

## CURRICULUM VITAE

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### EDUCATION

Ph.D. (Chemical Engineering)	2000	The University of Birmingham, U.K.
M.Eng. (Food Engineering)	1995	King Mongkut's Institute of Technology Thonburi, Thailand
B.Sc. (Microbiology)	1992	King Mongkut's Institute of Technology Thonburi, Thailand

### PROFESSIONAL SERVICE

- Instructor for Better Process Control School- a training program for operating supervisors of commercial food canning operations approved by the US Food and Drug Administration (FDA).
- Instructor for Retort Supervisor Training Program approved by Thai Food and Drug Administration (ThaiFDA).
- Instructor for Process Authority Training Program approved by Thai Food and Drug Administration (ThaiFDA).
- Give food safety courses for public and industries in Thailand and Malaysia.
- Review papers for several international journals including Journal of Food Science, Journal of Food Engineering, International Journal of Food Microbiology, Food Microbiology, Food Chemistry, Food Research International, LWT-Food Science and Technology, Journal of Food Processing and Preservation, Food and Bioprocess Technology, Journal of Food Composition Analysis, Scientia Horticulturae, Innovative Food Science and Emerging Technologies, Journal of Agricultural and Food Chemistry, Food and Bioproducts Process, International Journal of Food Science and Technology.
- Review papers for national journals including KMUTT research and development Journal, Kasetsart Journal, Chiang Mai Journal of Science, SDU journal, University of the Thai Chamber of Commerce Journal.
- Review papers for several international conferences.
- Review research proposals for Thailand Research Fund and several universities.
- Serve as thesis examiner for universities in Thailand.
- Co-chair, Organizing Committee, The International Congress on Food Engineering and Technology, Bangkok, Thailand, March, 2012.
- Member, Organizing Committee, 6th Asia-Pacific Drying Conference, Bangkok, Thailand, October 2009.

## ONGOING RESEARCH

- Feasibility study of industrial production for functional dietary fiber from agro-industrial residues.

## LIST OF PUBLICATIONS (Refereed Papers)

1. **Rattanasomboon, N.**, Bhumiratana, S. and Yoovidhya, T. 1996. Optimized Conditions for drying of shiitake mushroom. *Research and Development Journal of the Engineering Institute of Thailand* 7(1), 16-26 (in Thai).
2. Vanabordeenimit, C., Bhumiratana, S., Yoovidhya, T., and **Rattanasomboon, N.** 1996. Drying of shiitake mushroom: Effect of drying on lenthionine content. *KMITT Research and Development Journal* 19(1), 77-89 (in Thai).
3. **Rattanasomboon, N.**, Bellara, S.R., Harding, C.L., Fryer, P.J., Thomas, C.R., Al-Rubeai, M., and McFarlane, C.M. 1999. Growth and enumeration of the meat spoilage bacterium: *Brochothrix thermosphacta*. *International Journal of Food Microbiology* 51(2-3), 145-148.
4. **Rattanasomboon, N.**, Bellara, S.R., Fryer, P.J. Thomas, C.R., and McFarlane, C.M. 2001. The gradient plate technique as a means of studying the recovery of heat injured *Brochothrix thermosphacta*. *International Journal of Food Science and Technology* 36(4), 369-376.
5. Saengow, K., Katipun, Y., Suttithanalert, W., Yoovidhya, T., and **Rattanasomboon\***, N. 2001. Effect of drying condition on Shiitake mushroom flavor. *KMUTT Research and Development Journal* 24(3), 117-129. (in Thai).
6. Simuang, J., **Chiewchan\***, N. and Tansakul, A. 2004. Effects of fat content and temperature on the apparent viscosity of coconut milk. *Journal of Food Engineering* 64(2), 193-197.
7. Phungamngoen, C., **Chiewchan\***, N. and Siriwattanayothin, S. 2004. Effect of some stabilizers on the quality of canned high fat coconut milk. *KMUTT Research and Development Journal* 27(3), 375-390.
8. Rattanathanalerk, M., **Chiewchan\***, N. and Srichumpoung, W. 2005. Effects of thermal processing on the quality loss of pineapple juice. *Journal of Food Engineering* 66(2), 259-265.
9. Methakhup, S., **Chiewchan\***, N. and Devahastin, S. 2005. Effects of drying methods and conditions on drying kinetics and quality of Indian gooseberry flake. *Libensmittel-Wissenschaft und-Technologie* 38(6), 579-587.
10. Taweesujinunsakul, U., **Chiewchan\***, N. and Vatanachaiyingyong, U. 2005. Effect of pH and temperature on the antifungal activity of chitosan. *KMUTT Research and Development Journal* 28(2), 183-198.
11. Leeratanarak, N., Devahastin\*, S. and **Chiewchan, N.** 2006. Drying kinetics and quality of potato chips undergoing different drying techniques. *Journal of Food Engineering* 77(3), 635-643.
12. **Chiewchan\***, N., Phungamngoen, C. and Siriwattanayothin, S. 2006. Effect of homogenizing pressure and sterilizing condition on quality of canned high fat coconut milk. *Journal of Food Engineering* 73(1), 38-44.
13. Peamprasart, T. and **Chiewchan, N.** 2006. Effect of fat content and preheat treatment on the apparent viscosity of coconut milk after homogenization. *Journal of Food Engineering* 77(3), 653-658.
14. Kongsoontornkijkul, P., Ekwongsupasarn, P., **Chiewchan\***, N. and Devahastin S. 2006. Effects of drying methods and tea preparation temperature on the amount of vitamin C in Indian gooseberry tea. *Drying Technology* 24(11), 1509-1513.

