

**LEMBAR**  
**HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW**  
**KARYA ILMIAH : PROSIDING ILMIAH**

Judul Karya Ilmiah/Artikel : The influenced of Lactobacillus plantarum starter addition and the length time of fermentation process on the activityof seaweed antioxidant ulva lactuca from Krakal Beach, Yogyakarta

Jumlah Penulis : 7 (tujuh)

Status Pengusul : ~~Penulis pertama~~/ penulis ke 7./ ~~penulis korespondensi~~ \*\*

Penulis Karya Ilmiah : ND Ambarsari, IRPA Rushanti, A Setyaji, TR Ningsih, N Nurhana, I Subekhi, Eko Nurcahya Dewi.

Identitas Karya Ilmiah :

a. Nama Prosiding : IOP Conf. Series :  
Earth and Environmental Science.

b. No. ISBN : -

c. Tahun Terbit, : 2018  
Tempat Pelaksanaan : Indonesia

d. Penerbit : IOP

e. Alamat web prosiding :

<http://iopscience.iop.org/article/10.1088/1755-1315/116/1/012074>  
Alamat web artikel :

<http://iopscience.iop.org/article/10.1088/1755-1315/116/1/012074/pdf>  
g. Terindeks di (jika ada) : Scopus

Kategori Publikasi Jurnal Ilmiah :  *Prosiding-Forum Ilmiah Internasional* .....  
 (beri ✓ pada kategori yang tepat)  *Prosiding Forum Ilmiah Nasional*.....  
 Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal <i>Prosiding</i>		Nilai Akhir Yang Diperoleh
	Internasional	Nasional	
a. Kelengkapan unsur isi paper (10%)	30	10	
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		
d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	9		
<b>Total = (100%)</b>	<b>30</b>		
<b>Nilai Pengusul =</b>			

Catatan Penilaian Paper oleh Reviewer :

*Tidak dinilai, melayani belayshes = maks 2 paper per seminar /jurnal.*

Semarang, ..... 22/11/2018  
 Reviewer 1

*[Signature]*  
 Prof. Norma Afiati, M.Sc., Ph.D  
 NIP. 195511101982032001  
 Unit kerja : FPIK UNDP

**LEMBAR  
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW  
KARYA ILMIAH : PROSIDING ILMIAH**

**Judul Karya Ilmiah/Artikel** : The influenced of Lactobacillus plantarum starter addition and the length time of fermentation process on the activity of seaweed antioxidant ulva lactuca from Krakal Beach, Yogyakarta  
**Jumlah Penulis** : 7 (tujuh)  
**Status Pengusul** : Penulis pertama/ penulis ke 7 / penulis korespondensi \*\*  
**Penulis Karya Ilmiah** : ND Ambarsari, IRPA Russhanti, A Setyaji, TR Ningsih, N Nurhana, I Subekhi, Eko Nurcahya Dewi,  
**Identitas Karya Ilmiah** : a. Nama Prosiding : IOP Conf. Series : Earth and Environmental Science.  
 b. No. ISBN : -  
 c. Tahun Terbit, : 2018  
 d. Penerbit : IOP  
 e. Alamat web prosiding :  
<http://iopscience.iop.org/article/10.1088/1755-1315/116/1/012074>  
 f. Alamat web artikel :  
<http://iopscience.iop.org/article/10.1088/1755-1315/116/1/012074/pdf>  
 g. Terindeks di (jika ada) : Scopus

**Kategori Publikasi Jurnal Ilmiah** :  Prosiding Forum Ilmiah Internasional .....  
 Prosiding Forum Ilmiah Nasional.....  
 Hasil Penilaian Peer Review :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Pengusul = Total = (100%)
	Internasional	Nasional	
a. Kelengkapan unsur isi paper (10%)	3	3.0	
b. Ruang lingkup dan kedalaman pembahasan (30%)	9	6.9	
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9	8.1	
d. Kelengkapan unsur dan kualitas terbitan/prosiding (30%)	9	8.8	
<b>Total = (100%)</b>	<b>30</b>	<b>26.8</b>	<b>1.99</b>

Catatan Penilaian Paper oleh Reviewer :

