

**LEMBAR**  
**HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW**  
**KARYA ILMIAH : JURNAL ILMIAH TERINDEKS SCOPUS**

Judul Karya Ilmiah/Artikel : The bacterial diversity associated with bacterial diseases on Mud Crab (Scylla serrata Fab.) from Pematang Coast, Indonesia

Jumlah Penulis : 4 (empat)

Status Pengusul : Penulis pertama/ ~~penulis ke-2~~/ penulis korespondensi\*

Penulis Karya Ilmiah : **Sarjito, Desrina, AHC Haditomo, S. Budi Prayitno.**

Identitas Karya Ilmiah

a. Nama prosiding : IOP Conference Series: Earth and Environmental Science

b. No.ISSN : 17551307/17551315

c. Vol, No, Bln, Thn : Vol. 1025 (2018) 012076

d. Penerbit : IOP Publishing

e. DOI Artikel (Jika ada) : 10.1088/1742-6596/1025/1/012076  
 URL : <https://iopscience.iop.org/article/10.1088/1742-6596/1025/1/012076/pdf>

f. Alamat Web Prosiding : <https://iopscience.iop.org/article/10.1088/1742-6596/1025/1/012076>

g. Terindeks di : Scopus, SJR : 0.18 ; H Index : 26

Kategori Publikasi Prosiding Ilmiah :  Prosiding Internasional / Internasional bereputasi  
 Prosiding Nasional  
 (beri ✓ pada kategori yang tepat)

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Komponen Yang Dinilai	Nilai Maksimal Prosiding			Nilai Yang Diperoleh
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a. Kelengkapan unsur isi artikel (10%)	3			2,8
b. Ruang lingkup dan kedalaman pembahasan (30%)	9			8
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9			7,5
d. Kelengkapan unsur dan kualitas penerbit (30%)	9			8
<b>Total = (100%)</b>				<b>26,3</b>
<b>Nilai Pengusul : 0,6 x 26,3 = 15,78</b>				

Catatan Penilaian Paper oleh Reviewer:

1. Unsur isi artikel lengkap. Pada pendahuluan telah dijelaskan permasalahan dan pentingnya penelitian, dan tujuan sudah dirumuskan sesuai permasalahan.
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3. Kecukupan dan kemutakhiran data/informasi dan metodologi: informasi kemutakhiran kurang didukung referensi, karena hanya 9 ref di bawah 10 tahun, dari 19 pustaka yang disitasi
4. Artikel diterbitkan pada jurnal internasional terindek scopus, unsur dan kualitas penerbit lengkap dan baik.
5. perlu di cek uji kemiripannya

Semarang, 17 Maret 2022

Reviewer

Prof. Dr. Ir. Suradi, M.S.  
 NIP. 196005161987031001

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e. Kelengkapan unsur isi artikel (10%)	3			2.5
f. Ruang lingkup dan kedalaman pembahasan (30%)	9			8.1
g. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9			6.5
h. Kelengkapan unsur dan kualitas penerbit (30%)	9			8.2
<b>Total = (100%)</b>				<b>25.3</b>
<b>Nilai Pengusul : 0.6 x 25.3 = 15.18</b>				

Catatan Penilaian Paper oleh Reviewer:

IOP Conference Series: Earth and Environmental Science; Scopus coverage years:from 2010 to Present; ISSN:1755-1307E-ISSN:1755-1315. Artikel lengkap, memenuhi kriteria penulisan artikel ilmiah. Beberapa bagian kurang memenuhi standar penulisan dalam Bahasa Inggris (masih terstruktur Bahasa Indonesia atau masih terlihat kata Bahasa Indonesia), Namun metode cukup baik, memenuhi kebutuhan penelitian. Pembahasan baik, menggunakan sekitar 70% artikel yang tersedia. Perbandingan dengan penelitian lain juga baik. Kebaruan sedang, sekitar 40% artikel terbit dalam 10 th. Kualitas Penerbit cukup baik.

