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

Judul Karya Ilmiah (Prosiding) : Ion wind drying with input power variation of the potato slices

Nama/ Jumlah Penulis : 4 Orang

Status Pengusul : ~~Penulis pertama~~/ Penulis ke 2 /~~ Penulis Korespondesi **~~

Identitas Prosiding :

a.	Judul Prosiding	:	The 9th International Seminar on New Paradigm and Innovation of Natural Sciences and its Application 22 October 2019
b.	ISBN/ISSN	:	1742-6588, eISSN : 1742-6596
c.	Thn Terbit, Tempat Pelaks.	:	2020, 22 Oktober 2019, Semarang
d.	Penerbit/Organiser	:	IOP Publishing Ltd.
e.	Alamat Repository/Web	:	https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012001/meta
	Alamat Artikel	:	https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012001/pdf
f.	Terindeks di (jika ada)	:	Scopus

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) :
- [√] *Prosiding* Forum Ilmiah Internasional
- [ ] *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai rata-rata
	Reviewer 1	Reviewer 2	
a. Kelengkapan unsur isi prosiding (10%)	3	3	3
b. Ruang lingkup dan kedalaman pembahasan (30%)	8,9	8,9	8,9
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9	9	9
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	8,8	8,8	8,8
Total = (100%)	**29,7**	**29,7**	**29,7**
Nilai Pengusul = (40% x 29,7)/3=3,96			

Semarang, 10 Mei 2023

Reviewer 1

Prof. Dr. Kusworo Adi, S.Si., M.T.
NIP. 197203171998021001
Unit Kerja : Fakultas Sains dan Matematika
Bidang Ilmu: Fisika

Reviewer 2

Prof. Dr. Heri Sutanto, S.Si., M.Si.
NIP. 197502151998021001
Unit Kerja : Fakultas Sains dan Matematika
Bidang Ilmu: Fisika

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

Judul Karya Ilmiah (Prosiding) : Ion wind drying with input power variation of the potato slices

Nama/ Jumlah Penulis : 4 Orang

Status Pengusul : ~~Penulis pertama~~/ Penulis ke 2 /~~ Penulis Korespondesi **~~

Identitas Prosiding :

a.	Judul Prosiding	:	The 9th International Seminar on New Paradigm and Innovation of Natural Sciences and its Application 22 October 2019
b.	ISBN/ISSN	:	1742-6588, eISSN : 1742-6596
c.	Thn Terbit, Tempat Pelaks.	:	2020, 22 Oktober 2019, Semarang
d.	Penerbit/Organiser	:	IOP Publishing Ltd.
e.	Alamat Repository/Web	:	https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012001/meta
	Alamat Artikel	:	https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012001/pdf
f.	Terindeks di (jika ada)	:	Scopus

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional
[ ] *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional [√]	Nasional [ ]	
a. Kelengkapan unsur isi prosiding (10%)	3		3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		8,9
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		9
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8,8
Total = (100%)	**30**		**29,7**
Nilai Pengusul = (40% x 29,7)/3=3,96			

Catatan Penilaian Paper oleh Reviewer :

1. Kesesuaian dan kelengkapan unsur isi prosiding:

Artikel telah ditulis seuai dengan format IOP Science. Latar belakang sangat singkat dan kebaruan dikemukakan secara explisit. Unsur-unsur artikel lengkap.

2. Ruang lingkup dan kedalaman pembahasan:

Substansi artikel sesuai dengan ruang lingkup jurnal pada Seminar on New Paradigm and Innovation on Natural Science and Its Applications. Pembahasan sudah dilakukan secara baik dan cukup mendalam serta sudah membandingkan dengan hasil peneliti lain yang berkaitan dengan pengeringan irisan kentang dengan memvariasi daya dari angin ion.

3. Kecukupan dan kemutakhiran data/informasi dan metodologi:

Data-data hasil penelitian adalah data dengan metodeangin ion, sudah menunjukkan ada kebaruan informas dengan menampilkan 3 buah grafik. Terdapat kesesuain pustaka dengan tema penelitian dan sumber pustaka rata-rata relative baru, sehingga aspek keterbaruannya cukup baik

4. Kelengkapan unsur dan kualitas terbitan/ prosiding:

Kualitas penerbitan cukup baik.. Paper berasal dari konferensi dimuat di IOP Science, terindeks Scopus, Q4. Nilai maximum 30.

