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Food Hydrocolloids

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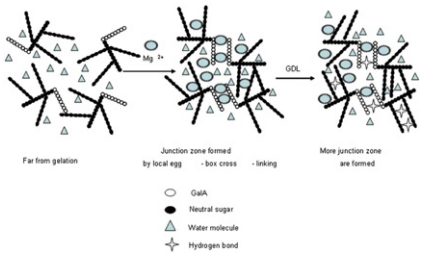
Graphical abstracts

The effects of $MgSO_4$, D-glucono-δ-lactone (GDL), sucrose, and urea on gelation properties of pectic polysaccharide from soy hull

He Liu, Xiaofei Guo, Jun Li, Danshi Zhu, Jianrong Li*

Institute of Food Science, School of Chemistry & Chemical Engineering and Food Safety, Bohai University, 19 Keji Road, Jinzhou 121013, China

Food Hydrocolloids **2013**, 31, 137–145

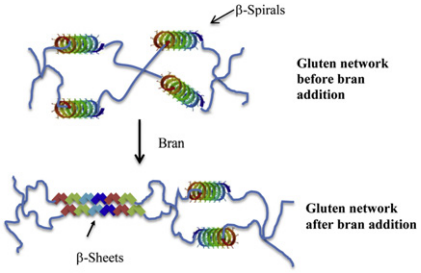


Bran-induced changes in water structure and gluten conformation in model gluten dough studied by Fourier transform infrared spectroscopy

Jayne E. Bock, Srinivasan Damodaran*

Department of Food Science, University of Wisconsin-Madison, Madison, WI 53706, USA

Food Hydrocolloids **2013**, 31, 146–155

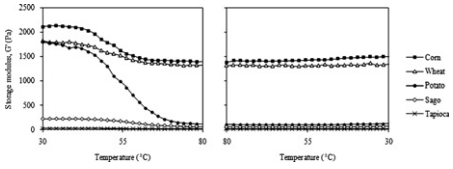


Rheological and textural studies of fresh and freeze-thawed native sago starch–sugar gels. II. Comparisons with other starch sources and reheating effects

L.Y. Teng, N.L. Chin*, Y.A. Yusof

Department of Process and Food Engineering, Faculty of Engineering, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia

Food Hydrocolloids **2013**, 31, 156–165



Extraction of chitin from prawn shells and conversion to low molecular mass chitosan

Food Hydrocolloids **2013**, 31, 166–171

Musarrat H. Mohammed[a], Peter A. Williams[a,*], Olga Tverezovskaya[b]

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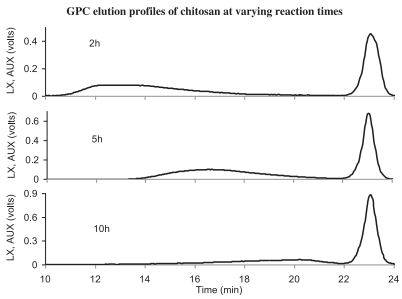
[b]*Biocomposites Centre, Bangor University, Bangor, Gwynedd LL57 2UW, UK*

GPC elution profiles of chitosan at varying reaction times.



Butternut and beetroot pectins: Characterization and functional properties

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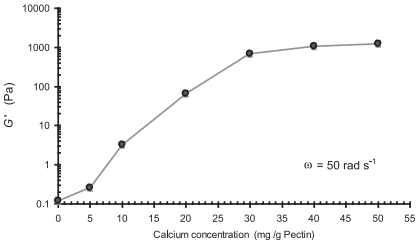
Eliana N. Fissore[a,b], Ana M. Rojas[a,b], Lía N. Gerschenson[a,b], Peter A. Williams[c,*]

[a]*Departamento de Industrias, Facultad de Ciencias Exactas y Naturales, Universidad de Buenos Aires, Ciudad Universitaria, (1428) Buenos Aires, Argentina*
[b]*National Scientific and Technical Research Council of Argentina (CONICET), Argentina*
[c]*Centre for Water Soluble Polymers, Glyndŵr University Wrexham, Plas Coch, Mold Road, Wrexham, Wales LL11 2AW, United Kingdom*



