

## CONTENTS

Volume 138, issues 2–3, 15 May–1 June 2013 (Published 4 February 2013)

### General Section: Review

- 1764 *In vitro* antioxidant properties of crude extracts and compounds from brown algae  
E.M. BALBOA, E. CONDE, A. MOURE, E. FALQUÉ & H. DOMÍNGUEZ (Spain)

### General Papers

- 745 Net analyte signal standard addition method for simultaneous determination of sulphadiazine and trimethoprim in bovine milk and veterinary medicines  
R. HAJIAN, E. MOUSAVI & N. SHAMS (Iran)
- 750 Biochemistry of foods, 3rd ed., N.A. Michael Eskin and Fereidoon Shahidi (Eds.), ISBN 978-0-12-242352-9, XIII+565 pp., Elsevier, 2012  
G. BIRCH
- 751 Anti-inflammatory effects of an aqueous extract of Welsh onion green leaves in mice  
B.-S. WANG, G.-J. HUANG, Y.-H. LU & L.-W. CHANG (Taiwan, ROC)
- 757 Apple polyphenols suppress antigen presentation of ovalbumin by THP-1-derived dendritic cells  
S. KATAYAMA, T. KUKITA, E. ISHIKAWA, S. NAKASHIMA, S. MASUDA, T. KANDA, H. AKIYAMA, R. TESHIMA & S. NAKAMURA (Japan)
- 762 Nutritional and antinutritional evaluation of raw and processed Australian wattle (*Acacia saligna*) seeds  
K.Y. EE & P. YATES (Australia)
- 776 Interaction and digestibility of phaseolin/polyphenol in the common bean  
N.M.V. DE TOLEDO, L.C. ROCHA, A.G. DA SILVA & S.G. CANNIATTI BRAZACA (Brazil)
- 781 Reduction of abdominal fat accumulation in rats by 8-week ingestion of a newly developed sweetener made from high fructose corn syrup  
T. IIDA, T. YAMADA, N. HAYASHI, K. OKUMA, K. IZUMORI, R. ISHII & T. MATSUO (Japan)
- 786 Influence of seasonality on the chemical composition of oysters (*Crassostrea rhizophorae*)  
G.M. LIRA, J.C.M. PASCOAL, E.A.F.S. TORRES, R.A.M. SOARES, S. MENDONÇA, G.R. SAMPAIO, M.S. CORREIA, C.C.V.Q. CABRAL, C.R. CABRAL JÚNIOR & A.M.Q. LÓPEZ (Brazil)
- 802 Pterostilbene inhibits dimethylnitrosamine-induced liver fibrosis in rats  
M.-F. LEE, M.-L. LIU, A.-C. CHENG, M.-L. TSAI (Taiwan, ROC), C.-T. HO (USA), W.-S. LIOU & M.-H. PAN (Taiwan, ROC)

- 808 *In vitro* biological activity of essential oils and isolated furanosesquiterpenes from the neglected vegetable *Smyrniolum olusatrum* L. (Apiaceae)  
L. QUASSINTI, M. BRAMUCCI, G. LUPIDI, L. BARBONI, M. RICCIUTELLI, G. SAGRATINI, F. PAPA, G. CAPRIOLI, D. PETRELLI, L.A. VITALI, S. VITTORI & F. MAGGI (Italy)
- 821 Quality enhancement in refrigerated red drum (*Sciaenops ocellatus*) fillets using chitosan coatings containing natural preservatives  
T. LI, J. LI, W. HU & X. LI (China)
- 835 Comparative analysis of nutritional compositions of transgenic high iron rice with its non-transgenic counterpart  
D. GAYEN, S.N. SARKAR, S.K. DATTA & K. DATTA (India)
- 841 Effects of particle size and heating time on thiobarbituric acid (TBA) test of soybean powder  
Y.-J. LEE & W.-B. YOON (South Korea)
- 851 Nutritional value and antioxidant activity of honeys produced in a European Atlantic area  
O. ESCUREDO, M. MÍGUEZ, M. FERNÁNDEZ-GONZÁLEZ & M. CARMEN SEIJO (Spain)
- 857 Thermal-induced changes of kale's antioxidant activity analyzed by HPLC–UV/Vis-online-TEAC detection  
M. FIOL, A. WECKMÜLLER, S. NEUGART, M. SCHREINER, S. ROHN, A. KRUMBEIN & L.W. KROH (Germany)
- 866 Determination of ethylenediaminetetraacetic acid in foods by reversed-phase high-performance liquid chromatography  
T. KEMMEI, S. KODAMA, A. YAMAMOTO, Y. INOUE & K. HAYAKAWA (Japan)
- 876 Increase in antioxidant and anticancer effects of ginsenoside Re–lysine mixture by Maillard reaction  
N. YAMABE, Y.-J. KIM, S. LEE, E.-J. CHO, S.-H. PARK, J. HAM, H.Y. KIM & K.S. KANG (Republic of Korea)
- 884 Effects of twin-screw extrusion on soluble dietary fibre and physicochemical properties of soybean residue  
Y. JING & Y.-J. CHI (China)
- 898 Adhesive microbeads for the targeting delivery of anticaries agents of vegetable origin  
B. CONTI, B. COLZANI, A. PAPETTI, D. MASCHERPA, R. DORATI, I. GENTA, C. PRUZZO, C. SIGNORETTO (Italy), E. ZAURA (The Netherlands), P. LINGSTRÖM (Sweden), I. OFEK (Israel), M. WILSON, D.A. SPRATT (UK) & G. GAZZANI (Italy)
- 905 Odour quality of spray-dried hens' egg powders: The influence of composition, processing and storage conditions  
C. RANNOU, F. TEXIER, M. MOREAU, P. COURCOUX, A. MEYNIER & C. PROST (France)
- 923 Antioxidant activities of the synthesized thiol-contained peptides derived from computer-aided pepsin hydrolysis of yam tuber storage protein, dioscorin  
C.-H. HAN, J.-C. LIU, S.-U. FANG & W.-C. HOU (Taiwan)
- 931 Winter wheat hull (husk) is a valuable source for tricin, a potential selective cytotoxic agent  
A. MOHEB, M. GRONDIN, R.K. IBRAHIM, R. ROY & F. SARHAN (Canada)
- 938 Quantification by UHPLC of total individual polyphenols in fruit juices  
M.C. DÍAZ-GARCÍA, J.M. OBÓN, M.R. CASTELLAR, J. COLLADO & M. ALACID (Spain)
- 950 Protective effect of marine algae phlorotannins against AAPH-induced oxidative stress in zebrafish embryo  
M.-C. KANG (Republic of Korea), S.H. CHA (United States), W.A.J.P. WIJESINGHE, S.-M. KANG, S.-H. LEE, EUN-A. KIM, C.B. SONG & Y.-J. JEON (Republic of Korea)
- 956 Glycosidic aroma precursors of Syrah and Chardonnay grapes after an oak extract application to the grapevines  
A.M. MARTÍNEZ-GIL (Spain), M. ANGENIEUX (France), A.I. PARDO-GARCÍA, G.L. ALONSO (Spain), H. OJEDA (France) & M. ROSARIO SALINAS (Spain)
- 966 Effects of amylosucrase treatment on molecular structure and digestion resistance of pre-gelatinised rice and barley starches  
B.-S. KIM, H.-S. KIM (Republic of Korea), J.-S. HONG, K.C. HUBER (USA), J.-H. SHIM & S.-H. YOO (Republic of Korea)

