

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

Judul Karya Ilmiah (Prosiding) : Electrohydrodynamic (edh) drying of ginger slices (*zingiber officinale*)

Nama/ Jumlah Penulis : 3 Orang

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

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- a. Judul Prosiding : 7th International Seminar on New Paradigm and Innovation on Natural Science and Its Applications
- b. ISBN/ISSN : 1742-6588, eISSN : 1742-6596
- c. Thn Terbit, Tempat Pelaks. : 2018, 17 Oktober 2017 di Semarang
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- f. Terindeks di (jika ada) : Scopus

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

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Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai rata-rata Akhir Yang Diperoleh
	Reviewer 1	Reviewer 2	
a. Kelengkapan unsur isi prosiding (10%)	3	3	3
b. Ruang lingkup dan kedalaman pembahasan (30%)	8,8	8,8	8,8
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	8,8	8,9	8,85
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	8,8	8,7	8,75
Total = (100%)	29,4	29,4	29,4
Nilai untuk Pengusul = (40% x 29,4) / 2 = 5,88			

Semarang, 10 Mei 2023

Reviewer 2

Reviewer



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



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

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b. Ruang lingkup dan kedalaman pembahasan (30%)	9		8,8
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9		8,8
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8,8
Total = (100%)	30		29,2
Nilai Pengusul = $40/100 \times 29,2/2 = 5,84$			

Catatan Penilaian Paper oleh Reviewer :

- Kesesuaian dan kelengkapan unsur isi prosiding:**
Artikel telah ditulis sesuai dengan format IOP Science. Unsur-unsur artikel lengkap.
- 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).
- Kecukupan dan kemutakhiran data/informasi dan metodologi:**
Data-data hasil penelitian adalah data yang cukup. Pembahasan masing kurang dibandingkan dengan peneliti lain. Masih sangat mendasar.
- 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

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

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a. Kelengkapan unsur isi prosiding (10%)	3		3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		2,8
c. Kecukupan dan kemutakhiran data/informasi dan metodologi (30%)	9		2,9
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8,7
Total = (100%)	30		29,4
Nilai Pengusul = (40% x 29,4) / 2 = 5,88			

Catatan Penilaian Paper oleh Reviewer :

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Artikel telah ditulis secara lengkap dari abstrak hingga referensi sesuai dengan format JCPS IOP Science. Latar belakang sangat singkat dan kebaruan dikemukakan secara eksplisit.
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- Kelengkapan unsur dan kualitas terbitan/ prosiding:**
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Semarang, 5 Mei 2023
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Prof. Dr. Heri Sutanto, S.Si., M.Si.

NIP. 197502151998021001

Unit Kerja : Fakultas Sains dan Matematika
Bidang Ilmu: Fisika

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

Sumariyah  ; Khuriati, Ainie; Fachriyah, Enny

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^a Physics Department, Mathematics and Sciences Faculty, Diponegoro University, Indonesia

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Electrohydrodynamic (EHD) flow or ion wind of corona discharges has been generated utilizing pin-multi ring concentric electrodes. The pin was made of stainless steel with a tip diameter of 0.018 mm. The multi-ring constructed electrodes by a metal material connected to each other and each ring has a diameter of 24 mm, 16 mm and 8 mm in the same width and thickness is 4 mm and 1 mm. EHD was generated by using a DC high voltage of 5 kV. Pin as an active electrode of corona discharge and multi-ring concentric electrodes as a collector and passive electrodes. The ion wind or EHD flow is produced through changes in voltage and distance between electrodes. The ionic wind generated system outputs through multi-ring concentric electrodes which will further dry the sample. A circle ginger slices as a sample with a diameter of 26 mm with a thickness of 2 mm. The drying is done at the distance between the fixed electrodes of 4 mm and the varied voltages are 1.2 kV, 1.4 kV, and 1.6 kV. The sample drying time varied 30 minutes, 60 minutes, 90 minutes, 120 minutes and 150 minutes. The result of drying the sample at a fixed voltage is obtained moisture of ginger slices decreased with increased drying time. © Published under licence by IOP Publishing Ltd.

