

Graphical abstracts

Characterization of core-shell structures formed by zein

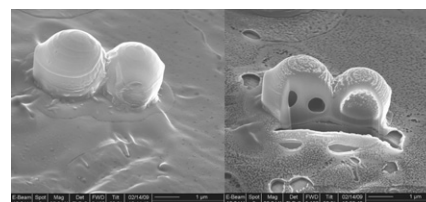
Food Hydrocolloids **2013**, 30, 487–494

Yi Wang^a, Chin-Ping Su^b, Matthew Schulmerich^c, Graciela W. Padua^{b,*}

^aDepartment of Applied Biology and Chemical Technology, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong, People's Republic of China

^bDepartment of Food Science and Human Nutrition, University of Illinois at Urbana-Champaign, 382-L AESB, 1304 West Pennsylvania Avenue, Urbana, IL 61801, USA

^cDepartment of Bioengineering, University of Illinois at Urbana-Champaign, 1304 West Springfield Avenue, Urbana, IL 61801, USA

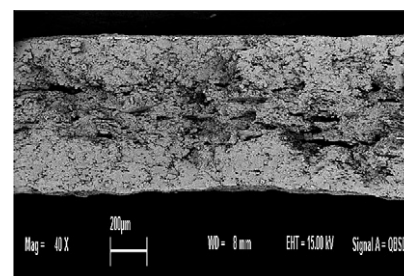


The use of microbial transglutaminase and soy protein isolate to enhance retention of capsaicin in capsaicin-enriched layered noodles

Food Hydrocolloids **2013**, 30, 495–503

Ling-Yun Li, Azhar Mat Easa*, Min-Tze Liong, Thuan-Chew Tan, Wan-Teck Foo

Food Technology Division, School of Industrial Technology, University Sains Malaysia, 11800 USM, Minden, Penang, Malaysia



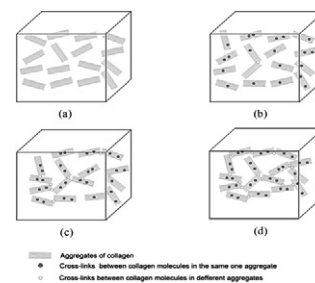
The rheological and structural properties of fish collagen cross-linked by N-hydroxysuccinimide activated adipic acid

Food Hydrocolloids **2013**, 30, 504–511

Min Zhang^{a,b}, Jiheng Li^a, Cuicui Ding^a, Wentao Liu^a, Guoying Li^{a,*}

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^bMaterial Engineering College, Fujian Agriculture and Forestry University, Fuzhou 350002, PR China



Characteristics of a novel bacterial polysaccharide consisted of glucose and mannose as major components

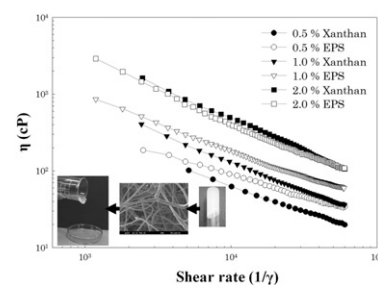
Haykuhi Charchoghlyan^a, Heui-Dong Park^{a,b,c,*}

^aGraduate School, Kyungpook National University, Daegu 702-701, Republic of Korea

^bSchool of Food Science and Biotechnology, Kyungpook National University, 80 Daehakro, Daegu 702-701, Republic of Korea

^cInstitute of Fermentation Biotechnology, Kyungpook National University, Daegu 702-701, Republic of Korea

Food Hydrocolloids **2013**, 30, 512–518

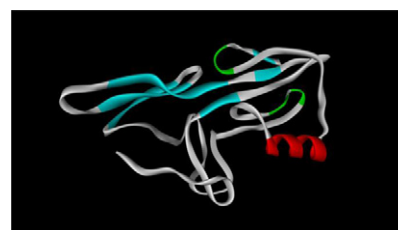


Molecular dynamics simulation of the effect of heat on the conformation of bovine β-lactoglobulin A: A comparison of conventional and accelerated methods

S.R. Euston*

School of Life Sciences & International Centre for Brewing & Distilling, Heriot-Watt University, Edinburgh EH14 4AS, UK