Semarang, 5 Mei 2023
Reviewer 1

Prof. Dr. Kusworo Adi, S.Si., M.T.
NIP. 197203171998021001
Unit Kerja : Fakultas Sains dan Matematika
Bidang Ilmu: Fisika

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

Judul Karya Ilmiah (Prosiding) : Ion wind drying with input power variation of the potato slices

Nama/ Jumlah Penulis : 4 Orang

Status Pengusul : ~~Penulis pertama~~/ Penulis ke 2 /~~ Penulis Korespondesi **~~

Identitas Prosiding :

a. Judul Prosiding : The 9th International Seminar on New Paradigm and Innovation of Natural Sciences and its Application 22 October 2019

b. ISBN/ISSN : 1742-6588, eISSN : 1742-6596

c. Thn Terbit, Tempat Pelaks. : 2020, 22 Oktober 2019, Semarang

d. Penerbit/Organiser : IOP Publishing Ltd.

e. Alamat Repository/Web : https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012001/meta

Alamat Artikel : https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012001/pdf

f. Terindeks di (jika ada) : Scopus

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional
[ ] *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional [√]	Nasional [ ]	
a. Kelengkapan unsur isi prosiding (10%)	3		3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		8,8
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		9
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8,9
Total = (100%)	**30**		**29,7**
Nilai Pengusul =			

Catatan Penilaian Paper oleh Reviewer :

1. **Kesesuaian dan kelengkapan unsur isi prosiding:**
   Artikel telah ditulis secara lengkap sesuai dengan format prosiding IOP Science. Abstrak dan kesimpulan relevan. Toipk artikel masuk dalam scope prosiding.
2. **Ruang lingkup dan kedalaman pembahasan:**
   Substansi artikel terkait angin ion kering untuk pengeringan irisan kentang. Pembahasan sudah dilakukan secara baik dan cukup mendalam serta sudah membandingkan dengan hasil peneliti lain.
3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**
   Data penelitian disajikan dalam 4 grafik dan kategori memadai dan mutakhir. Data yang diperoleh sesuai metodologi penelitian yang diungkapkan. Artikel yang disusun sudah mengacu 27 referensi kategori mutakhir dan relevan dengan topik artikel.
4. **Kelengkapan unsur dan kualitas terbitan/ prosiding:**
   Kualitas penerbitan cukup baik.. Paper berasal dari konferensi dimuat di IOP Science, terindeks Scopus, Q4. Nilai maximum 3.

Semarang, 5 Mei 2023
Reviewer 2

Prof. Dr. Heri Sutanto, S.Si., M.Si.
NIP. 197502151998021001
Unit Kerja : Fakultas Sains dan Matematika
Bidang Ilmu: Fisika

Journal of Physics: Conference Series • *Open Access* • Volume 1524, Issue 1 • 22 June 2020 • Article number 012001 • 9th International Seminar on New Paradigm and Innovation of Natural Sciences and Its Application, ISNPINSA 2019 • Semarang, Central Java • 22 October 2019 • Code 161297

Ion wind drying with input power variation of the potato slices

Sumariyah S.[a] ✉ ; Khuriati A.[a]; Pratiwi S.H.[a]; Fachriyah E.[b]

Save all to author list

[a] Physics Department, Mathematics and Sciences Faculty, Diponegoro University, Indonesia

[b] Chemistry Department, Mathematics and Sciences Faculty, Diponegoro University, Indonesia

Document type
Conference Paper • *Bronze Open Access*

Source type
Conference Proceedings

ISSN
17426588

DOI
10.1088/1742-6596/1524/1/012001

Abstract

The ion wind drying method has been used to dehydrate potato slices with a variation of electric power and a constant drying time of 30 minutes. Ion wind drying is generated by an electrohydrodynamic flow reactor using 10 x 10 pairs of pin electrodes and multi-ring concentric electrodes connected by a DC high voltage. The high electric field in space between electrode causes ionization of air at the atmosphere condition which is produced ion flow together with heat transfer, and radical ions which are used for drying. Power in the reactor during drying is influenced by the input voltage and the measured current obtained a minimum value of 10 Watt and a maximum value of 60 Watt. Ion wind drying in the sample slices found also the value of the level of drying, shrinkage, humidity, and energy consumption which increases with increasing power at the reactor. © Published under licence by IOP Publishing Ltd.