15. **Chiewchan\***, N., Tangduangdee, C. and Srichumpoung, W. 2006. Prohibited chemical substances in fermented fruits from street vendors in Bangkok and Samutprakarn. *Food* 36(4), 347-355. (in Thai)
16. **Chiewchan\***, N., Tangduangdee, C. and Srichumpoung, W. 2006. Pesticide residues in fresh fruits and vegetables from markets and street vendors in Bangkok and Samutprakarn. *Food* 37(1), 59-72.
17. **Chiewchan**, N. Pakdee, W. and Devahastin, S. 2007. Effect of water activity on thermal resistance of *Salmonella* Krefeld in liquid medium and on rawhide surface. *International Journal of Food Microbiology* 114(1), 43-49.
18. Jongaroontaprangsee, S., Tritrong, W., Chokanaporn, W., Methacanon, P., Devahastin, S. and **Chiewchan\***, N. 2007. Effects of drying temperature and particle size on hydration properties of dietary fiber powder from lime and cabbage by-products. *International Journal of Food Properties* 10(4), 887-897.
19. Pimpaporn, P. Devahastin\*, S. and **Chiewchan**, N. 2007. Effects of combined pretreatments on drying kinetics and quality of potato chips undergoing low-pressure superheated steam drying. *Journal of Food Engineering* 81(2), 318-329.
20. Jirapeangtong, K., Siriwatanayothin, S. and **Chiewchan\***, N. 2008. Effects of coconut sugar and stabilizing agents on stability and apparent viscosity of high fat coconut milk. *Journal of Food Engineering* 87(3), 422-427.
21. Kingcam, R., Devahastin\*, S. and **Chiewchan**, N. 2008. Effect of starch retrogradation on texture of potato chips produced by low-pressure superheated steam drying. *Journal of Food Engineering* 89(1), 72-79.
22. Lertwanawatana, P., Methacanon, P. and **Chiewchan\***, N. 2008. Rheology and stability of pineapple juice with suspended lime dietary fiber. *KMUTT Research and Development Journal*, 31(3), 497-511.
23. Chantaro, P., Devahastin, S. and **Chiewchan\***, N. 2008. Production of antioxidant high dietary fiber powder from Carrot Peels. *LWT- Food Science and Technology* 41(10), 1987-1997.
24. Hawaree, N., **Chiewchan\***, N. and Devahastin, S. 2009. Effects of drying temperature and surface characteristics of vegetable on the survival of *Salmonella*. *Journal of Food Science* 74(1), E16-E22.
25. Wuttipalakorn, P., Srichumpuang, W. and **Chiewchan\***, N. 2009. Effects of pretreatment and drying on composition and bitterness of high dietary fiber powder from lime residues. *Drying Technology* 27(1), 133-142.
26. Kuljarachanan, T., Devahastin, S., **Chiewchan\***, N. 2009. Evolutions of antioxidant compounds in lime residues during drying. *Food Chemistry* 113(4), 944-949.
27. **Chiewchan\***, N. and Morakotjinda, P. 2009. Effect of acetic acid pretreatment and hot air drying on resistance of *Salmonella* on cabbage slices. *Drying Technology* 27(9), 955-961.
28. Nilnakara, S., **Chiewchan\***, N. and Devahastin, S. 2009. Production of Antioxidant Dietary Fiber Powder from Cabbage Outer Leaves. *Trans IChemE, Part C, Food and Bioproducts Process* 87(4), 301-307.
29. Chindapan, N., Devahastin\*, S. and **Chiewchan**, N. 2009. Electrodialysis desalination of fish sauce: Electrodialysis performance and product quality. *Journal of Food Science* 74(7), E363-E371.
30. Chindapan, N., Devahastin\*, S. and **Chiewchan**, N. 2010. Effect of electrodialysis pretreatment on physicochemical properties and morphology of spray-dried-fish sauce powder. *Journal of Food Engineering*, 99(1), 31-39.