Food Hydrocolloids **2013**, 30, 519–530



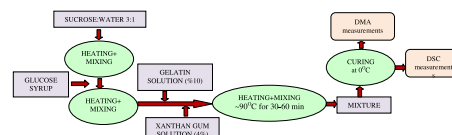
Mechanical spectra and calorimetric evaluation of gelatin–xanthan gum systems with high levels of co-solutes in the glassy state

Filiz Altay^a, Sundaram Gunasekaran^{b,*}

^aIstanbul Technical University, Faculty of Chemical and Metallurgical, Department of Food Engineering, Maslak, Istanbul 34469, Turkey

^bUniversity of Wisconsin-Madison, Department of Biological Systems Engineering, 460 Henry Mall, Madison, WI 53706, USA

Food Hydrocolloids **2013**, 30, 531–540

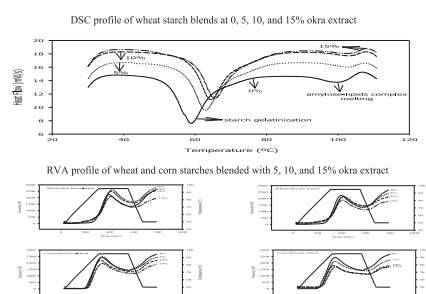


Effects of alkaline-soluble okra gum on rheological and thermal properties of systems with wheat or corn starch

Mohammed S. Alamri, Abdellatif A. Mohamed*, Shahzad Hussain

Department of Food Science & Nutrition, King Saud University, P.O. Box 2460, Riyadh 11451, Saudi Arabia

Food Hydrocolloids **2013**, 30, 541–551



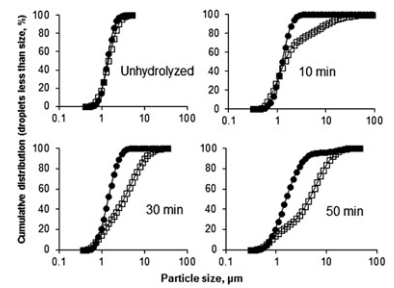
Covalent attachment of fenugreek gum to soy whey protein isolate through natural Maillard reaction for improved emulsion stability

Madzlan Kasran^a, Steve W. Cui^{b,*}, H. Douglas Goff^a

^aFood Science Department, University of Guelph, Guelph, Ontario N1G 2W1, Canada

^bFood Research Program, Agricultural and Agri-Food Canada, 93 Stone Road West, Guelph, Ontario N1G 5C9, Canada

Food Hydrocolloids 2013, 30, 552–558



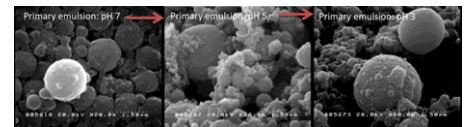
Oil globule microstructure of protein/polysaccharide or protein/protein bilayer emulsions at various pH

M. Tippetts^{a,1}, F.K. Shen^{b,2}, S. Martini^{a,*}

^aDepartment of Nutrition, Dietetics and Food Science, Utah State University, 8700 Old Main Hill, 750 N 1200 E, Logan, UT 84322-8700, USA

As the pH of an emulsion changes the interactions between the fat droplets alters depending on what coats the layer. This study takes an emulsion from pH 7 to pH 5 to pH 3 with droplets coated by protein, protein/protein, and protein/polysaccharide layers and looks at the stability and microstructure to evaluate how the two might be correlated.

Food Hydrocolloids 2013, 30, 559–566

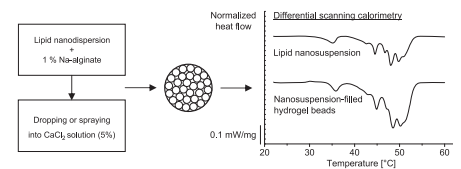


Incorporation of lipid nanoparticles into calcium alginate beads and characterization of the encapsulated particles by differential scanning calorimetry

Birthe Strasdat, Heike Bunjes*

Technische Universität Braunschweig, Institute of Pharmaceutical Technology, Mendelssohnstraße 1, 38106 Braunschweig, Germany

Food Hydrocolloids 2013, 30, 567–575



Antimicrobial and physical properties of edible chitosan films enhanced by lactoperoxidase system

