



## SUMATE KERATIMANOCH, PH.D.

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78 Soi Phrayadamrong Rama 4 Road Mahapruttharam Bangrak Bangkok 10500

### EXPERTISE

Protein Chemistry  
Spectroscopy  
Tyndallization  
Thermal Processing  
Cold Plasma Technology

### LANGUAGE

Thai (Native)  
English (Professional fluency)  
Japanese (Beginner and improving)

### COMPETENCIES

Knowledge Facilitation  
Empathetic Listening  
Product Development  
Project Management  
AI prompting

### QUALITIES

Adaptability  
Autonomy  
Team Spirit  
Multicultural Sensitivity

### INTERESTS

Life-long Learning  
Hiking  
Perfumery  
Gardening

### ACRONYMS

SCI-CU: Faculty of Science,  
Chulalongkorn University

### EDUCATION

<b>Tokyo University of Marine Science and Technology</b>	Tokyo, Japan
Ph.D. in Applied Marine Biosciences	2023
<b>University of Leeds</b>	Leeds, United Kingdom
M.Sc. with distinction in Food Science	2012
<b>Chulalongkorn University</b>	Bangkok, Thailand
B. Sc. in Food Technology	2011

### WORK EXPERIENCE

#### **Department of Food Technology, SCI-CU**

Postdoctoral Researcher 2023 – Present

- Studying The kinetics of microbial inactivation by using in-package non-thermal plasma technology
- Co-supervising student's senior project (The effect of food composition on the efficiency of microbial inactivation by dielectric barrier discharge cold plasma)
- Co-supervised Food Innovation Competition Contestants at KU-FOSTAT 2024 (Mycobar, food bar from mycoprotein)
- Co-supervised student intern from i3L, Indonesia (Food microbial inactivation kinetics study by using non-thermal plasma)

#### **Centre of Excellence in Food Processing Pilot Plant, SCI-CU**

Academic service provider 2012 - 2019

- Supervised and operated UHT processing pilot plant
- Provided consultation and conducted research for private companies on product development and shelf-life extension

### ADDITIONAL EXPERIENCE

#### **Tokyo University of Marine Science and Technology**

- Teaching assistant for student experiments (soy sauce production, reaction rate determination)

#### **Department of Food Technology, SCI-CU**

- Food Innovation Contest by FoSTAT, awarded a consolation prize, 2011
- Completed apprenticeship at Thai Union Frozen Products Co., Ltd., 2011
- Product Development Contest in 19<sup>th</sup> Open Can Event, 2010

## **ACADEMIC ARTICLES**

- Chen, C., Geng, J. T., Thanathornvarakul, N., Keratimanoch, S., Üçyol, N., Okazaki, E., & Osako, K. (2022). The influence of processing sequence and frozen storage on the seasoned alaska pollack (*Theragra chalcogramma*) roe product quality. *Food Chemistry*, 373(PB), 131516.  
<https://doi.org/10.1016/j.foodchem.2021.131516>
- Jiarpinijnun, A., Geng, J. T., Thanathornvarakul, N., Keratimanoch, S., Üçyol, N., Okazaki, E., & Osako, K. (2022). Identifying volatile compounds in rabbit fish (*Siganus fuscescens*) tissues and their enzymatic generation. *European Food Research and Technology*, 248(6), 1485–1497.  
<https://doi.org/10.1007/s00217-022-03977-1>
- Keratimanoch, S., Alvarez, G., & Anuntagool, J. (2025). Kinetics of microbial inactivation using in-package nonthermal plasma generated by dielectric barrier discharge. *Innovative Food Science & Emerging Technologies*, 103932. <https://doi.org/10.1016/j.ifset.2025.103932>
- Keratimanoch, S., Takahashi, K., Kuda, T., Okazaki, E., Geng, J. T., & Osako, K. (2022). Effects of tyndallization temperature on the sterility and quality of kamaboko. *Food Chemistry*, 366(March 2021), 130692.  
<https://doi.org/10.1016/j.foodchem.2021.130692>
- Moniruzzaman, S. M., Takahashi, K., Nesa, N. U., Keratimanoch, S., Okazaki, E., & Osako, K. (2019). Characterization of Acid- And Pepsin-soluble Collagens Extracted from Scales of Carp and Lizardfish Caught in Japan, Bangladesh and Vietnam with a Focus on Thermostability. *Food Science and Technology Research*, 25(2), 331–340. <https://doi.org/10.3136/fstr.25.331>
- Siripatrawan, U., Hwansena, V., Ornrootee, K., Chuesiang, P., Ruengdech, A., Keratimanoch, S., & Jaturontrasame, P. (2022). Effect of packaging systems on dried shrimp quality and storage stability as visualized using pattern recognition. *Agriculture and Natural Resources*, 56(5), 987–996.  
<https://doi.org/10.34044/j.anres.2022.56.5.13>

