

**Rapid Communications**

- 1515 Aryl hydrocarbon receptor ligand activity of commercial health foods  
Y. AMAKURA, T. TSUTSUMI, M. NAKAMURA, H. HANDA, M. YOSHIMURA, R. MATSUDA & T. YOSHIDA (Japan)
- 1521 Immunomodulatory effect of mushrooms on cytotoxic activity and cytokine production of intestinal lamina propria leukocytes does not necessarily depend on  $\beta$ -glucan contents  
J.-S. LEE, K. OKA, O. WATANABE, H. HARA & S. ISHIZUKA (Japan)

**General Papers**

- 1527 Occurrence of furan in coffee from Spanish market: Contribution of brewing and roasting  
M.S. ALTAKI, F.J. SANTOS & M.T. GALCERAN (Spain)
- 1533 Residual pattern of fenhexamid on pepper fruits grown under greenhouse conditions using HPLC and confirmation via tandem mass spectrometry  
L. HEM, J.-H. CHOI, J.-H. PARK (Republic of Korea), MD.I.R. MAMUN (Bangladesh), S.-K. CHO (Republic of Korea), A.M. ABD EL-ATY (Egypt) & J.-H. SHIM (Republic of Korea)
- 1539 Influence of putrescine, cadaverine, spermidine or spermine on the formation of *N*-nitrosamine in heated cured pork meat  
G. DRABIK-MARKIEWICZ (Belgium, Poland), B. DEJAEGHER, E. DE MEY (Belgium), T. KOWALSKA (Poland), H. PAELINCK & Y. VANDER HEYDEN (Belgium)
- 1546 Structural and functional properties of starches from field peas  
S. WANG, P. SHARP & L. COPELAND (Australia)
- 1553 Secoisolariciresinol diglucoside determination in flaxseed (*Linum usitatissimum* L.) oil and application to a shelf life study  
E. BRAVI, G. PERRETTI, O. MARCONI, E. PATRIZI & P. FANTOZZI (Italy)
- 1559 Impact of salt and lipid type on *in vitro* digestion of emulsified lipids  
S.J. HUR, S.T. JOO, B.O. LIM (Republic of Korea), E.A. DECKER & J.D. MCCLEMENTS (United States)
- 1565 Separation of an effective fraction from turmeric against *Streptococcus mutans* biofilms by the comparison of curcuminoid content and anti-acidogenic activity  
S. PANDIT, H.-J. KIM, J.-E. KIM & J.-G. JEON (Republic of Korea)

