

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

Judul Jurnal Ilmiah (Artikel) : Carrageenan drying with dehumidified air: drying characteristics and product quality

Jumlah Penulis : 5 orang (Mohamad Djaeni, Setia Budi Sasongko, Aji Prasetyaningrum A, Xin Jin and Anton J. van Boxtel)

Status Pengusul : penulis ke-2

Identitas Jurnal Ilmiah :

- a. Nama Jurnal : International Journal of Food Engineering
- b. Nomor ISSN : 1556-3758
- c. Vol, No., Bln Thn : Volume 8 (2012): Issue 3 (Jun 2012)
- d. Penerbit : Walter de Gruyter GmbH
- e. DOI artikel (jika ada) : <https://doi.org/10.1515/1556-3758.2682>
- f. Alamat web jurnal : <https://www.degruyter.com/view/journals/ijfe/8/3/article-1556-3758.2682.xml.xml>
- Alamat Artikel : <https://doc-pak.undip.ac.id/372/1/djaeni2012.pdf>
- g. Terindex : Scopus, Q1

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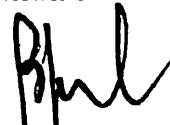
Semarang, 10 Agustus 2020

Reviewer 2



Prof. Tutuk Djoko Kusworo, S.T., M.Eng., Ph.D.  
 NIP. 197306211997021001  
 Unit Kerja : Dept. Teknik Kimia FT UNDIP

Reviewer 1



Prof. Dr. Ir. Budiyo, M.Si.  
 NIP. 19602201991021001  
 Unit Kerja : Dept. Teknik Kimia FT UNDIP

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- Kecukupan dan kemutakhiran data/informasi dan metodologi: semua data yang dikutip T. Kimia, sah dan valid, data fit diperoleh dengan benar, juga dikemukakan.
- Kelengkapan unsur dan kualitas terbitan: artikel terakreditasi Scopus, jurnal Q1, tidak simulasitas 100%, jurnal bereputasi internasional.

Semarang, Juni 2020  
Reviewer 1

Prof. Dr. Ir. Budiyo, MSi  
NIP. 196502201991021001  
Unit Kerja : Dept. Teknik Kimia FT UNDIP

**LEMBAR**  
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**KARYA ILMIAH : JURNAL ILMIAH**

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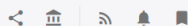
A handwritten signature in black ink, appearing to read 'Tutuk'.

Prof. Dr. Tutuk Djoko Kusworo, ST, M.Eng.  
NIP. 197306211997021001  
Unit Kerja : Dept. Teknik Kimia FT UNDIP

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# International Journal of Food Engineering

Editor In Chief: Xiao Dong Chen

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- Application of artificial intelligence in food engineering research and in industry
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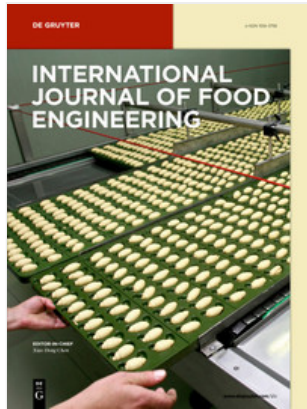
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# International Journal of Food Engineering

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### *Drying in Food Processing*

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## Volume 8 (2012): Issue 3 (Jun 2012)

in [International Journal of Food Engineering](#)





## **Formation of N $\epsilon$ -(Carboxymethyl)lysine in Saccharide-Lysine Model Systems by Different Heat Treatments**

Quanyi Fu, Lin Li Dr. and Bing Li

Article Category: Research Article | Published online: 26 Jun 2012

### **ABSTRACT**

Advanced glycation endproducts (AGEs) form when proteins are heated with reducing sugars. N $\epsilon$ -(Carboxymethyl) lysine (CML), as one of the common AGEs

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## **Effects of Drying Methods on Antioxidant Properties and Phenolic Content in White Button Mushroom**

Hongfang Ji, Ailin Du, Lingwen Zhang, Shuang Li, Mingduo Yang and Bo Li

Article Category: Research Article | Published online: 26 Jun 2012

### **ABSTRACT**

In order to explore the potential drying process, the effects of different drying methods (sun drying, hot-air drying, microwave-vacuum dryi

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**Impact of Oleifera Powder on Nutritional and Function Properties of Wheat Flour Product**

Xue Liu, Shaowei Liu and Yanhua Lu

Article Category: Research Article | Published online: 26 Jun 2012

**ABSTRACT**

Wheat flours was substituted with 0, 10, 20, and 30% Moringa leaf in order to study physicochemical, Rheological and textural properties of tortill

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**Effect of Starter Cultures on Several Chemical, Sensory and Textural Attributes of Turkish Fermented Sausage**

Bülent Ergönül and Akif Kundakçi

Article Category: Research Article | Published online: 26 Jun 2012

**ABSTRACT**

Two different probiotic cultures (*Lactobacillus casei* and *Lactobacillus acidophilus*) were used in the formulation of dry fermented Turkish sausa

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**Effect of Drying on Degradation kinetics of carotenoids and color of tomato pulp**

Indu Parmar, Gurpreet Kaur Chandi, Kalika Gupta and Balmeet Singh Gill

Article Category: Research Article | Published online: 23 Jul 2012

**ABSTRACT**

Tomato pulp was dried under various drying conditions using hot air oven (65-950C), and cabinet drier (65-950C). The drying rate constant increase

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**Carrageenan drying with dehumidified air: drying characteristics and product quality**

