

LWT—Food Science and Technology

CONTENTS

Volume 141, April 2021

Review articles

Production of protein-rich pulse ingredients through dry fractionation: A review

S. Fernando

110961

Research papers

Ultrasound-assisted preparation of double nano-emulsions loaded with glycyrrhizic acid in the internal aqueous phase and skim milk as the external aqueous phase

N. Maghamian, M. Goli and A. Najarian

110850

Harnessing the nutritional potential of concentrated whey for enhanced galactose flux in fermentative yeast

A. Beniwal, P. Saini, S. De and S. Vij

110840

Improvements in the extraction of milk phospholipids from beta-serum using ultrasound prior to tertiary amine extraction

K. Rathnakumar, J. Ortega-Anaya, R. Jimenez-Flores and S.I. Martínez-Monteagudo

110864

HS-GC-IMS detection of volatile organic compounds in yak milk powder processed by different drying methods

D. Feng, J. Wang, X.-j. Ji, W.-x. Min and W.-j. Yan

110855

Volatile compounds in Chinese steamed bread influenced by fermentation time, yeast level and steaming time

J. Xi, Q. Zhao, D. Xu, Y. Jin, F. Wu, Z. Jin and X. Xu

110861

Flavor release from lactose/protein matrix during storage: Effects of lactose crystallization and powder microstructure

Z. Huang, K. Li, L. Ma, F. Chen, X. Liao, X. Hu and J. Ji

110857

Characterisation and analysis of alcohol in baijiu with a microwave cavity resonator

Z. Li, A. Haigh, P. Wang, C. Soutis and A. Gibson

110849

Acerola by-product may improve the *in vitro* gastrointestinal resistance of probiotic strains in a plant-based fermented beverage

A.D.S. Vieira, C. Battistini, R. Bedani and S.M.I. Saad

110858

Development of crackers with the addition of olive leaf flour (*Olea europaea* L.): Chemical and sensory characterization

L.S. Faccioli, M.P. Klein, G.R. Borges, C.S. Dalanhol, I.C.K. Machado, J. Garavaglia and S.M. Dal Bosco

110848

Effects of fermentation with *Bacillus natto* on the allergenicity of peanut

X. Pi, G. Fu, B. Dong, Y. Yang, Y. Wan and M. Xie

110862

Going green in food analysis: A rapid and accurate method for the determination of sorbic acid and benzoic acid in foods by capillary ion chromatography with conductivity detection

T. D'Amore, A. Di Taranto, G. Berardi, V. Vita and M. Iammarino

110841

Formation of debranched wheat starch-fatty acid inclusion complexes using saturated fatty acids with different chain length

M.H. Lee, H.R. Kim, W.S. Lim, M.-C. Kang, H.-D. Choi and J.S. Hong

110867

Prediction of pelargonidin-3-glucoside in strawberries according to the postharvest distribution period of two ripening stages using VIS-NIR and SWIR hyperspectral imaging technology

J.-S. Cho, J.H. Lim, K.J. Park, J.H. Choi and G.S. Ok

110875

Enzyme-assisted fermentation improves the antimicrobial activity and drying properties of potato pulp

J. Du, Y. Hong, L. Cheng, Z. Gu, Z. Li and C. Li

110874

Investigating phytosterol as a potential functional component in milk through textural, flavour and oral perception study