Effect of heating–cooling on rheological properties of tapioca starch paste with and without xanthan gum

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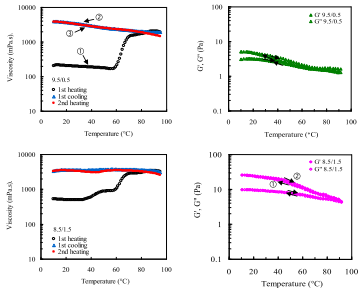
Prawta Chantaro, Rungnaphar Pongsawatmanit*, Katsuyoshi Nishinari**

Left: Temperature dependence of steady shear viscosity of 5% w/w TS/Xan mixtures: 9.5/0.5 and 8.5/1.5 shear rate: 10 s^{-1}. ① Heating from 10 to 95 °C, ② cooling from 95 to 10 °C, ③ and finally reheating from 10 to 95 °C at the rate of 1 °C/min.
Right: Temperature dependence of G' and G'' of 5% w/w TS/Xan pastes 9.5/0.5 and 8.5/1.5. ① Cooling from 90 to 10 °C and ② subsequently heating from 10 to 90 °C (frequency: 1 rad/s, scan rate at 1 °C/min, 5% strain).

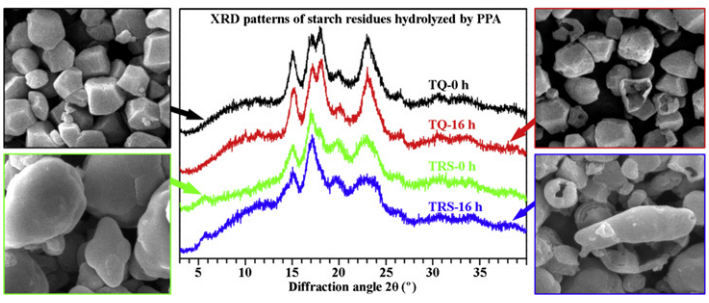


Morphology and structural characterization of high-amylose rice starch residues hydrolyzed by porcine pancreatic α-amylase

Food Hydrocolloids **2013**, 31, 195–203

Jianmin Man[a], Yang Yang[a], Changquan Zhang[a], Fengmin Zhang[b], Youping Wang[a], Minghong Gu[a], Qiaoquan Liu[a,**], Cunxu Wei[a,*]

[a]*Key Laboratories of Crop Genetics and Physiology of the Jiangsu Province and Plant Functional Genomics of the Ministry of Education, Yangzhou University, Yangzhou 225009, China*
[b]*Testing Center, Yangzhou University, Yangzhou 225009, China*



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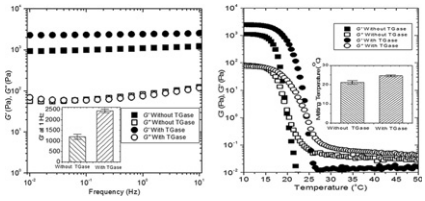
Optimization of gelatine gel preparation from New Zealand hoki (*Macruronus novaezelandiae*) skins and the effect of transglutaminase enzyme on the gel properties

Nor Fazliyana Mohtar, Conrad O. Perera*, Siew-Young Quek, Yacine Hemar

School of Chemical Sciences, Food Science Programme, The University of Auckland, Private Bag 92019, Auckland, New Zealand



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Effect of different drying methods on chemical and molecular structure of heteropolysaccharide–protein gum from durian seed

Hamed Mirhosseini*, Bahareh Tabatabaee Amid, Kok Whye Cheong

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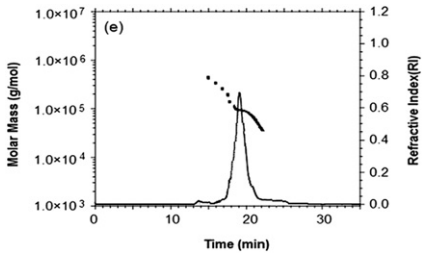

SEC-MALS chromatograms representing the average molecular weight (M_w) of vacuum oven-dried gum vs. time.