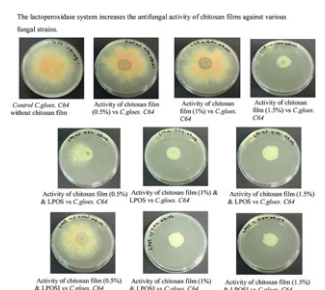
Cissé Mohamed^{a,*}, Kouakou Amenan Clementine^{a,b}, Montet Didier^a, Loiseau Gérard^a, Ducamp-Collin Marie Noëlle^a

^aUMR Qualisud, Centre de Coopération Internationale en Recherche Agronomique pour le Développement, CIRAD, 73 rue Jean François Breton, 34398 Montpellier Cedex 5, France

^bLaboratory of Microbiology and Molecular, UFR STA, University of Abobo-Adjamé, 02 BP 801 Abidjan 02, Ivory Coast

The lactoperoxidase system increases the antifungal activity of chitosan films against various fungal strains.

Food Hydrocolloids 2013, 30, 576–580



Comparative study on the physicochemical properties of κ -carrageenan extracted from *Kappaphycus alvarezii* (doty) doty ex Silva in Tawau, Sabah, Malaysia and commercial κ -carrageenans

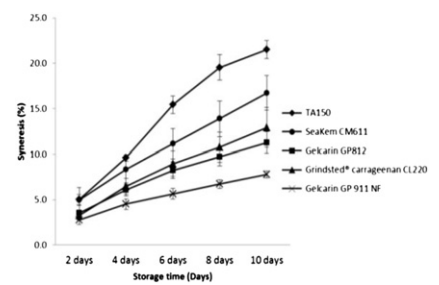
Sook Wah Chan^a, Hamed Mirhosseini^a, Farah Saleena Taip^b, Tau Chuan Ling^c, Chin Ping Tan^{a,*}

^aDepartment of Food Technology, Faculty of Food Science and Technology, Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia

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

Syneresis of commercial κ -carrageenans and κ -carrageenan isolated from Sabah *Eucheuma cottonii* (TA150).

Food Hydrocolloids 2013, 30, 581–588

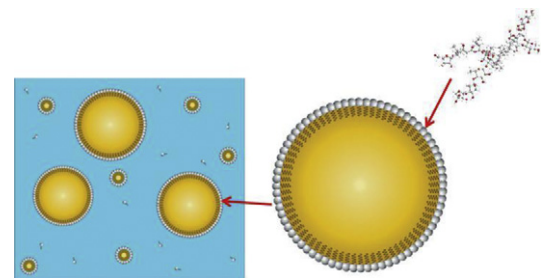


Formation and stability of emulsions using a natural small molecule surfactant: Quillaja saponin (Q-Naturale[®])

Ying Yang^a, Martin E. Leser^b, Alexander A. Sher^b, David Julian McClements^{a,*}

^aBiopolymers and Colloids Laboratory, Department of Food Science, University of Massachusetts, Amherst, MA 01003, USA

This paper describes the use of a new natural surfactant (saponin) to form and stabilize oil-in-water emulsions suitable for use in foods and beverages. This manuscript compares the performance of this natural surfactant with a synthetic surfactant for forming and stabilizing emulsions.

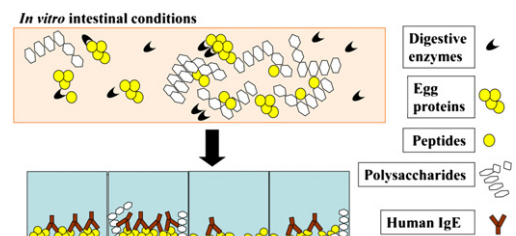


Food Hydrocolloids 2013, 30, 589–596

IgE-binding and *in vitro* gastrointestinal digestibility of egg allergens in the presence of polysaccharides

Rodrigo Jiménez-Saiz, Iván López-Expósito, Elena Molina, Rosina López-Fandiño*

Instituto de Investigación en Ciencias de la Alimentación (CIAL) CSIC-UAM, Nicolás Cabrera 9, 28049 Madrid, Spain



Assessing the intestinal stability of egg allergens in the presence of polysaccharides in terms of digestibility and human IgE-binding capacity.