Mohamad Djaeni, Setia Budi Sasongko, Aji Prasetyaningrum A, Xin Jin and Anton J. van Boxtel

Article Category: Research Article | Published online: 23 Jul 2012

**ABSTRACT**

Applying dehumidified air is considered as an option to retain quality in carrageenan drying. This work concerns the effects of operational te

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# *International Journal of Food Engineering*

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*Volume 8, Issue 3*

2012

*Article 32*

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## **Carrageenan drying with dehumidified air: drying characteristics and product quality**

**Mohamad Djaeni**, *Diponegoro University*

**Setia Budi Sasongko**, *Diponegoro University*

**Aji Prasetyaningrum A**, *Diponegoro University*

**Xin Jin**, *Wageningen University*

**Anton J. van Boxtel**, *Wageningen University*

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DOI: 10.1515/1556-3758.2682

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# Carrageenan drying with dehumidified air: drying characteristics and product quality

Mohamad Djaeni, Setia Budi Sasongko, Aji Prasetyaningrum A, Xin Jin, and  
Anton J. van Boxtel

## Abstract

Applying dehumidified air is considered as an option to retain quality in carrageenan drying. This work concerns the effects of operational temperature, air velocity, and carrageenan thickness on the progress of drying and product quality when using dehumidified air. Final product quality and progress of drying were measured by experiments, and a two dimensional model was developed to analyze progress of drying for the different operational conditions. The experimental and modeling results showed that air dehumidification with zeolite reduces the drying time the most at low temperatures. Under these conditions the carrageenan qualities whiteness and gel strength are the least affected by the exposure to the drying temperature. The drying time is the shortest at 120°C, but at this temperature the carrageenan quality degrades the most and is not be improved by air dehumidification. Moreover, the quality is improved by increasing the air velocity and by drying thin carrageenan sheets.

**KEYWORDS:** carrageenan, dehumidified air, quality, zeolite

**Author Notes:** This research was funded by the Indonesian Directory of Higher Education (DGHE), Department of National Education. The experimental work was conducted at Department of Chemical Engineering, Diponegoro University, while the simulation using COMSOL was done at System and Control Group, Wageningen University.

# *International Journal of Food Engineering*

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*Volume 8, Issue 3*

2012

*Article 1*

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## **Formation of N $\epsilon$ -(Carboxymethyl)lysine in Saccharide-Lysine Model Systems by Different Heat Treatments**

**Quanyi Fu**, *South China University of Technology,*  
*Guangzhou*

**Lin Li Dr.**, *South China University of Technology,*  
*Guangzhou*

**Bing Li**, *South China University of Technology, Guangzhou*

### **Recommended Citation:**

Fu, Quanyi; Li, Lin Dr.; and Li, Bing (2012) "Formation of N $\epsilon$ -(Carboxymethyl)lysine in Saccharide-Lysine Model Systems by Different Heat Treatments," *International Journal of Food Engineering*: Vol. 8: Iss. 3, Article 1.

DOI: 10.1515/1556-3758.2724

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# Formation of N $\epsilon$ -(Carboxymethyl)lysine in Saccharide-Lysine Model Systems by Different Heat Treatments

Quanyi Fu, Lin Li Dr., and Bing Li

## Abstract

Advanced glycation endproducts (AGEs) form when proteins are heated with reducing sugars. N $\epsilon$ -(Carboxymethyl) lysine (CML), as one of the common AGEs studied in consumed foods, was determined by HPLC-MS/MS in this experiment. The aim of this work was to evaluate the performance of forming CML incubated by different heat treatments in saccharide - lysine model systems. Different heating treatment such as water heating (W- heating), drying oven heating (D- heating) and microwave heating (M- heating) in saccharide-lysine model systems can affect the production of CML. M-heating method showed higher formation of CML capacity than W-heating method and D-heating method. The higher temperature and higher molar ratio of saccharide to lysine can increase the CML content. The order of reactivity for the formation of CML was lactose > glucose > sucrose.

**KEYWORDS:** advanced glycation endproducts (AGEs), N $\epsilon$ -(carboxymethyl) lysine, water heating, drying oven heating, microwave heating

**Author Notes:** School of Light Industry and Food Science, South China University of Technology, Guangzhou 510640, PR China. Please send correspondence to BingLi; tel.: +8620 87113252; fax: +862087113252; email: lcbingli@scut.edu.cn. Acknowledgements This work was financially supported by National Basic Research Program of China (973 Program, No.2012CB720800), International S&T Cooperation Program of China (No.2009DFA32070), and the Fundamental Research Funds for the Central Universities, SCUT (No. 2011ZZ0084).

# *International Journal of Food Engineering*

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*Volume 8, Issue 3*

2012

*Article 4*

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## Effect of Starter Cultures on Several Chemical, Sensory and Textural Attributes of Turkish Fermented Sausage

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## Abstract

Two different probiotic cultures (*Lactobacillus casei* and *Lactobacillus acidophilus*) were used in the formulation of dry fermented Turkish sausages. Proximate compositions, TBA values, residue nitrite contents, fatty acid profiles, textural and sensorial scores of sausages were determined. As results of sensorial and statistical analyses, it was concluded that the most preferred sample was the one fermented by using probiotic *Lactobacillus casei* strains. Also suggestions for further industrial practices were given in the text.

**KEYWORDS:** *Lactobacillus casei*, *Lactobacillus acidophilus*, probiotic, texture, fermented sausage