31. **Chiewchan\***, N., Praphraiphetch, C. and Devahastin, S. 2010. Effect of pretreatment on surface topographical features of vegetables during drying. *Journal of Food Engineering*, 101(1), 41-48.
32. Tanongkankit, Y., **Chiewchan\***, N. and Devahastin, S. 2010. Effect of processing on antioxidants and their activity in dietary fiber powder from cabbage outer leaves. *Drying Technology*, 28(9), 1063-1071.
33. Saencom, S., **Chiewchan\***, N., Devahastin, S. 2011. Production of dried ivy gourd sheet as a health snack. *Trans IChemE, Part C, Food and Bioproducts Process*, 89(4), 414-421
34. Hiranvarachat, B., Devahastin\*, S., **Chiewchan**, N. 2011. Effects of acid pretreatments on some physicochemical properties of carrot undergoing hot air drying. *Food and Bioproducts Processing*, 89, 116-127.
35. Tanongkankit, Y., **Chiewchan\***, N. and Devahastin, S. 2011. Evolution of anticarcinogenic substance in dietary fiber powder from cabbage outer leaves during drying. *Food Chemistry*, 127(1), 67-73.
36. Phungamngoen, C., **Chiewchan\***, N. and Devahastin, S. 2011. Thermal resistance of *Salmonella enterica* serovar Anatum on cabbage surfaces during drying: effects of drying methods and conditions. *International Journal of Food Microbiology*, 147(2), 127-133.
37. Phungamngoen, C., **Chiewchan\***, N. and Devahastin, S. 2011. Effects of food topographical features on attachment and heat resistance of *Salmonella* during drying. *Drying Technology*, 29(12), 1378-1385.
38. Chindapan N., Devahastin S., Chiewchan N., and Sablani S.S. 2011. Desalination of fish sauce by electrodialysis: effect on selected aroma compounds and amino acid compositions. *Journal of Food Science*, 76(7), S451-S457.
39. Tanongkankit, Y., **Chiewchan\***, N. and Devahastin, S. 2012. Physicochemical property changes of cabbage outer leaves upon preparation into functional dietary fiber powder. *Trans IChemE, Part C, Food and Bioproducts Process*, 90(3), 541-548.
40. Hiranvarachat, B., Devahastin\*, S. and **Chiewchan**, N. 2012. *In vitro* bioaccessibility of  $\beta$ -carotene in dried carrots pretreated by different methods. *International Journal of Food Science & Technology*, 47(3), 535–541.
41. Peerajit, P., **Chiewchan\***, N., Devahastin, S. 2012. Effects of pretreatment methods on health-related functional properties of high dietary fiber powder from lime residues. *Food Chemistry*, 132(4), 1891-1898.
42. Thangvaravut, T., Chiewchan, N. and Devahastin, S. 2012. Inhibitory effects of chitosan films incorporated with 1,8-cineole on *Salmonella* attached on model food surface. *Advanced Materials Research*, 506, 599-602.
43. Jundee, J., Devahastin, S. and Chiewchan, N. 2012. Development and testing of a pilot-scale electrodialyser for desalination of fish sauce. *Procedia Engineering*, 32, 97-103.
44. Hiranvarachat, B., Devahastin\*, S., **Chiewchan**, N. and Raghavan, G.S.V. 2013. Structural modification by different pretreatment methods to enhance microwave-assisted extraction of  $\beta$ -carotene from carrots. *Journal of Food Engineering*, 115(2), 190-197.
45. Phungamngoen, C., **Chiewchan\***, N. and Devahastin, S. 2013. Effects of various pretreatments and drying methods on *Salmonella* resistance and physical properties of cabbage. *Journal of Food Engineering*, 115(2), 237-244.