- 976 Degradation pattern of gibberellic acid during the whole process of tea production  
H. CHEN, X. LIU, D. YANG & P. YIN (China)
- 982 <sup>1</sup>H NMR-based metabolic fingerprinting of urine metabolites after consumption of lingonberries (*Vaccinium vitis-idaea*) with a high-fat meal  
H.-M. LEHTONEN, A. LINDSTEDT, R. JÄRVINEN, J. SINKKONEN (Finland), G. GRAÇA (Portugal), M. VIITANEN (Finland, Sweden), H. KALLIO (Finland) & A.M. GIL (Portugal)
- 991 Simultaneous determination of Mn<sup>2+</sup> and Fe<sup>3+</sup> as 4,4'[(4-chlorophenyl)methylene] bis(3-methyl-1-phenyl-1H-pyrazol-5-ol) complexes in some foods, vegetable and water samples by artificial neural networks  
M. ABBASI-TARIGHAT, E. SHAHBAZI & K. NIKNAM (Iran)
- 998 Simultaneous detection of multiple adulterants in dry milk using macro-scale Raman chemical imaging  
J. QIN, K. CHAO & M.S. KIM (USA)
- 1008 Anti-inflammatory effects of phenolic crude extracts from five fractions of *Corchorus Olitorius* L.  
Y.-Y. YAN, Y.-W. WANG, S.-L. CHEN, S.-R. ZHUANG & C.-K. WANG (Taiwan, ROC)
- 1015 Alteration of  $\alpha$ -tocopherol-associated protein (TAP) expression in human breast epithelial cells during breast cancer development  
K.-W. TAM (Taiwan), C.-T. HO (USA), W.-J. LEE, S.-H. TU, C.-S. HUANG, C.-S. CHEN, C.-H. LEE, C.-H. WU & Y.-S. HO (Taiwan)
- 1022 Interaction of cellulase with three phenolic acids  
Y. TIAN, Y. JIANG & S. OU (China)
- 1028 Neuroprotective effects of oral gallic acid against oxidative stress induced by 6-hydroxydopamine in rats  
M.T. MANSOURI, Y. FARBOOD, M.J. SAMERI, A. SARKAKI, B. NAGHIZADEH & M. RAFEIRAD (Iran)
- 1034 Cannabisin B induces autophagic cell death by inhibiting the AKT/mTOR pathway and S phase cell cycle arrest in HepG2 cells  
T. CHEN, J. HAO, J. HE, J. ZHANG, Y. LI, R. LIU & L. LI (China)
- 1062 Identification of phenolic constituents in red chicory salads (*Cichorium intybus*) by high-performance liquid chromatography with diode array detection and electrospray ionisation tandem mass spectrometry  
C. CARAZZONE, D. MASCHERPA, G. GAZZANI & A. PAPETTI (Italy)
- 1072 The influence of cation exchange treatment on the final characteristics of red wines  
C. LASANTA, I. CARO & L. PÉREZ (Spain)
- 1079 Peyer's patch-mediated intestinal immune system modulating activity of pectic-type polysaccharide from peel of *Citrus unshiu*  
H.-J. SUH, H.-S. YANG, K.-S. RA, D.-O. NOH, K.-H. KWON, J.-H. HWANG & K.-W. YU (Republic of Korea)
- 1087 Storage stability of hen egg white powders in three protein/water dough model systems  
Q. RAO (United States), J.R. ROCCA-SMITH (Italy) & T.P. LABUZA (United States)
- 1095 An electrospray ionisation-mass spectrometry screening of triacylglycerols in developing cultivated and wild peanut kernels (*Arachis hypogaea* L.)  
A.O. CHERIF (Tunisia), N. LEVEQUE (France), M. BEN MESSAOUDA, H. KALLEL (Tunisia) & F. MOUSSA (France)
- 1101 Film forming ability of gelatins from splendid squid (*Loligo formosana*) skin bleached with hydrogen peroxide  
M. NAGARAJAN, S. BENJAKUL, T. PRODPRAN, P. SONGTIPYA & P. NUTHONG (Thailand)
- 1116 Hypolipidemic and antioxidant activities of thymoquinone and limonene in atherogenic suspension fed rats  
S. AHMAD & Z.H. BEG (India)
- 1125 Geographical origin identification of Romanian wines by ICP-MS elemental analysis  
I. GEANA, A. IORDACHE, R. IONETE, A. MARINESCU, A. RANCA & M. CULEA (Romania)
- 1145 Effects of sodium caseinate concentration and storage conditions on the oxidative stability of oil-in-water emulsions  
S.P. O' DWYER, D. O' BEIRNE, D.N. EIDHIN & B.T. O' KENNEDY (Ireland)
- 1153 Antioxidant activity and nutritional quality of traditional red-grained rice varieties containing proanthocyanidins  
A. GUNARATNE (Sri Lanka, China), K. WU, D. LI (China), A. BENTOTA (Sri Lanka), H. CORKE & Y.-Z. CAI (China)