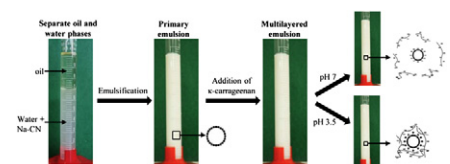
Food Hydrocolloids 2013, 30, 597–605

Stabilization of multilayered emulsions by sodium caseinate and κ -carrageenan

F.A. Perrechil, R.L. Cunha*

Department of Food Engineering, Faculty of Food Engineering, University of Campinas (UNICAMP), PO Box 6121, 13083-862 – Campinas, SP, Brazil

Food Hydrocolloids 2013, 30, 606–613



Physicochemical, thermal, and pasting properties of flours and starches of eight Brazilian maize landraces (*Zea mays* L.)

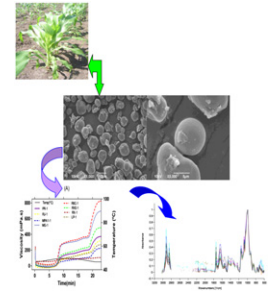
Virgilio Gavicho Uarrota^{a,*}, Edna Regina Amante^b, Ivo Mottin Demiate^c, Flavia Vieira^d, Ivonne Delgadillo^d, Marcelo Maraschin^a

^aPlant Morphogenesis and Biochemistry Laboratory, Santa Catarina Federal University, Servidao Ana Terra 110, P.O. Box 476, SC Florianopolis, Brazil

^bLaboratory of Fruits and Vegetables, Santa Catarina Federal University, Florianopolis, Brazil

^cDepartment of Food Engineering, University of Ponta Grossa, Paraná, Brazil

Food Hydrocolloids 2013, 30, 614–624



Mechanical properties and water vapour permeability of hydrolysed collagen–cocoa butter edible films plasticised with sucrose

A.L. Fadini^{a,*}, F.S. Rocha^b, I.D. Alvim^a, M.S. Sadahira^a, M.B. Queiroz^a, R.M.V. Alves^a, L.B. Silva^a

^aITAL – Institute of Food Technology, Avenida Brasil 2880, Jardim Chapadão, P.O.B. 139, Campinas, CEP 13.070-178, São Paulo, Brazil

^bFaculty of Food Engineering, University of Campinas, UNICAMP, 13083-862 Campinas, SP, Brazil

The brightness of the product with the coating developed in this study was very attractive.

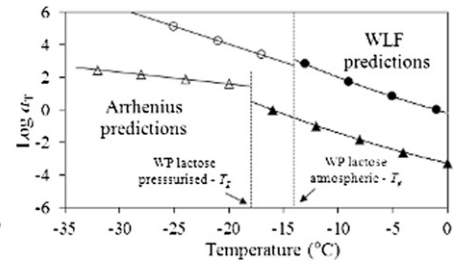
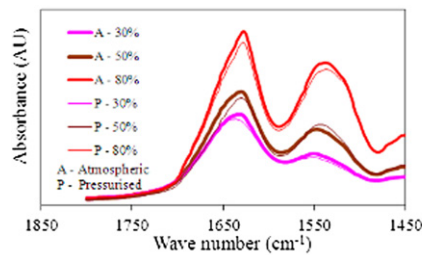
Food Hydrocolloids 2013, 30, 625–631



Hydrostatic pressure effects on the structural properties of condensed whey protein/lactose systems

Muditha Dissanayake^a, Stefan Kasapis^{a,*}, Paul George^a, Benu Adhikari^b, Martin Palmer^c, Barbara Meurer^c

^aSchool of Applied Sciences, RMIT University, City Campus, Melbourne, Vic 3001, Australia



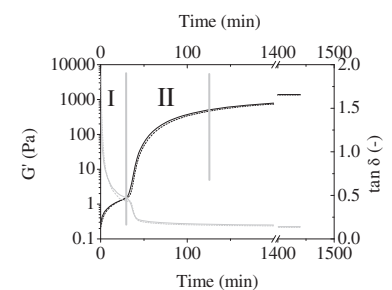
Food Hydrocolloids 2013, 30, 632–640

Rheological properties of acid-induced soy protein-stabilized emulsion gels in the absence and presence of N-ethylmaleimide

Fang Li^{*}, Yufei Hua

State Key Laboratory of Food Science and Technology, School of Food Science and Technology, Jiangnan University, 1800 Lihu Avenue, Wuxi, 214122 Jiangsu Province, PR China