References (27)

View in search results format >

All | Export | Print | E-mail | Save to PDF | Create bibliography

1 Aghbashlo, M., Kianmehr, M.H., Arabhosseini, A.
Modeling of thin-layer drying of potato slices in length of continuous band dryer

(2009) *Energy Conversion and Management*, 50 (5), pp. 1348-1355. Cited 87 times.
doi: 10.1016/j.enconman.2009.01.004

View at Publisher

2 Dehghannya, J., Hosseinlar, S.-H., Heshmati, M.K.
Multi-stage continuous and intermittent microwave drying of quince fruit coupled with osmotic dehydration and low temperature hot air drying

(2018) *Innovative Food Science and Emerging Technologies*, 45, pp. 132-151. Cited 65 times.
http://www.elsevier.com.proxy.undip.ac.id:2048/locate/ifset
doi: 10.1016/j.ifset.2017.10.007

View at Publisher

3 Djaeni, M., Prasetyaningrum, A., Hargono
(2011) *Sistem Pengering Adsorpsi Dengan Zeolite (Parzel) Untuk Produk Bahan Pangan Dan Tanaman Obat: SebuahTerobosan di Bidang Teknologi Peneringan*

4 Peng, C., Ravi, S., Patel, V.K., Momen, A.M., Moghaddam, S.
Physics of direct-contact ultrasonic cloth drying process (Open Access)

(2017) *Energy*, 125, pp. 498-508. Cited 33 times.
www.elsevier.com/inca/publications/store/4/8/3/

5 Chapchaimoh, K., Poomsa-Ad, N., Wiset, L., Morris, J.
Thermal characteristics of heat pump dryer for ginger drying

(2016) *Applied Thermal Engineering*, 95, pp. 491-498. Cited 57 times.
http://www.journals.elsevier.com.proxy.undip.ac.id:2048/applied-thermal-engineering/
doi: 10.1016/j.applthermaleng.2015.09.025

View at Publisher

6 Barreto, I.M.A., Tribuzi, G., Marsaioli Junior, A., Carciofi, B.A.M., Laurindo, J.B.
Oil–free potato chips produced by microwave multiflash drying

(2019) *Journa* Abstract + Refs(opens in a new window) times.
http://www.sc urnal/02608774
doi: 10.1016/j.jfoodeng.2019.05.033

View at Publisher

7 Lammerskitten, A., Wiktor, A., Siemer, C., Toepfl, S., Mykhailyk, V., Gondek, E., Rybak, K., (...), Parniakov, O.

The effects of pulsed electric fields on the quality parameters of freeze-dried apples

(2019) *Journal of Food Engineering*, 252, pp. 36-43. Cited 51 times.
http://www.sciencedirect.com.proxy.undip.ac.id:2048/science/journal/02608774
doi: 10.1016/j.jfoodeng.2019.02.006

View at Publisher

8 Sumariyah, Khuriati, A., Fachriyah, E.

Electrohydrodynamic (edh) drying of ginger slices (zingiber officinale) (Open Access)

(2018) *Journal of Physics: Conference Series*,
http://iopscience.iop.org/journal/1742-6596
doi: 10.1088/1742-6596/1025/1/012015

Abstract + Refs(opens in a new window)

View at Publisher

9 Sumariyah, Khuriati, A., Pratiwi, S.H., Fachriyah, E.
(2018) *Iop Conf. Series: Journal of Physics: Conf. Series*, 1170.