- 1172 Hydroxytyrosyl ethyl ether exhibits stronger intestinal anticarcinogenic potency and effects on transcript profiles compared to hydroxytyrosol  
G. PEREIRA-CARO, R. MATEOS (UK, Spain), M.H. TRAKA, J.R. BACON, R. BONGAERTS (UK), B. SARRIÁ, L. BRAVO (Spain) & P.A. KROON (UK)
- 1183 Simple, fast, and efficient process for producing and purifying trehalulose  
Y. WEI, J. LIANG, Y. HUANG, P. LEI, L. DU & R. HUANG (China)
- 1189 Effect of peeling and three cooking methods on the content of selected phytochemicals in potato tubers with various colour of flesh  
J. LACHMAN, K. HAMOUZ (Czech Republic), J. MUSILOVÁ (Slovak Republic), K. HEJTMÁNKOVÁ, Z. KOTÍKOVÁ, K. PAZDERŮ, J. DOMKÁŘOVÁ, V. PIVEC & J. CIMR (Czech Republic)
- 1215 Antioxidant synergism between ethanolic *Centella asiatica* extracts and  $\alpha$ -tocopherol in model systems  
Y.Y. THOO, F. ABAS, O.-M. LAI, C.W. HO (Malaysia), J. YIN, R.V. HEDEGAARD, L.H. SKIBSTED (Denmark) & C.P. TAN (Malaysia)
- 1220 Antioxidant activity of phytosteryl phenolates in different model systems  
Z. TAN & F. SHAHIDI (Canada)
- 1225 Purification and characterisation of a novel chitinase from persimmon (*Diospyros kaki*) with antifungal activity  
J. ZHANG, N.K. KOPPARAPU, Q. YAN, S. YANG & Z. JIANG (PR China)
- 1250 Root tubers of *Lactuca tuberosa* as a source of antioxidant phenolic compounds and new furofuran lignans  
A. STOJAKOWSKA, K. MICHALSKA, J. MALARZ (Poland), A. BEHARAV (Israel) & W. KISIEL (Poland)
- 1256 Compositional characterisation of soluble apple polysaccharides, and their antioxidant and hepatoprotective effects on acute CCl<sub>4</sub>-caused liver damage in mice  
X. YANG, S. YANG, Y. GUO, Y. JIAO & Y. ZHAO (China)
- 1265 Moisture diffusivity in food materials  
R.G.M. VAN DER SMAN & M.B.J. MEINDERS (The Netherlands)
- 1275 Investigation of the effect of gelatine, egg albumin and cross-flow microfiltration on the phenolic composition of Pinotage wine  
A. OBERHOLSTER (South Africa, USA), L.M. CARSTENS & W.J. DU TOIT (South Africa)
- 1282 Identification of novel antioxidant peptides generated in Spanish dry-cured ham  
E. ESCUDERO (Spain), L. MORA, P.D. FRASER (UK), M.-C. ARISTOY & F. TOLDRÁ (Spain)
- 1289 Modelling the interactions between free phenols, l-ascorbic acid, apple polyphenoloxidase and oxygen during a thermal treatment  
J.-P. AKA, F. COURTOIS, L. LOUARME, J. NICOLAS & C. BILLAUD (France)
- 1298 Iron and zinc bioavailability in Caco-2 cells: Influence of caseinophosphopeptides  
M.J. GARCÍA-NEBOT, R. BARBERÁ & A. ALEGRÍA (Spain)
- 1304 The physical characteristics and emulsification properties of partially dephosphorylated bovine  $\beta$ -casein  
N.A. MCCARTHY, A.L. KELLY, J.A. O'MAHONY & M.A. FENELON (Ireland)
- 1312 Antioxidant and antimicrobial activity of xylan-chitooligomer-zinc complex  
S. WU, Y. DU, Y. HU, X. SHI & L. ZHANG (China)
- 1333 Evaluation of antioxidant activities and chemical characterisation of staghorn sumac fruit (*Rhus hirta* L.)  
T. WU (Canada, China), J.L. MCCALLUM, S. WANG, R. LIU, H. ZHU & R. TSAO (Canada)
- 1351 Relationships between the evolution of the percentage in weight of polar compounds and that of the molar percentage of acyl groups of edible oils submitted to frying temperature  
M.D. GUILLÉN & P.S. URIARTE (Spain)
- 1360 Understanding the degradation of ascorbic acid and glutathione in relation to the levels of oxidative stress biomarkers in broccoli (*Brassica oleracea* L. *italica* cv. Bellstar) during storage and mechanical processing  
S. RASEETHA, S.Y. LEONG, D.J. BURRITT & I. OEY (New Zealand)
- 1374 Evaluation of sea bream (*Sparus aurata*) shelf life using an optoelectronic nose  
P. ZARAGOZÁ, A. FUENTES, I. FERNÁNDEZ-SEGOVIA, J.-L. VIVANCOS, A. RIZO, J.V. ROS-LIS, J.M. BARAT & R. MARTÍNEZ-MÁÑEZ (Spain)