Author keywords

Electrohydrodynamic flow; moisture; multi-ring concentric electrodes

Indexed keywords

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- 1 Srinivasan, K.
[Ginger rhizomes \(Zingiber officinale\): A spice with multiple health beneficial potentials](#)

(2017) *PharmaNutrition*, 5 (1), pp. 18-28. Cited 140 times.
<http://www.journals.elsevier.com.proxy.undip.ac.id:2048/pharmanutrition/>
doi: 10.1016/j.phanu.2017.01.001

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- 2 Lua, P.L., Salihah, N., Mazlan, N.
[Effects of inhaled ginger aromatherapy on chemotherapy-induced nausea and vomiting and health-related quality of life in women with breast cancer](#)

(2015) *Complementary Therapies in Medicine*, 23 (3), pp. 396-404. Cited 66 times.
http://www.elsevier.com.proxy.undip.ac.id:2048/wps/find/journaldescription.cws_home/623020/authorinstructions
doi: 10.1016/j.ctim.2015.03.009

- 3 Gümüşay, O.A., Borazan, A.A., Ercal, N., Demirkol, O.
Drying effects on the antioxidant properties of tomatoes and ginger

(2015) *Food Chemistry*, 173, pp. 156-162. Cited 149 times.
www.elsevier.com/locate/foodchem
doi: 10.1016/j.foodchem.2014.09.162

[View at Publisher](#)
-
- 4 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](#)
-
- 5 Hanafizadeh, P., Gharahasanlo, M., Ahmadi, S., Zeraati, S., Akhavan-Behabadi, M.A.
Numerical investigation of EHD effects on heat transfer
- 6 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](#)
-
- 7 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

(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](#)
-
- 8 Bai, Y., Qu, M., Luan, Z., Li, X., Yang, Y.
Electrohydrodynamic drying of sea cucumber (*Stichopus japonicus*)

(2013) *LWT*, 54 (2), pp. 570-576. Cited 64 times.
<https://www.journals-elsevier-com.proxy.undip.ac.id/lwt>
doi: 10.1016/j.lwt.2013.06.026

[View at Publisher](#)
-
- 9 Kusminarto, S., Arief Hermanto, A., Dan Nuswantoro, P.
Velocity Measurement of EHD Flow Produced by Pin-Multi Concentric Ring electrodes Generator
(2015) *Applied Mechanics and Materials*, 771, pp. 227-231. Cited 6 times.
-
- 10 Sumariyah, Kusminarto, Hermanto, A., Nuswantoro, P.
Determination of ion mobility in EHD flow zone of plasma generator

(2015) *AIP Conference Proceedings*, 1699, art. no. 040019. Cited 4 times.
<http://scitation.aip.org/content/aip/proceeding/aipcp>
ISBN: 978-073541346-7

- 11 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>
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Sumariyah¹, Ainie Khuriati¹ and Enny Fachriyah²

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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.

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Ion wind generation and its application to drying of wild Ginger slices (*Curcuma Xanthorrhiza*)

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References ▾

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Abstract

Temulawak or wild ginger is a herbal medicinal derived from Indonesia original. Wild ginger contains include an active compound as curcuminoid and antioxidant oleoresin components having a special quality to take care of health from various diseases. Drying is the important process to produce wild ginger (*Curcuma xanthorrhiza*) simplicia as raw material herbal medicine. In this study, has been dried of wild ginger using ion wind which yielded from corona discharge utilizing pin-multi ring concentrated electrodes. Corona discharge was generated by using the fixed DC high voltage of 4,3 kV and drying was done at the distance between the fixed electrodes of 4 mm. Shaped of the five temulawak slices is a circle with a thickness of 2 mm and the diameter of 10 mm - 30 mm with 5 mm diameter interval. The sliced temulawak is placed just below the concentric multi-ring electrode and is 2 mm in distance. The wild ginger slices were dried with time varied 5-65 minutes with time interval 5 minutes. The researched result of drying of wild ginger slices obtained drying rate and shrinkage is inversely proportional to drying time.