Semarang, 17 Maret 2022  
 Reviewer 2



Prof. Dr. Ir. Diah Permata Wijayanti, M.Sc.  
 NIP. 196901161993032001

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## The 7th International Seminar on New Paradigm and Innovation on Natural Science and Its Application

To cite this article: 2018 *J. Phys.: Conf. Ser.* **1025** 011001

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## PREFACE

The 7th International Seminar on New Paradigm and Innovation on Natural Sciences and Its Application (ISNPINSA-7) is annual conferences organized by Faculty of Sciences and Mathematics (FSM) Diponegoro University and has been successfully conducted since 2011. The aims of ISNPINSA are to facilitate brain storming and state of the art information in field of sciences and mathematics; to increase innovation of technology that can be applied in industries; to contribute in formulating strategy to increase the role of science for community; and to stimulate collaboration between industries, researchers and government to increase community welfare. The theme of 7th ISNPINSA in 2017 is “*Science and Data Science for Sustainable Development Goals*”.

The scope of the field of participants comes from various fields including biology, physics, chemistry, statistics, mathematics, informatics, environment, public health, and relevant fields that contribute to sustainable development. The conference was held in Semarang, Indonesia on October, 17th, 2017. There were three keynote speakers and three invited speaker who came from Japan, Italy, Malaysia, Philipines and Indonesia. The number of participants of this seminar were more than 200 consist of researchers, lecturers, postgraduate and undergraduate students from various universities and after the selection process there are 132 articles selected to be published in the present conference proceeding.

The Editors

Dr. Budi Warsito

Sapto Purnomo Putro, Ph.D.

Ali Khumaeni, Ph.D.





### CONFERENCE PHOTOGRAPH

















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Prof. Dr. Norsarahaida Saidina Amin	Universiti Teknologi Malaysia
Mario Rosario Guarracino, PhD.	Instituto di Calcolo e Reti ad Alte Prestazioni- National Research Council (ICAR-CNR), Italy
Dr. dr. Budi Wiweko, Sp. OG-KFER.	University of Indonesia, Jakarta

### Invited Speaker:

Prof. Elmer S. Estacio, PhD.	National Institute of Physics, University of the Philippines, Manila,
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To cite this article: 2018 *J. Phys.: Conf. Ser.* **1025** 011002

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## Peer review statement

All papers published in this volume of *Journal of Physics: Conference Series* have been peer reviewed through processes administered by the proceedings Editors. Reviews were conducted by expert referees to the professional and scientific standards expected of a proceedings journal published by IOP Publishing.



## The impact of ozonated water treatment on growth rate of ‘Srikandi’ tilapia (*Oreochromis Aureus X Niloticus*)

\*Sapto Putro<sup>1</sup>, Devi Adityarini<sup>2</sup> and R.T. Chiang<sup>3</sup>

<sup>1\*</sup> Center of Marine Ecology and Biomonitoring for Sustainable Aquaculture (Ce-MEBSA), Integrated Laboratory, Diponegoro University, Tembalang Campus, Semarang, Central Java, Indonesia

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**Abstract.** The impact of ozonized water treatment on ‘Srikandi’ tilapia was assessed using ozone reactor with an airflow velocity of 1.5 L / min at a voltage of 10 kV, which leads to that the dissolved oxygen (DO) content increases from 0.99 to 11.11 mg / L. The ozonized water treatment was divided into five groups based on the length of treatment period: 5 minutes as group I, 10 minutes as group II, 15 minutes as group III, 20 minutes as group IV and 0 minute (Reference case). The fish growth rate was measured in terms of length and weight per seven days for 30 days. The result indicated that the fastest growth rate of ‘Srikandi’ tilapia occurred at the group III (length growth: 7.82 cm; weight growth: 7.72 g in 30 days). The fastest Specific Growth Rate (SGR) of the fish occurred at the group II (1.281%), and the fastest Relative Growth Rate (RGR) of the fish occurs at the group III (4.538%). The oxygen content, temperature, salinity to match the growth of Tilapia ‘Srikandi’ are vital elements in Tilapia farming management. These results are considered to be useful to increase the production rate of ‘Srikandi’ tilapia farming.

### 1. Introduction

Salt water pond-fish farming in coastal areas has following advantages than the corresponding fresh water pond-fish farming i.e. high tolerance of salinity up to 30 ppt with survival rate >80%, rapid growth (can reach 200 grams in three months with salinity pressure), high protein contain as a food source of animal protein, high content of omega 3(reach >105 mg/100 g meat) and omega 6 (reach >230 mg/100g of meats ) fatty acids, has a better meat taste and chewy meat texture, and can grow up in polyculture system [1]. Aquaculture can be defined as human efforts to increase the water productivity through aquatic farming of aquatic biotas. Aquaculture is a breeding activity to gain benefits via reproduction, growth, and aquatic organism quality increase In line with the increase demand of seafood production around the world, a productive aquaculture is urgently needed to produce organisms in controlled environment and subsequently to gain profit [2].