*Reviewers of Biodiversity of Bawang Beluntas*  
*Struktur Penelitian yang baik, dan kualitas Terbitan Baik*  
*Mr. Paper cukup lengkap, dan kualitas Terbitan Baik*  
*Kedalaman pembahasan =  $10/21 = 47.62\%$ ,  $0.3/30 \times 9 = 6.9$*   
*Kemutakhiran Informasi =  $66.7\%$ ,  $0.2/30 \times 9 = 8.1$*

Semarang, 27 Mei 2018.  
 Reviewer 2

Prof. Dr. Ir. Slamet Budi Prayitno, M.Sc  
 NIP. 195506281981031005  
 Unit kerja : FPIK Undip

< Back to results | < Previous 6 of 12 Next >

Export Download Print E-mail Save to PDF Add to List More... >

View at Publisher

IOP Conference Series: Earth and Environmental Science

Volume 116, Issue 1, 8 March 2018, Article number 012074

3rd International Conference on Tropical and Coastal Region Eco Development 2017; Yogyakarta; Indonesia; 2 October 2017 through 4 October 2017; Code 135131

## The Influenced of *Lactobacillus plantarum* Starter Addition and the Length Time of Fermentation Process on the Activity of Seaweed Antioxidant *Ulva lactuca* from Krakal Beach, Yogyakarta (Conference Paper) (Open Access)

Ambarsari, N.D. ✉, Rushanti, I.R.P.A., Setyaji, A., Ningsih, T.R., Nurhana, N., Subekhi, I., Dewi, E.N.



Fisheries Processing Department, Faculty Fisheries and Marine Sciences UNDIP, Jl. Prof. Soedarto, SH, Tembalang, Semarang, Jawa Tengah, 50275, Indonesia

### Abstract

View references (21)

Seaweed contains phenol compound functioning as antioxidant. *Lactobacillus plantarum* starter addition in a fermentation process was expected will increase the activity of antioxidant. The purpose of this research was to determine the influence of *L. plantarum* addition and the length of fermentation on the activity of antioxidant in *U. lactuca*. The experiment was conducted with factorial design. The first treatment consisted 2 different factors namely without *L. plantarum* addition and *L. plantarum* addition. While the second treatment were the different length fermentation time: 0, 12, 24, and 36 hours. Each treatment were done in triplicate. The data was analyzed using ANOVA and BNJ test was applied if there any differences between the treatments. The results showed that the fresh *U. lactuca* with *L. plantarum* addition for 36 hours fermentation had TPC BAL 9,83 CFU/ml, pH 4,26, phenol 231 ppm and antioxidant activity  $IC_{50}$  1375,12 ppm. Dried *U. lactuca* with *L. plantarum* addition that was fermented for 36 hours had TPC BAL 9,10 CFU/ml, pH 4,75, phenol 166,24 ppm and antioxidant activity  $IC_{50}$  4070,32 ppm. The fresh *U. lactuca* with *L. plantarum* addition for 36 hours fermentation was the best treatment since the antioxidant activity is  $IC_{50}$  1375,12 ppm. Although the antioxidant activity was categorized as weak but it was still showed an increase compared to the result of antioxidant activity with maceration method using n-hexane dissolver which was 11213,76 ppm, ethyl acetate 9770,285 ppm, and ethanol extract 4921,79 ppm. © Published under licence by IOP Publishing Ltd.

### SciVal Topic Prominence ⓘ

Topic: Seaweed | Antioxidants | *Bacillus subtilis*

Prominence percentile: 87.168 ⓘ

### Reaxys Database Information

View Compounds

### Author keywords

Antioxidant Fermentation Length Time *Lactobacillus plantarum* Phenol *Ulva lactuca*

### Indexed keywords

Engineering controlled terms:

Bacilli Coastal zones Fermentation Phenols Process control Seaweed Starters

Engineering uncontrolled terms

Anti-oxidant activities Ethyl acetates Factorial design Fermentation process

### Metrics ⓘ

0 Citations in Scopus

0 Field-Weighted Citation Impact



PlumX Metrics

Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

### Cited by 0 documents

Inform me when this document is cited in Scopus:

Set citation alert >

Set citation feed >

### Related documents

Phenolics total and antioxidant activity of strawberry (*Fragaria chiloensis*)