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Computed microtomography and mechanical property analysis of soy protein porous hydrogel prepared by homogenizing and microbial transglutaminase cross-linking

Jian Guo[a], Yu-Cong Jin[a], Xiao-Quan Yang[a,*], Shu-Juan Yu[b], Shou-Wei Yin[a], Jun-Ru Qi[a]

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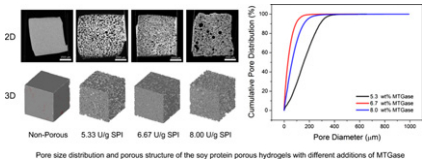
[b]*Research and Development Center of Sugar, College of Light Industry and Food Sciences, South China University of Technology, Guangzhou 510640, PR China*



Pore size distribution and porous structure of the soy protein porous hydrogels with different additions of MTGase

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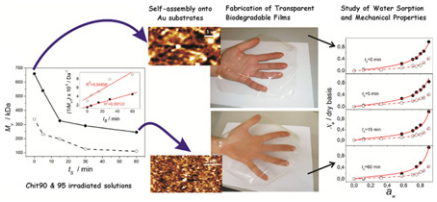
Ultrasound-assisted preparation of size-controlled chitosan nanoparticles: Characterization and fabrication of transparent biofilms

Hiléia K.S. Souza*, José M. Campiña**, Ana M.M. Sousa, Fernando Silva, Maria P. Gonçalves



Chitosans with different degree of deacetylation (*DD*) were fragmented under ultrasonic irradiation and characterized by rheological techniques. Then, the roles played by molecular mass and *DD* on the structural characteristics, moisture sensitivity, and mechanical properties of transparent plastic films of pure chitosan could be unveiled without interferences of plasticizers.

Fabrication and characterization of kidney bean (*Phaseolus vulgaris* L.) protein isolate–chitosan composite films at acidic pH

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Wen Ma[a], Chuan-He Tang[a], Xiao-Quan Yang[a], Shou-Wei Yin[a,b,*]

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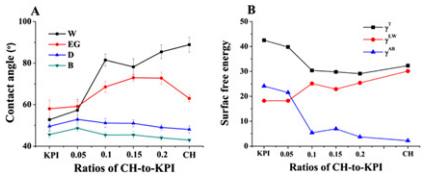
[b]*State Key Laboratory of Pulp and Paper Engineering, South China University of Technology, Guangzhou 510640, PR China*



Surface hydrophobicity and surface free energy (γ^T) of KPI/CH composite films: Effect of CH-to-KPI ratios. Panel A: Surface hydrophobicity. Panel B: Surface free energy (γ) and its components, the Lifshitz–van Der Waals (γ^{LW}) and Acid–Base (γ^{AB}).

PFG-NMR self-diffusion in casein dispersions: Effects of probe size and protein aggregate size

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Souad Salami[a,b], Corinne Rondeau-Mouro[a,b], John van Duynhoven[c,d], Francois Mariette[a,b,*]

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[c]*Unilever R&D, Olivier van Noortlaan 120, P.O. Box 114, 3130 AC Vlaardingen, The Netherlands*
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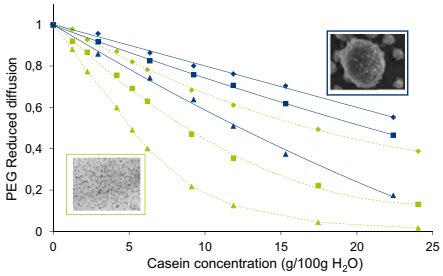

Effect of freezing on physical properties of whey protein emulsion films

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M. Soazo[a,b], L.M. Pérez[b], A.C. Rubiolo[a], R.A. Verdini[b,*]

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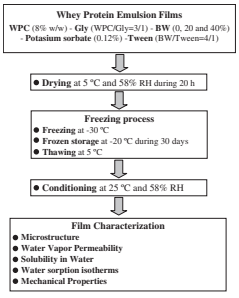
[b]*Facultad de Ciencias Bioquímicas y Farmacéuticas, Universidad Nacional de Rosario (UNR) & Instituto de Química Rosario (IQUIR, UNR-CONICET), Suipacha 531, Rosario 2000, Argentina*