10 Sumariyah, Khuriati, A., Fachriyah, E.

Ion wind generation and its application to drying of wild Ginger slices (Curcuma Xanthorhiza) (Open Access)

(2018) *Journal of Physics: Conference Series*, 1025 (1), art. no. 012016. Cited 4 times.
http://iopscience.iop.org/journal/1742-6596
doi: 10.1088/1742-6596/1025/1/012016

11 Zhang, J., Lai, F.C.

Effect of emitting electrode number on the performance of EHD gas pump in a rectangular channel

(2011) *Journal of Electrostatics*, 69 (6), pp. 486-493. Cited 53 times.
doi: 10.1016/j.elstat.2011.06.007

View at Publisher

12 Li, F.-D., Li, L.-T., Sun, J.-F., Tatsumi, E.

Effect of electrohydrodynamic (EHD) technique on drying process and appearance of okara cake

(2006) *Journal of Food Engineering*, 77 (2), pp. 275-280. Cited 67 times.
doi: 10.1016/j.jfoodeng.2005.06.028

View at Publisher

13 Esehaghbeygi, A., Basiry, M.

Electrohydrodynamic (EHD) drying of tomato slices (Lycopersicon esculentum)

(2011) *Journal of Food Engineering*, 104 (4), pp. 628-631. Cited 87 times.
doi: 10.1016/j.jfoodeng.2011.01.032

View at Publisher

14 Law, C.L., Chen, H.H.H., Mujumdar, A.S.
Food Technologies: Drying

(2014) *Encyclopedia of Food Safety*, 3, pp. 156-167. Cited 17 times.
http://www.sciencedirect.com.proxy.undip.ac.id:2048/science/book/9780123786135
ISBN: 978-012378612-8; 978-012378613-5
doi: 10.1016/B978-0-12-378612-8.00268-7

View at Publisher

15 Martynenko, A., Zheng, W.
Electrohydrodynamic drying of apple slices: Energy and quality aspects

(2016) *Journal of Food Engineering*, 168, art. no. 8279, pp. 215-222. Cited 83 times.
http://www.sciencedirect.com.proxy.undip.ac.id:2048/science/journal/02608774
doi: 10.1016/j.jfoodeng.2015.07.043

View at Publisher

16 Goodenough, T.I.J., Goodenough, P.W., Goodenough, S.M.
The efficiency of corona wind drying and its application to the food industry

(2007) *Journal of Food Engineering*, 80 (4), pp. 1233-1238. Cited 84 times.
doi: 10.1016/j.jfoodeng.2006.09.016

View at Publisher

17 Wang, H.-C., Jewell-Larsen, N.E., Mamishev, A.V.
Thermal management of microelectronics with electrostatic fluid accelerators

(2013) *Applied Thermal Engineering*, 51 (1-2), pp. 190-211. Cited 82 times.
doi: 10.1016/j.applthermaleng.2012.08.068

View at Publisher

18 Taghian Dinani, S., Havet, M.
Effect of voltage and air flow velocity of combined convective-electrohydrodynamic drying system on the physical properties of mushroom slices
Abstract + Refs(opens in a new window)
(2015) *Industrial Crops and Products*, 70, pp. 417-426. Cited 51 times.
www.elsevier.com/inca/publications/store/5/2/2/8/2/5
doi: 10.1016/j.indcrop.2015.03.047
View at Publisher

19 Nowacka, M., Wiktor, A., Śledź, M., Jurek, N., Witrowa-Rajchert, D.
Drying of ultrasound pretreated apple and its selected physical properties
(2012) *Journal of Food Engineering*, 113 (3), pp. 427-433. Cited 200 times.
doi: 10.1016/j.jfoodeng.2012.06.013
View at Publisher

20 Martynenko, A., Zheng, W.
Electrohydrodynamic drying of apple slices: Energy and quality aspects
(2016) *Journal of Food Engineering*, 168, art. no. 8279, pp. 215-222. Cited 83 times.
http://www.sciencedirect.com.proxy.undip.ac.id:2048/science/journal/02608774
doi: 10.1016/j.jfoodeng.2015.07.043
View at Publisher

21 Sumariyah, Kusminart, Hermanto, A., Nuswantoro, P.
Study of EHD flow generator's efficiencies utilizing pin to single ring and multi-concentric rings electrodes (Open Access)
(2016) *Journal of Physics: Conference Series*, 776 (1), art. no. 012100. Cited 4 times.
http://www.iop.org/EJ/journal/conf