- 1381 Characterization of 3,4-DHPEA-EDA oxidation products in virgin olive oil by high performance liquid chromatography coupled with mass spectrometry  
I. DI MAIO, S. ESPOSTO, A. TATICCHI, R. SELVAGGINI, G. VENEZIANI, S. URBANI & M. SERVILI (Italy)
- 1392 A water-alcohol extract of *Citrus grandis* whole fruits has beneficial metabolic effects in the obese Zucker rats fed with high fat/high cholesterol diet  
A. RAASMAJA, A. LECKLIN (Finland), X.M. LI, J. ZOU, G.-G. ZHU (PR China), I. LAAKSO & R. HILTUNEN (Finland)
- 1400 Effect of incorporating hydrothermal, kilned and defatted oats on antioxidant and chapatti making properties of wheat flour  
H.S. GUJRAL, P. SHARMA, B.S. GILL & S. KAUR (India)
- 1407 Effects of Azocompost and urea on the herbage yield and contents and compositions of essential oils from two genotypes of dragonhead (*Dracocephalum moldavica* L.) in two regions of Iran  
S. YOUSEFZADEH, S.A.M. MODARRES-SANAVY, F. SEFIDKON, A. ASGARZADEH, A. GHALAVAND & K. SADAT-ASILAN (Iran)
- 1414 *In vitro* digestibility and starch content, predicted glycemic index and potential *in vitro* antidiabetic effect of lentil sprouts obtained by different germination techniques  
M. SWIECA, B. BARANIAK & U. GAWLIK-DZIKI (Poland)
- 1421 Piceatannol, a potent bioactive stilbene, as major phenolic component in *Rhodomyrtus tomentosa*  
T.N.H. LAI (Belgium, Viet Nam), M.-F. HERENT, J. QUETIN-LECLERCQ (Belgium), T.B.T. NGUYEN (Viet Nam), H. ROGEZ (Brazil), Y. LARONDELLE & C.M. ANDRÉ (Belgium)
- 1431 Molecular and functional properties of gelatin from the skin of unicorn leatherjacket as affected by extracting temperatures  
P. KAEWRUANG, S. BENJAKUL & T. PRODPRAN (Thailand)
- 1438 Phytosteryl sinapates and vanillates: Chemoenzymatic synthesis and antioxidant capacity assessment  
Z. TAN & F. SHAHIDI (Canada)
- 1448 Comparative study on hypocholesterolemic and antioxidant activities of various extracts of fenugreek seeds  
O. BELGOUTH-HADRICHE (Tunisia), M. BOUAZIZ (Tunisia, UK), K. JAMOSSI (Tunisia), M.S.J. SIMMONDS (UK), A. EL FEKI & F. MAKNI-AYEDI (Tunisia)
- 1454 Purification and identification of lipolysis-stimulating peptides derived from enzymatic hydrolysis of soy protein  
M.-J. TSOU, F.-J. KAO, H.-C. LU, H.-C. KAO & W.-D. CHIANG (Taiwan, ROC)
- 1461 Characterization of oils and fats by <sup>1</sup>H NMR and GC/MS fingerprinting: Classification, prediction and detection of adulteration  
G. FANG, J.Y. GOH, M. TAY, H.F. LAU & S.F.Y. LI (Singapore)
- 1470 Structural elucidation and antioxidant activity of a water-soluble polysaccharide from the fruit bodies of *Bulgaria inquinans* (Fries)  
H. BI, T. GAO, Z. LI, L. JI, W. YANG, B. JEFF ITEKU, E. LIU & Y. ZHOU (PR China)
- 1476 Effects of different freezing treatments on the biogenic amine and quality changes of bighead carp (*Aristichthys nobilis*) heads during ice storage  
H. HONG, Y. LUO, Z. ZHOU, Y. BAO, H. LU & H. SHEN (China)
- 1483 Chemical evidence for the synergistic effect of a cysteinyl thiol on the antioxidant activity of caffeic and dihydrocaffeic esters  
A. FUJIMOTO, M. INAI & T. MASUDA (Japan)
- 1493 Oligomeric procyanidins of lotus seedpod inhibits the formation of advanced glycation end-products by scavenging reactive carbonyls  
Q. WU, H. CHEN, Z. LV, S. LI, B. HU, Y. GUAN, B. XIE & Z. SUN (PR China)
- 1510 Malolactic fermentation of wines with immobilised lactic acid bacteria – Influence of concentration, type of support material and storage conditions  
Z. GENISHEVA, S.I. MUSSATTO, J.M. OLIVEIRA & J.A. TEIXEIRA (Portugal)