Effect of plasticizer content on the functional properties of extruded gelatin-based composite films

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Z.A. Nur Hanani[a], J. McNamara[b], Y.H. Roos[b], J.P. Kerry[a,*]

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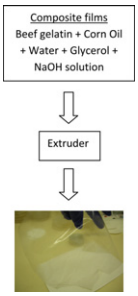
[b]*School of Food and Nutritional Sciences, University College Cork – National University of Ireland, Cork, Ireland*



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Long-term storage stability of selected potato starch – Non-starchy hydrocolloid binary gels

Magdalena Krystyjan[a,*], Greta Adamczyk[a], Marek Sikora[a], Piotr Tomasik[b]

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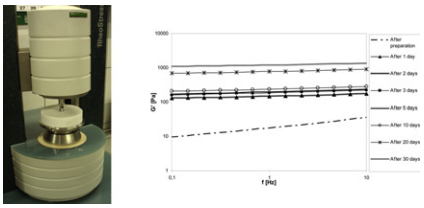

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Mathematical approach for two component modeling of salep–starch mixtures using central composite rotatable design: Part II. Dynamic oscillatory shear properties and applicability of Cox–Merz rule

Safa Karaman[a], Mustafa Tahsin Yilmaz[b], Ahmed Kayacier[a,*]

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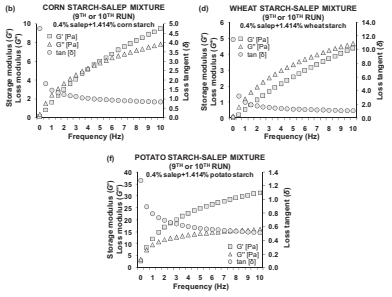

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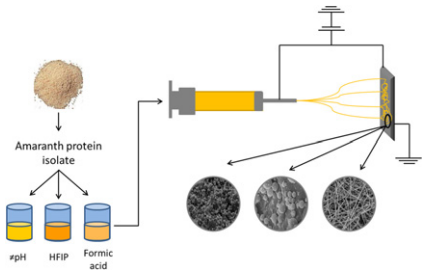
Development of novel ultrathin structures based in amaranth (*Amaranthus hypochondriacus*) protein isolate through electrospinning

Marysol Aceituno-Medina[a], Amparo Lopez-Rubio[b,*], Sandra Mendoza[a], José María Lagaron[b]

[a]*Departamento de Investigación y Posgrado en Alimentos, Facultad de Química, Universidad Autónoma de Querétaro, Cerro de las Campanas s/n, Querétaro, Qro. 76010, Mexico*
[b]*Novel Materials and Nanotechnology Group, IATA-CSIC, Avda. Agustin Escardino 7, 46980 Paterna, Valencia, Spain*



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Sol-gel transition temperatures of high acyl gellan with monovalent and divalent cations from rheological measurements

Emmanuel Flores-Huicochea[a,1], Adriana I. Rodríguez-Hernández[b], Teodoro Espinosa-Solares[c], Alberto Tecante[a,*]

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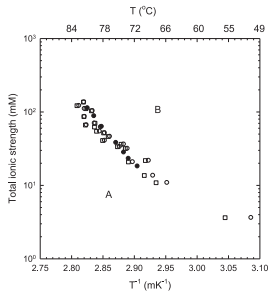
[c]*Departamento de Ingeniería Agroindustrial, Universidad Autónoma Chapingo, P.O. Box 161, Chapingo 56230, Edo. De México, Mexico*

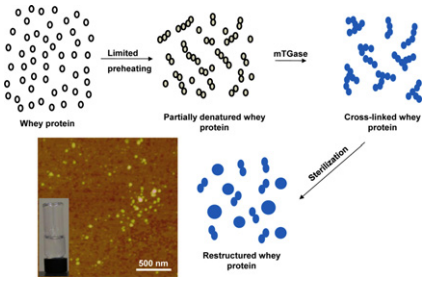


Sequential preheating and transglutaminase pretreatments improve stability of whey protein isolate at pH 7.0 during thermal sterilization

