g. Terindeks di : Scopus (Q4) SJR =0

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c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	12,0	9,0	6,0	8,0
d. Kelengkapan unsur dan kualitas terbitan/jurnal (30%)	12,0	9,0	6,0	9,0
Total = (100%)	40	30	20	29
Nilai Pengusul	$(0,4 \times 29) / 4 = 2,9$			2,9
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- Kelengkapan unsur kualitas penerbit** : Jurnal diterbitkan Litbang KKP, Jurnal terindeks Scopus (Q4) SJR =0,14 (Skor=9,0)
- Indikasi Plagiasi** : Tidak ada

Semarang, 10 November 2021
Reviewer 1.



Prof. Dr. Suwarno Hadisusanto, SU
 NIP/NIDN : 19541116 19830331002/0016115402
 Unit Kerja : Universitas Gadjah Mada Yogyakarta
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 Bidang Ilmu : Biologi

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Nama Penulis : 1. Stalis Norma Ethica, 2. **Sri Darmawati**, 3. Sri Sinto Dewi, 4. Nurrahman, 5. Ayu Rahmawati Sulistyaningtyas

Jumlah Penulis : 5 (lima) orang

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Total = (100%)		30		28,1
Nilai Pengusul	(40 % x 28,1)/4 = 2,81			2,81

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- Ruang lingkup dan kedalaman** : Substansi artikel sesuai dengan ruang lingkup jurnal. Jumlah referensi sebanyak 28 didominasi jurnal bereputasi 10 tahun terakhir, namun hanya 6 jurnal yang digunakan sebagai pembahasan (Skor=7,90)
- Kecukupan dan kemutakhiran data serta metodologi** : Kecukupan dan mutakhirannya ditunjukkan oleh penggunaan *database* dan *software* bioinformatika trkini dan metodologi sesuai (Skor=8,30).
- Kelengkapan unsur kualitas penerbit** : Jurnal diterbitkan Litbang KKP, Jurnal terindeks Scopus (Q4) SJR =0,14 (Skor=8,90)

Semarang, 10 November 2021
 Reviewer 2

Prof. Dr. Herpin Pancasakti Kusumaningrum, S.Si, M.Si
 NIP/NIDN : 197002081994032001/0008027003
 Unit Kerja : Fak. Sains dan Matematika UNDIP
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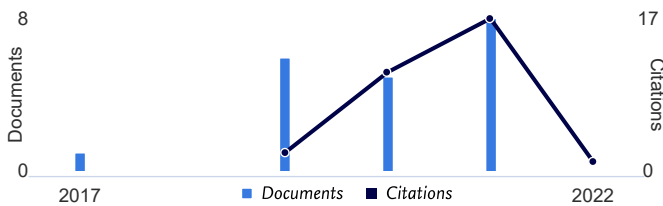
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Hidayati, N., Fuad, H., Munandar, H., ...Darmawati, S., Ethica, S.N.

IOP Conference Series: Earth and Environmental Science, 2021, 743(1), 012007

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Streptolysin encoding genes sagc and sagd as biomarkers of fish pathogen streptococcus iniae: An in silico study

Ethica S.N.^a, [Darmawati S.](#)^a, [Dewi S.S.](#)^b, [Nurrahman](#)^b, [Sulistyaningtyas A.R.](#)^b ✉[📁 Save all to author list](#)^a Magister Program of Medical Laboratory Science, Universitas Muhammadiyah Semarang, Jl. Kedungmundu Raya No. 18, Semarang, 50273, Indonesia^b Faculty of Nursing and Health Sciences, Universitas Muhammadiyah Semarang, Jl. Kedungmundu Raya No. 18, Semarang, 50273, Indonesia

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Abstract

Streptococcus iniae has been notorious as a serious tilapia fish pathogen leading to many disease outbreaks in warm water marine aquaculture. An in silico investigation about the potential of virulence genes of S. iniae, sagC and sagD, as biomarkers of the bacterial species, has been carried out. The aim was to determine bacterial biomarkers, which are important to facilitate early rapid diagnosis of S. iniae streptococcal infection in fish and also in humans. First, specific primers were designed from sagC and sagD genes of S. iniae SF1 genomic DNA using Primer3Plus. Next, in silico PCR (Polymerase Chain Reaction) analysis was carried out using the newly designed primers and 117 genomic DNA of

Cited by 2 documents

Food-grade protease producing bacteria isolated from Indonesian soybean tempe gembus and red oncom after prolonged fermentation

Sulistyaningtyas, A.R. , Baldivia, A.S. , Mukaromah, A.H. (2021) *IOP Conference Series: Earth and Environmental Science*

Detection of RtxA gene as a biomarker of seafood-borne pathogen vibrio cholerae using in silico PCR assay

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In-silico specificity comparison between GMF-GMR and JMF-JMR primers for detecting moaC genes of food spoilage bacteria pseudomonas spp

Ethica, S.N. , Sulistyaningtyas, A.R. , Darmawati, S. (2019) *IOP Conference Series: Earth and Environmental Science*

Construction and comparative study of monovalent and multivalent DNA vaccines against Streptococcus iniae

