Tabkrich Khumsap, Ph.D.

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Scopus: https://www.scopus.com/authid/detail.uri?authorId=57200140906
Google scholar: https://scholar.google.com/citations?user=b6xTNLgAAAAJ&hl=en&oi=ao

Education

May 2022: Doctor of Philosophy in Food Engineering and Bioprocess Technology, School of Environment, Resources, and Development, Asian Institute of Technology, Thailand

May 2014: Master of Science in Food Engineering and Bioprocess Technology, School of Environment, Resources, and Development, Asian Institute of Technology, Thailand

March 2012: Bachelor of Science in Food Science and Technology (Second class honors), Faculty of Agro - Industry, Chiang Mai University, Thailand

Professional Experiences

2022 – now: **Lecturer**, Division of Food Science and Technology, Faculty of Agro-Industry, Chiang Mai university, Thailand

2017 - 2021: **Part time Lecturer**, Department of Innovation in Food Technology and Nutrition, College of Health Science, Christian University of Thailand

2014 – 2017: **Lecturer**, Department of Innovation in Food Technology and Nutrition, College of Health Science, Christian University of Thailand

Research Expertise

1. Bio/chemical sensor for food safety application
2. Nanotechnology in food application
3. Molecularly imprinted polymer
4. Novel techniques in food processing

PhD Dissertation

Development of a Novel Epitope-imprinted Polydopamine Interface for Food Allergen Detection.

Publications (Dissertation)

Journals

Khumsap, T., Bamrungsap, S., Thu, V. T., & Nguyen, L. T. (2021). Epitope-imprinted polydopamine electrochemical sensor for Ovalbumin Detection. *Bioelectrochemistry*, *140*, 107805. https://doi.org/10.1016/j.bioelechem.2021.107805

Khumsap, T., Corpuz, A., & Nguyen, L. T. (2021). Epitope-imprinted polymers: Applications in protein recognition and separation. *RSC Advances*, *11*(19), 11403–11414. https://doi.org/10.1039/d0ra10742e

Khumsap, T., Bamrungsap, S., Thu, V. T., & Nguyen, L. T. (2022). Development of epitope-imprinted polydopamine magnetic nanoparticles for selective recognition of allergenic egg ovalbumin. *Chemical Papers*. https://doi.org/10.1007/s11696-022-02291-0

Book Chapter

Khumsap, T., & Nguyen, L. T. (2021). Chapter 12 - Molecularly imprinted polymer composites for detecting toxic contaminants in agricultural products. In *Molecularly Imprinted Polymer Composites Synthesis, Characterization and Applications* (pp. 309–344). Woodhead Publishing, Elsevier.

Publications (Non- dissertation)

Journals

Fashakin, O. O., Tangjaidee, P., Unban, K., Klangpetch, W., **Khumsap, T.**, Sringarm, K., Rawdkuen, S., & Phongthai, S. (2023). Isolation and identification of antioxidant peptides derived from cricket (gryllus bimaculatus) protein fractions. *Insects*, *14*(8), 674. https://doi.org/10.3390/insects14080674

Corpuz, A., **Khumsap, T**., Bamrungsap, S., Thu, V. T., & Nguyen, L. T. (2023). Epitope-imprinted polydopamine and reduced graphene oxide-based sensing interface for label-free detection of gliadin. *Journal of Food Composition and Analysis*, 117, 105090. https://doi.org/10.1016/j.jfca.2022.105090

Thasak, S., Arellano, C. A., **Khumsap, T.**, & Nguyen, L. T. (2023). Influence of different visible led light sources on photo-degradation of red cabbage extract. International Journal of Food Engineering. https://doi.org/10.1515/ijfe-2022-0249

Marzuki, S. U., Pranoto, Y., **Khumsap, T**., & Nguyen, L. T. (2020). Effect of blanching pretreatment and microwave-vacuum drying on drying kinetics and physicochemical properties of purple-fleshed sweet potato. *Journal of Food Science and Technology*, 58(8), 2884–2895. https://doi.org/10.1007/s13197-020-04789-5

Khumsap, T. (2016)**.** Approaches in Developing Food Products for Elderly. *International Journal of Nursing and Health Science 4(2)*.

รัชฎาพร แก้วสีงาม, ภานุ ยอดสุข, **ทับกฤช ขุมทรัพย์.** (2561). ผลของการบริโภคน้ำมันมะพร้าวต่อไขมันในเลือด. *วารสารมหาวิทยาลัยคริสเตียน 24(3).* 459 – 466.