Fadri, R.A. , Salvia , Novita, R. (2015) *International Journal on Advanced Science, Engineering and Information Technology*

Growth, yield and physiological characters of three types of Indonesian rice under limited water supply

Purbajanti, E.D. , Kusmiyati, F. , Fuskhah, E. (2017) *Asian Journal of Plant Sciences*

Antioxidant activity of leaf, unripe and ripe fruits of *Lantana camara* L

Layavarjitha, S. , Kadamban, D. (2014) *International Journal of Pharma and Bio Sciences*

View all related documents based on references

Find more related documents in Scopus based on:

Authors > Keywords >



Reaxys PhD Prize 2019  
The global award for ambitious young chemists is now open!

Apply now



ISSN: 17551307

Source Type: Conference Proceeding

Original language: English

DOI: 10.1088/1755-1315/116/1/012074

Document Type: Conference Paper

Volume Editors: Riyadi M.A.

Sponsors:

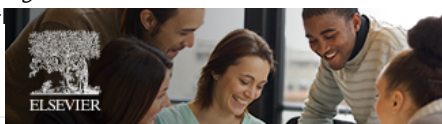
Publisher: Institute of Physics Publishing

## References (21)

[View in search results format >](#)

All | [Export](#) [Print](#) [E-mail](#) [Save to PDF](#) [Create bibliography](#)

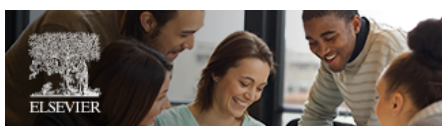
- 1 Maryam, K., Yousefzadi, M., Ali Ahmadi, A., Fegghi, M.A., Keshavarz, M. (2013) *Journal of the Persian Gulf*, 4, pp. 45-50.
- 2 Primurdia, E.G., Kusnadi, J. (2014) *Jurnal Pangan Dan Agroindustri*, 3.
- 3 Sharmila, S., Jeyanthi Rebecca, L.  
Phytochemical analysis of *Enteromorpha flexuosa* and *Ulva lactuca*: A comparative study  
(2014) *International Journal of Pharma and Bio Sciences*, 5 (4), pp. B830-B834. Cited 2 times.  
[http://www.ijpbs.net/cms/php/upload/3691\\_pdf.pdf](http://www.ijpbs.net/cms/php/upload/3691_pdf.pdf)
- 4 Aminin, A.L.N., Wandasari, B.D., Pratiwi, R.A., Utomo, S.R., Sarjono, P.R., Mulyani, N.S.  
Antioxidant and Alpha-Glucosidase Inhibitor Capacity of Fermented *Eucheuma cottoni* from Lombok, NTB  
(2014) *Compendia of Abstracts Int. Symp. on Food and Argo-biodiversity*
- 5 Bisson, L.F., Waterhouse, A.L., Ebler, S.E., Walker, M.A., Lapsey, J.T. (2001) *Nature*, pp. 696-699.
- 6 Kruszewska, D., Lan, J., Lorca, G., Yanagisawa, N., Marklinder, I., Ljungh, A. (2002) *Microecol Ther*, 29, pp. 37-49. Cited 48 times.
- 7 Gupta, S., Rajauria, G., Abu-Ghannam, N.  
Study of the microbial diversity and antimicrobial properties of Irish edible brown seaweeds  
(2010) *International Journal of Food Science and Technology*, 45 (3), pp. 482-489. Cited 32 times.  
<http://www3.interscience.wiley.com/cgi-bin/fulltext/123278936/PDFSTART>  
doi: 10.1111/j.1365-2621.2009.02149.x  
[View at Publisher](#)
- 8 Kusningrum, R.S. (2008) *Perancangan Percobaan*. Cited 10 times. (Surabaya: Airlangga)



Reaxys PhD Prize 2019  
The global award for ambitious  
young chemists is now open!