A.S. Goh, D.W. Ningtyas, B. Bhandari and S. Prakash

110873

- Modelling, experimental validation and process design of forward osmosis process for sugarcane juice concentration**
A. Akhtar, M. Singh, S. Subbiah and K. Mohanty 110852
- Effect of L-histidine and L-lysine on the properties of oil-in-water emulsions stabilized by porcine myofibrillar proteins at low/high ionic strength**
X. Guo, F. Gao, Y. Zhang, Z. Peng and M.A. Jamali 110883
- Effect of low-dose sodium nitrite treatment on the endogenous antioxidant capacity of yak meat during wet curing: Pros and cons**
G. Ma, Z. Wang, H. Chen, Q. Yu and L. Han 110879
- Assessment of turanose as a sugar alternative in a frozen dough system: Rheology, tomography, and baking performance**
S. Jeong, Y. Park and S. Lee 110869
- Correlation analysis between acoustic and sensory technique data for cooked pork loin samples**
A. González-Mohino, A. Jiménez, M. Rufo, J.M. Paniagua, L.S. Olegario and S. Ventanas 110882
- Isolation and identification of the umami peptides from *Trachinotus ovatus* hydrolysate by consecutive chromatography and Nano-HPLC-MS/MS**
X. Deng, H. Lin, I. Ahmed and J. Sui 110887
- Optimization of solvent free ohmic-assisted heating as a promising esterification tool for ethyl butyrate synthesis**
F. Nemati, M.-T. Golmakani, M. Niakousari and F. Ghiassi 110890
- Modeling and optimizing the changes in physical and biochemical properties of table grapes in response to natural zeolite treatment**
S. Huwei, M. Asghari, P. Zahedipour-Sheshglani and M. Alizadeh 110854
- Bee pollen as a novel substrate in pilot-scale probiotic-mediated lactic fermentation processes**
W.I. Mora-Adames, C.A. Fuenmayor, M.A. Benavides-Martín, N.A. Algecira-Enciso and M.C. Quicazán 110868
- Effect of carboxymethyl cellulose and baking conditions on in-vitro starch digestibility and physico-textural characteristics of low glycemic index gluten-free rice cookies**
B. Naseer, H.R. Naik, S.Z. Hussain, I. Zargar, Beenish, T.A. Bhat and N. Nazir 110885
- Physico-chemical and sensory qualities of Iberian sliced dry-cured loins from various commercial categories and the effects of the type of packaging and refrigeration time**
R. Contador, A. Ortiz, M.d.R. Ramírez, S. García-Torres, M.M. López-Parra and D. Tejerina 110876
- Development and characterization of two gelatin candies with alternative sweeteners and fruit bioactive compounds**
R. Rivero, D. Archaina, N. Sosa and C. Schebor 110894
- Fish gelatin as an alternative to mammalian gelatin for food industry: A meta-analysis**
