

Table of Contents i
JFS Masthead iv
Industrial Application Briefs v
Reviewer Index vii

R: CONCISE REVIEWS/HYPOTHESES IN FOOD SCIENCE

A Transfer of Technology from Engineering: Use of ROC Curves from Signal Detection Theory to Investigate Information Processing in the Brain during Sensory Difference Testing—*Sukanya Wichchukit and Michael O'Mahony* R183

C: FOOD CHEMISTRY

Aroma Recovery from Roasted Coffee by Wet Grinding—*J. Baggenstoss, D. Thomann, R. Perren, and F. Escher* C697

Development of a Rapid HPLC-UV Method for Simultaneous Quantification of Protodioscin and Rutin in White and Green Asparagus Spears—*Eun Jin Lee, Kil Sun Yoo, and Bhimanagouda S. Patil* C703

Effect of Enzyme Activity and Frozen Storage on Jalapeño Pepper Volatiles by Selected Ion Flow Tube—Mass Spectrometry—*Carolina Azcarate and Sheryl A. Barringer* C710

Antioxidant and Antiradical Capacities in Apricot (*Prunus armeniaca* L.) Fruits: Variations from Genotypes, Years, and Analytical Methods—*Attila Hegedüs, Rita Engel, László Abrankó, Emöke Balogh, Anna Blázovics, Rita Hermán, Júlia Halász, Sezaí Ercişli, Andrzej Pedryc, and Éva Stefanovits-Bányai* C722

Effect of Microbial Transglutaminase on Gel Properties and Film Characteristics of Gelatin from Lizardfish (*Saurida* spp.) Scales—*Sutee Wangtueai, Athapol Noomhorm, and Joe M. Regenstein* C731

Kinetic Characterization of a Basic Peroxidase from Garlic (*Allium sativum* L.) Cloves—*Saida Medjeldi Marzouki, Lorena Almagro, Ana B. Sabater-Jara, Alfonso Ros Barceló, and María A. Pedreño* C740

Comparison of Physical, Chemical, and Sensorial Characteristics between U.S.-Imported and Northwestern Mexico Retail Beef—*H. González-Ríos, A. Peña-Ramos, M. Valenzuela, L. Zamorano-García, G. Cumplido-Barbeitia, N.F. González-Méndez, and N. Huerta-Leidenz* C747

Effect of Thermal Processing on the Degradation, Isomerization, and Bioaccessibility of Lycopene in Tomato Pulp—*Ines Colle, Lien Lemmens, Sandy Van Buggenhout, Ann Van Loey, and Marc Hendrickx* C753

Fractionation, Separation, and Identification of Antioxidative Peptides in Potato Protein Hydrolysate that Enhance Oxidative Stability of Soybean Oil Emulsions—*Yu Cheng, Youling L. Xiong, and Jie Chen* C760

Effect of Light and Sweeteners on Color in an Amaretto-Type Liqueur—*F. Castañeda-Olivares, R.C. Pless, and E. González-Jasso* C766

Effects of Alpha-Tocopherol on Lactones in Beef Headspace during Storage—*A. Watanabe, M. Imanari, M. Higuchi, N. Shiba, and M. Yonai* C774

E: FOOD ENGINEERING AND PHYSICAL PROPERTIES

The Possibility of Lowering Oil Content of Potato Chips by Combining Atmospheric Frying with Postfrying Vacuum Application—*Azmil Haizam Ahmad Tarmizi and Keshavan Niranjan* E572

Study of the Quality Characteristics in Cold-Smoked Salmon (*Salmo Salar*) Originating from Pre- or Post-Rigor Raw Material—*S. Birkeland and L. Akse* E580

On the cover: 5000 × magnification of lizardfish scale gelatin gel, from "Effect of Microbial Transglutaminase on Gel Properties and Film Characteristics of Gelatin from Lizardfish (*Saurida* spp.) Scales" by Sutee Wangtueai, Athapol Noomhorm, and Joe M. Regenstein; p C737.



