

INDUSTRIAL CROPS AND PRODUCTS

VOLUME 114

April 2018

Contents

Fats and oils

Enhancement of storage stability of wheat germ oil by encapsulation

M. Karadeniz, S. Sahin and G. Sumnu (Turkey)

14

Effect of drought stress on qualitative characteristics of canola cultivars in winter cultivation

N. Safavi Fard, H. Heidari Sharif Abad, A.H. Shirani Rad, E. Majidi Heravan and J. Daneshian (Iran)

87

Microencapsulation of *Peumus boldus* essential oil and its impact on peanut seed quality preservation

N.S. Girardi, M.A. Passone, D. García, A. Nesci and M. Etcheverry (Argentina)

108

Bio-based phenolic-branched-chain fatty acid isomers synthesized from vegetable oils and natural monophenols using modified H⁺-Ferrierite zeolite

Z. Yan (China, USA), K. Wagner, X. Fan, A. Nuñez, R.A. Moreau and H. Ngo (USA)

115

Green and solvent-free simultaneous ultrasonic-microwave assisted extraction of essential oil from white and black peppers

Y. Wang, R. Li, Z.-T. Jiang, J. Tan, S.-H. Tang, T.-T. Li, L.-L. Liang, H.-J. He, Y.-M. Liu, J.-T. Li and X.-C. Zhang (People's Republic of China)

164

Microbiological quality and essential oil of parsley (*Petroselinum crispum*) submitted to the hygienizing and drying process

L.C. Corrêa Filho, A.P. Martinazzo, C.E. de Souza Teodoro and L. Vivès (Brazil)

180

Non-food bioactive products

Effect of nitrogen privation on the phenolics contents, antioxidant and antibacterial activities in *Moringa oleifera* leaves

C.J. Guillén-Román, R.G. Guevara-González, N.E. Rocha-Guzmán, A. Mercado-Luna and Ma.C.I. Pérez-Pérez (Mexico)

45

Toxicity of thymol, carvacrol and their respective phenoxyacetic acids in *Lactuca sativa* and *Sorghum bicolor*

T. de Assis Alves, P. Fontes Pinheiro, M. Miranda Praça-Fontes, L. Fonseca Andrade-Vieira, K. Barelo Corrêa, T. de Assis Alves, F.A. da Cruz, V. Lacerda Júnior, A. Ferreira and T.C. Bastos Soares (Brazil)

59

Aniseed (*Pimpinella anisum* L.) essential oil reduces pro-inflammatory cytokines and stimulates mucus secretion in primary airway bronchial and tracheal epithelial cell lines

R. Iannarelli, O. Marinelli, M.B. Morelli, G. Santoni, C. Amantini, M. Nabissi and F. Maggi (Italy)

81

Impact of removal of micro and nano sized particles on the phenolic content and antioxidant activity: Study on aqueous and methanolic leaves extracts of <i>Phlomis crinita</i> <i>A. Merouane, A. Saadi and A. Noui (Algeria)</i>	132	Bioenergy - crops and processing Unveiling 3D physicochemical changes of sugarcane bagasse during sequential acid/alkali pretreatments by synchrotron phase-contrast imaging <i>A. Isaac, F.A.F. Antunes, R. Conti, L.A. Montoro, A. Malachias, P. Massara, G. Kitten (Brazil), H. Markötter, I. Manke (Germany) and S.S. da Silva (Brazil)</i>	19
Elicitor mediated adventitious root culture for the large-scale production of anthraquinones from <i>Oldenlandia umbellata</i> L. <i>S.R.S. Krishnan and E.A. Siril (India)</i>	173	A review on assessment of biodiesel production methodologies from <i>Calophyllum inophyllum</i> seed oil <i>M. Jain, U. Chandrakant, V. Orsat and V. Raghavan (Canada)</i>	28
Natural rubber and resins Morphological, biological, productive and qualitative characterization of 68 guar (<i>Cyamopsis tetragonoloba</i> (L.) Taub.) genotypes <i>F. Gresta, G. Avola, S. Cannavò and C. Santonoceto (Italy)</i>	98	Towards a multi-scale understanding of dilute hydrochloric acid and mild 1-ethyl-3-methylimidazolium acetate pretreatment for improving enzymatic hydrolysis of poplar wood <i>S. Chen, Z. Ling, X. Zhang (China), Y.S. Kim (South Korea) and F. Xu (China)</i>	123
Two translationally controlled tumor protein (TCTP) genes from <i>Hevea brasiliensis</i> play overlapping and different roles in development and stress response <i>Z. Deng, J. Chen, Y. Wei, H. Liu, H. Yang, L. Dai and D. Li (China)</i>	137	Enhanced production of biodiesel over MgO catalysts synthesized in the presence of Poly-Vinyl-Alcohol (PVA) <i>A. Margellou, A. Koutsouki, D. Petrakis, T. Vaimakis, G. Manos, M. Kontominas and P.J. Pomonis (Greece)</i>	146
Fibres, proteins and carbohydrates Retention of antibacterial and antioxidant properties of lemongrass oil loaded on cellulose nanofibre-poly ethylene glycol composite <i>D. Mishra, P. Khare, D.K. Singh, S. Luqman, P.V. Ajaya Kumar, A. Yadav, T. Das and B.K. Saikia (India)</i>	68	Bio-based Materials from Crops Instrumental analyses of nanostructures and interactions with bound water of superheated steam treated plant materials <i>M. Nishida, T. Tanaka, T. Miki, T. Ito and K. Kanayama (Japan)</i>	1
Biorefinery, valorization of byproducts Rational approach for mutant selection of <i>Talaromyces verruculosus</i> IIIC 324 secreting biofuel cellulases—Assessing saccharification potential <i>L. Jain and D. Agrawal (India)</i>	93	Recommended flax fibre density values for composite property predictions <i>M. Le Gall, P. Davies, N. Martin and C. Baley (France)</i>	52
Optimization of dilute acid pretreatment of <i>Agave lechuguilla</i> and ethanol production by co-fermentation with <i>Escherichia coli</i> MM160 <i>D.I. Díaz-Blanco, J.R. de La Cruz (Mexico), J.C. López-Linares (Spain), T.K. Morales-Martínez (Mexico), E. Ruiz (Spain), L.J. Ríos-González (Mexico), I. Romero and E. Castro (Spain)</i>	154		