Conference Proceedings

Khumsap, T., Yingcharoen, S. (2014). The Development of Ohmic Heating Equipment in Reserving Coconut Juice (Phase I), Proceedings "The Multidisciplinary Research and Innovation for Globally Sustainable Development", P.44-54.

Sambath S., **Khumsap, T**. (2014). Product Development and Quality Evaluation of Broken Rice Soybean-Based Milk, *Proceedings "Global Health Sciences for a Better Quality of Life",* P.103-116.

Kittiamornkul, N., **Khumsap, T.**, Yingcharoen, S., & Inklab, L. (2017). A Small Pasteurization System using Magnetic Induction for Coconut Juice. *14th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTI-CON)*, 381–384.

อธิชา เนตรบุตร, ลักษณา อินทร์กลับ, **ทับกฤช ขุมทรัพย์.** (2565). การพัฒนาผลิตภัณฑ์เยลลี่คาราจีแนนมะม่วงหาวมะนาวโห่. การประชุมวิชาการระดับชาติ วิทยาลัยนครราชสีมา,. 497-505.

Research grants

1. Christian University research grant. The Development of Ohmic Heating Equipment in Reserving Coconut Juice. Duration: August 2014 – July 2015. Amount: 93,896 baht
2. National Research Council of Thailand (NRCT). The Development of Prototype of Tubular Heat Exchanger Using Induction Heater for Pasteurizing Coconut Products in Small Enterprises. Duration: November 2015 – October 2016. Amount: 1,104,168.54 baht

3. Faculty of Agro-Industry, Chiang mai University. Effects of the combination of riboflavin as photosensitizer and blue light emitting diodes on pathogen reduction in betel chewing under photodynamic therapy for elderly food safety. Duration: October 2022 to September 2023. Amount: 70,000 baht
4. Chiang mai University. Development of modified electrode functionalized with nanomaterials and epitope imprinted polymer for electrochemical detection of allergenic casein. Duration: June 2023 to June 2024. Amount: 200,000 baht

Service/Outreach

1. Member of Thai Association for Cooperative Education
2. Program Committee of Bachelor of Science in Food Technology and Nutrition, Christian University of Thailand (2013 – 2021)
3. Food Process Control Supervisor (Low acid can food and acidified food) , Thai-FDA
4. Process Authority (Low acid can food and acidified food), Thai-FDA
5. Preventive Control Qualified Individual, FSPCA, USFDA

Consultant experiences

1. I.O.P. Foods Co. Ltd. 7/5, Moo 3, Huai Chorakhe, Muang, Nakhon Pathom, 73000
2. Dok Bua Food Co. Ltd. 101, Ta Kwang, Sarapee, Chiang Mai, 50140
3. Paiboon Products Co. Ltd. 38/56, Aom noi, Kratumban, Samutsakorn, 74130
4. K.P. Foods Co.Ltd. 68/1, Sampatuan, Nakhonchaisri, Nakhon Pathom, 73120
5. Bupha sawan Drinking water community enterprise (วิสาหกิจชุมชนน้ำดื่ม บุผาสวรรค์), Pong Yang, Mae rim, Chiang Mai, 50180
6. กลุ่มวิสาหกิจชุมชนผู้ผลิตผลไม้ปลอดสารพิษเพื่อส่งออก, Bang Pae, Ratchaburi, 70160

Teaching experiences

As lecturer at Christian University of Thailand

1. TIFT3204 Introduction to Food Technology
2. TIFT3301 Food Processing I
3. TIFT3302 Food Processing II
4. TIFT3303 Food Engineering
5. TIFT3306 Food Microbiology

6. TIFT3311 Food Packaging
7. TIFT3411 Meat Technology and processing
8. TIFT3412 Fruits and vegetables processing
9. TFTN3331 Cooperative Education for Food Technology
10. TFTN3233 Product Development Technology in Food Technology

As Teaching Assistant at Asian Institute of Technology

1. Food Process Engineering Laboratory
2. Properties of Food Biomaterials and Nutrients Laboratory

As lecturer at Chiang Mai University

1. 601201 Principle of Food Processing and Preservation
2. 601202 Food Processing and Preservation 1
3. 601341 Food Engineering 1
4. 601344 Food Processing 2
5. 601345 Food Processing Laboratory
6. 601346 Food Processing 3
7. 601347 Food Processing Laboratory 2
8. 601494 Pre-Cooperative Education
9. 601495 Cooperative Education
10. 601702 Food Processing and Engineering
11. 601745 Advances in Food Processing and Technology
12. 601775 Advances in Food Science and Analysis