Table of Contents continued on next page

R: Concise Reviews in Food Science
C: Food Chemistry
E: Food Engineering & Physical Properties
M: Food Microbiology & Safety
S: Sensory & Food Quality
N: Nonscale Food Science
H: Health, Nutrition & Food
T: Toxicology & Chemical Food Safety

- Microencapsulated *Lactobacillus rhamnosus* GG Powders: Relationship of Powder Physical Properties to Probiotic Survival during Storage—*Dan Yang Ying, Mei Chi Phoon, Luz Sangwansri, Rangika Weerakkody, Iko Bungar, and Mary Ann Augustin*..... E588
- Application of the Chinese Steamed Bun Starter Dough (CSB-SD) in Breadmaking—*Suwinon Keenatipibul, Naphatrapi Luangsakul, Shinya Otsuka, Shigeru Sakai, Yasushi Hatano, and Somboon Tinasupawat*..... E596
- An Investigation of Bread-Baking Process in a Pilot-Scale Electrical Heating Oven Using Computational Fluid Dynamics—*A. Anishaparrin, N. Chhanual, D. Indrani, K.S.M.S. Raghavano, and C. Anandharamakrishnan*..... E605
- Calcium Lactate Effect on the Shelf Life of Osmotically Dehydrated Guavas—*Leila M. Pereira, Sandra M. Carmello-Guerreiro, Valéria C. A. Junqueira, Cristhiane C. Ferrari, and Miriam D. Hubinger*..... E612
- Physical, Mechanical, and Barrier Properties of Carp and Mammalian Skin Gelatin Films—*George Ninan, Jose Joseph, and Zynudheen Abubacker*..... E620
- A Human Gastric Simulator (HGS) to Study Food Digestion in Human Stomach—*Fanbin Kong and R. Paul Singh*..... E627
- Resistant Starch Modification: Effects on Starch Properties and Functionality as Co-Encapsulant in Sodium Caseinate-Based Fish Oil Microcapsules—*C. Chung, L. Sangwansri, and M.A. Augustin*..... E636
- M: FOOD MICROBIOLOGY AND SAFETY**
- Lactobacillus Fermentum* Isolated from Human Colonic Mucosal Biopsy Inhibits the Growth and Adhesion of Enteric and Foodborne Pathogens—*Parsathi Varma, Kavitha R. Dinesh, Krishna K. Menon, and Raja Biswas*..... M546
- Optimization of Medium Constituents for ϵ -Poly-L-Lysine Fermentation with Response Surface Methodology—*Hong Zong, Yibo He, Yao Zhan, Juan Du, Fengqin Feng, and Duo Li*..... M552
- Inhibition of *Listeria monocytogenes* by Food Antimicrobials Applied Singly and in Combination—*Alex L. Brandt, Alejandro Castillo, Kerri B. Harris, Jimmy T. Keeton, Margaret D. Hardin, and Thomas M. Taylor*..... M557
- Enumeration of Fungi in Fruits by the Most Probable Number Method—*Maiko Watanabe, Fumiyuki Tsutsumi, Ken-ichi Lee, Yoshiko Sugita-Konishi, Susumu Kumagai, Kosuke Takatori, Yukiko Hara-Kudo, and Hirotaka Komura*..... M564