Food Hydrocolloids 2013, 30, 641–646



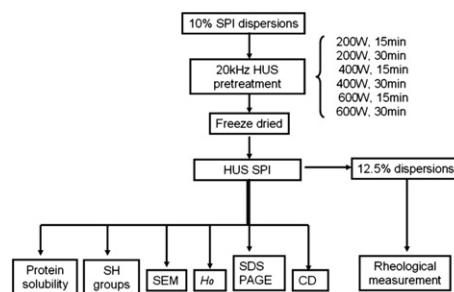
Food Hydrocolloids **2013**, 30, 647–655

Effects of ultrasound on structural and physical properties of soy protein isolate (SPI) dispersions

Hao Hu^a, Jiahui Wu^a, Eunice C.Y. Li-Chan^b, Le Zhu^a, Fang Zhang^a, Xiaoyun Xu^a, Gang Fan^a, Lufeng Wang^a, Xingjian Huang^a, Siyi Pan^{a,*}

^aCollege of Food Science and Technology, Huazhong Agricultural University, No. 1 Shizishan Road, Wuhan, Hubei 430070, PR China

^bThe University of British Columbia, Faculty of Land and Food Systems, Food Nutrition and Health Program, 2205 East Mall, Vancouver, British Columbia, Canada V6T 1Z4

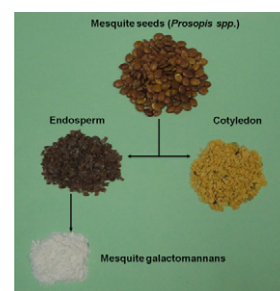


Physicochemical characterization and functional properties of galactomannans from mesquite seeds (*Prosopis* spp.)

Y.L. López-Franco^{a,*}, C.I. Cervantes-Montaña^{a,1}, K.G. Martínez-Robinson^{a,1}, J. Lizardi-Mendoza^{a,1}, L.E. Robles-Ozuna^b

^aLaboratory of Biopolymers, Research Center for Food and Development, CIAD, AC., P.O. Box 1735, Hermosillo, Sonora 83304, Mexico

^bEngineering and Processing of Fruits and Vegetables, Research Center for Food and Development, CIAD, AC., P.O. Box 1735, Hermosillo, Sonora 83304, Mexico

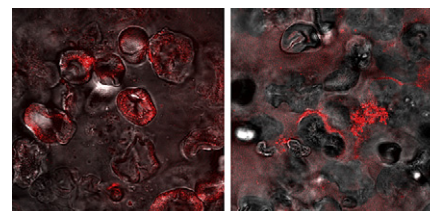
Food Hydrocolloids **2013**, 30, 656–660

Influence of milk proteins on the pasting behaviour and microstructural characteristics of waxy maize starch

Anthony P. Kett^a, Valérie Chaurin^a, Sinead M. Fitzsimons^a, Edwin R. Morris^b, James A. O'Mahony^b, Mark A. Fenelon^{a,*}

^aFood Chemistry and Technology Department, Teagasc Food Research Centre, Moorepark, Fermoy, Co. Cork, Ireland

^bSchool of Food and Nutritional Sciences, University College Cork, Cork, Ireland

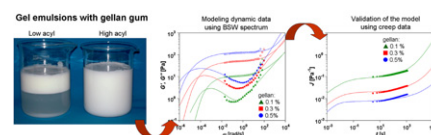
Food Hydrocolloids **2013**, 30, 661–671

Rheological analysis of emulsion-filled gels based on high acyl gellan gum

Gabriel Lorenzo^{a,b,*}, Noemí Zaritzky^{a,b}, Alicia Califano^a

^aCentro de Investigación y Desarrollo en Criotecnología de Alimentos (CIDCA), CONICET – La Plata, Facultad de Ciencias Exactas, UNLP, 47 y 116, La Plata 1900, Argentina

^bDepartamento de Ingeniería Química, Facultad de Ingeniería, UNLP, Argentina

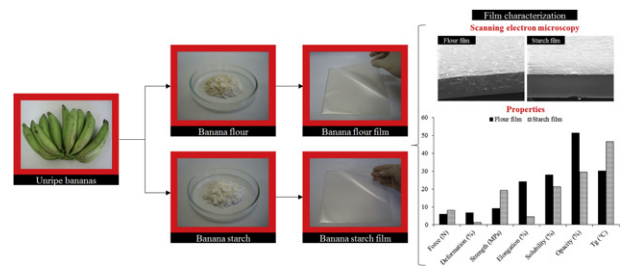
Food Hydrocolloids **2013**, 30, 672–680