- 1515 Isomerisation of carrot  $\beta$ -carotene in presence of oil during thermal and combined thermal/high pressure processing  
G. KNOCKAERT, S.K. PULISSERY, L. LEMMENS, S. VAN BUGGENHOUT, M. HENDRICKX & A. VAN LOEY (Belgium)
- 1521 Vitexin-2-O-xyloside, raphasatin and (–)-epigallocatechin-3-gallate synergistically affect cell growth and apoptosis of colon cancer cells  
A. PAPI, F. FARABEGOLI, R. IORI, M. ORLANDI, G.R. DE NICOLA, M. BAGATTA, D. ANGELINO, L. GENNARI & P. NINFALI (Italy)
- 1536 Absorption and urinary excretion of A-type procyanidin oligomers from *Litchi chinensis* pericarp in rats by selected ion monitoring liquid chromatography–mass spectrometry  
S. LI, Y. SUI, J. XIAO, Q. WU, B. HU, B. XIE & Z. SUN (People’s Republic of China)
- 1543 Phenolics content and antioxidant and anti-inflammatory activities of legume fractions  
S. BOUDJOU (Algeria), B.D. OOMAH (Canada), F. ZAIDI (Algeria) & F. HOSSEINIAN (Canada)
- 1551 Inhibitory activity of *Filipendula ulmaria* constituents on recombinant human histidine decarboxylase  
Y. NITTA, H. KIKUZAKI, T. AZUMA, Y. YE, M. SAKAUE, Y. HIGUCHI, H. KOMORI & H. UENO (Japan)
- 1557 Antioxidant properties of different edible mushroom species and increased bioconversion efficiency of *Pleurotus eryngii* using locally available casing materials  
K.K. MISHRA, R.S. PAL, R. ARUNKUMAR, C. CHANDRASHEKARA, S.K. JAIN & J.C. BHATT (India)
- 1564 Microbial metabolites, but not other phenolics derived from grape seed phenolic extract, are transported through differentiated Caco-2 cell monolayers  
D. WANG, B.A. WILLIAMS (Australia), M.G. FERRUZZI (USA) & B.R. D’ARCY (Australia)
- 1574 Biguanide related compounds in traditional antidiabetic functional foods  
V. PERLA & S.S. JAYANTY (USA)
- 1581 Thermal protection of  $\beta$ -carotene in re-assembled casein micelles during different processing technologies applied in food industry  
M.-J. SÁIZ-ABAJO, C. GONZÁLEZ-FERRERO, A. MORENO-RUIZ, A. ROMO-HUALDE & C.J. GONZÁLEZ-NAVARRO (Spain)
- 1588 Enhancing the production of galacto-oligosaccharides by mutagenesis of *Sulfolobus solfataricus*  $\beta$ -galactosidase  
Y. WU (People’s Republic of China), S. YUAN (China, Poland), S. CHEN, D. WU, J. CHEN & J. WU (People’s Republic of China)
- 1596 Interaction between lysozyme and procyanidin: Multilevel structural nature and effect of carbohydrates  
M. LIANG, R. LIU, W. QI, R. SU, Y. YU, L. WANG & Z. HE (PR China)
- 1604 The protein interactions and rheological properties of skim milk heated in the presence of low levels of reducing agent  
N.H.A. NGUYEN, M. WONG, P. HAVEA (New Zealand), F. GUYOMARC’H (France) & S.G. ANEMA (New Zealand)
- 1616 Total amino acid profiles of heat-processed fresh *Elaeis guineensis* and *Raphia hookeri* wines  
C.O. IBEGBULEM, C.U. IGWE, G.N. OKWU, C.O. UJOWUNDU, E.N. ONYEIKE & E.O. AYALOGU (Nigeria)
- 1621 Quality and antioxidant properties of breads enriched with dry onion (*Allium cepa* L.) skin  
U. GAWLIK-DZIKI, M. ŚWIECA, D. DZIKI, B. BARANIAK, J. TOMIŁO & J. CZYŻ (Poland)
- 1633 Effect of TiO<sub>2</sub> photocatalytic activity in a HDPE-based food packaging on the structural and microbiological stability of a short-ripened cheese  
M. GUMIERO, D. PERESSINI, A. PIZZARIELLO, A. SENSIDONI, L. IACUMIN, G. COMI & R. TONIOLO (Italy)
- 1648 Effects of blanching on polyphenol stability of innovative paste-like parsley (*Petroselinum crispum* (Mill.) Nym ex A. W. Hill) and marjoram (*Origanum majorana* L.) products  
A. KAISER, R. CARLE & D.R. KAMMERER (Germany)
- 1670 Phenolic compounds and antioxidant activities of selected species of seaweeds from Danish coast  
K.H. SABEENA FARVIN & C. JACOBSEN (Denmark)

- 1682 Cyto-genotoxic and oxidative effects of a continuous UV-C treatment of liquid egg products  
P. MENDES DE SOUZA (Spain, Germany), K. BRIVIBA, A. MÜLLER (Germany), A. FERNÁNDEZ (Spain) & M. STAHL (Germany)
- 1689 *In vitro* studies on  $\alpha$ -glucosidase inhibition, antioxidant and free radical scavenging activities of *Hedyotis biflora* L.  
I.V.S. NIMAL CHRISTHUDAS, P. PRAVEEN KUMAR, C. SUNIL, S. VAJRAVIJAYAN, R. LAKSHMI SUNDARAM, S. JENIFER SIRIL & P. AGASTIAN (India)
- 1696 Relationships between harvest time and wine composition in *Vitis vinifera* L. cv. Cabernet Sauvignon 1. Grape and wine chemistry  
K. BINDON, C. VARELA (Australia), J. KENNEDY (Australia, USA), H. HOLT & M. HERDERICH (Australia)
- 1706 Identification of organic acids in *Cichorium intybus* inhibiting virulence-related properties of oral pathogenic bacteria  
A. PAPETTI, D. MASCHERPA, C. CARAZZONE, M. STAUDER (Italy), D.A. SPRATT, M. WILSON, J. PRATTEN, L. CIRIC (UK), P. LINGSTRÖM (Sweden), E. ZAURA (The Netherlands), E. WEISS, I. OFEK (Israel), C. SIGNORETTO, C. PRUZZO & G. GAZZANI (Italy)
- 1713 Purification and characterisation of a novel antioxidant peptide derived from blue mussel (*Mytilus edulis*) protein hydrolysate  
B. WANG, L. LI, C.-F. CHI, J.-H. MA, H.-Y. LUO & Y.-F. XU (PR China)
- 1723 Volatile profiling of high quality hazelnuts (*Corylus avellana* L.): Chemical indices of roasting  
L. NICOLOTTI, C. CORDERO, C. BICCHI, P. RUBIOLO, B. SGORBINI & E. LIBERTO (Italy)
- 1734 The potential to intensify sulforaphane formation in cooked broccoli (*Brassica oleracea* var. *italica*) using mustard seeds (*Sinapis alba*)  
S.K. GHAWI, L. METHVEN & K. NIRANJAN (UK)
- 1749 Fatty acid composition of cooked chicken meat and chicken meat products as influenced by price range at retail  
R.A. GIBBS, C. RYMER & D.I. GIVENS (United Kingdom)
- 1757 Detection, isolation and characterisation of cyclolinopeptides J and K in ageing flax  
P.D. JADHAV, D.P. OKINYO-OWITI, P.W.K. AHIAHONU & M.J.T. REANEY (Canada)
- 1786 Concentrations of PCDD/Fs, dioxin-like PCBs, PBDEs, and hexachlorobenzene in fat samples from cattle of different ages and gender in Korea  
M. KIM, D.-G. KIM, Y.H. BONG, J.-H. JANG & S.-W. SON (Republic of Korea)
- 1800 Thermal stability of anthocyanins and colourless phenolics in pomegranate (*Punica granatum* L.) juices and model solutions  
U.A. FISCHER, R. CARLE & D.R. KAMMERER (Germany)
- 1810 Effects of various pressing programs and yields on the antioxidant activity, antimicrobial activity, phenolic content and colour of pomegranate juices  
M. TÜRKYILMAZ, Ş. TAĞI, U. DERELI & M. ÖZKAN (Turkey)
- 1819 Valuable compounds in macroalgae extracts  
P.B. ANDRADE, M. BARBOSA, R.P. MATOS, G. LOPES, J. VINHOLES, T. MOUGA & P. VALENTÃO (Portugal)
- 1856 Dung-shen (*Codonopsis pilosula*) attenuated the cardiac-impaired insulin-like growth factor II receptor pathway on myocardial cells  
K.-H. TSAI, N.-H. LEE, G.-Y. CHEN, W.-S. HU, C.-Y. TSAI, M.-H. CHANG, G.-P. JONG, C.-H. KUO, B.-S. TZANG, F.-J. TSAI, C.-H. TSAI & C.-Y. HUANG (Taiwan)
- 1884 Novel surface-active oligofructose fatty acid mono-esters by enzymatic esterification  
S.E.H.J. VAN KEMPEN, C.G. BOERIU, H.A. SCHOLS, P. DE WAARD, E. VAN DER LINDEN & L.M.C. SAGIS (The Netherlands)
- 1892 Influences of muscle composition and structure of pork from different breeds on stability and textural properties of cooked meat emulsion  
S. SORAPUKDEE, C. KONGTASORN, S. BENJAKUL & W. VISESSANGUAN (Thailand)
- 1908 Natural occurrence of aflatoxin in green leafy vegetables  
P. HARIPRASAD, P. DURIVADIVEL, M. SNIGDHA & G. VENKATESWARAN (India)