22 Martynenko, A., Kudra, T.
Electrically-induced transport phenomena in EHD drying - A review
(2016) *Trends in Food Science and Technology*, 54, pp. 63-73. Cited 67 times.
http://www.elsevier.com.proxy.undip.ac.id:2048/wps/find/journaldescription.cws_home/601278/description#description
doi: 10.1016/j.tifs.2016.05.019
View at Publisher

23 Shakouri Pour, M., Esmaeilzadeh, E.
Experimental investigation of convective heat transfer enhancement from 3D-shape heat sources by EHD actuator in duct flow
(2011) *Experimental Thermal and Fluid Science*, 35 (7), pp. 1383-1391. Cited 29 times.
doi: 10.1016/j.expthermflusci.2011.05.006
View at Publisher

24 Martynenko, A., Kudra, T.
Electrically-induced transport phenomena in EHD drying - A review

(2016) *Trends in Food Science and Technology*, 54, pp. 63-73. Cited 67 times.
http://www.elsevier.com.proxy.undip.ac.id:2048/wps/find/journaldescription.cws_home/601278/description#description
doi: 10.1016/j.tifs.2016.05.019

View at Publisher

25 Talla, A., Puiggali, J.-R., Jomaa, W., Jannot, Y.
Shrinkage and density evolution during drying of tropical fruits: Application to banana

(2004) *Journal of Food Engineering*, 64 (1), pp. 103-109. Cited 78 times.
doi: 10.1016/j.jfoodeng.2003.09.017

View at Publisher

26 Hashinaga, F., Bajgai, T.R., Isobe, S., Barthakur, N.N.
Electrohydrodynamic (EHD) drying of apple slices

(1999) *Drying Technology*, 17 (3), pp. 479-495. Cited 116 times.
www.tandf.co.uk/journals/titles/07373937.asp
doi: 10.1080/07373939908917547

View at Publisher

27 Cao, W., Nishiyama, Y., Koide, S.
Electrohydrodynamic drying characteristics of wheat using high voltage electrostatic field

(2004) *Journal of Food Engineering*, 62 (3), pp. 209-213. Cited 84 times.
doi: 10.1016/S0260-8774(03)00232-2

Sumariyah, S.; Physics Department, Mathematics and Sciences Faculty, Diponegoro University, Indonesia; email:sumariyah.jaelani@gmail.com

Faculty of Sciences and Mathematics
Diponegoro University

9th ISNPINSA

International Seminar on New Paradigma and Innovation on Natural Science and Its Application

CONTRIBUTION OF SCIENCE TOWARD INDUSTRY 4.0 ERA

Date and Venue :
October 22, 2019
Gets Hotel Semarang - Jl. MT. Haryono No.312 - 316, Sarirejo, Kec. Semarang Timur, Kota Semarang, Jawa Tengah 50124

LIST OF SPEAKER

I. Keynote Speaker

No.	Name	Research Field	Institution	Country
1.	Prof. Emmanuel Cornillot	Biotechnology	Universite de' Monpellier	Perancis
2.	Prof. Dr. Baba Musta	Geochemistry	Faculty of Science, UMS	Malaysia
3.	Prof. Dr. Ir. Rokhmin Dahuri, MS.	Marine Resource and Environmental Studies	President of Indonesian Aquaculture Society; Proffesor in Marine Resource and Environmental Studies	Indonesia
4.	Sapto P. Putro, M.Si., Ph.D.	Marine Ecology and Aquaculture	Faculty of Science and Mathematics, Diponegoro University	Indonesia

II. Invited Speaker

No.	Name	Department	Institution	Country
1.	Dinar Mutiara Kusumo Nugraheni, S.T., M.InfoTech.(Comp).	Computer Science	FSM UNDIP	Indonesia
2.	Dr. Eng. Ali Khumaeni, S.Si., MS	Physics	FSM UNDIP	Indonesia
3.	Dr. M. Cholid Djunaidi, M.Si.	Chemistry	FSM UNDIP	Indonesia
4.	Dr. Lilih Khotimperwati, S.Si., M.Si.	Biology	FSM UNDIP	Indonesia
5.	Dr. Tarno, M.Si.	Chemistry	FSM UNDIP	Indonesia
6.	Farikhin, M.Sc. Ph.D.	Mathematics	FSM UNDIP	Indonesia