S. Nitsuwat, P. Zhang, K. Ng and Z. Fang 110899
- Effect of phospholipids on the physicochemical properties of myofibrillar proteins solution mediated by NaCl concentration**
H. Dai, Y. Sun, W. Xia, L. Ma, L. Li, Q. Wang and Y. Zhang 110895
- Exploration of structure-activity relationship between IgG1 and IgE binding ability and spatial conformation in ovomucoid with pulsed electric field treatment**
Y. Li, S. Zhang, P. Jiang, L. Zhong, S. Lin and N. Sun 110891
- Effect of combined pulsed electric energy and high pressure homogenization on selective and energy efficient extraction of bio-molecules from microalga *Parachlorella kessleri***
R. Zhang, L. Marchal, E. Vorobiev and N. Grimi 110901
- Development and characterization of novel antioxidant films based on chitosan and Maillard reaction products**
Y. Li, K. Chen, Q. Yang, H. Hong, L. Feng and Y. Luo 110886
- Mining and evaluating novel serovar-specific *Salmonella* C1 serogroup genes by polymerase chain reaction analysis**
Q. Ye, Y. Shang, M. Chen, R. Pang, F. Li, X. Xiang, B. Zhou, C. Wang, S. Zhang, J. Zhang, J. Wang, L. Xue, Y. Ding and Q. Wu 110821
- Comparative study of adsorption polysaccharide on bioactive components and *in vitro* antioxidant activity of sea buckthorn (*Hippophaë rhamnoides* L.) pulp oil for LWT-food science and technology**
C.-G. Ma, M. Zhao, T.-L. Si and X.-W. Chen 110896
- Effects of fermentation with different microbial species on the umami taste of Shiitake mushroom (*Lentinus edodes*)**
Z. Chen, H. Gao, W. Wu, H. Chen, X. Fang, Y. Han and H. Mu 110889
- Using air deformation of raw fillet surfaces to identify severity of woody breast myopathy in broiler fillets**
X. Sun, C.J. Maynard, J.P. Caldas-Cueva, C.N. Coon and C.M. Owens 110904
- Protein-lipid film (*fuzhu*) prepared from soymilk: Effects of soymilk convection on its formation, composition, and quality**
J. Zhang, X. Peng and S. Guo 110909
- In vitro* assessment of probiotic and virulence potential of *Enterococcus faecium* strains derived from artisanal goatskin casing Tulum cheeses produced in central Taurus Mountains of Turkey**
E.R. Özkan, T. Demirci and N. Akın 110908
- Effects of curcumin-based photodynamic treatment on quality attributes of fresh-cut pineapple**
Y. Zou, Y. Yu, L. Cheng, L. Li, B. Zou, J. Wu, W. Zhou, J. Li and Y. Xu 110902
- Symbiotic goat milk ice cream with umbu fortified with autochthonous goat cheese lactic acid bacteria**
A.P.D. de Oliveira, T.J. de Oliveira Almeida, T.M.B. Santos and F.S. Dias 110888