- 1914 A traceability study on the Moscato wine chain  
M. ACETO, E. ROBOTTI, M. ODDONE, M. BALDIZZONE, G. BONIFACINO, G. BEZZO, R. DI STEFANO, F. GOSETTI, E. MAZZUCCO, M. MANFREDI & E. MARENGO (Italy)
- 1923 Tea polysaccharides as food antioxidants: An old woman's tale?  
Y. WANG, Y. ZHAO (PR China), K. ANDRAE-MAROBELA, H. OKATCH (Botswana) & J. XIAO (PR China)
- 1945 Purification, properties and cDNA cloning of glutamate decarboxylase in germinated faba bean (*Vicia faba* L.)  
R. YANG, Y. YIN, Q. GUO & Z. GU (China)
- 1952 Effect of ferrous sulfate fortification in germinated brown rice on seed iron concentration and bioavailability  
Y. WEI, M.J.I. SHOHAG, F. YING, X. YANG, C. WU & Y. WANG (People's Republic of China)
- 1967 Effects of fish protein hydrolysate and freeze-thaw treatment on physicochemical and gel properties of natural actomyosin from Pacific cod  
M. KORZENIOWSKA, I.W.Y. CHEUNG & E.C.Y. LI-CHAN (Canada)
- 1982 Redox properties of catechins and enriched green tea extracts effectively preserve L-5-methyltetrahydrofolate: Assessment using cyclic voltammetry analysis  
E. ROZOY, M. ARAYA-FARIAS, S. SIMARD, D. KITTS, J. LESSARD & L. BAZINET (Canada)
- 1992 Physicochemical responses and microbial characteristics of shiitake mushroom (*Lentinus edodes*) to gum arabic coating enriched with natamycin during storage  
T. JIANG, L. FENG, X. ZHENG & J. LI (PR China)
- 1998 Apoptosis of human breast cancer cells induced by microencapsulated betulinic acid from sour jujube fruits through the mitochondria transduction pathway  
Y.-F. SUN (China, Austria, Germany), C.-K. SONG (Germany), H. VIERNSTEIN, F. UNGER (Austria) & Z.-S. LIANG (China)
- 2016 Pesticide residues in market foods in Shaanxi Province of China in 2010  
S. WANG, Z. WANG, Y. ZHANG, J. WANG & R. GUO (China)
- 2026 Colour and stability assessment of blue ferric anthocyanin chelates in liquid pectin-stabilised model systems  
M. BUCHWEITZ, J. BRAUCH, R. CARLE & D.R. KAMMERER (Germany)
- 2043 Combined effect of starter culture and temperature on phenolic compounds during fermentation of Taggiasca black olives  
E. PISTARINO, B. ALIAKBARIAN, A.A. CASAZZA, M. PAINI, M.E. COSULICH & P. PEREGO (Italy)
- 2057 Radical scavenging activity and cytotoxicity of active quinic acid derivatives from *Scorzonera divaricata* roots  
Y.-J. YANG, X. LIU, H.-R. WU, X.-F. HE, Y.-R. BI, Y. ZHU & Z.-L. LIU (People's Republic of China)
- 2064 Transglycosylation of stevioside to improve the edulcorant quality by lower substitution using cornstarch hydrolyzate and CGTase  
S. LI, W. LI, Q.-Y. XIAO & Y. XIA (China)
- General Section: Short Communications**
- 797 Analysis of the blackening of green pepper (*Piper nigrum* Linnaeus) berries  
F. GU, L. TAN, H. WU, Y. FANG & Q. WANG
- 1206 Quantification of vitamin D<sub>3</sub> and its hydroxylated metabolites in waxy leaf nightshade (*Solanum glaucophyllum* Desf.), tomato (*Solanum lycopersicum* L.) and bell pepper (*Capsicum annuum* L.)  
R.B. JÄPELT, D. SILVESTRO, J. SMEDSGAARD, P.E. JENSEN & J. JAKOBSEN (Denmark)
- 1212 Growth conditions influence the melatonin content of tomato plants  
M.B. ARNAO & J. HERNÁNDEZ-RUIZ (Spain)
- 1370 Multiple mutations of the critical amino acid residues for the sweetness of the sweet-tasting protein, brazzein  
J.-W. LEE, J.-E. CHA, H.-J. JO & K.-H. KONG (Republic of Korea)
- 1503 Antioxidant and pro-oxidant activity of (–)-epigallocatechin-3-gallate in food emulsions: Influence of pH and phenolic concentration  
L. ZHOU & R.J. ELIAS (USA)



