

# FOOD SCIENCE AND TECHNOLOGY RESEARCH

Contents of Vol. 24, No. 3

## Food Technology and Engineering

### Original papers

- 369 Zinc Accumulation and Distribution in Germinated Brown Rice  
Runqiang YANG, Yuxi SUN and Zhenxin GU
- 377 Quality Evaluation of 1-Methylcyclopropene Treated Japanese Apricot Using X-ray Computed Tomography  
Poly KARMOKER, Wako OBATAKE, Fumina TANAKA and Fumihiko TANAKA
- 385 Optimizing the Extraction of Acid-soluble Collagen Inside the Eggshell Membrane  
Elahe KAZEMI KHEIRABADI, Seyed hadi RAZAVI, Faramarz KHODAIYAN and Mohammad-Taghi GOLMAKANI
- 395 Promotion of Fungal Growth, Antibacterial and Antioxidative Activities in Tempe Produced with Soybeans Thermally Treated Using Steam Pressure  
Dewi KUSUMAH, Yukihiro KABUYAMA and Isamu MAEDA
- 403 Control of *Bacillus subtilis* Spores by Intermittent Treatment Using Heating after Carbonation in the Presence of Germinants and Bacteriostatic Agents  
Yukiko TOMINAGA, Seiji NOMA, Noriyuki IGURA, Mitsuya SHIMODA and Nobuyuki HAYASHI
- 413 High Hydrostatic Pressure Treatment of Greeneye (*Chlorophthalmus albatrossis*) for Refrigeration Storage as a Deep-fry-suitable Material  
Yoshiko NAKAURA and Kazutaka YAMAMOTO

### Notes

- 421 Effects of Cooking Conditions on the Relationships Among Oxalate, Nitrate, and Lutein in Spinach  
Zheng WANG, Akira ANDO, Atsuko TAKEUCHI and Hiroshi UEDA
- 427 Evaluation of Staling of Cooked Rice by Kinetic Analysis of Texture Changes  
Miho OAHARA, Yoko SATO and Midori KASAI
- 435 Formulation and Evaluation of a Satiety-inducing Carbonated Beverage that Forms a Bubble-containing Gel in the Stomach  
Takashi DOMOTO, Hiroyuki KOZU, Marie YAMAI, Takuto TAKEI, Kazuto NISHIJIMA, Kiichi MATSUDO, Yutaka MIZUMA, Kazutaka SAISHO, Isao KOBAYASHI and Sosaku ICHIKAWA

## Food Science and Chemistry

### Original papers

- 443 Effects of the *Wx* Gene on Starch Biosynthesis, Physicochemical Wheat Flour Properties, and Dry Noodle Quality  
Peng QIN, Zhiyou KONG and Yeju LIU
- 455 Inactivation of *Bacillus subtilis* Spores by Carbonation with Glycerin Fatty Acid Esters  
Rina HIROKADO, Seiji NOMA, Nobuaki SOH, Noriyuki IGURA, Mitsuya SHIMODA and Nobuyuki HAYASHI
- 465 Effect of Proteolysis on the Meat Quality of a Brand Fish, Red Sea Bream *Pagrus major*  
Reiko NAGASAKA, Atsuko HARIGAYA and Toshiaki OHSHIMA
- 475 Effects of pH Values on Physicochemical Properties and Antioxidant Potential of Whey Protein Isolate-safflower Yellow Complexes  
Xueyan LI, Zengli GAO, Tong LI, Shuvan-Kumar SARKER, Sathi CHOWDHURY, Zhanmei JIANG and Zhishen MU
- 485 A Survey of Phage Contamination in Natto-producing Factories and Development of Phage-resistant *Bacillus subtilis* (natto) Strains  
Yuji KUBO, Supawadee SRIYAM, Rikio NAKAGAWA and Keitarou KIMURA
- 493 Production of Isoflavone Aglycone-enriched Tempeh with *Rhizopus stolonifer*  
Tsuyoshi KAMEDA, Hideyuki AOKI, Noriyuki YANAKA, Thanutchaporn KUMRUNGSEE and Norihisa KATO

- 501 Discriminant and Simultaneous HPLC Analysis of Reducing and Non-reducing Monosaccharides on a Polyethyleneimine-attached Hydrophilic Interaction Liquid Chromatography Column  
Hsuan CHUNG, Akihiro SHIMURA and Toshiro MATSUI
- 509 Metabolite Profiling in Dough During Fermentation  
Toshihide NAKAMURA, Satoru TOMITA and Katsuichi SAITO
- 519 Functionality of Okra Gum as a Novel Carbohydrate-based Fat Replacer in Ice Cream  
Nurul Shahirah AZIZ, Noor-Soffalina SOFIAN-SENG, Salma Mohamad YUSOP, Khairul Farihan KASIM and Noorul Syuhada MOHD RAZALI
- 531 Effects of Deer Antler Base Polypeptide on Hormone-induced Mammary Hyperplasia in Mice  
Xue LI, Yuzhen PI, DongBing TAO and Kun QIAN
- 541 Production, Analysis and *in Vivo* Antihypertensive Evaluation of Novel Angiotensin-I-converting Enzyme Inhibitory Peptides from Porcine Brain  
Yu-Tse LIU, Fu-Yuan CHENG, Shiro TAKEDA, Hirofumi ENOMOTO, Gow-Chin YEN, Liang-Chuan LIN and Ryoichi SAKATA

#### Notes

- 551 Random-centroid Optimization Reveals the Strongest Superoxide Anion Radical Scavenging Activity of Maltose- and Ribose-conjugated Chicken Myofibrillar Protein  
Kimio NISHIMURA and Hiroki SAEKI
- 559 Effects of Calcium Fertilizer Application on the Physicochemical Properties of Starch Isolated from the Processing Type Potato *cv.* Toyoshiro  
Samanthi PELPOLAGE, Daiki MURAYAMA, Masayuki TANI, Jiwan PALTA, Hiroaki YAMAUCHI and Hiroshi KOAZE
- 567 Stimulatory Effects of 6-Methylsulfinylhexyl Isothiocyanate on Cultured Human Follicle Dermal Papilla Cells  
Tomoe YAMADA-KATO, Isao OKUNISHI, Yosuke FUKAMATSU, Hidenori TSUBOI and Yusuke YOSHIDA