- Impact of surfactant concentration and antioxidant mode of incorporation on the oxidative stability of oil-in-water nanoemulsions**
T.F. Ferreira da Silveira, M. Laguerre, C. Bourlieu-Lacanal, J. Lecomte, E. Durand, M.C. Figueroa-Espinoza, B. Baréa, N. Barouh, I.A. Castro and P. Villeneuve 110892
- Characterization of synbiotic ice cream made with probiotic yeast *Saccharomyces boulardii* CNCM I-745 in combination with inulin**
A. Sarwar, T. Aziz, S. Al-Dalali, J. Zhang, J.u. Din, C. Chen, Y. Cao, H. Fatima and Z. Yang 110910
- Effect of oil type and β -carotene incorporation on the properties of gelatin nanoparticle-stabilized pickering emulsions**
H. Tan, L. Han and C. Yang 110903
- Identification of antioxidant peptides from cheddar cheese made with *Lactobacillus helveticus***
W. Yang, X. Hao, X. Zhang, G. Zhang, X. Li, L. Liu, Y. Sun and Y. Pan 110866
- Modulation and metabolism of obesity-associated microbiota in a dynamic simulator of the human gut microbiota**
T. Requena, Y. Song, C. Peláez and M.C. Martínez-Cuesta 110921
- Quercetin-loaded niosomal nanoparticles prepared by the thin-layer hydration method: Formulation development, colloidal stability, and structural properties**
R. Javani, F.S. Hashemi, B. Ghanbarzadeh and H. Hamishehkar 110865
- The improved rehydration property, flavor characteristics and nutritional quality of freeze-dried instant rice supplemented with tea powder products**
T. Fu, L. Niu, L. Wu and J. Xiao 110932
- Using solid acid catalysts to improve the oxidative stability of cold-pressed sesame oil**
Q. Yu, Y.-X. Ma, Z. Qin, X.-R. Luo, H.-M. Liu and X.-D. Wang 110928
- Effects of dough resting time on the development of gluten network in different sheeting directions and the textural properties of noodle dough**
S. Liu, Q. Liu, X. Li, M. Obadi, S. Jiang, S. Li and B. Xu 110920
- The regulatory mechanism of pulsed electric field (PEF) targeting at C-terminal glutamine of shrimp antioxidant peptide QMDDQ based on MD simulation**
S. Zhang, L. Qi, D. Li, L. Zhong, D. Wu and S. Lin 110930
- Incorporation of antimicrobial nanoemulsions into complex foods: A case study in an apple juice-based beverage**
A. Molet-Rodríguez, A. Turmo-Ibarz, L. Salvia-Trujillo and O. Martín-Belloso 110926
- Application of sage herbal dust essential oils and supercritical fluid extract for the growth control of *Escherichia coli* in minced pork during storage**
B. Danilović, N. Đorđević, B. Milićević, B. Šojić, B. Pavlič, V. Tomović and D. Savić 110935
- Development of gluten-free premixes with buckwheat and chia flours: Application in a bread product**
E.B. Coronel, E.N. Guiotto, M.C. Aspiroz, M.C. Tomás, S.M. Nolasco and M.I. Capitani 110916
- Evaluation of quality properties and antioxidant activities of tiger nut (*Cyperus esculentus* L.) oil produced by mechanical expression or/with critical fluid extraction**
T. Guo, C. Wan, F. Huang and C. Wei 110915
- Modulation of carotenoid/flavonoid profiles and sugar content of a potential functional citrus-based food through crossflow microfiltration**
I. Hammad, M. Dornier, A. Servent, P. Poucheret and C. Dhuique-Mayer 110923
- Antifungal effect of cinnamaldehyde, eugenol and carvacrol nanoemulsion against *Penicillium digitatum* and application in postharvest preservation of citrus fruit**
R. Yang, J. Miao, Y. Shen, N. Cai, C. Wan, L. Zou, C. Chen and J. Chen 110924
- Efficacy of gaseous chlorine dioxide in reducing *Salmonella enterica*, *E. coli* O157:H7, and *Listeria monocytogenes* on strawberries and blueberries**
P. Luu, V.S. Chhetri, M.E. Janes, J.M. King and A. Adhikari 110906
- Antioxidant capacity differences between the major flavonoids in cherry (*Prunus pseudocerasus*) *in vitro* and *in vivo* models**
W. Dong, D. Chen, Z. Chen, H. Sun and Z. Xu 110938
- Development of a novel soy-wax containing emulsion with enhanced antifungal properties for the postharvest treatment of fresh citrus fruit**
T. Fei, F.M.A. Leyva-Gutierrez, Z. Wan and T. Wang 110878
- Structural and interfacial characterization of oil bodies extracted from *Camellia oleifera* under the neutral and alkaline condition**
W. Jin, Y. Pan, Y. Wu, C. Chen, W. Xu, D. Peng and Q. Huang 110911
- Identification of age-markers based on profiling of Baijiu volatiles over a two-year maturation period: Case study of Lu-flavor Baijiu**
X.-J. Zhang, L.-J. Meng, Z.-M. Lu, L.-J. Chai, S.-T. Wang, J.-S. Shi, C.-H. Shen and Z.-H. Xu 110913
- Shelf-life extension of pacific white shrimp using tragacanth gum -based coatings containing Persian lime peel (*Citrus latifolia*) extract**
S. Khaledian, S. Basiri and S.S. Shekarforoush 110937
- Impact of hurdle technologies and low temperatures during ripening on the production of nitrate-free pork salami: A microbiological and metabolomic comparison**
G. Rocchetti, I. Falasconi, G. Dallolio, J.M. Lorenzo, L. Lucini and A. Rebecchi 110939