Food Hydrocolloids **2013**, 31, 306–316

Qixin Zhong*, Wan Wang, Zhixiong Hu, Shinya Ikeda

Department of Food Science and Technology, The University of Tennessee, Knoxville, TN 37996, USA

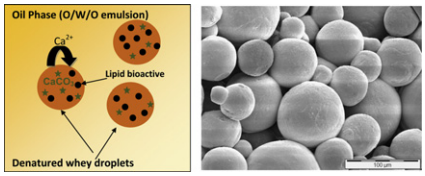


Cold-set whey protein microgels for the stable immobilization of lipids

Food Hydrocolloids **2013**, 31, 317–324

Thelma Egan[a,b], Jean-Christophe Jacquier[a,*], Yael Rosenberg[b], Moshe Rosenberg[b]

[a]*Institute of Food and Health, School of Agriculture and Food Science, University College Dublin, Belfield, Dublin 4, Ireland*
[b]*Department of Food Science and Technology, University of California Davis, One Shields Avenue, Davis, CA 95616, USA*

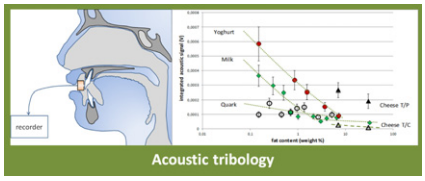


Acoustic emission measurement of rubbing and tapping contacts of skin and tongue surfaces in relation to tactile perception

Food Hydrocolloids **2013**, 31, 325–331

George A. van Aken*

NIZO Food Research, Ede, the Netherlands



Development of carboxymethyl chitosan hydrogel beads in alcohol-aqueous binary solvent for nutrient delivery applications

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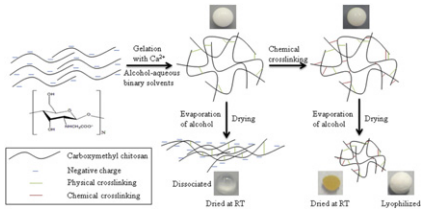
Yangchao Luo, Zi Teng, Xiangan Wang, Qin Wang*

Department of Nutrition and Food Science, University of Maryland, 0112 Skinner Building, College Park, MD 20742, United States



Effects of plasticizers and nano-clay content on the physical properties of chicken feather protein composite films

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Nak-Bum Song[a], Wan-Shin Jo[a], Hye-Yeon Song[a], Kyung-Sook Chung[b], Misun Won[b], Kyung Bin Song[a,*]

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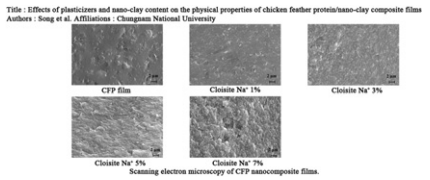
[b]*Medical Genomic Research Center, Korea Research Institute of Bioscience and Biotechnology, Daejeon 305-806, Republic of Korea*



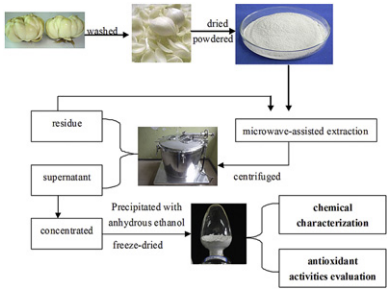
Microwave-assisted extraction, chemical characterization of polysaccharides from *Lilium davidii* var.*unicolor* Salisb and its antioxidant activities evaluation

Food Hydrocolloids **2013**, 31, 346–356

Baotang Zhao[a,b,c,*], Ji Zhang[a,b,c], Xiao Guo[b,c], Junlong Wang[b,c]

[c]*College of Life Science, Northwest Normal University, Lanzhou 730070, China*

The polysaccharides from Lilium davidii var.unicolor Salisb was extracted by microwave-assisted extraction and its chemical characterization and antioxidative activity were investigated.