46. Tanongkankit, Y., **Chiewchan\***, N. and Devahastin, S. 2013. Microwave-assisted extraction of sulforaphane from white cabbages: Effects of extraction condition, solvent and sample pretreatment. *Journal of Food Engineering*, 117(1), 151-157.
47. Chindapan, N., Sablani, S.S., Chiewchan, N. and Devahastin, S. 2013. Modeling and optimization of electrodialytic desalination of fish sauce using artificial neural networks and genetic algorithm. *Food and Bioprocess Technology*, 6, 2695–2707
48. Chinapongtitiwat, V., Jongaroontaprangsee, S., **Chiewchan\***, N. and Devahastin, S. 2013. Important flavonoids and limonin in selected Thai citrus residues. *Journal of Functional Foods*, 5(3), 1151-1158.
49. Lekcharoenkul, P., Tanongkankit, Y., Chiewchan\*, N. and Devahastin, S. 2014. Enhancement of sulforaphane content in cabbage outer leaves using hybrid drying technique and stepwise change of drying temperature. *Journal of Food Engineering*, 122, 56-61.
50. Tanongkankit, Y., **Chiewchan\***, N. and Devahastin, S. 2014. Evolution of antioxidants in dietary fiber powder produced from white cabbage outer leaves: Effects of blanching and drying methods. *Journal of Food Science and Technology*, DOI 10.1007/s13197-013-1203-8
51. Jongaroontaprangsee, S., **Chiewchan\***, N. and Devahastin, S. 2014. Composition profiles and functional properties of dietary fiber powder from lime residues: Effects of pretreatment and drying methods. *Drying Technology*, 32(4), 484–493.
52. Chaisamlitpol, S., Hiranvarachat, B., Srichumpoung, J., Devahastin, S. and Chiewchan, N. 2014. Bioactive compositions of extracts from cabbage outer leaves as affected by drying pretreatment prior to microwave-assisted extraction. *Separation and Purification Technology*, 136, 177-183.
53. Tanongkankit, Y., Chiewchan\*, N. and Devahastin, S. 2015. Evolution of antioxidants in dietary fiber powder produced from white cabbage outer leaves: Effects of blanching and drying methods. *Journal of Food Science and Technology*, 52(4), 2280–2287.
54. Pongmalai, P., Devahastin, S., Chiewchan, N., and Soponronnarit, S. 2015. Enhancement of microwave-assisted extraction of bioactive compounds from cabbage outer leaves via the application of ultrasonic pretreatment. *Separation and Purification Technology*, 144, 37-45.