Source details

Journal of Physics: Conference Series

Scopus coverage years: from 2005 to Present

Publisher: Institute of Physics Publishing

ISSN: 1742-6588 E-ISSN: 1742-6596

Subject area: Physics and Astronomy: General Physics and Astronomy

View all documents > Set document alert Save to source list Journal Homepage

CiteScore 2019
0.7
Add CiteScore to your site

SJR 2019
0.227

SNIP 2019
0.574

CiteScore CiteScore rank & trend Scopus content coverage

Improved CiteScore methodology
CiteScore 2019 counts the citations received in 2016-2019 to articles, reviews, conference papers, book chapters and data papers published in 2016-2019, and divides this by the number of publications published in 2016-2019. Learn more >

CiteScore 2019

$$0.7 = \frac{35.313 \text{ Citations } 2016 - 2019}{53.520 \text{ Documents } 2016 - 2019}$$

Calculated on 06 May, 2020

CiteScoreTracker 2020

$$0.6 = \frac{37.237 \text{ Citations to date}}{60.771 \text{ Documents to date}}$$

Last updated on 07 September, 2020 • Updated monthly

CiteScore rank 2019

Category	Rank	Percentile
Physics and Astronomy General Physics and Astronomy	#186/224	17th

View CiteScore methodology > CiteScore FAQ >

D. Conference Organizers

Organizing Committee:

Prof. Dr. Widowati, M.Si (Steering Committee)
Farikhin, S.Si., M.Si., Ph.D. (Steering Committee)
Dr. Kusworo Adi, S.Si., MT. (Steering Committee)
Drs. Sapto P. Putro, M.Si., Ph.D (Steering Committee)
Dr. Suryono, M.Si. (Chairman)
Nor Basid Adiwibawa Prasetya, S.Si., M.Sc., Ph.D. (Secretary)
Dinar Mutiara K. Nugraheni, S.T., M.InfoTech.(Comp). (Secretary)
Nurdin Bahtiar, S.Si., M.Kom. (member)
Dr. Eng. Ali Khumaeni, ME. (member)
Dr. Di Asih I Maruddani, S.Si., M.Si. (member)
Dra. Sri Harumaningsih, .S.Si., M.IP. (member)
Lilik Maryuni, S.E., M.Si (member)
Novita Sulistyana, S.E., M.Si. (member)
Susilo Wanto, SH (member)
Herman Aprianto, S.Kom. (member)
Iys Syabilla Rusda, S.IP. (member)
Choiriyah, SE (member)
Nur Azizah, SE (member)
Alik Maulidiyah, S.Si. M.Sc. (member)
Rahmawan Bagus Trianto, S.Kom. (member)
Deby Yuniarto (member)
Siswoyo (member)

Scientific Committee:

Prof. Emmanuel Cornillot, Universite de' Monpellier, France
Prof. Dr. Baba Musta, Universiti Malaysia Sabah, Malaysia
Prof. Dr. Ir. Rokhmin Dahuri, MS, President of Indonesian Aquaculture Society; Proffesor in Marine Resource and Environmental Studies

Table of contents

Volume 1524

2020

Previous issue Next issue

The 9th International Seminar on New Paradigm and Innovation of Natural Sciences and its Application 22 October 2019, Central Java, Indonesia

Accepted papers received: 16 April 2020

Published online: 22 June 2020

Open all abstracts

Preface

Papers

Isolation and identification of rare actinomycete-like bacteria from soil-based on 16S ribosomal RNA gene sequences

Y Eshananda[1], F Ningsih[1,2], Y Sakai[3,4], A Yokota[3], S Yabe[3,4], W Sjamsuridzal[1,2]

[1]Department of Biology, Faculty of Mathematics and Natural Sciences, Universitas Indonesia, Kampus UI Depok, Depok 16424, Indonesia
[2]Center of Excellence for Indigenous Biological Resources-Genome Studies, Faculty of Mathematics and Natural Sciences, Universitas Indonesia, Kampus UI Depok, Depok 16424, Indonesia
[3]Department of Microbial Resources, Graduate School of Agricultural Science, Faculty of Agricultural, Tohoku University, 468-1 Aoba, Aramaki, Sendai, Miyagi 980-0845, Japan
[4]Hazaka Plant Research Center, Kennan Eisei Kogyo Co., Ltd., 44 Aza-Inariyama, Oaza-Ashitate, Murata-Cho, Shibata gun, Miyagi 989-1311, Japan.