**ANALYTICAL METHODS: Papers**

- 733 Development of the simple and sensitive method for lipoxygenase assay in AOT/isooctane reversed micelles  
K.M. PARK, Y.N. KIM, S.J. CHOI & P.-S. CHANG (Republic of Korea)
- 739 Electrochemical determination of Sudan I in food samples at graphene modified glassy carbon electrode based on the enhancement effect of sodium dodecyl sulphonate  
X. MA, M. CHAO & Z. WANG (PR China)
- 770 Comparison of extraction induced by emulsion breaking, ultrasonic extraction and wet digestion procedures for determination of metals in edible oil samples in Turkey using ICP-OES  
D. BAKIRCIOGLU, Y.B. KURTULUS & S. YURTSEVER (Turkey)
- 791 Simultaneous determination of 2-naphthol and 1-hydroxypyrene in fish and shellfish contaminated with crude oil by gas chromatography–mass spectrometry  
H.-H. LIM & H.-S. SHIN (Republic of Korea)
- 814 Quantification of organic acids using voltammetric tongues  
J.D. ESCOBAR, M. ALCANIZ, R. MASOT, A. FUENTES, R. BATALLER, J. SOTO & J.M. BARAT (Spain)
- 827 Multi-class method for determination of veterinary drug residues and other contaminants in infant formula by ultra performance liquid chromatography–tandem mass spectrometry  
J. ZHAN, Y.-Y. ZHONG, X.-J. YU, J.-F. PENG, S. CHEN, J.-Y. YIN, J.-J. ZHANG & Y. ZHU (China)
- 870 Assessment of antimicrobial and antiprotozoal activity of the olive oil macerate samples of *Hypericum perforatum* and their LC–DAD–MS analyses  
I.E. ORHAN, M. KARTAL, A.R. GÜLPINAR (Turkey), P. COS, A. MATHEEUSSEN, L. MAES (Belgium) & D. TASDEMIR (Ireland)
- 890 Dispersive liquid–liquid microextraction combined with field-amplified sample stacking in capillary electrophoresis for the determination of non-steroidal anti-inflammatory drugs in milk and dairy products  
U. ALSHANA, N.G. GÖĞER & N. ERTAŞ (Turkey)
- 915 Classification of Spanish extra virgin olive oils by data fusion of visible spectroscopic fingerprints and chemical descriptors  
C. PIZARRO, S. RODRÍGUEZ-TECEDOR, N. PÉREZ-DEL-NOTARIO, I. ESTEBAN-DÍEZ & J.M. GONZÁLEZ-SÁIZ (Spain)
- 1042 Vitamin D and 25-hydroxyvitamin D determination in meats by LC–IT–MS  
N. STROBEL, S. BUDDHADASA, P. ADORNO, K. STOCKHAM & H. GREENFIELD (Australia)
- 1048 Simultaneous determination of aflatoxin B<sub>1</sub> and ochratoxin A in licorice roots and fritillary bulbs by solid-phase extraction coupled with high-performance liquid chromatography–tandem mass spectrometry  
L. WANG, Z. WANG, W. GAO, J. CHEN, M. YANG, Y. KUANG, L. HUANG & S. CHEN (China)
- 1055 Novel IAC–LC–ESI–MS<sup>2</sup> analytical set-up for ochratoxin A determination in pork  
S.C. DUARTE, C.M. LINO & A. PENA (Portugal)
- 1109 Investigation of isotope dilution mass spectrometric (ID–MS) method to determine niacin in infant formula, breakfast cereals and multivitamins  
H. SHIN, B. KIM & J. LEE (Republic of Korea)
- 1135 Multidisciplinary analytical investigation of phospholipids and triglycerides in offshore farmed gilthead sea bream (*Sparus aurata*) fed commercial diets  
R. ANEDDA, C. PIGA, V. SANTERCOLE, S. SPADA, E. BONAGLINI, R. CAPPUCCINELLI, G. MULAS, T. ROGGIO & S. UZZAU (Italy)
- 1162 Non-destructive determination of chemical composition in intact and minced pork using near-infrared hyperspectral imaging  
D.F. BARBIN, G. ELMASRY, D.-W. SUN & P. ALLEN (Ireland)
- 1198 A multi-residue method for the determination of 124 pesticides in rice by modified QuEChERS extraction and gas chromatography–tandem mass spectrometry  
X. HOU, M. HAN, X. DAI, X. YANG & S. YI (China)
- 1233 Determination of ethyl carbamate in cachaça produced from copper stills by HPLC  
A.M. DE RESENDE MACHADO, M.D.G. CARDOSO, A.A. SACZK, J.P. DOS ANJOS, L.M. ZACARONI, H.S. DÓREA & D.L. NELSON (Brazil)