Effect of temperature on molecular mobility, oxygen permeability, and dynamic site heterogeneity in amorphous α-lactalbumin films

Food Hydrocolloids **2013**, 31, 357–364

Rashmi Tiwari, Richard D. Ludescher[*]

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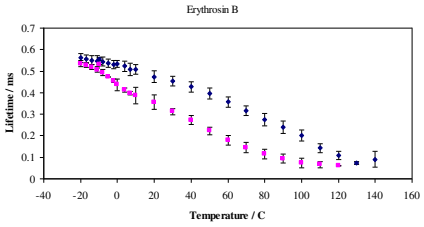

The influence of macromolecular architecture on the critical aggregation concentration of large amphiphilic starch derivatives

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Morgan J. Tizzotti[a,b], Michael C. Sweedman[b], Christian Schäfer[c], Robert G. Gilbert[a,b,*]

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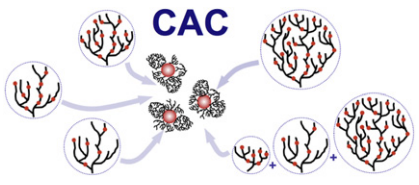
[c]*DSM Nutritional Products Ltd., Nutrition R & D Center Forms and Application, P.O. Box 2676, 4002 Basel, Switzerland*



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Effect of extraction conditions on the yield and purity of ulvan extracted from *Ulva lactuca*

Hela Yaich[a,**], Haikel Garna[b,*], Souhail Besbes[a], Michel Paquot[c], Christophe Blecker[d], Hamadi Attia[a]

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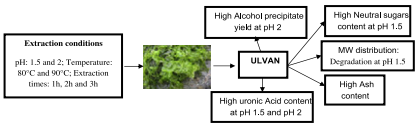

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Rheological properties of rice–locust bean gum gels from different rice varieties

M.J. Correa[a], C. Ferrero[a], C. Puppo[a,b], C. Brites[c,*]

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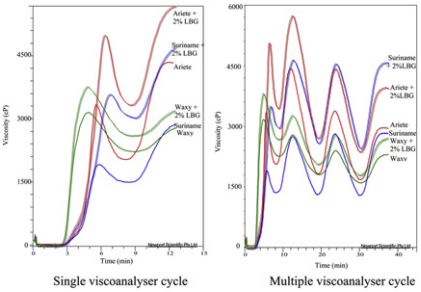
[b]*Facultad de Ciencias Agrarias y Forestales, Universidad Nacional de La Plata. 60 y 119, 1900 La Plata, Argentina*
[c]*Instituto Nacional de Investigação Agrária e Veterinária, INIAV. Unidade Tecnologia Alimentar, Oeiras, Portugal*



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Optimization of medium composition for enhanced chitin extraction from *Parapenaeus longirostris* by *Lactobacillus helveticus* using response surface methodology

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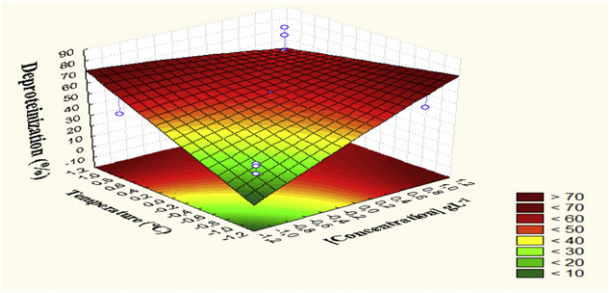
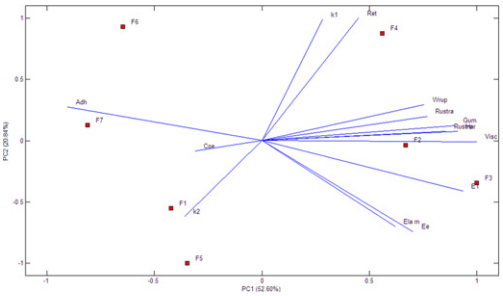


Food Hydrocolloids **2013**, 31, 404–412

Rheological behavior of functional sugar-free guava preserves: Effect of the addition of salts