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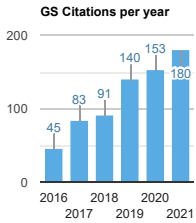
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KEYWORDS

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Squalen Bulletin of Marine and Fisheries Postharvest and Biotechnology

- **Current issue:** 2021: Squalen Bulletin Volume 16 Issue 2 Year 2021 (August) |
- **Forthcoming issue:** 2021: Squalen Bulletin Volume 16 Issue 3 Year 2021 (December) (Issue in Progress)

- ISSN: 2089-5690 (print)
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NEW SQUALEN BULLETIN IS NOW IN SCOPUS

We are happy to announce that the Squalen Bulletin of Marine and Fisheries Postharvest and Biotechnology has been accepted for indexing by Scopus as of November 2019 and is expected to be listed by the first quarter of 2020.

Elsevier's Scopus is one of the largest databases of abstract and citation that is curating over 36,000 journal titles in various subject areas. The inclusion of Squalen Bulletin in the Scopus means that the visibility of the published papers within the journal will be significantly improved.

Squalen publishes original and innovative research to provide readers with the latest research and knowledge on, emerging technologies of marine and fisheries postharvest and biotechnology from tropical waters.

The Journal also publishes review articles by invitation that providing an overview and discussion of the latest developments in topics of specific interest to researchers in this field of activity.

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CALL FOR SPECIAL ISSUE PROPOSALS

Squalen Bulletin invites scholars to submit a special issue proposal. The purpose of the special issue is to provide collection of articles on a specific topic within the scope of marine and fisheries post-harvest and biotechnology that is of high interest to the readers. Squalen Bulletin publishes original research articles and reviews three times a year by the Research Center for Marine and Fisheries Product Processing and Biotechnology, Indonesia.

Posted: 2021-02-25

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REPLACEMENT EDITOR-IN-CHIEF

As of July 1st, 2020, Prof. Dr. Ekowati Chasanah has decided to step down as the Editor-in-Chief of the Squalen Bulletin of Marine and Fisheries Product Processing and Biotechnology and will continue to contribute as part of the Editorial Board.

Posted: 2020-07-03

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PLAGIARISM CHECK

Plagiarism screening will be conducted by Squalen Bulletin Editorial Board using Grammarly® Plagiarism Checker and Turnitin® plagiarism screening

Posted: 2019-01-21

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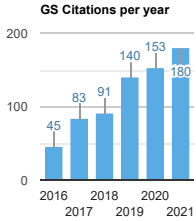
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KEYWORDS

ACE inhibitor, Amino acid, fatty acid, Stichopus vastus, Salemo Island, Indonesia Protease, bacteria, Bacillus subtilis, Geobacillus thermophilus Sarcophyton Staphylococcus aureus aflatoxin B1, Aspergillus flavus, dried salted fish antibacterial activity, marine invertebrate extract, REMA, resazurin indicator antioxidant antioxidant activity, ethanolic extract, green algae, liquid nitrogen, profiling bioethanol, treatment, seaweed processing waste, SSF biopolymer, Poly (3-hydroxybutyrate-co-3-hydroxyvalerate), PHBV, Haloferax mediterranei, yeast extract diversity, bacteria, hydrogenases, microbial mat, hot spring Wartawan beach exposure assessment, organic contaminant, coastal population, seafood, Jakarta Bay exposure, formaldehyde, health risk assessment, opah fish, simulation fucoidan, hydrolysis, brown seaweed,

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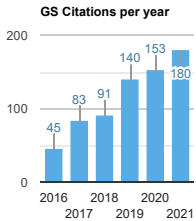
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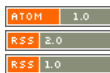
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May 2020

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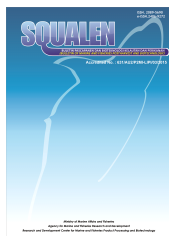
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Characteristics and Use of Peptones from Catfish (*Clarias gariepinus*) and Pangas Catfish (*Pangasius pangasius*) Heads as Bacterial Growth Media

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Abstract

Peptone is a hydrolysate product rich in amino acids, and it is uncoagulated at high temperature. Commercial peptone produced from land animals cannot be declared as acceptable in terms of lawfulness due to religious concerns. Catfish (*Clarias gariepinus*) and pangas catfish (*Pangasius pangasius*) are important species for the fish processing industry in Indonesia. The filleting process resulted in value by-products. The fish head as the by-products can be utilized as a main raw material for higher economic value products, such as peptone. The aim of this study was to characterize peptones extracted from the heads of catfish and pangas catfish with different acid conditions. The characteristics of chemical composition, yield, color parameter, solubility, amino acid content, bacterial growth rate and biomass production were observed. The catfish peptone (CFP) and pangas catfish peptone (PCP) obtained with different acid conditions showed high protein content in the range of 84.35% to 90.80% ($P < 0.05$). The yields of CFP and PCP were significantly different ($P < 0.05$) and varied between 4.75% and 5.66%. The solubility of treated peptones varied between 98.03% and 99.52%, and the peptones were rich in glycine, glutamic acid, proline and leucine. Bacterial growth test showed that both CFP and PCP had better growth rates compared to the commercial peptone tested in this study. In addition, the biomass production with peptone from catfish and pangas catfish was higher than that with the commercial product ($P < 0.05$). This research proposed that catfish and pangas catfish heads could be developed as an alternative source for peptone production.