- 1571 Identification of bioactive compounds from jambolão (*Syzygium cumini*) and antioxidant capacity evaluation in different pH conditions  
A.F. FARIA, M.C. MARQUES & A.Z. MERCADANTE (Brazil)
- 1579 Tree-to-tree variation in stearic and oleic acid content in seed fat from *Allanblackia floribunda* from wild stands: Potential for tree breeding  
A.R. ATANGANA (Canada), E. VAN DER VLIS (The Netherlands), D.P. KHASA (Canada), D. VAN HOUTEN (The Netherlands), J. BEAULIEU (Canada) & H. HENDRICKX (The Netherlands)
- 1586 Effect of fermentation time on antioxidative activities of *Ganoderma lucidum* broth using leguminous plants as part of the liquid fermentation medium  
Y.L. CHIEN (Taiwan), C.T. HO (Taiwan, USA), B.H. CHIANG & L.S. HWANG (Taiwan)
- 1593 Anticancer, antioxidant and antimicrobial activities of the essential oil of *Lycopus lucidus* Turcz. var. *hirtus* Regel  
J.-Q. YU, J.-C. LEI, X.-Q. ZHANG, H.-D. YU, D.-Z. TIAN, Z.-X. LIAO & G.-L. ZOU (PR China)
- 1599 Relationship between nitrogen content in grapes and volatiles, namely heavy sulphur compounds, in wines  
N. MOREIRA, P.G. DE PINHO, C. SANTOS & I. VASCONCELOS (Portugal)
- 1608 Melatonin is synthesised by yeast during alcoholic fermentation in wines  
M.I. RODRIGUEZ-NARANJO, A. GIL-IZQUIERDO, A.M. TRONCOSO, E. CANTOS-VILLAR & M.C. GARCIA-PARRILLA (Spain)
- 1614 Purification and characterisation of angiotensin I converting enzyme (ACE) inhibitory peptides derived from enzymatic hydrolysate of ovotransferrin  
K. MAJUMDER & J. WU (Canada)
- 1620 Chemometric characterisation of the fats released during the conditioning processes of table olives  
A. LÓPEZ-LÓPEZ, A. CORTÉS-DELGADO & A. GARRIDO-FERNÁNDEZ (Spain)
- 1629 Astaxanthin is responsible for antiglycoxidative properties of microalga *Chlorella zofingiensis*  
Z. SUN, J. LIU, X. ZENG, J. HUANGFU, Y. JIANG, M. WANG & F. CHEN (PR China)
- 1636 Antioxidant properties of peptide fractions from silver carp (*Hypophthalmichthys molitrix*) processing by-product protein hydrolysates evaluated by electron spin resonance spectrometry  
S. ZHONG, C. MA (China), Y.C. LIN (USA) & Y. LUO (China)
- 1643 Effect of processing methods on the nutraceutical and antioxidant properties of little millet (*Panicum sumatrense*) extracts  
S.R. PRADEEP & M. GUHA (India)
- 1648 Antioxidant activity and chemical constituents of edible flower of *Sophora viciifolia*  
Z. TAI, L. CAI, L. DAI, L. DONG, M. WANG, Y. YANG, Q. CAO & Z. DING (China)
- 1655 Protective effects of three smoke flavouring phenols on oxidative damage and nitric oxide production  
M.-H. HUANG, L.-W. CHANG, W.-C. SUNG, W.-J. VONG & B.-S. WANG (ROC)
- 1662 Effects of acetic acid/acetic anhydride ratios on the properties of corn starch acetates  
C.I.K. DIOP, H.L. LI, B.J. XIE (PR China) & J. SHI (Canada)
- 1670 *Pachyrhizus ahipa* (Wedd.) Parodi roots and flour: Biochemical and functional characteristics  
M.C. DOPORTO, A. MUGRIDGE, M.A. GARCÍA & S.Z. VIÑA (Argentina)
- 1679 Contribution of monophenols to beer flavour based on flavour thresholds, interactions and recombination experiments  
F.L. STERCKX, J. MISSIAEN, D. SAISON & F.R. DELVAUX (Belgium)
- 1686 Carotenoid content and expression of phytoene synthase and phytoene desaturase genes in bitter melon (*Momordica charantia*)  