Patrícia Aparecida Pimenta Pereira[*], Vanessa Rios de Souza, Taísa Rezende Teixeira, Fabiana Queiroz, Soraia Vilela Borges, João de Deus Souza Carneiro

Department of Food Science, Federal University of Lavras, 37200-000 Lavras, MG, Brazil



Ultrasound-treated starch: SEM and TEM imaging, and functional behaviour

Food Hydrocolloids **2013**, 31, 413–419

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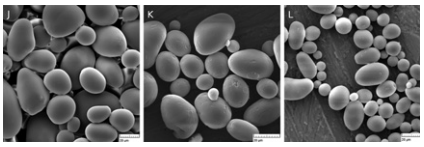

Fabrication and physicochemical characterization of HPMC films with commercial plant extract: Influence of light and film composition

Food Hydrocolloids **2013**, 31, 420–427

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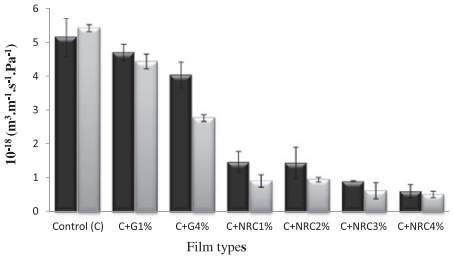

Oxygen permeability of edible HPMC films as a function of NRC concentration and fluorescent light exposure, (■) 0 day light exposure, (■) 20 days light exposure.

Alginate submicron beads prepared through w/o emulsification and gelation with $CaCl_2$ nanoparticles

Food Hydrocolloids **2013**, 31, 428–434

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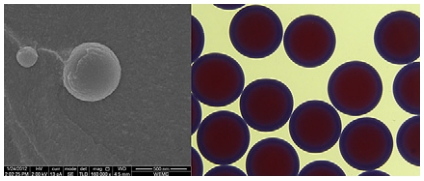

FTIR spectroscopic characterization of soy proteins obtained through AOT reverse micelles

Food Hydrocolloids **2013**, 31, 435–437

Xiangyan Chen[a], Yi Ru[a], Fengliang Chen[a], Xianchang Wang[a], Xiaoyan Zhao[a,*], Qiang Ao[b,**]

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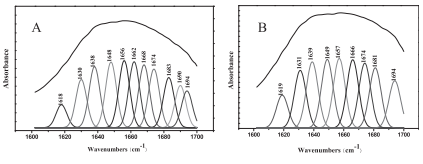

Spray drying behaviour and functionality of emulsions with β-lactoglobulin/pectin interfacial complexes

Food Hydrocolloids **2013**, 31, 438–445

Y. Serfert[a,*], J. Schröder[b], A. Mescher[c], J. Laackmann[d], K. Rätzke[e], M.Q. Shaikh[e,1], V. Gaukel[b], H.-U. Moritz[d], H.P. Schuchmann[b], P. Walzel[c], S. Drusch[f], K. Schwarz[a]

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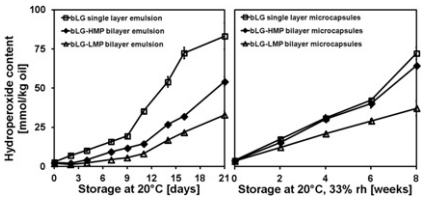

The effects of sodium alginate and calcium levels on pea proteins cold-set gelation

Food Hydrocolloids **2013**, 31, 446–457

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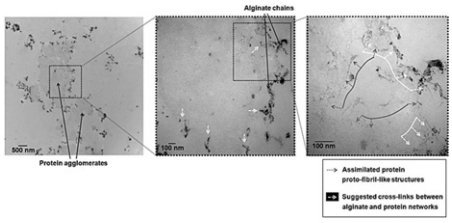

TEM micrographs (PATAg staining) of pre-aggregated pea globulins – alginate cold-set mixed gel, produced by *in situ* release of calcium cations.

Structural properties of films and rheology of film-forming solutions based on chitosan and chitosan-starch blend enriched with murta leaf extract

Food Hydrocolloids **2013**, 31, 458–466

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