- A one step enhanced extraction and encapsulation system of cornelian cherry (*Cornus mas* L.) polyphenols and iridoids with β -cyclodextrin**
B.M. Popović, B. Blagojević, D. Latković, D. Četojević-Simin, A.Z. Kucharska, F. Parisi and G. Lazzara 110884
- Antimicrobial activity and physical properties of starch/chitosan film incorporated with lemongrass essential oil and its application**
M.I. Perdana, J. Ruamcharoen, S. Panphon and M. Leelakriangsak 110934
- Selection of appropriate hydrocolloid for eggless cakes containing chubak root extract using multiple criteria decision-making approach**
S. Hedayati, M. Niakousari, M. Seidi Damyeh, S.M. Mazloomi, S. Babajafari and E. Ansarifar 110914
- A new perspective of a well-recognized raw material: Phenolic content, antioxidant and antimicrobial activities and α - and β -acids profile of Brazilian hop (*Humulus lupulus* L.) extracts**
T.R. Arruda, P.F. Pinheiro, P.I. Silva and P.C. Bernardes 110905
- Investigate the adverse effects of foliarly applied antimicrobial nanoemulsion (carvacrol) on spinach**
Z. Zhang, Y. Tan and D.J. McClements 110936
- Physical properties and salt release of potato starch-based emulsion gels with OSA starch-stabilized oil droplets**
Y. Zhang, H. Yang, H. Zheng, D. Yuan and L. Mao 110929
- Retaining bioactive proteins and extending shelf life of skim milk by microfiltration combined with Ultraviolet-C treatment**
W. Zhang, Y. Liu, Z. Li, S. Xu, K. Hetinga and P. Zhou 110945
- Metabolomic changes and biological activities during the lacto-fermentation of jackfruit juice using *Lactobacillus casei* ATCC334**
B.J. Muhialdin, A.S. Meor Hussin, H. Kadum, A. Abdul Hamid and A.H. Jaafar 110940
- Bacterial diversity analysis in Kazakh fermented milks *Shubat* and *Ayran* by combining culture-dependent and culture-independent methods**
S. Zhadyra, X. Han, B.B. Anapiyayev, F. Tao and P. Xu 110877
- Effects of cooking methods on the Maillard reaction products, digestibility, and mineral bioaccessibility of Pacific oysters (*Crassostrea gigas*)**
S. Jiang, X. Feng, F. Zhang, R. Wang and M. Zeng 110943
- Hyperspectral characteristics of bruised tomatoes as affected by drop height and fruit size**
Y. Sun, I. Pessane, L. Pan and X. Wang 110863
- Characterization of *Enterococcus faecium* EO1 isolated from mutton and activity of bacteriocin-like substances in the control of *Listeria monocytogenes* in fresh mutton sausage**
R. Junges da Costa, A. Pereira da Silva, R. Nobre da Fonseca, S. de Oliveira Hübner, E.S. Nalério, J. de Lima Marques, H.R. Soares Vitola, W. Padilha da Silva, E.H. Duval and Â.M. Fiorentini 110954
- Drying of wolfberry fruit juice using low-intensity pulsed ultrasound**
Y. Qi, F. Yu, X. Wang, N. Wan, M. Yang, Z. Wu and Y. Li 110953
- Antioxidant and anti-norovirus properties of aqueous acetic acid macromolecular extracts of edible brown macroalgae**
T. Kuda, M. Nishizawa, D. Toshima, K. Matsushima, S. Yoshida, H. Takahashi, B. Kimura and T. Yamagishi 110942
- Quantitative prediction and visualization of key physical and chemical components in black tea fermentation using hyperspectral imaging**
C. Yang, Y. Zhao, T. An, Z. Liu, Y. Jiang, Y. Li and C. Dong 110975
- Effect of fresh beetroot application and processing conditions on some quality features of new type of potato-based snacks**
K. Lisiecka and A. Wójtowicz 110919
- Optimization of emulsification conditions for designing ultrasound assisted curcumin loaded nanoemulsion: Characterization, antioxidant assay and release kinetics**
N. Sharma, G. Kaur and S.K. Khaikar 110962
- The contribution of superheated steam treatment of wheat flour to the cake quality**
Y. Ma, S. Sang, D. Xu, Y. Jin, Y. Chen and X. Xu 110958
- Static \times dynamic controlled atmosphere: Impacts of aerobic and anaerobic metabolism on physiological disorders and overall quality of 'Royal Gala' apples**
F.R. Thewes, F.R. Thewes, V. Both, E.E. Schultz, M.R.P. Berghetti, V. Ludwig and A. Brackmann 110922
- Microbial community analysis of viable cells and genomes in *kyejang*, a traditional Korean fermented beverage**
J.-K. Jung, S.-P. Hong and M.-K. Lee 110956
- Fusarium* diversity and mycotoxin occurrence in proso millet in Korea**
J.-H. Choi, J.-Y. Nah, M.-J. Lee, J.-y. Jang, T. Lee and J. Kim 110964
- Developing a new modification technology of oat flour based on differential pressure explosion puffing**
Y. Zhang, C. Chen, N. Wang, Y. Chen, J. Yu, X. Zheng, S. Li and Y. Chen 110967
- Mechanical, thermal stability and microstructural properties of emulsion-filled gels: Effect of sugar beet pectin/soy protein isolate ratio**
L. Feng, X. Jia, J. Yan, W. Yan and L. Yin 110917

