

# FOOD RESEARCH INTERNATIONAL

## CONTENTS

Volume 96, June 2017

### Reviews

- 132 Kinetic and thermodynamic compensation. A current and practical review for foods  
A. GARVÍN, R. IBARZ, A. IBARZ (Spain)

### Research Articles

- 1 Effects of structural and textural properties of brittle cereal foams on mechanisms of oral breakdown and *in vitro* starch digestibility  
S.A. ALAM, S. PENTIKÄINEN, J. NÄRVÄINEN, U. HOLOPAINEN-MANTILA, K. POUTANEN, N. SOZER (Finland)
- 12 Antiproliferative activity of Ontario grown onions against colorectal adenocarcinoma cells  
A.I. MURAYYAN, C.M. MANOHAR, G. HAYWARD, S. NEETHIRAJAN (Canada)
- 19 The cell wall compound of *Saccharomyces cerevisiae* as a novel wall material for encapsulation of probiotics  
S. MOKHTARI, S.M. JAFARI, M. KHOMEIRI, Y. MAGHSOUDLOU, M. GHORBANI (Iran)
- 27 Vulnerability of global food production to extreme climatic events  
F. YENI, H. ALPAS (Turkey)
- 40 Characterization of white tea metabolome: Comparison against green and black tea by a nontargeted metabolomics approach  
W. DAI, D. XIE, M. LU, P. LI, H. LV, C. YANG, Q. PENG, Y. ZHU, L. GUO, Y. ZHANG, J. TAN, Z. LIN (PR China)
- 46 Foliar nitrogen application in Cabernet Sauvignon vines: Effects on wine flavonoid and amino acid content  
G. GUTIÉRREZ-GAMBOA (Chile, Spain), T. GARDE-CERDÁN, J. PORTU (Spain), Y. MORENO-SIMUNOVIC (Chile), A.M. MARTÍNEZ-GIL (Chile, Spain)
- 54 Matrix effects on the crystallization behaviour of butter and roll-in shortening in laminated bakery products  
K.D. MATTICE, A.G. MARANGONI (Canada)
- 64 The hypoglycemic effects of guava leaf (*Psidium guajava* L.) extract are associated with improving endothelial dysfunction in mice with diet-induced obesity  
E. DÍAZ-DE-CERIO, A. RODRÍGUEZ-NOGALES, F. ALGIERI, M. ROMERO, V. VERARDO, A. SEGURA-CARRETERO, J. DUARTE, J. GALVEZ (Spain)
- 72 Effect of regulated deficit irrigation on quality parameters, carotenoids and phenolics of diverse tomato varieties (*Solanum lycopersicum* L.)  
E. COYAGO-CRUZ (Spain, Ecuador) M. CORELL, C.M. STINCO, D. HERNANZ, A. MORIANA, A.J. MELÉNDEZ-MARTÍNEZ (Spain)
- 84 Protection of  $\beta$ -carotene from chemical degradation in emulsion-based delivery systems using antioxidant interfacial complexes: Catechin-egg white protein conjugates  
L. GU (People's Republic of China, United States), Y. SU, M. ZHANG, C. CHANG, J. LI (People's Republic of China), D.J. MCCLEMENTS (United States), Y. YANG (People's Republic of China)
- 94 Microencapsulation and characterization of liposomal vesicles using a supercritical fluid process coupled with vacuum-driven cargo loading  
W.-C. TSAI, S.S.H. RIZVI (USA)

(Continued on next page)

- 103** Production of highly concentrated oil-in-water emulsions using dual-channel microfluidization: Use of individual and mixed natural emulsifiers (saponin and lecithin)  
X. LUO (China, USA), Y. ZHOU (China), L. BAI, F. LIU, R. ZHANG, Z. ZHANG, B. ZHENG (USA), Y. DENG (China), D.J. MCCLEMENTS (USA)
- 113** Key odor and physicochemical characteristics of raw and roasted jicaro seeds (*Crescentia alata* K.H.B.)  
C.V. CORRALES (Nicaragua), M. LEBRUN, F. VAILLANT, M.N. MADEC, S. LORTAL (France), A.M. PÉREZ (Costa Rica), G. FLIEDEL (France)
- 121** Structural strength analysis of amorphous trehalose-maltodextrin systems  
V.A. MAIDANNYK (Ireland), B. NURHADI (Indonesia), Y.H. ROOS (Ireland)
- 154** Encapsulated thyme (*Thymus vulgaris*) essential oil used as a natural preservative in bakery product  
N.D. GONÇALVES, F.D.L. PENA, A. SARTORATTO, C. DERLAMELINA, M.C.T. DUARTE, A.E.C. ANTUNES, A.S. PRATA (Brazil)
- 161** Structural and mechanical properties of organogels: Role of oil and gelator molecular structure  
M.A. CERQUEIRA (Portugal), L.H. FASOLIN, C.S.F. PICONE (Brazil), L.M. PASTRANA (Portugal), R.L. CUNHA (Brazil), A.A. VICENTE (Portugal)
- 171** Analysis of domestic refrigerator temperatures and home storage time distributions for shelf-life studies and food safety risk assessment  
A. ROCCATO (Italy), M. UYTENDAELE (Belgium), J.-M. MEMBRÉ (France)
- 182** Protein digestomic analysis reveals the bioactivity of deer antler velvet in simulated gastrointestinal digestion  
Y. YU, Y. JIN, F. WANG, J. YAN, Y. QI, M. YE (China)
- 191** Investigation on water status and distribution in broccoli and the effects of drying on water status using NMR and MRI methods  
F. XU, X. JIN (PR China), L. ZHANG (PR China, The Netherlands), X.D. CHEN (PR China)
- 198** Testing the Abbreviated Food Technology Neophobia Scale and its relation to satisfaction with food-related life in university students  
B. SCHNETTLER (Chile), K.G. GRUNERT (Denmark), E. MIRANDA-ZAPATA (Chile), L. ORELLANA, J. SEPÚLVEDA (Chile, United Kingdom), G. LOBOS, C. HUECHE, Y. HÖGER (Chile)
- 206** Functional characterizations of  $\beta$ -glucosidases involved in aroma compound formation in tea (*Camellia sinensis*)  
Y. ZHOU, L. ZENG, J. GUI, Y. LIAO, J. LI, J. TANG, Q. MENG, F. DONG, Z. YANG (China)
- 215** Cheese milk low homogenization enhanced early lipolysis and volatiles compounds production in hard cooked cheeses  
M.A. VÉLEZ, E.R. HYNES, C.A. MEINARDI, V.I. WOLF, M.C. PEROTTI (Argentina)
- 226** Addition of exogenous enzymes to diets containing grape pomace: Effects on intestinal utilization of catechins and antioxidant status of chickens  
S. CHAMORRO, A. VIVEROS, A. REBOLÉ, I. ARIJA, C. ROMERO, I. ALVAREZ, A. REY, A. BRENES (Spain)
- 235** Effect of egg albumin fining, progressive clarification and cross-flow microfiltration on the polysaccharide and proanthocyanidin composition of red varietal wines  
L. MARTÍNEZ-LAPUENTE, Z. GUADALUPE, B. AYESTARÁN (Spain)