Corresponding author: yuriza.eshananda@ui.ac.id

Abstract. The rare actinomycete-like bacteria are mycelium-forming bacteria other than phylum *Actinobacteria* that difficult to isolate and cultivate. This group of bacteria was recently speculated by many scientists as a potential new microbial resource for the discovery of novel compounds, as a substitute for actinomycetes. In this study, we isolate and identify rare actinomycete-like bacteria from forest soil collected under bamboo trees, near the CisolokGeysers, Sukabumi, Indonesia. The isolation of bacteria was performed using Reasoner's 2A (1:10 dilution) medium with 2% gellan gum instead of agar and incubated at 30 °C for three weeks. The 16S rRNA gene sequences of the isolates were examined to determine their taxonomic position. Four isolates designated K17-1, K17-2, K42, and K44 showed pale oranges colonies and formed mycelia were obtained. The results of 16S rRNA gene sequences of these isolates showed high similarity to members of the genus *Dictyobacter* in the family *Dictyobacteraceae* of the class *Ktedonobacteria* of the phylum *Chlorofexi*, with values 97.16-98.02%, and most closely related to the species *Dictyobacteraurantiacus* S-27^{T} (97.16-98.02% similarities). This result suggested that the member of the class *Ktedonobacteria*, which considered as rare actinomycete-like bacteria, such as *Dictyobacter* could be found in the forest soil of the geothermal area.

1. Introduction

Actinobacteria are gram-positive bacteria that have a high percentage of guanine and cytosine in their genome [1]. This group morphologically comprises unicellular organisms to mycelium-forming bacteria which called Actinomycetes [1,2]. However, bacteria that have filamentous appearance also could be found in the phylum *Chlorofexi*. The member of this phylum which has actinomycete-like morphology is present in the four different class namely *Chlorofexi*, *Anaerolineae*, *Caldilineae*and *Ktedonobacteria* [3]. Among these class, *Ktedonobacteria* has some obvious morphological features which distinguish themselves from others. The member of *Ktedonobacteria*are aerobic organism and forming branched mycelia with spores like actinomycetes [3,4]. Moreover, most validly published strains of *Ktedonobacteria*budding their multiple spores per cell on the aerial mycelium which unique among bacteria [5]. All of*Ktedonobacteria*identified as gram-positive bacteria while almost of the member in phylum *Chlorofexi* were gram-negative [3,6]. Based on these exceptional characters, class *Ktedonobacteria* could be included as the rare actinomycete-like bacteria.

Rare actinomycete-like bacteria could provide an alternative for the discovery of new compounds derived from microorganisms because spore formation usually would be followed by the production of secondary metabolites [7,8]. Further analysis of the genomic of nine members of rare actinomycete-like bacteria

Hoax news validation using similarity algorithms

S Y Yuliani[1,2], **S Sahib**[2], **M F Abdollah**[2], **Y S Wijaya, N H M Yusoff**

[1]Information Security and Networking Research Group (InFORSNET), Faculty of Information Communication Technology, Universiti Teknikal Malaysia Melaka Malaka, Malaysia
[2]Informatic Department, Faculty Engineering, University Widyatama Bandung, Indonesia