Keywords: peptone, fish by-product, acid-assisted extraction, growth rate, biomass production

1. Introduction

Indonesia is the third largest country in terms of total aquaculture production (FAO, 2018). In 2017, its production reached 17.22 million tons, and an increase of approximately 37 million tons in 2030 was projected (Ministry of Marine Affairs and Fisheries, 2017). Catfish (*Clarias gariepinus*) and pangas catfish (*Pangasius pangasius*) are aquaculture commodities with high productivity rates. The average growth of catfish and pangas catfish production in Indonesia increased 56.32% and 31.76% from 2015 to 2018, respectively. The total catfish production reached 841.75 thousand tons in 2017 and increased by

approximately 1.81 million tons in 2018 due to the biofloc program. The production of pangas catfish increased from 245.75 thousand tons in 2017 to 492 thousand tons in 2018 (Ministry of Maritime Affairs and Fisheries, 2018). Both catfish and pangas catfish are commercially important species from an industrial point of view. They are usually used for fillet production as raw materials in meatballs, fish cakes, nuggets and other diversified fish products; meanwhile, by-products, especially the head portion, are used as low added-value products. The heads of catfish and pangas catfish weigh approximately 27.49% and 43.28% of the total catfish weight, respectively (Ningsih et al., 2011). These by-products can be served

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Growth Rate and Histamine Production of *Klebsiella* sp. CK02 Isolated from Skipjack Tuna Compared with *Morganella morganii* ATCC 25830 at Various Incubation Temperatures

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Abstract

One of an important quality parameter in tuna is the level of histamine content. The contamination of histamine in tuna is mainly due to the activity of histidine decarboxylase produced by the bacteria. A rapid growth of histamine producing bacteria is correlated with the practice of temperature abuse during handling. This study aimed to develop predictive growth modeling of two histamine-producing bacteria in the function of temperature. The growth and histamine production of *Klebsiella* sp. CK02 and *Morganella morganii* ATCC 25830 at various temperatures were measured in tryptic soy broth histidine (TSBH) and tuna fish infusion broth (TFIB) growth media. Broths were incubated at 4°C and 15°C for 7 days, and at 30°C and 40°C for 24 hours. The Baranyi and Roberts model was used with DMFit to determine primary growth kinetics, and the Ratkowsky square root model to describe bacterial growth rate as a function of temperature. Histamine production was enumerated by the apparent yield factor ($pY_{his/CFU}$) value. Growth rate increased with temperature, with a maximum rate at 40°C for *Klebsiella* sp. CK02 (0.740 log CFU/h) and *M. morganii* (0.578 log CFU/h). The T_{min} for *Klebsiella* sp. CK02 in TFIB was -8.9°C, indicating better survival in low storage temperature, compare to *M. morganii* ATCC 25830. In addition, *Klebsiella* sp. CK02 produced a lower $pY_{his/CFU}$ at 15 and 30°C compared to *M. morganii* ATCC 25830.

Keywords: growth rate, temperature, histamine, *Klebsiella* sp. CK02, *M. morganii* ATCC 25830

1. Introduction

Scombridae and *Scorpaenidae* fish commonly have a high concentration of the amino acid histidine (Rawles, Flick, & Martin, 1996). During fish spoilage, bacteria can produce decarboxylase, an enzyme that converts free histidine and other amino acids into histamine and other biogenic amines, two substances frequently used as fish quality indicators (Lehane & Olley, 2000), as well as food safety indicators due to the toxic effects of histamine (Sumner, Ross, & Ababouch, 2004). Histamine-related toxication, known as histamine fish poisoning (HFP), is often associated with consumption of seafood (Rawles et al., 1996). Histamine production in fish is mainly caused by improper handling temperature, which causes the growth of histidine decarboxylase (HDC)-producing

bacteria or histamine-producing bacteria (HPB) (Lehane & Olley, 2000). Sumner et al. (2004) reported that common HPB are from the Enterobacteriaceae family, such as *Hafnia*, *Klebsiella*, and *Morganella*, as well as from the Bacillaceae family, with varied abilities of histamine production among species. *Enterobacter aerogenes*, *Morganella morganii*, *Photobacterium damsela*, *Raoultella planticola*, and *R. ornithinolytica* can produce >1,000 ppm histamine, whereas *Citrobacter freundii*, *Escherichia coli*, *Hafnia alvei*, and *Vibrio alginolyticus* generate low histamine levels of <500 ppm, under similar culture conditions (Björnsdóttir-Butler, Bolton, Jaykus, McClellan-Green, & Green, 2010). Among HPB species, *H. alvei*, *Klebsiella pneumoniae*, and *M. morganii* have been isolated from fish samples that allegedly caused scombroid poisoning (Rawles et al., 1996). Moreover,

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