Comparative study on the properties of flour and starch films of plantain bananas (*Musa paradisiaca*)

Food Hydrocolloids 2013, 30, 681–690

Franciele Maria Pelissari^a, Margarita María Andrade-Mahecha^a, Paulo José do Amaral Sobral^b, Florencia Cecilia Menegalli^{a,*}

^aDepartment of Food Engineering, School of Food Engineering, University of Campinas, CEP 13083-862 Campinas, SP, Brazil
^bDepartment of Food Engineering, School of Animal Science and Food Engineering, University of São Paulo, CEP 13635-900 Pirassununga, SP, Brazil

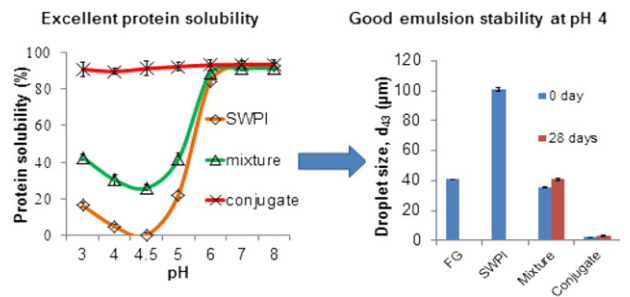


Emulsifying properties of soy whey protein isolate–fenugreek gum conjugates in oil-in-water emulsion model system

Food Hydrocolloids 2013, 30, 691–697

Madzlan Kasran^a, Steve W. Cui^{b,*}, H. Douglas Goff^a

^aDepartment of Food Science, University of Guelph, Guelph, Ontario N1G 2W1, Canada
^bGuelph Food Research Centre, Agriculture and Agri-Food Canada, 93 Stone Road West, Guelph, Ontario N1G 5C9, Canada

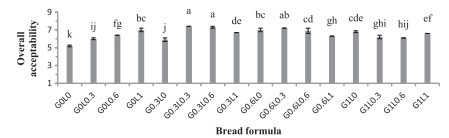


Evaluation of *Lepidium sativum* seed and guar gum to improve dough rheology and quality parameters in composite rice–wheat bread

Food Hydrocolloids 2013, 30, 698–703

Bahareh Sahraiyani^a, Fariba Naghipoor^{a,*}, Mahdi Karimi^b, Mehdi Ghiafe Davoodi^b

^aDepartment of Food Science and Technology, Ferdowsi University of Mashhad (FUM), Mashhad, Iran
^bKhorasan Agricultural and Natural Resources Center, Mashhad, Iran



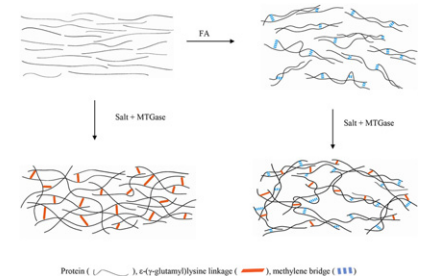
Effect of gums addition on sensory panel overall acceptability score of fresh rice–wheat ($n = 3$). Means \pm SD with different letters differ significantly ($p < 0.05$).

Effect of formaldehyde on protein cross-linking and gel forming ability of surimi from lizardfish induced by microbial transglutaminase

Food Hydrocolloids 2013, 30, 704–711

Sochaya Chanarat, Soottawat Benjakul^{*}

Department of Food Technology, Faculty of Agro-Industry, Prince of Songkla University, 15 Kanchanawanich Road, Hat Yai, Songkhla 90112, Thailand



Encapsulation of vitamin E in edible emulsions fabricated using a natural surfactant

Ying Yang, David Julian McClements*

*Biopolymers and Colloids Laboratory, Department of Food Science,
University of Massachusetts, Amherst, MA 01003, USA*

This paper describes the use of a new natural surfactant (saponin) to form and stabilize vitamin E colloidal delivery systems. Oil-in-water emulsions containing vitamin E acetate were prepared that are suitable for use in foods and beverages.