- 1239 A nanosilver-based spectrophotometry method for sensitive determination of tartrazine in food samples  
R. SAHRAEI, A. FARMANY & S.S. MORTAZAVI (Iran)
- 1243 Development of apple certified reference material for quantification of organophosphorus and pyrethroid pesticides  
T. OTAKE, T. YARITA, Y. AOYAGI, Y. KURODA, M. NUMATA, H. IWATA, M. WATAI, H. MITSUDA, T. FUJIKAWA & H. OTA (Japan)
- 1320 Classification of rice wine according to different marked ages using a novel artificial olfactory technique based on colorimetric sensor array  
Q. OUYANG, J. ZHAO, Q. CHEN & H. LIN (PR China)
- 1325 A critical study of use of the Fe(II)/3-hydroxy-4-nitroso-2,7-naphthalenedisulfonic acid complexes in the quantification of polyphenols in medicinal plants  
D.X. DA SILVA, M.W. DE SOUZA, C. DOS SANTOS CORRÊA & H.D. MOYA (Brazil)
- 1341 A simple HPLC method for the comprehensive analysis of *cis/trans* (*Z/E*) geometrical isomers of carotenoids for nutritional studies  
A.J. MELENDEZ-MARTINEZ (USA, Spain), C.M. STINCO (Spain), C. LIU & X.-D. WANG (USA)
- 1355 A rapid determination method for ethylenethiourea in potato and cucumber by modified QuEChERS – High performance liquid chromatography–tandem mass spectrometry  
L. ZHOU, X. LIU, S. KANG, F. ZHANG & C. PAN (China)
- 1531 Production of xylooligosaccharide from wheat bran by microwave assisted enzymatic hydrolysis  
T.-H. WANG & S. LU (Taiwan)
- 1610 A novel colloidal gold-based lateral flow immunoassay for rapid simultaneous detection of cyromazine and melamine in foods of animal origin  
T. LE, P. YAN, J. XU & Y. HAO (PR China)
- 1629 Detection of adulteration in honey samples added various sugar syrups with <sup>13</sup>C/<sup>12</sup>C isotope ratio analysis method  
M. TOSUN (Turkey)
- 1641 Determination of total iron in food samples after flow injection preconcentration on polyurethane foam functionalized with *N,N*-bis(salicylidene)-1,3-propanediamine  
S.M. ABDEL-AZEEM (Egypt), N.R. BADER (Libya), H.M. KUSS (Germany) & M.F. EL-SHAHAT (Egypt)
- 1657 Prediction of fatty acid composition in *Camellia oleifera* oil by near infrared transmittance spectroscopy (NITS)  
J. YUAN, C. WANG, H. CHEN, H. ZHOU & J. YE (China)
- 1663 A validated method for the determination of selected phenolics in olive oil using high-performance liquid chromatography with coulometric electrochemical detection and a fused-core column  
B. BAYRAM (Germany, Turkey), B. OZCELIK (Turkey), G. SCHULTHEISS, J. FRANK & G. RIMBACH (Germany)
- 1742 Determination of seven synthetic dyes in animal feeds and meat by high performance liquid chromatography with diode array and tandem mass detectors  
T. ZOU, P. HE, A. YASEN & Z. LI (PR China)
- 1792 Determination of the degree of oxidation in highly-oxidised lipids using profile changes of fatty acids  
T.S. KIM, J. YEO, J.Y. KIM, M.-J. KIM & J. LEE (Republic of Korea)
- 1829 Near-infrared hyperspectral imaging and partial least squares regression for rapid and reagentless determination of Enterobacteriaceae on chicken fillets  
Y.-Z. FENG, G. ELMASRY, D.-W. SUN, A.G.M. SCANNELL, D. WALSH & N. MORCY (Ireland)
- 1837 NMR metabolite profiling of Greek grape marc spirits  
C. FOTAKIS, D. CHRISTODOULEAS, K. KOKKOTOU, M. ZERVOU, P. ZOUMPOULAKIS, P. MOULOS, M. LIOUNI & A. CALOKERINOS (Greece)
- 1847 Effect of thermal heating on some lignans in flax seeds, sesame seeds and rye  
E. GERSTENMEYER, S. REIMER, E. BERGHOFER, H. SCHWARTZ & G. SONTAG (Austria)
- 1868 Evolution of flavonoids in Mouratón berries taken from both bunch halves  
M. FIGUEIREDO-GONZÁLEZ, B. CANCHO-GRANDE, S. BOSO, J.L. SANTIAGO, M.C. MARTÍNEZ & J. SIMAL-GÁNDARA (Spain)

- 1878 Characterization and identification of gamma-irradiated sauces by electron spin resonance spectroscopy using different sample pretreatments  
K. AKRAM (Korea, Pakistan), J.-J. AHN & J.-H. KWON (Korea)
- 1902 Near infrared reflectance spectroscopy for determination of the geographical origin of wheat  
H. ZHAO, B. GUO, Y. WEI & B. ZHANG (People's Republic of China)
- 1928 Determination of tartrazine in beverage samples by stopped-flow analysis and three-way multivariate calibration of non-linear kinetic-spectrophotometric data  
A.V. SCHENONE, M.J. CULZONI, N.R. MARSILI & H.C. GOICOCHEA (Argentina)
- 1936 Development of a standardised human *in vitro* digestion protocol based on macronutrient digestion using response surface methodology  
S. HOLLEBEECK, F. BORLON, Y.-J. SCHNEIDER, Y. LARONDELLE (Belgium) & H. ROGEZ (Brazil)
- 1959 Validation of methods for the detection and quantification of engineered nanoparticles in food  
T.P.J. LINSINGER (Belgium), Q. CHAUDHRY (UK), V. DEHALU, P. DELAHAUT (Belgium), A. DUDKIEWICZ (UK), R. GROMBE (Belgium), F. VON DER KAMMER (Austria), E.H. LARSEN (Denmark), S. LEGROS (Austria), K. LOESCHNER (Denmark), R. PETERS (The Netherlands), R. RAMSCH (Spain), G. ROEBBEN (Belgium), K. TIEDE (UK) & S. WEIGEL (The Netherlands)
- 1976 Real Time PCR to detect hazelnut allergen coding sequences in processed foods  
E. INIESTO, A. JIMÉNEZ, N. PRIETO, B. CABANILLAS, C. BURBANO, M.M. PEDROSA, J. RODRÍGUEZ, M. MUZQUIZ, J.F. CRESPO, C. CUADRADO & R. LINACERO (Spain)
- 2008 Rapid quantification of muscle fat content and subcutaneous adipose tissue in fish using MRI  
G. COLLEWET, J. BUGEON, J. IDIER, S. QUELLEC, B. QUITTET, M. CAMBERT & P. HAFFRAY (France)
- 2036 Redox spectrophotometric method involving electrolytically generated manganese(III) sulphate with diphenylamine for the determination of ascorbic acid present in the samples of various fruits, commercial juices and sprouted food grains  
B. SHYLA & G. NAGENDRAPPA (India)
- 2050 Synthesis and characterisation of nano structure lead (II) ion-imprinted polymer as a new sorbent for selective extraction and preconcentration of ultra trace amounts of lead ions from vegetables, rice, and fish samples  
M. BEHBAHANI, A. BAGHERI, M. TAGHIZADEH, M. SALARIAN, O. SADEGHI, L. ADLNASAB & K. JALALI (Iran)
- ANALYTICAL METHODS: Short Communication**
- 1720 D/H exchange in C–H bonds of fatty acids: Implication for geographical discrimination of food materials  
A. YAMANAKA, A.S. GOTO & T. KORENAGA (Japan)

I Calendar