[Apply now](#)

- 9 Fardiaz, S.  
(1993) *Analisa Mikrobiologi Pangan*  
(Jakarta: PT. Raja Grafindo Persada)
- 
- 10 Orak, H.H.  
(2006) *Electronic Journal of Polish Agricultural University Food Science and Technology*, 9, p. 18. Cited 5 times.
- 
- 11 Molyneux, P.  
(2004) *J. Sci. Technol.*, 26, pp. 211-219. Cited 1149 times.
- 
- 12 Hanani, E., Mun'Im, A., Sekarini, R.  
(2005) *Majalah Ilmu Kefarmasian*, 2 (3), pp. 127-133. Cited 12 times.  
II
- 
- 13 Okawa, M., Kinjo, J., Nohara, T., Ono, M.  
DPPH (1,1-diphenyl-2-Picrylhydrazyl) radical scavenging activity of flavonoids obtained from some medicinal plants ([Open Access](#))  
  
(2001) *Biological and Pharmaceutical Bulletin*, 24 (10), pp. 1202-1205. Cited 172 times.  
doi: 10.1248/bpb.24.1202  
  
[View at Publisher](#)
- 
- 14 Mallesha Shylaja, R., Djh, S.  
(2010) *Rec. Res. Sci. Technol.*, 2, pp. 42-46. Cited 17 times.
- 
- 15 Luhur, N.  
(2015) *Pengaruh Penambahan Starter Lactobacillus Plantarum Dan Lama Proses Fermentasi Terhadap Aktivitas Antioksidan Rumput Laut Glacilaria Sp.*  
(Semarang: Teknologi Hasil Perikanan. UNDIP)
- 
- 16 Kumalaningsih, S., Wignyanto, Permatasari, V.R., Triyono, A.  
(2014) *Program Pasca Sarjana*  
(Surabaya: Universitas Brawijaya, Malang) Pengaruh Jenis Mikroorganisme dan pH Terhadap Kualitas Minuman Probiotik Dari Ampas Tahu
- 
- 17 Nahariah, Legowo, A.M., Abustam, E., Hintono, A., Pramono, Y.B., Yuliati, F.N.  
(2013) *Jurnal Ilmu Dan Teknologi Peternakan*, 3, pp. 33-39. Cited 2 times.
- 
- 18 Pratama, A.Y., Febriani, R.N., Gunawan, S.  
(2013) *Jurnal POMITS*, 2.
- 



Reaxys PhD Prize 2019  
The global award for ambitious  
young chemists is now open!

[Apply now](#)



- 19 Hitayezu, R., Baakdah, M.M., Kinnin, J., Henderson, K., Tsopmo, A.  
Antioxidant activity, avenanthramide and phenolic acid contents of oat milling fractions

(2015) *Journal of Cereal Science*, 63, pp. 35-40. Cited 32 times.  
<http://www.elsevier.com/inca/publications/store/6/2/2/8/5/9/index.htm>  
doi: 10.1016/j.jcs.2015.02.005

[View at Publisher](#)

- 20 Arditiana, A., Rochmawati, N., Widunugroho, P., Puspitasari, R.D.  
(2015) *Jurnal Pangan Dan Agroindustri*, 3.

- 21 Febriansah, E.M., Sakti, E.R.E., Kodir, R.A.  
(2015) *Proc. SPeSIA Unisba*

🔗 Ambarsari, N.D.; Fisheries Processing Department, Faculty Fisheries and Marine Sciences UNDIP, Jl. Prof. Soedarto, SH, Tembalang, Semarang, Jawa Tengah, Indonesia; email:nataliadesiambarsari@gmail.com  
© Copyright 2018 Elsevier B.V., All rights reserved.

[< Back to results](#) | [< Previous](#) 6 of 12 [Next >](#)

[^ Top of page](#)

## About Scopus

[What is Scopus](#)  
[Content coverage](#)  
[Scopus blog](#)  
[Scopus API](#)  
[Privacy matters](#)

## Language

[日本語に切り替える](#)  
[切换到简体中文](#)  
[切换到繁体中文](#)  
[Русский язык](#)

## Customer Service

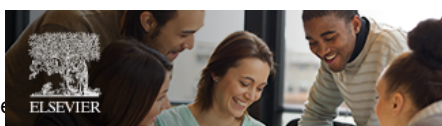
[Help](#)  
[Contact us](#)

ELSEVIER

[Terms and conditions ↗](#) [Privacy policy ↗](#)

Copyright © 2019 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.  
We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the use of cookies.

 RELX Group™



Reaxys PhD Prize 2019  
The global award for ambitious young chemists is now open!

[Apply now](#)