- Assessment of Potential Probiotic Properties of *Lactobacillus* spp., *Lactococcus* spp., and *Pediococcus* spp. Strains Isolated from Kefir—*Firat Sabir, Yavuz Beyatli, Cumbur Cokmus, and Derya Onal-Darilmaz*..... M568
- Electrostatic Sprays of Food-Grade Acids and Plant Extracts are More Effective than Conventional Sprays in Decontaminating *Salmonella* Typhimurium on Spinach—*Vijayalakshmi Ganesh, Navam S. Hettiarachchy, Madhuran Ravichandran, Michael G. Johnson, Carl L. Griffiths, Elizabeth M. Martin, Jean-Francois Meulenet, and Steven C. Ricke*..... M574
- Effect of NaCl on the Biofilm Formation by Foodborne Pathogens—*Hua Xu, Yunyun Zou, Hyon-Yong Lee, and Juhee Ahn*..... M580
- Carboxymethyl Cellulose Coating and Low-Dose Gamma Irradiation Improves Storage Quality and Shelf Life of Pear (*Pyrus Communis* L., Cv. Bartlett/William)—*Peerzada R. Hussain, Raghunver S. Meena, Mohd A. Dar, and Ali M. Wani*..... M586
- Characterization of Butter Spoiling Yeasts and Their Inhibition by Some Spices—*Osman Sagdic, Ismet Ozturk, Okan Bayram, Zülal Kesmen, and Mustafa Tahsin Yilmaz*..... M597
- S: SENSORY AND FOOD QUALITY**
- Effects of Bagging on Volatiles and Polyphenols in "Wanmi" Peaches during Endocarp Hardening and Final Fruit Rapid Growth Stages—*Yiju Wang, Chunxiang Yang, Chunyan Liu, Man Xu, Shaohua Li, Liu Yang, and Younian Wang*..... S455
- Impact of Shelf Life on Content of Primary and Secondary Metabolites in Apple (*Malus domestica* Borkh.)—*Robert Viberic, Valcutina Schmitzer, Maja M. Petkovec, and Franci Stampar*..... S461
- Effects of Extraction Conditions on the Sensory and Instrumental Characteristics of Fish Gelatin Gels—*G. Boran, H.T. Lawless, and J.M. Regenstein*..... S469
- Gas Chromatography/Olfactometry and Electronic Nose Analyses of Retronasal Aroma of Espresso and Correlation with Sensory Evaluation by an Artificial Neural Network—*Tomomi Michishita, Masayuki Akiyama, Yuta Hirano, Michio Ikeda, Yasuyuki Sagana, and Tetsuya Araki*..... S477
- Use of Species Other than Oak to Flavor Wine: An Exploratory Survey—*O.A. Young, M. Kaushal, J.D. Robertson, H. Burns, and S.J. Nunn*..... S490
- Variation in Sensory Profile of Individual Rainbow Trout (*Oncorhynchus mykiss*) from the Same Production Batch—*Ditte Marie Benedikte Green-Petersen and Grethe Hyldig*..... S499
- Aroma Profile and Volatiles Odor Activity Along Gold Cultivar Pineapple Flesh—*Marta Montero-Calderón, María Alejandra Rojas-Graü, and Olga Martín-Belloso*..... S506
- Consumer Perception of Astringency in Clear Acidic Whey Protein Beverages—*Jessica L. Childs and MaryAnne Drake*..... S513
- Measuring Acceptance of Milk and Milk Substitutes Among Younger and Older Children—*Orsolya M. Palacios, Joseph*