Corresponding author: sy.yuliany@gmail.com

Abstract. News that is presented every day on social media dramatically affects the feelings, feelings, thoughts, or even actions of a person or group. Hoax News is one of them which is disturbing the public and raising noise in various fields, ranging from politics, culture, security, and order, to the economy. Inseparable from social media users. How every day, there is information on social media, which is not necessarily true so that people are provoked by hoax on social media. The news detection system in this study was designed using Unsupported Learning so that it does not require data training. The system was built using the Equation algorithm to calculate the validity of document similarity. Extraction results used to search for content related to user input using a detection engine, then the similarity value and the time needed to utilize hoax news are calculated. System validation testing by using a four text similarity algorithm called the Equation algorithm, the Levenshtein algorithm, the Smith-Waterman algorithm, the Damerau Levenshtein algorithm; this algorithm is used to find the best analytical solution of news hoaxes and submissions needed to find the news hoax password. The final results of the deception detection research using a script that has been done for Validation using an algorithm, get the value of accuracy in detection using the Smith-Waterman algorithm, which produces an accuracy value of text similarity of 99.29% and can be used a process of 6, 57 seconds, followed by the second sequence that is the similarity algorithm produces an accuracy of 75% and requires a processing time of 4.94 seconds, then the third sequence is the Levenshtein algorithm with an accuracy of 55.02% and requires a processing time of 5.49 seconds, and is used today is Damerau Levenshtein algorithm is 55.02% and requires a processing time of 7.54%. The results of research tests on this text can conclude the more text on the detection engine, the higher the verification value and the higher the time needed to process hoax news.

1. Introduction

Sharing information is a positive thing, but not all information disseminated through social media is in the form of facts. There have been various cases of spreading the news that is not facts or often called hoaxes. Whereas hoax is critical information that misleads human perception by spreading false information but considered as valid, No wonder then the intensity of fake news and hoax news on social media is so viral on social media [1]. For personal and group benefit by spreading harmful content that caused unrest and mutual suspicion in the community [2]. The ease and speed of dissemination on social media make this hoax news known to many people in a relatively short period, and can to more people.

Ion wind drying with input power variation of the potato slices

S Sumariyah[1], A Khuriati[2], S H Pratiwi[3], E Fachriyah[4]

[1,2,3]Physics Department, Mathematics and Sciences Faculty, Diponegoro University, Indonesia
[4]Chemistry Department, Mathematics and Sciences Faculty, Diponegoro University, Indonesia

Corresponding author: sumariyah.jaelani@gmail.com

Abstract. The ion wind drying method has been used to dehydrate potato slices with a variation of electric power and a constant drying time of 30 minutes. Ion wind drying is generated by an electrohydrodynamic flow reactor using 10 x 10 pairs of pin electrodes and multi-ring concentric electrodes connected by a DC high voltage. The high electric field in space between electrode causes ionization of air at the atmosphere condition which is produced ion flow together with heat transfer, and radical ions which are used for drying. Power in the reactor during drying is influenced by the input voltage and the measured current obtained a minimum value of 10 Watt and a maximum value of 60 Watt. Ion wind drying in the sample slices found also the value of the level of drying, shrinkage, humidity, and energy consumption which increases with increasing power at the reactor.

1. Introduction

The consumption of potatoes (*Solanum tuberosum*) has increased in the last few years. Potato is a nutritious vegetable containing the highest levels of carbohydrate, and rich in minerals, protein. However, fresh potatoes will not be durable due to easily exposed to bacteria and mold [1]. Drying is one of the oldest and most effective methods for the preservation of potatoes by reducing water content and reducing microbial activity [2]. The drying process is one that is widely used in industry and it takes around 12-20% of the energy needed in the manufacturing industry [3].

Recent research has revealed that advanced drying technology can improve energy efficiency. It is like drying with the help of microwaves or ultrasonic [4], drying heat pumps [5], drying the refraction window [6] and drying high electric fields [7]. High electric field drying is also called EHD Drying [8], electric wind dring or Ionic wind drying [9]. An ionic wind or ionic wind is a stream coming from an ionized fluid produced by a strong electric field [10]. The ionic wind produced by the electrodes is charged with direct current (positive or negative) at a high enough voltage (in the kV range), while the applied voltage can be high, the current involved is usually very small (in the mA range), which makes the required power supply sufficient low [11].

Research on Ionic wind drying has been carried out by several researchers including Li et al (2006), Esehaghbeygi *et al* (2011), Bai *et al* (2013), Law (2014), Singh *et al* (2015), Dinani *et al* (2015) 2015) and Martynenko *et al*. (2016). Li (2006) has reported the results of ionic wind drying experiments for Okara cake with 3 needle and single plate electrodes [12]. Whereas Esehaghbeygi *et al* (2011) have conducted research on drying sliced tomatoes with multi-pin electrode electrodes at 10 kV voltage