P.A. TUAN, J.K. KIM, N.I. PARK, S.Y. LEE & S.U. PARK (Republic of Korea)
- 1693 Integrated application of nitric oxide and modified atmosphere packaging to improve quality retention of button mushroom (*Agaricus bisporus*)  
T. JIANG, X. ZHENG, J. LI, G. JING, L. CAI & T. YING (PR China)
- 1700 Changes in phenolic profile and antioxidant activity during production of diced tomatoes  
A. VALLVERDÚ-QUERALT, A. MEDINA-REMÓN, C. ANDRES-LACUEVA & R.M. LAMUELA-RAVENTOS (Spain)

- 1708 Pinolenic acid inhibits human breast cancer MDA-MB-231 cell metastasis *in vitro*  
S.-J. CHEN, C.-P. HSU, C.-W. LI, J.-H. LU & L.-T. CHUANG (Taiwan)
- 1716 Increasing omega-3 levels through dietary co-extruded flaxseed supplementation negatively affects pork palatability  
M. JUÁREZ, M.E.R. DUGAN, N. ALDAI, J.L. AALHUS, J.F. PATIENCE, R.T. ZIJLSTRA & A.D. BEAULIEU (Canada)
- 1724 Screening of selected Asian spices for anti obesity-related bioactivities  
N.D. YULIANA (The Netherlands, Indonesia), M. IQBAL, M. JAHANGIR (The Netherlands), C.H. WIJAYA (Indonesia), H. KORTHOUT, M. KOTTENHAGE, H.K. KIM & R. VERPOORTE (The Netherlands)
- 1730 *Pyrus bioessieriana* Buhse leaf extract: An antioxidant, antihyperglycaemic and antihyperlipidemic agent  
M.-E. SHAHABODDIN, M. POURAMIR, A.-A. MOGHADAMNIA, H. PARSIAN, M. LAKZAEI & H. MIR (Iran)
- 1734 Comparative shelf life study of blackberry fruit in bio-based and petroleum-based containers under retail storage conditions  
M. JOO, N. LEWANDOWSKI, R. AURAS, J. HARTE & E. ALMENAR (USA)
- 1741 Anti-inflammatory effects and chemical study of a flavonoid-enriched fraction from adlay bran  
H.-J. CHEN, C.-P. CHUNG, W. CHIANG & Y.-L. LIN (Taiwan)
- 1749 RP-HPLC–DAD analysis of phenolic compounds in pomace extracts from five grape cultivars: Evaluation of their antioxidant, antiradical and antifungal activities in orange and apple juices  
O. SAGDIC, I. OZTURK, G. OZKAN, H. YETIM, L. EKICI & M.T. YILMAZ (Turkey)
- 1759 Characterisation of sweetpotato from Papua New Guinea and Australia: Physicochemical, pasting and gelatinisation properties  
J.G. WARAMBOI, S. DENNIEN, M.J. GIDLEY & P.A. SOPADE (Australia)
- 1771 Selenium concentration and speciation in biofortified flour and bread: Retention of selenium during grain biofortification, processing and production of Se-enriched food  
D.J. HART, S.J. FAIRWEATHER-TAIT, M.R. BROADLEY, S.J. DICKINSON, I. FOOT, P. KNOTT, S.P. MCGRATH, H. MOWAT, K. NORMAN, P.R. SCOTT, J.L. STROUD, M. TUCKER, P.J. WHITE, F.J. ZHAO & R. HURST (UK)
- 1779 Inhibitory effect of *Lavandula viridis* on Fe<sup>2+</sup>-induced lipid peroxidation, antioxidant and anti-cholinesterase properties  
P. COSTA, S. GONÇALVES, P.B. ANDRADE, P. VALENTÃO & A. ROMANO (Portugal)
- 1787 Pb, Hg, Cd, As, Sb and Al levels in foodstuffs from the 2nd French total diet study  
S. MILLOUR, L. NOËL, A. KADAR, R. CHEKRI, C. VASTEL, V. SIROT, J.-C. LEBLANC & T. GUÉRIN (France)
- 1800 Changes in iron, zinc and chelating agents during traditional African processing of maize: Effect of iron contamination on bioaccessibility  
V. GREFFEUILLE (France), A.P. POLYCARPE KAYODÉ (Benin), C. ICARD-VERNIÈRE (France), M. GNIMADI (France, Benin), I. ROCHETTE & C. MOUQUET-RIVIER (France)

