Nutrition, Functional and Sensory Properties of Foods

Edited by

Chi-Tang Ho
*Rutgers University, New Brunswick, USA*
*Email: ho@AESOP.Rutgers.edu*

Cynthia Mussinan
*IFF R&D, Union Beach, USA*

Fereidoon Shahidi
*Memorial University of Newfoundland, Canada*

Ellene Tratras Contis
*Eastern Michigan University, USA*

RSC Publishing
Contents

Flavor Chemistry

Furan: A food-borne flavor carcinogen
Xinchen Zhang, Feng Chen and Mingfu Wang 3

Evaluation of melamine analysis in flavor raw materials using GC-MS versus LC-MS-MS
J. Broekhans and H. Leijis 19

Validation and application of QuEChERS to flavor and fragrance R&D
N. Harmuth, F. Fang and G. Reiner 33

Effect of enzyme treatment on volatile profile of white and red wines from Macedonia by using HS-SPME-GC/MS
Sanja Kostadinović Veličkovska, Sebastian Tolle, Recep Goek, Goran Milanov and Peter Winterhalter 40

Enzymatic modification of wheat proteins for flavor generation
Marissa Villafuerte Romero, Sree Raghavan and Chi-Tang Ho 57

Aroma character of coriander (Coriandrum sativum L.) leaves: limited odor unit method and sensory perception in preference
H. Tamura, K. Maeyama, E. Yoshida and M. Kori 66

Volatile flavor constituents of chamomile from eight different areas of Greece
P.C. Gourna, P.G. Demertzis and K. Akrida-Demertzis 74

Identification of volatile flavor constituents of the peel (flavedo) from five Greek citrus varieties cultivated in the area of Arta
P.G. Demertzis, A.I. Passa and K. Akrida-Demertzis 85

Flavor and sensory characteristics of yogurt derived from milk treated by high intensity ultrasound
Panagiotis Sfakianakis and Constantina Tzia 92

Effects of naturally occurring phenolic compounds in coffee on the formation of Maillard aromas
Yongmin Wang and Chi-Tang Ho 98

Study of flavor volatile profile in microencapsulated Greek saffron products
Charikleia Chranioti, Stephanos Papoutsakis, Aspasia Nikoloudaki and Constantina Tzia 111
Effect of Laurus nobilis (bay leaf) essential oil on the formulation, oxidative stability and sensory characteristics of O/W/O olive oil microemulsions
Vasiliki Polychniatou and Constantina Tzia

Effect of addition of cryoprotectants on frozen/thawed mashed potatoes flavor by sensory evaluation
Nantia Bikaki, Giannou Virginia and Constantina Tzia

Antimicrobial activity of natural flavor components incorporated into edible films in meat products
Sofia Chanioti, Andreas Katsigiannis and Constantina Tzia

Profile of aroma-related volatile compounds isolated from probiotic dry-fermented sausages produced with free or immobilized L. casei using SPME GC/MS analysis
Marianthi Sidira, Maria Kanellaki and Yiannis Kourkoutas

Application of non-targeted approach in flavor science: A review
Sang Mi Lee and Young-Suk Kim

Nutritional And Functional Properties Of Food

Bioactive peptides and human health
Fereidoon Shahidi and Quanqaun Li

Omega-3 oils, their food and non-food application and beneficial health effects
Fereidoon Shahidi and Abdulrhman S. Al-Khalifa

Metabolism of dietary phenolic acids
Yu Wang, Fereidoon Shahidi and Chi-Tang Ho

Emulsion in oral delivery of bioactive lipophilic phytochemicals
Yuwen Ting, Shiming Li, Chi-Tang Ho and Qingrong Huang

Oil and phytochemicals from small fruit seeds
Fereidoon Shahidi and Nishani Perera

Review on chemical analysis and formation mechanism of cholesterol oxidation products
Daniel Wong and Mingfu Wang

Impact on epigenetic in cancer chemoprevention by natural dietary compounds
Jia-Ching Wu, Ching-Shu Lai, Slavik Dushenkov, Ying-Jan Wang, Chi-Tang Ho and Min-Hsiung Pan

The molecular targets of garcinol confer antitumor effects
Chi-Tang Ho, Min-Hsiung Pan and Yuan-Soon Ho
Tea extracts confer its antiproliferating effects through inhibition of nicotine- and estrogen-induced 9-nicotinic acetylcholine receptor upregulation in human breast cancer cells
_**Yuan-Soon Ho and Min-Hsiung Pan**_

Comparison of anti-proliferative and anti-inflammatory effects of nobiletin and its urinary metabolite, 3',4'-didemethylnobiletin
_**Ching-Shu Lai, Grace S. Chang, Shiming Li, Chih-Yu Lo, Chi-Tang Ho and Min-Hsiung Pan**_

Inhibitory effects of 5-demethyltangeretin and 5-acetyloxy-6,7,8,4'-tetramethoxyflavone on human colon cancer cells
_**Ching-Shu Lai, Jun-Yan Zeng, Shiming Li, Qingrong Huang, Chi-Tang Ho and Min-Hsiung Pan**_

Peracetylated epigallocatechin-3-gallate effectively prevents human breast cancer cell metastasis by targeting the matrix metalloproteinases activity and fatty acid synthase expression
_**Yi-Shiou Chiou, Nianhan Jia-Lin Ma, Shengmin Sang, Shiming Li, Ying-Jan Wang, Chi-Tang Ho and Min-Hsiung Pan**_

Total phenolics, antioxidant and antibacterial activity of commercial pomegranate based juices from Greece
_**E.Ch. Zografou, A. Kallimanis, K. Akrida-Demertzi and P.G. Demertzis**_

Suppression of the deformation of Raji cells by (E)-2-alkenals, aroma components of coriander (Coriandrum sativum L.) leaves, and behavior of (E)-2-dodecenal in rat blood

Acute limit oral toxicity study of 2,4,5-trimethoxybenzaldehyde in rats
_**Chin-Chu Chen and Chia-Feng Kuo**_

Subject Index