## **ACADEMIC CONFERENCES**

- Furukawa, K., Keratimanoch, S., Osako, K., & Geng, J.T. (2022, March 26-29). *Characterization of recovered protein obtained by isoelectric precipitation from Akoya pearl oyster (Pinctada fucata martensii)*. The Japanese Society of Fisheries Science Spring Meeting 2022, Tokyo, Japan.
- Keratimanoch, S., & Borompichaichartkul, C. (2018, June 14-17). *Product development of low-calorie snack from dried pumpkin gels*. The 20<sup>th</sup> Food Innovation Asia Conference 2018, Bangkok, Thailand.
- Keratimanoch, S., Geng, J.T., & Osako, K. (2021, March 26-29). *Effects of NaCl and L-alanine concentration on spore germination in kamaboko gel*. The Japanese Society of Fisheries Science Spring Meeting 2021, Tokyo, Japan.
- Keratimanoch, S., Geng, J.T., & Osako, K. (2022, March 26-29). *The impact of tyndallization and retort sterilization on the quality of kamaboko gel*. The Japanese Society of Fisheries Science Spring Meeting 2022, Tokyo, Japan.

## **PETTY PATENT**

- Kanitha Tananuwong & Sumate Keratimanoch (2024). Dried gel pieces containing vegetables to be used as ingredients in foods and beverages, Thailand petty patent number 23318.

## **RESEARCH ADMINISTRATION RELEVANT EXPERIENCE**

- Project leader of “Product prototype development for food entrepreneur”, supported by Secretariat of the Conference of University Presidents of Thailand (2017)
- Project committee of “The Improvement of Food, Beverage, and Packaging Manufacturing Process for Shelf-life Extension”, supported by The Thailand Research Fund (2017)
- Project committee of “Development and Value Adding Program for Processed Food under Processed Food Industry Development Project”, supported by 9<sup>th</sup> Division Industrial Promotion Centre, Department of Industrial Promotion, Thailand (2017)
- Project committee of “Development of flavored dairy beverage for chronic kidney disease patient”, supported by Innovation and technology assistance program (ITAP), National Science and Technology Development Agency, Thailand (2016)
- Project committee of “Development of UHT Egg White Beverage”, supported by Innovation and technology assistance program (ITAP), National Science and Technology Development Agency, Thailand (2016)
- Project committee of “Development of low-calorie snack from dried pumpkin gel”, supported by Innovation and technology assistance program (ITAP), National Science and Technology Development Agency, Thailand (2016)
- Project committee of “Development of Reconstituted Dairy Coffee Creamer”, supported by Department of Industrial Promotion, Thailand (2016)
- Project committee of “Development of Pasteurized Soy Milk with Pumpkin Beads”, supported by Department of Industrial Promotion, Thailand (2016)
- Project committee of “Development of Ready-to-eat Sukhothai Noodle in Retort Pouch”, supported by Department of Industrial Promotion, Thailand (2016)
- Project committee of “Development of Concentrated Thai Tea Syrup”, supported by Department of Industrial Promotion, Thailand (2016)
- Project committee of “Product Development of UHT Coconut Beverage”, supported by Innovation and technology assistance program (ITAP), National Science and Technology Development Agency, Thailand (2014)
- Project committee of “Frozen Food Research Management for Knowledge Utilization”, supported by National Research Council of Thailand (2014)

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## **PROFESSIONAL TRAININGS**

- The Operation of UHT Processing Line and Aseptic Packaging System by Tetra Pak (Thailand) Co., Ltd.
- Retort Supervisors according to the notification of Ministry of Public Health (No. 349), Food and Drug Administration, Thailand