### Short Communications

- 1808 Inhibition of xanthine oxidase activity by an oxathiolanone derivative of quercetin  
U. TAKAHAMA, Y. KOGA, S. HIROTA & R. YAMAUCHI (Japan)
- 1812 Shelf-life extension of highbush blueberry using 1-methylcyclopropene stored under air and controlled atmosphere  
V. CHIABRANDO & G. GIACALONE (Italy)
- 1817 Predicting glycogen concentration in the foot muscle of abalone using near infrared reflectance spectroscopy (NIRS)  
M. FLUCKIGER, M.R. BROWN, L.R. WARD & N.A. MOLTSCHANIWSKYJ (Australia)

### Analytical Methods

#### Review

- 1821 A critical review of methods for characterisation of polyphenolic compounds in fruits and vegetables  
I. IGNAT, I. VOLF & V.I. POPA (Romania)

### General Papers

- 1836 Suitability of a colorimetric method for the selective determination of chitosan in dietary supplements  
B. MIRALLES, M. MENGÍBAR, R. HARRIS & A. HERAS (Spain)

- 1840 Sample preparation method for the analysis of some organophosphorus pesticides residues in tomato by ultrasound-assisted solvent extraction followed by dispersive liquid–liquid microextraction  
A. BIDARI, M.R. GANJALI, P. NOROUZI, M.R.M. HOSSEINI & Y. ASSADI (Iran)
- 1845 Spectrofluorimetric determination of buparvaquone in biological fluids, food samples and a pharmaceutical formulation by using terbium–deferasirox probe  
J.L. MANZOORI, A. JOUYBAN, M. AMJADI, V. PANAHI-AZAR, A.R. KARAMI-BONARI & E. TAMIZI (Iran)
- 1850 Determination of free phenolic acids and antioxidant activity of methanolic extracts obtained from fruits and leaves of *Chenopodium album*  
A.H. LAGHARI, S. MEMON, A. NELOFAR, K.M. KHAN & A. YASMIN (Pakistan)
- 1856 Infrared spectroscopy and chemometrics for the starch and protein prediction in irradiated rice  
Y. SHAO, Y. CEN, Y. HE & F. LIU (China)
- 1862 A novel and enhanced approach for the assessment of the total carotenoid content of foods based on multipoint spectroscopic measurements  
A.J. MELÉNDEZ-MARTÍNEZ, F. AYALA, J.F. ECHÁVARRI, A.I. NEGUERUELA, M.L. ESCUDERO-GILETE, M.L. GONZÁLEZ-MIRET, I.M. VICARIO & F.J. HEREDIA (Spain)
- 1870 The study of deoxynivalenol and its masked metabolites fate during the brewing process realised by UPLC–TOFMS method  
M. KOSTELANSKA, M. ZACHARIASOVA, O. LACINA, M. FENCLOVA, A.-L. KOLLOS & J. HAJŠLOVA (Czech Republic)
- 1877 Detection of gamma irradiated fig seeds by analysing electron spin resonance  
B. ENGIN, C. AYDAŞ & M. POLAT (Turkey)
- 1883 DNA extraction methods for detecting genetically modified foods: A comparative study  
R.M. ELSANHOTY, M.F. RAMADAN (Egypt) & K.D. JANY (Germany)
- 1890 Qualitative and quantitative analysis of curcuminoids in herbal medicines derived from *Curcuma* species  
R. LI, C. XIANG, M. YE, H.-F. LI, X. ZHANG & D.-A. GUO (PR China)
- 1896 Phenolic acid composition of sprouted wheats by ultra-performance liquid chromatography (UPLC) and their antioxidant activities  
P. VAN HUNG (Vietnam, Canada), D.W. HATCHER & W. BARKER (Canada)
- 1902 5-Hydroxymethylfurfural content in foodstuffs determined by micellar electrokinetic chromatography  
E. TEIXIDÓ, O. NÚÑEZ, F.J. SANTOS & M.T. GALCERAN (Spain)
- 1909 Screening assay of angiotensin-converting enzyme inhibitory activity from complex natural colourants and foods using high-throughput LC-MS/MS  
K. INOUE, M. KITADE, T. HINO & H. OKA (Japan)
- 1916 Selective determination of trace 17 $\beta$ -estradiol in dairy and meat samples by molecularly imprinted solid-phase extraction and HPLC  
Y. SHI, D.-D. PENG, C.-H. SHI, X. ZHANG, Y.-T. XIE & B. LU (China)
- 1926 Development of a headspace trap HRGC/MS method for the assessment of the relevance of certain aroma compounds on the sensorial characteristics of commercial apple juice  
M.P. NIKFARDJAM & D. MAIER (Germany)
- 1934 Extraction and deglycosylation of flavonoids from sumac fruits using steam explosion  
G. CHEN & H. CHEN (China)
- 1939 Determination of carnosine, anserine, homocarnosine, pentosidine and thiobarbituric acid reactive substances contents in meat from different animal species  
P.G. PEIRETTI, C. MEDANA, S. VISENTIN, V. GIANCOTTI, V. ZUNINO & G. MEINERI (Italy)
- 1948 Determination of 3,4-dihydroxyphenylglycol, hydroxytyrosol and tyrosol purified from olive oil by-products with HPLC in animal plasma and tissues  
G. RODRÍGUEZ-GUTIÉRREZ, S. WOOD (UK), J. FERNÁNDEZ-BOLAÑOS GUZMÁN (Spain), G.G. DUTHIE & B. DE ROOS (UK)
- 1953 Sensory assessment and chemical measurement of astringency of Greek wines: Correlations with analytical polyphenolic composition  
S. KALLITHRAKA (Greece), D. KIM (Canada), A. TSAKIRIS, I. PARASKEVOPOULOS (Greece) & G. SOLEAS (Canada)

- 1959 Preparative separation and purification of gingerols from ginger (*Zingiber officinale* Roscoe) by high-speed counter-current chromatography  
K. ZHAN, K. XU & H. YIN (China)
- 1964 A new method based on electrospray ionisation ion mobility spectrometry (ESI-IMS) for simultaneous determination of caffeine and theophylline  
M.T. JAFARI, B. REZAEI & M. JAVAHERI (Iran)
- 1971 Chemical and sensory evaluation of Bordeaux wines (Cabernet-Sauvignon and Merlot) and correlation with wine age  
K. CHIRA, N. PACELLA, M. JOURDES & P.-L. TEISSEDE (France)
- 1978 Multivariate analysis of volatile compounds detected by headspace solid-phase microextraction/gas chromatography: A tool for sensory classification of cork stoppers  
C. PRAT, E. BESALÚ, L. BAÑERAS & E. ANTICÓ (Spain)
- 1985 Extraction and concentration of tanshinones in *Salvia miltiorrhiza* Bunge by task-specific non-ionic surfactant assistance  
W. BI, M. TIAN & K.H. ROW (Republic of Korea)
- 1991 Phenolic composition of Merlot and Cabernet-Sauvignon grapes from Bordeaux vineyard for the 2009-vintage: Comparison to 2006, 2007 and 2008 vintages  
B. LORRAIN, K. CHIRA & P.-L. TEISSEDE (France)
- 2000 Mercury speciation in seafood samples by LC-ICP-MS with a rapid ultrasound-assisted extraction procedure: Application to the determination of mercury in Brazilian seafood samples  
B.L. BATISTA, J.L. RODRIGUES, S.S. DE SOUZA, V.C. OLIVEIRA SOUZA & F. BARBOSA JR. (Brazil)
- 2005 An amperometric sensor based on Prussian blue and poly(*o*-phenylenediamine) modified glassy carbon electrode for the determination of hydrogen peroxide in beverages  
J. PING, J. WU, K. FAN & Y. YING (PR China)
- 2010 Quantitation of heterocyclic aromatic amines in ready to eat meatballs by ultra fast liquid chromatography  
F. OZ (Turkey)