- A green nano-biosynthesis of selenium nanoparticles with *Tarragon* extract: Structural, thermal, and antimicrobial characterization**
M.T. Yilmaz, H. İspirli, O. Taylan and E. Dertli 110969
- Development of physical process for quinoa fractionation and targeted separation of germ with physical, chemical and SEM studies**
A. Ray, A.A. Inamdar, S.D. Sakhare and A.K. Srivastava 110957
- Proximate composition, physical, sensory and microbial properties of wheat-hog plum bagasse composite cookies**
A.O. Oladunjoye, S.C. Eziama and O.R. Aderibigbe 111038
- Effect of debranching on the structure and digestibility of octenyl succinic anhydride starch nanoparticles**
S. Liang, Y. Hong, Z. Gu, L. Cheng, C. Li and Z. Li 111076
- Effects of dielectric barrier discharge cold plasma on the activity, structure and conformation of horseradish peroxidase (HRP) and on the activity of litchi peroxidase (POD)**
Y. Wang, Z. Ye, J. Li, Y. Zhang, Y. Guo and J.-H. Cheng 111078
- Synergistic inhibition of isolated flavonoids from *Moringa oleifera* leaf on α -glucosidase activity**
Y.S. Hamed, M. Abdin, A.M. Rayan, H.M. Saleem Akhtar and X. Zeng 111081
- Ultrasound-assisted thawing accelerates the thawing of common carp (*Cyprinus carpio*) and improves its muscle quality**
Q. Sun, B. Kong, S. Liu, O. Zheng and C. Zhang 111080
- Effect of temperature, pH, and ionic strength on the structure and physical stability of double emulsions prepared with starch**
J. Yang, Z. Gu, L. Cheng, Z. Li, C. Li and Y. Hong 111086
- The correlation of taste and chemesthetic sensation in individuals with different suprathreshold sensitivities**
L.-L. Zhang, B.-L. Shi, P. Sun, Y.-M. Zheng, K. Zhong, H.-Y. Wang, Y. Cui, L.-Y. Liu, R. Xie and L. Zhao 111070
- Chemical preservative delivery in meat using edible vegetable tubular cellulose**
A. Panitsa, T. Petsi, P. Kandylis, P.S. Nigam, M. Kanellaki and A.A. Koutinas 111049
- Short communications**
- Modelling the role of oral processing on *in vivo* aroma release of white rice: Conceptual model and experimental validation**
M.S. How, J.R. Jones, M.P. Morgenstern, E. Gray-Stuart, J.E. Bronlund, A. Saint-Eve, I.C. Trelea and I. Souchon 110918
- Special section on 'Emerging Processing Technologies to Improve the Safety and Quality of Foods'; edited by Dr. Amin Mousavi Khaneghah and Dr. Mohsen Gavahian**
- Dry-heat treatment vs. heat-moisture treatment assisted by microwave radiation: Techno-functional and rheological modifications of rice flour**
Á.G. Solaesa, M. Villanueva, J.M. Muñoz and F. Ronda 110851
- Effect of high-pressure processing (HPP) on production and characterization of chia seed oil nanoemulsions**
E.C. Kaya, M.H. Oztop and H. Alpas 110872
- Combined radio frequency and hot water pasteurization of *Nostoc sphaeroides*: Effect on temperature uniformity, nutrients content, and phycocyanin stability**
J. Xu, S. Zhu, M. Zhang, P. Cao and B. Adhikari 110880
- An overview of sprouts nutritional properties, pathogens and decontamination technologies**
S.A. Mir, S. Farooq, M.A. Shah, S.A. Sofi, B.N. Dar, A.M. Hamdani and A. Mousavi Khaneghah 110900
- 3D printing of protein-based composite fruit and vegetable gel system**
Y. Chen, M. Zhang and P. Phuhongsung 110978
- Erratum**
- Erratum to 'Chemical composition and sensory quality of sauerkraut produced from different cabbage varieties' [LWT - Food Science and Technology 136 (2021) 110325]**
P. Satora, M. Skotniczny, S. Strnad and W. Piechowicz 111088