Tilapia is cultivated in fresh water commodity in hatchery and enlargement because of it benefits that can be compared with some fresh water fishes, especially in rapid growth, easy to breed, easy in maintenance process, and high adaptation in environment changes [3]. Tilapia habitat originates in fresh water of rivers, lakes, stanks, and swamps, but can tolerate in large salinity (eury haline) so that it can live in brackish water and salt water of ocean. The fish tolerant availability of salinity is 0-35 ppt





## Lipid production from tapioca wastewater by culture of *Scenedesmus sp.* with simultaneous BOD, COD and nitrogen removal

Romaidi<sup>1\*</sup>, Muhammad Hasanudin<sup>1</sup>, Khusnul Kholifah<sup>1</sup>, Alik Maulidiyah<sup>2</sup>, Sapto P. Putro<sup>2</sup>, Akira Kikuchi<sup>3,4</sup>, Toshifumi Sakaguchi<sup>5</sup>

<sup>1</sup>Department of Biology, Faculty of Science and Technology, Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia

<sup>2</sup>Faculty of Science and Mathematics, Diponegoro University, Semarang, Indonesia

<sup>3</sup>Faculty of Agriculture, University of Brawijaya, Malang, Indonesia

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**Abstract.** The use of microalgae to produce biodiesel or possibly remove nutrients from industrial wastewater has gained important attention during recent years due to their photosynthetic rate and its versatile nature to grow in various wastewater systems. In this study, a microalgae, *Scenedesmus sp.*, was cultured to enhance the lipid production and nutrients removal from tapioca wastewater sample. To assess lipid production, *Scenedesmus sp.* was cultured in different concentration of tapioca wastewater sample (from 0 to 100 %), and nutrient removal including BOD, COD, NH<sub>4</sub>, NO<sub>2</sub>, NO<sub>3</sub> level by *Scenedesmus sp.* was assessed in 100% of tapioca wastewater culture. After 8 days of culture, it was found out that 50% of tapioca wastewater sample resulted in highest concentration of lipid content than that of the other concentrations. The level of environment indicator as nutrient removal such as BOD, COD, NH<sub>4</sub>, NO<sub>2</sub>, NO<sub>3</sub> were also decreased up to 74%, 72%, 95%, 91%, and 91%, respectively. The pH condition changed from initial condition acidic (pH: 4) to neutral or basic condition (pH: 7-8) as recommended in wastewater treatment system. This research provided a novel approach and achieved efficient simultaneous lipid production and nutrients removal from tapioca wastewater sample by *Scenedesmus*'s culture system.

**Keyword:** *Scenedesmus sp.*, tapioca wastewater, lipid production

### 1. Introduction

The energy crisis is one of the most important problems faced by all people over the world in the 21st century. The highest consumption of fossil fuels has result in greenhouse effect and causes global climate change [1,2]. One of a type of renewable energy is microalgae biomass-based biofuel, which is considered as one of the most potent substitutes for fossil fuel [2]. However, to increase the production of microalgae biomass, several strategies should be developed, such as modification of culture medium and environmental factors. Hence, one of promising strategies is using wastewater sample as





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DECREE OF DEAN NUMBER : 1778/UN7.5.8/HK/2018

# Certificate

THIS IS TO CERTIFY THAT

**Sarjito**

*as*

## **PRESENTER**

In the 8<sup>th</sup> International Seminar on New Paradigm and Innovation on  
Natural Science and Its Application (8<sup>th</sup> ISNPiNSA )

Held on 26 September 2018 at Gets Hotel, Semarang, Indonesia  
with paper entitled as follows:

**Screening of potential isolate candidates probiotic against  
Aeromonas hydrophila from Boyolali, Indonesia**

DEAN OF FSM UNDIP

  


**Prof. Dr. Widowati, S.Si, M.Si**  
NIP. 196902141994032002

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NIP. 198308072014041001