<i>Badran, Lisa Spence, Mary Anne Drake, Michele Reisner, and Howard R. Moskowitz</i>	S522	Absorption of Folic Acid and Ascorbic Acid from Nutrient Comparable Beverages— <i>Brett Carter, Pablo Monsivais, and Adam Drewnowski</i>	H289
Utilization of Oryzacystatin for Regulating the Ripening of Squid <i>Shiokara</i> , a Traditional Japanese Salted and Fermented Seafood— <i>J. Funaki, T. Tamura, M. Nishinoaki, T. Misaka, W. Eto, and T. Asakura</i>	S527	Effects of Buckwheat Sprouts on Plasma and Hepatic Parameters in Type 2 Diabetic <i>db/db</i> Mice— <i>Mitsuru Watanabe and Jun Ayugase</i>	H294
Consumer Preferences for Fresh Tomato at the European Scale: A Common Segmentation on Taste and Firmness— <i>Mathilde Causse, Chloé Friguet, Clément Coiret, Mélanie Lépicier, Brigitte Navez, Monica Lee, Nancy Holthuysen, Fiorella Sinesio, Elisabetta Moneta, and Silvana Grandillo</i>	S531	A Low-Calorie Beverage Supplemented with Low-Viscosity Pectin Reduces Energy Intake at a Subsequent Meal— <i>Martine Perrigue, Brett Carter, Susan A. Roberts, and Adam Drewnowski</i>	H300
Physicochemical and Sensory Properties of Fresh Potato-Based Pasta (<i>Gnocchi</i>)— <i>Laura Alessandrini, Federica Balestra, Santina Romani, Pietro Rocculi, and Marco Dalla Rosa</i>	S542	GC-MS Determined Distribution of Urinary Equol Producers as Affected by Age, Gender, and Repeated Ingestions of Soy milk— <i>Ting-Fu Ko, Hui-Su Tsai, Shu-Mei Lin, Chi-Dong Liu, Show-Phon Learn, and Robin Y.Y. Chiou</i>	H306
Processing of Soft Hispanic Cheese ("Queso Fresco") Using Thermo-Sonicated Milk: A Study of Physicochemical Characteristics and Storage Life— <i>Daniela Bernúdez-Aguirre and Gustavo V. Barbosa-Cánovas</i>	S548	Soybean Peptide Lunasin Suppresses <i>In Vitro</i> and <i>In Vivo</i> 7,12-Dimethylbenz-[a]anthracene-Induced Tumorigenesis— <i>Chia-Chien Hsieh, Blanca Hernández-Ledesma, and Ben O. de Lumen</i>	H311
H: HEALTH, NUTRITION, AND FOOD		Hydrolysis of <i>Chlorella</i> by <i>Cellulomonas</i> sp. YJ5 Cellulases and Its Biofunctional Properties— <i>Li-Jung Yin, Shann-Tzong Jiang, Shen-Hwei Pon, and Hsin-Hung Lin</i>	H317
Antihyperlipidemic Effect of Sesame (<i>Sesamum indicum</i> L.) Protein Isolate in Rats Fed a Normal and High Cholesterol Diet— <i>Anandhati Biswas, Pubali Dhar, and Santinath Ghosh</i>	H274	T: TOXICOLOGY AND CHEMICAL FOOD SAFETY	
Differential Effects of Sulfated Triterpene Glycosides, Holothurin A ₁ , and 24-Dehydroechinoside A, on Antimetastatic Activity via Regulation of the MMP-9 Signal Pathway— <i>Qin Zhao, Yong Xue, Zhi-dong Liu, Hui Li, Jing-feng Wang, Zhao-jie Li, Yu-ming Wang, Ping Dong, and Chang-hu Xue</i>	H280	Evaluation of Cleaning Procedures for Allergen Control in a Food Industry Environment— <i>X. Wang, O.A. Young, and D.P. Karl</i>	T149
		Levels of 2-Dodecylcyclobutanone in Ground Beef Patties Irradiated by Low-Energy X-Ray and Gamma Rays— <i>Faraj M. Hijaz and J. Scott Smith</i>	T156

NOTICE: Page Charges for Publication of Research Papers

There are no page charges for *IFT members*; for *non-IFT-members*, a charge of \$85 per printed page for the first 4 pages (\$120 for each additional page) applies to all manuscripts on original research. Color figures can be included in the print version for a fee of \$500 per figure, or online only for free. When payment is possible only from an author's personal funds, and this means of payment would impose undue financial hardship, a request for **partial or full waiver** of page charges can be made, provided this is done **prior to publication**. In this instance, a **statement certifying** that the author's employer(s) is unable to pay because of financial distress, and that the author cannot personally pay because this would impose an undue financial burden, signed by both the author and the employer, should be sent—**prior to publication**—to: JFS Managing Editor, Institute of Food Technologists, 525W. Van Buren St., Suite 1000, Chicago, IL 60607, USA (E-mail: akferguson@ift.org).

Submission of papers must be made electronically through Scholar One Manuscripts on the Web at: <http://mc.manuscriptcentral.com/jfs>. Submission of manuscripts in paper form is no longer permitted.

Concise Reviews and **Hypothesis Papers** are exempt from page charges, provided the Scientific Editor (Daryl B. Lund, dlund@cals.wisc.edu) is consulted and issues an invitation in advance of submission.